



SERVICE MANUAL

VHF FM TRANSCEIVERS

IC-F3

IC-F3S

UHF FM TRANSCEIVERS

IC-F4

IC-F4S

INTRODUCTION

This service manual describe the latest information for the IC-F3/IC-F3S and IC-F4/IC-F4S at the time of publication.

DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. Such a connection could cause a fire hazard and/or electric shock.

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>

1110001810	S.IC	TA7368F	IC-F3S	MAIN UNIT	1 piece
8810009510	Screw	B0 2×4 NI-ZU	IC-F4	MAIN PCB	6 pieces

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



IC-F3

IC-F4S

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 tuning 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 40 dB or 50 dB attenuator between the transceiver and a deviation meter or spectrum analyser when using such test equipment.
8. READ the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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SECTION 1 SPECIFICATIONS

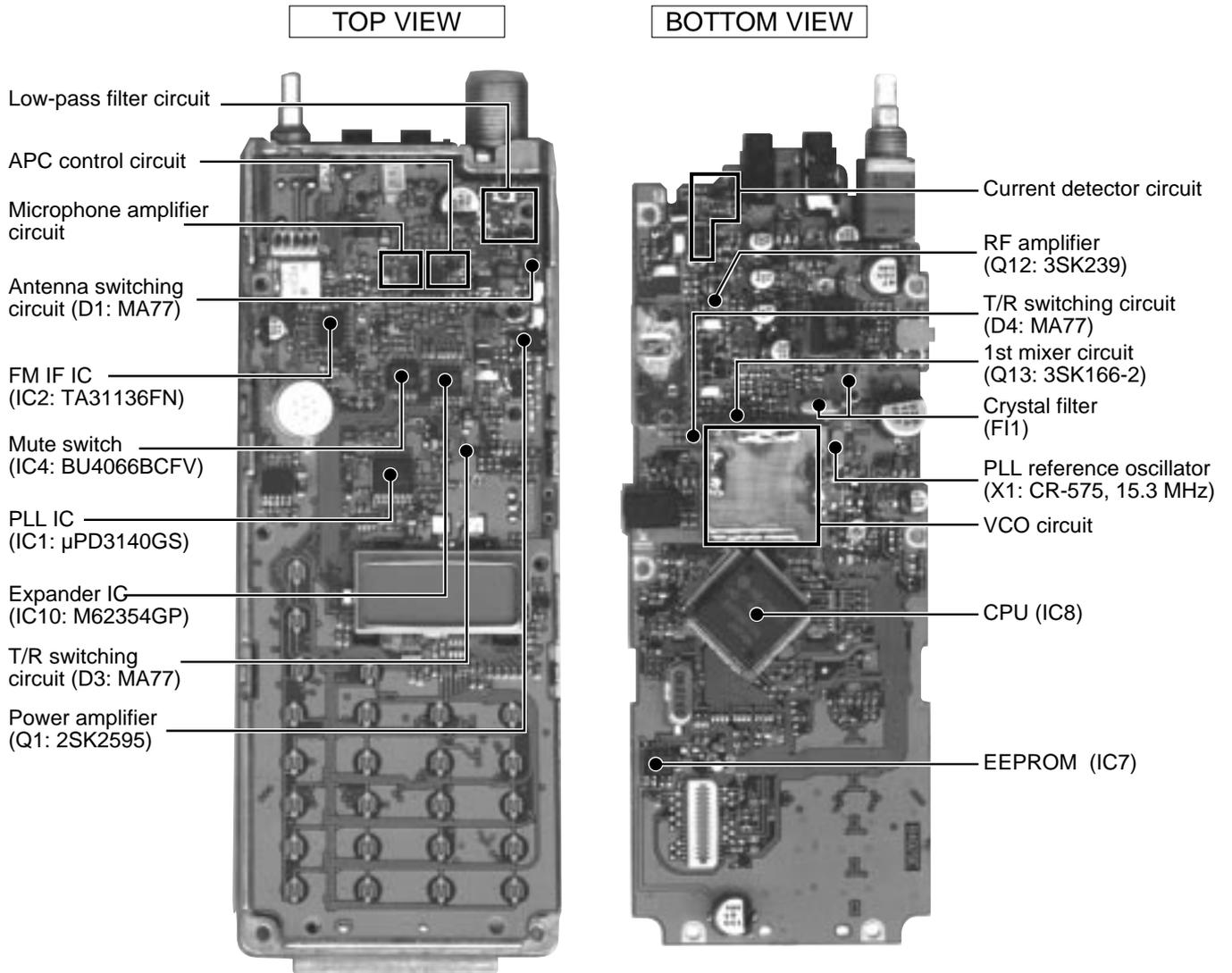
		IC-F3/F3S	IC-F4/F4S		
GENERAL	Frequency coverage	136.000–150.000 MHz (L-band) 146.000–174.000 MHz (H-band)	400.000–430.000 MHz (L-band) 440.000–470.000 MHz (ML-band) 470.000–500.000 MHz (MH-band) 490.000–512.000 MHz (H1-band) 490.000–520.000 MHz (H2-band)		
	Type of emission	16K0F3E (W-type), 14K0F3E (M-type: F3/S only), 8K50F3E (N-type)			
	Number of channels	32 ch (16 channels × 2 banks: 2-BANK version), 16 ch (16 channel version)			
	Power supply requirement	9.6 V DC (negative ground; supplied battery pack)			
	Current drain (approx.)	TX	at High	1.3 A	1.4 A
			at Low	600 mA	700 mA
		RX	rated audio	250 mA	250 mA
			stand-by	60 mA (typ.)	60 mA (typ.)
	Frequency stability	±0.0005% (EIA), ±2000 Hz (ETS/CEPT; W, M-types), ±2.5 kHz (ETS/CEPT; N-type)			
	Usable temperature range	+22°F to +140°F (EIA) –20°C to +55°C (ETS/CEPT)	+22°F to +140°F (EIA) –30°C to +60°C (ETS/CEPT)		
Dimensions (proj. not included)	57(W) × 140(H) × 37(D) mm; 2¼(W) × 5½(H) × 1½(D) inch				
Weight (BP-196)	390 g; 13.8 oz				
TRANSMITTER	Output power	High 5 W Low 1 W	High 4 W Low 1 W		
	Modulation system	Variable reactance frequency modulation			
	Max. frequency deviation	±5.0 kHz (W-type), ±4.0 kHz (M-type), ±2.5 kHz (N-type)			
	Spurious emissions	70 dB typical (EIA) 0.25 µW (ETS/CEPT)			
	Adjacent channel power	70 dB typical (W, M-types) 60 dB (N-type)			
	Transmitter audio distortion	Less than 5 % at 1 kHz, 60 % deviation			
	Limiting charact of modulator	70–100 % of max.deviation			
	Ext. microphone connector	3-conductor 2.5(d) mm (1/10")/2 kΩ			
RECEIVER	Receive system	Double-conversion superheterodyne system			
	Intermediate frequencies	1st: 31.05 MHz 2nd: 450 kHz	1st: 46.350 MHz 2nd: 450 kHz		
	Sensitivity (typical)	0.25 µV at 12 dB SINAD 0.63 µV (emf) at 20 dB SINAD	0.3 µV at 12 dB SINAD 0.79 µV (emf) at 20 dB SINAD		
	Squelch sensitivity (at threshold)	0.25 µV	0.3 µV		
	Adjcent chnnel selectivity	70 dB (W, M-types) 60 dB (N-type)			
	Spurious response	70 dB			
	Intermoduration rejection ratio	65 dB			
	Audio output power (at 9.6 V DC)	500 mW typical at 10% distortion with a 8 Ω load			
	External SP connector	3-conductor 3.5 (d) mm (1/8")/8 Ω			

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

SECTION 2 INSIDE VIEWS

2-1 IC-F3/S

• MAIN UNIT



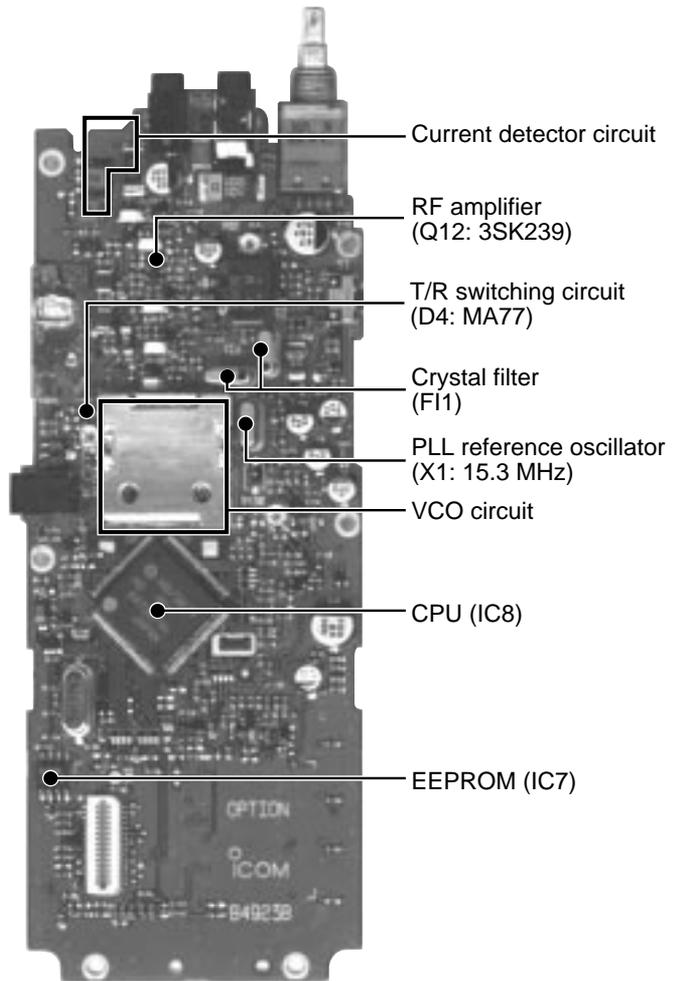
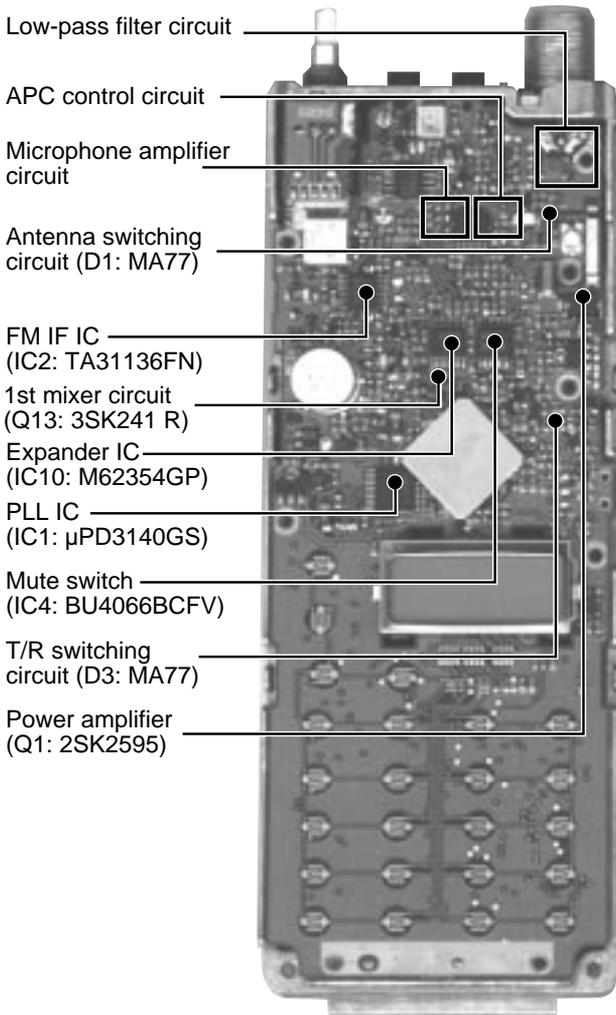
2-2 IC-F4/S

• MAIN UNIT

F4/S

TOP VIEW

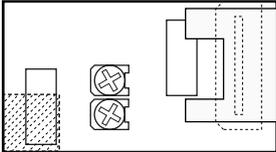
BOTTOM VIEW



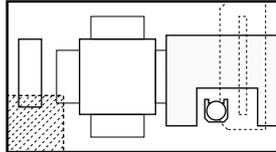
3-2 OPTIONAL UNIT INSTALLATIONS

- ① Remove the option cover.
- ② Remove the bottom protective paper of sponge.
- ③ Connect either a UT-80, UT-96 or UT-105 optional unit to J5.
- ④ Attached the 1556 sponge to the specified position at the unit as following illustration.

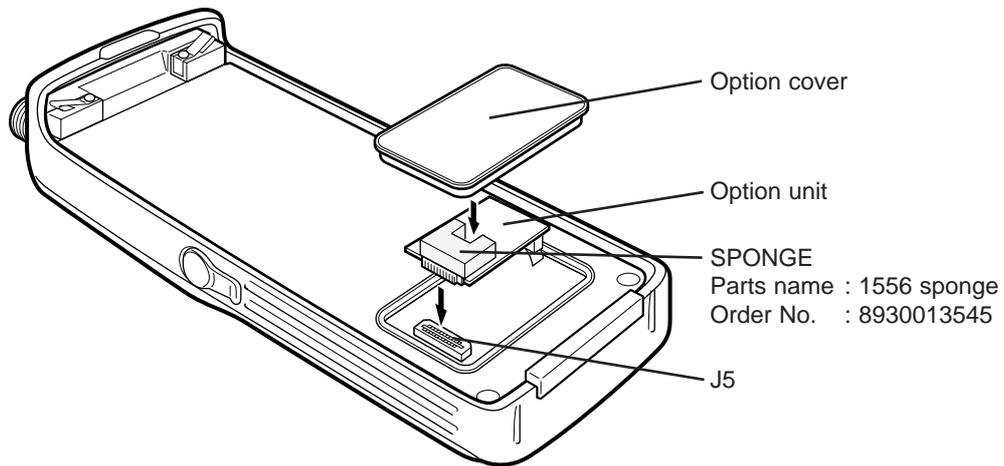
UT-80



UT-96



- ⑤ Replace the option cover to the chassis-hole.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 ANTENNA SWITCHING CIRCUIT

Received signals are passed through the low-pass filter (L1–L3, C1–C7 for IC-F3/S, L1–L3, C3, C5, C7 for IC-F4/S). The filtered signals are applied to the $\lambda/4$ type antenna switching circuit (D8 for IC-F3/S D406, D8 for IC-F4/S).

