ICOM®

SERVICE MANUAL

UHF TRANSCEIVERS

IC-F80DT/DS
IC-F80T/S

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the **IC-F80DT/DS and IC-F80T/S** UHF TRANSCEIVERS at the time of publication.

MODEL	VERSION	SYMBOL	APCO25	10-KEYPAD
IC-F80DS	USA-02	[L]	Compatible	No
	USA-03	[H]		
	USA-04	[L]	Not compatible	
	USA-05	[H]		
IC-F80S	USA-06	[L]	FM only	
	USA-07	[H]		
IC-F80DT	USA-02	[L]	Compatible	Yes
	USA-03	[H]		
	USA-04	[L]	Not compatible	
	USA-05	[H]		
IC-F80T	USA-06	[L]	FM only	
	USA-07	[H]		

DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 7.2 V. Such a connection could cause a fire or electric hazard.

DO NOT expose the transceiver to rain, snow or any liquids.

DO NOT reverse the polarities of the power supply when connecting the transceiver.

DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.

ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<**SAMPLE ORDER**>

1130010100 S.IC	LMX2352TM	IC-F80DS	Main unit	5 pieces
8810010121 Screw	PH B0 M2×8 SUS SSBC	IC-F80DS	Chassis	10 pieces

Addresses are provided on the inside back cover for your convenience.

IC-F80DS/S

To upgrade quality, all electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

REPAIR NOTES

1. Make sure a problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated turning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a signal generator or a sweep generator.
7. **ALWAYS** connect a 30 dB to 40 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency coverage : 400–470 MHz
  450–520 MHz
- Type of emission : 11K0F3E/8K10F1E (Narrow)
  16K0F3E (Wide)
- Number of conventional channels : 256 channels (Max.)
- Antenna impedance : 50 Ω (Nominal)
- Operating temperature range : –22°F to 140°F
- Power supply requirement : Specified Icom's battery pack only
  (Operatable voltage; 7.2 V DC negative ground)
- Current drain (At 7.2 V DC ; approx.) :

RECEIVING		TRANSMITTING (at 4 W)
Stand-by	Max.audio	2.4 A
150 mA	600 mA	

- Dimensions (Projections not included) : 2 5/16 (W)× 5 31/32 (H)× 1 1/2 (D) in
- Weight (Except anntena, battery pack) : 9 5/32 oz (Approx.)

■ TRANSMITTER

- Output power (At 7.2 V DC) : 4 W
- Modulation : Variable reactance frequency modulation
- Maximum permissible deviation : ±2.5 kHz (Narrow)
  ±5.0 kHz (Wide)
- Frequency error : ±2.0 ppm
- Spurious emissions : 70 dB typ.
- Adjacent channel power : 60 dB (Narrow)
  70 dB (Wide)
- Audio harmonic distortion : Less than 3%
- Limiting charactor of modulator : 60–100% of max. deviation
- FM hum and noise : 35 dB typ. (Narrow)
  40 dB typ. (Wide)
- Audio frequency response : +2 dB to –8 dB of 6 dB/octave from 300 Hz to 2550 Hz (Narrow)
  +2 dB to –8 dB of 6 dB/octave from 300 Hz to 3000 Hz (Wide)
- Microphone impedance : 600 Ω

■ RECEIVER

- Receive system : Double conversion superheterodyne system
- Intermediate frequencies : 1st IF; 46.35 MHz, 2nd IF; 450 kHz
- Sensitivity : 0.32 μV typ. at 12 dB SINAD
- Squelch sensitivity (At threshold) : 0.32 μV typ.
- Adjacent channel selectivity : 68 dB (Narrow)
  73 dB (Wide)
- Spurious response : 73 dB
- Intermodulation rejection ratio : 65 dB (Narrow)
  73 dB (Wide)
- Hum and Noise : 35 dB (Narrow)
  40 dB (Wide)
- Audio output power : 0.35 W typ. at 5% distortion with an 8 Ω load
- Output impedance (Audio) : 8 Ω

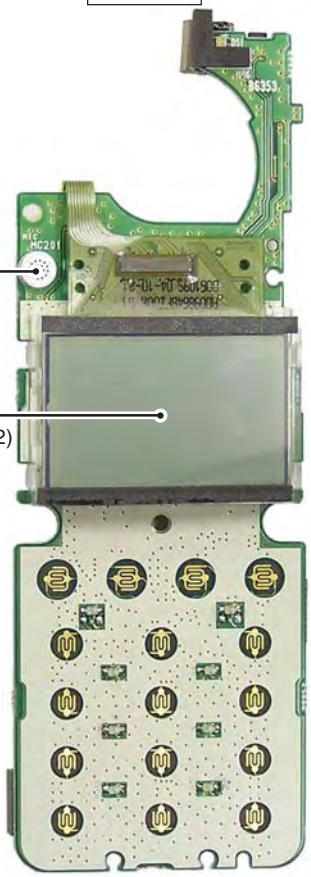
Specifications are measured in accordance with EIA-152-C/204D, TIA-603.

All stated specifications are subject to change without notice or obligation.

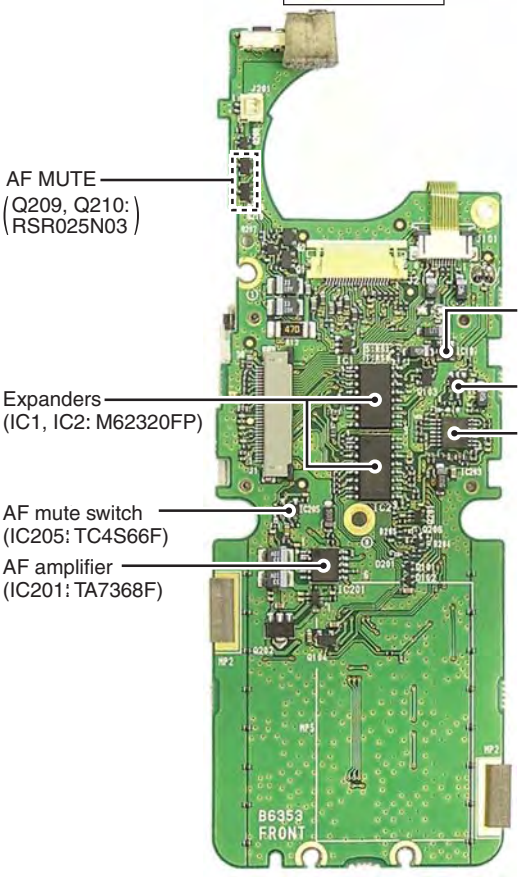
SECTION 2 INSIDE VIEWS

• FRONT UNIT

TOP VIEW

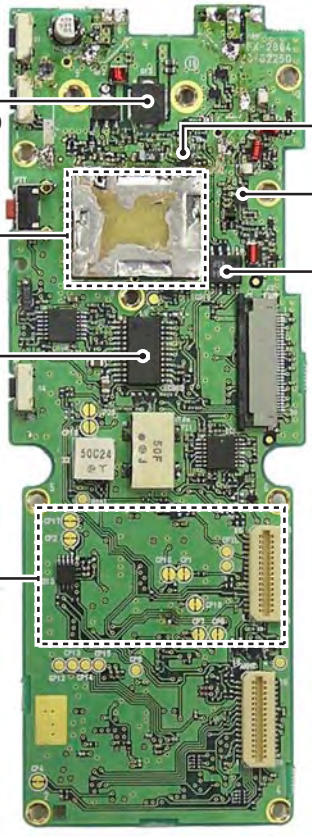


BOTTOM VIEW

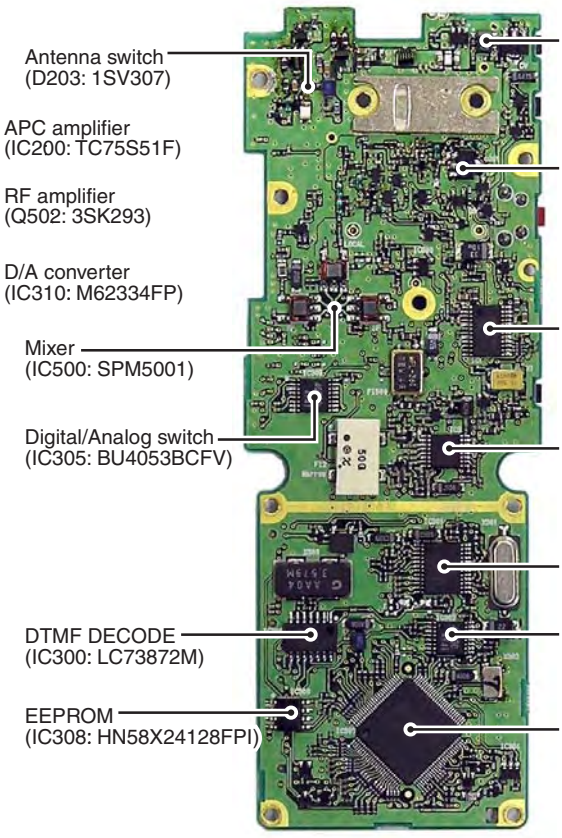


• MAIN UNIT

TOP VIEW



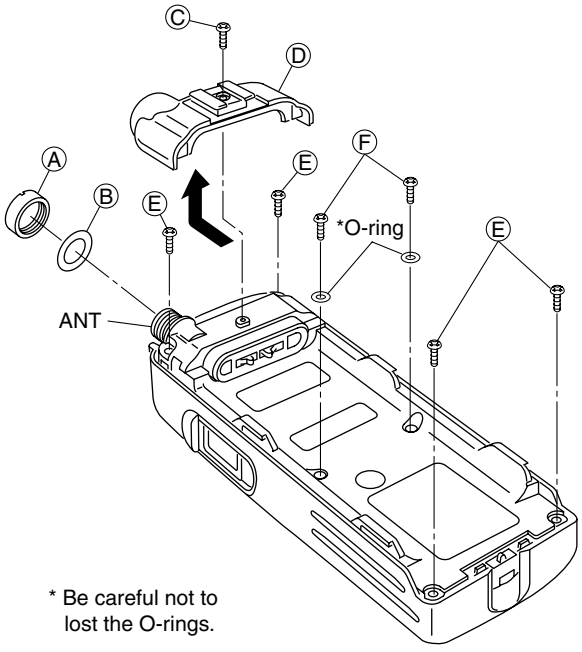
BOTTOM VIEW



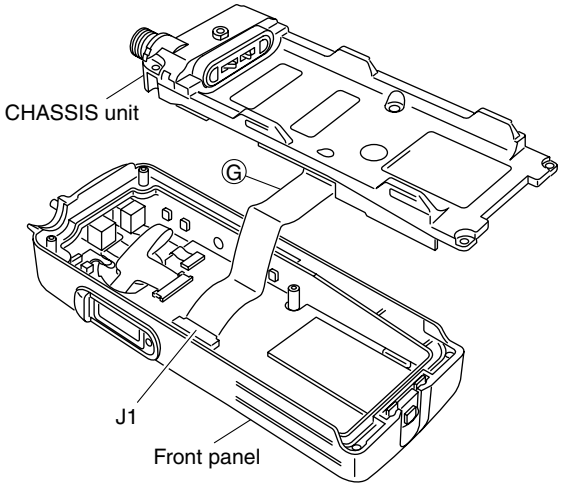
SECTION 3 DISASSEMBLY INSTRUCTIONS

• REMOVING THE CHASSIS UNIT

① Unscrew the ANT nut Ⓐ and remove the ANT washer Ⓑ.
② Unscrew the screw Ⓒ, and remove the rear panel Ⓓ in the direction of the arrow.
③ Unscrew 4 screws Ⓔ and 2 screws Ⓕ.

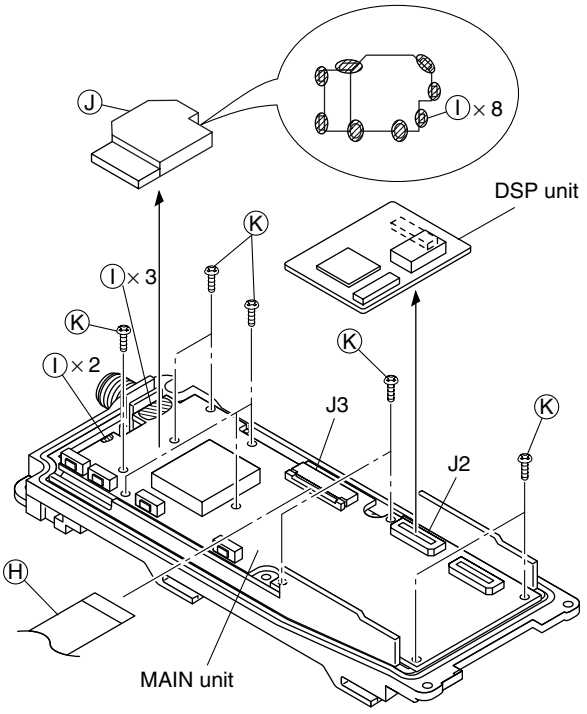


⑤ Disconnect the cable Ⓖ from J1 and remove the CHASSIS unit from the front panel.



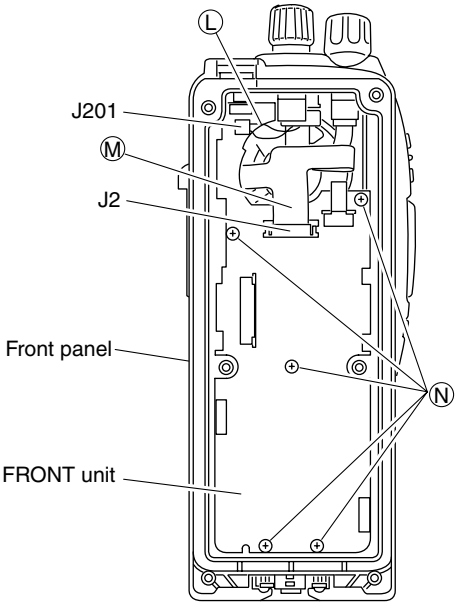
• REMOVING THE MAIN UNIT

① Disconnect the cable Ⓗ from J3.
② Remove the DSP unit from J2.
③ Unsolder 13 points Ⓘ and remove the shield plate Ⓙ.
④ Unscrew 10 screws Ⓚ and remove the MAIN unit from the CHASSIS.



• REMOVING THE FRONT UNIT

① Disconnect the speaker cable Ⓛ from J201.
② Disconnect the cable Ⓜ from J2.
③ Unscrew 5 screws Ⓝ and remove the FRONT unit from the front panel.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 ANTENNA SWITCHING CIRCUIT (MAIN UNIT)

The antenna switching circuit toggles the receive line and the transmit line. This circuit does not allow transmit signals to enter the receiver circuits.

Received signals from the antenna connector (CHASSIS UNIT; J1) are passed through a two-stage low-pass filter (LPF; L522, L523, C565–C569) and applied to the $\lambda/4$ type antenna switching circuit (D203, D510).

While receiving, no voltage is applied to D203 and D510. Thus, the receive line and the ground are disconnected and L520 and C564 function as an LPF which leads received signals to the RF circuits via the limiter (D509).

4-1-2 RF CIRCUITS (MAIN UNIT)

The RF circuits amplify received signals within the range of frequency coverage and filters off out-of-band signals.

The signals from the antenna switching circuit are passed through the two-stage tunable bandpass filters (BPF; D506, D507, L516, L517, C551, C552, C554–C556) to suppress unwanted signals. The filtered signals are amplified at the RF amplifier (Q502).

The amplified signals are passed through another two-stage tunable BPF (D502, D504, D505, L510, C520, C522, C523, C527, C530, C536, C538) to suppress unwanted signals again. The filtered signals are then applied to the 1st IF circuit.

4-1-3 1st IF CIRCUITS (MAIN UNIT)

The 1st IF circuits contain the 1st mixer, IF amplifier and the 1st IF filter circuits, and the 1st IF mixer converts the received signals into a fixed frequency of the 1st intermediate frequency (IF) signal. The converted 1st IF signal is filtered at the 1st IF filter, then amplified at the 1st IF amplifier.

The signals from the two-stage tunable BPF are converted into the 46.35 MHz 1st IF signal at the double-balanced type 1st mixer (IC500, L503, L504, L506) by being mixed with the 1st LO signal generated at the RX VCOs (Q600, D604, D605 for 400–434 MHz, Q601, D606, D607 for 435–470 MHz).

The 1st IF signal from the 1st mixer is passed through the crystal filter (FI500) to suppress unwanted signals, and then amplified at the 1st IF amplifier (Q500). The amplified 1st IF signal is applied to the FM IF IC (IC3, pin 16).

4-1-4 2nd IF AND FM DEMODULATOR CIRCUITS (MAIN UNIT)

The 1st IF signal is converted into the 2nd IF signal and demodulated at the detector section in the FM IF IC. The FM IF IC contains 2nd mixer, limiter amplifier, quadrature detector, etc. in its package.

The 1st IF signal from the 1st IF amplifier (Q500) is applied to the mixer section in FM IF IC (IC3, pin 16). The applied 1st IF signal is mixed with the 45.9 MHz 2nd LO signal generated by tripling the 15.3 MHz PLL reference frequency to be converted into the 450 kHz 2nd IF signal.

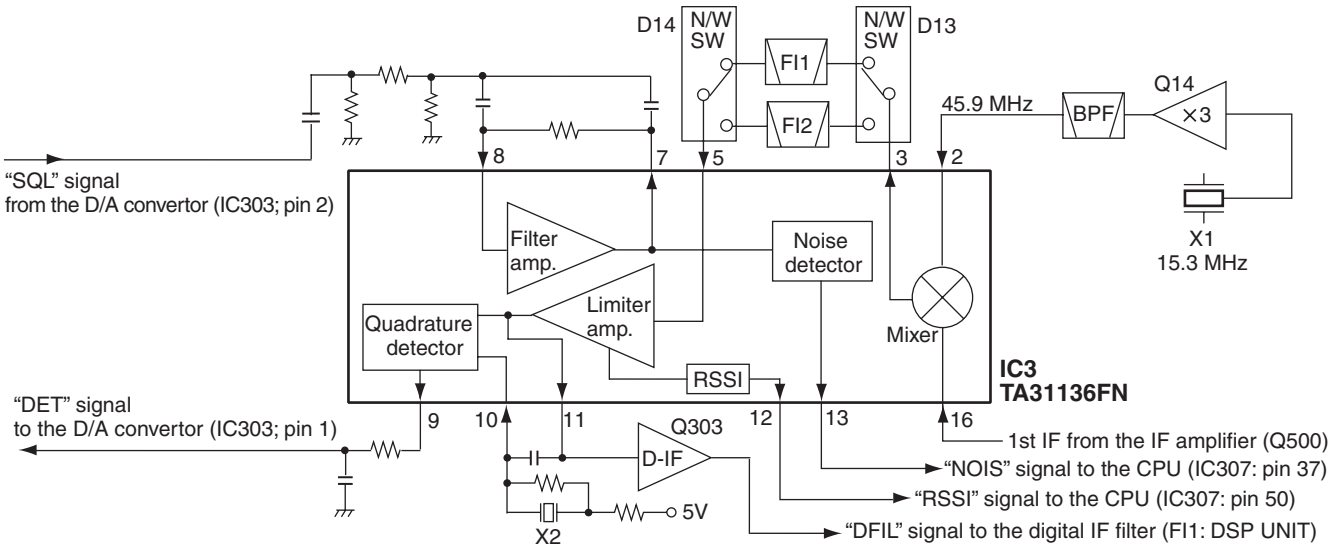
The 2nd IF signal from the mixer section is output from pin 3 and passed through the N/W switches (D13, D14) and a ceramic filter (FI1 or FI2) to suppress the heterodyne noise.

The N/W switches (D13, D14) toggle the receive mode wide and narrow according to "NWC" signal from the CPU (IC307, pin 19). FI1 is used for wide, and FI2 is used for narrow mode operation.

The filtered signal is applied to IC3 (pin 5) again, and amplified at the limiter amplifier section and demodulated by the quadrature detector.

The quadrature detector is a detection method which uses a ceramic discriminator (X2).

• 2ND IF AND DEMODULATOR CIRCUITS



The demodulated AF signals are output from pin 9, and applied to the AF cricuits.

4-1-5 AF CIRCUITS (MAIN AND FRONT UNITS)

The demodulated AF signals from the FM IF IC are amplified and filtered at AF circuit. This transceiver employs the base band IC for audio signal processing for both transmit and receive. The base band IC is an audio processor and composed of pre-amplifier, compressor, expander, scrambler, etc. in its package.

The AF signals from FM IF IC (IC3, pin 9) are applied to the base band IC (IC301, pin 23) via the digital/analog switch (IC302, pins 12, 14).

The applied AF signals are amplified at the amplifier section and level adjusted at the volume control section, and then suppressed unwanted 3 kHz and higher audio signals at LPF section. The filtered AF signals are applied or bypassed the TX/RX HPF, de-scrambler, de-emphasis and expander sections in sequence, then applied to another volume controller.

The TX/RX HPF filters out 250 Hz and lower audio signals, and the de-emphasis obtains –6 dB/oct of audio characteristics. The expander expands the compressed audio signals and also noise reduction function is provided.

The AF signals are level adjusted at the volume controller and amplified at the amplifier section. The amplified AF signals are output from pin 20 and applied to the D/A coverter (IC303, pin 16) to be adjusted its level. The level adjusted AF signals are then output from pin pin 15, and then applied to the FRONT UNIT via J3 (pin 28).

The level controlled AF signals from the MAIN UNIT are passed through the mute switch (FRONT UNIT; IC205, pins 1, 2) and applied to the AF power amplifier (FRONT UNIT; IC201, pin 4) to obtain 350 mW of AF output power. The power amplified AF signals are applied to the internal speaker (CHASSIS UNIT; SP1).

4-1-6 SQUELCH CIRCUITS (MAIN AND FRONT UNITS)

• NOISE SQUELCH

Noise squelch circuit mutes AF output signals when no RF signals are received. By detecting noise components in the demodulated AF signals, the squelch circuit switches the AF mute swithch and AF power amplifier controller ON and OFF.

A portion of the demodulated AF signals from the FM IF IC (IC3, pin 9) are applied to the converter (IC303, pin 1) to be adjusted its level. The level controlled signals are output from pin 2 and applied to the active filter (IC3, pins 7, 8; R74, R75, R77, R78, C137–C139). The filtered signals are applied to the filter amplifier section to amplify the noise components only.

The amplified noise components are converted into the pulse-type signal at the noise detector section, and output from pin 13 as the “NOIS” signal and applied to the CPU (IC307, pin 37). Then the CPU outputs “AFON” signal from pin 18 according to the “NOIS” signal level to toggle the AF mute circuit (FRONT UNIT; IC205) and AF amplifier controller (FRONT UNIT; Q202, Q203) ON/OFF.

• CTCSS AND DTCS

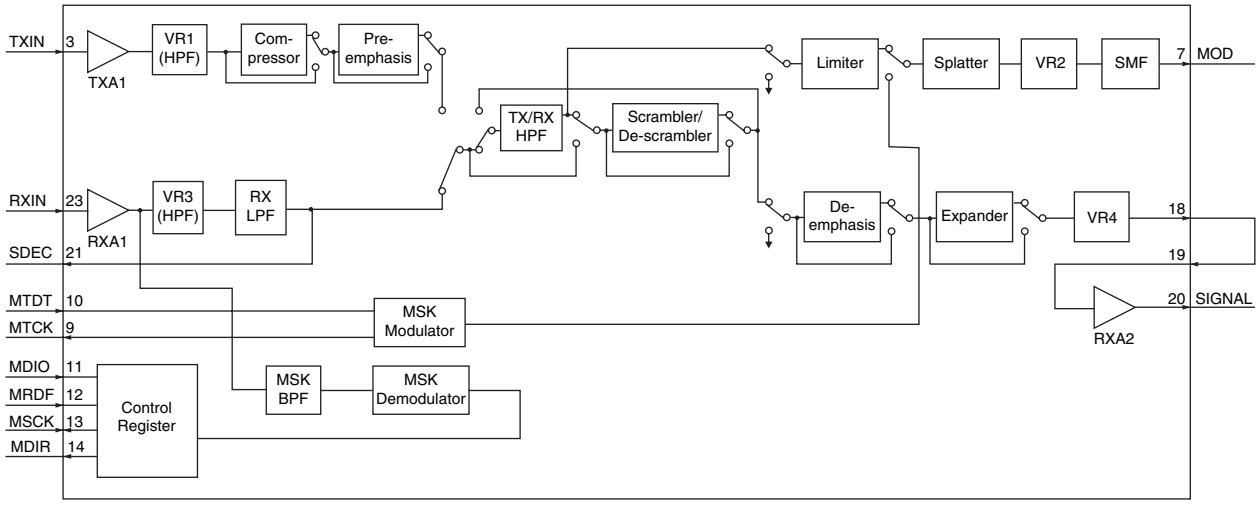
The tone squelch circuit detects tone signals and opens the squelch only when receiving a signal containing a matched sub audible tone (CTCSS or DTCS). When the tone squelch is in use, and a signal with a mismatched or no sub audible tone is received, the tone squelch circuit mutes the AF signals even when the noise squelch is open.

A portion of the demodulated AF signals from the FM IF IC are passed through the LPF (IC2, pins 12, 14) to filter CTCSS/DTCS signal. The filtered signal is applied to the CPU (IC307, pin 46) after being amplified at the buffer amplifier (IC2, pins 1, 3).

The CPU compares the applied signal and the set CTCSS/DTCS, then output the "AFON" signal to the AF mute switch (FRONT UNIT; IC205) and AF amplifier controller (FRONT UNIT; Q202, Q203) control signal from pin 18.

• BASE BAND IC BLOCK DIAGRAM

IC301 AK2346



4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHONE AMPLIFIER CIRCUIT (FRONT AND MAIN UNITS)

The microphone amplifier circuit amplifies the audio signals from microphone within +6 dB/oct pre-emphasis characteristic. The microphone signals are processed in the base band IC which contains microphone amplifier, compressor, scrambler, limiter, splatter filter, etc. in its package.

The audio signals from the microphone (FRONT UNIT; MC201) are passed through the microphone mute switch (FRONT UNIT; IC204 pins 1, 2). The switched signals are amplified at the microphone amplifiers (FRONT UNIT; IC203, pins 1, 2, 13, 14) to obtain within +6 dB/oct pre-emphasis characteristics. The amplified signals are applied to the MAIN UNIT via J1 (pin 2).

The amplified MIC signals from the FRONT UNIT are applied to the base band IC (IC301, pin 3). The applied MIC signals are amplified at the amplifier section, and level adjusted at the volume control section. The level adjusted MIC signals are applied or bypassed the compressor, pre-emphasis, TX/RX HPF, scrambler, limiter and splatter sections in sequence, then applied to another volume controller.

The compressor compresses the MIC signals to provide high S/N ratio for receive side, and the pre-emphasis obtains +6 dB/oct audio characteristics. The TX/RX HPF filters out 250 Hz and lower audio signals, the limiter limits its level and the splatter filters out 3 kHz and higher audio signals.

The filtered MIC signals are level adjusted at another volume control section and amplified at the amplifier section, and then output from pin 7 via smoothing section (SMF).

4-2-2 MODULATION CIRCUIT (MAIN UNIT)

The modulation circuit modulates the VCO oscillating signal with the audio signals from the microphone.

MIC signals from the base band IC (IC301) are passed through the MIC switch (IC302, pins 4, 5), PM filter (C338, R327), FM/PM switch (IC302, pins 1, 15), and then applied to the AF mixer (IC12, pin 2) to be mixed with CTCSS/DTCS signals.

The mixed MIC signals are output from pin 1 and then applied to the D/A converter (IC303, pin 4) to be adjusted its level. The level adjusted AF signals are output from pin 3 and applied to the modulation circuit (D611) to modulate the VCO oscillating signal by changing the reactance of D611 at the TX VCO (Q602, D608, D609).
The CTCSS/DTCS signals are generated by the CPU (IC307) and output from pins 89–91 (“CENC0,” “CENC1,” ”CENC2”). The CTCSS/DTCS signals are passed through 3 registers (R374–R376) to change its wave form. The wave form changed CTCSS/DTCS signals are then passed through the LPF (IC12, pins 8, 10) and applied to the converter (IC303, pin 9) to be adjusted its level, and output from pin 10.

The level adjusted CTCSS/DTCS signals are applied to the AF mixer (IC12, pin 2) to be mixed with MIC signals. The mixed CTCSS/DTCS signals are output from pin 1 and applied to the D/A converter (IC303, pin 4) to be adjusted its level again, then output from pin 3. The CTCSS/DTCS signals from the D/A converter are applied to the both of reference frequency oscillator (X1) and modulation circuit (D611) to modulate the reference frequency signal and VCO oscillating signal.

The modulated VCO output signal is amplified at the buffer amplifiers (Q605, Q606, Q609) and is then applied to the pre-drive amplifier (Q201) via the TX/RX switch (D200).

4-2-3 TRANSMIT AMPLIFIERS (MAIN UNIT)

The VCO output signal is amplified to transmit output power level by the transmit amplifiers .

