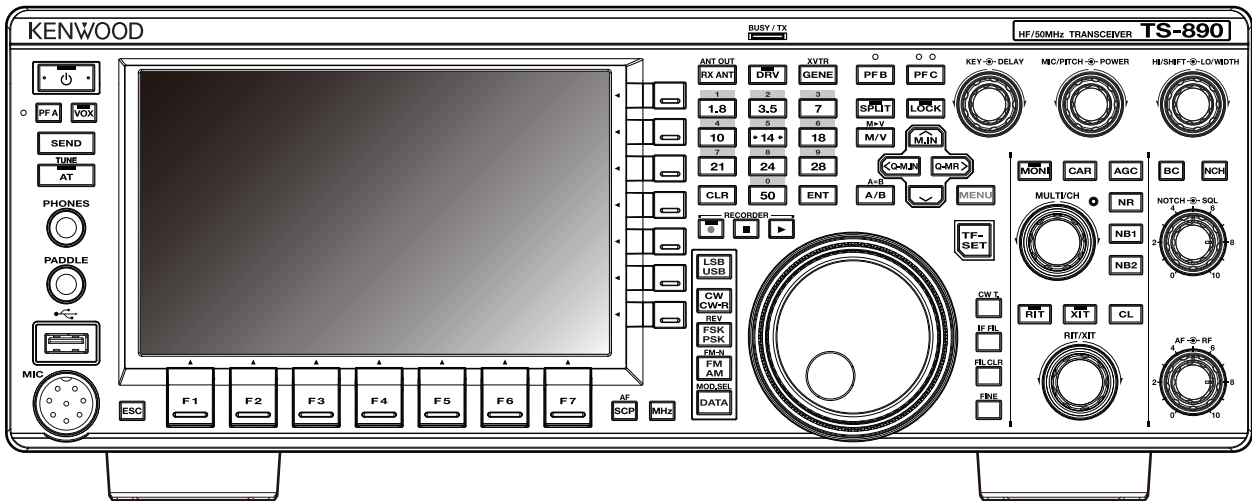


# KENWOOD

## SERVICE MANUAL

HF/50MHz TRANSCEIVER (K TYPE), HF/50MHz/70MHz TRANSCEIVER (E TYPE)

### TS-890S



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This product complies with the **RoHS** directive for the European market.



This product uses Lead Free solder.

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## Disclaimer

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## NOTE

- This equipment should be serviced by only qualified technicians.
- Danger of explosion if the battery is incorrectly replaced; replace only with the same type.
- To dispose of batteries, be sure to comply with the laws and regulations in your country or region.

## SPECIFICATION

General		
Frequency range (Transmitter)	160 m band	1.8 ~ 2.0 MHz (K type) / 1.81 ~ 2.0 MHz (E type)
	80 m band	3.5 ~ 4.0 MHz (K type) / 3.5 ~ 3.8 MHz (E type)
	60 m band *1	5.1675 MHz (K type), 5.25 ~ 5.45 MHz
	40 m band	7.0 ~ 7.3 MHz (K type) / 7.0 ~ 7.2 MHz (E type)
	30 m band	10.1 ~ 10.15 MHz
	20 m band	14.0 ~ 14.35 MHz
	17 m band	18.068 ~ 18.168 MHz
	15 m band	21.0 ~ 21.45 MHz
	12 m band	24.89 ~ 24.99 MHz
	10 m band	28.0 ~ 29.7 MHz
	6 m band	50.0 ~ 54.0 MHz (K type) / 50.0 ~ 52.0 MHz (E type)
	4 m band	70.0 ~ 70.5 MHz (E type)
Frequency range (Receiver)		0.13 ~ 30 MHz, 50 ~ 54 MHz, 70.0 ~ 70.5 MHz (E type) VFO: Continuous 30 kHz ~ 60 MHz/ 74.8 MHz (E type)
Mode		J3E (SSB)/ A1A (CW)/ A3E (AM)/ F3E (FM)/ F1B (FSK)/ G1B (PSK)
Frequency stability		±0.1 ppm (0 °C ~ +50 °C)
Antenna impedance		50 ohm
Antenna tuner load range		16.7 ohm ~ 150 ohm
Supply voltage		DC 13.8 V ± 15 %
Ground		Negative ground
Current Consumption	TX	22.5 A or less
	RX (No signal)	2.5 A or less
Operating Temperature		0 °C ~ +50 °C (+32 °F ~ +122 °F)
Dimensions	Without projections	W 396.0 × H 141.3 × D 340.0 mm (W 15.59 x H 5.56 x D 13.38 in)
	With projections	W 409.6 × H 158.3 × D 387.4 mm (W 16.13 x H 6.23 x D 15.25 in)
Weight		Approx. 15.8 kg (34.83 lbs)
Transmitter		
Output Power	CW/SSB/FSK/PSK/FM (AM)	HF/50 MHz: Max 100 W / Min 5 W, (Max 25 W / Min 5 W)
		70 MHz (E type): Max 50 W / Min 5 W, (Max 12.5 W / Min 5 W)
Modulation		SSB: Balanced, AM: Low Power, FM: Reactance
Maximum frequency deviation (FM)		Wide: ±5 kHz or less, Narrow: ±2.5 kHz or less
Spurious emissions		HF: -50 dB or less 50 MHz: -63 dB or less 70 MHz (E type): -60 dB or less

Carrier suppression		60 dB or more
Unwanted sideband suppression		60 dB or more
Transmit frequency response		Within -6 dB (100 ~ 2900 Hz)
Microphone impedance		600 ohm
XIT variable range		±9.999 kHz
<b>Receiver</b>		
Circuit type		Double superheterodyne
Intermediate frequency	1st IF	8.248 MHz
	2nd IF	24 kHz (except FM), 36 kHz (FM)
Sensitivity (Typical)	SSB/ CW/ FSK/ PSK (S/N 10 dB)	0.5 μV (0.13 ~ 0.522 MHz)
		4 μV (0.522 ~ 1.705 MHz)
		0.2 μV (1.705 ~ 24.5 MHz)
		0.13 μV (24.5 ~ 30.0 MHz)
		0.13 μV (50.0 ~ 54.0 MHz)
		0.13 μV (70.0 ~ 70.5 MHz)
	AM (S/N 10 dB)	6.3 μV (0.13 ~ 0.522 MHz)
		31.6 μV (0.522 ~ 1.705 MHz)
		2 μV (1.705 ~ 24.5 MHz)
		1.3 μV (24.5 ~ 30.0 MHz)
		1.3 μV (50.0 ~ 54.0 MHz)
		1.3 μV (70.0 ~ 70.5 MHz)
FM (12 dB SINAD)	0.22 μV (28.0 ~ 30.0 MHz)	
	0.22 μV (50.0 ~ 54.0 MHz)	
	0.22 μV (70.0 ~ 70.5 MHz)	
Squelch Sensitivity	SSB/ CW/FSK /PSK/ AM	5.6 μV or less (0.13 ~ 0.522 MHz)
		18.0 μV or less (0.522 ~ 1.705 MHz)
		1.8 μV or less (1.705 ~ 30 MHz)
		1.1 μV or less (50.0 ~ 54.0 MHz)
		1.1 μV or less (70.0 ~ 70.5 MHz)
	FM	0.2 μV or less (28.0 ~ 30.0 MHz)
		0.2 μV or less (50.0 ~ 54.0 MHz)
		0.2 μV or less (70.0 ~ 70.5 MHz)
Image Rejection Ratio		70 dB or more (HF), 60 dB or more (50/ 70 MHz)
IF Rejection Ratio		70 dB or more
Selectivity	SSB	2.6 kHz or more (-6 dB)
		4.4 kHz or less (-60 dB)
	CW/ FSK/ PSK	500 Hz or more (-6 dB)
		1.2 kHz or less (-60 dB)
	AM	6.0 kHz or more (-6 dB)
		12.0 kHz or less (-50 dB)
	FM	12.0 kHz or more (-6 dB)
		25.0 kHz or less (-50 dB)
RIT variable range		±9.999 kHz
Notch filter attenuation		70 dB or more
Beat cancel attenuation		40 dB or more
Audio output		1.5 W or more (8 ohm)
Audio output impedance		4 ohm ~ 8 ohm

\*1 60m band: Refer to applicable amateur radio regulations to your country (E type only).  
Specifications are subject to change without notice due to advancements in technology.



### 2.1.3 LO1/LO2/LO3/INT CLK

#### ■LO1 (1st Local Oscillator)

The 100MHz reference signal is applied to pin 15 of the PLL/VCOs (IC201) via the amplifier (Q181) and LPF. The signal which is generated inside the PLL/VCOs (IC201) is frequency-divided by N and the reference signal applied to pin 15 is frequency-divided by R. They are phase-compared to lock the frequency. The signal to lock the frequency is applied to the frequency divider inside the PLL/VCOs (IC201) where by frequency is divided by 1, 2, 4, ...60, or 62. The frequency divided signal is sent from pin 28 of the PLL/VCOs (IC201).

The signal which is sent from the PLL/VCOs (IC201) is applied to the frequency divider (IC241) via the amplifier (Q241) where the frequency is divided by 1, 2, 4, or 8. The frequency divided signal is passed through the amplifier (Q251) and BPF, and is sent as the LO1.

#### ■LO2 (2nd Local Oscillator)

The LO2 sends 50MHz which is used for 70MHz band transmission and 80MHz which is used for transmission in bands other than the 70MHz band (70MHz band transmission is for E type only).

During 70MHz band transmission, the 100MHz reference signal is applied to the frequency divider (IC511) via the amplifier (Q501) and LPF where the frequency is divided by 2 to generate a 50MHz signal. The frequency divided 50MHz signal is passed through the LPF, amplifier (Q701), and BPF, and is sent as the LO2.

During transmission in bands other than the 70MHz band, the 100MHz reference signal is applied to the frequency dividers (IC512 to IC516) via the amplifier (Q503) and LPF where the frequency is divided by 5 to generate a 20MHz signal. The frequency divided 20MHz signal passes through the LPF and is frequency-doubled by Q541 to generate 40MHz. This 40MHz signal passes through the buffer (Q542) and is frequency-doubled by Q651 to generate 80MHz, which is passed through the amplifier (Q652) and BPF, and is sent as the LO2.

#### ■LO3 (3rd Local Oscillator)

The DDS (IC601) generates an LO3. The 40MHz frequency-doubled by Q541 is applied to pin 6 of the DDS (IC601) via the amplifier (Q601). In FM mode, 8.212MHz is sent from the DDS (IC601). In modes other than FM, 8.224MHz is sent. The signal sent from the DDS (IC601) is passed through the amplifier (Q603) and BPF, and is sent as the LO3.

#### ■INT CLK (System Clock)

The 40MHz frequency-doubled by Q541 is applied to pin 10 of the PLL (IC721) via the amplifier (Q721). The 39.3216MHz oscillation signal of the crystal oscillator (X751) is applied to pin 17 of the PLL (IC721) via the buffer (Q751), amplifier (Q786), and LPF.

The signal (39.3216MHz) applied to pin 17 of the PLL is frequency-divided by N and the reference signal (40MHz) which is applied to pin 10 is frequency-divided by R. They are phase-compared and the 39.3216MHz is phase-locked. The 39.3216MHz signal is sent as INT CLK via the amplifier (Q801) and BPF.

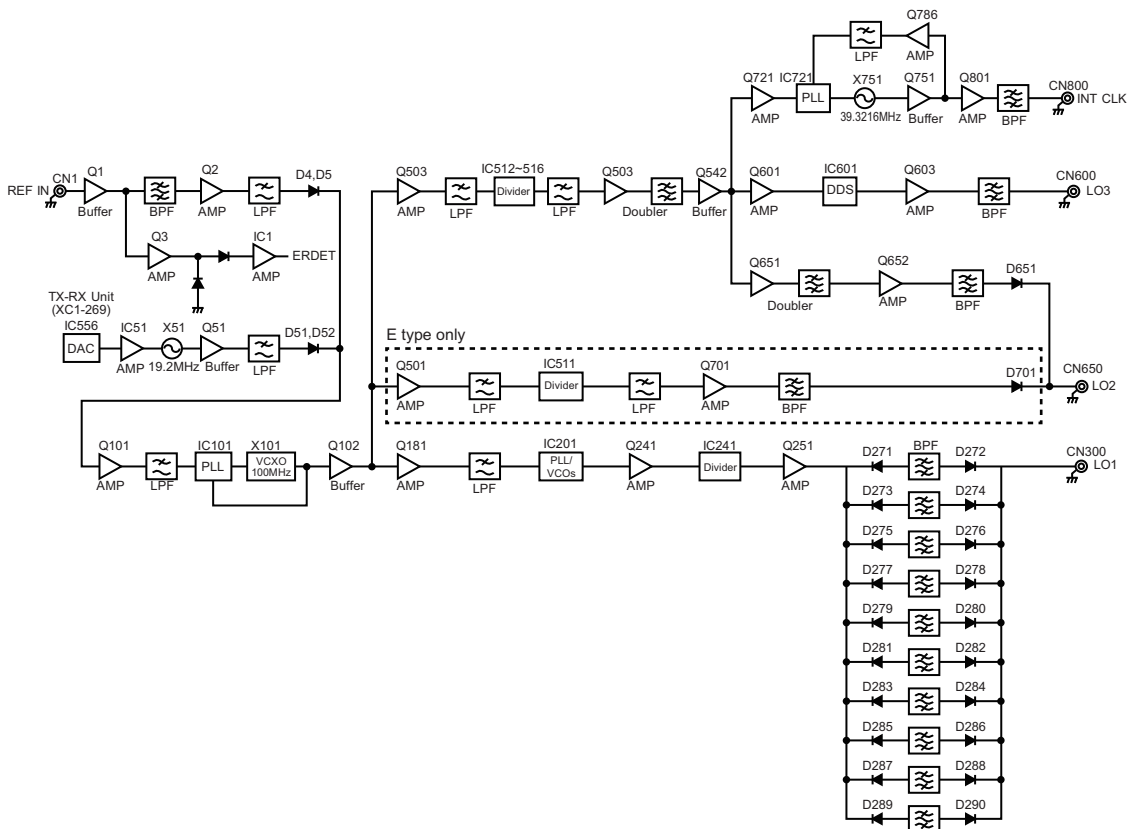


Fig.2 Reference signal generator, LO1/LO2/LO3/INT CLK  
Table 1 LO1/LO3 (During receiving) frequency shift data

Frequency: 0.03 to 74.8 MHz

RX LO1		IC201 HMC829 (LPEN2)											
		USB		USB-DATA		LSB		LSB-DATA		CW		CW-R	
		RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz
Mode offset		+(DSPFC)	+(DSPFC)	+(DSHIFT)	+(DSHIFT)	-(DSPFC)	-(DSPFC)	-(DSHIFT)	-(DSHIFT)	+(CW OFFSET)	+(CW OFFSET)	-(CW OFFSET)	-(CW OFFSET)
RIT		(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)
CAR correction	IF8.248MHz_2.7kHz	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)
	IF8.248MHz_500Hz	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)
	IF8.248MHz_OPTION	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)

RX LO1		IC201 HMC829 (LPEN2)											
		PSK		PSK-R		FSK		FSK-R		AM		FM	
		RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz
Mode offset		0	0	0	0	-(FSK SHIFT/2)	-(FSK SHIFT/2)	-(FSK SHIFT/2)	-(FSK SHIFT/2)	0	0	0	0
RIT		(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)	(ΔRIT)
CAR correction	IF8.248MHz_2.7kHz	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	+(CAR3)	-(CAR3)	-	-	-	-
	IF8.248MHz_500Hz	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	+(CAR2)	-(CAR2)	-	-	-	-
	IF8.248MHz_OPTION	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	+(CAR1)	-(CAR1)	-	-	-	-

RX LO3		IC601 AD9835 (LDEN2)											
		USB		USB-DATA		LSB		LSB-DATA		CW		CW-R	
		RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz
Mode offset		+(DSPFC)	-(DSPFC)	+(DSHIFT)	-(DSHIFT)	-(DSPFC)	+(DSPFC)	-(DSHIFT)	+(DSHIFT)	+(CW OFFSET)	-(CW OFFSET)	-(CW OFFSET)	+(CW OFFSET)
CAR correction	IF8.248MHz_15kHz	-	-	-	-	-	-	-	-	-	-	-	-
	IF8.248MHz_6kHz	-	-	-	-	-	-	-	-	-	-	-	-
	IF8.248MHz_2.7kHz	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)
	IF8.248MHz_500Hz	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)
	IF8.248MHz_OPTION	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)

RX LO3		IC601 AD9835 (LDEN2)											
		PSK		PSK-R		FSK		FSK-R		AM		FM	
		RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz	RX < 35MHz	RX ≥ 35MHz
Mode offset		0	0	0	0	0	0	0	0	0	0	0	0
CAR correction	IF8.248MHz_15kHz	-	-	-	-	-	-	-	-	-	-	0	0
	IF8.248MHz_6kHz	-	-	-	-	-	-	-	-	0	0	-	-
	IF8.248MHz_2.7kHz	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	+(CAR3)	-	-	-	-
	IF8.248MHz_500Hz	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	+(CAR2)	-	-	-	-
	IF8.248MHz_OPTION	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	+(CAR1)	-	-	-	-

(ΔRIT) :RIT frequency variable amount (-9.999~+9.999kHz step by 1Hz)

(FSK SHIFT) :FSK shift width frequency (170Hz [85Hz], 200Hz [100Hz], 425Hz [212Hz], 850Hz [425Hz], and initial value: 170Hz)

\* In the case of FSK SHIFT / 2 in parentheses [ ]

(CW OFFSET) :CW Filter Offset (-800~+800Hz step by 50Hz)

CWOFFSET=(CW\_Shift)

CAR correction :SSB IF-Filter adjustment range (The range is set to zero when Narrow Optional Filter is used.)

(CAR1) :Option Filter correction value

(CAR2) :BW 500Hz Filter correction value

(CAR3) :BW 2.7kHz Filter correction value

(DSPFC) :DSP\_Filter\_Center

Variable according to the High / Low setting value of DSP Filter

DSPFC = (Low\_Cut + (High\_Cut - Low\_Cut) / 2)

(DSHIFT) :DATA mode SHIFT setting value (Initial value 1.5 kHz)

Table 2 LO1/LO3 (During transmitting) frequency shift data

**Frequency: 0.03~74.8MHz**

TX LO1	IC201 HMC829 (LPEN2)											
	USB	USB-DATA	LSB	LSB-DATA	CW	CW-R	PSK	PSK-R	FSK	FSK-R	AM	FM
Mode offset	+1.5k	+1.5k	-1.5k	-1.5k	0	0	0	0	-(FSK SHIFT/2)	-(FSK SHIFT/2)	0	0
XIT	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)	( $\Delta$ XIT)

TX LO3	IC601 AD9835 (LDEN2)											
	USB	USB-DATA	LSB	LSB-DATA	CW	CW-R	PSK	PSK-R	FSK	FSK-R	AM	FM
Mode offset	-1.5k	-1.5k	+1.5k	+1.5k	0	0	0	0	0	0	0	0

( $\Delta$ XIT) :XIT frequency variable amount (-9.999~+9.999kHz)

(FSK SHIFT) :FSK shift width frequency (170Hz [85Hz], 200Hz [100Hz], 425Hz [212Hz], 850Hz [425Hz], and initial value: 170Hz)

\* In the case of FSK SHIFT / 2 in parentheses [ ]

**2.1.4 Receiver Circuit**

A double heterodyne down conversion is adopted for the receiver circuit so that the 8.248MHz is used for the 1st IF signal, 36kHz is used for the 2nd IF signal in FM mode, and 24kHz is used in modes other than FM.

**2.1.4.1 From the Antenna Terminal to the Pre-Amplifier (Q604)**

The received signal from the antenna terminal (ANT1/ANT2) passes through the antenna switching relay (K301) in the FINAL unit (XC3-062), the IN/THROUGH switching relay (K302) in the antenna tuner, and transmission/reception switching relay (K303), and is sent to the CN201 (RAT) on the TX-RX unit (XC1-269) through a coaxial cable.

Figure 3 shows a block diagram from the RAT to the front part in the receiving circuit in the TX-RX unit.

The signal which is applied to the TX-RX unit passes through the RX ANT relay (K201), excessive input cutoff relay (K203), and the relay (K204) supporting the ANT OUT function, and is fed to the ATT circuit (OFF/ 6dB/ 12dB/ 18dB switchable). When the ANT OUT function is operated during reception, the received signal via the distributor (L205) can be sent from the ANT OUT terminal. When this signal is applied to the external receiver, it can be received at the same time and the scope function of the receiver can be used. The input signal is then fed to the BPF via the LPF, surge current absorbing limiter, 1st IF trap (8.248MHz TRAP), and BC band attenuator (except 30kHz to 1.705MHz) [(E type only): Broadcast Bands Trap (11MHz/15MHz)].

The BPF divides in the range as shown in table 2. In order to prevent intermodulation due to high power broadcasting stations in the medium wave band, the ATT (attenuator) is mounted on the BPF of the BC band (ATT ON: CN301=open, CN302=short / ATT OFF: CN301=short, CN302=open). In addition to the received signal, the transmission signal also passes through the BPF during transmission.

The input signal passing through the BPF is fed to the pre-amplifier (Q604) via the VHFATT switching relay for general coverage (K601). The pre-amplifier of this transceiver uses a bipolar transistor and forms a grounded emitter circuit. This pre-amplifier (Q604) has a gain adjustment function to switch the emitter feedback level. With the pre-amplifier key, the gain can be selected from three stages, PRE1 ON, PRE2 ON, and PRE OFF. When PRE1 ON is selected, the gain is approximately 12 dB, when PRE2 ON is selected, the gain is approximately 20 dB, and when PRE OFF is selected, the pre-amplifier circuit is bypassed. When PRE OFF is selected during general coverage reception (35 to 49.999M, 54 to 69.999M, and 70.5 to 74.800MHz), the VHFATT switching relay for general coverage (K601) operates, so that the signal passes through the ATT of approximately 6 dB and is amplified to an amount equivalent to that when PRE1 ON is selected. As described above, when PRE OFF is selected during general coverage reception, the gain is excessive by approximately 6 dB, but the signal is attenuated in the RGC circuit in the 1st IF stage so that the gain is equivalent to that when PRE OFF is selected in other frequency bands.

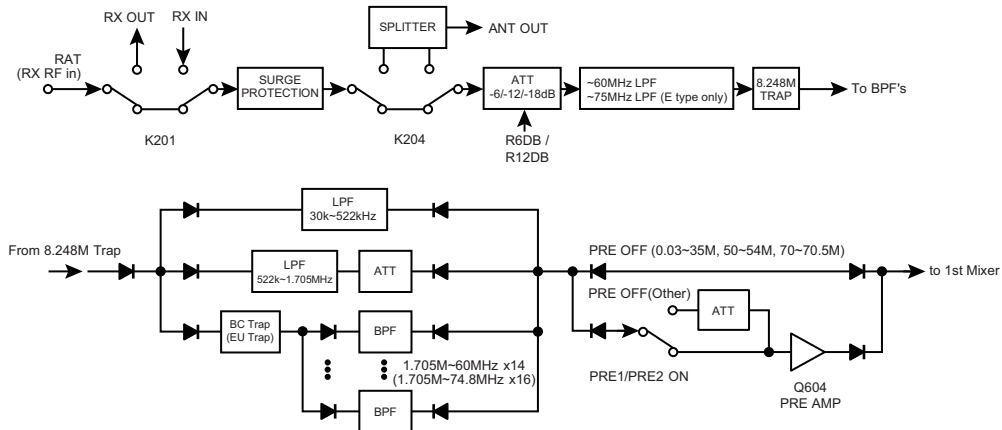


Fig.3 From the antenna terminal to the pre-amplifier (Q604)

Table 3 Mode, conversion method, and IF frequency

Mode		SSB	CW	FSK/PSK	AM	FM
RX path	Conversion method	Double				
	IF frequency	1st	8.248MHz			
		2nd	24kHz			36kHz

Table 4 BPF range

BPF No.	Band	Filter range(K type)	Filter range(E type)
1	135kHz	30~522kHz	30~522kHz
2	BC	522kHz~1.705MHz	522kHz~1.705MHz
3	1.8MHz	1.705~2.5MHz	1.705~2.5MHz
4	3.5MHz	2.5~4.1MHz	2.5~4.1MHz
5	5MHz	4.1~6.0MHz	4.1~6.0MHz
6	7MHz	6.0~7.5MHz	6.0~7.5MHz
7	10MHz	7.5~10.5MHz	7.5~10.5MHz
8	14MHz	10.5~14.5MHz	10.5~14.5MHz
9	18MHz	14.5~18.5MHz	14.5~18.5MHz
10	21MHz	18.5~22.5MHz	18.5~22.5MHz
11	24MHz	22.5~27.5MHz	22.5~27.5MHz
12	28MHz	27.5~35MHz	27.5~35MHz
13	35MHz	35~41.5MHz	35~41.5MHz
14	45MHz	41.5~48.0MHz	41.5~48.0MHz
15	50MHz	48.0~55MHz	48.0~55MHz
16	60MHz	55~60MHz	55~62MHz
17	65MHz	-	62~69MHz
18	70MHz	-	69~74.8MHz

Table 5 Pre-amplifier operation

Frequency [MHz]		PRE OFF				PRE 1 ON				PRE 2 ON				
Upper limit	lower limit	VHFATT	PREAMP	RGC	∠Gain	VHFATT	PREAMP	RGC	∠Gain	VHFATT	PREAMP	RGC	∠Gain	
0.030	21.499	0dB	0dB	0dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB	
21.500	34.999	0dB	0dB	0dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB	
35.000	49.999	-6dB	12dB	-6dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB	
50.000	53.999	0dB	0dB	0dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB	
54.000	59.999	-6dB	12dB	-6dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB	
*1	60.000	69.999	-6dB	12dB	-6dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB
*1	70.000	70.499	0dB	0dB	0dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB
*1	70.500	74.799	-6dB	12dB	-6dB	0dB	0dB	12dB	-2dB	10dB	0dB	20dB	0dB	20dB

\*1: E type only



### 2.1.4.2 From the Pre-Amplifier and the 2nd Mixer

Figure 4 shows a block diagram of the pre-amplifier to the 2nd mixer.

The signal passing through the pre-amplifier is fed to the 1st mixer via the 1st IF trap (8.248MHz TRAP).

The 1st mixer is a mixer of H-mode type with a bus switch (IC602) accompanied by a transformer. The signal is mixed with the LO1 signal at a level of approximately +10 dBm and is converted into the 1st IF signal (8.248MHz). The +6 V power supply generated with the 6VAVR (IC601) is applied to the bus switch (IC602). With this bus switch (IC602), a bias voltage of 3.0 V is applied to each port of RF and IF1, and a bias voltage of approximately 1.9 V is applied to the LO1 port.

The 1st IF signal passing through the diplexer placed to enable the wide-band matching of the output impedance of the 1st mixer is divided into two in the branch circuit, one of which is applied to the CONTROL (DSP/FPGA) unit (XC1-270 2/2) as the IF signal of the SCOPE and the other becomes the receiver's 1st IF signal. The receiver's 1st IF signal is further distributed into 2 paths depending on whether the NB1 is selected or not. When the NB1 supporting the noise blanker function is selected, the receiver's 1st IF signal passes through the 2-pole MCF (XF601) intended for band limitation. When the NB1 is not selected, it passes through the path (ATT side) bypassing the 2-pole MCF (XF601).

The 1st IF signal is then amplified by approximately 12 dB in the post-amplifier (Q611) intended for the improvement of the NF of the receiver, and is applied to the blanking gate circuit (D704 to D707). When the noise blanker function is ON, the blanking gate circuit is driven with the noise detection signal which is amplified high in the noise detector, and the noise is removed.

The 1st IF signal then passes through the filter automatically selected from the four IF filters (roofing filters: XF801 to XF804) according to the mode and the DSP filter bandwidth (Refer to Table \*). Any filter can also be chosen with the filter setting menu. In addition, an IF filter with a BW of 270Hz can also be additionally set as an option filter to the option filter slot.

The 1st IF signal passing the IF filter is applied to the AGC amplifier (Q807) that uses a dual-gate FET. The gain of the 1st IF signal is varied with the gate voltage control of the AGC amplifier (Q807) using the AGC voltage (AGCV) sent from the DSP.

It is further amplified by approximately 20 dB in the RX IF1 amplifier (Q811 and Q812), and then passes through the IFGC circuit (D817) using a PIN diode. The voltage suitable for each IF filter is applied to D817 to compensate for the insertion loss of the IF filters (500Hz, 2.7kHz, 6kHz, 15kHz, and OPTION: 270Hz).

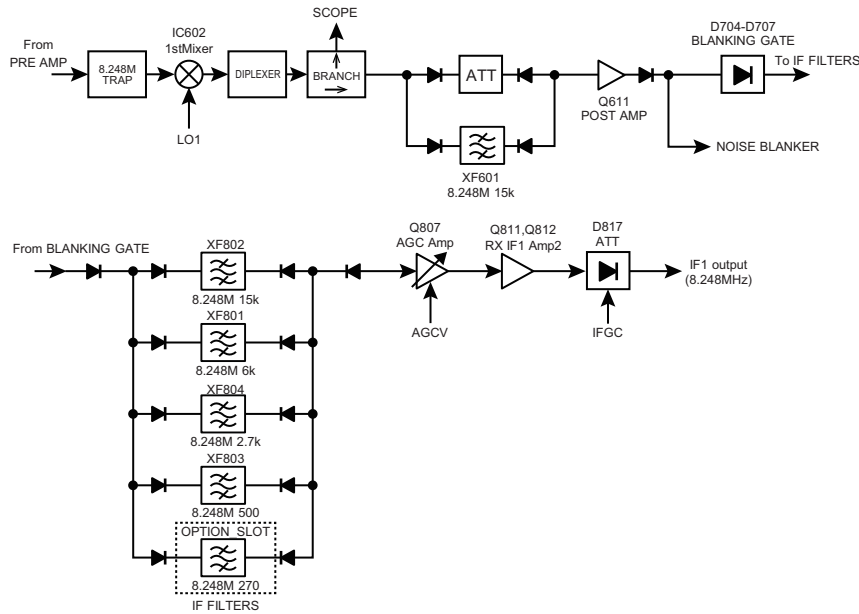


Fig.4 From the pre-amplifier to the second mixer

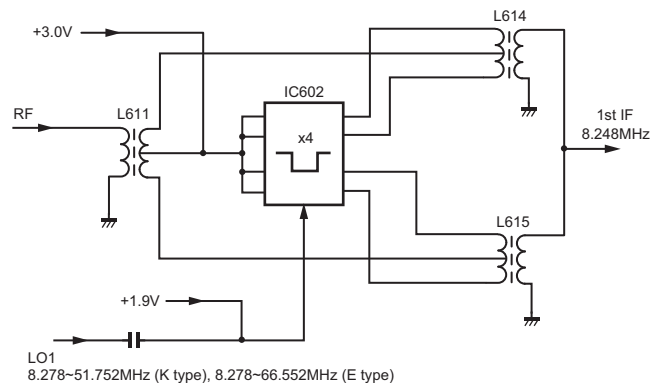


Fig.5 1st mixer circuit

Table 6 IF filter specifications

Item	XF601, XF802: L7B-0032-00	XF801: L7B-0031-00	XF804: L7B-0030-00
Nominal center frequency	8.248MHz	8.248MHz	8.248MHz
Pass bandwidth	±7.5kHz or more at 3dB	±3kHz or more at 6dB	±1.35kHz or more at 6dB
Attenuation bandwidth	±37.5kHz or less at 60dB	±16kHz or less at 60dB	±3.75kHz or less at 60dB
Ripple	1dB or less	1dB or less	2dB or less
Insertion loss	3dB or less	3dB or less	5dB or less
Guaranteed attenuation	70dB or more at fo±1MHz	70dB or more at fo±1MHz	70dB or more at fo±1MHz
Center frequency deviation	Within fo±1000Hz	Within fo±500Hz	Within fo±200Hz
Terminating impedance	5.6kohm//0pF//2pF	2.4kohm//2pF//15pF	1.35kohm//7pF

Item	XF803: L7B-0029-00
Nominal center frequency	8.248MHz
Pass bandwidth	±250Hz or more at 6dB
Attenuation bandwidth	±700Hz or less at 60dB
Ripple	2dB or less
Insertion loss	4dB or less
Guaranteed attenuation	70dB or more at fo±48kHz
Center frequency deviation	Within fo±100Hz
Terminating impedance	50ohm

Table 7 Selecting an IF filter

IF frequency	IF filter	Mode					
		FM	AM	SSB	PSK	FSK	CW
8.248MHz	15kHz	○	○				
	6kHz		○	○	○		
	2.7kHz			○	○	○	○
	500Hz			○	○	○	○
	270Hz *1			○	○	○	○

\*1: Optional filter

Table 8 RX IF filter settings

SSB at Slope Tune [Hz]		FM at Slope Tune [Hz]		SSB at VBT [Hz]			PSK at VBT [Hz]		AM [Hz]			CW [Hz]			FSK [Hz]	
LOW CUT	HI CUT	LOW CUT	HI CUT	WIDTH	SHIFT	IFBW	WIDTH	IFBW	LOW CUT	HI CUT	IFBW	WIDTH	IFBW	SHIFT	WIDTH	IFBW
0	600	0	1000	50	50	(270)*	50	(270)*	0	2000		50	(270)*	-800	250	(270)*
50	50	50	1000	80	80	(270)*	80	(270)*	100		6k	80	(270)*	300	300	500
100	2700	100	2700	100	1450	(270)*	100	(270)*	200	3000		100	(270)*	-10	350	500
200 (100 step)	200	200 (100 step)	150	150	(50 step)	(270)*	150	(270)*	300	(100 step)		150	(270)*	(10 step)	400	500
300	2800	300	2800	200	1500	(270)*	200	(270)*		3500	15k	200	(270)*	0	450	500
2900	2900	2900	250	1550		(270)*	250	(270)*		4000	15k	250	(270)*	10	500	500
3000	3000	1000	300	300			300	500		5000	15k	300	500		1000	2.7k
2000 (100 step)	3400 (100 step)	3400 (100 step)	350	2500	(50 step)		500	350	500			350	500	800	1500	2.7k
	4000	4000	400				500	400	500			400	500	(10 step)		
	5000		5000	450			500	450	500			450	500			
			600				500	500	500			500	500			
								600				600				
						2.7k		1000	2.7k			1000	2.7k			
				2600		2.7k		1000 (100 step)				1000 (100 step)				
				2700		2.7k		1200	2.7k			1500	2.7k			
				2800		6k		1400	2.7k			2000	2.7k			
				2900		6k		1500	2.7k			2500	2.7k			
				3000		6k		1600								
									2.7k							
								2600								
								2600 (200 step)								
								2800	6k							
								3000	6k							

FSK tone	FSK shift	Center frequency
1275Hz	170Hz	1360Hz
	200Hz	1375Hz
	425Hz	1487.5Hz
	850Hz	1700Hz
2125Hz	170Hz	2210Hz
	200Hz	2225Hz
	425Hz	2337.5Hz
	850Hz	2550Hz

Initial value

\* LOW CUT: Low-cut frequency, HI CUT: High-cut frequency, WIDTH: Bandwidth, SHIFT: Center frequency (SSB), SHIFT (L/H): Amount of change from the center frequency (CW), IFBW: Bandwidth with the roofing filter (270Hz is when optional filter is installed.)

### 2.1.4.3 From the 2nd Mixer to the RIF Output

Figure 6 shows a block diagram of the 2nd mixer to the RIF output.

The signal passing through the IFGC circuit (D817) is applied to the 2nd mixer (D818 and D819). In the 2nd mixer, the signal is converted into the 36kHz 2nd IF signal in FM mode and into 24kHz 2nd IF signal in modes other than FM. The frequency of the LO3 supplied and mixed for conversion into the 2nd IF signal is 8.212MHz in FM mode and 8.224MHz in modes other than FM.

After converted into the 2nd IF signal and then amplified in the RX IF2 amplifier (IC802 2/2) via the TX/RX switch (IC803), this signal is applied as the RIF signal from the connector (CN807) to the CONTROL (DSP/FPGA) unit (XC1-270 2/2).

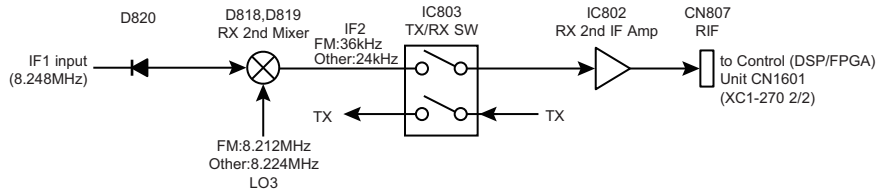


Fig.6 From the second mixer to the RIF output

### 2.1.5 Noise Blanker Circuit

#### ■Noise Detector

The noise detector removes pulse noise of short cycle.

The 1st IF signal (8.248MHz) passes through the buffer amplifier (Q703), makes a connection inside the TX-RX unit with the coaxial cable (between CN701 and CN702), and is applied to the NB amplifier circuit. The 1st IF signal is amplified by the 4-stage amplifier (Q704, Q705/Q706, Q707/Q708, and Q710) in the NB amplifier circuit. The 1st IF signal then passes through the buffer amplifier (Q712) and is noise detected by D701. With the switching signals Q711 and Q713 (Figure 7) and Q714 and Q715 (Figure 8) using this detecting voltage, the noise blanking gates (D704 to D707) are controlled, the 1st IF signal is attenuated according to noise, and the pulsive noise contained in the audio output is removed.

The AGC works when a long cycle signal is applied, and the gains of NB amplifier 1 to NB amplifier 4 fall. This results in a low detecting voltage, and Q713 is not turned ON. Thus, the blanking gate circuit does not operate. The AGC does not work for short pulses, which results in a high detecting voltage, and Q713 is turned ON. Therefore, the blanking gate circuit operates.

When the NB function is turned ON, a DC voltage NBL (threshold control voltage) is applied to the emitter of Q711 from the D/A converter (DAC: IC553), so that the Noise Blanking effect can be adjusted by varying the emitter voltage.

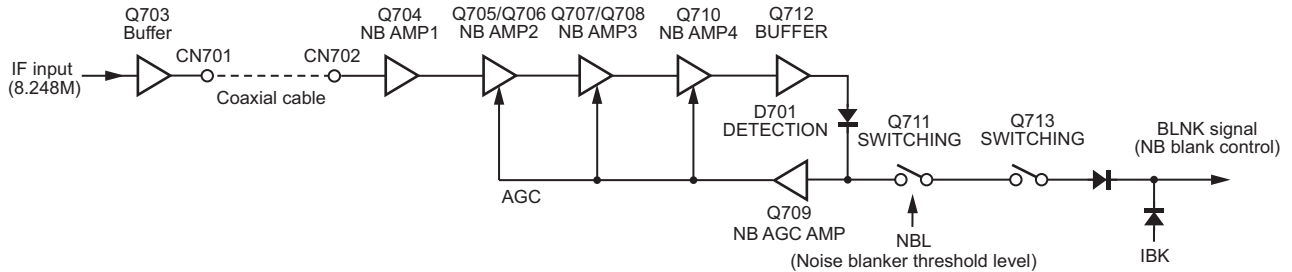


Fig.7 Noise detection circuit

#### ■Blanking Gate Circuit

The blanking gate circuit consisting of PIN diodes attenuates the 1st IF signal by the pulse signal detected in the noise detector and removes pulse noises. When pulse noise is detected in the NB circuit, the BLNK signal goes to "H", Q714 is turned ON, and Q715 is turned OFF. Diodes D704 and D705 are then turned OFF and the IF signal is attenuated.

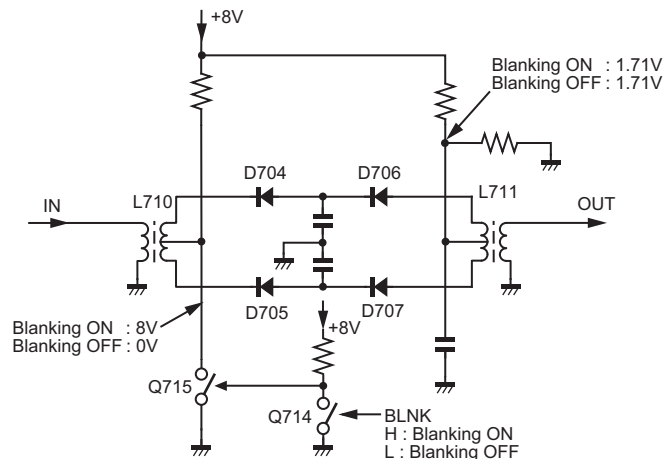


Fig.8 Blanking gate circuit

## 2.1.6 Transmission Circuit

### 2.1.6.1 From the Transmission Signal (TIF) to the Drive Output

The transmission signal (TIF) which is sent from the CONTROL (DSP/FPGA) unit (XC1-270 2/2) is sent regardless of the type of radio waves (FM: 36kHz, modes other than FM: 24kHz).

The TIF signal is converted into the 8.248MHz transmission IF signal by the mixer circuit (D818 and D819). The 8.248MHz transmission IF signal then passes through the IF filter and is applied to the TGC circuit (consisting of D1209, D1210, and D1211). The TGC circuit operates the variable attenuator with the TGC adjusting voltage, and varies the level of the 8.248MHz transmission IF signal. The variable level provides the TGC function which controls each band's transmission gain.

The 8.248MHz transmission IF signal is converted into the 71.752MHz transmission IF signal by the mixer circuit (IC1201). The output level of the 71.752MHz transmission IF signal is made variable by varying the impedance with the current that passes through the pin diode (D1208). The variable output level corrects the transmission output level (PGC function) at the time of power control.

The transmission IF signal is applied to the first gate of the transmission IF amplifier (Q1203) for ALC control, and the gain is adjusted by controlling the second gate by the ALC voltage.

E type only:

The transmission IF signal in the 70MHz band is switched from 71.752MHz to 41.752MHz.

It is converted to the target transmission frequency in the final transmission mixer circuit (Q1201 and Q1202). After passing through the transmission BPF, it is amplified to the power needed to drive the final circuit in the drive amplifier (Q1104).

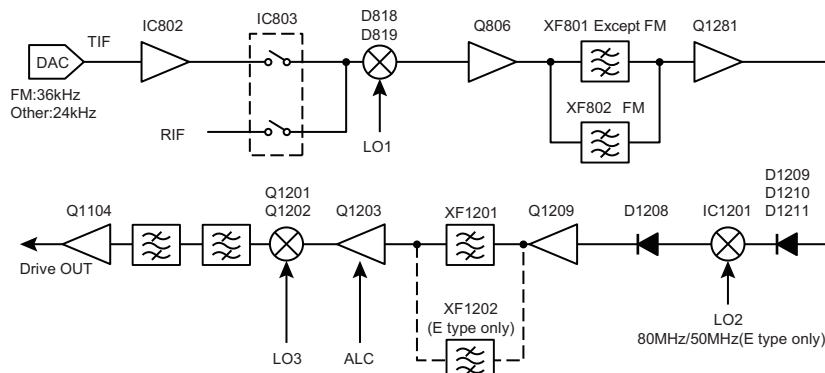


Fig.9 From the Transmission Signal (TIF) to the Drive output

### 2.1.6.2 From the Drive Output to the Antenna

The transmission signal from the drive output (TXRF) is amplified to the specified power by the final stage (Q2, Q3, Q4, and Q5) and sent from the antenna terminal through the LPF. This transceiver includes a relay antenna tuner circuit that operates in all bands.

The transmission signal that is applied to the CN1 of the FINAL unit (XC3-062) is power amplified by Q2, Q3, Q4, and Q5. The harmonic components are then removed by the LPF, and the signal goes through the forward/reflected wave detector (L124), transmission/reception switching (K303), antenna tuner IN/THROUGH switching relay (K302), amplitude/phase detector (IC103 and IC104) for the antenna tuner, and antenna switching relay (K301), and is finally sent from ANT1 or ANT2. Transmission/reception switching is in a configuration using PIN diodes (D302, D305, D306, and D307) and the reed relay (K303).

In the antenna tuner (ANT Tuner), a C, and an L and a C in combination tune the signal. Its operation is as follows: IC104's phase error signal (Phase ERROR OUT) switches the input side capacitor of the tuning circuit, and the IC103's amplitude difference signal (Amplitude ERROR OUT) switches the output side capacitor. The SWR is decided by calculating the voltage of the forward wave and that of the reflected wave with the MPU.

There are protection circuits such as the circuits for controlling the transmission output and fans by detecting Q4 and Q5 temperatures.

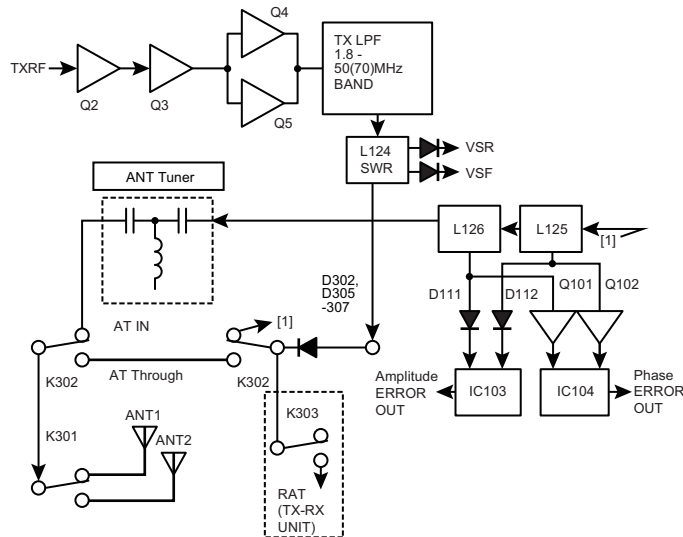


Fig.10 From the drive output to the antenna terminal

### 2.1.6.3 Transmit Power Control

Transmit power control is done the same way as in previous models; Control is done referencing the ALC voltage.

The voltage detected by the forward wave voltage (VSF)/reflected wave voltage (VSR) detector in the FINAL unit (XC3-062) is sent to the TX-RX unit (XC1-269). For the transmission output, the VSF and the POC voltage are compared, and the ALC voltage is controlled to achieve the desired output.

SWR protection is controlled by the reflected wave voltage (VSR). The reflected wave voltage (VSR) is applied to IC1001 1/2. If it exceeds a specified voltage (SWR increases), the output of IC1002 controls the ALC voltage, thus lowering the transmit power.

Current protection is done the same way as SWR protection; If the drain current (ID) exceeds a specified value, the output of IC1001 2/2 controls the ALC voltage, thus limiting the current.

The power meter is calculated from the forward wave voltage (VSF), the SWR meter is calculated from the forward wave and the reflected wave voltage, and the ALC meter is amplified from the ALC voltage by the OP AMP, and they are applied to the A/D converter for meter-indication.

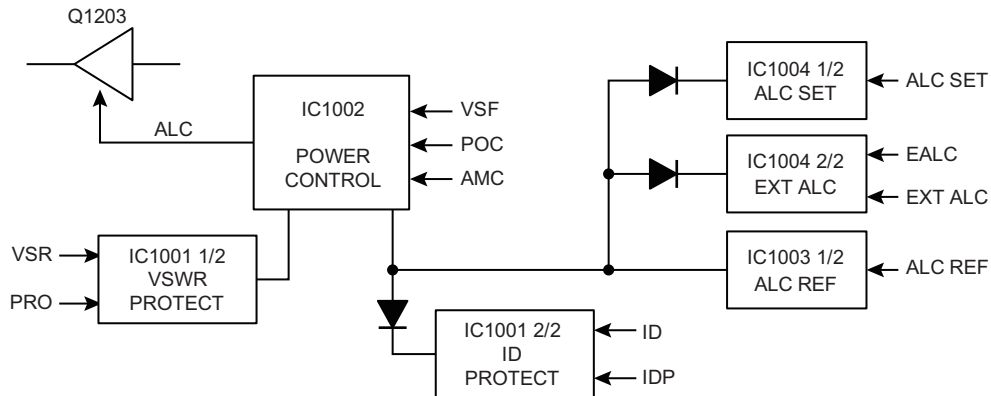


Fig.11 Transmit power control

### 2.1.7 Scope Circuit

The input signal (SCOPE IF) into the scope circuit is an IF signal obtained from the TX-RX unit (XC1-269 CN603). At the time of signal reception, it is 8.248MHz. And the scope display is available at the time of signal transmission, and the input signal is the 8.248MHz IF signal obtained from the TX-RX unit at the time of signal reception.

The signal which is applied from the TX-RX unit (XC1-269 CN603) to the CONTROL (DSP/FPGA) unit (XC1-270 2/2 CN1500) is amplified by the buffer amplifier (Q1500). To remove out-of-band signals, the output signal from the buffer amplifier passes through the filter circuit and the attenuator circuit and is applied to the differential amplifier (IC1501). It is converted into a differential signal in the differential amplifier, and is applied to the A/D converter (IC1502).

The filter circuit is switched between the wide-band filter and the narrow-band filter according to the display span. Connect an appropriate device, such as a tracking generator, to the adjustment connectors (CN1502 and CN1503) and turn the trimmers (TC1500 and TC1502) to adjust the narrow-band filter. Adjustment is possible with the CONTROL unit alone; no need for a power supply or connection to another unit. The attenuator provides three levels of attenuation, -10 dB, -20 dB, and -30 dB.

The clock signal (INT CLK) which is applied from the PLL unit (XC2-036 CN800) to the CONTROL (DSP/FPGA) unit (XC1-270 2/2 CN1501) is amplified by the amplifier (Q1512 and IC1500) and applied to the A/D converter (IC1502).

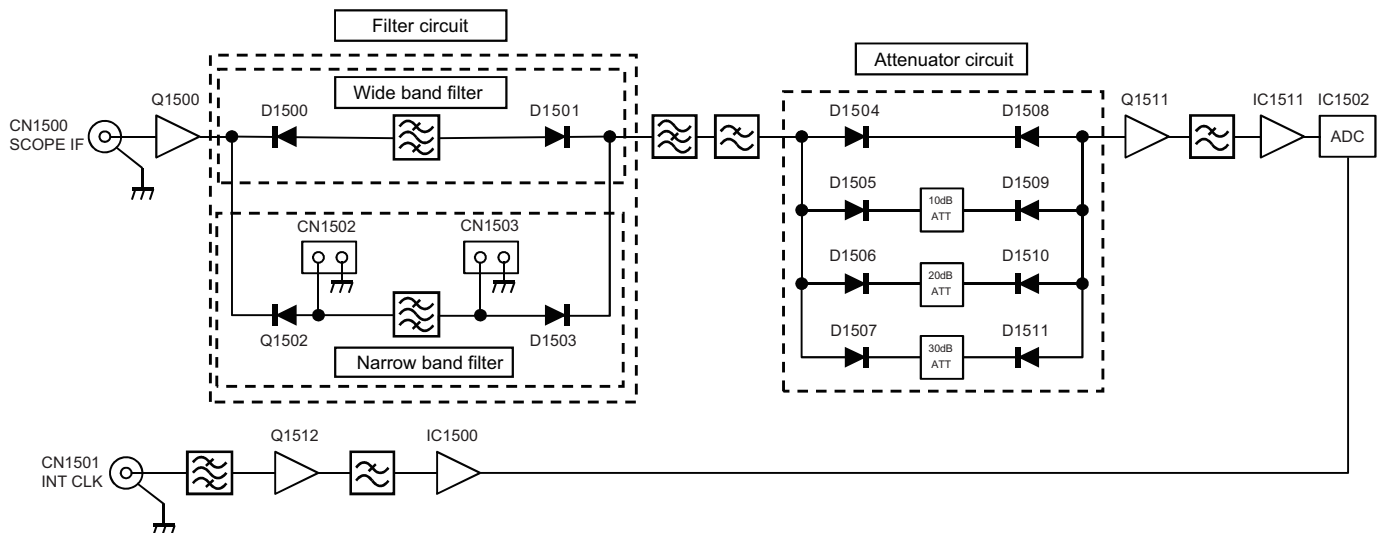


Fig.12 Scope circuit

## 2.1.8 FPGA (Field Programmable Gate Array) and the Peripheral Circuit

### ■FPGA (IC1400) and the Peripheral Circuit

The FPGA (IC1400) program is stored in the flash memory (IC1401). The operating voltages and clocks are as follows.

Operating voltages:

Internal core voltage (1.2 V), I/O voltage (1.8 V) for the interface with the ADC (IC1502) for the IF, and another interface I/O voltage (3.3 V)

Operating clocks:

Operating clock (39.3216MHz) for band scope data processing and another operating clock (24.576MHz) for generating ADC/DAC clocks

For SPI communication between the FPGA (IC1400) and the SUB MPU (IC1100), the SPI port to connect is switched between IC1402 and IC1403 depending on whether the program is operated with a normal command and depending on whether the FPGA (IC1400) program is upgraded. During SPI communication, the SUB MPU serves as the master and the FPGA serves as a slave.

The FPGA (IC1400) performs the following operations:

- (1) Down convert the scope IF data sent from the ADC for the IF (IC1502) to the SCP\_DSP (IC1300).
- (2) Supply the MCLK, SCLK, and LRCK to each DSP and each ADC/DAC.  
 Destination of the MCLK1, SCLK1, and LRCK1: IC1200, IC1300, IC1605, IC1606  
 Destination of the MCLK2, SCLK2, and LRCK2: IC1600, IC1601, IC1602, IC1603, IC1604  
 \* The frequencies are as follows: MCLK1/MCLK2=24.576MHz, SCLK1/SCLK2=6.144MHz, and SRCK1/LRCK2=96kHz.
- (3) Select one from the signals applied from the CN1050 (ACCRTK, VCTS1D, VDSR1D, VCTS2D, and VDSR2D) and send as the RTK signal to the TXMRX\_DSP (IC1200), using the SUB MPU (IC1100) command.
- (4) Hold the out-of-range signal (pin 23, IC1502) from the ADC for the IF (IC1502) for a certain period of time, convert the voltage from 1.8 V to 3.3 V, and output the signal as the ADCOVR signal to the SUB MPU (IC1100).
- (5) To the TXMRX\_DSP (IC1200) and SCP\_DSP (IC1300), send the flag signal (FRDY) as to whether the FPGA (IC1400) is operable.

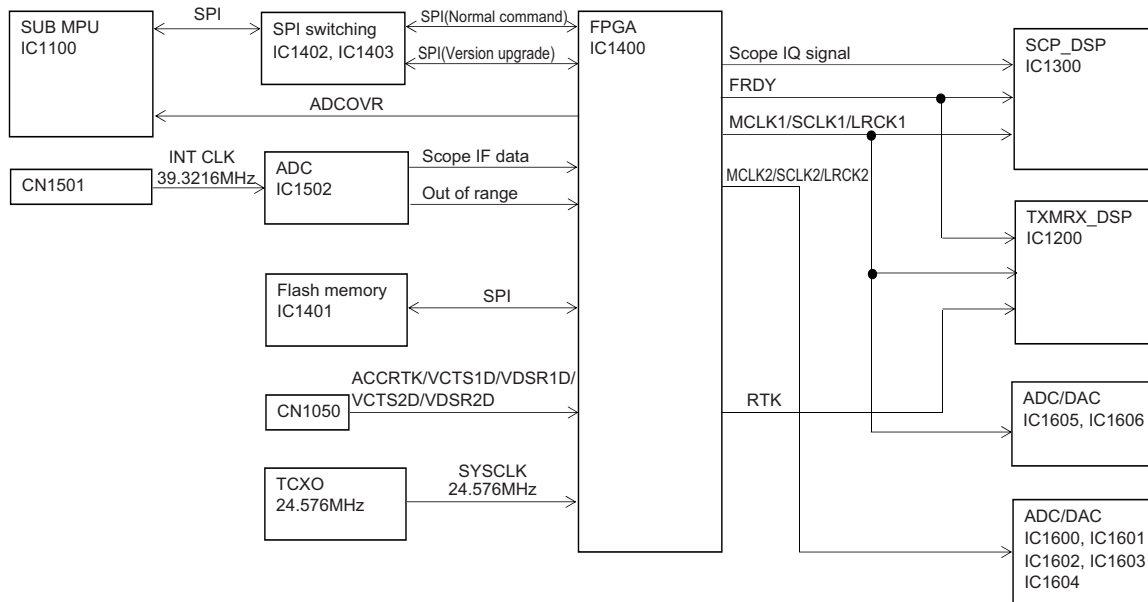


Fig.13 FPGA and the Peripheral circuit

## 2.1.9 DSP Circuit

### ■Outline

The DSP circuit consists of two DSPs (IC1200 and IC1300), SUB MPU (IC1100), Latch circuits (IC1202, IC1203, IC1302, and IC1303), two flash memories (IC1201 and IC1301), two A/D converter (ADC) circuits (IC1601 and IC1605), five D/A converter (DAC) circuits (IC1600, IC1602, IC1603, IC1604, and IC1606), electronic volume circuit (IC1619), AF amplifier circuit (IC1616), and headphone amplifier (IC1622).

The SUB MPU uses the UART to perform communications with the control block (Main MPU: IC101) while the SPI performs communications between the DSP and the SUB MPU.

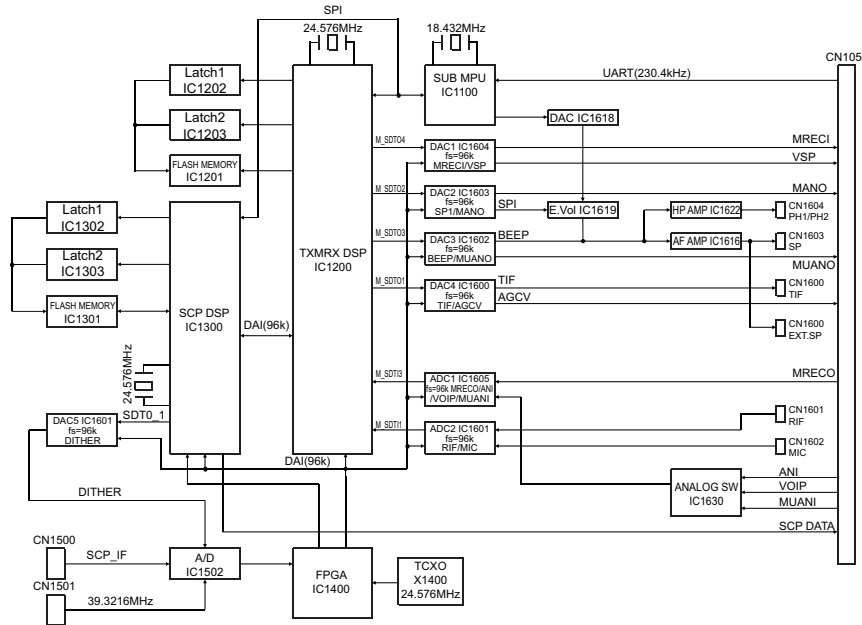


Fig.14 DSP circuit

### ■DSPs (IC1200 and IC1300) and the Peripheral Circuit

There are two types of DSPs (IC1200 and IC1300).

The TXMRX-DSP (IC1200) is used for transmission, reception, and RTTY/PSK31 encoding, and operates at an internal core voltage of 1.2 V, external I/O voltage of 3.3 V, reference clock frequency of 24.576MHz, and operating clock frequency of 331.776MHz.

The SCOPE DSP (SCP-DSP) (IC1300) is used for the processing for displaying the band scope and so on and for RTTY/PSK31 decoding, and operates at an internal core voltage of 1.2 V, external I/O voltage of 3.3 V, reference clock frequency of 24.576MHz, and operating clock frequency of 331.776MHz.

The FPGA (IC1400) supplies the BICK (SCLK96K) and LRCK (LRCK96K) for an MCLK frequency of 24.576MHz and a sampling frequency (fs) of 96kHz to each ADC and DAC.

The SCLK96K and LRCK96K for a sampling frequency (fs) of 96kHz are also supplied to the TXMRX-DSP (IC1200) and SCOPE DSP (SCP-DSP) (IC1300).

The Flash memories (IC1201 and IC1301) are used to store each DSP program, the Latch circuits (IC1202 and IC1203) are used as an address decoder for the TXMRX-DSP use, and the Latch circuits (IC1302 and IC1303) are used as an address decoder for the SCOPE DSP (SCP-DSP) use.

The Main MPU (IC101) serves as a HOST. Therefore, the SUB MPU (IC1100) performs conversion to the UART (230.4kHz) to enable communications between the SUB MPU (IC1100) and the HOST and performs conversion to the SPI to enable communications between the SUB MPU (IC1100) and each DSP.

The SUB MPU is connected to the DAC (IC1618) to control the electronic volume IC (IC1619) in control of various functions, such as volume control, mute control, DSP reset release control, or boot control. When the SUB MPU is in SPI communication with the DSPs, the SUB MPU serves as the master and each DSP serves as a slave.

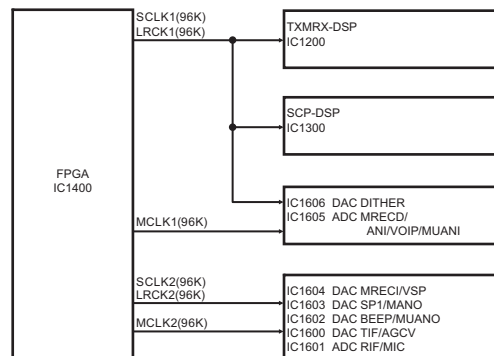


Fig.15 DSPs (IC1200 and IC1300) and the Peripheral Circuit

### ■Reception Signal Path (IF Signal/FM Wave Detection to AF Output)

The received IF signal (RIF) sent from the TX-RX unit (XC1-269) is sent to the RIF connector (CN1601) and applied to the L channel of the ADC (IC1601) through the active filters (IC1612 and IC1611).

The TXMRX-DSP performs reception signal processing on the RIF signal sampled by the ADC at an fs of 96kHz.

The processed signal is sent from the TXMRX-DSP to the DAC (IC1603), the DAC (IC1603) converts it to the AF signal at an fs of 96kHz, and the signal for the SP1 is sent. The signal for the SP1 passes through the active filter (IC1623), and is then set to a certain voltage level by the electronic volume circuit (IC1619). It is mixed with the BEEP signal in IC1620, and is applied to the AF power amplifier circuit (IC1616) and headphone amplifier (IC1622).

The signal applied to the AF power amplifier circuit passes through the mute circuit (which operates as SMUTE1), and then the SP1 signal is sent as a built-in speaker output from CN1603. If an external SP1 is used, the signal is sent from J1600 (the SP1 and the built-in speaker are mutually exclusive).

The SP1 signal applied to the headphone amplifier passes through the mute circuit (which operates as PMUTE), and is then sent from CN1604 and connected to the PHONE jack on the front panel.

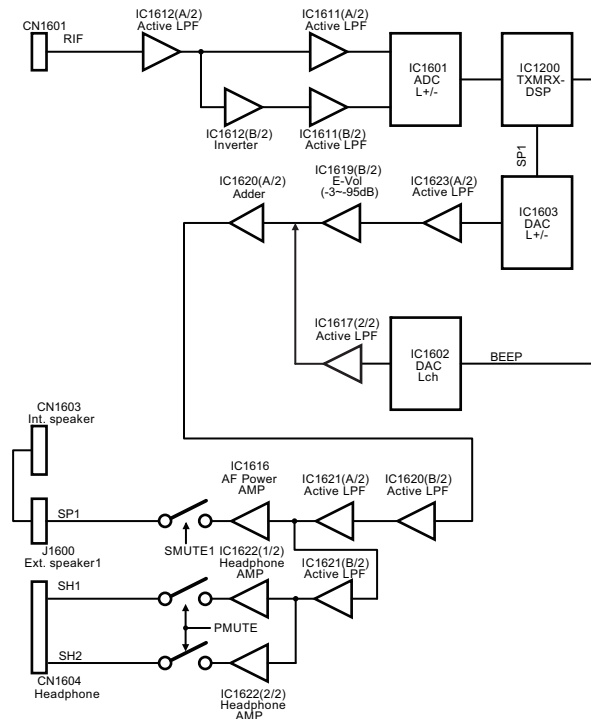


Fig.16 Receive signal path

### ■Transmission Signal Path (MIC Input to the IF Signal/FM Transmission AF Output)

The signal applied from the microphone passes through the DISPLAY unit (XC1-271 4/9) and is sent to the MIC connector (CN1602). The signal is received by the differential amplifier (IC1615), and is then applied to the R channel of the ADC (IC1601) through the active filters (IC1613 and IC1614).

The TXMRX-DSP (IC1200) performs transmission signal processing on the MIC signal sampled by the R channel of the ADC (IC1601) at an fs of 96kHz, and the signal is sent from the L channel of the DAC (IC1600) at an fs of 96kHz.

The signal sent from the L channel of the DAC (IC1600) passes through the active filters (IC1609 and IC1610) and is sent as the TIF signal from CN1600 to the TX-RX unit.

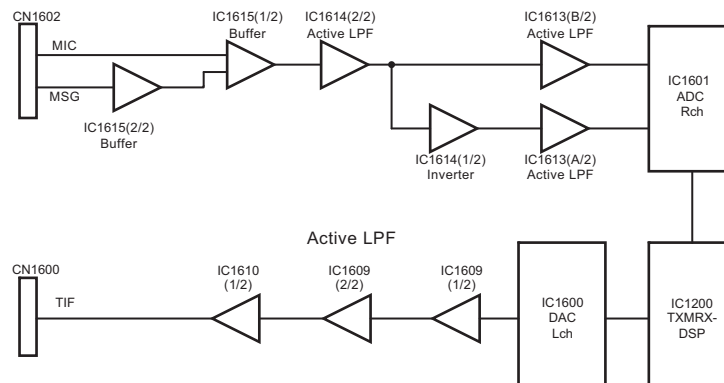


Fig.17 Transmission signal path



### ■Signal Path to External I/O

From the signal (ANI) applied from the CN1050 to the ACC2, the signal (MUANI) applied from the USB, and the signal (VOIP) applied from the LAN, one signal is selected by the analog switch (IC1630). The signal is then applied to the R channel of the ADC (IC1605) through the active filters (IC1628 and IC1629). The ANI, MUANI, and VOIP signals sampled by the ADC (IC1605) at an fs of 96kHz are sent to the TXMRX-DSP (IC1200).

#### ●Signal (MANO) sent to the ACC2

The sound processed by the TXMRX-DSP (IC1200) is sent to the DAC (IC1603), is converted into an audio signal at an fs of 96kHz, is sent from the R channel of the DAC (IC1603), passes through the active filters (IC1623 and IC1624), and is sent as the MANO signal to the ACC2 through the CN1050.

#### ●Signal (MUANO) sent to the USB

The sound processed by the TXMRX-DSP (IC1200) is sent to the DAC (IC1602), is converted into an audio signal at an fs of 96kHz, is sent from the R channel of the DAC (IC1602), passes through the active filter (IC1625), and is then applied as the MUANO signal from the CN1050 to the USB codec IC (IC806) of the CONTROL (APP) unit (XC1-270 1/2).

#### ●Signal (VSP) sent to the LAN

The sound processed by the TXMRX-DSP (IC1200) is sent to the DAC (IC1604), is converted into an audio signal at an fs of 96kHz, is sent from the R channel of the DAC (IC1604), passes through the active filter (IC1626), and is then applied as the VSP signal from the CN1050 to the CONTROL (APP) unit (XC1-270 1/2).

### ■Signal Paths of Recording Sound and Playback Sound

#### ●Recording signal (MRECI)

The sound processed by the TXMRX-DSP (IC1200) is sent to the L channel of the DAC (IC1604), is converted to an audio signal at an fs of 96kHz, is sent from the L channel of the DAC (IC1604), passes through the active filter (IC1627), and is then sent as the MRECI signal from the CN1050 to the CONTROL (APP) unit (XC1-270 1/2).

#### ●Playback sound signal (MRECO)

The playback sound signal (MRECO) is applied from the CONTROL (APP) unit (XC1-270 1/2) the CN1050 and is applied to the L channel of the ADC (IC1605). The signal sampled by the L channel of the ADC (IC1605) at an fs of 96kHz is sent to the TXMRX-DSP (IC1200).

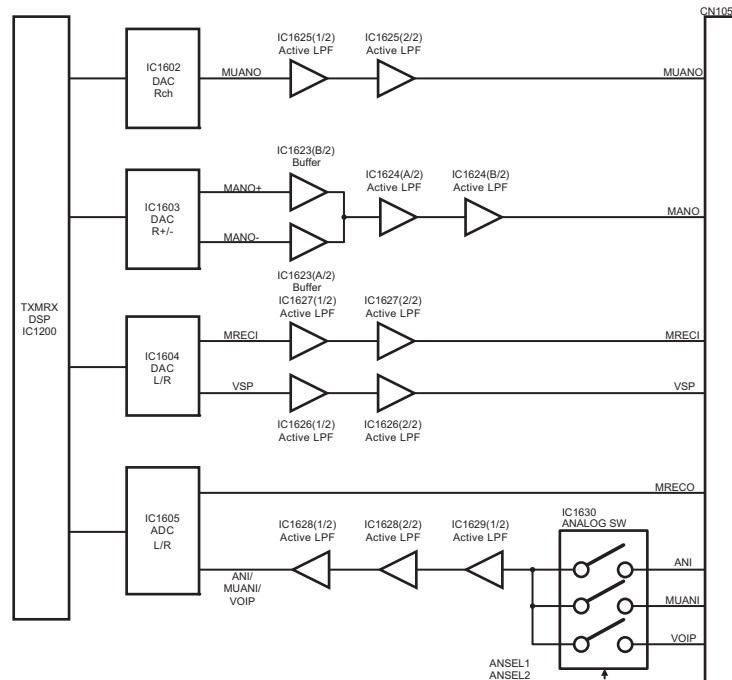


Fig.18 External I/O and signal paths of recording and playback sounds

### ■AGC Voltage Output Circuit

The AGC voltage output (MAGCV) for the main signal reception is sent from the TXMRX-DSP (IC1200) to the R channel of the DAC (IC1600) at an fs of 96kHz. It is applied from the CN1050 to the TX-RX unit via the CONTROL (APP) unit (XC1-270 1/2) after passing through the buffer amplifier (IC1608).

### ■DITHER Signal Output Circuit

The DITHER signal is sent from the SCOPE DSP (SCP-DSP) (IC1300) to the L channel of the DAC (IC1606). It is applied to the SCP\_IF after passing through the active filter (IC1607).

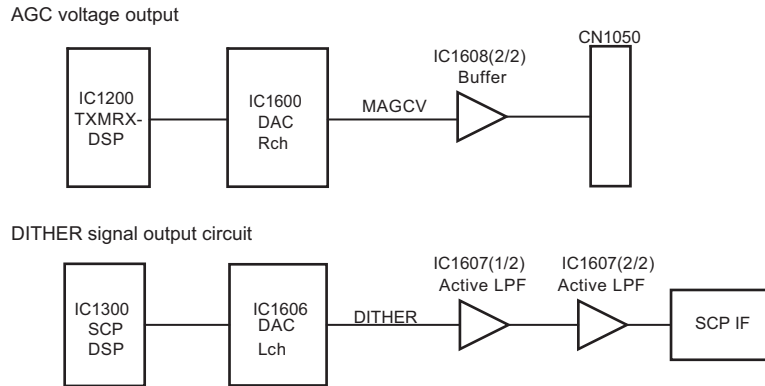


Fig.19 AGC voltage output and DITHER signal output circuit

## 2.1.10 Digital Control Circuit

### ■Outline

The digital control circuit mainly consists of the application MPU (APP MPU: IC405), program storage memories (IC401 and IC413), and computation memories (IC406 and IC407). The IC405 mainly controls the 7-inch LCD, external monitor output system (IC701 and IC703), USB transceiver (IC802 and IC803), and Ethernet PHY IC (IC901).

### ■APP MPU and Its Periphery (IC405)

The clock frequency is 26MHz and the internal operating frequency is 600MHz. As for the memory configuration, 32M-bit NOR flash memory (IC401) and 8G-bit eMMC (IC413) for program storage and two 1G-bit DDR2 memories (IC406 and IC407) for program computation are incorporated.

Three types of supply voltages in five systems are used, i.e., 1.8 V (for the DDR controller system), 3.3 V (for the I/O system), 1.2 V (for the core), 1.8 V (for others), and 3.3 V (for the USB system), and started in the sequence shown in Fig. 20.

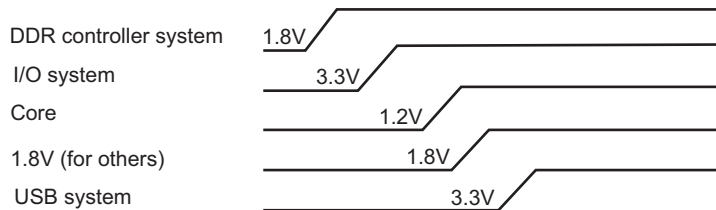


Fig.20 APP MPU peripheral (IC405)

### ■Communication with the Main MPU (IC101)

The APP MPU is basically operated by commands from the main MPU (IC101) of the same unit. These commands are transmitted in UART communication at a baud rate of 921,600 bps.

### ■Communication with the Scope DSP (IC1300)

Scope image data displayed on the main display is transmitted from the scope DSP (IC1300) mounted in CONTROL (DSP/FPGA) unit (XC1-270 2/2) to the APP MPU in serial peripheral interface (SPI) mode. The baud rate is 2,073,600 bps.

### ■Communication with the Panel MPU

Coordinate data obtained when the 7-inch LCD is touched is received through the panel MPU (IC1) of the DISPLAY unit (XC1-271). The baud rate is 115,200bps.

### ■LAN Interface

The LAN interface of this transceiver supports 100BASE-TX and 10BASE-T standards, and consists of the MAC function of the APP MPU (IC405), PHY function of the Ethernet PHY IC (IC901), and the transformer-built-in RJ-45 LAN connector (J901). The MAC interface communicates over RMII (Reduced Media Independent Interface).

The MAC address is stored in the EEPROM (IC181) connected to the main MPU, in addition to the eMMC (IC413) on the same board.

### ■USB Interface (Host)

This transceiver incorporates a 2-channel USB host function and supports USB 2.0 (Full Speed). The APP MPU (IC405) and the USB transceiver (IC802 and IC803) achieve the 2-channel host function.

The USB bus power supply uses the HIGH SIDE switch (IC801) for over-current detection. The interface of the APP MPU and USB transceiver (IC802 and IC803) performs 6-pin serial communication.

## ■DVI Output

This transceiver incorporates a DVI-I terminal with analog and digital video output functions.

As digital output, RGB888 digital signals from the APP MPU (IC405) are converted by the DVI transmitter (IC703) via the digital visual interface (DVI), so that digital image signals are sent from the DVI-I terminal (J701).

Likewise, for analog output, RGB888 digital signals from the APP MPU are subject to D/A conversion by the video DAC (IC701), so that analog image signals are sent from the DVI-I terminal (J401).

The output images are the same as images output from the main display.

## ■Recording/Playback

This transceiver has a recording/playback function. The ADC (IC409; L channel) performs the A/D conversion of recording analog signals sent from the TXMRX DSP (IC1200) of the CONTROL (DSP/FPGA) unit (XC1-270 2/2) at a sampling frequency (fs) of 16kHz. The signals are stored in the eMMC (IC413) via the APP MPU (IC405). At the time of playback, the DAC (IC408; L channel) performs the D/A conversion of the audio data memorized in the eMMC through the APP MPU at an fs of 16kHz and transmits the signal as an analog signal to the TXMRX DSP (IC1200).

## ■7-Inch LCD Interface

The LCD incorporated into this transceiver is a 7-inch (800 X 480 resolution) TFT LCD. In the interface of the LCD and the APP MPU (IC405), RGB666 digital signal sent from the APP MPU with RGB666 is fed to the buffer ICs (IC704, IC705, and IC706) where waveform shaping is performed, and the signal is transferred to the 7-inch LCD.

## ■Operating as USB 2.0 (Device)

If this transceiver is connected to a PC over a USB cable, the following four items operate as USB 2.0 devices.

### ●USB to UART bridge (IC805 and IC812)

Used for keying and PC command communication for the ARCP. There are two systems.

The signals used for keying are VCTS1D, VDSR1D, VCTS2D, and VDSR2D, and are applied to the TXMRX DSP (IC1200) through the FPGA (IC1400).

### ●USB Audio (IC806)

The USB audio operates at the time of signal transmission and reception through the microphone and speaker connected to the PC or recording the sound received.

### ●Access to the eMMC (IC413)

In the case of updating firmware through the PC, the firmware is stored temporarily in the eMMC via the APP MPU (IC405).

The above four devices are connected through the USB-B connector (J801) on the rear panel to the PC through the USB 4-channel hub (IC804).

## ■VoIP (Voice over Internet Protocol) Input/Output

This transceiver enables input/output of audio data using the Internet Protocol (IP).

As with the recording/playback function, the ADC (IC409; R channel) performs the A/D conversion of the analog signals sent from the TXMRX DSP (IC1200) at a sampling frequency (fs) of 16kHz. The signals are sent to from the LAN connector (J901) through the APP MPU (IC405).

The DAC (IC408; R channel) performs the D/A conversion of the audio data applied from the LAN connector through the APP MPU at an fs of 16kHz and transmits the signal as an analog signal to the TXMRX DSP (IC1200).

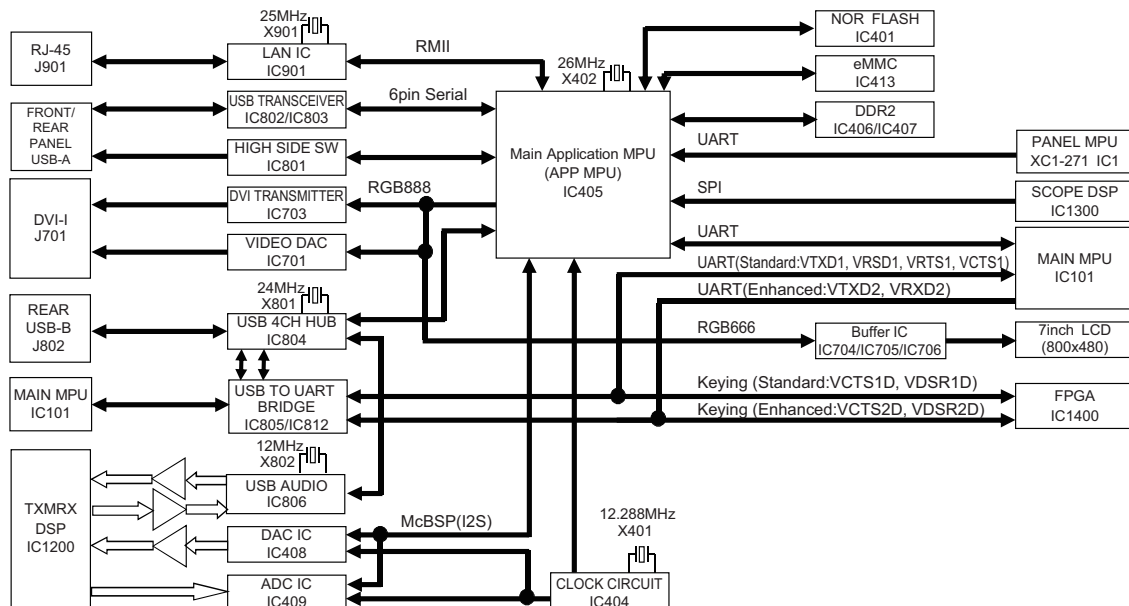


Fig.21 Digital control circuit

## 2.1.11 Control Circuit

### ■Outline

The control circuit consists of the main MPU (IC101) along with the EEPROM (IC181), reset IC (IC166), RTC IC (IC171), and extended output ICs (IC184 to IC188).

### ■Main MPU and Its Periphery

The main MPU (IC101) operates at a power supply voltage of 3.3V and an internal operating frequency of 88.4736MHz (obtained by multiplying the clock frequency of 11.0592MHz in the main MPU by eight).

Furthermore, the number of output ports is insufficient. Therefore, five expansion ICs are prepared to compensate for 40 ports.

The 3.3 V power supply must be always supplied. Therefore, this power supply is different from other power supplies.

The main MPU is connected with the EEPROM (IC181) for backup use, clock count RTC IC (IC171), and reset IC (IC166).

The EEPROM mainly stores various set values, such as adjustment data.

In order to suppress the standby power consumption of the transceiver when the transceiver is turned OFF, a setting allows the main MPU to go into stop mode to reduce the standby current.

The UART mainly performs communication between the main MPU and other MPU. The communication speed of communication between the main MPU and the APP MPU is 921.6kHz bps, that of communication between the main MPU and the SUB MPU is 230.4kHz bps, and that of communication between the main MPU and the Panel MPU is 115.2kHz bps.

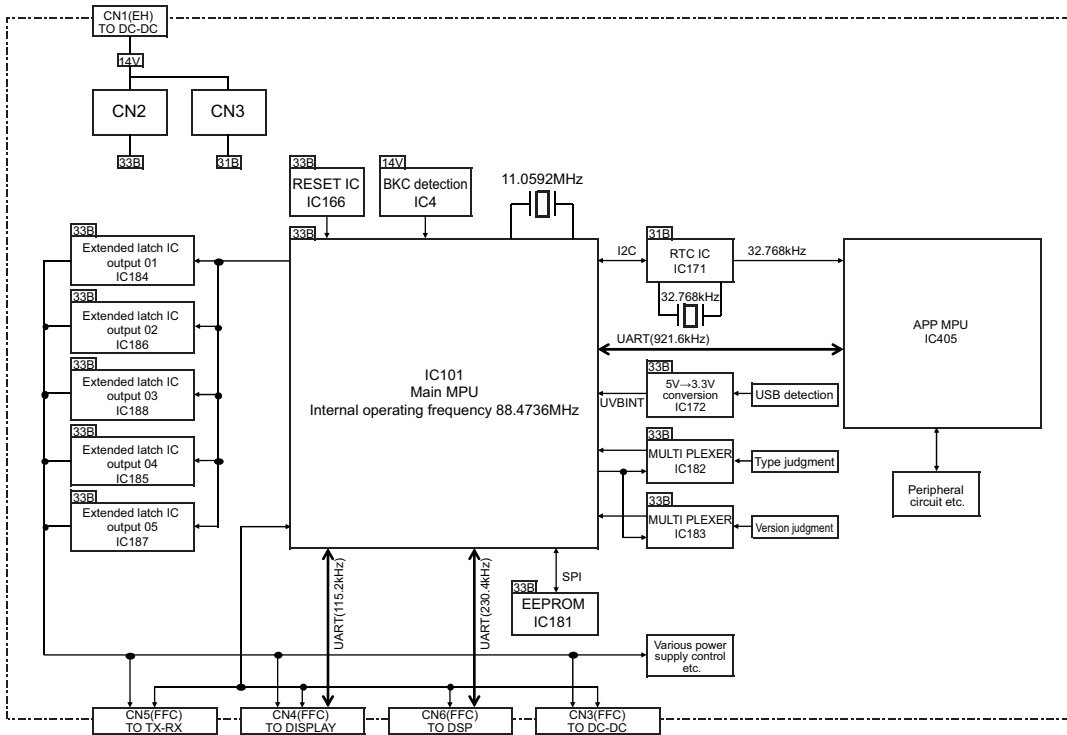


Fig.22 Control circuit

### 2.1.12 DC/DC Converter Circuit

The 14S and 14 V applied from the CN1 of the DC-DC UNIT are distributed to each unit through the following paths.

