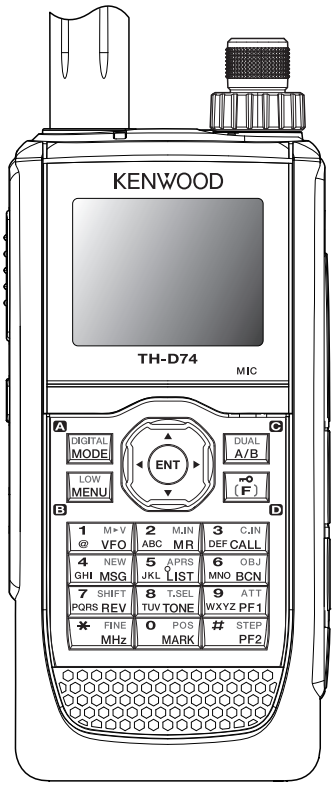
KENWOOD

SERVICE MANUAL

144/430MHz DUAL BANDER

TH-D74E



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

This product uses Lead Free solder.

B5B-7248-00

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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	Band-A	TX	144 - 146, 430 - 440 MHz
		RX	136 - 174, 410 - 470 MHz
	Band-B	RX	0.1 - 76 MHz, 76 - 108 MHz (WFM) 108 - 524 MHz
Mode	TX		F3E, F1D, F2D, F7W
	RX		F3E, F1D, F2D, A1A, A3E, J3E, F7W
Operating Temp. Range			-20 °C ~ +60 °C (-4°F ~ +140°F)
	with Incd. KNB-75L		-10 °C ~ +50 °C (+14°F ~ +122°F)
Frequency Stability			±2.0 ppm
Antenna Impedance			50 ohm
Operating Voltage	DC-IN		DC 11.0 ~ 15.9 V (STD: DC 13.8 V)
	BATT		DC 6.0 ~ 9.6 V (STD: DC 7.4 V)
Current Consumption: TX (TYP.)	EXT.PS 13.8 V	HI	1.4 A
		MID	0.9 A
		L	0.6 A
		EL	0.4 A
	Battery 7.4 V	HI	2.0 A
		MID	1.3 A
		L	0.8 A
		EL	0.5 A
Current Consumption: RX (TYP.)	SINGLE	Rated Power	260 mA
		SQ Close	135 mA
		Avg. Save on	48 mA
	DUAL	Rated Power	310 mA
		SQ Close	185 mA
		Avg. Save on	50 mA
	GPS logger mode		115 mA
Battery Life (Approx.) Single, Save on, Rate 6:6:48 sec, GPS off Approx. 10 % shorter when GPS is ON	KNB-74L (1,100 mAh)	HI	4 hours
		MID	5 hours
		L	7 hours
		EL	9 hours
	KNB-75L (1,800 mAh)	HI	6 hours
		MID	8 hours
		L	12 hours
		EL	15 hours
	KBP-9 (Alkaline AAAx6)	HI	-
		MID	-
		L	3.5 hours
		EL	-
Dimensions (W x H x D) Projections not included	with KNB-74L (1,100 mAh)		56.0 x 119.8 x 29.3 mm (2.20 x 4.72 x 1.15 in)
	with KNB-75L (1,800 mAh)		56.0 x 119.8 x 33.9 mm (2.20 x 4.72 x 1.33 in)
	with KBP-9		56.0 x 119.8 x 36.0 mm (2.20 x 4.72 x 1.42 in)
Weight (net)	Body only		202 g (7.13 oz)
	with KNB-74L (1,100 mAh)		315 g (11.1 oz)(w/ Antenna, Belt Clip)
	with KNB-75L (1,800 mAh)		345 g (12.2 oz)(w/ Antenna, Belt Clip)
	with KBP-9		360 g (12.7 oz)(w/ Antenna, Belt Clip, AAAx6 Battery)

RECEIVER					**Band A**	**Band B**
Circuitry			F3E, F2D, F1D, F7W		Double Super Heterodyne	
			A1A, A3E, J3E		-	Triple Super Heterodyne
IF Frequency			1st IF		57.15 MHz	58.05 MHz
			2nd IF		450 kHz	450 kHz
			3rd IF (A1A, A3E, J3E)		-	10.8 kHz
Sensitivity (TYP.)	Amateur Band	FM	12dB SINAD, FM/ NFM	144 MHz	0.18/ 0.22 uV	0.19/ 0.24 uV
				430 MHz	0.18/ 0.22 uV	0.20/ 0.25 uV
		DV	PN9/GMSK 4.8kbps, BER 1%	144 MHz	0.20 uV	0.22 uV
				430 MHz	0.22 uV	0.22 uV
		SSB	10 dB S/N		-	0.16 uV
		AM	10 dB S/N		-	0.50 uV
Sensitivity (TYP.)	Except above Amateur Band	AM	10 dB S/N	0.3 - 0.52 MHz	-	4 uV
				0.52 - 1.8 MHz	-	1.59 uV
				1.8 - 54 MHz	-	0.63 uV
				54 - 76 MHz	-	1.12 uV
				118 - 175 MHz	-	0.50 uV
				200 - 250 MHz	-	0.63 uV
				382 - 412 MHz	-	1.12 uV
				415 - 524 MHz	-	1.12 uV
		FM	12dB SINAD	28 - 54 MHz	-	0.32 uV
				54 - 76 MHz	-	0.56 uV
				118 - 144 MHz	0.36 uV	0.36 uV
				148 - 175 MHz	-	0.36 uV
				200 - 222 MHz	-	0.36 uV
				225 - 250 MHz	-	0.36 uV
				382 - 400 MHz	-	0.50 uV
				400 - 412 MHz	0.36 uV	0.36 uV
				415 - 430 MHz	0.36 uV	0.36 uV
				450 - 490 MHz	0.36 uV	0.36 uV
				490 - 524 MHz	-	0.63 uV
		SSB	10 dB S/N	1.8 - 54 MHz	-	0.40 uV
				54 - 76 MHz	-	0.79 uV
				144 - 148 MHz	-	0.16 uV
				222 - 225 MHz	-	0.20 uV
				430 - 450 MHz	-	0.16 uV
	FM BC Band	WFM	30 dB S/N	76 - 95 MHz	-	1.59 uV
				95 - 108 MHz	-	2.00 uV
Squelch (TYP.)					0.18 uV	0.25 uV
Channel Selectivity			-6 dB		12 kHz or more	
			-50 dB		30 kHz or less	
Spurious Rejection			144 MHz		50 dB or more	45 dB or more
			430 MHz		50 dB or more	40 dB or more
IF Rejection					60 dB or more	55 dB or more
Audio Output			7.4 V, 10% Dist.		400 mW or more/ 8 ohm	

TRANSMITTER			
RF Power Output	EXT.PS 13.8 V / Battery:7.4 V	HI	5 W
		MID	2 W
		L	0.5 W
		EL	0.05 W
Modulation	FM		Reactance Modulation
	DV		GMSK Reactance Modulation
Modulation Deviation	FM		±5.0 kHz
	NFM		±2.5 kHz
Spurious Emissions	HI / MID		-60 dBc or less
	L		-50 dBc or less
	EL		-40 dBc or less
Microphone Impedance			2 k ohm
GPS			
TTFF (Cold start)			Approx. 40 sec
TTFF (Hot start)			Approx. 5 sec
Horizontal Accuracy			10 m or less
Receive sensitivity(Ta = 25°C, Open sky)			Approx. -141 dBm (Acquisition)
Bluetooth			
Version, Class			Version 3.0, Class 2
Output Power			-6 < Pav < 4 dBm
Modulation Characteristics			140 ≦ △f 1avg ≦ 175 kHz
Initial Carrier Frequency			-75 ≦ f0 ≦ +75 kHz
Carrier Frequency Drift			±25 kHz (One Slot Packet) ±40 kHz (Three Slot Packet) ±40 kHz (Five Slot Packet)

Note:

Except for sensitivity, these specifications are guaranteed for Amateur Bands only.

Specifications are subject to change without notice, due to advancements in technology.

SECTION 1
PRECAUTION

This service manual does not describe PRECAUTION.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 Circuit Description

2.1.1 Outline

The TH-D74E is an FM dual-band transceiver designed for amateur radio applications in the 144/430 MHz bands.

2.1.2 Frequency Configuration

This transceiver has two discrete VCO/PLL and IF circuit configurations for the A-band and B-band to achieve simultaneous dual-band signal reception and full-duplex operation.
The VCO block of the A-band is used as the first local oscillator for VHF and UHF reception in the A-band. The VCO block for the B-band is composed of two VCOs including modulation circuitry and used as the first local oscillator for the VHF/UHF transmission of signals and reception of signals in a range of 0.1 to 524 MHz in the B-band.
The 19.200 MHz reference oscillator connected to the PLL IC for the A-band is used to generate a PLL comparison frequency.
The reference oscillator that generates a frequency of 57.600 MHz tripled from the 19.200 MHz is used for the comparison frequency of the PLL IC for the B-band. Furthermore, this reference oscillator is used as the second local oscillator for the reception of signals in both A-band and B-band.

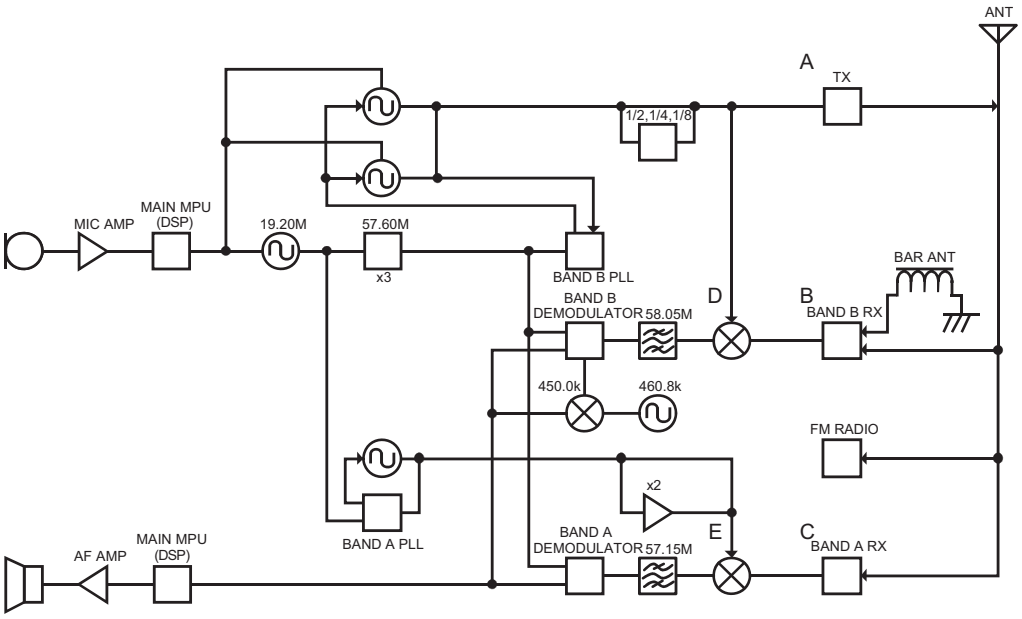


Fig.1 Frequency configuration

Table 1 Frequency configuration

	TH-D74E (E-type)
A	144.000 ~ 145.995MHz 430.000 ~ 439.995MHz
B	0.100 ~ 75.995MHz 108.000 ~ 523.995MHz
C	136.000 ~ 173.995MHz 410.000 ~ 469.995MHz
D	58.150 ~ 468.045MHz
E	193.150 ~ 412.845MHz

2.1.3 Receiver System

2.1.3.1 VHF receiver circuit

■A band VHF receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q179). The signal amplified by the RF amplifier (Q179) enters the distribution circuit for signal distribution with the B-band. The distributed signal is amplified by the second RF amplifier (Q178), passes through the band-pass filter, and enters the mixer (Q281). The signal is converted to a first IF of 57.150 MHz after the signal undergoes upper heterodyne conversion by the first local oscillation frequency. Then the signal is amplified by the IF amplifier (Q282) after the signal passes through the MCF (XF281), and applied to the IF IC (IC281).
The signal undergoes upper heterodyne conversion in the IF IC (IC281) by the second local oscillation frequency (57.600 MHz) tripled from the reference frequency (19.200 MHz). Then the signal is converted to a second IF of 450 kHz and detected to generate an audio signal.

■B band VHF receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q179). The signal amplified by the RF amplifier (Q179) enters the distribution circuit for signal distribution with the A-band. The distributed signal is amplified by the second RF amplifier (Q193), passes through the band-pass filter, and enters the mixer (IC283). The signal is converted to a first IF of 58.050 MHz after the signal undergoes upper heterodyne conversion by the first local oscillation frequency. Then the signal is applied to the IF IC (IC284) through the MCF (XF282).
The signal undergoes lower heterodyne conversion in the IF IC (IC284) by the second local oscillation frequency (57.600 MHz) tripled from the reference frequency (19.200 MHz). Then the signal is converted to a second IF of 450 kHz and detected to generate an audio signal. While the transceiver is in AM/SSB/CW mode, the signal is converted to a third IF of 10.8 kHz after the signal undergoes upper heterodyne conversion by the 3rd local oscillation frequency (460.8 kHz). Then the signal is input into the CODEC IC (IC707).

■VHF accompanying circuit

Tuning voltage output from the D/A converter (IC671) under the control of the main MPU (IC702) is applied to each band-pass filter through a discrete variable-capacitance diode so that the respective band-pass filters will be tuned to target frequencies.

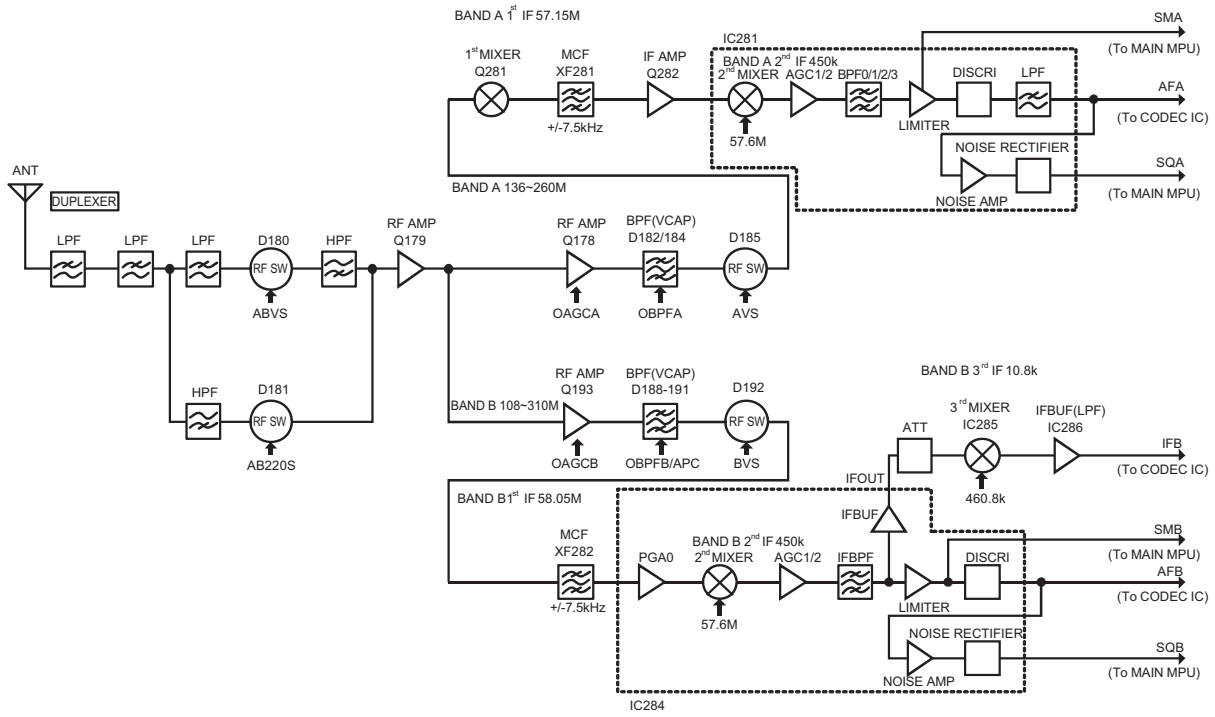


Fig.2 VHF receiver circuit

2.1.3.2 UHF receiver circuit

■A band UHF receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q172). The signal amplified by the RF amplifier (Q172) enters the distribution circuit for signal distribution with the B-band. The distributed signal is amplified by the second RF amplifier (Q171), passes through the bandpass filter, and enters the mixer (Q281). The signal is converted to a first IF of 57.150 MHz after the signal undergoes lower heterodyne conversion by the first local oscillation frequency. Then the signal is amplified by the IF amplifier (Q282) after the signal passes through the MCF (XF281), and applied to the IF IC (IC281).
The signal undergoes upper heterodyne conversion in the IF IC (IC281) by the second local oscillation frequency (57.600 MHz) tripled from the reference frequency (19.200 MHz). Then the signal is converted to a second IF of 450 kHz and detected to generate an audio signal.

■B band UHF receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q172). The signal amplified by the RF amplifier (Q172) enters the distribution circuit for signal distribution with the A-band. The distributed signal is amplified by the second RF amplifier (Q192), passes through the band-pass filter, and enters the mixer (IC283). The signal is converted to a first IF of 58.050 MHz after the signal undergoes upper heterodyne conversion by the first local oscillation frequency. Then the signal is input into IF IC (IC284) through the MCF (XF282). The signal undergoes lower heterodyne conversion in the IF IC (IC284) by the second local oscillation frequency (57.600 MHz) tripled from the reference frequency (19.200 MHz). Then the signal is converted to a second IF of 450 kHz and detected to generate an audio signal.

While the transceiver is in AM/SSB/CW mode, the signal is converted to a third IF of 10.8 kHz after the signal undergoes upper heterodyne conversion by the 3rd local oscillation frequency (460.8 kHz). Then the signal is input into the CODEC IC (IC707).

■UHF accompanying circuit

Tuning voltage output from the D/A converter (IC671) under the control of the main MPU (IC702) is applied to each band-pass filter through a discrete variable-capacitance diode so that the respective band-pass filters will be tuned to target frequencies.

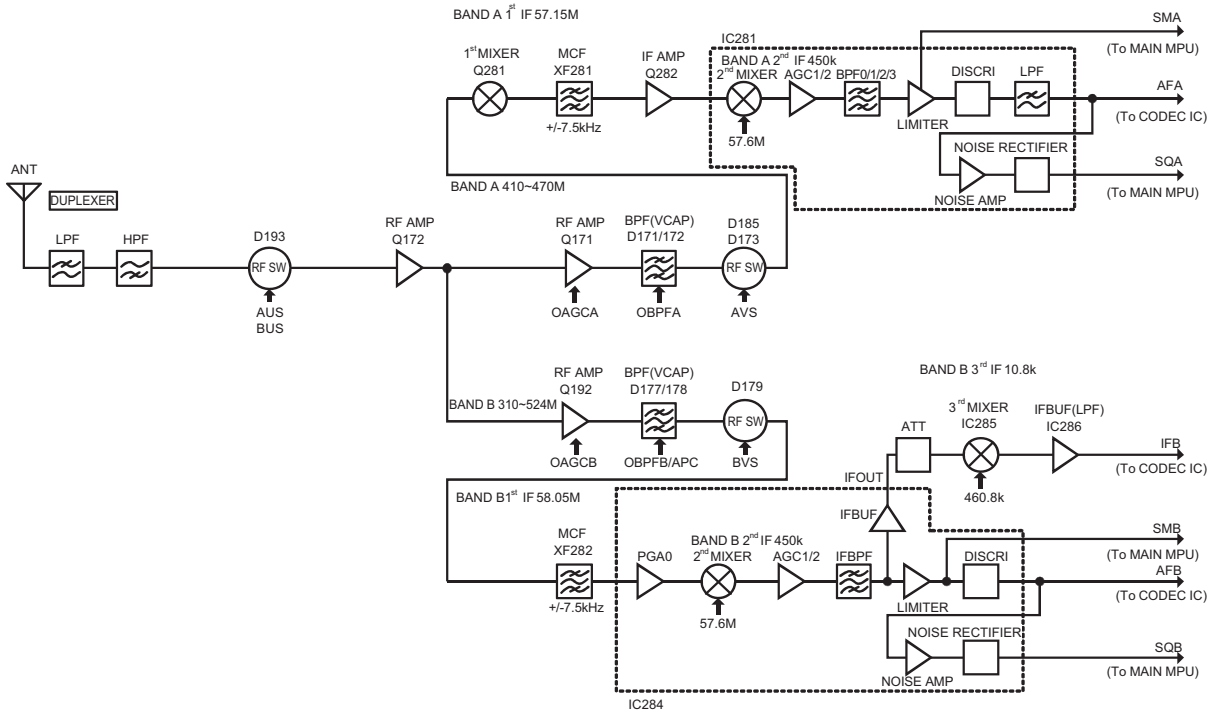


Fig.3 UHF receiver circuit

2.1.3.3 HF receiver circuit

■HF receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q190). The signal amplified by the RF amplifier (Q190) enters the mixer (IC283) after the signal is further amplified by the second amplifier (Q191). The signal is converted to a first IF of 58.050 MHz after the signal undergoes upper heterodyne conversion by the first local oscillation frequency. Then the signal is applied to the IF IC (IC284) through the MCF (XF282). The signal undergoes lower heterodyne conversion in the IF IC (IC284) by the second local oscillation frequency (57.600 MHz) tripled from the reference frequency (19.200 MHz). Then the signal is converted to a second IF of 450 kHz and detected to generate an audio signal.

While the transceiver is in AM/SSB/CW mode, the signal is converted to a third IF of 10.8 kHz after the signal undergoes upper heterodyne conversion by the 3rd local oscillation frequency (460.8 kHz). Then the signal is input into the CODEC IC (IC707).

■BAR Antenna circuit

The bar antenna can be selected for HF reception.

The reception signal from the bar antenna passes through the tuning circuit and enters the RF amplifier (Q190). Then the signal is received on the same path in the HF receiving circuit.

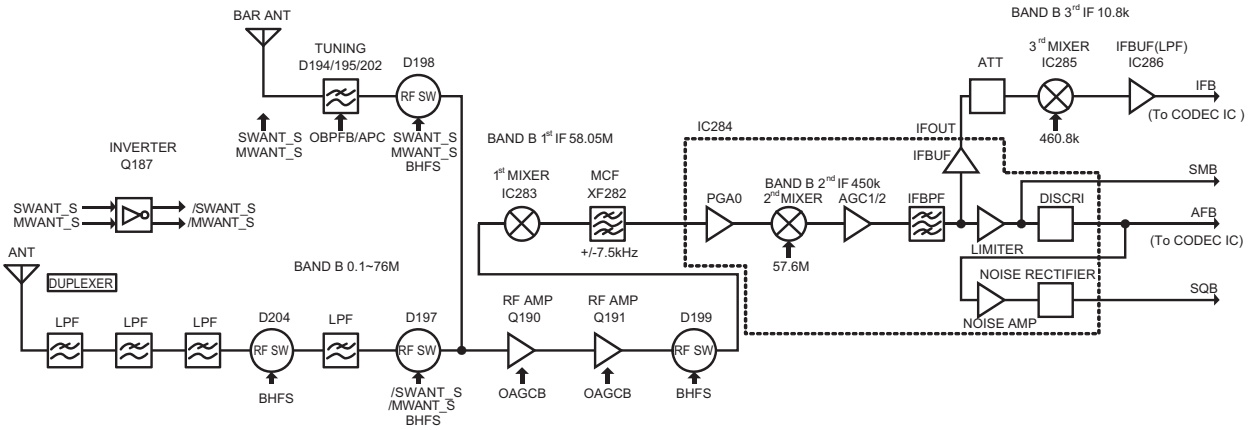


Fig.4 HF receiver circuit

2.1.3.4 FM Tuner receiver circuit

■FM Tuner receiver circuit

The reception signal from the antenna passes through the filter circuit and enters the RF amplifier (Q195). The signal amplified by the RF amplifier is further amplified by the second RF amplifier (Q675) after the signal passes through the filter circuit, and enters the FM Tuner IC (IC674). The RF signal is demodulated in the FM tuner IC (IC674) and converted into an audio signal.

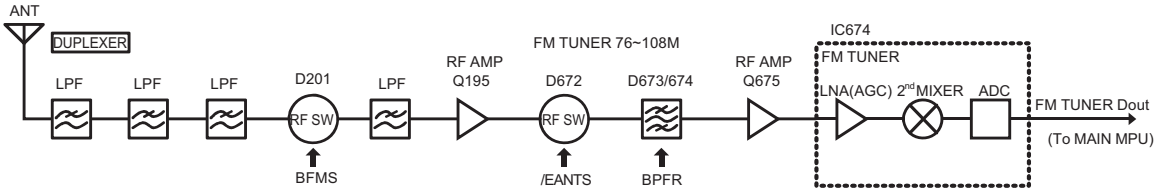


Fig.5 FM Tuner receiver circuit

2.1.4 Transmitter System

2.1.4.1 Transmitter circuit

The VCO (B-band) VHF transmission signal that is sent from the RF amplifier (Q361) passes through the band switches (D35 and D32). The pre-drive amplifier (IC1) and drive amplifier (Q6) amplify the signal. The signal passes through the band switches (D22 and D26), and the final amplifier (Q2) amplifies the signal to the final output level. Then the signal passes through the antenna switches (D13, D14, and D45), triplexer, and LPF, and is fed to the antenna.

The VCO (B-band) UHF transmission signal that is sent from the RF amplifier (Q361) passes through the band switches (D36 and D33). The pre-drive amplifier (IC1) and drive amplifier (Q6) amplify the signal. The signal passes through the band switch (D31), and the final amplifier (Q2) amplifies the signal to the final output level. Then the signal passes through the antenna switches (D42, D43, D18, and D19), triplexer, and LPF, and is fed to the antenna.

2.1.4.2 APC circuit

The automatic power control (APC) circuit ensures stable TX power and is in control of TX power by detecting voltage generation from the drain current of the final amplifier (Q2) in use.

The operational amplifier circuit (consisting of IC3 and Q12) amplifies the voltage on R55 and R57 generated by the drain current of the final amplifier, and the generated voltage (CURR) is input into the main MPU (IC702) through the A/D converter (IC725).

The main MPU (IC702) compares the transmission CURR voltage and adjustment CURR voltage and changes the APC voltage according to the comparison result. The main MPU (IC702) inputs the APC voltage into the gates of the drive amplifier (Q6) and the final amplifier (Q2) through the D/A converter (IC671) and operational amplifier (IC287), thus changing the TX power level.

In the power adjustment menu, power adjustments are made by changing the APC voltage (APC digit) value. The APC loop function is OFF in the power adjustment menu. When an appropriate APC voltage level is determined, the APC voltage and CURR voltage will be stored as adjustment values. The adjustment values are used for APC performance while the transceiver is in user mode.

2.1.4.3 Thermal protection circuit

The sub MPU (IC661) monitors the detected voltage (FTH) of the thermistor (TH1) arranged for the prevention of the thermal breakdown of the final amplifier (Q2) in use. An APC voltage (OAGCA/APC) change will occur when the temperature exceeds the preset temperature, at which time the TX power will be controlled to prevent excessive heat generation.

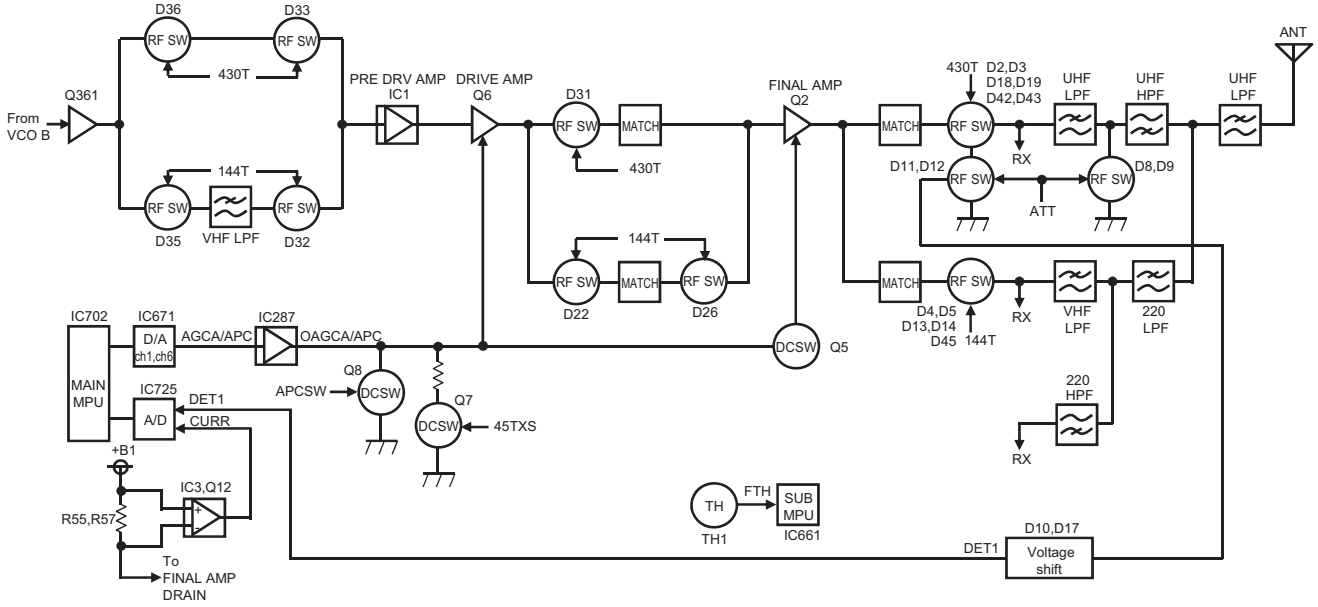


Fig.6 Transmitter circuit

2.1.5 VCO-PLL Circuit

2.1.5.1 Oscillator circuit

A standard reference frequency of 19.2 MHz is generated from the TCXO (X362) of the reference oscillation circuit is divided in the PLL IC (IC364) to provide a comparison frequency of 800 kHz. The reference frequency tripled to 57.600 MHz in the RF amplifier block (Q382 and Q378) is divided in the PLL IC (IC284) to provide a comparison frequency of 480 kHz.
Furthermore, a reference frequency of 57.600 MHz is used as the second local oscillation frequency of both A-band and B-band. The A-band VCO signal is generated and amplified by the oscillation amplifier (Q386) and sent to the F-in amplifier (Q384) and F-out amplifier (Q381) through the buffer amplifier (Q383). The B-band VCO signal is generated and amplified by the two oscillation amplifiers (Q368 and Q369) and sent to the F-in amplifier (Q364) and F-out amplifier (Q365) through the buffer amplifier (Q389). The signal will be branched directly to the transmission side and the reception side if the signal is not divided after the signal passes through the F-out amplifier. If the signal is split, the signal will be branched to the transmission side and reception side through the frequency divider (IC361) and amplifier (Q363). The signal on the reception side is provided to the mixer (IC283). The signal on the transmission side is provided to the pre-drive (IC1) after the signal passes through the amplifier (Q361). The reference oscillator modulates the signal at the time of transmission.

2.1.5.2 Phase comparator

These PLL ICs of fractional-N type divide the input oscillation frequency and reference frequency according to PLL data from the sub MPU (IC661) and make phase comparison to achieve the PLL synthesizer according to the desired step frequency.

2.1.5.3 Lock voltage

Pulse signals obtained by phase comparison in the respective PLL ICs (IC284 and IC364) are swept output from the built-in charge pumps and used as the control voltages of the respective VCOs for oscillation frequency control after the loop filters eliminate the ripples in the signals.

2.1.5.4 Unlock detection circuit

The LD pins (pin 39 of the IC284 and pin 7 of the IC364) of the PLL ICs will output L-level signals when the PLLs are unlocked. The main MPU (IC702) is in control of the switching timing of transmission and reception by monitoring the output.

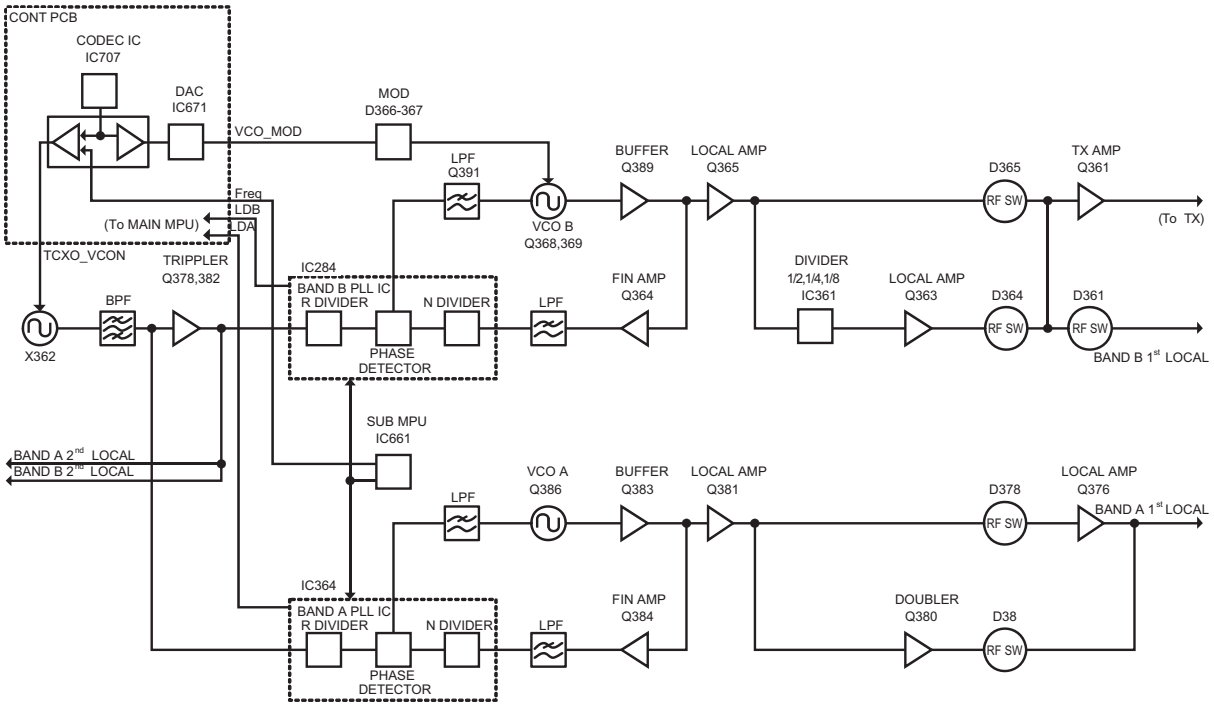


Fig.7 VCO-PLL circuit

2.1.6 Power Supply Circuit

2.1.6.1 DC-IN circuit

The +B power supply will be provided with a constant voltage of 8.3 V through the charging DC-DC driver IC (IC585) and the switching FET (Q580) when power at 11.0 to 15.9 VDC is supplied to the DC-IN JACK. At the same time, the VINOK pin (pin 5 of IC585) will be set to a high level.

When the +B voltage is 5.3 V or higher, the output of the comparator IC (IC591) will be fixed to a low level and the collector voltage of the Q585 will be set to a high level.

When the VINOK pin of the IC585 is set to a high level, the monostable multivibrator IC (IC588) will output a single-pulse signal. When a battery at 5.5 V or higher is connected, the monostable multivibrator IC (IC588) will output a single-pulse signal.

The EN pin (pin 1) of the DC-DC module (IC584) will be set to a high level when the power switch is pressed or when the single-pulse signal is input into the logic circuitry consisting of the OR circuit (IC592), AND IC (IC587), and NOT circuit (Q584).

When the EN pin of the IC584 is set to a high level, the IC584 will output a constant voltage of 4.0 V to the 40C power supply, and the main MPU (IC700) will start.

When the main MPU starts, the main MPU will transmit a charge control instruction to the IC585 and set the 40CS to a high level at the same time.

The EN pin of the IC584 will be kept at a high level as the 40CS is set to a high level. As a result, the IC584 will output 4.0 V to the 40C continuously, and the main MPU will continue to operating.

2.1.6.2 Lithium-ion Battery charging control circuit

The IC585 will charge the lithium battery by receiving the charge control instruction from the main MPU. The IC585 will detect the battery voltage and the battery charging current, and operate as shown below.

If the battery voltage is less than 6.0 V, the IC585 and Q580 will supply a constant voltage of 6.0 V to the +B power supply, and control the gate voltage of the Q581 and perform pre-charging at a charging current of 128 mA.

If the battery voltage is 6.0 V or higher and less than 8.4 V, the Q581 will be turned ON. Then the IC585 and Q580 will perform switching (constant current charging) so that the charging current will be a constant current as specified, and supply a voltage almost the same as the battery voltage to the +B power supply.

When the voltage battery rises to 8.4 V, the Q581 will be kept turned ON, and the IC585 and Q580 will provide the +B power supply with a constant voltage of 8.4 V and perform the constant voltage charging of the battery.

During the constant voltage charging of the battery, the charging current will gradually decrease. The battery will be deemed to be fully charged when the charging current reaches 128 mA or below, and the Q581 will be turned OFF, and the charging will be completed.

If the charging of the battery is completed while the transceiver is in signal reception or a standby state, the IC585 and Q580 will continue providing a constant voltage of 8.4 V to the +B power supply.

If the charging of the battery is completed while the transceiver is in a standby state, the main MPU will send a charge stop instruction to the IC585, and the IC585 will stop charging the battery. The main MPU will set the 40CS to a low level, thus stopping the operation of the IC584 to block the 40C power supply. Then the main MPU will stop operating, and the transceiver will be turned off.

If the transceiver starts transmission while the battery is charged, the main MPU will send a charge stop instruction to the IC585 to stop charging the battery. Upon completion of transmission, the main MPU will transmit a charge control instruction to the IC585 to resume charging the battery.

2.1.6.3 Protection circuit

The main MPU monitors the temperature detected by the thermistor (TH700). If the temperature is out of an optimal temperature range of 0°C to 40°C, the main MPU will transmit a charge stop instruction to the IC585 to stop charging the battery.

The main MPU monitors the DC-IN JACK voltage. If an overvoltage beyond guarantee is applied, the main MPU will stop the operation of the transceiver and protect the circuits.

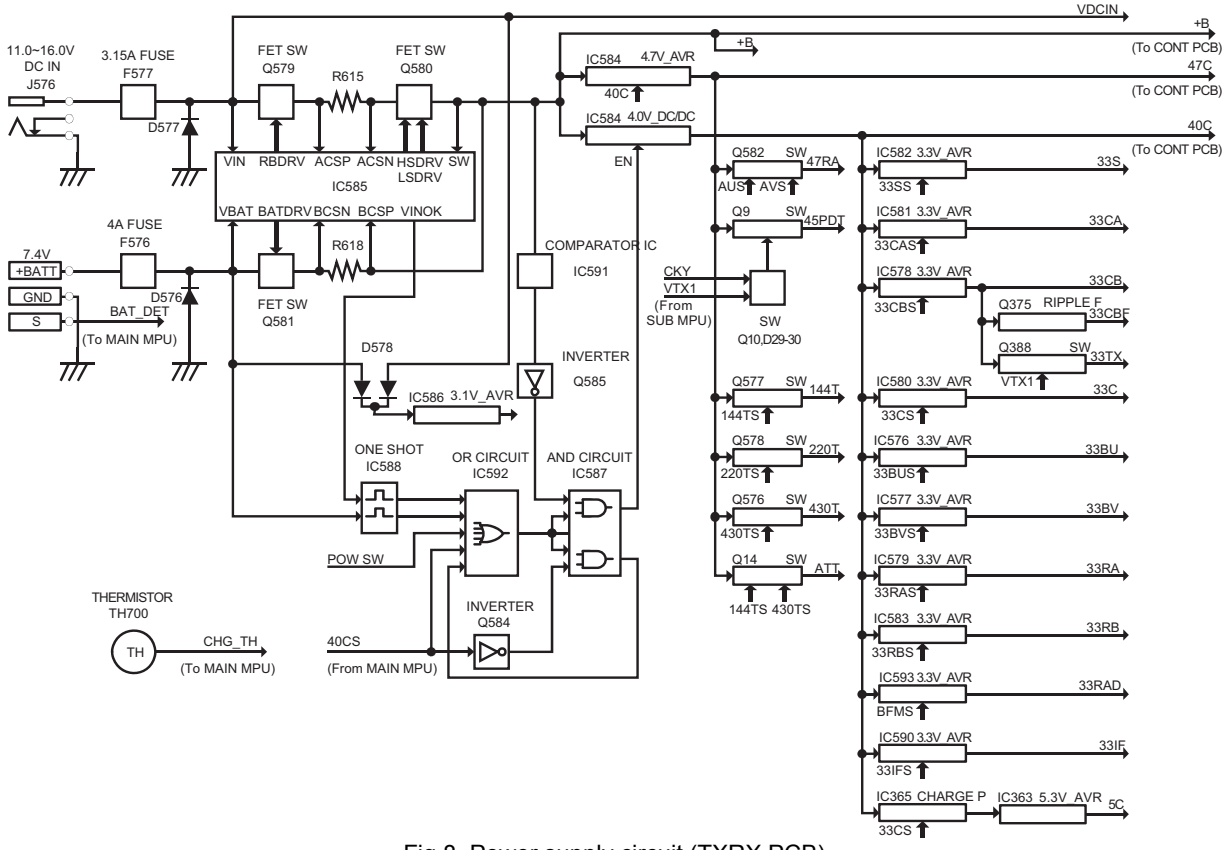


Fig.8 Power supply circuit (TXRX PCB)

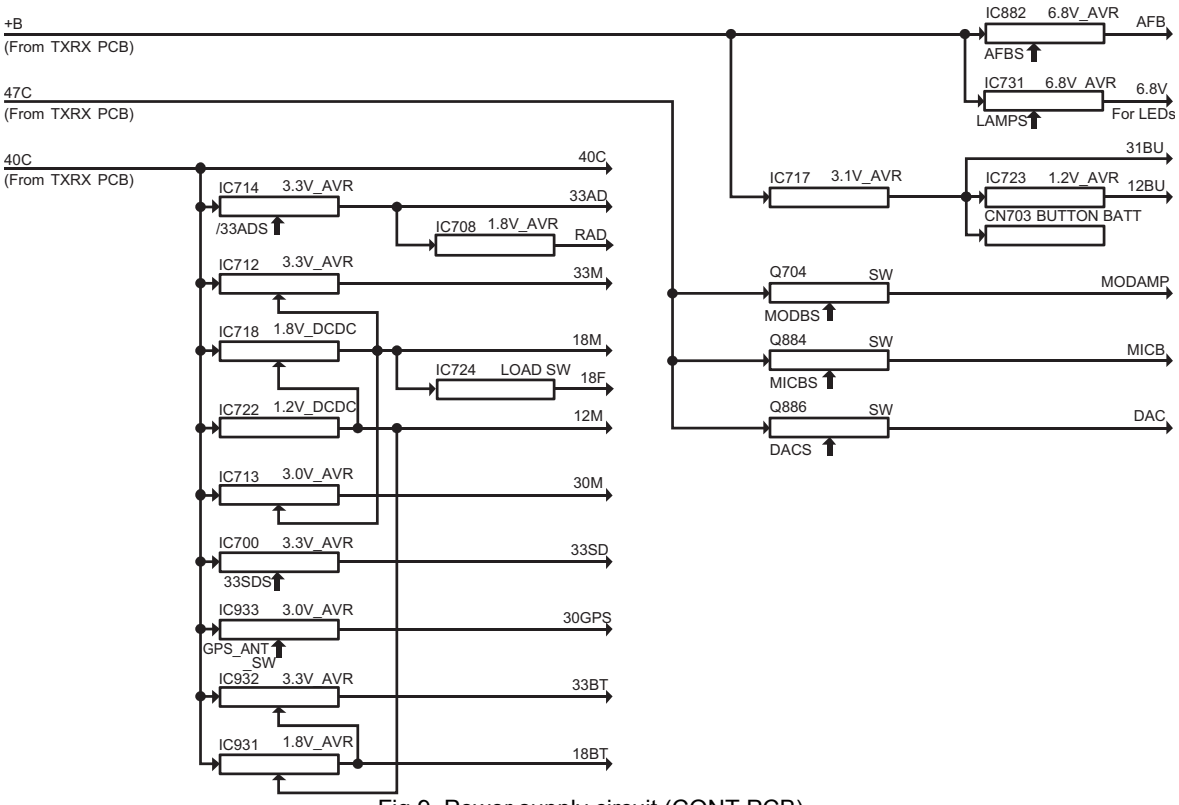


Fig.9 Power supply circuit (CONT PCB)

2.1.7 AF signal system

2.1.7.1 Reception AF circuit

■Demodulation signal circuit

Reception AF signals demodulated by the respective IF ICs (IC281 and IC284) for the A-band and B-band are independently applied to the main MPU/DSP (IC702) through the CODEC IC (IC707). Each signal is deemphasized under loudness control. Then the signals pass through the CODEC IC (IC707), enter to the AF amplifier (IC880) for the last amplification of the signals, pass through the SP MUTE switches (Q881 and Q883), and drive the SP.

Furthermore, the transceiver can save its power consumption in save mode by turning OFF the AVR (IC882) for the AF amplifier (IC880) according to an AFM control signal from the main MPU (IC702).

■Tone decode circuit

Reception AF signals for the A-band and B-band will be independently applied to the MPU/DSP (IC702) if the CTCSS, DCS, and Weather Alert function are ON, and selected signal components will be amplified to a necessary level for decoding processing.

■BEEP, DTMF circuit

The BEEP and DTMF signals generated from the main MPU/DSP (IC702) are applied to the AF Amplifier (IC880), and the signals pass through the SP MUTE switches (Q881 and Q883) and drive the SP.

When the BEEP and DTMF signals are sent, the AF MUTE switch in the main MPU/DSP (IC702) will cause a MUTE-ON state, and the signals will be sent separately from the reception AF signal.

■Squelch circuit

The amount of noise (SQA and SQB) and the signal strength (SMA and SMB) obtained from the respective IF ICs (IC281 and IC284) are retrieved by the main MPU/DSP (IC702) to control the AF MUTE switch.