The buffer-amplified signal from the TX/RX switch (D200) is applied to the pre-drive (Q201), drive (Q202), and power (Q203) amplifiers to be amplified to the transmit output power level.The power amplified transmit signal is passed through the power detector (D202, D204), antenna switch (D203), and two-stage LPFs (L522, L523, C565–C569), and then applied to the antenna connector (CHASSIS UNIT; J1).

4-2-4 APC CIRCUIT (MAIN UNIT)

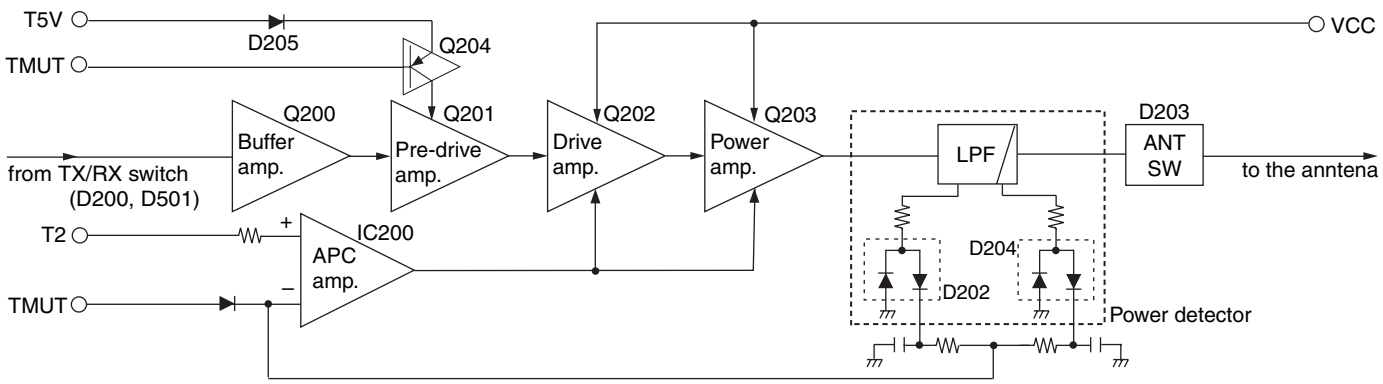
The APC (Automatic Power Control) circuit stabilizes transmit output power and controls transmit output power High or Low.

The power detector circuits (D202, D204) detect the transmit output signal level and converts it into DC voltage.

The detected voltage is applied to the APC amplifier (IC200, pin 3). The “T2” signal from the D/A converter (IC310, pin 2), controlled by the CPU (IC307), is applied to the another input (pin 1) for reference, and the "T2" signal also controls transmit output power (4 W, 2 W or 1 W).

The output voltage from the APC amplifier controls the bias of the drive amplifier (Q202) and power amplifier (Q203) to control the output power by comparing the detected voltage and the reference voltage. Thus the APC circuit maintains a constant transmit output power.

• APC CIRCUIT



4-3 PLL CIRCUITS

4-3-1 PLL CIRCUIT (MAIN UNIT)

The PLL circuit provides stable oscillation of the transmit frequency and receive 1st LO frequency. The PLL circuit compares the phase of the divided VCO frequency with the reference frequency. The PLL output frequency is controlled by the divided ratio (N-data) of the programmable divider.

The PLL circuit contains the two RX VCOs (Q600, D604, D605 for 400–434 MHz, Q601, D606, D607 for 435–470 MHz) and one TX VCO (Q602, D608, D609). The oscillated signal is amplified at the buffer amplifiers (Q605, Q606, Q608) and applied to the PLL IC (IC1, pin 6) after being passed through the LPF (L2, L3, C22, C25, C27, C28, C37).

The applied signal is divided at the prescaler and programmable divider section by the N-data ratio from the CPU (IC307). The divided signal is phase-compared with the devided reference frequency at the phase detector. The phase difference is output from pin 4 as a pulse signal after being passed through the charge pump section. The output signal is passed through the loop filter (R16, R17, C17, C24, C29, C31) to converted into the DC voltage, and is then applied to the VCO circuits as the lock voltage.

If the oscillated signal drifts, its phase changes from that of the reference frequency, causing a lock voltage change to compensate for the drift in the oscillated frequency.

4-3-2 VCO CIRCUITS (MAIN UNIT)

The VCO circuits contain separate two RX VCOs (Q600, D604, D605 for 400–434 MHz, Q601, D606, D607 for 435–470 MHz) and one TX VCO (Q602, D608, D609). The oscillated signal is amplified at the buffer amplifiers (Q605, Q606, Q609) and is then applied to the TX/RX switch (D200, D501). Then the receive 1st LO (RX) signal is applied to the 1st mixer (IC500, L503, L504, L506), and the transmit (TX) signal is applied to the buffer amplifier (Q200).

A portion of the signal from the buffer amplifier (Q605, Q606) is fed back to the PLL IC (IC1, pin 6) as the comparison signal via the buffer amplifier (Q608) and the LPF (L2, L3, C22, C25, C27, C28, C37).

4-4 POWER SUPPLY CIRCUITS

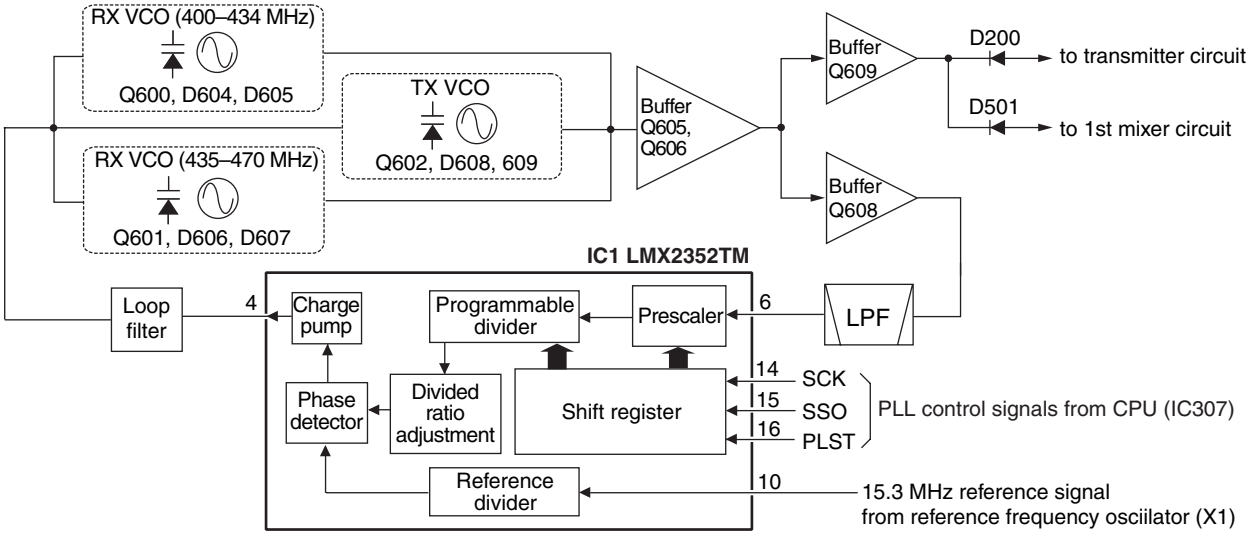
4-4-1 VOLTAGE LINES (MAIN UNIT)

LINE	DESCRIPTION
VCC	The voltage from the attached battery pack passed through the power switch (Q309).
CPU5V	Common 5 V for the CPU (IC307) converted from the VCC line at the CPU5V regulator (IC311).
5V	Common 5 V line converted from the VCC line at the +5V regulator (Q307, Q308).
T5V	5 V for the transmit circuits regulated from the 5V line by the T5V switch (Q305). The switch is controlled by the "T5C" signal from the CPU (IC307, pin 16).
S5V	5 V for the power save line regulated from the 5V line by the S5V switch (Q304). The switch is controlled by the "S5C" signal from the CPU (IC307, pin 27).
R5V	5 V for the receive circuits regulated from the 5V line by the R5V switch (Q306). The regulator is controlled by the "R5C" signal from the CPU (IC307, pin 26).

4-4-2 VOLTAGE LINES (DSP UNIT)

LINE	DESCRIPTION
DVDD3.3V	3.3 V for the CPU (IC12; DSP UNIT), DSP IC (IC7) and EEPROM (IC17) regulated from the 5V line by the +3VC regulator (IC1).
CVDD1.5V	1.5 V for the DSP IC (IC7) converted from the +5V line at the +1.5VA regulator (IC2).
+3VD	3.3 V for the A/D converter (IC8) and LINER CODEC IC (IC9) from the 5V line at the +3VD regulator (IC3).

• PLL CIRCUIT



4-5 DIGITAL CIRCUIT (IC-F80DT/DS only)

• WHILE RECEIVING

A portion of the 2nd IF sigal from the limiter amplifier section in the FM IF IC (IC3) is output from pin 11 and is applied to the 2nd IF amplifier (Q303). The amplified 2nd IF signal is applied to the DSP UNIT via J2 (pin 11).

The 2nd IF signal from the MAIN UNIT is passed through the ceramic BPF (DSP UNIT; FI1) to suppress heterodyne noise, and amplified again at the digital IF amplifier (DSP UNIT; IC5, pin 4). The amplified 2nd IF signal is applied to the A/D converter (DSP UNIT; IC8, pin 3) to be converted into digital IF data, then applied to the DSP IC (DSP UNIT; IC7). The DSP IC converts the digital IF into the digital audio signal.

The digital audio signal from the DSP IC are converted into analog audio signals at the LINER CODEC IC (IC9) and output from pin 16. The audio signals from the LINER CODEC IC are applied to the MAIN UNIT via J1 (pin 22).

The audio signals from the DSP UNIT are applied to the base band IC (MAIN UNIT; IC301, pin 20) after being passed through the digital/analog switch (MAIN UNIT; IC302).

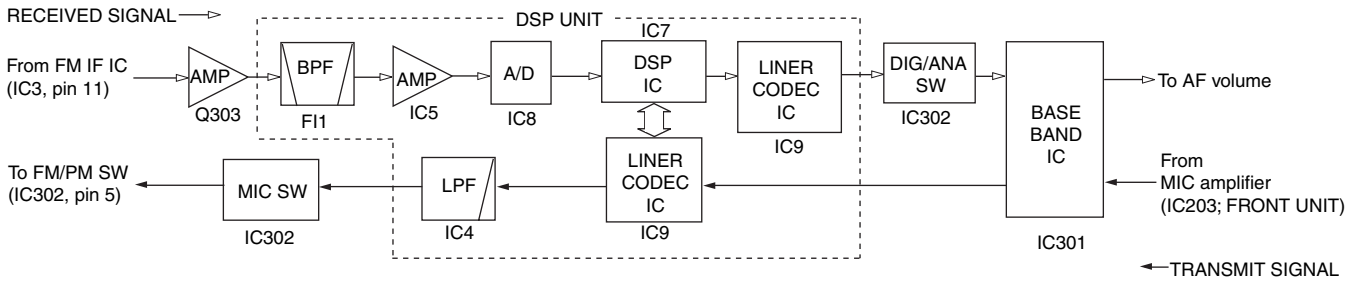
• WHILE TRANSMITTING

The microphone signals from the base band IC (IC301, pin 7) are applied to the DSP UNIT via J2 (pin 4).

The microphone signals from the MAIN UNIT are applied to the LINER CODEC IC (DSP UNIT; IC9, pin 2) to convert into the digital audio signal.

The converted digital audio signal is processed by the DSP IC (DSP UNIT; IC7), and applied to the LINER CODEC IC (DSP UNIT; IC9) again. The signal from the LINER CODEC IC (IC9, pin 15) is passed through the LPFs (DSP UNIT; IC4, pins 3, 4, 5, 7) and applied to the MAIN UNIT via J1, and then passed through the microphone switch (MAIN UNIT; IC302, pins 3, 4), FM filter (R328, C335), FM/PM switch (IC302, pins 2, 15).

• DIGITAL MODE BLOCK DIAGRAM



4-6 PORT ALLOCATIONS

4-6-1 CPU (IC307)

Pin number	Port name	Description
4–7	R1, R2, R4, R8	Input ports for rotary selector (VR UNIT; S1).
10	SSO	Outputs serial data to the PLL IC (IC1, pin 15) and D/A converter (IC303, pin 8).
11	SCK	Outputs clock signal to the PLL IC (IC1 pin 14) and D/A converter (IC303, pin 7), etc.
13	PLST	Outputs strobe signals to the PLL IC (IC1, pin 16).
15	DASW	Outputs control signal to the digital /analog switch (IC302). Low: While analog mode is selected.
16	TXC	Outputs the T5V switch (Q305) control signal. Low: During transmit.
17	TMUT	• Outputs the APC amplifier (IC200) control signal. • Outputs the TX switch (Q204, D205) control signal. Low: During receive.
18	AFON	Outputs control signal for AF mute circuit (FRONT UNIT; IC205) and AF power amplifier (FRONT UNIT; IC201). High: AF amplifier (IC201) is activated.
19	NWC	Outputs wide/narrow switch (D13, D14) control signal. High: When narrow mode is selected.

Pin number	Port name	Description
20	DDSD	Input port for serial data from the DTMF decoder IC (IC300, pin 9).
21	DDAC	Outputs clock signals to the DTMF decoder IC (IC300, pin 10).
26	R5C	Outputs R5V switch (Q306) control signal. High:While receiving.
27	S5C	Outputs S5V switch (Q304) control signal. High:In power save mode..
29	PTTO	Input port for optional unit. Low: Switch ON.
30	EM	Input port for the emegency switch (FRONT UNIT; S117). Low: While emegency switch is pushed.
32	RMUT	Input port for the AF mute signal from the optional unit via J1 or J2. Low: While RX audio is muted.
33	MMUT	Input port for the microphone mute signal from the optional unit via J1 or J2. Low: While microphone audio is muted.
34–36	OPT1–OPT3	I/O ports for the connected optional unit to J1.
37	NOIS	Input port for the noise signal from the FM IF IC (IC3, pin 13).

4-6-1 CPU (continued)

Pin number	Port name	Description
38	PWRSW	Input port for the [VOL] control (VR UNIT; R1). Low: While power is ON.
39	DDST	Input port for the decodedDTMF signals from the DTMF decoder IC (IC300, pin 11).
40	CIRQ	Inputs offering signal from the optional unit and DSP unit. Low: Offering signal is output.
41	PWRO	Outputs control signal for the power switch circuit (Q309, Q310). High: Power ON.
43	SENC	Outputs single tone encode signal.
44	BEEP	Outputs beep audio signals.
45	SDEC	Input port for single tone decode signal from the base band IC (IC301, pin 1).
46	CDEC	Input port for CTCSS/DTCS signal from the LPF (IC12, pin 7).
47	ULCK	Input port for the PLL unlock signal. Low: The PLL circuit is unlocked.
48	BATV	Input port for the connected battery pack for the low battery voltage detection. Low: The battery voltage is low.
49	LVIN	Input port for the PLL lock voltage.
50	RSSI	Input port for the "RSSI" signal from the FM IF IC (IC3, pin 12).
51	TEMP/ OPTV	• Input port for the transceiver's internal temperature detecting signal. High: Internal temperature is high. • Input port for the optional unit detecting signal. High: While connecting optional unit to the multiconnector.
55	SIDE1	Input port for [UP] switch (MAIN UNIT; S1). Low: While [UP] switch is pushed.
68	DAST	Outputs strobe signals to the D/A converter (IC303, pin 6).
69	DSDA	I/O port for data signal to the D/A converter (IC310, pin 6).
72	SPCON	Outputs "SPCON" signal. Low: Audio output.
78	MTCK	Input port for transmitting MSK clock signal from the base band IC (IC301, pin 9).
79	KR	Input port for key matrix. Low: While any of key on the 10-keypad (including [P0]–[P3]) is pushed.
80	FSDA	I/O port for the serial data signal for the expander (FRONT UNIT; IC2).
81	FSCL	Outputs clock signal to the expander (FRONT UNIT; IC2).
88	SIDE2	Input port for [DOWN] switch (MAIN UNIT; S2). Low: While [DOWN] switch is pushed.
89–91	CENC0–CENC2	Output the CTCSS/DTCS signals.
92	SIDE3	Input port for [MONITOR] switch (MAIN UNIT; S4). Low: While [MONITOR] switch is pushed.
93	MTDT	Outputs the MSK data to the base band IC (IC301, pin 10).
94	MDIR	Outputs serial data control signal to the base band IC (IC301, pin 14).
95	MDIO	I/O port for the serial data signals from/to the base band IC (IC301, pin 11).
96	MSCK	Outputs clock signal for the base band IC (IC301, pin 13).
97	PMFM	Outputs the the FM/PM switch (IC302, pin 11) control signal. High:While PM is selected.
98	ESDA	I/O port for data signals from/to the EEPROM (IC308, pin 5).
99	ESCL	Outputs clock signal to the EEPROM (IC308, pin 6).
100	CODE8	Output port for "CODE8" signal.

4-6-2 D/A CONVERTER (MAIN UNIT; IC303)

Pin number	Port name	Description
2	SQL	Outputs AF signals to the squelch circuit (IC3, pin 8).
3	MOD	Outputs modulation signals to the modulation circuit (D8).
10	TENC	Outputs CTCSS/DTCS signals.
11	BAL	Outputs deviation balance control signal.
14	BEPV	Outputs beep audio signals to the speaker via the AF amplifier (FRONT UNIT; IC201).
15	SIGNAL	Outputs AF signals to the speaker via the AF amplifiers (FRONT UNIT; IC201).
22	TONE	Outputs single tone signal.
23	REF	Outputs reference oscillator control signal.

4-6-3 D/A CONVERTER (MAIN UNIT; IC310)

Pin number	Port name	Description
1	T1	Outputs the bandpass filters (D18, D19) tuning signal.
2	T2	• While receiving: Outputs the bandpass filters (D15, D16) tuning signal. • While transmitting: Outputs the TX power control signal which selects TX output power of HIGH or LOW. The output signal is applied to the ALC amplifier (IC5, pin 1).
3	TXLVA	Outputs TX VCO lock voltage.
4	RXLVA	Outputs RX VCO lock voltage.

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

When adjusting IC-F80DT/DS/D/S, the optional CS-F70/F1700 ADJ ADJUSTMENT SOFTWARE (Rev. 1.1 or later), OPC-966 JIG CABLE (modified OPC-966 CLONING CABLE; see illustration page 5-2) are required.

■ REQUIRED TEST EQUIPMENTS

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 7.2 V DC Current capacity : 3 A or more	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
FM deviation meter	Frequency range : DC–600 MHz Measuring range : 0 to ±10 kHz	Attenuator	Power attenuation : 50 or 60 dB Capacity : 10 W
Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 0.1–600 MHz Output level : 0.1 µV to 32 mV (–127 to –17 dBm)
Digital multimeter	Input impedance : 10 MΩ/V DC or more	AC millivoltmeter	Measuring range : 10 mV to 10 V
RF power meter	Measuring range : 1–10 W Frequency range : 100–600 MHz Impedance : 50 Ω SWR : Better than 1.2 : 1	Oscilloscope	Frequency rang : DC–20 MHz Measuring range : 0.01–20 V
		External speaker	Input impedance : 8 Ω Capacity : 1 W or more

■ SYSTEM REQUIREMENTS

- Microsoft® Windows® 98/98SE/Me/2000/XP
- RS-232C serial port (D-sub 9 pin)

■ ADJUSTMENYT SOFTWARE INSTALLATION

① Quit all applications when Windows is running.
② Insert the CD into the appropriate CD drive.
③ Double-click the “Setup.exe” contained in the ‘CS-F70/F1700 ADJ’ folder in the CD drive.
④ The “Welcome to the InstallShield Wizard for CS-F70/F1700 ADJ” will appear. Click [Next>].
⑤ The “Choose Destination Location” will appear. Then click [Next>] to install the software to the destination folder. (e.g. C:\Program Files\Icom\CS-F70/F1700 ADJ)
⑥ After the installation is completed, the “InstallShield Wizard Complete” will appear. Then click [Finish].
⑦ Eject the CD.
⑧ Program group ‘CS-F70/F1700 ADJ’ appears in the ‘Programs’ folder of the start menu, and ‘CS-F70/F1700 ADJ’ icon appears on the desk top screen.

■ BEFORE STARTING SOFTWARE ADJUSTMENT

Clone the adjustment frequencies into the transceiver, and-set the configuration using with the CS-F70/F1700 CLONING SOFTWARE before starting the software adjustment. Otherwise, the transceiver can not start software adjustment.

CAUTION!: BACK UP the originally programmed memory data in the transceiver before programming the adjustment frequencies.
When program the adjustment frequencies into the transceiver, the transceiver’s memory data will be overwritten and lose original memory data at the same time.

■ STARTING SOFTWARE ADJUSTMENT

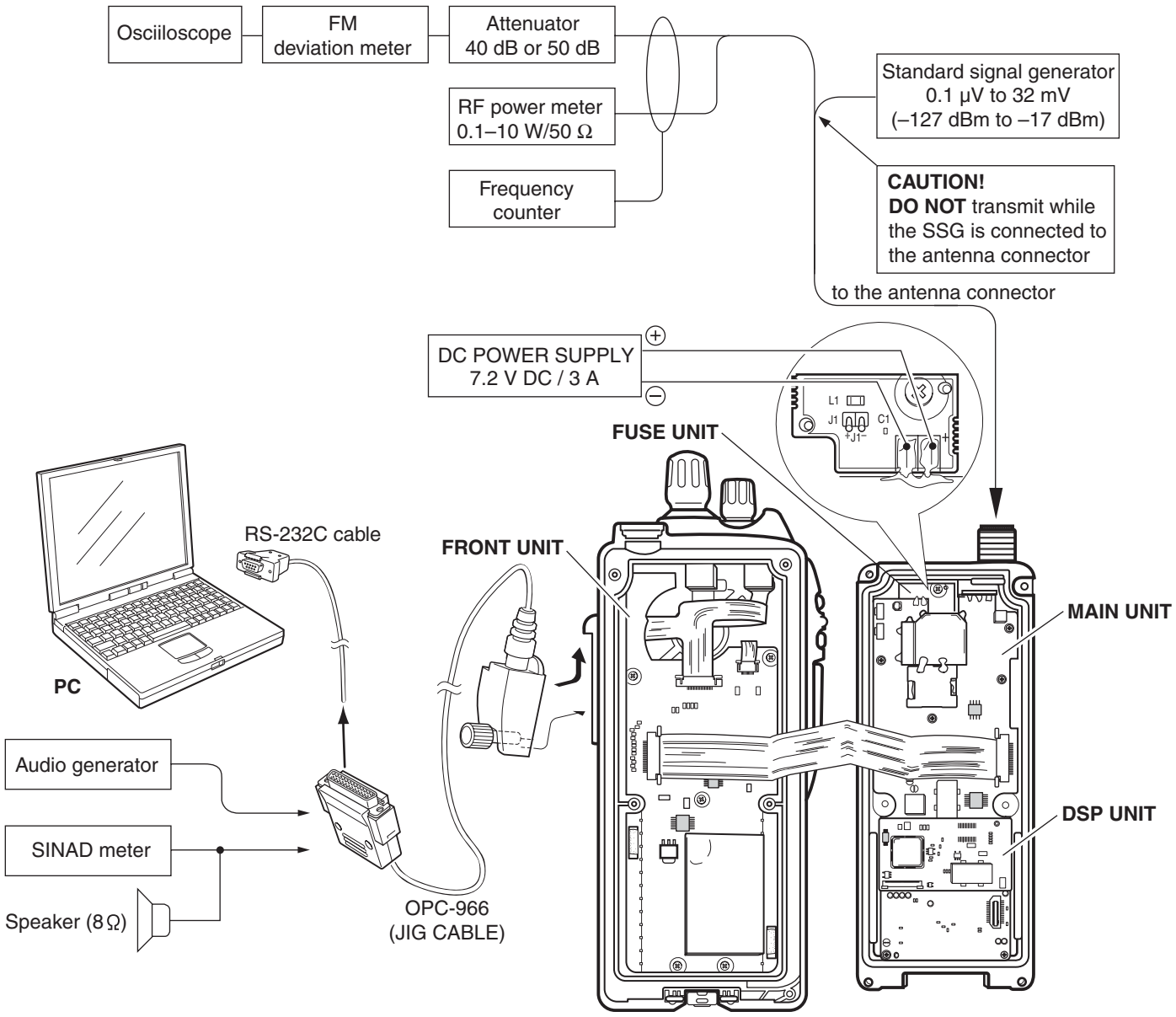
① Connect the transceiver and PC with OPC-966 JIG CABLE.
② Turn the transceiver power ON.
③ Boot up Windows, and click the program group ‘CS-F70/F1700 ADJ’ in the ‘Programs’ folder of the [Start] menu, then CS-F70/F1700 ADJ’s window appears.
④ Click ‘Connect’ on the CS-F70/F1700 ADJ’s window, then appears transceiver’s up-to-date condition.
⑤ Set or modify adjustment data as desired.

• ADJUSTMENT FREQUENCY LIST

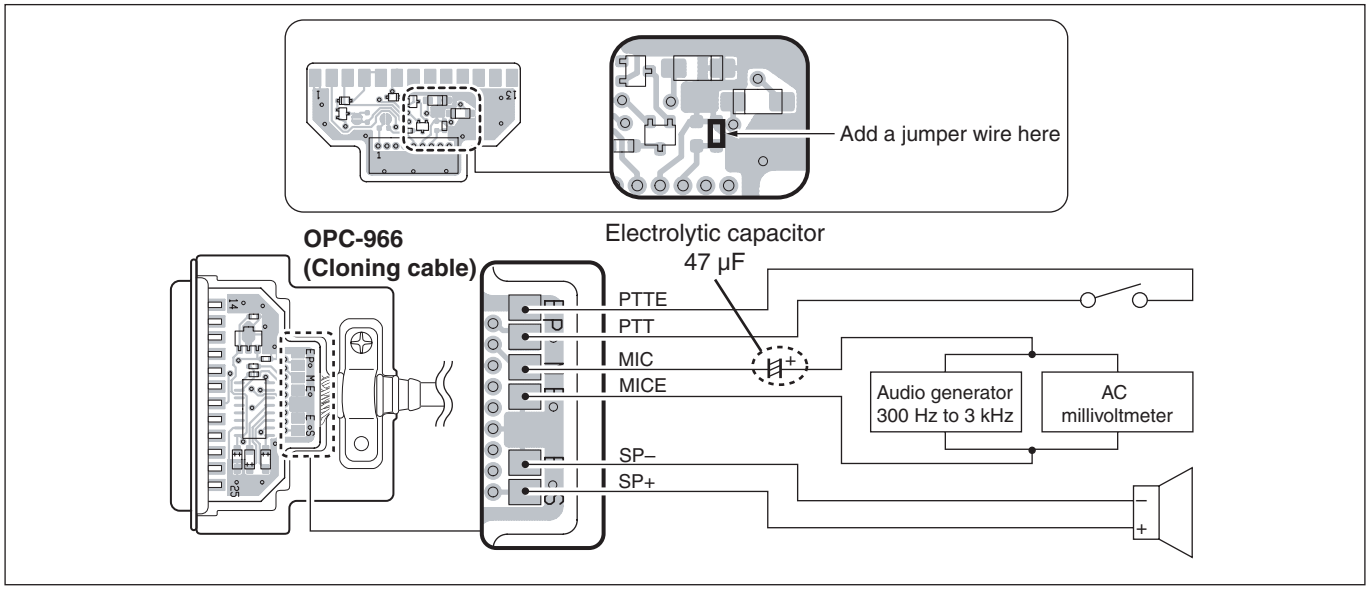
CH	FREQUENCY (MHz)		ADJUSTMENT ITEM
	[L]	[H]	
1	400.000	450.000	TX power : Low1 Mode : Narrow
2	435.000	485.000	TX power : Low1 Mode : Narrow
3	470.000	520.000	TX power : Low1 Mode : Narrow
4	435.000	485.000	TX power : Low1 Mode : Wide
5	400.000	450.000	TX power : Low1 Mode : Wide
6	435.000	485.000	TX power : High Mode : Wide
7	435.000	485.000	TX power : Low2 Mode : Wide
8	470.000	520.000	TX power : Low1 Mode : Wide
9*	435.000	485.000	TX power : Low1 Mode : Digital Preamble Length† : 270
10*	400.000	450.000	TX power : Low1 Mode : Digital Preamble Length† : 270
11*	470.000	520.000	TX power : Low1 Mode : Digital Preamble Length† : 270
12	435.000	485.000	TX power : Low1 Mode : Wide CTCSS : 151.4 Hz DTCS : 007

†; [USA-02], [USA-03], [USA-21], [USA-22] only
*; IC-F80DT/DS only

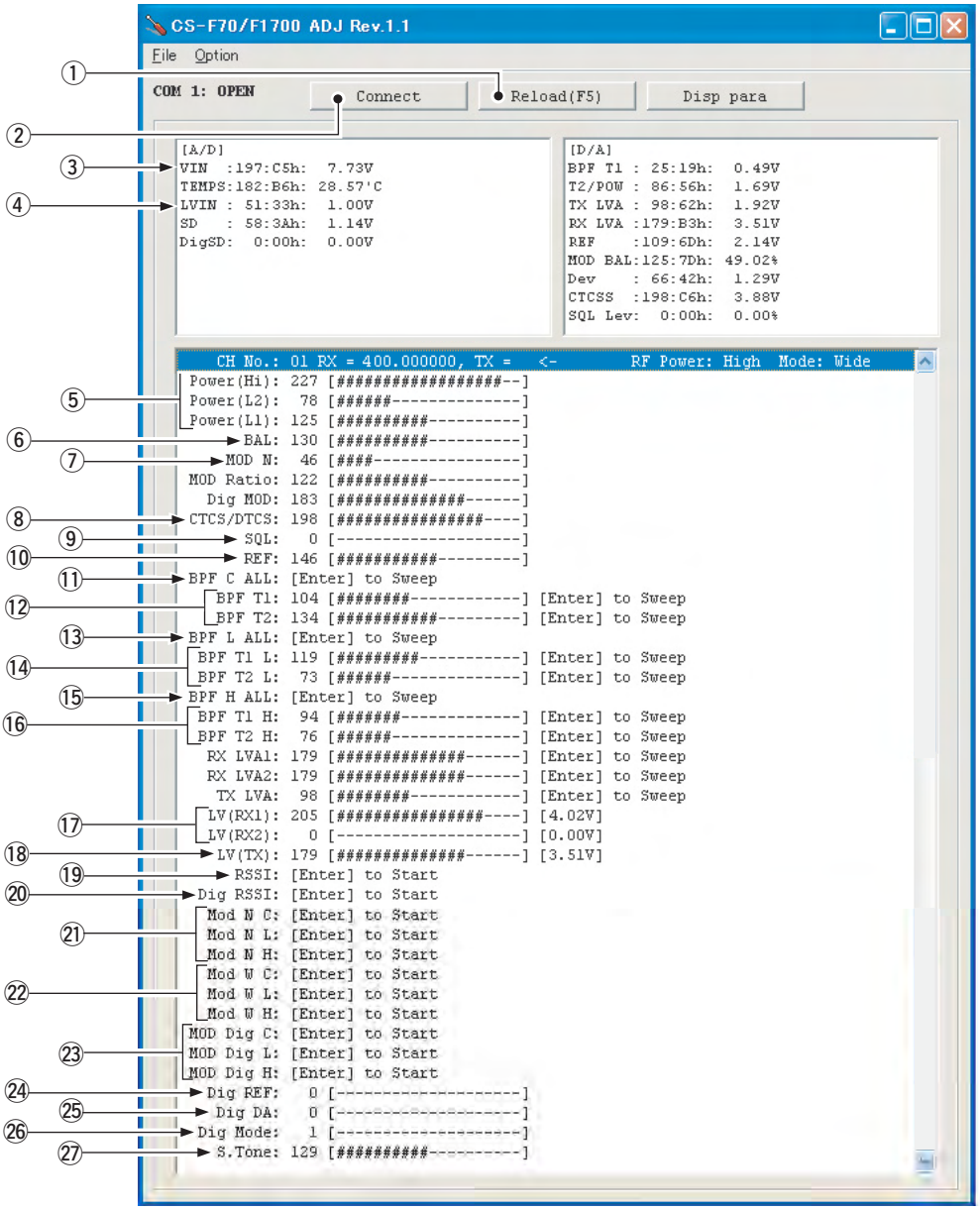
• CONNECTION



• JIG cable



• PC SCREEN EXAMPLE



NOTE: The above values for settings are example only.
Each transceiver has its own specific values for each setting.