14S: 14S input is supplied to the CONTROL UNIT (1/2, 2/2), TX-RX UNIT, and external AT connector.

14 V: 14 V input is supplied to the CONTROL UNIT (1/2, 2/2).

8 V system: 8 V generated from the 14 V input into the DC/DC converter is supplied to the CONTROL UNIT (1/2, 2/2), DISPLAY UNIT, and TX-RX UNIT.

5 V system: 5 V generated from the 14 V input into the DC/DC converter is supplied to the CONTROL UNIT (1/2, 2/2), TX-RX UNIT, and FINAL UNIT. Furthermore, the generated 5 V is supplied via the filter to the CONTROL UNIT (1/2, 2/2) and DISPLAY UNIT.

3.3 V system: 3.3 V generated from the 14 V input into the DC/DC converter is supplied to the CONTROL UNIT (1/2, 2/2). Furthermore, the generated 3.3 V is supplied via the FET switch to the DC-DC UNIT, TX-RX UNIT, and FINAL UNIT.

6.5 V system: By using the LDO, 6.5 V is generated from the 8 V generated by the DC/DC converter, and is supplied to the DISPLAY UNIT.

-12 V: Oscillation is performed from 14S input, using an astable multivibrator, and the output is rectified, smoothed, and regulated to generate -12 V, which is supplied to the FINAL UNIT.

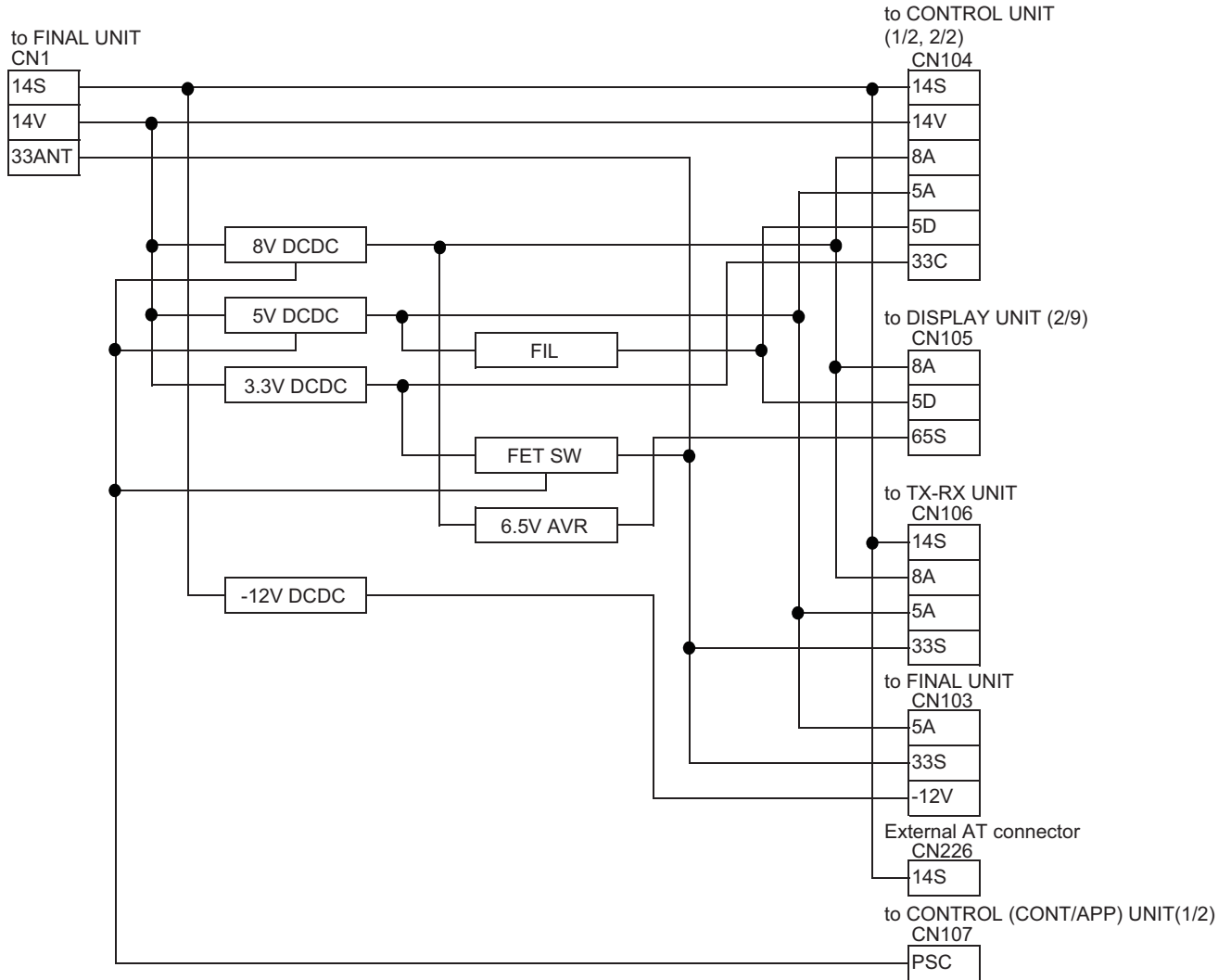


Fig.23 DC/DC converter circuit



## 2.2 SEMICONDUCTOR DATA

### 2.2.1 Main MPU : F56104VDFKGYA (Control (CONT) unit IC101)

Pin No.	Name	I/O	Function
1	TDI	I	E1/E20 emulator communication
2	TMS	I	E20 emulator communication
3	SMET1	O	External meter 1
4	SMET2	O	External meter 2
5	AVSS	-	Analog Ground
6	TRST#	I	E1/E20 emulator communication
7	VRXD1	I	Virtual com port received data 1
8	VTXD1	O	Virtual com port transmitted data 1
9	DC5SW	O	DC 5V switch
10	EMLE	I	E1/E20 emulator communication
11	TDO	O	E1/E20 emulator communication
12	VSS	-	Ground
13	MDE	I	Endianness setting L: Little endianness
14	VCL	-	Power terminal
15	MD1	I	E1/E20 emulator communication
16	MD0	I	E1/E20 emulator communication
17	DASH	I	Electronic keyer dash signal L: KEY dash
18	PKSR	I	PTT output for data communication L: PTT ON
19	MRESET	I	Reset
20	XTAL	I	X'tal input
21	VSS	-	Ground
22	EXTAL	-	X'tal output
23	VCC	-	3.3V power
24	NMI	I	Not used (VCC connection)
25	STPC	I	Interrupt for returning from sleep mode (PC control)
26	WOLINT	I	Interrupt signal for wake from LAN
27	BKC	I	Reduced voltage detection interrupt L: Reduced voltage
28	RTINTB	I	Interrupt signal B from RTC IC
29	PWS	I	Power switch
30	SS	I	Standby switch L: Transmit
31	DTXD	O	Transmitted data for Sub MPU
32	DRXD	I	Received data from Sub MPU
33	NC(DCFV)	O	"L" output
34	KEY1	I	KEY down signal / Electronic keyer dot signal L: KEY down / KEY dot
35	KEY2	I	KEY down signal / Electronic keyer dash signal L: KEY down / KEY dash

Pin No.	Name	I/O	Function
36	PRXD	I	Received data from Panel MPU
37	PTXD	O	Transmitted data for Panel MPU
38	ATXD	O	Transmitted data for Application MPU
39	PLLVCC	-	3.3V power for PLL
40	ARXD	I	Received data from Application MPU
41	PLLVSS	-	Ground for PLL
42	RTCL	O	RTC communication clock
43	RTDA	I/O	RTC communication data
44	VTXD2	O	Virtual com port transmitted data 2
45	VRXD2	I	Virtual com port received data 2
46	PFPRG	I/O	Programming mode request for Panel MPU L: Programming mode
47	CRTS	O	RS-232C request to send
48	CLK	O	Common serial clock
49	DATA	O	Common serial data
50	VDSR1	I	DSR signal from USB-serial bridge (for keying)
51	VCTS2	I	Virtual com port clear to send 2
52	TRDATA3	O	E20 emulator communication
53	TRDATA2	O	E20 emulator communication
54	TRDATA1	O	E20 emulator communication
55	TRDATA0	O	E20 emulator communication
56	DOT	I	Electronic keyer dot signal L: KEY dot
57	VSS	-	Ground
58	TRCLK	O	E20 emulator communication
59	VCC	-	3.3V power
60	TRSYNC	O	E20 emulator communication
61	DRST	O	Reset for Sub MPU
62	DCTS	I	RTS signal input from Sub MPU H: Communication permit
63	DFPRG	I/O	Programming mode request for Sub MPU L: Programming mode
64	AHLT	I	Status of Application MPU H: Normal
65	ACTS	I	RTS signal input from Application MPU H: Communication permit
66	ARST	O	Reset for Application MPU
67	PCTS	I	RTS signal input from Panel MPU H: Communication permit
68	CCTS	I	RS-232C clear to send
69	CTXD	O	RS-232C transmitted data
70	CRXD	I	RS-232C received data
71	VCTS1	I	Virtual com port clear to send
72	MLPX1	I	Multiplexer X-common data input
73	MLPY1	I	Multiplexer Y-common data input

Pin No.	Name	I/O	Function
74	VCC	-	3.3V power
75	MLPX2	I	Multiplexer X-common data input
76	VSS	-	Ground
77	MLPY2	I	Multiplexer Y-common data input
78	DRTS	O	RTS signal output from Sub MPU
79	ARTS	O	RTS signal output from Application MPU
80	FPRG	I	Programming mode request for Main MPU L: Programming mode
81	EEN	O	EEPROM enable (Backup)
82	EDA	O	EEPROM data output (Backup)
83	ESI	I	EEPROM data input (Backup)
84	ECK	O	EEPROM clock (Backup)
85	PSC	O	Power switch control H: Active
86	270DET	I	Roofing filter (270Hz) detection
87	ULREF	I	Unlock detect (PLL REF/INT CLK) H: Lock
88	STS	O	RS-232C receiver bias control
89	LANSW	O	LAN power switch H: Active
90	14SW	O	Power switch control for 14V H: Active
91	VCC	-	3.3V power
92	LOE	O	Output enable for extension port IC
93	VSS	-	Ground
94	LDAT7	O	Data bit 7 of extension port IC
95	LDAT6	O	Data bit 6 of extension port IC
96	LDAT5	O	Data bit 5 of extension port IC
97	LDAT4	O	Data bit 4 of extension port IC
98	LDAT3	O	Data bit 3 of extension port IC
99	LDAT2	O	Data bit 2 of extension port IC
100	LDAT1	O	Data bit 1 of extension port IC
101	LDAT0	O	Data bit 0 of extension port IC
102	BOVER	I	Over voltage detection L: Over voltage
103	SPEN2	I	Detected of suspend for USB-Serial bridge 2
104	UVBINT	I	USB connect interrupt input H: Connect
105	LE1	O	Latch enable 1 of extension port IC
106	LE2	O	Latch enable 2 of extension port IC
107	LE3	O	Latch enable 3 of extension port IC
108	LE4	O	Latch enable 4 of extension port IC
109	LE5	O	Latch enable 5 of extension port IC
110	LE6	O	Latch enable 6 of extension port IC

Pin No.	Name	I/O	Function
111	AFPROG	O	Programming mode request for Application MPU H: Programming mode
112	PRTS	O	RTS signal output from Panel MPU
113	MABK1	O	AF blanking 1 for TXMRX-DSP H: Mute
114	MABK2	O	AF blanking 2 for TXMRX-DSP H: Mute
115	PHD	I	Phase comparison detection voltage
116	AMD	I	Amplitude comparison detection voltage
117	TTI	I	External antenna tuner signal
118	TSI	I	External antenna tuner signal
119	MCTDET	I	CTCSS detection from TXMRX-DSP H: detection
120	IBK	O	RX IF blanking H: Mute
121	LO1BK	O	LO1 blanking H: Mute
122	TXC	O	TX ON/OFF H: TX ON
123	CKY	O	CKY mute signal H: Mute
124	VRTS1	O	RTS signal output for USB-serial bridge
125	LDT	O	Local data output
126	LCK	O	Local clock output
127	VDSR2	I	DSR signal from USB-serial bridge (for keying)
128	RESSEL	O	Resolution select
129	SPEN1	I	Detected of suspend for USB-serial bridge 1
130	VSS	-	Ground
131	ULLO1	I	Unlock detect (LO1) H: Lock
132	VCC	-	3.3V power
133	TH1	I	Temperature detection (Final)
134	VD	I	Drain voltage input for meter
135	ID1	I	Power current voltage
136	ALM	I	ALC meter voltage
137	KYSR	I	KEY jack judgment signal Less than 2.3V: Plugged
138	ERDET	I	External reference A/D converter detect
139	VSRM	I	VSR meter voltage
140	VREFL	-	A/D converter reference L level (Ground)
141	VSFM	I	VSF meter voltage
142	VREFH	-	A/D converter reference H level (3.3V)
143	AVCC	-	A/D converter power (3.3V)
144	TCK	I	E1/E20 emulator communication



**2.2.2 Extension Port IC : TC74VHC373FT  
(Control (CONT) unit IC184)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	USBSW	O	Switch signal for USB device power H: Active
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	RT32S	O	32kHz clock output control H: Active
6	33SW1	O	Switch signal for digital 3.3V FET H: Active
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	33SW2	O	Switch signal for digital 3.3V FET H: Active
10	GND	-	Ground
11	LE	I	Latch enable
12	MLPA	O	Multiplexer control signal A
13	D4	I	Data bit 4
14	D5	I	Data bit 5
15	MLPB	O	Multiplexer control signal B
16	MBLEN	O	Backlight enable H: Enable
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	PRST	O	Panel MPU reset signal L: Reset
20	VCC	-	3.3V

**2.2.3 Extension Port IC: TC74VHC373FT  
(Control (CONT) unit IC185)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	LNGSEL	O	Language select signal H:Japanese L:English
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	SEL0	O	LO0 divider (PLL unit: IC241) divider value select signal
6	SEL1	O	LO0 divider (PLL unit: IC241) divider value select signal
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	DC12SW	O	Switch signal for digital 1.2V DC/DC converter H: Active
10	GND	-	Ground
11	LE	I	Latch enable

Pin No.	Name	I/O	Function
12	DC18SW	O	Switch signal for digital 1.8V DC/DC converter H: Active
13	D4	I	Data bit 4
14	D5	I	Data bit 5
15	ERSW1	O	Internal reference ON/OFF control signal H: Internal reference ON
16	ERSW2	O	External reference ON/OFF control signal H: External reference ON
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	MANOMU	O	Main ANO mute control signal H: Main ANO mute
20	VCC	-	3.3V

**2.2.4 Extension Port IC: TC74VHC373FT  
(Control (CONT) unit IC186)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	TIMERL	O	Timer LED control H: light
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	NBS	O	NB ON/OFF H: NB ON
6	LCDREQ	O	LCD active request to Application MPU H: Active
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	FEN1	O	Shift register enable signal for Final unit
10	GND	-	Ground
11	LE	I	Latch enable
12	FEN2	O	Shift register enable signal for Final Unit
13	D4	I	Data bit 4
14	D5	I	Data bit 5
15	SPOE	O	Shift register output enable for Final Unit
16	FID	O	D/A converter enable signal for TX-RX unit
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	ATPWS	O	AT relay power supply control H: Enabled
20	VCC	-	3.3V

**2.2.5 Extension Port IC: TC74VHC373FT  
(Control (CONT) unit IC187)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	PKP	O	Invert PKS control signal H: PTT ON
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	TEN1	O	Shift register enable signal for TX-RX unit
6	TEN2	O	Shift register enable signal for TX-RX unit
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	DAEN2	O	D/A converter enable signal for TX-RX unit
10	GND	-	Ground
11	LE	I	Latch enable
12	MSQC	O	Main squelch control signal (to ACC2) H: Main squelch open
13	D4	I	Data bit 4
14	D5	I	Data bit 5
15	DACRST	O	10bit D/A converter reset signal for TX-RX unit
16	EHENB	O	Reset signal of USB-serial bridge
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	NC(HUBRST)	O	Not used
20	VCC	-	3.3V

**2.2.6 Extension Port IC: TC74VHC373FT  
(Control (CONT) unit IC188)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	TTO	O	External antenna tuner signal
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	TSO	O	External antenna tuner signal
6	DAEN1	O	D/A converter IC enable for TX-RX unit
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	LSEN	O	Local shift register (PLL unit:IC853/ IC854) enable
10	GND	-	Ground
11	LE	I	Latch enable
12	LPEN2	O	LO1 PLL/VCO (PLL unit: IC201) enable
13	D4	I	Data bit 4
14	D5	I	Data bit 5

Pin No.	Name	I/O	Function
15	LCEN1	O	Internal clock PLL (PLL unit: IC721) enable
16	LPEN1	O	Reference PLL (PLL unit: IC101) enable
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	LDEN2	O	LO3 DDS (PLL unit: IC601) enable
20	VCC	-	3.3V

**2.2.7 Extension Port IC: TC74VHC373FT  
(Control (CONT) unit IC189)**

Pin No.	Name	I/O	Function
1	OE	I	Output enable
2	NC	O	No connection
3	D0	I	Data bit 0
4	D1	I	Data bit 1
5	NC	O	No connection
6	NC	O	No connection
7	D2	I	Data bit 2
8	D3	I	Data bit 3
9	NC	O	No connection
10	GND	-	Ground
11	LE	I	Latch enable
12	NC	O	No connection
13	D4	I	Data bit 4
14	D5	I	Data bit 5
15	NC	O	No connection
16	NC	O	No connection
17	D6	I	Data bit 6
18	D7	I	Data bit 7
19	NC	O	No connection
20	VCC	-	3.3V

**2.2.8 Sub MPU : F2136ACNFKGZA  
(Control (DSP/FPGA) unit IC1100)**

Pin No.	Name	I/O	Function
1	SCDHLT	I	Scope DSP (SCP-DSP) check signal input
2	VREF	I	A/D standard voltage input
3	SMODE	I	Flash programming mode signal
4	NC	O	Not used
5	NC	O	Not used
6	SRST	I	For reset L: Reset
7	XOUT	O	System clock output (18.432MHz)
8	VSS	-	Ground
9	XIN	I	System clock input (18.432MHz)

Pin No.	Name	I/O	Function
10	VCC	-	Power supply input (3.3V)
11	SPSYNC	O	Span synchronization signal at step division
12	TXC	I	TX ON/OFF H: TX ON
13	SCDRET	O	Communication request to Scope DSP (SCP-DSP)
14	SCWST1	I	Scope DSP (SCP-DSP) programming status signal input 1
15	SCATT3	O	30dB attenuator control
16	DSOUT	O	DSP data output (SPI)
17	DCLK	O	DSP clock output (SPI)
18	DSIN	I	DSP data input (SPI)
19	MDSCS	O	TXMRX-DSP chip select L: Enable
20	nFRST	O	FPGA reset L: Reset
21	SCATT2	O	20dB attenuator control
22	SCATT1	O	10dB attenuator control
23	SCATT0	O	Attenuator control
24	SBFPRG	I	Compulsion firmware programming mode detect
25	SCWST2	I	Scope DSP (SCP-DSP) programming status signal input 2
26	SCDBT	O	Boot configuration select for Scope DSP (SCP-DSP) H: Flash boot / L: SPI Slave boot
27	IFSEL1	O	IF select 1 (Wide band)
28	BKC	I	Reduced voltage detect interrupt L: Reduced voltage
29	MDHLT	I	TXMRX-DSP check signal input
30	TRDRST	O	TXMRX-DSP reset L: Reset
31	MDRET	O	Communication request to TXMRX-DSP
32	BEEP	O	Beep signal output
33	MWST1	I	TXMRX-DSP programming status signal input 1
34	IFSEL2	I	IF select 2 (Narrow band)
35	ANSEL1	O	Analog input select 1 for IC1630
36	ANSEL2	O	Analog input select 2 for IC1630
37	SCDREQ	I	Communication request from Scope DSP (SCP-DSP)
38	NC	O	No connection
39	nFPROG	I	Configuration start signal from FPGA
40	FHLT	I	FPGA check signal input
41	SCDSCS	O	Serial communication chip select output for Scope DSP (SCP-DSP)
42	FDONE	I	Configuration finish signal from FPGA
43	SCRXD	I	Serial data input from Main MPU

Pin No.	Name	I/O	Function
44	SCTXD	O	Serial data output to Main MPU
45	SCCTS	I	RTS signal input from Main MPU
46	SCRTS	O	RTS signal output to Main MPU
47	FCMD	O	Command select signal for FPGA
48	ADCOVR	I	Over range signal for A/D converter (IC1502)
49	NC	O	Not used
50	NC	O	Not used
51	MWST2	I	TXMRX-DSP programming status signal input 2
52	SCDRST	O	Scope DSP (SCP-DSP) reset L: Reset
53	SMUTE1	O	Audio mute control for SP/Ext.SP
54	PMUTE	O	Audio mute control for phone circuit
55	MDBT	O	Boot configuration select for TXMRX-DSP H: Flash boot / L: SPI Slave boot
56	PHDET	I	Phone detection
57	FSPDI	I	FPGA data input (SPI)
58	FSPDO	O	FPGA data output (SPI)
59	FSPCLK	O	FPGA clock output (SPI)
60	FSPCS	O	FPGA chip select L: Enable
61	VOLEN	O	Load enable for D/A converter (IC618)
62	VOLDT	O	Data output for D/A converter (IC618)
63	VOLCK	O	Clock output for D/A converter (IC618)
64	MDREQ	I	Communication request from TXMRX-DSP

### 2.2.9 TXMRX-DSP : A2136BSWZ1AA (Control (DSP/FPGA) unit IC1200)

Pin No.	Name	I/O	Function
1	VDDINT	I	Internal (Core) supply voltage (1.2V)
2	CLKCFG0	I	Core to CLKIN ratio control (Ground connect)
3	CLKCFG1	I	Core to CLKIN ratio control (Ground connect)
4	BOOT_CFG0	I	Boot configuration select (Ground Connect)
5	MDBT	I	Boot configuration select H: Flash boot / L: SPI Slave boot
6	GND	-	Ground
7	VDDEXT	I	External (I/O) supply voltage (3.3V)
8	GND	-	Ground
9	VDDINT	I	Internal (Core) supply voltage (1.2V)
10	GND	-	Ground
11	VDDINT	I	Internal (Core) supply voltage (1.2V)
12	GND	-	Ground

Pin No.	Name	I/O	Function
13	VDDINT	I	Internal (Core) supply voltage (1.2V)
14	GND	-	Ground
15	MDRET	I	Communication request from Sub MPU
16	MDREQ/ MWST0	O	Communication request to Sub MPU
17	M_AD7	I/O	Address/data bus for Flash memory
18	GND	-	Ground
19	VDDINT	I	Internal (Core) supply voltage (1.2V)
20	GND	-	Ground
21	VDDEXT	I	External (I/O) supply voltage (3.3V)
22	GND	-	Ground
23	VDDINT	I	Internal (Core) supply voltage (1.2V)
24	M_AD6	I/O	Address/data bus for Flash memory
25	M_AD5	I/O	Address/data bus for Flash memory
26	M_AD4	I/O	Address/data bus for Flash memory
27	VDDINT	I	Internal (Core) supply voltage (1.2V)
28	GND	-	Ground
29	M_AD3	I/O	Address/data bus for Flash memory
30	M_AD2	I/O	Address/data bus for Flash memory
31	VDDEXT	I	External (I/O) Supply Voltage (3.3V)
32	GND	-	Ground
33	M_AD1	I/O	Address/data bus for Flash memory
34	M_AD0	I/O	Address/data bus for Flash memory
35	M_WR	O	Write enable for Flash memory
36	VDDINT	I	Internal (Core) supply voltage (1.2V)
37	VDDINT	I	Internal (Core) supply voltage (1.2V)
38	GND	-	Ground
39	M_RD	O	Output enable for Flash memory
40	M_ALE	O	Address latch enable for Address decoder
41	M_AD15	O	Address bus for Flash memory
42	M_AD14	O	Address bus for Flash memory
43	M_AD13	O	Address bus for Flash memory
44	GND	-	Ground
45	VDDEXT	I	External (I/O) supply voltage (3.3V)
46	M_AD12	O	Address bus for Flash memory
47	VDDINT	I	Internal (Core) supply voltage (1.2V)
48	GND	-	Ground
49	M_AD11	O	Address bus for Flash memory
50	M_AD10	O	Address bus for Flash memory
51	M_AD9	O	Address bus for Flash memory
52	M_AD8	O	Address bus for Flash memory
53	SCLK96K	I	Audio serial I/F (BICK) from FPGA
54	VDDINT	I	Internal (Core) supply voltage (1.2V)
55	GND	-	Ground
56	LRCK96K	I	Audio serial I/F (LRCK) from FPGA

Pin No.	Name	I/O	Function
57	M_SDTO3	O	Audio serial I/F (Data) for DAC(IC1602)
58	GND	-	Ground
59	VDDEXT	I	External (I/O) supply voltage (3.3V)
60	VDDINT	I	Internal (Core) supply voltage (1.2V)
61	GND	-	Ground
62	M_SDTO4	O	Audio serial I/F (Data) for D/A converter (IC1604)
63	M_SDT11	I	Audio serial I/F (Data) from A/D converter (IC1601)
64	SDMISO1	I	Audio serial I/F (Data) from Scope DSP (SCP-DSP)
65	FRDY	I	Flag signal indicating whether the FPGA can operate
66	VDDINT	I	Internal (Core) supply voltage (1.2V)
67	GND	-	Ground
68	VDDINT	I	Internal (Core) supply voltage (1.2V)
69	GND	-	Ground
70	M_SDT13	I	Audio serial I/F (Data) from A/D converter (IC1605)
71	M_SDTO1	O	Audio serial I/F (Data) for D/A converter (IC1600)
72	VDDINT	I	Internal (Core) supply voltage (1.2V)
73	VDDEXT	I	External (I/O) supply voltage (3.3V)
74	GND	-	Ground
75	VDDINT	I	Internal (Core) supply voltage (1.2V)
76	GND	-	Ground
77	M_SDTO2	O	Audio serial I/F (Data) for D/A converter (IC1603)
78	PDN	O	Power down for A/D converter/D/A converter
79	TXC	I	TX ON/OFF H: TX ON
80	SDMOS11	O	Audio serial I/F (Data) to Scope DSP (SCP-DSP)
81	MCTDET/ MWST2	O	CTCSS detection signal output H: CTCSS detection
82	MDHLT	O	TXMRX-DSP check signal to Sub MPU
83	VDDINT	I	Internal (Core) supply voltage (1.2V)
84	GND	-	Ground
85	GND	-	Ground
86	MABK1	I	AF blanking signal input H: Mute
87	CKY	I	RF power ON/OFF H: Power ON
88	MWST1	O	TXMRX-DSP programming status signal output 1
89	MIBK	I	IF blanking signal input H: Mute
90	VDDINT	I	Internal (Core) supply voltage (1.2V)

Pin No.	Name	I/O	Function
91	GND	-	Ground
92	GND	-	Ground
93	VDDEXT	I	External (I/O) supply voltage (3.3V)
94	MABK2	I	AF blanking signal input H: Mute
95	GND	-	Ground
96	VDDINT	I	Internal (Core) supply voltage (1.2V)
97	RTK	I	RTTY key signal from FPGA
98	M_RYBY	I	Ready/busy signal from Flash memory
99	VDDINT	I	Internal (Core) supply voltage (1.2V)
100	GND	-	Ground
101	VDDINT	I	Internal (Core) supply voltage (1.2V)
102	GND	-	Ground
103	VDDINT	I	Internal (Core) supply voltage (1.2V)
104	GND	-	Ground
105	VDDINT	I	Internal (Core) supply voltage (1.2V)
106	GND	-	Ground
107	VDDINT	I	Internal (Core) supply voltage (1.2V)
108	VDDINT	I	Internal (Core) supply voltage (1.2V)
109	GND	-	Ground
110	VDDINT	I	Internal (Core) supply voltage (1.2V)
111	GND	-	Ground
112	VDDINT	I	Internal (Core) supply voltage (1.2V)
113	GND	-	Ground
114	VDDINT	I	Internal (Core) supply voltage (1.2V)
115	GND	-	Ground
116	VDDEXT	I	External (I/O) supply voltage (3.3V)
117	GND	-	Ground
118	VDDINT	I	Internal (Core) supply voltage (1.2V)
119	GND	-	Ground
120	VDDINT	I	Internal (Core) supply voltage (1.2V)
121	MDRES	I	TXMRX-DSP reset L: Reset
122	MDSCS	I	TXMRX-DSP chip select L: Enable
123	GND	-	Ground
124	VDDINT	I	Internal (Core) supply voltage (1.2V)
125	DCLK	I	DSP clock input from Sub MPU
126	DSIN	O	DSP data output to Sub MPU (SPI)
127	DSOUT	I	DSP data input from Sub MPU (SPI)
128	GND	-	Ground
129	VDDINT	I	Internal (Core) supply voltage (1.2V)
130	VDDEXT	I	External (I/O) supply voltage (3.3V)
131	AVDD	I	Analog supply voltage (1.2V)
132	AVSS	-	Analog GND
133	GND	-	Ground

Pin No.	Name	I/O	Function
134	NC	O	No connection
135	M_EMU	O	Not used
136	M_TDO	O	Not used
137	M_TDI	I	Not used
138	M_TRST	I	Not used
139	M_TCK	I	Not used
140	M_TMS	I	Not used
141	GND	-	Ground
142	CLKIN	I	System clock input (24.576MHz)
143	XTAL	O	System clock output (24.576MHz)
144	VDDEXT	I	External (I/O) supply voltage (3.3V)

### 2.2.10 SCP-DSP : A2136BSWZ1AA (Control (DSP/FPGA) unit IC1300)

Pin No.	Name	I/O	Function
1	VDDINT	I	Internal (Core) supply voltage (1.2V)
2	CLKCFG0	I	Core to CLKIN ratio control (Ground connect)
3	CLKCFG1	I	Core to CLKIN ratio control (Ground connect)
4	BOOT_CFG0	I	Boot configuration select (Ground connect)
5	SCDBT	I	Boot configuration select H: Flash boot / L: SPI Slave boot
6	GND	-	Ground
7	VDDEXT	I	External (I/O) supply voltage (3.3V)
8	GND	-	Ground
9	VDDINT	I	Internal (Core) supply voltage (1.2V)
10	GND	-	Ground
11	VDDINT	I	Internal (Core) supply voltage (1.2V)
12	GND	-	Ground
13	VDDINT	I	Internal (Core) supply voltage (1.2V)
14	GND	-	Ground
15	SCDRET	I	Communication request from Sub MPU
16	SCDREQ/ SCWST0	O	Communication request to Sub MPU
17	SCP_AD7	I/O	Address/data bus for Flash memory
18	GND	-	Ground
19	VDDINT	I	Internal (Core) supply voltage (1.2V)
20	GND	-	Ground
21	VDDEXT	I	External (I/O) supply voltage (3.3V)
22	GND	-	Ground
23	VDDINT	I	Internal (Core) supply voltage (1.2V)
24	SCP_AD6	I/O	Address/data bus for Flash memory
25	SCP_AD5	I/O	Address/data bus for Flash memory
26	SCP_AD4	I/O	Address/data bus for Flash memory
27	VDDINT	I	Internal (Core) supply voltage (1.2V)

Pin No.	Name	I/O	Function
28	GND	-	Ground
29	SCP_AD3	I/O	Address/data bus for Flash memory
30	SCP_AD2	I/O	Address/data bus for Flash memory
31	VDDEXT	I	External (I/O) supply voltage (3.3V)
32	GND	-	Ground
33	SCP_AD1	I/O	Address/data bus for Flash memory
34	SCP_AD0	I/O	Address/data bus for Flash memory
35	SCP_WR	O	Write enable for Flash memory
36	VDDINT	I	Internal (Core) supply voltage (1.2V)
37	VDDINT	I	Internal (Core) supply voltage (1.2V)
38	GND	-	Ground
39	SCP_RD	O	Output enable for Flash memory
40	SCP_ALE	O	Address latch enable for Address decoder
41	SCP_AD15	O	Address bus for Flash memory
42	SCP_AD14	O	Address bus for Flash memory
43	SCP_AD13	O	Address bus for Flash memory
44	GND	-	Ground
45	VDDEXT	I	External (I/O) supply voltage (3.3V)
46	SCP_AD12	O	Address bus for Flash memory
47	VDDINT	I	Internal (Core) supply voltage (1.2V)
48	GND	-	Ground
49	ACP_AD11	O	Address bus for Flash memory
50	SCP_AD10	O	Address bus for Flash memory
51	SCP_AD9	O	Address bus for Flash memory
52	SCP_AD8	O	Address bus for Flash memory
53	SCLK96K	I	Audio serial I/F (BICK) from FPGA
54	VDDINT	I	Internal (Core) supply voltage (1.2V)
55	GND	-	Ground
56	LRCK96K	I	Audio serial I/F (LRCK) from FPGA
57	SCPSCLK	I	Scope serial I/F (SCLK) from FPGA
58	GND	-	Ground
59	VDDEXT	I	External (I/O) supply voltage (3.3V)
60	VDDINT	I	Internal (Core) supply voltage (1.2V)
61	GND	-	Ground
62	SCPFCLK	I	Scope serial I/F (FCLK) from FPGA
63	SDTO1	O	Audio serial I/F (Data) for D/A converter (IC1606)
64	SDMISO1	O	Audio serial I/F (Data) to TXMRX-DSP
65	APSOUT	O	Serial data output to Application MPU
66	VDDINT	I	Internal (Core) supply voltage (1.2V)
67	GND	-	Ground
68	VDDINT	I	Internal (Core) supply voltage (1.2V)
69	GND	-	Ground
70	APCLK	O	Serial clock output to Application MPU

Pin No.	Name	I/O	Function
71	APSCS	O	Serial chip select output to Application MPU
72	VDDINT	I	Internal (Core) supply voltage (1.2V)
73	VDDEXT	I	External (I/O) supply voltage (3.3V)
74	GND	-	Ground
75	VDDINT	I	Internal (Core) supply voltage (1.2V)
76	GND	-	Ground
77	SDFPI	I	Scope IF I channel from FPGA
78	SDFPQ	I	Scope IF Q channel from FPGA
79	TXC	I	TX ON/OFF H: TX ON
80	FRDY	I	Ready signal from FPGA H: Clock output start from FPGA
81	SCWST2	O	Scope DSP (SCP-DSP) programming status signal output 2
82	SCDHLT	O	Scope DSP (SCP-DSP) check signal to Sub MPU
83	VDDINT	I	Internal (Core) supply voltage (1.2V)
84	GND	-	Ground
85	GND	-	Ground
86	BEEP	I	Beep signal input
87	SPSYNC	I	Span synchronization signal at step division
88	SCWST1	O	Scope DSP (SCP-DSP) programming status signal output 1
89	SDMOSI1	I	Audio serial I/F (Data) from TXMRX-DSP
90	VDDINT	I	Internal (Core) supply voltage (1.2V)
91	GND	-	Ground
92	GND	-	Ground
93	VDDEXT	I	External (I/O) supply voltage (3.3V)
94	NC(SDTI1)	O	Not used
95	GND	-	Ground
96	VDDINT	I	Internal (Core) supply voltage (1.2V)
97	PDN2	O	Power down for D/A converter
98	SCP_RYBY	I	Ready/busy signal from Flash memory
99	VDDINT	I	Internal (Core) supply voltage (1.2V)
100	GND	-	Ground
101	VDDINT	I	Internal (Core) supply voltage (1.2V)
102	GND	-	Ground
103	VDDINT	I	Internal (Core) supply voltage (1.2V)
104	GND	-	Ground
105	VDDINT	I	Internal (Core) supply voltage (1.2V)
106	GND	-	Ground
107	VDDINT	I	Internal (Core) supply voltage (1.2V)
108	VDDINT	I	Internal (Core) supply voltage (1.2V)
109	GND	-	Ground
110	VDDINT	I	Internal (Core) supply voltage (1.2V)

Pin No.	Name	I/O	Function
111	GND	-	Ground
112	VDDINT	I	Internal (Core) supply voltage (1.2V)
113	GND	-	Ground
114	VDDINT	I	Internal (Core) supply voltage (1.2V)
115	GND	-	Ground
116	VDDEXT	I	External (I/O) supply voltage (3.3V)
117	GND	-	Ground
118	VDDINT	I	Internal (Core) supply voltage (1.2V)
119	GND	-	Ground
120	VDDINT	I	Internal (Core) supply voltage (1.2V)
121	SCDRES	I	Scope DSP (SCP-DSP) reset L: Reset
122	SCDSCS	I	Scope DSP (SCP-DSP) chip select L: Enable
123	GND	-	Ground
124	VDDINT	I	Internal (Core) supply voltage (1.2V)
125	DCLK	I	DSP clock input from Sub MPU
126	DSIN	O	DSP data output to Sub MPU (SPI)
127	DSOUT	I	DSP data input from Sub MPU (SPI)
128	GND	-	Ground
129	VDDINT	I	Internal (Core) supply voltage (1.2V)
130	VDDEXT	I	External (I/O) supply voltage (3.3V)
131	AVDD	I	Analog supply voltage (1.2V)
132	AVSS	-	Analog Ground
133	GND	-	Ground
134	NC	O	No connection
135	SCP_EMU	O	Not used
136	SCP_TDO	O	Not used
137	SCP_TDI	I	Not used
138	SCP_TRST	I	Not used
139	SCP_TCK	I	Not used
140	SCP_TMS	I	Not used
141	GND	-	Ground
142	CLKIN	I	System clock input (24.576MHz)
143	XTAL	O	System clock output (24.576MHz)
144	VDDEXT	I	External (I/O) supply voltage (3.3V)

**2.2.11 Panel MPU : F3651KDFCKHAA  
(Display unit IC1)**

Pin No.	Name	I/O	Function
1	VREF	I	A/D standard voltage input (5.0V)
2	AVCC	I	Power supply input (5.0V)
3	LAT	O	AT LED (Green) H: Light
4	NC	-	Not used
5	NC	-	Not used
6	NC	-	Not used

Pin No.	Name	I/O	Function
7	BLPWM	O	TFT backlight control 1.93V: Bright 2.97V: Dark (D/A output)
8	NC	-	Not used
9	LMONI	O	MONI LED (Green) H: Light
10	NC	-	Not used
11	NC	-	Not used
12	LPON	O	Power ON LED (Green) H: Light
13	BYTE	I	Single chip mode selection (Vss connection)
14	E8CNV	I	For E8a (Firmware writing)
15	LSPLIT	O	SPLIT LED (Green) H: Light
16	NC	-	Not used
17	PRST	I	For reset L: Reset
18	XOUT	O	System clock output (11.0592MHz)
19	VSS	-	Ground
20	XIN	I	System clock input (11.0592MHz)
21	VCC1	I	Power supply input VCC1 (5.0V)
22	MULTIB	I	Multi encoder pulse B input
23	MULTIA	I	Multi encoder pulse A input
24	DELAYA	I	Delay encoder pulse A input
25	KEYA	I	KEY encoder pulse A input
26	MENCB	I	Main encoder pulse B input
27	MENCA	I	Main encoder pulse A input
28	RITB	I	RIT encoder pulse B input
29	RITA	I	RIT encoder pulse A input
30	NC	-	Not used
31	LEDBR	O	LED PWM control
32	NC	-	Not used
33	DELAYB	I	Delay encoder pulse B input
34	KEYB	I	KEY encoder pulse B input
35	NC	-	Not used
36	E8TXD	O	For E8a (Firmware writing)
37	VCC	I	Power supply input VCC1 (5.0V)
38	E8RXD	I	For E8a (Firmware writing)
39	VSS	-	Ground
40	E8CLK	O	For E8a (Firmware writing)
41	E8BSY	O	For E8a (Firmware writing)
42	NC	-	Not used
43	NC	-	Not used
44	NC	-	Not used
45	LVOX	O	VOX LED (Green) H: Light
46	NC	-	Not used
47	NC	-	Not used
48	NC	-	Not used
49	NC	-	Not used
50	NC	-	Not used

Pin No.	Name	I/O	Function
51	PFPRG	I	Firmware write mode setting
52	E8EPM	O	For E8a (Firmware writing)
53	LREC	O	REC LED (Red) H: Light
54	LRIT	O	RIT LED (Green) H: Light
55	KI10	I	Key scan input bit 10
56	KI9	I	Key scan input bit 9
57	KI8	I	Key scan input bit 8
58	LMULTI	O	Multi encoder LED (Amber) H: Light
59	LBSYG	O	Busy LED (Green) H: Light
60	LBSYR	O	TX LED (Red) H: Light
61	E8CE	-	Not used
62	LLOCK	O	LOCK LED (Amber) H: Light
63	KO6	O	Key scan output bit 6
64	KO5	O	Key scan output bit 5
65	PTXD	O	Serial port for connection with the Main MPU
66	PRXD	I	Serial port for connection with the Main MPU
67	PCTS	I	CTS port for connection with the Main MPU
68	PRTS	O	RTS port for connection with the Main MPU
69	HCENCB	I	High cut encoder pulse B input
70	LCENCB	I	Low cut encoder pulse B input
71	LXIT	O	XIT LED (Green) H: Light
72	LDRV	O	DRV LED (Green) H: Light
73	KI7	I	Key scan input bit 7
74	KI6	I	Key scan input bit 6
75	KI5	I	Key scan input bit 5
76	KI4	I	Key scan input bit 4
77	KI3	I	Key scan input bit 3
78	KI2	I	Key scan input bit 2
79	KI1	I	Key scan input bit 1
80	KO4	O	Key scan output bit 4
81	KO3	O	Key scan output bit 3
82	KO2	O	Key scan output bit 2
83	KO1	O	Key scan output bit 1
84	KO0	O	Key scan output bit 0
85	VCC2	I	Power supply input VCC2 (3.3V)
86	KI0	I	Key scan input bit 0
87	VSS	-	Ground
88	NC	-	Not used
89	NC	-	Not used
90	PRENCA	I	Power encoder pulse A input
91	MCENCA	I	MIC encoder pulse A input
92	PRENCB	I	Power encoder pulse B input

Pin No.	Name	I/O	Function
93	MCENCB	I	MIC encoder pulse B input
94	NC	-	Not used
95	NC	-	Not used
96	HCENCA	I	High cut encoder pulse A input
97	LCENCA	I	Low cut encoder pulse A input
98	NC	-	Not used
99	NC	-	Not used
100	PATXD	O	Serial port for connection with the Application MPU
101	PARXD	O	Serial port for connection with the Application MPU (Not used)
102	NC	-	Not used
103	NC	-	Not used
104	NC	-	Not used
105	NC	-	Not used
106	NC	-	Not used
107	NC	-	Not used
108	EXTPF1	I	External PF1 input (A/D)
109	EXTPF2	I	External PF2 input (A/D)
110	MU	I	MIC UP key input (A/D)
111	MD	I	MIC DOWN key input (A/D)
112	TPPUON	O	Touch panel switch pull up ON
113	TPPRES	O	Touch panel switch PRESS
114	PA_Y2	O	Touch panel switch Y2
115	PA_Y1	O	Touch panel switch Y1
116	PA_X2	O	Touch panel switch X2
117	PA_X1	O	Touch panel switch X1
118	NC	-	Not used
119	NC	-	Not used
120	PA_Y+	I	Touch panel detection input Y+ (A/D)
121	PA_Y-	I	Touch panel detection input Y- (A/D)
122	PA_X+	I	Touch panel detection input X+ (A/D)
123	PA_X-	I	Touch panel detection input X- (A/D)
124	SQLVOL	I	Squelch volume input (A/D)
125	NOTVOL	I	NOTCH volume input (A/D)
126	RFVOL	I	RF volume input (A/D)
127	AVSS	-	Analog Ground
128	AFVOL	I	AF volume input (A/D)



## 2.3 COMPONENTS DESCRIPTION

### 2.3.1 TX-RX UNIT (XC1-269X-XX)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1	OP AMP	1/2: Meter Level voltage2 amplifier 2/2: Meter Level voltage1 amplifier
IC551	Shift register	Q0: RXANT "H" when RXANT input is selected Q1: ANTOUT "H" when RX Antenna output is selected Q2: DRV "L" when Drive output is selected Q3: AMC "H" when AM TX is selected (for 50msec) Q4: LKY-HI "H" when Linear control active "H" is set Q5: LKY-LO "H" when Linear control active "L" is set Q6: VHFATT "L" when RX 35.0~74.8MHz is selected (except 50/70MHz AMA BAND) and pre-amplifier is ON Q7: RELAY "H" when relay control is ON
IC552	Shift register	Q0: RBPF2 "H" when 522kHz~1.705MHz is selected Q1: RBPF1 "H" when 30~522kHz is selected Q2: R6DB "L" when RX 6dB or 18dB attenuator is ON Q3: R12DB "L" when RX 12dB or 18dB attenuator is ON Q4: RPRE2 "H" when pre-amplifier2 is ON Q5: RGC1 "H" when RX 35.0~74.8MHz is selected (except 50/70MHz AMA BAND) and pre-amplifier is OFF Q6: RGC2 "H" when pre-amplifier1 is ON Q7: RPRE1 "H" when pre-amplifier is ON

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC553	DAC	Ao1: NBL/IDP NB level control voltage during reception Drain current setting voltage during transmission Ao2: IFGC RX IF gain control voltage Ao3: TGC TX band gain control voltage Ao4: PGC TX power gain control voltage Ao5: ALC_REF ALC reference voltage Ao6: TXM1 TX 3rd mixer bias voltage adjustment Ao7: TXM2 TX 3rd mixer bias voltage adjustment Ao8: PRO SWR protection control voltage Drain current setting voltage
IC554	Shift register	Q0: RFIL1 "H" when 500Hz IF filter is selected Q1: RFIL2 "H" when 2.7kHz IF filter is selected Q2: RFIL3 "H" when 6kHz IF filter is selected Q3: RFIL4 "H" when 15kHz IF filter is selected Q4: RFIL5 "H" when option IF filter is selected Q5: TXIF1 "H" when TX less than 60 MHz is selected Q6: TXIF2 "H" when TX of 60 MHz or more is selected Q7: TCS "L" when during AT tuning
IC555	Shift register	Q0: RBPF10 "H" when 18.5~22.5MHz is selected Q1: RBPF9 "H" when 14.5~18.5MHz is selected Q2: RBPF8 "H" when 10.5~14.5MHz is selected Q3: RBPF7 "H" when 7.5~10.5MHz is selected Q4: RBPF6 "H" when 6.0~7.5MHz is selected Q5: RBPF5 "H" when 4.1~6.0MHz is selected Q6: RBPF4 "H" when 2.5~4.1MHz is selected Q7: RBPF3 "H" when 1.705~2.5MHz is selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC556	DAC	Ao1: LREF Internal reference (19.2MHz) frequency adjust control voltage Ao2: POC TX power control voltage Ao3: LREF2 Internal reference (19.2MHz) frequency fine adjust control voltage Ao4: Reserve
IC557	Shift register	Q0: RBPF18 "H" when 68.5~74.8MHz is selected (E type only) Q1: RBPF17 "H" when 62.0~68.5MHz is selected (E type only) Q2: RBPF16 "H" when 55.0~62.0MHz is selected Q3: RBPF15 "H" when 48.0~55.0MHz is selected Q4: RBPF14 "H" when 41.5~48.0MHz is selected Q5: RBPF13 "H" when 35.0~41.5MHz is selected Q6: RBPF12 "H" when 27.5~35.0MHz is selected Q7: RBPF11 "H" when 22.5~27.5MHz is selected
IC558	DAC	Ao1: FI1 Pre-Drive current adjustment Ao2: FI2 Drive1 current adjustment Ao3: FI3 Reserve Ao4: FI4 Final Idle current adjustment (LEFT) Ao5: FI5 Final Idle current adjustment (RIGHT) Ao6: ALC_SET ALC preset setting Ao7: EXT_ALC Adjustment of operating point of ALC for linear amplifier Ao8: Reserve
IC559	Voltage Reference	Voltage reference of DAC (IC556)
IC601	6V linear regulator	6V regulator (for RX 1st Mixer)
IC602	RX 1st Mixer	Receiving mixer (RX RF > 8.248MHz)
IC801	OP AMP	1/2: IFGC voltage amplifier 2/2: AGCV voltage amplifier
IC802	OP AMP	1/2: TX IF signal amplifier 2/2: RX IF signal amplifier
IC803	Multiplexer	TX/RX IF changeover
IC1001~1003	OP AMP	ALC control
IC1004	OP AMP	External ALC control
IC1005	OP AMP	Amplifier for meter

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1201	TX 2nd Mixer	Transmission mixer (8.248MHz > 3rd IF)
Q1	Switching	ON when relay for HF band linear is used
Q2	Switching	ON when relay for HF band linear is transmission
Q3	Switching	ON when relay for HF band linear is used
Q4, 5	Switching	ON when relay for HF band linear is used
Q7	Mute	For ANO mute
Q9	Buffer	Buffer amplifier for ANO output
Q10	Switching	External squelch output signal (open collector)
Q11	Buffer	Buffer amplifier for PKS input signal
Q201	Switching	RXANT changeover relay (K202) control Switching, ON when RXANT and RXOUT are selected
Q202	Switching	RXOUT changeover relay (K201) control Switching, ON when RXANT and RXOUT are selected
Q203~205	Switching	RX circuit protection control Switching
Q206	Switching	ANTOUT changeover relay (K204) control Switching, ON when ANTOUT are selected
Q207	Switching	RX 6dBATT changeover relay (K205) control Switching, OFF when RX 6dB and 18dB ATT are ON
Q208	Switching	RX 12dBATT changeover relay (K206) control Switching, OFF when RX 12dB and 18dB ATT are ON
Q209, 210	Switching	RX circuit power supply Switching, ON during reception
Q211	Mute	Mutes reception path during transmission ON during transmission
Q212	Switching	RX circuit power supply Switching, ON during transmission
Q281~283	Switching	TXB power supply Switching, ON during transmission
Q284, 285	Switching	RXB power supply Switching, ON during reception
Q301	Switching	BPF Switching, ON when 7.5~10.5MHz is selected
Q302	Switching	BPF Switching, ON when 10.5~14.5MHz is selected
Q303	Switching	BPF Switching, ON when 14.5~18.5MHz is selected
Q304	Switching	BPF Switching, ON when 18.5~22.5MHz is selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q305	Switching	BPF Switching, ON when 22.5~27.5MHz is selected
Q306	Switching	BPF Switching, ON when 27.5~35.0MHz is selected
Q307	Switching	BPF Switching, ON when 6.0~7.5MHz is selected
Q308	Switching	BPF Switching, ON when 522kHz~1.705MHz is selected
Q309	Switching	BPF Switching, ON when 30~522kHz is selected
Q310	Switching	BPF Switching, ON when 1.705~2.5MHz is selected
Q311	Switching	BPF Switching, ON when 2.5~4.1MHz is selected
Q312	Switching	BPF Switching, ON when 4.1~6.0MHz is selected
Q313	Switching	BPF Switching, ON when 35.0~41.5MHz is selected
Q314	Switching	BPF Switching, ON when 41.5~48.0MHz is selected
Q315	Switching	BPF Switching, ON when 48.0~55.0MHz is selected
Q316	Switching	BPF Switching, ON when 55.0~62.0MHz is selected
Q317	Switching	BPF Switching, ON when 62.0~69.0MHz is selected (E type only)
Q318	Switching	BPF Switching, ON when 69.0~74.8MHz is selected (E type only)
Q601, 602	Switching	Pre-amplifier power supply Switching, ON when RX 35.0~74.8MHz is selected (except 50/70MHz AMA BAND) and pre-amplifier is ON
Q603	Switching	Pre-amplifier power supply Switching, ON when RX 0.03~35.0MHz and 50M/70MHz AMA BAND are selected and pre-amplifier is OFF
Q604	Amplifier	RX pre-amplifier (PRE1: 12dB, PRE2: 20dB)
Q605	Switching	Pre-amplifier power supply Switching, ON when RX 0.03~35.0MHz and 50M/70MHz AMA BAND are selected and pre-amplifier is OFF
Q606	Switching	RX pre-amplifier gain control Switching, ON when PRE2 is selected
Q607	Switching	Noise blanker MCF Switching, ON when NBS is "L"
Q610	Switching	Noise blanker MCF Switching, ON when NBS is "H"

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q611	Amplifier	RX Post amplifier (8.248MHz)
Q612	Switching	RX VHF ATT changeover relay (K601) control Switching, OFF when RX 35.0~74.8MHz is selected (except 50/70MHz AMA BAND) and pre-amplifier is OFF
Q701, 702	Switching	Noise blanker power supply Switching, ON when NBS is "H"
Q703	Buffer	Noise blanker IF buffer amplifier
Q704	Amplifier	Noise blanker IF amplifier 1 (8.248MHz)
Q705, 706	Amplifier	Noise blanker IF amplifier 2 (8.248MHz) Gain is controlled according to the NB voltage
Q707, 708	Amplifier	Noise blanker IF amplifier 3 (8.248MHz) Gain is controlled according to the NB voltage
Q709	Amplifier	Noise blanker AGC control amplifier
Q710	Amplifier	Noise blanker IF amplifier 4 (8.248MHz)
Q711	Switching	Audio mute signal is generated
Q712	Buffer	Noise blanker IF buffer amplifier
Q713	Switching	Audio mute signal is generated
Q714	Switching	Noise blanker gate Switching, ON when BLNK signal is "H"
Q715	Switching	Noise blanker gate Switching, OFF when BLNK signal is "H"
Q801	Switching	IF filter Switching, ON when 500Hz IF filter is selected
Q802	Switching	IF filter Switching, ON when option IF filter is selected
Q803	Switching	IF filter Switching, ON when 2.7kHz IF filter is selected
Q804	Switching	IF filter Switching, ON when 6kHz IF filter is selected
Q805	Switching	IF filter Switching, ON when 15kHz IF filter is selected
Q806	Buffer	TX IF buffer amplifier (8.248MHz)
Q807	Amplifier	RX AGC amplifier (8.248MHz) Gain is controlled according to the AGCV voltage
Q808	Switching	Gain correction Switching, ON when RX 35.0~74.8MHz is selected (except 50/70MHz AMA BAND) and pre-amplifier is OFF
Q809	Switching	Gain correction Switching, ON when pre-amplifier1 ON
Q811, 812	Amplifier	RX IF amplifier (8.248MHz)

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q813	Switching	TX/RX IF changeover multiplexer (IC803) control Switching, ON during transmission
Q1001	Switching	On in AM mode, makes it an average value type ALC
Q1002, 1003	Amplifier	ALC amplifier
Q1004, 1005	Switching	Cancels the time constant for VSF and VSR voltage lines during antenna tuning
Q1101	Switching	TX Drive output changeover Switching, ON when Drive output is selected
Q1102	Switching	TX antenna connector output changeover Switching, ON when Antenna connector output is selected
Q1103	Switching	Power supply Switching of TXB to FINAL Unit (XC3-062) ON when TX antenna connector output is selected)
Q1104	Amplifier	TX Drive output amplifier
Q1105	Switching	TX BPF Switching, OFF when TX HF Band is selected
Q1106, 1107	Switching	TX BPF Switching, OFF when TX HF Band is selected
Q1108, 1109	Switching	TX BPF Switching, ON when TX 50MHz Band is selected
Q1110, 1111	Switching	TX BPF Switching, ON when TX 70MHz Band is selected (E type only)
Q1201, 1202	TX 3rd Mixer	Transmission mixer (3rd IF> TX RF)
Q1203	Amplifier	TX IF amplifier Gain is controlled according to the ALC voltage
Q1204, 1205	Switching	TX MCF Switching, ON when TX 50MHz Band is selected
Q1206, 1207	Switching	TX MCF Switching, ON when TX 70MHz Band is selected (E type only)
Q1208	Switching	Transmission IF mute control Switching, Mute when OFF
Q1209	Amplifier	TX IF amplifier
Q1281	Amplifier	TX IF amplifier (8.248MHz)
D1	Reverse current prevention	KEY connector (2pin KEY down/ Electric keyer dot signal)
D2	Reverse current prevention	KEY connector (3pin KEY down/ Electric keyer dash signal)
D3	Surge protection	METER connector (2pin MET1)

Ref. No.	Use / Function	Operation / Condition / Compatibility
D4	Surge protection	METER connector (3pin MET2)
D5	Reverse current prevention	Linear amplifier control signal
D6	Surge absorption	Relay (K1)
D7, 8	Reverse current prevention	Linear amplifier control signal
D9	Mute	For ANO mute
D10, 11	Clipper	External packet data input
D12	Reverse current prevention	Relay (K1) control signal
D13	Surge protection	ACC2 connector (2pin RTTY)
D14	Surge protection	ACC2 connector (5pin PSQ)
D15	Surge protection	ACC2 connector (9pin PKS)
D16	Reverse current prevention	Invert PKS control signal
D17	Surge protection	ACC2 connector (6pin MET1)
D18	Surge protection	ACC2 connector (10pin MET2)
D19	Reverse current prevention	External PF key 2 input
D20	Reverse current prevention	External PF key 1 input
D101~103	Surge protection	REMOTE connector (7pin LKY)
D209	Surge absorption	Relay (K202)
D210	Surge absorption	Relay (K201)
D211	Detection	Detect RX RF signal
D212	Surge absorption	Relay (K203)
D213	Surge protection	RX RF signal input
D214	Surge absorption	Relay (K204)
D215	Surge absorption	Relay (K205)
D216	Surge absorption	Relay (K206)
D217~220	Surge absorption	Internal circuit protection
D221	Switching	TX/RX signal changeover Switching, ON during reception
D222, 224	Switching	RX signal Switching, ON when RX of 1.705MHz or more is selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
D301, 319	Switching	TX/RX signal Switching, ON when 7.5~10.5MHz is selected
D302, 320	Switching	TX/RX signal Switching, ON when 10.5~14.5MHz is selected
D303, 321	Switching	TX/RX signal Switching, ON when 14.5~18.5MHz is selected
D304, 322	Switching	TX/RX signal Switching, ON when 18.5~22.5MHz is selected
D305, 323	Switching	TX/RX signal Switching, ON when 22.5~27.5MHz is selected
D306, 324	Switching	TX/RX signal Switching, ON when 27.5~35.0MHz is selected
D307, 318	Switching	TX/RX signal Switching, ON when 6.0~7.5MHz is selected
D308, 317	Switching	TX/RX signal Switching, ON when 4.1~6.0MHz is selected
D309, 313	Switching	RX signal Switching, ON when RX 522kHz~1.705MHz is selected
D310	Switching	RX signal Switching, ON when RX 30~522kHz is selected
D311, 315	Switching	TX/RX signal Switching, ON when 1.705~2.5MHz is selected
D312, 316	Switching	TX/RX signal Switching, ON when 2.5~4.1MHz is selected
D314	Switching	TX/RX signal Switching, ON when 30~522kHz is selected
D325, 331	Switching	TX/RX signal Switching, ON when 35.0~41.5MHz is selected
D326, 332	Switching	TX/RX signal Switching, ON when 41.5~48.0MHz is selected
D327, 333	Switching	TX/RX signal Switching, ON when 48.0~55.0MHz is selected
D328, 334	Switching	TX/RX signal Switching, ON when 55.0~62.0MHz is selected
D329, 335	Switching	TX/RX signal Switching, ON when 62.0~69.0MHz is selected (E type only)
D330, 336	Switching	TX/RX signal Switching, ON when 69.0~74.8MHz is selected (E type only)
D337, 338	Switching	TX signal Switching, ON when TX LF and 475kHz Band are selected
D601, 606	Switching	RX signal Switching, ON when RX pre-amplifier is ON
D602, 604	Switching	RX signal Switching, ON when RX pre-amplifier is OFF
D603	Reverse current prevention	RX 1st Mixer power supply
D607	Switching	LO1 signal Switching, ON during reception

Ref. No.	Use / Function	Operation / Condition / Compatibility
D608	Switching	LO1 signal Switching, ON during transmission
D609, 611	Switching	RX signal Switching, ON when noise blanker is OFF
D610, 612	Switching	RX signal Switching, ON when noise blanker is ON
D613	Switching	Scope IF signal Switching, ON during transmission
D614	Switching	Scope IF signal Switching, ON during reception
D615	Surge absorption	Relay (K601)
D701	Detection	Noise blanker Switching pulse detection
D702, 703	Reverse current prevention	IBK and NB mute signal matching, RX mute when ON
D704~707	Noise Blanking	Noise Blanking Gate, ON when BLNK signal is "H"
D801	Switching	RX signal Switching, ON during reception
D802, 809	Switching	TX/RX signal Switching, ON when 500Hz IF filter is selected
D803, 810	Switching	TX/RX signal Switching, ON when 2.7kHz IF filter is selected
D804, 811	Switching	TX/RX signal Switching, ON when 6kHz IF filter is selected
D806, 813	Switching	TX/RX signal Switching, ON when 15kHz IF filter is selected
D808, 815	Switching	TX/RX signal Switching, ON when option IF filter is selected
D812	Switching	TX signal Switching, ON during reception
D814	Switching	RX signal Switching, ON during transmission
D816	Switching	TX signal Switching, ON during transmission
D817	Attenuator	IF gain adjustment
D818, 819	RX 2nd/TX 1st Mixer	Receiving , Transmission mixer (8.248MHz > 24kHz / 36kHz , 24kHz / 36kHz > 8.248MHz)
D820	Switching	RX signal Switching, ON during reception
D1001	Power control	Reduce power at high voltage
D1002	Reverse current prevention	External ALC voltage
D1005	ALC control	External ALC control
D1006	Power control	Reduce power at Low voltage
D1007	Current protection	Reduce power at over current
D1008	Surge protection	ALC meter voltage
D1009	Speed up	CKY signal

Ref. No.	Use / Function	Operation / Condition / Compatibility
D1010, 1011	Reverse current prevention	Meter circuit
D1012	Current protection	Reduce power at over current
D1101, 1102	Surge absorption	Drive output terminal
D1103	Switching	TX signal Switching, ON when Drive output is selected
D1104	Switching	TX signal Switching, ON when Antenna connector output is selected
D1105, 1112	Switching	TX signal Switching, OFF when TX LF and HF Band are selected
D1106, 1110	Switching	TX signal Switching, ON when TX 50MHz Band is selected
D1107, 1111	Switching	TX signal Switching, ON when TX 70MHz Band is selected (E type only)
D1108	Reverse current prevention	RBPF15 signal
D1109	Reverse current prevention	RBPF18 signal (E type only)
D1201	Switching	TX signal Switching, ON during transmission
D1204, 1207	Switching	TX signal Switching, ON when TX HF and 50MHz Band are selected
D1205, 1206	Switching	TX signal Switching, ON when TX 70MHz Band is selected (E type only)
D1208	Attenuator	PGC control attenuator
D1209~1212	Attenuator	TGC control attenuator
D1213	Thermal compensation	PGC control
D1291	Switching	TX signal Switching, ON during transmission

### 2.3.2 CONTROL UNIT (XC1-270X-XX)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1	5V Switching regulator	Power supply for 5V (Digital circuit Power Supply)
IC2	3.3V linear regulator	Power supply for 3.3V (Main MPU Power supply)
IC3	3.1V linear regulator	Power supply for 3.1V (RTC circuit Power supply)
IC4	Reset	Backup detect
IC101	MPU	Main MPU
IC166	Reset	System Reset
IC167	Buffer	For serial Clock and Data

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC168	Level converter (5V→3.3V)	For External Antenna Tuner signal
IC169	Level converter (3.3V→5V)	For External Antenna Tuner signal
IC171	Real Time Clock	Real Time Clock
IC172	Level converter (5V→3.3V)	USB connection detect
IC181	EEPROM	EEPROM for Back up
IC182	Multiplexer	For Type
IC183	Multiplexer	For PCB version
IC184~189	Latch	Extension Port of Main MPU
IC401	NOR FLASH	Program for IC405
IC402, 403	Latch	Address decoder for IC405
IC404	Triple Inverter (Unbuffer Type)	Inverter for crystal oscillation and buffer
IC405	MPU	Application MPU
IC406, 407	DDR2 SDRAM	DDR2 166MHz
IC408	DAC	DA converter for VOIP and MRECO
IC409	ADC	AD converter for VSP and MRECI
IC410	OP AMP	Reference voltage of OP Amplifier supply
IC411	OP AMP	Active filter for VOIP signal
IC412	OP AMP	Active filter for MRECO signal
IC413	eMMC	Program for IC405
IC414	Inverter	Control for LE of IC402,IC403
IC415	AND GATE	Buffer for EXCLK
IC701	Video DAC	Triple 8-bit video DAC
IC702	Dual Buffer	Level shift from 3.3V to 5V for DSHSM and DSVSM
IC703	DVI Transmitter	DVI transmitter
IC704~706	Octal Bus Buffer	Buffer for display interface
IC801	2ch High Side Switching	Over current protection for USB VBUS
IC802	USB Transceiver	Universal serial bus transceivers
IC803	USB Transceiver	Universal serial bus transceivers
IC804	USB 4ch HUB	USB 4ch hub device
IC805	USB-UART Bridge	USB-UART Bridge Device
IC806	USB CODEC	USB Audio Device
IC807	AND Gate	USB VBUS control
IC808	AND Gate	USB audio device full speed select control
IC809	USB Bus Switching	USB on the go BUS SW

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC810	OP AMP	Active filter for USB audio analog output
IC811	3.3V linear regulator	Power supply for 3.3V (USB Audio Power supply)
IC812	USB-UART Bridge	USB-UART Bridge Device
IC901	Ethernet Phy Chip	Ethernet physical layer transceiver
IC902, 903	Quad Bus Switching	LAN interface BUS SW
IC951	1.8V Switching regulator	Power supply for 1.8V (IC405 Power Supply)
IC952	1.2V Switching regulator	Power supply for 1.2V (IC405 CORE Power Supply)
IC1001	1.8V Switching regulator	Power supply for 1.8V (FPGA & ADC for SCOPE Power Supply)
IC1002	1.2V Switching regulator	Power supply for 1.2V (Scope DSP Internal (Core) Supply)
IC1003	1.2V Switching regulator	Power supply for 1.2V (TXMRX DSP Internal (Core) Supply)
IC1100	MPU	SUB MPU
IC1101	RS-232C transceiver	RS-232C Line Transceiver
IC1200	DSP	TXMRX-DSP
IC1201	Flash Memory	Program for TXMRX-DSP
IC1202, 1203	Latch	Address decoder for TXMRX-DSP
IC1300	DSP	SCP-DSP
IC1301	Flash Memory	Program for SCP-DSP
IC1302, 1303	Latch	Address decoder for SCP-DSP
IC1400	FPGA	FPGA
IC1401	Flash Memory	Program for FPGA
IC1402	Triple Inverter	Control for /OE of IC1403
IC1403	Octal Bus Buffer	BUS SW for SPI(FPGA)
IC1404	1.2V linear regulator	Power supply for 1.2V (FPGA Internal (Core) Supply)
IC1405	Triple Inverter (Unbuffer Type)	Inverter for TCXO and buffer
IC1500	Triple Inverter (Unbuffer Type)	Inverter for SYSTEM CLK and buffer
IC1501	Differential amplifier	Differential amplifier for scope IF
IC1502	ADC	AD converter for SCOPE IF
IC1503	3.3V linear regulator	Power supply for 3.3V (Buffer of System CLK Power Supply)
IC1600	DAC	DA converter for TIF and MAGCV signal

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1601	ADC	AD converter for MRIF and MIC signal
IC1602	DAC	DA converter for BEEP and MUANO signal
IC1603	DAC	DA converter for SP1 and MANO signal
IC1604	DAC	DA converter for MRECI and VSP signal
IC1605	ADC	AD converter for MRECO and ANI signal
IC1606	DAC	DA converter for DITHER signal
IC1607	OP AMP	Active filter for DITHER signal
IC1608	OP AMP	Buffer for MAGCV signal and reference voltage of OP Amplifier
IC1609, 1610	OP AMP	Active filter for TIF signal
IC1611, 1612	OP AMP	Active filter for MRIF signal
IC1613, 1614	OP AMP	Active filter for MIC signal
IC1615	OP AMP	Amplifier for MIC signal
IC1616	Audio power amplifier	SP1(internal SP) / Ext.SP1
IC1617	OP AMP	Active filter for BEEP signal and reference voltage of OP Amplifier
IC1618	DAC	DA converter for electronic volume IC control
IC1619	OP Amplifier with electronic volume	Electronic volume for SP1 signal
IC1620	OP AMP	Additional circuit for SP1/BEEP signal
IC1621	OP AMP	Active filter for SP1 signal
IC1622	Phone amplifier	Phone output
IC1623	OP AMP	Active filter for SP1 signal
IC1624	OP AMP	Active filter for MANO signal
IC1625	OP AMP	Active filter for MUANO signal
IC1626	OP AMP	Active filter for VSP signal
IC1627	OP AMP	Active filter for MRECI signal
IC1628, 1629	OP AMP	Active filter for ANI/MUANI/VOIP signal
IC1630	Analog Switching	Select input line (VOIP ,MUANI or ANI)
Q401	Inverter Switching	AnRST control Switching for IC405
Q402	Power Switching	Power supply control for Analog 5V
Q403	Switching	Q402 ON/OFF Switching
Q701	Power Switching	Power supply control for 5V of display

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q702	Switching	Q701 ON/OFF Switching
Q801	Switching	Q804 ON/OFF Switching
Q802	Switching	Q805 ON/OFF Switching
Q803	Switching	Q806 ON/OFF Switching
Q804	Switching	VBUS Active Signal Switching
Q805	Switching	USB-UART Bridge Device Active Signal Switching
Q806	Switching	USB Audio Device Active Signal Switching
Q807	Switching	Q808 ON/OFF Switching
Q808	Power Switching	USB Device Power Supply Control Switching
Q809	Switching	USB-UART Bridge Device Active Signal Switching
Q810	Switching	Q809 ON/OFF Switching
Q901	Power Switching	LAN Device Power Supply Control Switching
Q902	Switching	Q901 ON/OFF Switching
Q903, 904	Switching	LED Control Switching for LAN
Q951	Power Switching	Power supply control for digital 3.3V
Q952	Switching	Q951 ON/OFF Switching
Q953	Power Switching	Power supply control for 3.3V of USB PHY
Q954	Switching	Q953 ON/OFF Switching
Q955	Power Switching	Power supply control for digital 1.8V
Q956	Switching	Q955 ON/OFF Switching
Q1001	Power Switching	Power supply control for digital 3.3V
Q1002	Switching	Q1001 ON/OFF Switching
Q1100	Switching	232C Transceiver Power Supply Control Switching
Q1101	Switching	STPC control Switching
Q1102	Switching	Q1100 ON/OFF Switching
Q1103	Power Switching	SUB MPU Power Supply Control Switching
Q1104	Switching	Q1103 ON/OFF Switching
Q1500	Amplifier	Amplifier for Scope IF
Q1501	Switching	Q1502 ON/OFF Switching
Q1502	Switching	Scope IF BPF Switching
Q1504	Switching	Q1505 ON/OFF Switching
Q1505	Switching	Scope IF BPF Switching
Q1507~1510	Switching	Scope IF Attenuate Switching
Q1511	Amplifier	Amplifier for Scope IF
Q1512	Amplifier	Amplifier for System CLK
Q1600	Active Filter	Audio Power Amplifier power supply
Q1601	Switching	Audio mute on/off Switching

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q1602	Switching	Q1601 ON/OFF Switching
Q1604	Switching	Audio mute on/off Switching
Q1605	Switching	Q1604 ON/OFF Switching
Q1606	Switching	Control for Analog SW(IC1630)
Q1607	Switching	Q1606 ON/OFF Switching
Q1608	Switching	Control for Analog SW(IC1630)
Q1609	Switching	Q1608 ON/OFF Switching
D1	Switching	Catch diode for 5V switching regulator
D2	Reverse current prevention	Reverse current prevention(14V)
D3	Reverse current prevention	For Reduced voltage detection(BKC)
D101	Surge protection	Surge protect(KYSR2)
D102	Surge protection	Surge protect(KYSR)
D103	Reverse current prevention	For Standby Switching Signal(SS)
D104	Reverse Voltage protection	Reverse Voltage protect(IC2)
D171	Reverse current prevention	For Real Time Clock IC Power
D401	Reverse current prevention	Reduced voltage detection(BKC)
D701~713	Surge protection	Surge protect(DVI)
D801, 802	Surge protection	Surge protect(USB B)
D901~908	Surge protection	Surge protect(LAN)
D1050	Reverse current prevention	For Reduced voltage detection(BKC)
D1100	Slicer	Slice the signal(STPC)
D1500~1503	Switching	Diode Switching(IF BPF)
D1504~1511	Switching	Diode Switching(ATT)
D1601	Reverse current prevention	For relay circuit
D1603	Reverse current prevention	For relay circuit



### 2.3.3 DISPLAY UNIT (XC1-271J-00)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1	MPU	Panel MPU
IC2	Buffer	Conversion 3.3V→5V Reset signal
IC3	3.3V linear regulator	Power supply for 3.3V(Panel MPU)
IC501	AND Gate	TFT back light control(ON/OFF)
IC502	linear regulator	Power supply for 5.0V(TFT Back light)
IC504	linear regulator	Power supply for 3.4V(TFT)
IC650	Inverter	Inversion of CLK signal for TFT
Q22	Switching	VOX LED Control
Q23	Switching	POWER LED Control
Q24	Switching	AT LED Control
Q25	Switching	TIMER LED Control
Q27,28	Switching	LED DIMMER Control
Q31	Switching	MONI LED Control
Q33	Switching	SPLIT LED Control
Q34	Switching	REC LED Control
Q35	Switching	RIT LED Control
Q36	Switching	BUSY LED Control
Q37	Switching	TX LED Control
Q38	Switching	LOCK LED Control
Q39	Switching	XIT LED Control
Q40	Switching	MULTI encoder LED Control
Q41	Switching	DRV LED Control
Q502, 503	Switching	Touch panel SW X1
Q504, 505	Switching	Touch panel SW Y2
Q506	Switching	Touch panel SW Pull up on
Q507	Switching	Touch panel SW Press
D1-D7	Reverse current prevention	For Key matrix
D11	LED	MONI LED
D13	LED	SPLIT LED
D14	LED	REC LED
D15	LED	RIT LED
D16	LED	BUSY LED
D17	LED	TX LED
D18	LED	LOCK LED
D22	LED	XIT LED
D28	LED	DRV LED
D29	Over current prevention	MIC 8V
D30	Reverse current prevention	MIC 8V
D503-D506	Surge protection	For Touch panel

Ref. No.	Use / Function	Operation / Condition / Compatibility
D700, D701	Reverse current prevention	For Paddle jack
D703-D705	Reverse current prevention	For MIC jack
D706	LED	MULTI encoder LED
D707	LED	TIMER LED
D708	LED	POWER LED
D709	LED	VOX LED
D710	LED	AT LED

### 2.3.4 DC-DC UNIT (XC2-035J-00)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC100	8V DC/DC Converter	Power supply for 8V
IC120	5V DC/DC Converter	Power supply for 5V
IC140	3.3V DC/DC Converter	Power supply for 3.3V
IC401	6.5V linear regulator	Power supply for 6.5V
Q20	Switching	Overvoltage detection
Q23~25	Switching	Multi-vibrator for -12V
Q160	Switching	Q161 ON/OFF Switching
Q161	Switching	Power supply control for 3.3S
D20	Zener Diode	Overvoltage detection
D100	Back electromotive force protection	For L101
D101, 102	Rectification	For -12V
D103	Surge protection	For VD
D120	Back electromotive force protection	For L121
D140	Back electromotive force protection	For L141
D225	Surge protection	For TT
D226	Surge protection	For TS

### 2.3.5 PLL UNIT (XC2-036X-XX)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1	OP AMP	Detect voltage of External REF (10MHz) signal
IC51	OP AMP	Control voltage of Internal REF (19.2MHz) signal
IC52	3.3V linear regulator	3.3V regulator (for 19.2MHz TCXO)
IC101	PLL	PLL for 100MHz VCXO
IC201	PLL/VCOs	PLL/VCOs for LO1
IC241	Divider	1/1, 1/2, 1/4, 1/8 divide of LO1
IC511	Flip-flop	1/2 divide of LO2 (E type only)
IC512, 514, 516	Flip-flop	1/5 divide
IC513	Exclusive-OR gate	1/5 divide
IC515	AND gate	1/5 divide
IC601	DDS	DDS for LO3
IC721	PLL	PLL for 39.3216MHz VCXO
IC821	OP AMP	1/2: Charge pump Voltage of 39.3216MHz VCXO amplifier 2/2: Charge pump Voltage of 100MHz VCXO amplifier
IC851	Dual BUS buffer	Level shift from 3.3V to 5V for LDEN2
IC852	Dual BUS buffer	1/2: Level shift from 3.3V to 5V for LDT 2/2: Level shift from 3.3V to 5V for LCK
IC853	Shift register	Q0: LBPF9 "H" when TX 3.0~23.248MHz is selected Q1: LBPF10 "H" when TX 23.248~74.8MHz is selected Q2: DIV5 Always "L" Q3: DIV2 "L" when TX 60.0~74.8MHz is selected Q4: TLO80 "H" when TX 60.0~74.8MHz is selected Q5: Reserved Q6: Reserved Q7: Reserved

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC854	Shift register	Q0: LBPF1 "H" when RX 0.03~3.3MHz is selected Q1: LBPF2 "H" when RX 3.3~9.0MHz is selected Q2: LBPF3 "H" when RX 9.0~14.8MHz is selected Q3: LBPF4 "H" when RX 14.8~17.5MHz and 18.5~20.7MHz are selected Q4: LBPF5 "H" when RX 17.5~18.5MHz and 20.7~26.5MHz are selected Q5: LBPF6 "H" when RX 26.5~29.8MHz and 35.0~49.0MHz are selected Q6: LBPF7 "H" when RX 29.8~35.0MHz and 49.0~60.0MHz are selected Q7: LBPF8 "H" when RX 60.0~74.8MHz and TX 0.03~3.0MHz are selected
IC901, 912	5V linear regulator	5V regulator
IC922	3.3V linear regulator	3.3V regulator
Q1	Buffer	External REF (10MHz) signal buffer amplifier
Q2, 3	Amplifier	External REF (10MHz) signal amplifier (Operate when External REF is selected)
Q6, 7	Switching	Power supply (8V) Switching, ON when External REF is selected
Q51	Buffer	Internal REF (19.2MHz) signal buffer amplifier (Operate when Internal REF is selected)
Q52, 53	Switching	Power supply (5V) Switching, ON when Internal REF is selected
Q101	Amplifier	Internal/External REF (10/19.2MHz) signal amplifier
Q102	Buffer	100MHz REF signal buffer amplifier
Q181	Amplifier	LO1 100MHz REF signal amplifier
Q201	Switching	LO1 Loop Filter, ON during transmission
Q241	Amplifier	LO1 PLL output signal amplifier
Q242, 243	Switching	LO1 Divider (IC251) divider value select
Q251	Amplifier	LO1 signal amplifier
Q271, 272	Switching	LO1 BPF Switching, ON when RX 0.03~3.3MHz is selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q274, 275	Switching	LO1 BPF Switching, ON when RX 3.3~9.0MHz is selected
Q277, 278	Switching	LO1 BPF Switching, ON when RX 9.0~14.8MHz is selected
Q280, 281	Switching	LO1 BPF Switching, ON when RX 14.8~17.5MHz and 18.5~20.7MHz are selected
Q283, 284	Switching	LO1 BPF Switching, ON when RX 17.5~18.5MHz and 20.7~26.5MHz are selected
Q286, 287	Switching	LO1 BPF Switching, ON when RX 26.5~29.8MHz and 35.0~49.0MHz are selected
Q289, 290	Switching	LO1 BPF Switching, ON when RX 29.8~35.0MHz and 49.0~60.0MHz are selected
Q292, 293	Switching	LO1 BPF Switching, ON when RX 60.0~74.8MHz and TX 0.03~3.0MHz are selected
Q295, 296	Switching	LO1 BPF Switching, ON when TX 3.0~23.248MHz is selected
Q298, 299	Switching	LO1 BPF Switching, ON when TX 23.248~74.8MHz is selected
Q501	Amplifier	LO2 100MHz REF signal amplifier (E type only)
Q502	Switching	LO2 Divider Switching, OFF when TX 60.0~74.8MHz is selected (E type only)
Q503	Amplifier	100MHz REF signal amplifier
Q504	Switching	Divider Switching, Always OFF
Q541	Doubler	20MHz signal (20MHz > 40MHz)
Q542	Buffer	40MHz signal buffer amplifier
Q601	Amplifier	LO3 40MHz signal amplifier
Q603	Amplifier	LO3 8.212/8.224MHz signal amplifier
Q651	Doubler	LO2 40MHz signal (40MHz > 80MHz)
Q652	Amplifier	LO2 80MHz signal amplifier
Q701	Amplifier	LO2 50MHz signal amplifier (E type only)
Q702, 704	Switching	LO2 Power supply (8V) Switching, ON during transmission
Q703	Switching	LO2 Power supply (8V) Switching, ON when TX 60.0~74.8MHz is selected
Q705, 707	Switching	LO2 Power supply (8V) Switching, ON when TX 0.03~60.0MHz is selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q706	Switching	LO2 Power supply (8V) Switching, ON when TX 60.0~74.8MHz is selected (E type only)
Q721	Amplifier	INT CLK 40MHz signal amplifier
Q751	Oscillate VCXO	INT CLK 39.3216MHz VCXO
Q786	Amplifier	INT CLK 39.3216MHz fin amplifier (IC721)
Q801	Amplifier	INT CLK 39.3216MHz signal amplifier
Q841	Ripple Filter	Power supply (8V) ripple filter
Q842	Switching	Power supply (8V) Switching, OFF when LO1 Mute
Q843	Switching	Power supply (8V) Switching, ON when LO1 Mute
D1	Surge protection	External REF (10MHz) signal input
D2, 3	Surge absorption	External REF (10MHz) signal input
D4, 5	Switching	External REF (10MHz) signal Switching, ON when External REF is selected
D6	Detection	Detect external REF (10MHz) signal
D51, 52	Switching	Internal REF (19.2MHz) signal Switching, ON when Internal REF is selected
D101, 103	Switching	External REF (10MHz) signal Switching, ON when External REF is selected
D102, 104	Switching	Internal REF (19.2MHz) signal Switching, ON when Internal REF is selected
D105	Reverse current prevention	PLL (IC101) Lock detect
D271, 272	Switching	LO1 signal Switching, ON when RX 0.03~3.3MHz is selected
D273, 274	Switching	LO1 signal Switching, ON when RX 3.3~9.0MHz is selected
D275, 276	Switching	LO1 signal Switching, ON when RX 9.0~14.8MHz is selected
D277, 278	Switching	LO1 signal Switching, ON when RX 14.8~17.5MHz and 18.5~20.7MHz are selected
D279, 280	Switching	LO1 signal Switching, ON when RX 17.5~18.5MHz and 20.7~26.5MHz are selected
D281, 282	Switching	LO1 signal Switching, ON when RX 26.5~29.8MHz and 35.0~49.0MHz are selected
D283, 284	Switching	LO1 signal Switching, ON when RX 29.8~35.0MHz and 49.0~60.0MHz are selected