The antenna switching circuit functions as a low-pass filter while receiving. However, its impedance becomes very high while D8 (IC-F3/S)/D406 and D8 (IC-F4/S) is/are turned ON. Thus transmit signals are blocked from entering the receiver circuits. The antenna switching circuit employs a $\lambda/4$ type diode switching system. The passed signals are then applied to the RF amplifier circuit.

4-1-2 RF CIRCUIT

The RF circuit amplifies signals within the range of frequency coverage and filters out-of-band signals.

The signals from the antenna switching circuit are amplified at the RF amplifier (Q12) after passing through the tuneable bandpass filter (D9, D10, C83 for IC-F3/S, D10, L413, C79 for IC-F4/S). The amplified signals are applied to the 1st mixer circuit (Q13) after out-of-band signals are suppressed at the tuneable bandpass filter (D11, D12, D21, D22, C94 for IC-F3/S, D11, D12, D401, C94 for IC-F4/S).

Varactor diodes are employed at the bandpass filters that track the filters and are controlled by the CPU (IC8) via the expander IC (IC10) using T1–T4 signals. These diodes tune the centre frequency of an RF passband for wide bandwidth receiving and good image response rejection.

4-1-3 1ST MIXER AND 1ST IF CIRCUITS

The 1st mixer circuit converts the received signal to a fixed frequency of the 1st IF signal with a PLL output frequency. By changing the PLL frequency, only the desired frequency will be passed through a crystal filter at the next stage of the 1st mixer.

The signals from the RF circuit are mixed at the 1st mixer (Q13) with a 1st LO signal coming from the VCO circuit to produce a 31.05 MHz (IC-F3/S) or 46.35 MHz (IC-F4/S) 1st IF signal.

The 1st IF signal is applied to a pair of crystal filters (F11) to suppress out-of-band signals. The filtered 1st IF signal is applied to the IF amplifier (Q14 for IC-F3/S, Q400 for IC-F4/S), then applied to the 2nd mixer circuit (IC2, pin 16).

4-1-4 2ND IF AND DEMODULATOR CIRCUITS

The 2nd mixer circuit converts the 1st IF signal to a 2nd IF signal. A double conversion superheterodyne system (which converts receive signals twice) improves the image rejection ratio and obtains stable receiver gain.

The 1st IF signal from the IF amplifier is applied to the 2nd mixer section of the FM IF IC (IC2, pin 16), and is mixed with the 2nd LO signal to be converted to a 450 kHz 2nd IF signal.

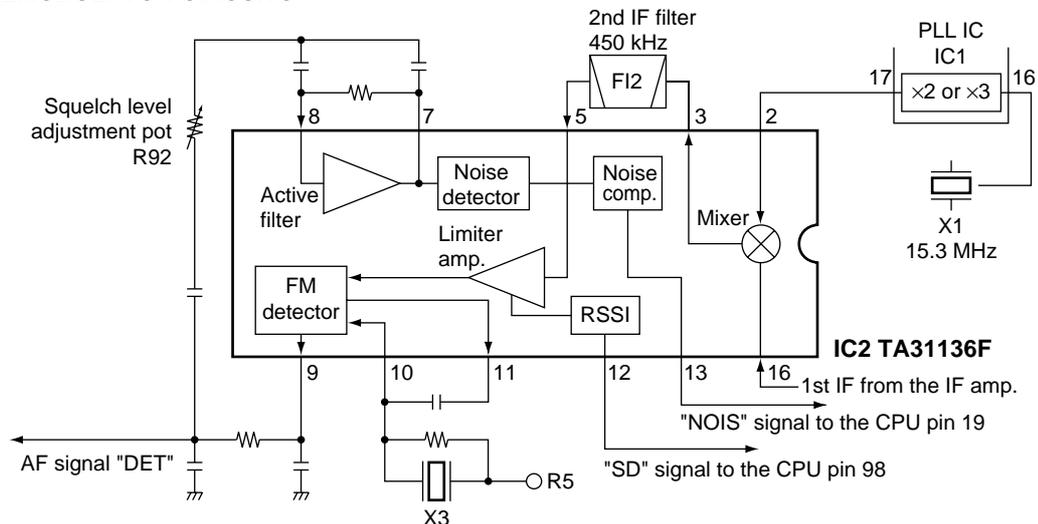
The FM IF IC contains the 2nd mixer, limiter amplifier, quadrature detector and active filter circuits. A 2nd LO signal (30.6 MHz for IC-F3/S, 45.9 MHz for IC-F4/S) is produced at the PLL circuit by dividing its reference frequency.

The 2nd IF signal from the 2nd mixer (IC2, pin 3) passes through a ceramic filter (F12) to remove unwanted heterodyned frequencies. It is then amplified at the limiter amplifier (IC2, pin 5) and applied to the quadrature detector (IC2, pins 10, 11) to demodulate the 2nd IF signal into AF signals.

4-1-5 AF CIRCUIT

AF signals from the FM IF IC (IC2 pin 9) are applied to the mute switch (IC4, pin 1) via the AF filter circuit (IC3b, pins 6, 7). The output signals from pin 11 are applied to the AF power amplifier (IC5, pin 4) after being passed through the [VOL] control (VR board, R1).

• 2nd IF AND DEMODULATOR CIRCUITS



The applied AF signals are amplified at the AF power amplifier circuit (IC5, pin 4) to obtain the specified audio level. The amplified AF signals, output from pin 10, are applied to the internal speaker (SP1) via the [SP] jack when no plug is connected to the jack.

4-1-6 SQUELCH CIRCUIT

A squelch circuit cuts out AF signals when no RF signals are received. By detecting noise components in the AF signals, the squelch switches the AF mute switch.

A portion of the AF signals from the FM IF IC (IC2, pin 9) are applied to the active filter section (IC2, pin 8) where noise components are amplified and detected with an internal noise detector. The squelch level adjustment pot (R92) is connected in parallel to the active filter input (pin 8) to control the input noise level.

The active filter section amplifies noise components. The filtered signals are rectified at the noise detector section and converted into "NOIS" (pulse type) signals at the noise comparator section. The "NOIS" signal is applied to the CPU (IC8, pin 19).

The CPU detects the receiving signal strength from the number of the pulses, and outputs an "RM" signal from pin 43. This signal controls the mute switch (IC4) to cut the AF signal line.

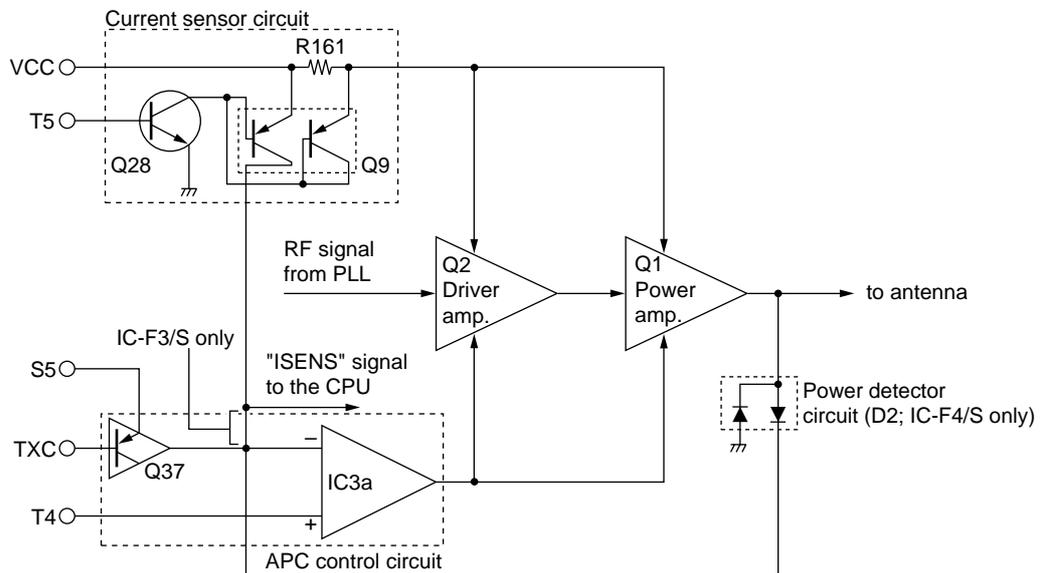
4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHONE AMPLIFIER CIRCUIT

The microphone amplifier circuit amplifies audio signals with +6 dB/octave pre-emphasis characteristics from the microphone to a level needed for the modulation circuit.

The AF signals from the microphone are applied to the microphone amplifier circuit (IC3c, pin 10). The amplified AF signals are passed through the low-pass filter circuit (IC3d, pins 13, 14) via the mute switch (IC4, pins 2–4). The filtered AF signals are applied to the modulator circuit after being passed through the mute switch (IC4, pins 8–10) and the deviation adjustment pot (R119; IC-F4/S only).

• **APC circuit**



4-2-2 MODULATION CIRCUIT

The modulation circuit modulates the VCO oscillating signal (RF signal) using the microphone audio signal.

The audio signals change the reactance of a diode (D6 for IC-F3/S, D404 for IC-F4/S) to modulate an oscillated signal at the VCO circuit (Q7, Q8). The oscillated signal is amplified at the buffer-amplifiers (Q4, Q6), then applied to the T/R switching circuit (D3, D4).

4-2-3 DRIVE/POWER AMPLIFIER CIRCUITS

The signal from the VCO circuit passes through the T/R switching circuit (D3) and is amplified at the buffer(s) (Q3 for IC-F3/S, Q3, Q403 for IC-F4/S), drive (Q2) and power amplifier (Q1) to obtain 5 W (IC-F3/S)/4 W (IC-F4/S) of RF power (at 9.6 V DC). The amplified signal passes through the antenna switching circuit (D1), and low-pass filter and is then applied to the antenna connector.

The bias current of the drive (Q2) and the power amplifier (Q1) is controlled by the APC circuit.

4-2-4 CURRENT DETECTOR CIRCUIT

The current detector circuit (Q9, Q28) detects the total driving current of the drive and the power amplifiers, using the current sensor (R161). The differential amplifier (Q9) detects the voltage difference of the current sensor input and output voltages, then outputs control voltage to the APC circuit (IC-F3/S only) and the CPU (IC8, pin 97).

4-2-5 POWER DETECTOR CIRCUIT (IC-F4/S ONLY)

The power detector circuit (D2) detects the transmit power output level and converts it to DC voltage. The detected signal is applied to the APC circuit.

4-2-6 APC CIRCUIT

The APC circuit (IC3a, Q37) protects the drive and the power amplifiers from excessive current drive, and selects HIGH or LOW output power.

The signal output from the current sensor circuit (Q9, Q28; IC-F3/S) or the power detector circuit (D2; IC-F4/S) is applied to the differential amplifier (IC3a, pin 2), and the "T4" signal from the expander (IC10, pin 14), controlled by the CPU (IC8), is applied to the other input for reference.

When the driving current is increased, input voltage of the differential amplifier (pin 2) will be increased. In such cases, the differential amplifier output voltage (pin 1) is decreased to reduce the driving current.

4-3 PLL CIRCUIT

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

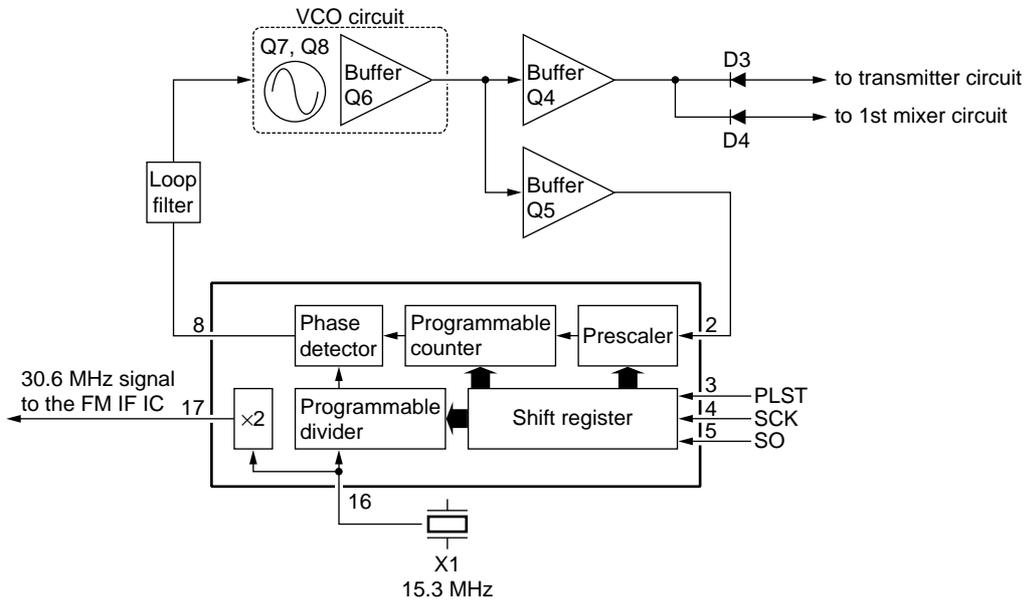
The PLL circuit contains the VCO circuit (Q7, Q8). The oscillated signal is amplified at the buffer-amplifiers (Q5, Q6) and then applied to the PLL IC (IC1, pin 2).

The PLL IC contains a prescaler, programmable counter, phase detector and charge pump, etc. The entered signal is divided at the prescaler and programmable counter section by the N-data ratio from the CPU. The divided signal is detected on phase at the phase detector using the reference frequency.

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.

A portion of the VCO signal is amplified at the buffer-amplifier (Q4) and is then applied to the receive 1st mixer or transmit buffer-amplifier circuit via the T/R switching diode (D3, D4).