■FM tuner circuit

The FM broadcasting band (76MHz~108MHz) signal can be received using an SMA antenna.
The reception signal passes through the band-pass filter and enters the RF amplifier (Q675) for the amplification of the signal, and the signal is applied to the FM tuner IC (IC674). The signal is demodulated in the FM tuner IC to generate an audio signal and de-emphasized. Then the signal is applied to the main MPU/DSP (IC702) for loudness control. Then the signal enters the AF amplifier (IC880) for the last amplification of the signal, passes through the SP MUTE switches (Q881 and Q883), and drives the SP.

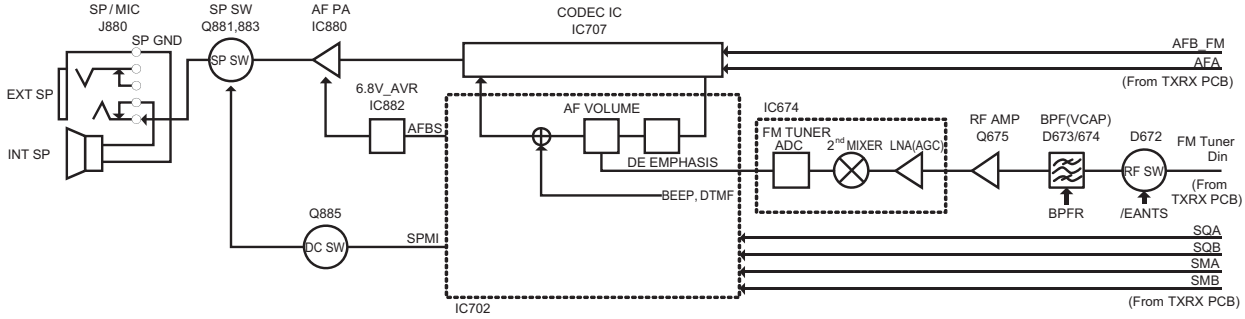


Fig.10 Reception AF circuit

2.1.7.2 Transmission AF circuit

■Modulation signal circuit

The transmission AF signal from the microphone is amplified by the MIC amplifier (IC881), applied to the main MPU/DSP (IC702) through the CODEC IC (IC707), and pre-emphasized.
Each signal made in the main MPU/DSP (IC702) is processed as shown below. The TONE and DTMF signals are pre-emphasized here. Packet transmission data at 1200 bps is subjected to the baseband filter and sub-carrier modulation. Packet transmission data at 9600 bps is subjected to the baseband filter only.
The transmission AF signal that has been level adjusted to an appropriate value passes through the CODEC IC (IC707), and then branched into two. One of them is amplified by the MOD VCO AMP (IC720) and applied as a high-speed modulation signal (MOD) to the D/A converter (IC671). Then the signal is applied to the VCO B. The other is amplified by the MOD TCXO AMP (IC720) and applied to the reference oscillator (X362).

■VOX circuit

The transmission AF signal is amplified by the VOX amplifier (IC881) and detected by the DC-detector (D882) to obtain a DC voltage in proportion to the input signal level. This voltage is input into the main MPU/DSP (IC702) to monitor the audio signal level.

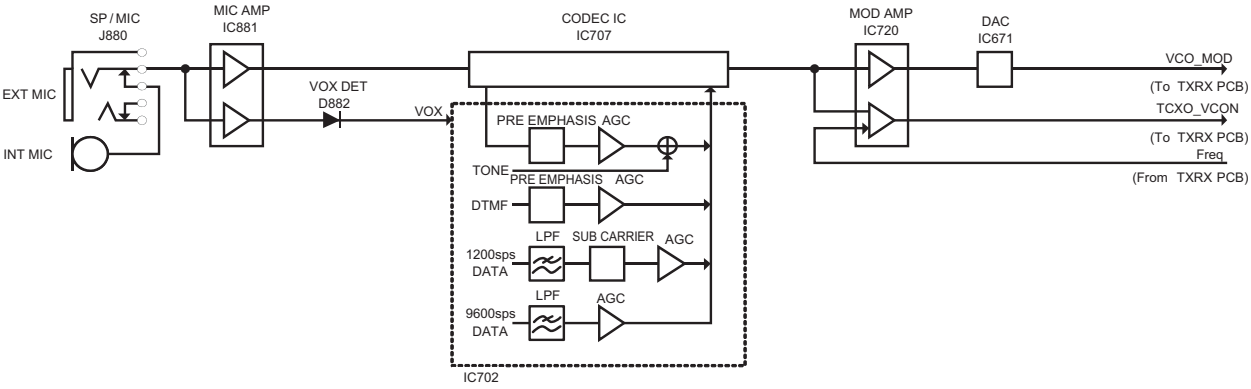


Fig.11 Transmission AF circuit

2.1.8 Control system

The control circuit consists of the main MPU/DSP (IC702), its peripheral circuits, and sub MPU (IC661). The IC702 has the following primary roles.

(1) Switching of transmission and reception by the PTT signal.
(2) Reading of the system program from the memory.
(3) Control of the audio mute circuit according to decode data.

The IC661 has the following primary roles.

(1) Frequency program transfer to the PLL and IF IC control.

2.1.8.1 MAIN MPU

The main microprocessor with digital signal processor (MPU/DSP) (IC702) incorporates a 32-bit RISC processor, fixed- and floating-point VLIW digital signal processors, and peripheral functions.
This microprocessor operates at a 139.2 MHz clock rate and 3.3/1.8/1.2 VDC. The microprocessor controls the transmission and reception of data to and from the flash memory, mobile DDR, control circuit, display circuit, sub MPU, and external devices.

2.1.8.2 Memory Circuit

The memory circuit consists of the main processor (IC702), mobile DDR (IC701), and flash memory (IC705).
The flash memory has a capacity of 256 Mbits, including a transceiver control program and recording data for the MPU. The mobile DDR is has a capacity of 512 Mbits. The MPU copies the program from the flash memory to mobile DDR. The MPU uses the mobile DDR as a work area.

2.1.8.3 LCD

The main MPU (IC702) is in direct control of the LCD.

2.1.8.4 Key Detection Circuit

The I/O expansion IC (IC730) is used to detect the keys. The IC730 detects a key pressed, which will be reported to the main MPU (IC702) through the serial line.

2.1.8.5 SUB MPU Circuit

The sub MPU (IC661) consists of an ARM-based 32-bit processor and a 64-kilobyte flash memory. The sub MPU is in control of the IF IC and PLL IC.

2.1.8.6 DSP

The DSP circuit consists of the MPU/DSP (IC702) and a baseband signal. The DSP operates at a 139.2 MHz clock rate, the I/O section operates at 3.3/1.8 V, and the core section operates at 1.2 V.

2.1.8.7 PC Port

The PC Port supports connections to external equipment (PCs) through the USB connector. The PC Port communicates with the main MPU (IC702).

2.1.8.8 SD slot

The SD Port supports micro SD memory cards through the micro SD memory card connector. The SD Port communicates with the main MPU (IC702).

2.1.8.9 Bluetooth/GPS Circuit

The Bluetooth/GPS circuit mainly consists of the Bluetooth/GPS IC (IC935).
The Bluetooth/GPS requires two clocks, one of which is the 19.2 MHz (X930) clock and the other is the slower clock at 32.768 kHz for the UART.
The Bluetooth/GPS IC uses the HCI UART and AI2 UART to communicate with the main MPU. The level shift ICs (IC930, IC936, and IC937) perform the level conversion of digital audio (PCM) at the UART as the interface between the main MPU (IC702) and Bluetooth/ GPS IC (IC935).
The two discrete external regulators (IC931 and IC932) provide power at 1.8 V and 3.3 V to the Bluetooth/GPS IC.

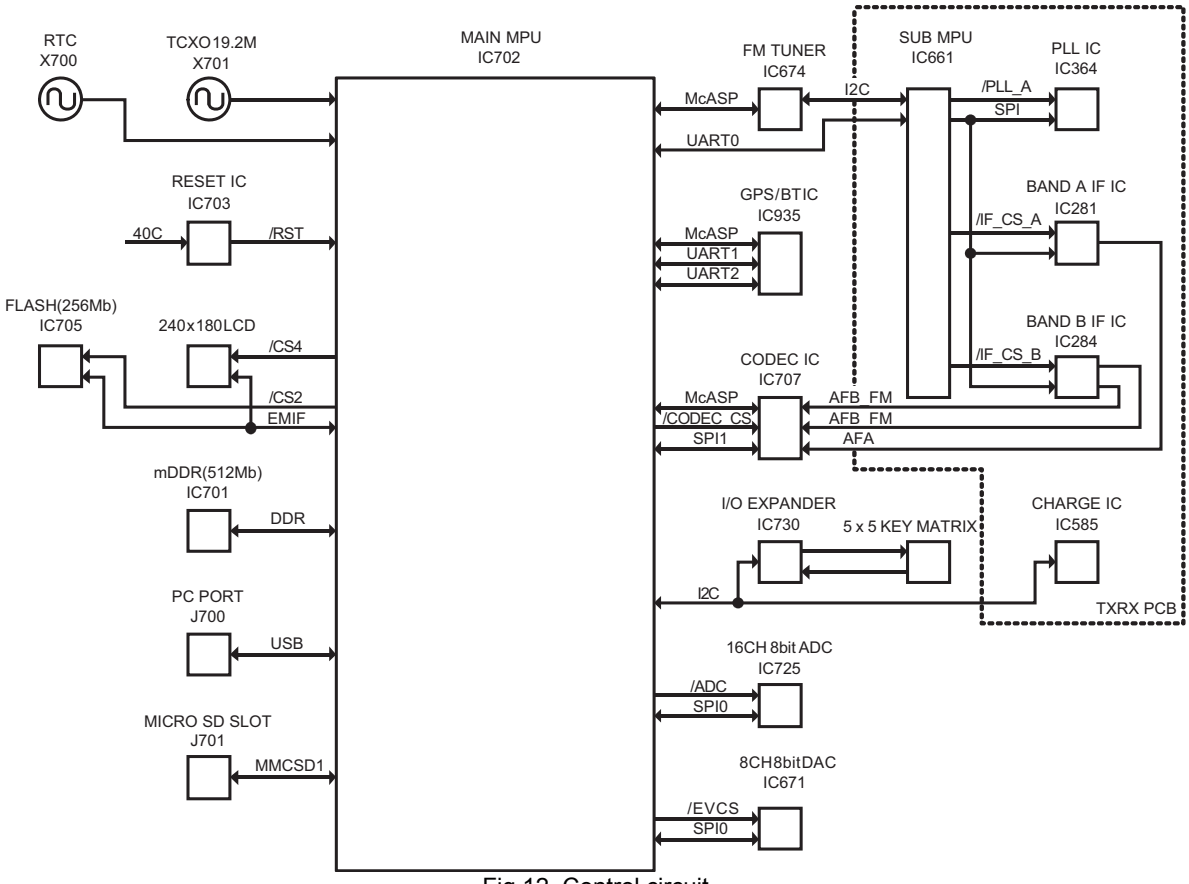


Fig.12 Control circuit

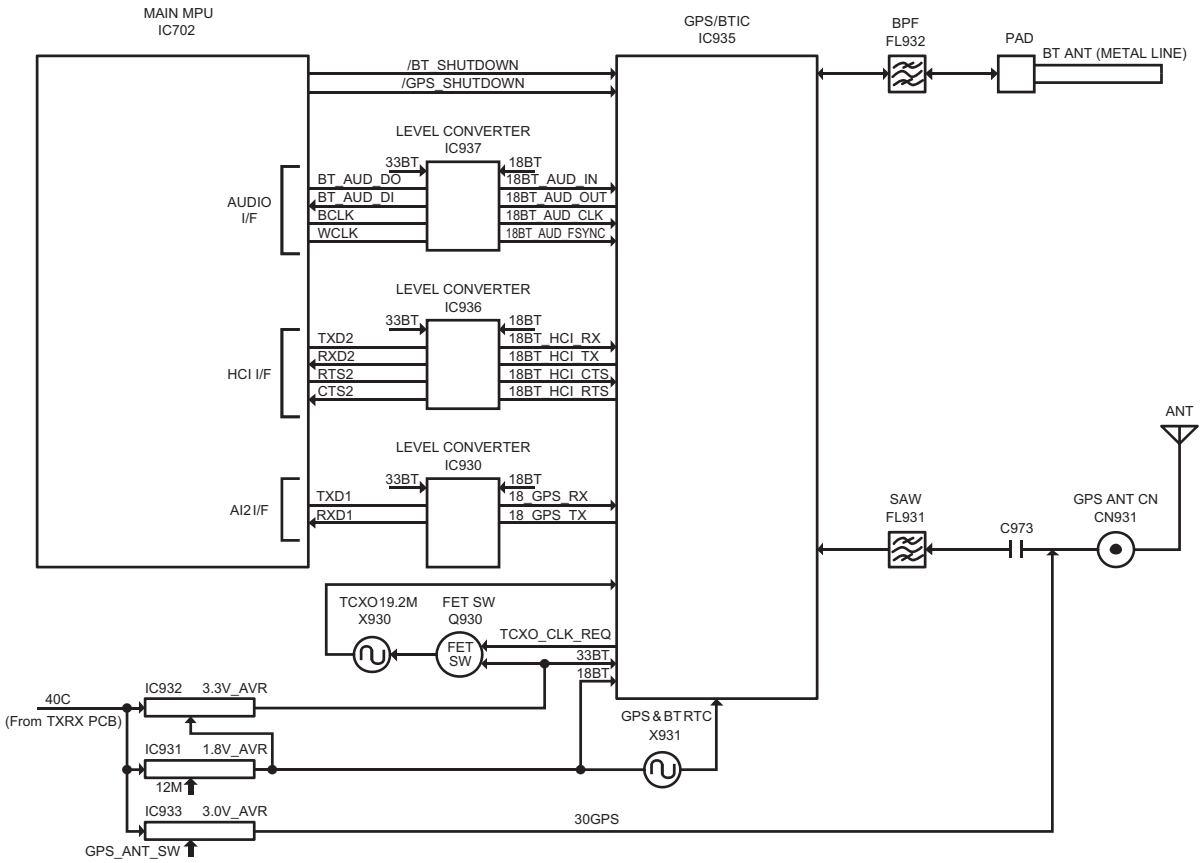


Fig.13 Bluetooth/GPS circuit

2.2 COMPONENTS DESCRIPTION

2.2.1 TX-RX UNIT (XC1-138E-01)

Ref. No.	Use / Function	Operation/Condition/Compatibility
IC1	RF AMP	TX AMP
IC3	APC	AMP
IC281	IF(A-band)	A-band
IC283	1st Mixer	B-band
IC284	IF(B-band)	B-band
IC285	3rd Mixer	B-band
IC286	IF AMP	B-band
IC287	Buffer(A-band)	OP AMP
IC288	Buffer(B-band)	OP AMP
IC361	Divider	Local B-band
IC363	5C AVR	5.3V regulator
IC364	PLL	A-band
IC365	6.6V DCDC	Charge pump
IC576	33BU AVR	3.3V regulator
IC577	33BV AVR	3.3V regulator
IC578	33CB AVR	3.3V regulator
IC579	33RA AVR	3.3V regulator
IC580	33C AVR	3.3V regulator
IC581	33CA AVR	3.3V regulator
IC582	33S AVR	3.3V regulator
IC583	33RB AVR	3.3V regulator
IC584	40C DCDC	4.0V DC/DC
IC585	Battery Charger	8.4V DC/DC Driver IC with Battery Charger
IC586	31BU AVR	3.1V AVR
IC587	AND SW	Power ON Logic for DC IN or Battery Insert
IC588	Pulse Generator	Power ON Logic for DC IN or Battery Insert
IC589	47C AVR	4.7V AVR
IC590	33IF AVR	3.3V AVR
IC591	AMP	Power ON Logic for DC IN or Battery Insert
IC592	OR Circuit	Power ON Logic for DC IN or Battery Insert
IC593	33RAD AVR	3.3V AVR
IC661	Sub MPU	Sub CPU
IC662	AND SW	A-band PLL IC Control Signal
IC663	AND SW	B-band PLL IC/FM IC Control Signal
IC671	DA Converter	Signal level adjust
IC672	Inverter	Oscillation circuit for FM tuner IC
IC673	AND SW	BCLK, WCLK on/off
IC674	FM tuner	FM radio
IC675~677	Gate SW	SDO0, SCK0, /EVCS on/off
IC700	33SD AVR	3.3V AVR
IC701	LPDDR	Program for operation
IC702	Main MPU	CPU with DSP
IC703	Reset	3.5V detect
IC704	/BINT	5.0V detect
IC705	FLASH	Store the program and user data
IC707	CODEC	coder/decoder for IF and AF
IC708	CODEC AVR	1.8V for CODEC
IC709	LED driver	LCD backlight driver
IC710	AND SW	LCD backlight control
IC711	Inverter	Oscillation circuit for CODEC
IC712	33M AVR	3.3V regulator
IC713	30M AVR	3.0V regulator
IC714	33AD AVR	3.3V regulator
IC715	Level shift	Level shift 1.8V -> 3.1V
IC717	31BU AVR	3.1V regulator
IC718	18M DCDC	1.8V DC/DC
IC719	AND SW	VINOK on/off
IC720	MOD AMP	OP AMP
IC721	ADC VREF	2.1V ref for ADC
IC722	12M DCDC	1.2V DC/DC
IC723	12BU AVR	1.2V regulator
IC724	Load SW	18M on/off
IC725	ADC	Signal level converter
IC726,732	Bus SW	Analog signal on/off
IC728	AND SW	PWR on/off
IC730	I/O Expander	Key scan and LCD backlight control
IC731	LAMP B	Variable regulator (6.8V)
IC733	SW	Pull up switch
IC880	AF AMP	SP output
IC881	MIC AMP	OP AMP
IC882	AF AMP AVR	Variable regulator (6.8V)
IC930	Level shift	Level shift 1.8V <=> 3.3V
IC931	18BT AVR	1.8V regulator
IC932	33BT AVR	3.3V regulator
IC933	30GPS AVR	3.0V regulator
IC935	BT and GPS	Bluetooth and GPS control
IC936,937	Level shift	Level shift 1.8V <=> 3.3V
Q2	RF AMP	TX final AMP(VHF/UHF)
Q4	SW	VHF TX
Q5	SW	Band SW(VHF,UHF)
Q6	RF AMP	TX drive AMP
Q7	SW	APC slope change SW
Q8	DC SW	TX on/off
Q9,10	DC SW	47C on/off
Q11	DC SW	UHF TX

Ref. No.	Use / Function	Operation/Condition/Compatibility
Q12	APC	AMP
Q13	DC SW	VHF TX
Q14	DC SW	ATT
Q171	RF AMP	UHF RX A-band
Q172	RF AMP	UHF RX
Q173	SW	UHF RX
Q174	SW	UHF RX A-band
Q175	SW	UHF RX B-band
Q176	SW	VHF RX
Q177	SW	220M RX
Q178	RF AMP	VHF/220M RX A-band
Q179	RF AMP	VHF RX
Q180	SW	VHF/220M RX
Q181	SW	VHF RX A-band
Q182	SW	VHF RX B-band
Q183	SW	MW bar antenna
Q184	SW	HF RX
Q185	SW	SW bar antenna
Q186~189	SW	ANT switch
Q190,191	RF AMP	HF RX B-band
Q192	RF AMP	UHF RX B-band
Q193	RF AMP	VHF/220M RX B-band
Q194	SW	UHF RX
Q195	RF AMP	FM Radio
Q196	SW	HF/FM radio
Q197	SW	FM Radio
Q281	1st Mixer	A-band
Q282	IF AMP	A-band
Q283	DC SW	Current switch
Q361	RF AMP	TX AMP
Q362	SW	Fin switch
Q363	RF AMP	Local B-band
Q364	RF AMP	Fin B-band
Q365	RF AMP	Local B-band
Q368,369	Oscillator	VCO2 B-band
Q371	SW	VCO2 B-band
Q372	SW	VCO1 B-band
Q373,374	SW	VCO Shift B-band
Q375	RIPPLE FILTER	VCO B-band
Q376	RF AMP	Local AMP A-band
Q377	SW	Local AMP A-band
Q378	RF AMP	TRIPLER
Q379	SW	DOUBLER A-band
Q380	RF AMP	DOUBLER A-band
Q381	RF AMP	Buffer
Q382	RF AMP	TRIPLER

Ref. No.	Use / Function	Operation/Condition/Compatibility
Q383	RF AMP	Buffer
Q384	RF AMP	Fin A-band
Q385	RIPPLE FILTER	VCO A-band
Q386	Oscillator	VCO A-band
Q387	SW	VCO Shift A-band
Q388	DC SW	33TX on/off
Q389	RF AMP	Buffer
Q390	DC SW	Local B-band
Q391	SW	Loop Filter B-band
Q576	DC SW	UHF TX
Q577	DC SW	VHF TX
Q579	SW	DC IN
Q580	SW	Switching FET for 8.4V DC/DC with Battery Charger
Q581	SW	Battery
Q582	DC SW	1st Mixer A-band
Q584,585	Inverter	Power ON Logic for DC IN or Battery Insert
Q661	SW	Beet Shift
Q675	RF AMP	RX signal
Q700	SW	Beat shift
Q701	Level shift	+B -> 3.3V
Q702	SW	33AD
Q703	SW	LCD reset
Q704	SW	MOD AMP on/off
Q706	SW	18M DC/DC on/off
Q707	SW	Bus switch on/off
Q711	SW	TX/busy LEDs on/off
Q712	SW	VBUS on/off
Q881,883, 885	SW	SP mute
Q884	SW	MIC AMP on/off
Q886	SW	47C on/off
Q930	SW	TCXO(GPS) on/off
D2,3	RF SW	UHF RX
D4,5	RF SW	VHF RX
D8,9	RF SW	ATT
D10	Detector	TX protector
D11,12	RF SW	ATT
D13,14	RF SW	VHF TX
D17	Detector	TX protector
D18,19	RF SW	UHF TX
D20	Reverse current protector	
D22,26	RF SW	VHF TX
D27	SW	VHF TX
D28	SW	UHF TX

Ref. No.	Use / Function	Operation/Condition/Compatibility
D29,30	SW	TX AMP on/off
D31	RF SW	UHF TX
D32,35	RF SW	VHF TX
D33,36	RF SW	UHF TX
D38	RF SW	Local A-band
D39	Reverse current protector	
D40,41	SW	ATT switch
D42,43	SW	UHF TX
D44	Surge protection	
D45	RF SW	VHF TX
D171,172	BPF tuning	UHF RX A-band
D173	RF SW	UHF RX A-band
D175	SW	UHF RX
D177,178	BPF tuning	UHF RX B-band
D179	RF SW	UHF RX B-band
D180	RF SW	VHF RX
D181	RF SW	220M RX
D182,184	BPF tuning	VHF RX A-band
D185	RF SW	VHF RX A-band
D186	SW	VHF RX
D188,189, 191	BPF tuning	VHF RX B-band
D192	RF SW	VHF RX B-band
D193	RF SW	UHF RX
D194,195	Bar ANT tuning	AM radio
D196	SW	Bar ANT
D197	RF SW	HF RX B-band
D198	RF SW	Bar ANT
D199	RF SW	HF B-band
D200	RF SW	Bar ANT(MW)
D201	RF SW	HF B-band
D202	Bar ANT tuning	AM radio
D204	RF SW	HF B-band
D361	RF SW	B-band RX Local
D362,363	RF SW	B-band Fin
D364,365	RF SW	B-band Local
D366	Modulator	B-band VCO2
D367	Modulator	B-band VCO1
D369,372	Frequency Control	B-band VCO2
D370,373	Frequency Control	B-band VCO1
D374	RF SW	B-band VCO2 Shift
D375	RF SW	B-band VCO1 Shift
D376	Speed up	Ripple filter
D378	RF SW	Local A-band
D379	Speed up	Ripple filter
D380	Modulator	A-band VCO Shift
D381	Modulator	A-band VCO
D382	Frequency Control	A-band VCO
D383	RF SW	Local B-band
D576	Reverse Voltage Protection	Battery
D577	Reverse Voltage Protection	DC-IN
D578	OR Circuit	3.1V Power Supply
D579,580, 583	Over Voltage Protection	Power ON Logic for DC IN or Battery Insert
D587	Surge protection	8.4V DC/DC with Battery Charger
D588	Speed up	8.4V DC/DC with Battery Charger
D673,674	BPF tuning	FM radio
D675,700	Voltage protector	Constant voltage
D710	Reverse current protector	
D720	SW	Bus switch power on/off
D721	LED	TX/busy
D801~812	LED	Back Light
D882,883	VOX	Current steering

2.3 TERMINAL FUNCTION

2.3.1 TX-RX UNIT (XC1-138)(1/7) CONTROL

Pin No.	Name	I/O	Function
CN702(to LCD Module)			
1	LEDK3	I	LED cathode 3
2	LEDK2	I	LED cathode 2
3	LEDK1	I	LED cathode 1
4	LEDA	O	40C power supply(LED anode)
5	VSSA	-	Analog GND
6	VSSA	-	Analog GND
7	VCC	O	3V power supply
8	VCC	O	3V power supply
9	DC	O	LCD driver data/command switching signal
10	/CS	O	LCD driver CS signal
11	/RESET	O	LCD driver RESET signal
12	/RD	O	LCD driver RD signal
13	/WR	O	LCD driver WR signal
14	IMO	O	Interface mode select
15	BD15	I/O	LCD driver bus data output
16	BD14	I/O	LCD driver bus data output
17	BD13	I/O	LCD driver bus data output
18	BD12	I/O	LCD driver bus data output

Pin No.	Name	I/O	Function
19	BD11	I/O	LCD driver bus data output
20	BD10	I/O	LCD driver bus data output
21	BD09	I/O	LCD driver bus data output
22	BD08	I/O	LCD driver bus data output
23	BD07	I/O	LCD driver bus data output
24	BD06	I/O	LCD driver bus data output
25	BD05	I/O	LCD driver bus data output
26	BD04	I/O	LCD driver bus data output
27	BD03	I/O	LCD driver bus data output
28	BD02	I/O	LCD driver bus data output
29	BD01	I/O	LCD driver bus data output
30	BD00	I/O	LCD driver bus data output
31	CABC	-	NC
32	IOVCC	O	1.8V power supply
33	IOVCC	O	1.8V power supply
34	VSSD	-	digital GND
35	VSSD	-	digital GND
CN705(to KEY)			
1	LAMP B	O	LAMP B
2	NC	-	NC
3	LAMP GND	-	LAMP GND
4	SP-	I	SP GND
5	SP+	O	SP AF
6	LAMP GND	-	LAMP GND
7	KEY_I0	I	key matrix
8	KEY_I1	I	key matrix
9	KEY_I2	I	key matrix
10	KEY_I3	I	key matrix
11	KEY_I4	I	key matrix
12	KEY_O0	O	key matrix
13	KEY_O1	O	key matrix
14	KEY_O2	O	key matrix
15	KEY_O3	O	key matrix
16	KEY_O4	O	key matrix
CN706(to TX-RX)			
1	+B	I	+B power supply
2	DET1	I	power detect signal
3	+B	I	+B power supply
4	DET2	-	No use
5	TCXO VCOM	O	Modulation signal for TCXO
6	CURR	I	Final current detection voltage
7	40C	I	40C power supply
8	SQA	I	Band A squelch voltage signal
9	40C	I	40C power supply
10	GND	-	GND
11	RAINT	O	Interrupt signal for radio

Pin No.	Name	I/O	Function
12	BPFA	O	Band A BPF adjustment signal
13	47C	I	47C power supply
14	AFA	I	Band A audio signal
15	AGCB	O	Band B AGC signal
16	SMA	I	Band A RSSI voltage signal
17	IFB	I	Band B SSB/CW/AM/IF signal
18	LDA	I	Band A lock detect signal
19	AFB_FM	I	Band B D-star/FM audio signal
20	PRHOTB	I	Processor hot signal
21	SQB	I	Band B squelch voltage signal
22	PMO	I	Voltage output signal for charge
23	SMB	I	Band B RSSI voltage signal
24	LDB	I	Band B lock detect signal
25	I2CCK	O	I2C CLK signal for charge IC
26	/RST_R	I	RESET signal for radio IC
27	I2CDT	I/O	I2C DATA signal for charge IC
28	GND	-	GND
29	I2CCKR	I	I2C CLK signal for radio IC
30	GND	-	GND
31	I2CDTR	I/O	I2C DATA signal for radio IC
32	GND	-	GND
33	SCPU_TXD	O	UART for SUB MPU
34	BFMS	I	Band B switch signal for power supply(76-108MHz)
35	SCPU_RXD	I	UART for SUB MPU
36	VINOK	I	VINOK signal
37	/S_RST	O	RESET signal for SUB MPU
38	BAT_DET	I	Battery S terminal detect signal
39	40CS	O	40C switch signal
40	VDCIN	I	Detection signal for DC IN voltage
41	33SS	O	33S switch signal
42	POSWO	O	Power switch output signal
43	Freq	I	TCXO Frequency adjustment signal
44	AGCA/APC	O	Band A AGC signal & APC signal
45	VCOMOD	O	Modulation signal for VCO
46	VBAT	I	Battery voltage detect signal
47	BPFB	O	Band B BPF adjustment signal
48	NC	-	NC
49	33RAD	I	33RAD power supply
50	+B1	I	+B power supply
CN707(to encoder)			
1	GND	-	GND
2	Vol_O	O	Volume signal
3	Vol_I	I	Power supply for volume

Pin No.	Name	I/O	Function
4	ENC2	I	Encoder data 2
5	GND	-	GND
6	ENC1	I	Encoder data 1

2.3.2 TX-RX UNIT (XC1-138)(2/7) TX-RX

Pin No.	Name	I/O	Function
CN182(to MW/SW)			
1	BFMS	O	Band B switch signal for power supply(76-108MHz)
2	FMOUT	I	FM Radio RF signal
3	SWANT_S	O	SW bar antenna on/off switch signal
4	GND	-	GND
5	GND	-	GND
6	HFIN	O	Band B HF RF signal
7	MWANT_S	O	MW bar antenna on/off switch signal
8	GND	-	GND
9	GND	-	GND
10	BHFS	O	Band B switch signal for power supply(0.1-76MHz)
11	OBPFB	O	Band B BPF adjustment signal
12	GND	-	GND
13	GND	-	GND
14	HFOUT	I	Band B HF RF signal
15	OAGCB	O	Band B AGC signal
16	GND	-	GND
17	GND	-	GND
18	GND	-	GND
19	47C	O	47C power supply
20	47C	O	47C power supply
CN401(to VCO B)			
1	VCO2	O	Band B switch signal for power supply(VCO2)
2	CV_B	O	Band B lock voltage
3	33BF	O	Band B VCO Power supply
4	GND	-	GND
5	UCW_VCO	-	NC
6	GND	-	GND
7	VCO1	O	Band B switch signal for power supply(VCO1)
8	GND	-	GND
9	SHIFT_B	O	Band B VCO shift signal
10	VCO_MOD	O	Modulation signal for VCO
11	GND	-	GND
12	GND	-	GND
13	GND	-	GND
14	NC	-	NC
15	GND	-	GND
16	VCO_B	I	Band B VCO signal

Pin No.	Name	I/O	Function
CN501(to VCO A)			
1	VCO_A	I	Band A VCO signal
2	Fin_A	O	Band A PLL RF input signal
3	GND	-	GND
4	GND	-	GND
5	GND	-	GND
6	GND	-	GND
7	GND	-	GND
8	NC	-	NC
9	33CA	O	33CA power supply
10	GND	-	GND
11	GND	-	GND
12	GND	-	GND
13	GND	-	GND
14	GND	-	GND
15	SHIFT_A	O	Band A VCO shift signal
16	CV_A	O	Band A lock voltage
CN661(to CONTROL)			
1	+B	O	+B power supply
2	DET1	O	power detect signal
3	+B	O	+B power supply
4	DET2	-	NC
5	TCXO VCOM	I	Modulation signal for TCXO
6	CURR	O	Final current detection voltage
7	40C	O	40C power supply
8	SQA	O	Band A squelch voltage signal
9	40C	O	40C power supply
10	GND	-	GND
11	RAINT	I	Interrupt signal for radio
12	BPFA	I	Band A BPF adjustment signal
13	47C	O	47C power supply
14	AFA	O	Band A audio signal
15	AGCB	I	Band B AGC signal
16	SMA	O	Band A RSSI voltage signal
17	IFB	O	Band B SSB/CW/AM/IF signal
18	LDA	O	Band A lock detect signal
19	AFB_FM	O	Band B D-star/FM audio signal
20	PRHOTB	O	Processor hot signal
21	SQB	O	Band B squelch voltage signal
22	PMO	O	Voltage output signal for charge
23	SMB	O	Band B RSSI voltage signal
24	LDB	O	Band B lock detect signal
25	I2CCK	I	I2C CLK signal for charge IC
26	/RST_R	O	RESET signal for radio IC
27	I2CDT	I/O	I2C DATA signal for charge IC
28	GND	-	GND

Pin No.	Name	I/O	Function
29	I2CCKR	O	I2C CLK signal for radio IC
30	GND	-	GND
31	I2CDTR	I/O	I2C DATA signal for radio IC
32	GND	-	GND
33	SCPU_TXD	I	UART for SUB MPU
34	BFMS	O	Band B switch signal for power supply(76-108MHz)
35	SCPU_RXD	O	UART for SUB MPU
36	VINOK	O	VINOK signal
37	/S_RST	I	RESET signal for SUB MPU
38	BAT_DET	O	Battery S terminal detect signal
39	40CS	I	40C switch signal
40	VDCIN	O	Detection signal for DC IN voltage
41	33SS	I	33S switch signal
42	POSWO	I	Power switch output signal
43	Freq	O	NC
44	AGCA/APC	I	Band A AGC signal & APC signal
45	VCOMOD	I	Modulation signal for VCO
46	VBAT	O	Battery voltage detect signal
47	BPFB	I	Band B BPF adjustment signal
48	NC	-	No connection
49	33RAD	O	33RAD power supply
50	+B1	O	+B power supply

2.3.3 TX-RX UNIT (XC1-138)(3/7) VCO-A

Pin No.	Name	I/O	Function
CN500(to TX-RX)			
1	VCO_A	O	Band A VCO signal
2	Fin_A	I	Band A PLL RF input signal
3	GND	-	GND
4	GND	-	GND
5	GND	-	GND
6	GND	-	GND
7	GND	-	GND
8	NC	-	NC
9	33CA	I	33CA power supply
10	GND	-	GND
11	GND	-	GND
12	GND	-	GND
13	GND	-	GND
14	GND	-	GND
15	SHIFT_A	I	Band A VCO shift signal
16	CV_A	I	Band A lock voltage

2.3.4 TX-RX UNIT (XC1-138)(4/7) VCO-B

Pin No.	Name	I/O	Function
CN400(to TX-RX)			
1	VCO2	I	Band B switch signal for power supply(VCO2)
2	CV_B	I	Band B lock voltage
3	33BF	I	Band B VCO Power supply
4	GND	-	GND
5	UCW_VCO	-	NC
6	GND	-	GND
7	VCO1	I	Band B switch signal for power supply(VCO1)
8	GND	-	GND
9	SHIFT_B	I	Band B VCO shift signal
10	VCO_MOD	I	Modulation signal for VCO
11	GND	-	GND
12	GND	-	GND
13	GND	-	GND
14	NC	-	NC
15	GND	-	GND
16	VCO_B	O	Band B VCO signal

2.3.5 TX-RX UNIT (XC1-138)(5/7) MW/SW

Pin No.	Name	I/O	Function
CN181(to TX-RX)			
1	FMOUT	O	FM Radio RF signal
2	BFMS	I	Band B switch signal for power supply(76-108MHz)
3	GND	-	GND
4	SWANT_S	I	SW bar antenna on/off switch signal
5	HFIN	I	Band B HF RF signal
6	GND	-	GND
7	GND	-	GND
8	MWANT_S	I	MW bar antenna on/off switch signal
9	BHFS	I	Band B switch signal for power supply(0.1-76MHz)
10	GND	-	GND
11	GND	-	GND
12	OBPFB	I	Band B BPF adjustment signal
13	HFOUT	O	Band B HF RF signal
14	GND	-	GND
15	GND	-	GND
16	OAGCB	I	Band B AGC signal
17	GND	-	GND
18	GND	-	GND
19	47C	I	47C power supply
20	47C	I	47C power supply

Pin No.	Name	I/O	Function
CN183(to BARANT)			
1	SW	I	SW signal
2	GND	-	GND
3	MW	I	MW signal

2.3.6 TX-RX UNIT (XC1-138)(6/7) BARANT

Pin No.	Name	I/O	Function
CN184(to MW/SW)			
1	MW	O	MW signal
2	GND	-	GND
3	SW	O	SW signal

2.3.7 TX-RX UNIT (XC1-138)(7/7) KEY

Pin No.	Name	I/O	Function
CN1(to CONTROL)			
1	KEY_O4	I	key matrix
2	KEY_O3	I	key matrix
3	KEY_O2	I	key matrix
4	KEY_O1	I	key matrix
5	KEY_O0	I	key matrix
6	KEY_I4	O	key matrix
7	KEY_I3	O	key matrix
8	KEY_I2	O	key matrix
9	KEY_I1	O	key matrix
10	KEY_I0	O	key matrix
11	LAMP GND	-	LAMP GND
12	SP+	I	SP AF
13	SP-	O	SP GND
14	LAMP GND	-	LAMP GND
15	NC	-	NC
16	LAMP B	I	LAMP B

2.3.8 Micro USB Socket J700

Pin No.	Pin Name	I/O	Function	Rating and Condition
1	V BUS	I	V BUS sense input	Input voltage 4.4-5.25V
2	DM	I/O	USB D-	Full-Speed(12Mbps) VIH>2.0V,VIL<0.8V Included Pull up resistors
3	DP	I/O	USB D+	Full-Speed(12Mbps) VIH>2.0V,VIL<0.8V
4	NC	-	NC	-
5	GND	I	GND	GND

2.3.9 micro SD Slot J701

Pin No.	Pin Name	I/O	Description	Rating and Condition
1	DAT2	I/O	Data line is bidirectional signal. Host and card drivers operate in push pull mode.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max 0.4V
2	DAT3	I/O	Data line is bidirectional signal. Host and card drivers operate in push pull mode.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max 0.4V
3	CMD	I/O	Command is bidirectional signal. Host and card drivers operate in push pull mode.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max 0.4V
4	VDD	O	3.3V power supply output.	Output Voltage:3.267 to 3.333V(typ3.3V) Maximum Current max 0.2A
5	CLK	I/O	Clock is a host to card signal. CLK operates in push pull mode.	VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max0.4V Clock frequency (High Speed MODE) MAX 50MHz
6	VSS	-	GND	-
7	DAT0	I/O	Data line is bidirectional signal. Host and card drivers operate in push pull mode.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max 0.4V
8	DAT1	I/O	Data line is bidirectional signal. Host and card drivers operate in push pull mode.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V VOH(Io=4mA):2.4 to 3.6V VOL(Io=4mA):max 0.4V
-	Card Detect SW	I	Normally open. microSD is inserted ON. microSD is inserted OFF.	VIH:2.0 to 3.6V VIL:-0.3 to 0.8V
-	COMMON	-	-	-

2.3.10 Microphone Jack J880

Pin No.	Pin Name	I/O	Function	Rating and Condition
1	PTT	I	PTT	VIH:2.0 to 3.6V Standby VIL:-0.3 to 0.4V Transmit
2	33M	O	3.3V output	VOH(Io=7.5mA max):2.4 to 3.6V
3	MIC	I	External Microphone input	2k ohm terminated

2.3.11 Speaker Jack J880

Pin No.	Pin Name	I/O	Function	Rating and Condition
6	SPG	I	Speaker GND	GND
7	SP	O	SP AF output	Output impedance 8 ohm or higher. Ex)SMC-34's speaker impedance is 15.5 ohm
8	REM	I	Remote key Detection	PF1:3.9k±5%.PF2:10k±5%.PF3:27k±5%. Lock:less than 10 ohm

2.3.12 DC Jack J576

Pin No.	Pin Name	I/O	Function	Rating and Condition
1	+	I	Voltage Supply	Voltage:11.0-15.9V
2	GND	I	GND	GND

SECTION 3
DISASSEMBLY

3.1 How to Remove the Case Assembly

(1) Remove the SP/MIC cap <1>.
(2) Pull out the two knobs <2>.
(3) Remove the two screws <3> on the front case.
(4) Remove the nut <4> of the antenna receptacle.
(5) Remove the nut <5> of the volume/encoder.
(6) Remove the top panel <6>.
(7) After removing the flat cable for the KEY PCB from the connector, remove the front case from the chassis.

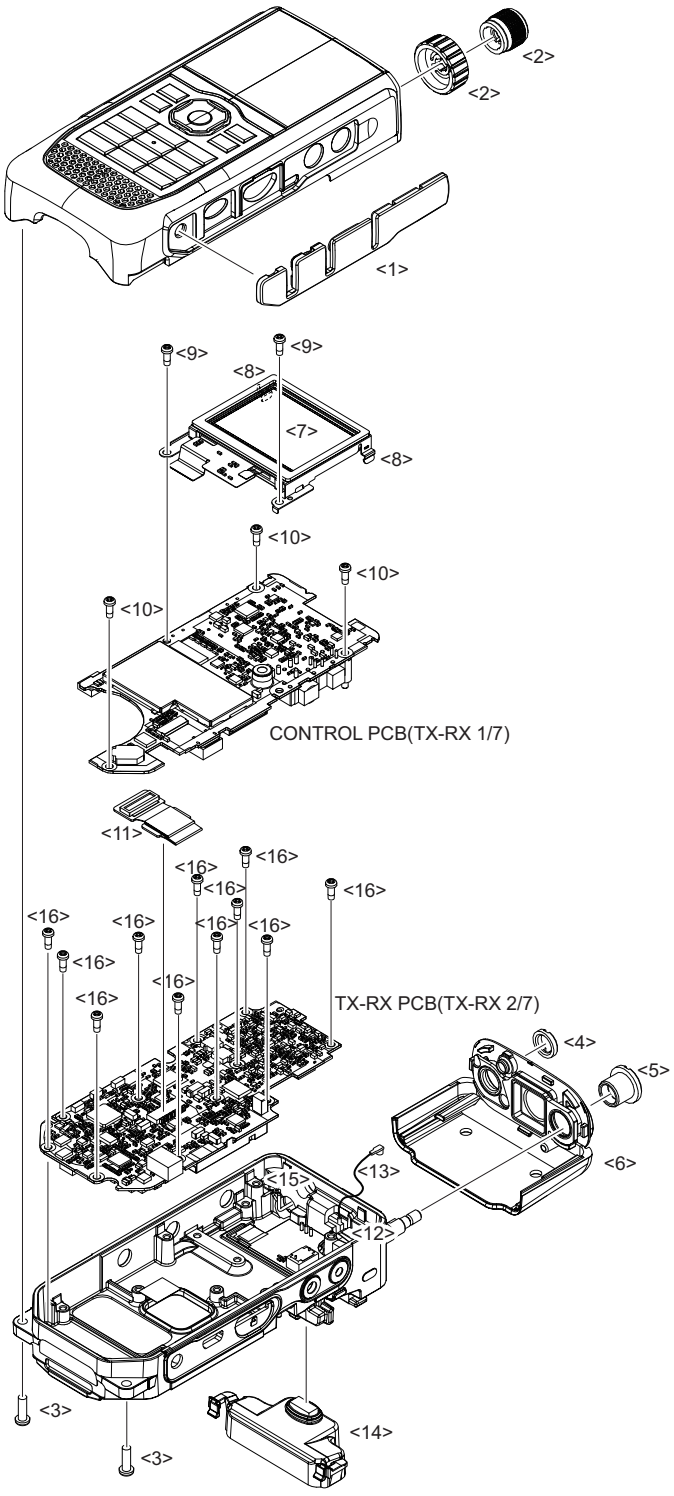
3.2 How to Remove the PCB

3.2.1 CONTROL PCB (TX-RX 1/7)

(1) Remove the flexible connector of the LCD <7>. Remove two tabs <8> and two screws <9> on the LCD mounting bracket. Then remove the LCD.
(2) Remove the 3 screws <10> on the PCB.
(3) Lift the CONTROL PCB, and disconnect the cord assembly (50-pin) <11>, volume/encoder FPC <12>, and GPS coaxial cable <13> from the respective connectors.
(4) Remove the CONTROL PCB from the chassis.

3.2.2 TX-RX PCB (TX-RX 2/7)

(1) Remove the two tabs on the left- and right-hand side of the rear packing <14> from the chassis, and remove the packing from the chassis.
(2) Remove the solder on the antenna terminal <15>.
(3) Remove the 11 screws <16> on the PCB.
(4) Lift and remove the TX-RX PCB.



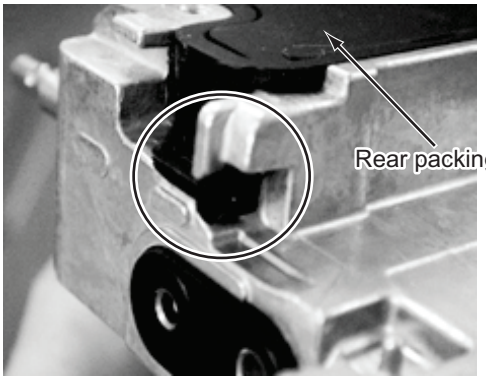
3.3 Precautions for Disassembly

3.3.1 How to Remove Key Tops

(1) The key tops are pasted to the surface of the front case with double-sided tape. Push the key tops from the inner side hole of the front case at the time of removing or replacing the key tops.

3.3.2 How to Remove Rear Packing

(1) Remove the two tabs on the left- and right-hand side on the packing from the slit of the chassis first at the time of removing the rear packing.