Ref. No.	Use / Function	Operation / Condition / Compatibility
D285, 286	Switching	LO1 signal Switching, ON when RX 60.0~74.8MHz and TX 0.03~3.0MHz are selected
D287, 288	Switching	LO1 signal Switching, ON when TX 3.0~23.248MHz is selected
D289, 290	Switching	LO1 signal Switching, ON when TX 23.248~74.8MHz is selected
D651	Switching	LO2 signal Switching, ON when TX 0.03~60.0MHz is selected
D701	Switching	LO2 signal Switching, ON when TX 60.0~74.8MHz is selected (E type only)
D721	Reverse current prevention	PLL (IC721) Lock detect
D752	VCXO frequency control	INT CLK 39.3216MHz VCXO

### 2.3.6 FINAL UNIT (XC3-062X-XX)

Ref. No.	Use / Function	Operation / Condition / Compatibility
IC1	Current detecting	Measuring drain current
IC2,3,4	Voltage shift	Supplying gate voltage
IC101~103	AMP	Amplitude detection
IC104	D Flip-Flop	Phase detection
IC501~506	Shift register	Conversion "serial " and "parallel"
Q2	Pre-drive Amplifier	HF/50M(70M) amplifier
Q3	Drive Amplifier	HF/50M(70M) amplifier
Q4,Q5	Final Amplifier	HF/50M(70M) amplifier
Q7	Switching	FAN control
Q603~605	Switching	FAN control
Q606~608	Switching	FAN control
Q101, 102	Amplifier	AT control
Q301~305	Switching	TX/RX switching
Q501, 502	Switching	Switching filter depend on bands
Q503	Switching	AT IN Through control
Q504~507	Switching	Switching filter depend on bands
Q508~515	Switching	AT switching depend on bands
Q516	Switching	ANT1,2 control

Ref. No.	Use / Function	Operation / Condition / Compatibility
Q517~520	Switching	Switching filter depend on bands
Q503	Switching	AT IN/THROUGH control
Q516	Switching	ANT1,2 control
Q508~515	Switching	AT switching depend on bands
Q521~524	Switching	AT switching depend on bands
Q525-532	Switching	Switching AT "CI" capacitor
Q534-542	Switching	Switching AT "CO" capacitor
Q601, 602	Switching	Switching +B line
Q603~605	Switching	FAN control
Q606~608	Switching	FAN control
D1,D2	Attenuator	RF Power control
D3	Detection	ID Meter control
D5	Protection	Surge protect
D102-110	Reverse voltage prevention	Surge protect
D113-114	Detection	VSF VSR control
D301, 303	Reverse voltage prevention	Surge protect
D304	Protection	Over Voltage protect
D302, 305,306, 307	Switching	Leading TX power
D308~310	Surge protection	Surge protect
D403-420	Surge protection	Surge protect
D600	Control	Constant voltage control
D601	Protection	Over Voltage protect
D602	Surge protection	Surge protect

## 2.4 TERMINAL FUNCTION

### 2.4.1 TX-RX UNIT (XC1-269X-XX)

Pin No.	Name	I/O	Function
<b>CN1</b>			
1	GND	-	GND
2	NC	-	No connection
3	VSF	I	Forward wave power detection voltage
4	VSR	I	Reflected wave power detection voltage
5	NC	-	No connection
6	FI5	O	Final Idle current adjustment (RIGHT)
7	FI4	O	Final Idle current adjustment (LEFT)
8	FI3	-	No connection
9	FI2	O	Drive current adjustment
10	FI1	O	Pre-Drive current adjustment
11	ID	I	Drain current signal
12	NC	-	No connection
13	TXB	O	TX 8V
<b>CN2</b>			
1	8A	O	DC-DC converted 8V
2	8A	O	DC-DC converted 8V
3	NC	-	No connection
4	GND	-	GND
5	CV_CLK	I	INT CLK PLL Charge pump voltage
6	CV_REF	I	Reference PLL Charge pump voltage
7	SEL1	O	LO1 Divider of divider value select signal
8	LREF	O	Internal reference (19.2MHz) frequency adjust control voltage
9	SEL0	O	LO1 Divider of divider value select signal
10	LPEN2	O	LO1 PLL/VCOs enable
11	LOV2	I	PLL Unit version detection signal
12	LDT	O	Local Serial data
13	LOV1	I	PLL Unit version detection signal
14	LCK	O	Local Serial clock
15	LDEN2	O	LO3 DDS enable
16	LREF2	O	Internal reference (19.2MHz) frequency fine adjust control voltage
17	ERDET	I	External reference detect
18	ULLO1	I	LO1 Unlock detect H: Lock
19	LO1BK	O	LO1 blanking signal H: Mute
20	LPEN1	O	Reference PLL enable
21	ERSW2	O	External reference ON/OFF control signal H: External reference ON

Pin No.	Name	I/O	Function
22	ERSW1	O	Internal reference ON/OFF control signal H: Internal reference ON
23	TXC	O	TX ON/OFF control signal H: TX ON
24	ULREF	I	Reference/INT CLK Unlock detect H: Lock
25	LSEN	O	Local shift register enable
26	LCEN1	O	INT CLK PLL enable
27	GND	-	GND
28	NC	-	No connection
29	5A	O	DC-DC converted 5V
30	5A	O	DC-DC converted 5V
<b>CN3</b>			
1	LCEN1	I	INT CLK PLL enable
2	LSEN	I	Local shift register enable
3	ULREF	O	Reference/INT CLK Unlock detect H: Lock
4	ERSW2	I	External reference ON/OFF control signal H: External reference ON
5	ERSW1	I	Internal reference ON/OFF control signal H: Internal reference ON
6	ERDET	O	External reference detect
7	LPEN1	I	Reference PLL enable
8	LDEN2	I	LO3 DDS enable
9	ULLO1	O	LO1 Unlock detect H: Lock
10	GND	-	GND
11	LCK	I	Local Serial clock
12	GND	-	GND
13	LDT	I	Local Serial data
14	GND	-	GND
15	LPEN2	I	LO1 PLL/VCOs enable
16	LOV1	O	PLL Unit version detection signal
17	DAEN1	I	D/A converter (IC553) enable
18	LOV2	O	PLL Unit version detection signal
19	DAEN2	I	D/A converter (IC556) enable
20	SEL0	I	LO1 Divider of divider value select signal
21	FID	I	D/A converter (IC558) enable
22	SEL1	I	LO1 Divider of divider value select signal
23	TEN1	I	Shift register (IC552/IC555/IC557) enable
24	TRXV1	O	TX-RX Unit version detection signal
25	TEN2	I	Shift register (IC551/IC554) enable
26	GND	-	GND

Pin No.	Name	I/O	Function
27	DATA	I	Serial data
28	GND	-	GND
29	CLK	I	Serial clock
30	GND	-	GND
31	LO1BK	I	LO1 blanking signal H: Mute
32	TRXV2	O	TX-RX Unit version detection signal
33	TXC	I	TX ON/OFF control signal H: TX ON
34	KEY2	O	KEY down signal / Electronic keyer dash signal
35	NBS	I	NB MCF ON/OFF control signal H: NB MCF PASS
36	KEY1	O	KEY down signal / Electronic keyer dot signal
37	IBK	I	RX IF blanking signal
38	KYSR	O	KEY jack / PADDLE judgement signal
39	270DET	O	Option filter detect
40	SMET2	I	Meter Level voltage 2
41	AGCV	I	RX AGC control voltage
42	SMET1	I	Meter Level voltage 1
43	NC	-	No connection
44	DACRST	I	D/A converter (IC556) reset
45	VFSM	O	VSF meter voltage
46	SP1	I	Speaker output (to REMOTE Connector)
47	VSRM	O	VSR meter voltage
48	SS	O	Standby switch
49	CKY	I	CKY mute signal
50	ANI	O	Packet data input (from ACC2 Connector)
51	ALM	O	ALC meter voltage
52	SQC	I	Squelch control signal (to ACC2 Connector)
53	ID1	O	Drain current signal
54	ANOMU	I	ANO mute control signal H: Mute
55	RTK	O	RTTY key signal
56	ANO	I	RX AF signal output (to ACC2 Connector)
57	EXTPF2	O	External PF key 2 input
58	PKSR	O	PTT output for data communication
59	EXTPF1	O	External PF key 1 input
60	PKP	I	Invert PKS control signal
<b>CN4</b>			
1	33S	I	DC-DC converted 3.3V
2	GND	-	GND
3	5A	I	DC-DC converted 5V

Pin No.	Name	I/O	Function
4	GND	-	GND
5	14S	I	Switched 14V
6	GND	-	GND
7	8A	I	DC-DC converted 8V
8	GND	-	GND
<b>CN201</b>			
1	RAT	I	RX RF signal (Coaxial)
<b>CN602</b>			
1	LO1	I	LO1 signal (Coaxial)
<b>CN603</b>			
1	SCOPE_IF	O	Scope IF signal (Coaxial)
<b>CN701</b>			
1	NB	O	RX noise blanker IF (Coaxial)
<b>CN702</b>			
1	NB	I	RX noise blanker IF (Coaxial)
<b>CN806</b>			
1	LO3	I	LO3 (8.212/8.224MHz) signal (Coaxial)
<b>CN807</b>			
1	RIF	O	RX IF signal
2	GND	-	GND
3	TIF	I	TX IF signal
4	GND	-	GND
<b>CN1101</b>			
1	TXRF	O	TX RF signal (Coaxial)
<b>CN1203</b>			
1	LO2	I	LO2 (50/80MHz) signal (Coaxial)
<b>J1 (KEY JACK)</b>			
2	KEY1	I	KEY down signal input
3	KEY2	I	KEY down signal input
5	KYSR	I	KEY jack / PADDLE judgement signal
<b>J2 (METER CONNECTOR)</b>			
2	MET1	O	Meter 1 level output
3	MET2	O	Meter 2 level output
-	GND	-	GND
<b>J3 (REMOTE CONNECTOR)</b>			
1	SPO	O	Speaker output
2	COM	I/O	Control relay terminal (Common)
3	SS	I	Standby (PTT) input
4	MKE	I/O	Control relay terminal
5	BRK	I/O	Control relay terminal
6	ALC	I	ALC control input
7	LKY	O	Switched 12V (TX)
<b>J4 (ACC2 CONNECTOR)</b>			
1	NC	-	No connection
2	RTTY	I	"RTTY key signal input (Mark/Space)"

Pin No.	Name	I/O	Function
3	ANO	O	"Data (detected) signal output"
4	GND	-	GND
5	PSQ	O	"Data squelch control output"
6	MET1	O	Meter 1 level output
7	NC	-	No connection
8	GND	-	GND
9	PKS	I	Data standby input
10	MET2	O	Meter 2 level output
11	ANI	I	Data signal input
12	GND	-	GND
13	SS	I	Standby (PTT) input
<b>J5 (KEYPAD JACK)</b>			
2	EXTPF2	I	External KEYPAD signal input
3	EXTPF1	I	External KEYPAD signal input
-	GND	-	GND
<b>J201 (RX OUT CONNECTOR)</b>			
1	RX OUT	O	RX Antenna output
-	GND	-	GND
<b>J202 (RX IN CONNECTOR)</b>			
1	RX IN	I	RX Antenna input
-	GND	-	GND
<b>J203 (ANT OUT CONNECTOR)</b>			
1	ANT OUT	O	Antenna output
-	GND	-	GND
<b>J1101 (DRV CONNECTOR)</b>			
1	DRV	O	Drive output
-	GND	-	GND
<b>OPTION FILTER CONNECTOR</b>			
1	IF IN	I	IF Filter input
2	GND	-	GND
3	270DET	-	Option Filter Detect (Short to the GND)
4	GND	-	GND
5	IF OUT	O	IF Filter output
6	GND	-	GND

#### 2.4.2 CONTROL (CONT/APP) UNIT (XC1-270X-XX 1/2)

Pin No.	Name	I/O	Function
<b>CN1</b>			
1	14V	I	Non-switched 14V
2	GND	-	Digital GND
3	GND	-	Digital GND
4	5D	I	DC-DC converted 5.0V
5	GND	-	Digital GND
6	33C	I	DC-DC converted 3.3V

Pin No.	Name	I/O	Function
7	GND	-	Digital GND
<b>CN2</b>			
1	GND	-	Digital GND
2	5D	I	VBUS 5V
3	GND	-	Digital GND
4	5VDCDC	I	DC-DC converted 5.0V
5	GND	-	Digital GND
6	33C	I	DC-DC converted 3.3V
<b>CN3</b>			
1	FINV1	I	Final PCB version detect 1
2	FINV2	I	Final PCB version detect 2
3	14SW	O	Power on switch control
4	PSC	O	Power Switch Control
5	GND	-	Digital GND
6	DCFV	-	No connection
7	GND	-	Digital GND
8	BOVER	I	Over voltage detection interrupt
9	GND	-	Digital GND
10	CLK	O	Serial clock
11	DATA	O	Serial data
12	FEN1	O	Shift register enable
13	FEN2	O	Shift register enable
14	SPOE	O	Shift register output enable
15	TT	IO	External AT IN/THROUGH control
16	TS	IO	External AT tuning start control
17	VD	I	Final Amplifier Drain Voltage
18	PHD	I	Voltage of phase detector
19	AMD	I	Voltage of amplitude detector
20	TH1	I	The thermistor detection voltage
21	ATPWS	O	Stop operating AT relays
22	NC	-	No connection
<b>CN4</b>			
1	LTIMER	O	TIMER LED(D707) H:ON
2	PRST	O	Reset signal for MPU L:Reset
3	DOT	I	Electronic keyer dot signal
4	DASH	I	Electronic keyer dash signal
5	KYSR	I	KEY jack judgement signal L: KEY or PADDLE plugged
6	PWS	I	Power switch signal L:Power on
7	SS	I	PTT control L:TX
8	PRXD	I	Serial data input from Panel MPU
9	PTXD	O	Serial data output to Panel MPU
10	PCTS	I	CTS signal input from Panel MPU
11	PRTS	O	RTS signal output to Panel MPU
12	EXTPF2	O	External PF key 2 input from KEY PAD Jack

Pin No.	Name	I/O	Function
13	EXTPF1	O	External PF key 1 input from KEY PAD Jack
14	MBLEN	O	Display backlight enable from Main MPU
15	PATXD	I	Serial data input from Panel MPU(Touch panel data)
16	PARXD	O	Serial data output to Panel MPU (Not used)
17	33B	O	Linear regulator 3.3V
18	NC	-	No connection
19	GND	-	Digital GND
20	PFPRG	O	Setup firmware write mode for panel MPU L:Firmware write mode
<b>CN5</b>			
1	PKP	O	Invert PKS control signal
2	EXTPF1	I	External PF key 1 input
3	PKSR	I	PTT input for data communication
4	EXTPF2	I	External PF key 2 input
5	ANO	O	RX AF signal output (to ACC2 Connector)
6	RTK	I	RTTY key signal
7	ANOMU	O	ANO mute control signal H: Mute
8	ID1	I	Drain current signal
9	SQC	O	Squelch control signal
10	ALM	I	ALC meter voltage
11	ANI	I	Packet data input (from ACC2 Connector)
12	CKY	O	CKY mute signal
13	SS	I	Standby switch
14	VSRM	I	VSR meter voltage
15	SP1	O	Speaker output (to REMOTE Connector)
16	VSFM	I	VSF meter voltage
17	DACRST	O	D/A converter reset
18	NC	-	No connection
19	SMET1	O	Meter Level voltage 1
20	AGCV	O	RX AGC control voltage
21	SMET2	O	Meter Level voltage 2
22	270DET	I	Option filter detect
23	KYSR	I	KEY jack / PADDLE judgement signal
24	IBK	O	RX IF blanking signal
25	KEY1	I	KEY down signal / Electronic keyer dot signal
26	NBS	O	NB MCF ON/OFF control signal H: NB MCF PASS
27	KEY2	I	KEY down signal / Electronic keyer dash signal
28	TXC	O	TX ON/OFF control signal H: TX ON

Pin No.	Name	I/O	Function
29	TRXV2	I	TX-RX Unit version detection signal
30	LO1BK	O	LO1 blanking signal H: Mute
31	GND	-	GND
32	CLK	O	Serial clock
33	GND	-	GND
34	DATA	O	Serial data
35	GND	-	GND
36	TEN2	O	Shift register enable
37	TRXV1	I	TX-RX Unit version detection signal
38	TEN1	O	Shift register enable
39	SEL1	O	LO1 Divider of divider value select signal
40	FID	O	D/A converter enable
41	SEL0	O	LO1 Divider of divider value select signal
42	DAEN2	O	D/A converter enable
43	LOV2	I	PLL Unit version detection signal
44	DAEN1	O	D/A converter enable
45	LOV1	I	PLL Unit version detection signal
46	LPEN2	O	LO1 PLL/VCOs enable
47	GND	-	GND
48	LDT	O	Local Serial data
49	GND	-	GND
50	LCK	O	Local Serial clock
51	GND	-	GND
52	ULLO1	I	LO1 Unlock detect H: Lock
53	LDEN2	O	LO3 DDS enable
54	LPEN1	O	Reference PLL enable
55	ERDET	I	External reference detect
56	ERSW1	O	Internal reference ON/OFF control signal H: Internal reference ON
57	ERSW2	O	External reference ON/OFF control signal H: External reference ON
58	ULREF	I	Reference/INT CLK Unlock detect H: Lock
59	LSEN	O	Local shift register enable
60	LCEN1	O	INT CLK PLL enable
<b>CN6</b>			
1	A+5V	I	DC-DC converted 5V
2	NC	-	No connection
3	MRECI	I	AF input for recording
4	AGND	-	Analog GND
5	MRECO	O	AF output for playback
6	AGND	-	Analog GND
7	VSP	I	AF input from Control (DSP/FPGA) Unit(LAN)
8	AGND	-	Analog GND



Pin No.	Name	I/O	Function
9	VOIP	O	AF output to Control (DSP/FPGA) Unit(LAN)
10	AGND	-	Analog GND
11	MUANO	I	AF input form Control (DSP/FPGA) Unit(USB codec)
12	AGND	-	Analog GND
13	MUANI	O	AF output to Control (DSP/FPGA) Unit(USB codec)
14	AGND	-	Analog GND
15	ANI	O	AF input from ACC2
16	AGND	-	Analog GND
17	MANO	I	AF output to ACC2
18	AGND	-	Analog GND
19	SP1	I	AF output to REMOTE (after power amplifier)
20	AGND	-	Analog GND
21	MAGCV	I	Automatic gain control voltage from TXMRX-DSP
22	GND	-	Digital GND
23	STS	O	RS-232C Receiver Power Control
24	RTK	O	RTTY key signal from ACC2
25	STPC	I	Interrupt for Returning from Sleep Mode(PC Control)
26	CTXD	O	RS-232C Transmitted Data
27	CRXD	I	RS-232C Received Data
28	CRTS	O	RS-232C Request to Send
29	CCTS	I	RS-232C Clear to Send
30	DGND	-	Digital GND
31	D+	I/O	USB data
32	D-	I/O	USB data
33	DGND	-	Digital GND
34	BKC	O	Reduced voltage detection interrupt
35	DTXD	O	Received Data from Main MPU
36	DRXD	I	Transmitted Data from Sub MPU
37	DRTS	O	Request to Send from Main MPU
38	DCTS	I	Request to Send from Sub MPU
39	DRST	O	Reset signal for Sub MPU
40	DFPRG	I/O	Setup firmware write mode for Sub MPU
41	CKY	O	RF power on/off
42	TXC	O	TX on/off
43	PSC	O	Power Switch Control
44	IBK	O	IF blanking for TXMRX-DSP
45	MABK1	O	AF blanking for TXMRX-DSP
46	MABK2	O	AF blanking for TXMRX-DSP
47	MCTDET	I	CTCSS detection from TXMRX-DSP
48	SCCSO	I	Serial Communication Chip Select to Application MPU

Pin No.	Name	I/O	Function
49	SCSIMO	I	Serial Data input from Scope DSP
50	SCCLK	I	Serial Communication CLK to Application MPU
51	VCTS1D	O	CTS from USB-Serial Bridge (for Keying1)
52	VDSR1D	O	DSR from USB-Serial Bridge (for Keying1)
53	VCTS2D	O	CTS from USB-Serial Bridge (for Keying2)
54	VDSR2D	O	DSR from USB-Serial Bridge (for Keying2)
55	NC	-	No connection
56	NC	-	No connection
57	NC	-	No connection
58	NC	-	No connection
59	NC	-	No connection
60	NC	-	No connection
<b>CN701</b>			
1	5DCDC	O	DC-DC converted 5.0V
2	5DCDC	O	DC-DC converted 5.0V
3	5DCDC	O	DC-DC converted 5.0V
4	5DCDC	O	DC-DC converted 5.0V
5	DE	O	Data enable for TFT Display
6	GND	-	Digital GND
7	GND	-	Digital GND
8	B5	O	Blue data for TFT Display
9	GND	-	Digital GND
10	B4	O	Blue data for TFT Display
11	GND	-	Digital GND
12	B3	O	Blue data for TFT Display
13	GND	-	Digital GND
14	B2	O	Blue data for TFT Display
15	GND	-	Digital GND
16	B1	O	Blue data for TFT Display
17	GND	-	Digital GND
18	B0	O	Blue data for TFT Display
19	GND	-	Digital GND
20	G5	O	Green data for TFT Display
21	GND	-	Digital GND
22	G4	O	Green data for TFT Display
23	GND	-	Digital GND
24	G3	O	Green data for TFT Display
25	GND	-	Digital GND
26	G2	O	Green data for TFT Display
27	GND	-	Digital GND
28	G1	O	Green data for TFT Display
29	GND	-	Digital GND

Pin No.	Name	I/O	Function
30	G0	O	Green data for TFT Display
31	GND	-	Digital GND
32	R5	O	Red data for TFT Display
33	GND	-	Digital GND
34	R4	O	Red data for TFT Display
35	GND	-	Digital GND
36	R3	O	Red data for TFT Display
37	GND	-	Digital GND
38	R2	O	Red data for TFT Display
39	GND	-	Digital GND
40	R1	O	Red data for TFT Display
41	GND	-	Digital GND
42	R0	O	Red data for TFT Display
43	GND	-	Digital GND
44	NC	-	No connection
45	GND	-	Digital GND
46	ABLENM	O	TFT Display backlight enable
47	GND	-	Digital GND
48	DCLK	O	Dot-clock output for TFT Display
49	GND	-	Digital GND
<b>CN801</b>			
1	U1VBUS	O	VBUS 5V for USB Device
2	U1D+	I/O	USB data
3	U1D-	I/O	USB data
4	U1SGND	-	USB signal GND
5	U1GND	-	Digital GND
<b>J701 (DISPLAY Connector (DVI-I))</b>			
1	TMDS DATA 2-	O	Digital RED -
2	TMDS DATA 2+	O	Digital RED +
3	SHILD	-	GND
4	NC	-	No connection
5	NC	-	No connection
6	NC	-	No connection
7	NC	-	No connection
8	VERTICAL SYNC	O	Vertical synchronization signal for analog interface
9	TMDS DATA 1-	O	Digital GREEN -
10	TMDS DATA 1+	O	Digital GREEN +
11	SHILD	-	GND
12	NC	-	No connection
13	NC	-	No connection
14	5V	O	5V power
15	GND	-	GND
16	NC	-	No connection
17	TMDS DATA 0-	O	Digital BLUE -
18	TMDS DATA 0+	O	Digital BLUE +

Pin No.	Name	I/O	Function
19	SHILD	-	GND
20	NC	-	No connection
21	NC	-	No connection
22	CLOCK SHILD	-	GND
23	TMDS CLOCK+	O	Digital CLOCK +
24	TMDS CLOCK-	O	Digital CLOCK -
C1	Analog RED	O	Analog RED
C2	Analog GREEN	O	Analog GREEN
C3	Analog BLUE	O	Analog BLUE
C4	HORIZONTAL SYNC	O	Horizontal synchronization signal for analog interface
C5	GND	-	GND
<b>J801 (USB Connector (USB-B))</b>			
1	VBUS	-	BUS power input
2	D-	I/O	USB data
3	D+	I/O	USB data
4	GND	-	GND
<b>J901 (LAN Connector (RJ-45))</b>			
1	TD+	O	Transmit data signal output
2	TD-	O	Transmit data signal output
3	RD+	I	Receive data signal input
4	NC	-	No connection
5	NC	-	No connection
6	RD-	I	Receive data signal input
7	NC	-	No connection
8	NC	-	No connection

### 2.4.3 CONTROL (DSP/FPGA) UNIT (XC1-270X-XX 2/2)

Pin No.	Name	I/O	Function
<b>CN1001</b>			
1	AGND	-	Analog GND
2	5A	I	DC-DC converted 5V
3	8A	I	DC-DC converted 8V
4	AGND	-	Analog GND
5	14S	I	Switched 14V for AF power amplifier
<b>CN1002</b>			
1	GND	-	Digital GND
2	5D	I	VBUS 5V
3	GND	-	Digital GND
4	5VDCDC	I	Digital 5V
5	GND	-	Digital GND
6	33C	I	DC-DC converted 3.3V
<b>CN1050</b>			
1	NC	-	No connection
2	NC	-	No connection

Pin No.	Name	I/O	Function
3	NC	-	No connection
4	NC	-	No connection
5	NC	-	No connection
6	NC	-	No connection
7	VDSR2D	I	DSR form USB-Serial Bridge (for Keying2)
8	VCTS2D	I	CTS form USB-Serial Bridge (for Keying2)
9	VDSR1D	I	DSR form USB-Serial Bridge (for Keying1)
10	VCTS1D	I	CTS form USB-Serial Bridge (for Keying1)
11	SCCLK	O	Serial Communication CLK to Application MPU
12	SCSIMO	O	Serial Data output to Application MPU
13	SCCSO	O	Serial Communication Chip Select to Application MPU
14	MCTDET	O	CTCSS detection from TXMRX-DSP
15	MABK2	I	AF blanking for TXMRX-DSP
16	MABK1	I	AF blanking for TXMRX-DSP
17	IBK	I	IF blanking for TXMRX-DSP
18	PSC	I	Power Switch Control
19	TXC	I	TX on/off
20	CKY	I	RF power on/off
21	DFPRG	I/O	Setup firmware write mode for Sub MPU
22	DRST	I	Reset signal for Sub MPU
23	DCTS	O	Request to Send form Sub MPU
24	DRTS	I	Request to Send from Main MPU
25	DRXD	O	Transmitted Data form Sub MPU
26	DTXD	I	Received Data from Main MPU
27	BKC	I	Reduced voltage detection interrupt
28	DGND	-	Digital GND
29	D-	I/O	USB data
30	D+	I/O	USB data
31	DGND	-	Digital GND
32	CCTS	O	RS-232C Clear to Send
33	CRTS	I	RS-232C Request to Send
34	CRXD	O	RS-232C Received Data
35	CTXD	I	RS-232C Transmitted Data
36	STPC	O	Interrupt for Returning from Sleep Mode(PC Control)
37	RTK	I	RTTY key signal form ACC2
38	STS	I	RS-232C Receiver Power Control
39	GND	-	Digital GND
40	MAGCV	O	Automatic gain control voltage form TXMRX-DSP
41	AGND	-	Analog GND

Pin No.	Name	I/O	Function
42	SP1	O	AF output to REMOTE (after power amplifier)
43	AGND	-	Analog GND
44	MANO	O	AF output to ACC2
45	AGND	-	Analog GND
46	ANI	I	AF input from ACC2
47	AGND	-	Analog GND
48	MUANI	I	AF input form USB codec
49	AGND	-	Analog GND
50	MUANO	O	AF output to USB codec
51	AGND	-	Analog GND
52	VOIP	I	AF input form LAN
53	AGND	-	Analog GND
54	VSP	O	AF output to LAN
55	AGND	-	Analog GND
56	MRECO	I	AF input for recording
57	AGND	-	Analog GND
58	MRECI	O	AF output for recording
59	NC	-	No connection
60	A+5V	O	DC-DC converted 5V
<b>CN1500</b>			
1	SCOPE IF	I	Scope IF signal(Coaxial)
<b>CN1501</b>			
1	INT CLK	I	(39.3216MHz) signal (Coaxial)
<b>CN1600</b>			
1	TIF	O	TX IF
2	NC	-	No connection
3	GND	-	Analog GND
<b>CN1601</b>			
1	RIF		RX IF
2	GND		Analog GND
<b>CN1602</b>			
1	MIC	I	Microphone signal(hot) input
2	MSG	I	Microphone signal(cold) input
3	MCG	-	Common GND
<b>CN1603</b>			
1	SP	O	AF output for internal speaker (after power amplifier)
2	GND	-	Power amplifier GND
<b>CN1604</b>			
1	PH1	O	AF output (Lch of phone output)
2	PHG	-	Phones GND
3	PH2	O	AF output (Rch of phone output)
4	PHDET	I	Phone jack insertion detection
<b>J1050 (USB Connector (USB-A))</b>			
1	VBUS	-	BUS power output

Pin No.	Name	I/O	Function
2	D-	I/O	USB data
3	D+	I/O	USB data
4	GND	-	GND
<b>J1100 (COM Connector)</b>			
1	NC	-	No connection
2	RXD	O	UART signal output
3	TXD	I	UART signal input
4	NC	-	No connection
5	GND	-	GND
6	NC	-	No connection
7	RTS	I	UART flow signal input
8	CTS	O	UART flow signal output
9	NC	-	No connection
<b>J1600 (EXT.SP Jack)</b>			
2	SP	O	External speaker AF output
3	SP1	O	External speaker AF output

#### 2.4.4 DISPLAY(MAIN PANEL) UNIT (XC1-271J-00 1/9)

Pin No.	Name	I/O	Function
<b>CN2</b>			
1	5D	I	DC-DC converted 5.0V
2	NC	-	No connection
3	GND	-	GND
4	NC	-	No connection
5	8A	I	DC-DC converted 8.0V
6	NC	-	No connection
7	LED B	O	LED power supply 8.0V
8	NC	-	No connection
9	SS	O	PTT control L:TX
10	LPWR	O	Power ON LED(D708) H:ON
11	LAT	O	AT LED(D710) H:ON
12	LVOX	O	VOX LED(D709) H:ON
13	KI0	I	Key scan IN 0
14	KO6	O	Key scan OUT 6
15	KO5	O	Key scan OUT 5
16	KO4	O	Key scan OUT 4
17	KO3	O	Key scan OUT 3
18	PRST	I	Reset signal for MPU L:Reset
19	PRXD	I	Serial data input from Main MPU(TXD)
20	PTXD	O	Serial data output to Main MPU(RXD)
21	PCTS	I	CTS signal input from Main MPU(RTS)
22	PRTS	O	RTS signal output to Main MPU(CTS)
23	EXTPF2	I	External PF key 2 input from KEY PAD Jack

Pin No.	Name	I/O	Function
24	EXTPF1	I	External PF key 1 input from KEY PAD Jack
25	PATXD	O	Serial data output to Application MPU(Touch panel data)
26	PARXD	I	Serial data input from Application MPU(Not used)
27	PFPRG	I	Setup firmware write mode for panel MPU L:Firmware write mode
28	GND	-	GND
29	NC	-	No connection
30	GND	-	GND
31	BLSYNC(NC)	-	No connection
32	GND	-	GND
33	BLPWM	O	TFT Display backlight luminance Control
34	GND	-	GND
35	TPPUON	O	Touch panel SW PULL UP ON
36	TPPRES	O	Touch panel SW PRESS
37	Y2	O	Touch panel SW Y2
38	Y1	O	Touch panel SW Y1
39	X2	O	Touch panel SW X2
40	X1	O	Touch panel SW X1
41	NC	-	No connection
42	PA_X-	I	Touch panel detection X-
43	PA_Y-	I	Touch panel detection Y-
44	PA_X+	I	Touch panel detection Y+
45	PA_Y+	I	Touch panel detection X+
<b>CN4</b>			
1	MU	I	MIC UP control L:UP
2	MD	I	MIC Down control L:Down
3	SS	I	PTT control L:TX
4	KO6	O	Key scan OUT 6
5	KO5	O	Key scan OUT 5
6	KO4	O	Key scan OUT 4
7	KO3	O	Key scan OUT 3
8	KO2	O	Key scan OUT 2
9	KO1	O	Key scan OUT 1
10	KO0	O	Key scan OUT 0
11	KI1	I	Key scan IN 1
12	KI0	I	Key scan IN 0
13	GND	-	GND
14	NC	-	No connection
15	8A	O	DC-DC converted 8.0V
<b>CN5</b>			
1	LCENCB	I	Low cut encoder pulse B
2	LCENCA	I	Low cut encoder pulse A
3	HCENCB	I	High cut encoder pulse B

Pin No.	Name	I/O	Function
4	HCENCA	I	High cut encoder pulse A
5	PRENCB	I	Power encoder pulse B
6	PRENCA	I	Power encoder pulse A
7	MCENCB	I	MIC encoder pulse B
8	MCENCA	I	MIC encoder pulse A
9	GND	-	GND
10	DELAYB	I	Delay encoder pulse B
11	DELAYA	I	Delay encoder pulse A
12	KEY_B	I	Key encoder pulse B
13	KEY_A	I	Key encoder pulse A
<b>CN6</b>			
1	5V	O	DC-DC converted 5.0V
2	MENCB	I	Main encoder pulse B
3	MENCA	I	Main encoder pulse A
4	GND	-	GND
<b>CN7</b>			
1	5V	O	DC-DC converted 5.0V
2	RITA	I	RIT encoder pulse A
3	RITB	I	RIT encoder pulse B
4	GND	-	GND
<b>CN8</b>			
1	LED B	O	LED power supply 8.0V
2	NC	-	No connection
3	LMULTI	O	Multi encoder LED(D706) H:ON
4	MULTIA	I	Multi encoder pulse A
5	MULTIB	I	Multi encoder pulse B
6	GND	-	GND
<b>CN9</b>			
1	5V	O	DC-DC converted 5.0V
2	AFVOL	I	AF volume voltage
3	RFVOL	I	RF volume voltage
4	NOTVOL	I	Notch volume voltage
5	SQVOL	I	Squelch volume voltage
6	GND	-	GND

#### 2.4.5 DISPLAY(LCD BACK BOARD) UNIT (XC1-271J-00 2/9)

Pin No.	Name	I/O	Function
<b>CN500</b>			
1	PA_Y+	O	Touch panel detection X+
2	PA_X+	O	Touch panel detection Y+
3	PA_Y-	O	Touch panel detection Y-
4	PA_X-	O	Touch panel detection X-
5	NC	-	No connection
6	X1	I	Touch panel SW X1
7	X2	I	Touch panel SW X2

Pin No.	Name	I/O	Function
8	Y1	I	Touch panel SW Y1
9	Y2	I	Touch panel SW Y2
10	TPPRES	I	Touch panel SW PRESS
11	TPPUON	I	Touch panel SW PULL UP ON
12	GND	-	GND
13	BLPWM	O	TFT backlight luminance Control
14	GND	-	GND
15	BLSYNC(NC)	-	No connection
16	GND	-	GND
17	NC	-	No connection
18	GND	-	GND
19	PFPRG	O	Setup firmware write mode for panel MPU L:Firmware write mode
20	PARXD	O	Serial data input from Application MPU(Not used)
21	PATXD	I	Serial data output to Application MPU(Touch panel data)
22	EXTPF1	O	External PF key 1 input from KEY PAD Jack
23	EXTPF2	O	External PF key 2 input from KEY PAD Jack
24	PRTS	I	CTS signal output to Main MPU
25	PCTS	O	RTS signal input from Main MPU
26	PTXD	I	Serial data output to Main MPU
27	PRXD	O	Serial data input from Main MPU
28	PRST	O	Reset signal for MPU L:Reset
29	KO3	I	Key scan OUT 3
30	KO4	I	Key scan OUT 4
31	KO5	I	Key scan OUT 5
32	KO6	I	Key scan OUT 6
33	KI0	O	Key scan IN 0
34	LVOX	I	VOX LED(D709) H:ON
35	LAT	I	AT LED(D710) H:ON
36	LPWR	I	Power ON LED(D708) H:ON
37	SS	I	PTT control L:TX
38	NC	-	No connection
39	LED B	I	LED power supply 8.0V
40	NC	-	No connection
41	8A	O	DC-DC converted 8.0V
42	NC	-	No connection
43	GND	-	GND
44	NC	-	No connection
45	5D	O	DC-DC converted 5.0V
<b>CN501</b>			
1	8A	I	DC-DC converted 8.0V
2	GND	-	GND
3	5D	I	DC-DC converted 5.0V

Pin No.	Name	I/O	Function
4	GND	-	GND
5	65S	I	Linear regulator 6.5V
6	GND	-	GND
<b>CN502</b>			
1	PFPRG	I	Setup firmware write mode for panel MPU L:Firmware write mode
2	GND	-	GND
3	NC	-	No connection
4	33B	I	Linear regulator 3.3V
5	PARXD	I	Serial data input from Application MPU(Not used)
6	PATXD	O	Serial data output to Application MPU(Touch panel data)
7	MBLEN	I	Display backlight enable from Main MPU
8	EXTPF1	I	External PF key 1 input from KEY PAD Jack
9	EXTPF2	I	External PF key 2 input from KEY PAD Jack
10	PRTS	I	CTS signal input from Main MPU(RTS)
11	PCTS	O	RTS signal output to Main MPU(CTS)
12	PTXD	I	Serial data input from Main MPU(TXD)
13	PRXD	O	Serial data output to Main MPU(RXD)
14	SS	O	PTT control L:TX
15	PWS	O	Power switch output signal L:Power on
16	KYSR	O	KEY jack judgement signal L: KEY or PADDLE plugged
17	DASH	O	Electronic keyer dash signal
18	DOT	O	Electronic keyer dot signal
19	PRST	I	Reset signal for MPU L:Reset
20	LTIMER	I	TIMER LED(D707) H:ON
<b>CN504</b>			
1	GND	-	GND
2	DCLK	I	Dot-clock Input for TFT Display
3	GND	-	GND
4	ABLENM	I	TFT Display backlight enable from application MPU
5	GND	-	GND
6	NC	-	No connection
7	GND	-	GND
8	R0	I	Red data for TFT Display
9	GND	-	GND
10	R1	I	Red data for TFT Display
11	GND	-	GND
12	R2	I	Red data for TFT Display

Pin No.	Name	I/O	Function
13	GND	-	GND
14	R3	I	Red data for TFT Display
15	GND	-	GND
16	R4	I	Red data for TFT Display
17	GND	-	GND
18	R5	I	Red data for TFT Display
19	GND	-	GND
20	G0	I	Green data for TFT Display
21	GND	-	GND
22	G1	I	Green data for TFT Display
23	GND	-	GND
24	G2	I	Green data for TFT Display
25	GND	-	GND
26	G3	I	Green data for TFT Display
27	GND	-	GND
28	G4	I	Green data for TFT Display
29	GND	-	GND
30	G5	I	Green data for TFT Display
31	GND	-	GND
32	B0	I	Blue data for TFT Display
33	GND	-	GND
34	B1	I	Blue data for TFT Display
35	GND	-	GND
36	B2	I	Blue data for TFT Display
37	GND	-	GND
38	B3	I	Blue data for TFT Display
39	GND	-	GND
40	B4	I	Blue data for TFT Display
41	GND	-	GND
42	B5	I	Blue data for TFT Display
43	GND	-	GND
44	GND	-	GND
45	DE	I	Data enable for TFT Display
46	5DCDC	I	DC-DC converted 5.0V
47	5DCDC	I	DC-DC converted 5.0V
48	5DCDC	I	DC-DC converted 5.0V
49	5DCDC	I	DC-DC converted 5.0V
<b>CN505</b>			
1	YU	I	Touch panel Y1
2	XU	I	Touch panel X1
3	YD	I	Touch panel Y2
4	XD	I	Touch panel X2
<b>CN507</b>			
1	VSS	-	GND
2	VSS	-	GND

Pin No.	Name	I/O	Function
3	VCC	O	Linear regulator 5.0V (for backlight)
4	VCC	O	Linear regulator 5.0V (for backlight)
5	VCC	O	Linear regulator 5.0V (for backlight)
6	PWCTRL	O	TFT Display backlight enable
7	LEDCTRL	O	TFT Display backlight luminance Control
8	B5	O	Blue data for TFT Display
9	B4	O	Blue data for TFT Display
10	B3	O	Blue data for TFT Display
11	B2	O	Blue data for TFT Display
12	B1	O	Blue data for TFT Display
13	B0	O	Blue data for TFT Display
14	VSS	-	GND
15	G5	O	Green data for TFT Display
16	G4	O	Green data for TFT Display
17	G3	O	Green data for TFT Display
18	G2	O	Green data for TFT Display
19	G1	O	Green data for TFT Display
20	G0	O	Green data for TFT Display
21	VSS	-	GND
22	R5	O	Red data for TFT Display
23	R4	O	Red data for TFT Display
24	R3	O	Red data for TFT Display
25	R2	O	Red data for TFT Display
26	R1	O	Red data for TFT Display
27	R0	O	Red data for TFT Display
28	DCLK	O	Dot-clock Input for TFT Display
29	VSS	-	GND
30	HSYNC(OPEN)	-	No connection
31	VSYNC(OPEN)	-	No connection
32	ENB	O	Data enable for TFT Display
33	UD	O	Data output order (up / down)
34	RL	O	Data output order (right / left)
35	VSS	-	GND
36	VDD	O	Linear regulator 3.4V (for TFT display)
37	NC	-	No connection
38	NC	-	No connection
39	NC	-	No connection
40	NC	-	No connection
<b>CN508</b>			
1	GND	-	GND
2	LPWR	O	Power LED(D708) H:ON
3	LED B	O	LED power supply 8.0V
4	LTIMER	O	Timer LED(D707) H:ON

Pin No.	Name	I/O	Function
5	33B	O	Linear regulator 3.3V (for Timer LED)
6	LAT	O	AT LED(D710) H:ON
7	LVOX	O	VOX LED(D710) H:ON
8	KI0	I	Key scan IN 0
9	KO6	O	Key scan OUT 6
10	KO5	O	Key scan OUT 5
11	KO4	O	Key scan OUT 4
12	KO3	O	Key scan OUT 3
13	PWS	I	Power switch output signal

#### 2.4.6 DISPLAY(POWER KEY) UNIT (XC1-271J-00 3/9)

Pin No.	Name	I/O	Function
<b>CN707</b>			
1	PWS	O	Power switch output signal
2	KO3	I	Key scan OUT 3
3	KO4	I	Key scan OUT 4
4	KO5	I	Key scan OUT 5
5	KO6	I	Key scan OUT 6
6	KI0	O	Key scan IN 0
7	LVOX	I	VOX LED(D710) H:ON
8	LAT	I	AT LED(D710) H:ON
9	33B	I	Linear regulator 3.3V (for Timer LED)
10	LTIMER	I	Timer LED(D707) H:ON
11	LED B	I	LED power supply 8.0V
12	LPWR	I	Power LED(D708) H:ON
13	GND	-	GND

#### 2.4.7 DISPLAY(MIC/KEY) UNIT (XC1-271J-00 4/9)

Pin No.	Name	I/O	Function
<b>CN702</b>			
1	MIC	O	MIC signal
2	MSG	O	MIC GND
3	MCG	-	GND
<b>CN703</b>			
1	MU	O	MIC UP control L:UP
2	MD	O	MIC Down control L:Down
3	SS	O	PTT control L:TX
4	KO6	I	Key scan OUT 6
5	KO5	I	Key scan OUT 5
6	KO4	I	Key scan OUT 4
7	KO3	I	Key scan OUT 3
8	KO2	I	Key scan OUT 2
9	KO1	I	Key scan OUT 1

Pin No.	Name	I/O	Function
10	KO0	I	Key scan OUT 0
11	KI1	O	Key scan IN 1
12	KI0	O	Key scan IN 0
13	GND	-	GND
14	NC	-	No connection
15	8A	I	DC-DC converted 8.0V
<b>J702 (MIC Connector)</b>			
1	MIC	I	MIC signal input
2	SS	I	MIC standby (PTT) control
3	MD	I	MIC down control
4	MU	I	MIC up control
5	8A	O	Switched 8V
6	NC	-	No connection
7	MSG	-	MIC GND
8	MCG	-	GND

#### 2.4.8 DISPLAY(ENCODER) UNIT (XC1-271J-00 5/9)

Pin No.	Name	I/O	Function
<b>CN704</b>			
1	KEY_A	O	Key encoder pulse A
2	KEY_B	O	Key encoder pulse B
3	DELAYA	O	Delay encoder pulse A
4	DELAYB	O	Delay encoder pulse B
5	GND	-	GND
6	MCENCA	O	MIC encoder pulse A
7	MCENCB	O	MIC encoder pulse B
8	PRENCA	O	Power encoder pulse A
9	PRENCB	O	Power encoder pulse B
10	HCENCA	O	High cut encoder pulse A
11	HCENCB	O	High cut encoder pulse B
12	LCENCA	O	Low cut encoder pulse A
13	LCENCB	O	Low cut encoder pulse B

#### 2.4.9 DISPLAY(VOLUME) UNIT (XC1-271J-00 6/9)

Pin No.	Name	I/O	Function
<b>CN706</b>			
1	5V	I	DC-DC converted 5.0V
2	AFVOL	O	AF volume voltage
3	RFVOL	O	RF volume voltage
4	NOTVOL	O	Notch volume voltage
5	SQVOL	O	Squelch volume voltage
6	GND	-	GND

#### 2.4.10 DISPLAY(JACK) UNIT (XC1-271J-00 7/9)

Pin No.	Name	I/O	Function
<b>CN700</b>			
1	PH1	I	Headphone output signal1
2	GND	-	GND
3	PH2	I	Headphone output signal2
4	PHDET	O	Headphone insert detect L:Insert
<b>CN709</b>			
1	KYSR	O	KEY jack judgement signal L: KEY or PADDLE plugged
2	DASH	O	Electronic keyer dash signal
3	GND	-	GND
4	DOT	O	Electronic keyer dot signal
<b>J700 (PHONES Jack)</b>			
1	PH1	O	PHONE AF output 1
2	PH2	O	PHONE AF output 2
-	GND	-	GND
<b>J701 (PADDLE Jack)</b>			
1	DOT	I	Dot signal input
2	DASH	I	Dash signal input
-	GND	-	GND

#### 2.4.11 DISPLAY(MULTI ENCODER) UNIT (XC1-271J-00 8/9)

Pin No.	Name	I/O	Function
<b>CN705</b>			
1	GND	-	GND
2	MULTIB	O	Multi encoder pulse B
3	MULTIA	O	Multi encoder pulse A
4	LMULTI	I	Multi encoder LED(D706) H:ON
5	NC	-	No connection
6	LED B	I	LED power supply 8.0V

#### 2.4.12 DISPLAY(USB) UNIT (XC1-271J-00 9/9)

Pin No.	Name	I/O	Function
<b>CN708</b>			
1	VBUS	I	VBUS 5V for USB Device
2	D+	I/O	USB data
3	D-	I/O	USB data
4	SGND	-	USB signal GND
5	GND	-	GND
<b>J703 (USB Connector (USB-A))</b>			
1	VBUS	O	BUS power output
2	D-	I/O	USB data
3	D+	I/O	USB data
4	GND	I	GND



### 2.4.13 DCDC UNIT (XC2-035J-00)

Pin No.	Name	I/O	Function
<b>CN1</b>			
1	14S	I	Switched 14V
2	GND	-	GND
3	14V	I	Non-switched 14V
4	14V	I	Non-switched 14V
5	33GND	-	GND
6	33ANT	O	DC-DC converted 3.3V for ANT-SW
<b>CN103</b>			
1	-12V	O	DC-DC converted -12V for ANT-SW
2	NC	-	No connection
3	GND	-	GND
4	NC	-	No connection
5	5A	O	DC-DC converted 5V
6	5A	O	DC-DC converted 5V
7	NC	-	No connection
8	33S	O	DC-DC converted 3.3V
9	NC	-	No connection
10	GND	-	GND
11	GND	-	GND
12	AMD	I	Amplitude detector
13	NC	-	No connection
14	PHD	I	Phase detector
15	NC	-	No connection
16	ATPWS	O	Stop operating AT relays
17	GND	-	GND
18	NC	-	No connection
19	FEN1	O	Shift register enable
20	SPOE	O	Shift register enable
21	DATA	O	Serial data
22	FEN2	O	Shift register enable
23	CLK	O	Serial clock
24	TH1	I	The thermistor detection voltage
25	VD	I	Final Amplifier Drain Voltage
26	14SW	O	14V ON/OFF
27	FINV2	I	Final PCB version detect 2
28	FINV1	I	Final PCB version detect 1
<b>CN104</b>			
1	14V	O	Non-switched 14V
2	GND	-	GND
3	GND	-	GND
4	5D	O	DC-DC converted 5V
5	GND	-	GND
6	33C	O	DC-DC converted 3.3V
7	GND	-	GND
8	AGND	-	Analog GND

Pin No.	Name	I/O	Function
9	5A	O	DC-DC converted 5V
10	8A	O	DC-DC converted 8V
11	AGND	-	Analog GND
12	14S	O	Switched 14V for AF power amplifier
<b>CN105</b>			
1	8A	O	DC-DC converted 8V
2	GND	-	GND
3	5D	O	DC-DC converted 5V
4	GND	-	GND
5	65S	O	Linear regulator 6.5V
6	GND	-	GND
<b>CN106</b>			
1	33S	O	DC-DC converted 3.3V
2	GND	-	GND
3	5A	O	DC-DC converted 5V
4	GND	-	GND
5	14S	O	Switched 14V
6	GND	-	GND
7	8A	O	DC-DC converted 8V
8	GND	-	GND
<b>CN107</b>			
1	NC	-	No connection
2	ATPWS	I	Stop operating AT relays
3	TH1	O	The thermistor detection voltage
4	AMD	O	Amplitude detector
5	PHD	O	Phase detector
6	VD	I	Final Amplifier Drain Voltage
7	TS	IO	External AT tuning start control
8	TT	IO	External AT IN/THROUGH control
9	SPOE	I	Shift register output enable
10	FEN2	I	Shift register enable
11	FEN1	I	Shift register enable
12	DATA	I	Serial data
13	CLK	I	Serial clock
14	GND	-	GND
15	BOVER	O	Over voltage detection interrupt
16	GND	-	GND
17	DCFV	-	No connection
18	GND	-	GND
19	PSC	I	Power Switch Control
20	14SW	I	14V ON/OFF
21	FINV2	O	Final PCB version detect 2
22	FINV1	O	Final PCB version detect 1
<b>CN226</b>			
1	14S	O	Power supply 14V for external AT

Pin No.	Name	I/O	Function
2	GND	-	GND
3	TT	IO	External AT IN/THROUGH control
4	TS	IO	External AT tuning start control
5	GND	-	GND

#### 2.4.14 PLL UNIT (XC2-036X-XX)

Pin No.	Name	I/O	Function
<b>CN1</b>			
1	REF IN	I	10MHz Reference input signal (Coaxial)
<b>CN300</b>			
1	LO1	O	LO1 signal (Coaxial)
<b>CN600</b>			
1	LO3	O	LO3 (8.212/8.224MHz) signal (Coaxial)
<b>CN650</b>			
1	LO2	O	LO2 (50/80MHz) signal (Coaxial)
<b>CN800</b>			
1	INT CLK	O	INT CLK (39.3216MHz) signal (Coaxial)
<b>CN870</b>			
1	5A	I	DC-DC converted 5V
2	5A	I	DC-DC converted 5V
3	NC	-	No connection
4	GND	-	GND
5	LCEN1	I	INT CLK PLL (IC721) enable
6	LSEN	I	Local shift register (IC853/IC854) enable
7	ULREF	O	Reference/INT CLK Unlock detect H: Lock
8	TXC	I	TX ON/OFF control signal H: TX ON
9	ERSW1	I	Internal reference ON/OFF control signal H: Internal reference ON
10	ERSW2	I	External reference ON/OFF control signal H: External reference ON
11	LPEN1	I	Reference PLL (IC101) enable
12	LO1BK	I	LO1 blanking signal H: Mute
13	ULLO1	O	LO1 Unlock detect H: Lock
14	ERDET	O	External reference detect
15	LREF2	I	Internal reference (19.2MHz) frequency fine adjust control voltage
16	LDEN2	I	LO3 DDS (IC601) enable
17	LCK	I	Local Serial clock
18	LOV1	O	PLL Unit version detection signal
19	LDT	I	Local Serial data
20	LOV2	O	PLL Unit version detection signal

Pin No.	Name	I/O	Function
21	LPEN2	I	LO1 PLL/VCOs (IC201) enable
22	SEL0	I	LO1 Divider (IC241) of divider value select signal
23	LREF	I	Internal reference (19.2MHz) frequency adjust control voltage
24	SEL1	I	LO1 Divider (IC241) of divider value select signal
25	CV_REF	O	Reference PLL (IC101) Charge pump output voltage
26	CV_CLK	O	INT CLK PLL (IC721) Charge pump output voltage
27	GND	-	GND
28	NC	-	No connection
29	8A	I	DC-DC converted 8V
30	8A	I	DC-DC converted 8V
<b>REF IN CONNECTOR</b>			
1	REF	I	Reference 10MHz Input
-	GND	-	GND

#### 2.4.15 FINAL Unit (XC3-062X-XX)

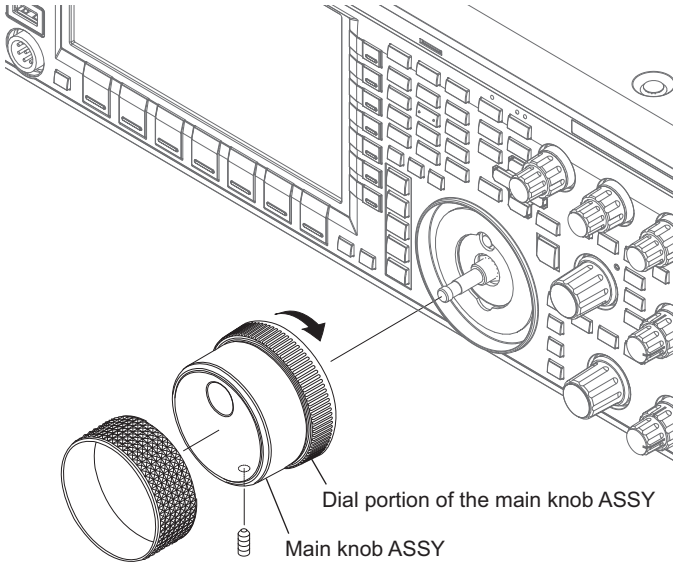
Pin No.	Name	I/O	Function
<b>CN1</b>			
1	RF POWER IN	I	RF POWER IN (Coaxial)
<b>CN301</b>			
1	RAT	I	RX RF signal (Coaxial)
<b>CN601</b>			
1	NC	-	No connection
2	FAN2+	O	Supply FAN2 voltage
3	GND	-	GND
<b>CN602</b>			
1	NC	-	No connection
2	FAN1+	O	Supply FAN1 voltage
3	GND	-	GND
<b>CN603</b>			
1	FINV1	O	Final PCB version detect 1
2	FINV2	O	Final PCB version detect 2
3	14SW	I	Power on switch control
4	VD	O	Final Amplifier Drain Voltage
5	TH1	O	The thermistor detection voltage operates FAN and Power protection
6	CLK	I	Timing CLOCK
7	FEN2	I	Shift register enable
8	DATA	I	Data
9	FEN3	I	Shift register enable
10	FEN1	I	Shift register enable
11	NC	-	No connection
12	GND	-	GND

Pin No.	Name	I/O	Function
13	ATPWS	I	Stop operating AT relays power on
14	NC	-	No connection
15	PHD	O	Phase detector(AT)
16	NC	-	No connection
17	AMD	O	Amplitude detector(AT)
18	GND	-	GND
19	GND	-	GND
20	NC	-	No connection
21	33S	I	DC-DC converted 3.3V
22	NC	-	No connection
23	5A	I	DC-DC converted 5V
24	5A	I	DC-DC converted 5V
25	NC	-	No connection
26	GND	-	GND
27	NC	-	No connection
28	-12V	I	DC-DC converted -12V for ANT-SW
<b>CN604</b>			
1	14S	O	Switched 14V
2	GND	-	GND
3	14V	O	Non-switched 14V
4	14V	O	Non-switched 14V
5	33GND	-	33GND
6	33ANT	I	DC-DC converted 3.3V for ANT-SW
<b>CN605</b>			
1	TXB	I	Supply 8V when TX
2	NC	-	No connection
3	ID	O	Drain current signal
4	F11	I	Pre-drive Idle current adjustment
5	F12	I	Drive Idle current adjustment
6	F13	-	Reserve
7	F14	I	Final Idle current adjustment(LEFT)
8	F15	I	Final Idle current adjustment(RIGHT)
9	NC	-	No connection
10	VSR	O	Reflected wave power detected voltage
11	VSF	O	Forward wave power detection voltage
12	NC	-	No connection
13	GND	-	GND

## SECTION 3 DISASSEMBLY

### 3.1 Cautions for attaching the main knob ASSY to the panel

Rotate the dial portion of the main knob ASSY clockwise to its maximum position (torque OFF), then attach the main knob ASSY to the panel.



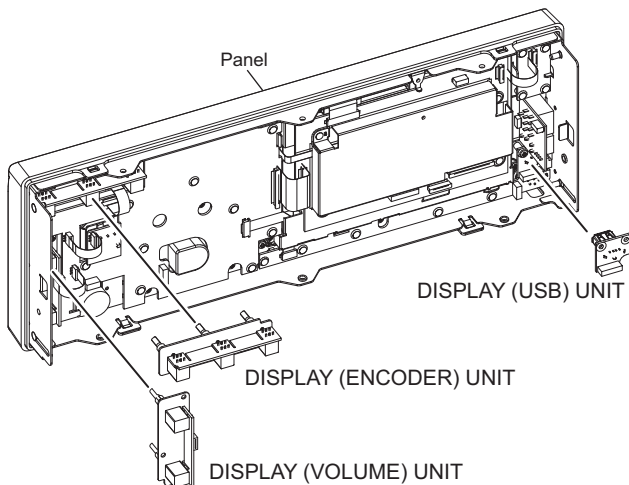
### 3.2 Precautions for disassembling / assembling the panel ASSY

#### Disassembling:

When removing the panel, remove "DISPLAY(ENCODER) UNIT, DISPLAY(VOLUME) UNIT, DISPLAY(USB) UNIT" first to make it easier to remove the panel.

#### Assembling:

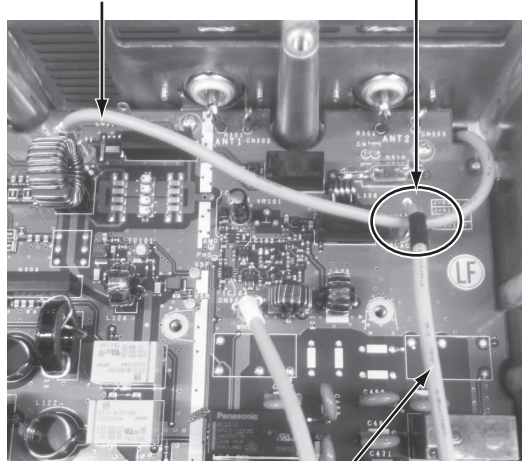
Attach "DISPLAY(ENCODER) UNIT, DISPLAY(VOLUME) UNIT, DISPLAY(USB) UNIT" after assembling the panel. ("DISPLAY(ENCODER) UNIT, DISPLAY(VOLUME) UNIT, DISPLAY(USB) UNIT" is positioned in the hole of the panel and screwed to the sub panel.)



### 3.3 Forming the two coaxial cables (E3K-0342-00, E3K-0424-00)

Forming the two coaxial cables (E3K-0342-00, E3K-0424-00) in the Final unit as shown in the figure.

Coaxial cable (E3K-0342-00) Forming so that the coaxial cable (E3K-0342-00) passes under the coaxial cable (E3K-0424-00).



Coaxial cable (E3K-0424-00)

### 3.4 Assembly Information (Sheet/Cushion)

When "Main Parts" is changed (ordered), "Assembled Sheet / Cushion" should also be changed (ordered) together. The Sticker and Sheet etc are non-reusable parts. It requires the new one to get the radio's performance after repairs.

Main Parts		Assembled Sheet/ Cushion	
Part Name	Part Number	Part Name	Part Number
PANEL	A6C-0086-00	BADGE (KENWOOD)	B43-0336-04
		BADGE (TS-890)	B4D-0057-00
		FIBROUS SHEET (MAIN KNOB AREA)	G10-1836-04
LCD ASSY	B3H-0100-00	SHEET (FOR FERRITE CORE)	G11-4520-04
		SHEET	G1B-0367-00
		SHEET	G1B-0368-00
FERRITE CORE	L92-0493-05	SHEET (FOR LCD ASSY)	G11-4520-04
FLAT SPRING (MAIN KNOB)	G02-1869-13	SHEET	G11-4621-04
MOUNTING HARDWARE(LCD)	J2B-0384-00	FIBROUS SHEET	G10-1348-04
		CUSHION(6PCS)	G1D-0302-00
		CONDUCTIVE CUSHION	G1D-0313-00
		CONDUCTIVE CUSHION	G1D-0314-00
		CONDUCTIVE CUSHION	G1D-0315-00
DRESSING PLATE (REAR)	B0B-0012-00	STANDARD LABEL (FCC)	B42-7070-04
JACK (USB-A)	E68-0424-05	CONDUCTIVE CUSHION	G1D-0311-00
DC CORD	E30-3489-35	RATING LABEL (25A, 2PCS)	B42-7003-04
ITEM CARTON	H5A-1615-00	LABEL FOR PACKAGE (E-TYPE)	B4J-0024-20
PHONE JACK	E11-0705-15	CUSHION	G13-1888-04
METALLIC CABINET (UPPER)	A0B-0029-00	CUSHION (2PCS)	G13-2343-04

# SECTION 4 ADJUSTMENT

## 4.1 Updating Firmware

The firmware of all processors can be updated with a firmware file (zip file) at once. The firmware file (zip file) contains the firmware for all processors. The firmware-updating program incorporated by the transceiver overwrites the processors having different version with the firmware file (zip file).

Follow the procedure explained in the instruction Manual to update the firmware.

The latest firmware file (zip file) can be download from the following site:

[http://www.kenwood.com/j/products/info/amateur/software\\_download.html](http://www.kenwood.com/j/products/info/amateur/software_download.html)

\* The URL may change without notice.

### Note1:

The firmware must be updated by the latest version, when the Control (CONT/APP) unit (XC1-270 1/2), the Display unit (XC1-271), the three MPUs (Main MPU: IC1, APP MPU: IC405, Panel MPU: IC1) and the Flash memories (IC1201, IC1301) for DSP are replaced.

### Note2:

When the Control (CONT/APP) unit (XC1-270 1/2) is replaced, the MAC Address is changed to the MAC Address written into the replaced Control (CONT/APP) unit.

## 4.2 Required Test Equipment

- (1) DC Voltmeter (DVM)
  - a) Input resistance: More than 1Mohm
  - b) Voltage range: 1.5 to 1000V AC/DC

### Note:

Even if high-accuracy multi-meter is used, an accurate value cannot be obtained for high-impedance circuits.

- (2) DC Ammeter (DC. A)
 

Current range: 100mA, 1.5A, 30A, high-accuracy ammeter should be used.
- (3) AF Voltmeter (AF VM)
  - a) Frequency range: 50Hz to 10kHz
  - b) Input resistance: 1Mohm or greater
  - c) Voltage range: 10mV to 30V
- (4) AF Generator (AG)
  - a) Frequency range: 200Hz to 5kHz
  - b) Output: 1mV or less to 1V, low distortion
- (5) AF Dummy Load (DM. SP)
  - a) Impedance: 8ohm
  - b) Dissipation: 3W or greater
- (6) Oscilloscope
 

Requires high sensitivity, and external synchronization capability (150MHz or greater).
- (7) Standard Signal Generator (SSG)
  - a) Frequency range: 50kHz to 75MHz
  - b) Output: -133dBm/0.1 $\mu$ V to 7dBm/1V
  - c) Output impedance: 50ohm
  - d) AM and FM modulation can be possible

### Note:

Generator must be frequency stable.

- (8) Frequency Counter (f. counter)
  - a) Minimum input voltage: 50mV
  - b) Frequency range: 150MHz or greater
  - c) Frequency accuracy: 0.05ppm or less

- (9) Noise Generator (Noise G.)
 

Must generate ignition noise containing harmonics beyond 60MHz.
- (10) Audio Analyzer
- (11) RF Dummy Load
  - a) Impedance: 150ohm and 50ohm
  - b) Dissipation: 150W or greater
- (12) Linear Detector
 

Frequency range: 70MHz or greater
- (13) Power Meter
  - a) Impedance: 50ohm
  - b) Dissipation: 150W continuous or greater
  - c) Frequency limits: 70MHz or greater
- (14) Spectrum Analyzer
  - a) Frequency range: 100kHz to 140MHz or greater
  - b) Bandwidth: 1kHz to 3MHz
  - c) Tracking Generator (Tracking G.) is integrated
- (15) Directional Coupler
- (16) Monitor Receiver
- (17) Microphone
 

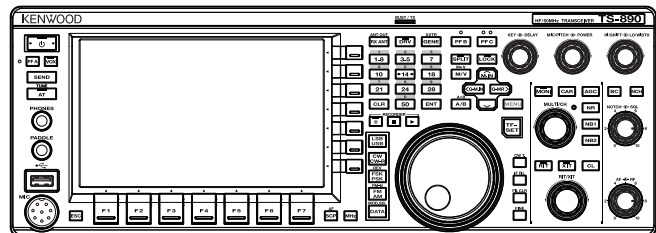
MC-43S or MC-60S8
- (18) Distortion Meter
- (19) Double Signal Pad (50ohm)

## 4.3 Preparation

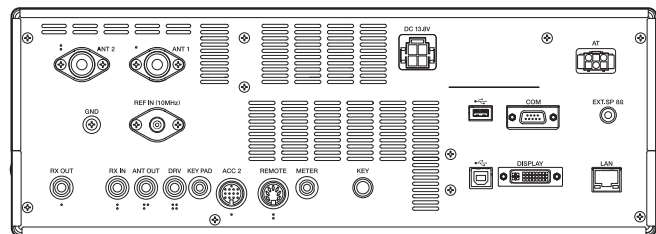
Unless otherwise specified, knobs and switches should be set as follows.

POWER---ON  
 NOTCH---Center  
 AF---MIN  
 RF---MAX  
 SQL---MIN

### ■Front panel

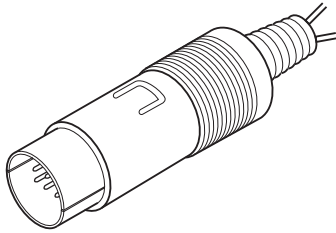


### ■Rear panel

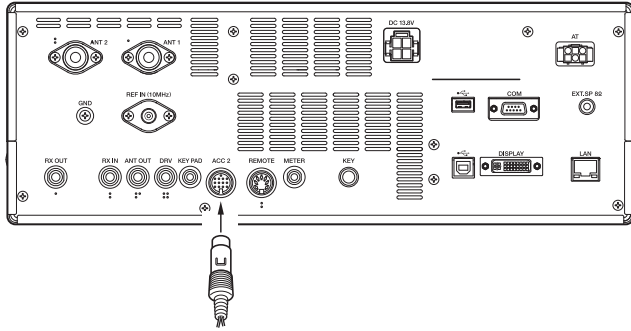


#### 4.4 Service Jig

- (1) ACC 2 connector short plug  
Use the same adjustment jig as the TS-570.



- How to use the ACC 2 connector short plug  
Insert the adjustment jig into the ACC 2 connector located on the rear panel of the transceiver.



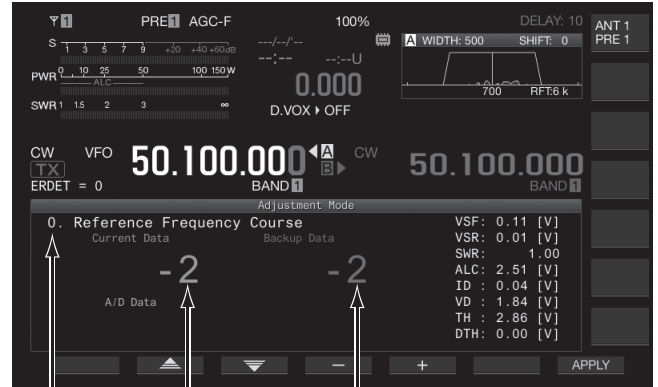
#### 4.5 Adjustment Mode

##### ■Outline

- (1) There are two adjustment methods for the transceiver. One method requires manual adjustments (e.g., coil and trimmer adjustments). In the other method, the transceiver is placed into service adjustment mode, where the transceiver is adjusted with panel keys. The adjustment items in MENU No. 0 to No. 96 are prepared for the service adjustment mode (hereinafter referred to as "adjustment mode"), and adjustment data is stored in the EEPROM (XC1-270: IC181).
- (2) Place the transceiver into adjustment mode and change the adjustment data on each adjustment item.
- (3) By executing "Write All" in MENU No. 94, new adjustment data is written into the EEPROM. Furthermore, new adjustment data can be written for each Menu number.

##### ■Operating Procedure for Adjustment Mode

- (1) Starting the Adjustment Mode
  - a) Insert an adjustment jig into the ACC2 connector on the rear panel of the transceiver.
  - b) The transceiver is placed into adjustment mode if the transceiver is turned ON while pressing the [MONI] and [NCH] key. A menu number and adjustment item appears on the "Adjustment Mode" display in the main screen.When the menu number appears, remove the adjustment jig from the transceiver.



MENU No.                      The value written to EEPROM  
   The Current adjustment value

- (2) Changing the Menu Number  
With pressing the F2[▲] / F3[▼] keys or rotating the[MULTI/CH] knob, the menu number can be changed.
- (3) Making Adjustment Data Changes  
Press F4[-] / F5[+] / F5[UPDATE] keys or [UP] / [Down] keys to change the current data (value).

##### Note:

The lower side of the main screen displays [-], [+] and [UPDATE] for the adjustment items only which are required to adjust.

- (4) Writing the Adjustment Data

The adjustment data can be written in two ways as below.

- a) Writing Adjustment Data for Each Adjustment Item  
When the F7 [APPLY] key is pressed for each adjustment item, the current adjustment data (value) is written to the EEPROM (i.e., the backup data value is replaced with the current data value).

##### Note:

The lower side of the main screen displays [APPLY] only for adjustment items that require adjustments.

- b) Writing the Adjustment Data for All Adjustment Items  
If you press the F7[APPLY] key, [UP] key, or [Down] key for MENU No. 94, the current adjustment data is written to the EEPROM.

- (5) Canceling the Adjustment Mode

Press the [CLR] key or [ESC] key to return to the normal VFO mode display.

##### Note:

The adjustment mode is canceled if the power is turned OFF.

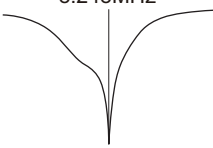


■Adjustment Mode Menu (MENU No. 0~96)

No.	Adjustment Item	Condition		Adjustment Range
		Frequency(MHz)	Mode	
0	Reference Frequency Course	50.1	CW	-500~500
1	Reference Frequency Fine	50.1	CW	-500~500
2	VR Center NOTCH	14.2	USB	0~255
3	VR Center SQUELCH	14.2	USB	0~255
4	MCF Waveform	14.2	USB	-
5	HF IF Gain 2.7k	14.2	USB	0~255
6	HF IF Gain 500			0~255
7	HF IF Gain 270			0~255
8	HF IF Gain 6k			0~255
9	HF IF Gain 15k			0~255
10	RX Mixer Balance	0.1	USB	-
11	RX AGC Reference	14.2	USB	0~1600
12	RX HF S-Meter S1	14.2	USB	0~960
13	RX HF S-Meter S9			0~960
14	RX HF S-Meter S-Full			0~960
15	RX HF FM S-Meter S1	29.2	FM	0~1023
16	RX HF FM S-Meter S-Full			0~1023
17	RX HF FM Squelch Threshold	29.2	FM	0~1023
18	RX HF FM Squelch Tight			0~1023
19	RX 50M IF Gain 2.7k	50.2	USB	0~255
20	RX 50M IF Gain 500			0~255
21	RX 50M IF Gain 270			0~255
22	RX 50M IF Gain 6K			0~255
23	RX 50M IF Gain 15k			0~255
24	RX 50M S-Meter S1	50.2	USB	0~960
25	RX 50M S-Meter S9			0~960
26	RX 50M S-Meter S-Full			0~960
27	RX 50M FM S-Meter S1	50.2	FM	0~1023
28	RX 50M FM S-Meter S-Full			0~1023
29	RX 50M FM Squelch Threshold	50.2	FM	0~1023
30	RX 50M FM Squelch Tight			0~1023
31	RX SCOPE Level Full Scale	14.2	CW	0~128
32	Idling Current Pre Drive	14.1	USB	0~255
33	Idling Current Drive1			0~255
34	Idling Current Drive2			0~255
35	Idling Current Final1			0~255
36	Idling Current Final2			0~255
37	ALC Reference	14.1	USB	0~255
38	TX Carrier Point 2.7k	14.1	USB	-500~500
39	TX Carrier Point 500			-500~500
40	TX Carrier Point 270			-500~500
41	Tx Mixer Bias	24.9	CW	0~255
42	Tx Mixer Bias Balance			-100~100
43	VSR Det. Null	14.1	CW	-



No.	Adjustment Item	Condition		Adjustment Range
		Frequency(MHz)	Mode	
44	HF 100W Power	14.1	CW	0~511
45	HF 100W Meter			0~255
46	50M 100W Power	50.1		0~511
47	50M 100W Meter			0~255
48	HF 50W Power	14.1		0~511
49	HF 50W Meter			0~255
50	70M 50W Power	70.49		0~511
51	70M 50W Meter			0~255
52	25W Power	14.1		0~511
53	25W Meter			0~255
54	10W Power			0~511
55	10W Meter			0~255
56	5W Power			0~511
57	5W Meter			0~255
58	TX GAIN TGC 14M	14.1	CW	0~255
59	ALC Meter Zone Max	14.1	CW	0~255
60	ALC Meter Start			0~255
61	ALC Preset	14.1	CW	0~255
62	TGC LW	0.136	CW	0~255
63	TGC 1.8M	1.83		0~255
64	TGC 3.5M	3.51		0~255
65	TGC 5M	5.3		0~255
66	TGC 7M	7.01		0~255
67	TGC 10M	10.1		0~255
68	TGC 18M	18.1		0~255
69	TGC 21M	21.1		0~255
70	TGC 24.9M	24.9		0~255
71	TGC 28M	29.1		0~255
72	TGC 50M	50.1		0~255
73	TGC 70M	70.49		0~255
74	PGC 50W	14.1	CW	0~255
75	PGC 25W			0~255
76	PGC 10W			0~255
77	PGC 5W			0~255
78	FM Dev. WIDE	29.1	FM	0~255
79	FM Dev. NARROW			0~255
80	Current Value	29.1	CW	0~255
81	HF SWR Protection	14.1	CW	0~255
82	50M SWR Protection	50.1		0~255
83	HF SWR Meter	14.1	CW	0~65535
84	50M SWR Meter	50.1		0~65535
85	AT AMD	50.1	CW	-
86	AT MANUAL	14.1	CW	0-511
87	Drain Voltage Meter	14.1	USB	0~255
88	TX SCOPE Level	14.1	CW	0~128
89	2Tone IMD 14.1MHz	14.1	USB	-
90	Power Output Error Protection Off	14.1	CW	-
94	Write All	14.2	USB	-
95	Display Color Change	14.2	USB	-
96	Firmware Version	14.2	USB	-

#### 4.6 Receiver section

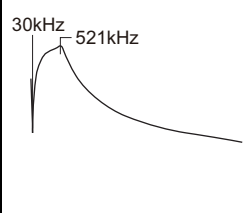
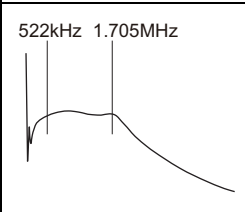
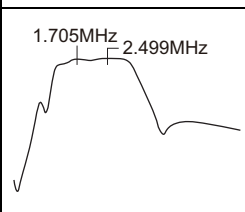
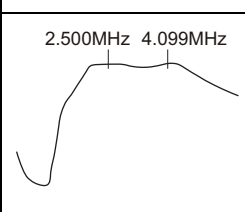
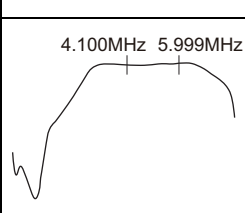
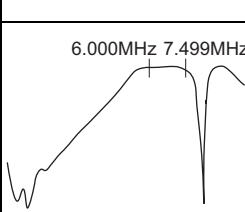
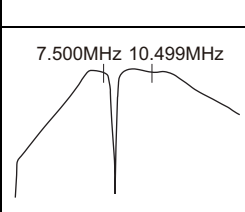
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
* The following items of No.2, 3, 5~7, 10~12, 15, 16 and 26 are adjusted by the Adjustment mode. If the Adjustment menu is finished during in-progress, press "F7"[APPLY] key to store the adjustment value.								
1. RX Trap Frequency (8.248MHz)	FREQ: 7.200000MHz MODE: USB PRE1: ON  Spectrum analyzer setting Center f.: 8.248MHz Span: 1MHz Tracking G.: 0dBm -Connect the tracking G. output to CN201. -Connect the spectrum analyzer input to CN601.	Tracking G. Spectrum analyzer	TX-RX	CN201 CN601	TX-RX	TC203 TC204 TC601 TC602	Adjust the trimmers to a minimum level at 8.248MHz.	
2. NB Voltage	MENU No. 4 -MCF Waveform- (MODE: USB, PRE1: ON, AGC: OFF, RFIL: 5kHz, NB1: ON, MLO2: 10kHz)  SSG setting FREQ: 14.201MHz Output: -101dBm (2µV)	AF VM Oscilloscope Distortion meter DM. SP	TX-RX	TP2	TX-RX	L706 L708 L709	Adjust the coils to a minimum level of NB voltage. *Repeat this adjustment for 2 or 3 times.	3.6V or less
3. Carrier point *XF804/2.7kHz	MENU No. 38 -TX Carrier Point 2.7k- (MODE: USB, PRE: OFF, AGC: ON, RFIL: 2.7kHz) DRV: ON Transmit Spectrum analyzer setting Center f.: 14.10150MHz Span:10.0kHz Marker 1: 14.1001MHz Marker 2: 14.1029MHz	Tracking G. Spectrum analyzer	TX-RX	CN201 DRV	Rear Panel		Check the DRV output, and adjust two carrier points to the same height using "F4"[-] or "F5"[+] key. Press "F7"[APPLY] key to store the adjustment value.	
*XF803/500Hz	MENU No.39 -TX Carrier Point 500- (MODE: USB, PRE1: OFF, AGC: ON, RFIL: 500Hz) Transmit Spectrum analyzer setting Center f.: 14.10150MHz Span:5.0kHz Marker 1: 14.1012MHz Marker 2: 14.1018MHz							
*OPTION/ 270Hz	MENU No. 40: -TX Carrier Point 270- (MODE: USB, PRE1: OFF, AGC: ON, RFIL: 270Hz) DRV: ON Transmit Spectrum analyzer setting Center f.: 14.10150MHz Span:2.0kHz Marker 1: 14.1013MHz Marker 2: 14.1017MHz							Install the Option filter (270Hz), Check two carrier points if it is as the right figure.