• **PLL circuit for IC-F3/S**



4-4 POWER SUPPLY CIRCUITS

VOLTAGE LINE

Line	Description
HV	The voltage from the attached battery pack.
VCC	The same voltage as the HV line (battery voltage) which is controlled by the power switch ([VOL] control).
CPU5	Common 5 V converted from the VCC line by the reference regulator circuit (IC6). The output voltage is applied to the CPU (IC8) and the 5V regulator circuit.
5V	Common 5 V converted from the VCC line by the 5 V regulator circuit (Q18, Q19) using the reference regulator (IC6).
T5	5 V for transmitter circuits regulated by the T5 regulator circuit (Q22).
R5	5 V for receiver circuits regulated by the R5 regulator circuit (Q21).
S5	Common 5 V converted from the 5V line by the S5 regulator circuit (Q20).
OPT	The same voltage as the 5V line for the optional HM-75A or HS-51 through a resistor (R132).

4-5 CPU PORT ALLOCATIONS

4-5-1 CPU (IC8)

Pin number	Port name	Description
1	CTCIN	Input port for CTCSS/DTCS signals for decoding.
11	CSIFT	Outputs reference oscillator for the CPU control signal.
12	SCK	Outputs clock signal to the PLL IC (IC1), EEPROM (IC7) and expander IC (IC10), etc.
13	SI	Input port for the data signals from EEPROM (IC7), etc.
14	SO	Outputs data signals to the PLL IC (IC1), EEPROM (IC7) and expander IC (IC10), etc.
15	UNLK	Input port for PLL unlock signal from the PLL IC (IC1). High level signal is applied during unlock.
18	PLST	Outputs strobe signals to the PLL IC (IC1).
19	NOIS	Input port for noise signals (pulse type) from the FM IF IC (IC2).
26	CONT	Outputs LCD contrast control signal. High: When normal level is selected
36–41 (IC-F3/S)	KS0–KS5	Output ports for key matrix.
40, 41 (IC-F4/S)	KS4, KS5	
42	MM	Outputs mic. mute control signal. Low: When DTMF or 2/5-tone signal is selected
43	RM	Outputs RX mute control signal. Low: When muted
44–47	KR0–KR5	Input ports for key matrix.
48	R5C	Outputs R5 regulator control signal. Low: While receiving
49	S5C	Outputs S5 regulator control signal. Low: While power is ON
50	TXC	Outputs T5 regulator control signal. Low: While transmitting
51	T5C	Outputs T5 regulator control signal. Low: While transmitting
52	LIGHT	Outputs LCD backlight control signal. High: Lights ON
53	AFON	Outputs the regulator circuit for the AF amplifier control signal. High: While AF amp. is activated.
54	DST	Outputs strobe signals to the expander IC (IC10).
60–62	CTDA0–CTDA2	Outputs CTCSS and DTCS encode signals (3-bit, D/A type).
63	DUSE	Outputs filter switch control signal for the CTCSS and DTCS (Q38). High: DTCS is activated.

CPU (IC8) — continued

Pin number	Port name	Description
90	MTONE	Output port for: Beep audio while receiving. 2/5-tone signals while transmitting.
91	DTMF	Output port for DTMF signals while transmitting.

4-5-2 OUTPUT EXPANDER IC (IC10)

Pin number	Port name	Description
2	DST	Input port for strobe signals.
3	SCK	Input port for clock signal.
4	SO	Input port for data signal.
11–13	T1–T3	Output tuneable bandpass filter control voltage.
14	T4	Outputs tuneable bandpass filter control signal while receiving. Outputs RF output power control signals while transmitting.

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 9.6 V DC Current capacity : 5 A or more	Audio generator	Frequency range : 300–3000 Hz Output level : 1–500 mV
RF power meter (terminated type)	Measuring range : 1–10 W Frequency range : 120–500 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Attenuator	Power attenuation : 40 or 50 dB Capacity : 10 W or more
Frequency counter	Frequency range : 0.1–500 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 120–500 MHz Output level : 0.1 μV–32 mV (–127 to –17 dBm)
FM deviation meter	Frequency range : DC–500 MHz Measuring range : 0 to ±5 kHz	DC voltmeter	Input impedance : 50 kΩ/V DC or better
Digital multimeter	Input impedance : 10 MΩ/V DC or better	Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V
		AC millivoltmeter	Measuring range : 10 mV–10 V

■ TRIMMER ADJUSTMENT

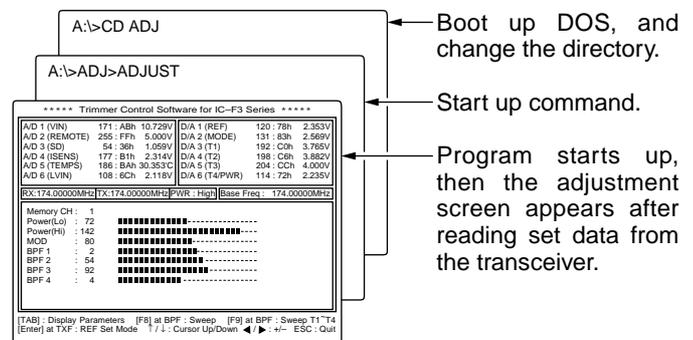
When you adjust the contents on page 5-4 or 5-8, TRIMMER ADJUSTMENT, the optional CS-F3 FIELD PROGRAMMING SOFTWARE (Rev. 3.0 or later) and OPC-478 CLONING CABLE are required.

• STARTING TRIMMER ADJUSTMENT

Turn ON power to the transceiver, connect a computer to the [SP] jack using the optional OPC-478 CLONING CABLE, then start up the “ADJUST” program in CS-F3.

• STARTING THE PROGRAM

- Boot up DOS.
- Insert the CS-F3 backup disk into drive A.
- Type the following to start up the program:
ADJ>ADJUST [Enter]
 - The adjustment screen appears after reading set data from the transceiver.
- After the adjustment screen appears, set or modify the data as desired.



NOTE: When the EEPROM (IC7) is replaced or the transceiver displays an error message and beeps, the following operation is necessary before starting the ADJUSTMENT.

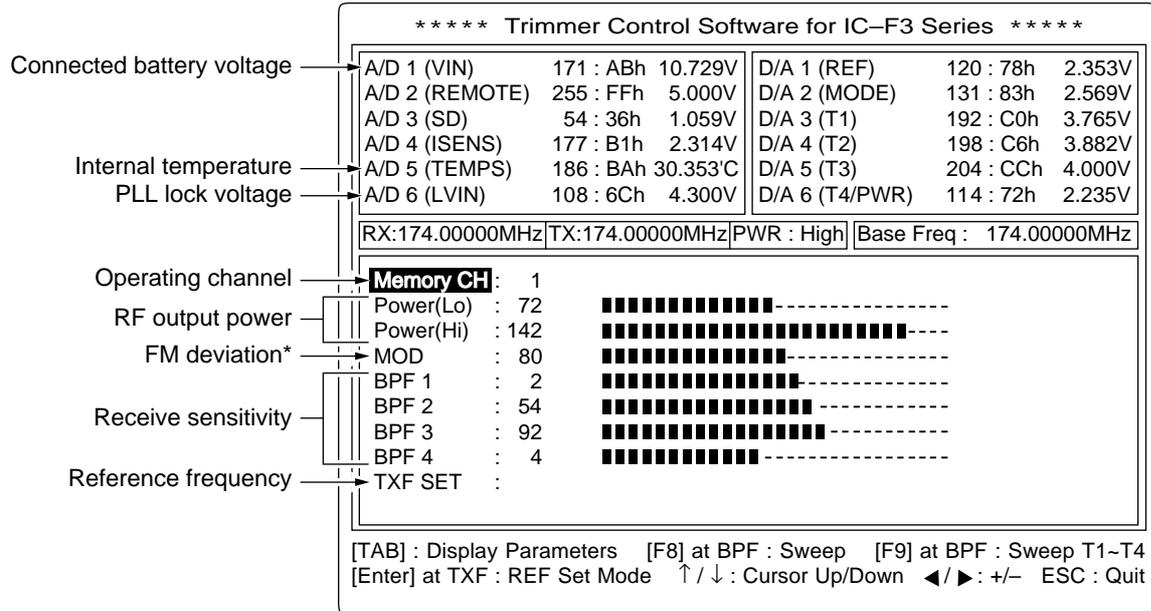
- Download the programmed frequency data using the CS-F3 FIELD PROGRAMMING SOFTWARE (Rev. 3.0 or later) from an exact same version of the transceiver, then save it. (See the instructions for detailed operation.)
- Return to DOS.
- Copy the saved frequency data into the "ADJ" directory as follows:
A>COPY [file name].ICF A:\ADJ [ENT]
- Connect the transceiver in which the EEPROM has been replaced, using the OPC-478 CLONING CABLE.
- Change the directory to "ADJ", and type as follows:
A>CD ADJ [ENT]
A>ADJ>EEPROM [file name].ICF 1* [ENT]
When cloning is successful, the transceiver displays "CL GOOD".

*RS-232C port number. You have to type "A>EEPROM [file name].ICF 2" when the port number is set to "2". This setting can be confirmed in the SETUP window while CS-F3 is running.

• SCREEN DISPLAY EXAMPLE

F3/S

F4/S

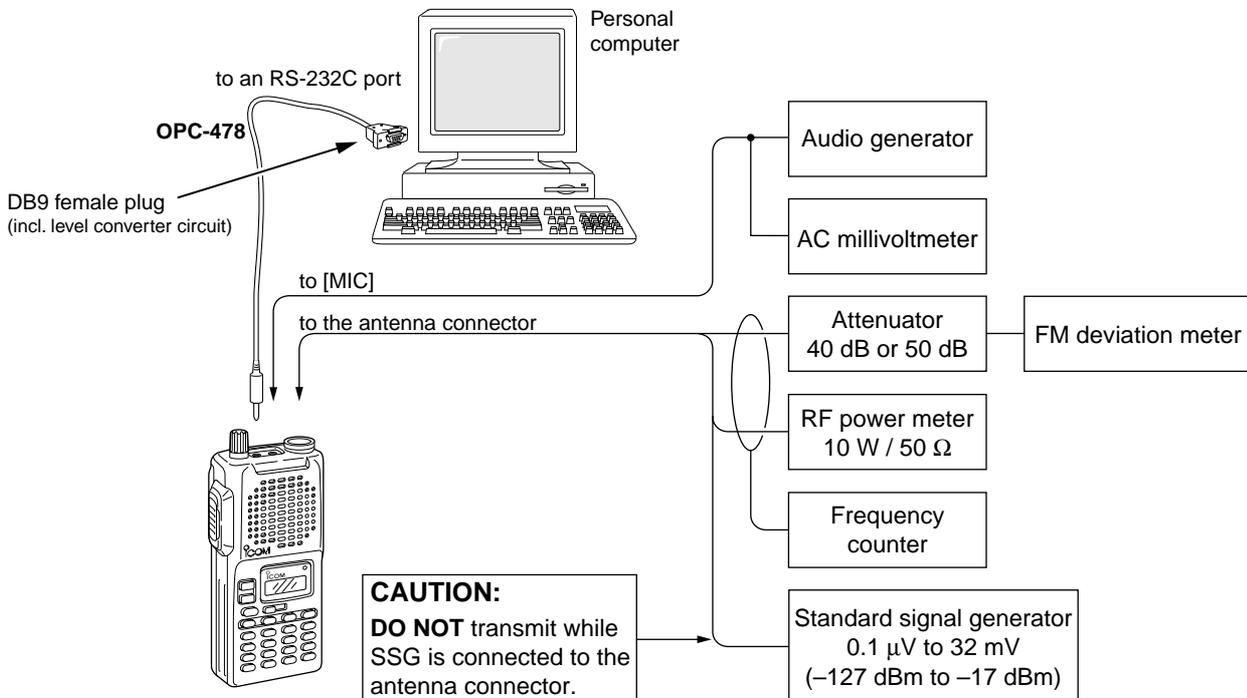


NOTE:

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

***DO NOT** change the value when adjusting the **IC-F4/S**. A value of 80 is necessary for the IC-F4/S.

• CONNECTIONS

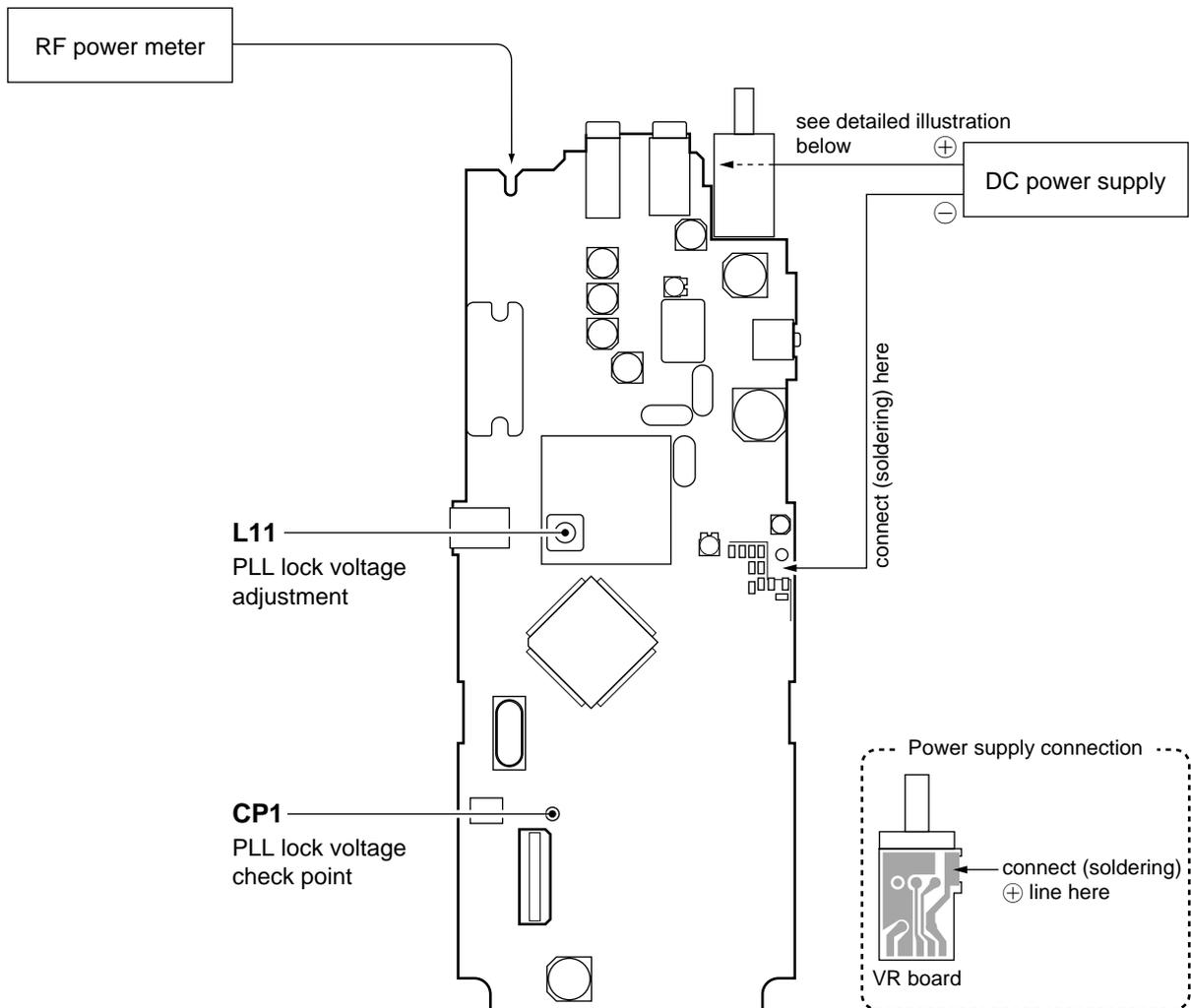


5-2 PLL ADJUSTMENT for IC-F3/S

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1 • Operating freq. : 150.000 MHz (L-band) 174.000 MHz (H-band) • Transmitting	MAIN	Connect a multi-meter to check point CP1.	3.0 V (L-band) 4.3 V (H-band)	MAIN	L11
	2 • Receiving					2.2–3.2 V (L-band) 3.1–4.1 V (H-band)