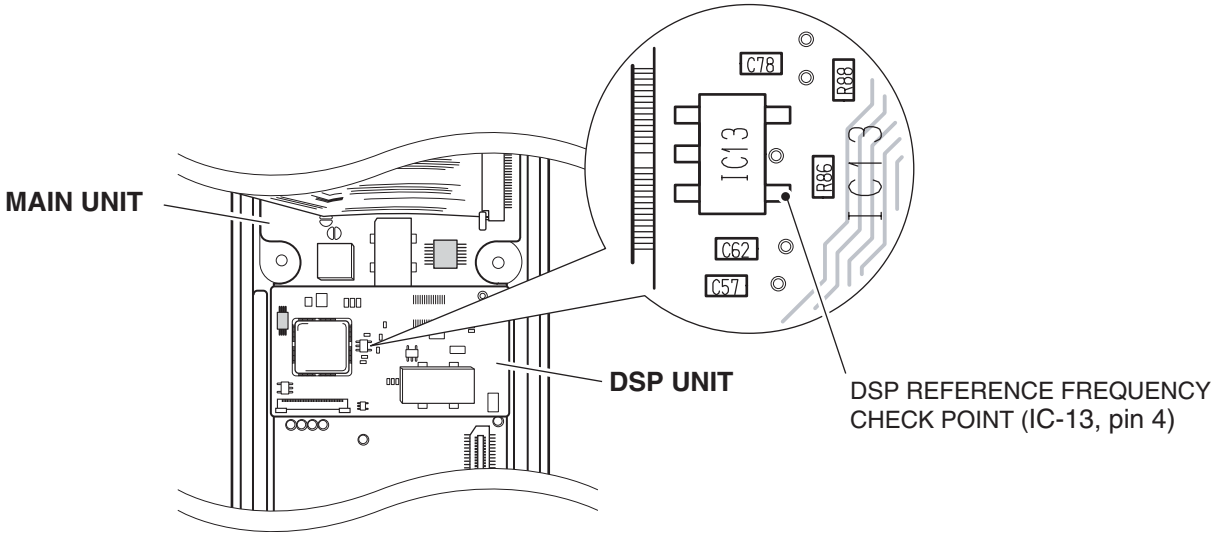
①: Reload adjustment data
②: Transceiver's connection state
③: Connected DC voltage measurement
④: PLL lock voltage measurement
⑤: RF output power
⑥: FM modulation balance
⑦: FM modulation preset
⑧: CTCSS/DTCS deviation
⑨: Squelch level
⑩: Reference frequency
⑪: Receive sensitivity for center (automatic)
⑫: Receive sensitivity for center (manual)
⑬: Receive sensitivity for low edge (automatic)
⑭: Receive sensitivity for low edge (manual)
⑮: Receive sensitivity for high edge (automatic)
⑯: Receive sensitivity for high edge (manual)
⑰: PLL lock voltage preset for RX (automatic)
⑱: PLL lock voltage preset for TX (automatic)
⑲: S-meter (FM)
⑳: S-meter (digital)
㉑: Deviation (narrow)
㉒: Deviation (wide)
㉓: Deviation (digital)
㉔: DSP reference frequency
㉕: Base band center voltage
㉖: Digital mode
㉗: 2/5 TONE, DTMF deviation

5-2 SOFT WARE ADJUSTMENT

Select an operation using [↑] / [↓] keys, then set specified value using [←] / [→] keys on the connected computer keyboard

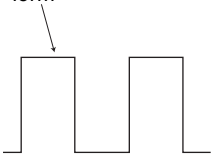
ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	OPERATION	
PLL LOCK VOLTAGE	1	• Operating CH. : CH 1 • Receiving	PC screen	Click [Reload (F5)] button, then check the "LVIN" item on the CS-F70/F1700 ADJ's screen.	0.75–1.45 V (Verify)
	2	• Operating CH. : CH 2 • Receiving			0.55–1.35 V (Verify)
	3	• Operating CH. : CH 3			0.55–1.15 V (Verify)
		• Connect an RF power meter or 50 Ω dummy load to the antenna connector.			
		• Transmitting			
REFERENCE FREQUENCY [REF]		• Operating CH. : CH 3 • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting	Top panel	Loosely couple a frequency counter to the antenna connector.	470.000000 MHz [L] 520.000000 MHz [H] ±100 Hz
DSP REFERENCE FREQUENCY* [Dig REF]		• Operating CH. : CH 8 • Receiving	DSP unit	Connect a frequency counter to the pin 4 of IC13 on the DSP unit through a 1000 pF capacitor. (see the illust below)	12.288000 MHz
BASE BAND CENTER VOLTAGE* [Dig DA]		• Operating CH. : CH 8 • Receiving	PC screen	Set the "Dig DA" item to 70.	

*; IC-F80DT/DS only



SOFTWARE ADJUSTMENT (Continued)

Select an operation using [↑] / [↓] keys, then set specified value using [←] / [→] keys on the connected computer keyboard

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	OPERATION	
OUTPUT POWER [Power (Hi)]	1	• Operating CH. : CH 6 • Transmitting	Top panel	Connect an RF power meter to the antenna connector.	4.0 W
[Power (L2)]	2	• Operating CH. : CH 7 • Transmitting			2.0 W
[Power (L1)]	3	• Operating CH. : CH 2 • Transmitting			1.0 W
MODULATION BALANCE [BAL]	1	• Operating CH. : CH 4 • Preset [MOD N] : 30 • No audio applied to the JIG cable. • Set an FM deviation meter as; HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Push [P0] while transmitting.	Top panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to square wave form 
FM DEVIATION (NARROW) [MOD N C]	1	• Operating CH. : CH 2 • Connect an audio generator to the JIG cable and set as; : 1.0 kHz/150 mV rms • Set an FM deviation meter as; HPF : OFF LPF : 20 kHz De- emphasis : OFF Detector : (P–P)/2 • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±2.00 to ±2.10 kHz
(NARROW) [MOD N L]	2	• Operating CH. : CH 1 • Transmitting			
(NARROW) [MOD N H]	3	• Operating CH. : CH 3 • Transmitting			
(WIDE) [MOD W C]	4	• Operating CH. : CH 4 • Transmitting			±4.00 to ±4.20 kHz
(WIDE) [MOD W L]	5	• Operating CH. : CH 5 • Transmitting			
(WIDE) [MOD W H]	6	• Operating CH. : CH 8 • Transmitting			

SOFTWARE ADJUSTMENT (Continued)

Select an operation using [↑] / [↓] keys, then set specified value using [←] / [→] keys on the connected computer keyboard

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	OPERATION	
DIGITAL DEVIATION* [MOD Dig C]	1	• Preset [Dig Mode] : 7	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±2.80 to ±2.90 kHz
	2	• Operating CH. : CH 9 • Set an FM deviation meter as; HPF : OFF LPF : 20 kHz De- emphasis : OFF Detector : (P–P)/2 • Transmitting			
[MOD Dig L]	3	• Operating CH. : CH 10 • Transmitting			
[MOD Dig H]	4	• Operating CH. : CH 11 • Transmitting			
DIGITAL DEVIATION* [MOD Dig C]	1	• Preset [Dig Mode] : 6	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±0.91 to ±1.01 kHz (Verify)
	2	• Operating CH. : CH 9 • Transmitting			
[MOD Dig L]	3	• Operating CH. : CH 10 • Transmitting			
[MOD Dig H]	4	• Operating CH. : CH 11 • Transmitting			
CTCSS/DTCS DEVIATION [CTCSS/DTCS]	1	• Operating CH. : CH 12 • No audio applied to the JIG cable. • Set an FM deviation meter as; HPF : OFF LPF : 20 kHz De- emphasis : OFF Detector : (P–P)/2 • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±0.60 to ±0.70 kHz
2/5 TONE /DTMF DEVIATION [S.Tone]	1	• Operating CH. : CH 2 • No audio applied to the JIG cable. • Set an FM deviation meter as; HPF : OFF LPF : 20 kHz De- emphasis : OFF Detector : (P–P)/2 • Push [P3] while transmitting.	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±1.50 kHz

*; [IC-F80DT/DS] only

SOFTWARE ADJUSTMENT (continued)

• Select an operation using [↑] / [↓]keys, then set specified value using [←] / [→] keys on the connected computer keyboard

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	LOCATION	
RX SENSITIVITY [BPF T1], [BPF T2]	**NOTE:** Need to adjust "S-METER ADJUSTMENT" after "RX SENSITIVITY ADJUSTMENT" is adjusted. Otherwise, "S-METER ADJUSTMENT" will not be adjusted properly.				
	1	• Operating CH : CH 4 • Connect the SSG to the antenna connector and set as; Frequency : 435.000 MHz [L] 485.000 MHz [H] Level : +20 dBμ† (–87 dBm) Modulation : 1 kHz Deviation : ±3.0 kHz • Receiving	PC screen	Connect the SINAD meter with an 8 Ω load to the JIG cable.	Minimum distortion level
[BPF T1 L], [BPF T2 L]	2	• Operating CH : CH 5 Frequency : 400.000 MHz [L] 450.000 MHz [H] • Receiving			
[BPF T1 H], [BPF T2 H]	3	• Operating CH : CH 8 Frequency : 470.000 MHz [L] 520.000 MHz [H] • Receiving			
		CONVENIENT: The BPF C/L/H can be adjustment automatically. ①-1: Put the cursor on "BPF C/L/H ALL" and then push [ENTER] key. ①-2: The connected PC tunes BPF C/L/H to peak levels. or ②-1: Put the cursor on the one of "BPF C/L/H" as desired. ②-2: Push [ENTER] key to start tuning. ②-3: Repeat ②-1 and ②-2 to perform additional BPF tuning.			
Digital RSSI* [Dig RSSI]	1	• Operating CH. : CH 9 • Connect the SSG to the antenna connector and set as; Frequency : 435.000 MHz [L] 485.000 MHz [H] Level : –20 dBμ† (–127 dBm) Modulation : No modulation • Receiving	Put the cursor on "Dig RSSI" and push the [ENTER] key to set the Digial RSSI level.		
S-METER [RSSI]	1	• Operating CH. : CH 4 • Connect the SSG to the antenna connector and set as; Frequency : 435.000 MHz [L] 485.000 MHz [H] Level : +23 dBμ† (–84 dBm) Modulation : 1 kHz Deviation : ±3.0 kHz • Receiving	Push the [ENTER] key on the connected computer's keyboard to set "S3" level.		
	2	• Set the SSG as; Level : –7dBμ† (–114 dBm) • Receiving	Push the [ENTER] key on the connected computer's keyboard to set "S1" level.		
SQUELCH LEVEL [SQL]	1	• Operating CH. : CH 4 • Connect the SSG to the antenna connector and set as; Frequency : 435.000 MHz [L] 485.000 MHz [H] Level : –14dBμ† (–121 dBm) Modulation : 1 kHz Deviation : ±3.0 kHz • Receiving	Top panel	Connect speaker to the JIG cable.	Set the SQL level to close squelch. Then set SQL level at the point where the audio signals just appears.

†; The output level of the standard signal generator (SSG) is indicated as the SSG's open circuit.

*; [IC-F80DT/DS] only

SECTION 6 PARTS LIST

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1110006440	S.IC M62320FP DF5J	B	20.7/73.6
IC2	1110006440	S.IC M62320FP DF5J	B	20.7/62.5
IC101	1180002400	S.REG S-812C30AMC-C2K-T2	B	9.4/80.8
IC201	1110001810	S.IC TA7368F (ER)	B	28.5/47.4
IC203	1110005340	S.IC NJM12902V-TE1	B	8.2/68
IC204	1130004200	S.IC TC4S66F (TE85R)	B	7.6/75.9
IC205	1130004200	S.IC TC4S66F (TE85R)	B	34/56.1
Q1	1590000980	S.TR DTB123EK T146	B	34.6/94.7
Q2	1590000980	S.TR DTB123EK T146	B	34.4/98.3
Q102	1590001940	S.TR DTC144EE TL	B	26.2/72.9
Q103	1590000980	S.TR DTB123EK T146	B	12.7/76.7
Q104	1590000980	S.TR DTB123EK T146	B	28.2/35.7
Q201	1590002230	S.TR UMG2N TL	B	14/55
Q202	1520000450	S.TR 2SB1132 T100 Q	B	35.4/37.3
Q203	1590001190	S.TR XP6501-(TX) AB	B	29.9/42.1
Q206	1590002430	S.TR DTA144EE TL	B	14/50.9
Q207	1590000430	S.TR DTC144EUA T106	B	37.1/96.5
Q208	1530002840	S.TR 2SC4116-Y (TE85R)	B	41.4/113
Q209	1560001330	S.FET RSR025N03	B	41.1/109.5
Q210	1560001330	S.FET RSR025N03	B	41.1/105.4
D1	1730002530	S.ZEN NNCD6.2G-T1	B	25.2/81.6
D101	1160000140	S.DIO DAP222 TL	B	15.3/47.1
D102	1160000140	S.DIO DAP222 TL	B	15.3/45
D201	1790001250	S.DIO MA2S111-(TX)	B	17.2/49
D202	1790001250	S.DIO MA2S111-(TX)	B	10.9/71.5
D203	1790001250	S.DIO MA2S111-(TX)	B	36.2/54.2
D204	1790001250	S.DIO MA2S111-(TX)	B	12.3/50.9
D205	1790001250	S.DIO MA2S111-(TX)	B	14.9/52.7
L1	6200004720	S.COL MLF1608D R10K-T	B	30.3/87.8
L2	6200004720	S.COL MLF1608D R10K-T	B	28.9/88.5
L3	6200004720	S.COL MLF1608D R10K-T	B	26.3/87.1
L4	6200004720	S.COL MLF1608D R10K-T	B	21.6/89.7
L5	6200004720	S.COL MLF1608D R10K-T	B	25.1/88.1
L6	6200004720	S.COL MLF1608D R10K-T	B	31.2/90.2
L7	6200004720	S.COL MLF1608D R10K-T	B	23.9/86.1
R1	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	34.8/127
R2	7030007280	S.RES ERJ2GEJ 331 X (330 Ω)	T	34.8/126.1
R3	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	36.5/93.5
R4	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	26.1/77
R5	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	26.1/75.8
R6	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	25.7/67
R7	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	25.8/65.1
R11	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	21.3/86.2
R12	7030001090	S.RES MCR50JZHJ 47 Ω (470)	B	33.7/83.9
R13	7030003440	S.RES ERJ3GEYJ 102 V (1 kΩ)	B	27.5/87.1
R15	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	22.8/86.3
R16	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	28.2/85
R30	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40.7/74.4
R31	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40.7/75.3
R32	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40.7/76.2
R33	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40.5/77.1
R34	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	17.2/89.4
R35	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	18.1/89.3
R36	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	19/89.3
R37	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	19.9/89.3
R38	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	40.7/65.6
R40	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40.7/72.5
R50	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ) [F80DT/T] only	B	16.4/79.1
R51	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ) [F80DS/S] only	B	17/80.6
R101	7030007270	S.RES ERJ2GEJ 151 X (150 Ω)	B	12.6/78.9
R102	7030008370	S.RES ERJ2GEJ 561 X (560 Ω)	B	11.1/78.3
R103	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	18.2/33.6
R104	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	15.4/57.1
R105	7030007250	S.RES ERJ2GEJ 220 X (22 Ω)	B	9.1/93.2
R106	7030007250	S.RES ERJ2GEJ 220 X (22 Ω)	B	10/93.2
R107	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	14.1/57.9
R108	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	14.8/60.7
R109	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	15.2/62.5
R110	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	26.6/58.8
R111	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	26.6/59.7
R112	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	26.6/60.6
R113	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	26.6/61.5
R115	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	12.8/94.2
R116	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	40/67.7
R201	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	17.6/55

[L]=Low band, [H]=High band

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R202	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	16.3/54.2
R203	7030003830	S.RES ERJ3GEYJ 185 V (1.8 MΩ)	B	26.8/71.1
R204	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	15.5/48.9
R205	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	14.5/49.2
R207	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	11.8/63.6
R208	7030007060	S.RES ERJ2GEJ 684X (680 kΩ)	B	12.6/69.7
R209	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	B	13.8/68.6
R210	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	B	13.8/66.8
R211	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	13.8/69.5
R212	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	Mar-69
R213	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	31.5/57.4
R214	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	B	36.2/56.3
R215	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	27.2/42.1
R216	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	13.6/49.2
R217	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	B	10.2/64.5
R219	7030003860	S.RES ERJ3GE JPW V	B	7.3/64.3
R221	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	6.4/63.2
R222	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)	B	34.5/51
R223	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	3/69.9
R224	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	2.8/67.1
R225	7030009140	S.RES ERJ2GEJ 272 X (2.7 kΩ)	B	30.2/43.9
R226	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	27.2/43.9
R227	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	16.7/51.2
R228	7030005700	S.RES ERJ2GEJ 274 X (270 kΩ)	B	5.1/64.9
R229	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	9.3/72.6
R231	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	3/68.1
R232	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	7.6/72.6
R235	7030007260	S.RES ERJ2GEJ 330 X (33 Ω)	B	27.6/51.9
R236	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)	B	27.6/51
R237	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	5.6/78.2
R238	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	6/79.4
R239	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	B	36.5/99.3
R240	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	B	38.5/98.7
R241	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	36.9/98.4
R242	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	41.9/114.9
R250	7030003860	S.RES ERJ3GE JPW V	B	27.2/68.1
R251	7030003860	S.RES ERJ3GE JPW V	B	40.2/78.8
R259	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	16.6/87.8
R260	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	15.7/87.8
R261	7030003860	S.RES ERJ3GE JPW V	B	41.3/71.5
R262	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	16.7/53
R263	7030010040	S.RES ERJ2GE-JPW	B	40.5/46
R264	7030010040	S.RES ERJ2GE-JPW	B	40.5/40
R265	7030010040	S.RES ERJ2GE-JPW	B	40.5/34
R266	7030010040	S.RES ERJ2GE-JPW	B	40.5/28
R267	7030010040	S.RES ERJ2GE-JPW	B	40.5/22
R268	7030010040	S.RES ERJ2GE-JPW	B	40.5/15.9
R269	7030010040	S.RES ERJ2GE-JPW	B	40.5/10
R270	7030010040	S.RES ERJ2GE-JPW	B	40.5/4
R271	7030010040	S.RES ERJ2GE-JPW	B	5.4/46
R272	7030010040	S.RES ERJ2GE-JPW	B	5.4/40
R273	7030010040	S.RES ERJ2GE-JPW	B	5.4/34
R274	7030010040	S.RES ERJ2GE-JPW	B	5.5/28
R275	7030010040	S.RES ERJ2GE-JPW	B	5.5/16
R276	7030010040	S.RES ERJ2GE-JPW	B	5.5/4
R277	7030010040	S.RES ERJ2GE-JPW	B	5.5/10
R278	7030010040	S.RES ERJ2GE-JPW	B	5.5/22
C2	4030016790	S.CER ECJ0EB1C103K	B	21.3/87.6
C3	4030017460	S.CER ECJ0EB1E102K	B	17.1/86.6
C4	4030016930	S.CER ECJ0EB1A104K	B	15.3/75.2
C5	4030016930	S.CER ECJ0EB1A104K	B	15.2/64.3
C6	4030017460	S.CER ECJ0EB1E102K	B	15.3/74.3
C7	4030017460	S.CER ECJ0EB1E102K	B	15.2/63.4
C8	4030017430	S.CER ECJ0EC1H101J	B	22.7/83.3
C9	4030017430	S.CER ECJ0EC1H101J	B	19.4/86.3
C10	4030017430	S.CER ECJ0EC1H101J	B	19/87.8
C11	4030017460	S.CER ECJ0EB1E102K	B	26.1/84.8
C12	4030017430	S.CER ECJ0EC1H101J	B	24.2/84.1
C13	4030017430	S.CER ECJ0EC1H101J	B	41.1/73.4
C15	4030017430	S.CER ECJ0EC1H101J	B	17.5/87.8
C16	4030016790	S.CER ECJ0EB1C103K	B	22.2/85.1
C17	4030009580	S.CER C1608 JB 1H 681K-T	B	26.9/38.1
C18	4030009580	S.CER C1608 JB 1H 681K-T	B	30.8/36.1
C19	4030009580	S.CER C1608 JB 1H 681K-T	B	35.5/40.9
C101	4550006300	S.TAN ECST1AY475R	B	13.8/80.6
C102	4030016930	S.CER ECJ0EB1A104K	B	12.3/82.1
C103	4030016930	S.CER ECJ0EB1A104K	B	16.4/32.6
C104	4030017420	S.CER ECJ0EC1H470J	B	41.3/67.6
C105	4550006150	S.TAN ECST1CY105R	B	7.2/90.4
C106	4550006620	S.TAN ECST0JY226R	B	11.6/83.8
C107	4030016790	S.CER ECJ0EB1C103K	B	10.8/85.4
C108	4030009580	S.CER C1608 JB 1H 681K-T	B	15.4/43.3
C109	4030016930	S.CER ECJ0EB1A104K	B	9/91.5

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C110	4030016930	S.CER ECJ0EB1A104K	B	7.5/93.6
C111	4550006450	S.TAN ECST1EY105R	B	12/90.6
C112	4030016930	S.CER ECJ0EB1A104K	B	11.3/93.6
C113	4030016930	S.CER ECJ0EB1A104K	B	14.8/76.4
C120	4030017730	S.CER ECJ0EB1E471K	B	16.3/56.6
C121	4030017730	S.CER ECJ0EB1E471K	B	14.1/58.8
C122	4030017730	S.CER ECJ0EB1E471K	B	14.8/59.7
C123	4030017730	S.CER ECJ0EB1E471K	B	14.8/61.6
C201	4030017460	S.CER ECJ0EB1E102K	B	27/70
C202	4030018100	S.CER ECJ0EB1H681K	B	11.8/64.5
C203	4030017730	S.CER ECJ0EB1E471K	B	13.8/67.7
C204	4550006300	S.TAN ECST1AY475R	B	3.9/73.7
C205	4030016960	S.CER ECJ0EB1C183K	B	12.6/67.3
C206	4030016960	S.CER ECJ0EB1C183K	B	12.6/65.7
C207	4030017730	S.CER ECJ0EB1E471K	B	5.8/71.4
C208	4030017460	S.CER ECJ0EB1E102K	B	36.8/43
C209	4030017460	S.CER ECJ0EB1E102K	B	36.8/42
C210	4030017460	S.CER ECJ0EB1E102K	B	32.2/41.9
C211	4030017460	S.CER ECJ0EB1E102K	B	36.6/52.5
C212	4030017460	S.CER ECJ0EB1E102K	B	27.2/43
C213	4030017460	S.CER ECJ0EB1E102K	B	18.1/51.2
C214	4030017460	S.CER ECJ0EB1E102K	B	16.3/55.1
C215	4030017460	S.CER ECJ0EB1E102K	B	15.6/51.2
C216	4030016930	S.CER ECJ0EB1A104K	B	9/64.3
C220	4550006250	S.TAN TEESVA 1A 106M8L	B	10.3/60.8
C221	4030017490	S.CER C1608 JB 1A 105K-T	B	8.3/61.8
C222	4030017460	S.CER ECJ0EB1E102K	B	32.8/50.4
C224	4030017460	S.CER ECJ0EB1E102K	B	32.2/42.8
C225	4030016930	S.CER ECJ0EB1A104K	B	29.8/40.2
C226	4550007060	S.TAN ECSTIAX336R	B	36/45.2
C227	4550007060	S.TAN ECSTIAX336R	B	36/48.6
C229	4030017460	S.CER ECJ0EB1E102K	B	5.1/77
C230	4030017510	S.CER ECJ0EC1H680J	B	5.1/64
C231	4030017460	S.CER ECJ0EB1E102K	B	5.8/72.3
C234	4030017460	S.CER ECJ0EB1E102K	B	2.8/65.3
C235	4030017460	S.CER ECJ0EB1E102K	B	2.8/66.2
C236	4550006250	S.TAN TEESVA 1A 106M8L	B	27.9/54.9
C237	4030017420	S.CER ECJ0EC1H470J	B	23.6/46.4
C238	4030016950	S.CER ECJ0EB1A473K	B	24.1/49.2
C239	4030017460	S.CER ECJ0EB1E102K	B	37.5/94.7
C240	4030017460	S.CER ECJ0EB1E102K	B	13.4/56.8
C241	4030016930	S.CER ECJ0EB1A104K	B	12.3/61.5
C242	4030016790	S.CER ECJ0EB1C103K	B	10.5/73.2
C243	4030016930	S.CER ECJ0EB1A104K	B	7.6/73.8
C244	4030017460	S.CER ECJ0EB1E102K	B	3.4/90.6
C245	4550007060	S.TAN ECSTIAX336R	B	34.7/90.7
C246	4550007060	S.TAN ECSTIAX336R	B	34.7/87.4
C247	4030006900	S.CER C1608 JB 1H 103K-T	B	34.4/52.7
C248	4030017460	S.CER ECJ0EB1E102K	B	31.5/58.3
C249	4030017430	S.CER ECJ0EC1H101J	B	29.9/89.9
C250	4030017430	S.CER ECJ0EC1H101J	T	24.5/91.6
C255	4030017430	S.CER ECJ0EC1H101J	B	41.3/78.5
C256	4030017430	S.CER ECJ0EC1H101J	B	29.1/86.2
C259	4030017430	S.CER ECJ0EC1H101J	B	29.4/82.8
C260	4030017460	S.CER ECJ0EB1E102K	B	41.4/70.4
C261	4030017460	S.CER ECJ0EB1E102K	B	41.4/68.6
C263	4030017460	S.CER ECJ0EB1E102K	B	41.2/66.5
C264	4030017460	S.CER ECJ0EB1E102K	B	21.3/88.5
C270	4030017430	S.CER ECJ0EC1H101J	B	41.2/64.7
C271	4030016930	S.CER ECJ0EB1A104K	B	41.2/63.8
C272	4030017430	S.CER ECJ0EC1H101J	T	27.1/91.8
C273	4030017430	S.CER ECJ0EC1H101J	T	25.9/91.4
C274	4030016790	S.CER ECJ0EB1C103K	T	25.6/93.4
C275	4030017430	S.CER ECJ0EC1H101J	B	41.5/69.5
J1	6510022710	S.CNR 30FLZ-SM1-TB	B	36/70.5
J2	6510024590	S.CNR 20FLH-SM1-TB	B	23.5/94.2
J101	6510024570	S.CNR 52745-0896	B	9.7/98
J201	6510021900	S.CNR BM02B-ASRS-TF	B	40.3/118.5
DS1	5040003140	S.LED FRDG1211C-TR	T	32.5/129.5
DS2	5030002830	LCD M4-0078TAY-2		
DS101	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	15.6/12.9
DS102	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	30.4/12.9
DS106	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	15.6/22.1
DS107	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	30.4/22.1
DS108	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	15.6/31.3
DS109	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	30.4/31.3
DS110	5010000120	S.LED LN1371G-(TR) [F80DS/S] only	T	12.1/39.3
DS111	5010000120	S.LED LN1371G-(TR) [F80DS/S] only	T	33.8/39.3
DS112	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	12.1/40.8
DS113	5010000120	S.LED LN1371G-(TR) [F80DT/T] only	T	33.8/40.8
DS201	5040002960	S.LED SML-A12MT T86	T	11.6/87.7
DS202	5040002960	S.LED SML-A12MT T86	T	22.1/87.7
DS203	5040002960	S.LED SML-A12MT T86	T	32.6/87.7
MC201	7700002310	MIC EM-140		
S117	2260002800	S.SW SW-167 (SKQTLAE010)	B	38.5/129