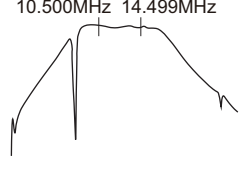
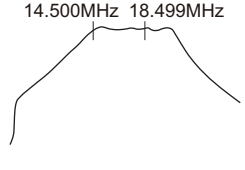
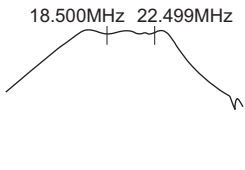
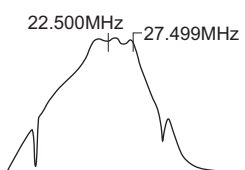
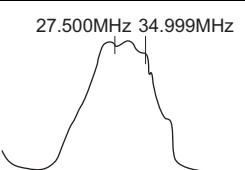
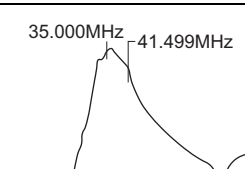
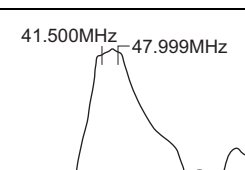
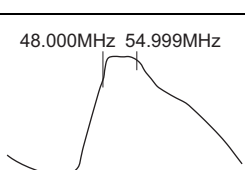
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
4. EXT REF IN Check	FREQ: 14.200MHz MODE: USB  SSG setting FREQ: 10MHz Output: 0dBm (224mV)	SSG	Rear Panel	REF IN (10MHz)	Rear Panel		Connect the SSG output (10MHz) to the REF IN (10MHz), and check the Display. After check it, disconnect the SSG cable.	It is "OK" to inject the SSG output signal only.
5. Frequency 1 Coarse adjustment (0.40~0.85Hz/1LSB)	MENU No. 0 -Reference Frequency Course- (FREQ: 50.1MHz, MODE: CW) DRV: ON	f. counter (EXT REF GPS 10MHz)	TX-RX	DRV			Connect f. Counter to DRV.	50.1MHz ± 1Hz (50.999 999~50.100 001MHz)
6. AGC start level (2.7kHz)	MENU No. 5 -HF IF Gain 2.7k- (FREQ: 14.2MHz, MODE: USB, PRE1: ON, RFIL: 2.7kHz, AGC: OFF)  SSG setting FREQ: 14.201MHz Output: -110dBm (0.707μV)	SSG	Rear Panel	ANT 1	Rear Panel		Adjust to the point when "A/D Data" displays "1" for the first time using the "F4"[-] or "F5"[+] key. All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	The Adjustment point where A/D Data displays "1" for the first time.
(500Hz)	MENU No. 6 -HF IF Gain 500- (FREQ:14.2MHz, MODE: USB, PRE1: ON, RFIL: 500Hz, AGC: OFF)  SSG setting FREQ: 14.201MHz Output: -110dBm (0.707μV)							
(6kHz)	MENU No. 8 -HF IF Gain 6k- (FREQ:14.2MHz, MODE: USB, PRE1: ON, RFIL: 6kHz, AGC: OFF)  SSG setting FREQ: 14.201MHz Output: -110dBm (0.707μV)							
(15kHz)	MENU No. 9 -HF IF Gain 15k- (FREQ:14.2MHz, MODE: USB, PRE1: ON, RFIL: 15kHz, AGC: OFF)  SSG setting FREQ: 14.201MHz Output: -110dBm (0.707μV)							

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
7. AGC gain curve (15kHz)	MENU No. 11 -RX AGC Reference- (FREQ:14.2MHz, MODE: USB, PRE1: ON, RFIL: 2.7kHz, AGC: FAST)  SSG setting FREQ: 14.201MHz Output: -55dBm (398μV)	SSG	Rear Panel	ANT 1	Rear Panel		Press "F5"[UPDATE] key to read a new data. After "Completed" is displayed, press "F7"[APPLY] key to store the adjustment value.	
8. HF SSB S meter Check (S1)	FREQ: 14.2MHz, MODE: USB, PRE1: ON, RFIL: 2.7kHz, AGC: FAST  SSG setting FREQ: 14.201MHz Output: -107dBm (1μV)	SSG	Rear Panel	ANT 1	Rear Panel		Check	S1 (4dots) ±2dots
(S9)	FREQ: 14.2MHz, MODE: USB, PRE1: ON, RFIL: 2.7kHz, AGC: FAST  SSG setting FREQ: 14.201MHz Output: -81dBm (19.9μV)							S9 (35dots) ± 2dots
(Full scale)	FREQ: 14.2MHz, MODE: USB, PRE1: ON, RFIL: 2.7kHz, AGC: FAST  SSG setting FREQ: 14.201MHz Output: -21dBm (19.9mv)							Full scale (70dots)
9. HF FM S meter (29MHz, S1)	FREQ: 29.2MHz, MODE: FM, RFIL: 15kHz  SSG setting FREQ: 29.200MHz Output: -117dBm (0.32μV)							S1 (4dot) ±2dots
(29MHz, Full scale)	Freq: 29.2MHz, MODE: FM, RFIL: 15kHz  SSG setting FREQ: 29.200MHz Output: -95dBm (3.98μV)						Full scale (70dots)	

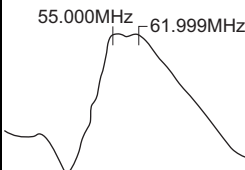
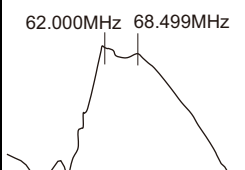
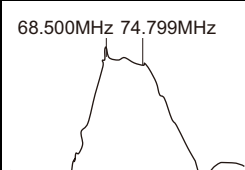
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
10. HF SQ (Threshold)	MENU No. 17 -RX HF FM Squelch Threshold- (FREQ: 29.2MHz, MODE: FM, PRE2: ON, RFIL: 15kHz)  SSG setting FREQ: 29.200MHz Output: OFF Mod.: 1kHz/Dev.: ±3kHz	SSG	Rear Panel	ANT 1	Front panel		Press "F5"[UPDATE] key to read a new data. Press "F7"[APPLY] key to store the adjustment value.	
11. HF SQ (Tight)	MENU No. 18 -RX HF FM Squelch Tight- (FREQ: 29.2MHz, MODE: FM, PRE2: ON, RFIL: 15kHz)  SSG setting FREQ: 29.200MHz Output: -113dBm (0.5μV) Mod.: 1kHz/Dev.: ±3kHz							
12. 50M AGC Start level (2.7kHz)	MENU No.:19 -RX 50M IF Gain 2.7k- (FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 2.7kHz, AGC: OFF)  SSG setting FREQ: 50.201MHz Output: -117dBm (0.32μV)	SSG	Rear Panel	ANT 1	Front panel		Adjust to the point when "A/ D Data" first displays "1" using the "F4"[-] or "F5"[-] key. All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	The Adjustment point where A/D Data displays "1" for the first time.
(500Hz)	MENU No.:20 -RX 50M IF Gain 500- (FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 500Hz, AGC: OFF)  SSG setting FREQ: 50.201MHz Output: -117dBm (0.32μV)							
(6kHz)	MENU No.:22 -RX 50M IF Gain 6k- (FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 6kHz, AGC: OFF)  SSG setting FREQ: 50.201MHz Output: -117dBm (0.32μV)							
(15kHz)	MENU No.:23 -RX 50M IF Gain 15k- (FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 15kHz, AGC: OFF)  SSG setting FREQ: 50.201MHz Output: -117dBm (0.32μV)							

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
13. 50M SSB S meter (S1)	FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 15kHz, AGC: OFF  SSG setting FREQ: 50.201MHz Output: -114dBm (0.44μV)	SSG	Rear Panel	ANT 1	Front panel		Check	S1 (4dot) ± 2dots
(S9)	FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 15kHz, AGC: OFF  SSG setting FREQ: 50.201MHz Output: -88dBm (8.9μV)							S9 (35dots) ± 2dot
(Full scale)	FREQ: 50.2MHz, MODE: USB, PRE2: ON, RFIL: 15kHz, AGC: OFF  SSG setting FREQ: 50.201MHz Output: -28dBm (8.9mV)							Full scale (70dots)
14. 50M FM S meter (S1)	FREQ: 50.2MHz, MODE: FM, RFIL: 15kHz  SSG setting FREQ: 50.201MHz Output: -117dBm (0.32μV)	SSG	Rear Panel	ANT 1	Front panel		Check	S1 (4dots) ± 2dots
(Full scale)	FREQ: 50.2MHz, MODE: FM, RFIL: 15kHz  SSG setting FREQ: 50.201MHz Output: -95dBm (3.98μV)							Full scale (70dots)
15. 50M squelch (Threshold)	MENU No.:29 -RX 50M FM Squelch Threshold- (FREQ: 50.2MHz, MODE: FM, RFIL: 15kHz)  SSG setting FREQ: 50.200MHz Output: OFF MOD: 1kHz/Dev: ±3kHz	SSG	Rear Panel	ANT 1	Front panel		Check	S1 (4dots) ± 2dots
(Tight)	MENU No.:30 -RX 50M FM Squelch Tight- (FREQ: 50.2MHz, MODE: FM, RFIL: 15kHz)  SSG setting FREQ: 50.200MHz Output: -113dBm (0.5μV) MOD: 1kHz/Dev: ±3kHz							Full scale (70dots)

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
16. SCOPE gain	MENU No. 31 -RX SCOPE Level Full Scale- (FREQ: 14.2MHz, MODE: CW, PRE1: ON, RFIL:2.7kHz)  SSG setting FREQ: 14.200MHz Output: -40dBm (2.24mV)	SSG	Rear Panel	ANT 1	Front panel		Press "F5"[UPDATE] key to read a new data. Press "F7"[APPLY] key to store the adjustment value.	
17. BPF (RX) characteristics Check (135kHz_BPF)	FREQ: 135kHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 4MHz Tracking G.: 0dBm	Tracking G. Spectrum analyzer	TX-RX	CN201 CN601	TX-RX		Check a waveform if it is as the right figure.	
(522kHz-1.705MHz BPF)	FREQ: 550kHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 4MHz Tracking G.: 0dBm							
(1.705-2.499M BPF)	FREQ: 1.800MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 6MHz Tracking G.: 0dBm							
(2.500-4.099M BPF)	FREQ: 3.500MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 6MHz Tracking G.: 0dBm							
(4.100-5.999M BPF)	FREQ: 5.000MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 8MHz Tracking G.: 0dBm							
(6.000-7.499M BPF)	FREQ: 7.000MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 0MHz Stop f.: 10MHz Tracking G.: 0dBm							
(7.500-10.499M BPF)	FREQ: 10.100MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 2MHz Stop f.: 16MHz Tracking G.: 0dBm							

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
(10.500-14.499M BPF)	FREQ: 14.200MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 2MHz Stop f.: 24MHz Tracking G.: 0dBm	Tracking G. Spectrum analyzer	TX-RX	CN201 CN601	TX-RX		Check a waveform if it is as the right figure.	10.500MHz 14.499MHz 
(14.500-18.499M BPF)	FREQ: 18.100MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 8MHz Stop f.: 26MHz Tracking G.: 0dBm							14.500MHz 18.499MHz 
(18.500-22.499M BPF)	FREQ: 21.200MHz MODE: USB P.AMP: Pre1 Spectrum analyzer setting Start f.: 10MHz Stop f.: 30MHz Tracking G.: 0dBm							18.500MHz 22.499MHz 
(22.500-27.499M BPF)	FREQ: 24.900MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Start f.: 0MHz Stop f.: 50MHz Tracking G.: -10dBm							22.500MHz 27.499MHz 
(27.500-34.999M BPF)	FREQ: 28.200MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Start f.: 0MHz Stop f.: 60MHz Tracking G.: -10dBm							27.500MHz 34.999MHz 
(35.000-41.499M BPF)	FREQ: 37.500MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Start f.: 0MHz Stop f.: 80MHz Tracking G.: -10dBm							35.000MHz 41.499MHz 
(41.500-47.999M BPF)	FREQ: 43.000MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Start f.: 0MHz Stop f.: 100MHz Tracking G.: -10dBm							41.500MHz 47.999MHz 
(48.000-54.999M BPF)	FREQ: 50.200MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Center f.: 52.000MHz Span: 50MHz Tracking G.: -10dBm							48.000MHz 54.999MHz 



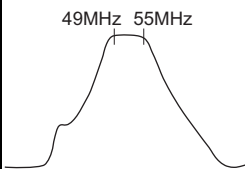
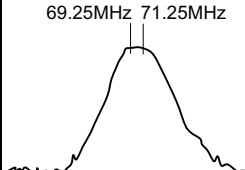
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
(55.000-61.999M BPF)	FREQ: 58.500MHz MODE: USB P.AMP:Pre2 Spectrum analyzer setting Center f.: 58.500MHz Span: 50MHz Tracking G.: -10dBm	Tracking G. Spectrum analyzer	TX-RX	CN201 CN601	TX-RX		Check a waveform if it is as the right figure.	
(62.000-68.499M BPF) *E type only	FREQ: 66.200MHz MODE: USB P.AMP: Pre2 Spectrum analyzer setting Center f.: 65.000MHz Span: 50MHz Tracking G.: 0dBm							
(68.500-74.799M BPF) *E type only	FREQ: 72.200MHz MODE: USB P.AMP:Pre2 Spectrum analyzer setting Center f.: 72.000MHz Span: 50MHz Tracking G.: 0dBm							
18. HF AF distortion Check (Narrow)	FREQ: 29.600MHz MODE: FMN  SSG setting FREQ: 29.600MHz Output: -53dBm (500µV) Mod.: 1kHz/Dev.: ±1.5kHz	Audio analyzer SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Adjust AF output to 0.63V/8ohm, and check AF distortion.	3.0% or less
19. HF FM S/N Check (Narrow)	FREQ: 29.600MHz MODE: FMN  SSG setting FREQ: 29.600MHz Output: -53dBm (500µV) Mod.: 1kHz/Dev.: ±1.5kHz	Audio analyzer SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Adjust AF output to 0.63V/8ohm, and check S/N.	40dB or more
20. Beat cancel Check	FREQ: 14.200MHz MODE::USB  SSG setting FREQ: 14.201MHz Output: -63dBm (158µV)	Audio analyzer SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Adjust AF output to 0.63V/8ohm, and check a difference of AF output level. -Between BC1_ON and OFF -Between BC2_ON and OFF	A difference of AF output: -40dB or less
21. PRE-AMP:PRE1 Check	FREQ: 14.200MHz MODE: USB  SSG setting FREQ: 14.201MHz Output: -63dBm (158µV)	Audio analyzer SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Check a difference of RX sensitivity between PRE.AMP1 ON and OFF.	A difference of SSG output: -5dB~-15dB
22. PRE-AMP:PRE2 Check	FREQ: 50.200MHz MODE: USB  SSG setting FREQ: 50.201MHz Output: -63dBm (158µV)	Audio analyzer SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Check a difference of RX sensitivity between PRE.AMP2 ON and OFF.	A difference of SSG output: -8dB~-18dB

Item	Condition	Measurement			Adjustment			Specification/ Remarks																																																																																																																																																																
		Test equipment	Unit	Terminal	Unit	Parts	Method																																																																																																																																																																	
23. ATT (12dB) Check	FREQ: 14.200MHz MODE: USB AGC: OFF ATT: OFF PRE1: OFF  SSG setting FREQ: 14.201MHz Output: -100dBm (2.24µV)	SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Adjust AF output to 0.63V/ 8ohm. Change the SSG output from -100dBm to -88dBm, and change ATT to "-12dB". Check a difference of AF output level.	Within ±2dB																																																																																																																																																																
24. ATT(6dB) Check	FREQ: 14.200MHz MODE: USB AGC:OFF ATT:OFF PRE1:OFF  SSG setting FREQ: 14.201MHz Output: -100dBm (2.24µV)	SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1			Adjust AF output to 0.63V/ 8ohm. Change the SSG output from -100dBm to -94dBm, and change ATT to "-6dB". Check a difference of AF output level.	Within ±2dB																																																																																																																																																																
25. RX S/N Check	Freq: Refer to the Table 1 AF output: 0.63V/8ohm AGC: FAST  SSG setting: Refer to Table 1.  <b>Note:</b> For USB and LSB modes, add the following setting. FREQ: USB/+1kHz, LSB/- 1kHz P.AMP: ON (Default) ATT: OFF	SSG Oscilloscope AF VM DM.SP	Rear panel	EXT.SP ANT 1	Table 1																																																																																																																																																																			
		<table border="1"> <thead> <tr> <th>Frequency</th> <th>Mode</th> <th>SSG Frequency</th> <th>SSG Output level (dBm)</th> <th>SSG MOD</th> <th>SSG DEV</th> <th>Method</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>137kHz</td> <td>LSB</td> <td>136kHz</td> <td>-111</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>550kHz</td> <td>AM</td> <td>550kHz</td> <td>-85</td> <td>1kHz</td> <td>60% → OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>1.8MHz</td> <td>LSB</td> <td>1.799MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>3.7MHz</td> <td>CW</td> <td>3.700MHz</td> <td>-123</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>5.3MHz</td> <td>LSB</td> <td>5.299MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>7.2MHz</td> <td>LSB</td> <td>7.199MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>7.05MHz</td> <td>USB</td> <td>8.248MHz</td> <td>-45</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&lt;10dB</td> </tr> <tr> <td>10.1MHz</td> <td>USB</td> <td>10.101MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>12.2MHz</td> <td>USB</td> <td>12.201MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>14.2MHz</td> <td>USB</td> <td>14.201MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>18.2MHz</td> <td>USB</td> <td>18.201MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>21.2MHz</td> <td>FSK</td> <td>21.200MHz</td> <td>-119</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>24.8MHz</td> <td>PSK</td> <td>24.800MHz</td> <td>-123</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>29.6MHz</td> <td>FM</td> <td>29.600MHz</td> <td>-118.5</td> <td>1kHz</td> <td>3kHz</td> <td>SINAD</td> <td>&gt;12dB</td> </tr> <tr> <td>38.0MHz</td> <td>USB</td> <td>38.001MHz</td> <td>-110</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>43.0MHz</td> <td>USB</td> <td>43.001MHz</td> <td>-110</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>51.2.MHz</td> <td>FM</td> <td>51.200MHz</td> <td>-118.5</td> <td>1kHz</td> <td>3kHz</td> <td>SINAD</td> <td>&gt;12dB</td> </tr> <tr> <td>50.2MHz</td> <td>USB</td> <td>50.201MHz</td> <td>-123</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> <tr> <td>53.5MHz</td> <td>USB</td> <td>53.500MHz</td> <td>-123</td> <td>OFF</td> <td>OFF</td> <td>S/N</td> <td>&gt;10dB</td> </tr> </tbody> </table>							Frequency	Mode	SSG Frequency	SSG Output level (dBm)	SSG MOD	SSG DEV	Method	Specification	137kHz	LSB	136kHz	-111	OFF	OFF	S/N	>10dB	550kHz	AM	550kHz	-85	1kHz	60% → OFF	S/N	>10dB	1.8MHz	LSB	1.799MHz	-119	OFF	OFF	S/N	>10dB	3.7MHz	CW	3.700MHz	-123	OFF	OFF	S/N	>10dB	5.3MHz	LSB	5.299MHz	-119	OFF	OFF	S/N	>10dB	7.2MHz	LSB	7.199MHz	-119	OFF	OFF	S/N	>10dB	7.05MHz	USB	8.248MHz	-45	OFF	OFF	S/N	<10dB	10.1MHz	USB	10.101MHz	-119	OFF	OFF	S/N	>10dB	12.2MHz	USB	12.201MHz	-119	OFF	OFF	S/N	>10dB	14.2MHz	USB	14.201MHz	-119	OFF	OFF	S/N	>10dB	18.2MHz	USB	18.201MHz	-119	OFF	OFF	S/N	>10dB	21.2MHz	FSK	21.200MHz	-119	OFF	OFF	S/N	>10dB	24.8MHz	PSK	24.800MHz	-123	OFF	OFF	S/N	>10dB	29.6MHz	FM	29.600MHz	-118.5	1kHz	3kHz	SINAD	>12dB	38.0MHz	USB	38.001MHz	-110	OFF	OFF	S/N	>10dB	43.0MHz	USB	43.001MHz	-110	OFF	OFF	S/N	>10dB	51.2.MHz	FM	51.200MHz	-118.5	1kHz	3kHz	SINAD	>12dB	50.2MHz	USB	50.201MHz	-123	OFF	OFF	S/N	>10dB	53.5MHz	USB	53.500MHz	-123	OFF	OFF	S/N	>10dB
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Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
26. Frequency2 Fine adjustment (0.05~0.10Hz/ 1LSB)	Adjust by the method of 1) or 2). 1)MENU No. 1 -Reference Frequency Fine- (FREQ: 50.1MHz, MODE: CW) DRV: ON	f. counter (EXT REF GPS 10MHz)	TX-RX	DRV			Connect the f. counter to the DRV output.	50.1MHz ± 0.5Hz (50.999 999 5 ~ 50.100 000 5MHz)
	2)MENU No. 1 -Reference Frequency Fine- (FREQ: 50.1MHz, MODE:CW) SSG setting FREQ: 50.1MHz Output: -53dBm (500μV) Using a cable, connect the between frequency counter and EXT.SP terminal. Adjust to 700 by the rotating CW pitch knob. Rotate the AF knob to a level detectable by the frequency counter.	SSG f. counter	Rear panel	EXT.SP	Rear panel		Set the adjustment value within the limit of the specified frequency using "F4"[-] or "F5"[+] key.	700Hz ± 0.17Hz

#### 4.7 Transmitter section

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
*The items excepting the following items of No.2,4 and 23~28 are adjusted by the Adjustment mode. If the Adjustment menu is finished during in-progress, press "F7"[APPLY] key to store the adjustment value.								
1. Idling current (Pre-Drive AMP)	MENU No.32 -Idling Current Pre Drive- (FREQ: 14.1MHz, MODE: USB)	DC Ammeter	Rear Panel	DC cable	Front Panel		-Transmitting [SEND] Adjust it using the "F4"[-] or "F5"[+] key. All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	650±50mA
(Drive 1)	MENU No. 33 -Idling Current Drive1- (FREQ: 14.1MHz, MODE: USB)							1000±100mA
(Final 1)	MENU No. 35 -Idling Current Final1- (FREQ: 14.1MHz, MODE: USB)							1000±100mA
(Final 2)	MENU No. 36 -Idling Current Final2- (FREQ: 14.1MHz, MODE: USB)							1000±100mA
2. FINAL FAN operation Check			FINAL	TP1			Short with tweezers between TP1 and GND.	FAN 1 and FAN 2 are strongly turning.

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
3. ALC Voltage	MENU No. 37 -ALC Reference- (FREQ: 14.1MHz, MODE: USB)	DVM	TX-RX	TP1	Front Panel		-Transmitting [SEND] Adjust "ALC Voltage" using the "F4"[-] or "F5"[+] key. The adjustment is finished, press "F7"[APPLY] key to store the adjustment value.	2.5V±0.1V
4. TX HF BPF (50M-54M BAND)	FREQ: 50.000MHz MODE: CW DRV: ON  Spectrum Analyzer setting Center f.: 52MHz Span: 50MHz Tracking G.: -10dBm Marker 1: 49MHz Marker 2: 55MHz -Connect "CN602" to the Tracking G. , and connect "DRV" to the Spectrum Analyzer Input.	Spectrum analyzer Tracking G.	TX-RX	DRV CN602	TX-RX	TC1101 TC1103 TC1105	-Transmitting [SEND] Adjust the trimmers a waveform as shown the right figure. *Repeat this adjustment for 2 or 3 times.	A difference between the maximum and the minimum level between markers 1 and 2 is within 3 dB. 
(70M-70.5M BAND) * E type only	FREQ: 70.000MHz MODE: CW DRV:ON  Spectrum Analyzer setting Center f.:70.25MHz Span: 50MHz Tracking G.: -10dBm Marker 1: 69.25MHz Marker 2: 71.25MHz  -Connect "CN602" to the Tracking G. , and connect "DRV" to the Spectrum Analyzer Input.	Spectrum analyzer Tracking G.	TX-RX	DRV CN602	TX-RX	TC1102 TC1104 TC1106	-Transmitting [SEND] Adjust the trimmers a waveform as shown the right figure. *Repeat this adjustment for 2 or 3 times.	A difference between the maximum and the minimum level between markers 1 and 2 is within 3 dB. 
5. TX Mixer Bias	MENU No. 41 -Tx Mixer Bias- (FREQ: 24.9MHz, MODE: CW) DRV: ON  Spectrum Analyzer setting Center f.: 24.9MHz Span: 10MHz -Connect "DRV" to the Spectrum Analyzer Input.	Spectrum analyzer	TX-RX	DRV	Front Panel		-Transmitting [SEND] Adjust the carrier level to a maximum using the "F4"[-] or "F5"[+] key. The adjustment is finished, press "F7"[APPLY] key to store the adjustment value.	level maximum

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
6. Tx Mixer Bias Balance	MENU No. 42 -Tx Mixer Bias Balance- (FREQ: 24.9MHz, MODE: CW) DRV: ON  Spectrum Analyzer setting Center f.: 24.9MHz Span: 10MHz -Connect "DRV" to the Spectrum Analyzer Input.	Spectrum Analyzer	TX-RX	DRV	Front Panel		-Transmitting [SEND] Adjust the spurious point level to a minimum using the "F4"[-] or "F5"[+] key. The adjustment is finished, press "F7"[APPLY] key to store the adjustment value.	
7. Null	MENU No. 43 -VSR Det. Null- (FREQ: 14.1MHz, MODE: CW) POWER adjust: 100W	Power meter 150W ATT DVM	FINAL	TP2	FINAL	TC101	-Transmitting [SEND] Check the TX power and adjust TP2(VSR) voltage to a minimum by adjusting TC101.	100±25W 200mV or less
8. HF 100W power and Meter (Power)	MENU No. 44 -HF 100W Power- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] <TX Power> Adjust the "TX Power" using the "F4"[-] or "F5"[+] key. The adjustment is finished, press "F7"[APPLY] key to store the adjustment value.	100W±3W
(Meter)	MENU No. 45 -HF 100W Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter						Power meter: 100W position
9. 50M 100W power and Meter (Power)	MENU No. 46 -50M 100W Power- (FREQ: 50.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT					-Transmitting [SEND] <Meter> Press "F5"[UPDATE] key to read a new data, and press "F7"[APPLY] key to store the adjustment value.	100W±3W
(Meter)	MENU No. 47 -50M 100W Meter- (FREQ: 50.1MHz, MODE: CW, ANT: ANT 1)	Power meter	Power meter: 100W position					
10. HF 50W Power and Meter (Power)	MENU No. 48 -HF 50W Power- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						50W±2W
(Meter)	MENU No. 49 -HF 50W Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter	Power meter: 50W position					
11. 70M Power and Meter (Power) *E type only	MENU No. 50 -70M 50W Power- (FREQ: 70.49MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						50W±2W
(Meter)	MENU No. 51 -70M 50W Meter- (FREQ: 70.49MHz, MODE: CW, ANT: ANT 1)	Power meter	Power meter: 50W position					

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
12. HF 25W Power and Meter (Power)	MENU No. 52 -25W Power- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] <TX Power> Adjust the "TX Power" using the "F4"[-] or "F5"[+] key. The adjustment is finished, press "F7"[APPLY] key to store the adjustment value.	25W±1W
(Meter)	MENU No. 53 -25W Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter					<Meter> Press "F5"[UPDATE] key to read a new data, and press "F7"[APPLY] key to store the adjustment value.	Power meter: 25W position
13. HF 10W Power and Meter (Power)	MENU No. 54 -10W Power- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						10W±0.5W
(Meter)	MENU No. 55 -10W Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter						Power meter: 10W position
14. HF 5W Power and Meter (Power)	MENU No. 56 -5W Power- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						5W±0.3W
(Meter)	MENU No. 57 -5W Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter						Power meter: 5W position
15. HF TGC 14M	MENU No. 58 -TX GAIN TGC 14M- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						100W±5W
16. ALC Meter (Full)	MENU No. 59 -ALC Meter Zone Max- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT						ALC meter: 35dots
(Start)	MENU No. 60 -ALC Meter Start- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)							ALC meter: 1dot or less
17. HF TGC LW Check	MENU No. 62 -TGC LW- (FREQ: 0.136MHz, MODE: CW, ANT: ANT 1) DRV: ON Spectrum Analyzer setting Center f.: 0.136MHz Span: 10kHz -Connect "DRV" to the Spectrum Analyzer Input.	Spectrum Analyzer	TX-RX	DRV	Front Panel		-Transmitting [SEND] Check the "HF TGC LW".	≥-10dBm

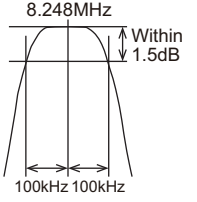
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
18. HF TGC (1.8M)	MENU No. 63 -TGC 1.8M- (FREQ: 1.83MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] Adjust the "ALC Meter" using "F4"[-] or "F5"[+] key.  All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	ALC Meter: 35dots (A half of ALC meter)
(3.5M)	MENU No. 64 -TGC 3.5M- (FREQ: 3.51MHz, MODE: CW, ANT: ANT 1)							
(5M)	MENU No. 65 -TGC 5M- (FREQ: 5.3MHz, MODE: CW, ANT: ANT 1)							
(7M)	MENU No. 66 -TGC 7M- (FREQ: 7.01MHz, MODE: CW, ANT: ANT 1)							
(10M)	MENU No. 67 -TGC 10M- (FREQ: 10.1MHz, MODE: CW, ANT: ANT 1)							
(18M)	MENU No. 68 -TGC 18M- (FREQ: 18.1MHz, MODE: CW, ANT: ANT 1)							
(21M)	MENU No. 69 -TGC 21M- (FREQ: 21.1MHz, MODE: CW, ANT: ANT 1)							
(24M)	MENU No. 70 -TGC 24M- (FREQ: 24.9MHz, MODE: CW, ANT: ANT 1)							
(28M)	MENU No. 71 -TGC 28M- (FREQ: 29.1MHz, MODE: CW, ANT: ANT 1)							
(50M)	MENU No. 72 -TGC 50M- (FREQ: 50.1MHz, MODE: CW, ANT: ANT 1)							
(70M) * E type only	MENU No. 73 -TGC 70M- (FREQ: 70.49MHz, MODE: CW, ANT: ANT 1)							

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
19. HF PGC (50W)	MENU No. 74 -PGC 50W- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)	Power meter 150W ATT	Rear Panel	ANT1	Front Panel		-Transmitting [SEND] Adjust the "ALC Meter" using "F4"[-] or "F5"[+] key.	ALC Meter: 35dots (A half of ALC meter)
(25W)	MENU No. 75 -PGC 25W- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)						All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	
(10W)	MENU No. 76 -PGC 10W- (FREQ: 14.1MHz, MODE: CW, ANT: ANT1)							
(5W)	MENU No. 77 -PGC 5W- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1)							
20. Protection (14.1MHz )	MENU No. 81 -HF SWR Protection- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1) Use 1m of RF coaxial cable between Transceiver and Power meter.	150ohm Dummy Load Through type power meter	Rear Panel	ANT 1	FINAL		-Transmitting [SEND] Adjust the TX power using "F4"[-] or "F5"[+] key.	40W±2W
(50MHz )	MENU No. 82 -50M SWR Protection- (FREQ: 50.1MHz, MODE: CW, ANT: ANT 1) Use 1m of RF coaxial cable between Transceiver and Power meter.						All adjustments are finished, press "F7"[APPLY] key to store the adjustment value.	
21. SWR Meter (14.1MHz )	MENU No. 83 -HF SWR Meter- (FREQ: 14.1MHz, MODE: CW, ANT: ANT 1) Use 18cm of RF coaxial cable between Power meter and 150ohm dummy load.	150ohm Dummy Load	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] Press "F5"[UPDATE] key to read a new data, and press "F7"[APPLY] key to store the adjustment value.	SWR Meter: 3
(50MHz )	MENU No. 84 -50M SWR meter- (FREQ: 50.1MHz, MODE: CW, ANT: ANT 1) Use 18cm of RF coaxial cable between Power meter and 150ohm dummy load.							
22. Vd Meter	MENU No. 87 -Drain Voltage Meter- (FREQ: 14.1MHz, MODE: USB) DC: 13.8V	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		Press "F5"[UPDATE] key to read a new data, and press "F7"[APPLY] key to store the adjustment value.	* Write AD value only in the reception.



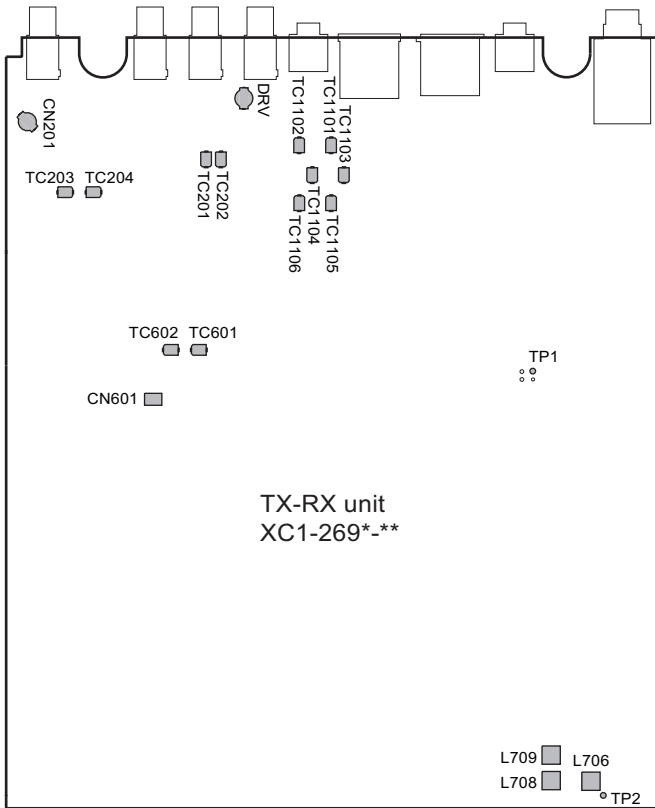
Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
23. SCOPE Gain (TX SCOPE Level)	MENU No. 88 -TX SCOPE Level- (FREQ: 14.1MHz, MODE: USB)	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] Press "F5"[UPDATE] key to read a new data, and press "F7"[APPLY] key to store the adjustment value.	
24. 1.8MHz (SWR Meter Check)	FREQ: 1.81MHz MODE: CW Use 18cm of RF coaxial cable between Transceiver and Power meter.	150ohm Dummy Load	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] Check the "SWR Meter".	SWR Meter: 3 or less
(AT Check)	FREQ: 1.81MHz MODE: CW Use 1m of RF coaxial cable between Transceiver and Power meter.						-Transmitting [SEND] Start TUNE[AT], and check the "SWR Meter".	SWR Meter: 1.3 (6dots) or less
25. 14MHz (SWR Meter Check)	FREQ: 14.1MHz MODE: CW Use 18cm of RF coaxial cable between Transceiver and Power meter.						-Transmitting [SEND] Check the "SWR Meter".	SWR Meter: 3 or less
(AT Check)	FREQ: 14.1MHz MODE: CW Use 1m of RF coaxial cable between Transceiver and Power meter.					-Transmitting [SEND] Start TUNE[AT], and check the "SWR Meter".	SWR Meter: 1.3 (6dots) or less	
26. 52MHz (SWR Meter Check)	FREQ: 51.99MHz MODE: CW Use 18cm of RF coaxial cable between Transceiver and Power meter.					-Transmitting [SEND] Check the "SWR Meter".	SWR Meter: 3 or less	
(AT Check)	FREQ: 51.99MHz MODE: CW Use 1m of RF coaxial cable between Transceiver and Power meter.					-Transmitting [SEND] Start TUNE[AT], and check the "SWR Meter".	SWR Meter: 1.3 (6dots) or less	
27. Temp Meter Check (14MHz)	FREQ: 14.1MHz MODE: CW	Power meter 150W ATT	Rear Panel	ANT 1	Front Panel		-Transmitting [SEND] Check the "Temp Meter".	Temp Meter: 10~60 dots
28. Vd Meter Check (14MHz)	FREQ: 14.1MHz MODE: CW PWR: 100W						-Transmitting [SEND] Check the "Vd Meter".	Vd Meter: 10~15V
29. Id Meter Check (14MHz)	FREQ: 14.1MHz MODE: CW PWR: 100W						-Transmitting [SEND] Check the "Id Meter".	Id Meter: 13~19A

#### 4.8 SCOPE Filter adjustment section

Item	Condition	Measurement			Adjustment			Specification/ Remarks
		Test equipment	Unit	Terminal	Unit	Parts	Method	
1. SCOPE Filter	For the SCOPE Filter adjustment, disassemble the Transceiver and take out the CONTROL(DSP/FPGA) Unit (XC1-270 2/2).  Spectrum analyzer setting Center f.: 8.248MHz Span: 1MHz Tracking G.: -20dBm -Connect "CN1502" to the Tracking G. output , and connect "CN1503" to the Spectrum analyzer input.	Tracking G. Spectrum analyzer	CONTROL (2/2)	CN1502 CN1503	CONTROL (2/2)	TC1500 TC1502	Adjust the trimmers to a waveform as the right figure.	 <p>8.248MHz Within 1.5dB 100kHz 100kHz</p>

#### 4.9 Adjustment points

##### ■TX-RX unit (XC1-269\*~\*\*)



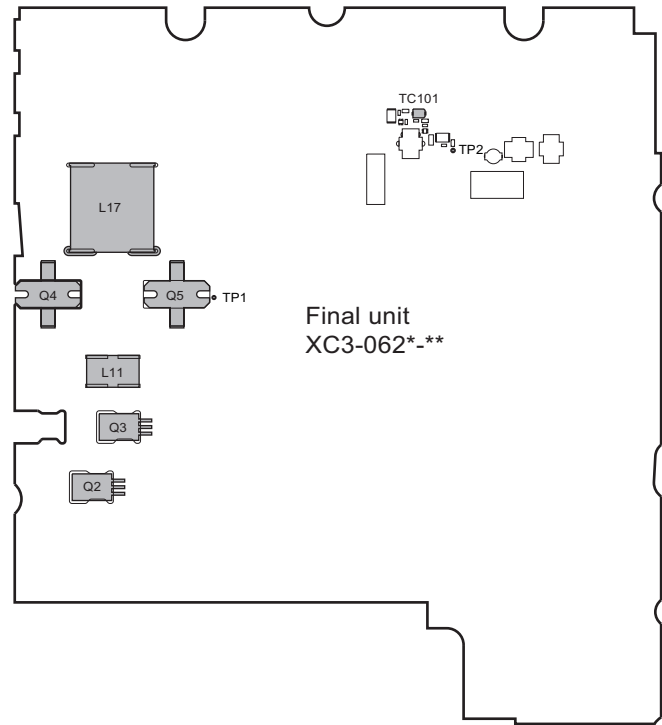
##### <Receiver section>

- RX Trap frequency: TC203,TC204,TC601,TC602
- NB Voltage Check point: TP2,  
Adjustment parts: L706,L708,L709

##### <Transmitter section>

- TX HF BPF (50M-54M BAND): TC1101,TC1103,TC1105  
TX HF BPF (70M-70.5M BAND): TC1102,TC1104,TC1106
- ALC Voltage Check point: TP1

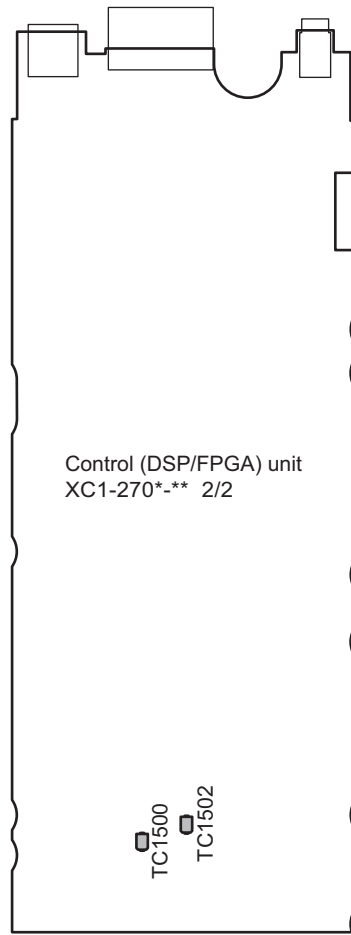
##### ■Final unit(XC3-062\*~\*\*)



##### <Transmitter section>

- Null Check point: TP2, Adjustment part: TC101
- FINAL FAN operation Check point: TP1

■Control (DSP/FPGA) unit (XC1-270\*-\* 2/2)



Front side

<SCOPE Filter adjustment section>

- SCOPE Filter: TC1500,TC1502

# SECTION 5 TROUBLESHOOTING

## 5.1 Fault Diagnosis 1 of the BGA (Ball Grid Array) IC

### ■ Overview

This flowchart is used to determine whether the BGA parts are faulty when the transceiver does not start normally, or when there are abnormality of band scope display, audio abnormality, keying malfunction and/or SCP.OVF lighting.

### ■ BGA parts

Control (DSP/FPGA) Unit: XC1-270 (2/2)

FPGA(IC1400)

If the diagnosis result is determined to be a FPGA (IC1400) faulty, replace it with the service Control unit.

Please refer to the "5.3 Service part/unit information for repair"

#### ● Checking power supply voltage

>Checking voltage		Normal voltage
Points to be checked		
3.3V(33C)	L1401	3.3V
1.8V(18FP)	L1400	1.8V
1.2V	L1402	1.2V

Fail

Checking for an abnormal point

>3.3V has an abnormal voltage.  
Remove L1401, and check the voltage of the 3.3V.  
If the voltage becomes normal, FPGA(IC1400) is broken.

>1.8V has an abnormal voltage.  
Remove L1400, and check the voltage of the 1.8V.  
If the voltage becomes normal, FPGA(IC1400) is broken.

>1.2V has an abnormal voltage.  
Remove L1402, and check the voltage of the 1.8V. If the voltage becomes normal, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

#### ● Checking the waveform configuration

>Checking the waveform configuration		Normal voltage
Points to be checked		
FDONE	R1438	3.3V
nFPROG	R1439	3.3V
CSSPI	R1442	Amplitude: 3.3V
MCLK	R1445	Amplitude: 3.3V
SPID	R1443	Amplitude: 3.3V

FDONE is a fixed value of 3.3 V except when starting up.  
CSSPI/MCLK/SPID will output the waveform only after turning on the power.

Fail

Checking for an abnormal point

>nPROG has an abnormal.  
Remove R1439, and check the signal of IC1100 side.  
If the voltage becomes normal, FPGA(IC1400) is broken.

>FDONE has an abnormal.  
Remove R1438, and check the signal of FPGA side.  
If the voltage is abnormal, then check CSSPI, MCLK, SPID.

>CSSPI,MCLK,SPID has an abnormal.  
/CSSPI has an abnormal.  
Remove R1442, and check the signal of FPGA side.  
If its waveform is abnormal, FPGA(IC1400) is broken.

/MCLK has an abnormal.  
Remove R1445, and check the signal of FPGA side.  
If its waveform is abnormal, FPGA(IC1400) is broken.

/SPID has an abnormal.  
Remove R1443, and check the signal of IC1401 side.  
If a normal signal can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

#### ● Checking the clock signal

>Checking the SYS_CLK(24.576MHz)		Normal amplitude and frequency
Points to be checked		
R1481		Amplitude: 3.3V Frequency: 24.576MHz

>Checking the ADC_DCO(39.3216MHz)		Normal amplitude and frequency
Points to be checked		
R1584, R1585		Amplitude: 1.8V Frequency: 39.3216MHz

Fail

Checking for an abnormal point

>SYS\_CLK has an abnormal.  
Remove R1481, and check the signal of IC1405 side.  
If a normal signal can be confirmed, FPGA(IC1400) is broken.

>ADC\_DCO has an abnormal.  
Remove R1584 and R1585, and check the signal of IC1502 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

● Checking the Reset/RDY signal

>Checking the Reset signal		
Points to be checked		Normal voltage
nFRST	R1109	3.3V
>Checking the RDY signal		
Points to be checked		Normal voltage
FRDY	R1430	3.3V

Fail

Checking for an abnormal point

>nFRST has an abnormal.  
Remove R1109, and check the signal of IC1100 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.

>FRDY has an abnormal.  
Remove R1430, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

● Checking the communication waveform with SUB MPU

>Communication waveform with SUB MPU		
Points to be checked		Normal voltage
FSPCS	R1415	Amplitude: 3.3V
FSPCLK	R1416	Amplitude: 3.3V
FSPDO	R1417	Amplitude: 3.3V
FSPDI	R1409	Amplitude: 3.3V
ADCOVER	R1410	Amplitude: 3.3V
FSPDI outputs waveform only immediately after startup. FSPCS/FSPCLK/FSPDO outputs waveforms when SCOPE setting (SPAN etc.) is changed.		

Fail

Checking for an abnormal point

>FSPCS has an abnormal.  
Remove R1415, and check the signal of IC1403 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.

>FSPCLK has an abnormal.  
Remove R1416, and check the signal of IC1403 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.

>FSPDO has an abnormal.  
Remove R1417, and check the signal of IC1403 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.

>FSPDI has an abnormal.  
Remove R1409, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>ADCOVER has an abnormal.  
Remove R1410, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

● Checking of the clock waveform supplied to audio ADC / DAC

>Clock waveform supplied to audio ADC / DAC		
Points to be checked		Normal voltage
MCLK1	L1405	Amplitude: 3.3V
SCLK1	L1406	Amplitude: 3.3V
LRCK1	R1422	Amplitude: 3.3V
MCLK2	L1407	Amplitude: 3.3V
SCLK2	L1408	Amplitude: 3.3V
LRCK2	R1425	Amplitude: 3.3V

Fail

Checking for an abnormal point

>MCLK1 has an abnormal.  
Remove L1405, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>SCLK1 has an abnormal.  
Remove L1406, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>LRCK1 has an abnormal.  
Remove R1422, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>MCLK2 has an abnormal.  
Remove L1407, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>SCLK2 has an abnormal.  
Remove L1408, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

>LRCK2 has an abnormal.  
Remove R1425, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

Pass

• Checking the waveform from ADC for IF signal

>Checking the waveform from ADC for IF signal

Points to be checked	Normal voltage
ADC_DAT0 R1570	Amplitude: 1.8V
ADC_DAT1 R1571	Amplitude: 1.8V
ADC_DAT2 R1572	Amplitude: 1.8V
ADC_DAT3 R1573	Amplitude: 1.8V
ADC_DAT4 R1574	Amplitude: 1.8V
ADC_DAT5 R1575	Amplitude: 1.8V
ADC_DAT6 R1576	Amplitude: 1.8V
ADC_DAT7 R1577	Amplitude: 1.8V
ADC_DAT8 R1578	Amplitude: 1.8V
ADC_DAT9 R1579	Amplitude: 1.8V
ADC_DAT10 R1580	Amplitude: 1.8V
ADC_DAT11 R1581	Amplitude: 1.8V
ADC_DAT12 R1582	Amplitude: 1.8V
ADC_DAT13 R1583	Amplitude: 1.8V
ADC_OR R1566	Amplitude: 1.8V

Fail

Pass

Checking for an abnormal point

- >ADC\_DAT0 has an abnormal.  
Remove R1570, and check the signal of IC1502 side.
- >ADC\_DAT1 has an abnormal.  
Remove R1571, and check the signal of IC1502 side.
- >ADC\_DAT2 has an abnormal.  
Remove R1572, and check the signal of IC1502 side.
- >ADC\_DAT3 has an abnormal.  
Remove R1573, and check the signal of IC1502 side.
- >ADC\_DAT4 has an abnormal.  
Remove R1574, and check the signal of IC1502 side.
- >ADC\_DAT5 has an abnormal.  
Remove R1575, and check the signal of IC1502 side.
- >ADC\_DAT6 has an abnormal.  
Remove R1576, and check the signal of IC1502 side.
- >ADC\_DAT7 has an abnormal.  
Remove R1577, and check the signal of IC1502 side.
- >ADC\_DAT8 has an abnormal.  
Remove R1578, and check the signal of IC1502 side.
- >ADC\_DAT9 has an abnormal.  
Remove R1579, and check the signal of IC1502 side.
- >ADC\_DAT10 has an abnormal.  
Remove R1580, and check the signal of IC1502 side.
- >ADC\_DAT11 has an abnormal.  
Remove R1581, and check the signal of IC1502 side.
- >ADC\_DAT12 has an abnormal.  
Remove R1582, and check the signal of IC1502 side.
- >ADC\_DAT13 has an abnormal.  
Remove R1583, and check the signal of IC1502 side.
- >ADC\_OR has an abnormal.  
Remove R1566, and check the signal of IC1502 side.

If a normal waveform can be confirmed in each of the above abnormal point, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

• Checking the waveform of output signal to DSP

>Checking the waveform of output signal to DSP

Points to be checked	Normal voltage
SCPFCK R1426	Amplitude: 3.3V
SCPSCK R1427	Amplitude: 3.3V
SDFPI R1428	Amplitude: 3.3V
SDFPQ R1429	Amplitude: 3.3V

Fail

Pass

Checking for an abnormal point

- >SCPFCK has an abnormal.  
Remove R1426, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.
- >SCPSCK has an abnormal.  
Remove R1427, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.
- >SDFPI has an abnormal.  
Remove R1428, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.
- >SDFPQ has an abnormal.  
Remove R1429, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

• Checking the waveform of keying signal

>Checking the waveform of keying signal

Points to be checked	Normal voltage
ACCRTK R1076	Amplitude: 3.3V
VCTS1D R1053	Amplitude: 3.3V
VDSR1D R1052	Amplitude: 3.3V
VCTS2D R1051	Amplitude: 3.3V
VDSR2D R1050	Amplitude: 3.3V
RTK R1431	Amplitude: 3.3V

Fail

Pass

Checking for an abnormal point

- >ACCRTK has an abnormal.  
Remove R1076, and check the signal of CN1050 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.
- >VCTS1D has an abnormal.  
Remove R1053, and check the signal of CN1050 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.
- >VDSR1D has an abnormal.  
Remove R1052, and check the signal of CN1050 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.
- >VCTS2D has an abnormal.  
Remove R1051, and check the signal of CN1050 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.
- >VDSR2D has an abnormal.  
Remove R1050, and check the signal of CN1050 side.  
If a normal waveform can be confirmed, FPGA(IC1400) is broken.
- >RTK has an abnormal.  
Remove R1431, and check the signal of FPGA side.  
If an abnormal waveform can be confirmed, FPGA(IC1400) is broken.

In the case of other symptoms, there is a problem other than FPGA (IC1400).

There is an abnormality other than FPGA (IC1400).

## 5.2 Fault Diagnosis 2 of the BGA (Ball Grid Array) IC

### ■Overview

This flowchart is used to determine whether the BGA parts are faulty when the transceiver does not start normally or when there are disturbance of LCD screen and abnormal color of LCD.

### ■BGA parts

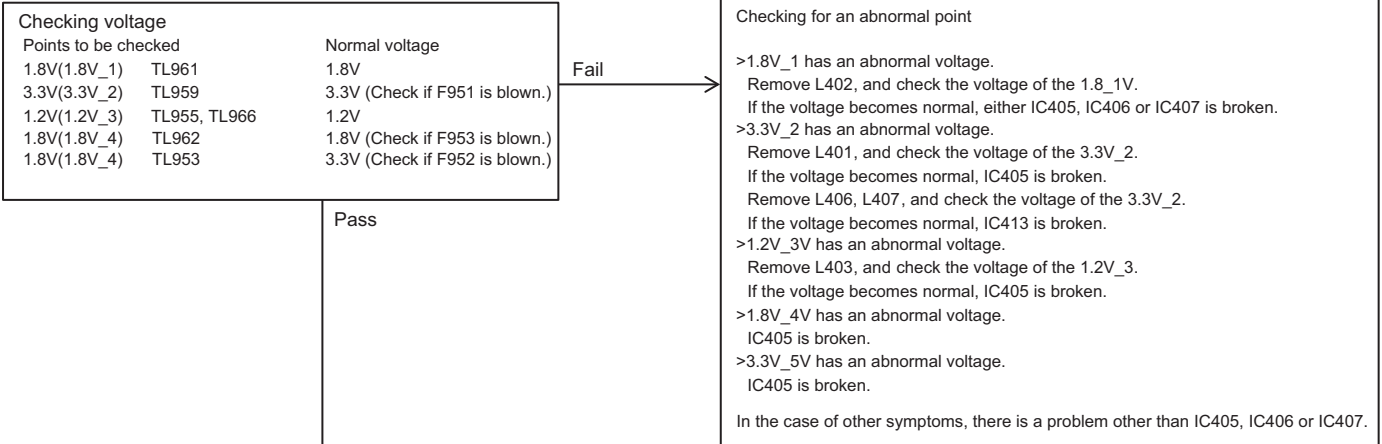
Control (CONT/APP) Unit: XC1-270 (1/2)

Application MPU(IC405), DDR2 memory(IC406, IC407), eMMC memory(IC413)

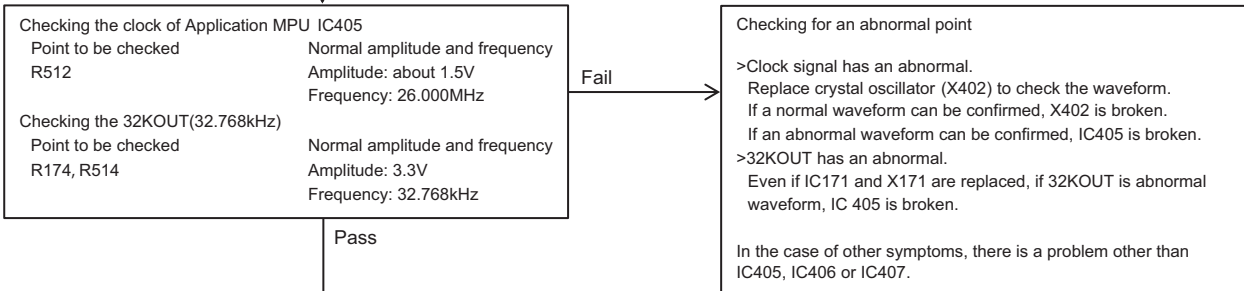
If the diagnosis result is determined to be a BGA IC (MPU, DDR2 and/or eMMC) faulty, replace it with the service Control unit.

Please refer to the "5.3 Service part/unit information for repair"

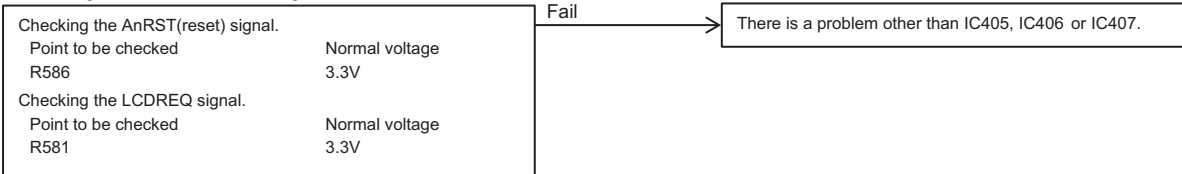
#### • Checking power supply voltage



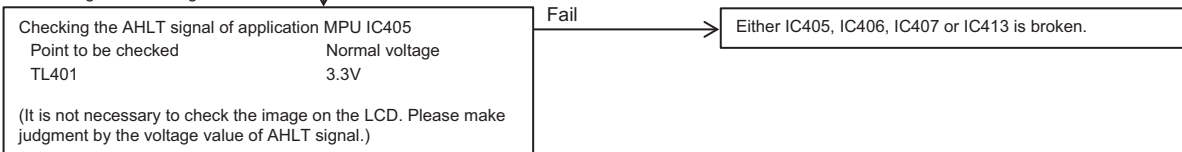
#### • Checking the clock signal



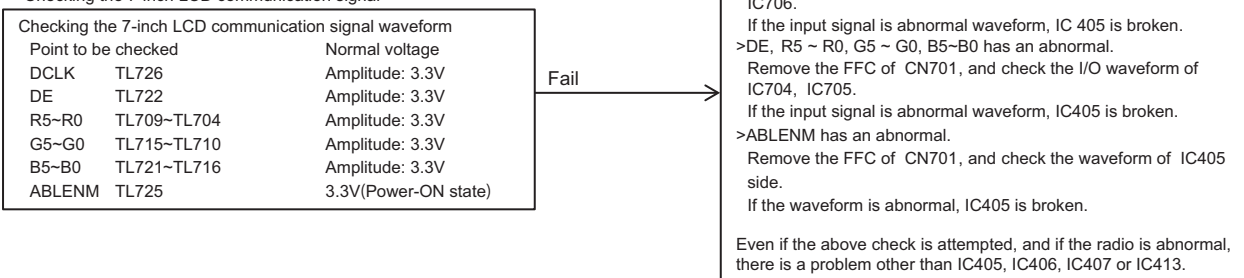
#### • Checking the reset and LCDREQ signal



#### • Checking the AHLT signal



#### • Checking the 7-inch LCD communication signal



### 5.3 Service part/unit information for repair

#### 5.3.1 Service part information for repair

##### 5.3.1.1 Service parts requiring the Firmware update

The following service parts have been written the Initial Firmware. After replacing the parts, it is necessary to update the Firmware using the latest updater.

##### Service parts requiring the Firmware update

Unit number	Symbol number	Part name	Service part number
XC1-270(1/2)	IC101	Main MPU	F56104VDFKGYA
XC1-270(2/2)	IC1100	Sub MPU	F2136ACNFKGZA
XC1-271	IC1	Panel MPU	F3651KDFCKHAA

##### 5.3.1.2 Service part whose data must be written

The following service part has not been written a data. After replacing this part, it is necessary to write a data using the latest updater.

##### Service part requiring to write a data

Unit number	Symbol number	Part name	Part number
XC1-270(2/2)	IC1201,IC1301	Flash memory	E29LV32CB70TI

Because the transceiver, replaced with new E29LV32CB70TI which data has not been written, will be started in the firmware update mode, please write the latest data using the latest updater.

### 5.3.2 Service unit information for repair

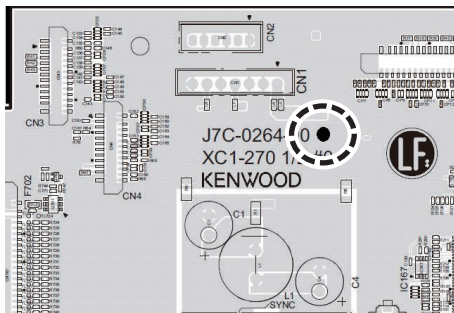
#### 5.3.2.1 Service Control unit

Model	Part name	Service unit number
TS-890S (K type)	Control unit	XC1-270K-01
TS-890S (E type)	Control unit	XC1-270E-01

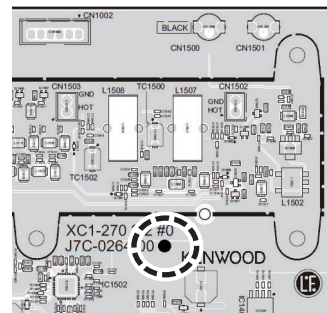
#### 5.3.2.2 Method of confirming “Original Control unit (1/2, 2/2)” and “Service Control unit (1/2, 2/2)”

The service Control unit (1/2, 2/2) has a black marking on the right side of the printed circuit board number (J7C-0264-00).

· Service Control unit (1/2)



· Service Control unit (2/2)



### 5.3.3 MAC address information

#### 5.3.3.1 Memory location of MAC address

- eMMC (IC413: External memory for application MPU) in the Control (CONT/APP) unit XC1-270(1/2)
- EEPROM (IC181) in the Control (CONT/APP) unit XC1-270(1/2)

#### 5.3.3.2 MAC Address information when the above parts or the Control unit is replaced

##### ■When EEPROM (IC181) is replaced

The MAC address information of EEPROM is automatically updated with the MAC address information of eMMC. Therefore, MAC address information is not changed.

##### Note:

Readjustment is necessary for setting and adjustment value.

##### ■When the Control (CONT/APP) unit XC1-270(1/2) is replaced with the Service control unit

The transceiver works with the MAC address written into the Service control unit.

##### Note:

MAC address is changed to a different MAC address written into the Service control unit. For this reason, it is necessary to explain it to the user why the MAC address has changed.

##### ■When Main MPU(IC101) or the unit other than the Control (CONT/APP) unit XC1-270(1/2) is replaced

MAC address information is not changed.

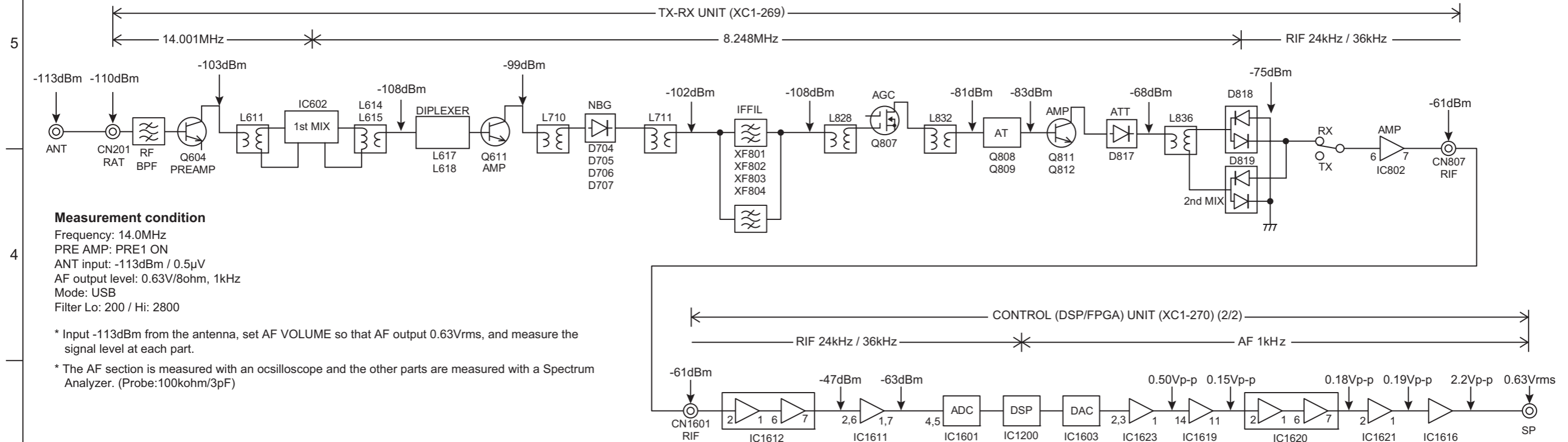


## PRECAUTIONS ON SCHEMATIC DIAGRAMS

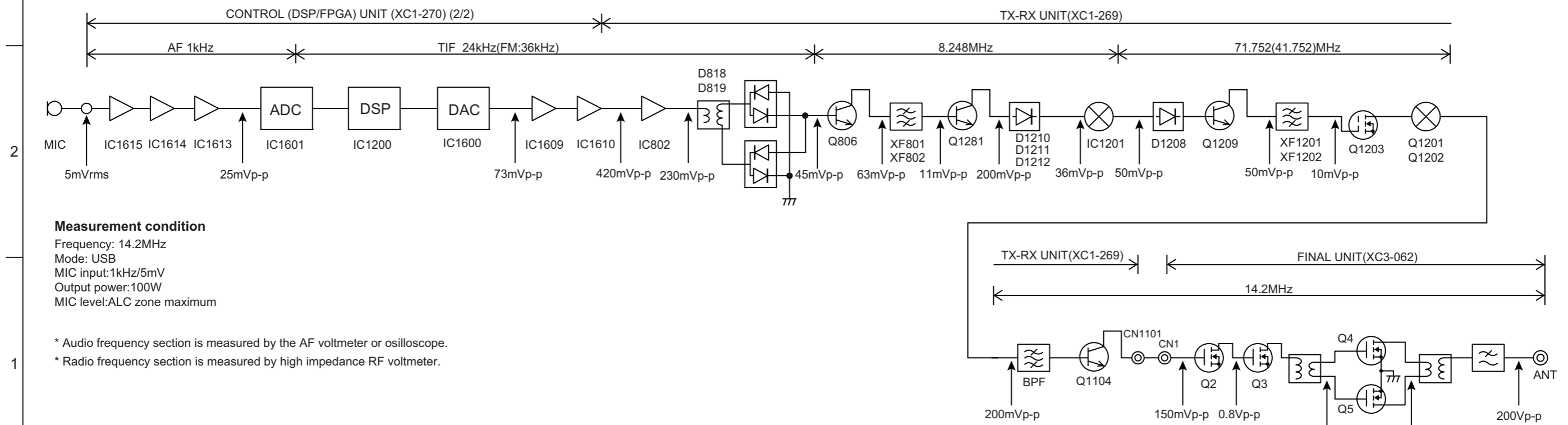
- \* Due to the improvement in performance, some part numbers shown in the circuit diagrams may not agree with those indicated in the Parts List.
- \* The parts numbers, values and rated voltage etc. in the Schematic Diagrams are for reference only.
- \* Since the circuit diagrams are standard ones, the circuits and circuit constants may be subject to change for improvement without any notice.
- \* The parts of the symbol with " \* " may vary depending on model. Refer to the parts list for details.
- \* The parts of the symbol with " \$ " are unmounted parts.

# LEVEL DIAGRAM

## Receiver Section



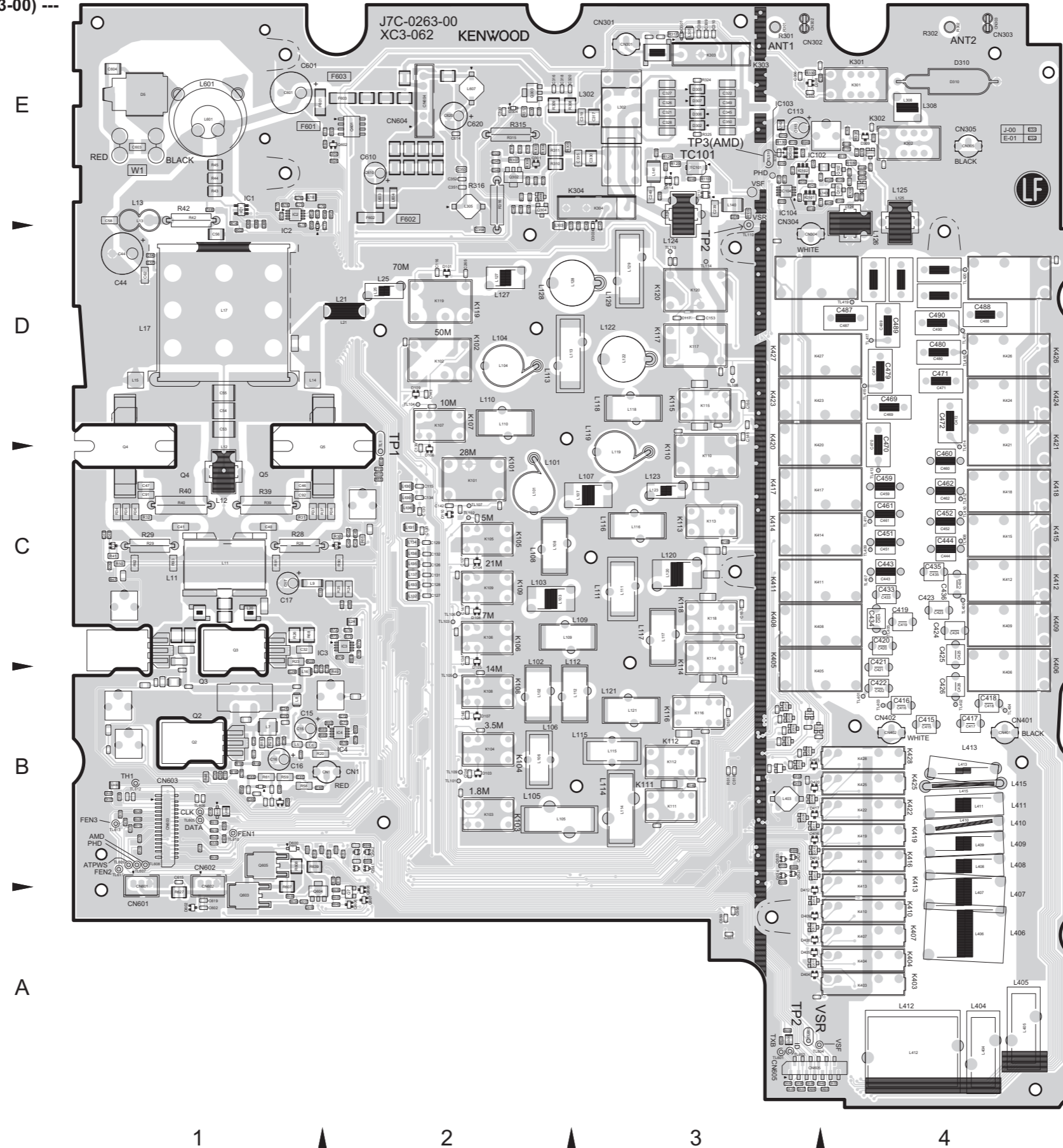
## Transmitter Section



# PRINTED CIRCUIT BOARD

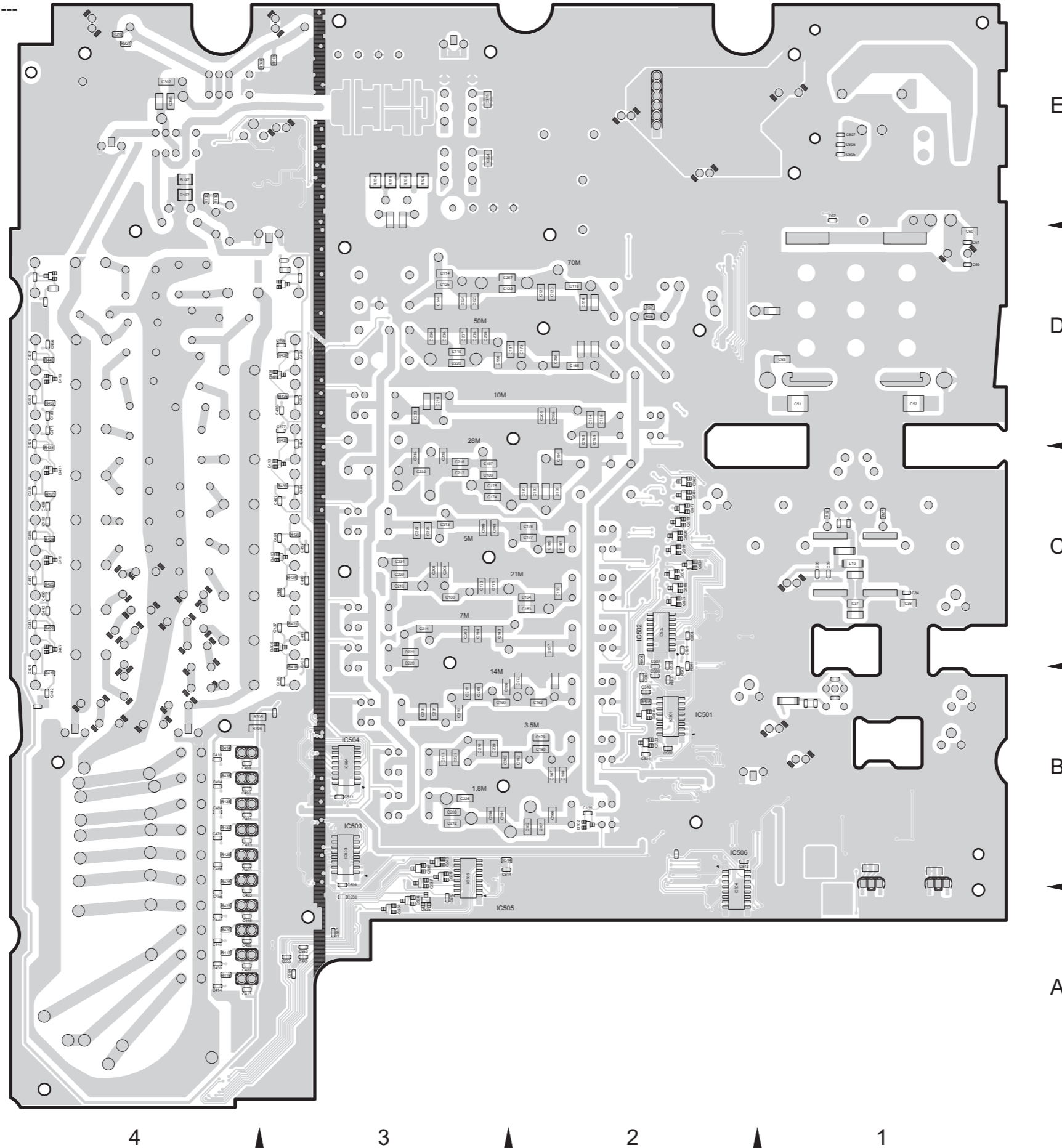
■ FINAL UNIT (XC3-062J-00(TS-890S(K)), XC3-062E-01(TS-890S(E)))

--- Component side view/Side A (J7C-0263-00) ---



■ FINAL UNIT (XC3-062J-00(TS-890S(K)), XC3-062E-01(TS-890S(E)))

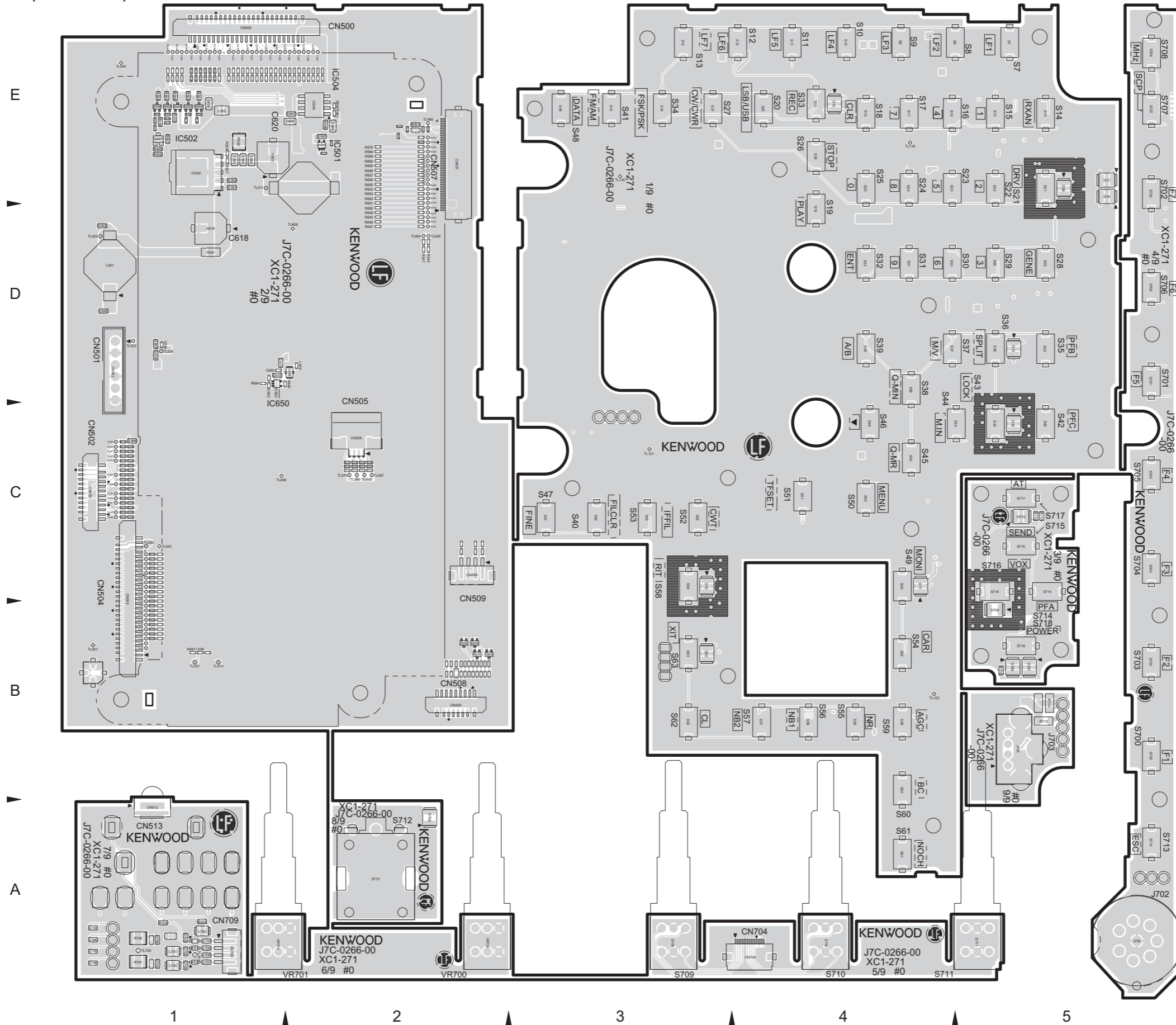
--- Foil side view/Side B (J7C-0263-00) ---





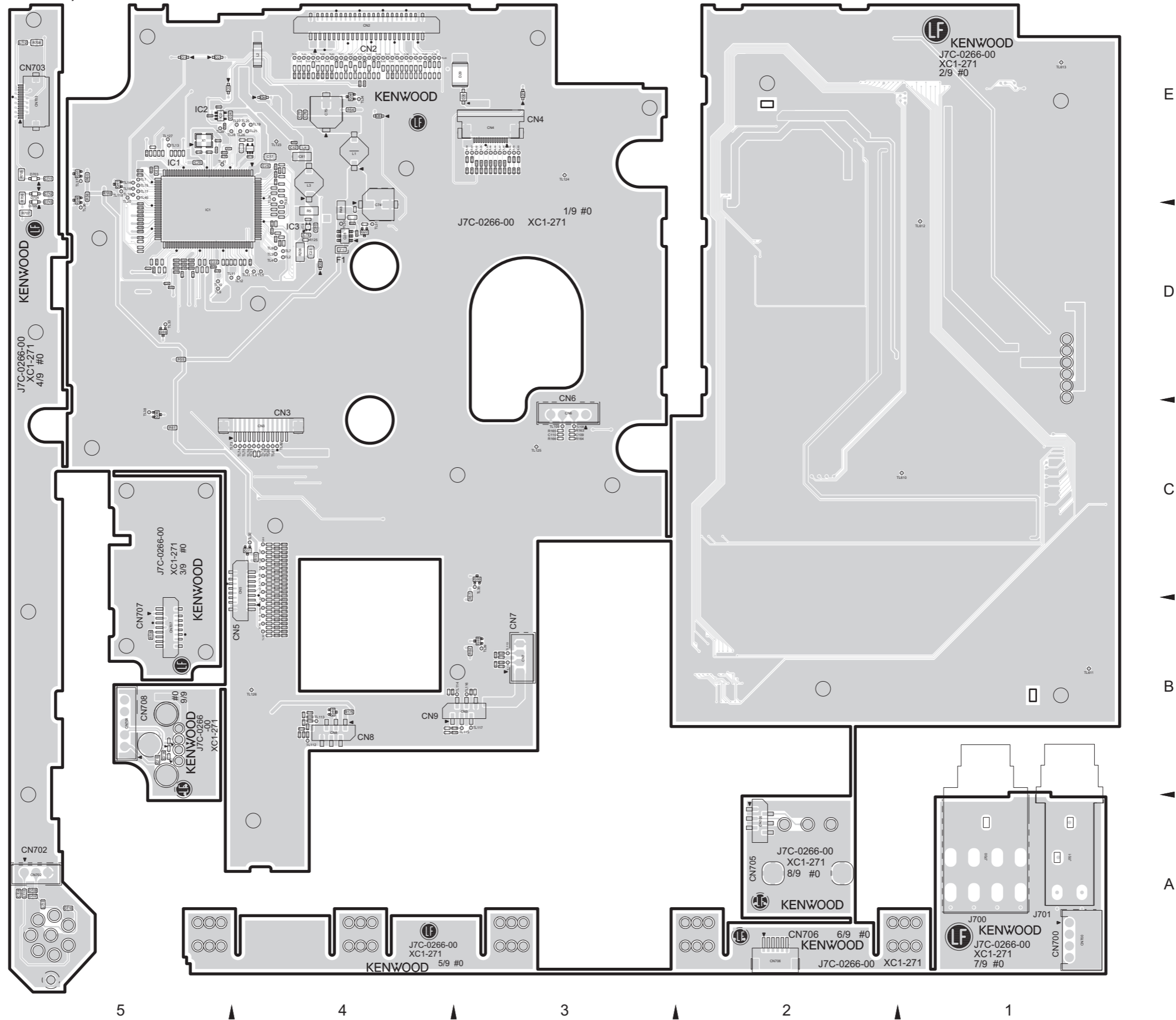
■ DISPLAY UNIT (XC1-271J-00)

--- Component side view/Side A (J7C-0266-00) ---



■ DISPLAY UNIT (XC1-271J-00)

--- Foil side view/Side B (J7C-0266-00) ---

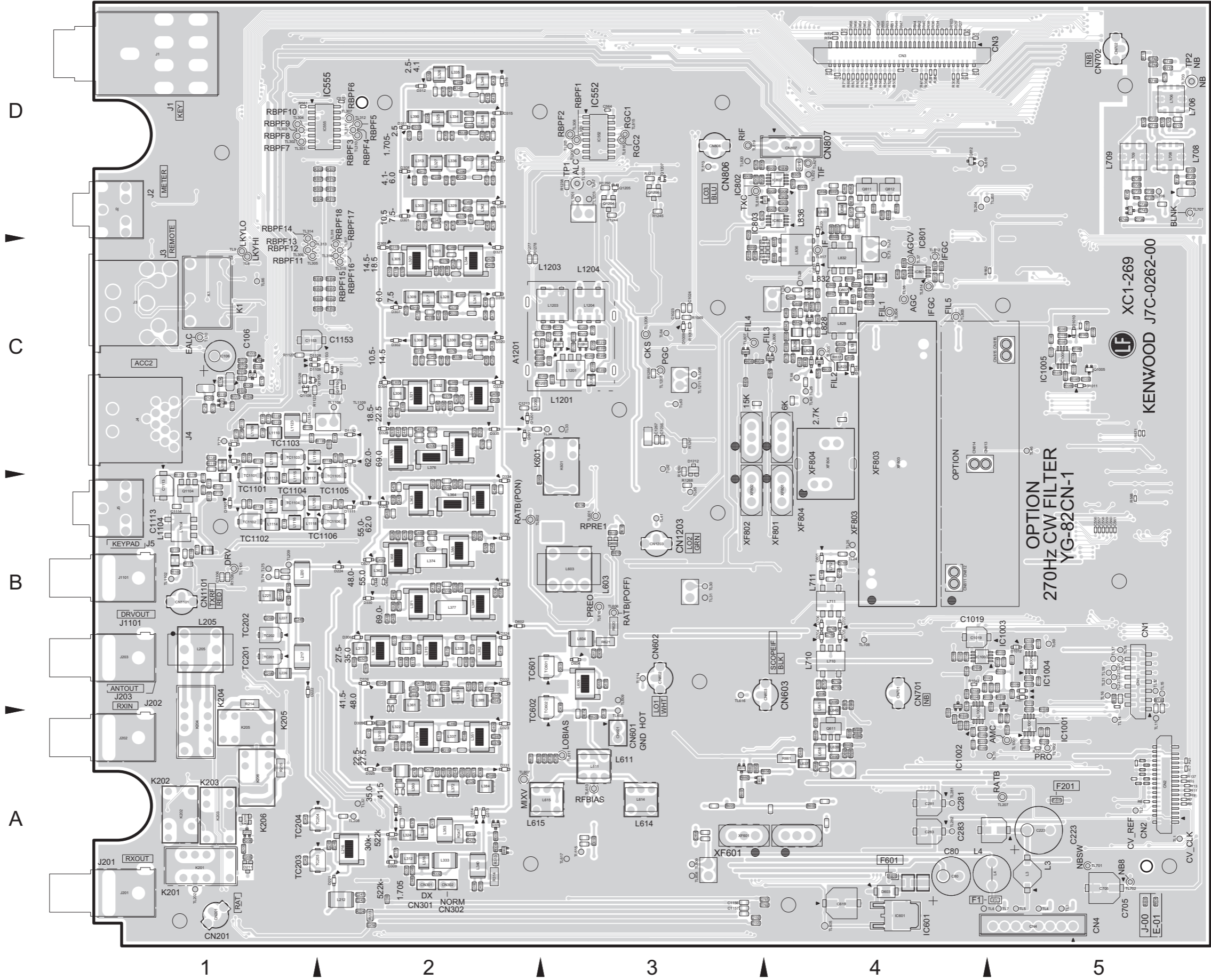






■ TX-RX UNIT (XC1-269J-00(TS-890S(K)), XC1-269E-01(TS-890S(E)))