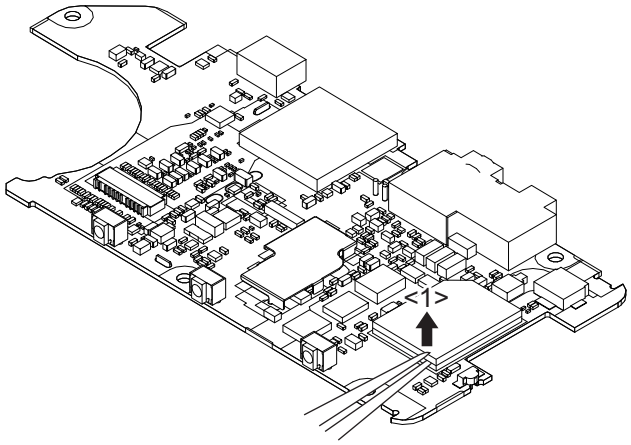


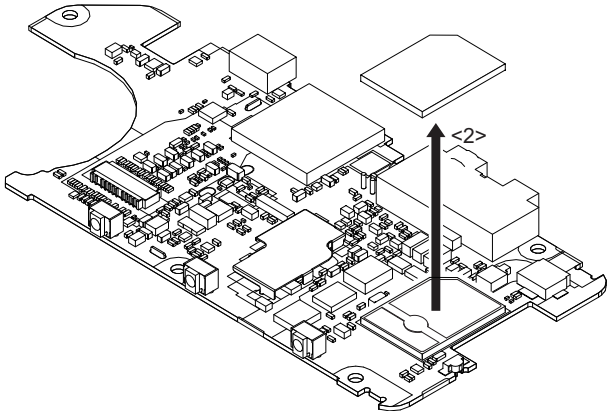
3.3.3 Remove the top cover from the shield cover

(1) Use tweezers to slightly lift the edge of the top cover. <1>

(2) As you do step 2 above, vary the position you hold the top cover as you lift it, and remove the top cover <2>.

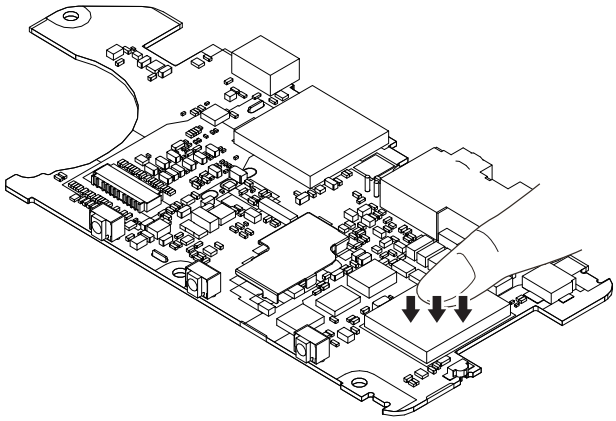
Note: Once the top cover is removed, it cannot be used again.





Note:

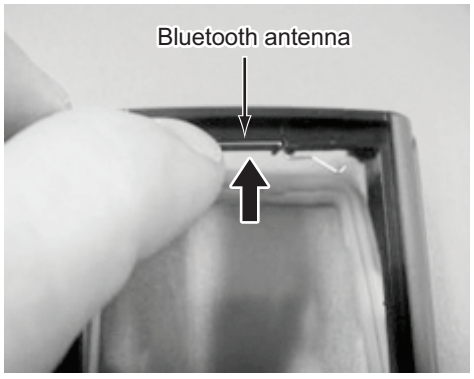
Push evenly on the top cover and be careful that you do not bend it as you install it on the shield cover.



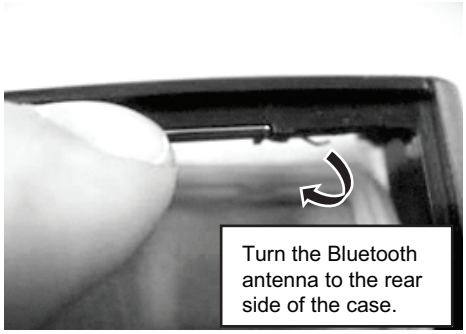
3.4 Precautions for Reassembly

3.4.1 Mounting of Bluetooth Antenna (BAR SPRING)

(1) Mount the Bluetooth antenna onto the front-side groove of the case with the absence of the front glass, the state of which will occur at the time of replacing the front case, for example.

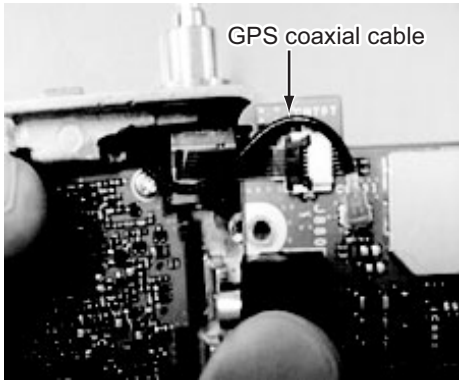


(2) Turn the Bluetooth antenna to the rear side of the case, and mount the antenna onto the rear groove of the case.



3.4.2 Forming of GPS Coaxial Cable

(1) Perform the forming the GPS coaxial cable as shown in the figure.



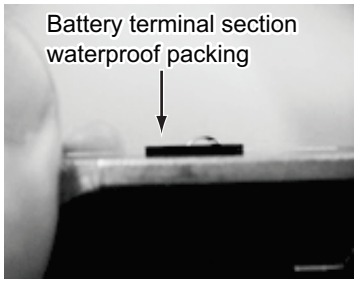
3.4.3 Mounting of Top Panel Nuts and Front Case Screws

(1) Assemble the front case into the chassis and attach the two nuts to the top panel.

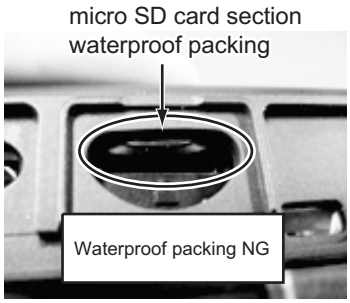
(2) Attach the two screws to the front case.

3.4.4 Check on Waterproof Packing of Battery Terminals and micro SD Card Section

(1) After assembling the TX-RX PCB (TX-RX 2/7) into the chassis, check that the waterproof packing of the battery terminal section is firmly inserted.



(2) After assembling the front case into the chassis, check that the waterproof packing of the micro SD card section is firmly inserted.



3.4.5 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.
For example, when “Mounting bracket (J2B-0201-00)” is changed, “Cushion (G1D-0133-00)” should be ordered and changed together because Cushion (G1D-0133-00) are non-reusable.

Main Parts		Assembled Sheet/ Cushion	
Part Name	**Part Number**	**Part Name**	**Part Number**
Case ASSY (for service) "Case/All-around packing/Speaker/ Speaker lead wire"	XC2-030J-00	Key top	K2K-0186-00
		Front glass	B1A-0052-00
		Sheet (KEY PCB)	G1B-0148-00
		Cushion (MIC)	G1D-0144-00
Mounting bracket(LCD)	J2B-0201-00	Cushion (LCD)	G1D-0133-00

3.4.6 Replacing Service PCB

The following part does not belong to the Control PCB and TX-RX PCB for service. Please use the part which has been attached to the printed circuit board. After the replacement of the printed circuit board, be sure to update the firmware to the latest version, and then be sure to adjust the transceiver over again.

Service PCB	Part Name	Part Number
TX-RX PCB (TX-RX 2/7)	Battery terminal x3	E2K-0031-00
	Packing (Terminal block)	G5D-0076-00
	Terminal block	E7C-0011-00
	Shielding cover (VCO-A)	F1B-0052-00
	Shielding cover (VCO-B)	F1B-0053-00
Control PCB (TX-RX 1/7)	Lithium battery	W09-0971-05

SECTION 4
ADJUSTMENT

4.1 Updating the Firmware

The firmware can be updated using Firmware Updating Program (s).
Update the firmware according to the procedure displayed in updating program.
Download the latest updating program from the following URL:
http://www.kenwood.com/i/products/info/amateur/software_download.html
* The URL may change without notice.

4.2 Required Test Equipment

(1) Stabilized Power Supply
- a) The supply voltage can be changed between 3V and 16V and the current is 3A or more.
- b) The standard voltage is 13.8V.

(2) DC Ammeter (DC. A)
- a) Class 1 ammeter (17 ranges and other features)
- b) The full scale can be switched between 300mA and 3A.
- c) A cable with low internal loss must be used.

(3) Frequency Counter (f. counter)
- a) Frequencies of up to 1GHz or so can be measured.
- b) The sensitivity can be changed to 250MHz or below and measurements are highly stable and accurate (about 0.2ppm).

(4) Power Meter (terminal type)
- a) Measurable frequency: Up to 500MHz
- b) Impedance: 50 ohm, unbalanced
- c) Measuring range: Full scale of 10W
- d) The specified special connection cable must be used.

(5) RF Voltmeter (RF VM)
- a) Measurable frequency: Up to 500MHz or so

(6) Linear Detector
- a) Measurable frequency: Up to 500MHz
- b) Characteristic is flat and CN is 60dB or more.

(7) Digital Voltmeter (DVM)
- a) Voltage range: FS = 18V or so
- b) Input resistance: 1M ohm or more

(8) Oscilloscope
- a) Measuring range: DC to 30MHz
- b) Provides highly accurate measurements for 5 to 25MHz

(9) AF Voltmeter (AF VM)
- a) Measurable frequency: 50Hz to 1MHz
- b) Maximum sensitivity: 1mV or more

(10) Spectrum Analyzer
- a) Measuring range: DC to 1GHz or more

(11) Standard Signal Generator (SSG)
- a) Maximum frequency: 500MHz or more
- b) Output: -133dBm (0.05μV) to -13dBm (50mV)
- c) Output impedance: 50 ohm

(12) Tracking Generator
- a) Center frequency: 50kHz to 200MHz
- b) Frequency deviation: ±35MHz
- c) Output voltage: 100mV or more

(13) Dummy Load
- a) 8 ohm, 3W or more

4.3 Service Jig

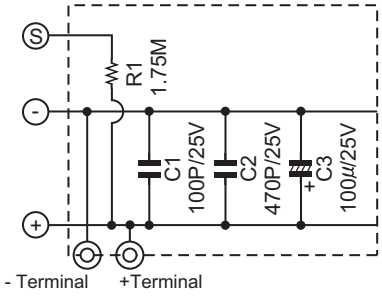
■Battery Jig (W3F-0208-00)

Connect the power cable properly between the battery jig installed in the transceiver and the power supply, and be sure output voltage and the power supply polarity prior to switching the power supply ON, otherwise over voltage and reverse connection may damage the transceiver, or the power supply or both.

Note:

When using the battery jig, you must measure the voltage at the terminals of the battery jig. Otherwise, a slight voltage drop may occur within the power cable, between the power supply and the battery jig, especially while the transceiver transmits.

Schematic diagram



■**Connection cable**

Connection cable consists of 2 pieces of flat cable assembly (X42-3510-10), to extend its cable length double for connection between two PCBs.

For repair and adjustment, use this connection cable to connect a Control PCB and a TX-RX PCB by inserting the connection cable to connectors on these PCBs.

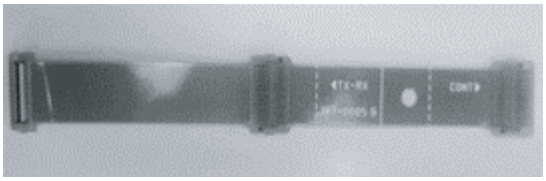
Note:

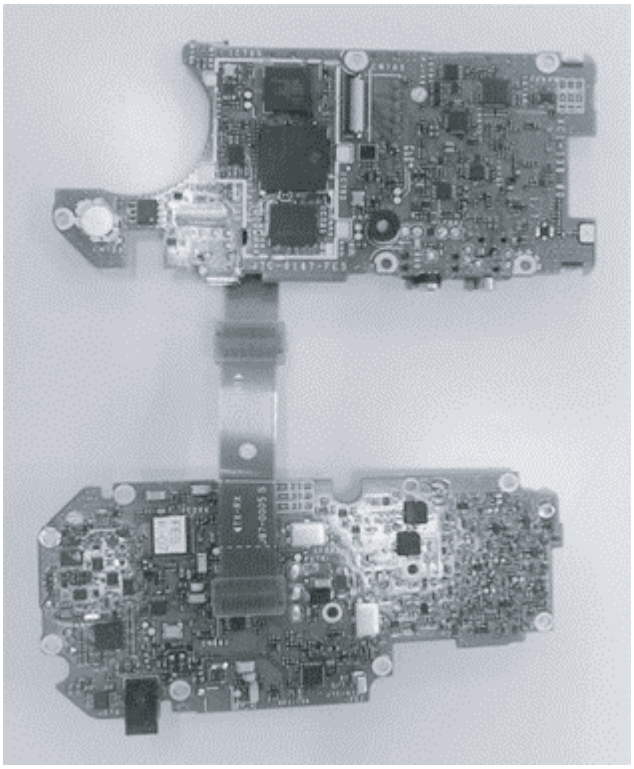
If Control PCB and TX-RX PCB are disassembled from the main chassis, there may possibly cause short-circuit, electrical shock or the high-frequency signal interference.

To verify the transmit state, be sure to keep Control PCB and TX-RX PCB assembled in a chassis.

Besides, transmission without a heat sink attached may possibly cause the device to be damaged.

Be sure to verify the transmit performance with LOW/EL transmit power transmitted in a short amount of time.





4.4 Adjustment Mode

■**Outline**

(1) Set the transceiver to adjustment mode and change each setting data item.

(2) This mode is used when the PCBs are replaced at a service center or at the time of making transceiver readjustments.

Note:

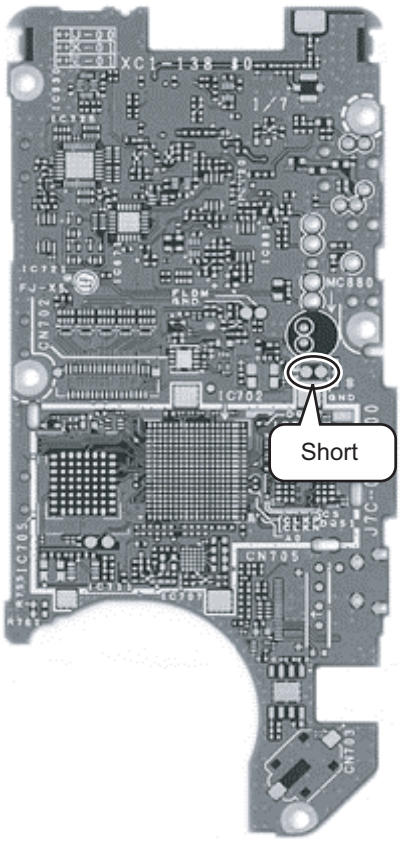
All adjustment data is stored in the flash memory (TX-RX 1/7: CONTROL IC705).

■**Operation procedures in adjustment mode**

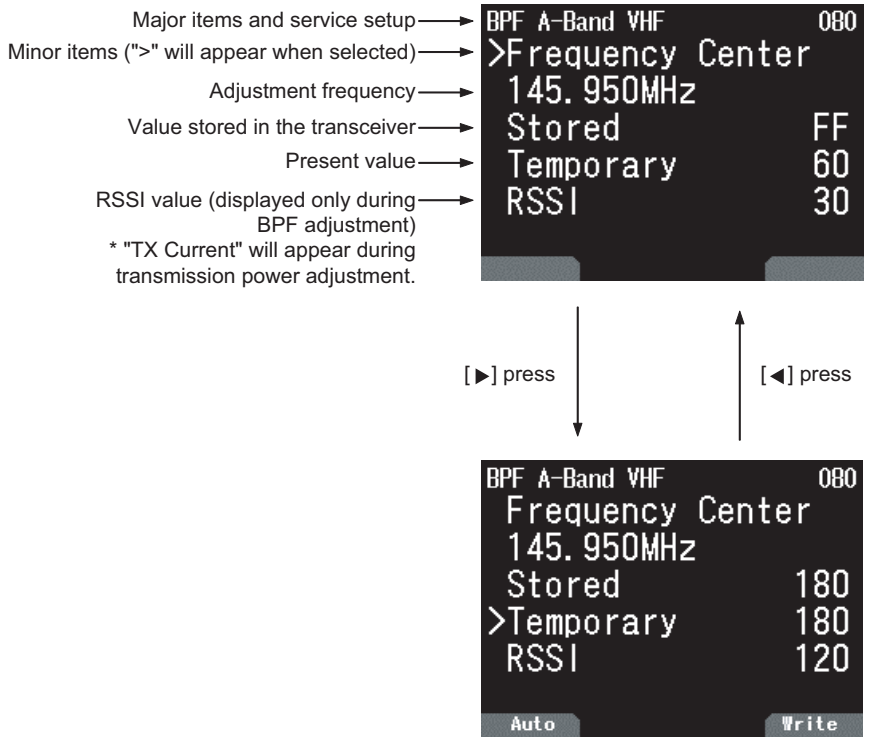
(1) Turn ON the transceiver.

(2) Short-circuit two lands (SET and GND) on the component side of the TX-RX unit (1/7) to set the transceiver to adjustment mode.

When the transceiver is set to adjustment mode, the adjustment items for the battery will be displayed.



■**LCD display in the adjustment mode**



■**Key operation in the adjustment mode**

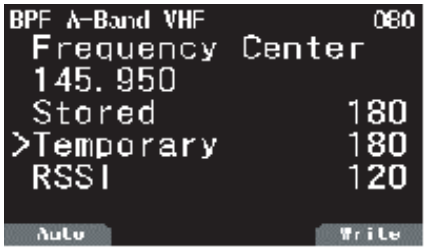
Key name	Function	
	">" appears for minor items (Adjustment item change mode).	">" appears for "Temporary" (Adjustment value change/Setting mode)
Encoder, [▲], [▼]	Adjustment item change	Adjustment value change
[◀]	-	Goes to adjustment item change mode
[▶], [ENT], [Write] ([A/B])	Set to adjustment value change/adjustment mode, and ">" moves to "Temporary."	Adjustment value change
[Auto] ([MODE])	-	Start of automatic adjustment (BPF calibration adjustment)*1

Note:

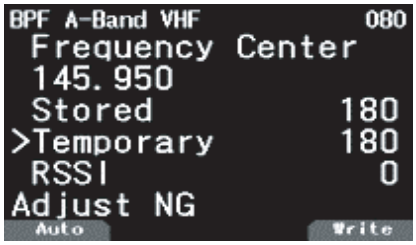
- Transmission power adjustments are possible with the [▶], [ENT] or [Write] key only during transmission.
- The backlight will not be lit while in adjustment mode so as to prevent the adverse influence of the backlight current on the adjustment.

***1**

(1) The BPF automatic adjustment will start when the [Auto] key is pressed.
The adjustment value will be set when the automatic adjustment is finished successfully.



"Adjust NG" will appear if the automatic adjustment fails.



(2) Calibration is adjusted with the [Auto] key.

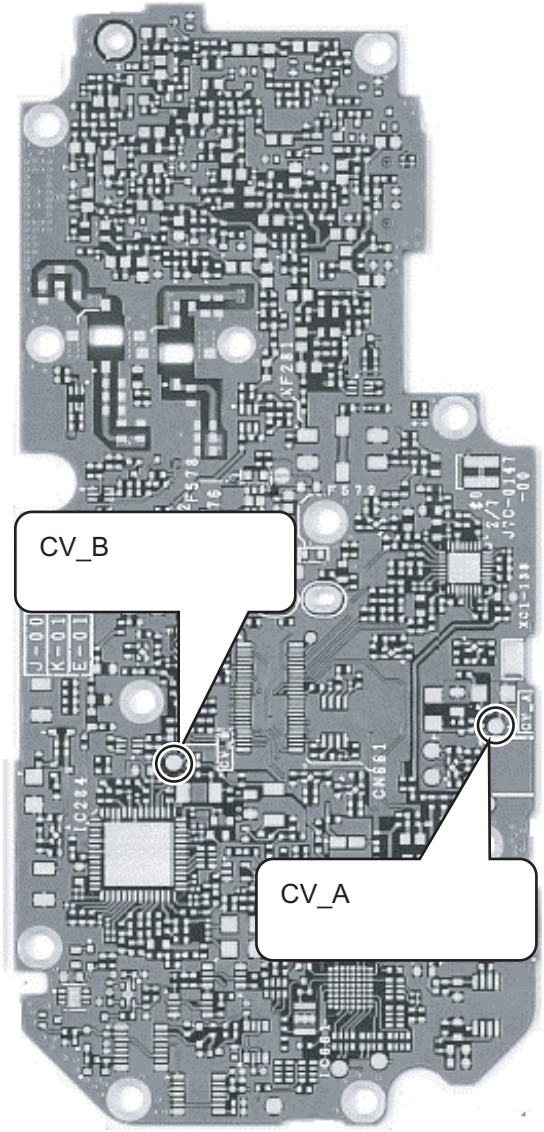
■**Adjustment items and Display**

Adjustment items	Display				
	Adjustment item number	Major item	Minor item	Frequency adjustment	6th line displayed
A. Power supply voltage (7.4 V)	0	COMMON	Battery	439.900 MHz	
B. Transmission frequency	1		Frequency B/S Off	439.900 MHz	
	2		Frequency B/S On-	439.900 MHz	
C. TX Power	4	TX Hi Power VHF	Frequency Center	145.100 MHz	TX Current
	5		Frequency Low	144.100 MHz	TX Current
	6		Frequency High	145.900 MHz	TX Current
	7	TX Mid Power VHF	Frequency Center	145.100 MHz	TX Current
	8		Frequency Low	144.100 MHz	TX Current
	9		Frequency High	145.900 MHz	TX Current
	10	TX Low Power VHF	Frequency Center	145.100 MHz	TX Current
	11		Frequency Low	144.100 MHz	TX Current
	12		Frequency High	145.900 MHz	TX Current
	13	TX EL Power VHF	Frequency Center	145.100 MHz	TX Current
	14		Frequency Low	144.100 MHz	TX Current
	15		Frequency High	145.900 MHz	TX Current
	28	TX Hi Power UHF	Frequency Center	435.100 MHz	TX Current
	29		Frequency Low	430.100 MHz	TX Current
	30		Frequency High	439.900 MHz	TX Current
	31	TX Mid Power UHF	Frequency Center	435.100 MHz	TX Current
	32		Frequency Low	430.100 MHz	TX Current
	33		Frequency High	439.900 MHz	TX Current
	34	TX Low Power UHF	Frequency Center	435.100 MHz	TX Current
	35		Frequency Low	430.100 MHz	TX Current
	36		Frequency High	439.900 MHz	TX Current
	37	TX EL Power UHF	Frequency Center	435.100 MHz	TX Current
	38		Frequency Low	430.100 MHz	TX Current
	39		Frequency High	439.900 MHz	TX Current
D. TX Balance TCXO	40	Balance Tcxo VHF	Frequency Center	145.100 MHz	
	41		Frequency Low	144.100 MHz	
	42		Frequency High	145.900 MHz	
	46	Balance Tcxo UHF	Frequency Center	435.100 MHz	
	47		Frequency Low	430.100 MHz	
	48		Frequency High	439.900 MHz	
E. TX Balance VCO	49	Balance Vco VHF	Frequency Center	145.100 MHz	
	50		Frequency Low	144.100 MHz	
	51		Frequency High	145.900 MHz	
	55	Balance Vco UHF	Frequency Center	435.100 MHz	
	56		Frequency Low	430.100 MHz	
	57		Frequency High	439.900 MHz	

Adjustment items	Display				
	Adjustment item number	Major item	Minor item	Frequency adjustment	6th line displayed
F. MAX Deviation	58	MAX Deviation VHF	Frequency Center	145.100 MHz	
	59		Frequency Low	144.100 MHz	
	60		Frequency High	145.900 MHz	
	64	MAX Deviation UHF	Frequency Center	435.100 MHz	
	65		Frequency Low	430.100 MHz	
	66		Frequency High	439.900 MHz	
G. BPF	79	BPF A-Band VHF	Frequency Low	136.050 MHz	RSSI
	80		Frequency Center	145.950 MHz	RSSI
	81		Frequency High	173.950 MHz	RSSI
	85	BPF A-Band UHF	Frequency Low	410.050 MHz	RSSI
	86		Frequency Center	439.950 MHz	RSSI
	87		Frequency High	469.950 MHz	RSSI
	88	BPF B-Band VHF	Frequency Low	118.050 MHz	RSSI
	89		Frequency Center	145.950 MHz	RSSI
	90		Frequency High	173.950 MHz	RSSI
	91	BPF B-Band 220	Frequency Low	205.050 MHz	RSSI
	92		Frequency Center	224.050 MHz	RSSI
	95	BPF B-Band UHF	Frequency LowD	379.950 MHz	RSSI
	96		Frequency Center	439.950 MHz	RSSI
	97		Frequency HighD	469.950 MHz	RSSI
H. Calibration	99	Calibration	+3kHz	145.950 MHz	
	100		-3kHz	145.950 MHz	
I. SQL/S-meter	102	SQL A-Band VHF	Level1	145.950 MHz	
	104	SM A-Band VHF	S-1	145.950 MHz	
	105		S-FULL	145.950 MHz	
	110	SQL A-Band UHF	Level1	439.950 MHz	
	112	SM A-Band UHF	S-1	439.950 MHz	
	113		S-FULL	439.950 MHz	
	114	SQL B-Band VHF	Level1	145.950 MHz	
	116	SM B-Band VHF	S-1	145.950 MHz	
	117		S-FULL	145.950 MHz	
	118	SQL B-Band 220	Level1	224.050 MHz	
	120	SM B-Band 220	S-1	224.050 MHz	
	121		S-FULL	224.050 MHz	
	122	SQL B-Band UHF	Level1	439.950 MHz	
	124	SM B-Band UHF	S-1	439.950 MHz	
	125		S-FULL	439.950 MHz	
	126	SQL B-Band 50	Level1	51.100 MHz	
	128	SM B-Band 50	S-1	51.100 MHz	
	129		S-FULL	51.100 MHz	

4.5 Adjustment Points

■TX-RX UNIT (2/7) Component side



CV_A: VCO lock voltage (A-band)
CV_B: VCO lock voltage (B-band)
* Check the VCO lock voltage with the VCO shield case attached.

4.6 Common Section

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1.VCO Lock Voltage Check A-Band	Battery terminal:7.4V 1) Frequency: 410.000MHz	DVM	TX-RX (2/7)	CV_A			Check	1.5V or more
	2) Frequency: 173.995MHz	DVM	TX-RX (2/7)	CV_A			Check	4.9V or less
B-Band	VCO1 3) Frequency: 266.945MHz	DVM	TX-RX (2/7)	CV_B			Check	4.9V or less
	VCO1 4) Frequency: 176.950MHz	DVM	TX-RX (2/7)	CV_B			Check	0.5V or more
	VCO2 5) Frequency: 176.945MHz	DVM	TX-RX (2/7)	CV_B			Check	4.9V or less
	VCO2 6) Frequency: 266.950MHz	DVM	TX-RX (2/7)	CV_B			Check	0.5V or more

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
2.Battery Voltage Adjust	Goes to adjustment mode. See "4.4 Adjustment Mode". 1) Battery terminal: 7.4V	DVM		Battery terminal			[▸] or [Write]	Note: The correct transmission power will not be output from the transceiver in user mode unless the battery voltage is adjusted correctly.

4.7 Transmitter Section: Adjustment Mode Setting Items

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency (TCXO Shift OFF)	Battery terminal:7.4V/3.0A 1) Frequency:439.900MHz Transmission	f. counter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	439.9MHz ±50Hz
(TCXO Shift ON)	2) Frequency:439.900MHz Transmission	f. counter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	439.9MHz ±50Hz
2. Power	Battery terminal:7.4V/3.0A 1) Power:HI Frequency:145.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	4.8W ±0.1W 2.18A or less
	2) Power:HI Frequency:144.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	4.8W ±0.1W 2.18A or less
	3) Power:HI Frequency:145.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	4.8W ±0.1W 2.18A or less
	4) Power:Mid Frequency:145.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	2.0W ±0.1W 1.55A or less
	5) Power:Mid Frequency:144.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	2.0W ±0.1W 1.55A or less
	6) Power:Mid Frequency:145.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	2.0W ±0.1W 1.55A or less
	7) Power:Low Frequency:145.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	0.5W ±0.05W 0.90A or less
	8) Power:Low Frequency:144.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	0.5W ±0.05W 0.90A or less
	9) Power:Low Frequency:145.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	0.5W ±0.05W 0.90A or less
	10) Power:EL Frequency:145.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	50mW~100mW 0.55A or less
	11) Power:EL Frequency:144.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	50mW~100mW 0.55A or less
	12) Power:EL Frequency:145.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▸] or [Write]	50mW~100mW 0.55A or less

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
2. Power	13) Power:HI Frequency:435.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.8W ±0.1W 2.18A or less
	14) Power:HI Frequency:430.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.8W ±0.1W 2.18A or less
	15) Power:HI Frequency:439.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.8W ±0.1W 2.18A or less
	16) Power:Mid Frequency:435.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.0W ±0.1W 1.55A or less
	17) Power:Mid Frequency:430.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.0W ±0.1W 1.55A or less
	18) Power:Mid Frequency:439.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.0W ±0.1W 1.55A or less
	19) Power:Low Frequency:435.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	0.5W ±0.05W 0.90A or less
	20) Power:Low Frequency:430.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	0.5W ±0.05W 0.90A or less
	21) Power:Low Frequency:439.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	0.5W ±0.05W 0.90A or less
	22) Power:EL Frequency:435.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	50mW~100mW 0.55A or less
	23) Power:EL Frequency:430.100MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	50mW~100mW 0.55A or less
	24) Power:EL Frequency:439.900MHz Transmission	Power meter Ammeter		ANT		Encoder [▲]/[▼]	[▶] or [Write]	50mW~100mW 0.55A or less
3. Balance TCXO	Battery terminal:7.4V/3.0A 1)Frequency:145.100MHz Linear detector (FM±) LPF : 3kHz HPF : OFF De-emphasis: OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	2)Frequency:144.100MHz Linear detector (FM±) LPF : 3kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
3. Balance TCXO	3)Frequency:145.900MHz Linear detector (FM±) LPF : 3kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	4)Frequency:435.100MHz Linear detector (FM±) LPF : 3kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	5)Frequency:430.100MHz Linear detector (FM±) LPF : 3kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	6)Frequency:439.900MHz Linear detector (FM±) LPF : 3kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
4. Balance VCO	Battery terminal:7.4V/3.0A 1)Frequency:145.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF De-emphasis: OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	2)Frequency:144.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	3)Frequency:145.900MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	4)Frequency:435.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
	5)Frequency:430.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
4. Balance VCO	6)Frequency:439.900MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	2.4kHz ±50Hz
5. MAX Deviation	Battery terminal:7.4V/3.0A 1)Frequency:145.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF De-emphasis: OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz
	2)Frequency:144.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz
	3)Frequency:145.900MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz
	4)Frequency:435.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz
	5)Frequency:430.100MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz
	6)Frequency:439.900MHz Linear detector (FM±) LPF : 15kHz HPF : OFF Transmission	Linear detector Power meter Oscilloscope		ANT		Encoder [▲]/[▼]	[▶] or [Write]	4.15kHz ±75Hz

4.8 Transmitter Section: User Mode Confirmation Items

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1.Transmission Frequency	Battery terminal:7.4V/3.0A 1) Frequency: 439.900MHz Transmission	f. counter		ANT			Check	439.9MH ±400Hz
2.Power	Battery terminal:7.4V/3.0A 1) Power: Hi Frequency: 144.100MHz Transmission	Power meter Ammeter		ANT			Check	4.8W ±0.3W 2.2A or less

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
2.Power	2) Power: Hi Frequency: 145.900MHz Transmission	Power meter Ammeter		ANT			Check	4.8W ±0.3W 2.2A or less
	3)Power: Mid Frequency: 144.100MHz Transmission	Power meter Ammeter		ANT			Check	2.0W ±0.4W 1.6A or less
	4)Power: Mid Frequency: 145.900MHz Transmission	Power meter Ammeter		ANT			Check	2.0W ±0.4W 1.6A or less
	5)Power: Low Frequency: 144.100MHz Transmission	Power meter Ammeter		ANT			Check	0.5W -0.3/+0.4W 0.95A or less
	6)Power: Low Frequency: 145.900MHz Transmission	Power meter Ammeter		ANT			Check	0.5W -0.3/+0.4W 0.95A or less
	7)Power: EL Frequency: 144.100MHz Transmission	Power meter Ammeter		ANT			Check	0.05W -0.04/+0.25W 0.6A or less
	8)Power: EL Frequency: 145.900MHz Transmission	Power meter Ammeter		ANT			Check	0.05W -0.04/+0.25W 0.6A or less
	9)Power: Hi Frequency: 430.100MHz Transmission	Power meter Ammeter		ANT			Check	4.8W ±0.3W 2.2A or less
	10)Power: Hi Frequency: 439.900MHz Transmission	Power meter Ammeter		ANT			Check	4.8W ±0.3W 2.2A or less
	11)Power: Mid Frequency: 430.100MHz Transmission	Power meter Ammeter		ANT			Check	2.0W ±0.4W 1.6A or less
	12)Power: Mid Frequency: 439.900MHz Transmission	Power meter Ammeter		ANT			Check	2.0W ±0.4W 1.6A or less
	13)Power: Low Frequency: 430.100MHz Transmission	Power meter Ammeter		ANT			Check	0.5W -0.3/+0.4W 0.95A or less
	14)Power: Low Frequency: 439.900MHz Transmission	Power meter Ammeter		ANT			Check	0.5W -0.3/+0.4W 0.95A or less
	15)Power: EL Frequency: 430.100MHz Transmission	Power meter Ammeter		ANT			Check	0.05W -0.04/+0.25W 0.6A or less
	16)Power: EL Frequency: 439.900MHz Transmission	Power meter Ammeter		ANT			Check	0.05W -0.04/+0.25W 0.6A or less
3.MIC sensitivity	1)Power: Low Frequency: 145.100MHz 435.100MHz Linear detector [FM p-p/2] LPF:15kHz HPF:OFF De-emphasis: OFF AG:1kHz/8mV Transmission	Linear detector Oscilloscope AG		ANT			Check	2.4kHz~3.9kHz

4.9 Receiver Section: Adjustment Mode Setting Items

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1.RX BPF A-Band	1)Frequency: 136.05MHz SSG: -110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	2)Frequency: 145.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	3)Frequency: 173.95MHz SSG:-100dBm(2.24μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	4)Frequency: 410.05MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	5)Frequency: 439.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	6)Frequency: 469.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
B-Band	10)Frequency: 118.05MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	11)Frequency: 145.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	12)Frequency: 173.95MHz SSG:-100dBm(2.24μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	13)Frequency: 205.05MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	14)Frequency: 224.05MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	15)Frequency: 379.95MHz SSG:-100dBm(2.24μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
	16)Frequency: 439.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
B-Band	17)Frequency: 469.95MHz SSG:-110dBm(0.707μV) Mode:FM(3kHz) AF VR:0.63V/8 ohm	SSG Oscilloscope Audio analyzer		ANT SP		[Auto]	Automatic adjustment	Max RSSI value
2.IF Filter Calibration	1)Frequency: 145.953MHz SSG:-53dBm(501μV) Mode:FM OFF	SSG		ANT SP		[Auto]	Automatic adjustment	
	1)Frequency: 145.947MHz SSG:-53dBm(501μV) Mode:FM OFF	SSG		ANT SP		[Auto]	Automatic adjustment	
3.Squelch and S-meter A-Band	1)Frequency: 145.950MHz SQL Level1 SSG:-124dBm (0.14μV) S-1 SSG:-120dBm(0.22μV) S-FULL SSG: -105dBm(1.26μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	
	2)Frequency: 439.95MHz SQL Level1 SSG:-125dBm(0.126μV) S-1 SSG:-120dBm(0.22μV) S-FULL SSG: -105dBm(1.26μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	
B-Band	3)Frequency: 145.950MHz SQL Level1 SSG:-125dBm(0.126μV) S-1 SSG:-120dBm(0.22μV) S-FULL SSG: -105dBm(1.26μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	
	4)Frequency: 224.50MHz SQL Level1 SSG:-122dBm(0.178μV) S-1 SSG:-117dBm(0.32μV) S-FULL SSG: -102dBm(1.77μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	
	5)Frequency: 439.95MHz SQL Level1 SSG:-125dBm(0.126μV) S-1 SSG:-120dBm(0.22μV) S-FULL SSG: -105dBm(1.26μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
HF-Band	6)Frequency: 51.100MHz SQL Level1 SSG:-121dBm(0.2μV) S-1 SSG:-116dBm(0.35μV) S-FULL SSG: -101dBm(2μV) Mode: FM(3kHz)	SSG		ANT		[▸] or [Write]	Write	

4.10 Receiver Section: User Mode Confirmation Items

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1.Sensitivity A-Band	1) Frequency: 145.950MHz Mode: FM(3kHz) SSG: -121dBm(0.19μV) AF output: 0.63V/8 ohm ATT:OFF	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	2) Frequency: 145.950MHz Mode: FM(3kHz) SSG: -115.5dBm (0.375μV) AF output: 0.63V/8 ohm ATT:ON	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or less
	3) Frequency: 430.050MHz Mode: FM(3kHz) SSG: -120dBm(0.22μV) AF output: 0.63V/8 ohm ATT:OFF	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	4) Frequency: 430.050MHz Mode: FM(3kHz) SSG: -115.5dBm (0.375μV) AF output: 0.63V/8 ohm ATT:ON	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or less
B-Band	5) Frequency: 144.050MHz Mode: FM(3kHz) SSG: -119dBm(0.25μV) AF output: 0.63V/8 ohm ATT:OFF	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	6) Frequency: 144.050MHz Mode: FM(3kHz) SSG: -115.5dBm (0.375μV) AF output: 0.63V/8 ohm ATT:ON	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or less
	7) Frequency: 224.950MHz Mode: FM(3kHz) SSG: -119dBm(0.25μV) AF output: 0.63V/8 ohm ATT:OFF	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	8) Frequency: 224.950MHz Mode: FM(3kHz) SSG: -115.5dBm (0.375μV) AF output: 0.63V/8 ohm ATT:ON	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or less

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
B-Band	9) Frequency: 430.050MHz Mode: FM(3kHz) SSG: -121dBm(0.19μV) AF output: 0.63V/8 ohm ATT:OFF	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	10) Frequency: 430.050MHz Mode: FM(3kHz) SSG: -115.5dBm (0.375μV) AF output: 0.63V/8 ohm ATT:ON	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or less
	11) Frequency: 80.200MHz Mode: WFM(75kHz) SSG: -102dBm(1.77μV) AF output: 0.63V/8 ohm	SSG Audio analyzer Oscilloscope		ANT SP			Check	12dB SINAD or more
	12) Frequency: 118.050MHz Mode: AM 60% SSG: -112dBm(0.562μV) AF output: 0.63V/8 ohm	SSG Audio analyzer Oscilloscope		ANT SP			Check	10dB S/N or more
3.Squelch A-Band	1) Frequency: 145.950MHz SQL :Level1 Mode: FM(3kHz) SSG: -122dBm(0.178μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	2) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch
	3) Frequency: 439.950MHz SQL :Level1 Mode: FM(3kHz) SSG: -122dBm(0.178μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	4) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch
B-Band	5)Frequency: 145.950MHz SQL :Level1 Mode:FM(3kHz) SSG: -119dBm(0.25μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	6) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch
	7)Frequency: 223.550MHz SQL :Level1 Mode:FM(3kHz) SSG: -119dBm(0.25μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	8) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch
	9)Frequency: 439.950MHz SQL :Level1 Mode:FM(3kHz) SSG: -119dBm(0.25μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	10) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch
	11)Frequency: 51.100MHz SQL :Level1 Mode:FM(3kHz) SSG: -118dBm(0.28μV)	SSG Oscilloscope		ANT			Check	Open Squelch
	12) SSG: OFF	SSG Oscilloscope		ANT			Check	Close Squelch

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
4.S-meter A-Band	1)Frequency: 145.950MHz Mode:FM(3kHz) SSG: -120dBm(0.22μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	2)SSG: -105dBm(1.26μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
	3)Frequency: 439.950MHz Mode:FM(3kHz) SSG: -120dBm(0.22μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	4)SSG: -105dBm(1.26μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
B-Band	5)Frequency: 145.950MHz Mode:FM(3kHz) SSG: -120dBm(0.22μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	6)SSG: -105dBm(1.26μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
	7)Frequency: 223.550MHz Mode:FM(3kHz) SSG: -117dBm(0.32μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	8)SSG: -102dBm (1.77μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
	9)Frequency: 439.950MHz Mode:FM(3kHz) SSG: -120dBm(0.22μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	10)SSG: -105dBm(1.26μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
	11)Frequency: 51.100MHz Mode:FM(3kHz) SSG: -116dBm(0.35μV)±5dB	SSG		ANT			Check	One segment in S-meter lights.
	12)SSG: -101dBm(2μV)±5dB	SSG		ANT			Check	All segments in S-meter light.
5.AF distortion A-Band	1)Frequency: 145.950MHz Mode:FM(3kHz) SSG: -53dBm(501μV) AF output: 0.63V/8 ohm	SSG Audio analyzer Oscilloscope		ANT SP			Check	5% or less
B-Band	2)Frequency: 439.950MHz Mode:FM(3kHz) SSG: -53dBm(60dBμ)(501μV) AF output: 0.63V/8 ohm	SSG Audio analyzer Oscilloscope		ANT SP			Check	5% or less
6.Standby Current	1) Set the transceiver to the single band. ([F]+[A/B]) 2) Close the squelch.	Ammeter		Battery terminal			Check	150mA or less
7.Built-in Bar Antenna	1)Receive the AM broadcast between 1000 and 1600 kHz.			BarANT			Check	Check that AM broadcast is received.

SECTION 5
TROUBLESHOOTING

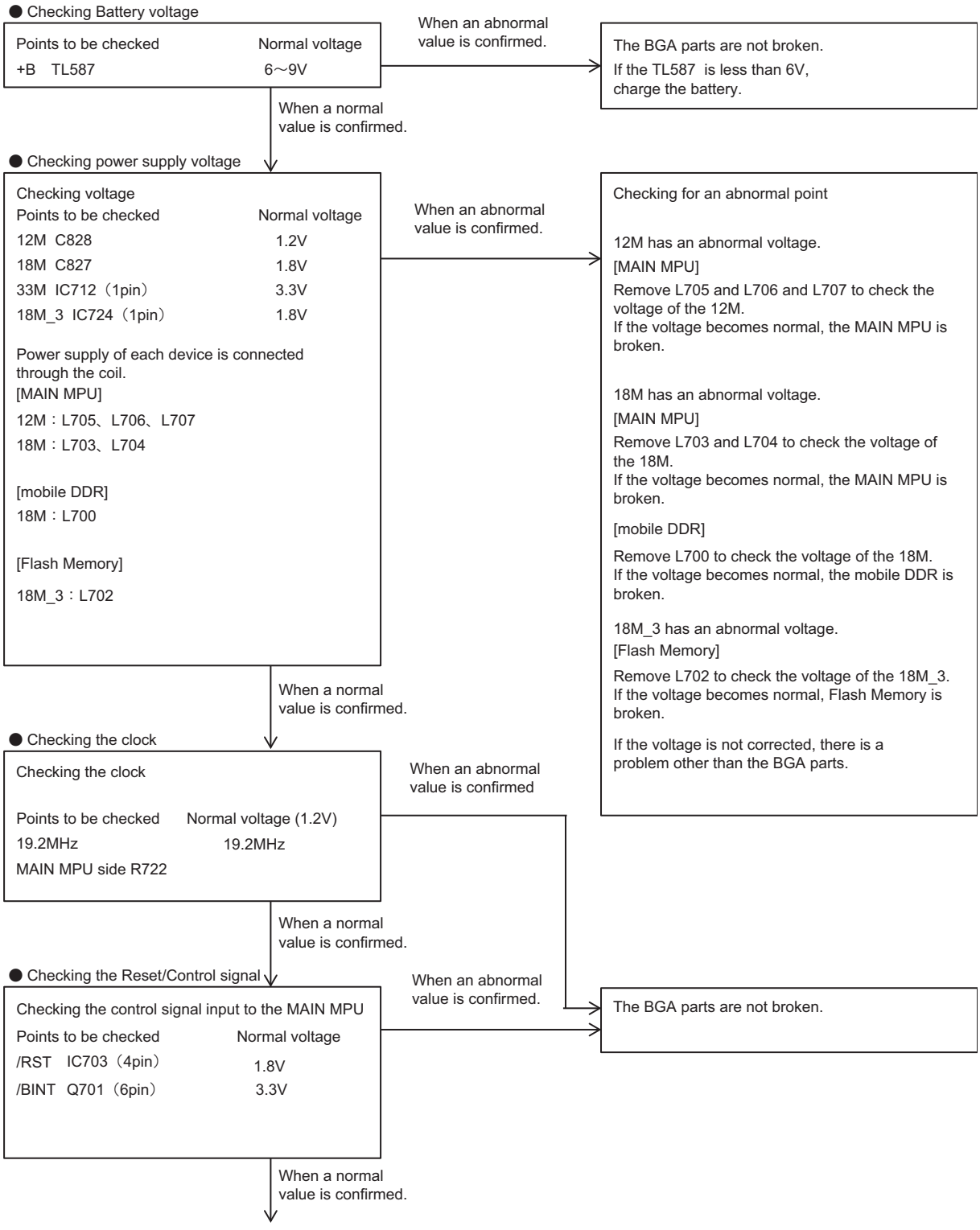
5.1 Fault Diagnosis of the BGA (Ball Grid Array) IC

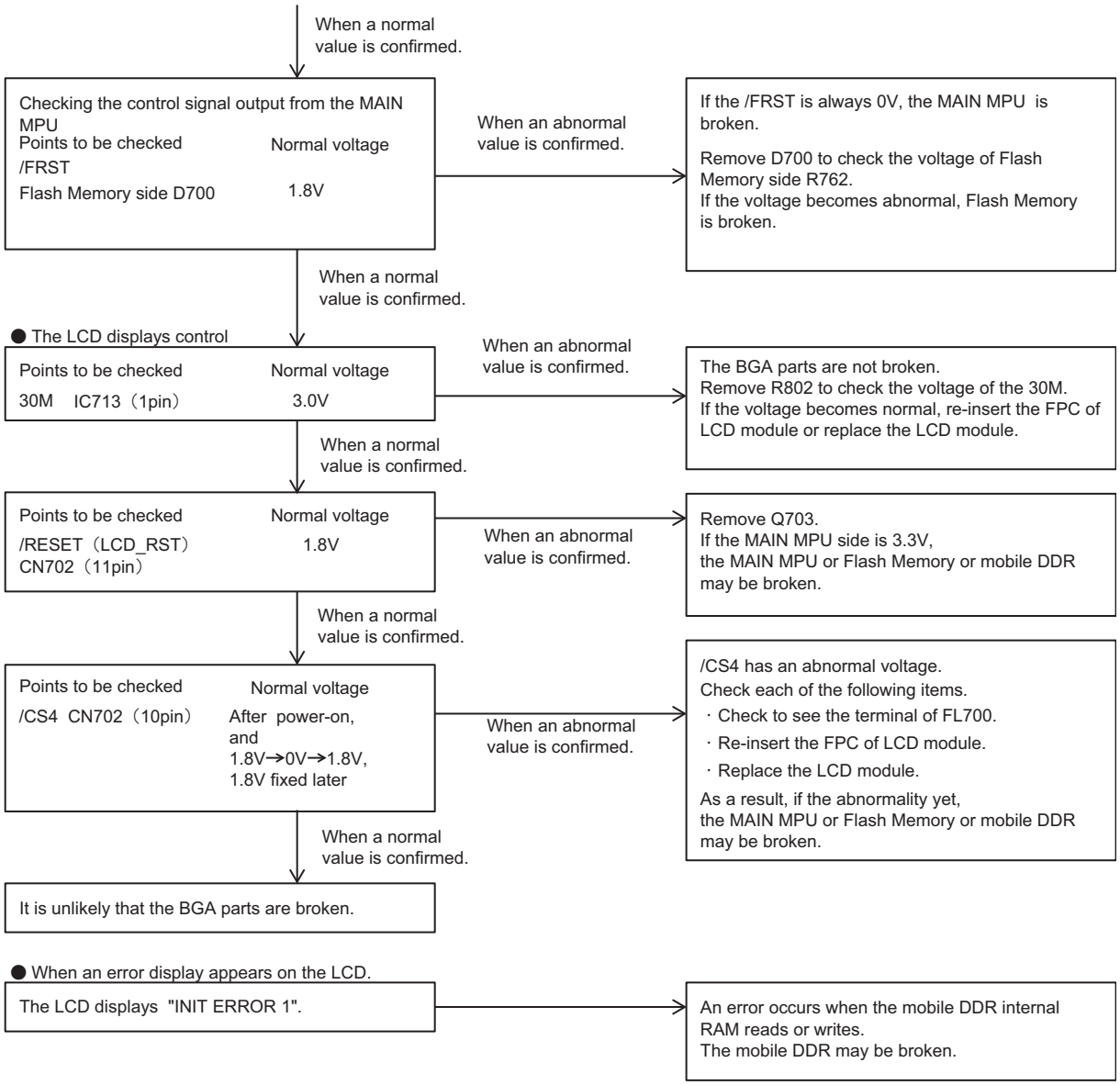
■Overview

A flowchart for determining whether or not the transceiver can be powered on (the LCD does not function even if the power switch is turned on) due to broken BGA parts.