[L]=Low band, [H]=High band

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1130010100	S.IC LMX2352TMX	B	75.8/36.7
IC2	1110005340	S.IC NJM12902V-TE1	T	75.7/37
IC3	1110003490	S.IC TA31136FN (D,EL)	B	57.6/30.4
IC12	1110005340	S.IC NJM12902V-TE1	T	56.5/13.1
IC200	1130008560	S.IC TC75S51F (TE85L)	T	101.6/18.4
IC300	1130009700	S.IC LC73872M-TRM	B	29.5/10.1
IC301	1110006220	S.IC AK2346-E2	B	39.8/30
IC302	1130008230	S.IC BU4053BCFV-E2	B	29.3/31.1
IC303	1190001350	S.IC M62364FP 600D	T	71.8/24.8
IC304	1110006260	S.IC BD5242G-TR	B	8.6/40.3
IC305	1130008230	S.IC BU4053BCFV-E2	B	66.1/10.6
IC307	1140010190	S.IC HD64F2268TF20 (EMPTY)	B	15/24.8
IC308	1140009240	S.IC HN58X24128FPI	B	17.7/6.8
IC310	1190001340	S.IC M62334FP 600C	T	84.2/12.4
IC311	1180002270	S.REG TK11250CMCL	B	119.5/36.3
IC312	1190001860	S.IC EW-460-FT	B	43.8/14.9
IC313	1130006220	S.IC TC4W53FU (TE12L)	T	38.4/36.5
IC500	1190002050	S.IC SPM5001	B	78.9/13.6
IC600	1130004200	S.IC TC4S66F (TE85R)	B	85.4/27.1
Q2	1560000540	S.FET 2SK880-Y (TE85R)	T	81/20.8
Q3	1530002850	S.TR 2SC4116-BL (TE85R)	B	94/36.8
Q14	1530002380	S.TR 2SC4215-Y (TE85R)	B	64.9/36.2
Q15	1590002430	S.TR DTA144EE TL	T	64.7/23.7
Q16	1590001940	S.TR DTC144EE TL	T	64.7/25.7
Q200	1530003260	S.TR 2SC5006-T1	B	100.8/26.9
Q201	1530003340	S.TR 2SC3357-T1 RF	B	100.9/33.3
Q202	1560001240	S.FET RD01MUS1	T	108/30.3
Q203	1560001230	S.FET RD07MVS1	T	109.4/24
Q204	1590001870	S.TR DTA114EE TL	T	106.5/18.2
Q300	1590001940	S.TR DTC144EE TL	T	49.8/8.3
Q302	1590001940	S.TR DTC144EE TL	B	5.9/38.1
Q303	1530002380	S.TR 2SC4215-Y (TE85R)	T	47.7/20.2
Q304	1510000920	S.TR 2SA1577 T106 Q	B	106/41.1
Q305	1510000920	S.TR 2SA1577 T106 Q	B	97.7/36.1
Q306	1510000920	S.TR 2SA1577 T106 Q	B	85.4/39.4
Q307	1590001190	S.TR XP6501-(TX) .AB	B	110.6/41.6
Q308	1520000450	S.TR 2SB1132 T100 Q	B	119.1/40.9
Q309	1590003320	S.FET TPC6103 (TE85L)	B	120.1/32.5
Q310	1590001940	S.TR DTC144EE TL	B	9.6/36.1
Q311	1590002430	S.TR DTA144EE TL	B	44.7/11.6
Q500	1530002600	S.TR 2SC4215-O (TE85R)	B	63.1/29
Q502	1580000730	S.FET 3SK293 (TE85L)	T	94.8/10
Q503	1560000840	S.FET 2SK1829 (TE85R)	B	91.3/8.7
Q600	1530002920	S.TR 2SC4226-T1 R25	T	93.6/32.5
Q601	1530002920	S.TR 2SC4226-T1 R25	T	94.5/26.4
Q602	1530002920	S.TR 2SC4226-T1 R25	T	94.9/20.4
Q603	1590001400	S.TR XP1214 (TX)	B	95.5/32.4
Q604	1590001940	S.TR DTC144EE TL	B	92/32.9
Q605	1530003310	S.TR 2SC5107-O (TE85R)	B	96.1/21.8
Q606	1530003310	S.TR 2SC5107-O (TE85R)	B	98.6/23.1
Q607	1590001400	S.TR XP1214 (TX)	B	96/26.9
Q608	1530003310	S.TR 2SC5107-O (TE85R)	B	90.5/28
Q609	1530003310	S.TR 2SC5107-O (TE85R)	B	99.6/19.9
D3	1790001250	S.DIO MA2S111-(TX)	B	92.1/38.2
D13	1750001070	S.DIO DAN235ETL	B	60/25
D14	1750001070	S.DIO DAN235ETL	B	55.7/23.5
D200	1790001260	S.DIO MA2S077-(TX)	B	103.7/19.1
D201	1790001250	S.DIO MA2S111-(TX)	T	103.9/16.3
D202	1790001670	S.DIO RB706F-40T106	T	111.1/13.8
D203	1750000580	S.DIO 1SV307 (TPH3)	B	112.8/10.2
D204	1790001670	S.DIO RB706F-40T106	T	114.2/12.9
D205	1790001250	S.DIO MA2S111-(TX)	T	107/15.2
D301	1160000050	S.DIO DAP202U T106	T	27.2/10.6
D302	1160000050	S.DIO DAP202U T106	B	5.1/12.3
D303	1160000050	S.DIO DAP202U T106	T	27/5.3
D304	1160000050	S.DIO DAP202U T106	T	26.7/8.1
D306	1730002320	S.ZEN MA8051-M (TX)	B	5.2/34.3
D307	1790001260	S.DIO MA2S077-(TX)	B	25.8/33.4
D308	1790001250	S.DIO MA2S111-(TX)	B	27.1/23.1
D309	1790001250	S.DIO MA2S111-(TX)	T	29.8/7.2
D310	1750000270	S.DIO 1SS301 (TE85R)	B	4.6/9.2
D311	1750000270	S.DIO 1SS301 (TE85R)	B	7.4/33.9
D312	1790001250	S.DIO MA2S111-(TX)	B	44.9/17.6
D313	1160000050	S.DIO DAP202U T106	B	9.2/9.2
D500	1750000370	S.DIO DA221 TL	B	63.7/31.4
D501	1790001260	S.DIO MA2S077-(TX)	B	100.7/16.2
D502	1750000710	S.VCP HVC350BTRF	T	86.1/4.7
D504	1750000710	S.VCP HVC350BTRF	T	89.3/6.7
D505	1750000710	S.VCP HVC350BTRF	T	91.3/5.4
D506	1750000710	S.VCP HVC350BTRF	T	100/5.5
D507	1750000710	S.VCP HVC350BTRF	T	108/2.4
D508	1790001250	S.DIO MA2S111-(TX)	B	89.9/5.4
D509	1790001240	S.DIO MA2S728-(TX)	T	108.4/5
D510	1790001260	S.DIO MA2S077-(TX)	B	108.4/4.8
D604	1720000700	S.VCP 1SV305 (TPL3)	T	87.3/30.4
D605	1720000700	S.VCP 1SV305 (TPL3)	T	85.2/33.3
D606	1720000700	S.VCP 1SV305 (TPL3)	T	89.4/26.1
D607	1720000700	S.VCP 1SV305 (TPL3)	T	91.1/26.9
D608	1720000700	S.VCP 1SV305 (TPL3)	T	84.4/18.5
D609	1720000700	S.VCP 1SV305 (TPL3)	T	86.5/21.2
D611	1720000570	S.VCP MA368 (TX)	T	91.7/20.9

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.	H/V LOCATION
FI1	2020001930	S.CER CFWCA450KFFA-R0		T	57.1/23.5
FI2	2020002120	S.CER CFWCA450KGFA-R0		B	56.7/17.1
FI200	2040001440	S.LC NFE31PT152Z1E9L		B	116.8/30.9
FI500	2030000410	S.MLH FL-380 MFT46.3P 46.350MHZ		B	69.6/24.7
X1	6050011860	S.XTL CR-778 (15.300 MHz)		B	68.4/39.6
X2	6070000190	S.DCR CDBCB450KCAY24-R0		T	55.5/32.5
X300	6050012100	S.XTL CR-800 (3.579545 MHz)		B	38.3/10.4
X301	6050012090	S.XTL CR-799 (3.6864 MHz)		B	39.2/39.3
X302	6050012110	S.XTL CR-803 (19.6608 MHz)		B	22.6/37.6
L1	6200004660	S.COL MLF1608A 1R8K-T		B	79.6/41.2
L2	6200005690	S.COL ELJRE 18NG-F		B	85.6/33.2
L3	6200005680	S.COL ELJRE 15NG-F		B	86.6/31.3
L24	6200003540	S.COL MLF1608D R22K-T		B	62.9/38.2
L25	6200004480	S.COL MLF1608D R82K-T		B	60.7/37.3
L46	6200004660	S.COL MLF1608A 1R8K-T		B	81.2/35
L200	6200005650	S.COL ELJRE 8N2Z-F	[L]	B	101.4/24.4
	6200005660	S.COL ELJRE 10NG-F	[H]	B	101.4/24.4
L201	6200011130	S.COL C1608CB-12NG	[H]	B	103/29.2
	6200011260	S.COL C1608CB-15NG	[L]	B	103/29.2
L203	6200011130	S.COL C1608CB-12NG		B	104.1/34.8
L204	6200005630	S.COL ELJRE 5N6Z-F	[H]	T	102.2/33.2
	6200005640	S.COL ELJRE 6N8Z-F	[L]	T	102.2/33.2
L205	6200005630	S.COL ELJRE 5N6Z-F	[H]	T	104/32.5
	6200005640	S.COL ELJRE 6N8Z-F	[L]	T	104/32.5
L206	6200009460	S.COL 0.25-1.9-7TL 67N		T	113.8/28.4
L207	6200005630	S.COL ELJRE 5N6Z-F	[H]	T	103.5/29.5
	6200005640	S.COL ELJRE 6N8Z-F	[L]	T	103.5/29.5
L208	6200006770	S.COL ELJRE 1N5Z-F		T	105.3/26.7
L209	6200008220	S.COL 0.40-1.4-5TR 21N		B	117.2/24.4
L210	6200009110	S.COL 0.30-0.9-2TR 4.1N		B	117.6/20.3
L212	6200008250	S.COL 0.30-0.9-7TL 21N		B	117.6/14.8
L213	6200002850	S.COL NL 252018T-R82J		B	112.5/13
L301	6200002860	S.COL NL 252018T-4R7J		B	28.9/17.5
L500	6200005530	S.COL ELJFC R47M-F		B	64.2/33.7
L501	6200003960	S.COL MLF1608A 1R0K-T		B	64.6/24.5
L502	6200003630	S.COL MLF1608D R68K-T		B	74.9/24.6
L503	6130003000	S.COL 617DB-1714=P3		B	79.2/18.8
L504	6130003000	S.COL 617DB-1714=P3		B	84.9/13.6
L506	6130003000	S.COL 617DB-1714=P3		B	79.2/8.4
L509	6200011430	S.COL C1608CB-22NG		B	94.5/14.4
L510	6200010250	S.COL 0.28-1.0-9TR 34N		T	86.7/8
L512	6200011430	S.COL C1608CB-22NG		B	97.1/14.4
L513	6200008240	S.COL 0.30-0.9-5TL 14N	[L]	T	92.4/11.6
	6200008530	S.COL 0.30-1.0-4TR 12N	[H]	T	92.4/11.6
L514	6200008090	S.COL LQW2BHN68NJ01L		T	99.6/9.1
L516	6200010250	S.COL 0.28-1.0-9TR 34N		T	102.8/7.9
L517	6200010250	S.COL 0.28-1.0-9TR 34N		T	105.9/5.8
L518	6200007730	S.COL LQW2BHN39NJ01L		T	110.5/6.6
L519	6200007730	S.COL LQW2BHN39NJ01L		B	108.9/9.4
L520	6200011430	S.COL C1608CB-22NG		B	109.9/6.8
L522	6200008250	S.COL 0.30-0.9-7TL 21N		B	116.2/8
L523	6200008700	S.COL 0.30-0.9-6TR 17.5N		B	120.2/8.8
L602	6200007120	S.COL ELJND 1R0J		T	85.2/30.4
L603	6200007120	S.COL ELJND 1R0J		T	88.4/28.1
L604	6200010090	S.COL ELJND R82JF		T	84.4/21.4
L605	6200009970	S.COL C2012C-R39G		T	87.3/32.6
L606	6200009970	S.COL C2012C-R39G		T	87.3/24.5
L607	6200009970	S.COL C2012C-R39G		T	86.6/19.1
L608	6200008330	S.COL 0.45-1.4-4TL 15N		T	89.8/32.6
L609	6200008330	S.COL 0.45-1.4-4TL 15N		T	91.6/24.6
L610	6200008240	S.COL 0.30-0.9-5TL 14N		T	88.9/19.7
L611	6200009970	S.COL C2012C-R39G		T	97/28.1
L612	6200009970	S.COL C2012C-R39G		T	96/33.2
L613	6200009970	S.COL C2012C-R39G		T	97.4/20.4
L614	6200011430	S.COL C1608CB-22NG		B	94.1/20.4
L615	6200005690	S.COL ELJRE 18NG-F		B	90.5/30.2
L616	6200011060	S.COL C1608CB-18NG	[L]	B	98.3/17.4
	6200011260	S.COL C1608CB-15NG	[H]	B	98.3/17.4
R1	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		T	72.1/38.9
R2	7030005700	S.RES ERJ2GEJ 274 X (270 kΩ)		T	74.9/41.4
R3	7030008310	S.RES ERJ2GEJ 564 X (560 kΩ)		T	73.2/43.2
R4	7410001130	S.ARY EXB28V102JX		B	73.1/41.6
R5	7030008310	S.RES ERJ2GEJ 564 X (560 kΩ)		T	73.2/41.4
R6	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		B	69.8/36.2
R7	7030005580	S.RES ERJ2GEJ 560 X (56 Ω)		B	83.5/34.9
R8	7510001730	S.TMR ERTJOEP 473J		B	64/40.5
R9	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		B	63.1/42.4
R10	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)		T	81.1/18
R11	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		T	12.5/32.4
R13	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)		B	76.8/28.7
R16	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)		B	77.7/30.3
R17	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	[H]	B	80.6/30.7
	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)	[L]	B	80.6/30.7
R18	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		B	88.8/22.4
R19	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)		B	84/23.3
R20	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		B	88.6/23.6
R21	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)		B	87.4/21.5
R22	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)		B	84.7/20.1

[L]=Low band, [H]=High band

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.	H/V LOCATION
R23	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)		T	90.5/19.1
R24	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)		B	95.8/37
R25	7030008370	S.RES ERJ2GEJ 561 X (560 Ω)		T	79.2/20.1
R59	7030007570	S.RES ERJ2GEJ 122 X (1.2 kΩ)		B	64/38.9
R60	7030007060	S.RES ERJ2GEJ 684X (680 kΩ)		B	65.4/38
R63	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)		B	58.4/23.8
R64	7030007250	S.RES ERJ2GEJ 220 X (22 Ω)		T	65.4/27.5
R66	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	60/23.4
R67	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	62.4/23.9
R68	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	52.9/24.4
R69	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	53.2/22.9
R70	7030008410	S.RES ERJ2GEJ 392 X (3.9 kΩ)		B	55.3/22
R71	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)		B	57.1/24.4
R72	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)		T	51/30.7
R73	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)		B	54.1/29.9
R74	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)		B	55.4/26
R75	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)		B	52.8/27.4
R77	7030005100	S.RES ERJ2GEJ 154 X (150 kΩ)		B	53.4/25.9
R78	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		B	51.9/27.4
R79	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)		B	54.1/33.9
R80	7030010040	S.RES ERJ2GE-JPW		B	57.3/35.6
R81	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		B	59/35.6
R82	7030006610	S.RES ERJ2GEJ 394 X (390 kΩ)		T	36.4/11.8
R83	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)		T	50/30.7
R200	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		B	103.9/22.4
R201	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)		B	103.9/21.5
R202	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	[L]	B	102.6/26.2
	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	[H]	B	102.6/26.2
R203	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)		B	103.7/28.1
R204	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)		B	103.5/30.9
R205	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)		B	104.2/32.1
R206	7030007280	S.RES ERJ2GEJ 331 X (330 Ω)	[H]	T	102.1/36
	7030009160	S.RES ERJ2GEJ 181 X (180 Ω)	[L]	T	102.1/36
R207	7030009530	S.RES ERJ2GEJ 270 X (27 Ω)	[L]	T	103.4/35.5
	7030010090	S.RES ERJ2GEJ 180 X (18 Ω)	[H]	T	103.4/35.5
R208	7030007280	S.RES ERJ2GEJ 331 X (330 Ω)	[H]	T	102.1/35.1
	7030009160	S.RES ERJ2GEJ 181 X (180 Ω)	[L]	T	102.1/35.1
R209	7030007270	S.RES ERJ2GEJ 151 X (150 Ω)		T	102.9/31.4
R210	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)		T	101.5/29
R211	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)		T	101.3/30.2
R212	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)		T	104.7/23.7
R213	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)		T	104.4/25
R214	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)		T	102.9/23.7
R215	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)		T	101.1/27.8
R216	7030009280	S.RES ERJ2GE		T	104.7/21.3
R217	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)		T	102.5/21.4
R218	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)		T	105/19.7
R219	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)		T	100.8/16.2
R220	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		T	88.5/12.6
R221	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		T	105/17.1
R222	7030003490	S.RES ERJ3GEYJ 272 V (2.7 kΩ)		B	115.4/15.3
R223	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)		T	109.1/11.8
R224	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		T	105.5/15.7
R225	7030003350	S.RES ERJ3GEYJ 181 V (180 Ω)		B	109.5/14.1
R226	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)		T	111.8/12
R227	7030003490	S.RES ERJ3GEYJ 272 V (2.7 kΩ)		B	116.7/11.4
R228	7030007270	S.RES ERJ2GEJ 151 X (150 Ω)		B	99.3/27
R300	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)		B	39/21
R301	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)		B	38.1/21
R302	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)		B	33.3/30.5
R303	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)		B	33.8/10.4
R304	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)	[H]	T	63.6/27
	7030005720	S.RES ERJ2GEJ 563 X (56 kΩ)	[L]	T	63.6/27
R305	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)		T	63.7/35.9
R306	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)		T	64.8/37.1
R307	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)		B	33.8/8.6
R308	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)		B	39.9/21.7
R309	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)		B	34.6/29.8
R310	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)		B	39.8/22.9
R311	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)		T	78.8/40.8
R312	7030006610	S.RES ERJ2GEJ 394 X (390 kΩ)		B	41.4/23.8
R313	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)		B	42.3/23.8
R314	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)		T	77/41.3
R315	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		T	77/43.1
R316	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)		B	40.8/21.7
R317	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)		T	36.1/20
R318	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)		T	38.2/16
R319	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)		B	41.4/35.6
R320	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		T	77/32.2
R321	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)		B	44/35
R322	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		T	77.6/31
R323	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)		B	39.8/23.8
R324	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	44.9/32.2
R325	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)		B	45.4/30.9
R326	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		B	45.8/35.2
R327	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)		B	30.9/23.9
R328	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)		B	30.3/26.7
R329	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		T	78.8/31.2
R330	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)		B	45.8/33.4
R331	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)		B	38.9/35.3
R332	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)		T	78.3/30
R333	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)		T	73/32.2
R334	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)		T	64/30.5
R335	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)		T	74.8/32.6

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R336	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	57.2/17.4
R337	7030010040	S.RES ERJ2GE-JPW	T	35/23.5
R338	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)	T	60.7/15.9
R339	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	58.8/17.4
R340	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	4.6/31
R342	7030005010	S.RES ERJ2GEJ 681 X (680 Ω)	T	76.1/19.3
R344	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	T	23.8/11.8
R345	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	T	23.8/13.2
R346	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	T	20/12.4
R347	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	15.6/14.2
R348	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	17.1/12.1
R349	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	15.8/12.5
R350	7410001140	S.ARY EXB28V104JX	T	4.4/9.9
R351	7030008410	S.RES ERJ2GEJ 392 X (3.9 kΩ)	T	67.7/17.9
R352	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	67.6/19.1
R353	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	65.3/20.1
R354	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	63.3/18.1
R355	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)	T	64.8/16.6
R356	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	37.6/35.3
R357	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	20/11.5
R358	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	22.4/12.3
R359	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	22.4/11.4
R360	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	51.8/9.1
R361	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	53.4/9.1
R362	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	52.2/16
R363	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	53/13.9
R364	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	53.2/12.1
R365	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	58.2/7.9
R366	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	51.9/10.8
R367	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	60.7/13.5
R368	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	50.4/12.1
R371	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	61.6/14.7
R372	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	51.3/14.5
R373	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	T	24.9/18.2
R374	7030008300	S.RES ERJ2GEJ 184 X (180 kΩ)	B	25/17.4
R375	7030005720	S.RES ERJ2GEJ 563 X (56 kΩ)	B	23.7/17.4
R376	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	23.7/18.3
R377	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	26.8/17.3
R378	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	49.4/21.7
R379	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	23.1/29.8
R380	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	23.1/28.9
R381	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	26.3/35.5
R382	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	47.6/18.1
R383	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	11/37.8
R384	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	26/29.9
R385	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	27/37.9
R386	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	27/25.8
R387	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	26/28.1
R388	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	24.8/27.4
R389	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	49.4/24.4
R391	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	21.7/32.7
R393	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)	B	40.9/20.4
R394	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	40.9/19.5
R396	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	T	39.9/33.5
R397	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	B	30.9/25.5
R399	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)	B	20.4/31.4
R400	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	50.4/35.8
R401	7030009320	S.RES ERJ2GEJ 4R7 X (4.7 Ω)	T	73/30.6
R402	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	24.8/23
R403	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	23.7/20.1
R404	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	23.7/21
R405	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	10.3/33.2
R406	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	23.7/19.2
R407	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	24.8/26.5
R408	7410001130	S.ARY EXB28V102JX	B	7.8/30.1
R409	7410001130	S.ARY EXB28V102JX	B	20.6/16.9
R410	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	5.5/31
R411	7410001130	S.ARY EXB28V102JX	B	18.6/15.3
R412	7410001130	S.ARY EXB28V102JX	B	5.8/28.1
R413	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	6.6/14.4
R414	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	12.3/27
R415	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	12.7/28.2
R416	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	19.3/12.2
R417	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	19.3/13.4
R418	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	3.2/16.9
R419	7410001140	S.ARY EXB28V104JX	T	9.8/16.8
R420	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	106.1/43.1
R421	7410001130	S.ARY EXB28V102JX	B	5.1/22.5
R422	7410001130	S.ARY EXB28V102JX	B	7.8/18
R423	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	7.3/9.2
R424	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	107.9/42.3
R425	7410001130	S.ARY EXB28V102JX	B	6.2/20
R426	7410001130	S.ARY EXB28V102JX	B	9.9/16.4
R427	7410001130	S.ARY EXB28V102JX	B	12.3/14.5
R428	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	95.5/34.1
R429	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	95.8/35.4
R430	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	82.8/40.2
R431	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	83.6/38.9
R432	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	79/14.1
R433	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	77.4/14.1
R434	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	108.8/42.3
R435	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	117/38.6
R436	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	122.2/40.8
R437	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	5.1/7.2

[L]=Low band, [H]=High band

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R438	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	3.1/8.1
R439	7030005700	S.RES ERJ2GEJ 274 X (270 kΩ)	B	120.2/29.2
R440	7030010080	S.RES ERJ2RHD 104 X (100 kΩ)	B	120.2/28.3
R441	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	5.4/36.8
R442	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	7.9/38.1
R443	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	10.8/40.8
R444	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	3.5/26.9
R445	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	3.5/28.7
R446	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	9.3/33.2
R447	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	29.3/23.1
R448	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	24/13.2
R449	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	22.9/13.2
R450	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	22/13.5
R451	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	27.5/22.2
R452	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	T	26.6/22.2
R453	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	T	25.6/22.2
R454	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	23.4/22.7
R455	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	24.6/22.2
R456	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	28.2/36.4
R457	7030005290	S.RES ERJ2GEJ 682 X (6.8 kΩ) [L]	B	28.2/37.3
	7030009140	S.RES ERJ2GEJ 272 X (2.7 kΩ) [H]	B	28.2/37.3
R460	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	76.2/30.3
R461	7030010040	S.RES ERJ2GE-JPW	B	25.1/6.5
R462	7030010040	S.RES ERJ2GE-JPW	B	32.5/34.7
R464	7030010040	S.RES ERJ2GE-JPW	T	56/17.8
R465	7030010040	S.RES ERJ2GE-JPW	B	69.2/16
R466	7030010040	S.RES ERJ2GE-JPW	B	20.6/12.1
R467	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	T	72.1/32.5
R500	7030004990	S.RES ERJ2GEJ 221 X (220 Ω)	B	62.3/26.7
R501	7030010040	S.RES ERJ2GE-JPW	T	19.2/13.9
R502	7030009270	S.RES ERJ2GEJ 821 X (820 Ω)	B	65.1/30.1
R503	7030010040	S.RES ERJ2GE-JPW	T	4.8/11.8
R504	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	65.1/28
R505	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	64.2/27.1
R506	7030010040	S.RES ERJ2GE-JPW	T	34.3/35.1
R507	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	65.7/31.9
R508	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	83.1/10.5
R509	7030009270	S.RES ERJ2GEJ 821 X (820 Ω)	B	76.4/23.9
R510	7030010130	S.RES ERJ2GE 6R8 X (6.8 Ω)	B	75.8/22.5
R511	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	83.1/9.6
R512	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	75.9/16.9
R513	7030007270	S.RES ERJ2GEJ 151 X (150 Ω)	B	76.2/10.1
R514	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	B	90.8/14
R515	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)	B	92.3/14.4
R516	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	B	93.5/15.9
R517	7030009270	S.RES ERJ2GEJ 821 X (820 Ω)	B	74.5/22
R518	7030000010	S.RES MCR10EZHJ JPW (000)	B	85/5.8
R519	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	46.8/17.1
R520	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	B	102.2/15.5
R521	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	103.4/15
R525	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	87.1/6.4
R527	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	84.9/5.2
R529	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	89.3/5
R530	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	90.8/8.1
R532	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	T	96.1/12.4
R533	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	92.5/8.5
R534	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	96.6/9.9
R535	7030008300	S.RES ERJ2GEJ 184 X (180 kΩ)	T	97.8/9.1
R536	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	96.2/9.8
R537	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)	B	95/11.1
R539	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)	B	89.4/9.6
R540	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	102/5.1
R541	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	102.7/5.7
R542	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	B	90.7/6.7
R543	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	105.4/3
R545	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	89/8.4
R546	7030003670	S.RES ERJ3GEYJ 823 V (82 kΩ)	B	122.7/10.7
R548	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	T	23/27.9
R549	7030010040	S.RES ERJ2GE-JPW	T	90.8/10.9
R600	7030010040	S.RES ERJ2GE-JPW	T	85.2/28.2
R601	7030010040	S.RES ERJ2GE-JPW	T	85.2/27.3
R602	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	84.4/23.9
R604	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	94.2/30.5
R605	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	95.1/23.4
R606	7030005290	S.RES ERJ2GEJ 682 X (6.8 kΩ)	T	93.9/18.6
R607	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	T	93.3/30.5
R608	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	T	94.9/24.6
R609	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	95.1/18.2
R610	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	97.2/30.5
R611	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	97.9/33.7
R612	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	97.6/23.1
R613	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	95.6/19.8
R614	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	94.2/22.5
R615	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	96/24.5
R616	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	94.4/18.7
R617	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	94.4/30.4
R618	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	95.4/30.1
R619	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	93.8/26.7
R620	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	93.2/28
R621	7030005100	S.RES ERJ2GEJ 154 X (150 kΩ)	B	92.3/28
R622	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ) [L]	B	97.6/19.5
	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ) [H]	B	97.6/19.5
R623	7030005530	S.RES ERJ2GEJ 100 X (10 Ω)	B	96/18.7
R624	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	102.4/18.7