--- Component side view/Side A (J7C-0262-00) ---



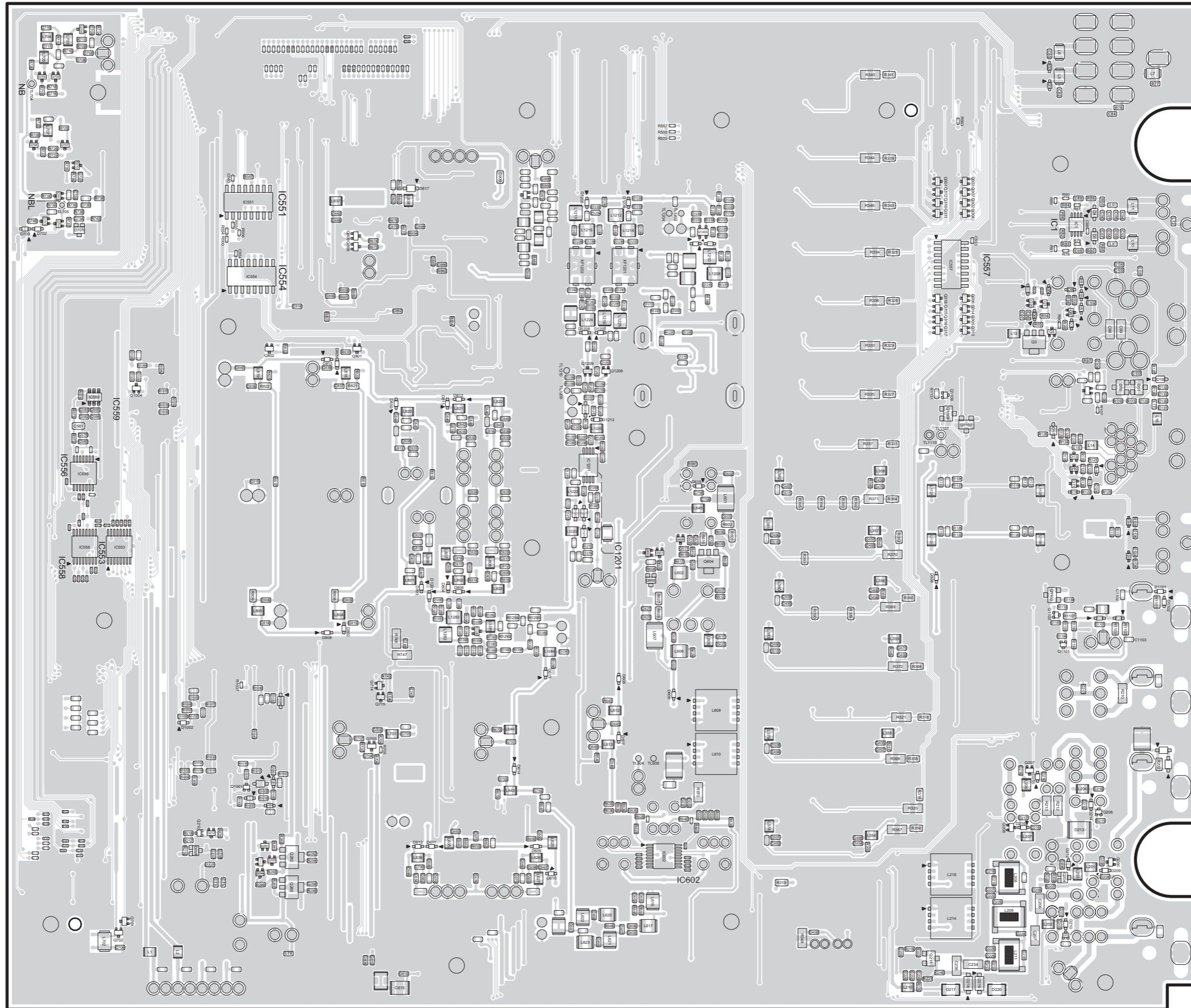
XC1-269  
KINWOOD J7C-0262-00

OPTION  
270Hz CW FILTER  
YG-82CN-1

1      2      3      4      5

■ TX-RX UNIT (XC1-269J-00(TS-890S(K)), XC1-269E-01(TS-890S(E)))

--- Foil side view/Side B (J7C-0262-00) ---



5

4

3

2

1

D

C

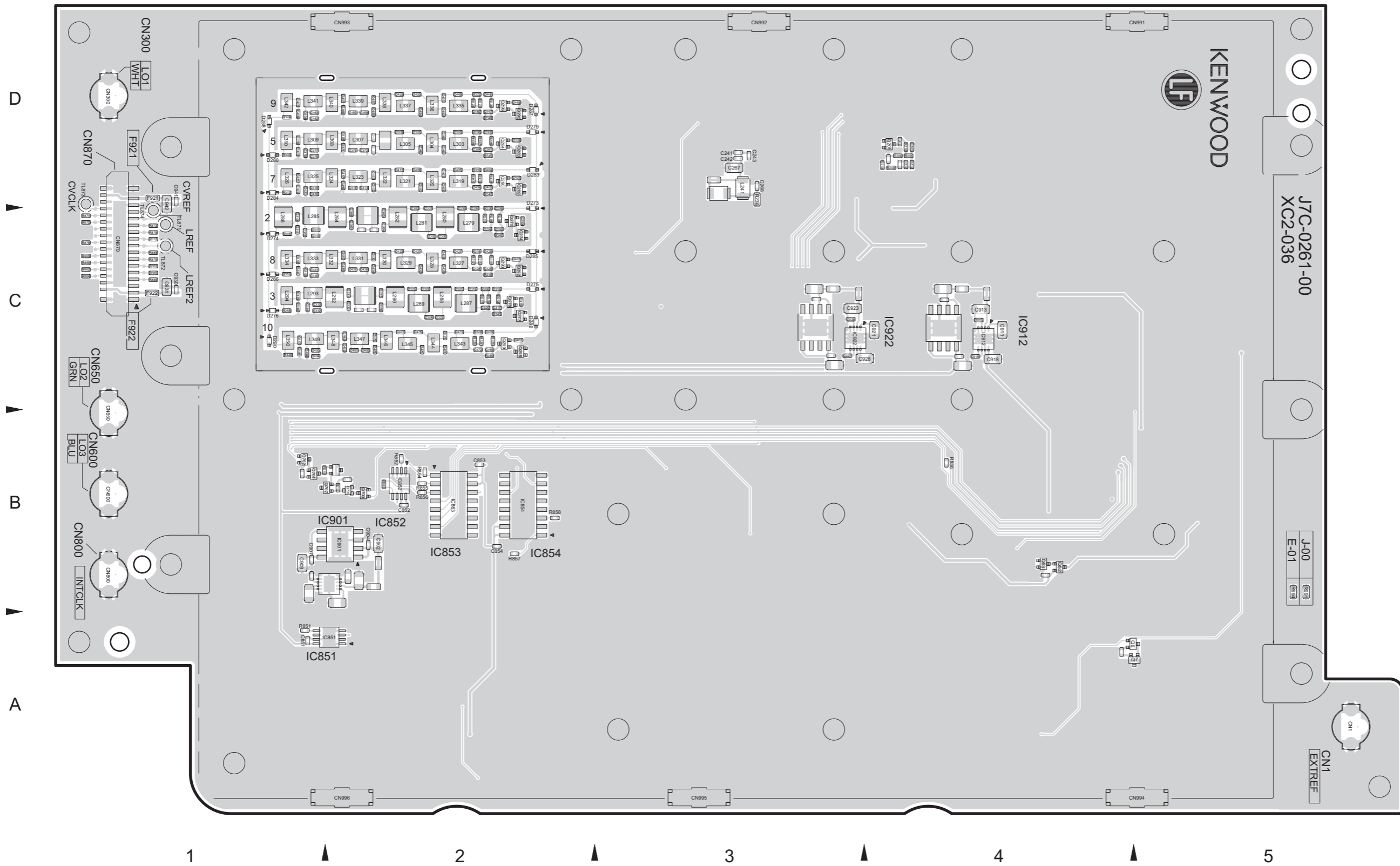
B

A



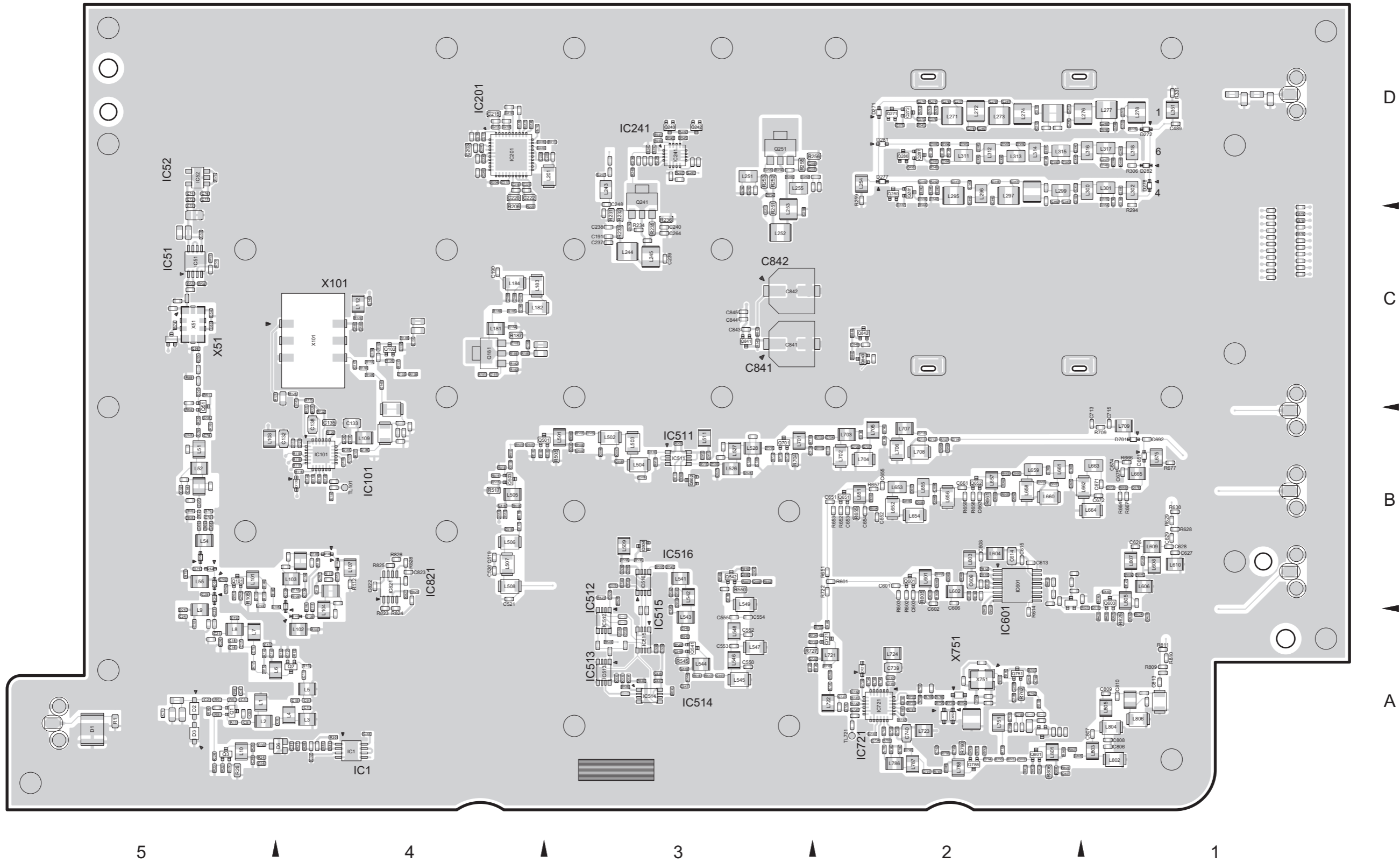
■ PLL UNIT (XC2-036J-00(TS-890S(K)), XC2-036E-01(TS-890S(E)))

--- Component side view/Side A (J7C-0261-00) ---



■ PLL UNIT (XC2-036J-00(TS-890S(K)), XC2-036E-01(TS-890S(E)))

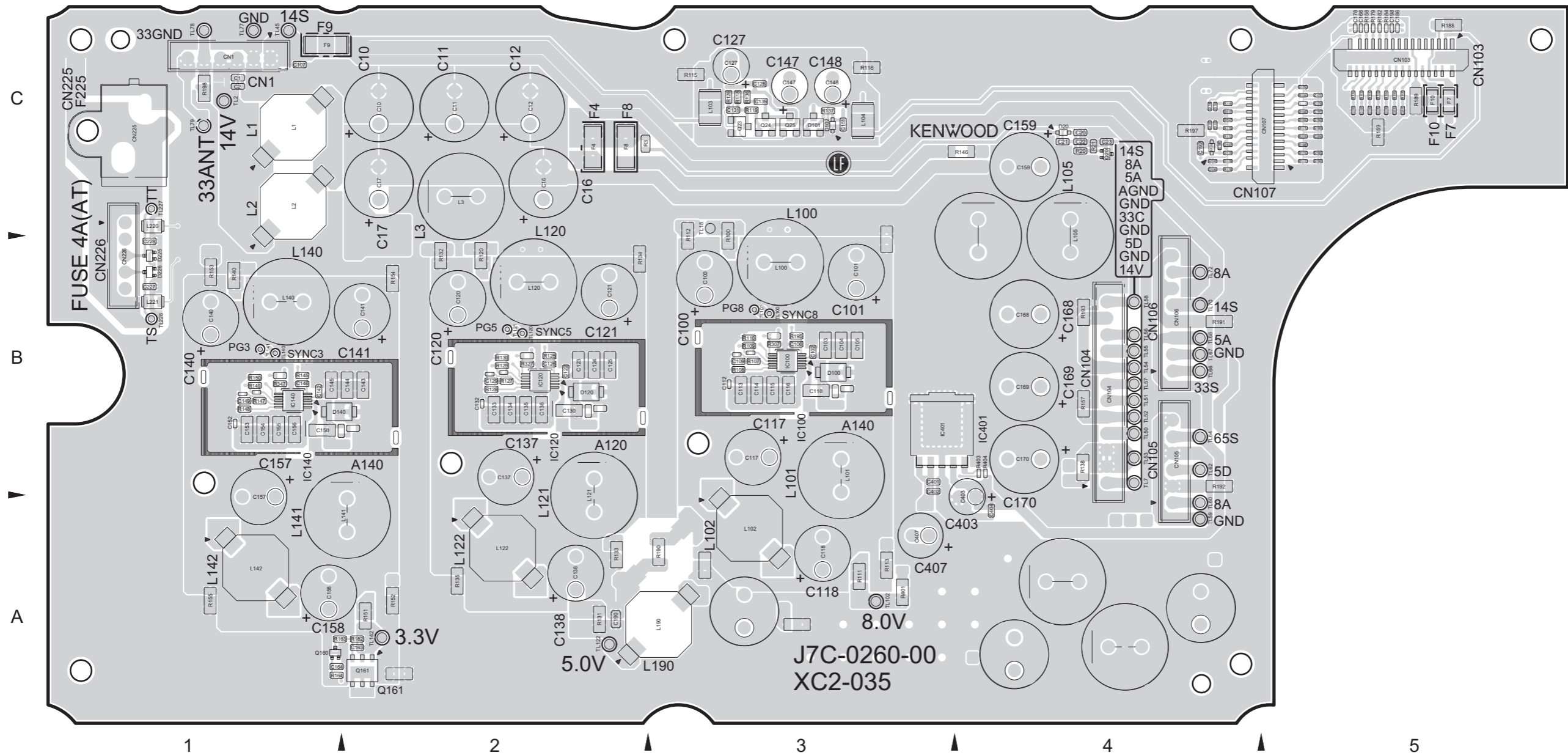
--- Foil side view/Side B (J7C-0261-00) ---





■ DC-DC UNIT (XC2-035J-00)

--- Component side view/Side A (J7C-0260-00) ---



● ADDRESS TABLE OF BOARD PARTS

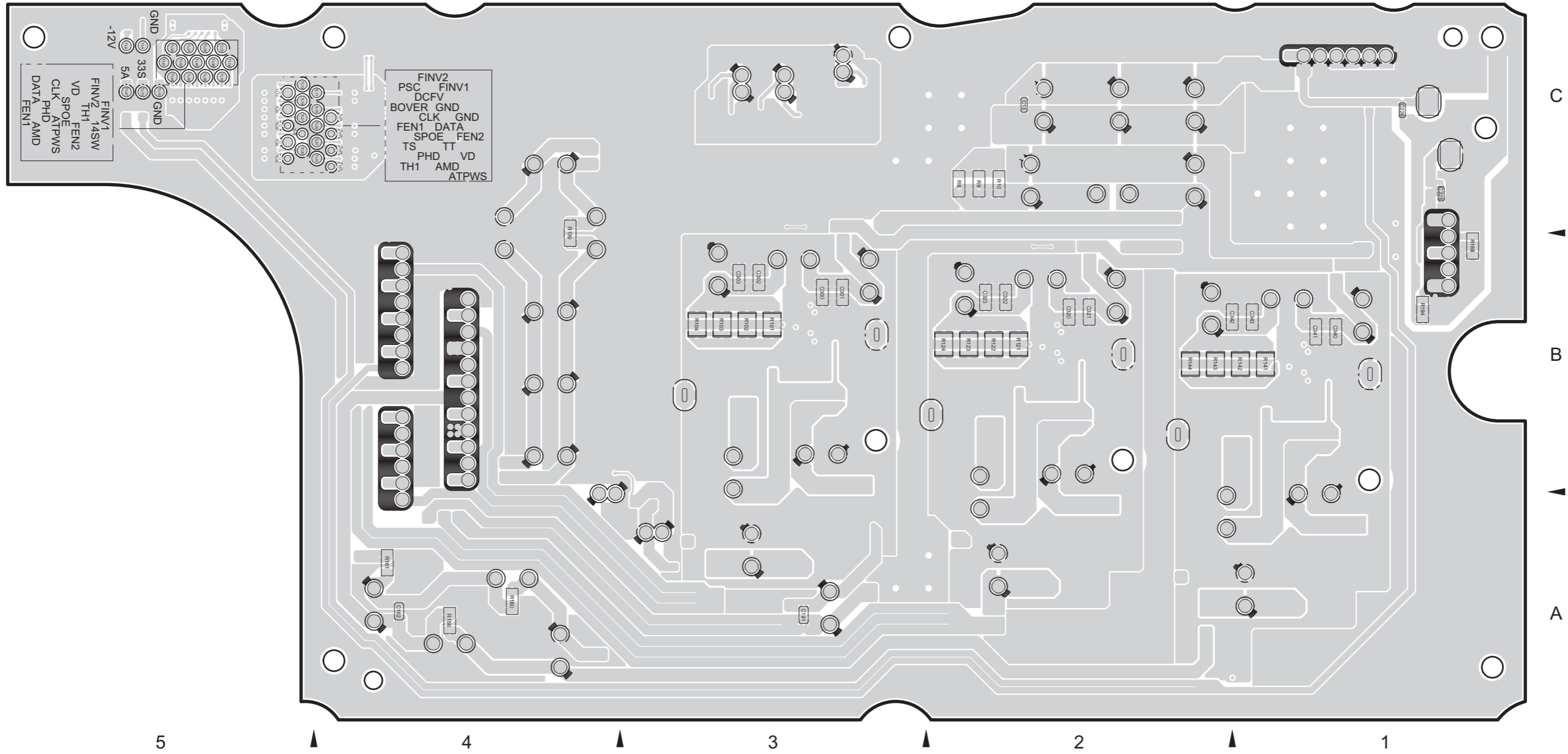
Each address may have an address error by one interval.



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IC	D225	A-1B	R119	A-3C	R150	A-1B	R178	A-4C	R347	A-1B	C105	A-3B	C130	A-2B	C152	A-1B	C180	A-5C	C227	A-1B	L1	A-1C	TL50	A-4B	TL101	A-3B	
IC100	A-3B	D226	A-1B	R120	A-2B	R151	A-2A	R179	A-5C	R401	A-3A	C106	A-3B	C131	A-3C	C153	A-1B	C181	A-5C	C228	A-1B	L2	A-1C	TL51	A-4B	TL102	A-3A
IC120	A-2B			R125	A-2B	R152	A-2A	R181	A-5C	R403	A-4B	C107	A-1C	C132	A-2B	C154	A-1B	C182	A-5C	C401	A-3B	L3	A-2C	TL52	A-4B	TL120	A-2B
IC140	A-1B	<b>RESISTOR</b>		R126	A-3C	R153	A-1B	R182	A-5C	R404	A-4B	C109	A-3B	C133	A-2B	C155	A-1B	C183	A-4C	C402	A-3B	L100	A-3B	TL53	A-4B	TL121	A-2B
IC401	A-3B	R3	A-2C	R127	A-2B	R154	A-2B	R183	A-5C			C110	A-3B	C134	A-2B	C156	A-1B	C184	A-5C	C403	A-4A	L101	A-3B	TL54	A-4B	TL122	A-2A
		R20	A-4C	R128	A-2B	R155	A-1A	R184	A-5C	<b>CAPACITOR</b>		C112	A-3B	C135	A-2B	C157	A-1A	C185	A-4C	C404	A-4A	L102	A-3A	TL55	A-4B	TL140	A-1B
<b>TRANSISTOR</b>		R21	A-4C	R129	A-2B	R157	A-4B	R185	A-5C	C1	A-1C	C113	A-3B	C136	A-2B	C158	A-1A	C186	A-5C	C407	A-3A	L103	A-3C	TL56	A-4B	TL141	A-1B
Q20	A-4C	R100	A-3B	R130	A-2B	R158	A-5C	R186	A-5C	C2	A-1C	C114	A-3B	C137	A-2B	C159	A-4C	C187	A-4C			L104	A-3C	TL57	A-4B	TL142	A-2A
Q23	A-3C	R105	A-5C	R131	A-2A	R159	A-5C	R187	A-5C	C10	A-2C	C115	A-3B	C138	A-2A	C163	A-2A	C188	A-5C	<b>OTHER</b>		L105	A-4B	TL58	A-4B	TL227	A-1C
Q24	A-3C	R106	A-5C	R132	A-2B	R162	A-2A	R188	A-5C	C11	A-2C	C116	A-3B	C139	A-3C	C164	A-1A	C189	A-4C	CN1	A-1C	L120	A-2B	TL59	A-4A	TL228	A-1B
Q25	A-3C	R107	A-3B	R133	A-2A	R163	A-1A	R189	A-5C	C12	A-2C	C117	A-3B	C140	A-1B	C165	A-1B	C190	A-2A	CN103	A-5C	L121	A-2A	TL60	A-4A		
Q160	A-1A	R108	A-3B	R134	A-2B	R164	A-1A	R190	A-3A	C16	A-2C	C118	A-3A	C141	A-2B	C166	A-5C	C192	A-4C	CN104	A-4B	L122	A-2A	TL62	A-4B		
Q161	A-2A	R109	A-3B	R135	A-2A	R167	A-4C	R191	A-4C	C17	A-2C	C120	A-2B	C142	A-1B	C167	A-5C	C193	A-5C	CN105	A-4B	L140	A-1B	TL64	A-4B		
		R110	A-3B	R136	A-3C	R169	A-5C	R192	A-4B	C20	A-4C	C121	A-2B	C143	A-2B	C168	A-4B	C194	A-4C	CN106	A-4B	L141	A-2A	TL66	A-4B		
<b>DIODE</b>		R111	A-3A	R137	A-3C	R170	A-4C	R193	A-4B	C21	A-4C	C122	A-2B	C144	A-2B	C169	A-4B	C195	A-5C	CN107	A-5C	L142	A-1A	TL67	A-4B		
D20	A-4C	R112	A-3B	R138	A-4B	R171	A-5C	R195	A-3B	C22	A-4C	C123	A-2B	C145	A-1B	C170	A-4B	C196	A-4C	CN225	A-1C	L190	A-3A	TL68	A-4B		
D100	A-3B	R113	A-3A	R140	A-1B	R172	A-4C	R196	A-5C	C23	A-4C	C124	A-2B	C146	A-1B	C174	A-4C	C197	A-5C	CN226	A-1B	L220	A-1C	TL70	A-4B		
D101	A-3C	R114	A-4C	R145	A-1B	R173	A-5C	R197	A-4C	C100	A-3B	C125	A-2B	C147	A-3C	C175	A-5C	C198	A-5C	F4	A-2C	L221	A-1B	TL72	A-4B		
D102	A-3C	R115	A-3C	R146	A-4C	R174	A-4C	R198	A-1C	C101	A-3B	C126	A-2B	C148	A-3C	C176	A-4C	C199	A-5C	F7	A-5C	TL2	A-1C	TL77	A-1C		
D103	A-4C	R116	A-3C	R147	A-1B	R175	A-5C	R205	A-5C	C102	A-3B	C127	A-3C	C149	A-1B	C177	A-5C	C200	A-5C	F8	A-2C	TL7	A-4B	TL78	A-1C		
D120	A-2B	R117	A-4C	R148	A-1B	R176	A-4C	R307	A-4C	C103	A-3B	C128	A-3C	C150	A-1B	C178	A-5C	C201	A-5C	F9	A-1C	TL18	A-3C	TL79	A-1C		
D140	A-1B	R118	A-3C	R149	A-1B	R177	A-5C	R327	A-2B	C104	A-3B	C129	A-2B	C151	A-3C	C179	A-5C	C206	A-5C	F10	A-5C	TL45	A-1C	TL100	A-3B		

■ DC-DC UNIT (XC2-035J-00)

--- Foil side view/Side B (J7C-0260-00) ---



● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.



REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
<b>RESISTOR</b>		R156	B- 4A	C321	B- 2B	TL16	B- 5C	TL37	B- 5C
R8	B- 2C	R160	B- 4A	C322	B- 2B	TL19	B- 5C	TL38	B- 5C
R9	B- 2C	R161	B- 4A	C323	B- 2B	TL20	B- 5C	TL39	B- 5C
R10	B- 2C	R168	B- 1B	C340	B- 1B	TL21	B- 5C	TL40	B- 5C
R101	B- 3B	R194	B- 1B	C341	B- 1B	TL22	B- 4C	TL41	B- 5C
R102	B- 3B			C342	B- 2B	TL23	B- 5C	TL42	B- 5C
R103	B- 3B	<b>CAPACITOR</b>		C343	B- 1B	TL24	B- 4C	TL43	B- 5C
R104	B- 3B	C13	B- 2C			TL25	B- 5C	TL44	B- 5C
R121	B- 2B	C162	B- 4A	<b>OTHER</b>		TL27	B- 4C	TL47	B- 5C
R122	B- 2B	C191	B- 3A	TL5	B- 5C	TL28	B- 5C	TL74	B- 5C
R123	B- 2B	C225	B- 1C	TL6	B- 5C	TL29	B- 4C	TL75	B- 4C
R124	B- 2B	C226	B- 1C	TL10	B- 5C	TL30	B- 5C	TL76	B- 4C
R139	B- 4B	C300	B- 3B	TL11	B- 4C	TL31	B- 4C		
R141	B- 1B	C301	B- 3B	TL12	B- 5C	TL32	B- 5C		
R142	B- 1B	C302	B- 3B	TL13	B- 5C	TL33	B- 4C		
R143	B- 2B	C303	B- 3B	TL14	B- 5C	TL35	B- 5C		
R144	B- 2B	C320	B- 2B	TL15	B- 5C	TL36	B- 5C		



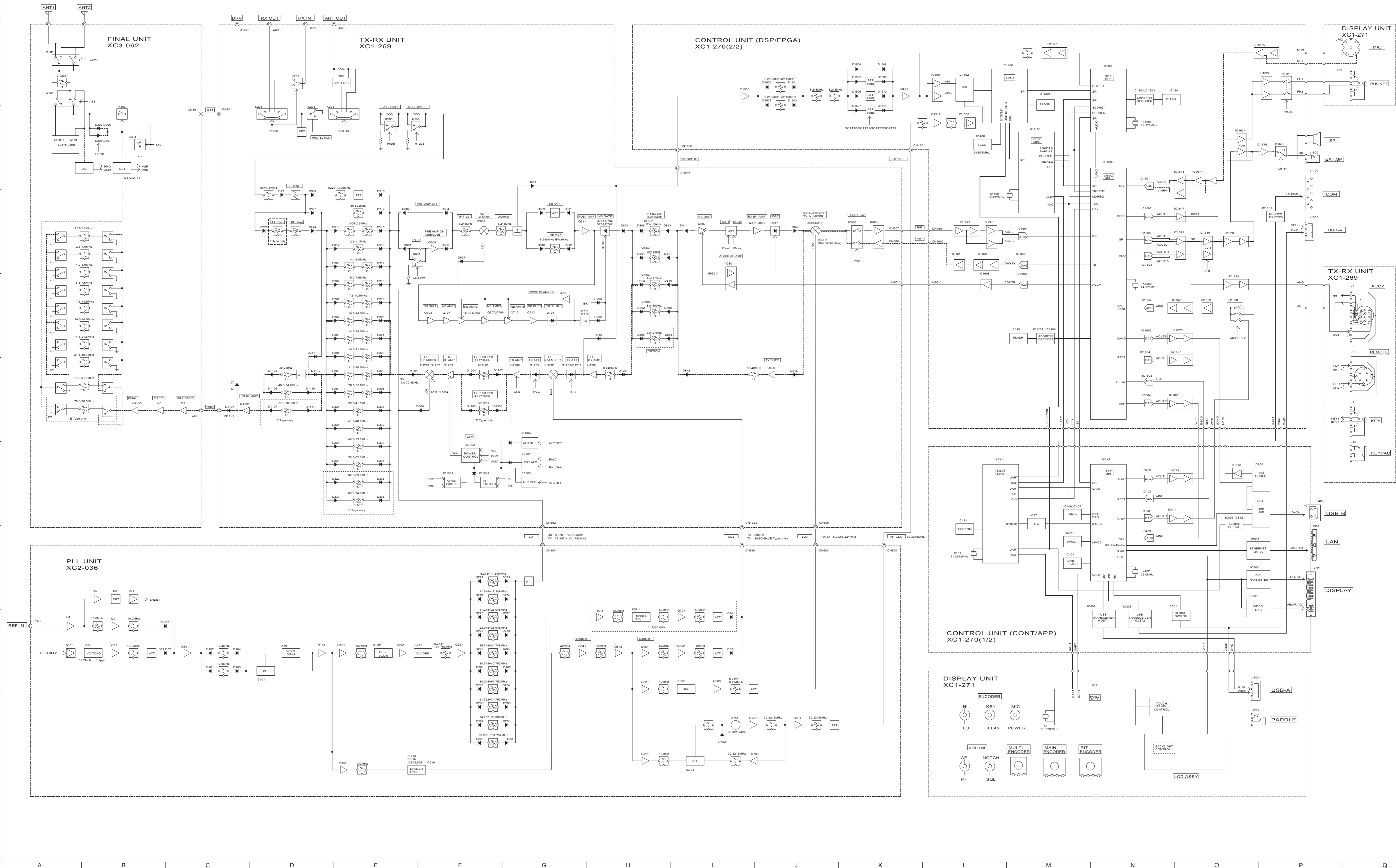




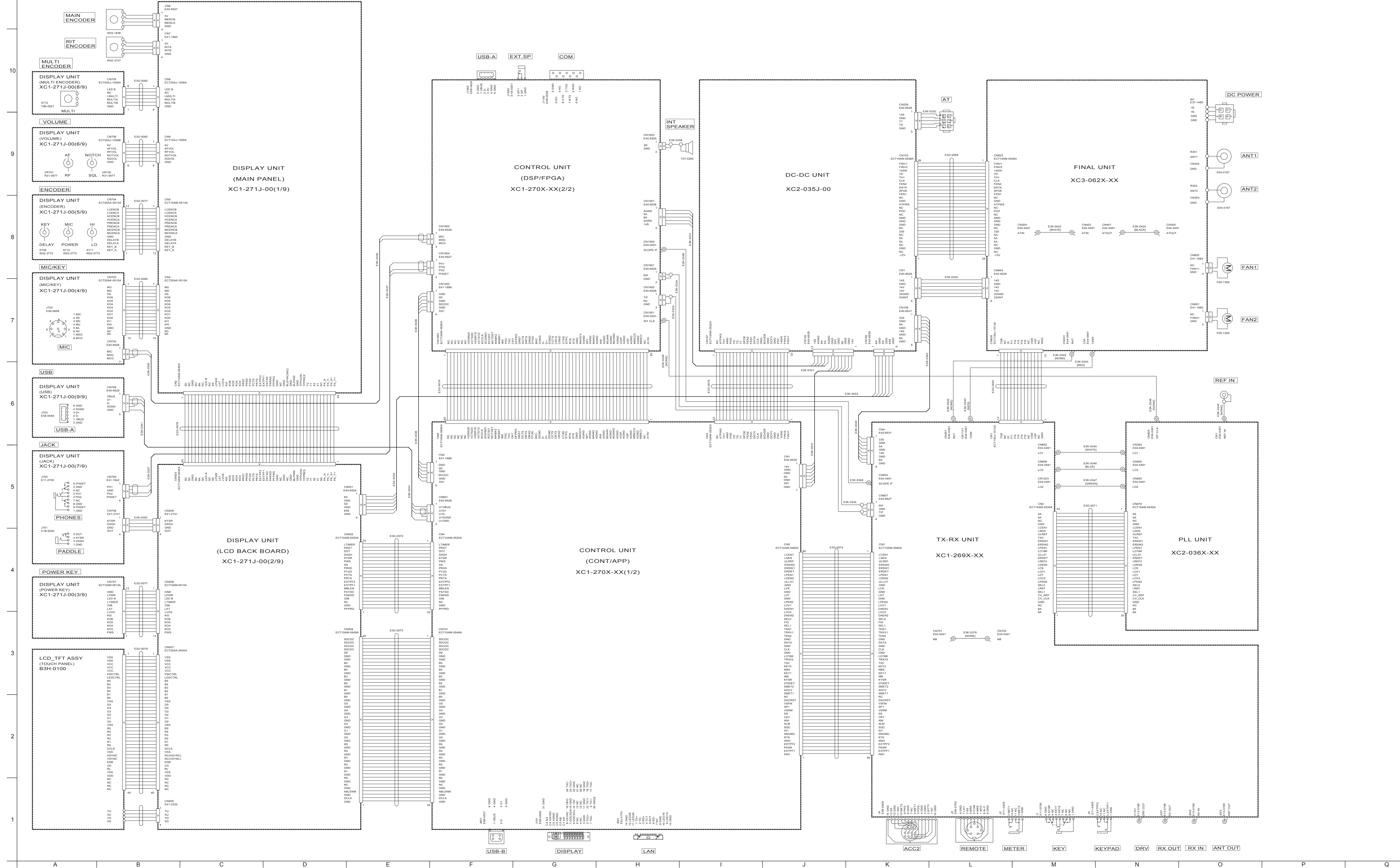




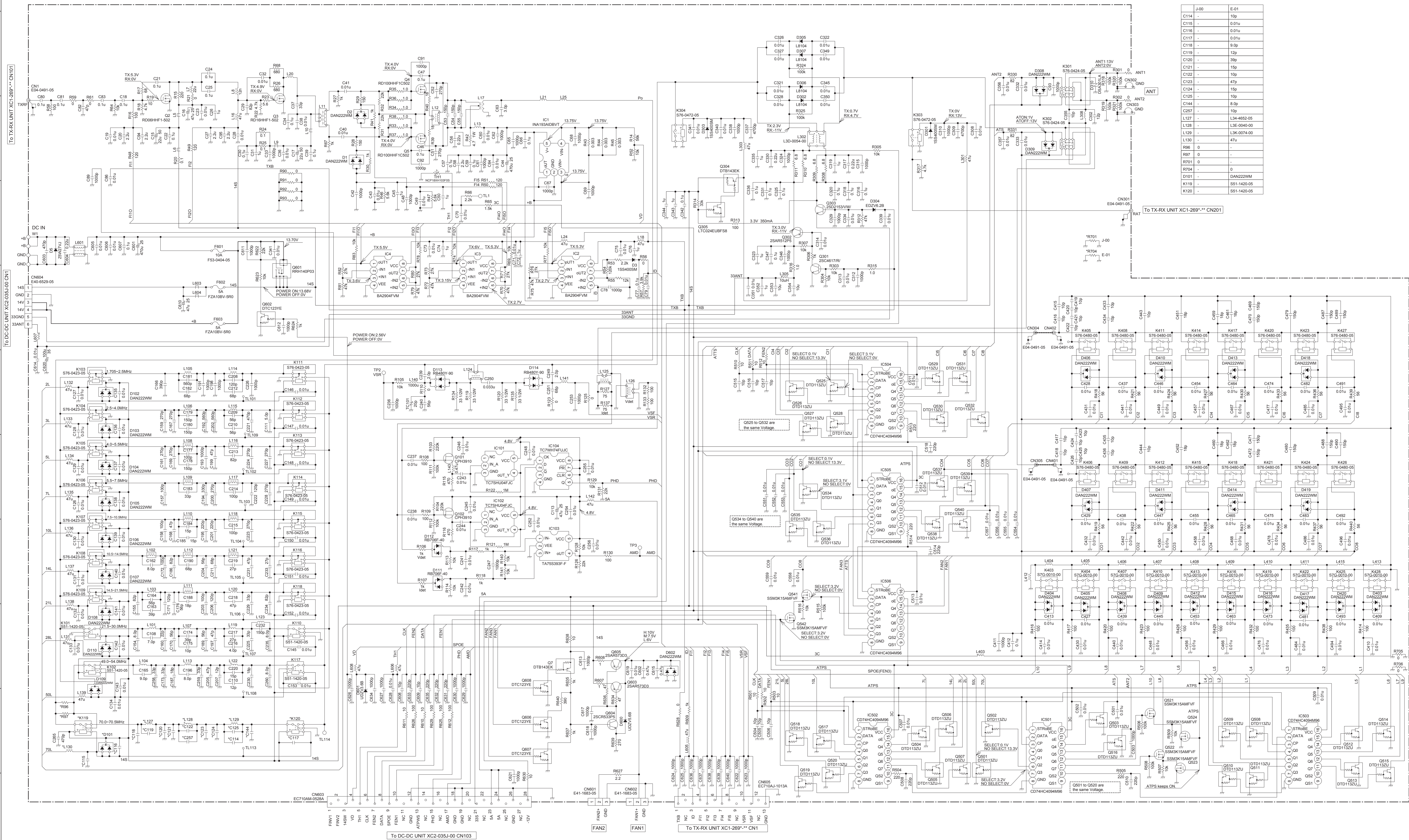
BLOCK DIAGRAM



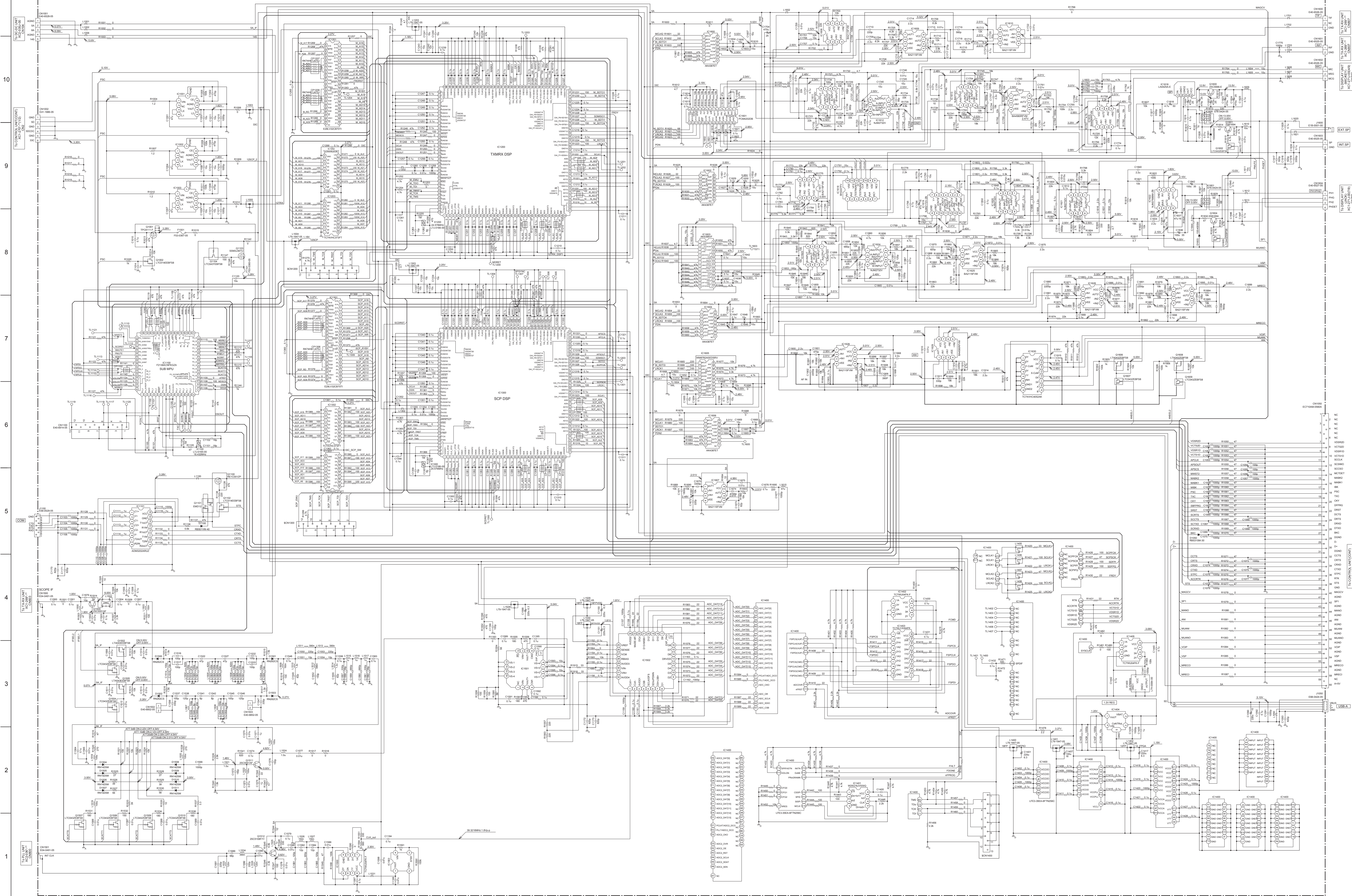
# INTERCONNECTION DIAGRAM



**SCHEMATIC DIAGRAM**  
**■ FINAL UNIT (XC3-062J-00(TS-890S(K)), XC3-062E-01(TS-890S(E)))**

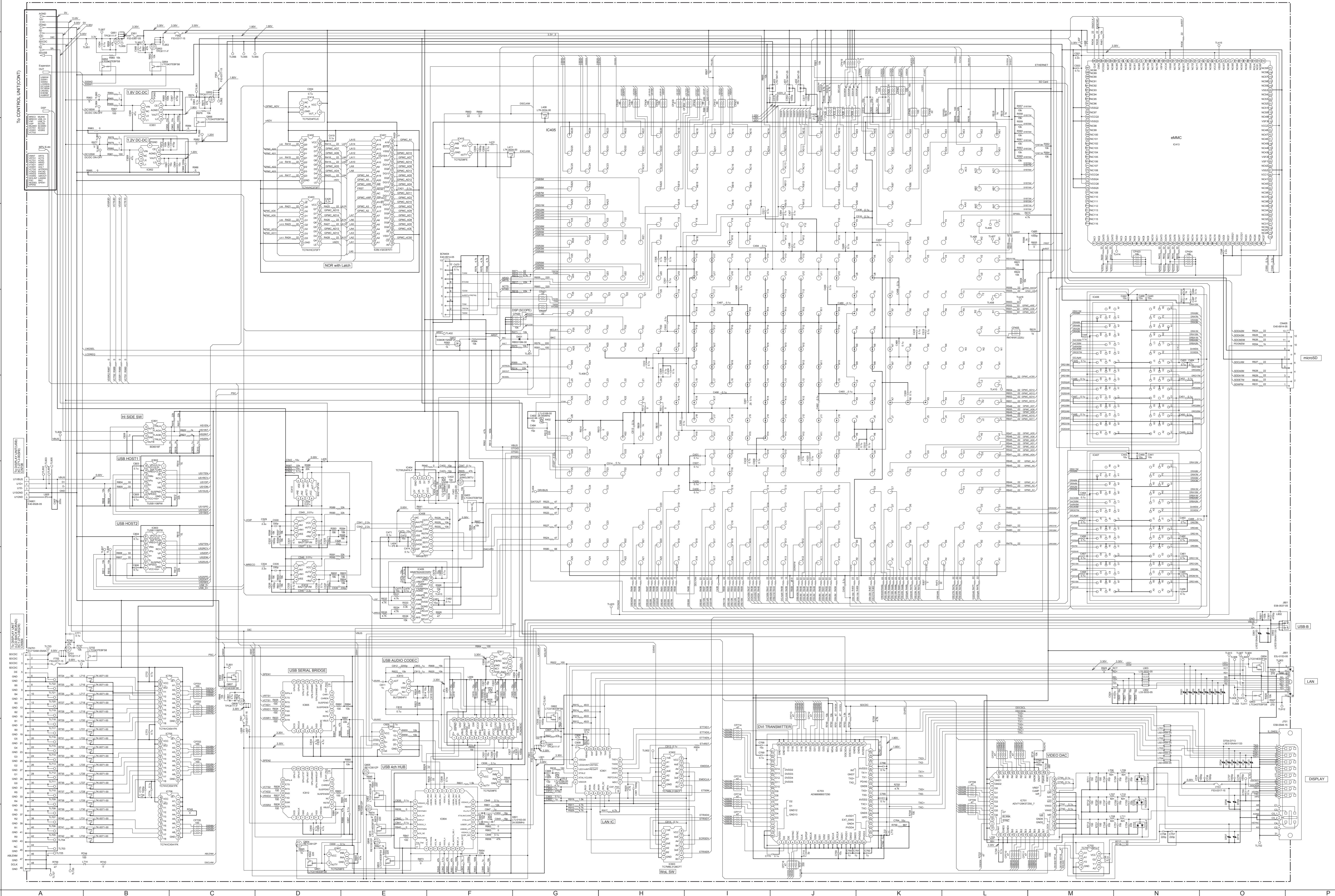


J-00	E-01
C114	10p
C115	0.01u
C116	0.01u
C117	0.01u
C118	9.0p
C119	12p
C120	30p
C121	15p
C122	10p
C123	47p
C124	15p
C125	10p
C144	8.0p
C257	10p
L127	L34-4652-05
L128	L3E-0040-00
L129	L3K-0074-00
L130	47u
R96	0
R97	0
R98	0
R99	0
R100	0
R101	0
R102	0
R103	0
R104	0
R105	0
R106	0
R107	0
R108	0
R109	0
R110	0
R111	0
R112	0
R113	0
R114	0
R115	0
R116	0
R117	0
R118	0
R119	0
R120	0

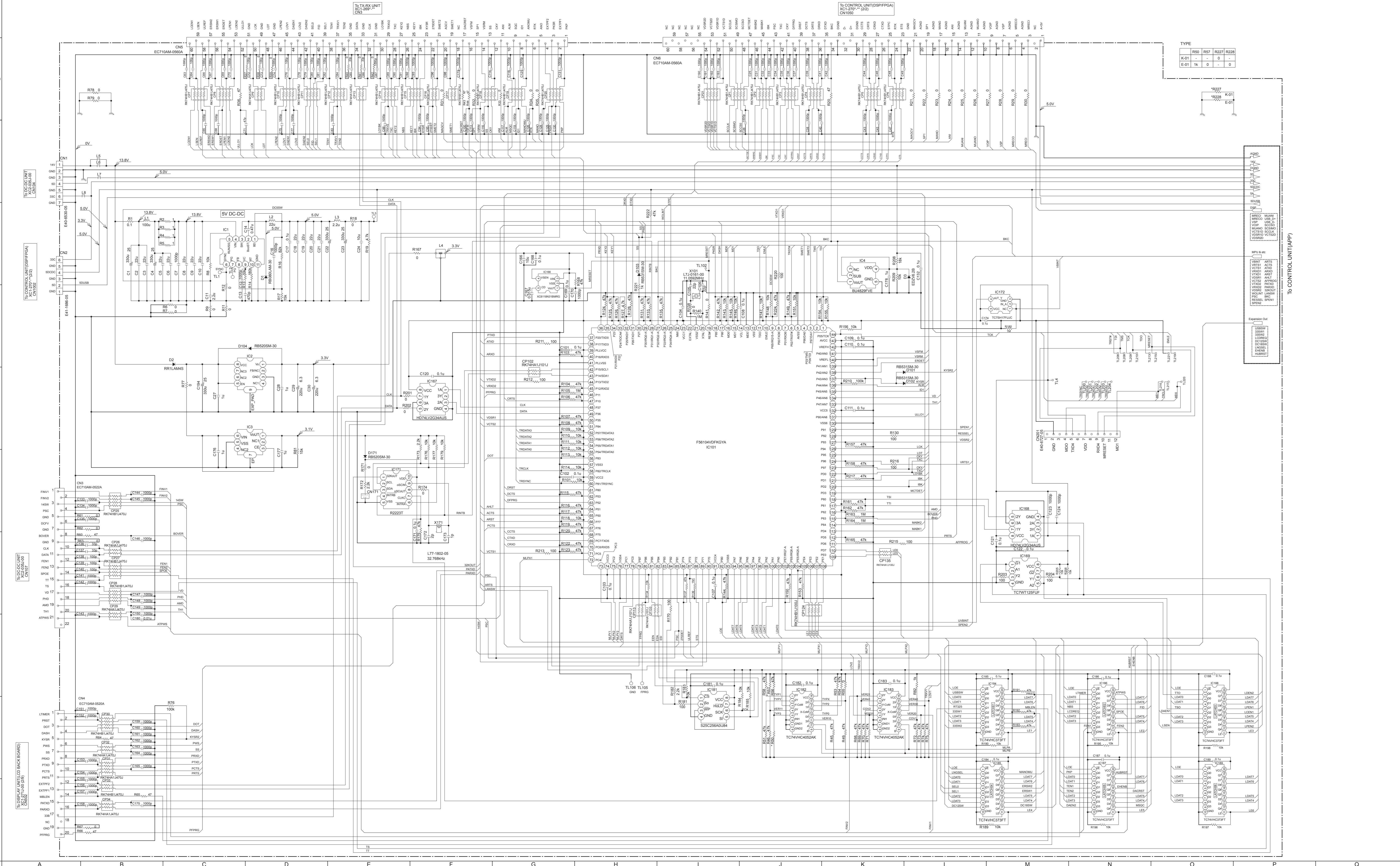




CONTROL UNIT(APP) (XC1-270K-01(TS-890S(K)), XC1-270E-01(TS-890S(E))) (1/2)



■ CONTROL UNIT(CONT) (XC1-270K-01(TS-890S(K)), XC1-270E-01(TS-890S(E))) (1/2)



TYPE	R50	R57	R227	R228
K-01	-	0	0	-
E-01	1	0	0	0

■ DISPLAY UNIT (XC1-271J-00)

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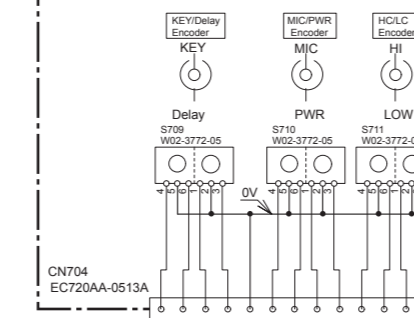
4

3

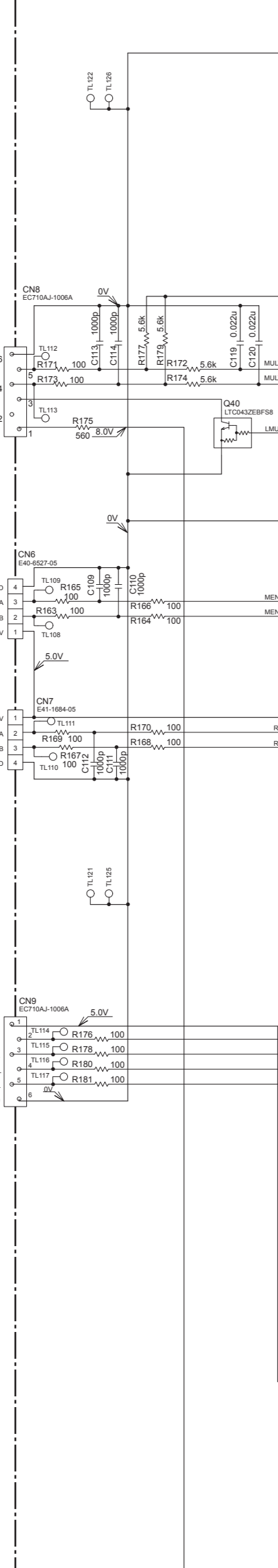
2

1

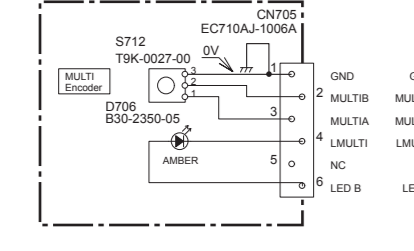
DISPLAY UNIT (ENCODER) XC1-271J-00(9)



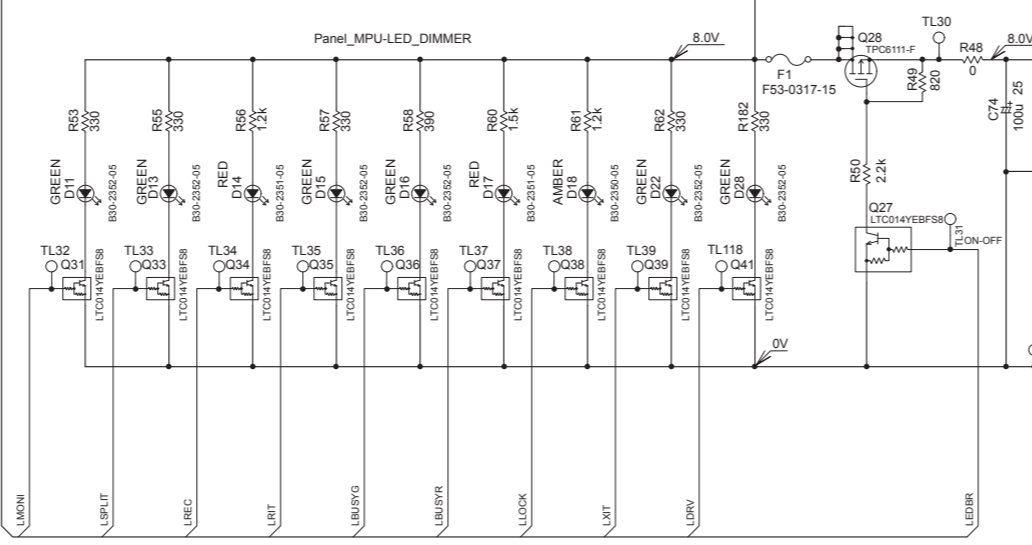
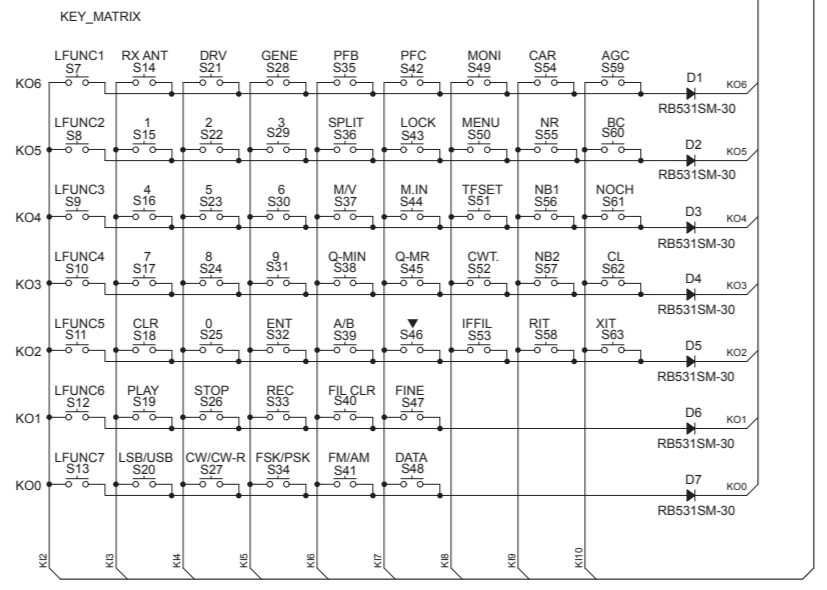
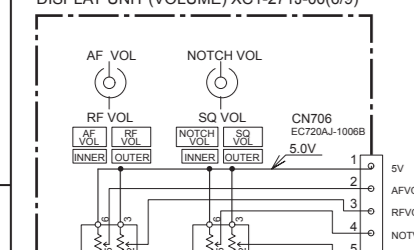
DISPLAY UNIT (MAIN PANEL) XC1-271J-00(19)



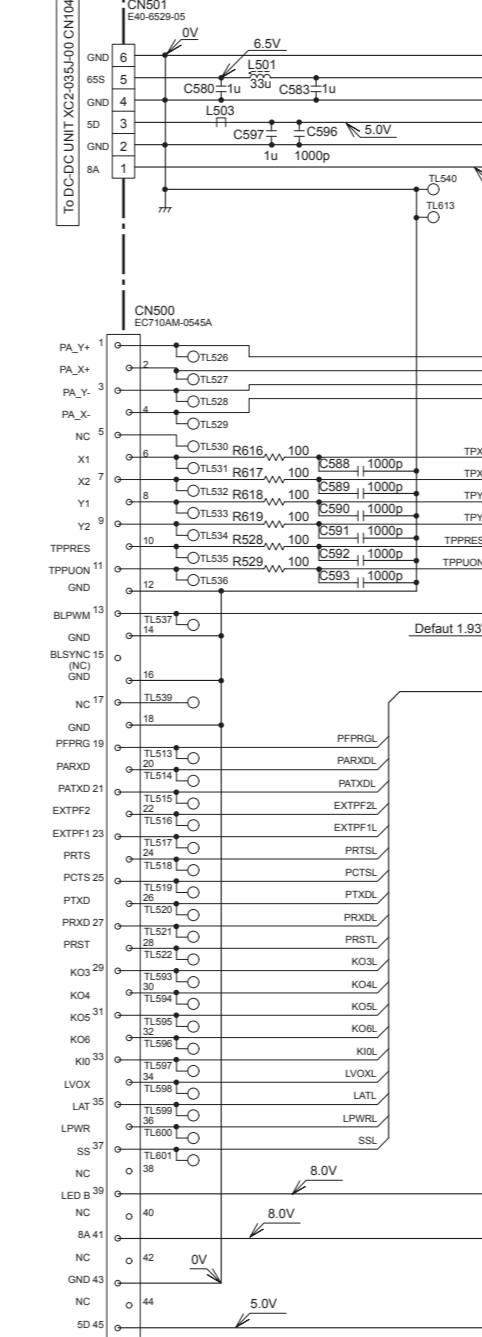
DISPLAY UNIT (MULTI ENCODER) XC1-271J-00(8)



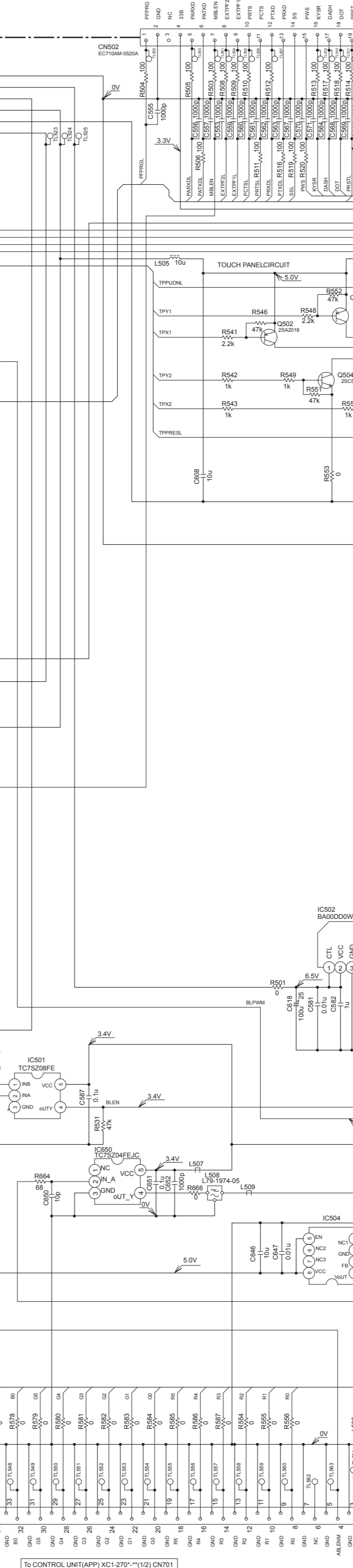
DISPLAY UNIT (VOLUME) XC1-271J-00(9)



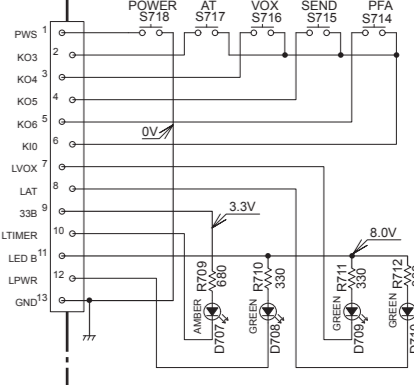
DISPLAY UNIT (LCD BACK BOARD) XC1-271J-00(9)



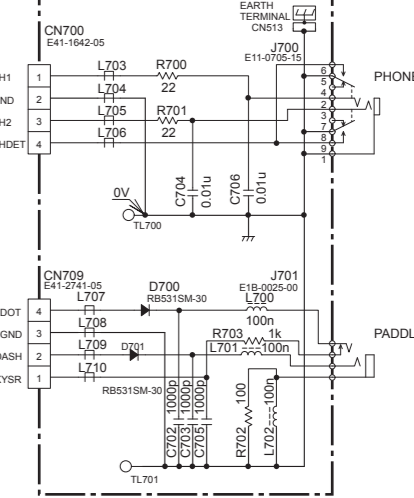
To CONTROL UNIT(CN1) XC1-271J-00(CN4)



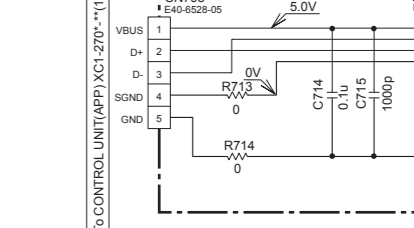
DISPLAY UNIT (POWER KEY) XC1-271J-00(9)



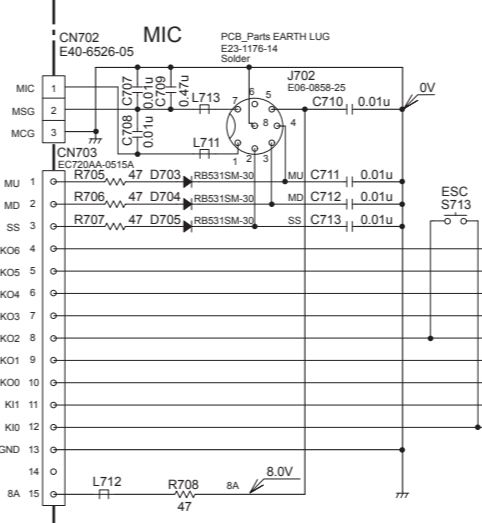
DISPLAY UNIT (JACK) XC1-271J-00(9)



DISPLAY UNIT (USB) XC1-271J-00(9)



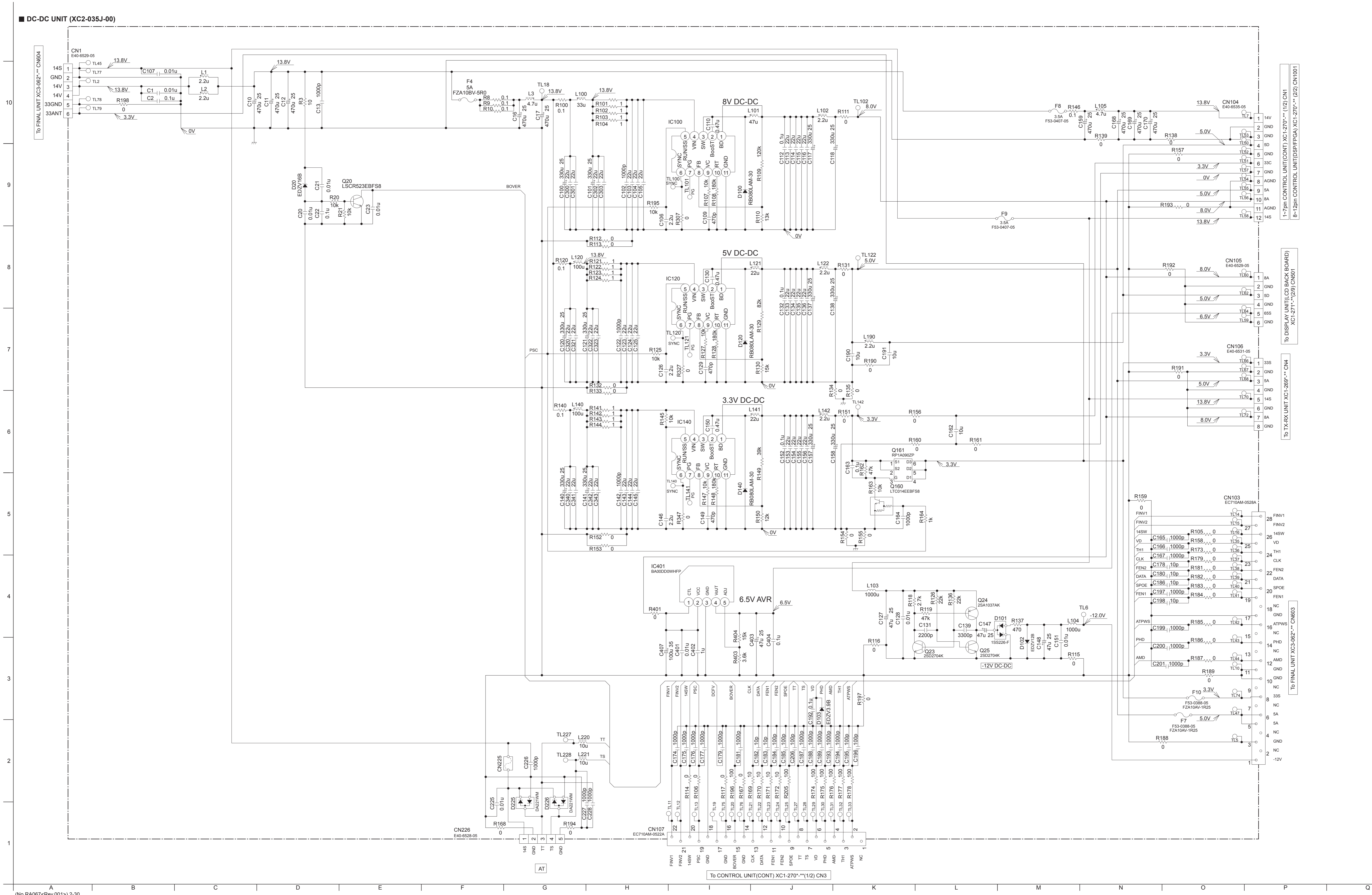
DISPLAY UNIT (MICKEY) XC1-271J-00(9)







DC-DC UNIT (XC2-035J-00)



# PARTS LIST

[TS-890S]

**\* SAFETY PRECAUTION**

Parts identified by the  $\triangle$  symbol are critical for safety. Replace only with specified part numbers.

**\* BEWARE OF BOGUS PARTS**

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine parts be used.

\* (x\_) in a description column shows the number of the used part.

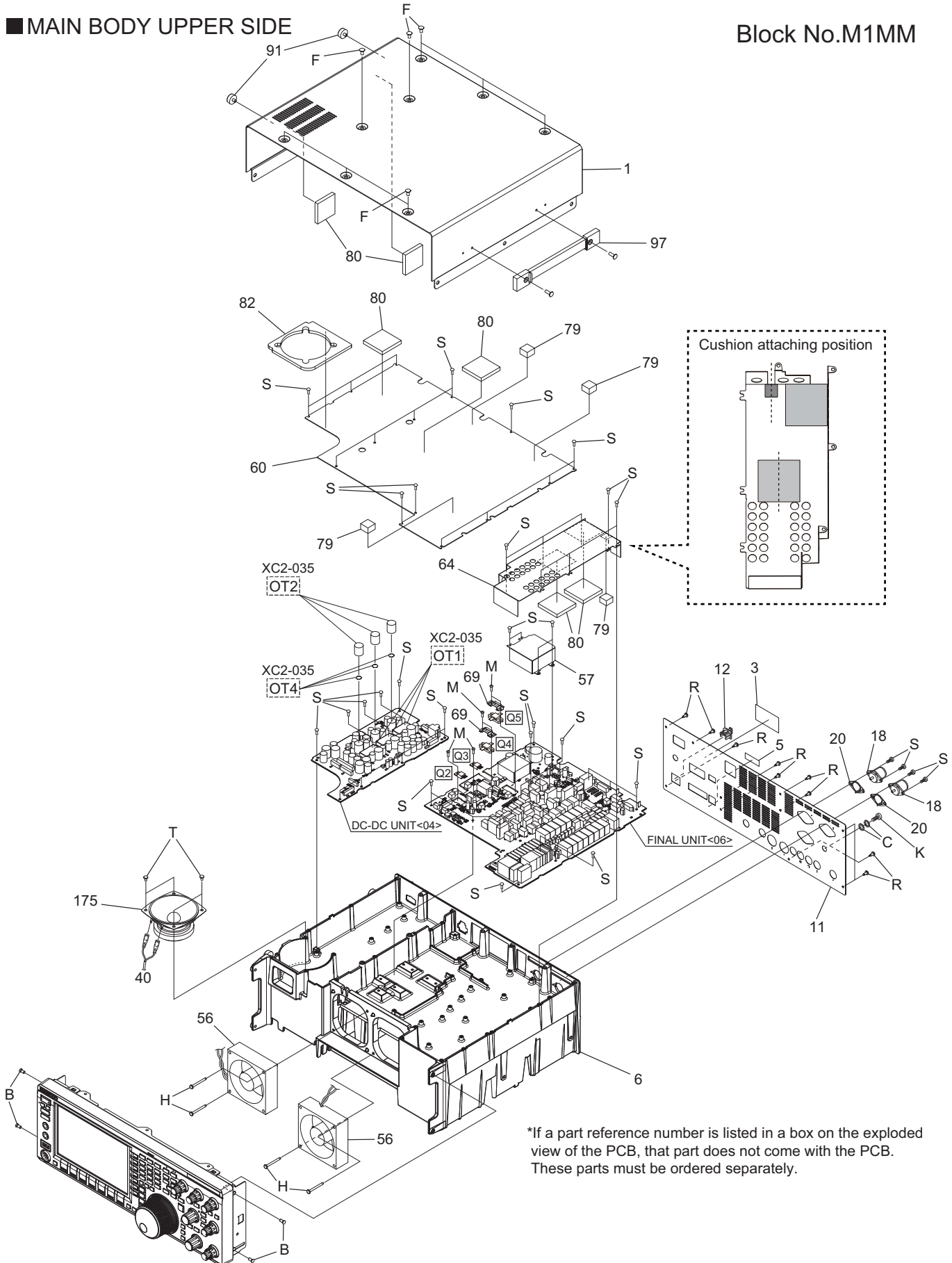
- Contents -

Exploded view of general assembly and parts list .....	3-2
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# Exploded view of general assembly and parts list

## ■ MAIN BODY UPPER SIDE

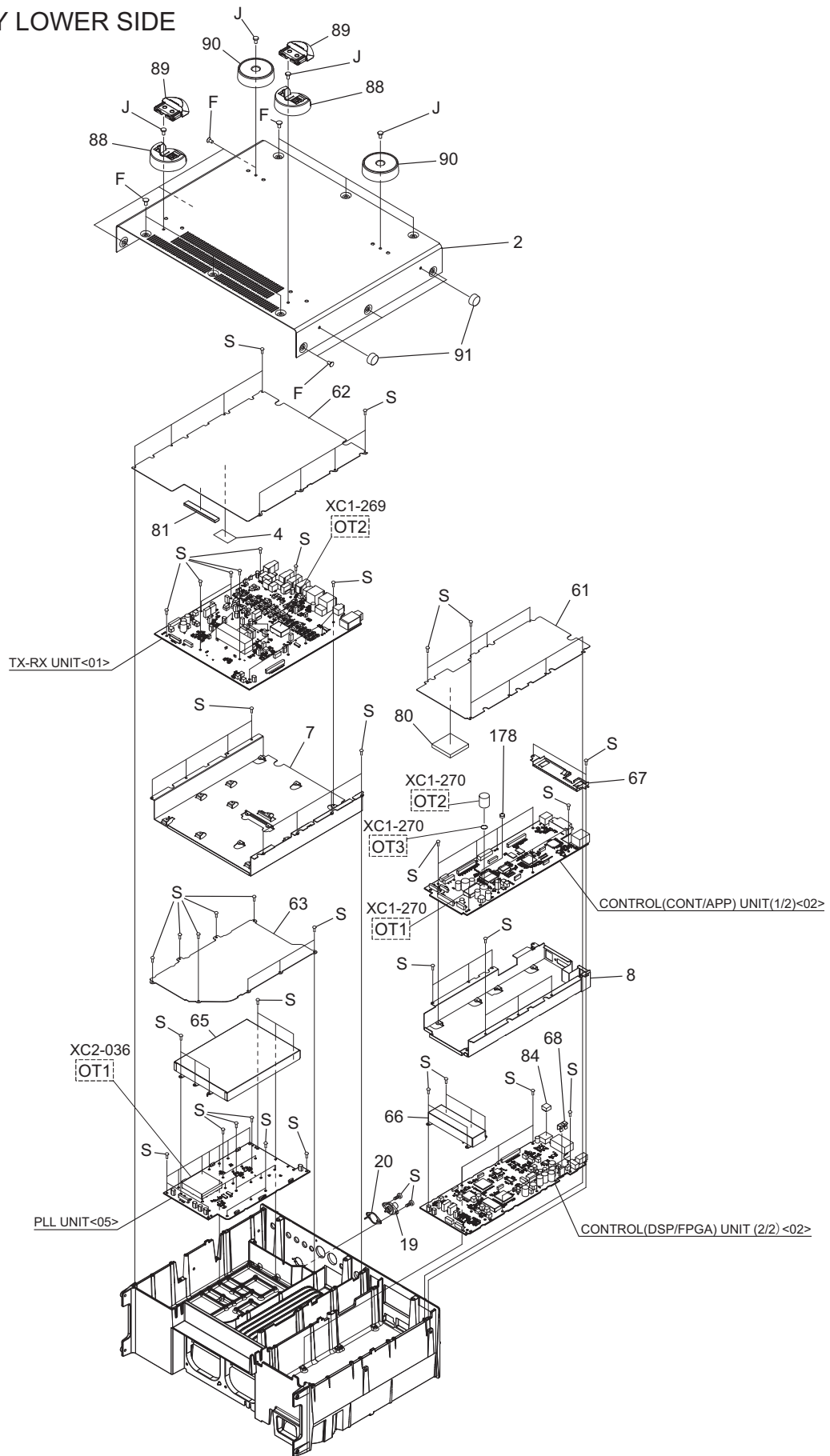
Block No.M1MM



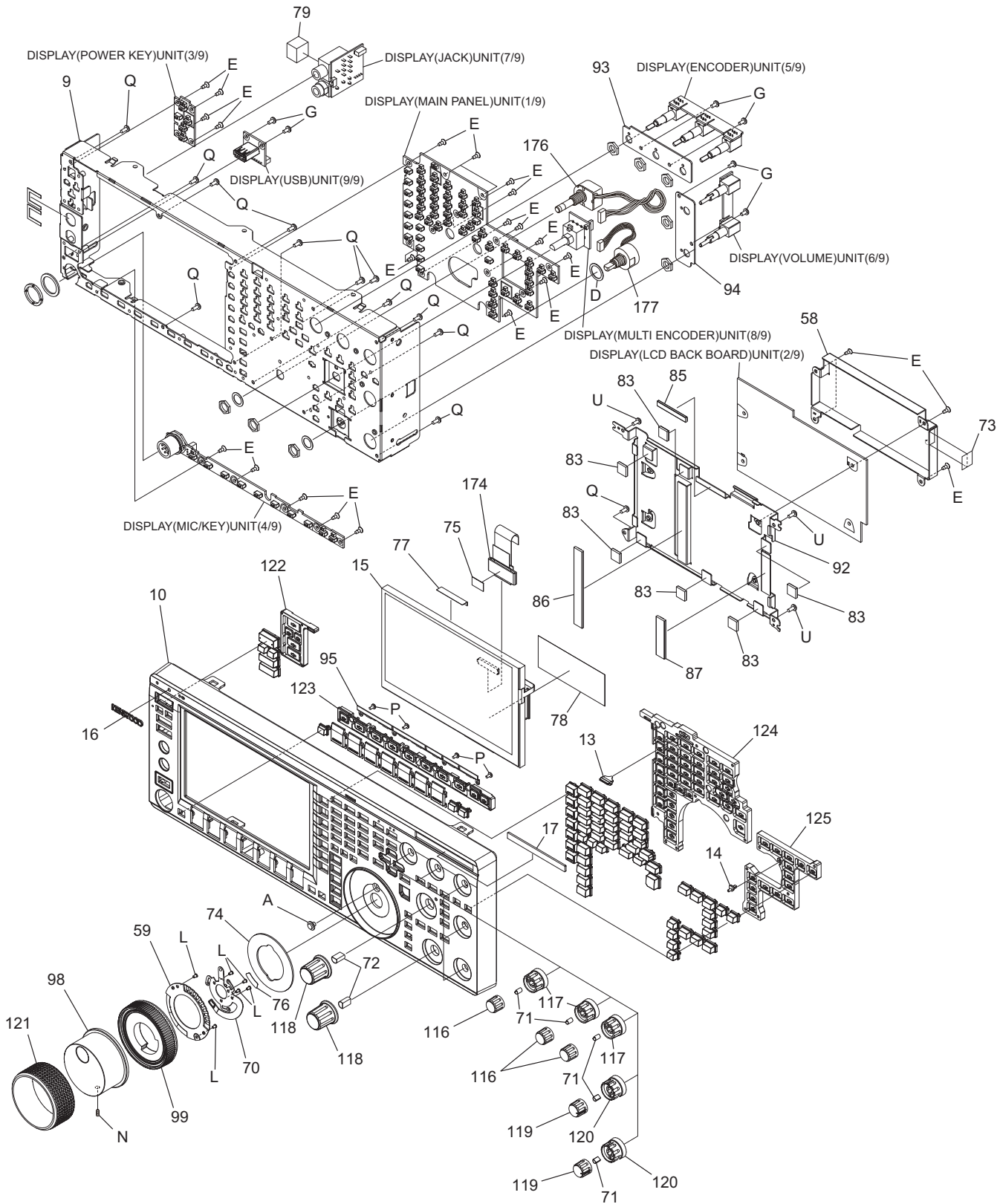
\*If a part reference number is listed in a box on the exploded view of the PCB, that part does not come with the PCB. These parts must be ordered separately.