■BGA parts

MAIN MPU(IC702), mobile DDR(IC701), Flash Memory(IC705)





■Descriptions of signal names

(1) /RST	:MAIN MPU reset signal	LOW → Reset
(2) /BINT	:Battery final voltage monitoring	LOW → Final voltage
(3) /FRST	:Flash Memory reset signal	LOW → Reset
(4) /CS_F	:Flash Memory chip select signal	LOW → Active
(5) 30M	:LCD module control 3.0V power supply	
(6) /RESET(LCD_RST)	:LCD reset signal	LOW → Reset
(7) /CS4	:LCD controller chip select signal	LOW → Active

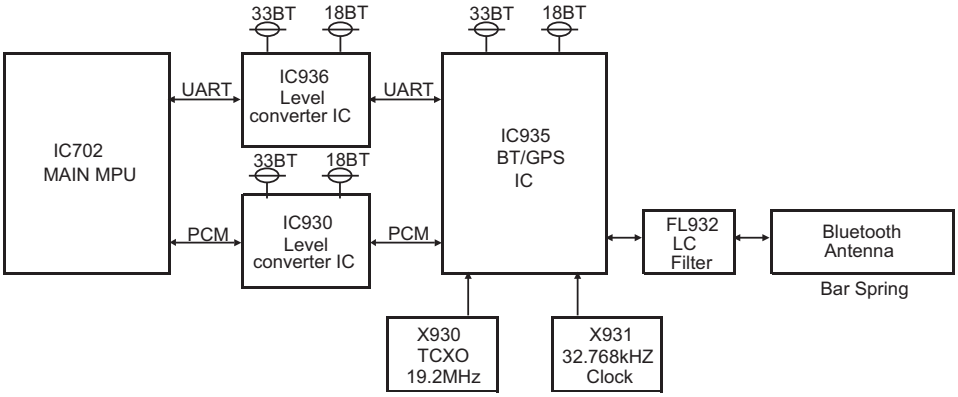
5.2 Failure diagnosis of the Bluetooth section

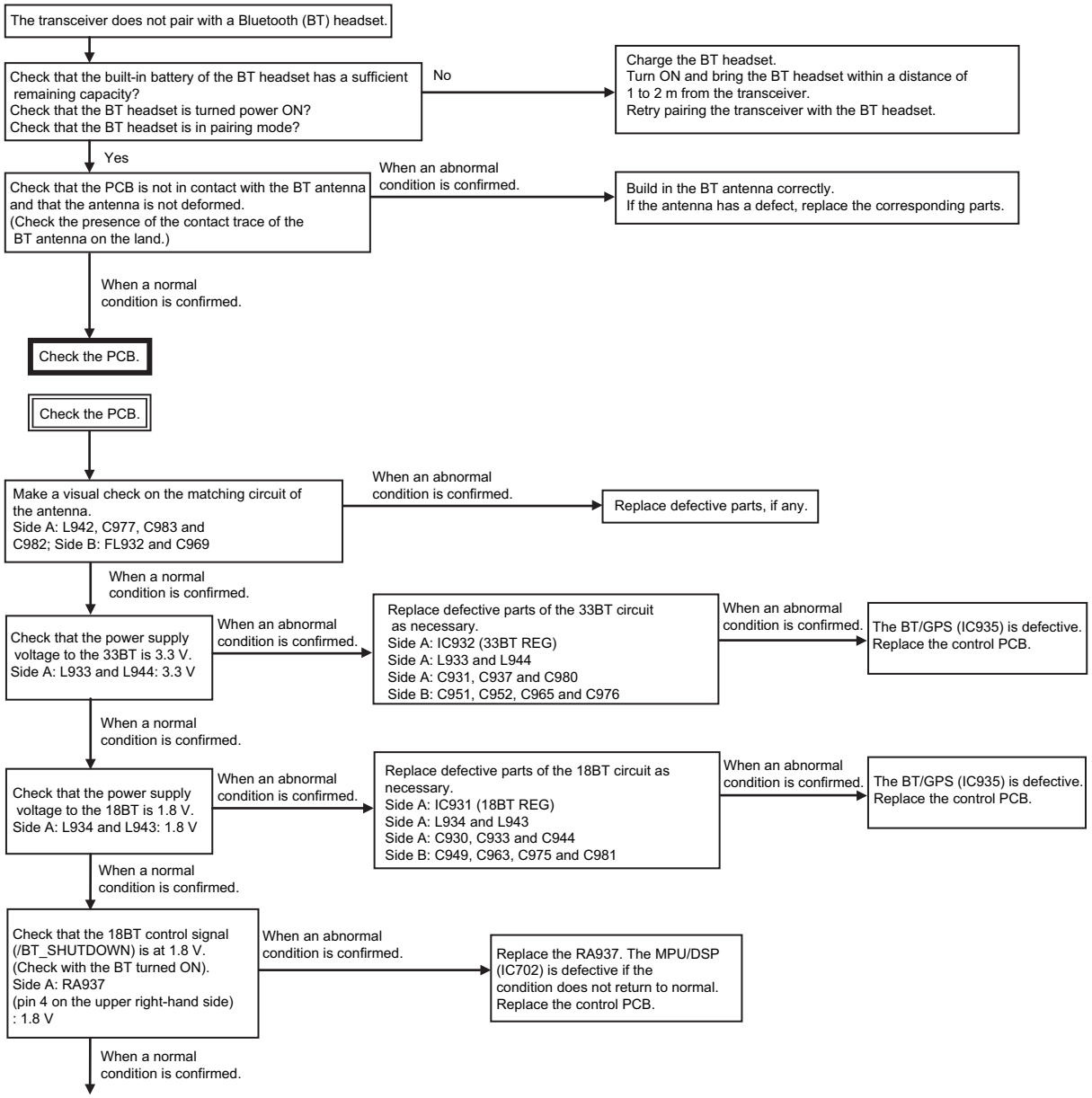
Overview:

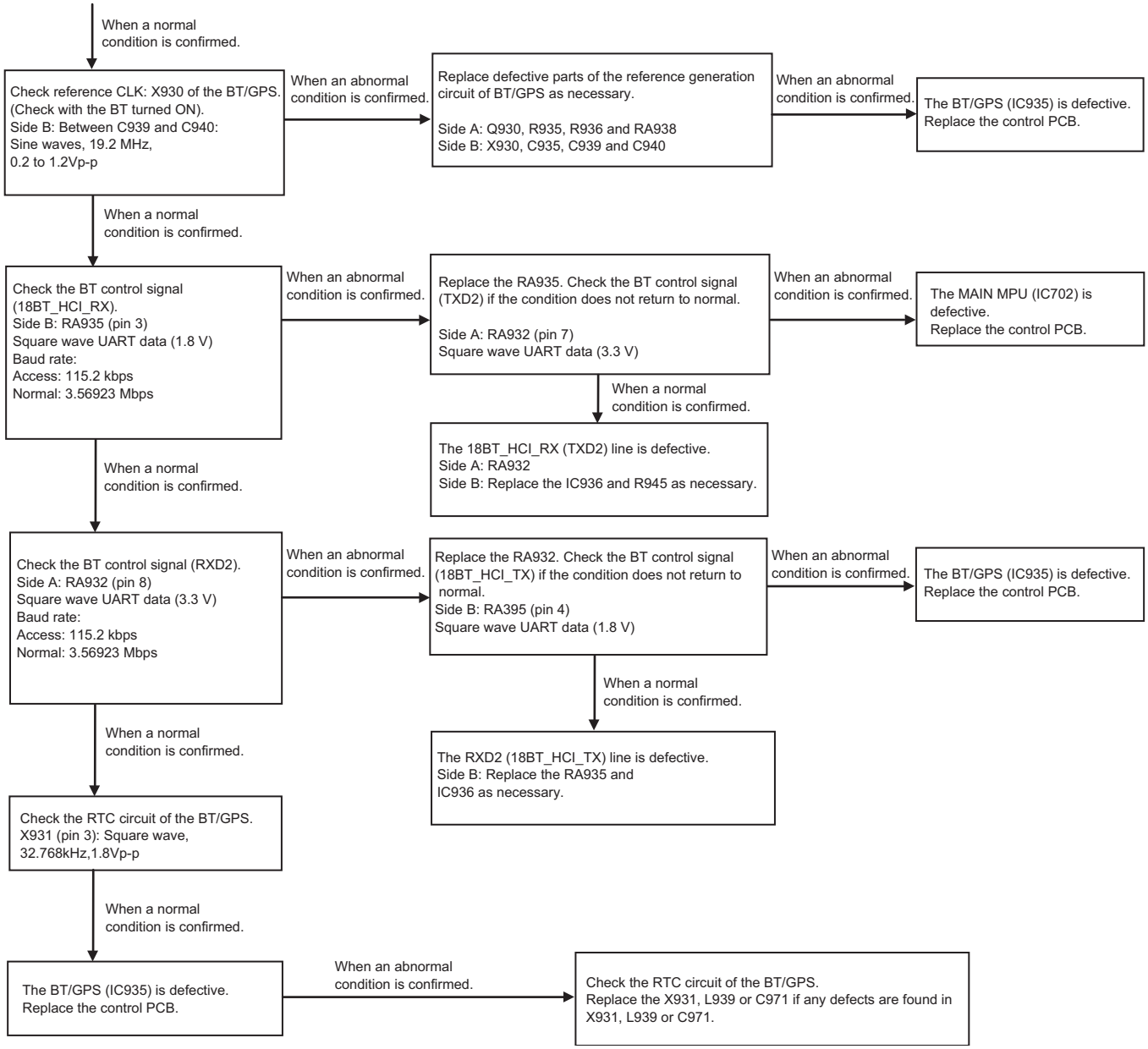
When the Bluetooth function does not operate, use this flowchart to determine the problem.

Major parts for a Bluetooth circuit

- Bluetooth antenna
- LC filter (FL932)
- Bluetooth/GPS IC (IC935)
- Level converter (IC936)
- Level converter (IC937)
- TCXO 19.2MHz (X930)
- 32.768kHz clock (X931)
- 33BT Regulator (IC932)
- 18BT Regulator (IC931)
- MAIN MPU (IC702)







Descriptions of signal names

(1) 33BT:BT/GPS IC 3.3V power supply
(2) 18BT:BT/GPS IC 1.8V power supply
(3) TXD2:BT/GPS serial data line (UART)(IC702(MAIN MPU) → IC936(LEVEL CONVERTER))
(4) RXD2:BT/GPS serial data line (UART)(IC936(LEVEL CONVERTER) → IC702(MAIN MPU))
(5) 18BT_HCI_RX:Serial data line (UART)(IC936(LEVEL CONVERTER) → IC935(BT/GPS IC))
(6) 18BT_HCI_TX:Serial data line (UART)(IC935(BT/GPS IC) → IC936(LEVEL CONVERTER))
(7) /BT_SHUTDOWN:BT active control (IC702(MAIN MPU) → IC935(BT/GPS IC)) High Active, Low Reset

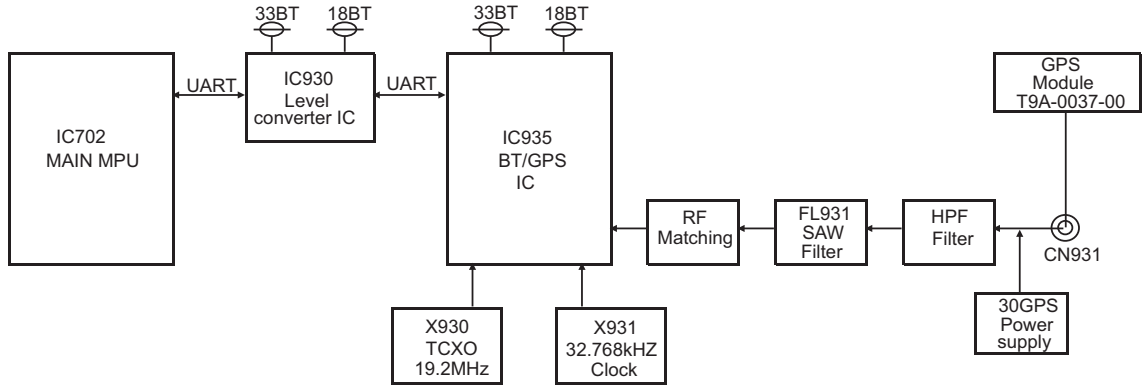
5.3 Failure diagnosis of the GPS section

Overview:

When the GPS function does not operate, use this flowchart to determine the problem.

Major parts for a GPS circuit

- GPS Connector(CN931)
- SAW Filter(FL931)
- Bluetooth/GPS IC (IC935)
- Level Converter IC (IC930)
- TCXO 19.2MHz (X930)
- 32.768kHz clock (X931)
- 33BT Regulator (IC932)
- 18BT Regulator (IC931)
- 30GPS Regulator (IC933)
- MAIN MPU (IC702)
- GPS module (T9A-0037-00)



Normal positioning fails.

Check that the location is suitable for sufficient GPS signal reception ?

No → Receive the GPS signal in an open-sky area.

Yes

Check that the PCB and the patch antenna are connected securely with a coaxial cable ?

No → Connect the GPS antenna cable correctly. Otherwise, try replacing the GPS antenna module (T9A-0037-00) or the coaxial connector (Side B: CN931).

Yes

Check the PCB

Check the PCB

Make a visual check on the matching circuit of the antenna.
Side A: R946 and VA931; Side B: C973 and R947

When an abnormal condition is confirmed. → Replace defective parts, if any.

When a normal condition is confirmed.

Check that the power supply voltage to the 33BT is 3.3 V.
Side A: L933 and L944: 3.3 V

When an abnormal condition is confirmed. → Replace defective parts of the 33BT circuit as necessary.
Side A: IC932 (33BT REG)
Side A: L933 and L944
Side A: C931, C937 and C980
Side B: C951, C952, C965 and C97

When an abnormal condition is confirmed. → The BT/GPS (IC935) is defective.
Replace the control PCB.

When a normal condition is confirmed.

Check that the power supply voltage to the 18BT is 1.8 V.
Side A: L934 and L943: 1.8 V

When an abnormal condition is confirmed. → Replace defective parts of the 18BT circuit as necessary.
Side A: IC931(18BT REG)
Side A: L934 and L943
Side A: C930,C933 and C944
Side B: C949,C963,C975 and C981

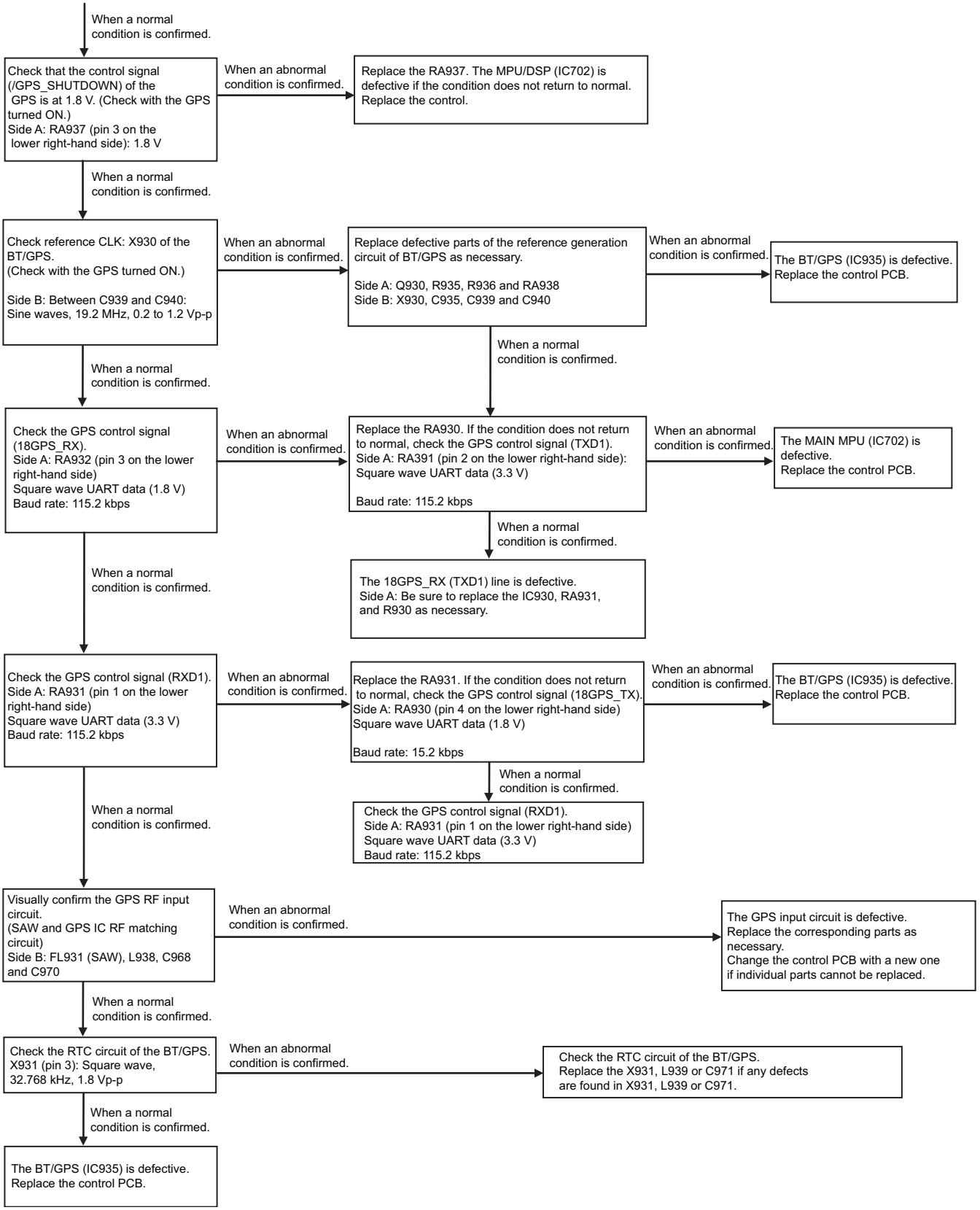
When an abnormal condition is confirmed. → The MAIN MPU (IC702) is defective.
Replace the control PCB.

When a normal condition is confirmed.

Check that the power supply voltage of the 30GPS is 3.0 V.
(Check with the GPS turned ON.)
Side B: L937: 3.0 V

When an abnormal condition is confirmed. → Replace defective parts of the 30GPS circuit as necessary.
Side A: IC933 (30GPS REG)
Side A: C938
Side B: L937, C958 and C961
GPS module: (T9A-0037-00)

When a normal condition is confirmed.



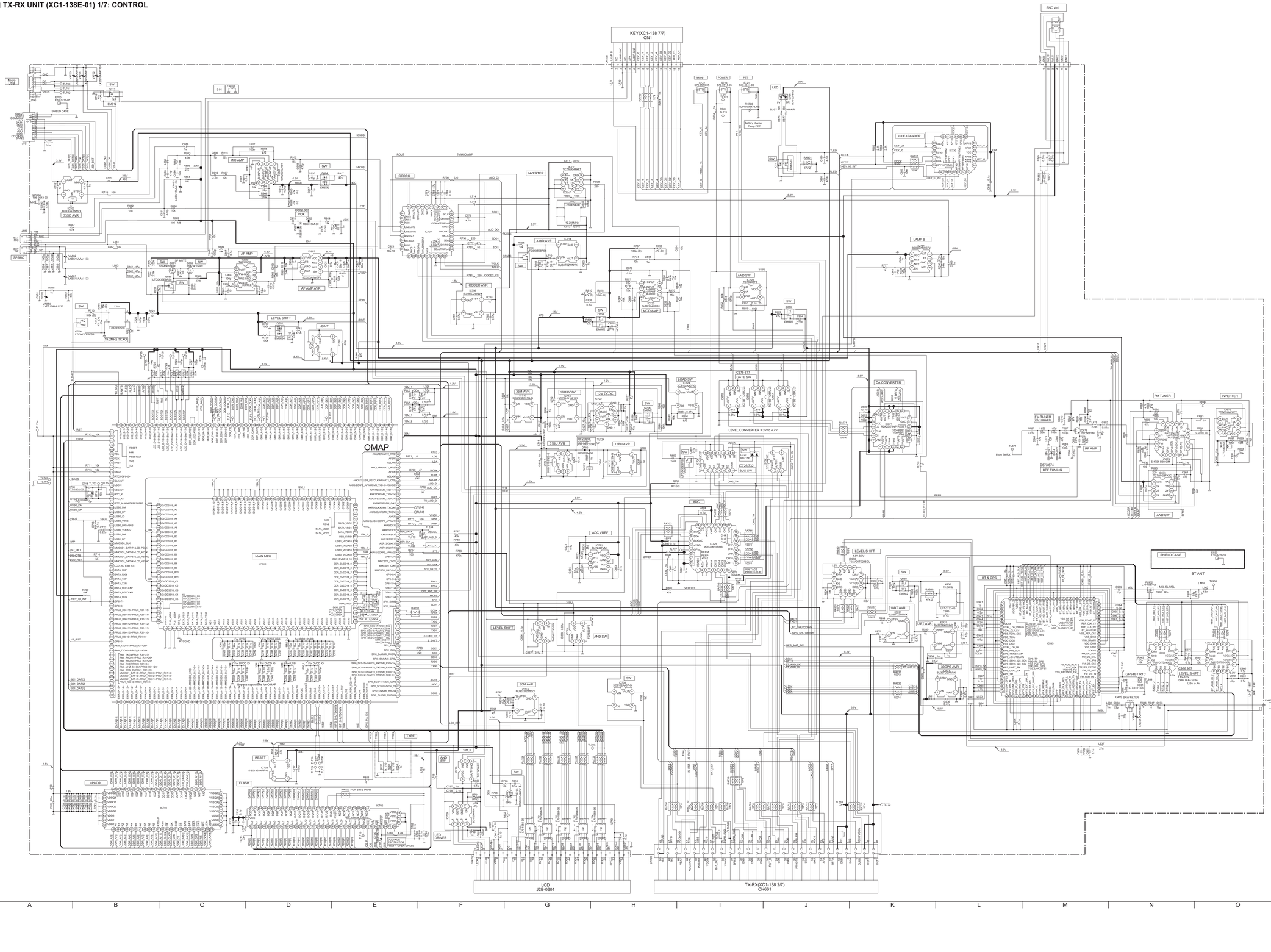
Descriptions of signal names

(1) 33BT: BT/GPS IC 3.3V power supply
(2) 18BT: BT/GPS IC 1.8V power supply
(3) TXD1:BT/GPS serial data line (UART)(IC702(MAIN MPU) → IC930(LEVEL CONVERTER))
(4) RXD1:BT/GPS serial data line (UART)(IC930(LEVEL CONVERTER) → IC702(MAIN MPU))
(5) 18GPS_RX:Serial data line (UART)(IC930(LEVEL CONVERTER) → IC935(BT/GPS IC))
(6) 18GPS_TX:Serial data line (UART)(IC935(BT/GPS IC) → IC930(LEVEL CONVERTER))
(7) /GPS_SHUTDOWN:GPS active control (IC702(MAIN MPU) → IC935(BT/GPS IC)) High Active, Low Reset

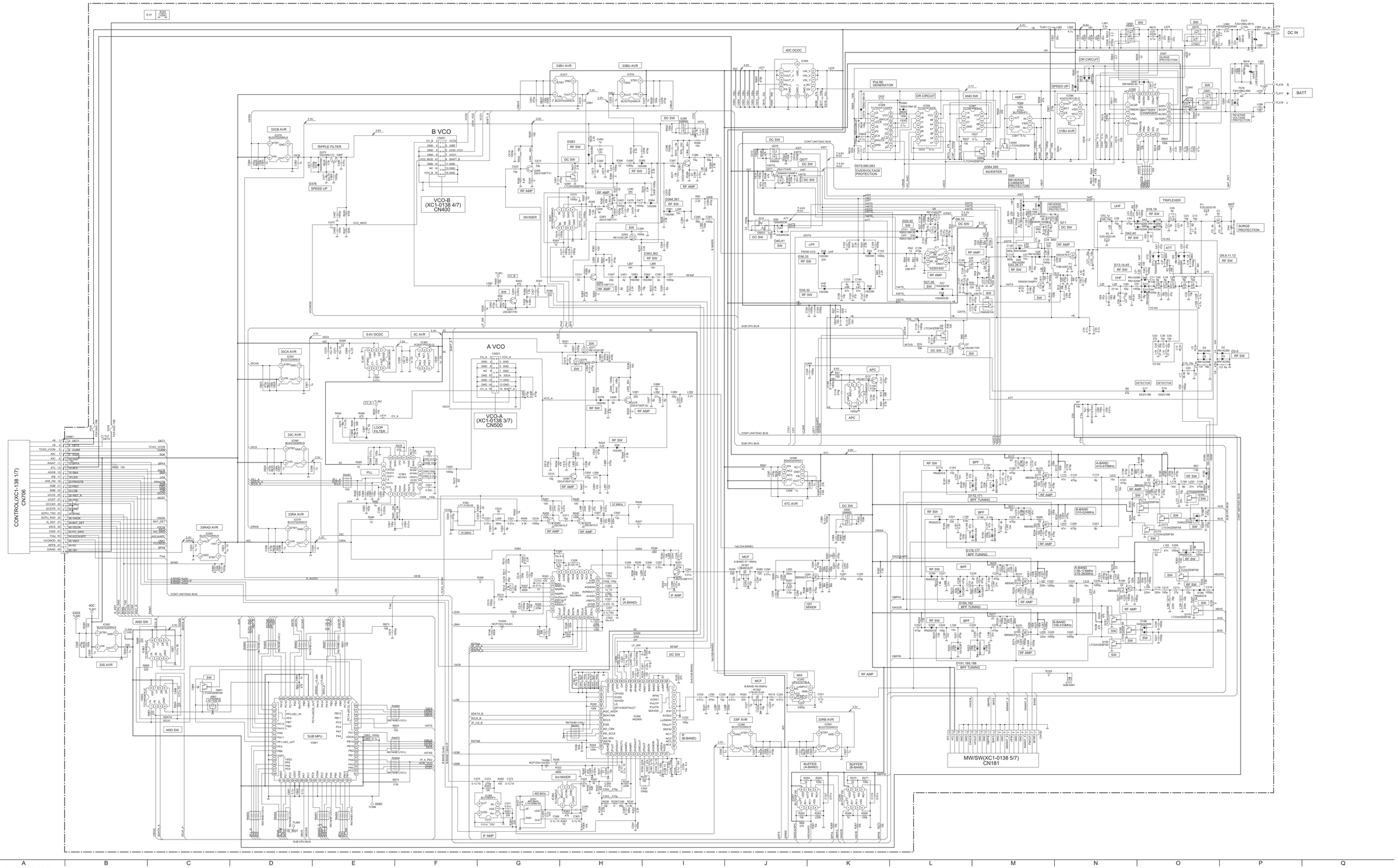
MEMO

SCHEMATIC DIAGRAM

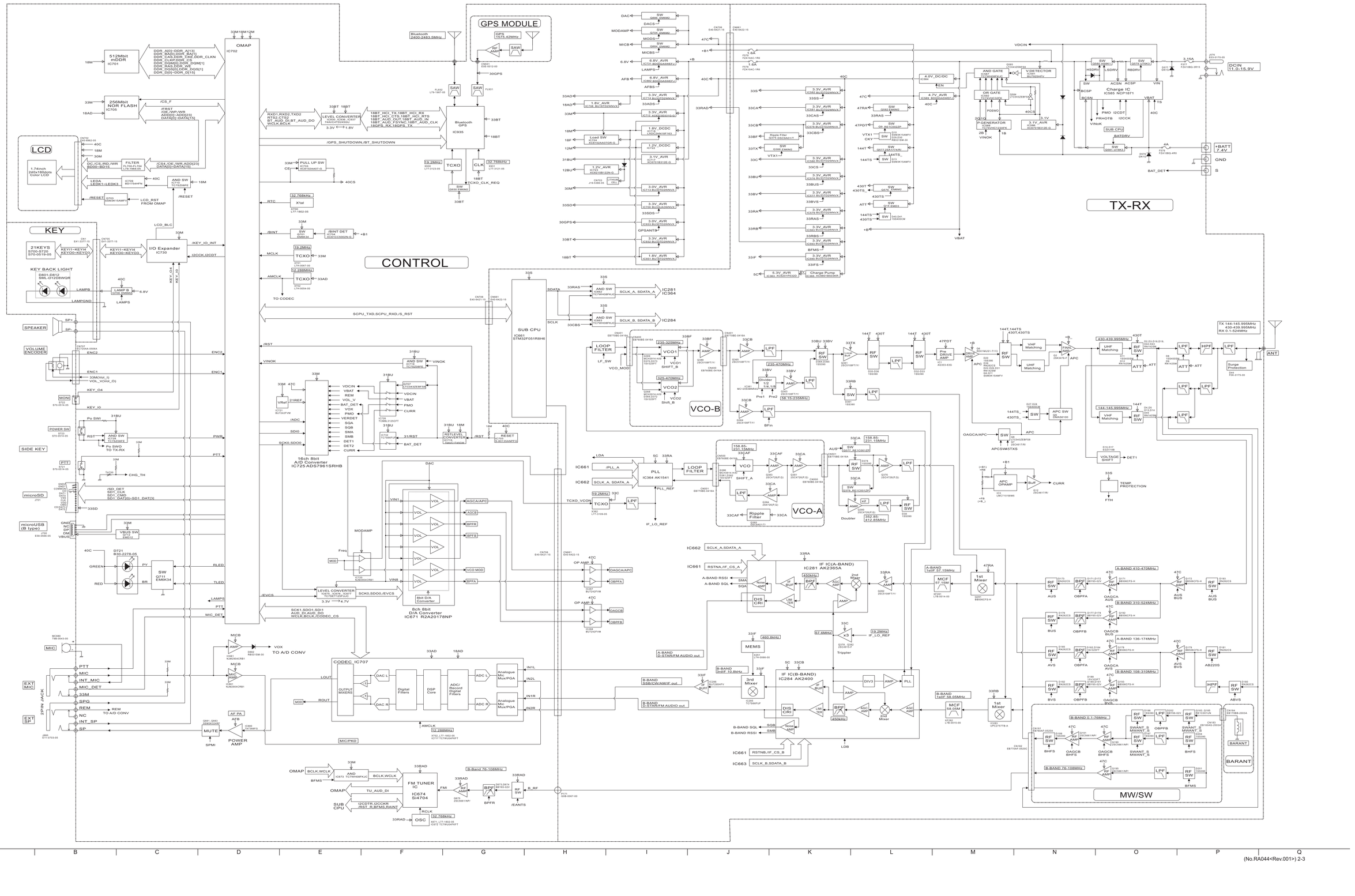
■ TX-RX UNIT (XC1-138E-01) 1/7: CONTROL



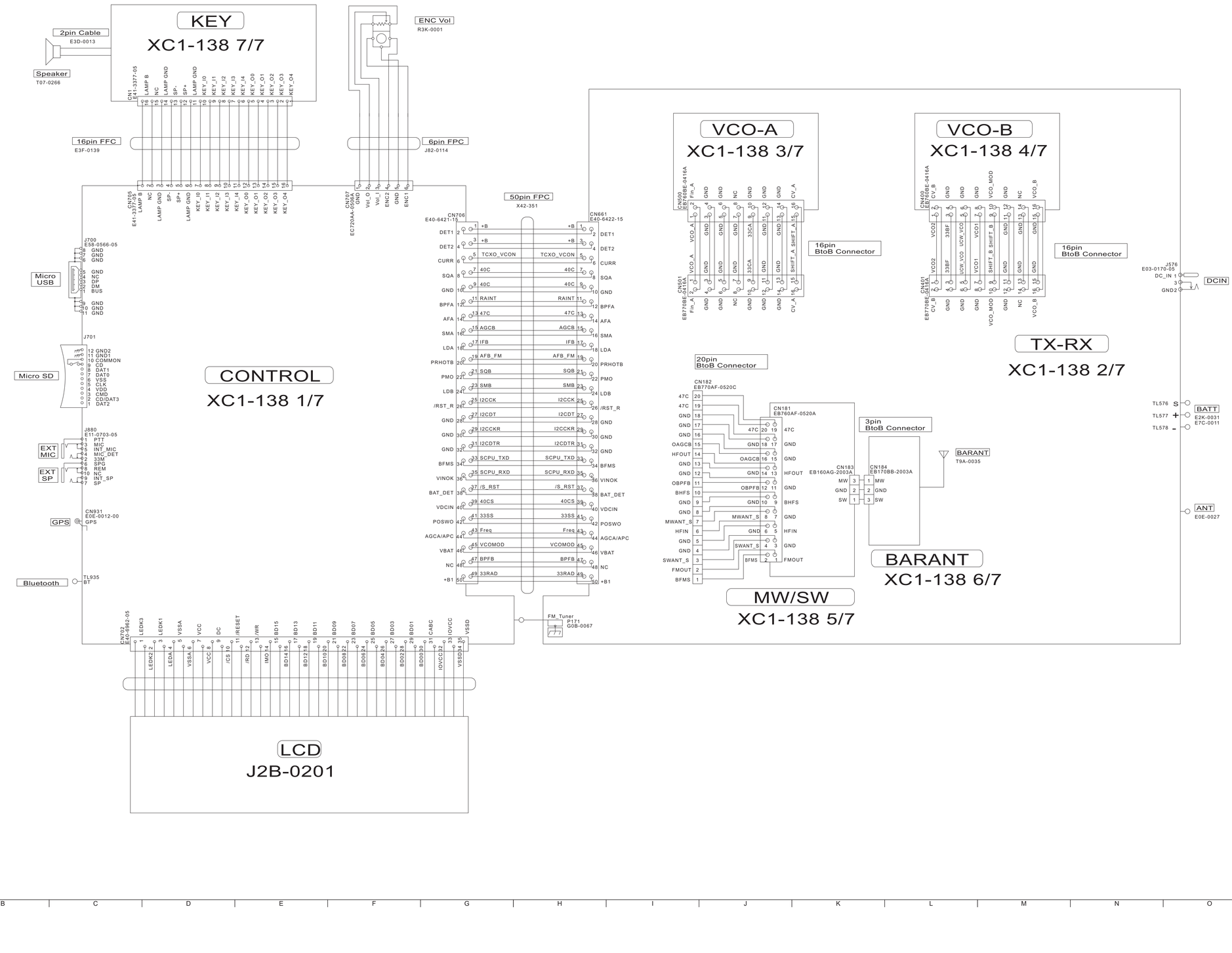
■ TX-RX UNIT (XC1-138E-01) 2/7: TX-RX



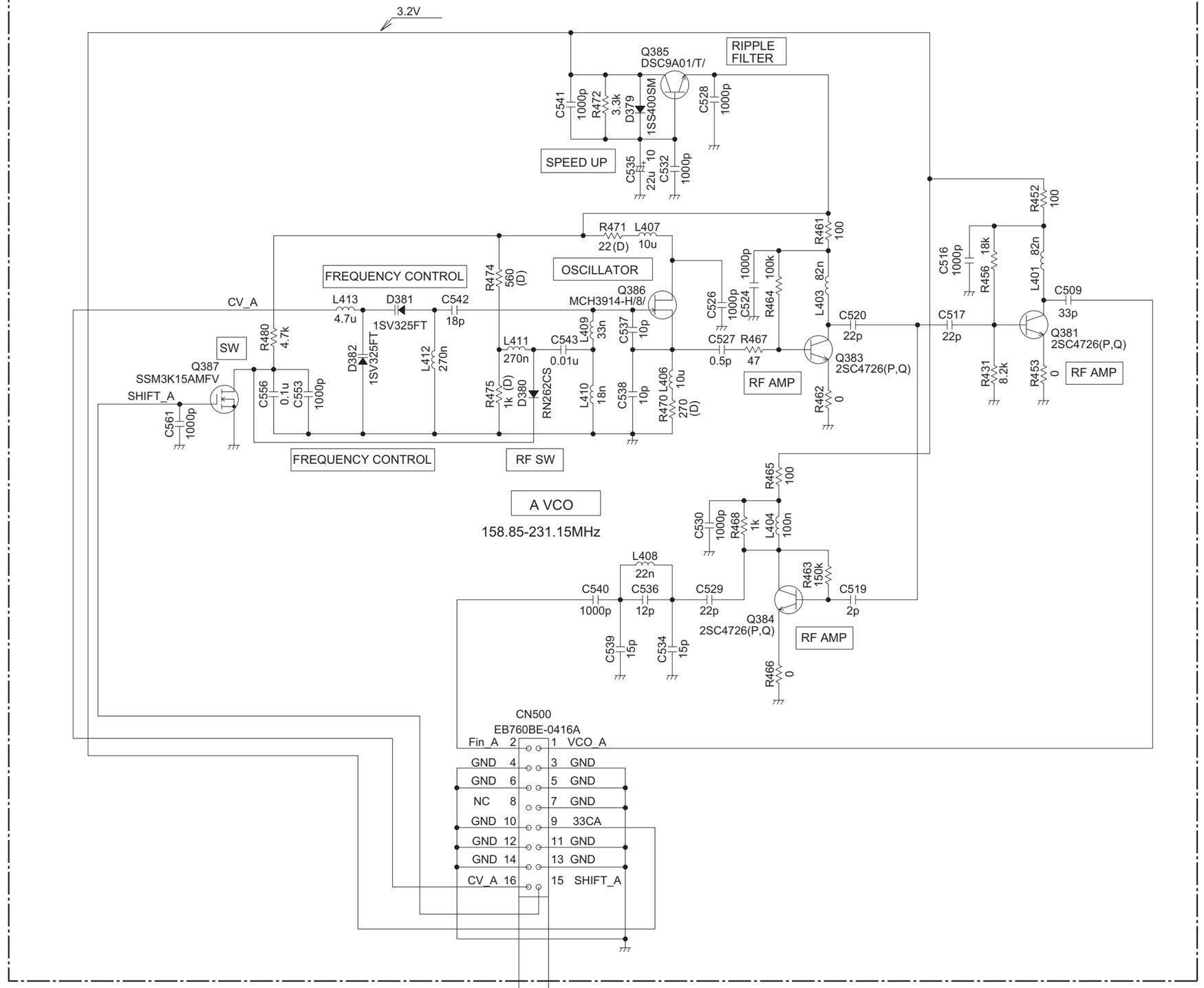
BLOCK DIAGRAM



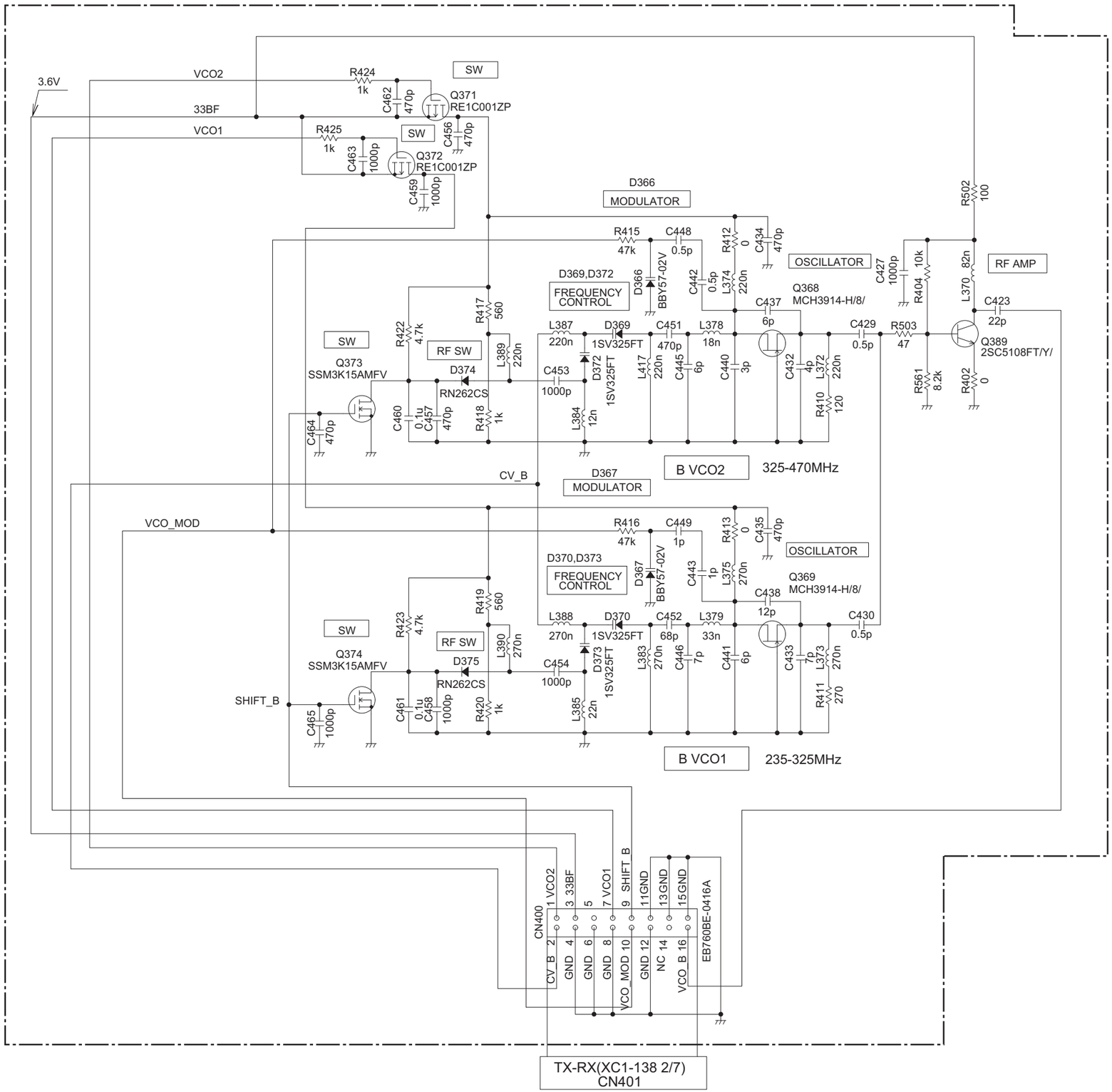
INTERCONNECTION DIAGRAM



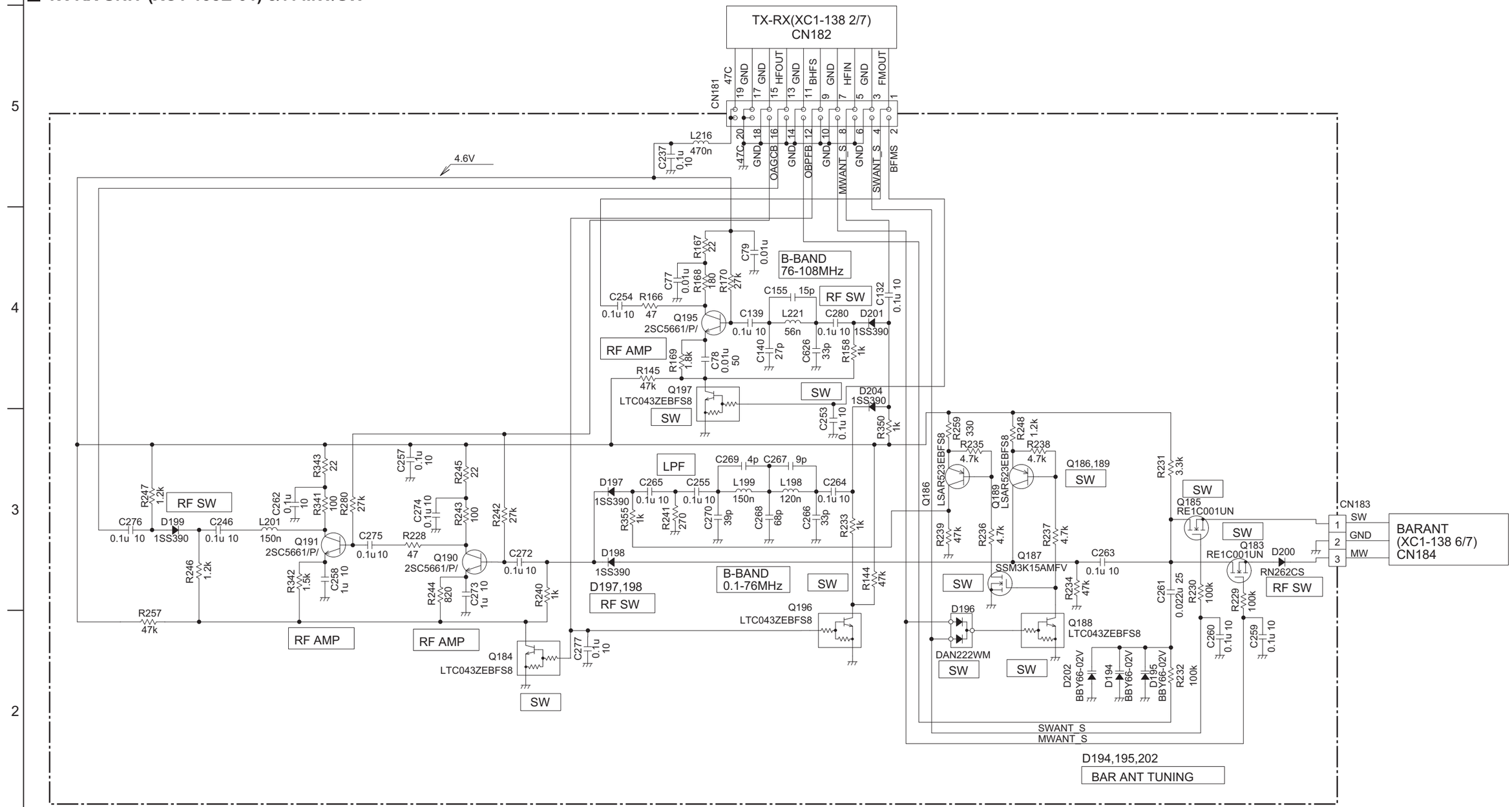
■ TX-RX UNIT (XC1-138E-01) 3/7: VCO-A



■ TX-RX UNIT (XC1-138E-01) 4/7: VCO-B

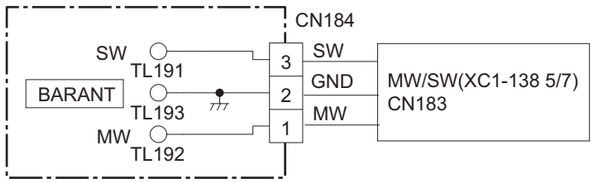


■ TX-RX UNIT (XC1-138E-01) 5/7: MW/SW

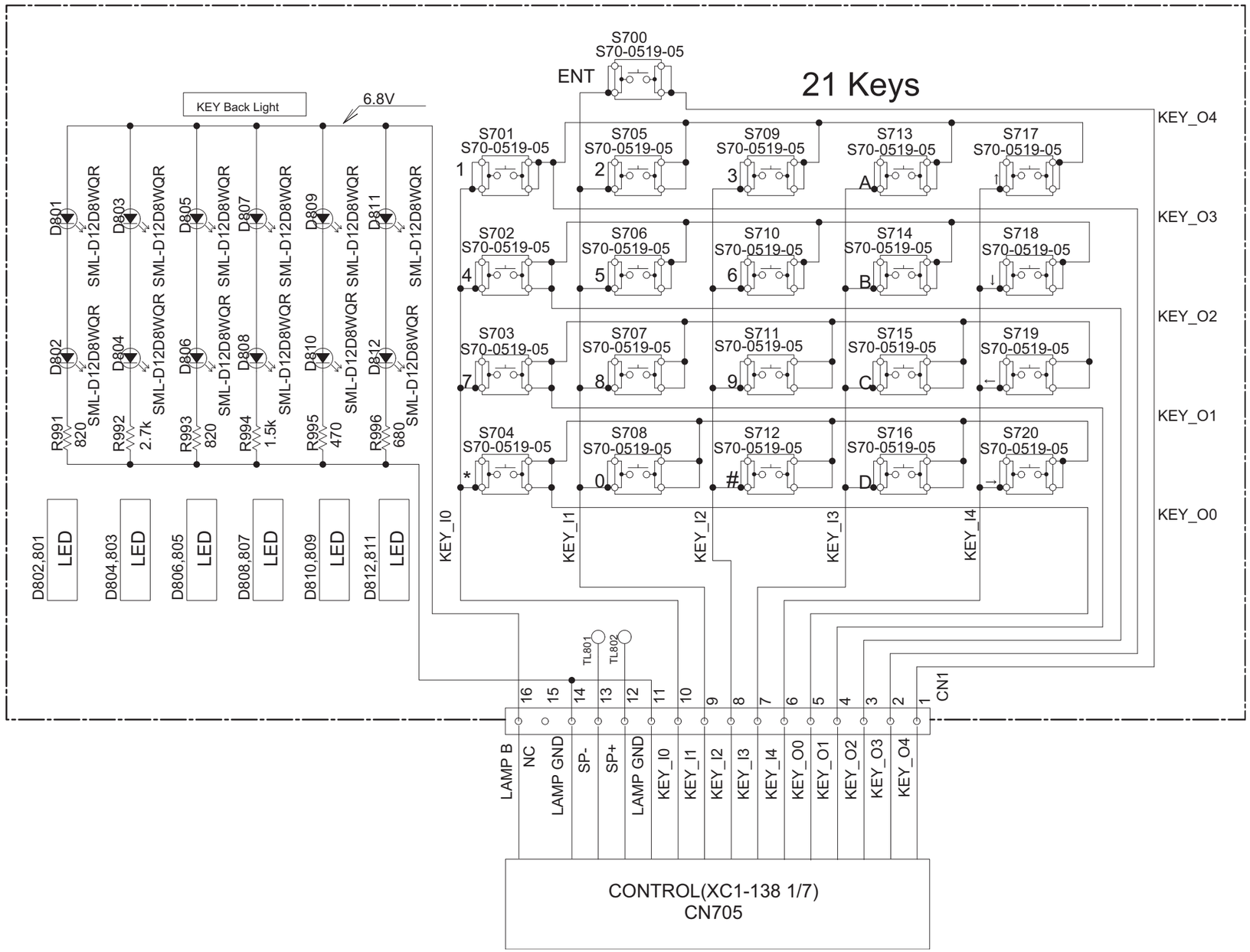


(No.RA044<Rev.001>) 2-7
2-7 (No.RA044<Rev.001>)