F3/S

• MAIN unit



5-3 TRIMMER ADJUSTMENT for IC-F3/S

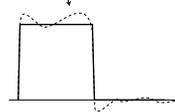
Select an operation using [↑]/[↓] keys, then set the specified value using [←]/[→] keys on the connected computer keyboard.

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	
		UNIT	LOCATION		
REFERENCE FREQUENCY	1	<ul style="list-style-type: none"> Operating freq. : 136.000 MHz (L-band) 146.000 MHz (H-band) High/Low switch : Low Transmitting 	Top panel	Loosely couple a frequency counter to the antenna connector.	136.000000 MHz (L-band) 146.000000 MHz (H-band)
	2	<ul style="list-style-type: none"> Transmitting 			136.001360 MHz (L-band) 146.001460 MHz (H-band)
OUTPUT POWER	1	<ul style="list-style-type: none"> Operating freq. : 143.000 MHz (L-band) 146.000 MHz (H-band) High/Low switch : Low Transmitting 	Top panel	Connect an RF power meter to the antenna connector.	1.0 W
	2	<ul style="list-style-type: none"> High/Low switch : High Transmitting 			5.0 W
FM DEVIATION	1	<ul style="list-style-type: none"> Operating freq. : 143.000 MHz (L-band) 160.000 MHz (H-band) High/Low switch : Low Connect an audio generator to the [MIC] jack and set as: 1 kHz/150 mV 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.	±4.2 kHz (W-type) ±2.1 kHz (N-type) ±3.4 kHz (M-type)
BPF1-BPF4	1	<ul style="list-style-type: none"> Operating freq. : 136.000 MHz (L-band) 146.000 MHz (H-band) Set an SSG as: Level : 3.2 μV* (-97 dBm) Modulation : 1 kHz Deviation : ±3.5 kHz (W-type) ±1.75 kHz (N-type) ±2.8 kHz (M-type) Receiving 	Top panel	Connect an SSG to the antenna connector and a SINAD meter with an 8 Ω load to the [SP] jack.	Minimum distortion level
<p>CONVENIENT: The BPF T1-BPF T4 can be adjusted automatically.</p> <p>①-1 Set each to 0, then push the [F9] key. (The cursor must be set to the BPF T1 position.)</p> <p>①-2 The connected PC tunes BPF T1-BPF T4 to peak levels. or</p> <p>②-1 Set the cursor to one of BPF T1, T2, T3 or T4 as desired. ②-2 Push [F8] to start tuning. ②-3 Repeat ②-1 and ②-2 to perform additional BPF tuning.</p>					

*This output level of a standard signal generator (SSG) is indicated as SSG's open circuit.

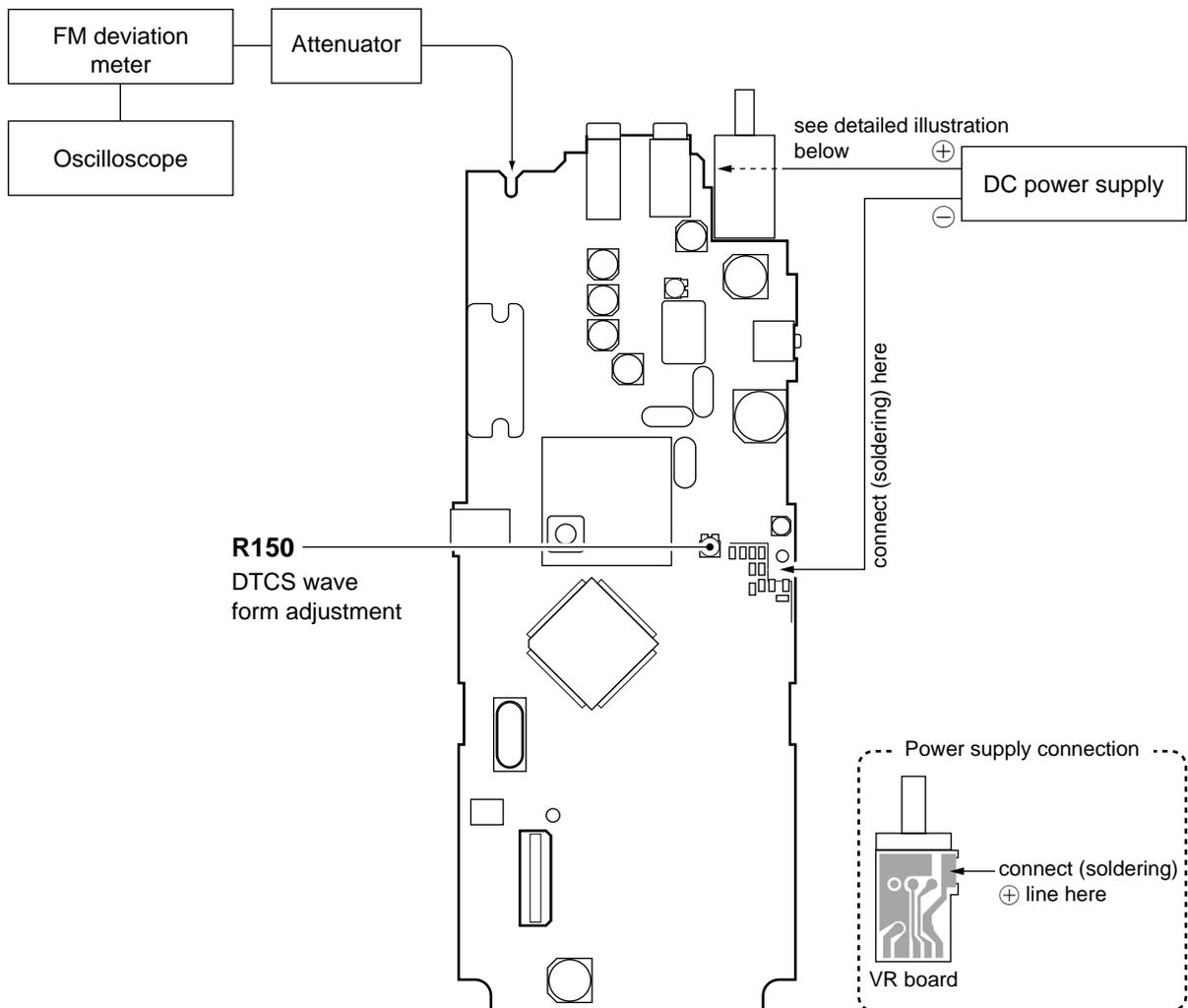
5-4 TRANSMITTER ADJUSTMENT for IC-F3/S

The following adjustment must be performed after "REFERENCE FREQUENCY ADJUSTMENT" in section 5-3.

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
DTCS WAVE FORM	1 <ul style="list-style-type: none"> • Operating freq. : 143.000 MHz (L-band) 160.000 MHz (H-band) • High/Low switch: Low • No audio applied to the [MIC] jack. • DTCS code : 007 • Transmitting 	Top panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to flat wave form 	MAIN	R150

F3/S

• MAIN unit



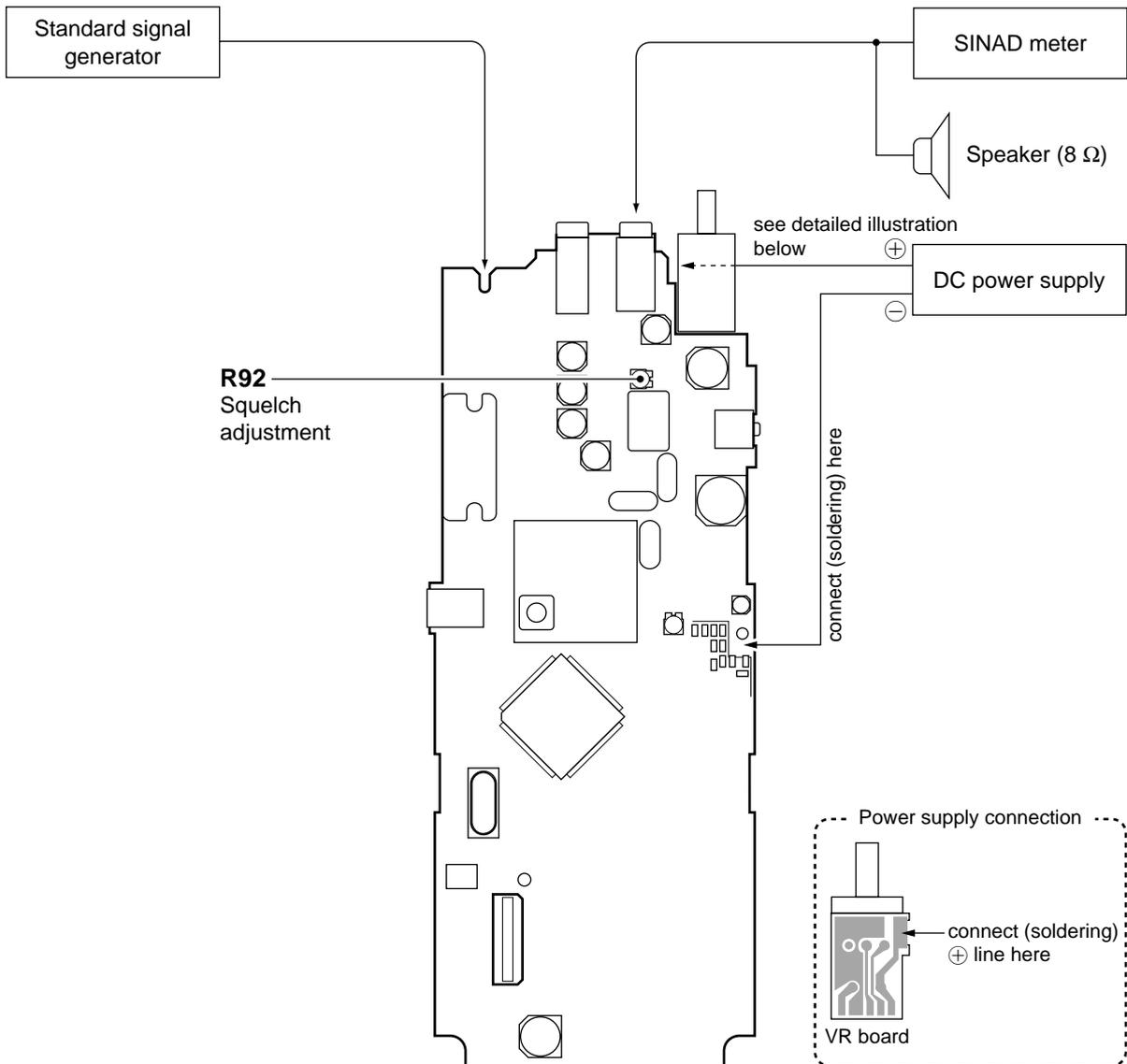
5-5 RECEIVER ADJUSTMENT for IC-F3/S

The following adjustment must be performed after "BPF1-BPF4 ADJUSTMENT" in section 5-3.