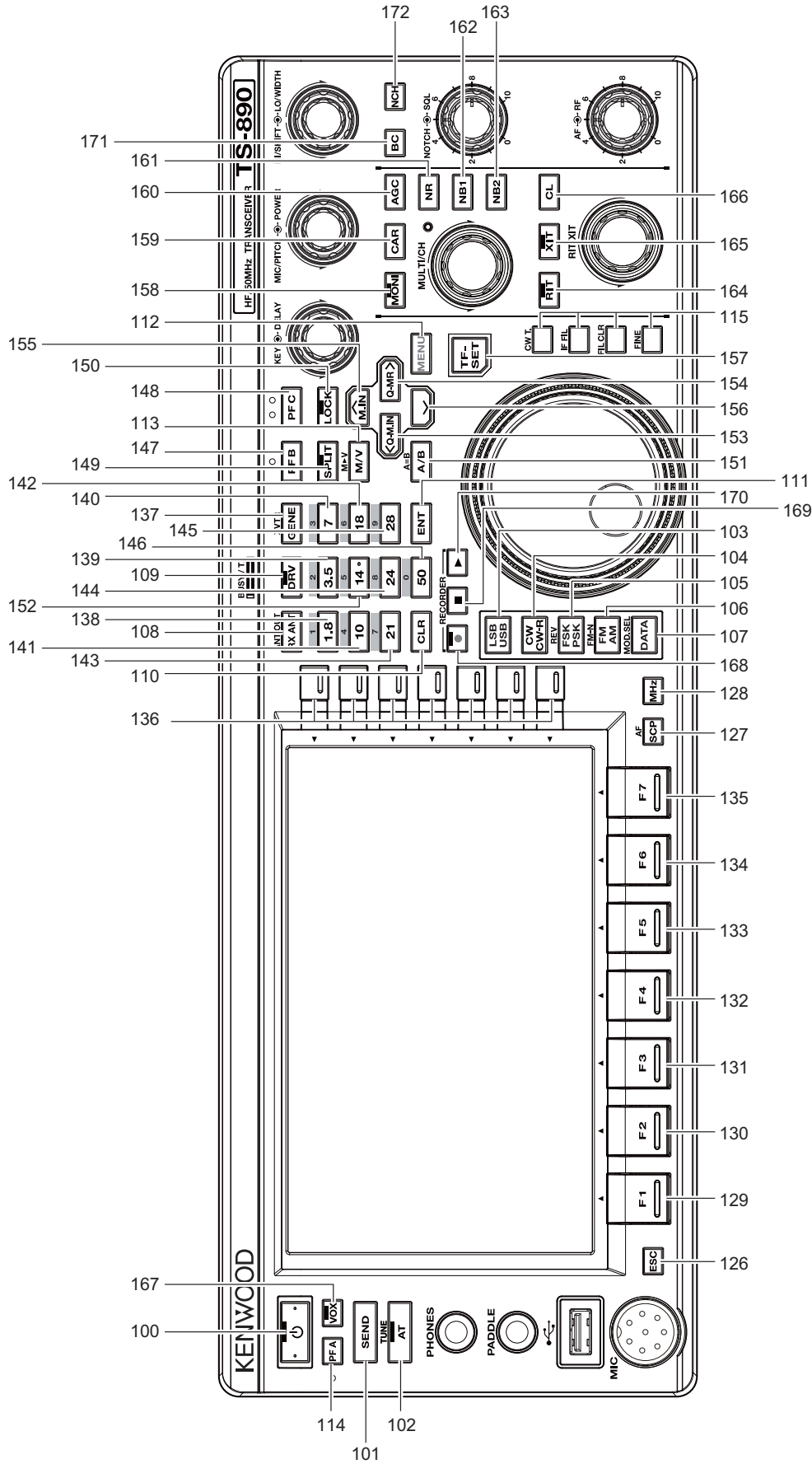
■ MAIN BODY LOWER SIDE



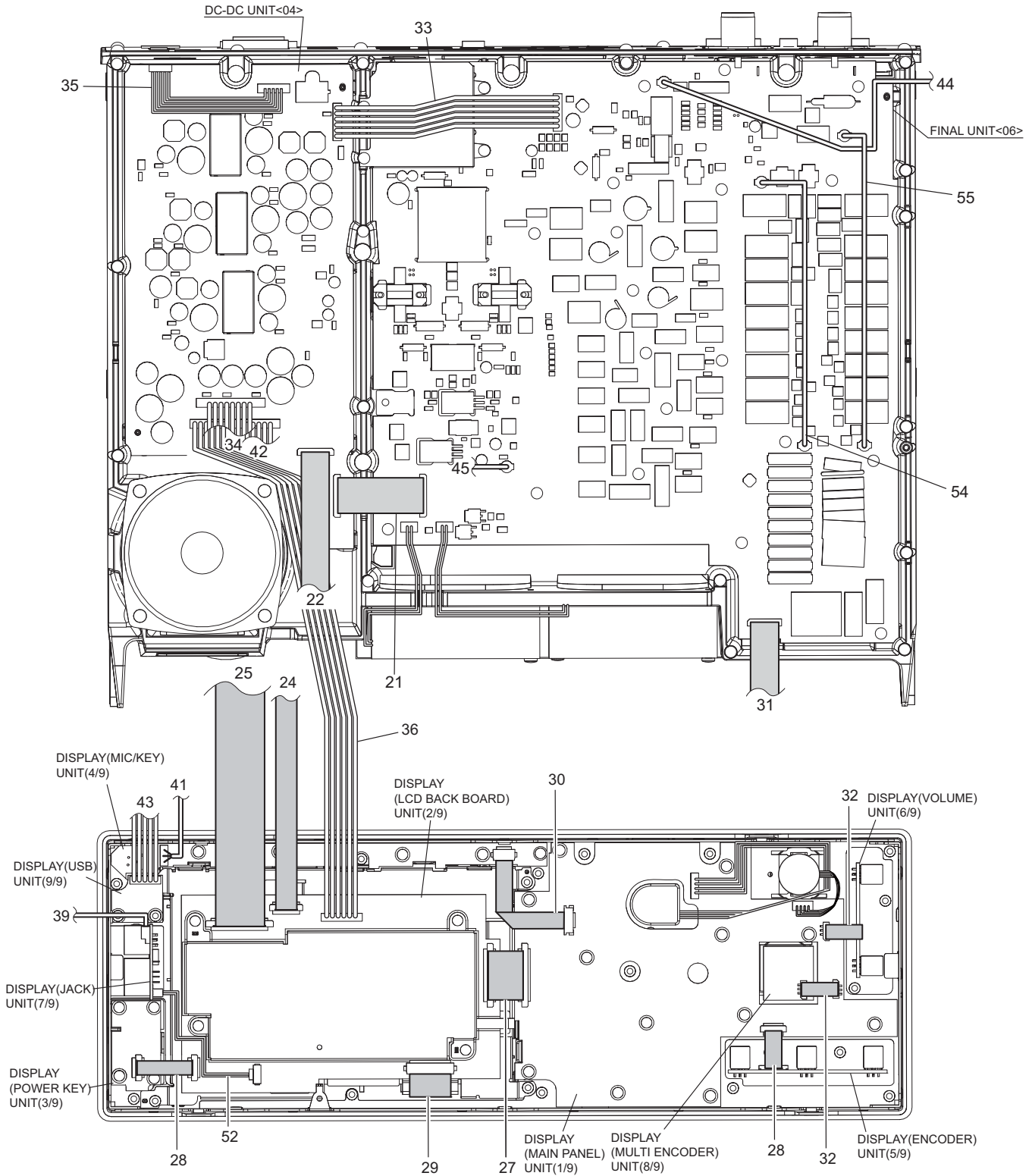
# ■ PANEL 1/2



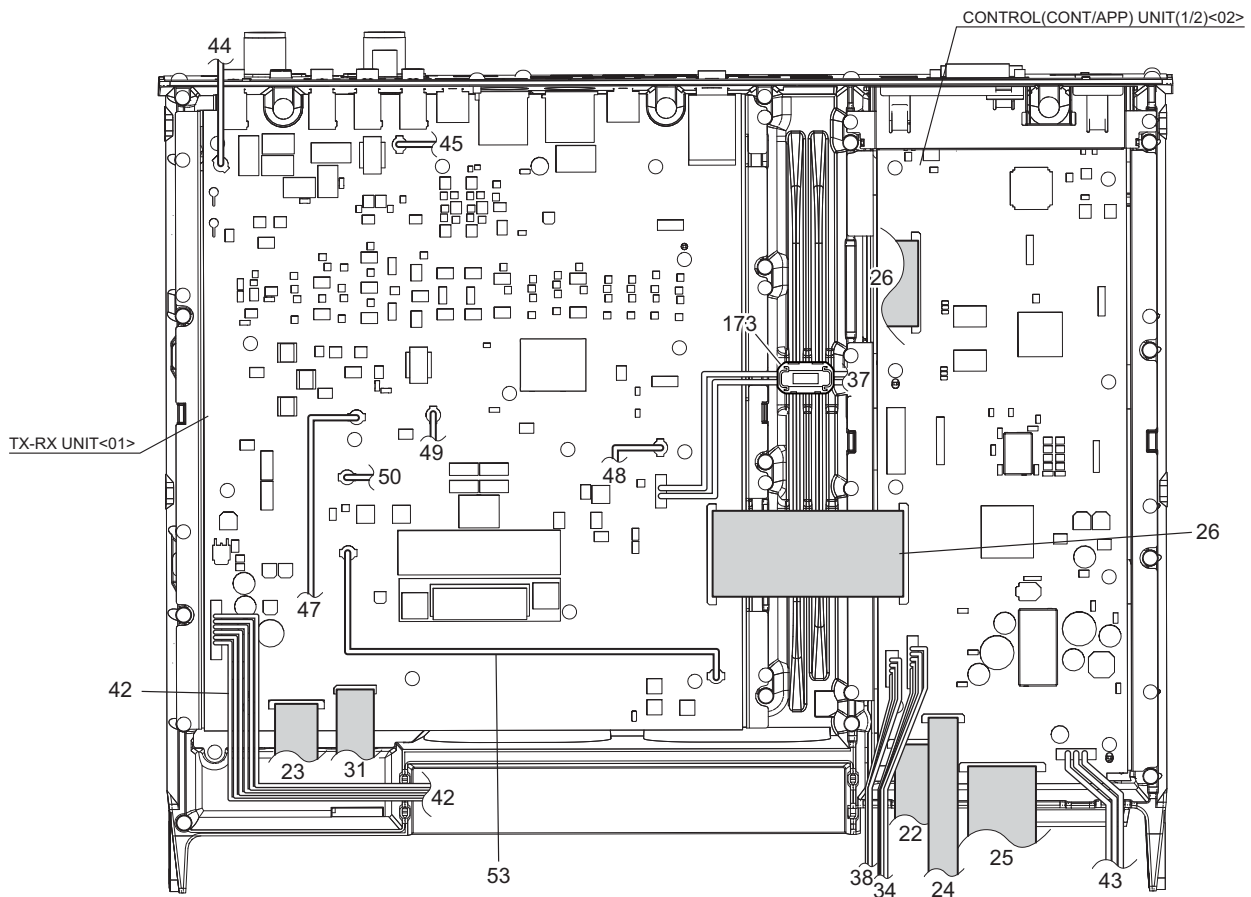
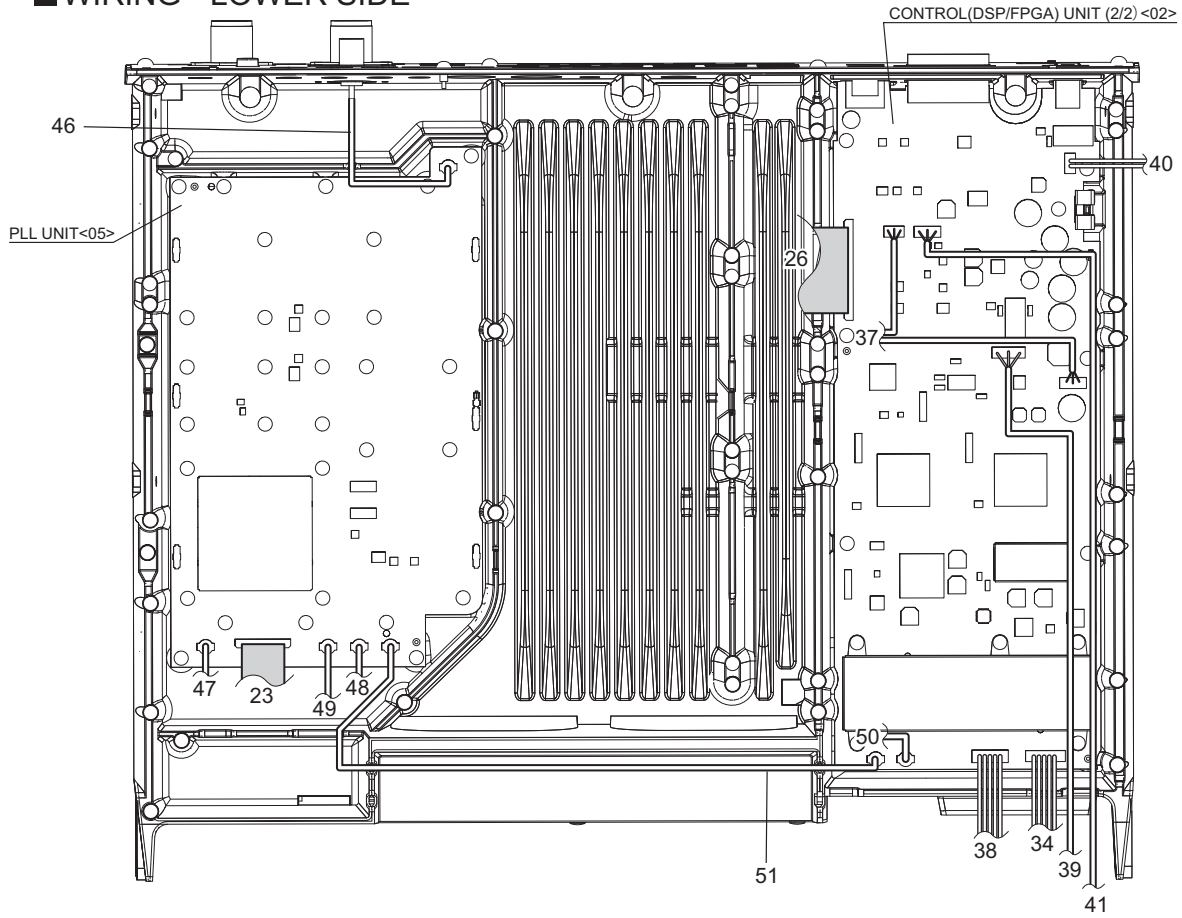
■ PANEL 2/2



# ■ WIRING - UPPER SIDE, PANEL



■ WIRING - LOWER SIDE



# General assembly

Block No. [M][1][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
1	A0B-0029-00	M.CABINET	UPPER	
2	A0B-0030-00	M.CABINET	LOWER	
3	B4A-1237-00	NAME PLATE	JKY PRINTING	
4	B42-5898-04	STICKER	TXRX	
5	B42-7070-04	STANDARD LABEL	FCC	890SK
6	-----	CHASSIS		
7	-----	FRAME	TXRX	
8	-----	FRAME	CONTROL	
9	-----	SUB PANEL		
10	A6C-0086-00	PANEL		
11	B0B-0012-00	DRESSING PLATE	REAR PANEL	
12	B0K-0100-00	CAP	LAN	
13	B11-1898-03	ILL.GUIDE	TX_BUSY	
14	B11-1899-03	ILL.GUIDE	MULTI	
15	B3H-0100-00	LCD ASSY	EDT 7inch	
16	B43-0336-04	BADGE	KENWOOD	
17	B4D-0057-00	BADGE	TS-890	
18	E04-0167-15	C.RECEPTACLE-M	ANT(x2)	
19	E04-0454-15	C.RECEPTACLE-BN	BNC	
20	E23-1164-24	EARTH LUG	ANT/BNC(x3)	
21	E3G-0069-00	FFC WIRE	DCDC-FINAL	
22	E3G-0070-00	FFC WIRE	DCDC-CONT	
23	E3G-0071-00	FFC WIRE	TXRX-PLL	
24	E3G-0072-00	FFC WIRE	CONT-PANEL	
25	E3G-0073-00	FFC WIRE	CONT-PANEL	
26	E3G-0074-00	FFC WIRE	CONT-TXRX, CONT-DSP(x2)	
27	E3G-0076-00	FFC WIRE	LCD-PANEL	
28	E3G-0077-00	FFC WIRE	LCD-PWR KEY, PANEL-ENC(x2)	
29	E3G-0079-00	FFC WIRE	LCD-LCD ASSY	
30	E3G-0080-00	FFC WIRE	PANEL-MIC	
31	E3G-0081-00	FFC WIRE	FINAL-TXRX	
32	E3G-0082-00	FFC WIRE	PANEL-MULTI, PANEL-VOL(x2)	
33	E3K-0330-00	LEAD.WIRE W.C.	DCDC-FINAL	
34	E3K-0331-00	LEAD.WIRE W.C.	DCDC-CONT/DSP	
35	E3K-0332-00	LEAD.WIRE W.C.	DCDC-EXT.AT	
36	E3K-0333-00	LEAD.WIRE W.C.	DCDC-PANEL	
37	E3K-0334-10	LEAD.WIRE W.C.	TXRX-DSP	
38	E3K-0336-00	LEAD.WIRE W.C.	CONT-DSP	
39	E3K-0337-00	LEAD.WIRE W.C.	DSP-PHONES	
40	E3K-0338-00	LEAD.WIRE W.C.	DSP-SP	
41	E3K-0339-00	LEAD.WIRE W.C.	DSP-MIC	
42	E3K-0340-00	LEAD.WIRE W.C.	DCDC-TXRX	
43	E3K-0341-00	LEAD.WIRE W.C.	CONT-USB	
44	E3K-0342-00	L.WIRE W.M.PLUG	FINAL-TXRX	
45	E3K-0343-00	L.WIRE W.M.PLUG	FINAL-TXRX	
46	E3K-0344-00	L.WIRE W.M.PLUG	EXT.REF-PLL	
47	E3K-0345-00	L.WIRE W.M.PLUG	TXRX-PLL	
48	E3K-0346-00	L.WIRE W.M.PLUG	TXRX-PLL	
49	E3K-0347-00	L.WIRE W.M.PLUG	TXRX-PLL	
50	E3K-0348-00	L.WIRE W.M.PLUG	TXRX-DSP	
51	E3K-0349-00	L.WIRE W.M.PLUG	DSP-PLL	
52	E3K-0350-00	LEAD.WIRE W.C.	PANEL-PHONES	
53	E3K-0379-00	L.WIRE W.M.PLUG	TXRX-TXRX	
54	E3K-0423-00	L.WIRE W.M.PLUG	FINAL-FINAL	
55	E3K-0424-00	L.WIRE W.M.PLUG	FINAL-FINAL	
56	F09-1309-05	FANMOTOR	FINAL 80x80X25(x2)	
57	-----	SHIELDING COVER	DC-IN	
58	-----	SHIELDING COVER	7INCH NOISE	
59	F10-3198-13	SHIELDING PLATE	MAIN-TORQUE	
60	-----	SHIELDING PLATE	FINAL-TOP	
61	-----	SHIELDING PLATE	CONTROL	
62	-----	SHIELDING PLATE	TXRX	
63	-----	SHIELDING PLATE	LO	
64	-----	SHIELDING COVER	AT	
65	-----	SHIELDING COVER	LO	
66	-----	SHIELDING COVER	DSP SCOPE IF	
67	-----	SHIELDING COVER	CONT DVI UPPER	
68	G02-0791-24	FLAT SPRING	AUDIO IC	
69	G02-1860-04	EARTH SPRING	FINAL-FET(x2)	
70	G02-1869-13	FLAT SPRING	MAIN-TORQUE	
71	G02-0505-05	KNOB SPRING	INNER-KNOB(x5)	
72	G09-0405-05	KNOB SPRING	MULTI, RIT(x2)	
73	G10-1348-04	FIBROUS SHEET	LCD SHIELD BURR	
74	G10-1836-04	FIBROUS SHEET	MAIN-TORQUE	
75	G11-4520-04	SHEET	PANEL CORE	
76	G11-4621-04	SHEET	MAIN-KNOB	
77	G1B-0367-00	SHEET	TA	
78	G1B-0368-00	SHEET	TA	
79	G13-1888-04	CUSHION	PANEL 6.5D PHONE JACK(x5)	

△ Symbol No.	Part No.	Part Name	Description	Local
80	G13-2343-04	CUSHION	CONT & FINAL PLATE(x7)	
81	G13-2435-04	CONDUCT CUSHION	TXRX	
82	G1D-0298-00	CUSHION	SP	
83	G1D-0302-00	CUSHION	LCD REAR(x6)	
84	G1D-0311-00	CONDUCT CUSHION	USB-A	
85	G1D-0313-00	CONDUCT CUSHION	LCD_5x34	
86	G1D-0314-00	CONDUCT CUSHION	LCD_10x80	
87	G1D-0315-00	CONDUCT CUSHION	LCD_10x40	
88	J02-1310-12	FOOT	FRONT-BASE(x2)	
89	J02-1311-12	FOOT	FRONT-LEVER(x2)	
90	J02-1312-13	FOOT	REAR(x2)	
91	J0B-0014-00	FOOT	SIDE(x4)	
92	J2B-0384-00	MOUNTING	LCD	
93	J2B-0385-00	MOUNTING	3ENC	
94	J2B-0386-00	MOUNTING	2VOL	
95	J2B-0387-00	MOUNTING	FUNCTION_KEY	
-	J61-0307-05	WIRE BAND	(x3)	
97	K01-0427-15	HANDLE		
98	K21-1109-13	KNOB	MAIN-UPPER	
99	K21-1110-03	KNOB	MAIN-LOWER	
100	K29-9514-02	BUTTON KNOB	A-POWER	
101	K29-9516-02	BUTTON KNOB	B-SEND	
102	K29-9517-02	BUTTON KNOB	B-AT	
103	K29-9529-02	BUTTON KNOB	D-LSB/USB	
104	K29-9530-02	BUTTON KNOB	D-CW/CW-R	
105	K29-9531-02	BUTTON KNOB	D-FSK/PSK	
106	K29-9532-02	BUTTON KNOB	D-FM/AM	
107	K29-9533-02	BUTTON KNOB	D-DATA	
108	K29-9538-01	BUTTON KNOB	F-RX_ANT	
109	K29-9539-01	BUTTON KNOB	F-DRV	
110	K29-9549-01	BUTTON KNOB	F-CLR	
111	K29-9551-01	BUTTON KNOB	F-ENT	
112	K29-9554-01	BUTTON KNOB	F-MENU	
113	K29-9555-01	BUTTON KNOB	F-M/V	
114	K29-9570-02	BUTTON KNOB	M-PF A	
115	K29-9574-12	BUTTON KNOB	M-PLATING(x4)	
116	K29-9577-03	KNOB	HI/LO-INNER(x3)	
117	K29-9578-13	KNOB	HI/LO-OUTER(x3)	
118	K29-9579-02	KNOB	MULTI, RIT(x2)	
119	K29-9580-03	KNOB	VR-BIG-IN(x2)	
120	K29-9581-13	KNOB	VR-BIG-OUT(x2)	
121	K29-9582-13	KNOB RING	MAIN KNOB	
122	K2K-0310-00	KEY TOP	KEY-AREA-1	
123	K2K-0311-00	KEY TOP	KEY-AREA-2	
124	K2K-0312-00	KEY TOP	KEY-AREA-3	
125	K2K-0313-00	KEY TOP	KEY-AREA-4	
126	K2K-0315-00	BUTTON KNOB	N-ESC	
127	K2K-0316-00	BUTTON KNOB	N-SCP	
128	K2K-0317-00	BUTTON KNOB	N-MHz	
129	K2K-0318-00	BUTTON KNOB	O-F1	
130	K2K-0319-00	BUTTON KNOB	O-F2	
131	K2K-0320-00	BUTTON KNOB	O-F3	
132	K2K-0321-00	BUTTON KNOB	O-F4	
133	K2K-0322-00	BUTTON KNOB	O-F5	
134	K2K-0323-00	BUTTON KNOB	O-F6	
135	K2K-0324-00	BUTTON KNOB	O-F7	
136	K2K-0325-00	BUTTON KNOB	P-FUNC_TFT(x7)	
137	K2K-0326-00	BUTTON KNOB	F-GENE	
138	K2K-0327-00	BUTTON KNOB	F-1.8 (1)	
139	K2K-0328-00	BUTTON KNOB	F-3.5 (2)	
140	K2K-0329-00	BUTTON KNOB	F-7 (3)	
141	K2K-0330-00	BUTTON KNOB	F-10 (4)	
142	K2K-0331-00	BUTTON KNOB	F-18 (6)	
143	K2K-0332-00	BUTTON KNOB	F-21 (7)	
144	K2K-0333-00	BUTTON KNOB	F-24 (8)	
145	K2K-0334-00	BUTTON KNOB	F-28 (9)	
146	K2K-0335-00	BUTTON KNOB	F-50 (0)	
147	K2K-0336-00	BUTTON KNOB	F-PF_B	
148	K2K-0337-00	BUTTON KNOB	F-PF_C	
149	K2K-0338-00	BUTTON KNOB	F-SPLIT	
150	K2K-0339-00	BUTTON KNOB	F-LOCK	
151	K2K-0340-00	BUTTON KNOB	F-A/B	
152	K2K-0341-00	BUTTON KNOB	G-14	
153	K2K-0342-00	BUTTON KNOB	Q-< Q-MIN	
154	K2K-0343-00	BUTTON KNOB	R-Q-MR >	
155	K2K-0344-00	BUTTON KNOB	K-UP_M-IN	
156	K2K-0345-00	BUTTON KNOB	L-DOWN	
157	K2K-0346-00	BUTTON KNOB	H2-TF-SET	
158	K2K-0347-00	BUTTON KNOB	S-MONI	
159	K2K-0348-00	BUTTON KNOB	S-CAR	
160	K2K-0349-00	BUTTON KNOB	S-AGC	
161	K2K-0350-00	BUTTON KNOB	S-NR	
162	K2K-0351-00	BUTTON KNOB	S-NB1	

Symbol No.	Part No.	Part Name	Description	Local
163	K2K-0352-00	BUTTON KNOB	S-NB2	
164	K2K-0353-00	BUTTON KNOB	S-RIT	
165	K2K-0354-00	BUTTON KNOB	S-XIT	
166	K2K-0355-00	BUTTON KNOB	S-CL	
167	K2K-0356-00	BUTTON KNOB	M2-VOX	
168	K2K-0357-00	BUTTON KNOB	M2-●(REC)	
169	K2K-0358-00	BUTTON KNOB	M2-□(STOP)	
170	K2K-0359-00	BUTTON KNOB	M2-△(PLAY)	
171	K2K-0360-00	BUTTON KNOB	M2-BC	
172	K2K-0361-00	BUTTON KNOB	M2-NCH	
173	L79-1417-05	LINE FILTER		
174	L92-0493-05	FERRITE CORE	LCD FFC	
175	T07-0797-05	SPEAKER		
176	W02-1836-15	ENCODER	MAIN	
177	W02-3727-05	ENCODER	RIT	
178	W09-0971-05	LITHIUM CELL	COTROL UNIT	
A	N09-6602-05	SPECIAL SCREW	PANEL	
B	N09-6617-05	SPECIAL SCREW	SUB PANEL TO CHASSIS(x4)	
C	N15-1040-48	FLAT WASHER	GND(x2)	
D	N19-0673-15	SPECIAL WASHER	FRONT OF RIT-ENCODER	
E	N33-2606-43	O.HEAD M.SCREW	SW PCB(x25)	
F	N33-4008-43	O.HEAD M.SCREW	CABINET(x20)	
G	N35-2604-43	BI.HEAD M.SCREW	ENC & VOL PLATE, USB(x6)	
H	N35-3030-48	BI.HEAD M.SCREW	FAN(x4)	
J	N35-4006-43	BI.HEAD M.SCREW	FOOT(x4)	
K	N35-4010-48	BI.HEAD M.SCREW	GND	
L	N38-2030-48	P.HEAD M.SCREW	MAIN KNOB(x6)	
M	N67-2608-48	P.H.SEMS SCREW	FET(x6)	
N	N77-3006-43	H.S.H.SET SCREW	MAIN KNOB	
P	N82-2004-43	BI.HEAD T.SCREW	MOUNTING OF FUNC-KEY(x4)	
Q	N82-2605-48	BI.HEAD T.SCREW	SUBPANEL, MOUNTING OF LCD(x13)	
R	N87-2606-43	BR.HEAD T.SCREW	DRESSING PLATE(x10)	
S	N87-2608-48	BR.HEAD T.SCREW	PCB(x162)	
T	N87-3005-43	BR.HEAD T.SCREW	SP(x4)	
U	N82-2606-43	BI.HEAD T.SCREW	SUBPANEL, MOUNTING OF LCD(x3)	
-	XC1-269J-00	TX-RX UNIT		890SK
-	XC1-270K-01	CONTROL UNIT	SERVICE UNIT	890SK
-	XC1-271J-00	DISPLAY UNIT		
-	XC2-035J-00	DC-DC UNIT		
-	XC2-036J-00	PLL UNIT		890SK
-	XC3-062J-00	FINAL UNIT		890SK
-	XC1-269E-01	TX-RX UNIT		890SE
-	XC1-270E-01	CONTROL UNIT	SERVICE UNIT	890SE
-	XC2-036E-01	PLL UNIT		890SE
-	XC3-062E-01	FINAL UNIT		890SE



# Electrical parts list

## TX-RX UNIT

**XC1-269J-00(TS-890S(K))**

**XC1-269E-01(TS-890S(E))**

Block No. [0][1]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	BA2904FVM	IC		
IC551	CD74HC4094M96	IC		
IC552	CD74HC4094M96	IC		
IC553	R2A20168SA	IC		
IC554	CD74HC4094M96	IC		
IC555	CD74HC4094M96	IC		
IC556	BU2508FV	IC		
IC557	CD74HC4094M96	IC		
IC558	R2A20168SA	IC		
IC559	ADR3433ARJZ	IC		
IC601	BA06CC0FP	IC		
IC602	SN74CBT3257PW	IC		
IC801	BA2904FVM	IC		
IC802	BA4580RFVM	IC		
IC803	TC4W53FUF	IC		
IC1001	BA2904FVM	IC		
IC1002	BA2904FVM	IC		
IC1003	BA2904FVM	IC		
IC1004	BA2904FVM	IC		
IC1005	BA2904FVM	IC		
IC1201	NJM2594V-ZB	IC		
Q1	LTC014EEBFS8	DIGI TRANSISTOR		
Q2	LTC043ZEBFS8	DIGI TRANSISTOR		
Q3	2SAR512P5	TRANSISTOR		
Q4	LTC043ZEBFS8	DIGI TRANSISTOR		
Q5	RE1L002SN	FET		
Q7	RE1L002SN	FET		
Q9	2SC4617/R/	TRANSISTOR		
Q10	LTC043ZEBFS8	DIGI TRANSISTOR		
Q11	RE1L002SN	FET		
Q201	LTC023YEBFS8	TRANSISTOR		
Q202	SSM3K15AMFVF	FET		
Q203	2SC4617/R/	TRANSISTOR		
Q204	2SA1586(Y,GR)F	TRANSISTOR		
Q205	LTC024EUBFS8	DIGI TRANSISTOR		
Q206	SSM3K15AMFVF	FET		
Q207	LTC023YEBFS8	TRANSISTOR		
Q208	LTC023YEBFS8	TRANSISTOR		
Q209	2SB1694	TRANSISTOR		
Q210	SSM3K15AMFVF	FET		
Q211	2SD1757K/QRS/	TRANSISTOR		
Q212	LTC043ZEBFS8	DIGI TRANSISTOR		
Q281	LTC043ZEBFS8	DIGI TRANSISTOR		
Q282	2SAR512P5	TRANSISTOR		
Q283	LTC014EEBFS8	DIGI TRANSISTOR		
Q284	RE1L002SN	FET		
Q285	2SAR512P5	TRANSISTOR		
Q301	LTC043ZEBFS8	DIGI TRANSISTOR		
Q302	LTC043ZEBFS8	DIGI TRANSISTOR		
Q303	LTC043ZEBFS8	DIGI TRANSISTOR		
Q304	LTC043ZEBFS8	DIGI TRANSISTOR		
Q305	LTC043ZEBFS8	DIGI TRANSISTOR		
Q306	LTC043ZEBFS8	DIGI TRANSISTOR		
Q307	LTC043ZEBFS8	DIGI TRANSISTOR		
Q308	LTC043ZEBFS8	DIGI TRANSISTOR		
Q309	LTC043ZEBFS8	DIGI TRANSISTOR		
Q310	LTC043ZEBFS8	DIGI TRANSISTOR		
Q311	LTC043ZEBFS8	DIGI TRANSISTOR		
Q312	LTC043ZEBFS8	DIGI TRANSISTOR		
Q313	LTC043ZEBFS8	DIGI TRANSISTOR		
Q314	LTC043ZEBFS8	DIGI TRANSISTOR		
Q315	LTC043ZEBFS8	DIGI TRANSISTOR		
Q316	LTC043ZEBFS8	DIGI TRANSISTOR		
Q317	LTC043ZEBFS8	DIGI TRANSISTOR		
Q318	LTC043ZEBFS8	DIGI TRANSISTOR		
Q601	LTC043ZEBFS8	DIGI TRANSISTOR		
Q602	2SB1694	TRANSISTOR		
Q603	RE1L002SN	FET		

△ Symbol No.	Part No.	Part Name	Description	Local
Q604	2SC5551AF	TRANSISTOR		
Q605	2SB1694	TRANSISTOR		
Q606	LTC043ZEBFS8	DIGI TRANSISTOR		
Q607	LSCR523EBFS8	TRANSISTOR		
Q610	LTC043ZEBFS8	DIGI TRANSISTOR		
Q611	2SC5551AF	TRANSISTOR		
Q612	LTC023YEBFS8	TRANSISTOR		
Q701	LTC043ZEBFS8	DIGI TRANSISTOR		
Q702	LTA014EEBFS8	DIGI TRANSISTOR		
Q703	2SC4617/R/	TRANSISTOR		
Q704	2SC4617/R/	TRANSISTOR		
Q705	2SC4617/R/	TRANSISTOR		
Q706	2SC4617/R/	TRANSISTOR		
Q707	2SC4617/R/	TRANSISTOR		
Q708	2SC4617/R/	TRANSISTOR		
Q709	RE1L002SN	FET		
Q710	2SC4617/R/	TRANSISTOR		
Q711	LSCR523EBFS8	TRANSISTOR		
Q712	2SC4617/R/	TRANSISTOR		
Q713	LTA014EEBFS8	DIGI TRANSISTOR		
Q714	LTC043ZEBFS8	DIGI TRANSISTOR		
Q715	LTC043ZEBFS8	DIGI TRANSISTOR		
Q801	LTC043ZEBFS8	DIGI TRANSISTOR		
Q802	LTC043ZEBFS8	DIGI TRANSISTOR		
Q803	LTC043ZEBFS8	DIGI TRANSISTOR		
Q804	LTC043ZEBFS8	DIGI TRANSISTOR		
Q805	LTC043ZEBFS8	DIGI TRANSISTOR		
Q806	2SC4725	TRANSISTOR		
Q807	3SK293F	FET		
Q808	LTC043ZEBFS8	DIGI TRANSISTOR		
Q809	LTC043ZEBFS8	DIGI TRANSISTOR		
Q811	2SC5551AF	TRANSISTOR		
Q812	2SC5551AF	TRANSISTOR		
Q813	LTC043ZEBFS8	DIGI TRANSISTOR		
Q1001	SSM3K15AMFVF	FET		
Q1002	2SC4617/R/	TRANSISTOR		
Q1003	2SC4617/R/	TRANSISTOR		
Q1004	LTC043ZEBFS8	DIGI TRANSISTOR		
Q1005	LTC043ZEBFS8	DIGI TRANSISTOR		
Q1101	SSM3K15AMFVF	FET		
Q1102	SSM3K15AMFVF	FET		
Q1103	DTB143EK	DIGI TRANSISTOR		
Q1104	2SC5551AF	TRANSISTOR		
Q1105	SSM3K15AMFVF	FET		
Q1106	SSM3K15AMFVF	FET		
Q1107	DTB143EK	DIGI TRANSISTOR		
Q1108	DTB143EK	DIGI TRANSISTOR		
Q1109	SSM3K15AMFVF	FET		
Q1110	DTB143EK	DIGI TRANSISTOR		890SE
Q1111	SSM3K15AMFVF	FET		890SE
Q1201	3SK293F	FET		
Q1202	3SK293F	FET		
Q1203	3SK293F	FET		
Q1204	DTB143EK	DIGI TRANSISTOR		
Q1205	SSM3K15AMFVF	FET		
Q1206	DTB143EK	DIGI TRANSISTOR		890SE
Q1207	SSM3K15AMFVF	FET		890SE
Q1208	RE1L002SN	FET		
Q1209	2SC4726/PQ/	TRANSISTOR		
Q1281	2SC4726/PQ/	TRANSISTOR		
D1	1SS400SM	DIODE		
D2	1SS400SM	DIODE		
D3	UDZV6.2B	ZENER DIODE		
D4	UDZV6.2B	ZENER DIODE		
D5	1SS400SM	DIODE		
D6	1SS400SM	DIODE		
D7	1SS400SM	DIODE		
D8	1SS400SM	DIODE		
D9	CES388	SCHOTTKY DIODE		
D10	1SS226-F	DIODE		
D11	1SS226-F	DIODE		
D12	1SS400SM	DIODE		
D13	DAN217WM	DIODE		
D14	EDZV18B	ZENER DIODE		
D15	EDZV4.3B	ZENER DIODE		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
D16	1SS400SM	DIODE			D704	RN142SM	DIODE		
D17	UDZV6.2B	ZENER DIODE			D705	RN142SM	DIODE		
D18	UDZV6.2B	ZENER DIODE			D706	RN142SM	DIODE		
D19	CES388	SCHOTTKY DIODE			D707	RN142SM	DIODE		
D20	CES388	SCHOTTKY DIODE			D801	RN142SM	DIODE		
D101	EDZV18B	ZENER DIODE			D802	RN142SM	DIODE		
D102	EDZV18B	ZENER DIODE			D803	RN142SM	DIODE		
D103	EDZV18B	ZENER DIODE			D804	RN142SM	DIODE		
D209	1SS400SM	DIODE			D806	RN142SM	DIODE		
D210	1SS400SM	DIODE			D808	RN142SM	DIODE		
D211	RB706F-40	DIODE			D809	RN142SM	DIODE		
D212	1SS400SM	DIODE			D810	RN142SM	DIODE		
D213	CSA70-401L	SURGE ABSORBER			D811	RN142SM	DIODE		
D214	1SS400SM	DIODE			D812	RN142SM	DIODE		
D215	1SS400SM	DIODE			D813	RN142SM	DIODE		
D216	1SS400SM	DIODE			D814	RN142SM	DIODE		
D217	L8103R	DIODE			D815	RN142SM	DIODE		
D218	MMSD103T1G	DIODE			D816	RN142SM	DIODE		
D219	MMSD103T1G	DIODE			D817	RN731V	DIODE		
D220	L8103R	DIODE			D818	RB706F-40	DIODE		
D221	RN142SM	DIODE			D819	RB706F-40	DIODE		
D222	RN142SM	DIODE			D820	RN142SM	DIODE		
D224	RN142SM	DIODE			D1001	EDZV6.2B	ZENER DIODE		
D301	RN142SM	DIODE			D1002	1SS400SM	DIODE		
D302	RN142SM	DIODE			D1005	1SS400SM	DIODE		
D303	RN142SM	DIODE			D1006	1SS400SM	DIODE		
D304	RN142SM	DIODE			D1007	1SS400SM	DIODE		
D305	RN142SM	DIODE			D1008	UDZV3.3B	ZENER DIODE		
D306	RN142SM	DIODE			D1009	1SS400SM	DIODE		
D307	RN142SM	DIODE			D1010	RB520SM-30	DIODE		
D308	RN142SM	DIODE			D1011	RB520SM-30	DIODE		
D309	RN142SM	DIODE			D1012	1SS400SM	DIODE		
D310	RN142SM	DIODE			D1101	EDZV18B	ZENER DIODE		
D311	RN142SM	DIODE			D1102	EDZV18B	ZENER DIODE		
D312	RN142SM	DIODE			D1103	RN142SM	DIODE		
D313	RN142SM	DIODE			D1104	RN142SM	DIODE		
D314	RN142SM	DIODE			D1105	RN142SM	DIODE		
D315	RN142SM	DIODE			D1106	RN142SM	DIODE		
D316	RN142SM	DIODE			D1107	RN142SM	DIODE		890SE
D317	RN142SM	DIODE			D1108	1SS400SM	DIODE		
D318	RN142SM	DIODE			D1109	1SS400SM	DIODE		890SE
D319	RN142SM	DIODE			D1110	RN142SM	DIODE		
D320	RN142SM	DIODE			D1111	RN142SM	DIODE		890SE
D321	RN142SM	DIODE			D1112	RN142SM	DIODE		
D322	RN142SM	DIODE			D1201	RN142SM	DIODE		
D323	RN142SM	DIODE			D1204	RN142SM	DIODE		
D324	RN142SM	DIODE			D1205	RN142SM	DIODE		890SE
D325	RN142SM	DIODE			D1206	RN142SM	DIODE		890SE
D326	RN142SM	DIODE			D1207	RN142SM	DIODE		
D327	RN142SM	DIODE			D1208	RN731V	DIODE		
D328	RN142SM	DIODE			D1209	RN731V	DIODE		
D329	RN142SM	DIODE		890SE	D1210	RN731V	DIODE		
D330	RN142SM	DIODE		890SE	D1211	RN731V	DIODE		
D331	RN142SM	DIODE			D1212	DA204U	MULTIPLE DIODE		
D332	RN142SM	DIODE			D1213	RN142SM	DIODE		
D333	RN142SM	DIODE			D1291	RN142SM	DIODE		
D334	RN142SM	DIODE							
D335	RN142SM	DIODE		890SE	C2	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D336	RN142SM	DIODE		890SE	C4	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D337	RN142SM	DIODE			C6	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D338	RN142SM	DIODE			C8	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D601	RN142SM	DIODE			C9	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D602	RN142SM	DIODE			C12	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D603	RR1LAM4S	DIODE			C13	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D604	RN142SM	DIODE			C14	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D606	RN142SM	DIODE			C15	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D607	RN142SM	DIODE			C17	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D608	RN142SM	DIODE			C18	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D609	RN142SM	DIODE			C44	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D610	RN142SM	DIODE			C46	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D611	RN142SM	DIODE			C47	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D612	RN142SM	DIODE			C48	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D613	RN142SM	DIODE			C57	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D614	RN142SM	DIODE			C61	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D615	1SS400SM	DIODE			C62	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D701	RB706F-40	DIODE			C66	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D702	1SS400SM	DIODE			C67	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
D703	1SS400SM	DIODE			C68	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C73	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C222	CC73GCH1H090B	C CAPACITOR	9pF 50V B	890SE
C75	CK73GB1E105K	C CAPACITOR	1uF 25V K		C223	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C78	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C224	CC73GCH1H220G	C CAPACITOR	22pF 50V G	890SK
C80	CD04BQ1C471M	E CAPACITOR	470uF 16V M		C224	CC73GCH1H270G	C CAPACITOR	27pF 50V G	890SE
C82	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C225	CC73GCH1H020B	C CAPACITOR	2pF 50V B	
C83	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C226	CC73GCH1H040B	C CAPACITOR	4pF 50V B	890SK
C84	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C227	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C85	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C228	CC73GCH1H560G	C CAPACITOR	56pF 50V G	890SK
C86	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C228	CC73GCH1H470G	C CAPACITOR	47pF 50V G	890SE
C87	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C229	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C88	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C230	CC73GCH1H120G	C CAPACITOR	12pF 50V G	890SK
C89	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C230	CC73GCH1H220G	C CAPACITOR	22pF 50V G	890SE
C90	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C231	CC73GCH1H020B	C CAPACITOR	2pF 50V B	890SE
C91	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C232	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C92	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C233	CC73GCH1H180G	C CAPACITOR	18pF 50V G	890SK
C93	CK73GBB1H472K	C CAPACITOR	4700pF 50V K		C234	CK73EB1H104K	C CAPACITOR	0.1uF 50V K	
C94	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C235	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C95	CK73GBB1H472K	C CAPACITOR	4700pF 50V K		C236	CK73EB1H104K	C CAPACITOR	0.1uF 50V K	
C96	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C237	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C97	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C238	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C98	C93-1823-05	C CAPACITOR	1000pF 630V		C239	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C99	C93-1823-05	C CAPACITOR	1000pF 630V		C240	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C100	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C241	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C101	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C242	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C102	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C243	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C103	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C245	CC73GCH1H182J	C CAPACITOR	1800pF 50V J	
C104	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C246	CC73GCH1H152J	C CAPACITOR	1500pF 50V J	
C106	CD04AZ1V101M	E CAPACITOR	100uF 35V M		C247	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C108	CK73GB1E105K	C CAPACITOR	1uF 25V K		C249	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C110	CK73GXR1E475K	C CAPACITOR	4.7uF 25V K		C250	CC73GCH1H222J	C CAPACITOR	2200pF 50V J	
C111	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C251	CC73FCH1H472J	C CAPACITOR	4700pF 50V J	
C112	CK73GBB1H473K	C CAPACITOR	0.047uF 50V K		C252	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C114	CK73GXR1E475K	C CAPACITOR	4.7uF 25V K		C254	CC73GCH1H222J	C CAPACITOR	2200pF 50V J	
C117	CK73GB1E105K	C CAPACITOR	1uF 25V K		C258	CC73GCH1H050B	C CAPACITOR	5pF 50V B	890SE
C118	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C259	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE
C120	CK73GXR1E475K	C CAPACITOR	4.7uF 25V K		C281	GE32CL1C220M	E CAPACITOR	22uF 16V M	
C121	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C282	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C122	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C283	GE32CL1C220M	E CAPACITOR	22uF 16V M	
C123	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C284	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C124	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C301	CC73GCH1H121J	C CAPACITOR	120pF 50V J	
C125	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C302	CC73GCH1H121J	C CAPACITOR	120pF 50V J	
C126	CK73GBB1H472K	C CAPACITOR	4700pF 50V K		C303	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C127	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C304	CC73GCH1H121J	C CAPACITOR	120pF 50V J	
C128	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C305	CC73GCH1H680G	C CAPACITOR	68pF 50V G	
C129	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C307	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C130	CK73GBB1H472K	C CAPACITOR	4700pF 50V K		C309	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C131	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C310	CC73GCH1H820J	C CAPACITOR	82pF 50V J	
C132	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C311	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C133	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C312	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C134	CC73GCH1H101J	C CAPACITOR	100pF 50V J		C313	CC73GCH1H271J	C CAPACITOR	270pF 50V J	
C135	CC73GCH1H101J	C CAPACITOR	100pF 50V J		C314	CC73GCH1H222J	C CAPACITOR	2200pF 50V J	
C146	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C315	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C150	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C316	CC73GCH1H120G	C CAPACITOR	12pF 50V G	
C151	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C317	CC73GCH1H121J	C CAPACITOR	120pF 50V J	
C152	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C318	CC73GCH1H331J	C CAPACITOR	330pF 50V J	
C201	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C319	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C202	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C320	CC73GCH1H820J	C CAPACITOR	82pF 50V J	
C203	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C321	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C204	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C322	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C205	CK73GBB1H222K	C CAPACITOR	2200pF 50V K		C323	CC73GCH1H220G	C CAPACITOR	22pF 50V G	
C206	CC730DP2J030C	C CAPACITOR	3.0pF 630V C		C324	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C207	C93-1880-05	C CAPACITOR	22pF 630V		C325	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C208	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C329	CC73GCH1H561J	C CAPACITOR	560pF 50V J	
C209	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C330	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C210	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C331	CC73GCH1H180G	C CAPACITOR	18pF 50V G	
C211	CC73GCH1H820J	C CAPACITOR	82pF 50V J		C333	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C212	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C334	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C214	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C335	CC73GCH1H220G	C CAPACITOR	22pF 50V G	
C215	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C336	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C216	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C337	CK73GBB1H332K	C CAPACITOR	3300pF 50V K	
C217	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C338	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C218	CC73GCH1H220G	C CAPACITOR	22pF 50V G	890SK	C339	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C218	CC73GCH1H120G	C CAPACITOR	12pF 50V G	890SE	C340	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C219	CC73GCH1H080B	C CAPACITOR	8pF 50V B	890SK	C341	CC73GCH1H821J	C CAPACITOR	820pF 50V J	
C219	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE	C342	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C221	CC73GCH1H560G	C CAPACITOR	56pF 50V G	890SK	C343	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C221	CC73GCH1H390G	C CAPACITOR	39pF 50V G	890SE	C344	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C222	CC73GCH1H020B	C CAPACITOR	2pF 50V B	890SK	C346	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C348	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C433	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C352	CC73GCH1H820J	C CAPACITOR	82pF 50V J		C435	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C353	CC73GCH1H270G	C CAPACITOR	27pF 50V G		C436	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C354	CC73GCH1H182J	C CAPACITOR	1800pF 50V J		C438	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C355	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C441	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE
C356	CC73GCH1H152J	C CAPACITOR	1500pF 50V J		C442	CC73GCH1H271J	C CAPACITOR	270pF 50V J	
C357	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C443	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C358	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C444	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C359	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C445	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C360	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C446	CC73GCH1H221J	C CAPACITOR	220pF 50V J	890SE
C361	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C447	CC73GCH1H181J	C CAPACITOR	180pF 50V J	890SE
C362	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C449	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C363	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C450	CC73GCH1H120G	C CAPACITOR	12pF 50V G	
C364	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C454	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C365	CC73GCH1H221J	C CAPACITOR	220pF 50V J		C455	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C366	CC73GCH1H222J	C CAPACITOR	2200pF 50V J		C456	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C367	CK73GB1E105K	C CAPACITOR	1uF 25V K		C457	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C368	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C458	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	890SE
C369	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C459	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	890SE
C370	CC73GCH1H151J	C CAPACITOR	150pF 50V J		C460	CC73GCH1H331J	C CAPACITOR	330pF 50V J	
C371	CC73GCH1H331J	C CAPACITOR	330pF 50V J		C461	CC73GCH1H271J	C CAPACITOR	270pF 50V J	
C372	CC73GCH1H180G	C CAPACITOR	18pF 50V G		C462	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C373	CC73GCH1H150G	C CAPACITOR	15pF 50V G		C463	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C374	CC73GCH1H220G	C CAPACITOR	22pF 50V G		C466	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C375	CC73GCH1H180G	C CAPACITOR	18pF 50V G		C467	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C376	CC73GCH1H150G	C CAPACITOR	15pF 50V G		C468	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C377	CC73GCH1H150G	C CAPACITOR	15pF 50V G		C469	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C378	CK73GGB1H153K	C CAPACITOR	0.015uF 50V K		C470	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	890SE
C379	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C471	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	890SE
C380	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C472	CC73GCH1H820J	C CAPACITOR	82pF 50V J	
C381	CC73GCH1H151J	C CAPACITOR	150pF 50V J		C473	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C382	CC73GCH1H121J	C CAPACITOR	120pF 50V J		C474	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C383	CC73GCH1H180G	C CAPACITOR	18pF 50V G		C475	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C384	CC73GCH1H101J	C CAPACITOR	100pF 50V J		C477	CC73GCH1H270G	C CAPACITOR	27pF 50V G	890SE
C386	CC73GCH1H470G	C CAPACITOR	47pF 50V G		C478	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE
C388	CC73GCH1H220G	C CAPACITOR	22pF 50V G		C479	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C389	CC73GCH1H220G	C CAPACITOR	22pF 50V G		C480	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C390	CC73GCH1H470G	C CAPACITOR	47pF 50V G		C481	CC73GCH1H330G	C CAPACITOR	33pF 50V G	
C391	CC73GCH1H270G	C CAPACITOR	27pF 50V G		C482	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C392	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C484	CC73GCH1H101J	C CAPACITOR	100pF 50V J	890SE
C393	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C485	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C395	CC73GCH1H150G	C CAPACITOR	15pF 50V G		C487	CC73GCH1H680G	C CAPACITOR	68pF 50V G	
C396	CC73GCH1H180G	C CAPACITOR	18pF 50V G		C488	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C397	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C489	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C398	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C490	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C399	CC73GCH1H152J	C CAPACITOR	1500pF 50V J		C491	CC73GCH1H390G	C CAPACITOR	39pF 50V G	890SE
C400	CC73GCH1H561J	C CAPACITOR	560pF 50V J		C492	CC73GCH1H330G	C CAPACITOR	33pF 50V G	890SE
C401	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C493	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C402	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C494	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C403	CK73GB1E105K	C CAPACITOR	1uF 25V K		C495	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C404	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C496	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C405	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C497	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	890SE
C406	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C498	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	890SE
C407	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C499	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C408	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C500	CC73GCH1H151J	C CAPACITOR	150pF 50V J	890SE
C409	CC73GCH1H331J	C CAPACITOR	330pF 50V J		C501	CC73GCH1H080B	C CAPACITOR	8pF 50V B	
C410	CC73GCH1H271J	C CAPACITOR	270pF 50V J		C502	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C411	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C503	CC73GCH1H120G	C CAPACITOR	12pF 50V G	
C412	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C504	CC73GCH1H181J	C CAPACITOR	180pF 50V J	890SE
C413	CK73GB1E105K	C CAPACITOR	1uF 25V K		C505	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C414	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C507	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C415	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C508	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C416	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C509	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C417	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C510	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C418	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C511	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	890SE
C419	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C512	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	890SE
C420	CC73GCH1H221J	C CAPACITOR	220pF 50V J		C513	CC73GCH1H680G	C CAPACITOR	68pF 50V G	
C421	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C514	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C422	CC73GCH1H561J	C CAPACITOR	560pF 50V J		C515	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C423	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C516	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C424	CC73GCH1H221J	C CAPACITOR	220pF 50V J		C517	CC73GCH1H390G	C CAPACITOR	39pF 50V G	890SE
C425	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C518	CC73GCH1H330G	C CAPACITOR	33pF 50V G	890SE
C427	CK73GB1E105K	C CAPACITOR	1uF 25V K		C523	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE
C428	CC73GCH1H152J	C CAPACITOR	1500pF 50V J		C524	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C429	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C525	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C430	CC73GCH1H152J	C CAPACITOR	1500pF 50V J		C526	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C431	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K		C527	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C432	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C528	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C529	CC73GCH1H181J	C CAPACITOR	180pF 50V J	890SE	C635	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C531	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		C636	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C532	CC73GCH1H821J	C CAPACITOR	820pF 50V J		C637	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K	
C533	CC73GCH1H220G	C CAPACITOR	22pF 50V G		C638	CK73GGBB1H102K	C CAPACITOR	1000pF 50V K	
C538	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C639	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C539	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C640	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C540	CC73GCH1H221J	C CAPACITOR	220pF 50V J		C641	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C541	CC73GCH1H271J	C CAPACITOR	270pF 50V J		C642	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C542	CC73GCH1H050B	C CAPACITOR	5pF 50V B		C643	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C543	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C644	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C544	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C645	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C547	CC73GCH1H120G	C CAPACITOR	12pF 50V G		C646	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C549	CC73GCH1H220G	C CAPACITOR	22pF 50V G		C647	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C551	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C648	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C552	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C649	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C553	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C650	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C554	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C651	CC73GCH1H331J	C CAPACITOR	330pF 50V J	
C555	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C652	CC73GCH1H331J	C CAPACITOR	330pF 50V J	
C556	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C653	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C557	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C655	CC73GCH1H151J	C CAPACITOR	150pF 50V J	
C558	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C656	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C559	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C657	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C560	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C658	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C561	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C659	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C563	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C661	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C564	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C664	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C565	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C665	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C569	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C666	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C570	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C667	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C571	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C669	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C572	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C673	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C573	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C674	CC73GCH1H010B	C CAPACITOR	1pF 50V B	
C574	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C675	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C575	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C679	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C576	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C680	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C577	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C682	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C578	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C683	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C579	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C685	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C580	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C686	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C581	CK73FB1C106K	C CAPACITOR	10uF 16V K		C687	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C582	CK73GGBB1H102K	C CAPACITOR	1000pF 50V K		C688	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C583	CK73GB1E105K	C CAPACITOR	1uF 25V K		C689	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C584	CK73GGBB1H102K	C CAPACITOR	1000pF 50V K		C690	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C585	CK73GB1E105K	C CAPACITOR	1uF 25V K		C691	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C588	CC73GCH1H331J	C CAPACITOR	330pF 50V J		C692	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C589	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C693	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K	
C590	CC73GCH1H101J	C CAPACITOR	100pF 50V J		C694	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C591	CC73GCH1H181J	C CAPACITOR	180pF 50V J		C695	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C601	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C696	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C602	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C698	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C603	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C700	CC73GCH1H391J	C CAPACITOR	390pF 50V J	
C604	CK73GB1E105K	C CAPACITOR	1uF 25V K		C701	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C605	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C702	CC73GCH1H020B	C CAPACITOR	2pF 50V B	
C607	CC73GCH1H101J	C CAPACITOR	100pF 50V J		C704	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C608	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C705	CE32CL1C470M	E CAPACITOR	47uF 16V M	
C609	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C706	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C610	CK73GB1E105K	C CAPACITOR	1uF 25V K		C707	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C611	CK73GB1E105K	C CAPACITOR	1uF 25V K		C708	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C612	CK73GGBB1H102K	C CAPACITOR	1000pF 50V K		C709	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C613	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C710	CC73GCH1H470G	C CAPACITOR	47pF 50V G	
C614	CK73GB1E105K	C CAPACITOR	1uF 25V K		C711	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C615	C93-1875-05	C CAPACITOR	22uF 25V		C713	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C617	CK73GB1E105K	C CAPACITOR	1uF 25V K		C714	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C618	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C715	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C619	CE32CL1C470M	E CAPACITOR	47uF 16V M		C716	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C620	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C717	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C622	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C719	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C623	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C720	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C624	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C721	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C625	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C722	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C627	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C723	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C628	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C724	CK73GB1E474K	C CAPACITOR	0.47uF 25V K	
C629	CK73GGBB1H102K	C CAPACITOR	1000pF 50V K		C727	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C630	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K		C728	CK73GGBB1H473K	C CAPACITOR	0.047uF 50V K	
C631	CC73GCH1H060B	C CAPACITOR	6pF 50V B		C729	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C632	CC73GCH1H182J	C CAPACITOR	1800pF 50V J		C730	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	
C633	CC73GCH1H152J	C CAPACITOR	1500pF 50V J		C731	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C634	CK73GGBB1H104K	C CAPACITOR	0.1uF 50V K		C732	CK73GGBB1H103K	C CAPACITOR	0.01uF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C734	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C868	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C735	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C869	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C737	CK73GB1E105K	C CAPACITOR	1uF 25V K		C870	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C738	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C871	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C739	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C872	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C740	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C875	CC73GCH1H080B	C CAPACITOR	8pF 50V B	
C741	CK73GB1E105K	C CAPACITOR	1uF 25V K		C877	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C743	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C879	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C744	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C882	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C745	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C884	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C746	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C885	CC73GCH1H470G	C CAPACITOR	47pF 50V G	
C748	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C886	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C749	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C888	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C750	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C889	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C751	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C891	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C752	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C892	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C753	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C893	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C758	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C894	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C759	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C895	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C760	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C896	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C761	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C897	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C762	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C900	CC73GCH1H560G	C CAPACITOR	56pF 50V G	
C764	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C902	CK73GBB1H223K	C CAPACITOR	0.022uF 50V K	
C802	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C903	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C803	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C904	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C804	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C905	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C805	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C906	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C806	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C907	CK73GBB1H223K	C CAPACITOR	0.022uF 50V K	
C807	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C908	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C808	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C909	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C809	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C910	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C811	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C914	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C812	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C915	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C813	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C917	CC73GCH1H470G	C CAPACITOR	47pF 50V G	
C814	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C918	CC73GCH1H680G	C CAPACITOR	68pF 50V G	
C815	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C919	CC73GCH1H181J	C CAPACITOR	180pF 50V J	
C816	CC73GCH1H560G	C CAPACITOR	56pF 50V G		C921	CC73GCH1H122J	C CAPACITOR	1200pF 50V J	
C817	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C924	CC73GCH1H270G	C CAPACITOR	27pF 50V G	
C821	CC73GCH1H070B	C CAPACITOR	7pF 50V B		C925	CC73GCH1H390G	C CAPACITOR	39pF 50V G	
C822	CC73GCH1H050B	C CAPACITOR	5pF 50V B		C926	CC73GCH1H220G	C CAPACITOR	22pF 50V G	890SE
C823	CC73GCH1H060B	C CAPACITOR	6pF 50V B		C927	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE
C824	CC73GCH1H090B	C CAPACITOR	9pF 50V B		C928	CC73GCH1H470G	C CAPACITOR	47pF 50V G	
C825	CC73GCH1H010B	C CAPACITOR	1pF 50V B		C929	CC73GCH1H270G	C CAPACITOR	27pF 50V G	
C830	CC73GCH1H060B	C CAPACITOR	6pF 50V B		C930	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE
C831	CC73GCH1H070B	C CAPACITOR	7pF 50V B		C931	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE
C832	CC73GCH1H050B	C CAPACITOR	5pF 50V B		C1001	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C834	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C1002	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C835	CC73GCH1H560G	C CAPACITOR	56pF 50V G		C1003	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C836	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C1004	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C837	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1005	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C838	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1007	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C839	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1008	CK73GBB1H223K	C CAPACITOR	0.022uF 50V K	
C840	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1009	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C842	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C1010	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C843	CC73GCH1H391J	C CAPACITOR	390pF 50V J		C1011	CK73GB1E474K	C CAPACITOR	0.47uF 25V K	
C844	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1012	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C845	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1013	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C846	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1014	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C847	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1015	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C848	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1016	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C849	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1017	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C851	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1018	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C852	CC73GCH1H120G	C CAPACITOR	12pF 50V G		C1019	CE32CL1V4R7M	E CAPACITOR	4.7uF 35V M	
C853	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1020	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C854	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C1021	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C855	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1022	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C856	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1023	CK73GBB1H333K	C CAPACITOR	0.033uF 50V K	
C857	CC73GCH1H560G	C CAPACITOR	56pF 50V G		C1024	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C858	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1025	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C859	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1027	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C860	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1028	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C861	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1029	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C862	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1030	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C863	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1031	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C864	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1032	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C865	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1033	CC73GCH1H101J	C CAPACITOR	100pF 50V J	
C866	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1034	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C867	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1035	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1036	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1241	CC73GCH1H030B	C CAPACITOR	3pF 50V B	
C1037	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1242	CC73GCH1H4R5B	C CAPACITOR	4.5pF 50V B	890SE
C1101	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1243	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1102	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1244	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C1103	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1249	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1104	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1250	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C1105	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1252	CK73GBB1H223K	C CAPACITOR	0.022uF 50V K	
C1106	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1253	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C1108	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1254	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1109	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1255	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1111	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1256	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C1112	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1257	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1113	CE32CL1V4R7M	E CAPACITOR	4.7uF 35V M		C1259	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1114	CC73GCH1H330G	C CAPACITOR	33pF 50V G		C1261	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C1115	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1263	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1116	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1264	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1117	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1266	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1118	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1267	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1120	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1268	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C1121	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1269	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1122	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	C1270	CC73GCH1H820J	C CAPACITOR	82pF 50V J	
C1123	CC73GCH1H050B	C CAPACITOR	5pF 50V B		C1271	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1124	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C1272	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1126	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1273	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1128	CC73GCH1H121J	C CAPACITOR	120pF 50V J		C1274	CC73GCH1H050B	C CAPACITOR	5pF 50V B	
C1129	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C1276	CC73GCH1H820J	C CAPACITOR	82pF 50V J	
C1130	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE	C1277	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1131	CC73GCH1H470G	C CAPACITOR	47pF 50V G		C1281	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1132	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C1282	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1133	CC73GCH1H330G	C CAPACITOR	33pF 50V G	890SE	C1283	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1134	CC73GCH1H100B	C CAPACITOR	10pF 50V B		C1284	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1135	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C1285	CC73GCH1H121J	C CAPACITOR	120pF 50V J	
C1136	CC73GCH1H050B	C CAPACITOR	5pF 50V B		C1286	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C1138	CC73GCH1H270G	C CAPACITOR	27pF 50V G		C1287	CC73GCH1H470G	C CAPACITOR	47pF 50V G	
C1139	CC73GCH1H270G	C CAPACITOR	27pF 50V G	890SE	C1288	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1142	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C1289	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1143	CC73GCH1H330G	C CAPACITOR	33pF 50V G	890SE	C1290	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1145	CC73GCH1H390G	C CAPACITOR	39pF 50V G		C1292	CC73GCH1H120G	C CAPACITOR	12pF 50V G	890SE
C1147	CC73GCH1H680G	C CAPACITOR	68pF 50V G		C1295	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C1148	CC73GCH1H121J	C CAPACITOR	120pF 50V J	890SE	C1296	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1151	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1300	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1152	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	TC201	C0F-0010-00	TRIM CAPACITOR		890SE
C1153	CE32CL1V4R7M	E CAPACITOR	4.7uF 35V M		TC202	C0F-0010-00	TRIM CAPACITOR		890SE
C1154	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		TC203	C0F-0010-00	TRIM CAPACITOR		
C1155	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		TC204	C0F-0010-00	TRIM CAPACITOR		
C1156	CC73GCH1H100B	C CAPACITOR	10pF 50V B		TC601	C0F-0010-00	TRIM CAPACITOR		
C1157	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		TC602	C0F-0010-00	TRIM CAPACITOR		
C1159	CC73GCH1H100B	C CAPACITOR	10pF 50V B		TC1101	C0F-0010-00	TRIM CAPACITOR		
C1201	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		TC1102	C0F-0010-00	TRIM CAPACITOR		890SE
C1202	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		TC1103	C0F-0010-00	TRIM CAPACITOR		
C1203	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		TC1104	C0F-0010-00	TRIM CAPACITOR		890SE
C1204	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		TC1105	C0F-0010-00	TRIM CAPACITOR		
C1205	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		TC1106	C0F-0010-00	TRIM CAPACITOR		890SE
C1206	CC73GCH1H102J	C CAPACITOR	1000pF 50V J						
C1207	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		R5	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C1208	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		R6	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1209	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R7	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C1210	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R8	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1211	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R9	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1213	CC73GCH1H390G	C CAPACITOR	39pF 50V G		R10	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1216	CC73GCH1H471J	C CAPACITOR	470pF 50V J		R11	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1219	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R12	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1220	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R13	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1222	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R15	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1223	CK73GB1E105K	C CAPACITOR	1uF 25V K		R16	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1224	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		R17	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1225	CC73GCH1H102J	C CAPACITOR	1000pF 50V J		R18	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1226	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R19	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1228	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R20	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1229	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R21	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1230	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	R22	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1232	CC73GCH1H150G	C CAPACITOR	15pF 50V G	890SE	R23	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1233	CC73GCH1H090B	C CAPACITOR	9pF 50V B		R24	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1234	CC73GCH1H060B	C CAPACITOR	6pF 50V B	890SE	R25	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1235	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R26	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1236	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	R27	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1237	CC73GCH1H030B	C CAPACITOR	3pF 50V B		R28	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C1238	CC73GCH1H4R5B	C CAPACITOR	4.5pF 50V B	890SE	R29	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R30	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R115	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R32	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R117	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R33	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R118	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R34	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R119	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R35	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R120	RK73GB2A474J	MG RESISTOR	470kΩ 1/10W J	
R36	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R121	RK73GB2A2R2J	MG RESISTOR	2.2Ω 1/10W J	
R37	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R122	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R38	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R123	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R39	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R124	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J	
R40	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R125	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J	
R41	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R126	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J	
R42	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R127	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J	
R44	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R128	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R45	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R129	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R46	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R130	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R47	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R132	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R49	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R134	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R50	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R135	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R51	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R136	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R52	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R137	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R53	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R202	RK73FB2B104J	MG RESISTOR	100kΩ 1/8W J	
R54	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R205	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R55	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R206	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R56	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R207	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R57	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R208	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R58	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R209	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R60	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R210	RK73EB2E101J	MG RESISTOR	100Ω 1/4W J	
R61	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R211	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R62	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R212	RK73EB2E101J	MG RESISTOR	100Ω 1/4W J	
R63	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R213	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	
R64	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R214	RK73EB2E470J	MG RESISTOR	47Ω 1/4W J	
R65	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R215	RK73EB2E151J	MG RESISTOR	150Ω 1/4W J	
R66	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R216	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R67	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R217	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R68	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R218	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R69	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R219	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R70	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R220	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R71	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R221	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R72	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R222	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R73	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R223	RK73FB2B680J	MG RESISTOR	68Ω 1/8W J	
R74	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R224	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R75	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R225	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R76	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R281	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R77	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R282	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R78	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		R283	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R79	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		R284	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R80	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J		R286	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R81	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		R287	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R82	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R288	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R83	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R301	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R84	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R302	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R85	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J		R303	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R86	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R304	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R87	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		R305	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R88	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J		R306	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R89	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		R307	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R90	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		R308	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R91	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J		R309	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R92	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R310	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R93	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R311	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R94	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J		R312	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R95	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R313	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R96	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R314	RK73EB2E330J	MG RESISTOR	33Ω 1/4W J	
R97	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R315	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R98	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R316	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R99	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R317	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R100	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R318	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R102	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R319	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R103	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R320	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	
R106	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J		R321	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	
R107	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		R322	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R108	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R323	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R109	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R324	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R110	RK73GB2A392J	MG RESISTOR	3.9kΩ 1/10W J		R325	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R111	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R326	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R112	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R327	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	
R113	RK73GB2A562J	MG RESISTOR	5.6kΩ 1/10W J		R328	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	
R114	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J		R329	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R330	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R604	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R331	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R605	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R332	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R606	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J	
R333	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R608	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J	
R334	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R609	RK73GB2A182J	MG RESISTOR	1.8kΩ 1/10W J	
R335	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R612	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J	
R336	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R613	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R337	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R614	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J	
R338	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R615	RK73FB2B390J	MG RESISTOR	39Ω 1/8W J	
R339	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R616	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R340	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R617	RK73GB2A820J	MG RESISTOR	82Ω 1/10W J	
R341	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R618	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R342	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R619	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J	
R343	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R620	RK73EB2E121J	MG RESISTOR	120Ω 1/4W J	
R344	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R621	RK73EB2E121J	MG RESISTOR	120Ω 1/4W J	
R345	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R623	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R346	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R626	RK73GB2A181J	MG RESISTOR	180Ω 1/10W J	
R347	RK73EB2E560J	MG RESISTOR	56Ω 1/4W J		R627	RK73FB2B271J	MG RESISTOR	270Ω 1/8W J	
R348	RK73EB2E560J	MG RESISTOR	56Ω 1/4W J		R628	RK73FB2B271J	MG RESISTOR	270Ω 1/8W J	
R349	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R629	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R350	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R630	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J	
R351	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R631	RK73GH2A122D	MG RESISTOR	1.2kΩ 1/10W D	
R352	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R632	RK73GH2A561D	MG RESISTOR	560Ω 1/10W D	
R353	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	890SE	R633	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R354	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	890SE	R634	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J	
R355	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R635	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J	
R356	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R636	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J	
R357	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R638	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R358	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R639	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R359	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R640	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R360	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R641	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R361	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R642	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R362	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J		R643	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R363	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	890SE	R644	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R364	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	890SE	R645	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R365	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J	890SE	R646	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R366	RK73FB2B330J	MG RESISTOR	33Ω 1/8W J	890SE	R647	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R367	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R650	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R368	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R651	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R369	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R652	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J	
R370	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J		R653	RK73GB2A180J	MG RESISTOR	18Ω 1/10W J	
R371	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	890SE	R654	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J	
R372	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	890SE	R655	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R389	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R656	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R390	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R657	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R391	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R658	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R392	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SE	R660	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R393	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SE	R661	RK73EB2E331J	MG RESISTOR	330Ω 1/4W J	
R394	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SE	R663	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R395	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SE	R665	RK73GB2A392J	MG RESISTOR	3.9kΩ 1/10W J	
R396	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R666	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J	
R397	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R667	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J	
R551	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R668	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R552	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R669	RK73GB2A8R2J	MG RESISTOR	8.2Ω 1/10W J	
R553	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R670	RK73EB2E471J	MG RESISTOR	470Ω 1/4W J	
R554	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R672	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R555	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R673	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R556	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R674	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R557	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R680	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R558	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R681	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R559	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R704	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R560	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R705	RK73HB1J154J	MG RESISTOR	150kΩ 1/16W J	
R561	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R706	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R562	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R707	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R563	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R709	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R564	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R710	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R565	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R711	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R566	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R712	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R567	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R713	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R568	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R714	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R569	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R716	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R570	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R717	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R571	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R718	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R572	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R719	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R573	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R720	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R574	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R722	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R601	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R723	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R602	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R724	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R725	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R874	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R726	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J		R877	RK73GB2A561J	MG RESISTOR	560Ω 1/10W J	
R727	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R878	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R728	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		R879	RK73GB2A681J	MG RESISTOR	680Ω 1/10W J	
R729	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R881	RK73GB2A8R2J	MG RESISTOR	8.2Ω 1/10W J	
R730	RK73GB2A683J	MG RESISTOR	68kΩ 1/10W J		R882	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R731	RK73GB2A390J	MG RESISTOR	39Ω 1/10W J		R883	RK73GB2A8R2J	MG RESISTOR	8.2Ω 1/10W J	
R732	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R884	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R733	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		R886	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R734	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R887	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R735	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J		R888	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R736	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J		R891	RK73GB2A180J	MG RESISTOR	18Ω 1/10W J	
R737	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R892	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R738	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R894	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R739	RK73GB2A333J	MG RESISTOR	33kΩ 1/10W J		R895	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R740	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J		R900	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R741	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R901	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R743	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R903	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R744	RK73GB2A681J	MG RESISTOR	680Ω 1/10W J		R904	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R745	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R905	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R746	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J		R906	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R747	RK73EB2E221J	MG RESISTOR	220Ω 1/4W J		R907	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R748	RK73EB2E221J	MG RESISTOR	220Ω 1/4W J		R908	RK73GB2A563J	MG RESISTOR	56kΩ 1/10W J	
R749	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R909	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R750	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J		R911	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R751	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J		R912	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R752	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J		R913	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R753	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J		R920	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R801	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	890SK	R1001	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J	
R804	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	890SE	R1002	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R808	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R1004	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J	
R809	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R1005	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R810	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1006	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J	
R812	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1007	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R814	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1008	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R816	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1009	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J	
R817	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1010	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R821	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R1011	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J	
R822	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R1012	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R823	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1013	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R824	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1014	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R828	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1015	RK73GB2A822J	MG RESISTOR	8.2kΩ 1/10W J	
R829	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1016	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R830	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1017	RK73GB2A823J	MG RESISTOR	82kΩ 1/10W J	
R831	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1018	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R832	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1019	RK73GB2A124J	MG RESISTOR	120kΩ 1/10W J	
R833	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1020	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R834	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1021	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R835	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1022	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R836	RK73GB2A182J	MG RESISTOR	1.8kΩ 1/10W J		R1023	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R837	RK73FB2B331J	MG RESISTOR	330Ω 1/8W J		R1024	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R838	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1025	RK73GB2A105J	MG RESISTOR	1MΩ 1/10W J	
R839	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R1026	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R840	RK73GB2A561J	MG RESISTOR	560Ω 1/10W J		R1027	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R841	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1028	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R842	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R1029	RK73GB2A333J	MG RESISTOR	33kΩ 1/10W J	
R843	RK73GB2A563J	MG RESISTOR	56kΩ 1/10W J		R1030	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R845	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R1031	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R846	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1032	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J	
R847	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1033	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R848	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1034	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R849	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J		R1035	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R850	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1036	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R851	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1037	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
R853	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J		R1038	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R854	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1039	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R857	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1040	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R858	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1041	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R859	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		R1042	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R860	RK73GB2A393J	MG RESISTOR	39kΩ 1/10W J		R1043	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R861	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J		R1044	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R863	RK73GB2A122J	MG RESISTOR	1.2kΩ 1/10W J		R1046	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R864	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1048	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R866	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J		R1049	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R867	RK73GB2A390J	MG RESISTOR	39Ω 1/10W J		R1050	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R868	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J		R1053	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R871	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1054	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R873	RK73GB2A270J	MG RESISTOR	27Ω 1/10W J		R1055	RK73GB2A274J	MG RESISTOR	270kΩ 1/10W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R1057	RK73GB2A683J	MG RESISTOR	68kΩ 1/10W J		R1219	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J	
R1058	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R1220	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J	
R1059	RK73GB2A124J	MG RESISTOR	120kΩ 1/10W J		R1221	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R1060	RK73GB2A393J	MG RESISTOR	39kΩ 1/10W J		R1222	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R1062	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R1224	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1063	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1227	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R1064	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1228	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R1066	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R1231	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1067	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1232	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R1068	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1233	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1069	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1234	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1070	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1235	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R1071	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		R1236	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J	
R1072	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1237	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R1073	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J		R1238	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
R1074	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1239	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R1075	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R1242	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1076	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J		R1243	RK73GB2A680J	MG RESISTOR	68Ω 1/10W J	890SE
R1077	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R1244	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R1078	RK73GB2A272J	MG RESISTOR	2.7kΩ 1/10W J		R1245	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	890SE
R1079	RK73GB2A394J	MG RESISTOR	390kΩ 1/10W J		R1246	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1080	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1247	RK73GB2A390J	MG RESISTOR	39Ω 1/10W J	890SE
R1081	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J		R1250	RK73GB2A180J	MG RESISTOR	18Ω 1/10W J	
R1082	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J		R1251	RK73GB2A180J	MG RESISTOR	18Ω 1/10W J	890SE
R1083	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1252	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1084	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1254	RK73GB2A390J	MG RESISTOR	39Ω 1/10W J	
R1101	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J		R1255	RK73GB2A682J	MG RESISTOR	6.8kΩ 1/10W J	
R1102	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J		R1256	RK73GB2A182J	MG RESISTOR	1.8kΩ 1/10W J	
R1103	RK73FB2B391J	MG RESISTOR	390Ω 1/8W J		R1257	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R1104	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1258	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1105	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1259	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R1106	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1260	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R1107	RK73FB2B391J	MG RESISTOR	390Ω 1/8W J		R1261	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R1108	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1262	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R1109	RK73GB2A688J	MG RESISTOR	6.8Ω 1/10W J		R1264	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1110	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J		R1265	RK73GB2A121J	MG RESISTOR	120Ω 1/10W J	
R1111	RK73GB2A391J	MG RESISTOR	390Ω 1/10W J		R1267	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R1112	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R1268	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R1113	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R1269	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R1114	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1272	RK73GB2A332J	MG RESISTOR	3.3kΩ 1/10W J	
R1115	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1273	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R1116	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R1275	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1117	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1277	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1118	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R1278	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1119	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1280	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R1120	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	890SE	R1281	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R1121	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1282	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R1122	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	890SE	R1284	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R1123	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1285	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R1124	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1286	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1125	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	890SE	R1287	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R1126	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J		R1288	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R1127	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R1289	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R1128	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R1290	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R1129	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1291	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R1130	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	890SE	R1293	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R1131	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1294	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R1132	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J		R1295	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R1133	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R1296	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R1134	RK73GB2A180J	MG RESISTOR	18Ω 1/10W J		R1297	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
R1135	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R1298	RK73GB2A561J	MG RESISTOR	560Ω 1/10W J	
R1136	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		R1299	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R1201	RK73FB2B331J	MG RESISTOR	330Ω 1/8W J		R1300	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R1202	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1301	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R1203	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R1302	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J	
R1204	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		R1303	RK73GB2A821J	MG RESISTOR	820Ω 1/10W J	890SE
R1205	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1304	RK73GB2A391J	MG RESISTOR	390Ω 1/10W J	
R1206	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1305	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R1207	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1306	RK73GB2A820J	MG RESISTOR	82Ω 1/10W J	
R1208	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J		R1307	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J	
R1209	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J		R1308	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R1210	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J						
R1213	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		L1	LR73Z0AE100J	CHIP INDUCTOR		
R1214	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		L2	LR73Z0AE100J	CHIP INDUCTOR		
R1215	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		L3	LR79Z0PM100M	CHIP INDUCTOR		
R1216	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		L4	L33-1557-05	CHOKE COIL		
R1217	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		L5	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	
R1218	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		L6	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
L7	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH		L349	L41-1898-60	CHIP INDUCTOR		
L8	LB73G0AM-004	CHIP FERRITE			L350	L41-1298-60	CHIP INDUCTOR		
L9	LB73G0AM-004	CHIP FERRITE			L351	L34-4615-05	AIR CORE COIL		
L10	LR77Z0AA101J	CHIP INDUCTOR	100uH		L352	L34-4614-05	AIR CORE COIL		
L11	LR77Z0AA101J	CHIP INDUCTOR	100uH		L353	L33-0695-05	CHOKE COIL		
L12	LB73G0AM-004	CHIP FERRITE			L354	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L13	LR73Z0AE1R0J	CHIP INDUCTOR			L355	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L14	LR73Z0AE101J	CHIP INDUCTOR			L356	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L15	LB73G0AM-004	CHIP FERRITE			L357	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L16	LR73Z0AE101J	CHIP INDUCTOR			L358	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	890SE
L17	LB73G0AM-004	CHIP FERRITE			L359	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	890SE
L18	LR73Z0AE1R2J	CHIP INDUCTOR			L360	L41-3978-60	CHIP INDUCTOR		
L201	LR73Z0AE101J	CHIP INDUCTOR			L361	L41-3378-60	CHIP INDUCTOR		
L202	LR73Z0AE101J	CHIP INDUCTOR			L362	L41-1288-60	CHIP INDUCTOR		
L203	LR73Z0AE101J	CHIP INDUCTOR			L363	L34-4614-05	AIR CORE COIL		
L204	LR73Z0AE101J	CHIP INDUCTOR			L364	LR79Z0CM28NG	CHIP INDUCTOR	28nH	
L205	L39-1594-05	TOROIDAL COIL			L365	L34-4614-05	AIR CORE COIL		
L206	LR73Z0AE101J	CHIP INDUCTOR			L366	L41-3978-60	CHIP INDUCTOR		
L207	LR73Z0AE101J	CHIP INDUCTOR			L367	L41-3378-60	CHIP INDUCTOR		
L208	L34-4616-05	AIR CORE COIL		890SK	L368	L34-4614-05	AIR CORE COIL		
L208	L34-4614-05	AIR CORE COIL		890SE	L370	L34-4613-05	AIR CORE COIL		890SE
L209	L34-4616-05	AIR CORE COIL		890SK	L371	L34-4612-05	AIR CORE COIL		890SE
L209	L34-4614-05	AIR CORE COIL		890SE	L372	L41-3978-60	CHIP INDUCTOR		
L210	LR73Z0AE100J	CHIP INDUCTOR			L373	L41-3378-60	CHIP INDUCTOR		
L211	L34-4616-05	AIR CORE COIL		890SK	L374	L34-4610-15	AIR CORE COIL		
L211	L34-4614-05	AIR CORE COIL		890SE	L376	LR79Z0CM22NG	CHIP INDUCTOR	22nH	890SE
L212	L33-0695-05	CHOKE COIL			L377	LR79Z0CM17N5G	CHIP INDUCTOR		890SE
L214	L3E-0048-00	COIL			L378	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L216	L34-4615-05	AIR CORE COIL			L379	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L217	L33-0695-05	CHOKE COIL			L380	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L218	L3E-0048-00	COIL			L381	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L220	L33-0695-05	CHOKE COIL			L382	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	890SE
L221	L41-5698-64	CHIP INDUCTOR			L383	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	890SE
L226	L41-6898-64	CHIP INDUCTOR		890SE	L384	L41-3978-60	CHIP INDUCTOR		
L227	L41-6898-64	CHIP INDUCTOR		890SE	L385	L41-3378-60	CHIP INDUCTOR		
L302	L34-4614-05	AIR CORE COIL			L386	L34-4614-05	AIR CORE COIL		
L303	L41-3988-60	CHIP INDUCTOR			L388	L34-4613-05	AIR CORE COIL		890SE
L304	L41-3988-60	CHIP INDUCTOR			L389	L34-4612-05	AIR CORE COIL		890SE
L305	L41-3388-60	CHIP INDUCTOR			L390	LR79Z0CX3R3G	CHIP INDUCTOR		
L306	L41-2788-60	CHIP INDUCTOR			L601	L33-0695-05	CHOKE COIL		
L309	LR79Z0CXR82G	CHIP INDUCTOR			L602	L41-6878-60	CHIP INDUCTOR		
L310	L41-2288-60	CHIP INDUCTOR			L603	L39-1556-05	TOROIDAL COIL		
L311	L41-1888-60	CHIP INDUCTOR			L604	L33-0695-05	CHOKE COIL		
L312	L41-6898-64	CHIP INDUCTOR			L605	LR73Z0AE100J	CHIP INDUCTOR		
L313	LR79Z0CXR75G	CHIP INDUCTOR			L606	L41-1588-60	CHIP INDUCTOR		
L314	L34-4615-05	AIR CORE COIL			L607	L33-0695-05	CHOKE COIL		
L315	L34-4615-05	AIR CORE COIL			L608	L3E-0048-00	COIL		
L316	L41-6898-64	CHIP INDUCTOR			L609	L34-4615-05	AIR CORE COIL		
L317	L41-5688-60	CHIP INDUCTOR			L610	L3E-0048-00	COIL		
L318	L41-3988-60	CHIP INDUCTOR			L611	L39-1554-15	TOROIDAL COIL		
L319	L41-3988-60	CHIP INDUCTOR			L612	LR73Z0AE100J	CHIP INDUCTOR		
L320	L34-4615-05	AIR CORE COIL			L613	LR73Z0AE101J	CHIP INDUCTOR		
L321	L34-4616-05	AIR CORE COIL			L614	L39-1554-15	TOROIDAL COIL		
L322	L41-2288-60	CHIP INDUCTOR			L615	L39-1554-15	TOROIDAL COIL		
L323	L41-1098-60	CHIP INDUCTOR			L617	L41-1898-60	CHIP INDUCTOR		
L324	L41-1505-08	CHIP INDUCTOR			L618	L41-5688-60	CHIP INDUCTOR		
L325	L41-4798-60	CHIP INDUCTOR			L620	LR79Z0CXR82G	CHIP INDUCTOR		
L326	L41-1898-60	CHIP INDUCTOR			L621	LR79Z0CXR82G	CHIP INDUCTOR		
L327	L41-1298-60	CHIP INDUCTOR			L622	LR79Z0CXR82G	CHIP INDUCTOR		
L328	LR79Z0CX3R3G	CHIP INDUCTOR			L623	LR79Z0CXR82G	CHIP INDUCTOR		
L329	L41-2298-60	CHIP INDUCTOR			L625	LR73Z0AE101J	CHIP INDUCTOR		
L330	L41-1898-60	CHIP INDUCTOR			L626	LR73Z0AE101J	CHIP INDUCTOR		
L331	L41-1898-60	CHIP INDUCTOR			L627	LR73Z0AE8R2J	CHIP INDUCTOR		
L332	L41-1598-60	CHIP INDUCTOR			L634	LK73G0AQ8R2K	M.CHIP INDUCTOR		
L333	L33-0695-05	CHOKE COIL			L635	LR73Z0AE101J	CHIP INDUCTOR		
L334	L41-4798-60	CHIP INDUCTOR			L636	LR73Z0AE101J	CHIP INDUCTOR		
L335	L41-4798-60	CHIP INDUCTOR			L637	LR73Z0AE101J	CHIP INDUCTOR		
L336	LR79Z0CX3R3G	CHIP INDUCTOR			L638	L41-1298-60	CHIP INDUCTOR		
L337	L41-6888-60	CHIP INDUCTOR			L639	LR73Z0AE101J	CHIP INDUCTOR		
L338	L41-1298-60	CHIP INDUCTOR			L640	LR73Z0AE101J	CHIP INDUCTOR		
L339	L41-1505-08	CHIP INDUCTOR			L641	L41-1298-60	CHIP INDUCTOR		
L340	L33-0695-05	CHOKE COIL			L643	LR73Z0AE101J	CHIP INDUCTOR		
L341	L41-4788-60	CHIP INDUCTOR			L644	LR73Z0AE101J	CHIP INDUCTOR		
L342	L41-3988-60	CHIP INDUCTOR			L645	LR73Z0AE101J	CHIP INDUCTOR		
L343	L41-3988-60	CHIP INDUCTOR			L701	LR73Z0AER12J	CHIP INDUCTOR		
L344	L34-4616-05	AIR CORE COIL			L702	L41-1005-44	CHIP INDUCTOR		
L345	L34-4616-05	AIR CORE COIL			L703	LR73Z0AE4R7J	CHIP INDUCTOR		
L348	L41-4798-60	CHIP INDUCTOR			L704	LR73Z0AER22J	CHIP INDUCTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
L705	LR73Z0AE470J	CHIP INDUCTOR			L1284	LR73Z0AE100J	CHIP INDUCTOR		
L706	L1D-0009-00	ADJUST TRANS			CN1	EC710AJ-1013A	FFC FPC CONNE		
L707	LR73Z0AE470J	CHIP INDUCTOR			CN2	EC710AM-0530A	FFC FPC CONNE		
L708	L1D-0009-00	ADJUST TRANS			CN3	EC710AM-0560A	FFC FPC CONNE		
L709	L1D-0009-00	ADJUST TRANS			CN4	E40-6531-05	PIN ASSY		
L710	L3K-0069-00	TOROIDAL COIL			CN201	E04-0491-05	PIN SOCKET		
L711	L3K-0069-00	TOROIDAL COIL			CN301	E40-5487-05	PIN ASSY		
L712	LR73Z0AE101J	CHIP INDUCTOR			CN302	E40-5487-05	PIN ASSY		
L801	LR73Z0AE101J	CHIP INDUCTOR			CN601	E40-6852-05	PIN ASSY		
L802	LR73Z0AE101J	CHIP INDUCTOR			CN602	E04-0491-05	PIN SOCKET		
L803	LR73Z0AE101J	CHIP INDUCTOR			CN603	E04-0491-05	PIN SOCKET		
L804	LR73Z0AE101J	CHIP INDUCTOR			CN701	E04-0491-05	PIN SOCKET		
L805	LR73Z0AE101J	CHIP INDUCTOR			CN702	E04-0491-05	PIN SOCKET		
L806	LR73Z0AE5R6J	CHIP INDUCTOR			CN806	E04-0491-05	PIN SOCKET		
L807	LR73Z0AE6R8J	CHIP INDUCTOR			CN807	E40-6527-05	PIN ASSY		
L808	LR73Z0AE8R2J	CHIP INDUCTOR			CN811	E6J-0016-00	SOCKET		
L812	LK73G0AQ5R6K	M.CHIP INDUCTOR	6.8uH		CN812	E6J-0016-00	SOCKET		
L814	LK73G0AQ6R8K	M.CHIP INDUCTOR			CN813	E6J-0016-00	SOCKET		
L816	LK73G0AQ8R2K	M.CHIP INDUCTOR			CN814	E6J-0016-00	SOCKET		
L818	LR73Z0AE101J	CHIP INDUCTOR			CN815	E6J-0016-00	SOCKET		
L819	LR73Z0AE101J	CHIP INDUCTOR			CN816	E6J-0016-00	SOCKET		
L820	LR73Z0AE101J	CHIP INDUCTOR			CN1101	E04-0491-05	PIN SOCKET		
L821	LR73Z0AE101J	CHIP INDUCTOR			CN1203	E04-0491-05	PIN SOCKET		
L822	LR73Z0AE101J	CHIP INDUCTOR			F1	F53-0371-05	FUSE		
L823	LR73Z0AE101J	CHIP INDUCTOR			F201	F53-0363-05	FUSE		
L824	LR73Z0AE4R7J	CHIP INDUCTOR			F601	F53-0363-05	FUSE		
L825	LR73Z0AE101J	CHIP INDUCTOR			J1	E11-0705-15	PHONE JACK		
L828	L39-1597-05	TOROIDAL COIL			J2	E11-0455-15	3.5D PHONE JACK		
L829	LR73Z0AE100J	CHIP INDUCTOR			J3	E06-0752-15	DIN SOCKET		
L830	LR73Z0AE101J	CHIP INDUCTOR			J4	E56-0408-15	DIN SOCKET		
L831	LR73Z0AE101J	CHIP INDUCTOR			J5	E11-0455-15	3.5D PHONE JACK		
L832	L39-1598-05	TOROIDAL COIL			J201	E13-0166-25	PIN JACK		
L834	LR73Z0AE101J	CHIP INDUCTOR			J202	E13-0166-25	PIN JACK		
L836	L39-1255-15	TOROIDAL COIL			J203	E13-0166-25	PIN JACK		
L837	LR73Z0AE100J	CHIP INDUCTOR			J1101	E13-0166-25	PIN JACK		
L838	LR73Z0AE101J	CHIP INDUCTOR			K1	S51-1420-05	RELAY		
L839	LR73Z0AE100J	CHIP INDUCTOR			K201	S76-0424-05	RELAY		
L1103	LR73Z0AE470J	CHIP INDUCTOR			K202	S76-0483-05	RELAY		
L1104	L3K-0069-00	TOROIDAL COIL			K203	S76-0483-05	RELAY		
L1106	LR73Z0AE101J	CHIP INDUCTOR			K204	S76-0424-05	RELAY		
L1107	LR73Z0AE101J	CHIP INDUCTOR			K205	S76-0483-05	RELAY		
L1108	LR73Z0AE101J	CHIP INDUCTOR		890SE	K206	S76-0483-05	RELAY		
L1109	LR79Z0MW47NG	CHIP INDUCTOR			K601	S76-0483-05	RELAY		
L1110	LR79Z0MW68NG	CHIP INDUCTOR			OT1	E18-0254-05	SOCKET		
L1111	LR79Z0MWR27G	CHIP INDUCTOR			OT2	-----	SHIELDING CASE		
L1112	LR79Z0MWR15G	CHIP INDUCTOR		890SE	TH803	157-102-65001	N THERMISTOR		
L1113	LR79Z0MW1R5J	CHIP INDUCTOR			TH1261	157-102-65001	N THERMISTOR		
L1114	LR79Z0MW1R5J	CHIP INDUCTOR		890SE	XF601	L7B-0032-00	MCF		
L1115	LR79Z0MWR27G	CHIP INDUCTOR			XF801	L7B-0031-00	MCF		
L1116	LR79Z0MWR15G	CHIP INDUCTOR		890SE	XF802	L7B-0032-00	MCF		
L1117	LR79Z0MW1R5J	CHIP INDUCTOR			XF803	L7B-0029-00	CRYSTAL FILTER		
L1118	LR79Z0MW1R5J	CHIP INDUCTOR		890SE	XF804	L7B-0030-00	CRYSTAL FILTER		
L1119	LR79Z0MWR27G	CHIP INDUCTOR			XF1201	L7B-0044-00	MCF		
L1120	LR79Z0MWR15G	CHIP INDUCTOR		890SE	XF1202	L7B-0045-00	MCF		890SE
L1121	LR73Z0AE101J	CHIP INDUCTOR							
L1122	LR73Z0AE101J	CHIP INDUCTOR		890SE					
L1123	L33-0695-05	CHOKE COIL							
L1200	LR79Z0JG39NG	CHIP INDUCTOR							
L1201	L3K-0069-00	TOROIDAL COIL							
L1202	LR73Z0AE101J	CHIP INDUCTOR							
L1203	L39-1255-15	TOROIDAL COIL							
L1204	L39-1255-15	TOROIDAL COIL							
L1205	LK73G0ASR10J	M.CHIP INDUCTOR	0.1uH						
L1208	LR79Z0MW1R5J	CHIP INDUCTOR							
L1210	LR79Z0MWR33G	CHIP INDUCTOR							
L1212	LR79Z0MW56NG	CHIP INDUCTOR							
L1213	LR79Z0MWR10G	CHIP INDUCTOR		890SE					
L1214	LR79Z0MWR27G	CHIP INDUCTOR							
L1215	LR79Z0MWR47G	CHIP INDUCTOR		890SE					
L1218	LR79Z0MWR27G	CHIP INDUCTOR							
L1220	LR73Z0AE470J	CHIP INDUCTOR							
L1222	LR73Z0AE101J	CHIP INDUCTOR							
L1223	LR73Z0AE101J	CHIP INDUCTOR							
L1224	LR79Z0MWR47G	CHIP INDUCTOR		890SE					
L1225	LR79Z0MWR15G	CHIP INDUCTOR							
L1281	LR73Z0AE470J	CHIP INDUCTOR							
L1282	LR79Z0MW2R2J	CHIP INDUCTOR							
L1283	LR79Z0MW1R0G	CHIP INDUCTOR							