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.	H/V LOCATION
R625	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)		B	85.8/24.9
R628	7030010040	S.RES ERJ2GE-JPW		T	88.6/22.4
R629	7030005570	S.RES ERJ2GEJ 820 X (82 Ω)		B	102.4/20.3
C1	4030017330	S.CER ECJ0EF1C104Z		B	71.3/41.6
C2	4030017420	S.CER ECJ0EC1H470J		B	72.9/43.6
C3	4030017420	S.CER ECJ0EC1H470J		B	73.8/43.6
C4	4030017330	S.CER ECJ0EF1C104Z		B	80.2/42.4
C5	4030017420	S.CER ECJ0EC1H470J		B	75.1/41.6
C6	4030017460	S.CER ECJ0EB1E102K		B	81.7/38.9
C7	4030017420	S.CER ECJ0EC1H470J		T	73.2/42.3
C8	4030017490	S.CER C1608 JB 1A 105K-T		B	77.8/42.4
C9	4030017460	S.CER ECJ0EB1E102K		T	71.8/34.6
C10	4030017460	S.CER ECJ0EB1E102K		B	77.4/41
C11	4030016930	S.CER ECJ0EB1A104K		B	65.7/42.4
C13	4030017420	S.CER ECJ0EC1H470J		B	75.1/32.3
C14	4030017460	S.CER ECJ0EB1E102K		B	69.8/34.4
C16	4030017460	S.CER ECJ0EB1E102K		T	76.7/2.2
C17	4030016790	S.CER ECJ0EB1C103K		B	77.4/31.5
C18	4030017460	S.CER ECJ0EB1E102K		B	83.5/33.3
C19	4030016930	S.CER ECJ0EB1A104K		B	64/42.1
C20	4030017380	S.CER ECJ0EC1H050B		B	84/36.2
C21	4030017460	S.CER ECJ0EB1E102K		T	78.9/21.3
C22	4030017580	S.CER ECJ0EC1H060C		B	85.6/35.3
C23	4030017460	S.CER ECJ0EB1E102K		T	81.1/18.9
C24	4550006430	S.TAN ECST1VY474R		B	73.9/28.5
C25	4030017620	S.CER ECJ0EC1H100C		B	84.7/31
C27	4030017340	S.CER ECJ0EC1H010B		B	84.5/34.5
C28	4030017530	S.CER ECJ0EC1H0R5B		B	86.4/30.2
C29	4030016790	S.CER ECJ0EB1C103K	[H]	B	81.9/31.2
	4030016970	S.CER ECJ0EB1C223K	[L]	B	81.9/31.2
C30	4030017460	S.CER ECJ0EB1E102K		B	86.7/23.6
C31	4030016790	S.CER ECJ0EB1C103K	[H]	B	82.8/31.2
	4030016970	S.CER ECJ0EB1C223K	[L]	B	82.8/31.2
C32	4030017420	S.CER ECJ0EC1H470J		B	88.3/20.3
C33	4030017770	S.CER ECJ0EB1E332K		B	82.7/22.9
C34	4030016930	S.CER ECJ0EB1A104K		B	88.8/21.5
C35	4030017490	S.CER C1608 JB 1A 105K-T		B	85.6/21.5
C36	4030017720	S.CER ECJ0EB1H331K		B	89.2/20.3
C37	4030017580	S.CER ECJ0EC1H060C		B	88.3/30.2
C40	4030016790	S.CER ECJ0EB1C103K		B	93.3/39.5
C44	4550006760	S.TAN TEESVB21A336M8R		B	87.9/34.9
C50	4030017330	S.CER ECJ0EF1C104Z		B	82/32.9
C51	4030017490	S.CER C1608 JB 1A 105K-T		B	80.9/33.1
C52	4030017330	S.CER ECJ0EF1C104Z		B	78.7/32
C53	4030017490	S.CER C1608 JB 1A 105K-T		T	79.6/35.5
C54	4030017460	S.CER ECJ0EB1E102K		B	79.6/32
C55	4030017460	S.CER ECJ0EB1E102K		B	77.4/32.4
C104	4030017620	S.CER ECJ0EC1H100C		B	67.4/36.2
C109	4030016790	S.CER ECJ0EB1C103K		B	65.2/40.3
C112	4030017500	S.CER ECJ0EC1H560J		B	63/36
C117	4030017570	S.CER ECJ0EC1H040B		B	62.1/36
C118	4030016930	S.CER ECJ0EB1A104K		B	65.2/39.4
C120	4030016790	S.CER ECJ0EB1C103K		B	61.4/39
C125	4030017590	S.CER ECJ0EC1H070C		B	61.8/37.7
C127	4030016930	S.CER ECJ0EB1A104K		B	61.5/24.5
C128	4030016930	S.CER ECJ0EB1A104K		B	60/22.5
C129	4030017360	S.CER ECJ0EC1H030B		B	61.2/35.2
C130	4030016930	S.CER ECJ0EB1A104K		B	54.1/24.7
C131	4030016930	S.CER ECJ0EB1A104K		B	54.1/22.9
C132	4030016930	S.CER ECJ0EB1A104K		B	62.3/22.3
C133	4030016930	S.CER ECJ0EB1A104K		B	58.4/25.4
C134	4030016930	S.CER ECJ0EB1A104K		B	61.4/22.3
C135	4030016930	S.CER ECJ0EB1A104K		B	56.6/25.6
C136	4030016930	S.CER ECJ0EB1A104K		B	54.1/27.7
C137	4030017690	S.CER ECJ0EC1H121J		B	55.4/25.1
C138	4030017690	S.CER ECJ0EC1H121J		B	54.1/26.8
C139	4030017430	S.CER ECJ0EC1H101J		B	51.5/26.1
C140	4030017460	S.CER ECJ0EB1E102K		B	57.5/25.6
C141	4030017460	S.CER ECJ0EB1E102K		B	53.1/34.8
C142	4030017420	S.CER ECJ0EC1H470J		B	52.7/35.7
C143	4550006050	S.TAN TEESVA 0J 106M8L		B	52.1/30.9
C144	4030017460	S.CER ECJ0EB1E102K		B	59/34.7
C145	4030017650	S.CER ECJ0EC1H270J		B	61.1/33.5
C146	4030017680	S.CER ECJ0EC1H820J		B	55.6/34.8
C147	4030017460	S.CER ECJ0EB1E102K		B	58.4/36.5
C152	4030016930	S.CER ECJ0EB1A104K		B	52.2/22.3
C162	4030016790	S.CER ECJ0EB1C103K		B	67.1/31.7
C200	4030017460	S.CER ECJ0EB1E102K		B	104/23.7
C201	4030017380	S.CER ECJ0EC1H050B	[L]	B	101.4/22.3
	4030017600	S.CER ECJ0EC1H080C	[H]	B	101.4/22.3
C202	4030016790	S.CER ECJ0EB1C103K		B	102.8/23.3
C203	4030017570	S.CER ECJ0EC1H040B		B	100.5/22.3
C204	4030017360	S.CER ECJ0EC1H030B	[H]	B	100/25.3
	4030017570	S.CER ECJ0EC1H040B	[L]	B	100/25.3
C205	4030017570	S.CER ECJ0EC1H040B	[L]	B	100.4/28.9
	4030017580	S.CER ECJ0EC1H060C	[H]	B	100.4/28.9
C206	4030017460	S.CER ECJ0EB1E102K		B	104.3/26.2
C207	4030017460	S.CER ECJ0EB1E102K		B	102.6/27.1
C208	4030017460	S.CER ECJ0EB1E102K		B	101.3/29.8
C209	4030016930	S.CER ECJ0EB1A104K		B	104.3/27.1
C210	4030017440	S.CER ECJ0EC1H221J		B	102.8/24.2
C211	4030017380	S.CER ECJ0EC1H050B		T	104.3/35.5
C213	4030017460	S.CER ECJ0EB1E102K		B	104.2/33
C214	4030017460	S.CER ECJ0EB1E102K		T	103.4/33.9

[L]=Low band, [H]=High band

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.	H/V LOCATION
C215	4030017350	S.CER ECJ0EC1H020B	[H]	B	102.1/28.1
	4030017570	S.CER ECJ0EC1H040B	[L]	B	102.1/28.1
C216	4030017350	S.CER ECJ0EC1H020B	[H]	B	102.8/35.6
	4030017550	S.CER ECJ0EC1H1R5B	[L]	B	102.8/35.6
C219	4030017600	S.CER ECJ0EC1H080C	[H]	T	101.1/34
	4030017630	S.CER ECJ0EC1H120J	[L]	T	101.1/34
C220	4030017600	S.CER ECJ0EC1H080C	[L]	T	101.1/32.4
	4030017610	S.CER ECJ0EC1H090C	[H]	T	101.1/32.4
C221	4030017460	S.CER ECJ0EB1E102K		T	101.3/31.1
C222	4030017400	S.CER ECJ0EC1H220J	[L]	T	104.9/28.9
	4030017670	S.CER ECJ0EC1H390J	[H]	T	104.9/28.9
C223	4030017460	S.CER ECJ0EB1E102K		T	116.9/27
C224	4030017620	S.CER ECJ0EC1H100C	[L]	T	103.9/27.8
	4030017630	S.CER ECJ0EC1H120J	[H]	T	103.9/27.8
C225	4030016930	S.CER ECJ0EB1A104K		T	100.6/29
C226	4030017400	S.CER ECJ0EC1H220J	[L]	T	103.9/26.8
	4030017620	S.CER ECJ0EC1H100C	[H]	T	103.9/26.8
C227	4030016790	S.CER ECJ0EB1C103K		T	115.9/27
C229	4550006650	S.TAN ECST1CY685R		T	101.3/24
C230	4030017650	S.CER ECJ0EC1H270J	[L]	T	103.9/25.9
	4030017670	S.CER ECJ0EC1H390J	[H]	T	103.9/25.9
C231	4030017460	S.CER ECJ0EB1E102K		T	104.3/22.5
C232	4030017460	S.CER ECJ0EB1E102K		T	103.4/21.3
C233	4030018860	S.CER ECJ0EB0J105K		T	101.2/20.6
C234	4030017460	S.CER ECJ0EB1E102K		B	115.7/26.7
C235	4030017460	S.CER ECJ0EB1E102K		T	103.8/23.7
C236	4030016790	S.CER ECJ0EB1C103K		B	115.7/27.6
C237	4030007030	S.CER C1608 CH 1H 150J-T		T	114.5/20.7
C238	4030011810	S.CER C1608 JB 1A 224K-T		T	103.9/18.8
C239	4030007040	S.CER C1608 CH 1H 180J-T		T	115.7/20.7
C240	4030007000	S.CER C1608 CH 1H 090D-T	[L]	B	116.3/17.5
	4030009350	S.CER C1608 CH 1H 3R5B-T	[H]	B	116.3/17.5
C241	4030017780	S.CER ECJ0EB1E472K		T	100.8/15.3
C242	4030006860	S.CER C1608 JB 1H 102K-T		B	118.2/17.9
C243	4030017460	S.CER ECJ0EB1E102K		T	109.1/13.5
C244	4030017420	S.CER ECJ0EC1H470J		T	102.7/15.8
C245	4030009910	S.CER C1608 CH 1H 040B-T		B	119.9/15.4
C246	4030017460	S.CER ECJ0EB1E102K		B	109.5/12.5
C247	4030017460	S.CER ECJ0EB1E102K		B	108.6/12.5
C248	4030009910	S.CER C1608 CH 1H 040B-T		B	119.9/13.7
C249	4030017460	S.CER ECJ0EB1E102K		T	110/11.8
C250	4030017420	S.CER ECJ0EC1H470J		B	110.4/12.5
C251	4030006860	S.CER C1608 JB 1H 102K-T		B	115.5/12.6
C253	4030017460	S.CER ECJ0EB1E102K		T	111.8/11.1
C254	4030006990	S.CER C1608 CH 1H 080D-T	[L]	B	116.3/18.7
	4030007000	S.CER C1608 CH 1H 090D-T	[H]	B	116.3/18.7
C255	4030016790	S.CER ECJ0EB1C103K		B	98.4/27
C256	4030017730	S.CER ECJ0EB1E471K		B	104.3/17.3
C300	4030017420	S.CER ECJ0EC1H470J		B	35.7/23.2
C301	4030017420	S.CER ECJ0EC1H470J		B	36/35.9
C302	4030017640	S.CER ECJ0EC1H150J		B	34.7/10.4
C303	4030017420	S.CER ECJ0EC1H470J		B	36.6/23.2
C304	4030017420	S.CER ECJ0EC1H470J		B	34.7/34.7
C305	4030017460	S.CER ECJ0EB1E102K		T	79.3/39.6
C306	4030017420	S.CER ECJ0EC1H470J		B	37.5/23.2
C307	4030016970	S.CER ECJ0EB1C223K		B	34.6/28.9
C308	4030016930	S.CER ECJ0EB1A104K		B	34.6/31.3
C309	4030017390	S.CER ECJ0EC1H180J		B	34.7/8.6
C310	4030017420	S.CER ECJ0EC1H470J		B	38.4/23.2
C311	4030016930	S.CER ECJ0EB1A104K		B	33.6/16.5
C312	4030017460	S.CER ECJ0EB1E102K		B	45.1/24.2
C313	4550000460	S.TAN TEESVA 1C 105M8L		B	44.5/21.1
C314	4030017420	S.CER ECJ0EC1H470J		B	42.1/25
C315	4030018860	S.CER ECJ0EB0J105K		T	63.3/28.6
C316	4030018860	S.CER ECJ0EB0J105K		T	65.2/35.9
C317	4030018860	S.CER ECJ0EB0J105K	[L] only	T	66.2/35.9
C318	4550000460	S.TAN TEESVA 1C 105M8L		B	45/27.3
C319	4030017730	S.CER ECJ0EB1E471K		T	77/42.2
C320	4030016930	S.CER ECJ0EB1A104K		B	24.1/6.5
C321	4550006250	S.TAN TEESVA 1A 106M8L		T	80.4/42.4
C322	4030017910	S.CER ECJ0EB1H152K		B	42.2/22.4
C323	4030017680	S.CER ECJ0EC1H820J		B	44.5/30.9
C324	4030018860	S.CER ECJ0EB0J105K	[H] only	T	67.6/35.9
C325	4030017400	S.CER ECJ0EC1H220J		B	37.6/36.2
C326	4030016930	S.CER ECJ0EB1A104K		T	77.9/32.2
C327	4030016930	S.CER ECJ0EB1A104K		B	42.2/21.5
C328	4030017400	S.CER ECJ0EC1H220J		B	40.1/36.2
C329	4550006350	S.TAN TEESVB2 1A 226M8L		B	30.6/38.8
C330	4030016790	S.CER ECJ0EB1C103K		T	76.1/32.2
C331	4030017460	S.CER ECJ0EB1E102K		T	39/33.5
C332	4030016930	S.CER ECJ0EB1A104K		B	32.6/32.9
C333	4030016930	S.CER ECJ0EB1A104K		B	44/35.9
C334	4030017460	S.CER ECJ0EB1E102K		B	33.8/34.7
C335	4030017720	S.CER ECJ0EB1H331K		B	32.4/28
C336	4030016930	S.CER ECJ0EB1A104K		T	69.5/19.1
C337	4030016940	S.CER ECJ0EB1A393K		T	78.8/32.8
C338	4030017760	S.CER ECJ0EB1H222K		B	30/25.5
C339	4030016930	S.CER ECJ0EB1A104K		B	46.3/30.9
C340	4030017750	S.CER ECJ0EB1E122K		B	46.8/32.2
C341	4030017460	S.CER ECJ0EB1E102K		T	77.1/29.5
C342	4030016930	S.CER ECJ0EB1A104K		T	45.7/18.6
C343	4030017460	S.CER ECJ0EB1E102K		T	57.2/18.3
C344	4030017260	S.CER C2012 JB 0J 475KT		T	66.5/30.5
C345	4030016930	S.CER ECJ0EB1A104K		T	74.8/31.7

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C346	4030016930	S.CER ECJ0EB1A104K	T	74.2/30.4
C347	4030017710	S.CER ECJ0EC1H181J	T	59.8/15.9
C348	4030016930	S.CER ECJ0EB1A104K	T	58.8/18.3
C349	4030016930	S.CER ECJ0EB1A104K	T	77.9/22.5
C350	4030017460	S.CER ECJ0EB1E102K	T	7.6/5.1
C351	4030016930	S.CER ECJ0EB1A104K	T	73.9/18.5
C352	4030017420	S.CER ECJ0EC1H470J	T	9.1/12.5
C353	4030016930	S.CER ECJ0EB1A104K	T	72.6/19.1
C354	4030016930	S.CER ECJ0EB1A104K	T	64.2/18.1
C355	4030016930	S.CER ECJ0EB1A104K	T	65.3/21.8
C356	4030016930	S.CER ECJ0EB1A104K	T	63.3/16.4
C357	4030017420	S.CER ECJ0EC1H470J	B	56.9/11.8
C358	4030017420	S.CER ECJ0EC1H470J	T	10.4/12.7
C359	4030017460	S.CER ECJ0EB1E102K	T	17.2/3.5
C360	4030017460	S.CER ECJ0EB1E102K	T	6.3/6.8
C361	4030018090	S.CER ECJ0EB1C822K	T	53/14.8
C362	4030018560	S.CER C2012 JB 1A 475K-T	T	70.1/31.8
C363	4030017420	S.CER ECJ0EC1H470J	T	53.4/8.2
C364	4030017510	S.CER ECJ0EC1H680J	T	53.1/16
C365	4030016930	S.CER ECJ0EB1A104K	T	51.8/8.2
C366	4030017420	S.CER ECJ0EC1H470J	T	59.8/13.5
C367	4030017460	S.CER ECJ0EB1E102K	T	29.3/18.5
C368	4030017740	S.CER ECJ0EB1E821K	T	55.3/8.2
C369	4030017460	S.CER ECJ0EB1E102K	B	33.2/4.1
C370	4030017420	S.CER ECJ0EC1H470J	T	32.9/10.8
C371	4030017460	S.CER ECJ0EB1E102K	B	34.1/4.1
C372	4030018240	S.CER ECJ0EB1E562K	T	58.2/8.8
C373	4030017710	S.CER ECJ0EC1H181J	T	56.6/7.9
C374	4030016930	S.CER ECJ0EB1A104K	T	53.2/10.4
C375	4030016780	S.CER ECJ0EB1C153K	T	51.3/12.1
C376	4030018110	S.CER ECJ0EB1H272K	T	60/14.7
C377	4030017420	S.CER ECJ0EC1H470J	T	34.8/10.8
C378	4030016930	S.CER ECJ0EB1A104K	B	11.7/39.8
C379	4030017460	S.CER ECJ0EB1E102K	T	53.1/17.6
C380	4030016930	S.CER ECJ0EB1A104K	B	5.9/36.4
C381	4030016790	S.CER ECJ0EB1C103K	B	6.3/41
C382	4030016930	S.CER ECJ0EB1A104K	T	47.7/22.5
C383	4030017420	S.CER ECJ0EC1H470J	T	23/29.7
C384	4030017420	S.CER ECJ0EC1H470J	T	23/28.8
C385	4030016930	S.CER ECJ0EB1A104K	T	47.6/17.2
C386	4030017660	S.CER ECJ0EC1H330J	B	26.3/36.4
C387	4030016930	S.CER ECJ0EB1A104K	T	68.6/19.1
C388	4030017460	S.CER ECJ0EB1E102K	T	16.9/16.9
C389	4030017460	S.CER ECJ0EB1E102K	T	12.2/22.6
C390	4030016790	S.CER ECJ0EB1C103K	B	25.5/31.4
C391	4030017590	S.CER ECJ0EC1H070C	B	21.7/31.8
C392	4030017460	S.CER ECJ0EB1E102K	T	13.2/20.1
C393	4030017400	S.CER ECJ0EC1H220J	B	19.7/32.7
C394	4030016930	S.CER ECJ0EB1A104K	B	69.2/14.3
C395	4030017420	S.CER ECJ0EC1H470J	T	73.1/2.2
C396	4030017460	S.CER ECJ0EB1E102K	T	13.8/24
C397	4030017460	S.CER ECJ0EB1E102K	T	21.8/24.5
C399	4030016930	S.CER ECJ0EB1A104K	B	12/34.7
C402	4030017420	S.CER ECJ0EC1H470J	T	28.3/18.5
C403	4030016930	S.CER ECJ0EB1A104K	B	63.9/5
C404	4030017620	S.CER ECJ0EC1H100C	T	70.6/2.2
C405	4030017620	S.CER ECJ0EC1H100C	T	71.5/2.2
C408	4030017420	S.CER ECJ0EC1H470J	T	22.2/15.2
C409	4030018920	S.CER ECJ0EB1H392K	T	38.1/33.5
C410	4030017420	S.CER ECJ0EC1H470J	T	20.9/15.7
C411	4030017420	S.CER ECJ0EC1H470J	T	20/15.7
C412	4030017420	S.CER ECJ0EC1H470J	B	18/11.7
C413	4030017420	S.CER ECJ0EC1H470J	B	17.4/13
C415	4030017420	S.CER ECJ0EC1H470J	B	3.7/31
C416	4030017420	S.CER ECJ0EC1H470J	B	3.8/25.7
C418	4030016930	S.CER ECJ0EB1A104K	T	11.3/22.6
C419	4030017460	S.CER ECJ0EB1E102K	B	105.2/43.1
C420	4030016930	S.CER ECJ0EB1A104K	B	19.3/10.9
C421	4030016790	S.CER ECJ0EB1C103K	B	107/43.1
C422	4030017460	S.CER ECJ0EB1E102K	B	108.1/39.9
C423	4030017460	S.CER ECJ0EB1E102K	B	99.5/37.1
C424	4030016790	S.CER ECJ0EB1C103K	B	97.2/34.1
C425	4030017460	S.CER ECJ0EB1E102K	B	104.3/38.1
C426	4030017420	S.CER ECJ0EC1H470J	B	3.2/19.6
C427	4030017420	S.CER ECJ0EC1H470J	B	3.2/18.7
C428	4030017420	S.CER ECJ0EC1H470J	B	3.2/17.8
C429	4030017420	S.CER ECJ0EC1H470J	B	4.6/15.8
C430	4030017420	S.CER ECJ0EC1H470J	B	5.7/14.9
C431	4030017420	S.CER ECJ0EC1H470J	B	6.7/14.9
C432	4030017420	S.CER ECJ0EC1H470J	B	7.6/14.9
C433	4030017420	S.CER ECJ0EC1H470J	B	7.6/13.6
C434	4030017420	S.CER ECJ0EC1H470J	B	8.9/13.1
C435	4030017420	S.CER ECJ0EC1H470J	B	9.8/13.1
C436	4030017420	S.CER ECJ0EC1H470J	B	10.7/13.1
C437	4030017420	S.CER ECJ0EC1H470J	B	11.6/10.4
C438	4030017420	S.CER ECJ0EC1H470J	B	12.5/10.4
C439	4030017420	S.CER ECJ0EC1H470J	B	13.8/11.4
C440	4030017420	S.CER ECJ0EC1H470J	B	14.2/13.1
C441	4030017460	S.CER ECJ0EB1E102K	B	86.9/40.8
C442	4030016790	S.CER ECJ0EB1C103K	B	87.4/38.9
C443	4030017460	S.CER ECJ0EB1E102K	B	109/39.9
C444	4550006250	S.TAN TEESVA 1A 106M8L	B	23.6/32.9
C445	4550005980	S.TAN TEESVA 1A 475M8L	B	114.3/42.1
C446	4030016930	S.CER ECJ0EB1A104K	T	79/12.9

[L]=Low band, [H]=High band

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C447	4030016930	S.CER ECJ0EB1A104K	B	116/38.6
C448	4030018860	S.CER ECJ0EB0J105K	B	122.7/32.3
C449	4030018860	S.CER ECJ0EB0J105K	B	116.7/34.6
C450	4030016790	S.CER ECJ0EB1C103K	T	11.1/34.1
C451	4510004630	S.ELE ECEV1CA100SR	T	120.2/36.3
C452	4030017460	S.CER ECJ0EB1E102K	B	122.7/33.2
C453	4030017460	S.CER ECJ0EB1E102K	B	122.3/31
C454	4030017460	S.CER ECJ0EB1E102K	B	9.7/37.7
C455	4030017430	S.CER ECJ0EC1H101J	T	114.9/42.4
C456	4030017430	S.CER ECJ0EC1H101J	T	106.8/40.5
C457	4030017430	S.CER ECJ0EC1H101J	T	88.3/41.5
C458	4030017430	S.CER ECJ0EC1H101J	T	61.9/42.5
C459	4550006050	S.TAN TEESVA 0J 106M8L	B	84.1/8
C460	4550006250	S.TAN TEESVA 1A 106M8L	B	31.5/17.3
C461	4030016790	S.CER ECJ0EB1C103K	B	29.2/15.5
C462	4030018860	S.CER ECJ0EB0J105K	B	28.2/38.2
C465	4030017750	S.CER ECJ0EB1E122K	B	31.8/25.5
C466	4030017420	S.CER ECJ0EC1H470J	B	46.2/10.4
C467	4030018860	S.CER ECJ0EB0J105K	B	71.4/18.8
C468	4030017730	S.CER ECJ0EB1E471K	T	4.5/36.8
C501	4030016790	S.CER ECJ0EB1C103K	B	61.1/27.2
C502	4030016790	S.CER ECJ0EB1C103K	B	64.2/26.2
C503	4030017460	S.CER ECJ0EB1E102K	B	66.3/29.3
C504	4030016790	S.CER ECJ0EB1C103K	B	65.7/31
C506	4030017630	S.CER ECJ0EC1H120J	B	75.6/26.4
C508	4030016790	S.CER ECJ0EB1C103K	B	76.2/21.2
C509	4030017640	S.CER ECJ0EC1H150J	B	70.6/20.8
C510	4030017460	S.CER ECJ0EB1E102K	B	79.7/22.8
C511	4030017460	S.CER ECJ0EB1E102K	B	75.9/16
C513	4030017460	S.CER ECJ0EB1E102K	B	89.2/14.6
C515	4030016790	S.CER ECJ0EB1C103K	B	89.1/12.3
C516	4030016790	S.CER ECJ0EB1C103K	B	78.4/4.6
C517	4030017400	S.CER ECJ0EC1H220J [H]	B	82.5/5.8
	4030017620	S.CER ECJ0EC1H100C [L]	B	82.5/5.8
C518	4030017460	S.CER ECJ0EB1E102K	B	102.2/16.4
C519	4030017600	S.CER ECJ0EC1H080C	B	64.5/22.8
C520	4030017620	S.CER ECJ0EC1H100C	B	87.1/6.3
C522	4030017360	S.CER ECJ0EC1H030B	B	87.1/4.7
C523	4030017380	S.CER ECJ0EC1H050B [H]	B	88/5.6
	4030017570	S.CER ECJ0EC1H040B [L]	B	88/5.6
C525	4030017460	S.CER ECJ0EB1E102K	B	99.7/14.8
C526	4030017380	S.CER ECJ0EC1H050B	B	94.4/15.9
C527	4030017610	S.CER ECJ0EC1H090C [H]	T	85.5/6.4
	4030017640	S.CER ECJ0EC1H150J [L]	T	85.5/6.4
C528	4030017600	S.CER ECJ0EC1H080C	B	95.4/15.9
C529	4030017460	S.CER ECJ0EB1E102K	T	88.1/5.2
C530	4030017550	S.CER ECJ0EC1H1R5B	T	89.5/9.1
C532	4030017460	S.CER ECJ0EB1E102K	T	87.2/5.2
C533	4030017460	S.CER ECJ0EB1E102K	T	83.6/6.3
C535	4030017380	S.CER ECJ0EC1H050B	B	98.8/14.8
C536	4030017390	S.CER ECJ0EC1H180J [L]	T	90.4/9.3
	4030017640	S.CER ECJ0EC1H150J [H]	T	90.4/9.3
C537	4030017440	S.CER ECJ0EC1H221J	T	90.4/12.4
C538	4030017350	S.CER ECJ0EC1H020B	T	91.3/9.3
C540	4030017460	S.CER ECJ0EB1E102K	T	97.9/11.7
C541	4030016930	S.CER ECJ0EB1A104K	T	94.8/12
C542	4030017420	S.CER ECJ0EC1H470J	T	92.5/9.4
C543	4030017460	S.CER ECJ0EB1E102K	T	93.9/12
C544	4030017460	S.CER ECJ0EB1E102K	T	97.3/12.9
C545	4030017460	S.CER ECJ0EB1E102K	T	92.5/7.6
C546	4030016930	S.CER ECJ0EB1A104K	B	96.2/10.7
C547	4030017460	S.CER ECJ0EB1E102K	T	97.8/10
C548	4030017460	S.CER ECJ0EB1E102K	B	94/9.8
C549	4030017620	S.CER ECJ0EC1H100C	T	102.6/9.5
C550	4030017420	S.CER ECJ0EC1H470J	B	93.1/9.8
C551	4030017580	S.CER ECJ0EC1H060C	T	103.3/5.8
C552	4030017400	S.CER ECJ0EC1H220J [L]	T	101.5/6.3
	4030017620	S.CER ECJ0EC1H100C [H]	T	101.5/6.3
C553	4030017460	S.CER ECJ0EB1E102K	B	104.7/2.3
C554	4030017340	S.CER ECJ0EC1H010B	T	105.8/8.2
C555	4030017400	S.CER ECJ0EC1H220J [L]	T	106.3/3
	4030017620	S.CER ECJ0EC1H100C [H]	T	106.3/3
C556	4030017590	S.CER ECJ0EC1H070C	T	104.2/5.8
C557	4030017380	S.CER ECJ0EC1H050B	T	107.4/8.2
C558	4030017380	S.CER ECJ0EC1H050B	T	108.4/6.6
C559	4030017630	S.CER ECJ0EC1H120J [H]	B	111.1/8.4
	4030017640	S.CER ECJ0EC1H150J [L]	B	111.1/8.4
C560	4030017460	S.CER ECJ0EB1E102K	B	107.8/6.9
C562	4030006860	S.CER C1608 JB 1H 102K-T	B	112.9/7.8
C564	4030017380	S.CER ECJ0EC1H050B	B	110.6/5.2
C565	4030006980	S.CER C1608 CH 1H 070D-T [L]	B	112.9/6.5
	4030009920	S.CER C1608 CH 1H 050B-T [H]	B	112.9/6.5
C566	4030009510	S.CER C1608 CH 1H 010B-T [L]	B	116.3/6.2
	4030009540	S.CER C1608 CH 1H 1R5B-T [H]	B	116.3/6.2
C567	4030006990	S.CER C1608 CH 1H 080D-T [H]	B	118.3/5.5
	4030007020	S.CER C1608 CH 1H 120J-T [L]	B	118.3/5.5
C568	4030009540	S.CER C1608 CH 1H 1R5B-T	B	118.5/8.4
C569	4030006980	S.CER C1608 CH 1H 070D-T [L]	B	121.9/8.8
	4030009910	S.CER C1608 CH 1H 040B-T [H]	B	121.9/8.8
C572	4030017460	S.CER ECJ0EB1E102K	B	103.2/6.9
C605	4030017590	S.CER ECJ0EC1H070C [H]	T	89.4/30.4
	4030017630	S.CER ECJ0EC1H120J [L]	T	89.4/30.4
C606	4030017590	S.CER ECJ0EC1H070C [H]	T	89.4/24
C606	4030017600	S.CER ECJ0EC1H080C [L]	T	89.4/24