F3/S

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
SQUELCH LEVEL	1 • Operating freq. : 136.000 MHz (L-band) 146.000 MHz (H-band) • Set the SSG as: Modulation : 1kHz Deviation : ±3.5 kHz (W-type) ±1.75 kHz (N-type) ±2.8 kHz (M-type) • Receiving	Top panel	Connect an SSG to the antenna connector and SINAD meter with an 8 Ω load to the [SP] jack.	12 dB SINAD	SSG	Output level
	2 • Turn R92 clockwise to close squelch. • Receiving					

• MAIN unit

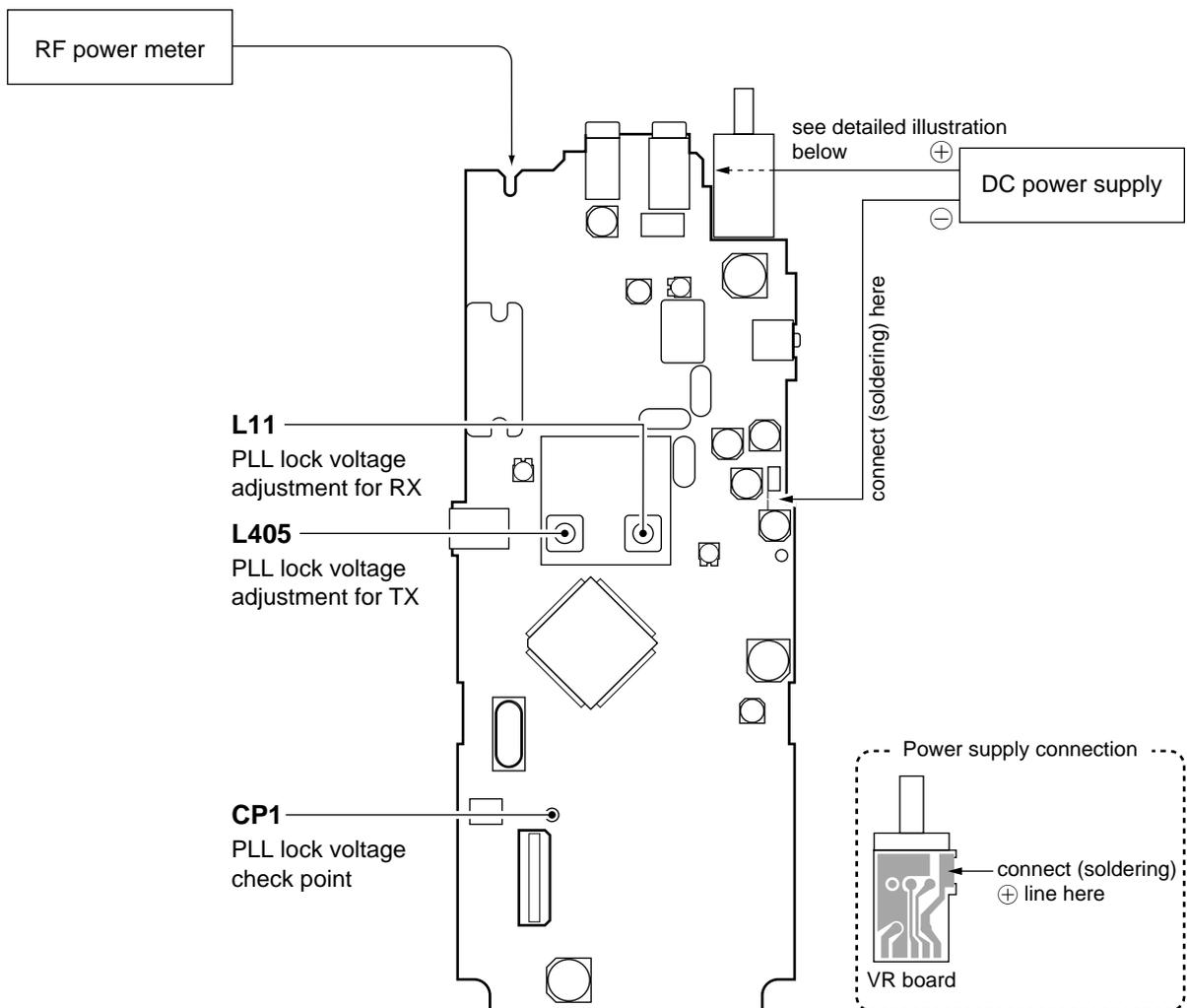


5-6 PLL ADJUSTMENT for IC-F4/S

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT		
		UNIT	LOCATION		UNIT	ADJUST	
PLL LOCK VOLTAGE	1 • Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) • Receiving	MAIN	Connect a multimeter to check point CP1.	1.3 V	MAIN	L11	
	2 • Transmitting					L405	
	3 • Operating freq. : 430.000 MHz (L-band) 470.000 MHz (ML-band) 500.000 MHz (MH-band) 512.000 MHz (H1-band) 520.000 MHz (H2-band) • Receiving					2.5–4.2 V (H1-band) 3.0–4.5 V (other)	Verify
	4 • Transmitting						

F4/S

• MAIN unit



5-7 TRIMMER ADJUSTMENT for IC-F4/S

Select an item using [↑]/[↓] keys on the connected computer keyboard.

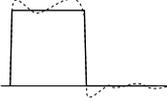
F4/S

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT
		UNIT	LOCATION		
REFERENCE FREQUENCY	1 <ul style="list-style-type: none"> Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) High/Low switch : Low Transmitting 	Top panel	Loosely couple a frequency counter to the antenna connector.	400.000000 MHz (L-band)	Push [←] or [→] keys on the computer key-board.
				440.000000 MHz (ML-band)	
	470.000000 MHz (MH-band)				
	490.000000 MHz (H1/H2-bands)				
	2 <ul style="list-style-type: none"> Transmitting 			400.004000 MHz (L-band)	
				440.004400 MHz (ML-band)	
				470.004700 MHz (MH-band)	
				490.004900 MHz (H1/H2-bands)	
OUTPUT POWER	1 <ul style="list-style-type: none"> Operating freq. : 415.000 MHz (L-band) 455.000 MHz (ML-band) 485.000 MHz (MH-band) 	Top panel	Connected computer screen "Power (Hi)".	180	Push [←] or [→] keys on the computer key-board.
	2 <ul style="list-style-type: none"> 501.000 MHz (H1-band) 505.000 MHz (H2-band) High/Low switch : High Transmitting 			Connect an RF power meter to the antenna connector.	
	3 <ul style="list-style-type: none"> Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) High/Low switch : High Transmitting 			4.2 W	Push [←] or [→] keys on the computer key-board.
	4 <ul style="list-style-type: none"> High/Low switch : Low Transmitting 			1.1 W	
BPF1-BPF4	1 <ul style="list-style-type: none"> Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) Set an SSG as: Level : 3.2 μV* (-97 dBm) Modulation : 1 kHz Deviation : ±3.5 kHz (W-type) ±1.75 kHz (N-type) Receiving 	Top panel	Connect an SSG to the antenna connector and a SINAD meter with an 8 Ω load to the [SP] jack.	Minimum distortion level	Push [←] or [→] keys on the computer key-board.
	<p>CONVENIENT: The BPF T1-BPF T4 can be adjusted automatically.</p> <p>①-1 Set each to 0, then push the [F9] key. (The cursor must be set to the BPF T1 position.)</p> <p>①-2 The connected PC tunes BPF T1-BPF T4 to peak levels. or</p> <p>②-1 Set the cursor to one of BPF T1, T2, T3 or T4 as desired. ②-2 Push [F8] to start tuning. ②-3 Repeat ②-1 and ②-2 to perform additional BPF tuning.</p>				

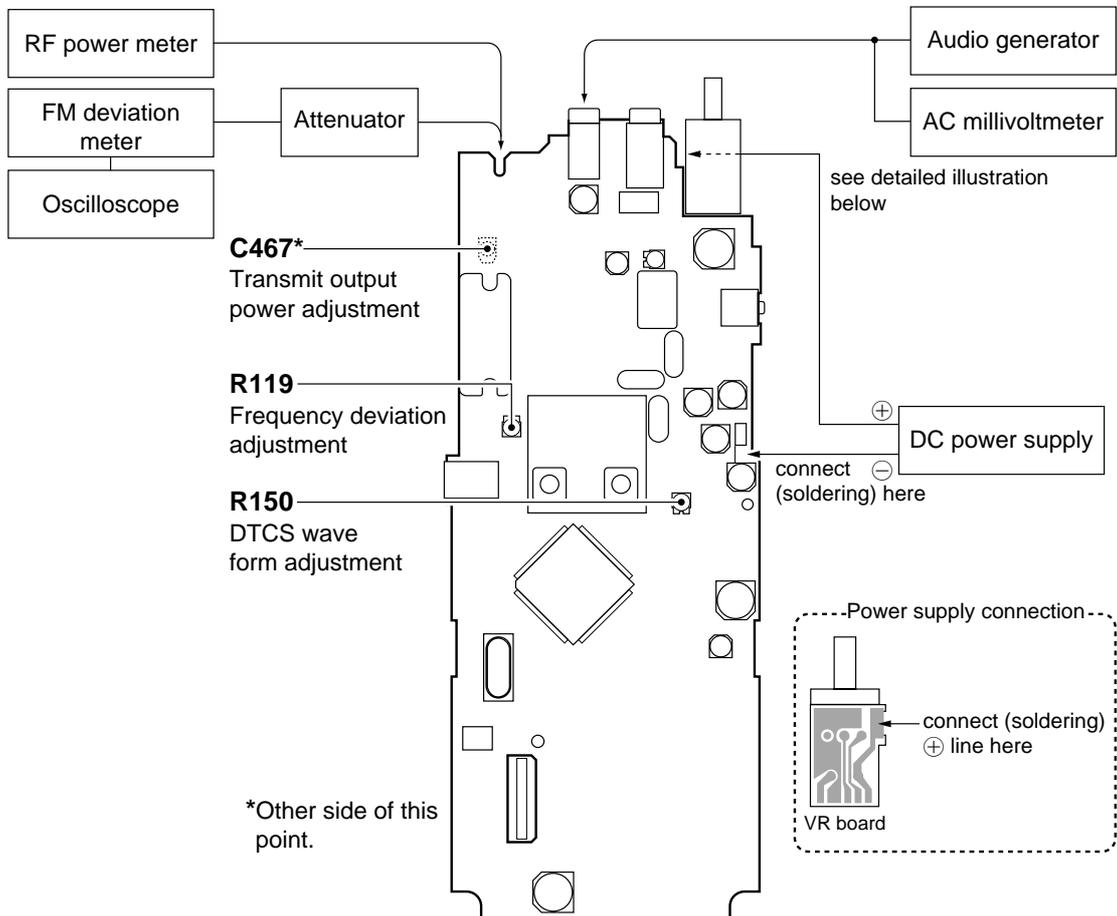
*This output level of a standard signal generator (SSG) is indicated as SSG's open circuit.

5-8 TRANSMITTER ADJUSTMENT for IC-F4/S

The following adjustment must be performed after "REFERENCE FREQUENCY ADJUSTMENT" in section 5-7.

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
FM DEVIATION	1 <ul style="list-style-type: none"> Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) High/Low switch : Low Connect an audio generator to the [MIC] jack and set as: 1 kHz/150 mV 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.	±4.1 kHz (W-type) ±2.1 kHz (N-type)	MAIN	R119
DTCS WAVE FORM	1 <ul style="list-style-type: none"> Operating freq. : 415.000 MHz (L-band) 455.000 MHz (ML-band) 485.000 MHz (MH-band) 501.000 MHz (H1-band) 505.000 MHz (H2-band) High/Low switch : Low No audio applied to the [MIC] jack. DTCS code : 007 Transmitting 	Top panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to flat wave form 	MAIN	R150

• MAIN unit



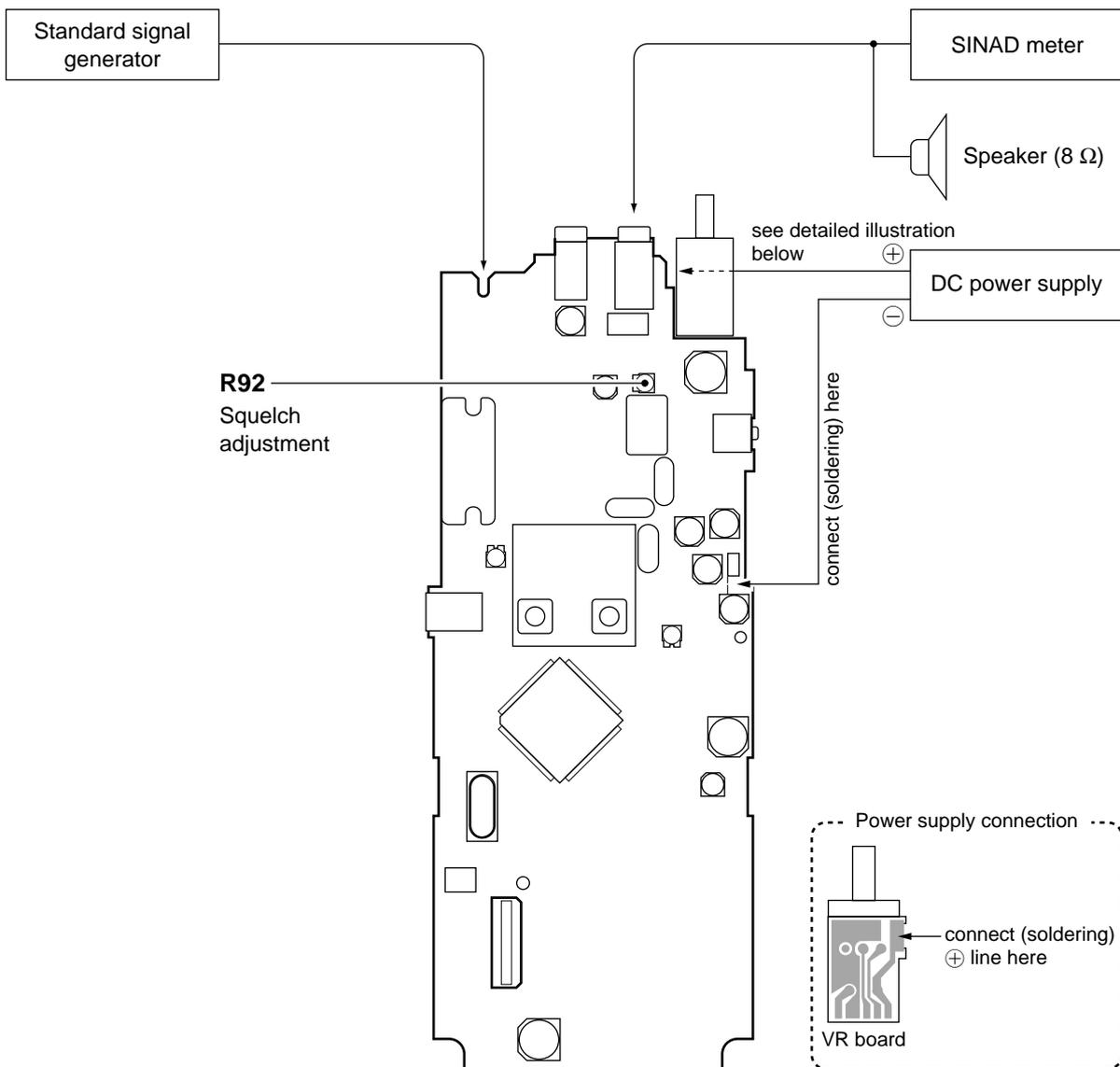
5-9 RECEIVER ADJUSTMENT for IC-F4/S

The following adjustment must be performed after "BPF1-BPF4 ADJUSTMENT" in section 5-7.