■ TX-RX UNIT (XC1-138E-01) 6/7: BARANT



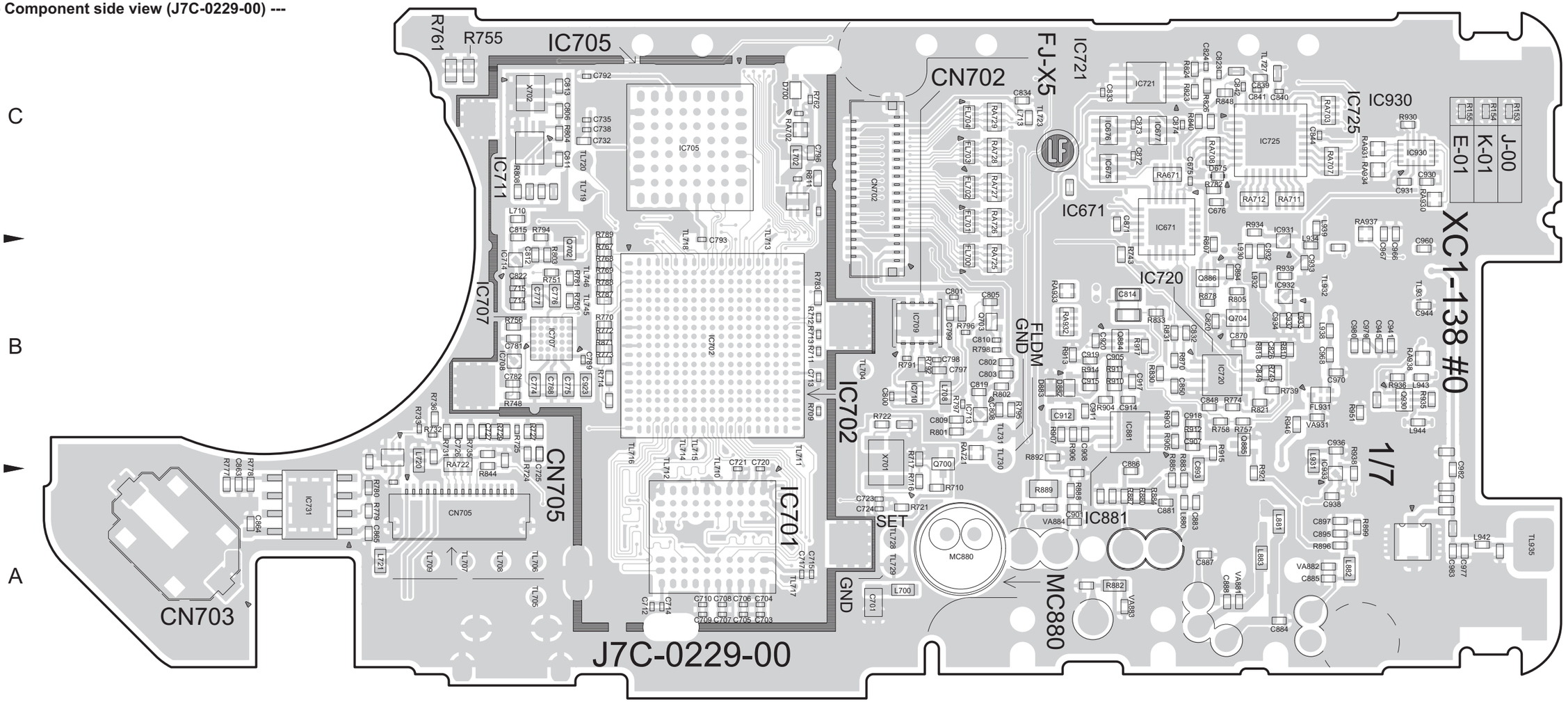
■ TX-RX UNIT (XC1-138E-01) 7/7: KEY



PRINTED CIRCUIT BOARD

■ TX-RX UNIT (XC1-138E-01) 1/7: CONTROL

--- Component side view (J7C-0229-00) ---



● **ADDRESS TABLE OF BOARD PARTS**
Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

REF.NO.	LOCATION
IC	
IC671	A- 4C
IC675	A- 4C
IC676	A- 4C
IC677	A- 4C
IC701	A- 3A
IC702	A- 3B
IC705	A- 3C
IC707	A- 2B
IC708	A- 2B
IC709	A- 3B
IC710	A- 3B
IC711	A- 2C
IC713	A- 4B
IC714	A- 2B
IC720	A- 4B
IC721	A- 4C
IC725	A- 5C
IC731	A- 1A
IC881	A- 4B
IC930	A- 5C
IC931	A- 5B
IC932	A- 5B
IC933	A- 5A
TRANSISTOR	
Q700	A- 3B
Q702	A- 2B
Q703	A- 4B
Q704	A- 4B
Q884	A- 4B
Q885	A- 4B
Q886	A- 4B
Q930	A- 5B
DIODE	
D675	A- 4C
D700	A- 3C
D882	A- 4B
D883	A- 4B
RESISTOR	
R153	A- 5C
R154	A- 5C
R155	A- 5C
R709	A- 3B
R710	A- 3A
R711	A- 3B
R712	A- 3B
R713	A- 3B
R714	A- 2B
R716	A- 3A
R717	A- 3B
R721	A- 3A
R722	A- 3B
R724	A- 2B
R725	A- 2B
R727	A- 2B
R729	A- 2B
R731	A- 2B
R732	A- 2B
R733	A- 2B
R735	A- 2B
R736	A- 2B
R737	A- 2B
R738	A- 2B
R739	A- 2B
R748	A- 2B
R750	A- 2B
R751	A- 2B
R755	A- 2C
R756	A- 2B
R757	A- 4B
R758	A- 4B
R761	A- 2C
R762	A- 3C
R767	A- 2B
R768	A- 2B
R769	A- 2B
R770	A- 2B
R772	A- 2B
R773	A- 2B
R774	A- 4B
R777	A- 1A
R778	A- 1A
R779	A- 2A
R780	A- 2A
R781	A- 2B
R782	A- 4C
R783	A- 3B
R787	A- 2B
R788	A- 2B
R789	A- 2B
R791	A- 3B
R792	A- 3B
R794	A- 2C
R795	A- 4B
R796	A- 4B
R798	A- 4B
R801	A- 4B
R802	A- 4B
R803	A- 2B
R804	A- 2C
R805	A- 4B
R807	A- 4B
R810	A- 5B
R811	A- 3C
R818	A- 5B
R821	A- 4C
R823	A- 4C
R824	A- 4C
R826	A- 4C
R830	A- 4B
R831	A- 4B
R833	A- 4B
R840	A- 4C
R844	A- 2B
R848	A- 4C
R870	A- 4B
R871	A- 2B
R878	A- 4B
R880	A- 4A
R882	A- 4A
R883	A- 4A
R896	A- 5A
R897	A- 4B
R899	A- 4B
R903	A- 4B
R904	A- 4B
R905	A- 4B
R906	A- 4B
R907	A- 4B
R910	A- 4B
R911	A- 4B
R912	A- 4B
R913	A- 4B
R914	A- 4B
R915	A- 4B
R917	A- 4B
R921	A- 4A
R930	A- 5C
R934	A- 4C
R935	A- 5B
R936	A- 5B
R946	A- 5B
R951	A- 5B
RA671	A- 4C
RA702	A- 3C
RA703	A- 5C
RA707	A- 5C
RA708	A- 4C
RA711	A- 5C
RA712	A- 4C
RA721	A- 4B
RA722	A- 2B
RA725	A- 4B
RA726	A- 4C
RA727	A- 4C
RA728	A- 4C
RA729	A- 4C
RA930	A- 5C
RA931	A- 5C
RA932	A- 4B
RA933	A- 4B
RA934	A- 5C
RA937	A- 5C
RA938	A- 5B
CAPACITOR	
C675	A- 4C
C676	A- 4C
C701	A- 3A
C702	A- 3A
C703	A- 3A
C704	A- 3A
C705	A- 3A
C706	A- 3A
C707	A- 3A
C708	A- 3A
C709	A- 3A
C710	A- 3A
C712	A- 3A
C713	A- 3B
C714	A- 3A
C715	A- 3A
C717	A- 3A
C720	A- 3A
C721	A- 3A
C723	A- 3A
C724	A- 3A
C725	A- 2B
C726	A- 2B
C727	A- 2B
C732	A- 2C
C735	A- 2C
C738	A- 2C
C774	A- 2B
C775	A- 2B
C776	A- 2B
C777	A- 2B
C781	A- 2B
C782	A- 2B
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C789	A- 2B
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C797	A- 3B
C798	A- 3B
C799	A- 3B
C800	A- 3B
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C802	A- 4B
C803	A- 4B
C804	A- 4B
C805	A- 4B
C806	A- 2C
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C809	A- 4B
C810	A- 4B
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C813	A- 2C
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C820	A- 4B
C822	A- 2B
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C832	A- 4B
C833	A- 4C
C834	A- 4C
C839	A- 4C
C840	A- 5C
C841	A- 4C
C843	A- 4C
C844	A- 4C
C848	A- 4C
C849	A- 4B
C850	A- 4B
C863	A- 1A
C864	A- 1A
C865	A- 2A
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C887	A- 4A
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C894	A- 4B
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C897	A- 5A
C901	A- 4A
C902	A- 4B
C903	A- 4B
C904	A- 4B
C905	A- 4B
C907	A- 4B
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C911	A- 4B
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C921	A- 4B
C922	A- 4B
C923	A- 2B
C930	A- 5C
C931	A- 5C
C932	A- 5B
C933	A- 5B
C934	A- 5B
C936	A- 5B
C937	A- 5B
C938	A- 5A
C941	A- 5B
C944	A- 5B
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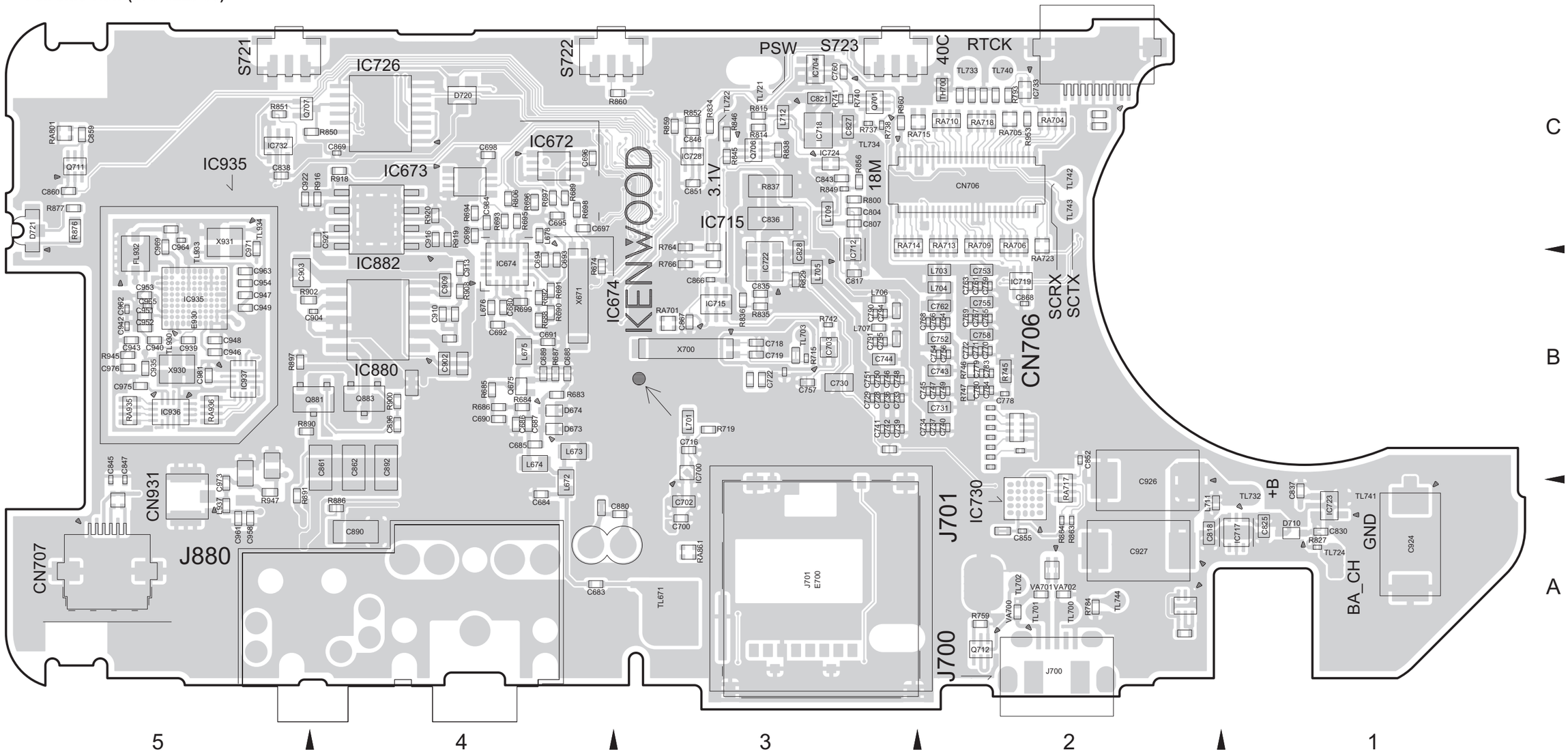
C960	A- 5B
C966	A- 5C
C967	A- 5B
C968	A- 5B
C970	A- 5B
C977	A- 5A
C979	A- 5B
C980	A- 5B
C982	A- 5A
C983	A- 5A
OTHER	
X701	A- 3B
X702	A- 2C
FL700	A- 4B
FL701	A- 4C
FL702	A- 4C
FL703	A- 4C
FL704	A- 4C
FL931	A- 5B
CN702	A- 3C
CN703	A- 1A
CN705	A- 2A
L700	A- 3A
L702	A- 3C
L708	A- 3B
L710	A- 2C
L713	A- 4C
L714	A- 2B
L715	A- 2B
L720	A- 2B
L721	A- 2A
L880	A- 4A
L881	A- 5A
L882	A- 5A
L883	A- 5A
L930	A- 4B
L931	A- 5B
L932	A- 5B
L933	A- 5B
L934	A- 5B
L938	A- 5B
L939	A- 5C
L942	A- 5A
L943	A- 5B
L944	A- 5B
MC880	A- 4A
VA881	A- 4A
VA882	A- 5A
VA883	A- 4A
VA884	A- 4A
VA931	A- 5B

■ TX-RX UNIT (XC1-138E-01) 1/7: CONTROL

--- Foil side view (J7C-0229-00) ---



● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

Side — A-1C — Y axis / X axis

REF.NO.	LOCATION
IC	
IC672	B- 4C
IC673	B- 4C
IC674	B- 4B
IC700	B- 3B
IC703	B- 3B
IC704	B- 3C
IC712	B- 3B
IC715	B- 3B
IC717	B- 1A
IC718	B- 3C
IC719	B- 2B
IC722	B- 3B
IC723	B- 1A
IC724	B- 3C
IC726	B- 4C
IC728	B- 3C
IC730	B- 2A
IC732	B- 5C
IC733	B- 2C
IC880	B- 4B
IC882	B- 4C
IC935	B- 5B
IC936	B- 5B
IC937	B- 5B
TRANSISTOR	
Q675	B- 4B
Q701	B- 3C
Q706	B- 3C
Q707	B- 5C
Q711	B- 5C
Q712	B- 2A
Q881	B- 4B
Q883	B- 4B
DIODE	
D673	B- 4B
D674	B- 4B
D710	B- 1A
D720	B- 4C
D721	B- 5C
RESISTOR	
R674	B- 4B
R683	B- 4B
R684	B- 4B
R685	B- 4B
R686	B- 4B
R687	B- 4B
R688	B- 4B
R689	B- 4C
R690	B- 4B
R691	B- 4B
R692	B- 4B
R693	B- 4C
R694	B- 4C
R695	B- 4C
R696	B- 4C
R697	B- 4C
R698	B- 4C
R699	B- 4B
R715	B- 3B
R719	B- 3B
R737	B- 3C
R738	B- 3C
R740	B- 3C
R741	B- 3C
R742	B- 3B
R745	B- 2B
R746	B- 2B
R747	B- 2B
R759	B- 2A
R764	B- 3C
R766	B- 3B
R784	B- 2A
R793	B- 2C
R800	B- 3C
R806	B- 4C
R814	B- 3C
R815	B- 3C
R827	B- 1A
R829	B- 3B
R834	B- 3C
R835	B- 3B
R836	B- 3B
R837	B- 3C
R845	B- 3C
R846	B- 3C
R849	B- 3C
R850	B- 4C
R851	B- 5C
R852	B- 4C
R856	B- 3C
R859	B- 3C
R860	B- 3C
R863	B- 2A
R864	B- 2A
R876	B- 5C
R877	B- 5C
R886	B- 4A
R890	B- 5B
R891	B- 5A
R897	B- 5B
R900	B- 4B
R902	B- 5B
R908	B- 4B
R916	B- 4C
R918	B- 4C
R919	B- 4C
R920	B- 4C
R945	B- 5B
R947	B- 5A
R953	B- 2C
R960	B- 3C
CAPACITOR	
C680	B- 4B
C683	B- 4A
C684	B- 4A
C685	B- 4B
C686	B- 4B
C687	B- 4B
C688	B- 4B
C689	B- 4B
C690	B- 4B
C691	B- 4B
C692	B- 4B
C693	B- 4B
C694	B- 4B
C695	B- 4C
C696	B- 4C
C697	B- 4C
C698	B- 4C
C699	B- 4C
C700	B- 3A
C702	B- 3A
C716	B- 3B
C718	B- 3B
C719	B- 3B
C722	B- 3B
C728	B- 3B
C729	B- 3B
C730	B- 3B
C731	B- 2B
C733	B- 3B
C734	B- 2B
C736	B- 3B
C737	B- 2B
C739	B- 3B
C740	B- 2B
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C742	B- 3B
C743	B- 2B
C744	B- 3B
C745	B- 2B
C746	B- 3B
C747	B- 2B
C748	B- 3B
C749	B- 2B
C750	B- 3B
C751	B- 3B
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C754	B- 2B
C755	B- 2B
C756	B- 2B
C757	B- 3B
C758	B- 2B
C759	B- 2B
C760	B- 3C
C761	B- 2B
C762	B- 2B
C763	B- 2B
C764	B- 2B
C765	B- 2B
C766	B- 2B
C767	B- 2B
C768	B- 2B
C769	B- 2B
C770	B- 2B
C771	B- 2B
C772	B- 2B
C778	B- 2B
C779	B- 2B
C780	B- 2B
C783	B- 2B
C790	B- 3B
C791	B- 3B
C794	B- 3B
C795	B- 3B
C804	B- 3C
C807	B- 3C
C817	B- 3B
C818	B- 2A
C821	B- 3C
C825	B- 1A
C827	B- 3C
C828	B- 3B
C830	B- 1A
C835	B- 3B
C836	B- 3C
C837	B- 1A
C838	B- 5C
C843	B- 3A
C845	B- 5A
C846	B- 3C
C847	B- 5A
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C855	B- 2A
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C862	B- 4B
C866	B- 3B
C867	B- 3B
C868	B- 2B
C869	B- 4C
C880	B- 3A
C890	B- 4A
C892	B- 4B
C902	B- 4B
C903	B- 4B
C904	B- 4B
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C922	B- 4C
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C926	B- 2A
C927	B- 2A
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C943	B- 5B
C946	B- 5B
C947	B- 5B
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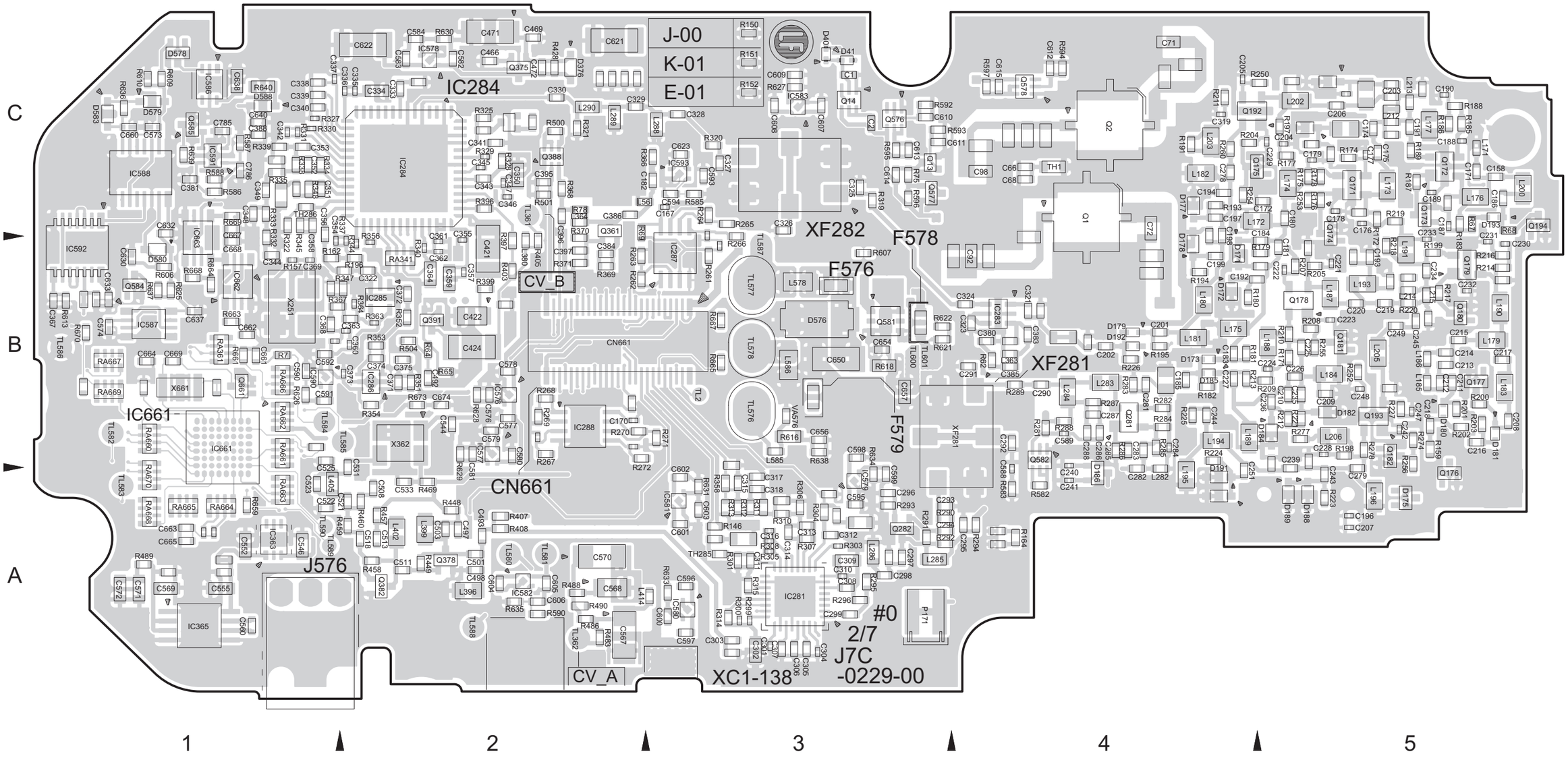
C949	B- 5B
C951	B- 5B
C952	B- 5B
C953	B- 5B
C954	B- 5B
C956	B- 5B
C962	B- 5B
C963	B- 5B
C964	B- 5C
C965	B- 5B
C969	B- 5C
C971	B- 5C
C973	B- 5A
C975	B- 5B
C976	B- 5B
C981	B- 5B
C984	B- 4C
OTHER	
X671	B- 4B
X700	B- 3B
X930	B- 5B
X931	B- 5C
FL932	B- 5B
TH700	B- 2C
CN706	B- 2C
CN707	B- 5A
CN931	B- 5A
S721	B- 5C
S722	B- 4C
S723	B- 3C
E700	B- 3A
E930	B- 5B
J700	B- 2A
J701	B- 3A
J880	B- 4A
L672	B- 4A
L673	B- 4B
L674	B- 4B
L675	B- 4B
L676	B- 4B
L678	B- 4C
L701	B- 3B
L703	B- 2B
L704	B- 2B
L705	B- 3B
L706	B- 3B
L709	B- 3C
L711	B- 2A
L712	B- 3C
L937	B- 5A
VA700	B- 2A
VA701	B- 2A
VA702	B- 2A