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.	H/V LOCATION
C607	4030017590	S.CER ECJ0EC1H070C	[H]	T	88.9/17.8
	4030017630	S.CER ECJ0EC1H120J	[L]	T	88.9/17.8
C609	4030017610	S.CER ECJ0EC1H090C	[H]	T	91.5/30.4
C609	4030017630	S.CER ECJ0EC1H120J	[L]	T	91.5/30.4
C610	4030017590	S.CER ECJ0EC1H070C	[H]	T	93.9/22.8
	4030017610	S.CER ECJ0EC1H090C	[L]	T	93.9/22.8
C612	4030017520	S.CER ECJ0EC1H0R3B		T	91.7/18.3
C613	4030017350	S.CER ECJ0EC1H020B	[H]	T	91.7/31.6
	4030017600	S.CER ECJ0EC1H080C	[L]	T	91.7/31.6
C614	4030017580	S.CER ECJ0EC1H060C	[L]	T	93.9/23.7
C615	4030017380	S.CER ECJ0EC1H050B	[H]	T	93.9/17.7
	4030017590	S.CER ECJ0EC1H070C	[L]	T	93.9/17.7
C616	4030017390	S.CER ECJ0EC1H180J	[L]	T	95.8/31.1
	4030017640	S.CER ECJ0EC1H150J	[H]	T	95.8/31.1
C617	4030017400	S.CER ECJ0EC1H220J	[H]	T	94.2/34.2
	4030017650	S.CER ECJ0EC1H270J	[L]	T	94.2/34.2
C618	4030017390	S.CER ECJ0EC1H180J	[L]	T	96.3/24.7
	4030017600	S.CER ECJ0EC1H080C	[H]	T	96.3/24.7
C619	4030017400	S.CER ECJ0EC1H220J	[L]	T	95.1/28.1
	4030017640	S.CER ECJ0EC1H150J	[H]	T	95.1/28.1
C620	4030017620	S.CER ECJ0EC1H100C	[H]	T	96.3/18.4
	4030017630	S.CER ECJ0EC1H120J	[L]	T	96.3/18.4
C621	4030017390	S.CER ECJ0EC1H180J		T	95.5/22.2
C622	4030017540	S.CER ECJ0EC1HR75B		T	97.9/31.9
C623	4030017730	S.CER ECJ0EB1E471K		T	91.7/33.2
C624	4030017730	S.CER ECJ0EB1E471K		T	93.3/19.5
C625	4030016790	S.CER ECJ0EB1C103K		T	92.8/28.7
C626	4030017520	S.CER ECJ0EC1H0R3B	[L]	T	96.7/25.9
	4030017540	S.CER ECJ0EC1HR75B	[H]	T	96.7/25.9
C627	4030017540	S.CER ECJ0EC1HR75B	[L]	T	96.7/23.1
	4030017550	S.CER ECJ0EC1H1R5B	[H]	T	96.7/23.1
C628	4030016930	S.CER ECJ0EB1A104K		B	93/25.5
C629	4030017430	S.CER ECJ0EC1H101J		B	94.8/23.7
C630	4030017460	S.CER ECJ0EB1E102K		B	92.6/18.7
C631	4030017730	S.CER ECJ0EB1E471K		B	94.8/17.5
C632	4030017460	S.CER ECJ0EB1E102K		B	96.6/29.4
C633	4030017460	S.CER ECJ0EB1E102K		B	93.5/30.4
C634	4030017360	S.CER ECJ0EC1H030B	[H]	B	97.6/20.4
	4030017560	S.CER ECJ0EC1H2R5B	[L]	B	97.6/20.4
C635	4030017350	S.CER ECJ0EC1H020B		B	93/22.1
C636	4030017460	S.CER ECJ0EB1E102K		B	95.7/17.5
C637	4030017460	S.CER ECJ0EB1E102K		B	92.3/29.7
C638	4030017400	S.CER ECJ0EC1H220J		B	88.8/31.3
C639	4030017460	S.CER ECJ0EB1E102K		B	97.6/18.6
C640	4030017610	S.CER ECJ0EC1H090C	[H]	B	100.4/18
	4030017630	S.CER ECJ0EC1H120J	[L]	B	100.4/18
C641	4030016930	S.CER ECJ0EB1A104K		B	87.4/24.9
C645	4030017590	S.CER ECJ0EC1H070C		B	90.5/31.3
C646	4030016790	S.CER ECJ0EB1C103K		B	101.4/20.3
C647	4030017460	S.CER ECJ0EB1E102K		B	76.1/4
C648	4030017460	S.CER ECJ0EB1E102K		B	75.1/4
C649	4030017460	S.CER ECJ0EB1E102K		T	9.6/25.4
C650	4030017460	S.CER ECJ0EB1E102K		B	66.7/4
C651	4030017460	S.CER ECJ0EB1E102K		B	64.8/5
C653	4030017460	S.CER ECJ0EB1E102K		B	74/6.1
C654	4030017460	S.CER ECJ0EB1E102K		B	74.1/4
C657	4030017460	S.CER ECJ0EB1E102K		T	69.3/2.2
C658	4030017460	S.CER ECJ0EB1E102K		B	68.5/4
C659	4030017460	S.CER ECJ0EB1E102K		B	64.8/1.6
C660	4030017460	S.CER ECJ0EB1E102K		T	67.1/2.2
C661	4030017360	S.CER ECJ0EC1H030B	[L]	B	98.3/16.2
	4030017580	S.CER ECJ0EC1H060C	[H]	B	98.3/16.2
C662	4030017730	S.CER ECJ0EB1E471K		B	74.8/8.1
C663	4030017730	S.CER ECJ0EB1E471K		B	73.8/8.1
C665	4030017730	S.CER ECJ0EB1E471K		B	73.1/11.7
C668	4030017730	S.CER ECJ0EB1E471K		B	70.6/4.1
C669	4030017730	S.CER ECJ0EB1E471K		B	72.1/11.7
C670	4030017730	S.CER ECJ0EB1E471K		B	69.6/7.6
C671	4030017460	S.CER ECJ0EB1E102K		B	77.1/4
J1	6510018430	S.CNR AXN330C038P		T	16.1/7.5
J2	6510018430	S.CNR AXN330C038P		T	38.2/6.3
J3	6510022710	S.CNR 30FLZ-SM1-TB		T	70.5/6.6
F1	5210000830	S.FUS ERBFE3R00U		T	120.1/31.8
S1	2260002800	S.SW SW-167 (SKQTLAE010)		T	119.2/42.8
S2	2260002800	S.SW SW-167 (SKQTLAE010)		T	109.8/42.8
S3	2260002840	SW SKHLLFA010			
S4	2260002800	S.SW SW-167 (SKQTLAE010)		T	66.4/42.8
EP1	6910015370	S.BEA ACZ1005Y-102-T		B	65.2/41.2
EP300	6910015370	S.BEA ACZ1005Y-102-T		B	43.6/24.5
EP301	6910015370	S.BEA ACZ1005Y-102-T		B	34.5/33.2
EP600	6910015370	S.BEA ACZ1005Y-102-T		T	92.8/27.8
EP601	6910015370	S.BEA ACZ1005Y-102-T		B	25.3/21
EP602	6910015370	S.BEA ACZ1005Y-102-T		B	25.3/20.1

[L]=Low band, [H]=High band

[DSP UNIT] (IC-F80DT/DS only)

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1180002590	S.REG XC6204B332MR	B	2.1/19.5
IC2	1180002740	S.REG R1230D151F-TR-F	B	2.9/30.3
IC3	1180002590	S.REG XC6204B332MR	T	23.7/7.5
IC4	1110003800	S.IC NJM2904V-TE1	T	14.5/11.8
IC5	1110006230	S.IC NJM2711F-TE1	B	14.6/16.4
IC7	1140011980	S.IC TMS320VC5416GGU120	B	11.8/30.4
IC8	1190002080	S.IC AD7476ARTZ-500RL7	T	14.7/18.4
IC9	1130011610	S.IC AK4550VT-E2	T	23.5/19.3
IC10	1110006230	S.IC NJM2711F-TE1	T	24.2/29.7
IC12	1140011880	S.IC HD64F2239TE16	T	11.8/30.4
IC13	1130003830	S.IC TC7S04F (TE85R)	B	11.6/22.5
IC14	1110005730	S.IC S-80928CNMC-G8Y-T2	B	19.6/38.1
IC15	1130011600	S.IC TC7MET541AFK (EC)	T	7/16.4
IC17	1130010390	S.IC HN58X2416TI	B	8.9/38.5
Q1	1530002060	S.TR 2SC4081 T106 R	B	23.4/22
FI1	2020001780	S.CER CFWCA450KEFA-R0	B	20.7/12.1
X1	6050012080	S.XTL CR-798 (12.288 MHz)	T	23.4/36.3
L1	6200003590	S.COL EXCCL3225U1	T	23.5/2.5
L2	6200003960	S.COL MLF1608A 1R0K-T	B	3.6/23.6
L3	6200003960	S.COL MLF1608A 1R0K-T	T	24.6/12.1
L4	6200003960	S.COL MLF1608A 1R0K-T	T	1/24.3
L5	6200003960	S.COL MLF1608A 1R0K-T	B	3.6/24.8
L6	6200003960	S.COL MLF1608A 1R0K-T	B	3.7/37.2
L7	6200011440	S.COL NLFV25T-330K-PF	B	3.1/33.3
L8	6200003960	S.COL MLF1608A 1R0K-T	B	21.1/5.4
R1	7030003860	S.RES ERJ3GE JPW V	B	3.7/26
R2	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	16.3/6.4
R3	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	8.2/8
R4	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	19.6/8.4
R5	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	14/12.6
R6	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	B	11.5/16.8
R7	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	15.5/13.9
R8	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	20.5/8.4
R9	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	20.7/21.9
R10	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ)	T	17.5/13.9
R12	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	4.3/9.8
R15	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	11.1/8.6
R16	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ)	T	18.8/11.3
R17	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)	B	21.6/21.2
R18	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	21.8/19.4
R19	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	B	13.7/13.9
R20	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	15.6/14.3
R21	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	11.2/13.9
R22	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	4.3/6.6
R23	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	5.5/8
R24	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	1.9/10.3
R25	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	7.3/8
R26	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	15.3/9.3
R27	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	2.7/7.6
R28	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	6.4/8
R29	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	4.6/6.2
R30	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	3.9/4.3
R31	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	3.6/2.8
R32	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	14.2/5.1
R33	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ)	T	19.6/9.6
R34	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ)	T	18.9/13.5
R35	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	19.6/19.5
R36	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	18.4/19.2
R37	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	18/17.7
R38	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	17.7/16
R39	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ)	T	17.7/15.1
R41	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	16.5/37.9
R42	7030007250	S.RES ERJ2GEJ 220 X (22 Ω)	T	12.1/16.1
R43	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	B	17.1/18.7
R44	7030005000	S.RES ERJ2GEJ 471 X (470 Ω)	T	20.7/14.1
R45	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	T	11.6/17.4
R46	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	16.1/22.6
R47	7030004980	S.RES ERJ2GEJ 101 X (100 Ω)	T	18.3/20
R48	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	23.8/14.9
R49	7030010040	S.RES ERJ2GE-JPW	T	25/14.6
R50	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	20.9/31.5
R52	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	20.6/27.2
R53	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	18.5/30.5
R54	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	6.1/20.7
R55	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	2.7/34.4
R56	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	19.4/31
R57	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	23.4/19.5
R58	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	24.7/20.2
R59	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	T	25.7/37.3
R61	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	25.1/22.3
R62	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	25.4/32.2
R63	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	25.7/33.8

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[DSP UNIT] (IC-F80DT/DS only)

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R64	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	5.3/11.6
R65	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	T	25.7/27.1
R66	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	7.3/19.2
R67	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	T	22/27.3
R68	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	20.8/29.1
R70	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	9.1/10.2
R71	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	8.2/10.2
R72	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	7.3/10.2
R73	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	6.4/9.2
R74	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	5.5/9.2
R75	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	9.3/12.4
R76	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	T	8.4/12.4
R77	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	7.5/12.9
R78	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	T	6.6/12.7
R79	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	T	5.7/12
R80	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	20.7/35.9
R82	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	3.5/17.2
R83	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	2.1/38.6
R85	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	4.3/38.8
R86	7030005010	S.RES ERJ2GEJ 681 X (680 Ω)	B	12.1/20.3
R87	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	10.7/18.5
R88	7030004970	S.RES ERJ2GEJ 470 X (47 Ω)	B	9.8/19.8
R89	7030010040	S.RES ERJ2GE-JPW	T	3.3/37.4
R90	7030008370	S.RES ERJ2GEJ 561 X (560 Ω)	T	22/28.9
R91	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	23.4/25.7
R92	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	23.5/24.8
R93	7030010040	S.RES ERJ2GE-JPW	T	22.2/24
R94	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	7.8/19.8
R95	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	17.1/19.6
R96	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	1.6/11.8
R97	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	1.9/18.6
C1	4550007070	S.TAN TEESVP 1A 475M8R	B	1.2/15.3
C2	4550007070	S.TAN TEESVP 1A 475M8R	B	2/27.6
C3	4550007070	S.TAN TEESVP 1A 475M8R	T	23/4.9
C4	4030017420	S.CER ECJ0EC1H470J	B	22.7/1.7
C5	4030016930	S.CER ECJ0EB1A104K	B	1.3/17.3
C6	4030016930	S.CER ECJ0EB1A104K	B	4.6/27.4
C7	4030016930	S.CER ECJ0EB1A104K	T	21.5/7.7
C8	4030016930	S.CER ECJ0EB1A104K	B	23.7/5.6
C9	4030017420	S.CER ECJ0EC1H470J	B	9.1/8
C10	4550006250	S.TAN TEESVA 1A 106M8L	B	23.5/3.3
C11	4030017460	S.CER ECJ0EB1E102K	B	5.9/23.4
C12	4030017460	S.CER ECJ0EB1E102K	B	4.9/35.2
C13	4030017460	S.CER ECJ0EB1E102K	T	24.5/10
C14	4550007030	S.TAN TEESVP 0J 106M8R	B	4.9/21.3
C15	4550007030	S.TAN TEESVP 0J 106M8R	B	2.9/35.6
C16	4550007030	S.TAN TEESVP 0J 106M8R	T	22.4/10.8
C17	4550006250	S.TAN TEESVA 1A 106M8L	B	14.8/9.5
C18	4030016930	S.CER ECJ0EB1A104K	B	16.4/12.7
C19	4030016930	S.CER ECJ0EB1A104K	B	16.4/11.5
C20	4030017420	S.CER ECJ0EC1H470J	T	17.5/9.7
C21	4550006250	S.TAN TEESVA 1A 106M8L	B	11.8/13
C22	4030016930	S.CER ECJ0EB1A104K	B	12.4/16.8
C23	4030017680	S.CER ECJ0EC1H820J	B	13.2/9
C24	4030017730	S.CER ECJ0EB1E471K	T	18.4/9.7
C25	4030017420	S.CER ECJ0EC1H470J	T	20.2/11.3
C26	4030016930	S.CER ECJ0EB1A104K	T	14/14.3
C27	4030017590	S.CER ECJ0EC1H070C	B	14.6/13.9
C28	4030016930	S.CER ECJ0EB1A104K	B	20.9/19.4
C30	4030017450	S.CER ECJ0EB1E271K	T	19.3/14.7
C31	4030017420	S.CER ECJ0EC1H470J	T	4.9/13.2
C32	4030016930	S.CER ECJ0EB1A104K	B	19.6/18.6
C33	4030016790	S.CER ECJ0EB1C103K	T	12.4/14.6
C35	4030017420	S.CER ECJ0EC1H470J	B	3.1/7.2
C36	4030017420	S.CER ECJ0EC1H470J	B	4.3/7.5
C38	4030017420	S.CER ECJ0EC1H470J	B	3/11.3
C39	4030017760	S.CER ECJ0EB1H222K	B	19.6/20.4
C40	4030017420	S.CER ECJ0EC1H470J	B	7.8/9.9
C41	4030017420	S.CER ECJ0EC1H470J	T	12.9/9.3
C42	4030017420	S.CER ECJ0EC1H470J	T	3.2/8.8
C43	4030017460	S.CER ECJ0EB1E102K	B	16.5/39.7
C44	4030017420	S.CER ECJ0EC1H470J	T	7.6/8.7
C45	4030017420	S.CER ECJ0EC1H470J	B	3.9/8.7
C46	4030017420	S.CER ECJ0EC1H470J	T	3.4/6.4
C47	4030017460	S.CER ECJ0EB1E102K	B	18.6/26.9
C48	4030017460	S.CER ECJ0EB1E102K	B	19.4/34.7
C49	4030017420	S.CER ECJ0EC1H470J	T	3.4/5.5
C50	4030017420	S.CER ECJ0EC1H470J	T	2.4/3.7
C51	4030017420	S.CER ECJ0EC1H470J	B	15.1/5.1
C52	4030016930	S.CER ECJ0EB1A104K	B	17.1/19.6
C53	4030017460	S.CER ECJ0EB1E102K	B	19.4/33.3
C54	4030016930	S.CER ECJ0EB1A104K	T	20.2/12.9
C55	4550007030	S.TAN TEESVP 0J 106M8R	T	14.8/15.7
C56	4030017460	S.CER ECJ0EB1E102K	T	18.3/20.9
C57	4030017460	S.CER ECJ0EB1E102K	B	14.8/22.6
C58	4030016930	S.CER ECJ0EB1A104K	T	12.5/17.4
C59	4030017460	S.CER ECJ0EB1E102K	T	21.8/32.1
C60	4030017760	S.CER ECJ0EB1H222K	T	22.1/14.9
C62	4030017460	S.CER ECJ0EB1E102K	B	13.9/22.4
C63	4030016930	S.CER ECJ0EB1A104K	T	19.9/20

[L]=Low band, [H]=High band

[DSP UNIT] (IC-F80DT/DS only)

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C64	4030017460	S.CER ECJ0EB1E102K	T	23/14
C65	4030016930	S.CER ECJ0EB1A104K	T	18.9/17.6
C66	4550007030	S.TAN TEESVP 0J 106M8R	T	22.4/12.6
C67	4030017490	S.CER C1608 JB 1A 105K-T	T	20/17.2
C68	4030017460	S.CER ECJ0EB1E102K	T	1.2/26.5
C69	4030017460	S.CER ECJ0EB1E102K	T	1.6/38.1
C70	4030017490	S.CER C1608 JB 1A 105K-T	T	20.9/37.9
C71	4030017460	S.CER ECJ0EB1E102K	T	19.2/37.5
C72	4030016930	S.CER ECJ0EB1A104K	B	24.7/19.3
C73	4030016930	S.CER ECJ0EB1A104K	T	25.7/38.9
C74	4030017620	S.CER ECJ0EC1H100C	T	23.3/32.1
C75	4030016930	S.CER ECJ0EB1A104K	T	24.5/32.6
C76	4030017460	S.CER ECJ0EB1E102K	B	4.9/18.8
C77	4030017460	S.CER ECJ0EB1E102K	T	24.8/27.1
C78	4030017460	S.CER ECJ0EB1E102K	B	9.4/21.8
C79	4030017460	S.CER ECJ0EB1E102K	T	18.9/38.7
C80	4030017460	S.CER ECJ0EB1E102K	T	9.3/21.3
C81	4030017460	S.CER ECJ0EB1E102K	T	10.3/13.3
C82	4550007070	S.TAN TEESVP 1A 475M8R	T	2.8/21.9
C83	4030016790	S.CER ECJ0EB1C103K	B	17.4/39.7
C84	4030016930	S.CER ECJ0EB1A104K	T	4.9/21.5
C85	4030016930	S.CER ECJ0EB1A104K	T	2.5/23.3
C86	4030017460	S.CER ECJ0EB1E102K	B	1.2/37.9
C88	4030017730	S.CER ECJ0EB1E471K	B	1.4/23.1
C89	4030017490	S.CER C1608 JB 1A 105K-T	B	2.9/21.9
C90	4030017730	S.CER ECJ0EB1E471K	B	1.5/24.8
C91	4030017730	S.CER ECJ0EB1E471K	B	4.8/4.9
C92	4030016930	S.CER ECJ0EB1A104K	T	21.8/30.5
C93	4030017640	S.CER ECJ0EC1H150J	T	23.3/27.5
C94	4030016930	S.CER ECJ0EB1A104K	T	22.2/25.6
J1	6510018440	S.CNR AXN430C330P	T	13.2/4.3

[FUSE BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
L1	6200006190	S.COL BLM21PG300SN1D	T	7.5/6.5
C1	4030017460	S.CER ECJ0EB1E102K	T	10.5/2.9
J1	6910016860	CNR IMSA-9230B-1-02H12-PT1		

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210003200	VAR TP76N937N-16.5F-10KA-2803		
DS1	5040003170	LED UW3804X		
S1	2250000500	ECR TP70TF5164S-20F-2803		

[ANT BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
L1	6200008330	S.COL 0.45-1.4-4TL 15N [L]	T	3.9/10.4
	6200009360	S.COL 0.45-1.4-3TL 11N [H]	T	3.9/10.4
C1	4030006980	S.CER C1608 CH 1H 070D-T [L]	T	2.6/13
	4030009520	S.CER C1608 CH 1H 020B-T [H]	T	2.6/13

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
J1	6910015860	CNR IMSA-6277S-02A-G		
J2	6910016780	CNR ANT CONNECTOR-105		
W1	8900013740	CBL OPC-1429		

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

SECTION 7 MECHANICALPARTS AND DISASSEMBLY

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION		QTY.
J1	6910015860	IMSA-6277S-O2A-G		1
J2	6910016780	ANT connector 105		1
SP1	2510001300	036D0801C		1
W1	8900013740	OPC-1429		1
W2	8900010960	OPC-1129		1
MP1	8210021540	2803 S-front panel	[IC-F80DS/S]	1
	8210021800	2803 T-front panel	[IC-F80DT/T]	1
MP2	8210021490	2803 rear panel		1
MP8	8610012350	Knob N-327		1
MP10	8610012200	Knob N-321 (A)		1
MP17	8010019840	2803 chassis		1
MP20	8930064750	2803 main seal		1
MP22	8930064770	2803 release plate		1
MP25	8930059830	2600 sheet		1
MP26	8930065270	2803 MIC seal		1
MP29	8930059800	2600 pet sheet		1
MP34	8930059360	2600 release button		1
MP35	8930056540	Spring (AH)		2
MP39	8930063690	O-ring (BA)		2
MP41	8930055730	2403 connector seal		1
MP43	8830001470	VR nut (N)		2
MP44	8830002430	2803 ANT nut		1
MP47	8810010480	Screw PH B0 2X6 SUS SSBC		2
MP49	8810010120	Screw PH B0 2X8 SUS ZK		4
MP50	8820001320	2795 screw		2
MP51	8810009510	Screw PH B0 2X4 Ni-Zu (BT)		10
MP52	8810008970	Screw FH B0 2X3.5 Ni-ZU (BT)		2
MP53	8810010430	Screw truss M3X5 SUS SSBC		1
MP55	8930063060	2721 T-rubber		1
MP56	8850002590	2803 ANT washer		1
MP57	8810009180	Screw FH BT B0 2X5 Ni-Zu (BT)		5

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MC201	7700002310	EM-140	1
MP1	8210021460	2803 reflector	1
MP2	8930061120	Shield sponge (AA)	2
MP3	8930062540	Sponge (HO)	2
MP5	8930066040	Sponge (IK)	1
MP6	8930066250	2803 sponge	1
MP7	8930057931	Shield sponge (M)-1	1

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP3	8510016870	2803 VCO cover	1
MP5	8510017130	2804 PA shield	1
MP6	8930066240	Sponge (IM)	1

[DSP UNIT] (IC-F80DT/DS only)

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8930059940	Sponge (HF)	1

[FUSE BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6910016860	9230B-1-02H12-Pt1	1

[VR BOARD]

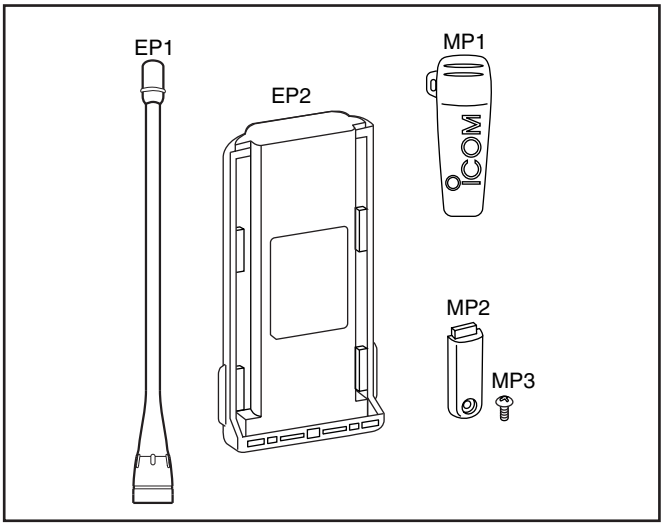
REF NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003200	TP76N937N 16.5F A103-2803	1
DS1	5040003170	UW3804X	1
S1	2250000500	TP70TF5164S 20F-2803	1
MP1	8930057690	O ring (AQ)	2

Screw abbreviations

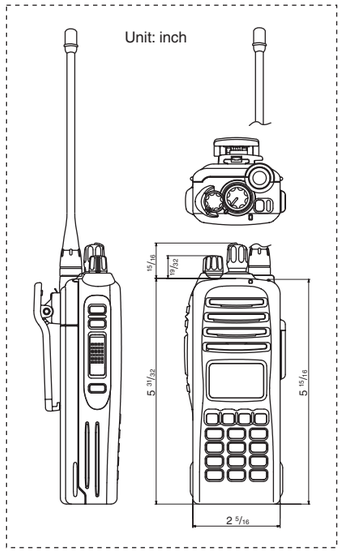
B0, BT: Self-tapping PH: Pan head
NI-ZU: Nickel-Zinc ZK: Black

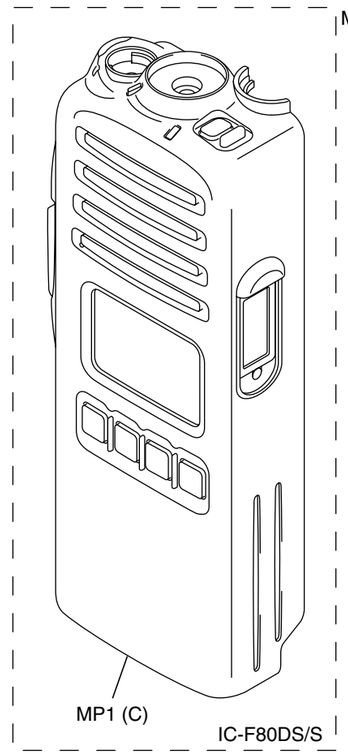
[ACCESORIES]

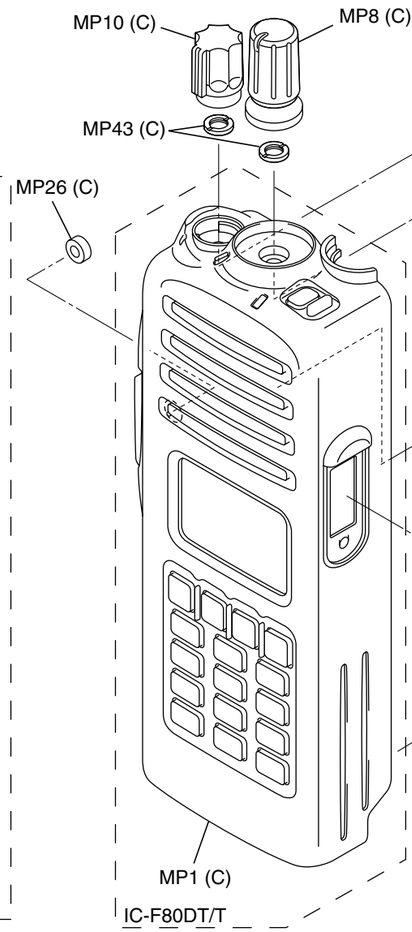
REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	Optional product	FA-SC57U-1	1
EP2	Optional product	BP-235	1
MP1	Optional product	MB-94	1
MP2	8210021470	2803 side panel	1
MP3	8810010430	Screw truss M3X5 SUS SSBC	1

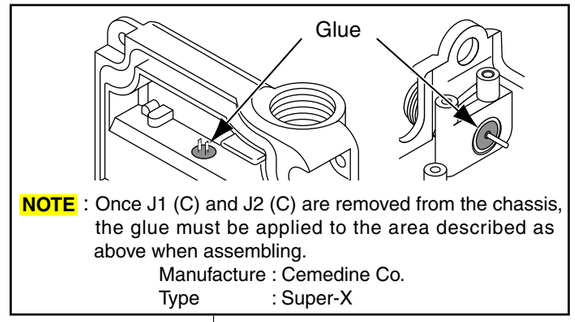


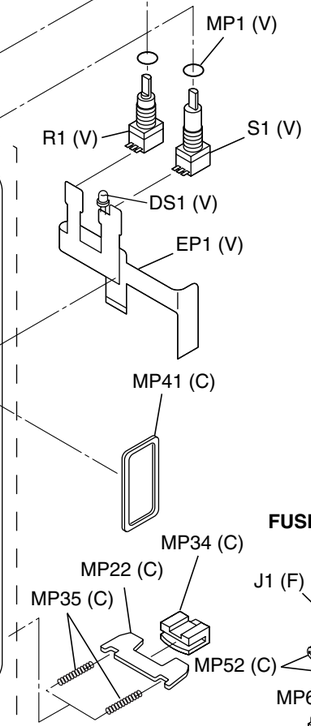
* Design is depended on versions.