F4/S

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
SQUELCH LEVEL	1 • Operating freq. : 400.000 MHz (L-band) 440.000 MHz (ML-band) 470.000 MHz (MH-band) 490.000 MHz (H1/H2-bands) • Set the SSG as: Modulation : 1 kHz Deviation : ±3.5 kHz (W-type) ±1.75 kHz (N-type) • Receiving	Top panel	Connect an SSG to the antenna connector and SINAD meter with an 8 Ω load to the antenna connector.	12 dB SINAD	SSG	Output level

• MAIN unit



SECTION 6 PARTS LIST

6-1 IC-F3/F3S

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC2	1110003490	S.IC	TA31136FN (D.EL)
IC3	1110003780	S.IC	NJM2902V-TE1
IC4	1130008090	S.IC	BU4066BCFV-E1
IC5	1110001810	S.IC	TA7368F (TP1)
IC6	1180001080	S.IC	S-81250PG-PD-T1
IC7	1140005620	S.IC	X25080SI-2.7T6 [16 ch]
	1130008670	S.IC	25LC160T-I/SN [2-BANK]
IC8	1140006460	S.IC	HD6433875A40H [16 ch]
	1140008380	S.IC	HD6433875B26H [2-BANK]
IC10	1110003690	S.IC	M62354GP 75EC
IC11	1110003500	S.IC	S-80742SL-A6-T1
Q1	1560000950	S.FET	2SK2595AXB
Q2	1560000960	S.FET	2SK2596BXTL
Q3	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q4	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q5	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q6	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q7	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q8	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q9	1590002160	S.TRANSISTOR	XP6401-(TX)
Q11	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q12	1580000720	S.FET	3SK239AXRTL
Q13	1580000490	S.FET	3SK166A-2-T7
Q14	1530002360	S.TRANSISTOR	2SC2714-Y (TE85R)
Q15	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q16	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q17	1590002530	S.TRANSISTOR	UN911H(TX)
Q18	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q19	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q20	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q21	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q22	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q23	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q25	1530000160	S.TRANSISTOR	2SC2712-Y (TE85RTEM)
Q26	1590000430	S.TRANSISTOR	DTC144EUA T106
Q27	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q28	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q29	1590001770	S.TRANSISTOR	XP1213 (TX)
Q31	1590000660	S.TRANSISTOR	DTC144TU T107
Q32	1590000430	S.TRANSISTOR	DTC144EUA T106
Q33	1590001650	S.TRANSISTOR	XP4601 (TX)
Q34	1560000540	S.FET	2SK880-Y (TE85R)
Q35	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q36	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q37	1590000720	S.TRANSISTOR	DTA144EUA T106
Q38	1590000430	S.TRANSISTOR	DTC144EUA T106
D1	1790000620	S.DIODE	MA77 (TX)
D3	1790000620	S.DIODE	MA77 (TX)
D4	1790000620	S.DIODE	MA77 (TX)
D5	1720000370	S.VARICAP	HVU350TRF
D6	1790000620	S.DIODE	MA77 (TX)
D7	1720000670	S.VARICAP	HVU17TRF
D8	1790000450	S.DIODE	MA862 (TX)
D9	1720000370	S.VARICAP	HVU350TRF
D10	1720000370	S.VARICAP	HVU350TRF
D11	1720000370	S.VARICAP	HVU350TRF
D12	1720000370	S.VARICAP	HVU350TRF
D13	1720000370	S.VARICAP	HVU350TRF
D15	1790001280	S.DIODE	MA111 (TX)
D16	1790001200	S.DIODE	MA6S121 (TX)
D17	1790001200	S.DIODE	MA6S121 (TX)
D18	1790001280	S.DIODE	MA111 (TX)
D19	1790001280	S.DIODE	MA111 (TX)
D21	1720000370	S.VARICAP	HVU350TRF
D22	1720000370	S.VARICAP	HVU350TRF
D24	1750000130	S.DIODE	DA204U T107
D25	1790000670	S.DIODE	SB07-03C-TB
D26	1160000060	S.DIODE	DAN202U T107

F3 only

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D27	1750000130	S.DIODE	DA204U T107
D28	1790000620	S.DIODE	MA77 (TX)
D29	1730002260	S.ZENER	MA8030-H (TX)
F11	2010002080	XTAL	FL-268 (31.05 MHz) (N, M)
	2010002110	XTAL	FL-270 (31.05 MHz) (W)
F12	2020001410	CERAMIC	CFWM450G (N)
	2020001270	CERAMIC	CFWM450E (M, W)
X1	6050009981	XTAL	CR-575A (15.3 MHz) (E)
	6050009991	XTAL	CR-576A (15.3 MHz) (U)
X2	6050008840	S.XTAL	CR-463 (6.8 MHz)
X3	6070000210	S.DISCRIMINATOR	CDBCA450CX24
L1	6110002000	COIL	LA-226
L2	6110002040	COIL	LA-225
L3	6110002040	COIL	LA-225
L4	6200002100	S.COIL	LQN 1A 17NJ04
L5	6200005780	S.COIL	33CS-Y655LY-03K=P3
L6	6200002820	S.COIL	LQN 1A 47NJ04
L7	6200006980	S.COIL	ELJRE R10G-F
L8	6200006980	S.COIL	ELJRE R10G-F
L9	6200004600	S.COIL	MLF1608D R15K-T (L)
	6200006980	S.COIL	ELJRE R10G-F (H)
L10	6200004600	S.COIL	MLF1608D R15K-T (L)
	6200006980	S.COIL	ELJRE R10G-F (H)
L11	6200004850	S.COIL	MC152-E558CN-100024
L12	6200003090	S.COIL	NL 322522T-2R7J-3
L13	6200003960	S.COIL	MLF1608A 1R0K-T
L14	6200005740	S.COIL	ELJRE 47NG-F (L)
	6200007000	S.COIL	ELJRE 82NG-F (H)
L15	6200002820	S.COIL	LQN 1A 47NJ04
L16	6200007160	S.COIL	LQN1H 54NK04
L17	6200007160	S.COIL	LQN1H 54NK04
L18	6200002360	S.COIL	LQN 1A 33NJ04
L19	6200002360	S.COIL	LQN 1A 33NJ04
L20	6200004790	S.COIL	MLF1608D R47K-T
L21	6200005740	S.COIL	ELJRE 47NG-F
L22	6200002820	S.COIL	LQN 1A 47NJ04
L23	6200002370	S.COIL	LQN 1A 39NJ04 (L)
	6200002360	S.COIL	LQN 1A 33NJ04 (H)
L24	6200003090	S.COIL	NL 322522T-2R7J-3
L25	6200003960	S.COIL	MLF1608A 1R0K-T
L26	6200003590	S.COIL	EXCCL3225U1
L27	6200003590	S.COIL	EXCCL3225U1
L28	6200006670	S.COIL	ELJRE 68NG-F
L29	6200006980	S.COIL	ELJRE R10G-F
L30	6200007220	S.COIL	EXCCL4532U1
R1	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R2	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R3	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R4	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R5	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R7	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R8	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R9	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R10	7030003250	S.RESISTOR	ERJ3GEYJ 270 V (27 Ω)
	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R11	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R12	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R13	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)
R14	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R15	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R16	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R18	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R19	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)

(L): L-band, (H): H-band, (N): N-type, (M): M-type, (W): W-type
 (E): ETS/CEPT version, (U): EIA/TIA version

S.=Surface mount

F3/S

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R20	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R21	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R22	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R23	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R24	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R25	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R26	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R27	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R28	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R29	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R30	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R31	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R32	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R33	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R34	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R35	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R41	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R42	7410000950	S.ARRAY	EXB-V8V 102JV
R44	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R45	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R48	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R49	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R50	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R51	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R52	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R53	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R54	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R55	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R57	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R58	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R59	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R61	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R62	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R63	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R64	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R65	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R66	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R67	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R68	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R69	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R70	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R72	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R75	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R77	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R79	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R80	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R81	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R82	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R83	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R84	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)
R85	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R86	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R87	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R88	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R91	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R92	7310004110	S.TRIMMER	EVM-1YSX50 B54 (503)
R93	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R94	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R95	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R96	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R97	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R98	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R99	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R100	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R101	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R102	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R103	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R104	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R105	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R106	7410000950	S.ARRAY	EXB-V8V 102JV
R107	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R108	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R109	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R112	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R113	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R114	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R115	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R116	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R117	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R119	7310004140	S.TRIMMER	EVM-1YSX50 B35 (304)
R120	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R121	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R122	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R123	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R125	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R126	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R127	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)
R128	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R130	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R131	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R132	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R133	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R134	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R135	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R137	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R139	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R141	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R142	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R144	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R145	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R146	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R147	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R148	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R149	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R150	7310004110	S.TRIMMER	EVM-1YSX50 B54 (503)
R151	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R153	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R154	7030008120	S.RESISTOR	RR0816P-682-D (6.8 kΩ)
R155	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R156	7030000160	S.RESISTOR	MCR10EZJH 15 Ω (150)
R157	7030000160	S.RESISTOR	MCR10EZJH 15 Ω (150)
R158	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R159	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R160	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R161	7030007330	S.RESISTOR	ERJ1WRSJR15U (0.15 Ω)
R162	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R163	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R166	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R167	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R168	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R169	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R170	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R171	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R174	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R175	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R176	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R177	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R178	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R181	7030005870	S.RESISTOR	RR0816R-104-D (100 kΩ)
R182	7510000910	S.THERMISTOR	NTCCF2012 4AH 473KC-T
R183	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R184	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R185	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R186	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R187	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R190	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R191	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R192	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R193	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R194	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R195	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R196	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R197	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R198	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R199	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R200	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R201	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R202	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R203	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R204	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R205	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R207	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R208	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R209	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R210	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R213	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R214	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)

L: L-band, H: H-band, N: N-type, M: M-type, W: W-type
 ©: ETS/CEPT version, Ⓢ: EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R215	7030005520	S.RESISTOR	RR0816R-334-D (330 kΩ)
R216	7030005630	S.RESISTOR	RR0816R-154-D (150 kΩ)
R217	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R218	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R219	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R220	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R221	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R222	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R224	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ) (N)
	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ) (M), (W)
R226	7410000950	S.ARRAY	EXB-V8V 102JV
R227	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R228	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R229	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R230	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R231	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R232	7410000950	S.ARRAY	EXB-V8V 102JV
R233	7410000950	S.ARRAY	EXB-V8V 102JV
R234	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R235	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 kΩ)
R236	7410000950	S.ARRAY	EXB-V8V 102JV
R237	7410000950	S.ARRAY	EXB-V8V 102JV
R238	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R240	7410000950	S.ARRAY	EXB-V8V 102JV
R241	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R242	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R243	7410000950	S.ARRAY	EXB-V8V 102JV
R244	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R245	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R249	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R250	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R251	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R252	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R253	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R255	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R257	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 M)
R258	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
C1	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C2	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C3	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
C4	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C5	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C6	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C7	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C10	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C11	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C12	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C15	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C20	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C21	4510004870	S.ELECTROLYTIC	ECEV1CA330P
C22	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C25	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C27	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C28	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C29	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C30	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C31	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C35	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C36	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C37	4030009520	S.CERAMIC	C1608 CH 1H 220J-T-A
	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C38	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C39	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C41	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C42	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
	4030008650	S.CERAMIC	C1608 JB 1H 332K-T-A
C45	4030010760	S.CERAMIC	C1608 CH 1H 331J-T-A
	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C47	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C48	4550006170	S.TANTALUM	ECST1AY225R
C49	4550006590	S.TANTALUM	ECST1CY684R
C50	4550006200	S.TANTALUM	ECST0JY106R
C51	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C52	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C53	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C54	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C55	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C56	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C57	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C58	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C59	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C62	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C63	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C64	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C65	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C66	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C67	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C69	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C70	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C71	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C72	4550006150	S.TANTALUM	ECST1CY105R
C73	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C75	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C76	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C78	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C79	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C80	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
	4030009350	S.CERAMIC	C1608 CH 1H 3R5B-T-A
C81	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C82	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C83	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C84	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C85	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C86	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C87	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C88	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C89	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C90	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C91	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C92	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C93	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C94	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C95	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C96	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C97	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C98	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C99	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C100	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C101	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C102	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C104	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C106	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C107	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C108	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C109	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C110	4030011530	S.CERAMIC	C1608 CH 1H 110J-T-A
	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C111	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C112	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C113	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C114	4030008900	S.CERAMIC	C1608 JB 1C 333K-T-A
C115	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C116	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C117	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C118	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A