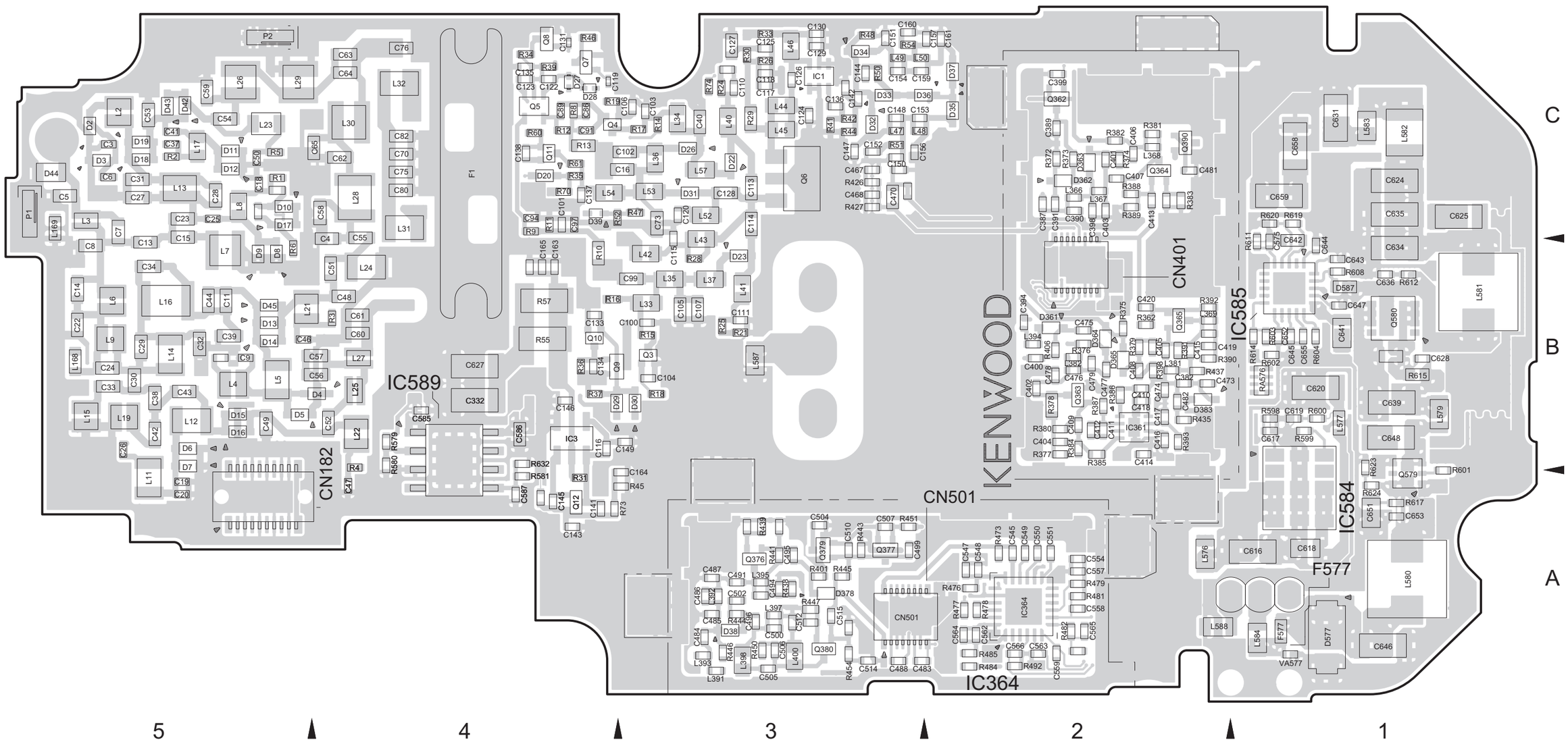
■ TX-RX UNIT (XC1-138E-01) 2/7: TX-RX

--- Component side view (J7C-0229-00) ---



■ TX-RX UNIT (XC1-138E-01) 2/7: TX-RX

--- Foil side view (J7C-0229-00) ---



● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
IC		Q363	B- 2B	D177	A- 4C	R47	B- 3C	R218	A- 5B	R330	A- 1C	R444	B- 3A	R621	A- 3B	C28	B- 5C	C120	B- 3C	C202	A- 4B	C305	A- 3A	C384	A- 2B	C501	A- 2A	C596	A- 3A	C674	A- 2B	L52	B- 3C	L576	B- 2A
IC1	B- 3C	Q364	B- 2C	D178	A- 4B	R48	B- 3C	R219	A- 5C	R331	A- 1C	R445	B- 3A	R622	A- 3B	C29	B- 5B	C122	B- 4C	C203	A- 5C	C306	A- 3A	C385	A- 4B	C502	B- 3A	C597	A- 3A	C785	A- 1C	L53	B- 3C	L577	B- 1B
IC3	B- 4B	Q365	B- 2B	D179	A- 4B	R50	B- 3C	R220	A- 5B	R332	A- 1B	R446	B- 3A	R623	B- 1B	C30	B- 5B	C123	B- 4C	C204	A- 5C	C307	A- 3A	C386	A- 2C	C503	A- 2A	C598	A- 3B	C786	A- 1C	L54	B- 4C	L578	A- 3B
IC281	A- 3A	Q375	A- 2C	D180	A- 5B	R51	B- 3C	R221	A- 5B	R333	A- 1C	R447	B- 3A	R624	B- 1A	C31	B- 5C	C124	B- 3C	C205	A- 4C	C308	A- 3A	C387	B- 2C	C504	B- 3A	C599	A- 3A			L56	A- 2C	L579	B- 1B
IC283	A- 4B	Q376	B- 3A	D181	A- 5B	R52	B- 4C	R223	A- 5A	R334	A- 1C	R448	A- 2A	R625	A- 1B	C32	B- 5B	C125	B- 3C	C206	A- 5C	C309	A- 3A	C388	A- 1C	C505	B- 3A	C600	A- 3A	**OTHER**		L57	B- 3C	L580	B- 1A
IC284	A- 2C	Q377	B- 3A	D182	A- 5B	R54	B- 3C	R224	A- 4B	R335	A- 1C	R449	A- 2A	R626	A- 1B	C33	B- 5B	C126	B- 3C	C207	A- 5A	C310	A- 3A	C389	B- 2C	C506	B- 3A	C601	A- 3A	X251	A- 1B	L168	B- 5B	L581	B- 1B
IC285	A- 2B	Q378	A- 2A	D184	A- 5B	R55	B- 4B	R225	A- 4B	R337	A- 2B	R450	B- 3A	R627	A- 3C	C34	B- 5B	C127	B- 3C	C208	A- 5B	C311	A- 3A	C390	B- 2C	C507	B- 3A	C602	A- 3A	X362	A- 2B	L169	B- 5C	L582	B- 1C
IC286	A- 2B	Q379	B- 3A	D185	A- 4B	R57	B- 4B	R226	A- 4B	R338	A- 1C	R451	B- 3A	R628	A- 2B	C37	B- 5C	C128	B- 3C	C209	A- 5B	C312	A- 3A	C391	B- 2C	C508	A- 2A	C603	A- 3A	X661	A- 1B	L171	A- 5C	L583	B- 1C
IC287	A- 3B	Q380	B- 3A	D186	A- 4A	R60	B- 4C	R227	A- 5B	R339	A- 1C	R454	B- 3A	R629	A- 2B	C38	B- 5B	C129	B- 3C	C210	A- 5B	C313	A- 3A	C394	B- 2B	C510	B- 3A	C604	A- 2A			L172	A- 4C	L584	B- 1A
IC288	A- 2B	Q382	A- 2A	D188	A- 5A	R61	B- 4C	R250	A- 5C	R340	A- 2B	R457	A- 2A	R630	A- 2C	C39	B- 5B	C130	B- 3C	C211	A- 5B	C314	A- 3A	C395	A- 2C	C511	A- 2A	C605	A- 2A	TH1	A- 4C	L173	A- 5C	L585	A- 3B
IC361	B- 2B	Q388	A- 2C	D189	A- 5A	R62	A- 4B	R252	A- 5B	R344	A- 2B	R458	A- 2A	R631	A- 3A	C40	B- 3C	C131	B- 4C	C212	A- 5B	C315	A- 3A	C396	A- 2C	C512	B- 3A	C606	A- 2A	TH285	A- 3A	L174	A- 5C	L586	A- 3B
IC363	A- 1A	Q390	B- 2C	D191	A- 4A	R64	A- 2B	R253	A- 5C	R345	A- 1C	R459	A- 2A	R632	B- 4B	C41	B- 5C	C133	B- 4B	C213	A- 5B	C316	A- 3A	C397	A- 2B	C513	A- 2A	C607	A- 3C	TH286	A- 1C	L175	A- 4B	L587	B- 3B
IC364	B- 2A	Q391	A- 2B	D192	A- 4B	R65	A- 2B	R254	A- 4C	R347	A- 2B	R460	A- 2A	R633	A- 3A	C42	B- 5B	C134	B- 4B	C214	A- 5B	C317	A- 3A	C398	B- 2C	C514	B- 3A	C608	A- 3C			L176	A- 5C	L588	B- 2A
IC365	A- 1A	Q576	A- 3C	D193	A- 5C	R67	A- 5C	R255	A- 5B	R348	A- 1C	R469	A- 2A	R634	A- 3A	C43	B- 5B	C135	B- 4C	C215	A- 5B	C318	A- 3A	C399	B- 2C	C515	B- 3A	C609	A- 3C	CN182	B- 5A	L177	A- 5C		
IC576	A- 2B	Q577	A- 3C	D361	B- 2B	R68	A- 5C	R256	A- 5B	R351	A- 2B	R473	B- 2A	R635	A- 2A	C44	B- 5B	C136	B- 3C	C216	A- 5B	C319	A- 4C	C400	B- 2B	C518	A- 2A	C610	A- 3C	CN401	B- 2B	L179	A- 5B	P1	B- 5C
IC577	A- 2B	Q578	A- 4C	D362	B- 2C	R69	A- 2C	R260	A- 4C	R352	A- 2B	R476	B- 2A	R636	A- 1C	C46	B- 5B	C137	B- 4C	C217	A- 5B	C321	A- 4B	C401	B- 2C	C521	A- 2A	C611	A- 3C	CN501	B- 3A	L180	A- 4B	P2	B- 5C
IC578	A- 2C	Q579	B- 1A	D363	B- 2C	R70	B- 4C	R261	A- 3B	R353	A- 2B	R477	B- 2A	R637	A- 1B	C47	B- 4A	C138	B- 4C	C218	A- 5B	C322	A- 2B	C402	B- 2B	C522	A- 1A	C612	A- 4C	CN661	A- 2B	L181	A- 4B	P171	A- 3A
IC579	A- 3A	Q580	B- 1B	D364	B- 2B	R73	B- 4A	R262	A- 2B	R354	A- 2B	R478	B- 2A	R638	A- 3B	C48	B- 4B	C141	B- 4A	C219	A- 5B	C323	A- 4B	C403	B- 2C	C523	A- 1A	C613	A- 3C			L182	A- 4C		
IC580	A- 3A	Q581	A- 3B	D365	B- 2B	R74	B- 3C	R263	A- 2B	R356	A- 2B	R479	B- 2A	R639	A- 1C	C49	B- 5B	C142	B- 3C	C220	A- 5B	C324	A- 4B	C404	B- 2B	C525	A- 1B	C614	A- 3C	F1	B- 4C	L183	A- 5B	VA576	A- 3B
IC581	A- 3A	Q582	A- 4B	D376	A- 2C	R75	A- 3C	R264	A- 3C	R358	A- 3A	R481	B- 2A	R640	A- 1C	C50	B- 5C	C143	B- 4A	C221	A- 5B	C325	A- 3C	C405	B- 2B	C531	A- 2B	C615	A- 4C	F576	A- 3B	L184	A- 5B	VA577	B- 1A
IC582	A- 2A	Q584	A- 1B	D378	B- 3A	R78	A- 2C	R265	A- 3C	R362	B- 2B	R482	B- 2A	R659	A- 1A	C51	B- 4B	C144	B- 3C	C222	A- 5B	C326	A- 3C	C406	B- 2C	C533	A- 2A	C616	B- 1A	F577	B- 1A	L185	A- 5B		
IC583	A- 3C	Q585	A- 1C	D383	B- 2B	R146	A- 3A	R266	A- 3B	R363	A- 2B	R483	A- 2A	R661	A- 1B	C52	B- 4B	C145	B- 4A	C223	A- 5B	C327	A- 3C	C407	B- 2C	C544	A- 2B	C617	B- 1B	F578	A- 3B	L186	A- 5B	XF281	A- 4B
IC584	B- 1A	Q661	A- 1B	D576	A- 3B	R150	A- 3C	R267	A- 2B	R364	A- 2B	R484	B- 2A	R663	A- 1B	C53	B- 5C	C146	B- 4B	C224	A- 5B	C328	A- 3C	C408	B- 2B	C545	B- 2A	C618	B- 1A	F579	A- 3B	L187	A- 5B	XF282	A- 3C
IC585	B- 1B			D577	B- 1A	R151	A- 3C	R268	A- 2B	R366	A- 3C	R485	B- 2A	R664	A- 1B	C54	B- 5C	C147	B- 3C	C225	A- 5B	C329	A- 2C	C409	B- 2B	C546	A- 1A	C619	B- 1B			L188	A- 5B		
IC586	A- 1C	**DIODE**		D578	A- 1C	R152	A- 3C	R269	A- 2B	R367	A- 1B	R486	A- 2A	R665	A- 3B	C55	B- 4C	C148	B- 3C	C226	A- 5B	C330	A- 2C	C410	B- 2B	C547	B- 2A	C620	B- 1B	J576	A- 1A	L189	A- 4B		
IC587	A- 1B	D2	B- 5C	D579	A- 1C	R157	A- 1B	R270	A- 2B	R368	A- 2C	R488	A- 2A	R667	A- 3B	C56	B- 4B	C149	B- 3B	C227	A- 4B	C332	B- 4B	C411	B- 2B	C548	B- 2A	C621	A- 2C			L190	A- 5B		
IC588	A- 1C	D3	B- 5C	D580	A- 1B	R159	A- 5B	R271	A- 3B	R369	A- 2B	R489	A- 1A	R668	A- 1B	C57	B- 4B	C150	B- 3C	C228	A- 5B	C333	A- 2C	C412	B- 2B	C549	B- 2A	C622	A- 2C	L2	B- 5C	L191	A- 5B		
IC589	B- 4B	D4	B- 4B	D583	A- 1C	R162	A- 1B	R272	A- 2B	R370	A- 2B	R490	A- 2A	R669	A- 1C	C58	B- 4C	C151	B- 3C	C229	A- 5C	C334	A- 2C	C413	B- 2C	C550	B- 2A	C623	A- 3C	L3	B- 5C	L193	A- 5B		
IC590	A- 1B	D5	B- 5B	D587	B- 1B	R164	A- 4A	R274	A- 5B	R371	A- 2B	R492	B- 2A	R670	A- 1B	C59	B- 5C	C152	B- 3C	C230	A- 5B	C335	A- 2C	C414	B- 2B	C551	B- 2A	C624	B- 1C	L4	B- 5B	L194	A- 4B		
IC591	A- 1C	D6	B- 5B	D588	A- 1C	R171	A- 5B	R277	A- 5B	R372	B- 2C	R500	A- 2C	R673	A- 2B	C60	B- 4B	C153	B- 3C	C231	A- 5B	C336	A- 2C	C415	B- 2B	C552	A- 1A	C625	B- 1C	L5	B- 5B	L195	A- 4A		
IC592	A- 1B	D7	B- 5B			R172	A- 5C	R278	A- 5B	R373	B- 2C	R501	A- 2C			C61	B- 4B	C154	B- 3C	C232	A- 5B	C337	A- 1C	C416	B- 2B	C554	B- 2A	C627	B- 4B	L6	B- 5B	L196	A- 5A		
IC593	A- 3C	D8	B- 5B	**RESISTOR**		R174	A- 5C	R281	A- 4B	R374	B- 2C	R504	A- 2B	RA341	A- 2B	C62	B- 4C	C156	B- 3C	C233	A- 5B	C338	A- 1C	C417	B- 2B	C555	A- 1A	C628	B- 1B	L7	B- 5B	L200	A- 5C		
IC661	A- 1B	D9	B- 5B	R1	B- 5C	R175	A- 5C	R282	A- 4B	R375	B- 2B	R579	B- 4B	RA361	A- 1B	C63	B- 4C	C157	B- 2C	C234	A- 5B	C339	A- 1C	C418	B- 2B	C557	B- 2A	C630	A- 1B	L8	B- 5C	L202	A- 5C		
IC662	A- 1B	D10	B- 5C	R2	B- 5C	R176	A- 5C	R283	A- 4B	R376	B- 2B	R580	B- 4B	RA576	B- 1B	C64	B- 4C	C158	A- 5C	C235	A- 5B	C340	A- 1C	C419	B- 2B	C558	B- 2A	C631	B- 1C	L9	B- 5B	L203	A- 4C		
IC663	A- 1B	D11	B- 5C	R3	B- 4B	R177	A- 5C	R284	A- 4B	R377	B- 2B	R581	B- 4A	RA660	A- 1B	C65	B- 4C	C159	B- 3C	C236	A- 5B	C341	A- 2C	C420	B- 2B	C559	B- 2A	C632	A- 1C	L11	B- 5A	L205	A- 5B		
		D12	B- 5C	R4	B- 4B	R178	A- 5C	R285	A- 4B	R378	B- 2B	R582	A- 4A	RA661	A- 1B	C66	A- 4C	C160	B- 3C	C239	A- 5A	C342	A- 1C	C421	A- 2B	C560	A- 1A	C633	A- 1B	L12	B- 5B	L206	A- 5B		
TRANSISTOR		D13	B- 5B	R5	B- 5C	R179	A- 5B	R286	A- 4B	R379	B- 2B	R583	A- 4A	RA662	A- 1B	C68	A- 4C	C161	B- 2C	C240	A- 4B	C343	A- 2C	C422	A- 2B	C562	B- 2A	C634	B- 1B	L13	B- 5C	L212	A- 5C		
Q1	A- 4C	D14	B- 5B	R6	B- 5B	R180	A- 4B	R287	A- 4B	R380	B- 2B	R585	A- 3C	RA663	A- 1A	C70	B- 4C	C163	B- 4B	C241	A- 4A	C344	A- 1B	C424	A- 2B	C563	B- 2A	C635	B- 1C	L14	B- 5B	L213	A- 5C		
Q2	A- 4C	D15	B- 5B	R7	A- 1B	R181	A- 4B	R288	A- 4B	R381	B- 2C	R586	A- 1C	RA664	A- 1A	C71	A- 4C	C164	B- 3A	C242	A- 5B	C345	A- 2C	C466	A- 2C	C564	B- 2A	C636	B- 1B	L15	B- 5B	L214	A- 5B		
Q3	B- 3B	D16	B- 5B	R8	B- 4C	R182	A- 4B	R289	A- 4B	R382	B- 2C	R587	A- 1C	RA665	A- 1A	C72	A- 4C	C165	B- 4B	C243	A- 5A	C346	A- 2C	C467	B- 3C	C565	B- 2A	C637	A- 1B	L16	B- 5B	L215	A- 5B		
Q4	B- 4C	D17	B- 5C	R9	B- 4C	R183	A- 5C	R290	A- 3A	R383	B- 2C	R588	A- 1C	RA666	A- 1B	C73	B- 3C	C167	A- 3C	C244	A- 4B	C347	A- 2C	C468	B- 3C	C566	B- 2A	C638	A- 1C	L17	B- 5C	L282	A- 4A		
Q5	B- 4C	D18	B- 5C	R10	B- 4B	R185	A- 5C	R291	A- 3A	R384	B- 2B	R590	A- 2A	RA667	A- 1B	C75	B- 4C	C170	A- 2B	C245	A- 5B	C348	A- 1C	C469	A- 2C	C567	A- 2A	C639	B- 1B	L19	B- 5B	L283	A- 4B		
Q6	B- 3C	D19	B- 5C	R11	B- 4C	R186	A- 5C	R292	A- 3A	R385	B- 2B	R592	A- 3C	RA668	A- 1A	C76	B- 4C	C171	A- 5C	C247	A- 5B	C349	A- 1C	C470	B- 3C	C568	A- 2A	C640	A- 1C	L21	B- 5B	L284	A- 4B		
Q7	B- 4C	D20	B- 4C	R12	B- 4C	R187	A- 5C	R293	A- 3A	R386	B- 2B	R593	A- 3C	RA669	A- 1B	C80	B- 4C	C172	A- 5C	C248	A- 5B	C350	A- 2C	C471	A- 2C	C569	A- 1A	C641	B- 1B	L22	B- 4B	L285	A- 3A		
Q8	B- 4C	D22	B- 3C	R13	B- 4C	R188	A- 5C	R294	A- 4A	R387	B- 2B	R594	A- 4C	RA670	A- 1A	C82	B- 4C	C174	A- 5C	C249	A- 5B	C351	A- 1C	C472	A- 2C	C570	A- 2A	C642	B- 1B	L23	B- 5C	L286	A- 3A		
Q9	B- 4B	D23	B- 3B	R14	B- 3C	R189	A- 5C	R295	A- 3A	R388	B- 2C	R595	A- 3C			C86	B- 4C	C175	A- 5C	C251	A- 4A	C352	A- 1C	C473	B- 2B	C571	A- 1A	C643	B- 1B	L24	B- 4B	L288	A- 3C		
Q10	B- 4B	D26	B- 3C	R15	B- 3B	R191	A- 4C	R296	A- 3A	R389	B- 2C	R596	A- 3C	**CAPACITOR**		C89	B- 4C	C176	A- 5C	C278	A- 4C	C353	A- 1C	C474	B- 2B	C572	A- 1A	C644	B- 1B	L25	B- 4B	L289	A- 2C		
Q11	B- 4C	D27	B- 4C	R16	B- 4B	R193	A- 4C	R299	A- 3A	R390	B- 2B	R597	A- 4C	C1	A- 3C	C91	B- 4C	C177	A- 5C	C279	A- 5A	C354	A- 1B	C475	B- 2B	C573	A- 1C	C645	B- 1B	L26	B- 5C	L290	A- 2C		
Q12	B- 4A	D28	B- 4C	R17	B- 3C	R194	A- 4B	R300	A- 3A	R391	B- 2B	R598	B- 1B	C2	A- 3C	C92	A- 4B	C178	A- 5C	C281	A- 4B	C355	A- 2B	C476	B- 2B	C574	A- 1B	C646	B- 1A	L27	B- 4B	L363	A- 4B		
Q13	A- 3C	D29	B- 4B	R18	B- 3B	R195	A- 4B	R301	A- 3A	R392	B- 2B	R599	B- 1B	C3	B- 5C	C94	B- 4C	C179	A- 5C	C282	A- 4A	C356	A- 1C	C477	B- 2B	C575	B- 1B	C647	B- 1B	L28	B- 4C	L364	A- 2C		
Q14	A- 3C	D30	B- 3B	R19	B- 4C	R196	A- 2B	R303	A- 3A	R393	B- 2B	R600	B- 1B	C4	B- 4B	C97	B- 4C	C180	A- 5C	C283	A- 4B	C357	A- 2B	C478	B- 2B	C576	A- 2B	C648	B- 1B	L29	B- 5C	L366	B- 2C		
Q171	A- 5C	D31	B- 3C	R21	B- 3B	R197	A- 5C	R304	A- 3A	R396	A- 2C	R601	B- 1A	C5	B- 5C	C98	A- 4C	C181	A- 5B	C284	A- 4B	C358	A- 1C	C479	B- 2B	C577	A- 2B	C650	A- 3B	L30	B- 4C	L367	B- 2C		
Q172	A- 5C	D32	B- 3C	R24	B- 3C	R198	A- 5B	R305	A- 3A	R397	A- 2B	R602	B- 1B	C6	B- 5C	C99	B- 3B	C182	A- 3C	C285	A- 4B	C359	A- 2B	C481	B- 2C	C578	A- 2B	C651	B- 1A	L31	B- 4C	L368	B- 2C		
Q173	A- 5C	D33	B- 3C	R25	B- 3B	R199	A- 5B	R306	A- 3A	R398	B- 2B	R603	B- 1B	C7	B- 5C	C100	B- 3B	C183	A- 4B	C286	A- 4B	C360	A- 2B	C482	B- 2B	C579	A- 2B	C652	B- 1B	L32	B- 4C	L369	B- 2B		
Q174	A- 5C	D34	B- 3C	R26	B- 3C	R200	A- 5B	R307	A- 3A	R399	A- 2B	R604	B- 1B	C8	B- 5B	C101	B- 4C	C184	A- 5B	C287	A- 4B	C361	A- 2B	C483	B- 3A	C580	A- 2B	C653	B- 1A	L33	B- 3B	L380	A- 2B		
Q175	A- 4C	D35	B- 2C	R28	B- 3B	R201	A- 5B	R308	A- 3A	R401	B- 3A	R606	A- 1B	C9	B- 5B	C102	B- 3C	C185	A- 4B	C288	A- 4B	C362	A- 2B	C484	B- 3A	C581	A- 2B	C654	A- 3B	L34	B- 3C	L381	B- 2B		
Q176	A- 5A	D36	B- 3C	R29	B- 3C	R202	A- 5B	R310	A- 3A	R403	A- 2B	R607	A- 3B	C11	B- 5B	C103	B- 3C	C186	A- 5C	C290	A- 4B	C363	A- 2B	C485	B- 3A	C582	A- 2C	C655	B- 1B	L35	B- 3B	L382	B- 2B		
Q177	A- 5B	D37	B- 2C	R30	B- 3C	R203	A- 5B	R311	A- 3A	R405	A- 2B	R608	B- 1B	C13	B- 5B	C104	B- 3B	C187	A- 5C	C291	A- 4B	C364	A- 2B	C486	B- 3A	C583	A- 2C	C656	A- 3B	L36	B- 3C	L391	B- 3A		
Q178	A- 5B	D38	B- 3A	R31	B- 4A	R204	A- 4C	R312	A- 3A	R406	B- 2B	R609	A- 1C	C14	B- 5B	C105	B- 3B	C188	A- 5C	C292	A- 4B	C367	A- 1B	C487	B- 3A	C584	A- 2C	C657	A- 3B	L37	B- 3B	L392	B- 3A		
Q179	A- 5B	D39	B- 4C	R33	B- 3C	R205	A- 5B	R313	A- 3A	R407	A- 2A	R610	A- 1C	C15	B- 5C	C106	B- 3C	C189	A- 5C	C293	A- 3A	C368	A- 1B	C488	B- 3A	C585	B- 4B	C658	B- 1C	L40	B- 3C	L393	B- 3A		
Q180	A- 5B	D40	A- 3C	R34	B- 4C	R207	A- 5B	R314	A- 3A	R408	A- 2A	R611	B- 1B	C16	B- 3C	C107	B- 3B	C190	A- 5C	C294	A- 3A	C369	A- 1B	C491	B- 3A	C586	B- 4B	C659	B- 1C	L41	B- 3B	L394	B- 2B		
Q181	A- 5B	D41	A- 3C	R35	B- 4C	R208	A- 5B	R315	A- 3A	R426	B- 3C	R612	B- 1B	C18	B- 5C	C110	B- 3C	C191	A- 5C	C295	A- 4A	C371	A- 2B	C492	A- 2B	C587	B- 4A	C660	A- 1C	L42	B- 3B	L395	B- 3A		
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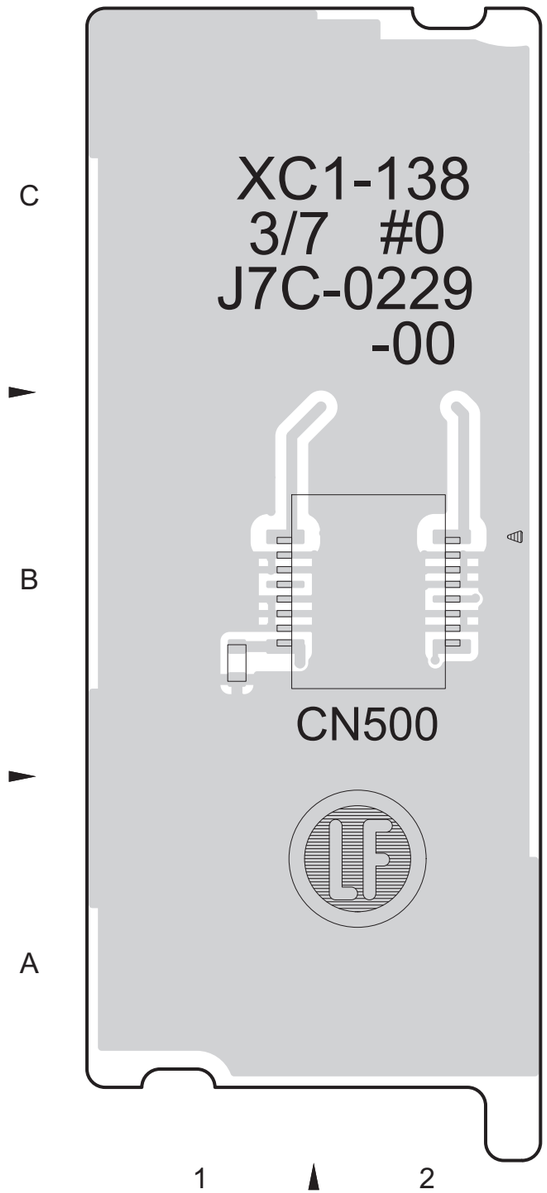
Q192	A- 4C	D43	B- 5C	R37	B- 4B	R210	A- 5B	R320	A- 3C	R428	A- 2C	R614	B- 1B	C20	B- 5A	C113	B- 3C	C193	A- 5B	C297	A- 3A	C373	A- 2B	C494	B- 3A	C589	A- 4B	C662	A- 1B	L44	B- 3C	L397	B- 3A		
Q193	A- 5B	D44	B- 5C	R39	B- 4C	R211	A- 4C	R321	A- 2C	R435	B- 2B	R615	B- 1B	C22	B- 5B	C114	B- 3C	C194	A- 4C	C298	A- 3A	C374	A- 2B	C495	B- 3A	C590	A- 1B	C663	A- 1A	L45	B- 3C	L398	B- 3A		
Q194	A- 5C	D45	B- 5B	R41	B- 3C	R212	A- 5B	R322	A- 1C	R437	B- 2B	R616	A- 3B	C23	B- 5C	C115	B- 3B	C196	A- 5A	C299	A- 3A	C375	A- 2B	C496	B- 3A	C591	A- 1B	C664	A- 1B	L46	B- 3C	L399	A- 2A		
Q281	A- 4B	D171	A- 4B	R42	B- 3C	R213	A- 4B	R325	A- 2C	R438	B- 3A	R617	B- 1A	C24	B- 5B	C116	B- 4B	C197	A- 4C	C301	A- 3A	C380	A- 4B	C497	A- 2A	C592	A- 1B	C665	A- 1A	L47	B- 3C	L400	B- 3A		
Q282	A- 3A	D172	A- 4B	R44	B- 3C	R214	A- 5B	R327	A- 1C	R439	B- 3A	R618	A- 3B	C25	B- 5C	C117	B- 3C	C198	A- 4C	C302	A- 3A	C381	A- 1C	C498	A- 2A	C593	A- 3C	C667	A- 1C	L48	B- 3C	L402	A- 2A		
Q361	A- 2C	D173	A- 4B	R45	B- 3A	R216	A- 5B	R328	A- 2C	R441	B- 3A	R619	B- 1C	C26	B- 5B	C118	B- 3C	C199	A- 4B	C303	A- 3A	C382	B- 2B	C499	B- 3A	C594	A- 3C	C668	A- 1B	L49	B- 3C	L405	A- 1A		
Q362	B- 2C	D175	A- 5A	R46	B- 4C	R217	A- 5B	R329	A- 2C	R443	B- 3A	R620	B- 1C	C27	B- 5C	C119	B- 4C	C201	A- 4B	C304	A- 3A	C383	A- 4B	C500	B- 3A	C595	A- 3A	C669	A- 1B	L50	B- 3C	L414	A- 3A		

■ TX-RX UNIT (XC1-138E-01) 3/7: VCO-A

--- Component side view (J7C-0229-00) ---



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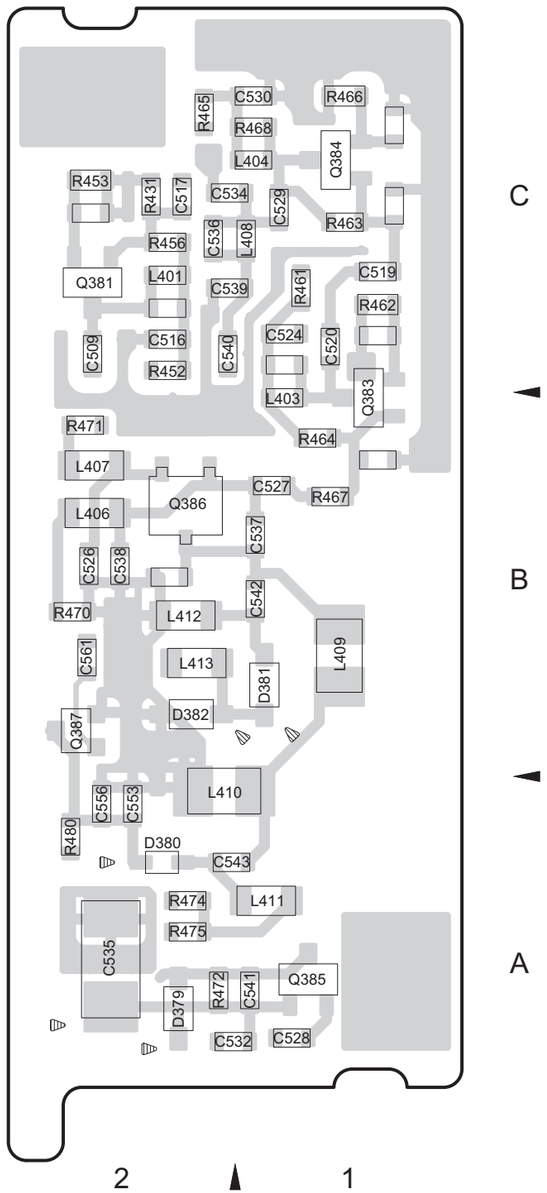


● **ADDRESS TABLE OF BOARD PARTS**

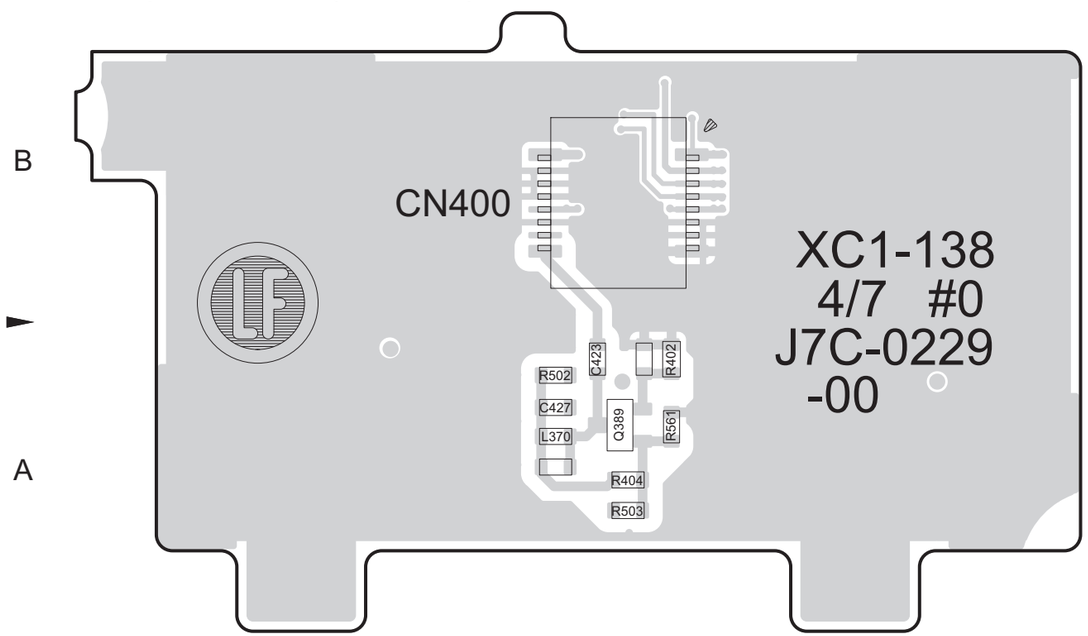
Each address may have an address error by one interval.

Side — A-1C — Y axis / X axis

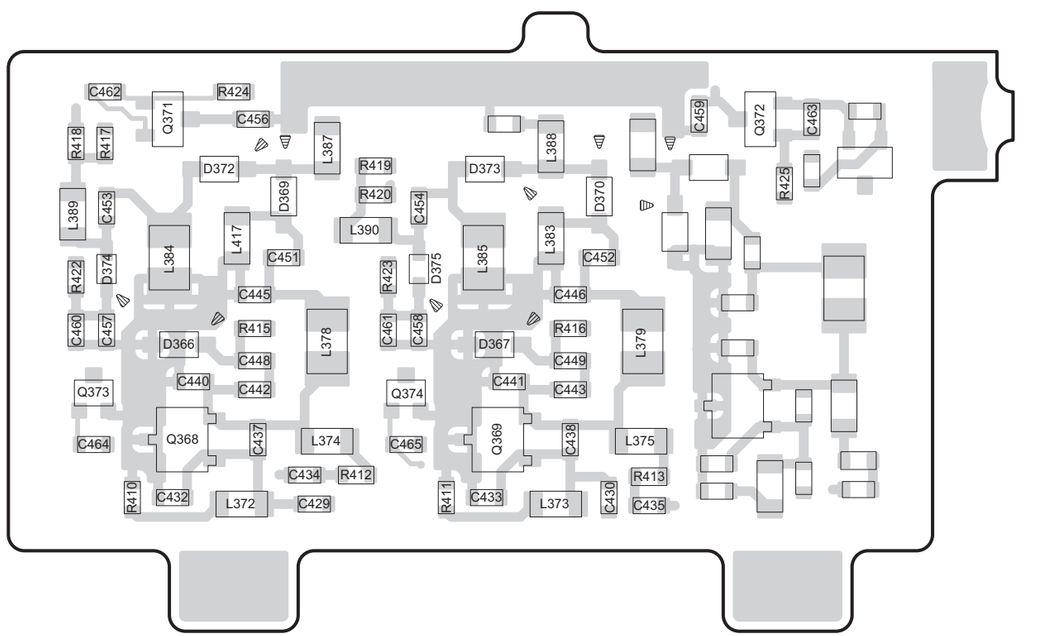
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
TRANSISTOR		R464	B- 1B	C529	B- 1C	L404	B- 1C
Q381	B- 2C	R465	B- 2C	C530	B- 1C	L406	B- 2B
Q383	B- 1B	R466	B- 1C	C532	B- 2A	L407	B- 2B
Q384	B- 1C	R467	B- 1B	C534	B- 2C	L408	B- 1C
Q385	B- 1A	R468	B- 1C	C535	B- 2A	L409	B- 1B
Q386	B- 2B	R470	B- 2B	C536	B- 2C	L410	B- 2A
Q387	B- 2B	R471	B- 2B	C537	B- 1B	L411	B- 1A
		R472	B- 2A	C538	B- 2B	L412	B- 2B
DIODE		R474	B- 2A	C539	B- 2C	L413	B- 2B
D379	B- 2A	R475	B- 2A	C540	B- 2C		
D380	B- 2A	R480	B- 2A	C541	B- 1A		
D381	B- 1B			C542	B- 1B		
D382	B- 2B	**CAPACITOR**		C543	B- 2A		
		C509	B- 2C	C553	B- 2A		
RESISTOR		C516	B- 2C	C556	B- 2A		
R431	B- 2C	C517	B- 2C	C561	B- 2B		
R452	B- 2C	C519	B- 1C				
R453	B- 2C	C520	B- 1C	**OTHER**			
R456	B- 2C	C524	B- 1C	CN500	A- 2B		
R461	B- 1C	C526	B- 2B				
R462	B- 1C	C527	B- 1B	L401	B- 2C		
R463	B- 1C	C528	B- 1A	L403	B- 1B		

■ TX-RX UNIT (XC1-138E-01) 4/7: VCO-B

--- Component side view (J7C-0229-00) ---



--- Foil side view (J7C-0229-00) ---



● ADDRESS TABLE OF BOARD PARTS

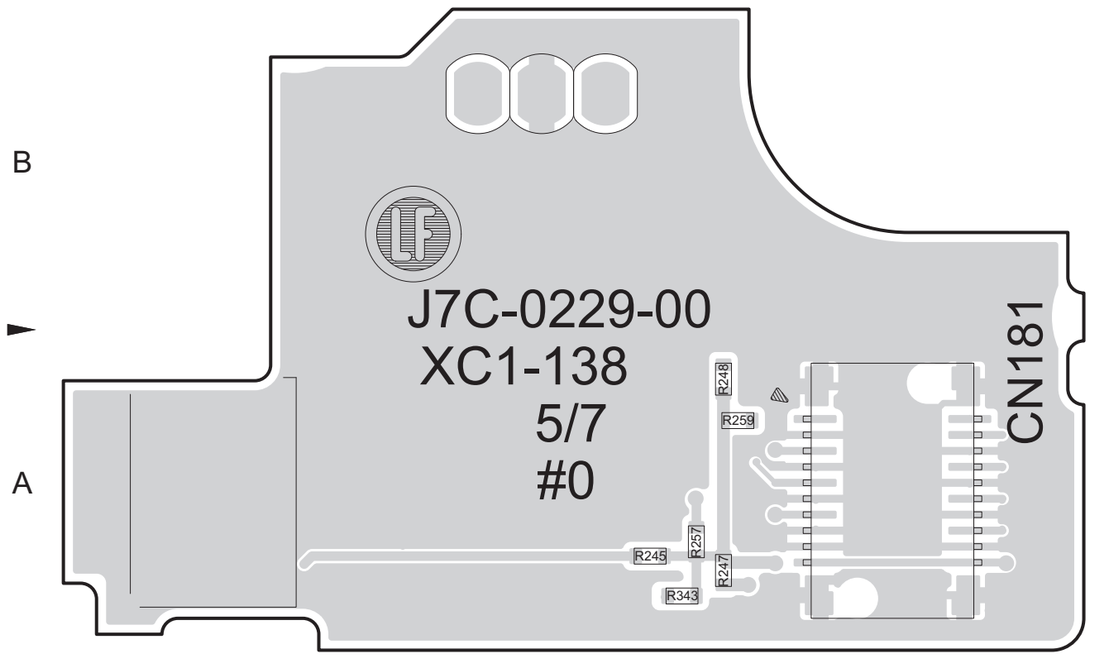
Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

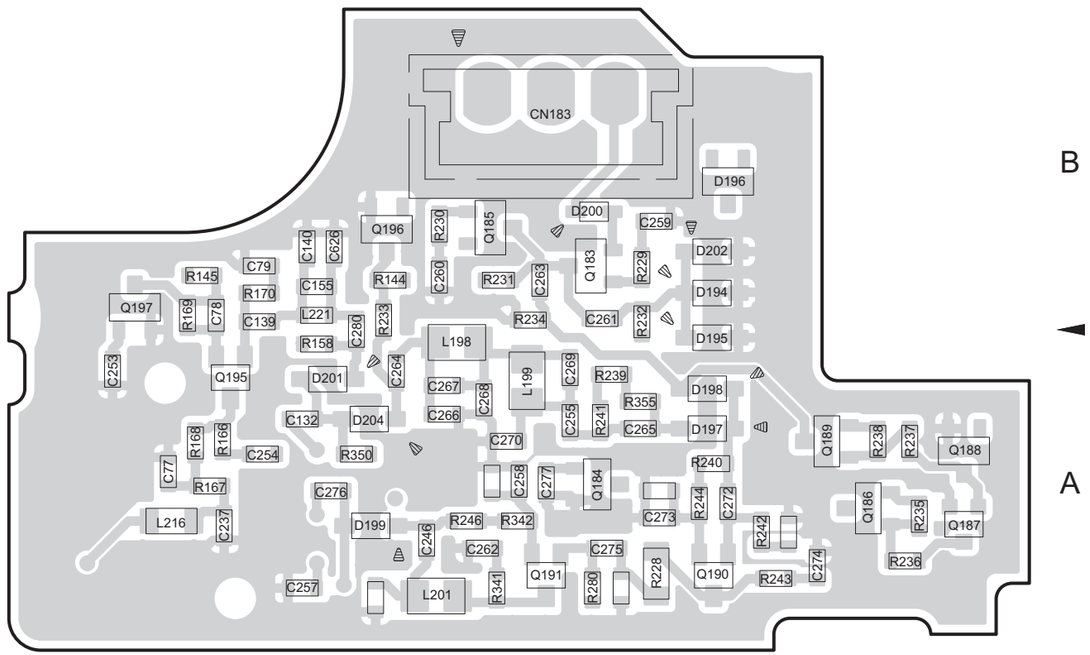
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
TRANSISTOR		R412	B- 2A	C435	B- 2A	C465	B- 2A
Q368	B- 3A	R413	B- 2A	C437	B- 3A		
Q369	B- 2A	R415	B- 3A	C438	B- 2A	**OTHER**	
Q371	B- 3B	R416	B- 2A	C440	B- 3A	CN400	A- 2B
Q372	B- 1B	R417	B- 3B	C441	B- 2A		
Q373	B- 3A	R418	B- 3B	C442	B- 3A	L370	A- 2A
Q374	B- 2A	R419	B- 2B	C443	B- 2A	L372	B- 3A
Q389	A- 2A	R420	B- 2B	C445	B- 3B	L373	B- 2A
		R422	B- 3B	C446	B- 2B	L374	B- 3A
DIODE		R423	B- 2B	C448	B- 3A	L375	B- 2A
D366	B- 3A	R424	B- 3B	C449	B- 2A	L378	B- 3A
D367	B- 2A	R425	B- 1B	C451	B- 3B	L379	B- 2A
D369	B- 3B	R502	A- 2A	C452	B- 2B	L383	B- 2B
D370	B- 2B	R503	A- 2A	C453	B- 3B	L384	B- 3B
D372	B- 3B	R561	A- 2A	C454	B- 2B	L385	B- 2B
D373	B- 2B			C456	B- 3B	L387	B- 3B
D374	B- 3B	**CAPACITOR**		C457	B- 3A	L388	B- 2B
D375	B- 2B	C423	A- 2A	C458	B- 2A	L389	B- 3B
		C427	A- 2A	C459	B- 1B	L390	B- 2B
RESISTOR		C429	B- 3A	C460	B- 3A	L417	B- 3B
R402	A- 2A	C430	B- 2A	C461	B- 2A		
R404	A- 2A	C432	B- 3A	C462	B- 3B		
R410	B- 3A	C433	B- 2A	C463	B- 1B		
R411	B- 2A	C434	B- 3A	C464	B- 3A		

■ TX-RX UNIT (XC1-138E-01) 5/7: MW/SW

--- Component side view (J7C-0229-00) ---



--- Foil side view (J7C-0229-00) ---



1 2 3 3 2 1

● ADDRESS TABLE OF BOARD PARTS

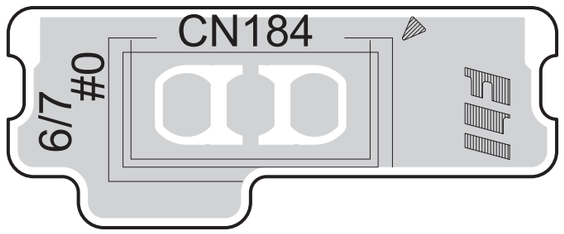
Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

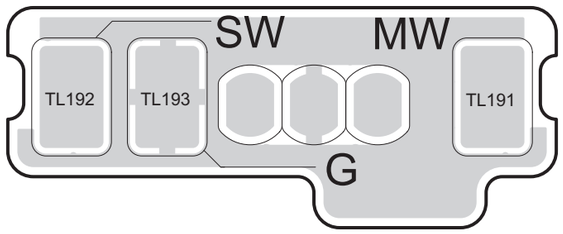
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
TRANSISTOR		D198	B- 1A	R231	B- 2B	R259	A- 2A	C254	B- 3A	C275	B- 2A
Q183	B- 2B	D199	B- 2A	R232	B- 2B	R280	B- 2A	C255	B- 2A	C276	B- 3A
Q184	B- 2A	D200	B- 2B	R233	B- 2B	R341	B- 2A	C257	B- 3A	C277	B- 2A
Q185	B- 2B	D201	B- 3A	R234	B- 2B	R342	B- 2A	C258	B- 2A	C280	B- 2A
Q186	B- 1A	D202	B- 1B	R235	B- 1A	R343	A- 2A	C259	B- 2B	C626	B- 3B
Q187	B- 1A	D204	B- 2A	R236	B- 1A	R350	B- 2A	C260	B- 2B		
Q188	B- 1A			R237	B- 1A	R355	B- 2A	C261	B- 2B	**OTHER**	
Q189	B- 1A	**RESISTOR**		R238	B- 1A			C262	B- 2A	CN181	A- 3A
Q190	B- 1A	R144	B- 2B	R239	B- 2A	**CAPACITOR**		C263	B- 2B	CN183	B- 2B
Q191	B- 2A	R145	B- 3B	R240	B- 1A	C77	B- 3A	C264	B- 2A		
Q195	B- 3A	R158	B- 3A	R241	B- 2A	C78	B- 3B	C265	B- 2A	L198	B- 2A
Q196	B- 2B	R166	B- 3A	R242	B- 1A	C79	B- 3B	C266	B- 2A	L199	B- 2A
Q197	B- 3B	R167	B- 3A	R243	B- 1A	C132	B- 3A	C267	B- 2A	L201	B- 2A
		R168	B- 3A	R244	B- 1A	C139	B- 3B	C268	B- 2A	L216	B- 3A
DIODE		R169	B- 3B	R245	A- 2A	C140	B- 3B	C269	B- 2A	L221	B- 3B
D194	B- 1B	R170	B- 3B	R246	B- 2A	C155	B- 3B	C270	B- 2A		
D195	B- 1A	R228	B- 2A	R247	A- 2A	C237	B- 3A	C272	B- 1A		
D196	B- 1B	R229	B- 2B	R248	A- 2A	C246	B- 2A	C273	B- 2A		
D197	B- 1A	R230	B- 2B	R257	A- 2A	C253	B- 3A	C274	B- 1A		

■ TX-RX UNIT (XC1-138E-01) 6/7: BARANT

--- Component side view (J7C-0229-00) ---

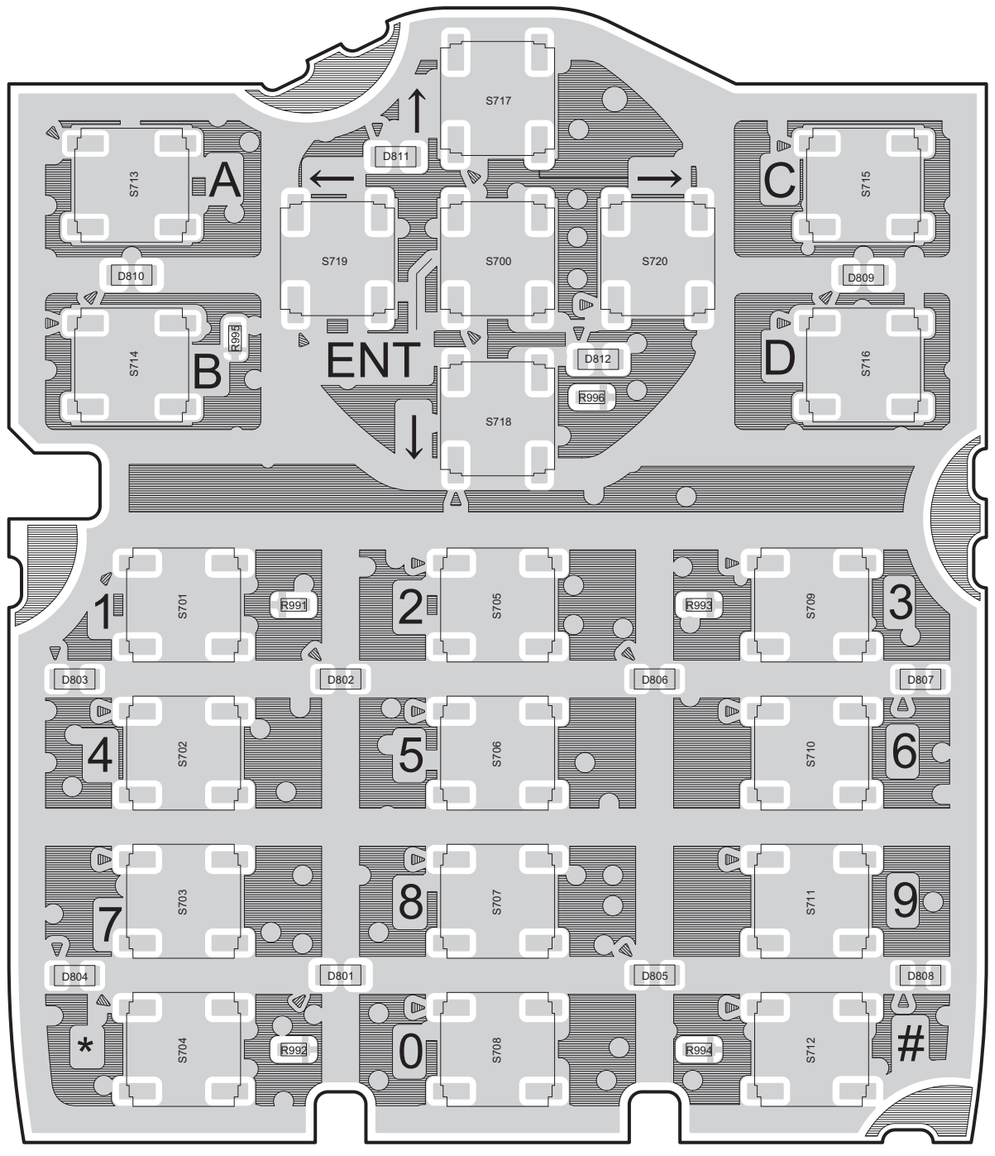


--- Foil side view (J7C-0229-00) ---

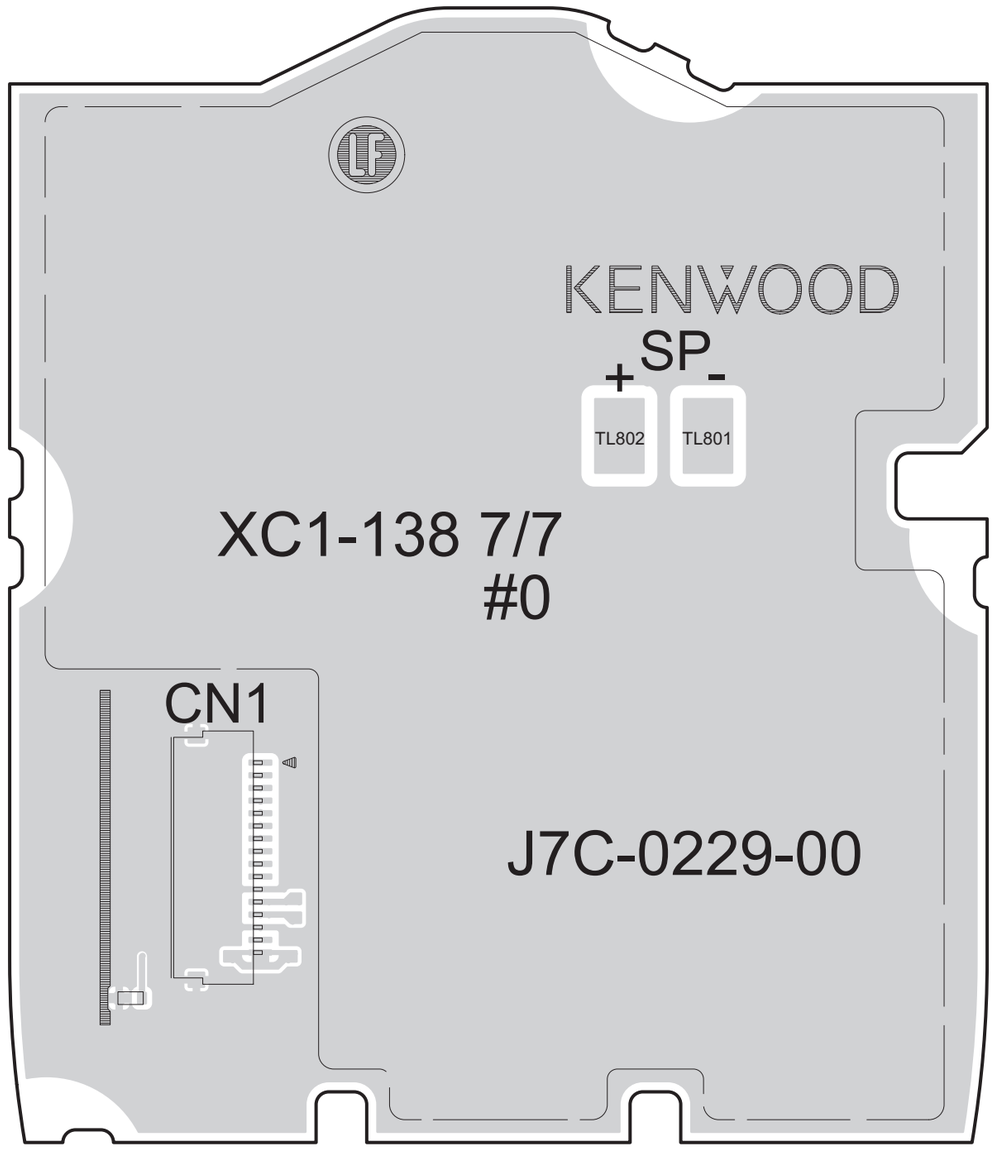


■ TX-RX UNIT (XC1-138E-01) 7/7: KEY

--- Component side view (J7C-0229-00) ---



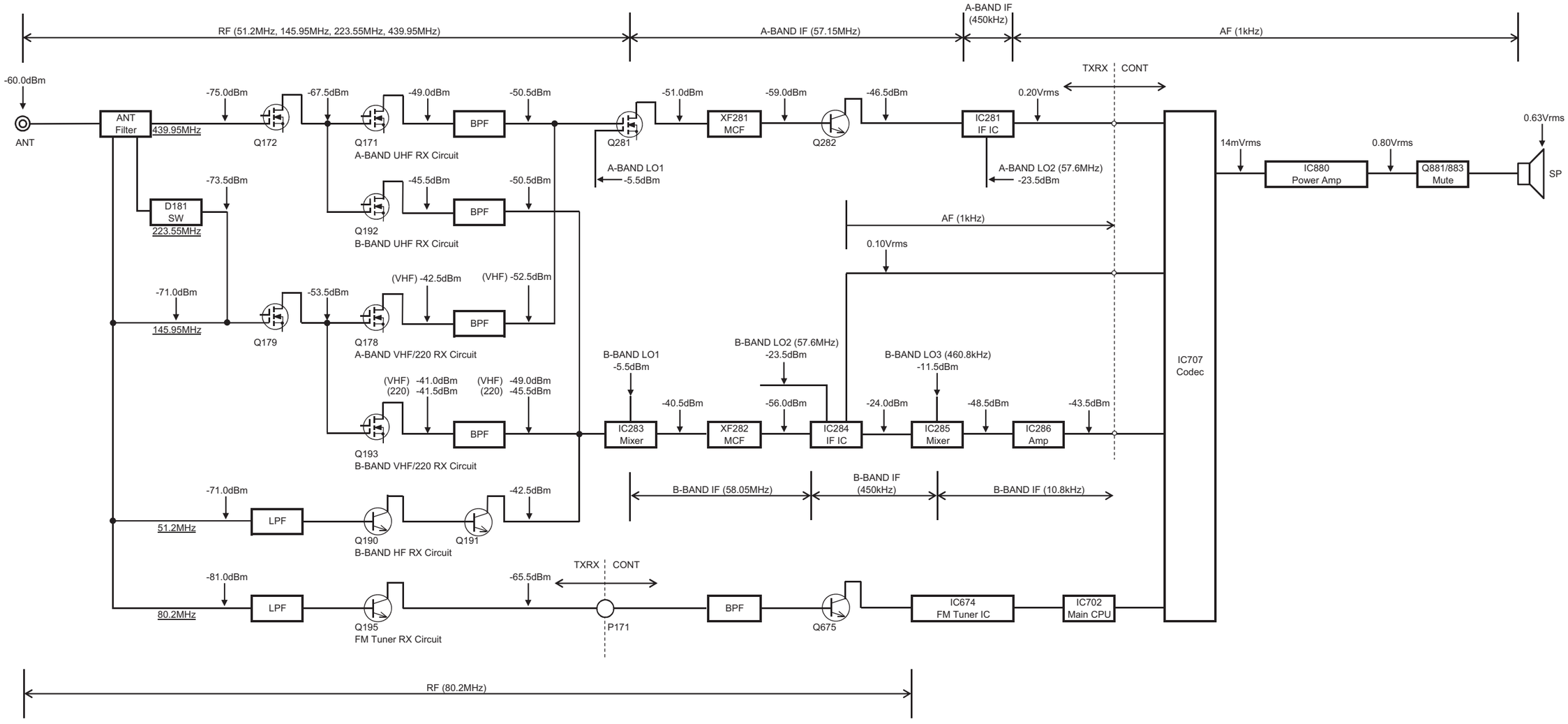
--- Foil side view (J7C-0229-00) ---



A | B | C | D | E | F | G

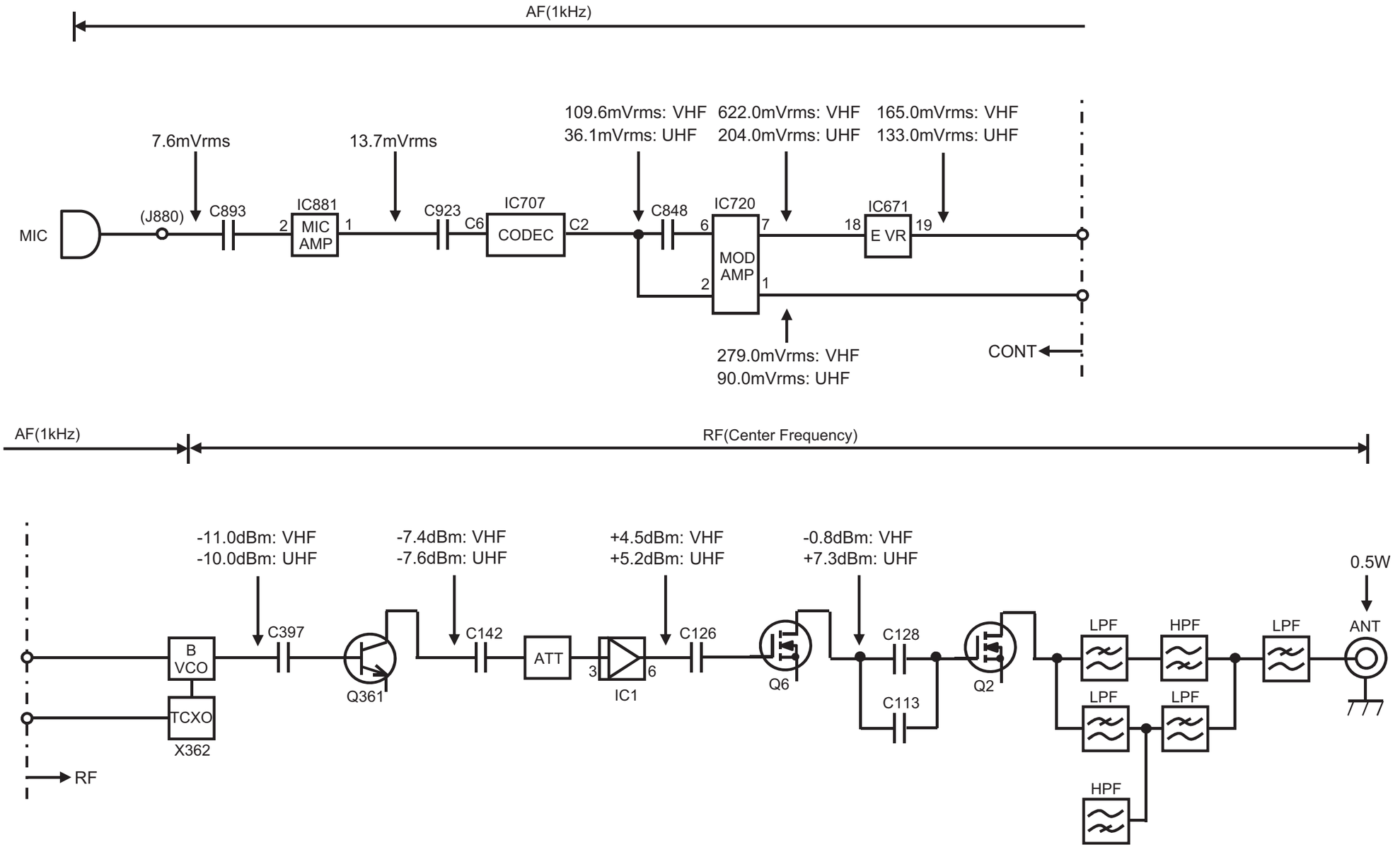
LEVEL DIAGRAM

■ Receiver Section



Note1: The RF levels at each point, were measured with a spectrum analyzer through a 0.1uF capacitor. When the -60dBm standard signal generator by a no modulation from ANT connecter.
Note2: The IF level were measured with 145.95 MHz of RX frequency.
Note3: The AF levels were measured with an oscilloscope when 145.95MHz of RX frequency, -60dBm standard signal generator signal modulated by a 1kHz modulation frequency and a 3kHz deviation was input and the AF output was adjusted to 0.63V/8 0hm by the AF VR.