# CONTROL UNIT

**XC1-270K-01(TS-890S(K))**

**XC1-270E-01(TS-890S(E))**

**\*Note : This part cannot be replaced. Therefore, this part is not supplied as a service part.**

Block No. [0][2]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	-----	IC	*Note	
IC2	-----	IC	*Note	
IC3	-----	IC	*Note	
IC4	BU4829FVE	IC		
IC101	F56104VDFKGYA	IC		
IC166	XC6118N31BMRG	IC		
IC167	HD74LV2G34AUS	IC		
IC168	HD74LV2G34AUS	IC		
IC169	TC7WT125FUF	IC		
IC171	R2223T	IC		
IC172	TC7SH17FUJC	IC		
IC181	S25C256A0J84	IC		
IC182	TC74VHC4052AK	IC		
IC183	TC74VHC4052AK	IC		
IC184	TC74VHC373FT	IC		
IC185	TC74VHC373FT	IC		
IC186	TC74VHC373FT	IC		
IC187	TC74VHC373FT	IC		
IC188	TC74VHC373FT	IC		
IC189	TC74VHC373FT	IC		
IC401	E29LV32CB70TI	IC		
IC402	TC74VHC373FT	IC		
IC403	TC74VHC373FT	IC		
IC404	TC7WU04FK-F	IC		
IC405	-----	IC	*Note	
IC406	-----	IC	*Note	
IC407	-----	IC	*Note	
IC408	AK4387ET	IC		
IC409	WM8782ASEDSRV	IC		
IC410	BA2115FVM	IC		
IC411	BA2115FVM	IC		
IC412	BA2115FVM	IC		
IC413	-----	IC	*Note	
IC414	TC7SZ04FEJC	IC		
IC415	TC7SZ08FE	IC		
IC701	ADV7125KSTZ50	IC		
IC702	TC7WT126FU-F	IC		
IC703	AD9889BBSTZ80	IC		
IC704	TC74VCX541FK	IC		
IC705	TC74VCX541FK	IC		
IC706	TC74VCX541FK	IC		
IC801	BD6516F	IC		
IC802	-----	IC	*Note	
IC803	-----	IC	*Note	
IC804	-----	IC	*Note	
IC805	-----	IC	*Note	
IC806	PCM2903C	IC		
IC807	TC7SZ08FE	IC		
IC808	TC7SZ08FE	IC		
IC809	-----	IC	*Note	
IC810	BU7295HFV	IC		
IC811	-----	IC	*Note	
IC812	-----	IC	*Note	
IC901	-----	IC	*Note	
IC902	TC7MBL3126CFT	IC		
IC903	TC7MBL3126CFT	IC		
IC951	-----	IC	*Note	
IC952	-----	IC	*Note	
IC1001	-----	IC	*Note	
IC1002	-----	IC	*Note	
IC1003	-----	IC	*Note	
IC1100	F2136ACNFKGZA	IC		
IC1101	ADM3202ARUZ	IC		
IC1200	-----	IC	*Note	
IC1201	E29LV32CB70TI	IC		
IC1202	TC74VHC373FT	IC		
IC1203	TC74VHC373FT	IC		
IC1300	-----	IC	*Note	

△ Symbol No.	Part No.	Part Name	Description	Local
IC1301	E29LV32CB70TI	IC		
IC1302	TC74VHC373FT	IC		
IC1303	TC74VHC373FT	IC		
IC1400	-----	IC	*Note	
IC1401	W25Q16JVSSIQ	IC		
IC1402	TC7WU04FK-F	IC		
IC1403	TC74LCX244FK	IC		
IC1404	-----	IC	*Note	
IC1405	TC7WU04FK-F	IC		
IC1500	TC7WU04FK-F	IC		
IC1501	-----	IC	*Note	
IC1502	-----	IC	*Note	
IC1503	-----	IC	*Note	
IC1600	AK4387ET	IC		
IC1601	PCM4202DB	IC		
IC1602	AK4387ET	IC		
IC1603	AK4396VF	IC		
IC1604	AK4387ET	IC		
IC1605	WM8782ASEDSRV	IC		
IC1606	AK4387ET	IC		
IC1607	BA2115FVM	IC		
IC1608	BA2115FVM	IC		
IC1609	BA2115FVM	IC		
IC1610	BA2115FVM	IC		
IC1611	NJM2732V	IC		
IC1612	NJM2732V	IC		
IC1613	NJM2732V	IC		
IC1614	BA4580RFVM	IC		
IC1615	BA4580RFVM	IC		
IC1616	LA4425A-E	IC		
IC1617	BA2115FVM	IC		
IC1618	BH2227FV	IC		
IC1619	NJM2172V-ZB	IC		
IC1620	NJM2732V	IC		
IC1621	NJM2732V	IC		
IC1622	NJM2768BM-ZB	IC		
IC1623	NJM2732V	IC		
IC1624	NJM2732V	IC		
IC1625	BA2115FVM	IC		
IC1626	BA2115FVM	IC		
IC1627	BA2115FVM	IC		
IC1628	BA2115FVM	IC		
IC1629	BA4580RFVM	IC		
IC1630	TC74VHC4052AK	IC		
Q401	SSM3K15AMFVF	FET		
Q402	SSM3J36TU	FET		
Q403	LTC043TEBFS8	DIGI TRANSISTOR		
Q701	TPC6111-F	FET		
Q702	LTC043TEBFS8	DIGI TRANSISTOR		
Q801	LTC014EEBFS8	DIGI TRANSISTOR		
Q802	LTC014EEBFS8	DIGI TRANSISTOR		
Q803	LTC014EEBFS8	DIGI TRANSISTOR		
Q804	RE1C001ZP	FET		
Q805	RE1C001ZP	FET		
Q806	RE1C001ZP	FET		
Q807	LTC014EEBFS8	DIGI TRANSISTOR		
Q808	TPC6111-F	FET		
Q809	RE1C001ZP	FET		
Q810	LTC014EEBFS8	DIGI TRANSISTOR		
Q901	TPC6111-F	FET		
Q902	LTC014EEBFS8	DIGI TRANSISTOR		
Q903	LTC043TEBFS8	DIGI TRANSISTOR		
Q904	LTC014EEBFS8	DIGI TRANSISTOR		
Q951	TPC6111-F	FET		
Q952	LTC043TEBFS8	DIGI TRANSISTOR		
Q953	TPC6111-F	FET		
Q954	LTC043TEBFS8	DIGI TRANSISTOR		
Q955	TPC6111-F	FET		
Q956	LTC043TEBFS8	DIGI TRANSISTOR		
Q1001	TPC6111-F	FET		
Q1002	LTC014EEBFS8	DIGI TRANSISTOR		
Q1100	RE1C001ZP	FET		
Q1101	EMD12	TRANSISTOR		
Q1102	LTC014EEBFS8	DIGI TRANSISTOR		
Q1103	SSM3J36TU	FET		
Q1104	LTC043TEBFS8	DIGI TRANSISTOR		
Q1500	2SC5551AF	TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
Q1501	LTC043ZEBFS8	DIGI TRANSISTOR			C10	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
Q1502	LTA043EEBFS8	DIGI TRANSISTOR			C11	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
Q1504	LTC043ZEBFS8	DIGI TRANSISTOR			C12	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
Q1505	LTA043EEBFS8	DIGI TRANSISTOR			C13	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
Q1507	LTC043ZEBFS8	DIGI TRANSISTOR			C14	CK73EBB1H474K	C CAPACITOR	0.47uF 50V K	
Q1508	LTC043ZEBFS8	DIGI TRANSISTOR			C16	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
Q1509	LTC043ZEBFS8	DIGI TRANSISTOR			C17	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
Q1510	LTC043ZEBFS8	DIGI TRANSISTOR			C18	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
Q1511	2SC5551AF	TRANSISTOR			C19	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
Q1512	2SC5108F/Y/	TRANSISTOR			C20	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
Q1600	2SC5566-E	TRANSISTOR			C21	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
Q1601	2SB1694	TRANSISTOR			C22	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
Q1602	LTC043ZEBFS8	DIGI TRANSISTOR			C23	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
Q1604	2SB1694	TRANSISTOR			C24	CK73FB1C106K	C CAPACITOR	10uF 16V K	
Q1605	LTC043ZEBFS8	DIGI TRANSISTOR			C25	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
Q1606	LTA043ZEBFS8	DIGI TRANSISTOR			C26	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
Q1607	LTC043ZEBFS8	DIGI TRANSISTOR			C27	CK73GB1E105K	C CAPACITOR	1uF 25V K	
Q1608	LTA043ZEBFS8	DIGI TRANSISTOR			C28	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
Q1609	LTC043ZEBFS8	DIGI TRANSISTOR			C29	CE32BQJ221M	E CAPACITOR	220uF 6.3V M	
D1	RB080LAM-30	SCHOTTKY DIODE			C30	CE32BQJ221M	E CAPACITOR	220uF 6.3V M	
D2	RR1LAM4S	DIODE			C31	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D3	EDZV6.2B	ZENER DIODE			C32	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D101	RB531SM-30	DIODE			C33	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D102	RB531SM-30	DIODE			C34	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D103	RB531SM-30	DIODE			C35	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D104	RB520SM-30	DIODE			C36	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D171	RB520SM-30	DIODE			C37	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D401	RB531SM-30	DIODE			C38	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D701	1SS226-F	DIODE			C39	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D702	1SS226-F	DIODE			C40	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D703	1SS226-F	DIODE			C41	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D704	LXES15AAA1133	VARISTOR			C42	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D705	LXES15AAA1133	VARISTOR			C43	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D706	LXES15AAA1133	VARISTOR			C44	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D707	LXES15AAA1133	VARISTOR			C45	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D708	LXES15AAA1133	VARISTOR			C46	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D709	LXES15AAA1133	VARISTOR			C47	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D710	LXES15AAA1133	VARISTOR			C48	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D711	LXES15AAA1133	VARISTOR			C49	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D712	LXES15AAA1133	VARISTOR			C63	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D713	LXES15AAA1133	VARISTOR			C64	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D801	LXES15AAA1133	VARISTOR			C65	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D802	LXES15AAA1133	VARISTOR			C66	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D901	LXES15AAA1133	VARISTOR			C67	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D902	LXES15AAA1133	VARISTOR			C68	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D903	LXES15AAA1133	VARISTOR			C69	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D904	LXES15AAA1133	VARISTOR			C70	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D905	LXES15AAA1133	VARISTOR			C71	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
D906	LXES15AAA1133	VARISTOR			C72	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D907	LXES15AAA1133	VARISTOR			C73	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D908	LXES15AAA1133	VARISTOR			C74	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1050	RB531SM-30	DIODE			C75	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1100	RB501VM-40	SCHOTTKY DIODE			C76	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D1500	RN262CS	DIODE			C77	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1501	RN262CS	DIODE			C78	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D1502	RN262CS	DIODE			C79	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1503	RN262CS	DIODE			C80	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D1504	RN142SM	DIODE			C81	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1505	RN142SM	DIODE			C82	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D1506	RN142SM	DIODE			C83	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1507	RN142SM	DIODE			C84	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
D1508	RN142SM	DIODE			C85	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
D1509	RN142SM	DIODE			C86	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
D1510	RN142SM	DIODE			C87	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1511	RN142SM	DIODE			C88	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1601	1SS400SM	DIODE			C89	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
D1603	1SS400SM	DIODE			C90	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C1	CD04BQ1E331M	E CAPACITOR	330uF 25V M		C91	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C2	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C92	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C3	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C93	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C4	CD04BQ1E331M	E CAPACITOR	330uF 25V M		C94	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C5	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C95	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C6	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C96	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C7	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C98	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C8	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C100	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C9	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C101	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
					C102	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
					C103	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	





△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C486	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C742	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C487	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C743	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C488	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C744	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C489	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C745	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C490	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C746	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C491	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C747	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C492	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C748	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C493	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C749	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C494	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C750	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C495	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C751	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C496	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C752	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C497	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C753	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C498	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C754	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C499	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C755	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C500	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C756	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C501	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C757	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C502	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C758	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C503	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C759	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C504	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C760	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C505	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C761	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C506	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C762	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C507	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C763	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C508	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C764	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C509	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C765	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C510	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C766	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C511	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C767	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C512	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C768	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C513	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C769	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C514	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C770	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C515	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C771	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C516	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C772	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C517	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C773	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C518	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C774	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C519	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C775	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C520	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C801	CK73HBB1H472K	C CAPACITOR	4700pF 50V K	
C521	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C803	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C522	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C804	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C523	CK73FB1C106K	C CAPACITOR	10uF 16V K		C805	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C524	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C806	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C525	CK73HBB1H222K	C CAPACITOR	2200pF 50V K		C807	C90-6990-05	E CAPACITOR	220uF 10V	
C526	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C808	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C527	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C809	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C528	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C810	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C529	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C811	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C530	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C812	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C531	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C813	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C532	CK73HBB1H182K	C CAPACITOR	1800pF 50V K		C814	CK73GBOJ106K	C CAPACITOR	10uF 6.3V K	
C533	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C815	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C534	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C816	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C535	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C817	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C536	CK73HBB1H182K	C CAPACITOR	1800pF 50V K		C818	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C537	CK73HBB1H222K	C CAPACITOR	2200pF 50V K		C819	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C538	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C820	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C539	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C821	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C540	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C822	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C541	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C823	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C542	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C824	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C543	CK73FB1C106K	C CAPACITOR	10uF 16V K		C825	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C544	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C826	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C545	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C827	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C546	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C828	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C547	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C829	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C548	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C830	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C549	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C831	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C550	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C832	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C551	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C833	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C552	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C834	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C553	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C835	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C554	CK73GBOJ106K	C CAPACITOR	0.1uF 50V K		C836	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C555	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C838	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C556	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C839	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C710	CC73HCH1H030C	C CAPACITOR	3pF 50V C		C840	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C736	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C841	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C737	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C842	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C738	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C843	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C739	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C844	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C740	CK73GBOJ106K	C CAPACITOR	1000pF 50V K		C845	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C741	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C846	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C847	CK73HB1A105K	C CAPACITOR	1uF 10V K		C1065	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C848	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1066	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C849	CC73HCH1H180J	C CAPACITOR	18pF 50V J		C1067	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C850	CC73HCH1H180J	C CAPACITOR	18pF 50V J		C1068	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C851	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1069	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C852	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1070	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C853	CK73HB1A105K	C CAPACITOR	1uF 10V K		C1073	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C854	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1074	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C855	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		C1075	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C856	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1076	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C857	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1077	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C858	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1078	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C859	CK73GB1A475K	C CAPACITOR	4.7uF 10V K		C1079	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C901	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1090	C90-6990-05	E CAPACITOR	220uF 10V	
C902	CK73HB1A105K	C CAPACITOR	1uF 10V K		C1091	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C903	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1092	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C904	CK73HB1A105K	C CAPACITOR	1uF 10V K		C1093	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C905	CC73HCH1H120G	C CAPACITOR	12pF 50V G		C1100	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C906	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1101	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C907	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1102	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C908	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1103	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C909	CK73GB1A475K	C CAPACITOR	4.7uF 10V K		C1104	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C910	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1105	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C911	CK73GB1A475K	C CAPACITOR	4.7uF 10V K		C1106	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C912	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C1107	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C913	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1108	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C914	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1109	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C915	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1110	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C920	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1111	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C921	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1112	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C922	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1113	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C923	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1114	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C924	CK73HBB1E220K	C CAPACITOR	0.022uF 25V K		C1115	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C954	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1116	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C955	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1120	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C956	CK73EXR1A476K	C CAPACITOR	47uF 10V K		C1150	CE32BQ0J221M	E CAPACITOR	220uF 6.3V M	
C957	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C1151	CE32BQ0J221M	E CAPACITOR	220uF 6.3V M	
C958	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1152	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C959	CK73EXR1A476K	C CAPACITOR	47uF 10V K		C1153	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C960	CC73GCH1H471J	C CAPACITOR	470pF 50V J		C1154	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C961	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1155	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C962	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1156	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C963	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1157	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C964	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1158	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C965	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1159	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C966	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1160	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1001	CK73EXR1A476K	C CAPACITOR	47uF 10V K		C1161	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1002	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C1162	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C1003	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1163	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1004	CK73EXR1A476K	C CAPACITOR	47uF 10V K		C1164	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1005	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C1165	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1006	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1166	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1007	CK73EXR1A476K	C CAPACITOR	47uF 10V K		C1168	CK73GB1E474K	C CAPACITOR	0.47uF 25V K	
C1008	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C1169	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C1009	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1170	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1010	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1171	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1011	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1172	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1012	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1173	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1013	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1200	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1014	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1201	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1015	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1202	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1016	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1203	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1017	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1204	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1050	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1205	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1051	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1206	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1052	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1207	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1053	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1208	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1054	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1209	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1055	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1210	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1056	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1211	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1057	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1212	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1058	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1213	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1059	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1214	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1060	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1215	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1061	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1216	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1062	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1224	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1063	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1225	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1064	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1226	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1526	CC73GCH1H820G	C CAPACITOR	82pF 50V G		C1606	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1527	CC73HCH1H470G	C CAPACITOR	47pF 50V G		C1607	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1528	CC73GCH1H101G	C CAPACITOR	100pF 50V G		C1608	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1529	CC73HCH1H470G	C CAPACITOR	47pF 50V G		C1609	CK73EXR1A476K	C CAPACITOR	47uF 10V K	
C1530	CC73GCH1H101G	C CAPACITOR	100pF 50V G		C1611	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1531	CC73HCH1H150G	C CAPACITOR	15pF 50V G		C1612	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C1532	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1613	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1533	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1614	CK73EXR1A476K	C CAPACITOR	47uF 10V K	
C1534	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1616	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1535	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1617	CK73EXR1A476K	C CAPACITOR	47uF 10V K	
C1536	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C1619	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C1537	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1620	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1538	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C1621	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1539	CC73GCH1H101G	C CAPACITOR	100pF 50V G		C1622	CK73EXR1A476K	C CAPACITOR	47uF 10V K	
C1540	CC73HCH1H080B	C CAPACITOR	8pF 50V B		C1626	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1541	CC73HCH1H090B	C CAPACITOR	9pF 50V B		C1627	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1542	CC73HCH1H080B	C CAPACITOR	8pF 50V B		C1628	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1543	CC73GCH1H101G	C CAPACITOR	100pF 50V G		C1629	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1544	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1630	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1545	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1631	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1546	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C1632	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1547	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C1633	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1548	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1634	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1549	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C1637	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1550	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C1638	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1551	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1639	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1552	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C1640	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1553	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C1641	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1554	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C1642	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1555	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C1645	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1556	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1646	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1557	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C1647	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1558	CC73HCH1H390J	C CAPACITOR	39pF 50V J		C1648	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1559	CC73GCH1H681J	C CAPACITOR	680pF 50V J		C1649	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1560	CC73GCH1H681J	C CAPACITOR	680pF 50V J		C1650	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1561	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C1652	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1562	CC73HCH1H390J	C CAPACITOR	39pF 50V J		C1653	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1563	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1654	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1564	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1655	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1565	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1656	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1566	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1657	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1567	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1658	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1568	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1659	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1569	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1664	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1570	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1665	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1571	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1666	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1572	CC73GCH1H151J	C CAPACITOR	150pF 50V J		C1667	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1573	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1668	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1574	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1669	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1575	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1670	CK73HBB1H332K	C CAPACITOR	3300pF 50V K	
C1576	CC73GCH1H151J	C CAPACITOR	150pF 50V J		C1671	CK73HBB1H182K	C CAPACITOR	1800pF 50V K	
C1577	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1672	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C1578	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1673	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C1579	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1674	CK73HBB1H472K	C CAPACITOR	4700pF 50V K	
C1580	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1675	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1581	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C1676	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1582	CC73HCH1H120G	C CAPACITOR	12pF 50V G		C1677	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C1583	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C1679	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C1584	CC73HCH1H120G	C CAPACITOR	12pF 50V G		C1680	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C1585	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C1681	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C1586	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C1682	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C1587	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1686	CC73GCH1H680J	C CAPACITOR	68pF 50V J	
C1588	CE32BQQJ221M	E CAPACITOR	220uF 6.3V M		C1704	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C1589	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1705	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1590	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1706	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1591	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1707	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1592	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1708	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C1593	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1709	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1594	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1710	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C1595	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1711	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C1596	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1712	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1598	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C1713	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1599	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C1714	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1601	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C1715	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1602	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1716	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C1603	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1717	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C1604	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1718	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1605	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1719	CC73HCH1H561J	C CAPACITOR	560pF 50V J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1720	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C1821	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C1721	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1822	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C1722	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1823	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C1724	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1824	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C1730	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1825	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1731	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1826	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1732	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1827	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1733	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1828	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1734	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C1830	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1735	CC73HCH1H681J	C CAPACITOR	680pF 50V J		C1831	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1736	CC73HCH1H681J	C CAPACITOR	680pF 50V J		C1832	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C1737	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1834	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1739	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1835	CE32CL1C470M	E CAPACITOR	47uF 16V M	
C1740	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1836	CD04AZ1V101M	E CAPACITOR	100uF 35V M	
C1741	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C1837	CE32CL1C470M	E CAPACITOR	47uF 16V M	
C1742	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1840	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1743	CC73HCH1H821J	C CAPACITOR	820pF 50V J		C1842	CD04AZ1V101M	E CAPACITOR	100uF 35V M	
C1744	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1844	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C1745	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1845	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1746	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1846	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1750	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1847	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C1751	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1848	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1752	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1850	CK73HBB1H152K	C CAPACITOR	1500pF 50V K	
C1753	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C1851	CK73HBB1H682K	C CAPACITOR	6800pF 50V K	
C1754	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C1852	CK73HBB1H152K	C CAPACITOR	1500pF 50V K	
C1755	CK73HBB1H182K	C CAPACITOR	1800pF 50V K		C1853	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C1756	CK73HBB1H182K	C CAPACITOR	1800pF 50V K		C1854	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C1757	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1855	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C1759	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1856	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C1760	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1857	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1761	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1858	CC73HCH1H681J	C CAPACITOR	680pF 50V J	
C1762	CC73HCH1H821J	C CAPACITOR	820pF 50V J		C1859	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C1763	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1860	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C1764	CK73HBB1H182K	C CAPACITOR	1800pF 50V K		C1861	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C1765	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1862	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C1766	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1863	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1767	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1864	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1768	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1865	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1769	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1866	CK73HBB1H122K	C CAPACITOR	1200pF 50V K	
C1770	CK73HB1A684K	C CAPACITOR	0.68uF 10V K		C1867	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1773	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		C1868	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1774	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1869	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C1775	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1870	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1780	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1871	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1781	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1872	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1782	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1873	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C1783	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		C1874	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C1784	CK73HBB1H682K	C CAPACITOR	6800pF 50V K		C1875	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1785	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C1877	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1791	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1878	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1792	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1880	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C1793	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1881	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1795	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1882	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C1796	CE32CL1C470M	E CAPACITOR	47uF 16V M		C1883	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1797	CK73GB1E105K	C CAPACITOR	1uF 25V K		C1884	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C1798	CK73GB0J106K	C CAPACITOR	10uF 6.3V K		C1885	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1799	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1886	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1800	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1887	CK73HBB1H182K	C CAPACITOR	1800pF 50V K	
C1801	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1888	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1802	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1889	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1803	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		C1890	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1804	CK73HBB1H272K	C CAPACITOR	2700pF 50V K		C1891	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C1805	CK73HBB1H272K	C CAPACITOR	2700pF 50V K		C1892	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C1806	CK73HBB1E153K	C CAPACITOR	0.015uF 25V K		C1893	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1807	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1894	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C1808	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1895	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C1809	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1896	CK73HBB1H182K	C CAPACITOR	1800pF 50V K	
C1810	CK73HBB1E153K	C CAPACITOR	0.015uF 25V K		C1897	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1811	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1898	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1812	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C1899	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1813	CK73HBB1H272K	C CAPACITOR	2700pF 50V K		C1900	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C1814	CK73HBB1H682K	C CAPACITOR	6800pF 50V K		C1901	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C1815	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C1902	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C1816	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C1903	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1817	CK73HBB1H332K	C CAPACITOR	3300pF 50V K		C1904	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C1818	CE32CL1H4R7M	E CAPACITOR	4.7uF 50V M		C1905	CK73HBB1H222K	C CAPACITOR	2200pF 50V K	
C1819	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C1906	CC73HCH1H391J	C CAPACITOR	390pF 50V J	
C1820	CD04AZ1E471M	E CAPACITOR	470uF 25V M		C1907	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1908	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		R71	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C1909	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R72	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C1910	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R73	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C1911	CC73HCH1H331J	C CAPACITOR	330pF 50V J		R74	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C1912	CK73HBB1H222K	C CAPACITOR	2200pF 50V K		R75	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C1913	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		R76	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
C1914	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		R77	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
C1915	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		R78	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C1916	CC73HCH1H821J	C CAPACITOR	820pF 50V J		R79	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C1917	CC73HCH1H821J	C CAPACITOR	820pF 50V J		R81	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
C1918	CK73HBB1H332K	C CAPACITOR	3300pF 50V K		R82	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
TC1500	C0F-0010-00	TRIM CAPACITOR			R101	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
TC1502	C0F-0010-00	TRIM CAPACITOR			R103	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
					R104	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1	R92-3625-05	RESISTOR	0.1Ω 0.33W		R105	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
R2	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R106	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R3	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R107	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R4	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R108	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R5	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R109	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R6	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R110	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R7	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R111	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R8	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R112	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R9	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R113	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R11	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R114	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R12	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R115	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R13	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R116	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R14	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J		R117	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R16	RK73GH2A823D	MG RESISTOR	82kΩ 1/10W D		R118	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R17	RK73GH2A153D	MG RESISTOR	15kΩ 1/10W D		R119	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R18	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R120	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R19	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R122	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R20	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R123	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R21	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R124	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R22	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R125	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R23	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R126	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R24	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R127	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R25	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R128	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R26	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R130	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R27	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R131	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R28	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R133	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R29	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R134	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R30	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R135	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R31	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R137	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R32	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R138	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R33	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R139	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
R34	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R140	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
R35	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R141	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R36	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R142	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R37	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R143	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R38	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R144	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R39	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R145	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R40	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R146	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R41	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R147	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R42	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R148	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R43	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		R149	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R44	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R150	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R45	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R151	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R46	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R153	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R49	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R154	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R50	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	890SE	R155	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R51	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R156	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R53	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R157	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R54	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R158	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R55	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R161	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R56	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R162	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R57	R92-0150-05	JUMPER RESISTOR	0.003Ω 2W	890SE	R163	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
R58	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R164	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
R60	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R165	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R61	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R167	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R62	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R168	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R63	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R170	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R64	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R171	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R65	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R172	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R66	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R173	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R67	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R174	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R68	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R175	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R69	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R176	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R70	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R177	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	







△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R740	RK73HB1J820J	MG RESISTOR	82Ω 1/16W J		R861	RK73GH2A123D	MG RESISTOR	12kΩ 1/10W D	
R741	RK73HB1J820J	MG RESISTOR	82Ω 1/16W J		R862	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R742	RK73HB1J820J	MG RESISTOR	82Ω 1/16W J		R863	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R743	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R864	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R744	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R865	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R745	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R866	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R746	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R867	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R747	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R868	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
R748	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R873	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R749	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R874	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R750	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R875	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R751	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R882	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R752	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R883	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R753	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R884	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R754	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R885	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R755	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R886	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R756	RK73GH2A8870D	MG RESISTOR	887Ω 0.1W D		R887	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R757	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J		R888	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R758	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R889	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R759	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R890	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R801	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R910	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R804	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		R911	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R805	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		R912	RK73GH2A49R9D	MG RESISTOR	49.9Ω 1/10W D	
R806	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		R913	RK73GH2A49R9D	MG RESISTOR	49.9Ω 1/10W D	
R807	RK73GB2A330J	MG RESISTOR	33Ω 1/10W J		R914	RK73GH2A49R9D	MG RESISTOR	49.9Ω 1/10W D	
R808	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R915	RK73GH2A49R9D	MG RESISTOR	49.9Ω 1/10W D	
R809	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R916	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R810	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R917	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R811	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R918	RK73GH2A1212D	MG RESISTOR	12.1kΩ 0.1W D	
R812	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R919	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R813	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R920	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R814	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R921	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R815	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R922	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R816	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R923	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R817	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R924	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R818	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R925	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R819	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R926	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R820	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R927	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R821	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R928	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R822	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R929	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R823	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R959	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R824	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R960	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R825	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R961	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R826	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J		R962	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R827	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R963	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R828	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R964	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R829	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R965	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R830	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J		R966	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R831	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R967	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R832	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R969	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R833	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R972	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R834	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R974	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R835	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R975	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
R836	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R976	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R837	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R977	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R838	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R978	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R839	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R979	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R840	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R980	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R841	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R981	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R842	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R982	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R843	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R983	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R844	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R984	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R845	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R985	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R846	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R986	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R847	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R987	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R848	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R988	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R849	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R989	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R850	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R990	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R851	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1001	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
R852	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R1002	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R853	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R1003	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R854	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R1004	RK73EB2E1R2J	MG RESISTOR	1.2Ω 1/4W J	
R855	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1005	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R856	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1006	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R857	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1007	RK73EB2E1R2J	MG RESISTOR	1.2Ω 1/4W J	
R858	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1008	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R859	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J		R1009	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R860	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1010	RK73EB2E1R2J	MG RESISTOR	1.2Ω 1/4W J	





△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R1448	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1562	RK73HH1J471D	MG RESISTOR	470Ω 1/16W D	
R1449	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1563	RK73HH1J221D	MG RESISTOR	220Ω 1/16W D	
R1450	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1564	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1451	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1565	RK73HH1J103D	MG RESISTOR	10kΩ 1/16W D	
R1452	RK73HH1J103D	MG RESISTOR	10kΩ 1/16W D		R1566	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1453	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1567	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R1454	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1568	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R1455	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1569	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R1456	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R1570	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1457	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1571	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1458	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1572	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1459	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1573	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1460	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1574	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1461	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R1575	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1471	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R1576	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1472	RK73HB1J121J	MG RESISTOR	120Ω 1/16W J		R1577	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1477	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1578	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1478	RK73GB2A2R2J	MG RESISTOR	2.2Ω 1/10W J		R1579	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1480	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1580	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1481	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1581	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1482	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1582	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1483	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R1583	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1501	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1584	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1503	RK73FB2B470J	MG RESISTOR	47Ω 1/8W J		R1585	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1505	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1587	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1506	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1588	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1507	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		R1589	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1509	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1590	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1511	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1591	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R1512	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1592	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R1513	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1593	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R1514	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R1594	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	
R1515	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R1600	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1516	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R1601	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1517	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R1602	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1518	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1603	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1519	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		R1605	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1520	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R1606	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1521	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1607	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1522	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1610	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1523	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1611	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1524	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1612	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R1525	RK73HB1J270J	MG RESISTOR	27Ω 1/16W J		R1613	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1526	RK73HB1J390J	MG RESISTOR	39Ω 1/16W J		R1614	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1527	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J		R1615	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1528	RK73HB1J270J	MG RESISTOR	27Ω 1/16W J		R1616	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1529	RK73HB1J390J	MG RESISTOR	39Ω 1/16W J		R1617	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1530	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J		R1618	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1531	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J		R1619	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1532	RK73HB1J151J	MG RESISTOR	150Ω 1/16W J		R1620	RK73HB1J680J	MG RESISTOR	68Ω 1/16W J	
R1533	RK73HB1J390J	MG RESISTOR	39Ω 1/16W J		R1621	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1534	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J		R1622	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1535	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1623	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1536	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J		R1624	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1537	RK73HB1J3R3J	MG RESISTOR	3.3Ω 1/16W J		R1625	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1538	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R1626	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1539	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J		R1627	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1540	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J		R1628	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1541	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J		R1630	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1542	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R1631	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1543	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J		R1632	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1544	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1635	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1545	RK73HB1J682J	MG RESISTOR	6.8kΩ 1/16W J		R1636	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1546	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		R1637	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R1547	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1638	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R1548	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J		R1639	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1549	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R1640	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R1550	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R1641	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1551	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J		R1642	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1552	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J		R1643	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1554	RK73HH1J560D	MG RESISTOR	56Ω 1/16W D		R1644	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1555	RK73HH1J181D	MG RESISTOR	180Ω 1/16W D		R1645	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1556	RK73HH1J471D	MG RESISTOR	470Ω 1/16W D		R1646	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1557	RK73HH1J221D	MG RESISTOR	220Ω 1/16W D		R1647	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1558	RK73HH1J101D	MG RESISTOR	100Ω 1/16W D		R1648	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R1559	RK73HH1J101D	MG RESISTOR	100Ω 1/16W D		R1649	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1560	RK73HH1J560D	MG RESISTOR	56Ω 1/16W D		R1650	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R1561	RK73HH1J181D	MG RESISTOR	180Ω 1/16W D		R1651	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R1652	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1740	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1653	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1741	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1654	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R1742	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1655	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1743	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1656	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1744	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1658	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1745	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1659	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1746	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1660	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1747	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1663	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1748	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1664	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1749	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1665	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R1750	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1666	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J		R1751	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1667	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1752	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1668	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J		R1753	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1669	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1754	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R1670	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1755	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R1671	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1756	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R1672	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1757	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R1673	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1758	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R1674	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		R1759	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1675	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1760	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1676	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1761	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R1677	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1762	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R1678	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1763	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R1679	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R1764	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1680	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1765	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1682	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1766	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1683	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1767	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R1684	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		R1770	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1687	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1771	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1688	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1772	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1689	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1773	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1690	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1774	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1691	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1775	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1692	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1778	RK73HB1J222D	MG RESISTOR	2.2kΩ 1/16W D	
R1693	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1779	RK73HB1J472D	MG RESISTOR	4.7kΩ 1/16W D	
R1694	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1784	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1695	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R1787	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R1696	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1788	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1697	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R1789	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1698	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R1790	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J	
R1700	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1791	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1701	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1792	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1702	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R1793	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1703	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1794	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1704	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J		R1795	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R1705	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J		R1796	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1706	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		R1797	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1707	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1798	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1708	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1799	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R1709	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J		R1800	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1710	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		R1801	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R1711	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J		R1802	RK73HB1J272J	MG RESISTOR	2.7kΩ 1/16W J	
R1712	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J		R1803	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R1713	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		R1804	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R1714	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J		R1805	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R1715	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1806	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R1716	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R1807	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1720	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R1809	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R1721	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R1810	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R1722	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1811	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R1723	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1812	RK73HB1J151J	MG RESISTOR	150Ω 1/16W J	
R1724	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J		R1813	RK73EB2E331J	MG RESISTOR	330Ω 1/4W J	
R1725	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1814	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R1726	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J		R1815	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R1727	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R1816	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R1728	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J		R1817	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R1729	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J		R1818	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1730	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J		R1819	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R1731	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1820	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1732	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R1821	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1733	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1822	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R1734	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J		R1826	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1735	RK73HB1J682J	MG RESISTOR	6.8kΩ 1/16W J		R1827	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R1736	RK73HB1J682J	MG RESISTOR	6.8kΩ 1/16W J		R1829	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	
R1737	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		R1830	RK73EB2E680J	MG RESISTOR	68Ω 1/4W J	
R1738	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1832	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R1739	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R1833	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R1834	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		L4	L79-1947-05	FILTER		
R1835	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L5	LB73G0AM-004	CHIP FERRITE		
R1836	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L6	LB73G0AM-004	CHIP FERRITE		
R1840	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		L7	LB73G0AM-004	CHIP FERRITE		
R1841	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L8	LB73G0AM-004	CHIP FERRITE		
R1842	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J		L401	L79-1947-05	FILTER		
R1843	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J		L402	L79-1947-05	FILTER		
R1844	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J		L403	L79-1947-05	FILTER		
R1845	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L404	LB73G0AM-004	CHIP FERRITE		
R1846	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L405	LB73G0AM-004	CHIP FERRITE		
R1847	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L406	LB73G0AM-004	CHIP FERRITE		
R1848	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L407	LB73G0AM-004	CHIP FERRITE		
R1849	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L408	L7K-0034-00	LC FILTER		
R1850	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L410	LB73G0AM-004	CHIP FERRITE		
R1851	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L411	L7K-0034-00	LC FILTER		
R1852	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J		L701	L92-0494-05	CHIP FERRITE		
R1853	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L702	L92-0494-05	CHIP FERRITE		
R1854	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L703	L92-0494-05	CHIP FERRITE		
R1855	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L704	L92-0494-05	CHIP FERRITE		
R1856	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L705	L41-8275-32	CHIP INDUCTOR		
R1857	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L706	L41-8275-33	CHIP INDUCTOR		
R1858	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L707	L41-8275-33	CHIP INDUCTOR		
R1859	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L708	L41-8275-33	CHIP INDUCTOR		
R1860	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L709	L41-8275-33	CHIP INDUCTOR		
R1861	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L710	L41-8275-33	CHIP INDUCTOR		
R1862	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L711	L41-8275-33	CHIP INDUCTOR		
R1863	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L712	LB73G0AM-004	CHIP FERRITE		
R1864	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L713	LB73G0AM-004	CHIP FERRITE		
R1865	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L714	L92-0490-05	CHIP FERRITE		
R1866	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L715	L7K-0071-00	LC FILTER		
R1870	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L716	L7K-0071-00	LC FILTER		
R1871	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L717	L7K-0071-00	LC FILTER		
R1872	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L718	L7K-0071-00	LC FILTER		
R1873	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L719	L7K-0071-00	LC FILTER		
R1874	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L720	L7K-0071-00	LC FILTER		
R1875	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L721	L7K-0071-00	LC FILTER		
R1876	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L722	L7K-0071-00	LC FILTER		
R1877	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L723	L7K-0071-00	LC FILTER		
R1878	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L724	L7K-0071-00	LC FILTER		
R1879	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L725	L7K-0071-00	LC FILTER		
R1880	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L726	L7K-0071-00	LC FILTER		
R1881	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L727	L7K-0071-00	LC FILTER		
R1882	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L728	L7K-0071-00	LC FILTER		
R1883	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L729	L7K-0071-00	LC FILTER		
R1884	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L730	L7K-0071-00	LC FILTER		
R1885	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L731	L7K-0071-00	LC FILTER		
R1890	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L732	L7K-0071-00	LC FILTER		
R1891	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L733	L7K-0071-00	LC FILTER		
R1892	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L734	LB73G0AM-004	CHIP FERRITE		
R1893	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L802	LB73G0AM-004	CHIP FERRITE		
R1894	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L805	LB73G0AM-004	CHIP FERRITE		
R1895	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L806	LB73G0AM-004	CHIP FERRITE		
R1896	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L807	LB73G0AM-004	CHIP FERRITE		
R1897	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L808	LB73G0AM-004	CHIP FERRITE		
R1898	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L809	LB73G0AM-004	CHIP FERRITE		
R1899	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L901	LB73G0AM-004	CHIP FERRITE		
R1900	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L902	L33-3033-05	CHOKE COIL		
R1901	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L903	L33-3033-05	CHOKE COIL		
R1902	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		L1001	LB73G0AM-004	CHIP FERRITE		
R1903	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		L1002	LB73G0AM-004	CHIP FERRITE		
R1904	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L1003	L79-1947-05	FILTER		
R1905	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		L1004	L79-1947-05	FILTER		
R1906	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		L1005	L79-1947-05	FILTER		
R1907	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L1006	LB73G0AM-004	CHIP FERRITE		
R1908	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J		L1050	LB73G0AM-004	CHIP FERRITE		
R1910	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		L1100	LB73G0AM-004	CHIP FERRITE		
R1911	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		L1202	LB73G0BF-003	CHIP FERRITE		
R1912	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		L1203	L79-1947-05	FILTER		
R1913	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		L1302	LB73G0BF-003	CHIP FERRITE		
R1914	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J		L1303	L79-1947-05	FILTER		
R1915	RN73GH1J330D	MF RESISTOR	33Ω 0.063W D		L1400	L79-1947-05	FILTER		
R1916	RN73GH1J330D	MF RESISTOR	33Ω 0.063W D		L1401	L79-1947-05	FILTER		
R1917	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		L1402	L79-1947-05	FILTER		
R1918	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		L1405	L7K-0034-00	LC FILTER		
					L1406	L7K-0070-00	LC FILTER		
L1	L33-3001-05	CHOKE COIL			L1407	L7K-0034-00	LC FILTER		
L2	LR19E0BA220M	LEADED INDUCTOR	22uH		L1408	L7K-0070-00	LC FILTER		
L3	L33-1595-05	CHOKE COIL			L1500	LR77Z0AA1R0J	CHIP INDUCTOR	1uH	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
L1502	L39-1597-05	TOROIDAL COIL			CN1604	E40-6527-05	PIN ASSY		
L1503	LR77Z0AAR15J	CHIP INDUCTOR	0.15uH		CP1	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1504	LR77Z0AAR82J	CHIP INDUCTOR	0.82uH		CP2	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1505	LR77Z0AAR82J	CHIP INDUCTOR	0.82uH		CP3	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1506	LR77Z0AAR82J	CHIP INDUCTOR	0.82uH		CP4	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1507	L39-1586-05	TOROIDAL COIL			CP5	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1508	L39-1586-05	TOROIDAL COIL			CP6	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1509	LR77Z0AAR15J	CHIP INDUCTOR	0.15uH		CP7	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1510	LR77Z0AA1R2J	CHIP INDUCTOR	1.2uH		CP8	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1511	LR77Z0AAR39J	CHIP INDUCTOR	0.39uH		CP9	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1512	LR77Z0AAR68J	CHIP INDUCTOR	0.68uH		CP10	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1513	LR77Z0AAR39J	CHIP INDUCTOR	0.39uH		CP11	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1514	LR77Z0AA1R2J	CHIP INDUCTOR	1.2uH		CP12	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1515	LR77Z0AA1R0J	CHIP INDUCTOR	1uH		CP13	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1516	LR77Z0AA1R0J	CHIP INDUCTOR	1uH		CP14	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1517	LR77Z0AA1R0J	CHIP INDUCTOR	1uH		CP15	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1518	L41-1015-33	CHIP INDUCTOR			CP16	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1519	L41-1015-33	CHIP INDUCTOR			CP17	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1520	L41-1015-33	CHIP INDUCTOR			CP18	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1521	L41-1098-60	CHIP INDUCTOR			CP19	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1522	LR73Z0AE101J	CHIP INDUCTOR			CP20	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1523	LR73Z0AE101J	CHIP INDUCTOR			CP21	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1524	L41-1098-60	CHIP INDUCTOR			CP25	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1525	LR77Z0AA1R0J	CHIP INDUCTOR	1uH		CP26	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1526	LR77Z0AAR15J	CHIP INDUCTOR	0.15uH		CP27	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1527	LR77Z0AAR15J	CHIP INDUCTOR	0.15uH		CP28	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1528	L79-1947-05	FILTER			CP29	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1529	L79-1947-05	FILTER			CP30	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1530	L79-1947-05	FILTER			CP31	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
L1531	LB73G0AM-004	CHIP FERRITE			CP32	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1533	LR77Z0AAR12J	CHIP INDUCTOR			CP33	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1534	LR77Z0AAR39J	CHIP INDUCTOR	0.39uH		CP34	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
L1535	LR77Z0AAR12J	CHIP INDUCTOR			CP102	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1600	LR79Z0PM100M	CHIP INDUCTOR			CP113	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1602	LB73G0AM-004	CHIP FERRITE			CP124	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
L1603	L41-1005-39	CHIP INDUCTOR			CP133	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1604	L41-1005-39	CHIP INDUCTOR			CP135	RK74HA1J100J	NET RESISTOR	10Ω 1/16W J	
L1605	L41-1005-39	CHIP INDUCTOR			CP405	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
L1606	LB73G0AM-004	CHIP FERRITE			CP406	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
L1607	LB73G0AM-004	CHIP FERRITE			CP407	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1608	LB73G0AM-004	CHIP FERRITE			CP408	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1609	L33-1597-05	CHOKE COIL			CP409	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
L1610	L41-1005-32	CHIP INDUCTOR			CP410	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
L1611	L41-1005-32	CHIP INDUCTOR			CP412	RK74HA1J680J	NET RESISTOR	68Ω 1/16W J	
L1612	LB73G0AM-004	CHIP FERRITE			CP414	RK74HA1J680J	NET RESISTOR	68Ω 1/16W J	
L1613	LB73G0AM-004	CHIP FERRITE			CP415	RK74HA1J151J	NET RESISTOR	150Ω 1/16W J	
L1615	LR77Z0AA470J	CHIP INDUCTOR	47uH		CP416	RK74HA1J151J	NET RESISTOR	150Ω 1/16W J	
L1616	LB73G0AM-004	CHIP FERRITE			CP419	RK74HB1J103J	NET RESISTOR	10kΩ 1/16W J	
L1620	LB73G0AM-004	CHIP FERRITE			CP420	RK74HB1J103J	NET RESISTOR	10kΩ 1/16W J	
L1621	LB73G0AM-004	CHIP FERRITE			CP421	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
L1701	LB73G0AM-004	CHIP FERRITE			CP423	RK74HB1J103J	NET RESISTOR	10kΩ 1/16W J	
L1702	LB73G0AM-004	CHIP FERRITE			CP424	RK74HB1J103J	NET RESISTOR	10kΩ 1/16W J	
L1703	LB73G0BF-003	CHIP FERRITE			CP425	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
L1704	LB73G0BF-003	CHIP FERRITE			CP426	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
					CP428	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
CN1	E40-6530-05	PIN ASSY			CP429	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
CN2	E41-1686-05	PIN ASSY			CP431	RK74HA1J680J	NET RESISTOR	68Ω 1/16W J	
CN3	EC710AM-0522A	FFC FPC CONNE			CP432	RK74HA1J680J	NET RESISTOR	68Ω 1/16W J	
CN4	EC710AM-0520A	FFC FPC CONNE			CP433	RK74HA1J000J	NET RESISTOR	0Ω 1/16W J	
CN5	EC710AM-0560A	FFC FPC CONNE			CP434	RK74HA1J151J	NET RESISTOR	150Ω 1/16W J	
CN6	EC710AM-0560A	FFC FPC CONNE			CP435	RK74HA1J680J	NET RESISTOR	68Ω 1/16W J	
CN171	J19-5386-05	HOLDER			CP437	RK74HA1J220J	NET RESISTOR	22Ω 1/16W J	
CN201	E40-6727-05	F.C.CONNECTOR			CP701	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
CN405	E40-6914-05	F.C.CONNECTOR			CP702	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
CN701	EC710AM-0549A	FFC FPC CONNE			CP703	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
CN801	E40-6528-05	PIN ASSY			CP704	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
CN1001	E40-6528-05	PIN ASSY			CP705	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
CN1002	E41-1686-05	PIN ASSY			CP706	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1050	EC710AM-0560A	FFC FPC CONNE			CP707	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1100	E40-6914-05	F.C.CONNECTOR			CP708	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1500	E04-0491-05	PIN SOCKET			CP709	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1501	E04-0491-05	PIN SOCKET			CP710	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1502	E40-6852-05	PIN ASSY			CP711	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1503	E40-6852-05	PIN ASSY			CP712	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1600	E40-6526-05	PIN ASSY			CP713	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1601	E40-6525-05	PIN ASSY			CP714	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1602	E40-6526-05	PIN ASSY			CP715	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CN1603	E40-6525-05	PIN ASSY			CP716	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local
CP717	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CP718	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CP1100	RK74HA1J000J	NET RESISTOR	0Ω 1/16W J	
CP1101	RK74HA1J000J	NET RESISTOR	0Ω 1/16W J	
CP1102	RK74HA1J000J	NET RESISTOR	0Ω 1/16W J	
CP1200	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1201	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1202	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1203	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1204	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1205	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1206	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CP1207	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CP1300	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1301	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1302	RK74HA1J470J	NET RESISTOR	47Ω 1/16W J	
CP1303	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1304	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1305	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
CP1306	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
CP1307	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
F401	F53-0360-05	FUSE		
F701	F53-0317-15	FUSE		
F702	F53-0317-15	FUSE		
F801	F53-0317-15	FUSE		
F901	F53-0317-15	FUSE		
F951	F53-0367-05	FUSE		
F952	F53-0317-15	FUSE		
F953	F53-0317-15	FUSE		
F1001	F53-0367-05	FUSE		
F1101	F53-0360-05	FUSE		
J701	E58-0548-15	R.RECEPTACLE		
J801	E58-0537-05	R.RECEPTACLE		
J901	E5J-0153-00	R.RECEPTACLE		
J1050	E68-0424-05	JACK OTHERS		
J1100	E58-0529-05	SUB SOCKET D		
J1600	E1B-0001-00	3.5D PHONE JACK		
K1600	S76-0424-05	RELAY		
K1601	S76-0424-05	RELAY		
OT1	-----	SHIELDING CASE		
OT2	-----	SHIELDING COVER		
OT3	G11-4535-04	SHEET		
X101	L7J-0161-00	QUARTZ CRYSTAL		
X171	L77-1802-05	QUARTZ CRYSTAL		
X401	L7J-0162-00	QUARTZ CRYSTAL		
X402	L7J-0168-00	QUARTZ CRYSTAL		
X801	L7J-0163-00	QUARTZ CRYSTAL		
X802	L7J-0167-00	QUARTZ CRYSTAL		
X901	L7J-0164-00	QUARTZ CRYSTAL		
X1100	L7J-0165-00	QUARTZ CRYSTAL		
X1200	L7J-0166-00	QUARTZ CRYSTAL		
X1300	L7J-0166-00	QUARTZ CRYSTAL		
X1400	L7H-0084-00	TCXO		

△ Symbol No.	Part No.	Part Name	Description	Local
Q24	LTC043ZEBFS8	DIGI TRANSISTOR		
Q25	LTC043ZEBFS8	DIGI TRANSISTOR		
Q27	LTC014YEBFS8	DIGI TRANSISTOR		
Q28	TPC6111-F	FET		
Q31	LTC014YEBFS8	DIGI TRANSISTOR		
Q33	LTC014YEBFS8	DIGI TRANSISTOR		
Q34	LTC014YEBFS8	DIGI TRANSISTOR		
Q35	LTC014YEBFS8	DIGI TRANSISTOR		
Q36	LTC014YEBFS8	DIGI TRANSISTOR		
Q37	LTC014YEBFS8	DIGI TRANSISTOR		
Q38	LTC014YEBFS8	DIGI TRANSISTOR		
Q39	LTC014YEBFS8	DIGI TRANSISTOR		
Q40	LTC043ZEBFS8	DIGI TRANSISTOR		
Q41	LTC014YEBFS8	DIGI TRANSISTOR		
Q502	2SA2018	TRANSISTOR		
Q503	2SA2018	TRANSISTOR		
Q504	2SC5585	TRANSISTOR		
Q505	2SC5585	TRANSISTOR		
Q506	LTA014YEBFS8	DIGI TRANSISTOR		
Q507	LSCR523UBFS8	TRANSISTOR		
D1	RB531SM-30	DIODE		
D2	RB531SM-30	DIODE		
D3	RB531SM-30	DIODE		
D4	RB531SM-30	DIODE		
D5	RB531SM-30	DIODE		
D6	RB531SM-30	DIODE		
D7	RB531SM-30	DIODE		
D11	B30-2352-05	LED		
D13	B30-2352-05	LED		
D14	B30-2351-05	LED		
D15	B30-2352-05	LED		
D16	B30-2352-05	LED		
D17	B30-2351-05	LED		
D18	B30-2350-05	LED		
D22	B30-2352-05	LED		
D28	B30-2352-05	LED		
D29	MINISMDC05002F	VARIATOR		
D30	1SS355VM	DIODE		
D503	LXES15AAA1133	VARIATOR		
D504	LXES15AAA1133	VARIATOR		
D505	LXES15AAA1133	VARIATOR		
D506	LXES15AAA1133	VARIATOR		
D700	RB531SM-30	DIODE		
D701	RB531SM-30	DIODE		
D703	RB531SM-30	DIODE		
D704	RB531SM-30	DIODE		
D705	RB531SM-30	DIODE		
D706	B30-2350-05	LED		
D707	B30-2350-05	LED		
D708	B30-2352-05	LED		
D709	B30-2352-05	LED		
D710	B30-2352-05	LED		

## DISPLAY UNIT

### XC1-271J-00

**\*Note : This part cannot be replaced. Therefore, this part is not supplied as a service part.**

Block No. [0][3]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	F3651KDFCKHAA	IC		
IC2	TC7SET125FUJC	IC		
IC3	BU33TD2WNVX	IC		
IC501	TC7SZ08FE	IC		
IC502	BA00DD0WHFP	IC		
IC504	-----	IC		
IC650	TC7SZ04FEJC	IC		
Q22	LTC043ZEBFS8	DIGI TRANSISTOR		
Q23	LTC043ZEBFS8	DIGI TRANSISTOR		

\*Note

C2	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C15	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C16	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C17	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C18	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C20	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C21	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C22	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C23	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C24	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C25	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C26	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C27	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C28	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C29	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C30	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C31	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C32	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C33	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C34	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C35	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C36	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C37	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C38	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C39	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C591	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C40	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C592	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C41	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C593	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C42	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C596	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C74	CE32BM1E101M	E CAPACITOR	100uF 25V M		C597	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C75	CE32BM1E101M	E CAPACITOR	100uF 25V M		C608	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C76	CK73GB1E105K	C CAPACITOR	1uF 25V K		C618	CE32BM1E101M	E CAPACITOR	100uF 25V M	
C77	CK73GB1E105K	C CAPACITOR	1uF 25V K		C620	CE32BM1E101M	E CAPACITOR	100uF 25V M	
C79	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C621	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C80	CK73GB1E474K	C CAPACITOR	0.47uF 25V K		C646	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C81	CK73EXR1E226K	C CAPACITOR	22uF 25V K		C647	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C82	CK73GB1E105K	C CAPACITOR	1uF 25V K		C648	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C83	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C649	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C84	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C650	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C85	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C651	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C86	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C652	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C87	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C702	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C88	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C703	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C89	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C704	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C90	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C705	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C91	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C706	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C92	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C707	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C93	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C708	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C94	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C709	CK73GB1E474K	C CAPACITOR	0.47uF 25V K	
C95	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C710	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C109	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C711	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C110	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C712	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C111	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C713	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C112	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C714	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C113	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C715	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C114	CK73HBB1H102K	C CAPACITOR	1000pF 50V K						
C119	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		R5	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C120	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		R7	RK73HB1J154J	MG RESISTOR	150kΩ 1/16W J	
C121	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R9	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
C122	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R10	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
C123	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R11	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C124	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R12	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C125	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R13	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J	
C126	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R14	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C127	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R15	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C128	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R16	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C129	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R17	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C130	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R18	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C131	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R19	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C132	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R24	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C526	CC73HCH1H330J	C CAPACITOR	33pF 50V J		R25	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C528	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R29	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C529	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R30	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C530	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R35	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C531	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R36	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C553	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R37	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C555	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R38	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C556	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R39	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C557	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R40	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C559	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R41	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C560	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R42	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C561	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R43	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C562	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R44	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
C563	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R45	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C564	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R46	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C565	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R48	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C566	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		R49	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
C567	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R50	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
C568	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R51	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J	
C569	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R52	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J	
C570	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R53	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
C571	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R55	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
C580	CK73GB1E105K	C CAPACITOR	1uF 25V K		R56	RK73GB2A122J	MG RESISTOR	1.2kΩ 1/10W J	
C581	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R57	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
C582	CK73GB1E105K	C CAPACITOR	1uF 25V K		R58	RK73GB2A391J	MG RESISTOR	390Ω 1/10W J	
C583	CK73GB1E105K	C CAPACITOR	1uF 25V K		R60	RK73GB2A152J	MG RESISTOR	1.5kΩ 1/10W J	
C584	CK73FB1C106K	C CAPACITOR	10uF 16V K		R61	RK73GB2A122J	MG RESISTOR	1.2kΩ 1/10W J	
C585	CK73FB1C106K	C CAPACITOR	10uF 16V K		R62	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J	
C586	CK73FB1C106K	C CAPACITOR	10uF 16V K		R67	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C587	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		R75	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C588	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R102	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
C589	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R107	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
C590	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R108	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R660	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		J701	E1B-0025-00	PHONE JACK		
R661	RK73HH1J223D	MG RESISTOR	22kΩ 1/16W D		J702	E06-0858-25	C.RECEPTACLE-RO		
R662	RK73HH1J682D	MG RESISTOR	6.8kΩ 1/16W D		J703	E58-0549-05	R.RECEPTACLE		
R663	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		OT1	E23-1176-14	EARTH LUG		
R664	RK73HB1J680J	MG RESISTOR	68Ω 1/16W J		S7	S70-0439-15	TACTILE PUSH SW		
R666	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		S8	S70-0439-15	TACTILE PUSH SW		
R667	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		S9	S70-0439-15	TACTILE PUSH SW		
R700	RK73PB2H220J	MG RESISTOR	22Ω 1/2W J		S10	S70-0439-15	TACTILE PUSH SW		
R701	RK73PB2H220J	MG RESISTOR	22Ω 1/2W J		S11	S70-0439-15	TACTILE PUSH SW		
R702	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		S12	S70-0439-15	TACTILE PUSH SW		
R703	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		S13	S70-0439-15	TACTILE PUSH SW		
R705	RK73FB2B470J	MG RESISTOR	47Ω 1/8W J		S14	S70-0439-15	TACTILE PUSH SW		
R706	RK73FB2B470J	MG RESISTOR	47Ω 1/8W J		S15	S70-0439-15	TACTILE PUSH SW		
R707	RK73FB2B470J	MG RESISTOR	47Ω 1/8W J		S16	S70-0439-15	TACTILE PUSH SW		
R708	RK73FB2B470J	MG RESISTOR	47Ω 1/8W J		S17	S70-0439-15	TACTILE PUSH SW		
R709	RK73GB2A681J	MG RESISTOR	680Ω 1/10W J		S18	S70-0439-15	TACTILE PUSH SW		
R710	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		S19	S70-0439-15	TACTILE PUSH SW		
R711	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		S20	S70-0439-15	TACTILE PUSH SW		
R712	RK73GB2A331J	MG RESISTOR	330Ω 1/10W J		S21	S70-0439-15	TACTILE PUSH SW		
R713	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		S22	S70-0439-15	TACTILE PUSH SW		
R714	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		S23	S70-0439-15	TACTILE PUSH SW		
VR700	R31-0677-15	V RESISTOR			S24	S70-0439-15	TACTILE PUSH SW		
VR701	R31-0677-15	V RESISTOR			S25	S70-0439-15	TACTILE PUSH SW		
					S26	S70-0439-15	TACTILE PUSH SW		
					S27	S70-0439-15	TACTILE PUSH SW		
L1	LR79Z0PM101M	CHIP INDUCTOR			S28	S70-0439-15	TACTILE PUSH SW		
L2	L92-0641-05	FERRITE CORE			S29	S70-0439-15	TACTILE PUSH SW		
L3	LR79Z0PM100M	CHIP INDUCTOR			S30	S70-0439-15	TACTILE PUSH SW		
L4	LB73G0AM-004	CHIP FERRITE			S31	S70-0439-15	TACTILE PUSH SW		
L501	L33-3022-05	CHOKO COIL			S32	S70-0439-15	TACTILE PUSH SW		
L503	LB73G0AM-004	CHIP FERRITE			S33	S70-0439-15	TACTILE PUSH SW		
L505	L41-1001-62	CHIP INDUCTOR			S34	S70-0439-15	TACTILE PUSH SW		
L506	LB73H0EY-003	CHIP FERRITE			S35	S70-0439-15	TACTILE PUSH SW		
L507	LB73G0AM-004	CHIP FERRITE			S36	S70-0439-15	TACTILE PUSH SW		
L508	L79-1974-05	FILTER			S37	S70-0439-15	TACTILE PUSH SW		
L509	L92-0490-05	CHIP FERRITE			S38	S70-0439-15	TACTILE PUSH SW		
L700	L41-1085-33	CHIP INDUCTOR			S39	S70-0439-15	TACTILE PUSH SW		
L701	L41-1085-33	CHIP INDUCTOR			S40	S70-0439-15	TACTILE PUSH SW		
L702	L41-1085-33	CHIP INDUCTOR			S41	S70-0439-15	TACTILE PUSH SW		
L703	LB73G0AK-001	CHIP FERRITE			S42	S70-0439-15	TACTILE PUSH SW		
L704	LB73G0AK-001	CHIP FERRITE			S43	S70-0439-15	TACTILE PUSH SW		
L705	LB73G0AK-001	CHIP FERRITE			S44	S70-0439-15	TACTILE PUSH SW		
L706	LB73G0AK-001	CHIP FERRITE			S45	S70-0439-15	TACTILE PUSH SW		
L707	LB73G0AK-001	CHIP FERRITE			S46	S70-0439-15	TACTILE PUSH SW		
L708	LB73G0AK-001	CHIP FERRITE			S47	S70-0439-15	TACTILE PUSH SW		
L709	LB73G0AK-001	CHIP FERRITE			S48	S70-0439-15	TACTILE PUSH SW		
L710	LB73G0AK-001	CHIP FERRITE			S49	S70-0439-15	TACTILE PUSH SW		
L711	LB73G0AM-004	CHIP FERRITE			S50	S70-0439-15	TACTILE PUSH SW		
L712	LB73G0AK-001	CHIP FERRITE			S51	S70-0439-15	TACTILE PUSH SW		
L713	LB73G0AM-004	CHIP FERRITE			S52	S70-0439-15	TACTILE PUSH SW		
					S53	S70-0439-15	TACTILE PUSH SW		
CN2	EC710AM-0545A	FFC FPC CONNE			S54	S70-0439-15	TACTILE PUSH SW		
CN3	E40-6727-05	F.C.CONNECTOR			S55	S70-0439-15	TACTILE PUSH SW		
CN4	EC720AK-0515A	FFC FPC CONNE			S56	S70-0439-15	TACTILE PUSH SW		
CN5	EC710AM-0513A	FFC FPC CONNE			S57	S70-0439-15	TACTILE PUSH SW		
CN6	E40-6527-05	PIN ASSY			S58	S70-0439-15	TACTILE PUSH SW		
CN7	E41-1684-05	PIN ASSY			S59	S70-0439-15	TACTILE PUSH SW		
CN8	EC710AJ-1006A	FFC FPC CONNE			S60	S70-0439-15	TACTILE PUSH SW		
CN9	EC710AJ-1006A	FFC FPC CONNE			S61	S70-0439-15	TACTILE PUSH SW		
CN500	EC710AM-0545A	FFC FPC CONNE			S62	S70-0439-15	TACTILE PUSH SW		
CN501	E40-6529-05	PIN ASSY			S63	S70-0439-15	TACTILE PUSH SW		
CN502	EC710AM-0520A	FFC FPC CONNE			S700	S70-0439-15	TACTILE PUSH SW		
CN504	EC710AM-0549A	FFC FPC CONNE			S701	S70-0439-15	TACTILE PUSH SW		
CN505	E41-2332-05	F.C.CONNECTOR			S702	S70-0439-15	TACTILE PUSH SW		
CN507	EC720AA-0540A	FFC FPC CONNE			S703	S70-0439-15	TACTILE PUSH SW		
CN508	EC710AM-0513A	FFC FPC CONNE			S704	S70-0439-15	TACTILE PUSH SW		
CN509	E41-2741-05	PIN ASSY			S705	S70-0439-15	TACTILE PUSH SW		
CN513	E23-1325-05	TERMINAL			S706	S70-0439-15	TACTILE PUSH SW		
CN700	E41-1642-05	PIN ASSY			S707	S70-0439-15	TACTILE PUSH SW		
CN702	E40-6526-05	PIN ASSY			S708	S70-0439-15	TACTILE PUSH SW		
CN703	EC720AA-0515A	FFC FPC CONNE	15P		S709	W02-3772-05	ENCODER		
CN704	EC720AA-0513A	FFC FPC CONNE			S710	W02-3772-05	ENCODER		
CN705	EC710AJ-1006A	FFC FPC CONNE			S711	W02-3772-05	ENCODER		
CN706	EC720AJ-1006B	FFC FPC CONNE			S712	T9K-0027-00	ROTARY ENCODER		
CN707	EC710AM-0513A	FFC FPC CONNE			S713	S70-0439-15	TACTILE PUSH SW		
CN708	E40-6528-05	PIN ASSY			S714	S70-0439-15	TACTILE PUSH SW		
CN709	E41-2741-05	PIN ASSY			S715	S70-0439-15	TACTILE PUSH SW		
F1	F53-0317-15	FUSE			S716	S70-0439-15	TACTILE PUSH SW		
J700	E11-0705-15	PHONE JACK							

△ Symbol No.	Part No.	Part Name	Description	Local
S717	S70-0439-15	TACTILE PUSH SW		
S718	S70-0439-15	TACTILE PUSH SW		
X1	L7J-0161-00	QUARTZ CRYSTAL		

△ Symbol No.	Part No.	Part Name	Description	Local
C129	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C130	CK73EBB1H474K	C CAPACITOR	0.47uF 50V K	
C131	CK73GGB1H222K	C CAPACITOR	2200pF 50V K	
C132	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C133	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C134	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C135	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C136	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C137	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C138	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C139	CK73GGB1H332K	C CAPACITOR	3300pF 50V K	
C140	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C141	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C142	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C143	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C144	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C145	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C146	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C147	CD04AY1E470M	E CAPACITOR	47uF 25V M	
C148	CD04AY1E470M	E CAPACITOR	47uF 25V M	
C149	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C150	CK73EBB1H474K	C CAPACITOR	0.47uF 50V K	
C151	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C152	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C153	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C154	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C155	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C156	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C157	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C158	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C159	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C162	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C163	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C164	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C165	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C166	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C167	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C168	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C169	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C170	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C174	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C175	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C176	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C177	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C178	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C179	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C180	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C181	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C182	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C183	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C184	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C185	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C186	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C187	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C188	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C189	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C190	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C191	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C192	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C193	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C194	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C195	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C196	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C197	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C198	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C199	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C200	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C201	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C206	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C225	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C226	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C227	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C228	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C300	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C301	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C302	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C303	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C320	CK73EXR1E226K	C CAPACITOR	22uF 25V K	

## DC-DC UNIT

### XC2-035J-00

**\*Note : This part cannot be replaced. Therefore, this part is not supplied as a service part.**

Block No. [0][4]

△ Symbol No.	Part No.	Part Name	Description	Local
IC100	-----	IC	*Note	
IC120	-----	IC	*Note	
IC140	-----	IC	*Note	
IC401	BA00DD0WHFP	IC		
Q20	LSCR523EBFS8	TRANSISTOR		
Q23	2SD2704K	TRANSISTOR		
Q24	2SA1037AK	TRANSISTOR		
Q25	2SD2704K	TRANSISTOR		
Q160	LTC014EEBFS8	DIGI TRANSISTOR		
Q161	RP1A090ZP	TRANSISTOR		
D20	EDZV16B	ZENER DIODE		
D100	RB080LAM-30	SCHOTTKY DIODE		
D101	1SS226-F	DIODE		
D102	EDZV12B	ZENER DIODE		
D103	EDZV3.9B	ZENER DIODE		
D120	RB080LAM-30	SCHOTTKY DIODE		
D140	RB080LAM-30	SCHOTTKY DIODE		
D225	DA221WM	DIODE		
D226	DA221WM	DIODE		
C1	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C2	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C10	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C11	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C12	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C13	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C16	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C17	CD04BQ1E471M	E CAPACITOR	470uF 25V M	
C20	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C21	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C22	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C23	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C100	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C101	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C102	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C103	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C104	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C105	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C106	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C107	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C109	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C110	CK73EBB1H474K	C CAPACITOR	0.47uF 50V K	
C112	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C113	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C114	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C115	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C116	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C117	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C118	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C120	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C121	CD04BQ1E331M	E CAPACITOR	330uF 25V M	
C122	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C123	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C124	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C125	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C126	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
C127	CD04AY1E470M	E CAPACITOR	47uF 25V M	
C128	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C321	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R159	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C322	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R160	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C323	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R161	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C340	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R162	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J	
C341	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R163	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
C342	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R164	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
C343	CK73EXR1E226K	C CAPACITOR	22uF 25V K		R167	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C401	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R168	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
C402	CK73GB1E105K	C CAPACITOR	1uF 25V K		R169	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C403	CD04AY1E470M	E CAPACITOR	47uF 25V M		R170	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C404	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		R171	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C407	CD04AZ1V101M	E CAPACITOR	100uF 35V M		R172	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
					R173	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R3	RK73FB2B100J	MG RESISTOR	10Ω 1/8W J		R174	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R8	R92-3625-05	RESISTOR	0.1Ω 0.33W		R175	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R9	R92-3625-05	RESISTOR	0.1Ω 0.33W		R176	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R10	R92-3625-05	RESISTOR	0.1Ω 0.33W		R177	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R20	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R178	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R21	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R179	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R100	R92-3625-05	RESISTOR	0.1Ω 0.33W		R181	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R101	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R182	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R102	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R183	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R103	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R184	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R104	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R185	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R105	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R186	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R106	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R187	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R107	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R188	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R108	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J		R189	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R109	RK73GH2A124D	MG RESISTOR	120kΩ 1/10W D		R190	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R110	RK73GH2A133D	MG RESISTOR	13kΩ 1/10W D		R191	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R111	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R192	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R112	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R193	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R113	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R194	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R114	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R195	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R115	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R196	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R116	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R197	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R117	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R198	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R118	RK73GB2A272J	MG RESISTOR	2.7kΩ 1/10W J		R205	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R119	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R307	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R120	R92-3625-05	RESISTOR	0.1Ω 0.33W		R327	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R121	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R347	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	
R122	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R401	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J	
R123	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R403	RK73HH1J362D	MG RESISTOR	3.6kΩ 1/16W D	
R124	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		R404	RK73HH1J153D	MG RESISTOR	15kΩ 1/16W D	
R125	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J						
R126	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		L1	L33-1595-05	CHOKE COIL		
R127	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		L2	L33-1595-05	CHOKE COIL		
R128	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J		L3	L33-1598-05	CHOKE COIL		
R129	RK73GH2A823D	MG RESISTOR	82kΩ 1/10W D		L100	LR19E0BA330M	LEADED INDUCTOR		
R130	RK73GH2A153D	MG RESISTOR	15kΩ 1/10W D		L101	LR19E0BA470L	LEADED INDUCTOR	47uH	
R131	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L102	L33-1595-05	CHOKE COIL		
R132	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L103	L33-0695-05	CHOKE COIL		
R133	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L104	L33-0695-05	CHOKE COIL		
R134	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L105	L33-1598-05	CHOKE COIL		
R135	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L120	L33-3001-05	CHOKE COIL		
R136	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		L121	LR19E0BA220M	LEADED INDUCTOR	22uH	
R137	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		L122	L33-1595-05	CHOKE COIL		
R138	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L140	L33-3001-05	CHOKE COIL		
R139	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L141	LR19E0BA220M	LEADED INDUCTOR	22uH	
R140	R92-3625-05	RESISTOR	0.1Ω 0.33W		L142	L33-1595-05	CHOKE COIL		
R141	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		L190	L33-1595-05	CHOKE COIL		
R142	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		L220	LR77Z0AA100J	CHIP INDUCTOR	10uH	
R143	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J		L221	LR77Z0AA100J	CHIP INDUCTOR	10uH	
R144	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J						
R145	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		CN1	E40-6529-05	PIN ASSY		
R146	R92-3625-05	RESISTOR	0.1Ω 0.33W		CN103	EC710AM-0528A	FFC FPC CONNE		
R147	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		CN104	E40-6535-05	PIN ASSY		
R148	RK73GB2A184J	MG RESISTOR	180kΩ 1/10W J		CN105	E40-6529-05	PIN ASSY		
R149	RK73GH2A393D	MG RESISTOR	39kΩ 1/10W D		CN106	E40-6531-05	PIN ASSY		
R150	RK73GH2A123D	MG RESISTOR	12kΩ 1/10W D		CN107	EC710AM-0522A	FFC FPC CONNE		
R151	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		CN225	J13-0605-05	FUSE HOLDER		
R152	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		CN226	E40-6528-05	PIN ASSY		
R153	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		F4	FZA10BV-5R0	FUSE (CC)		
R154	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		F7	F53-0388-05	FUSE		
R155	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		F8	F53-0407-05	FUSE(UL/CSA)		
R156	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		F9	F53-0407-05	FUSE(UL/CSA)		
R157	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		F10	F53-0388-05	FUSE		
R158	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		OT1	-----	SHIELDING CASE	(x3)	

△ Symbol No.	Part No.	Part Name	Description	Local
OT2	-----	SHIELDING COVER	(x3)	
OT3	FZB10AU-4R0	BLADE FUSE	F225	
OT4	G11-4535-04	SHEET	(x3)	
OT5	N82-3008-48	BI.HEAD T.SCREW		