L: L-band, H: H-band, N: N-type, M: M-type, W: W-type
 ©: ETS/CEPT version, Ⓢ: EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C119	4030008680	S.CERAMIC C2012 JF 1C 105Z-T-A
C120	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C121	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C122	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C123	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C124	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C125	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C126	4030008470	S.CERAMIC C1608 JB 1H 272K-T-A
C128	4030008680	S.CERAMIC C2012 JF 1C 105Z-T-A
C129	4550006680	S.TANTALUM ECST0JY156R
C131	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C132	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C133	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C134	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C135	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C136	4030010770	S.CERAMIC C1608 JB 1H 392K-T-A
C137	4030008900	S.CERAMIC C1608 JB 1C 333K-T-A
		(M, W)
C138	4030008890	S.CERAMIC C1608 JB 1C 273K-T-A
C138	4030008860	S.CERAMIC C1608 JB 1H 102K-T-A
C139	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C140	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C141	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C142	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C143	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C144	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C145	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C146	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C147	4030008630	S.CERAMIC C1608 JF 1C 104Z-T-A
C148	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C149	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C150	4550006200	S.TANTALUM ECST0JY106R
C151	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C152	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C153	4510005370	S.ELECTROLYTIC ECEV1AA221P
C154	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C155	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C156	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C157	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C158	4510005320	S.ELECTROLYTIC ECEV0JA101SP
C159	4030008630	S.CERAMIC C1608 JF 1C 104Z-T-A
C160	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C161	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C162	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C163	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C164	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C165	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C166	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C167	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C168	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C169	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C170	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C171	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C172	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C173	4510004640	S.ELECTROLYTIC ECEV1CA470SP
C174	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C175	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C176	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C177	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C179	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C180	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C181	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C182	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C183	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C184	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C185	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C186	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C187	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C189	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C190	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C193	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C194	4030007020	S.CERAMIC C1608 CH 1H 120J-T-A
C195	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C196	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C197	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C198	4550006170	S.TANTALUM ECST1AY225R
C199	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C200	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C201	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C202	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C203	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C204	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C205	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C209	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C210	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C211	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C212	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C213	4550006170	S.TANTALUM ECST1AY225R
C214	4030008900	S.CERAMIC C1608 JB 1C 333K-T-A
C215	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C217	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C218	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C221	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C222	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C223	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C224	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C225	4030008880	S.CERAMIC C1608 JB 1C 223K-T-A
C226	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C227	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C228	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C229	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C230	4550006140	S.TANTALUM ECST1EY474R
C231	4030008630	S.CERAMIC C1608 JF 1C 104Z-T-A
C232	4030008630	S.CERAMIC C1608 JF 1C 104Z-T-A
C233	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C234	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C235	4030009560	S.CERAMIC C1608 CH 1H R75B-T-A
C237	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C238	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C239	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C240	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C241	4550006200	S.TANTALUM ECST0JY106R
C242	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C243	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C244	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C245	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C246	4030008900	S.CERAMIC C1608 JB 1C 333K-T-A
C248	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C249	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C250	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C251	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C252	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C253	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C254	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C257	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C258	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C259	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C260	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C261	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C262	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C263	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C264	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C265	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C266	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C267	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C268	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C269	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C270	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C271	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C272	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C273	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C274	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C275	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C276	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C277	4030009540	S.CERAMIC C1608 CH 1H R5B-T-A
C278	4030007020	S.CERAMIC C1608 CH 1H 120J-T-A
		(L, H)
C280	4030009650	S.CERAMIC C1608 CH 1H 100D-T-A
C281	4030006860	S.CERAMIC C1608 CH 1H 240J-T-A
C282	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C283	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C284	4030008650	S.CERAMIC C1608 JB 1H 332K-T-A
		(L, H)
		(L, H)
C286	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C287	4030007030	S.CERAMIC C1608 JB 1H 150J-T-A
		(L, H)
		(L, H)
C288	4030006860	S.CERAMIC C1608 CH 1H 390J-T-A
C289	4030007090	S.CERAMIC C1608 JB 1H 102K-T-A
C290	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C291	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C292	4030011600	S.CERAMIC C1608 JB 1C 104KT-N

[L]: L-band, [H]: H-band, [N]: N-type, [M]: M-type, [W]: W-type
 ©: ETS/CEPT version, [U]: EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J2	6450001680	CONNECTOR	HSJ1122-010010
J3	6450001690	CONNECTOR	HSJ1456-01-220
J4	6450000870	CONNECTOR	HEC2711-01-020
J5	6510018430	S.CONNECTOR	AXN330C038P
J6	6510007080	CONNECTOR	PI28A-02M
J7	6910010850	CONNECTOR	IMSA-9230B-1-05Z080-T
DS1	5030001460	LCD	LM-1462B
DS2	5010000160	S.LED	LNJ310M6URA
DS3	5010000160	S.LED	LNJ310M6URA
DS4	5040002190	S.LED	LNJ808R8ERA
MC1	7700002160	MICROPHONE	KUC3523-040245
S1	2230000900	S.SWITCH	JPM1990-2013R
SP1	2510000960	SPEAKER	K036NA500-26
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W7	7030003860	S.JUMPER	ERJ3GE JPW V
W8	7030003860	S.JUMPER	ERJ3GE JPW V
W10	7030003860	S.JUMPER	ERJ3GE JPW V
			[2-BANK] [16 ch]
WS1	8600035801	M.OTHER	FX1922 P01MA-1
EP1	0910048456	PCB	B 4929F
EP2	8930042590	LCD CONTACT	SRCN-1922-SP-N-W

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210002950	VARIABLE	RV-312 (RK0971110)
EP1	0910048462	PCB	B 4930B

S.=Surface mount

6-2 IC-F4/F4S

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC2	1110003490	S.IC	TA31136FN (D,EL)
IC3	1110003780	S.IC	NJM2902V-TE1
IC4	1130008090	S.IC	BU4066BCFV-E1
IC5	1110001810	S.IC	TA7368F (TP1)
IC6	1180001080	S.IC	S-81250PG-PD-T1
IC7	1140005620	S.IC	X25080SI-2.7T6 [16 ch]
	1130008670	S.IC	25LC160T-I/SN [2-BANK]
IC8	1140006460	S.IC	HD6433875A40H [16 ch]
	1140008380	S.IC	HD6433875B26H [2-BANK]
IC10	1110003690	S.IC	M62354GP 75EC
IC11	1110003500	S.IC	S-80742SL-A6-T1
Q1	1560000950	S.FET	2SK2595AXB
Q2	1560000960	S.FET	2SK2596BXTL
Q3	1530002620	S.TRANSISTOR	2SC3585 R44-T2B
Q4	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q5	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q6	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q7	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q8	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q9	1590002160	S.TRANSISTOR	XP6401-(TX)
Q11	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q12	1580000720	S.FET	3SK239AXRTL
Q13	1580000680	S.FET	3SK241-R(TX)
Q15	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q16	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q17	1590002530	S.TRANSISTOR	UN911H (TX)
Q18	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q19	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q20	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q21	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q22	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q23	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q25	1530000160	S.TRANSISTOR	2SC2712-Y (TE85RTEM)
Q26	1590000430	S.TRANSISTOR	DTC144EUA T106
Q27	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q28	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q29	1590001770	S.TRANSISTOR	XP1213 (TX)
Q31	1590000660	S.TRANSISTOR	DTC144TU T107
Q33	1590001650	S.TRANSISTOR	XP4601 (TX)
Q34	1560000540	S.FET	2SK880-Y (TE85R)
Q35	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q36	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q37	1590000720	S.TRANSISTOR	DTA144EUA T106
Q38	1590000430	S.TRANSISTOR	DTC144EUA T106
Q400	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q401	1590001400	S.TRANSISTOR	XP1214 (TX)
Q402	1590000430	S.TRANSISTOR	DTC144EUA T106
Q403	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q404	1530002850	S.TRANSISTOR	2SC4116-BL (TE85R)
Q405	1590000430	S.TRANSISTOR	DTC144EUA T106
D1	1790000620	S.DIODE	MA77 (TX)
D2	1790000490	S.DIODE	HSM88AS-TR
D3	1790000620	S.DIODE	MA77 (TX)
D4	1790000620	S.DIODE	MA77 (TX)
D5	1720000370	S.VARICAP	HVU350TRF
D7	1720000670	S.VARICAP	HVU17TRF
D8	1790000620	S.DIODE	MA77 (TX)
D10	1720000370	S.VARICAP	HVU350TRF
D11	1720000370	S.VARICAP	HVU350TRF
D12	1720000370	S.VARICAP	HVU350TRF
D15	1790001280	S.DIODE	MA111 (TX)
D16	1790001200	S.DIODE	MA6S121 (TX)
D17	1790001200	S.DIODE	MA6S121 (TX)
D24	1750000130	S.DIODE	DA204U T107
D25	1790000670	S.DIODE	SB07-03C-TB
D26	1160000060	S.DIODE	DAN202U T107
D27	1750000130	S.DIODE	DA204U T107
D33	1790001280	S.DIODE	MA111 (TX)
D400	1790001210	S.DIODE	1SS375-TL
D401	1720000370	S.VARICAP	HVU350TRF
D402	1790001210	S.DIODE	1SS375-TL
D403	1720000370	S.VARICAP	HVU350TRF
D404	1720000520	S.VARICAP	1T365-01-T8A
D405	1720000360	S.DIODE	HSU88TRF

F4 only

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D406	1790000620	S.DIODE	MA77 (TX)
F11	2010002100	XTAL	FL-267 (46.35 MHz) (N)
	2010002120	XTAL	FL-271 (46.35 MHz) (W)
F12	2020001410	CERAMIC	CFWM450G (N)
	2020001270	CERAMIC	CFWM450E (W)
X1	6050009991	XTAL	CR-576A (15.3 MHz)
X2	6050008840	S.XTAL	CR-463 (6.8 MHz)
X3	6070000210	S.DISCRIMINATOR	CDBCA450CX24
L1	6200005780	S.COIL	33CS-Y655LY-03K=P3 [L], [ML], [MH]
	6200005800	S.COIL	33CS-Y655LY-02M=P3 [H1], [H2]
L2	6200005770	S.COIL	33CS-Y655LY-04K=P3 [L], [ML]
	6200005780	S.COIL	33CS-Y655LY-03K=P3 [MH]
	6200005800	S.COIL	33CS-Y655LY-02M=P3 [H1], [H2]
L3	6200005770	S.COIL	33CS-Y655LY-04K=P3 [L], [ML]
	6200005780	S.COIL	33CS-Y655LY-03K=P3 [MH]
	6200005800	S.COIL	33CS-Y655LY-02M=P3 [H1], [H2]
L5	6110003230	S.COIL	LA-515
L6	6200006780	S.COIL	ELJRE 1N8Z-F [L]
	6200006770	S.COIL	ELJRE 1N5Z-F other
L7	6200005680	S.COIL	ELJRE 15NG-F [L]
	6200005670	S.COIL	ELJRE 12NG-F other
L8	6200005400	S.COIL	LL1608-F27NJ [L], [ML], [MH]
	6200005380	S.COIL	LL1608-F18NJ [H1], [H2]
L9	6200005400	S.COIL	LL1608-F27NJ
L11	6200003690	S.COIL	MC152-E558ANA-100051=P3 [L], [ML]
	6200004110	S.COIL	MC152-E558ANA-100050 [MH], [H1], [H2]
L12	6200003550	S.COIL	MLF1608A 4R7K-T
L13	6200003960	S.COIL	MLF1608A 1R0K-T
L14	6200002450	S.COIL	LL2012-F15NK
L15	6200002100	S.COIL	LQN 1A 17NJ04
L17	6200002320	S.COIL	LQN 1A 8N8J04
L18	6200002320	S.COIL	LQN 1A 8N8J04
L19	6200002320	S.COIL	LQN 1A 8N8J04
L20	6200004480	S.COIL	MLF1608D R82K-T
L21	6200005460	S.COIL	LL1608-F82NJ [L]
	6200005430	S.COIL	LL1608-F47NJ other
L22	6200004660	S.COIL	MLF1608A 1R8K-T
L24	6200004480	S.COIL	MLF1608D R82K-T
L25	6200004480	S.COIL	MLF1608D R82K-T
L26	6200003590	S.COIL	EXCCL3225U1
L27	6200003590	S.COIL	EXCCL3225U1
L400	6200003540	S.COIL	MLF1608D R22K-T [L], [ML]
	6200005430	S.COIL	LL1608-F47NJ [MH], [H1], [H2]
L401	6200002100	S.COIL	LQN 1A 17NJ04
L402	6200002320	S.COIL	LQN 1A 8N8J04
L403	6200004780	S.COIL	MLF1608A 1R5K-T
L404	6200004780	S.COIL	MLF1608A 1R5K-T
L405	6200004110	S.COIL	MC152-E558ANA-100050
L406	6200004780	S.COIL	MLF1608A 1R5K-T
L407	6200003550	S.COIL	MLF1608A 4R7K-T
L409	6200003550	S.COIL	MLF1608A 4R7K-T
L410	6200003960	S.COIL	MLF1608A 1R0K-T
L411	6200005400	S.COIL	LL1608-F27NJ
L412	6200003960	S.COIL	MLF1608A 1R0K-T
L413	6200005400	S.COIL	LL1608-F27NJ [L]
	6200005370	S.COIL	LL1608-F15NJ [ML]
L414	6200003540	S.COIL	MLF1608D R22K-T
L415	6200007220	S.COIL	EXCCL4532U1
L416	6200003540	S.COIL	MLF1608D R22K-T
L417	6200005400	S.COIL	LL1608-F27NJ [MH]
	6200005390	S.COIL	LL1608-F22NJ [H1], [H2]

S.=Surface mount

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (N): N-type, (W): W-type, (E): ETS/CEPT version, (U): EIA/TIA version