■ Transmitter Section



Note1: This is the value measured while removed from the chassis. Use a short transmission burst. In the worst case scenario, some parts will be damaged. During this test, some parts will reach high temperature.
Note2: For the 1kHz MOD to become 8mVrms, set the MIC input terminal to AG.
Note3: Set the transmission output to Low.
Note4: Connect a 50Ohm terminal load or power meter to the ANT terminal.
Note5: RF levels for each point, other than for the ANT terminal, are measured at 1000pF with a spectrum analyzer through a capacitor.
Note6: Measure the AF level and Data level values with an oscilloscope.

MEMO

PARTS LIST

[TH-D74E]

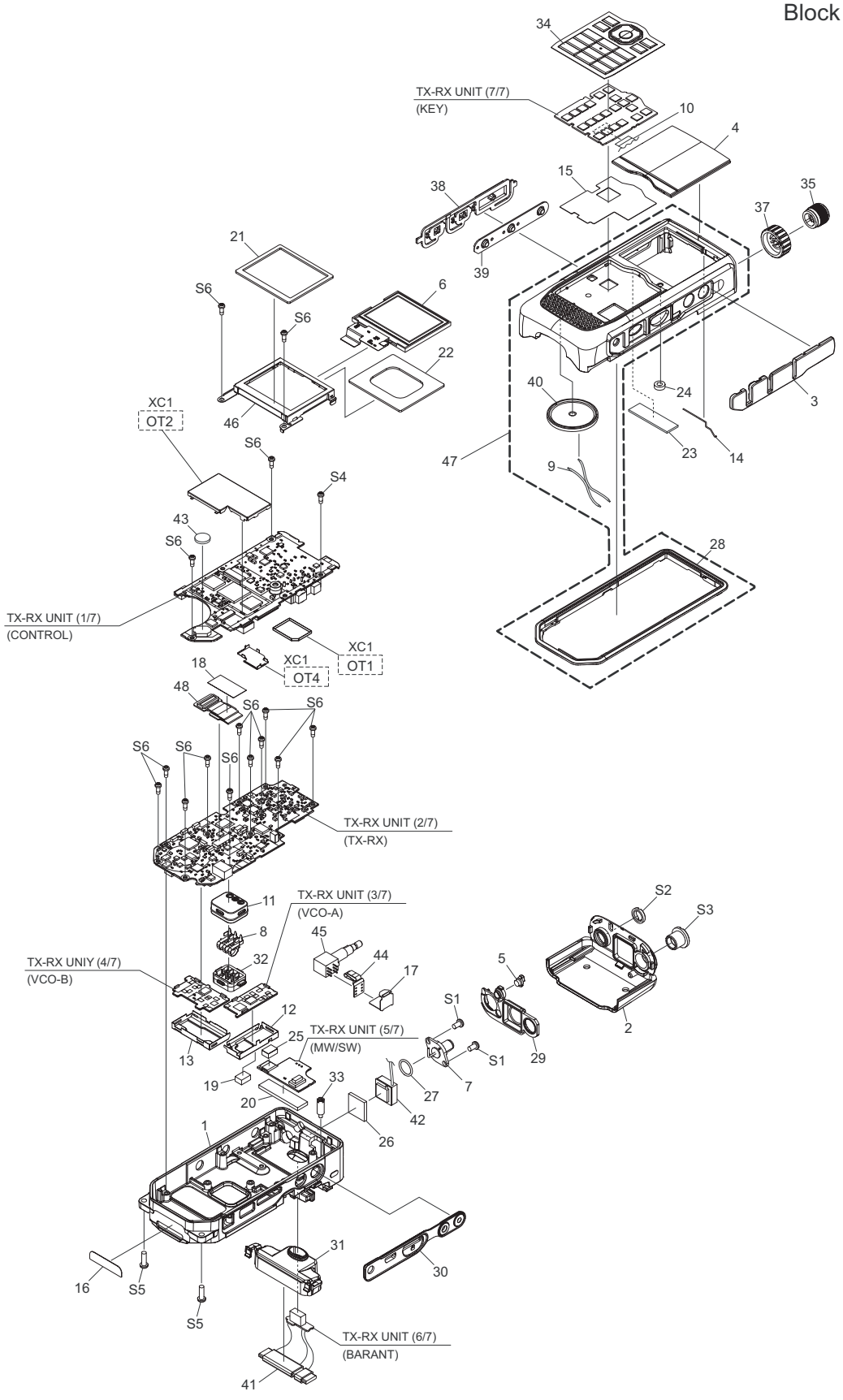
* SAFETY PRECAUTION
  Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.
* BEWARE OF BOGUS PARTS
  Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine parts be used.
* (x_) in a description column shows the number of the used part.

- Contents -

Exploded view of general assembly and parts list ---------- 3-2
Electrical parts list ---------- 3-4
Packing materials and accessories parts list ---------- 3-18

Exploded view of general assembly and parts list

Block No.M1MM



General assembly

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

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	A1A-0077-10	CHASSIS		
2	A6C-0042-00	PANEL		
3	B0K-0035-00	CAP	SP/MIC	
4	B1A-0052-00	FRONT GLASS		
5	B1B-0067-00	ILL.GUIDE	TX/BUSY	
6	B38-0960-05	LCD ASSY		
7	E0E-0027-00	C.RECEPTACLE-SM		
8	E2K-0031-00	TERMINAL	BATTERY(x3)	
9	E3D-0013-00	P.LEAD WIRE	KEY-PCB -> SP	
10	E3F-0139-20	FLAT CABLE	KEY-PCB -> CONT	
11	E7C-0011-00	TERMINAL BLOCK	BATTERY	
12	F1B-0052-00	SHIELDING COVER	VCO-A	
13	F1B-0053-00	SHIELDING COVER	VCO-B	
14	G0K-0011-00	BAR SPRING	BT-ANT	
15	G1B-0148-00	SHEET	KEY PCB	
16	G1B-0172-00	SHEET	CHASSIS BOTTOM	
17	G1B-0179-00	SHEET	VOL/ENC	
18	G1B-0217-00	SHEET	50PIN_FFC	
19	G1D-0112-00	CONDUCT CUSHION	VCO_A	
20	G1D-0132-00	CUSHION	B1F_PCB REAR	
21	G1D-0133-00	CUSHION	LCD FRONT	
22	G1D-0134-00	CUSHION	LCD REAR	
23	G1D-0135-00	CUSHION	LCD FPC_CHIP	
24	G1D-0144-00	CUSHION	MIC	
25	G1D-0145-00	CUSHION	B1F_PCB FRONT	
26	G1D-0167-00	CUSHION	GPS-ANT	
27	G53-1603-04	PACKING	RECEPTACLE O-RING	
28	G5D-0072-00	PACKING	AROUND	
29	G5D-0073-00	PACKING	TOP	
30	G5D-0074-00	PACKING	SP/MIC/USB	
31	G5D-0075-00	PACKING	BAR ANTENNA	
32	G5D-0076-00	PACKING	TERMINAL BLOCK	
33	J3C-0042-00	CYLINDRIC BOSS	NEAR VOL/ENC	
34	K2K-0186-00	KEY TOP	SHEET KEY	
35	K2K-0194-00	KNOB	ENC/INNER	
37	K2K-0195-00	KNOB	VOL/OUTER	
38	K2K-0196-00	KNOB	PTT	
39	K2K-0197-00	BUTTON KNOB	PTT RUBBER	
40	T07-0266-35	SPEAKER	FOSTER 28mm	
41	T9A-0035-00	BAR ANTENNA	AM BAR ANT	
42	T9A-0037-00	ANTENNA ELEMENT	GPS-ANT WITH CABLE	
43	W09-0971-05	LITHIUM CELL		
44	J82-0114-25	FPC	VOL/ENC	
45	R3K-0001-00	V RESISTOR ETC	VOL/ENC	
46	J2B-0201-00	MOUNTING	LCD	
47	XC2-030J-00	PANEL ASSY(SERVICE)		
48	X42-3510-10	CORD ASSY	50PIN	
S 1	N09-6554-05	PAN HEAD SCREW	RECEPTACLE(x2)	
S 2	N14-0573-14	CIRCULAR NUT	RECEPTACLE	
S 3	N1X-0017-00	CIRCULAR NUT	VOL/ENC	
S 4	N35-2004-43	BI.HEAD M.SCREW	PCB BOSS SCREW	
S 5	N80-2608-43	P.HEAD T.SCREW	F-CASE(x2)	
S 6	N83-2005-48	P.HEAD T.SCREW	PCB(x15)	
-	XC1-138E-01	TX-RX UNIT		

Electrical parts list

TX-RX UNIT

XC1-138E-01

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

Block No. [0][1]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC1	AG303-63G	IC		
IC3	LMC7101BIM5XN	IC		
IC281	AK2365A	IC		
IC283	UPC2757TB-A	IC		
IC284	AK2400	IC		
IC285	TC7S66FUF	IC		
IC286	BU7295HFV	IC		
IC287	BU7242FVM	IC		
IC288	BU7242FVM	IC		
IC361	MC12093MNR4G	IC		
IC363	XC6201P532D-G	IC		
IC364	AK1541	IC		
IC365	XC9801B503KR	IC		
IC576	BU33TD2WNVX	IC		
IC577	BU33TD2WNVX	IC		
IC578	BU33TD2WNVX	IC		
IC579	BU33TD2WNVX	IC		
IC580	BU33TD2WNVX	IC		
IC581	BU33TD2WNVX	IC		
IC582	BU33TD2WNVX	IC		
IC583	BU33TD2WNVX	IC		
IC584	----------	IC	*Note	
IC585	NCP1871	IC		
IC586	XC6701B312E-G	IC		
IC587	TC7WH08FKJC	IC		
IC588	TC74VHC123AFK	IC		
IC589	BD00GA5WEFJ	IC		
IC590	BU33TD2WNVX	IC		
IC591	BU7295HFV	IC		
IC592	TC74VHC32FK	IC		
IC593	BU33TD2WNVX	IC		
IC661	----------	IC	BGA *Note	
IC662	TC7WH08FKJC	IC		
IC663	TC7WH08FKJC	IC		
IC671	R2A20178NP	IC		
IC672	TC7WU04FKFT	IC		
IC673	TC7WH08FKJC	IC		
IC674	SI4704-D60-GM	IC		
IC675	TC7SET125FUJC	IC		
IC676	TC7SET125FUJC	IC		
IC677	TC7SET125FUJC	IC		
IC700	BU33UA3WNVX	IC		
IC701	----------	IC	BGA *Note	
IC702	----------	IC	BGA *Note	
IC703	S-80135ANPF-G	IC		
IC704	XC61CC5002N-G	IC		
IC705	----------	IC	BGA *Note	
IC707	----------	IC	BGA *Note	
IC708	BU18TD2WNVX	IC		
IC709	BD1754HFN	IC		
IC710	TC7SZ08FE	IC		
IC711	TC7WU04FKFT	IC		
IC712	XC6223D331G-G	IC		
IC713	BU30TD2WNVX	IC		
IC714	BU33TD2WNVX	IC		
IC715	74AVC1T45GW	IC		
IC717	XC6701B312E-G	IC		
IC718	LXDC2HN18F163	IC		
IC719	TC7SZ08FE	IC		
IC720	NJM2904CRB1	IC		
IC721	BU7242FVM	IC		
IC722	----------	IC	*Note	
IC723	XC6215B122N-G	IC		
IC724	XC8102AA07-G	IC		
IC725	ADS7961SRHB	IC		
IC726	TC7MBL3125CFT	IC		
IC728	TC7SZ08FE	IC		
IC730	----------	IC	BGA *Note	
IC731	BD00GA5WEFJ	IC		
IC732	TC7S66FUF	IC		
IC733	XC8102AA07-G	IC		
IC880	TA7368FG	IC		
IC881	NJM2904CRB1	IC		
IC882	BD00GA5WEFJ	IC		
IC930	74AVC4TD245GU	IC		
IC931	BU18TD2WNVX	IC		
IC932	BU33TD2WNVX	IC		
IC933	BU30TD2WNVX	IC		
IC935	----------	IC	BGA *Note	
IC936	74AVC4TD245GU	IC		
IC937	74AVC4TD245GU	IC		
Q2	2SK3476-F	FET		
Q4	SSM3K15AMFV	FET		
Q5	DMA56100	DIGI TR ARRAY		
Q6	RD01MUS1-T113	FET		
Q7	2SC4617/R/	TRANSISTOR		
Q8	LTC043ZEBFS8	DIGI TRANSISTOR		
Q9	RE1C002ZP	FET		
Q10	SSM3K15AMFV	FET		
Q11	SSM3K15AMFV	FET		
Q12	2SC4617/R/	TRANSISTOR		
Q13	SSM3K15AMFV	FET		
Q14	EMD3	DIGI TR ARRAY		
Q171	BB506CFS-H	FET		
Q172	BB506CFS-H	FET		
Q173	LTC043ZEBFS8	DIGI TRANSISTOR		
Q174	LTC043ZEBFS8	DIGI TRANSISTOR		
Q175	LTC043ZEBFS8	DIGI TRANSISTOR		
Q176	LTC043ZEBFS8	DIGI TRANSISTOR		
Q177	LTC043ZEBFS8	DIGI TRANSISTOR		
Q178	BB506CFS-H	FET		
Q179	BB506CFS-H	FET		
Q180	LTC043ZEBFS8	DIGI TRANSISTOR		
Q181	LTC043ZEBFS8	DIGI TRANSISTOR		
Q182	LTC043ZEBFS8	DIGI TRANSISTOR		
Q183	RE1C001UN	FET		
Q184	LTC043ZEBFS8	DIGI TRANSISTOR		
Q185	RE1C001UN	FET		
Q186	LSAR523EBFS8	TRANSISTOR		
Q187	SSM3K15AMFV	FET		
Q188	LTC043ZEBFS8	DIGI TRANSISTOR		
Q189	LSAR523EBFS8	TRANSISTOR		
Q190	2SC5661/P/	TRANSISTOR		
Q191	2SC5661/P/	TRANSISTOR		
Q192	BB506CFS-H	FET		
Q193	BB506CFS-H	FET		
Q194	LTC043ZEBFS8	DIGI TRANSISTOR		
Q195	2SC5661/P/	TRANSISTOR		
Q196	LTC043ZEBFS8	DIGI TRANSISTOR		
Q197	LTC043ZEBFS8	DIGI TRANSISTOR		
Q281	BB506CFS-H	FET		
Q282	2SC5108FT/Y/	TRANSISTOR		
Q361	2SC5108FT/Y/	TRANSISTOR		
Q362	RE1C001ZP	FET		
Q363	2SC5108FT/Y/	TRANSISTOR		
Q364	2SC5108FT/Y/	TRANSISTOR		
Q365	2SC5108FT/Y/	TRANSISTOR		
Q368	MCH3914-H/8/	FET		
Q369	MCH3914-H/8/	FET		
Q371	RE1C001ZP	FET		
Q372	RE1C001ZP	FET		
Q373	SSM3K15AMFV	FET		
Q374	SSM3K15AMFV	FET		
Q375	DSC9A01/T/	TRANSISTOR		
Q376	2SC4726(P,Q)	TRANSISTOR		
Q377	RE1C001ZP	FET		
Q378	2SC4915-F	TRANSISTOR		
Q379	RE1C001ZP	FET		
Q380	2SC4726(P,Q)	TRANSISTOR		
Q381	2SC4726(P,Q)	TRANSISTOR		

⚠ Symbol No.	Part No.	Part Name	Description	Local
Q382	2SC4915-F	TRANSISTOR		
Q383	2SC4726(P,Q)	TRANSISTOR		
Q384	2SC4726(P,Q)	TRANSISTOR		
Q385	DSC9A01/T/	TRANSISTOR		
Q386	MCH3914-H/8/	FET		
Q387	SSM3K15AMFV	FET		
Q388	EM6M2	FET		
Q389	2SC5108FT/Y/	TRANSISTOR		
Q390	LTC043ZEBFS8	DIGI TRANSISTOR		
Q391	2SC4617/R/	TRANSISTOR		
Q576	EM6M2	FET		
Q577	2SA1774/R/	TRANSISTOR		
Q579	UT6K3	FET		
Q580	HS8K1	FET		
Q581	UT6K3	FET		
Q582	EM6M2	FET		
Q584	LTC043ZEBFS8	DIGI TRANSISTOR		
Q585	LTC043ZEBFS8	DIGI TRANSISTOR		
Q661	LTC043ZEBFS8	DIGI TRANSISTOR		
Q675	2SC5661/P/	TRANSISTOR		
Q700	LTC043ZEBFS8	DIGI TRANSISTOR		
Q701	EM6K34	FET		
Q702	LTC043ZEBFS8	DIGI TRANSISTOR		
Q703	SSM3K15AMFV	FET		
Q704	EM6M2	FET		
Q706	EM6M2	FET		
Q707	LTC043ZEBFS8	DIGI TRANSISTOR		
Q711	EM6K34	FET		
Q712	EMD12	TRANSISTOR		
Q881	SSM3K324RF	FET		
Q883	SSM3K324RF	FET		
Q884	EM6M2	FET		
Q885	LTC043ZEBFS8	DIGI TRANSISTOR		
Q886	EM6M2	FET		
Q930	EM6M2	FET		
D2	RN142SM	DIODE		
D3	RN142SM	DIODE		
D4	RN142SM	DIODE		
D5	RN142SM	DIODE		
D8	1SS400SM	DIODE		
D9	RN142SM	DIODE		
D10	EDZV18B	ZENER DIODE		
D11	1SS400SM	DIODE		
D12	RN142SM	DIODE		
D13	RN142SM	DIODE		
D14	RN142SM	DIODE		
D17	EDZV18B	ZENER DIODE		
D18	RN142SM	DIODE		
D19	RN142SM	DIODE		
D20	1SS400SM	DIODE		
D22	RN142SM	DIODE		
D26	RN142SM	DIODE		
D27	1SS400CM	DIODE		
D28	1SS400CM	DIODE		
D29	RB531SM-30	DIODE		
D30	RB531SM-30	DIODE		
D31	RN142SM	DIODE		
D32	1SS390	DIODE		
D33	1SS390	DIODE		
D35	1SS390	DIODE		
D36	1SS390	DIODE		
D38	1SS390	DIODE		
D39	RN262CS	DIODE		
D40	1SS400CM	DIODE		
D41	1SS400CM	DIODE		
D42	RN142SM	DIODE		
D43	RN142SM	DIODE		
D44	F0K-0175-00	SURGE ABSORBER		
D45	RN142SM	DIODE		
D171	BBY65-02V	VARI CAP DIODE		
D172	BBY65-02V	VARI CAP DIODE		
D173	RN262CS	DIODE		
D175	DAN222WM	DIODE		
D177	BBY65-02V	VARI CAP DIODE		
D178	BBY65-02V	VARI CAP DIODE		
D179	RN262CS	DIODE		

⚠ Symbol No.	Part No.	Part Name	Description	Local
D180	RN262CS	DIODE		
D181	RN262CS	DIODE		
D182	1SV325FT	VARI CAP DIODE		
D184	1SV325FT	VARI CAP DIODE		
D185	RN262CS	DIODE		
D186	DAN222WM	DIODE		
D188	1SV325FT	VARI CAP DIODE		
D189	BBY65-02V	VARI CAP DIODE		
D191	1SV325FT	VARI CAP DIODE		
D192	RN262CS	DIODE		
D193	RN262CS	DIODE		
D194	BBY66-02V	VARI CAP DIODE		
D195	BBY66-02V	VARI CAP DIODE		
D196	DAN222WM	DIODE		
D197	1SS390	DIODE		
D198	1SS390	DIODE		
D199	1SS390	DIODE		
D200	RN262CS	DIODE		
D201	1SS390	DIODE		
D202	BBY66-02V	VARI CAP DIODE		
D204	1SS390	DIODE		
D361	1SS390	DIODE		
D362	1SS390	DIODE		
D363	1SS390	DIODE		
D364	1SS390	DIODE		
D365	1SS390	DIODE		
D366	BBY57-02V	VARI CAP DIODE		
D367	BBY57-02V	VARI CAP DIODE		
D369	1SV325FT	VARI CAP DIODE		
D370	1SV325FT	VARI CAP DIODE		
D372	1SV325FT	VARI CAP DIODE		
D373	1SV325FT	VARI CAP DIODE		
D374	RN262CS	DIODE		
D375	RN262CS	DIODE		
D376	1SS400SM	DIODE		
D378	1SS390	DIODE		
D379	1SS400SM	DIODE		
D380	RN262CS	DIODE		
D381	1SV325FT	VARI CAP DIODE		
D382	1SV325FT	VARI CAP DIODE		
D383	1SS390	DIODE		
D576	GN1G	DIODE		
D577	GN1G	DIODE		
D578	RB715W	DIODE		
D579	RB531SM-30	DIODE		
D580	RB531SM-30	DIODE		
D583	RB531SM-30	DIODE		
D587	RB160SS-40	SCHOTTKY DIODE		
D588	RB531SM-30	DIODE		
D673	BBY65-02V	VARI CAP DIODE		
D674	BBY65-02V	VARI CAP DIODE		
D675	1SS400CM	DIODE		
D700	RB531SM-30	DIODE		
D710	RB520SM-30	DIODE		
D720	RB715F	SCHOTTKY DIODE		
D721	B30-2278-05	LED		
D801	SML-D12D8WQR	LED		
D802	SML-D12D8WQR	LED		
D803	SML-D12D8WQR	LED		
D804	SML-D12D8WQR	LED		
D805	SML-D12D8WQR	LED		
D806	SML-D12D8WQR	LED		
D807	SML-D12D8WQR	LED		
D808	SML-D12D8WQR	LED		
D809	SML-D12D8WQR	LED		
D810	SML-D12D8WQR	LED		
D811	SML-D12D8WQR	LED		
D812	SML-D12D8WQR	LED		
D882	RB531SM-30	DIODE		
D883	RB531SM-30	DIODE		
C1	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C2	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C3	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C4	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C5	CC73GCH1H040B	C CAPACITOR	4pF 50V B	
C6	CC73HCH1H471J	C CAPACITOR	470pF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C7	CC73GCH1H040B	C CAPACITOR	4pF 50V B	
C8	CC73GCH1H040B	C CAPACITOR	4pF 50V B	
C9	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C11	CK73GXR1H104K	C CAPACITOR	0.1uF 50V K	
C13	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C14	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C15	CC73GCH1H080B	C CAPACITOR	8pF 50V B	
C16	CC73GCH1H220G	C CAPACITOR	22pF 50V G	
C18	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C19	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C20	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C22	CC73GCH1H150G	C CAPACITOR	15pF 50V G	
C23	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C24	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C25	CC73HCH1H470J	C CAPACITOR	47pF 50V J	
C26	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C27	CC73GCH1H010B	C CAPACITOR	1pF 50V B	
C28	CC73GCH1H040B	C CAPACITOR	4pF 50V B	
C29	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C30	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C31	CC73GCH1H070B	C CAPACITOR	7pF 50V B	
C32	CC73GCH1H270G	C CAPACITOR	27pF 50V G	
C33	CC73GCH1H820G	C CAPACITOR	82pF 50V G	
C34	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C37	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C38	CC73GCH1H100B	C CAPACITOR	10pF 50V B	
C39	CC73GCH1H180G	C CAPACITOR	18pF 50V G	
C40	C93-0935-05	C CAPACITOR	10pF 50V	
C41	CC73HCH1H470J	C CAPACITOR	47pF 50V J	
C42	CC73GCH1H820G	C CAPACITOR	82pF 50V G	
C43	CC73GCH1H270G	C CAPACITOR	27pF 50V G	
C44	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C46	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C48	CC73GCH1H180G	C CAPACITOR	18pF 50V G	
C50	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C51	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C53	CC73GCH1H040B	C CAPACITOR	4pF 50V B	
C54	CC73GCH1H471J	C CAPACITOR	470pF 50V J	
C55	CC73GCH1H820G	C CAPACITOR	82pF 50V G	
C58	CC73GCH1H270G	C CAPACITOR	27pF 50V G	
C59	C93-0988-05	C CAPACITOR	8.0pF 50V	
C62	C93-0955-05	C CAPACITOR	68pF 50V	
C63	C93-0871-05	C CAPACITOR	1.0pF 100V	
C64	C93-0941-05	C CAPACITOR	18pF 50V	
C65	C93-0951-05	C CAPACITOR	47pF 50V	
C66	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C68	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C70	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C71	C93-0942-05	C CAPACITOR	20pF 50V	
C73	CC73GCH1H060B	C CAPACITOR	6pF 50V B	
C75	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C76	C93-0941-05	C CAPACITOR	18pF 50V	
C77	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C78	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C79	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C82	CC73GCH1H101G	C CAPACITOR	100pF 50V G	
C86	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C89	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C91	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C98	C93-0949-05	C CAPACITOR	39pF 50V	
C102	CC73GCH1H102J	C CAPACITOR	1000pF 50V J	
C103	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C106	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C110	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C113	CC73GCH1H561J	C CAPACITOR	560pF 50V J	
C115	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C116	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C117	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C118	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C119	C93-1969-05	C CAPACITOR	1000pF 50V	
C120	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C122	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C123	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C124	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C125	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C126	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C127	CK73GB1A335K	C CAPACITOR	3.3uF 10V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C128	CC73GCH1H561J	C CAPACITOR	560pF 50V J	
C129	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C130	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C131	C93-1969-05	C CAPACITOR	1000pF 50V	
C132	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C133	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C134	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C135	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C136	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C137	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C138	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C139	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C140	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C141	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C142	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C143	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C144	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C145	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C146	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C147	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C148	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C149	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C150	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C152	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C153	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C155	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C156	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C158	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C163	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C164	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C165	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C167	C93-1953-05	C CAPACITOR	0.01uF 25V	
C170	C93-1953-05	C CAPACITOR	0.01uF 25V	
C171	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C172	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C174	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C175	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C176	C93-1967-05	C CAPACITOR	470pF 50V	
C177	C93-1967-05	C CAPACITOR	470pF 50V	
C178	C93-1967-05	C CAPACITOR	470pF 50V	
C179	C93-1967-05	C CAPACITOR	470pF 50V	
C180	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C181	CC73HCH1HR75B	C CAPACITOR	0.75pF 50V B	
C182	CC73HCH1H390G	C CAPACITOR	39pF 50V G	
C183	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C184	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C185	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C186	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C187	C93-1967-05	C CAPACITOR	470pF 50V	
C188	C93-1967-05	C CAPACITOR	470pF 50V	
C189	C93-1967-05	C CAPACITOR	470pF 50V	
C190	C93-1967-05	C CAPACITOR	470pF 50V	
C191	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C192	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C194	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C196	C93-1967-05	C CAPACITOR	470pF 50V	
C197	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C198	CC73HCH1HR75B	C CAPACITOR	0.75pF 50V B	
C199	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C201	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C202	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C203	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C204	C93-1967-05	C CAPACITOR	470pF 50V	
C205	C93-1967-05	C CAPACITOR	470pF 50V	
C206	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C207	C93-1967-05	C CAPACITOR	470pF 50V	
C208	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C209	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C210	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C211	CC73HCH1H330G	C CAPACITOR	33pF 50V G	
C212	CC73HCH1H330G	C CAPACITOR	33pF 50V G	
C213	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C214	CC73HCH1H390G	C CAPACITOR	39pF 50V G	
C215	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C216	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C217	CC73HCH1H050B	C CAPACITOR	5pF 50V B	
C218	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C219	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C220	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C221	C93-1969-05	C CAPACITOR	1000pF 50V	
C222	C93-1969-05	C CAPACITOR	1000pF 50V	
C223	C93-1969-05	C CAPACITOR	1000pF 50V	
C224	C93-1969-05	C CAPACITOR	1000pF 50V	
C225	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C226	CC73HCH1H020B	C CAPACITOR	2pF 50V B	
C227	CC73HCH1H050B	C CAPACITOR	5pF 50V B	
C228	C93-1969-05	C CAPACITOR	1000pF 50V	
C229	C93-1967-05	C CAPACITOR	470pF 50V	
C230	C93-1969-05	C CAPACITOR	1000pF 50V	
C231	C93-1969-05	C CAPACITOR	1000pF 50V	
C232	C93-1969-05	C CAPACITOR	1000pF 50V	
C233	C93-1969-05	C CAPACITOR	1000pF 50V	
C234	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C235	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C236	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C237	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C239	CC73HCH1H020B	C CAPACITOR	2pF 50V B	
C240	C93-1969-05	C CAPACITOR	1000pF 50V	
C241	C93-1969-05	C CAPACITOR	1000pF 50V	
C242	C93-1969-05	C CAPACITOR	1000pF 50V	
C243	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C244	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C245	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C246	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C247	C93-1969-05	C CAPACITOR	1000pF 50V	
C248	C93-1969-05	C CAPACITOR	1000pF 50V	
C249	CC73HCH1H102J	C CAPACITOR	1000pF 50V J	
C251	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C253	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C254	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C255	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C257	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C258	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C259	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C260	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C261	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K	
C262	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C263	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C264	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C265	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C266	CC73HCH1H330G	C CAPACITOR	33pF 50V G	
C267	CC73HCH1H090B	C CAPACITOR	9pF 50V B	
C268	CC73HCH1H680G	C CAPACITOR	68pF 50V G	
C269	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C270	CC73HCH1H390G	C CAPACITOR	39pF 50V G	
C272	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C273	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C274	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C275	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C276	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C277	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C278	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C279	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C280	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C281	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C282	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C283	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C284	C93-1967-05	C CAPACITOR	470pF 50V	
C285	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C286	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C287	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C288	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C290	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C291	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C292	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C293	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C294	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C295	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C296	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C297	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C298	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C299	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C301	C93-1959-05	C CAPACITOR	0.1uF 16V	
C302	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C303	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C304	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C305	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C306	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C307	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C308	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C309	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C310	C93-1959-05	C CAPACITOR	0.1uF 16V	
C311	CK73HB1A333K	C CAPACITOR	0.033uF 10V K	
C312	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C313	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C314	CC73HCH1H121J	C CAPACITOR	120pF 50V J	
C315	CK73HB1H182K	C CAPACITOR	1800pF 50V K	
C316	C93-1969-05	C CAPACITOR	1000pF 50V	
C317	CK73HBB1H681K	C CAPACITOR	680pF 50V K	
C318	CC73HCH1H680G	C CAPACITOR	68pF 50V G	
C319	C93-1967-05	C CAPACITOR	470pF 50V	
C321	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C322	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C323	CK73HBB1H332K	C CAPACITOR	3300pF 50V K	
C324	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C325	CC73HCH1H010B	C CAPACITOR	1pF 50V B	
C326	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C327	CC73HCH1H010B	C CAPACITOR	1pF 50V B	
C328	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C329	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C330	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C332	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C333	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C334	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C335	C93-1959-05	C CAPACITOR	0.1uF 16V	
C336	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C337	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C338	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C339	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C340	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C341	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C342	C93-1969-05	C CAPACITOR	1000pF 50V	
C343	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C344	CK73HB1H182K	C CAPACITOR	1800pF 50V K	
C345	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C346	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C347	C93-1959-05	C CAPACITOR	0.1uF 16V	
C348	CK73HBB1H681K	C CAPACITOR	680pF 50V K	
C349	CC73HCH1H560J	C CAPACITOR	56pF 50V J	
C350	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C351	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C352	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C353	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C354	CC73JCH1H150J	C CAPACITOR	15pF 50V J	
C355	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C356	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C357	C93-1959-05	C CAPACITOR	0.1uF 16V	
C358	CK73HB1A333K	C CAPACITOR	0.033uF 10V K	
C359	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C360	C93-1959-05	C CAPACITOR	0.1uF 16V	
C361	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C362	C93-1959-05	C CAPACITOR	0.1uF 16V	
C363	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C364	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C367	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C368	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C369	C93-1959-05	C CAPACITOR	0.1uF 16V	
C371	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C372	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C373	C93-1953-05	C CAPACITOR	0.01uF 25V	
C374	CC73HCH1H271J	C CAPACITOR	270pF 50V J	
C375	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C380	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C381	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C382	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C383	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C384	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C385	CC73HCH1H680G	C CAPACITOR	68pF 50V G	
C386	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C387	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C388	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C389	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C390	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C391	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C394	CC73HCH1H050B	C CAPACITOR	5pF 50V B	
C395	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C396	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C397	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C398	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C399	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C400	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C401	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C402	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C403	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C404	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C405	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C406	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C407	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C408	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C409	CC73HCH1H050C	C CAPACITOR	5pF 50V C	
C410	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C411	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C412	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C413	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C414	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C415	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C416	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C417	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C418	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C419	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C420	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C421	C93-1906-05	PF CAPACITOR	0.047uF 16V	
C422	CS77MP1CR68M	TA E CAPACITOR	0.68uF 16V M	
C423	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C424	C93-1906-05	PF CAPACITOR	0.047uF 16V	
C427	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C429	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C430	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C432	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C433	CC73HCH1H070B	C CAPACITOR	7pF 50V B	
C434	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C435	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C437	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C438	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C440	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C441	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C442	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C443	CC73HCH1H010B	C CAPACITOR	1pF 50V B	
C445	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C446	CC73HCH1H070B	C CAPACITOR	7pF 50V B	
C448	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C449	CC73HCH1H010B	C CAPACITOR	1pF 50V B	
C451	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C452	CC73HCH1H680G	C CAPACITOR	68pF 50V G	
C453	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C454	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C456	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C457	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C458	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C459	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C460	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C461	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C462	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C463	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C464	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C465	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C466	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C467	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C468	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C469	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C470	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C471	CS77MA1A220M	TA E CAPACITOR	22uF 10V M	
C472	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C473	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C474	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C475	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C476	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C477	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C478	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C479	CC73HCH1H040B	C CAPACITOR	4pF 50V B	
C481	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C482	CC73HCH1H070B	C CAPACITOR	7pF 50V B	
C483	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C484	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C485	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C486	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C487	CC73HCH1H080B	C CAPACITOR	8pF 50V B	
C488	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C491	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C492	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C493	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C494	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C495	CC73HCH1H090B	C CAPACITOR	9pF 50V B	
C496	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C497	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C498	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C499	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C500	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C501	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C502	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C503	CC73HCH1H270G	C CAPACITOR	27pF 50V G	
C504	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C505	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C506	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C507	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C508	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C509	CC73HCH1H330G	C CAPACITOR	33pF 50V G	
C510	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C511	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C512	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C513	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C514	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C515	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C516	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C517	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C518	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C519	CC73HCH1H020B	C CAPACITOR	2pF 50V B	
C520	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C521	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C522	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C523	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C524	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C525	CC73HCH1H030B	C CAPACITOR	3pF 50V B	
C526	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C527	CC73HCH1H0R5B	C CAPACITOR	0.5pF 50V B	
C528	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C529	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C530	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C531	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C532	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C533	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C534	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C535	CS77MA1A220M	TA E CAPACITOR	22uF 10V M	
C536	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C537	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C538	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C539	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C540	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C541	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C542	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C543	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C544	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C545	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C546	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C547	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C548	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C549	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C550	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C551	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C552	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C553	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C554	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C555	CK73GXR1A106M	C CAPACITOR	10uF 10V M	
C556	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C557	CC73HCH1H101J	C CAPACITOR	100pF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C558	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K	
C559	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C560	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C561	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C562	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C563	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C564	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C565	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C566	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C567	CS77MA1V0R1M	TA E CAPACITOR	0.1uF 35V M	
C568	CS77MP1C1R5M	TA E CAPACITOR	1.5uF 16V M	
C569	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C570	CS77MA1V0R1M	TA E CAPACITOR	0.1uF 35V M	
C571	CK73GXR1A106M	C CAPACITOR	10uF 10V M	
C572	CK73GXR1A106M	C CAPACITOR	10uF 10V M	
C573	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C574	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C575	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C576	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C577	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C578	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C579	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C580	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C581	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C582	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C583	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C584	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C585	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C586	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C587	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C588	C93-1969-05	C CAPACITOR	1000pF 50V	
C589	C93-1969-05	C CAPACITOR	1000pF 50V	
C590	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C591	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C592	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C593	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C594	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C595	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C596	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C597	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C598	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C599	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C600	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C601	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C602	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C603	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C604	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C605	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C606	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C607	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C608	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C609	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C610	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C611	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C613	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C614	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C616	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C617	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C618	CK73FXR0J226M	C CAPACITOR	22uF 6.3V M	
C619	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C620	CK73EF0J107Z	C CAPACITOR	100uF 16V Z	
C621	CK73EF0J107Z	C CAPACITOR	100uF 16V Z	
C622	CK73EF0J107Z	C CAPACITOR	100uF 16V Z	
C623	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C624	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C625	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C626	CC73HCH1H330G	C CAPACITOR	33pF 50V G	
C627	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C628	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C630	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C631	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C632	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C633	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C634	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C635	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C636	CK73HBB1H472K	C CAPACITOR	4700pF 50V K	
C637	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C638	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C639	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C640	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C641	CK73FB1C225K	C CAPACITOR	2.2uF 16V K	
C642	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C643	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C644	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C645	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C646	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C647	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C648	CK73EXR1E226K	C CAPACITOR	22uF 25V K	
C650	CK73EB1C226M	C CAPACITOR	22uF 16V M	
C651	CK73FB1E105K	C CAPACITOR	1.0uF 25V K	
C652	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C653	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C654	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C655	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C656	CK73HBB1H682K	C CAPACITOR	6800pF 50V K	
C657	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C658	CK73EF0J107Z	C CAPACITOR	100uF 16V Z	
C659	CK73EF0J107Z	C CAPACITOR	100uF 16V Z	
C660	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C661	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C662	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C663	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C664	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C665	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C667	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C668	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C669	CC73HCH1H090B	C CAPACITOR	9pF 50V B	
C674	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C675	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C676	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C680	CC73HCH1H060B	C CAPACITOR	6pF 50V B	
C683	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C684	CC73HCH1H470J	C CAPACITOR	47pF 50V J	
C685	CC73HCH1H470J	C CAPACITOR	47pF 50V J	
C686	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C687	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C688	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C689	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C690	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C691	CC73HCH1H470J	C CAPACITOR	47pF 50V J	
C692	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C693	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C694	CK73HBB1E223K	C CAPACITOR	0.022uF 25V K	
C695	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C696	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C697	CC73HCH1H120G	C CAPACITOR	12pF 50V G	
C698	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C699	CC73HCH1H330J	C CAPACITOR	33pF 50V J	
C700	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C701	CK73FXR0J226M	C CAPACITOR	22uF 6.3V M	
C702	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C703	C93-1959-05	C CAPACITOR	0.1uF 16V	
C704	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C705	C93-1959-05	C CAPACITOR	0.1uF 16V	
C706	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C707	C93-1959-05	C CAPACITOR	0.1uF 16V	
C708	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C709	C93-1959-05	C CAPACITOR	0.1uF 16V	
C710	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C712	C93-1959-05	C CAPACITOR	0.1uF 16V	
C713	C93-1959-05	C CAPACITOR	0.1uF 16V	
C714	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C715	C93-1959-05	C CAPACITOR	0.1uF 16V	
C716	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C717	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C718	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C719	CC73HCH1H150G	C CAPACITOR	15pF 50V G	
C720	C93-1959-05	C CAPACITOR	0.1uF 16V	
C721	C93-1959-05	C CAPACITOR	0.1uF 16V	
C722	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C723	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C724	C93-1953-05	C CAPACITOR	0.01uF 25V	
C725	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C726	CC73HCH1H101J	C CAPACITOR	100pF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C727	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C728	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C729	C93-1959-05	C CAPACITOR	0.1uF 16V	
C730	CK73FXR0J226M	C CAPACITOR	22uF 6.3V M	
C731	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C732	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C733	C93-1959-05	C CAPACITOR	0.1uF 16V	
C734	C93-1959-05	C CAPACITOR	0.1uF 16V	
C735	C93-1959-05	C CAPACITOR	0.1uF 16V	
C736	C93-1959-05	C CAPACITOR	0.1uF 16V	
C737	C93-1959-05	C CAPACITOR	0.1uF 16V	
C738	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C739	C93-1959-05	C CAPACITOR	0.1uF 16V	
C740	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C741	C93-1959-05	C CAPACITOR	0.1uF 16V	
C742	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C743	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C744	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C745	C93-1959-05	C CAPACITOR	0.1uF 16V	
C746	C93-1959-05	C CAPACITOR	0.1uF 16V	
C747	C93-1959-05	C CAPACITOR	0.1uF 16V	
C748	C93-1959-05	C CAPACITOR	0.1uF 16V	
C749	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C750	C93-1959-05	C CAPACITOR	0.1uF 16V	
C751	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C752	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C753	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C754	C93-1959-05	C CAPACITOR	0.1uF 16V	
C755	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C756	C93-1959-05	C CAPACITOR	0.1uF 16V	
C757	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C758	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C759	C93-1959-05	C CAPACITOR	0.1uF 16V	
C760	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C761	C93-1959-05	C CAPACITOR	0.1uF 16V	
C762	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C763	C93-1959-05	C CAPACITOR	0.1uF 16V	
C764	C93-1959-05	C CAPACITOR	0.1uF 16V	
C765	C93-1959-05	C CAPACITOR	0.1uF 16V	
C766	C93-1959-05	C CAPACITOR	0.1uF 16V	
C767	C93-1959-05	C CAPACITOR	0.1uF 16V	
C768	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C769	C93-1959-05	C CAPACITOR	0.1uF 16V	
C770	C93-1959-05	C CAPACITOR	0.1uF 16V	
C771	C93-1959-05	C CAPACITOR	0.1uF 16V	
C772	C93-1959-05	C CAPACITOR	0.1uF 16V	
C774	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C775	CK73GB1A225K	C CAPACITOR	2.2uF 10V K	
C776	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C777	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C778	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C779	C93-1959-05	C CAPACITOR	0.1uF 16V	
C780	C93-1959-05	C CAPACITOR	0.1uF 16V	
C781	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C782	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C783	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C784	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C785	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C786	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C788	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C789	C93-1959-05	C CAPACITOR	0.1uF 16V	
C790	C93-1959-05	C CAPACITOR	0.1uF 16V	
C791	C93-1959-05	C CAPACITOR	0.1uF 16V	
C792	C93-1959-05	C CAPACITOR	0.1uF 16V	
C793	C93-1959-05	C CAPACITOR	0.1uF 16V	
C794	C93-1959-05	C CAPACITOR	0.1uF 16V	
C795	C93-1959-05	C CAPACITOR	0.1uF 16V	
C796	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C797	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C798	C93-1959-05	C CAPACITOR	0.1uF 16V	
C799	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C800	C93-1959-05	C CAPACITOR	0.1uF 16V	
C801	C93-1969-05	C CAPACITOR	1000pF 50V	
C802	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C803	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C804	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C805	CK73HBB1H681K	C CAPACITOR	680pF 50V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C806	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C807	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C808	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C809	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C810	C93-1959-05	C CAPACITOR	0.1uF 16V	
C811	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C812	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C813	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C814	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C815	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C817	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C818	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C819	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C820	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C821	CK73GB1A475K	C CAPACITOR	4.7uF 10V K	
C822	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C823	C93-1959-05	C CAPACITOR	0.1uF 16V	
C824	C93-1959-05	C CAPACITOR	0.1uF 16V	
C825	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C826	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C827	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C828	CK73GB0J106K	C CAPACITOR	10uF 6.3V K	
C830	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C832	CC73HCH1H391J	C CAPACITOR	390pF 50V J	
C833	C93-1959-05	C CAPACITOR	0.1uF 16V	
C834	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C835	CC73HCH1H471J	C CAPACITOR	470pF 50V J	
C836	CK73EXR0J476M	C CAPACITOR	47uF 6.3V M	
C837	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C838	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C839	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C840	C93-1959-05	C CAPACITOR	0.1uF 16V	
C841	C93-1959-05	C CAPACITOR	0.1uF 16V	
C842	C93-1959-05	C CAPACITOR	0.1uF 16V	
C843	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C844	C93-1959-05	C CAPACITOR	0.1uF 16V	
C845	C93-1953-05	C CAPACITOR	0.01uF 25V	
C846	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C847	C93-1953-05	C CAPACITOR	0.01uF 25V	
C848	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C849	CC73HCH1H181J	C CAPACITOR	180pF 50V J	
C850	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C851	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C852	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C855	C93-1959-05	C CAPACITOR	0.1uF 16V	
C859	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C860	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C861	CK73EXR0J476M	C CAPACITOR	47uF 6.3V M	
C862	CK73EXR0J476M	C CAPACITOR	47uF 6.3V M	
C863	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C864	CK73HB1C105K	C CAPACITOR	1.0uF 16V K	
C865	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C866	C93-1959-05	C CAPACITOR	0.1uF 16V	
C867	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C868	C93-1953-05	C CAPACITOR	0.01uF 25V	
C869	C93-1959-05	C CAPACITOR	0.1uF 16V	
C870	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C871	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C872	C93-1953-05	C CAPACITOR	0.01uF 25V	
C873	C93-1953-05	C CAPACITOR	0.01uF 25V	
C874	C93-1953-05	C CAPACITOR	0.01uF 25V	
C880	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C881	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C883	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C884	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C885	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C886	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C887	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C888	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C890	CK73EB1E106K	C CAPACITOR	10uF 25V K	
C892	CK73EXR0J476M	C CAPACITOR	47uF 6.3V M	
C893	CK73GB1E105K	C CAPACITOR	1uF 25V K	
C894	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C895	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C896	CK73HB1H103K	C CAPACITOR	10000pF 50V K	
C897	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C901	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C902	CK73GXR1A106M	C CAPACITOR	10uF 10V M	
C903	CK73FXR1A226M	C CAPACITOR	22uF 10V M	
C904	CC73JCH1H101J	C CAPACITOR	100pF 50V J	
C905	CK73HBB1A104K	C CAPACITOR	0.1uF 10V K	
C907	CC73HCH1H101J	C CAPACITOR	100pF 50V J	
C908	CC73HCH1H390G	C CAPACITOR	39pF 50V G	
C909	CK73GB1A225K	C CAPACITOR	2.2uF 10V K	
C910	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C911	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C912	CK73GB1A225K	C CAPACITOR	2.2uF 10V K	
C913	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C914	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C915	CK73HB1A224K	C CAPACITOR	0.22uF 10V K	
C916	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C917	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C918	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C919	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C920	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C921	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C922	CK73HBB1H471K	C CAPACITOR	470pF 50V K	
C923	CK73GXR1A106M	C CAPACITOR	10uF 10V M	
C924	CA77VAD1C680M	AS E CAPACITOR	68uF 16V M	
C926	CA77VAD1C680M	AS E CAPACITOR	68uF 16V M	
C927	CA77VAD1C680M	AS E CAPACITOR	68uF 16V M	
C930	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C931	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C932	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C933	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C934	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C935	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C936	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C937	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C938	CK73HB1A474K	C CAPACITOR	0.47uF 10V K	
C939	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C940	CC73HCH1H100B	C CAPACITOR	10pF 50V B	
C941	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C942	C93-1959-05	C CAPACITOR	0.1uF 16V	
C943	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C944	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C945	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C946	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C947	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C948	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C949	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C951	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C952	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C953	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C954	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C958	CK73HBB1H102K	C CAPACITOR	1000pF 50V K	
C960	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C961	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C962	C93-1959-05	C CAPACITOR	0.1uF 16V	
C963	CK73HB1A105K	C CAPACITOR	1uF 10V K	
C964	C93-1959-05	C CAPACITOR	0.1uF 16V	
C965	C93-1959-05	C CAPACITOR	0.1uF 16V	
C966	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C967	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C968	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C969	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C970	CC73HCH1H2R5B	C CAPACITOR	2.5pF 50V B	
C971	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C973	CC73HCH1H180G	C CAPACITOR	18pF 50V G	
C975	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C976	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C977	CC73HCH1H010B	C CAPACITOR	1pF 50V B	
C979	CC73HCH1H470G	C CAPACITOR	47pF 50V G	
C980	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C981	CK73HB1E104K	C CAPACITOR	0.10uF 25V K	
C982	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
C983	CC73HCH1H2R5B	C CAPACITOR	2.5pF 50V B	
C984	CC73HCH1H220G	C CAPACITOR	22pF 50V G	
R1	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J	
R2	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J	
R3	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R5	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R6	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R7	RN73H0AJ103D	MF RESISTOR	10kΩ 0.063W D	
R8	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R12	RK73HB1J393J	MG RESISTOR	39kΩ 1/16W J	
R13	RK73GB2A220J	MG RESISTOR	22Ω 1/10W J	
R14	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R17	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R19	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R24	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R26	RK73HB1J683J	MG RESISTOR	68kΩ 1/16W J	
R28	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R29	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R30	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R31	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R33	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J	
R34	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R35	RK73HB1J680J	MG RESISTOR	68Ω 1/16W J	
R36	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R37	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R39	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R41	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J	
R42	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J	
R44	RK73HB1J391J	MG RESISTOR	390Ω 1/16W J	
R45	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R46	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R47	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R48	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R50	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R51	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R52	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R55	R92-3512-05	COMP RESISTOR	0.1Ω 0.5W	
R57	R92-3512-05	COMP RESISTOR	0.1Ω 0.5W	
R60	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R61	RK73HB1J330J	MG RESISTOR	33Ω 1/16W J	
R62	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R64	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R65	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R67	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R68	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R69	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R70	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R73	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	
R74	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J	
R75	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R78	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R144	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R145	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R146	RK73HB1J684J	MG RESISTOR	680kΩ 1/16W J	
R152	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R155	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R157	RK73JB1H472J	MG RESISTOR	4.7kΩ 1/20W J	
R158	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R159	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R162	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R164	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R166	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R167	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R168	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J	
R169	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R170	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R171	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R172	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R174	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R175	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R176	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R177	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R178	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R179	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R180	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R181	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R182	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R183	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R185	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R186	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R187	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R188	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R189	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R191	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R193	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R194	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R195	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R196	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R197	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R198	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R199	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R200	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R201	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R202	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R203	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R204	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R205	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R207	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R208	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J	
R209	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R210	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R211	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R212	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R213	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R214	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R216	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R217	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R218	RK73HB1J681J	MG RESISTOR	680Ω 1/16W J	
R219	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R220	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R221	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R223	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R224	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R225	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R226	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R227	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R228	RK73GB2A470J	MG RESISTOR	47Ω 1/10W J	
R229	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R230	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R231	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R232	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R233	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R234	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R235	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R236	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R237	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R238	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R239	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R240	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R241	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R242	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R243	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R244	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R245	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R246	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
R247	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
R248	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
R250	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R252	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R253	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R254	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R255	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R256	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R257	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R259	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R260	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R261	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R262	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R263	RK73HB1J224J	MG RESISTOR	220kΩ 1/16W J	
R264	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R265	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R266	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R267	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R268	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R269	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R270	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R271	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R272	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R274	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J	
R277	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R278	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R280	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R281	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R282	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R283	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J	
R284	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R285	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J	
R286	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R287	RK73HB1J272J	MG RESISTOR	2.7kΩ 1/16W J	
R288	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R289	RK73HB1J121J	MG RESISTOR	120Ω 1/16W J	
R290	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R291	RK73HB1J274J	MG RESISTOR	270kΩ 1/16W J	
R292	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R293	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R294	RK73HB1J681J	MG RESISTOR	680Ω 1/16W J	
R295	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R296	RK73HB1J681J	MG RESISTOR	680Ω 1/16W J	
R299	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R300	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R301	RK73HB1J563J	MG RESISTOR	56kΩ 1/16W J	
R303	RK73JB1H473J	MG RESISTOR	47kΩ 1/20W J	
R304	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R305	RK73JB1H224J	MG RESISTOR	220kΩ 1/20W J	
R306	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R307	RK73HB1J684J	MG RESISTOR	680kΩ 1/16W J	
R308	RK73JB1H105J	MG RESISTOR	1mΩ 1/20W J	
R310	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R311	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R312	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R313	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R314	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R315	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R319	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R320	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R321	RK73HB1J122J	MG RESISTOR	1.2kΩ 1/16W J	
R322	RK73HB1J684J	MG RESISTOR	680kΩ 1/16W J	
R325	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R327	RK73JB1H473J	MG RESISTOR	47kΩ 1/20W J	
R328	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R329	RK73JB1H101J	MG RESISTOR	100Ω 1/20W J	
R330	RK73JB1H224J	MG RESISTOR	220kΩ 1/20W J	
R331	RK73JB1H105J	MG RESISTOR	1mΩ 1/20W J	
R332	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R333	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R334	RK73HB1J224J	MG RESISTOR	220kΩ 1/16W J	
R335	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R337	RK73JB1H470J	MG RESISTOR	47Ω 1/20W J	
R338	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R339	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R340	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R341	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R342	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R343	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R344	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R345	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R347	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R348	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R350	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R351	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R352	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R353	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R354	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R355	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R356	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R358	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R362	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J	
R363	RK73JB1H473J	MG RESISTOR	47kΩ 1/20W J	
R364	RK73JB1H473J	MG RESISTOR	47kΩ 1/20W J	
R366	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R367	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R368	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R369	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R370	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R371	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R372	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R373	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R374	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R375	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R376	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R377	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R378	RK73GB2A471J	MG RESISTOR	470Ω 1/10W J	
R379	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R380	RK73HB1J823J	MG RESISTOR	82kΩ 1/16W J	
R381	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R382	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R383	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R384	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R385	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R386	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R387	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R388	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R389	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J	
R390	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R391	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R392	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R393	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R396	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R397	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R398	RK73HB1J120J	MG RESISTOR	12Ω 1/16W J	
R399	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R401	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R402	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R403	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R404	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R405	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R406	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R407	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R408	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R410	RN73HH1J121D	MF RESISTOR	120Ω 1/16W D	
R411	RN73H0AJ271D	MF RESISTOR	270Ω D	
R412	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R413	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R415	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R416	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R417	RN73HH1J561D	MF RESISTOR	560Ω 1/16W D	
R418	RN73H0AJ102D	MF RESISTOR	1kΩ D	
R419	RN73HH1J561D	MF RESISTOR	560Ω 1/16W D	
R420	RN73H0AJ102D	MF RESISTOR	1kΩ D	
R422	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R423	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R424	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R425	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R426	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R427	RK73HB1J224J	MG RESISTOR	220kΩ 1/16W J	
R428	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R431	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J	
R435	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R437	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R438	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R439	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R441	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R443	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R444	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R445	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R446	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R447	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R448	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R449	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R450	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R451	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R452	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R453	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R454	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R456	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R457	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R458	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R459	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R460	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R461	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R462	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R463	RK73HB1J154J	MG RESISTOR	150kΩ 1/16W J	
R464	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R465	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R466	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R467	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R468	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R469	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R470	RN73HH1J271D	MF RESISTOR	270Ω 1/16W D	
R471	RN73HH1J220D	MF RESISTOR	22Ω 1/16W D	
R472	RK73HB1J332J	MG RESISTOR	3.3kΩ 1/16W J	
R473	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R474	RN73HH1J561D	MF RESISTOR	560Ω 1/16W D	
R475	RN73H0AJ102D	MF RESISTOR	1kΩ D	
R476	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R477	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R478	RK73HB1J271J	MG RESISTOR	270Ω 1/16W J	
R479	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R480	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R481	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R482	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R483	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R484	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R485	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R486	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R488	RK73HB1J561J	MG RESISTOR	560Ω 1/16W J	
R489	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R490	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R492	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R500	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R501	RK73HB1J272J	MG RESISTOR	2.7kΩ 1/16W J	
R502	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R503	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R504	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R561	RK73HB1J822J	MG RESISTOR	8.2kΩ 1/16W J	
R579	RK73HH1J273D	MG RESISTOR	27kΩ 1/16W D	
R580	RK73HH1J562D	MG RESISTOR	5.6kΩ 1/16W D	
R581	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R582	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R583	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R585	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R586	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R587	RK73HH1J273D	MG RESISTOR	27kΩ 1/16W D	
R588	RK73HH1J104D	MG RESISTOR	100kΩ 1/16W D	
R590	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R592	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R593	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R595	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R596	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R598	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R599	RK73HH1J681D	MG RESISTOR	680Ω 1/16W D	
R600	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R601	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R602	RK73HB1J333J	MG RESISTOR	33kΩ 1/16W J	
R603	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R604	RK73HB1J4R7J	MG RESISTOR	4.7Ω 1/16W J	
R606	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R607	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R608	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R609	RK73HB1J154J	MG RESISTOR	150kΩ 1/16W J	
R610	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R611	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R612	RK73HB1J2R2J	MG RESISTOR	2.2Ω 1/16W J	
R613	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R614	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R615	RZ73G0BG10LF	RESISTOR	0.01Ω 0.3W F	
R616	RK73GB2A274J	MG RESISTOR	270kΩ 1/10W J	
R617	RK73HB1J2R2J	MG RESISTOR	2.2Ω 1/16W J	
R618	RZ73G0BG10LF	RESISTOR	0.01Ω 0.3W F	
R619	RK73HB1J164J	MG RESISTOR	160kΩ 1/16W J	
R620	RK73HB1J223J	MG RESISTOR	22kΩ 1/16W J	
R621	RK73HH1J274D	MG RESISTOR	270kΩ 1/16W D	
R622	RK73HH1J104D	MG RESISTOR	100kΩ 1/16W D	
R623	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R624	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R625	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R626	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R627	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R628	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R629	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R630	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R631	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R632	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R633	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R634	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R635	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R636	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R637	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R638	RK73HB1J184J	MG RESISTOR	180kΩ 1/16W J	
R639	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R640	RK73GB2A100J	MG RESISTOR	10Ω 1/10W J	
R659	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R661	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R663	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R664	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R665	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R667	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R668	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R669	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R670	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R673	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R674	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R683	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R684	RK73HB1J273J	MG RESISTOR	27kΩ 1/16W J	
R685	RK73HB1J181J	MG RESISTOR	180Ω 1/16W J	
R686	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R687	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R688	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R689	RK73HB1J106J	MG RESISTOR	10MΩ 1/16W J	
R690	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R691	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R692	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R693	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R694	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R695	RK73HB1J681J	MG RESISTOR	680Ω 1/16W J	
R696	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R697	RK73HB1J106J	MG RESISTOR	10MΩ 1/16W J	
R698	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R699	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R709	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R710	RK73HH1J562D	MG RESISTOR	5.6kΩ 1/16W D	
R711	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R712	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R713	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R714	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R715	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R716	RK73HH1J153D	MG RESISTOR	15kΩ 1/16W D	
R717	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R719	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R721	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R722	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R724	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R725	RK73JB1H102J	MG RESISTOR	1kΩ 1/20W J	
R727	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R729	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R731	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R732	RK73JB1H222J	MG RESISTOR	2.2kΩ 1/20W J	
R733	RK73JB1H222J	MG RESISTOR	2.2kΩ 1/20W J	
R735	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R736	RK73HB1J220J	MG RESISTOR	22Ω 1/16W J	
R737	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R738	RK73JB1H104J	MG RESISTOR	100kΩ 1/20W J	
R739	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R740	RK73JB1H474J	MG RESISTOR	470kΩ 1/20W J	
R741	RK73JB1H474J	MG RESISTOR	470kΩ 1/20W J	
R742	RK73JB1H472J	MG RESISTOR	4.7kΩ 1/20W J	
R743	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R745	RK73GH2A49R9D	MG RESISTOR	49.9Ω 1/10W D	
R746	RK73HH1J102D	MG RESISTOR	1kΩ 1/16W D	
R747	RK73HH1J102D	MG RESISTOR	1kΩ 1/16W D	
R748	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R749	RK73HB1J683J	MG RESISTOR	68kΩ 1/16W J	
R750	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R751	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R755	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R756	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R757	RK73HH1J104D	MG RESISTOR	100kΩ 1/16W D	
R758	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R759	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R761	RK73GB2A102J	MG RESISTOR	1kΩ 1/10W J	
R762	RK73JB1H472J	MG RESISTOR	4.7kΩ 1/20W J	
R764	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R767	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R768	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R769	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R770	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R772	RK73HB1J560J	MG RESISTOR	56Ω 1/16W J	
R773	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R774	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R777	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R778	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R779	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R780	RK73HB1J242J	MG RESISTOR	2.4kΩ 1/16W J	
R781	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R782	RK73HB1J393J	MG RESISTOR	39kΩ 1/16W J	
R783	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R784	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R787	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R788	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R789	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R791	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R792	RK73HH1J274D	MG RESISTOR	270kΩ 1/16W D	
R793	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R794	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R795	RK73HB1J470J	MG RESISTOR	47Ω 1/16W J	
R796	RK73JB1H472J	MG RESISTOR	4.7kΩ 1/20W J	
R797	RK73JB1H102J	MG RESISTOR	1kΩ 1/20W J	
R798	RK73JB1H103J	MG RESISTOR	10kΩ 1/20W J	
R800	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R801	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R802	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R803	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R804	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R805	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R806	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R807	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R808	RK73HB1J221J	MG RESISTOR	220Ω 1/16W J	
R810	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R811	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R814	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R815	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R818	RK73HH1J104D	MG RESISTOR	100kΩ 1/16W D	
R821	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R823	RK73HH1J123D	MG RESISTOR	12kΩ 1/16W D	
R824	RK73HH1J223D	MG RESISTOR	22kΩ 1/16W D	
R826	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R827	RK73JB1H102J	MG RESISTOR	1kΩ 1/20W J	
R829	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R830	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R831	RK73HB1J393J	MG RESISTOR	39kΩ 1/16W J	
R833	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
R834	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R835	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R836	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R837	RK73EB2E1R2J	MG RESISTOR	1.2Ω 1/4W J	
R838	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R840	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R844	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R845	RK73HB1J101J	MG RESISTOR	100Ω 1/16W J	
R846	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R848	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R849	RK73JB1H473J	MG RESISTOR	47kΩ 1/20W J	
R850	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R851	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R852	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R856	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R859	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R860	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R863	RK73JB1H222J	MG RESISTOR	2.2kΩ 1/20W J	
R864	RK73JB1H222J	MG RESISTOR	2.2kΩ 1/20W J	
R870	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
R871	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R876	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R877	RK73HB1J331J	MG RESISTOR	330Ω 1/16W J	
R878	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R880	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R882	RK73GB2A101J	MG RESISTOR	100Ω 1/10W J	
R883	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R884	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R885	RK73HB1J182J	MG RESISTOR	1.8kΩ 1/16W J	
R886	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R887	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R888	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R889	RK73FB2B101J	MG RESISTOR	100Ω 1/8W J	
R890	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R891	RK73HB1J274J	MG RESISTOR	270kΩ 1/16W J	
R892	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R896	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R897	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R899	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R900	RK73HB1J474J	MG RESISTOR	470kΩ 1/16W J	
R902	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R903	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R904	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R905	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R906	RK73HB1J274J	MG RESISTOR	270kΩ 1/16W J	
R907	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R908	RK73HB1J184J	MG RESISTOR	180kΩ 1/16W J	
R910	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R911	RK73HH1J473D	MG RESISTOR	47kΩ 1/16W D	
R912	RK73HB1J153J	MG RESISTOR	15kΩ 1/16W J	
R913	RK73HB1J334J	MG RESISTOR	330kΩ 1/16W J	
R914	RK73HB1J123J	MG RESISTOR	12kΩ 1/16W J	
R915	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R916	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R917	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R918	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R919	RK73HB1J183J	MG RESISTOR	18kΩ 1/16W J	
R920	RK73HB1J242J	MG RESISTOR	2.4kΩ 1/16W J	
R921	RK73HB1J472J	MG RESISTOR	4.7kΩ 1/16W J	
R930	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R934	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R935	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R936	RK73HB1J104J	MG RESISTOR	100kΩ 1/16W J	
R938	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R939	RK73HB1J102J	MG RESISTOR	1kΩ 1/16W J	
R945	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R946	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R947	RK73HB1J000J	MG RESISTOR	0Ω 1/16W J	
R951	RK73HB1J103J	MG RESISTOR	10kΩ 1/16W J	
R953	RK73HB1J100J	MG RESISTOR	10Ω 1/16W J	
R960	RK73HB1J473J	MG RESISTOR	47kΩ 1/16W J	
R991	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R992	RK73HB1J222J	MG RESISTOR	2.2kΩ 1/16W J	
R993	RK73HB1J821J	MG RESISTOR	820Ω 1/16W J	
R994	RK73HB1J152J	MG RESISTOR	1.5kΩ 1/16W J	
R995	RK73HB1J471J	MG RESISTOR	470Ω 1/16W J	
R996	RK73HB1J681J	MG RESISTOR	680Ω 1/16W J	
RA341	RK74HB1J104J	NET RESISTOR	100kΩ 1/16W J	
RA361	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA576	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA660	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA661	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA662	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA663	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA664	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA665	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA666	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA667	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA668	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA669	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA670	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA671	RK74HB1J151J	NET RESISTOR	150Ω 1/16W J	
RA701	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA702	RK74HA1J104J	NET RESISTOR	100kΩ 1/16W J	
RA703	RK74HB1J151J	NET RESISTOR	150Ω 1/16W J	
RA704	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA705	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA706	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA707	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA708	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA709	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA710	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	