△ Symbol No.	Part No.	Part Name	Description	Local
Q298	LTC043ZEBFS8	DIGI TRANSISTOR		
Q299	LTA014EEBFS8	DIGI TRANSISTOR		
Q501	2SC4617/R/	TRANSISTOR		890SE
Q502	LTC043ZEBFS8	DIGI TRANSISTOR		890SE
Q503	2SC4617/R/	TRANSISTOR		
Q504	LTC043ZEBFS8	DIGI TRANSISTOR		
Q541	2SC4617/R/	TRANSISTOR		
Q542	2SC4617/R/	TRANSISTOR		
Q601	2SC4617/R/	TRANSISTOR		
Q603	2SC4617/R/	TRANSISTOR		
Q651	2SC4617/R/	TRANSISTOR		
Q652	2SC4617/R/	TRANSISTOR		
Q701	2SC4617/R/	TRANSISTOR		890SE
Q702	LTC043ZEBFS8	DIGI TRANSISTOR		
Q703	LTC043ZEBFS8	DIGI TRANSISTOR		
Q704	LTA014EEBFS8	DIGI TRANSISTOR		
Q705	SSM3K15AMFVF	FET		
Q706	LTA014EEBFS8	DIGI TRANSISTOR		890SE
Q707	LTA014EEBFS8	DIGI TRANSISTOR		
Q721	2SC4617/R/	TRANSISTOR		
Q751	2SC4617/R/	TRANSISTOR		
Q786	2SC4617/R/	TRANSISTOR		
Q801	2SC4617/R/	TRANSISTOR		
Q841	2SC5585	TRANSISTOR		
Q842	2SC4617/R/	TRANSISTOR		
Q843	LTC043ZEBFS8	DIGI TRANSISTOR		

## PLL UNIT

**XC2-036J-00(TS-890S(K))**

**XC2-036E-01(TS-890S(E))**

**\*Note : This part cannot be replaced. Therefore, this part is not supplied as a service part.**

Block No. [0][5]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	BU7242FVM	IC		
IC51	BU7242FVM	IC		
IC52	BU33UC3WG	IC		
IC101	-----	IC	*Note	
IC201	-----	IC	*Note	
IC241	-----	IC	*Note	
IC511	TC7WZ74FKJC	IC		890SE
IC512	TC7WZ74FKJC	IC		
IC513	TC7WZ86FKJC	IC		
IC514	TC7WZ74FKJC	IC		
IC515	TC7WZ08FKJC	IC		
IC516	TC7WZ74FKJC	IC		
IC601	AD9835BRUZ	IC		
IC721	-----	IC	*Note	
IC821	BU7242FVM	IC		
IC851	TC7WT125FUF	IC		
IC852	TC7WT125FUF	IC		
IC853	CD74HC4094M96	IC		
IC854	CD74HC4094M96	IC		
IC901	-----	IC	*Note	
IC912	-----	IC	*Note	
IC922	-----	IC	*Note	
Q1	2SC4617/R/	TRANSISTOR		
Q2	2SC4617/R/	TRANSISTOR		
Q3	2SC4617/R/	TRANSISTOR		
Q6	LTC043ZEBFS8	DIGI TRANSISTOR		
Q7	LTA014EEBFS8	DIGI TRANSISTOR		
Q51	2SC4617/R/	TRANSISTOR		
Q52	LTA014EEBFS8	DIGI TRANSISTOR		
Q53	LTC043ZEBFS8	DIGI TRANSISTOR		
Q101	2SC4617/R/	TRANSISTOR		
Q102	2SC4617/R/	TRANSISTOR		
Q181	2SC5551AF	TRANSISTOR		
Q201	LTC043ZEBFS8	DIGI TRANSISTOR		
Q241	2SC5551AF	TRANSISTOR		
Q242	LTC043ZEBFS8	DIGI TRANSISTOR		
Q243	LTC043ZEBFS8	DIGI TRANSISTOR		
Q251	2SC5551AF	TRANSISTOR		
Q271	LTC043ZEBFS8	DIGI TRANSISTOR		
Q272	LTA014EEBFS8	DIGI TRANSISTOR		
Q274	LTC043ZEBFS8	DIGI TRANSISTOR		
Q275	LTA014EEBFS8	DIGI TRANSISTOR		
Q277	LTC043ZEBFS8	DIGI TRANSISTOR		
Q278	LTA014EEBFS8	DIGI TRANSISTOR		
Q280	LTC043ZEBFS8	DIGI TRANSISTOR		
Q281	LTA014EEBFS8	DIGI TRANSISTOR		
Q283	LTC043ZEBFS8	DIGI TRANSISTOR		
Q284	LTA014EEBFS8	DIGI TRANSISTOR		
Q286	LTC043ZEBFS8	DIGI TRANSISTOR		
Q287	LTA014EEBFS8	DIGI TRANSISTOR		
Q289	LTC043ZEBFS8	DIGI TRANSISTOR		
Q290	LTA014EEBFS8	DIGI TRANSISTOR		
Q292	LTC043ZEBFS8	DIGI TRANSISTOR		
Q293	LTA014EEBFS8	DIGI TRANSISTOR		
Q295	LTC043ZEBFS8	DIGI TRANSISTOR		
Q296	LTA014EEBFS8	DIGI TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local
D1	CSA70-401L	SURGE ABSORBER		
D2	UDZV3.3B	ZENER DIODE		
D3	UDZV3.3B	ZENER DIODE		
D4	RN262CS	DIODE		
D5	RN262CS	DIODE		
D6	RB706F-40	DIODE		
D51	RN262CS	DIODE		
D52	RN262CS	DIODE		
D101	RN262CS	DIODE		
D102	RN262CS	DIODE		
D103	RN262CS	DIODE		
D104	RN262CS	DIODE		
D105	CES388	SCHOTTKY DIODE		
D271	RN262CS	DIODE		
D272	RN262CS	DIODE		
D273	RN262CS	DIODE		
D274	RN262CS	DIODE		
D275	RN262CS	DIODE		
D276	RN262CS	DIODE		
D277	RN262CS	DIODE		
D278	RN262CS	DIODE		
D279	RN262CS	DIODE		
D280	RN262CS	DIODE		
D281	RN262CS	DIODE		
D282	RN262CS	DIODE		
D283	RN262CS	DIODE		
D284	RN262CS	DIODE		
D285	RN262CS	DIODE		
D286	RN262CS	DIODE		
D287	RN262CS	DIODE		
D288	RN262CS	DIODE		
D289	RN262CS	DIODE		
D290	RN262CS	DIODE		
D651	RN262CS	DIODE		
D701	RN262CS	DIODE		890SE
D721	CES388	SCHOTTKY DIODE		
D752	1SV323F	VARI CAP DIODE		
C1	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C2	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C3	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C4	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C5	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C6	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C7	CK73HBB1H152K	C CAPACITOR	1500pF 50V K	
C8	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C9	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C10	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C11	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C12	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C13	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C14	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C150	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C15	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C151	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C16	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C152	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C17	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C153	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C18	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C181	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C19	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C182	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C20	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C183	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C21	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C184	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C22	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C185	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C23	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C186	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C24	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C187	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C25	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C188	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C26	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C189	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C27	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C190	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C28	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C191	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C29	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C201	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C30	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C202	CK73HBB1H152K	C CAPACITOR	1500pF 50V K	
C31	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C203	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C32	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C204	CK73HBB1H332K	C CAPACITOR	3300pF 50V K	
C33	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C205	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C53	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C206	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C54	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C207	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C55	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C208	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C56	CC73HCH1H150G	C CAPACITOR	15pF 50V G		C209	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C57	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C211	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C58	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C213	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C59	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C214	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C60	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C215	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C62	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C216	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C64	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C217	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C67	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C218	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C68	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C219	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C69	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C220	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C70	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C221	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C71	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C222	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C72	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C223	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C73	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C224	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C74	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		C225	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C76	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		C226	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C77	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C237	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C79	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C238	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C83	CK73HBB1C333K	C CAPACITOR	0.033uF 16V K		C239	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C101	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C240	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C102	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C241	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C103	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C242	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C104	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C243	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C105	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C247	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C106	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C248	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C107	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C250	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C108	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C251	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C109	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C252	CC73HCH1H220J	C CAPACITOR	22pF 50V J	
C110	CC73HCH1H391J	C CAPACITOR	390pF 50V J		C253	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C111	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C254	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C114	CC73HCH1H391J	C CAPACITOR	390pF 50V J		C255	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C115	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C257	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C120	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C258	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C121	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C259	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C122	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C261	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C123	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C262	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C124	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		C264	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C126	CK73HB1A224K	C CAPACITOR	0.22uF 10V K		C266	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C127	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C267	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C128	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C268	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C129	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C271	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C130	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C273	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C131	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C274	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C132	CK73FB1C106K	C CAPACITOR	10uF 16V K		C275	CC73HCH1H681J	C CAPACITOR	680pF 50V J	
C133	CK73FB1C106K	C CAPACITOR	10uF 16V K		C276	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C134	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C277	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C135	CK73GBB1A824K	C CAPACITOR	0.82uF 10V K		C278	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C136	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C279	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C138	CK73FB1C106K	C CAPACITOR	10uF 16V K		C280	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C141	CK73HBB1C823K	C CAPACITOR	0.082uF 16V K		C281	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C145	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C282	CC73HCH1H821J	C CAPACITOR	820pF 50V J	
C146	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C283	CC73HCH1H681J	C CAPACITOR	680pF 50V J	
C147	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C286	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C148	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C287	CC73HCH1H390J	C CAPACITOR	39pF 50V J	
C149	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C288	CC73HCH1H331J	C CAPACITOR	330pF 50V J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C289	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C379	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C290	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C380	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C291	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C381	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C292	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C382	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C293	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C383	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C295	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C384	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C296	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C385	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C297	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C386	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C298	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C387	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C299	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C388	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C300	CC73HCH1H821J	C CAPACITOR	820pF 50V J		C389	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C301	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C390	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C302	CC73HCH1H821J	C CAPACITOR	820pF 50V J		C391	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C303	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C392	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C304	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C393	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C305	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C394	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C308	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C395	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C309	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C396	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C310	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C397	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C311	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C398	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C312	CC73HCH1H221J	C CAPACITOR	220pF 50V J		C399	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C313	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C400	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C314	CC73HCH1H270J	C CAPACITOR	27pF 50V J		C401	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C315	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C403	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C317	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C404	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C318	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C405	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C319	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C406	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C320	CC73HCH1H391J	C CAPACITOR	390pF 50V J		C407	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C321	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C408	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C322	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C409	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C323	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C410	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C324	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C411	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C325	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C412	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C326	CC73HCH1H391J	C CAPACITOR	390pF 50V J		C413	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C327	CC73HCH1H331J	C CAPACITOR	330pF 50V J		C414	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C330	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C415	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C331	CC73HCH1H220J	C CAPACITOR	22pF 50V J		C416	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C332	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C417	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C333	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C418	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C334	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C419	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C335	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C420	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C336	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C421	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C337	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C422	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C339	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C423	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C340	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C425	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C341	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C426	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C342	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C427	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C343	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C428	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C344	CC73HCH1H681J	C CAPACITOR	680pF 50V J		C429	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C345	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C430	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C346	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C431	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C347	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C432	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C350	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C433	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C351	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C434	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C352	CC73HCH1H181J	C CAPACITOR	180pF 50V J		C435	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C353	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C436	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C354	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C437	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C355	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C438	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C356	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C439	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C357	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C440	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C358	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C441	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C359	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C442	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C361	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C443	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C362	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C444	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C363	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C445	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C364	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C447	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C365	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C448	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C366	CC73HCH1H681J	C CAPACITOR	680pF 50V J		C449	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C367	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C450	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C368	CC73HCH1H561J	C CAPACITOR	560pF 50V J		C451	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C369	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C452	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C372	CC73HCH1H101J	C CAPACITOR	100pF 50V J		C453	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C373	CC73HCH1H090B	C CAPACITOR	9pF 50V B		C454	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C374	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C455	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C375	CC73HCH1H470G	C CAPACITOR	47pF 50V G		C456	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C376	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C457	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C377	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C458	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C378	CC73HCH1H121J	C CAPACITOR	120pF 50V J		C459	CC73HCH1H150G	C CAPACITOR	15pF 50V G	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C460	CC73HCH1H680J	C CAPACITOR	68pF 50V J		C549	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C461	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C550	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C462	CC73HCH1H680J	C CAPACITOR	68pF 50V J		C551	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C463	CC73HCH1H100B	C CAPACITOR	10pF 50V B		C552	CC73HCH1H331J	C CAPACITOR	330pF 50V J	
C464	CC73HCH1H680J	C CAPACITOR	68pF 50V J		C553	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C465	CC73HCH1H150G	C CAPACITOR	15pF 50V G		C554	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C466	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C555	CC73HCH1H270J	C CAPACITOR	27pF 50V J	
C467	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C556	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C469	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C557	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C470	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C558	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C471	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C559	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C472	CC73HCH1H680J	C CAPACITOR	68pF 50V J		C601	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C473	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C602	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C474	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C603	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C475	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C604	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C476	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C605	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C477	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C606	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C478	CC73HCH1H680J	C CAPACITOR	68pF 50V J		C607	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C479	CC73HCH1H820J	C CAPACITOR	82pF 50V J		C608	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C480	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C609	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C481	CC73HCH1H090B	C CAPACITOR	9pF 50V B		C611	CK73HBB1H472K	C CAPACITOR	4700pF 50V K	
C482	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C612	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C483	CC73HCH1H070B	C CAPACITOR	7pF 50V B		C613	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C484	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C614	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C485	CC73HCH1H070B	C CAPACITOR	7pF 50V B		C615	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K	
C486	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C619	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C487	CC73HCH1H090B	C CAPACITOR	9pF 50V B		C620	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C488	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C621	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C489	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		C622	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C490	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C623	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C501	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C624	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C502	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C625	CK73HBB1H182K	C CAPACITOR	1800pF 50V K	
C503	CC73HCH1H471J	C CAPACITOR	470pF 50V J	890SE	C626	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C504	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C627	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C505	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C628	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C506	CC73HCH1H330J	C CAPACITOR	33pF 50V J	890SE	C629	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C507	CC73HCH1H560J	C CAPACITOR	56pF 50V J	890SE	C630	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C508	CC73HCH1H560J	C CAPACITOR	56pF 50V J	890SE	C651	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C509	CC73HCH1H330J	C CAPACITOR	33pF 50V J	890SE	C652	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C510	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C653	CC73HCH1H221J	C CAPACITOR	220pF 50V J	
C511	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K	890SE	C654	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C512	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	890SE	C655	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C513	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C656	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C514	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C657	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C515	CC73HCH1H471J	C CAPACITOR	470pF 50V J		C658	CC73HCH1H151J	C CAPACITOR	150pF 50V J	
C516	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C659	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C517	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C660	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C518	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C661	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C519	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C662	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C520	CC73HCH1H560J	C CAPACITOR	56pF 50V J		C663	CC73HCH1H820J	C CAPACITOR	82pF 50V J	
C521	CC73HCH1H330J	C CAPACITOR	33pF 50V J		C664	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C522	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C665	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C523	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K		C666	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C524	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C667	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C525	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C668	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C526	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	C669	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C527	CC73HCH1H560J	C CAPACITOR	56pF 50V J	890SE	C670	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C528	CC73HCH1H101J	C CAPACITOR	100pF 50V J	890SE	C671	CC73HCH1H180J	C CAPACITOR	18pF 50V J	
C529	CC73HCH1H101J	C CAPACITOR	100pF 50V J	890SE	C672	CC73HCH1H680J	C CAPACITOR	68pF 50V J	
C530	CC73HCH1H560J	C CAPACITOR	56pF 50V J	890SE	C673	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C531	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	C674	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	
C532	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K		C675	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C533	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C676	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C534	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C692	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C535	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K		C701	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C536	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K		C702	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C537	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C703	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C538	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C704	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C539	CK73HBB1C473K	C CAPACITOR	0.047uF 16V K		C705	CC73HCH1H151J	C CAPACITOR	150pF 50V J	890SE
C540	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		C706	CC73HCH1H220J	C CAPACITOR	22pF 50V J	890SE
C541	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C707	CC73HCH1H221J	C CAPACITOR	220pF 50V J	890SE
C542	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C708	CC73HCH1H220J	C CAPACITOR	22pF 50V J	890SE
C543	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C709	CC73HCH1H221J	C CAPACITOR	220pF 50V J	890SE
C544	CC73HCH1H271J	C CAPACITOR	270pF 50V J		C710	CC73HCH1H220J	C CAPACITOR	22pF 50V J	890SE
C545	CC73HCH1H151J	C CAPACITOR	150pF 50V J		C711	CC73HCH1H151J	C CAPACITOR	150pF 50V J	890SE
C546	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C712	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C547	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C713	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C548	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C714	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C715	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K	890SE	C927	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C722	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C928	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C723	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C930	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C724	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C931	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C725	CC73HCH1H391J	C CAPACITOR	390pF 50V J		C941	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C726	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		C942	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C727	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R1	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
C729	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R5	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
C731	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R6	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J	
C732	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K		R8	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C733	CK73HB1A224K	C CAPACITOR	0.22uF 10V K		R9	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
C734	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R10	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
C735	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R11	RK73HB1J390J	MG RESISTOR	39Ω 1/16W J	
C736	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R12	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C737	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R13	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C738	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R14	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C739	CK73FB1C106K	C CAPACITOR	10uF 16V K		R15	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
C740	CK73FB1C106K	C CAPACITOR	10uF 16V K		R16	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
C751	CC73HCH1H821J	C CAPACITOR	820pF 50V J		R17	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C752	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R21	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
C753	CC73HCH1H680J	C CAPACITOR	68pF 50V J		R22	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C755	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R23	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C758	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R24	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C759	CC73HCH1H070B	C CAPACITOR	7pF 50V B		R25	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
C760	CC73HCH1H070B	C CAPACITOR	7pF 50V B		R26	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J	
C761	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R27	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
C762	CC73HCH1H150G	C CAPACITOR	15pF 50V G		R28	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
C765	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R30	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C766	CC73HCH1H680J	C CAPACITOR	68pF 50V J		R31	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
C768	CC73HCH1H680J	C CAPACITOR	68pF 50V J		R32	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
C786	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R51	RK73HB1J223D	MG RESISTOR	22kΩ 1/16W D	
C787	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R52	RK73HB1J184D	MG RESISTOR	180kΩ 1/16W D	
C788	CC73HCH1H820J	C CAPACITOR	82pF 50V J		R53	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
C789	CC73HCH1H151J	C CAPACITOR	150pF 50V J		R54	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
C790	CC73HCH1H820J	C CAPACITOR	82pF 50V J		R59	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C791	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R61	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
C792	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R63	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C793	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R64	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
C794	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R65	RK73HB1J390J	MG RESISTOR	39Ω 1/16W J	
C795	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R66	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C801	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R67	RK73HB1J180J	MG RESISTOR	18Ω 1/16W J	
C802	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R68	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C803	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R69	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C804	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R71	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
C805	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R73	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
C806	CC73HCH1H181J	C CAPACITOR	180pF 50V J		R74	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C807	CC73HCH1H330J	C CAPACITOR	33pF 50V J		R75	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C808	CC73HCH1H331J	C CAPACITOR	330pF 50V J		R101	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C809	CC73HCH1H330J	C CAPACITOR	33pF 50V J		R102	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C810	CC73HCH1H181J	C CAPACITOR	180pF 50V J		R103	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
C813	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R104	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C821	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R105	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J	
C822	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R106	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C823	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R107	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
C841	CE32BM1C101M	E CAPACITOR	100uF 16V M		R108	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
C842	CE32BM1C101M	E CAPACITOR	100uF 16V M		R109	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C843	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R110	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
C844	CK73HBB1H102K	C CAPACITOR	1000pF 50V K		R111	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
C845	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R112	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
C848	CK73HB1E104K	C CAPACITOR	0.10uF 25V K		R113	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
C851	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R115	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
C852	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R116	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
C853	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R117	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C854	CK73HBB1H103K	C CAPACITOR	0.01uF 50V K		R118	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C873	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R119	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
C875	CC73HCH1H101J	C CAPACITOR	100pF 50V J		R120	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
C902	CK73FB1C106K	C CAPACITOR	10uF 16V K		R121	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
C904	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		R122	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C907	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		R123	RK73HB1J682J	MG RESISTOR	6.8kΩ 1/16W J	
C909	CK73FB1C106K	C CAPACITOR	10uF 16V K		R124	RK73HB1J682J	MG RESISTOR	6.8kΩ 1/16W J	
C911	CK73FB1C106K	C CAPACITOR	10uF 16V K		R125	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	
C913	CK73FB1C106K	C CAPACITOR	10uF 16V K		R126	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C915	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		R127	RK73HB1J106J	MG RESISTOR	10MΩ 1/16W J	
C916	CK73HB1C105K	C CAPACITOR	1.0uF 16V K		R128	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C918	CK73FB1C106K	C CAPACITOR	10uF 16V K		R129	RK73HB1J2R2J	MG RESISTOR	2.2Ω 1/16W J	
C921	CK73FB1C106K	C CAPACITOR	10uF 16V K		R130	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C923	CK73FB1C106K	C CAPACITOR	10uF 16V K		R131	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
C925	CK73HB1C105K	C CAPACITOR	1.0uF 16V K						

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R132	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J		R306	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R135	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R308	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R136	RK73HB1J151J	MG RESISTOR	150Ω 1/16W J		R309	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R137	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R310	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R139	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R311	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R181	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R312	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R182	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R314	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R183	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R315	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R186	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R316	RK73HB1J150J	MG RESISTOR	15Ω 1/16W J	
R187	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		R317	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R188	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R318	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R189	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R320	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R201	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J		R321	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R202	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R322	RK73HB1J150J	MG RESISTOR	15Ω 1/16W J	
R203	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R323	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R204	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R324	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R205	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R326	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R206	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		R327	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R207	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R328	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J	
R208	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R329	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R209	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R330	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R210	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R331	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R211	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R341	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R212	RK73HB1J272J	MG RESISTOR	2.7kΩ 1/16W J		R342	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R229	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R343	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R230	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R344	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R231	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R345	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R232	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R346	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R233	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R347	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R234	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J		R348	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R235	RK73GB2A270J	MG RESISTOR	27Ω 1/10W J		R349	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R236	RK73GB2A270J	MG RESISTOR	27Ω 1/10W J		R350	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R237	RK73HB1J330J	MG RESISTOR	33Ω 1/16W J		R501	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	890SE
R238	RK73GB2A2R2J	MG RESISTOR	2.2Ω 1/10W J		R502	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	890SE
R240	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R503	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	890SE
R241	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R504	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	890SE
R242	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		R505	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	890SE
R243	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R506	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	890SE
R244	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R507	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	890SE
R245	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R508	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	890SE
R250	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J		R509	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	890SE
R251	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R510	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	890SE
R252	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R511	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	890SE
R253	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R512	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	890SE
R254	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J		R513	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R255	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J		R514	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R256	RK73GB2A120J	MG RESISTOR	12Ω 1/10W J		R515	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R259	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R516	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R260	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		R517	RK73GB2A151J	MG RESISTOR	150Ω 1/10W J	
R272	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R518	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R273	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J		R519	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R274	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J		R520	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R275	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J		R521	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R276	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R524	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R278	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R529	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R279	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J		R530	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R280	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J		R533	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R281	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J		R534	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R282	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R535	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R284	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R536	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R285	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R537	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R286	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J		R538	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R287	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R542	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R288	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R543	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R290	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R544	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R291	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R545	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R292	RK73HB1J180J	MG RESISTOR	18Ω 1/16W J		R546	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R293	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R547	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R294	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R548	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R296	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R549	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R297	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R550	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R298	RK73HB1J180J	MG RESISTOR	18Ω 1/16W J		R551	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R299	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R552	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R300	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R601	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R302	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R602	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R303	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R603	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R304	RK73HB1J180J	MG RESISTOR	18Ω 1/16W J		R604	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R305	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R605	RK73GB2A21J	MG RESISTOR	220Ω 1/10W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R606	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J		R786	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R607	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R787	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R608	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R788	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R609	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R789	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R611	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R790	RK73GB2A181J	MG RESISTOR	180Ω 1/10W J	
R612	RK73HB1J392J	MG RESISTOR	3.9kΩ 1/16W J		R791	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R613	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R792	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R614	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J		R793	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R615	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J		R801	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R621	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R802	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R622	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R803	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R623	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R804	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R624	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R805	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R625	RK73GB2A560J	MG RESISTOR	56Ω 1/10W J		R806	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R627	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R807	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R628	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J		R809	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R629	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R810	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R630	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J		R811	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R632	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J		R821	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R651	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R823	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R652	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R824	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R653	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R825	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R654	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R826	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R655	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J		R828	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R656	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R841	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R657	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R842	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R658	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R843	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R659	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J		R844	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R660	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R851	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R661	RK73GB2A271J	MG RESISTOR	270Ω 1/10W J		R852	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R662	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J		R853	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R663	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R854	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R664	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J		R855	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R665	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R856	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R666	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R857	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R667	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J		R858	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R677	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J		R871	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R701	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	890SE	R872	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R702	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	890SE	R873	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R703	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	890SE	R875	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R704	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	890SE	R876	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R705	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	890SE	R877	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R706	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	890SE	R878	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R707	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	890SE	R879	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R708	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	890SE	R880	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R709	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	890SE	R881	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R711	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R882	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R712	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R883	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R715	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	890SE	R884	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R722	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		R885	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R724	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R886	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R725	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		R888	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R726	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		R889	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R727	RK73GB2A391J	MG RESISTOR	390Ω 1/10W J		R991	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	890SK
R728	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J		R994	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	890SE
R729	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J						
R731	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J		L1	LR73Z0AER33J	CHIP INDUCTOR		
R732	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L2	LR73Z0AE2R7J	CHIP INDUCTOR		
R733	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		L3	LR73Z0AER18J	CHIP INDUCTOR		
R734	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		L4	LR73Z0AE2R7J	CHIP INDUCTOR		
R735	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J		L5	LR73Z0AER33J	CHIP INDUCTOR		
R736	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J		L6	LR73Z0AE100J	CHIP INDUCTOR		
R737	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J		L7	LR73Z0AER82J	CHIP INDUCTOR		
R751	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L8	LR73Z0AER82J	CHIP INDUCTOR		
R752	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J		L9	LR73Z0AE100J	CHIP INDUCTOR		
R753	RK73HB1J105J	MG RESISTOR	1MΩ 1/16W J		L10	LR73Z0AE100J	CHIP INDUCTOR		
R754	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J		L51	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
R755	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L52	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
R756	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L54	LR73Z0AE100J	CHIP INDUCTOR		
R757	RK73HB1J106J	MG RESISTOR	10MΩ 1/16W J		L55	LR73Z0AE100J	CHIP INDUCTOR		
R758	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L101	LR73Z0AE100J	CHIP INDUCTOR		
R759	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J		L102	LR73Z0AE330J	CHIP INDUCTOR		
R760	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J		L103	LR73Z0AE1R0J	CHIP INDUCTOR		
R761	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		L104	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
R762	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		L107	LR73Z0AE330J	CHIP INDUCTOR		
R763	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J		L108	LR73Z0AE1R0J	CHIP INDUCTOR		
R764	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L109	LR73Z0AE1R0J	CHIP INDUCTOR		
R773	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J		L112	LR73Z0AE1R0J	CHIP INDUCTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
L181	LR73Z0AER22J	CHIP INDUCTOR			L340	LR79Z0JG82NG	CHIP INDUCTOR		
L182	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH		L341	LR79Z0JG82NG	CHIP INDUCTOR		
L183	LR77Z0AAR12J	CHIP INDUCTOR			L342	LR79Z0JG68NG	CHIP INDUCTOR		
L184	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH		L343	LR79Z0JGR10G	CHIP INDUCTOR		
L201	LR77Z0AA47NJ	CHIP INDUCTOR	47nH		L344	LR79Z0JG68NG	CHIP INDUCTOR		
L241	LR77Z0AA47NJ	CHIP INDUCTOR	47nH		L345	LR79Z0JG68NG	CHIP INDUCTOR		
L243	LR79Z0JG56NG	CHIP INDUCTOR			L346	LR79Z0JG82NG	CHIP INDUCTOR		
L244	LR79Z0MW1R5J	CHIP INDUCTOR			L347	LR79Z0JG47NG	CHIP INDUCTOR		
L245	LR79Z0MW1R5J	CHIP INDUCTOR			L348	LR79Z0JG56NG	CHIP INDUCTOR		
L251	LR79Z0JG82NG	CHIP INDUCTOR			L349	LR79Z0JG56NG	CHIP INDUCTOR		
L252	LR79Z0MW1R5J	CHIP INDUCTOR			L350	LR79Z0JG47NG	CHIP INDUCTOR		
L253	LR79Z0MW1R5J	CHIP INDUCTOR			L351	LR73Z0AE100J	CHIP INDUCTOR		
L254	LR73Z0AE100J	CHIP INDUCTOR			L501	LR73Z0AER22J	CHIP INDUCTOR		890SE
L255	LR79Z0JG82NG	CHIP INDUCTOR			L502	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	890SE
L271	LR79Z0MW1R5J	CHIP INDUCTOR			L503	LR77Z0AAR12J	CHIP INDUCTOR		890SE
L272	LR79Z0MW1R2J	CHIP INDUCTOR			L504	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	890SE
L273	LR79Z0MW1R2J	CHIP INDUCTOR			L505	LR73Z0AER22J	CHIP INDUCTOR		
L274	LR79Z0MW1R5J	CHIP INDUCTOR			L506	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	
L276	LR79Z0MWR68G	CHIP INDUCTOR			L507	LR77Z0AAR12J	CHIP INDUCTOR		
L277	LR79Z0MWR47G	CHIP INDUCTOR			L508	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	
L278	LR79Z0MWR68G	CHIP INDUCTOR			L509	LR73Z0AE100J	CHIP INDUCTOR		
L279	LR79Z0MW1R0G	CHIP INDUCTOR			L511	LR73Z0AE100J	CHIP INDUCTOR		890SE
L280	LR79Z0MWR82G	CHIP INDUCTOR			L526	LR73Z0AER18J	CHIP INDUCTOR		890SE
L281	LR79Z0MWR82G	CHIP INDUCTOR			L527	LR73Z0AER22J	CHIP INDUCTOR		890SE
L282	LR79Z0MW1R0G	CHIP INDUCTOR			L528	LR73Z0AER18J	CHIP INDUCTOR		890SE
L284	LR79Z0MWR56G	CHIP INDUCTOR			L541	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
L285	LR79Z0MWR39G	CHIP INDUCTOR			L542	LR73Z0AER56J	CHIP INDUCTOR		
L286	LR79Z0MWR39G	CHIP INDUCTOR			L543	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
L287	LR79Z0MWR68G	CHIP INDUCTOR			L544	LR73Z0AE100J	CHIP INDUCTOR		
L288	LR79Z0MWR56G	CHIP INDUCTOR			L545	LR77Z0AA68NJ	CHIP INDUCTOR	68nH	
L289	LR79Z0MWR56G	CHIP INDUCTOR			L546	LR73Z0AER56J	CHIP INDUCTOR		
L290	LR79Z0MWR68G	CHIP INDUCTOR			L547	LR77Z0AA47NJ	CHIP INDUCTOR	47nH	
L292	LR79Z0MWR39G	CHIP INDUCTOR			L548	LR73Z0AER56J	CHIP INDUCTOR		
L293	LR79Z0JHR27G	CHIP INDUCTOR			L549	LR77Z0AA68NJ	CHIP INDUCTOR	68nH	
L294	LR79Z0JHR27G	CHIP INDUCTOR			L601	LR73Z0AER22J	CHIP INDUCTOR		
L295	LR79Z0MWR39G	CHIP INDUCTOR			L602	LR73Z0AER22J	CHIP INDUCTOR		
L296	LR79Z0JHR33G	CHIP INDUCTOR			L603	LR73Z0AE100J	CHIP INDUCTOR		
L297	LR79Z0MWR39G	CHIP INDUCTOR			L604	LR73Z0AE100J	CHIP INDUCTOR		
L299	LR79Z0JHR33G	CHIP INDUCTOR			L605	LR73Z0AE100J	CHIP INDUCTOR		
L300	LR79Z0JHR27G	CHIP INDUCTOR			L606	LR73Z0AER39J	CHIP INDUCTOR		
L301	LR79Z0JHR22G	CHIP INDUCTOR			L607	LR73Z0AE3R3J	CHIP INDUCTOR		
L302	LR79Z0JHR27G	CHIP INDUCTOR			L608	LR73Z0AER22J	CHIP INDUCTOR		
L303	LR79Z0JHR27G	CHIP INDUCTOR			L609	LR73Z0AE3R3J	CHIP INDUCTOR		
L304	LR79Z0JHR22G	CHIP INDUCTOR			L610	LR73Z0AER39J	CHIP INDUCTOR		
L305	LR79Z0JHR27G	CHIP INDUCTOR			L651	LR73Z0AER22J	CHIP INDUCTOR		
L307	LR79Z0JHR27G	CHIP INDUCTOR			L652	LR77Z0AA39NJ	CHIP INDUCTOR	39nH	
L308	LR79Z0JHR22G	CHIP INDUCTOR			L653	LR79Z0JHR27G	CHIP INDUCTOR		
L309	LR79Z0JGR18G	CHIP INDUCTOR			L654	LR77Z0AA22NJ	CHIP INDUCTOR	22nH	
L310	LR79Z0JHR27G	CHIP INDUCTOR			L655	LR79Z0JHR27G	CHIP INDUCTOR		
L311	LR79Z0JHR33G	CHIP INDUCTOR			L656	LR77Z0AA39NJ	CHIP INDUCTOR	39nH	
L312	LR79Z0JHR27G	CHIP INDUCTOR			L657	LR73Z0AER22J	CHIP INDUCTOR		
L313	LR79Z0JHR27G	CHIP INDUCTOR			L658	LR77Z0AA47NJ	CHIP INDUCTOR	47nH	
L314	LR79Z0JHR33G	CHIP INDUCTOR			L659	LR79Z0JGR18G	CHIP INDUCTOR		
L315	LR79Z0JGR18G	CHIP INDUCTOR			L660	LR77Z0AA27NJ	CHIP INDUCTOR	27nH	
L316	LR79Z0JHR22G	CHIP INDUCTOR			L661	LR79Z0JHR22G	CHIP INDUCTOR		
L317	LR79Z0JHR22G	CHIP INDUCTOR			L662	LR77Z0AA27NJ	CHIP INDUCTOR	27nH	
L318	LR79Z0JGR18G	CHIP INDUCTOR			L663	LR79Z0JGR18G	CHIP INDUCTOR		
L319	LR79Z0JHR27G	CHIP INDUCTOR			L664	LR77Z0AA47NJ	CHIP INDUCTOR	47nH	
L320	LR79Z0JGR18G	CHIP INDUCTOR			L665	LR73Z0AE100J	CHIP INDUCTOR		
L321	LR79Z0JGR18G	CHIP INDUCTOR			L675	LR73Z0AE100J	CHIP INDUCTOR		
L322	LR79Z0JHR27G	CHIP INDUCTOR			L701	LR73Z0AE100J	CHIP INDUCTOR		890SE
L323	LR79Z0JGR12G	CHIP INDUCTOR			L702	LR77Z0AA68NJ	CHIP INDUCTOR	68nH	890SE
L324	LR79Z0JGR18G	CHIP INDUCTOR			L703	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	890SE
L325	LR79Z0JGR18G	CHIP INDUCTOR			L704	LR77Z0AA47NJ	CHIP INDUCTOR	47nH	890SE
L326	LR79Z0JGR12G	CHIP INDUCTOR			L705	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	890SE
L327	LR79Z0JGR18G	CHIP INDUCTOR			L706	LR77Z0AA47NJ	CHIP INDUCTOR	47nH	890SE
L328	LR79Z0JGR12G	CHIP INDUCTOR			L707	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	890SE
L329	LR79Z0JGR12G	CHIP INDUCTOR			L708	LR77Z0AA68NJ	CHIP INDUCTOR	68nH	890SE
L330	LR79Z0JGR18G	CHIP INDUCTOR			L709	LR73Z0AE100J	CHIP INDUCTOR		890SE
L331	LR79Z0JG82NG	CHIP INDUCTOR			L721	LR73Z0AE330J	CHIP INDUCTOR		
L332	LR79Z0JGR12G	CHIP INDUCTOR			L722	LR73Z0AER22J	CHIP INDUCTOR		
L333	LR79Z0JGR12G	CHIP INDUCTOR			L723	LR73Z0AE1R0J	CHIP INDUCTOR		
L334	LR79Z0JG82NG	CHIP INDUCTOR			L724	LR73Z0AE1R0J	CHIP INDUCTOR		
L335	LR79Z0JGR10G	CHIP INDUCTOR			L751	LR73Z0AER22J	CHIP INDUCTOR		
L336	LR79Z0JG68NG	CHIP INDUCTOR			L786	LR73Z0AER22J	CHIP INDUCTOR		
L337	LR79Z0JG68NG	CHIP INDUCTOR			L787	LR73Z0AER22J	CHIP INDUCTOR		
L338	LR79Z0JGR10G	CHIP INDUCTOR			L788	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	
L339	LR79Z0JG68NG	CHIP INDUCTOR			L801	LR73Z0AER47J	CHIP INDUCTOR	0.47uH	

△ Symbol No.	Part No.	Part Name	Description	Local
L802	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	
L803	LR73Z0AER56J	CHIP INDUCTOR		
L804	LR77Z0AA56NJ	CHIP INDUCTOR	56nH	
L805	LR73Z0AER56J	CHIP INDUCTOR		
L806	LR77Z0AAR10J	CHIP INDUCTOR	0.1uH	
CN1	E04-0491-05	PIN SOCKET		
CN300	E04-0491-05	PIN SOCKET		
CN600	E04-0491-05	PIN SOCKET		
CN650	E04-0491-05	PIN SOCKET		
CN800	E04-0491-05	PIN SOCKET		
CN870	EC710AM-0530A	FFC FPC CONNE		
CN991	E23-1280-05	TERMINAL		
CN992	E23-1280-05	TERMINAL		
CN993	E23-1280-05	TERMINAL		
CN994	E23-1280-05	TERMINAL		
CN995	E23-1280-05	TERMINAL		
CN996	E23-1280-05	TERMINAL		
F921	F53-0367-05	FUSE		
F922	F53-0367-05	FUSE		
OT1	-----	SHIELDING COVER		
X51	L7H-0099-00	TCXO		
X101	L7H-0087-00	VCXO		
X751	L7J-0172-00	QUARTZ CRYSTAL		

△ Symbol No.	Part No.	Part Name	Description	Local
Q514	DTD113ZU	TRANSISTOR		
Q515	DTD113ZU	TRANSISTOR		
Q516	DTD113ZU	TRANSISTOR		
Q517	DTD113ZU	TRANSISTOR		
Q518	DTD113ZU	TRANSISTOR		
Q519	DTD113ZU	TRANSISTOR		
Q520	DTD113ZU	TRANSISTOR		
Q521	SSM3K15AMFVF	FET		
Q522	SSM3K15AMFVF	FET		
Q523	SSM3K15AMFVF	FET		
Q524	SSM3K15AMFVF	FET		
Q525	DTD113ZU	TRANSISTOR		
Q526	DTD113ZU	TRANSISTOR		
Q527	DTD113ZU	TRANSISTOR		
Q528	DTD113ZU	TRANSISTOR		
Q529	DTD113ZU	TRANSISTOR		
Q530	DTD113ZU	TRANSISTOR		
Q531	DTD113ZU	TRANSISTOR		
Q532	DTD113ZU	TRANSISTOR		
Q534	DTD113ZU	TRANSISTOR		
Q535	DTD113ZU	TRANSISTOR		
Q536	DTD113ZU	TRANSISTOR		
Q537	DTD113ZU	TRANSISTOR		
Q538	DTD113ZU	TRANSISTOR		
Q539	DTD113ZU	TRANSISTOR		
Q540	DTD113ZU	TRANSISTOR		
Q541	SSM3K15AMFVF	FET		
Q542	SSM3K15AMFVF	FET		
Q601	RRH140P03	FET		
Q602	DTC123YE	TRANSISTOR		
Q603	2SAR573D3	TRANSISTOR		
Q604	2SCR533P5	TRANSISTOR		
Q605	2SAR573D3	TRANSISTOR		
Q606	DTC123YE	TRANSISTOR		
Q607	DTC123YE	TRANSISTOR		
Q608	DTC123YE	TRANSISTOR		

## FINAL UNIT

**XC3-062J-00(TS-890S(K))**

**XC3-062E-01(TS-890S(E))**

Block No. [0][6]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	INA193AIDBVT	IC		
IC2	BA2904FVM	IC		
IC3	BA2904FVM	IC		
IC4	BA2904FVM	IC		
IC101	TC7SHU04FJC	IC		
IC102	TC7SHU04FJC	IC		
IC103	TA75S393F-F	IC		
IC104	TC7WH74FUJC	IC		
IC501	CD74HC4094M96	IC		
IC502	CD74HC4094M96	IC		
IC503	CD74HC4094M96	IC		
IC504	CD74HC4094M96	IC		
IC505	CD74HC4094M96	IC		
IC506	CD74HC4094M96	IC		
Q2	RD06HHF1-502	FET		
Q3	RD16HHF1-502	FET		
Q4	RD100HHF1C502	FET		
Q5	RD100HHF1C502	FET		
Q7	DTB143EK	DIGI TRANSISTOR		
Q101	CPH3910	FET		
Q102	CPH3910	FET		
Q301	2SC4617/R/	TRANSISTOR		
Q302	2SAR512P5	TRANSISTOR		
Q303	2SD2153/VW/	TRANSISTOR		
Q304	DTB143EK	DIGI TRANSISTOR		
Q305	LTC024EUBFS8	DIGI TRANSISTOR		
Q501	DTD113ZU	TRANSISTOR		
Q502	DTD113ZU	TRANSISTOR		
Q503	DTD113ZU	TRANSISTOR		
Q504	DTD113ZU	TRANSISTOR		
Q505	DTD113ZU	TRANSISTOR		
Q506	DTD113ZU	TRANSISTOR		
Q507	DTD113ZU	TRANSISTOR		
Q508	DTD113ZU	TRANSISTOR		
Q509	DTD113ZU	TRANSISTOR		
Q510	DTD113ZU	TRANSISTOR		
Q511	DTD113ZU	TRANSISTOR		
Q512	DTD113ZU	TRANSISTOR		
Q513	DTD113ZU	TRANSISTOR		

D1	DAN222WM	DIODE ARRAY		
D2	DAN222WM	DIODE ARRAY		
D3	1SS400SM	DIODE		
D5	Z5W27VJ	ZENER DIODE		
D101	DAN222WM	DIODE ARRAY		890SE
D102	DAN222WM	DIODE ARRAY		
D103	DAN222WM	DIODE ARRAY		
D104	DAN222WM	DIODE ARRAY		
D105	DAN222WM	DIODE ARRAY		
D106	DAN222WM	DIODE ARRAY		
D107	DAN222WM	DIODE ARRAY		
D108	DAN222WM	DIODE ARRAY		
D109	DAN222WM	DIODE ARRAY		
D110	DAN222WM	DIODE ARRAY		
D111	RB706F-40	DIODE		
D112	RB706F-40	DIODE		
D113	RB480Y-90	DIODE		
D114	RB480Y-90	DIODE		
D301	1SS400SM	DIODE		
D302	L8104	DIODE		
D303	1SS400SM	DIODE		
D304	EDZV6.2B	ZENER DIODE		
D305	L8104	DIODE		
D306	L8104	DIODE		
D307	L8104	DIODE		
D308	DAN222WM	DIODE ARRAY		
D309	DAN222WM	DIODE ARRAY		
D310	DSA301LA	DIODE		
D403	DAN222WM	DIODE ARRAY		
D404	DAN222WM	DIODE ARRAY		
D405	DAN222WM	DIODE ARRAY		
D406	DAN222WM	DIODE ARRAY		
D407	DAN222WM	DIODE ARRAY		
D408	DAN222WM	DIODE ARRAY		
D409	DAN222WM	DIODE ARRAY		
D410	DAN222WM	DIODE ARRAY		
D411	DAN222WM	DIODE ARRAY		
D412	DAN222WM	DIODE ARRAY		
D413	DAN222WM	DIODE ARRAY		
D414	DAN222WM	DIODE ARRAY		
D415	DAN222WM	DIODE ARRAY		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
D416	DAN222WM	DIODE ARRAY			C89	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
D417	DAN222WM	DIODE ARRAY			C91	C93-1900-05	C CAPACITOR	1000pF 630V	
D418	DAN222WM	DIODE ARRAY			C92	C93-1900-05	C CAPACITOR	1000pF 630V	
D419	DAN222WM	DIODE ARRAY			C93	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
D420	DAN222WM	DIODE ARRAY			C94	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
D600	UDZV5.6B	ZENER DIODE			C95	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K	
D601	UDZV3.6B	ZENER DIODE			C108	CC730DP2J070D	C CAPACITOR	7.0pF 630V D	
D602	DAN222WM	DIODE ARRAY			C110	C93-1877-05	C CAPACITOR	12pF 630V	
					C111	CC730DP2J050C	C CAPACITOR	5.0pF 630V C	
C15	CD04BQ1H220M	E CAPACITOR	22uF 50V M		C113	CD04AY1E470M	E CAPACITOR	47uF 25V M	
C16	CD04AY1E470M	E CAPACITOR	47uF 25V M		C114	C93-1876-05	C CAPACITOR	10pF 630V	890SE
C17	CD04BQ1H220M	E CAPACITOR	22uF 50V M		C115	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C18	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C116	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C19	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C117	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	890SE
C20	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C118	CC730DP2J090D	C CAPACITOR	9.0pF 630V D	890SE
C21	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C119	C93-1877-05	C CAPACITOR	12pF 630V	890SE
C22	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C120	C93-1883-05	C CAPACITOR	39pF 630V	890SE
C23	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C121	C93-1878-05	C CAPACITOR	15pF 630V	890SE
C24	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C122	C93-1876-05	C CAPACITOR	10pF 630V	890SE
C25	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C123	C93-1884-05	C CAPACITOR	47pF 630V	890SE
C26	CK73GB1E105K	C CAPACITOR	1uF 25V K		C124	C93-1878-05	C CAPACITOR	15pF 630V	890SE
C27	CK73GXR1C225K	C CAPACITOR	2.2uF 16V K		C125	C93-1876-05	C CAPACITOR	10pF 630V	890SE
C28	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C126	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C29	CC73GCH1H820J	C CAPACITOR	82pF 50V J		C127	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C30	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C128	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C31	CK73GB1E105K	C CAPACITOR	1uF 25V K		C129	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C32	C93-1807-05	C CAPACITOR	0.01uF 100V		C130	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C33	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C131	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C34	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C132	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C36	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C133	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C37	C93-1882-05	C CAPACITOR	33pF 630V		C134	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C38	C93-1807-05	C CAPACITOR	0.01uF 100V		C135	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C39	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C136	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C40	C93-1807-05	C CAPACITOR	0.01uF 100V		C137	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C41	C93-1807-05	C CAPACITOR	0.01uF 100V		C138	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C42	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C139	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C43	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C140	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C44	CD04BQ1E471M	E CAPACITOR	470uF 25V M		C141	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C45	CK73GB1E105K	C CAPACITOR	1uF 25V K		C142	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C46	CK73EB1H104K	C CAPACITOR	0.1uF 50V K		C143	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C47	CK73EB1H104K	C CAPACITOR	0.1uF 50V K		C144	CC730DP2J080D	C CAPACITOR	8.0pF 630V D	890SE
C48	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C145	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C49	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C146	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C50	CK73GB1E105K	C CAPACITOR	1uF 25V K		C147	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C51	CM73F2H271J	MICA CAPACITOR	270pF 500V J		C148	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C52	CM73F2H271J	MICA CAPACITOR	270pF 500V J		C149	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C53	CM73F2H151J	MICA CAPACITOR	150pF 500V J		C150	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C54	CM73F2H151J	MICA CAPACITOR	150pF 500V J		C151	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C55	CM73F2H151J	MICA CAPACITOR	150pF 500V J		C152	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C56	C93-1901-05	C CAPACITOR	0.22uF 250V		C153	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C57	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C154	CC730DP2J080D	C CAPACITOR	8.0pF 630V D	
C58	CK73EBB1E225K	C CAPACITOR	2.2uF 25V K		C155	C93-1887-05	C CAPACITOR	82pF 630V	
C59	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C157	C93-1888-05	C CAPACITOR	100pF 630V	
C60	C93-1807-05	C CAPACITOR	0.01uF 100V		C158	C93-1888-05	C CAPACITOR	100pF 630V	
C61	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C159	C93-1893-05	C CAPACITOR	270pF 630V	
C62	C93-1900-05	C CAPACITOR	1000pF 630V		C160	C93-1880-05	C CAPACITOR	22pF 630V	
C63	CC730DP2J030C	C CAPACITOR	3.0pF 630V C		C161	C93-1893-05	C CAPACITOR	270pF 630V	
C64	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C162	CC730DP2J080D	C CAPACITOR	8.0pF 630V D	
C65	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C163	C93-1883-05	C CAPACITOR	39pF 630V	
C66	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C164	C93-1885-05	C CAPACITOR	56pF 630V	
C67	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C165	CC730DP2J090D	C CAPACITOR	9.0pF 630V D	
C68	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C166	C93-1895-05	C CAPACITOR	390pF 630V	
C69	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C167	C93-1893-05	C CAPACITOR	270pF 630V	
C70	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C168	C93-1884-05	C CAPACITOR	47pF 630V	
C71	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C169	C93-1893-05	C CAPACITOR	270pF 630V	
C72	CK73GB1E105K	C CAPACITOR	1uF 25V K		C170	C93-1885-05	C CAPACITOR	56pF 630V	
C73	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C171	C93-1889-05	C CAPACITOR	120pF 630V	
C74	CK73GB1E105K	C CAPACITOR	1uF 25V K		C172	C93-1888-05	C CAPACITOR	100pF 630V	
C75	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C173	C93-1882-05	C CAPACITOR	33pF 630V	
C76	CK73GB1E105K	C CAPACITOR	1uF 25V K		C174	C93-1883-05	C CAPACITOR	39pF 630V	
C77	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C175	C93-1876-05	C CAPACITOR	10pF 630V	
C78	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		C176	C93-1885-05	C CAPACITOR	56pF 630V	
C79	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C177	C93-1888-05	C CAPACITOR	100pF 630V	
C80	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C178	CC730DP2J151J	C CAPACITOR	150pF 630V J	
C81	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C179	CC730DP2J151J	C CAPACITOR	150pF 630V J	
C82	CC73GCH1H470J	C CAPACITOR	47pF 50V J		C180	CC730DP2J151J	C CAPACITOR	150pF 630V J	
C83	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K		C181	CC730DP2J561J	C CAPACITOR	560pF 630V J	
C86	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C182	C93-1886-05	C CAPACITOR	68pF 630V	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C183	C93-1882-05	C CAPACITOR	33pF 630V		C265	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C184	C93-1878-05	C CAPACITOR	15pF 630V		C302	C93-1877-05	C CAPACITOR	12pF 630V	
C185	C93-1878-05	C CAPACITOR	15pF 630V		C308	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C186	C93-1887-05	C CAPACITOR	82pF 630V		C309	CK73GGB1H472K	C CAPACITOR	4700pF 50V K	
C187	C93-1879-05	C CAPACITOR	18pF 630V		C310	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C188	C93-1879-05	C CAPACITOR	18pF 630V		C312	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C189	C93-1885-05	C CAPACITOR	56pF 630V		C313	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C190	C93-1886-05	C CAPACITOR	68pF 630V		C314	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C191	C93-1900-05	C CAPACITOR	1000pF 630V		C315	C93-1900-05	C CAPACITOR	1000pF 630V	
C192	CC730DP2J561J	C CAPACITOR	560pF 630V J		C316	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C193	C93-1900-05	C CAPACITOR	1000pF 630V		C317	C93-1901-05	C CAPACITOR	0.22uF 250V	
C194	C93-1894-05	C CAPACITOR	330pF 630V		C318	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C195	C93-1892-05	C CAPACITOR	220pF 630V		C319	C93-1902-05	C CAPACITOR	1uF 50V	
C196	CC730DP2J080D	C CAPACITOR	8.0pF 630V D		C320	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C197	C93-1884-05	C CAPACITOR	47pF 630V		C321	C93-1873-05	C CAPACITOR	10000pF 630V	
C198	C93-1900-05	C CAPACITOR	1000pF 630V		C322	C93-1873-05	C CAPACITOR	10000pF 630V	
C199	C93-1884-05	C CAPACITOR	47pF 630V		C323	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C200	C93-1893-05	C CAPACITOR	270pF 630V		C324	C93-1900-05	C CAPACITOR	1000pF 630V	
C201	C93-1892-05	C CAPACITOR	220pF 630V		C325	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C202	CC730DP2J561J	C CAPACITOR	560pF 630V J		C326	C93-1873-05	C CAPACITOR	10000pF 630V	
C203	C93-1888-05	C CAPACITOR	100pF 630V		C327	C93-1873-05	C CAPACITOR	10000pF 630V	
C204	C93-1885-05	C CAPACITOR	56pF 630V		C328	C93-1873-05	C CAPACITOR	10000pF 630V	
C205	C93-1884-05	C CAPACITOR	47pF 630V		C329	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C206	C93-1889-05	C CAPACITOR	120pF 630V		C330	C93-1901-05	C CAPACITOR	0.22uF 250V	
C207	C93-1877-05	C CAPACITOR	12pF 630V		C331	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C208	C93-1889-05	C CAPACITOR	120pF 630V		C332	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C209	C93-1885-05	C CAPACITOR	56pF 630V		C333	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C210	C93-1885-05	C CAPACITOR	56pF 630V		C334	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C211	C93-1886-05	C CAPACITOR	68pF 630V		C335	C93-1902-05	C CAPACITOR	1uF 50V	
C212	C93-1886-05	C CAPACITOR	68pF 630V		C336	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C213	C93-1887-05	C CAPACITOR	82pF 630V		C337	CK73GGB1H472K	C CAPACITOR	4700pF 50V K	
C214	C93-1888-05	C CAPACITOR	100pF 630V		C338	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C215	C93-1888-05	C CAPACITOR	100pF 630V		C339	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C216	CC730DP2J040C	C CAPACITOR	4.0pF 630V C		C340	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C217	C93-1881-05	C CAPACITOR	27pF 630V		C341	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C218	C93-1884-05	C CAPACITOR	47pF 630V		C342	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C219	C93-1881-05	C CAPACITOR	27pF 630V		C343	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C220	C93-1878-05	C CAPACITOR	15pF 630V		C344	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C221	C93-1896-05	C CAPACITOR	470pF 630V		C345	C93-1873-05	C CAPACITOR	10000pF 630V	
C222	C93-1889-05	C CAPACITOR	120pF 630V		C346	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C223	C93-1893-05	C CAPACITOR	270pF 630V		C347	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C224	C93-1893-05	C CAPACITOR	270pF 630V		C349	C93-1873-05	C CAPACITOR	10000pF 630V	
C225	C93-1882-05	C CAPACITOR	33pF 630V		C350	C93-1873-05	C CAPACITOR	10000pF 630V	
C226	C93-1900-05	C CAPACITOR	1000pF 630V		C351	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C227	C93-1893-05	C CAPACITOR	270pF 630V		C352	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C228	C93-1893-05	C CAPACITOR	270pF 630V		C353	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C229	C93-1882-05	C CAPACITOR	33pF 630V		C354	CK73FB1C106K	C CAPACITOR	10uF 16V K	
C230	C93-1879-05	C CAPACITOR	18pF 630V		C355	C93-1876-05	C CAPACITOR	10pF 630V	
C231	C93-1884-05	C CAPACITOR	47pF 630V		C356	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C232	CC730DP2J151J	C CAPACITOR	150pF 630V J		C357	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C233	C93-1881-05	C CAPACITOR	27pF 630V		C409	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C234	C93-1887-05	C CAPACITOR	82pF 630V		C410	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C235	CC730DP2J080D	C CAPACITOR	8.0pF 630V D		C411	CK73GGB1H102K	C CAPACITOR	1000pF 50V K	
C236	CK73GGB1H102K	C CAPACITOR	1000pF 50V K		C412	CK73GGB1H104K	C CAPACITOR	0.1uF 50V K	
C237	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C413	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C238	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C414	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C239	CC730DP2J020C	C CAPACITOR	2.0pF 630V C		C415	C91-3115-05	HV CAPACITOR	10pF 2kV	
C240	CC73GCH1H560J	C CAPACITOR	56pF 50V J		C416	C91-3115-05	HV CAPACITOR	10pF 2kV	
C241	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C417	C91-3115-05	HV CAPACITOR	10pF 2kV	
C242	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C418	C91-3115-05	HV CAPACITOR	10pF 2kV	
C243	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C419	C91-3115-05	HV CAPACITOR	10pF 2kV	
C244	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C420	C91-3115-05	HV CAPACITOR	10pF 2kV	
C245	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C421	C91-3115-05	HV CAPACITOR	10pF 2kV	
C246	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C422	C91-3115-05	HV CAPACITOR	10pF 2kV	
C247	CK73GGB1H102K	C CAPACITOR	1000pF 50V K		C423	C91-3115-05	HV CAPACITOR	10pF 2kV	
C248	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C424	C91-3115-05	HV CAPACITOR	10pF 2kV	
C249	CC730DP2J020C	C CAPACITOR	2.0pF 630V C		C425	C91-3115-05	HV CAPACITOR	10pF 2kV	
C250	CK73GGB1H333K	C CAPACITOR	0.033uF 50V K		C426	C91-3115-05	HV CAPACITOR	10pF 2kV	
C251	CC73GCH1H680J	C CAPACITOR	68pF 50V J		C427	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C252	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C428	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C253	CK73GGB1H102K	C CAPACITOR	1000pF 50V K		C429	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C254	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C430	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C255	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C431	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C256	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K		C432	CK73GGB1H103K	C CAPACITOR	0.01uF 50V K	
C257	C93-1876-05	C CAPACITOR	10pF 630V	890SE	C433	C91-3115-05	HV CAPACITOR	10pF 2kV	
C258	C93-1882-05	C CAPACITOR	33pF 630V		C434	C91-3115-05	HV CAPACITOR	10pF 2kV	
C259	C93-1882-05	C CAPACITOR	33pF 630V		C435	C91-3115-05	HV CAPACITOR	10pF 2kV	
C260	CC730DP2J080D	C CAPACITOR	8.0pF 630V D		C436	C91-3115-05	HV CAPACITOR	10pF 2kV	



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C437	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C551	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C438	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C552	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C439	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C553	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C440	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C554	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C441	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C555	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C442	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C556	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C443	C91-3126-15	HV CAPACITOR	10pF 3kV		C557	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C444	C91-3126-15	HV CAPACITOR	10pF 3kV		C558	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C445	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C559	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C446	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C601	CD04AZ1E471M	E CAPACITOR	470uF 25V M	
C447	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C602	CK73GB1C474K	C CAPACITOR	0.47uF 16V K	
C448	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C603	C93-1896-05	C CAPACITOR	470pF 630V	
C449	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C604	C93-1901-05	C CAPACITOR	0.22uF 250V	
C450	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C605	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C451	C91-3127-15	HV CAPACITOR	18pF 3kV		C606	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C452	C91-3127-15	HV CAPACITOR	18pF 3kV		C607	CK73GBB1H104K	C CAPACITOR	0.1uF 50V K	
C453	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C608	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C454	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C609	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C455	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C610	DD04AY1E470M	E CAPACITOR	47uF 25V M	
C456	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C611	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C457	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C612	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C458	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C613	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C459	C91-3127-15	HV CAPACITOR	18pF 3kV		C614	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C460	C91-3127-15	HV CAPACITOR	18pF 3kV		C615	CK73GB1C474K	C CAPACITOR	0.47uF 16V K	
C461	C91-3127-15	HV CAPACITOR	18pF 3kV		C617	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C462	C91-3127-15	HV CAPACITOR	18pF 3kV		C618	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C463	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C619	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C464	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C620	CD04AZ1V101M	E CAPACITOR	100uF 35V M	
C465	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C621	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C466	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C622	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C467	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C623	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C468	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C624	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C469	C91-3123-05	HV CAPACITOR	150pF 3kV		C625	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C470	C91-3123-05	HV CAPACITOR	150pF 3kV		C626	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C471	C91-3123-05	HV CAPACITOR	150pF 3kV		C627	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C472	C91-3123-05	HV CAPACITOR	150pF 3kV		C628	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K	
C473	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C629	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C474	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C630	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C475	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C631	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C476	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C632	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C477	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C633	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C478	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C634	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C479	C91-3123-05	HV CAPACITOR	150pF 3kV		C635	CC73GCH1H221J	C CAPACITOR	220pF 50V J	
C480	C91-3123-05	HV CAPACITOR	150pF 3kV		C636	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C481	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C637	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C482	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C638	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C483	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C639	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C484	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		C640	CK73GBB1H102K	C CAPACITOR	1000pF 50V K	
C485	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		TC101	C0F-0010-00	TRIM CAPACITOR		
C486	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R14	RK73GH2A563D	MG RESISTOR	56kΩ 1/10W D	
C487	C91-3123-05	HV CAPACITOR	150pF 3kV		R15	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J	
C488	C91-3123-05	HV CAPACITOR	150pF 3kV		R16	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
C489	C91-3123-05	HV CAPACITOR	150pF 3kV		R17	RK73GB2A680J	MG RESISTOR	68Ω 1/10W J	
C490	C91-3123-05	HV CAPACITOR	150pF 3kV		R18	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
C491	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R19	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
C492	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R20	R92-3625-05	RESISTOR	0.1Ω 0.33W	
C493	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R21	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	
C494	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R22	RK73GB2A472J	MG RESISTOR	4.7kΩ 1/10W J	
C495	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R23	RK73EB2E5R6J	MG RESISTOR	5.6Ω 1/4W J	
C496	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R24	R92-3625-05	RESISTOR	0.1Ω 0.33W	
C501	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R25	R92-3625-05	RESISTOR	0.1Ω 0.33W	
C502	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R26	RK73PB2H681J	MG RESISTOR	680Ω 1/2W J	
C503	CK73GBB1H102K	C CAPACITOR	1000pF 50V K		R27	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J	
C504	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R28	RS16AB3A151J	OMF RESISTOR	150Ω 1W J	
C505	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R29	RS16AB3A151J	OMF RESISTOR	150Ω 1W J	
C506	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R30	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J	
C507	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R31	RK73FB2B223J	MG RESISTOR	22kΩ 1/8W J	
C508	CC73GCH1H221J	C CAPACITOR	220pF 50V J		R32	RK73FB2B223J	MG RESISTOR	22kΩ 1/8W J	
C509	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R33	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C510	CC73GCH1H221J	C CAPACITOR	220pF 50V J		R34	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C511	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R35	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C512	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R36	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C513	CK73GBB1H103K	C CAPACITOR	0.01uF 50V K		R37	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C514	CC73GCH1H221J	C CAPACITOR	220pF 50V J		R38	RK73EB2E1R0J	MG RESISTOR	1Ω 1/4W J	
C515	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R39	RS14DB3D180J	OMF RESISTOR	18Ω 2W J	
C516	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R40	RS14DB3D180J	OMF RESISTOR	18Ω 2W J	
C517	CC73GCH1H100B	C CAPACITOR	10pF 50V B		R41	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J	
C518	CC73GCH1H221J	C CAPACITOR	220pF 50V J						

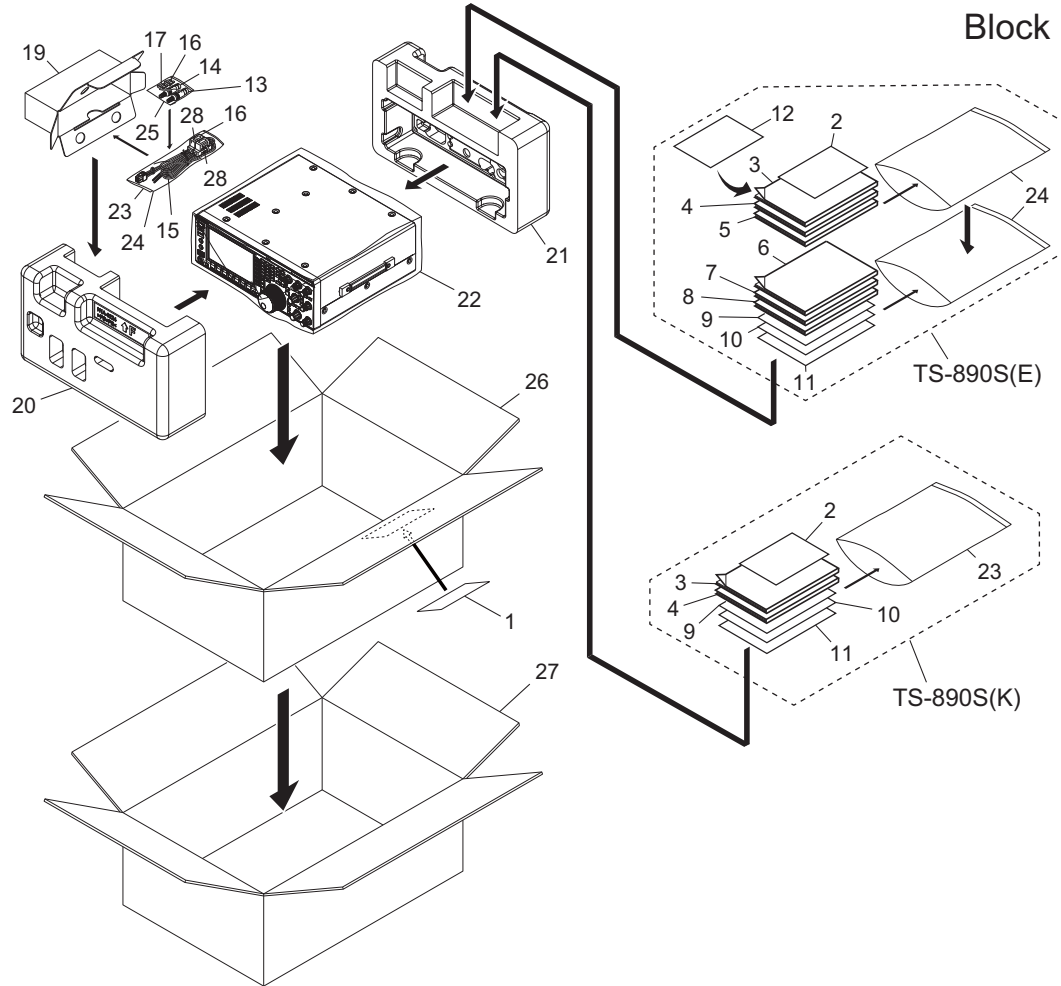
△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R42	RS14DB3A4R7J	OMF RESISTOR	4.7Ω 1W J		R140	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R43	R92-3636-05	RESISTOR	0.003Ω 1W		R141	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R44	R92-3636-05	RESISTOR	0.003Ω 1W		R301	R92-0150-05	JUMPER RESISTOR	0.003Ω 2W	
R45	R92-3636-05	RESISTOR	0.003Ω 1W		R302	R92-0150-05	JUMPER RESISTOR	0.003Ω 2W	
R46	RK73GB2A562J	MG RESISTOR	5.6kΩ 1/10W J		R303	RK73FB2B103J	MG RESISTOR	10kΩ 1/8W J	
R47	RK73GB2A562J	MG RESISTOR	5.6kΩ 1/10W J		R304	RK73FB2B103J	MG RESISTOR	10kΩ 1/8W J	
R48	RK73FB2B121J	MG RESISTOR	120Ω 1/8W J		R305	RK73FB2B103J	MG RESISTOR	10kΩ 1/8W J	
R49	RK73FB2B121J	MG RESISTOR	120Ω 1/8W J		R306	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J	
R50	RK73FB2B121J	MG RESISTOR	120Ω 1/8W J		R307	RK73FB2B103J	MG RESISTOR	10kΩ 1/8W J	
R51	RK73FB2B121J	MG RESISTOR	120Ω 1/8W J		R308	RK73PB2H6R8J	MG RESISTOR	6.8Ω 1/2W J	
R52	RK73GH2A103D	MG RESISTOR	10kΩ 1/10W D		R309	RK73PB2H6R8J	MG RESISTOR	6.8Ω 1/2W J	
R53	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J		R310	RK73PB2H6R8J	MG RESISTOR	6.8Ω 1/2W J	
R54	RK73GB2A124J	MG RESISTOR	120kΩ 1/10W J		R311	RK73PB2H6R8J	MG RESISTOR	6.8Ω 1/2W J	
R55	RK73GB2A123J	MG RESISTOR	12kΩ 1/10W J		R312	RK73FB2B473J	MG RESISTOR	47kΩ 1/8W J	
R56	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		R313	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R57	RK73GB2A392J	MG RESISTOR	3.9kΩ 1/10W J		R314	RK73GB2A333J	MG RESISTOR	33kΩ 1/10W J	
R58	RK73EB2E101J	MG RESISTOR	100Ω 1/4W J		R315	RS14DB3A1R0J	OMF RESISTOR	1.0Ω 1W J	
R59	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R316	RS14DB3A1R0J	OMF RESISTOR	1.0Ω 1W J	
R61	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R317	RK73FB2B472J	MG RESISTOR	4.7kΩ 1/8W J	
R64	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R318	RK73FB2B104J	MG RESISTOR	100kΩ 1/8W J	
R65	RK73GH2A152D	MG RESISTOR	1.5kΩ 1/10W D		R319	RK73FB2B104J	MG RESISTOR	100kΩ 1/8W J	
R66	RK73GB2A222J	MG RESISTOR	2.2kΩ 1/10W J		R320	RK73FB2B104J	MG RESISTOR	100kΩ 1/8W J	
R67	RK73FB2B102J	MG RESISTOR	1kΩ 1/8W J		R321	RK73FB2B104J	MG RESISTOR	100kΩ 1/8W J	
R68	RK73PB2H681J	MG RESISTOR	680Ω 1/2W J		R324	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R69	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R325	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R70	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R330	RK73FB2B820J	MG RESISTOR	82Ω 1/8W J	
R71	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R331	RK73FB2B820J	MG RESISTOR	82Ω 1/8W J	
R72	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R414	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R73	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R416	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R74	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R417	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R75	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R418	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R76	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R419	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R77	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R420	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R78	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R421	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R79	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R422	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R80	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R423	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R81	RK73GB2A473J	MG RESISTOR	47kΩ 1/10W J		R424	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R82	RK73GB2A273J	MG RESISTOR	27kΩ 1/10W J		R425	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R83	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R426	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R90	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R427	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R91	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R428	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R92	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R429	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R93	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		R430	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R96	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SK	R431	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R97	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J	890SK	R432	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R103	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J		R433	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R104	RK73GB2A224J	MG RESISTOR	220kΩ 1/10W J		R434	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R105	RK73FB2B103J	MG RESISTOR	10kΩ 1/8W J		R435	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R106	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R436	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R107	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R437	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R108	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J		R438	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R109	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J		R439	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R110	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R440	RK73FB2B560J	MG RESISTOR	56Ω 1/8W J	
R111	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R501	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R112	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J		R502	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R113	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R503	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R114	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R504	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J	
R115	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R505	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J	
R116	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J		R506	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R117	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R507	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R118	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		R508	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R119	RK73PB2H330J	MG RESISTOR	33Ω 1/2W J		R509	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R120	RK73PB2H330J	MG RESISTOR	33Ω 1/2W J		R510	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R121	RK73GB2A105J	MG RESISTOR	1MΩ 1/10W J		R511	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R122	RK73GB2A105J	MG RESISTOR	1MΩ 1/10W J		R512	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R123	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R513	RK73GB2A221J	MG RESISTOR	220Ω 1/10W J	
R125	RK73FB2B000J	MG RESISTOR	0Ω 1/8W J		R514	RK73FB2B221J	MG RESISTOR	220Ω 1/8W J	
R126	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		R515	RK73GB2A104J	MG RESISTOR	100kΩ 1/10W J	
R127	RK73PB2H750J	MG RESISTOR	75Ω 1/2W J		R516	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R128	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R607	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R129	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J		R608	RK73PB2H1R0J	MG RESISTOR	1Ω 1/2W J	
R130	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J		R609	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R131	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J		R610	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R132	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J		R611	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R133	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J		R612	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R134	RK73PB2H330J	MG RESISTOR	33Ω 1/2W J		R622	RK73GB2A223J	MG RESISTOR	22kΩ 1/10W J	
R135	RK73PB2H330J	MG RESISTOR	33Ω 1/2W J		R623	RK73GB2A103J	MG RESISTOR	10kΩ 1/10W J	
R137	RK73PB2H750J	MG RESISTOR	75Ω 1/2W J		R624	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R625	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		L302	L3D-0054-00	CHOKE COIL		
R626	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		L303	L41-4705-33	CHIP INDUCTOR		
R627	RK73PB2H2R2J	MG RESISTOR	2.2Ω 1/2W J		L305	LR79Z0PM100M	CHIP INDUCTOR		
R628	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J		L308	L34-1232-15	AIR CORE COIL		
R629	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J		L403	LR79Z0PM100M	CHIP INDUCTOR		
R630	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		L404	L39-1440-15	TOROIDAL COIL		
R634	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		L405	L39-1440-15	TOROIDAL COIL		
R635	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		L406	L34-4633-05	AIR CORE COIL		
R636	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J		L407	L34-4630-05	AIR CORE COIL		
R637	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J		L408	L34-4490-05	AIR CORE COIL		
R638	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J		L409	L34-4490-05	AIR CORE COIL		
R639	RK73PB2H271J	MG RESISTOR	270Ω 1/2W J		L410	L34-4628-05	AIR CORE COIL		
R640	RK73GB2A391J	MG RESISTOR	390Ω 1/10W J		L411	L34-4490-05	AIR CORE COIL		
R701	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	890SK	L412	L39-1568-05	TOROIDAL COIL		
R704	RK73GB2A000J	MG RESISTOR	0Ω 1/10W J	890SE	L413	L3E-0042-00	AIR CORE COIL		
R705	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L415	L3E-0043-00	AIR CORE COIL		
R706	RK73EB2E000J	MG RESISTOR	0Ω 1/4W J		L601	L39-1550-05	TOROIDAL COIL		
L5	LB73F0BW-002	CHIP FERRITE			L603	L92-0641-05	FERRITE CORE		
L6	LB73F0BW-002	CHIP FERRITE			L604	L92-0641-05	FERRITE CORE		
L7	L33-1552-05	CHIP INDUCTOR			L605	LR73Z0AE470J	CHIP INDUCTOR		
L8	LR77Z0AA12NJ	CHIP INDUCTOR	12nH		L606	LR73Z0AE470J	CHIP INDUCTOR		
L9	L92-0641-05	FERRITE CORE			L607	LR79Z0PM100M	CHIP INDUCTOR		
L10	L92-0641-05	FERRITE CORE			L608	LR73Z0AE470J	CHIP INDUCTOR		
L11	L39-1434-25	TOROIDAL COIL			CN1	E04-0491-05	PIN SOCKET		
L12	L3K-0096-00	TOROIDAL COIL			CN301	E04-0491-05	PIN SOCKET		
L13	L34-4928-05	COIL			CN302	E23-1310-05	TEST TERMINAL		
L16	L41-4705-33	CHIP INDUCTOR			CN303	E23-1310-05	TEST TERMINAL		
L17	L39-1569-05	TOROIDAL COIL			CN304	E04-0491-05	PIN SOCKET		
L18	LR73Z0AE470J	CHIP INDUCTOR			CN305	E04-0491-05	PIN SOCKET		
L20	L34-4606-15	AIR CORE COIL			CN401	E04-0491-05	PIN SOCKET		
L21	L39-0421-04	COIL			CN402	E04-0491-05	PIN SOCKET		
L24	LR73Z0AE470J	CHIP INDUCTOR			CN601	E41-1683-05	PIN ASSY		
L25	L34-1231-15	AIR CORE COIL			CN602	E41-1683-05	PIN ASSY		
L101	L34-4925-15	AIR CORE COIL			CN603	EC710AM-0528A	FFC FPC CONNE		
L102	L39-1456-15	TOROIDAL COIL			CN604	E40-6529-05	PIN ASSY		
L103	L34-1282-05	AIR CORE COIL			CN605	EC710AJ-1013A	FFC FPC CONNE		
L104	L3E-0049-00	AIR CORE COIL			F601	F53-0404-05	FUSE(UL/CSA)		
L105	L39-1259-15	TOROIDAL COIL			F602	FZA10BV-5R0	FUSE (CC)		
L106	L39-1547-05	TOROIDAL COIL			F603	FZA10BV-5R0	FUSE (CC)		
L107	L34-1282-05	AIR CORE COIL			K101	S51-1420-05	RELAY		
L108	L39-1457-15	TOROIDAL COIL			K102	S51-1420-05	RELAY		
L109	L39-1457-15	TOROIDAL COIL			K103	S76-0423-05	RELAY		
L110	L39-1221-15	TOROIDAL COIL			K104	S76-0423-05	RELAY		
L111	L39-1519-15	TOROIDAL COIL			K105	S76-0423-05	RELAY		
L112	L39-1570-05	TOROIDAL COIL			K106	S76-0423-05	RELAY		
L113	L39-1549-05	TOROIDAL COIL			K107	S76-0423-05	RELAY		
L114	L39-1260-15	TOROIDAL COIL			K108	S76-0423-05	RELAY		
L115	L39-1546-05	TOROIDAL COIL			K109	S76-0423-05	RELAY		
L116	L39-1405-15	TOROIDAL COIL			K110	S51-1420-05	RELAY		
L117	L39-1457-15	TOROIDAL COIL			K111	S76-0423-05	RELAY		
L118	L39-1221-15	TOROIDAL COIL			K112	S76-0423-05	RELAY		
L119	L34-4925-15	AIR CORE COIL			K113	S76-0423-05	RELAY		
L120	L34-1281-05	AIR CORE COIL			K114	S76-0423-05	RELAY		
L121	L39-1456-15	TOROIDAL COIL			K115	S76-0423-05	RELAY		
L122	L3E-0050-00	AIR CORE COIL			K116	S76-0423-05	RELAY		
L123	L34-1231-15	AIR CORE COIL			K117	S51-1420-05	RELAY		
L124	L3K-0075-00	TOROIDAL COIL			K118	S76-0423-05	RELAY		
L125	L39-1442-05	TOROIDAL COIL			K119	S51-1420-05	RELAY		890SE
L126	L39-1443-05	TOROIDAL COIL			K120	S51-1420-05	RELAY		890SE
L127	L34-4652-05	AIR CORE COIL		890SE	K301	S76-0424-05	RELAY		
L128	L3E-0040-00	AIR CORE COIL		890SE	K302	S76-0424-05	RELAY		
L129	L3K-0074-00	TOROIDAL COIL		890SE	K303	S76-0472-05	RELAY		
L130	L41-4705-33	CHIP INDUCTOR		890SE	K304	S76-0472-05	RELAY		
L131	L41-4705-33	CHIP INDUCTOR			K403	S7G-0010-00	MAGNETIC RELAY		
L132	L41-4705-33	CHIP INDUCTOR			K404	S7G-0010-00	MAGNETIC RELAY		
L133	L41-4705-33	CHIP INDUCTOR			K405	S76-0480-05	RELAY		
L134	L41-4705-33	CHIP INDUCTOR			K406	S76-0480-05	RELAY		
L135	L41-4705-33	CHIP INDUCTOR			K407	S7G-0010-00	MAGNETIC RELAY		
L136	L41-4705-33	CHIP INDUCTOR			K408	S76-0480-05	RELAY		
L137	L41-4705-33	CHIP INDUCTOR			K409	S76-0480-05	RELAY		
L138	L41-4705-33	CHIP INDUCTOR			K410	S7G-0010-00	MAGNETIC RELAY		
L139	L41-4705-33	CHIP INDUCTOR			K411	S76-0480-05	RELAY		
L140	L33-0695-05	CHOKE COIL			K412	S76-0480-05	RELAY		
L141	LR79Q0CW222J	CHIP INDUCTOR			K413	S7G-0010-00	MAGNETIC RELAY		
L142	LR73Z0AE470J	CHIP INDUCTOR			K414	S76-0480-05	RELAY		
L143	LR73Z0AER47J	CHIP INDUCTOR	0.47uH		K415	S76-0480-05	RELAY		
L301	L41-4705-33	CHIP INDUCTOR			K416	S7G-0010-00	MAGNETIC RELAY		

Symbol No.	Part No.	Part Name	Description	Local
K417	S76-0480-05	RELAY		
K418	S76-0480-05	RELAY		
K419	S7G-0010-00	MAGNETIC RELAY		
K420	S76-0480-05	RELAY		
K421	S76-0480-05	RELAY		
K422	S7G-0010-00	MAGNETIC RELAY		
K423	S76-0480-05	RELAY		
K424	S76-0480-05	RELAY		
K425	S7G-0010-00	MAGNETIC RELAY		
K426	S76-0480-05	RELAY		
K427	S76-0480-05	RELAY		
K428	S7G-0010-00	MAGNETIC RELAY		
TH1	NCP18XH103F0S	N THERMISTOR		
W1	E37-1480-05	L.WIRE W.TER.		

# Packing materials and accessories parts list

Block No.M2MM



## Packing and accessories

Block No. [M][2][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
1	B4J-0024-20	LABEL FOR PKG	E TYPE	890SE
2	-----	WARRANTY CARD	K TYPE	890SK
2	-----	WARRANTY CARD	E TYPE	890SE
3	B5A-2215-00	INST.MANUAL	ENGLISH	
4	B5A-2216-00	INST.MANUAL	FRENCH	
5	B5A-2217-00	INST.MANUAL	SPANISH	890SE
6	B5A-2218-00	INST.MANUAL	GERMAN	890SE
7	B5A-2219-00	INST.MANUAL	ITALIAN	890SE
8	B5A-2220-00	INST.MANUAL	DUTCH	890SE
9	B5C-0003-00	SCH.DIAGRAM	ACC	
10	B5C-0004-00	SCH.DIAGRAM	ACC	
11	B5C-0005-00	SCH.DIAGRAM	ACC	
12	-----	PAMPHLET		890SE
13	E07-0751-25	DIN PLUG	7P, ACC	
14	E07-1351-25	DIN PLUG	13P, ACC	
15	E30-3489-35	DC CORD	ACC	
16	FZB10AX-250	BLADE FUSE	25A(x2)	
17	FZB10AU-4R0	BLADE FUSE	4A-MINI, ACC	
19	H02-0638-03	INNER CARTON	FOR ACC	
20	H1A-0224-00	PS FOAM FIXTURE	FRONT	
21	H1A-0225-00	PS FOAM FIXTURE	REAR	
22	H2A-0012-00	PROTECT COVER	FOR BODY	
23	H25-2433-04	PROTECTION BAG	MANUAL, DC CORD(x2)	890SK
24	H25-2433-04	PROTECTION BAG	MANUAL, DC CORD(x3)	890SE
25	H2F-0141-00	PROTECTION BAG	FUSE, DIN	
26	H5A-1615-00	ITEM CARTON		
27	H6A-1480-00	OUTER CARTON		
28	B42-7003-04	RATING LABEL	DC CORD(x2)	890SE



# KENWOOD

JVC KENWOOD Corporation  
Communications Systems Division

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