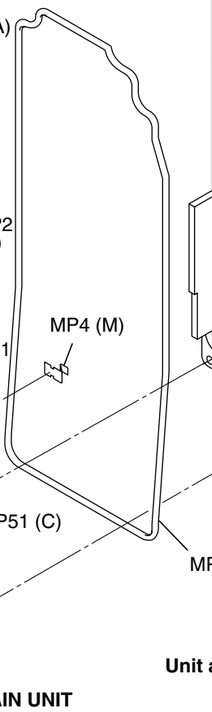


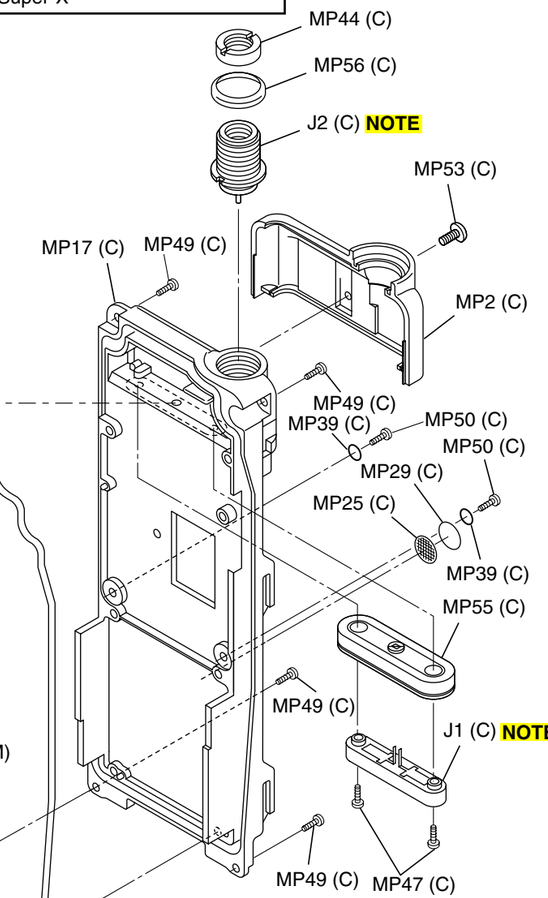


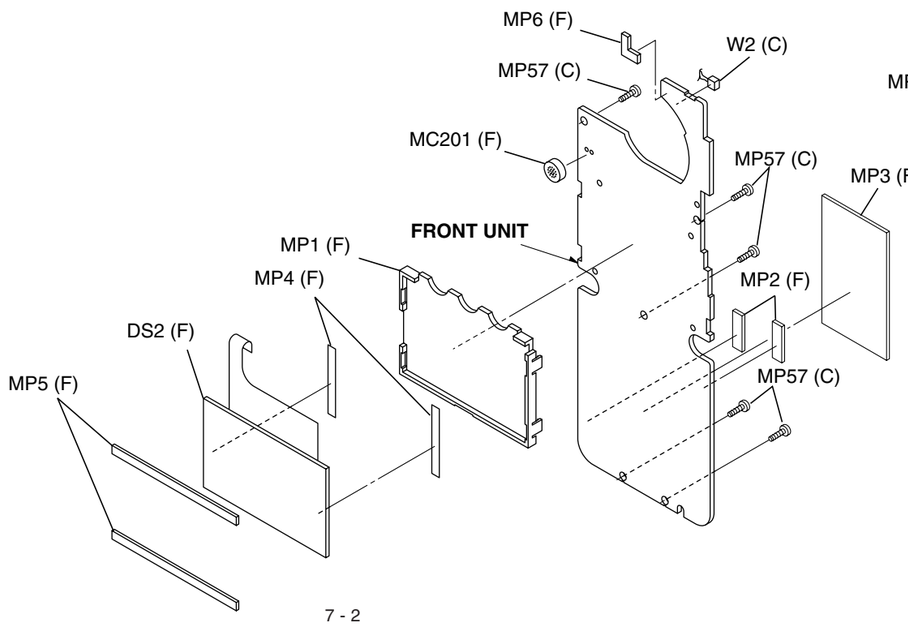








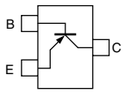
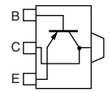
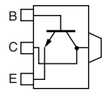
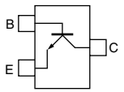
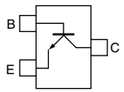
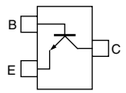
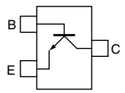
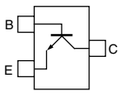
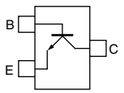
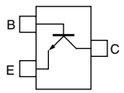
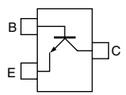
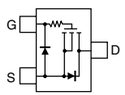
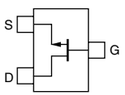
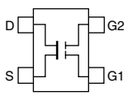
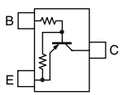
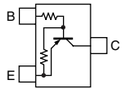
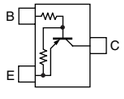
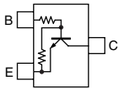
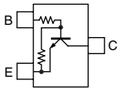
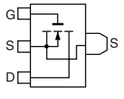
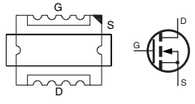
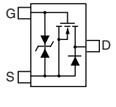
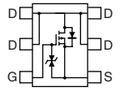
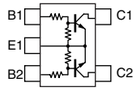
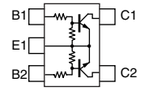
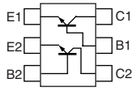




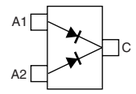
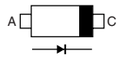
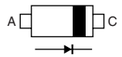
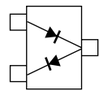
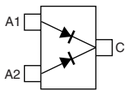
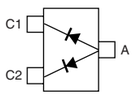
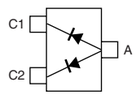
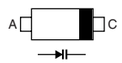
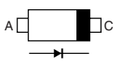
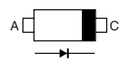
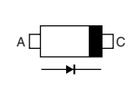
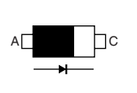
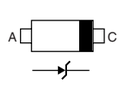
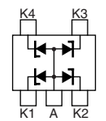
Unit abbreviations (F): FRONT UNIT
(M): MAIN UNIT
(C): CHASSIS PARTS
(V): VR BOARD
(D): DSP UNIT
(A): ANT BOARD
(F): FUSE BOARD

SECTION 8 SEMICONDUCTOR INFORMATION

• TRANSISTORS AND FET'S

2SA1577 T106 Q (Symbol: HQ) 	**2SB1132 T100 Q** (Symbol: BAQ) 	**2SC3357 T1 RF** (Symbol: RF) 	**2SC4081 T106 R** (Symbol: BR) 	**2SC4116 BL** (Symbol: LL) 
2SC4116 Y (Symbol: LY) 	**2SC4215 O** (Symbol: QO) 	**2SC4215 Y** (Symbol: QY) 	**2SC4226 T1 R25** (Symbol: R25) 	**2SC5006 T1** (Symbol: 24) 
2SC5107 O (Symbol: MFO) 	**2SK1829** (Symbol: K1) 	**2SK880 Y** (Symbol: XY) 	**3SK293** (Symbol: UF) 	**DTA114 EE TL** (Symbol: 14) 
DTA144 EE TL (Symbol: 16) 	**DTB123 EK T146** (Symbol: F12) 	**DTC144 EE TL** (Symbol: 26) 	**DTC144EUA T106** (Symbol: 26_) 	**RD01MUS1** (Symbol: K2) 
RD07MVS1 (Symbol: RD07MVS1) 	**RSR025N03** (Symbol: QY) 	**TPC6103** (Symbol: S3C) 	**UMG2N** (Symbol: G2) 	**XP1214** (Symbol: 9H) 
XP6501 AB (Symbol: 5N) 				

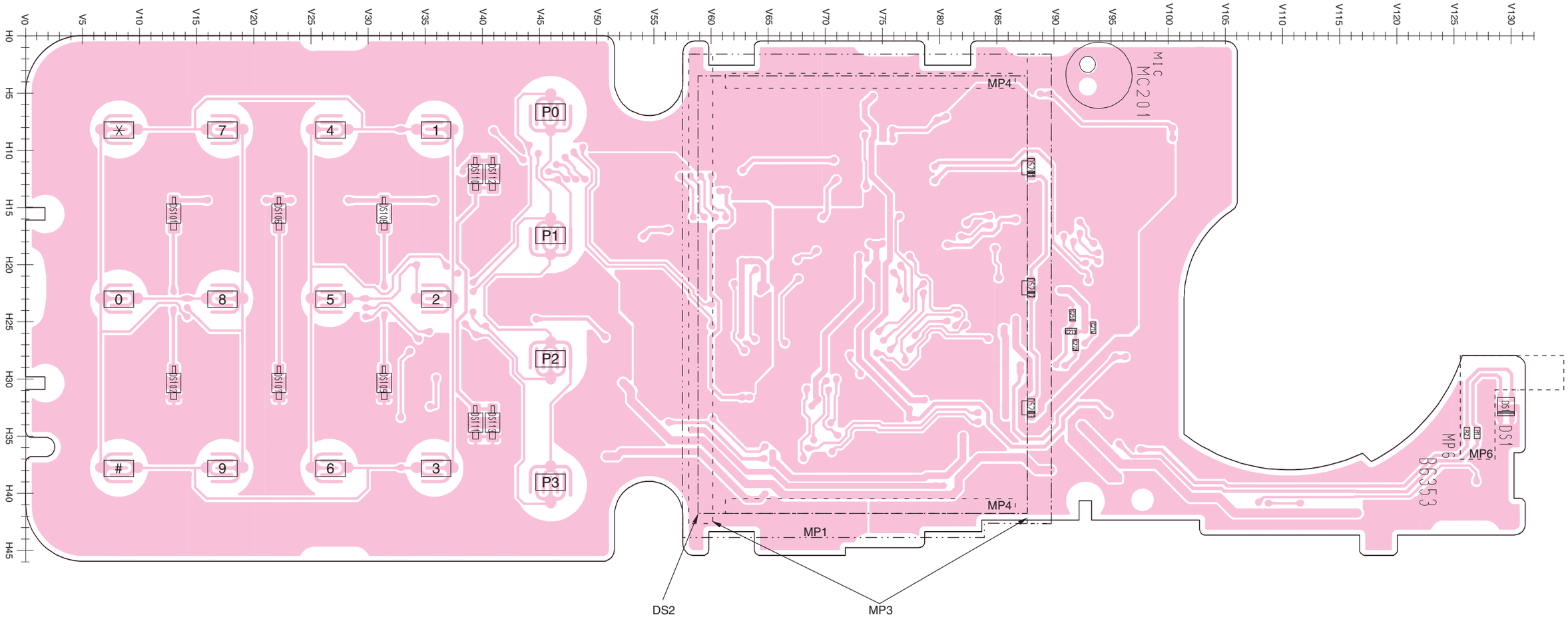
• DIODES

1SS301 (Symbol: B3) 	**1SV305** (Symbol: TV) 	**1SV307** (Symbol: TX) 	**DA221 TL** (Symbol: K) 	**DAN235E TL** (Symbol: M) 
DAP202 U T106 (Symbol: P) 	**DAP222 TL** (Symbol: P) 	**HVC350B** (Symbol: B0) 	**MA2S077** (Symbol: S) 	**MA2S111** (Symbol: A) 
MA2S728 (Symbol: B) 	**MA368** (Symbol: 6L) 	**MA8051 M** (Symbol: 5-1) 	**NNCD6.2G** (Symbol: 62G) 	**RB706F-40 T106** (Symbol: 3J)

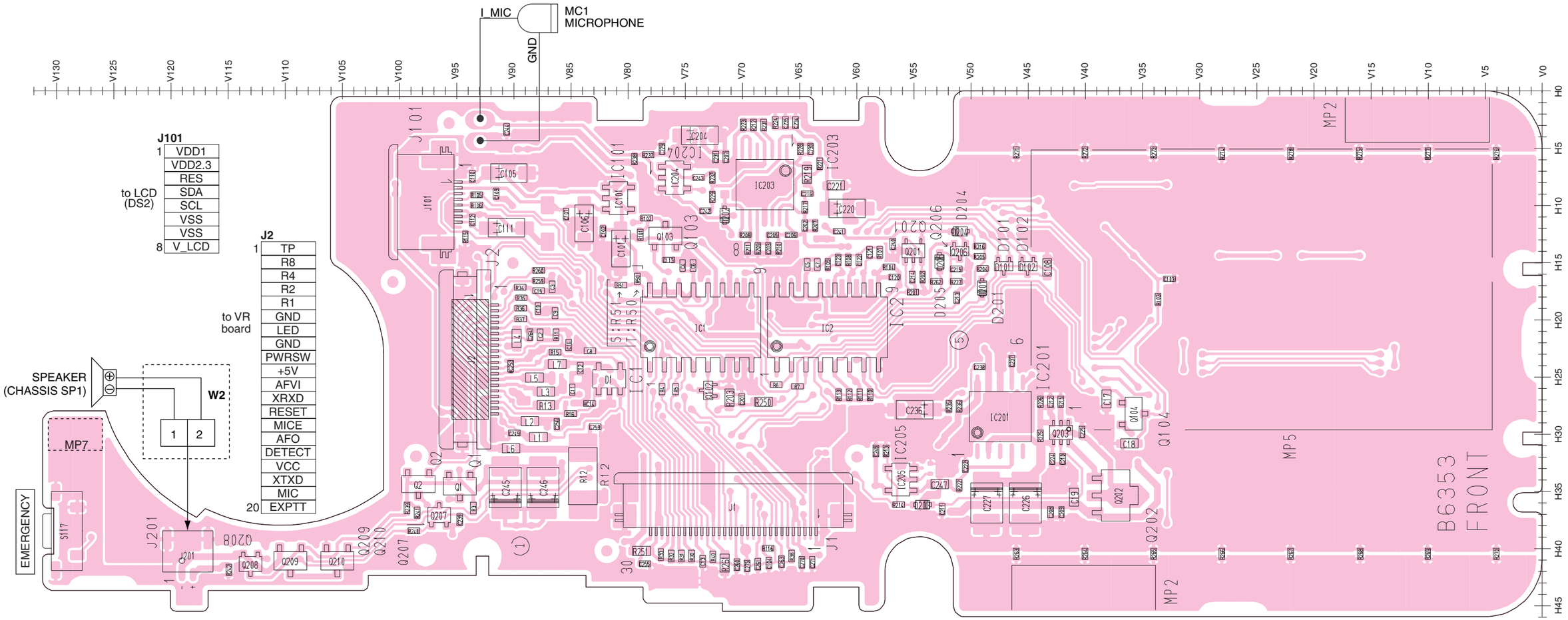
SECTION 9 BOARD LAYOUTS

9-1 FRONT UNIT

• TOP VIEW

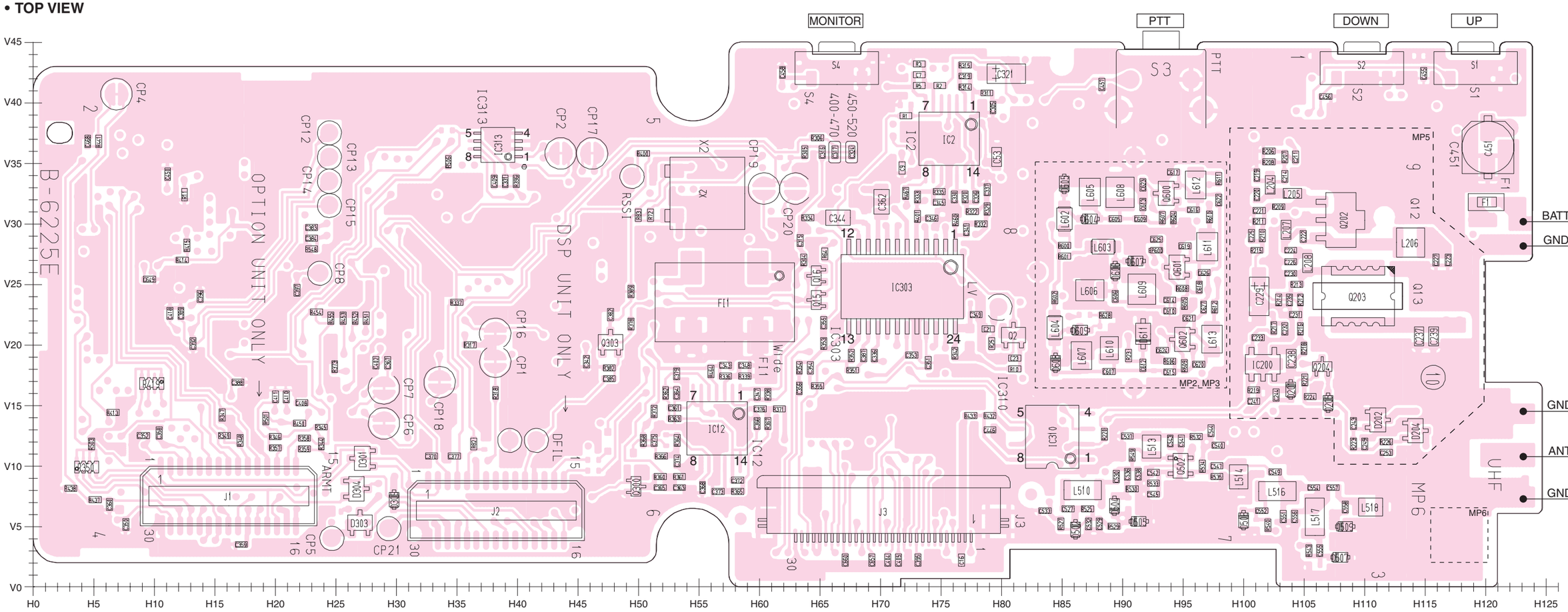


• **BOTTOM VIEW (FRONT UNIT)**



9-2 MAIN UNIT

• TOP VIEW



J1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PTTI	PTTO	MCOT	MCIN	NC	BUSY	NC	SIG	OPT1	OPT2	OPT3	GND	OPV3	OPV2	OPV1

30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GND	CPU5	VCC	AMMT	AFONO	BEPO	ARMT	DISC2	AFOUT	REM	CCS	IRQA	CSO	ACSI	CCK

to Optional unit

J2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PTTI	DPTT	DMO	DMI	RSSID	BUSY	NC	NC	NC	NC	DFIL	GND	NC	DTXD	DRXD

30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GND	5V	VCC	DMMT	DAFON	NC	DRMT	NC	DAFO	NC	CCS	IRQD	CSO	DCSI	CCK

to DSP unit J1

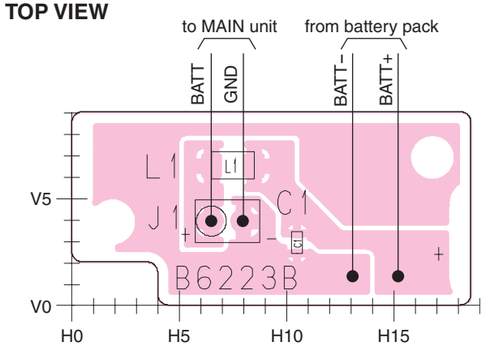
J3

30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GND	MIC	SP+	VCC	VCC	OPTV	AFVI	VOXOUT	PWRSW	KR	EM	PTTI	PTTSW	MCON	SPCON	AFON	FSDA	FSCL	GND	RESET	XTXD	XRXD	RESB	R8	R4	R2	R1	+5V	+5V	EXPTT

to FRONT unit J1

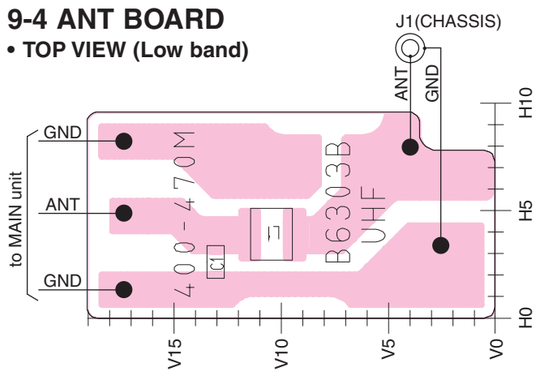
9-3 FUSE BOARD

• TOP VIEW

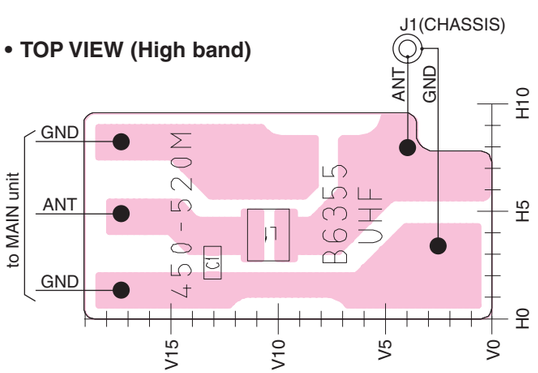


9-4 ANT BOARD

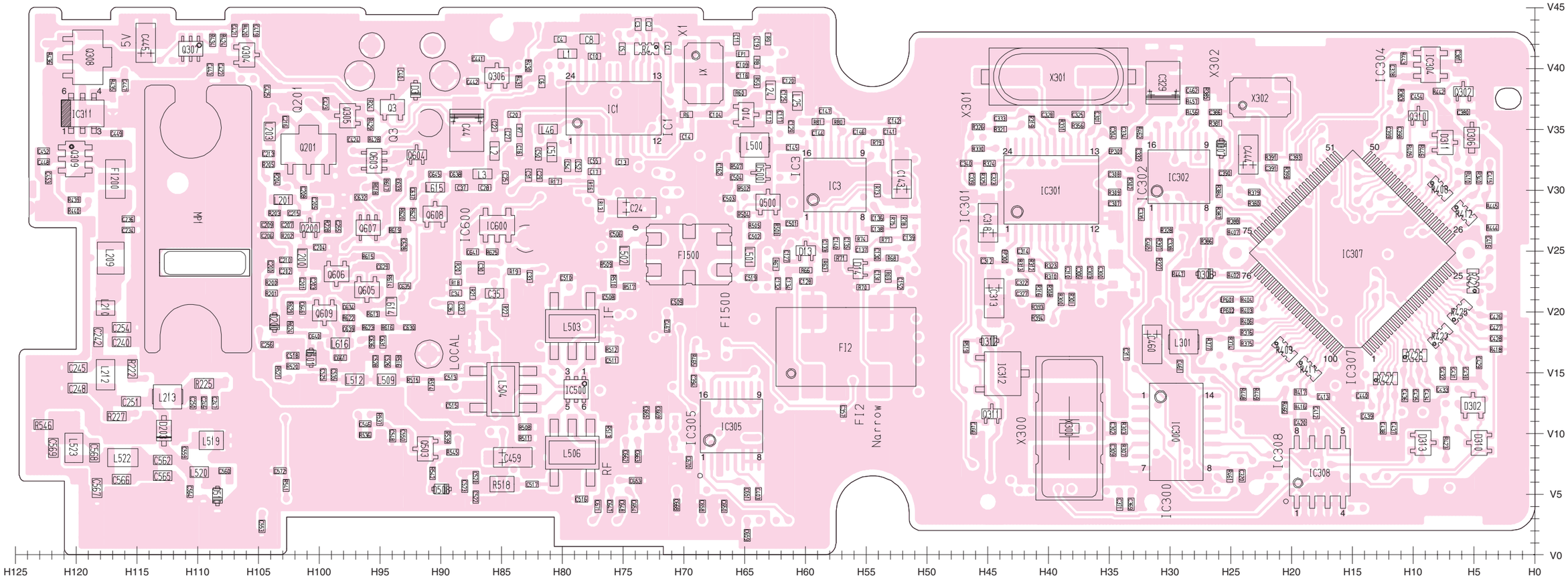
• TOP VIEW (Low band)



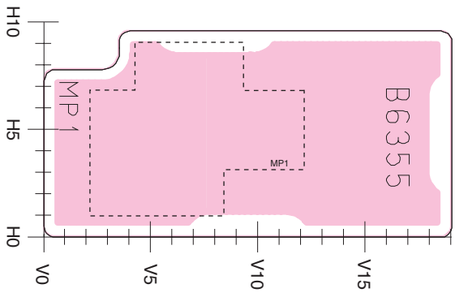
• TOP VIEW (High band)



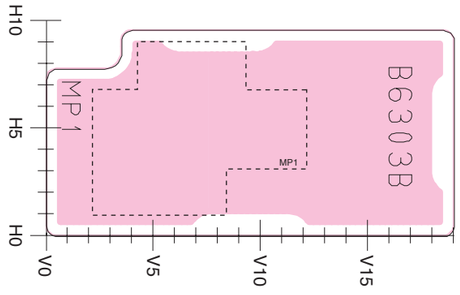
• **BOTTOM VIEW (MAIN UNIT)**



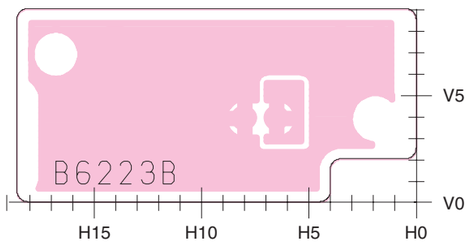
• **TOP VIEW (ANT BOARD)**
(High band)



• **TOP VIEW (ANT BOARD)**
(Low band)