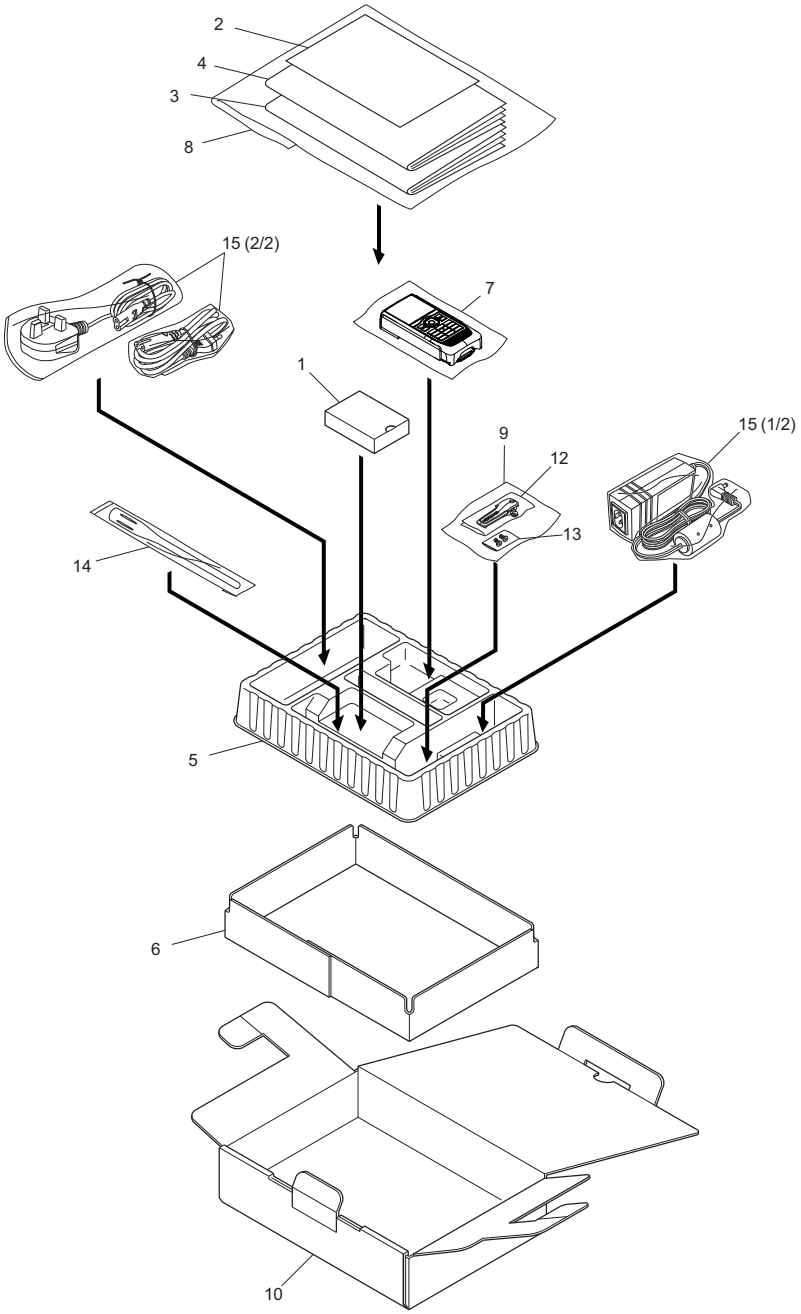
⚠ Symbol No.	Part No.	Part Name	Description	Local
RA711	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA712	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA713	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA714	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA715	RK74HA1J100J	NET RESISTOR	10Ω 1/16W J	
RA717	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA718	RK74HB1J100J	NET RESISTOR	10Ω 1/16W J	
RA721	RK74HA1J102J	NET RESISTOR	1kΩ 1/16W J	
RA722	RK74HB1J102J	NET RESISTOR	1kΩ 1/16W J	
RA723	RK74HA1J100J	NET RESISTOR	10Ω 1/16W J	
RA725	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
RA726	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
RA727	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
RA728	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
RA729	RK74HB1J470J	NET RESISTOR	47Ω 1/16W J	
RA801	RK74HA1J473J	NET RESISTOR	47kΩ 1/16W J	
RA861	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA930	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA931	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA932	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA933	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA934	RK74HA1J103J	NET RESISTOR	10kΩ 1/16W J	
RA935	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA936	RK74HB1J101J	NET RESISTOR	100Ω 1/16W J	
RA937	RK74HA1J101J	NET RESISTOR	100Ω 1/16W J	
RA938	RK74HA1J473J	NET RESISTOR	47kΩ 1/16W J	
L2	LR79Z0DC22NJ	CHIP INDUCTOR	22nH	
L3	LR79Z0DC12NJ	CHIP INDUCTOR	12nH	
L4	LR79Z0DC27N9J	CHIP INDUCTOR	27.9nH	
L5	LR79Z0DC45N5J	CHIP INDUCTOR	45.5nH	
L6	LR79Z0DC22NJ	CHIP INDUCTOR	22nH	
L7	L34-4548-05	AIR CORE COIL		
L8	LR79Z0GJR39G	CHIP INDUCTOR		
L9	LR79Z0DC22NJ	CHIP INDUCTOR	22nH	
L11	LR79Z0DC39N9J	CHIP INDUCTOR	39.9nH	
L12	LR79Z0DC45N5J	CHIP INDUCTOR	45.5nH	
L13	LR79Z0DD12N2J	CHIP INDUCTOR	12.2nH	
L14	LR79Z0DC33N6J	CHIP INDUCTOR	33.6nH	
L15	LR79Z0DC27N9J	CHIP INDUCTOR	27.9nH	
L16	L34-4551-05	AIR CORE COIL		
L17	LR79Z0GJR39G	CHIP INDUCTOR		
L19	LR79Z0DC27N9J	CHIP INDUCTOR	27.9nH	
L21	LR73Z0AE2R2J	CHIP INDUCTOR	2.2uH	
L23	LR79Z0CAR22J	CHIP INDUCTOR	0.22uH	
L24	LR79Z0DC45N5J	CHIP INDUCTOR	45.5nH	
L26	L34-4984-05	AIR CORE COIL		
L28	LR79Z0DD27N4J	CHIP INDUCTOR	27.4nH	
L29	L34-4984-05	AIR CORE COIL		
L30	L34-4985-05	AIR CORE COIL		
L32	LR79Z0DC45N5J	CHIP INDUCTOR	45.5nH	
L34	LR79Z0GJR39G	CHIP INDUCTOR		
L36	LR79Z0GJR39G	CHIP INDUCTOR		
L40	LR79Z0GJR39G	CHIP INDUCTOR		
L42	LR79Z0GJR10G	CHIP INDUCTOR		
L43	LR79Z0GJ56NG	CHIP INDUCTOR		
L44	LR79Z0GJ27NG	CHIP INDUCTOR		
L45	LR79Z0GJ27NG	CHIP INDUCTOR		
L46	LR79Z0GJR10G	CHIP INDUCTOR		
L47	LK73H0BC47NJ	M.CHIP INDUCTOR		
L48	LK73H0BC47NJ	M.CHIP INDUCTOR		
L52	LR79Z0GJR39G	CHIP INDUCTOR		
L53	LR79Z0GJ5N6G	CHIP INDUCTOR		
L54	LR79Z0GJR39G	CHIP INDUCTOR		
L56	LK73H0BC68NJ	M.CHIP INDUCTOR		
L57	LR79Z0GJ15NG	CHIP INDUCTOR		
L168	LK73G0BW4R7M	M.CHIP INDUCTOR		
L169	LK73G0BW4R7M	M.CHIP INDUCTOR		
L171	LK73H0BC33NJ	M.CHIP INDUCTOR		
L172	LR79Z0GJ10NG	CHIP INDUCTOR		
L173	LR79Z0GJ47NG	CHIP INDUCTOR		
L174	LR79Z0GJ47NG	CHIP INDUCTOR		
L175	LR79Z0GJ10NG	CHIP INDUCTOR		
L176	LR79Z0GJ33NG	CHIP INDUCTOR		
L177	LR79Z0GJ33NG	CHIP INDUCTOR		
L179	LR79Z0GJR22G	CHIP INDUCTOR		
L180	LR79Z0GJ5N6G	CHIP INDUCTOR		

⚠ Symbol No.	Part No.	Part Name	Description	Local
L181	LR79Z0GJ4N3G	CHIP INDUCTOR		
L182	LR79Z0GJ10NG	CHIP INDUCTOR		
L183	LR79Z0GJ47NG	CHIP INDUCTOR		
L184	LR79Z0GJ27NG	CHIP INDUCTOR		
L185	LK73H0BCR22J	M.CHIP INDUCTOR		
L186	LK73H0BCR22J	M.CHIP INDUCTOR		
L187	LR79Z0GJR22G	CHIP INDUCTOR		
L188	LR79Z0GJR39G	CHIP INDUCTOR		
L189	LR79Z0GJ27NG	CHIP INDUCTOR		
L190	LR79Z0GJR22G	CHIP INDUCTOR		
L191	LR79Z0GJR39G	CHIP INDUCTOR		
L194	LR79Z0GJ15NG	CHIP INDUCTOR		
L195	LR79Z0GJ12NG	CHIP INDUCTOR		
L196	LR79Z0GJ27NG	CHIP INDUCTOR		
L198	LR79Z0GJR12G	CHIP INDUCTOR		
L199	LR79Z0GJR15G	CHIP INDUCTOR		
L200	LR79Z0GJ27NG	CHIP INDUCTOR		
L201	LR79Z0GJR15G	CHIP INDUCTOR		
L202	LR79Z0GJ47NG	CHIP INDUCTOR		
L203	LR79Z0GJ47NG	CHIP INDUCTOR		
L205	LR79Z0GJR22G	CHIP INDUCTOR		
L206	LR79Z0GJR39G	CHIP INDUCTOR		
L212	LK73H0BC15NJ	M.CHIP INDUCTOR		
L213	LK73H0BC15NJ	M.CHIP INDUCTOR		
L214	LK73H0BC10NJ	M.CHIP INDUCTOR		
L215	LK73H0BC15NJ	M.CHIP INDUCTOR		
L216	LK73G0BBR47K	M.CHIP INDUCTOR		
L221	LK73H0BC56NJ	M.CHIP INDUCTOR		
L282	LK73H0BCR10J	M.CHIP INDUCTOR		
L283	LR79Z0GJR56G	CHIP INDUCTOR		
L284	LR79Z0GJR33G	CHIP INDUCTOR		
L285	LK73G0ADR33J	M.CHIP INDUCTOR		
L286	LK73G0BBR47K	M.CHIP INDUCTOR		
L288	LK73G0ADR33J	M.CHIP INDUCTOR		
L289	LK73G0ADR33J	M.CHIP INDUCTOR		
L290	LK73G0BBR47K	M.CHIP INDUCTOR		
L363	LK73H0BCR10J	M.CHIP INDUCTOR		
L364	LK73H0BC82NJ	M.CHIP INDUCTOR		
L366	LK73H0BC18NJ	M.CHIP INDUCTOR		
L367	LK73H0BC18NJ	M.CHIP INDUCTOR		
L368	LK73H0BCR10J	M.CHIP INDUCTOR		
L369	LK73H0BC82NJ	M.CHIP INDUCTOR		
L370	LK73H0BC82NJ	M.CHIP INDUCTOR		
L372	L41-2285-53	CHIP INDUCTOR		
L373	L41-2785-53	CHIP INDUCTOR		
L374	L41-2285-53	CHIP INDUCTOR		
L375	L41-2785-53	CHIP INDUCTOR		
L378	L41-1878-14	CHIP INDUCTOR		
L379	L41-3378-14	CHIP INDUCTOR		
L380	LB73H0AV-003	CHIP FERRITE		
L381	LK73H0BC12NJ	M.CHIP INDUCTOR		
L382	LK73H0BC39NJ	M.CHIP INDUCTOR		
L383	L41-2785-53	CHIP INDUCTOR		
L384	L41-1278-14	CHIP INDUCTOR		
L385	L41-2278-14	CHIP INDUCTOR		
L387	L41-2285-53	CHIP INDUCTOR		
L388	L41-2785-53	CHIP INDUCTOR		
L389	L41-2285-53	CHIP INDUCTOR		
L390	L41-2785-53	CHIP INDUCTOR		
L391	LK73H0BCR10J	M.CHIP INDUCTOR		
L392	LK73H0BC27NJ	M.CHIP INDUCTOR		
L393	LK73H0BC2N2S	M.CHIP INDUCTOR		
L394	LK73H0BC10NJ	M.CHIP INDUCTOR		
L395	LK73H0BC82NJ	M.CHIP INDUCTOR		
L396	LR79Z0GJR22G	CHIP INDUCTOR		
L397	LK73H0BC10NJ	M.CHIP INDUCTOR		
L398	LR79Z0GJ27NG	CHIP INDUCTOR		
L399	LR79Z0GJR22G	CHIP INDUCTOR		
L400	LR79Z0GJ27NG	CHIP INDUCTOR		
L401	LK73H0BC82NJ	M.CHIP INDUCTOR		
L402	LR79Z0GJR27G	CHIP INDUCTOR		
L403	LK73H0BC82NJ	M.CHIP INDUCTOR		
L404	LK73H0BCR10J	M.CHIP INDUCTOR		
L405	LK73G0ADR39J	M.CHIP INDUCTOR		
L406	LK73G0BB100K	M.CHIP INDUCTOR		
L407	LK73G0BB100K	M.CHIP INDUCTOR		
L408	LK73H0BC22NJ	M.CHIP INDUCTOR		
L409	L41-3378-14	CHIP INDUCTOR		
L410	L41-1878-14	CHIP INDUCTOR		
L411	L41-2785-53	CHIP INDUCTOR		
L412	L41-2785-53	CHIP INDUCTOR		
L413	LK73G0BB4R7K	M.CHIP INDUCTOR		
L414	LB73H0AV-003	CHIP FERRITE		
L417	L41-2285-53	CHIP INDUCTOR		
L576	LB73F0AH-003	CHIP FERRITE		
L577	LB73G0DK-004	CHIP FERRITE		
L578	LB73F0AH-003	CHIP FERRITE		
L579	LB73F0AH-003	CHIP FERRITE		
L580	LR79Z0HQ2R2M	CHIP INDUCTOR		
L581	LR79Z0HQ2R2M	CHIP INDUCTOR		
L582	LR73P0AX4R7N	CHIP INDUCTOR		
L583	LB73F0AH-003	CHIP FERRITE		
L584	LB73F0AH-003	CHIP FERRITE		
L585	LB73H0AV-003	CHIP FERRITE		
L586	LB73F0AH-003	CHIP FERRITE		
L587	LB73F0AH-003	CHIP FERRITE		
L588	LB73F0AH-003	CHIP FERRITE		
L672	LR79Z0GJ56NG	CHIP INDUCTOR		
L673	LR79Z0GJ12NG	CHIP INDUCTOR		
L674	LR79Z0GJR10G	CHIP INDUCTOR		
L675	LR79Z0GJR27G	CHIP INDUCTOR		
L676	LB73H0EC-001	CHIP FERRITE		
L678	LB73H0EC-001	CHIP FERRITE		
L700	LB73G0DV-001	CHIP FERRITE		
L701	LB73G0DV-001	CHIP FERRITE		
L702	LB73G0DV-001	CHIP FERRITE		
L703	LB73G0DV-001	CHIP FERRITE		
L704	LB73G0DV-001	CHIP FERRITE		
L705	LB73G0DK-004	CHIP FERRITE		
L706	L92-1101-05	CHIP FERRITE		
L707	L92-1101-05	CHIP FERRITE		
L708	LB73G0DV-001	CHIP FERRITE		
L709	LB73G0DK-004	CHIP FERRITE		
L710	LB73H0AV-002	CHIP FERRITE		
L711	LB73H0AV-002	CHIP FERRITE		
L712	LB73G0DK-004	CHIP FERRITE		
L713	LB73H0AV-002	CHIP FERRITE		
L714	LB73H0AV-002	CHIP FERRITE		
L715	LB73H0AV-002	CHIP FERRITE		
L720	LB73G0DK-004	CHIP FERRITE		
L721	LB73G0DK-004	CHIP FERRITE		
L880	LB73H0AV-003	CHIP FERRITE		
L881	LB73G0DK-004	CHIP FERRITE		
L882	LK73G0BB100K	M.CHIP INDUCTOR		
L883	LB73G0DK-004	CHIP FERRITE		
L930	LB73H0AV-002	CHIP FERRITE		
L931	LB73G0DV-001	CHIP FERRITE		
L932	LB73H0AV-003	CHIP FERRITE		
L933	L92-0487-05	CHIP FERRITE		
L934	L92-0487-05	CHIP FERRITE		
L937	LK73H0AM27NJ	M.CHIP INDUCTOR	27nH	
L938	LK73H0BC10NJ	M.CHIP INDUCTOR		
L939	L92-0487-05	CHIP FERRITE		
L942	LK73H0BC1N8S	M.CHIP INDUCTOR		
L943	L92-0487-05	CHIP FERRITE		
L944	L92-0487-05	CHIP FERRITE		
CN1	E41-3377-05	F.C.CONNECTOR		
CN181	EB760AF-0520A	B TO B CONNE		
CN182	EB770AF-0520C	B TO B CONNE		
CN183	EB160AG-2003A	B TO B CONNE		
CN184	EB170BB-2003A	B TO B CONNE		
CN201	E40-6421-15	PIN ASSY		
CN202	E40-6422-15	SOCKET FOR PIN		
CN400	EB760BE-0416A	B TO B CONNE		
CN401	EB770BE-0416A	B TO B CONNE		
CN500	EB760BE-0416A	B TO B CONNE		
CN501	EB770BE-0416A	B TO B CONNE		
CN661	E40-6422-15	SOCKET FOR PIN		
CN702	E40-6962-05	F.C.CONNECTOR		
CN703	J19-5386-05	HOLDER		
CN705	E41-3377-05	F.C.CONNECTOR		
CN706	E40-6421-15	PIN ASSY		
CN707	EC720AA-0506A	FFC FPC CONNE		

⚠ Symbol No.	Part No.	Part Name	Description	Local
CN931	E0E-0012-00	PIN SOCKET		
E700	F10-3236-05	SHIELDING CASE		
E930	F10-3228-15	SHIELDING CASE		
F1	F0B-0097-00	RADIATION PLATE		
F576	FZA10BQ-4R0	FUSE (CC)		
F577	FZA10BQ-3R15	FUSE (CC)		
F578	FZA10AC-1R6	FUSE (CC)	1.6A	
F579	FZA10AC-1R6	FUSE (CC)	1.6A	
FL700	L79-1984-05	FILTER		
FL701	L79-1984-05	FILTER		
FL702	L79-1984-05	FILTER		
FL703	L79-1984-05	FILTER		
FL704	L79-1984-05	FILTER		
FL931	----------	FILTER	*Note	
FL932	L79-1987-05	FILTER		
J576	E03-0170-05	DC JACK		
J700	E58-0566-05	R.RECEPTACLE		
J701	----------	JACK OTHERS	*Note	
J880	E11-0703-05	PHONE JACK		
MC880	T9B-0043-00	MIC ELEMENT		
OT1	F10-3227-05	SHIELDING COVER		
OT2	F1B-0040-00	SHIELDING CASE	OMAP	
OT3	J87-0005-35	FPC(LEAD FREE)		
OT4	F1B-0075-10	SHIELDING COVER		
P1	E2D-0022-00	TERMINAL		
P2	E2D-0022-00	TERMINAL		
P171	G0B-0067-00	EARTH SPRING		
S700	S70-0519-05	TACTILE PUSH SW		
S701	S70-0519-05	TACTILE PUSH SW		
S702	S70-0519-05	TACTILE PUSH SW		
S703	S70-0519-05	TACTILE PUSH SW		
S704	S70-0519-05	TACTILE PUSH SW		
S705	S70-0519-05	TACTILE PUSH SW		
S706	S70-0519-05	TACTILE PUSH SW		
S707	S70-0519-05	TACTILE PUSH SW		
S708	S70-0519-05	TACTILE PUSH SW		
S709	S70-0519-05	TACTILE PUSH SW		
S710	S70-0519-05	TACTILE PUSH SW		
S711	S70-0519-05	TACTILE PUSH SW		
S712	S70-0519-05	TACTILE PUSH SW		
S713	S70-0519-05	TACTILE PUSH SW		
S714	S70-0519-05	TACTILE PUSH SW		
S715	S70-0519-05	TACTILE PUSH SW		
S716	S70-0519-05	TACTILE PUSH SW		
S717	S70-0519-05	TACTILE PUSH SW		
S718	S70-0519-05	TACTILE PUSH SW		
S719	S70-0519-05	TACTILE PUSH SW		
S720	S70-0519-05	TACTILE PUSH SW		
S721	S70-0514-05	TACTILE PUSH SW		
S722	S70-0514-05	TACTILE PUSH SW		
S723	S70-0514-05	TACTILE PUSH SW		
TH1	B57331V2104J	THERMISTOR		
TH285	NCP15XV103J03	N THERMISTOR		
TH286	NCP15XV103J03	N THERMISTOR		
TH700	NCP18WB473J0S	N THERMISTOR	47kΩ	
VA576	LXES15AAA1133	VARISTOR		
VA577	LXES15AAA1133	VARISTOR		
VA700	LXES15AAA1133	VARISTOR		
VA701	LXES15AAA1133	VARISTOR		
VA702	LXES15AAA1133	VARISTOR		
VA881	LXES15AAA1133	VARISTOR		
VA882	LXES15AAA1133	VARISTOR		
VA883	LXES15AAA1133	VARISTOR		
VA884	LXES15AAA1133	VARISTOR		
VA931	LXES15AAA1133	VARISTOR		
X251	L7H-0066-00	SPXO		
X362	L77-3109-05	QUARTZ CRYSTAL		
X661	L78-1426-05	RESONATOR		
X671	L77-1802-05	QUARTZ CRYSTAL		
X700	L77-1802-05	QUARTZ CRYSTAL		
X701	L7H-0067-00	TCXO		
X702	L7H-0054-00	TCXO		
X930	L77-3123-05	TCXO		
X931	L77-3121-05	QUARTZ CRYSTAL		
XF281	L7B-0014-00	MCF		
XF282	L7B-0015-00	MCF		

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	----------	BATTERY	ACC 1800mAh	
2	----------	WARRANTY CARD		
3	B5A-0866-00	INST.MANUAL	ENG/SPA/FRE	
4	B5A-0867-00	INST.MANUAL	GER/DUT/ITA	
5	----------	PACKING FIXTURE		
6	----------	PACKING FIXTURE		
7	----------	PROTECTION BAG	SET	
8	----------	PROTECTION BAG	MANUAL	
9	----------	PROTECTION BAG	BELT HOOK SCREW	
10	H5A-0613-00	ITEM CARTON	ALL TYPE	
12	J29-0764-15	HOOK ASSY	ACC, KBH-20	
13	N09-6509-05	PAN HEAD SCREW	ACC, BELT HOOK(x2)	
14	T90-1106-05	WHIP ANTENNA	ACC, DUAL BAND	
15	W0H-0034-00	AC ADAPTER (CC)	ACC, E-TYPE	

MEMO

KENWOOD

JVC KENWOOD Corporation
Communications Systems Division

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