• **BOTTOM VIEW (FUSE BOARD)**



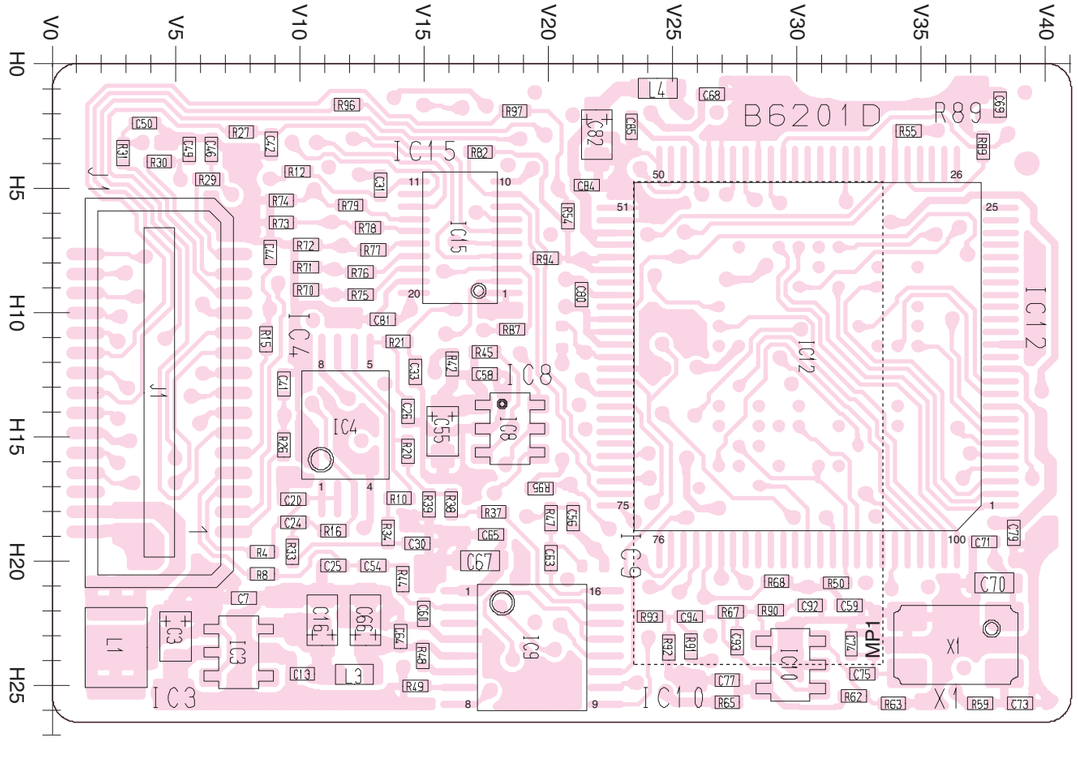
9-5 DSP UNIT (IC-F80DT/DS only)

• TOP VIEW

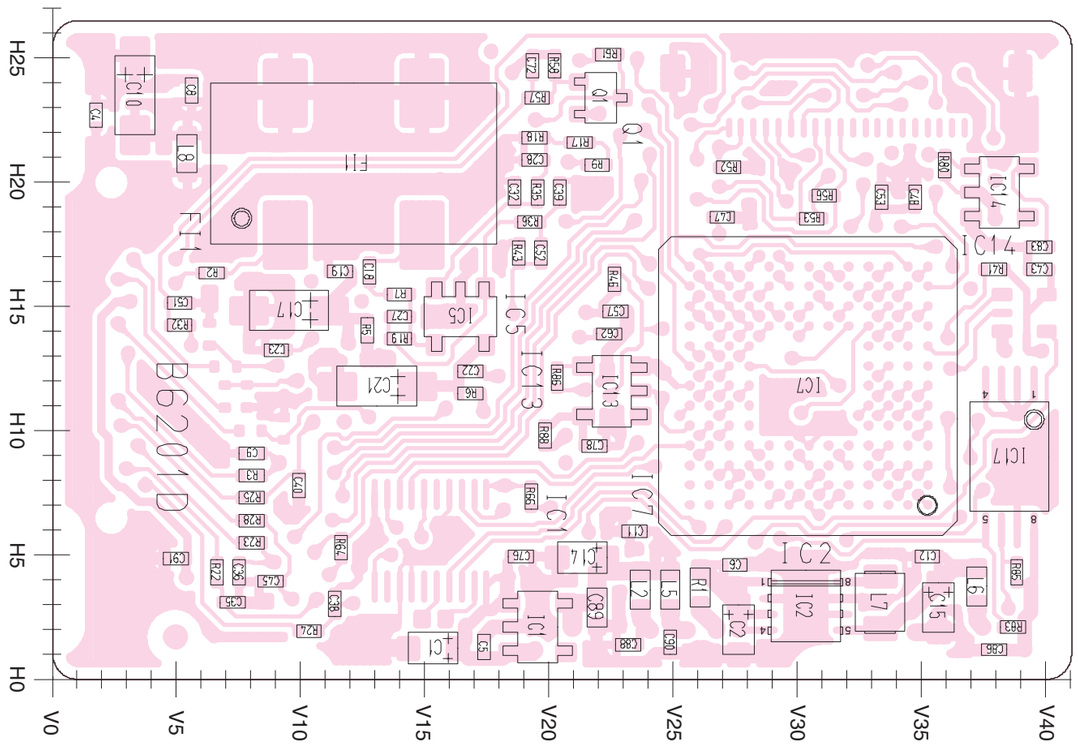
J1

16	SCK	RXD	15
	SI	TXD	
	SO	RTS	
	CIRQ	AGND	
	CCS	DFIL	
	FLASH_RXD	MD2	
	AFOUT	CPU_VDD	
	FLASH_TXD	CTS	
	RMUT	NC	
	3.3V	BUSY	
	AFON	RSSI	
	MMUT	MIC	
	VCC	QOUT	
	+5V	PTTO	
30	GND	PTTI	1

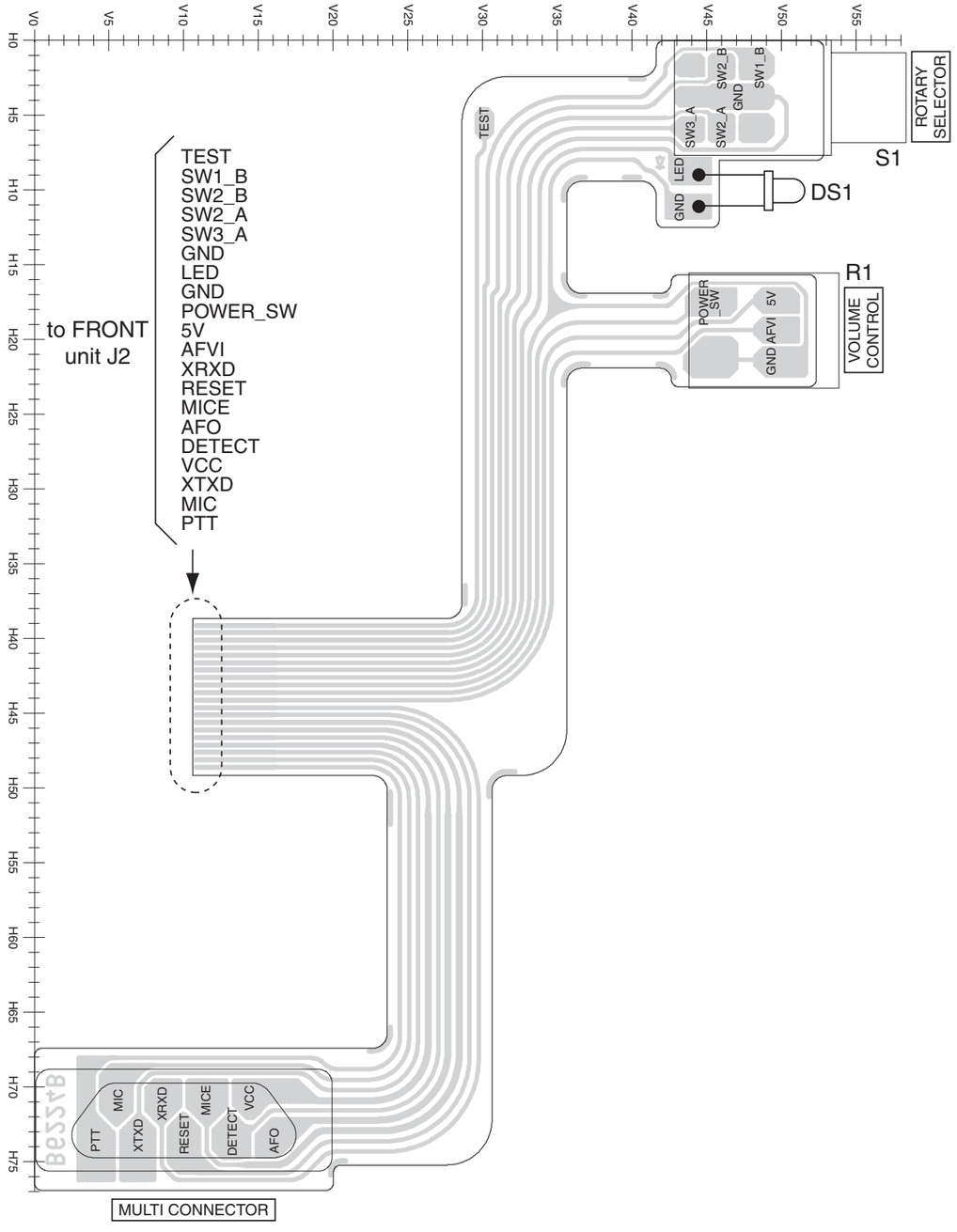
to MAIN unit J2



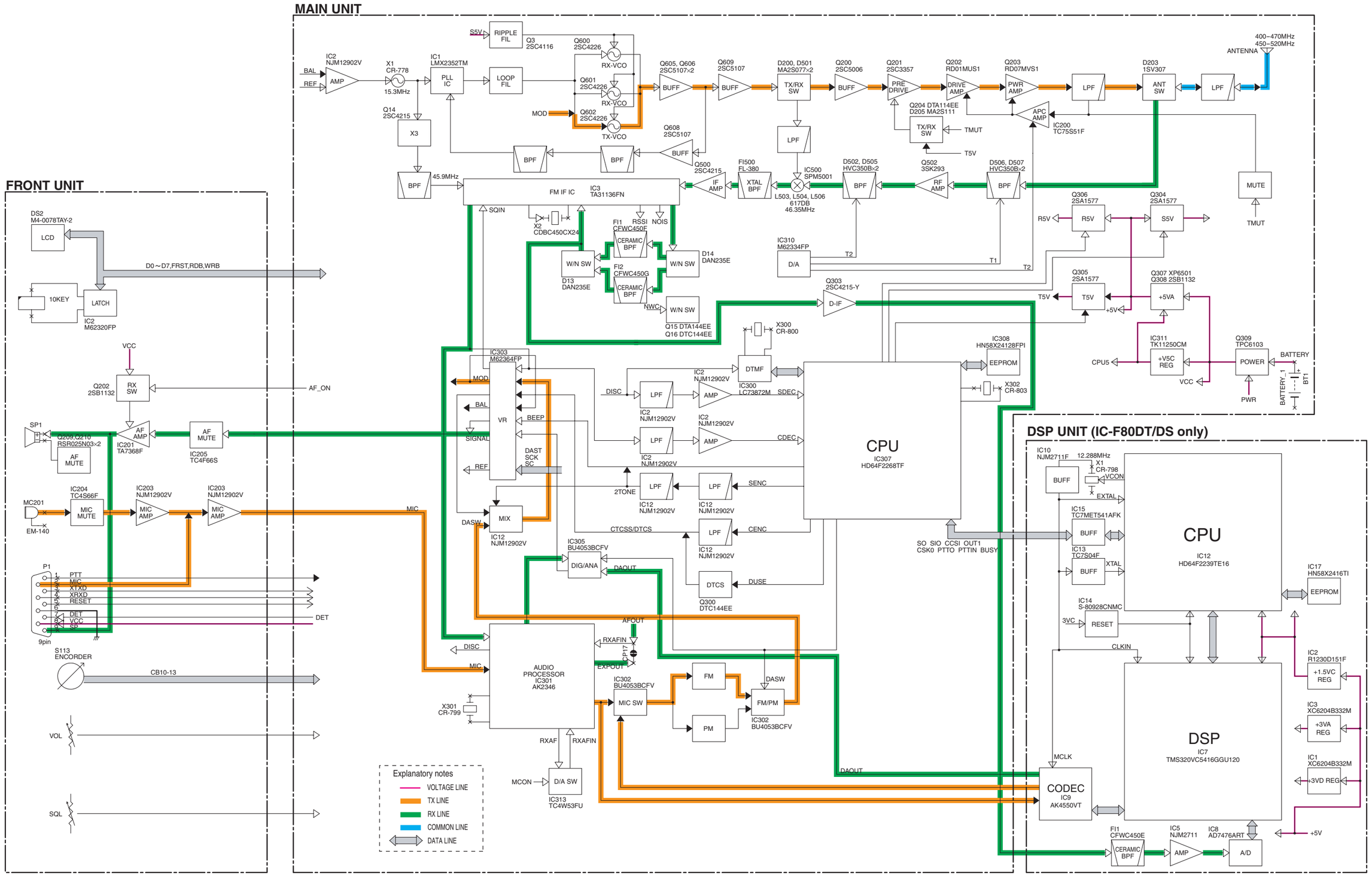
• BOTTOM VIEW (DSP UNIT)



9-6 VR BOARD

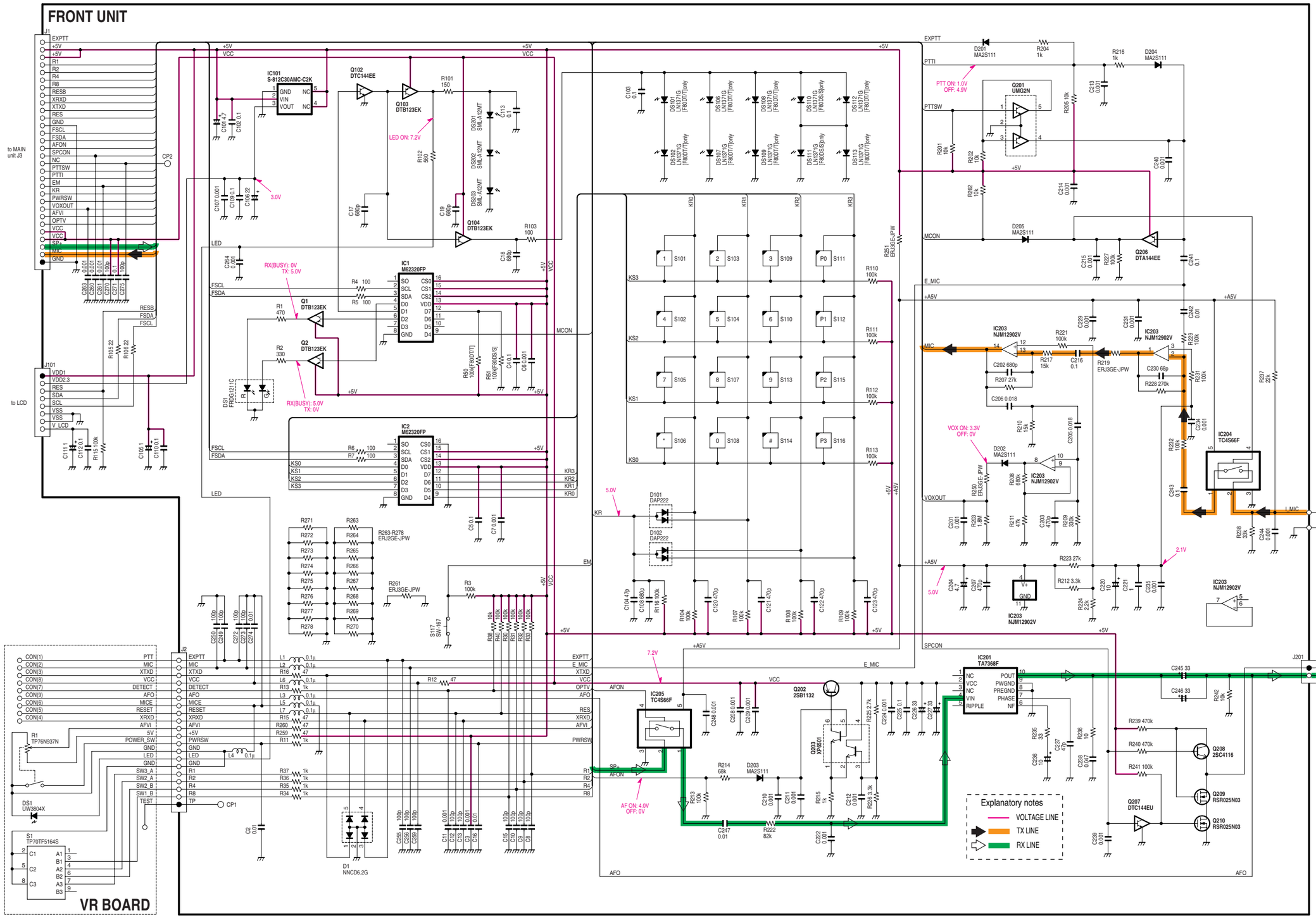


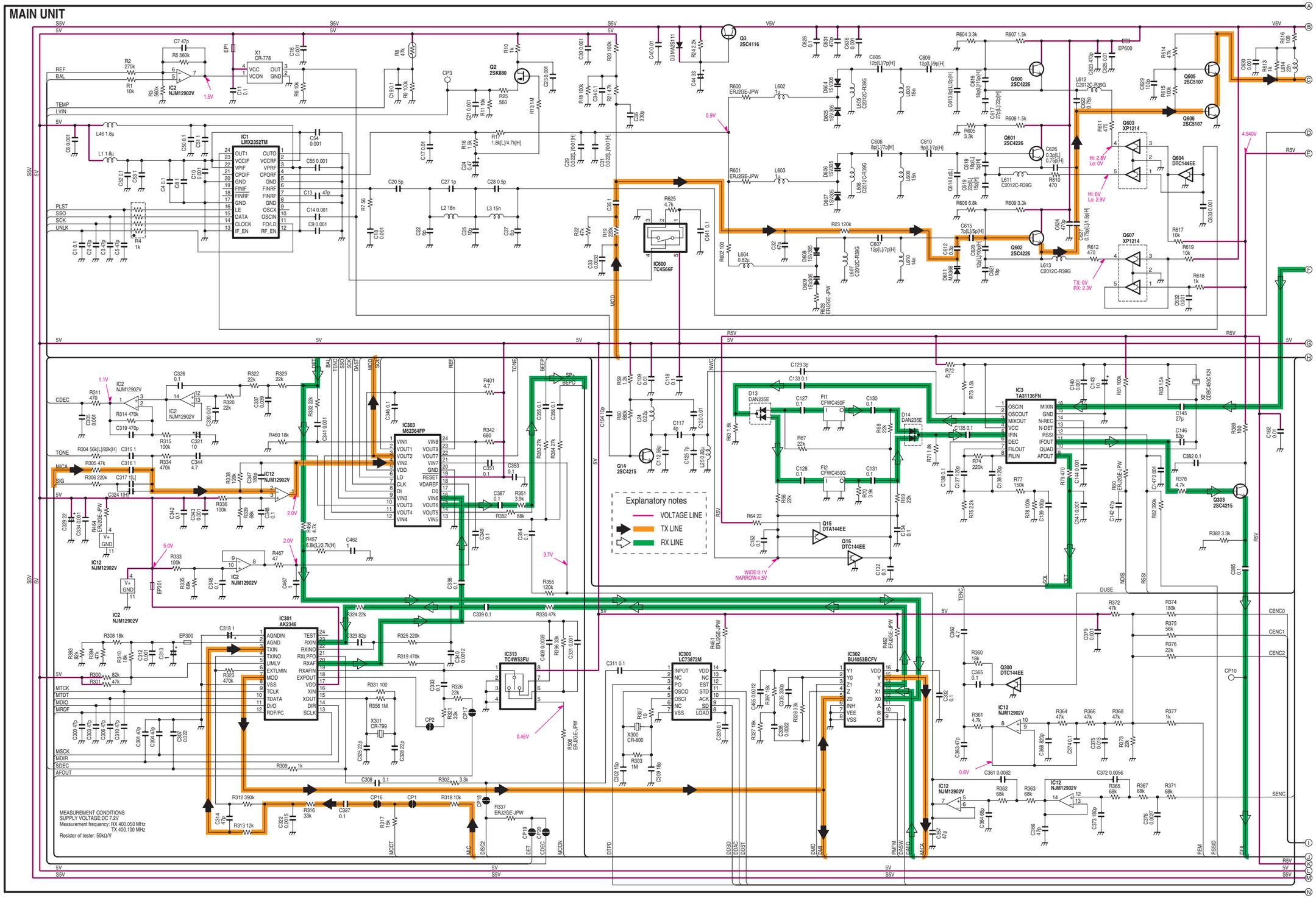
SECTION 10 BLOCK DIAGRAM



SECTION 11 VOLTAGE DIAGRAMS

11-1 FRONT UNIT




MAIN UNIT
IC1 LMX2352TM
IC2 NJM12902V
IC303 M62364FP
IC301 AK2346
IC313 TC4W53FU
IC300 LC73872M
IC302 BU4053BCFV
IC3 TA31136FN
IC12 NJM12902V
Q1 2SC4116
Q2 2SK880
Q3 2SC4116
Q14 2SC4215
Q15 DTA144EE
Q16 DTC144EE
Q300 DTC144EE
Q303 2SC4215
Q600 2SC4226
Q601 2SC4226
Q602 2SC4226
Q603 XP1214
Q604 DTC144EE
Q605 2SC5107
Q606 2SC5107
Q607 XP1214
IC600 TC4S66F
Explanatory notes
VOLTAGE LINE
TX LINE
RX LINE
MEASUREMENT CONDITIONS
SUPPLY VOLTAGE:DC 7.2V
Measurement frequency: RX 400.050 MHz
TX 400.100 MHz
Resister of tester: 50kΩ/V

MAIN UNIT

ANT BOARD

IC305 BU4053BCFV

IC307 HD64F2268TF

IC308 HN58X24128FPI

IC310 M62334FP

IC311 TK11250CM

IC312 EW-460

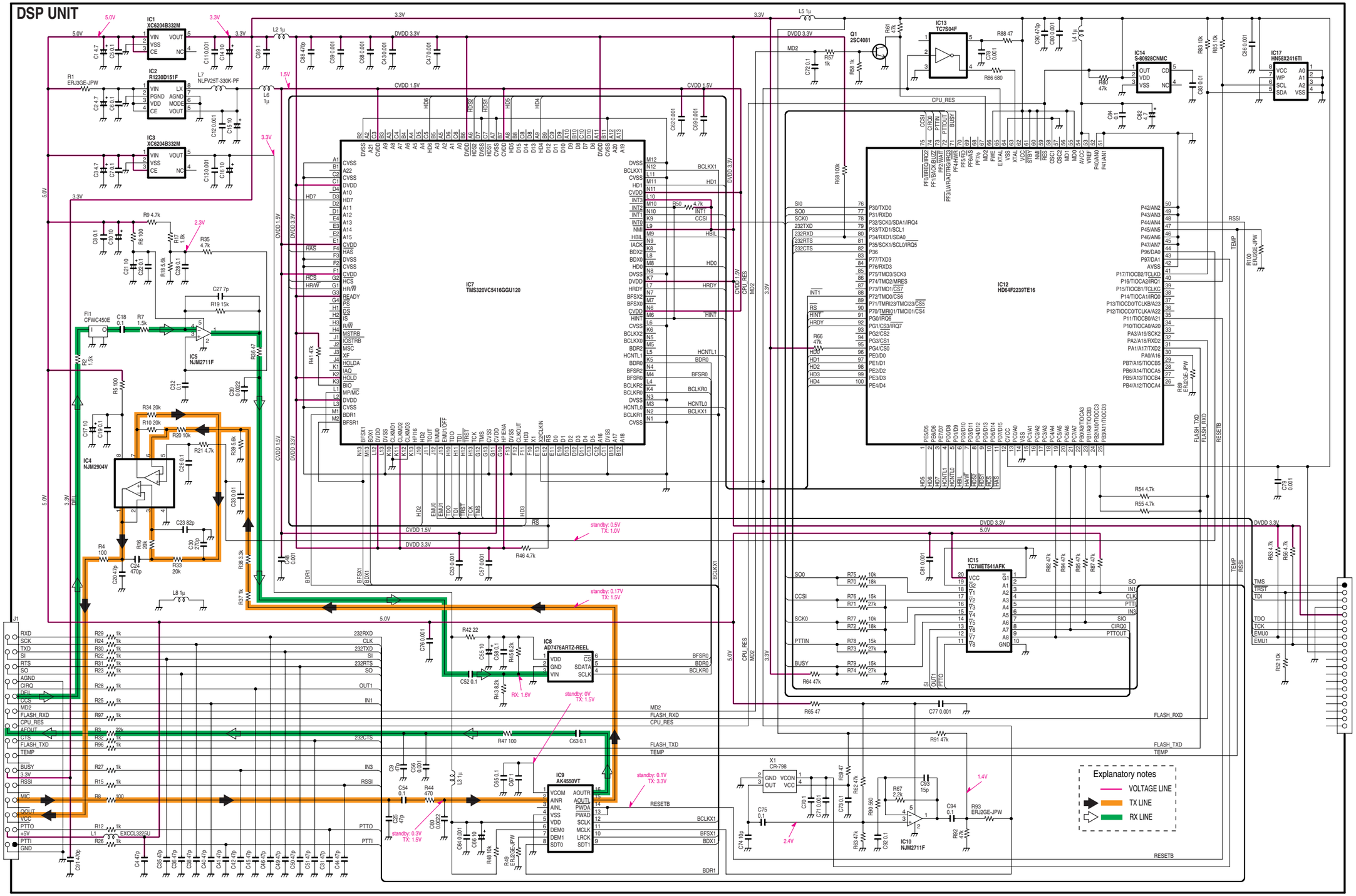
IC200 TC7S51F

IC304 BD5242G

IC500 SPM5001

Explanatory notes
- VOLTAGE LINE
- TX LINE
- RX LINE
- COMMON LINE

11-3 DSP UNIT (IC-F80DT/DS only)



Icom Inc.

1-1-32, Kamiminami, Hirano-ku, Osaka 547-0003, Japan
Phone : +81 (06) 6793 5302
Fax : +81 (06) 6793 0013
URL : http://www.icom.co.jp/world/index.html

Icom America Inc.

<Corporate Headquarters>
2380 116th Avenue N.E., Bellevue, WA 98004, U.S.A.
Phone : +1 (425) 454-8155 Fax : +1 (425) 454-1509
URL : http://www.icomamerica.com
E-mail : sales@icomamerica.com
<Customer Service>
Phone : +1 (425) 454-7619

Icom Canada

Glenwood Centre #150-6165
Highway 17 Delta, B.C., V4K 5B8, Canada
Phone : +1 (604) 952-4266 Fax : +1 (604) 952-0090
URL : http://www.icomcanada.com
E-mail : info@icomcanada.com

Icom (Australia) Pty. Ltd.

A.B.N. 88 006 092 575
290-294 Albert Street, Brunswick, Victoria, 3056, Australia
Phone : +61 (03) 9387-0666 Fax : +61 (03) 9387-0022
URL : http://www.icom.net.au
E-mail : sales@icom.net.au

Icom New Zealand

146A Harris Road, East Tamaki,
Auckland, New Zealand
Phone : +64 (09) 274 4062 Fax : +64 (09) 274 4708
URL : http://www.icom.co.nz
E-mail : inquiries@icom.co.nz

Beijing Icom Ltd.

1305, Wanshang Plaza, Shijingshan Road, Beijing China
Phone : +86 (010) 6866 6337 Fax : +86 (010) 6866 3553
URL : http://www.bjicom.com
E-mail : bjicom@bjicom.com

Icom (Europe) GmbH

Communication Equipment
Himmelgeister Str. 100, D-40225 Düsseldorf, Germany
Phone : +49 (0211) 346047 Fax : +49 (0211) 333639
URL : http://www.icomeurope.com
E-mail : info@icomeurope.com

Icom Spain S.L

Crta. de Gracia a Manresa Km. 14,750
08190 Sant Cugat del Valles Barcelona, SPAIN
Phone : +34 (93) 590 26 70 Fax : +34 (93) 589 04 46
URL : http://www.icomspain.com
E-mail : icom@icomspain.com

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.
Phone : +44 (01227) 741741 Fax : +44 (01227) 741742
URL : http://www.icomuk.co.uk
E-mail : info@icomuk.co.uk

Icom France S.a

Zac de la Plaine, 1, Rue Brindejonc des Moulinais
BP 5804, 31505 Toulouse Cedex, France
Phone : +33 (5) 61 36 03 03 Fax : +33 (5) 61 36 03 00
URL : http://www.icom-france.com
E-mail : icom@icom-france.com

Asia Icom Inc.

6F No.68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan, R.O.C.
Phone : +886 (02) 2559 1899 Fax : +886 (02) 2559 1874
URL : http://www.asia-icom.com
E-mail : sales@asia-icom.com

Icom Polska

Sopot, 3 Maja 54 Poland
Phone : +48 (58) 550 7135 Fax : +48 (58) 551 0484
E-mail : icompolska@icompolska.com.pl

Count on us!

Icom Inc.
1-1-32, Kamiminami, Hirano-ku, Osaka 547-0003, Japan

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Printed in Japan