F4/S

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R2	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R3	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5	7030000220	S.RESISTOR	MCR10EZJH 47 Ω (470)
R7	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R8	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R9	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R13	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R14	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R15	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R18	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R19	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R20	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R21	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R22	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R23	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R32	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ) [MH]
	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ) other
R33	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R34	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
			[L], [ML], [MH] [H1], [H2]
	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R40	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 kΩ)
R41	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R42	7410000950	S.ARRAY	EXB-V8V 102JV
R44	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R45	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R46	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R48	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R49	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R50	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R51	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R52	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R53	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R54	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R55	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R59	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R62	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R63	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R64	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R65	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R66	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R67	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R68	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R69	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R70	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R72	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R75	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R77	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R82	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ) (N)
	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ) (W)
R83	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R84	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R85	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R86	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ) (N)
	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ) (W)
R87	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ) (N)
	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ) (W)
R88	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R89	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R90	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ) (N)
	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ) (W)
R92	7310004110	S.TRIMMER	EVM-1YSX50 B54 (503)
R93	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R94	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R95	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R96	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R97	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R98	7030003880	S.RESISTOR	ERJ3GEYJ 244 V (240 kΩ) (E)
	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ) (U)
R99	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R100	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R101	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R102	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R103	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R104	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R105	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω) (N)
	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω) (W)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R107	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ) (N-⊖)
	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ) (N-U)
	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ) (W-⊖)
	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ) (W-U)
R108	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ) (N)
	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ) (W)
R109	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R112	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R113	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ) (E)
	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ) (U)
R114	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R115	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R116	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R117	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R118	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R119	7310004090	S.TRIMMER	EVM-1YSX50 B14 (103)
R120	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R121	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R122	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R123	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R125	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R126	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R127	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R128	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R130	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R131	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R132	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R133	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R134	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R135	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R137	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R139	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R141	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R142	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R144	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R146	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R147	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R148	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R149	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R150	7310004110	S.TRIMMER	EVM-1YSX50 B54 (503)
R153	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R154	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R155	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R156	7030000160	S.RESISTOR	MCR10EZJH 15 Ω (150)
R157	7030000160	S.RESISTOR	MCR10EZJH 15 Ω (150)
R158	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R159	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R160	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R161	7030007330	S.RESISTOR	ERJ1WRSJR15U (0.15 Ω)
R162	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R163	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R164	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R165	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R166	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R167	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R168	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R169	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R170	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R171	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R172	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R174	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R176	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R178	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R181	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R182	7510000910	S.THERMISTOR	NTCCF2012 4AH 473KC-T
R183	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R184	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R185	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R186	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R190	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R191	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R192	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R193	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R194	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R195	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R196	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R197	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R199	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R200	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R202	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R203	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (N): N-type, (W): W-type, (E): ETS/CEPT version, (U): EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R204	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R205	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R207	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R208	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R209	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R210	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R214	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R215	7030005520	S.RESISTOR	RR0816R-334-D (330 kΩ)
R216	7030005630	S.RESISTOR	RR0816R-154-D (150 kΩ)
R218	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ) (⊕)
	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ) (⊕)
R219	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ) (⊕)
	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ) (⊕)
R220	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R221	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R224	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ) (⊕)
	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ) (⊕)
	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ) (⊕)
R226	7410000950	S.ARRAY	EXB-V8V 102JV
R227	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R228	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R229	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R230	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R231	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R234	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R235	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 kΩ)
R236	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R237	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R400	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R401	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R402	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R403	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R404	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R405	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R406	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω) (⊕)
	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω) (⊕)
R407	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R408	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R409	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R410	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R411	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ) [L], [ML], [MH], [H1], [H2]
R412	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R413	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R414	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R415	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R416	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R417	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R419	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R420	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω) [L], [ML], [MH], [H1], [H2]
R421	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R422	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R424	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R425	7410000950	S.ARRAY	EXB-V8V 102JV
R426	7410000950	S.ARRAY	EXB-V8V 102JV
R427	7410000770	S.ARRAY	EXB-V4V 102JV (1 kΩ)
R428	7410000950	S.ARRAY	EXB-V8V 102JV
R429	7410000950	S.ARRAY	EXB-V8V 102JV
R430	7410000950	S.ARRAY	EXB-V8V 102JV
R431	7410000770	S.ARRAY	EXB-V4V 102JV (1 kΩ)
R432	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R433	7410000950	S.ARRAY	EXB-V8V 102JV
R434	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R436	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R437	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R438	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R439	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R440	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R441	7510000930	S.THERMISTOR	NTCCF2012 3NH 103KC-T
R442	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R443	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R444	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R445	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R446	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R447	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R448	7030003210	S.RESISTOR	ERJ3GEYJ 120 V (12 Ω)
R449	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R450	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R451	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R452	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R453	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) (⊕)
	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ) (⊕)
R454	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω) (⊕)
	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ) (⊕)
R455	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ) (⊕)
	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ) (⊕)
	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ) (⊕)
	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ) (⊕)
	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ) (⊕)
R456	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R457	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R458	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R459	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R460	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω) [L], [ML]
R461	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R464	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R465	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω) [L], [ML]
	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω) [MH], [H1], [H2]
R466	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R468	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ) (⊕)
	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ) (⊕)
R469	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R470	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω) [MH], [H1], [H2]
R471	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
C3	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [MH]
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A other
C5	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [L]
	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A [ML]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [MH]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [H1], [H2]
C7	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [L]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A other
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C10	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C11	4030004880	S.CERAMIC	C2012 CH 1H 120J-T-A [L]
	4030004850	S.CERAMIC	C2012 CH 1H 080D-T-A [ML]
	4030004810	S.CERAMIC	C2012 CH 1H 040C-T-A [MH], [H1], [H2]
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C15	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A [L]
	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A other
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C18	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C19	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C20	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C21	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C22	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L], [H1], [H2]
	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A [ML], [MH]
C24	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (⊕): N-type, (⊖): W-type, (⊕): ETS/CEPT version, (⊕): EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C25	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C26	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C27	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C28	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C30	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C31	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C32	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C33	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C42	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C47	4550006410	S.TANTALUM	ECST1VY334R [MH]
	4550006360	S.TANTALUM	ECST1VY104R other
C48	4550006450	S.TANTALUM	ECST1EY105R
C51	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C52	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C53	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C54	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C55	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C56	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C57	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C58	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C59	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A
C62	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A
C63	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C64	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C65	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C66	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C67	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C69	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C70	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C71	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C72	4550006320	S.TANTALUM	ECST0JY475R
C73	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C75	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C76	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [L]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A other
C77	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A [L], [ML]
	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A [MH]
C78	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [H1], [H2]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [L], [ML]
	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A [MH], [H1], [H2]
C79	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A
C84	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C85	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [ML], [MH]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [H1], [H2]
C86	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [L]
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [ML]
	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A [MH]
	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A [H1], [H2]
C87	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C88	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C89	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C90	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C91	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [L]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [ML]
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [MH]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [H1], [H2]
C92	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [L]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [ML]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [MH], [H1], [H2]
C93	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C94	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C95	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C96	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [L]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [ML]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [MH], [H1], [H2]
C97	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L]
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [ML]
	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A [MH]
	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A [H1], [H2]
C98	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C99	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C106	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C107	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C108	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C109	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C112	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C113	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C114	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C115	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C116	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C117	4550006700	S.TANTALUM	ECST1AY106R
C118	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C120	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C121	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C122	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C123	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C124	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C125	4030009980	S.CERAMIC	C1608 JB 1H 152K-T-A
C126	4030010770	S.CERAMIC	C1608 JB 1H 392K-T-A
C128	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C129	4550006680	S.TANTALUM	ECST0JY156R
C131	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C132	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C133	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C134	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C135	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C136	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C137	4030008900	S.CERAMIC	C1608 JB 1C 333K-T-A
C139	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C140	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C141	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C142	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C143	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C144	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C145	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C146	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C147	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C148	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C149	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C150	4550006200	S.TANTALUM	ECST0JY106R
C151	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C152	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C153	4550006670	S.TANTALUM	ECST1AD107R
C154	4550006200	S.TANTALUM	ECST0JY106R
C155	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C156	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C157	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C158	4510005320	S.ELECTROLYTIC	ECEV0JA101SP
C159	4550006320	S.TANTALUM	ECST0JY475R
C160	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C161	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C162	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C163	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C164	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C165	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C166	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C167	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C168	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (N): N-type, (W): W-type, (E): ETS/CEPT version, (U): EIA/TIA version

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C169	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C170	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C171	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C172	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C173	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C174	4510005430	S.ELECTROLYTIC	ECEV0JA220SR
C175	4510005430	S.ELECTROLYTIC	ECEV0JA220SR
C176	4550006370	S.TANTALUM	ECST0JX226R
C177	4510005430	S.ELECTROLYTIC	ECEV0JA220SR
C179	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C180	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C181	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C182	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C183	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C184	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C185	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C186	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C187	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C189	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C190	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C192	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C193	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C194	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C195	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C196	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C197	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C199	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C200	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C201	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C202	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C204	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C205	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C206	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A
C207	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C208	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C209	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C210	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C211	4550006320	S.TANTALUM	ECST0JY475R
C212	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C213	4550006320	S.TANTALUM	ECST0JY475R
C214	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C215	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C216	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C217	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C218	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C221	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C222	4030008770	S.CERAMIC	C1608 JB 1H 562K-T-A
C223	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C224	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C225	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C226	4030009630	S.CERAMIC	C1608 JB 1H 822K-T-A
C227	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C228	4030009490	S.CERAMIC	C1608 JB 1H 821K-T-A
C229	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C230	4550006140	S.TANTALUM	ECST1EY474R
C231	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C232	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C233	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C234	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C237	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C238	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C239	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C240	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C241	4550006200	S.TANTALUM	ECST0JY106R
C242	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C243	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C244	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C245	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C247	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C248	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C249	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C250	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C251	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C252	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C253	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C254	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C255	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C256	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C257	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C400	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C401	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C402	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C403	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C404	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C405	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [ML]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [MH]
	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A [H1], [H2]
C406	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L]
	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A [ML]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [MH], [H1], [H2]
C407	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C408	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C410	4030011530	S.CERAMIC	C1608 CH 1H 110J-T-A [L]
	4030016830	S.CERAMIC	GRM39 CH 070B 50PT [ML]
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A [MH]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [H1], [H2]
C411	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A [L]
	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A [ML]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [MH]
	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A [H1], [H2]
C412	4030008200	S.CERAMIC	C1608 UJ 1H 050C-T-A [L], [ML]
	4030008220	S.CERAMIC	C1608 UJ 1H 070D-T-A [MH], [H1], [H2]
C413	4030016830	S.CERAMIC	GRM39 CH 070B 50PT
C414	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C415	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C416	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C417	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C418	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A [L]
	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [ML]
	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A [MH], [H1], [H2]
C419	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A [L]
	4030009560	S.CERAMIC	C1608 CH 1H R75B-T-A other
C421	4030008190	S.CERAMIC	C1608 UJ 1H 040C-T-A [L]
	4030008210	S.CERAMIC	C1608 UJ 1H 060D-T-A [ML], [MH]
	4030008180	S.CERAMIC	C1608 UJ 1H 030C-T-A [H1], [H2]
C422	4030016830	S.CERAMIC	GRM39 CH 070B 50PT [L], [ML]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [MH]
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [H1], [H2]
C423	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A [L], [ML]
	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A [MH]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [H1], [H2]
C424	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C426	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C427	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C428	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C429	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C430	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C431	4550006300	S.TANTALUM	ECST1AY475R
C432	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C433	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C434	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C435	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (N): N-type, (W): W-type, (E): ETS/CEPT version, (U): EIA/TIA version

S.=Surface mount

F4/S

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C436	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C438	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C439	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C440	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C441	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C442	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C443	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C444	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C446	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C447	4510004420	S.ELECTROLYTIC	ECEV0JV330SR
C448	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A [L], [ML]
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A [MH]
	4030011530	S.CERAMIC	C1608 CH 1H 110J-T-A [H1], [H2]
C449	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C450	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C451	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C452	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C454	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C455	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L], [ML], [MH]
	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A [H1], [H2]
C456	4550006200	S.TANTALUM	ECST0JY106R
C457	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A [L], [ML]
C458	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C459	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A [L], [ML]
	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A [MH], [H1], [H2]
C460	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
	4030009970	S.CERAMIC	C1608 JB 1H 182K-T-A
C463	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A [L], [ML], [MH]
C464	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C465	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C466	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C467	4610001590	S.TRIMMER	TZC03R100A110 10P
C468	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C469	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C470	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C471	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C472	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C473	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C474	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C475	4030009350	S.CERAMIC	C1608 CH 1H 3R5B-T-A
	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C476	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C477	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C479	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C481	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C482	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C483	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C486	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C487	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C488	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C489	4030008860	S.CERAMIC	C1608 JB 1C 153K-T-A
C490	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C491	4550006450	S.TANTALUM	ECST1EY105R
C492	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L], [ML], [MH]
C493	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A [L], [ML]
	4030008890	S.CERAMIC	C1608 JB 1C 273K-T-A [MH], [H1], [H2]
C496	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C497	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C498	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C499	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C500	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
J2	6450001680	CONNECTOR	HSJ1122-010010
J3	6450001690	CONNECTOR	HSJ1456-01-220
J4	6450000870	CONNECTOR	HEC2711-01-020
J5	6510018430	S.CONNECTOR	AXN330C038P

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J6	6510007080	CONNECTOR	PI28A-02M
J7	6910010850	CONNECTOR	IMSA-9230B-1-05Z080-T
DS1	5030001460	LCD	LM-1462B
DS2	5010000160	S.LED	LNJ310M6URA
DS3	5010000160	S.LED	LNJ310M6URA
DS4	5040002190	S.LED	LNJ808R8ERA
MC1	7700002160	MICROPHONE	KUC3523-040245
S1	2230000990	S.SWITCH	EVQ-PJ705K
SP1	2510000960	SPEAKER	K036NA500-26
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W6	7120000480	S.JUMPER	MJP-0.4-T
W7	7030003860	S.JUMPER	ERJ3GE JPW V
W8	7030003860	S.JUMPER	ERJ3GE JPW V
W12	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8600035811	M.OTHER	FX1923 P01MA-1
EP1	0910048568	PCB	B 4929H
EP2	8930042590	LCD CONTACT	SRCN-1922-SP-N-W

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210002950	VARIABLE	RV-312 (RK0971110)
EP1	0910048852	PCB	B 4968B

[L]: L-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band
 (N): N-type, (W): W-type, (E): ETS/CEPT version, (U): EIA/TIA version

S.=Surface mount

SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

7-1 CABINET PARTS

[CHASSIS PARTS] for IC-F3/S

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8010016822	1922 chassis-2	1
MP2	8210014561	1922 front panel assembly-1 (F3)	1
	8210015151	2065 front panel assembly-1 (F3S)	1
MP4	8210014330	1922 contact base	1
MP5	8610010420	Knob N-261	1
MP6	8930042110	1922 10-key (F3) 1	1
	8930043970	2065 7-key (F3S) 1	1
MP7	8930042070	1922 MIC cap	1
MP9	8930042030	1922 main seal	1
MP10	8110006050	1922 OPT cover	1
MP11	8930042050	1922 DC cap	1
MP12	8930042090	1922 plus terminal	1
MP13	8930042080	1922 minus terminal	1
MP14	8950004671	ANT connector-101A	1
MP17	8310040690	1922 window plate (D)	1
MP19	8930042720	1922 rear sheet (A) ⊕-GEN (F3)	1
	8930042360	1922 rear sheet ⊕-L-W (F3)	1
	8930042760	1922 rear sheet (E) ⊕-H-W 16 ch (F3)	1
	8930043320	1922 rear sheet (G) ⊕-L-N (F3)	1
	8930043330	1922 rear sheet (H) ⊕-H-N (F3)	1
	8930045660	1922 rear sheet (AC) ⊕-H-W 2 BANK (F3)	1
	8930044750	1922 rear sheet (U) ⊕-EUR (F3)	1
	8930044350	1922 rear sheet (K) ⊕-GEN (F3S)	1
	8930044360	1922 rear sheet (L) ⊕-L-W (F3S)	1
	8930044370	1922 rear sheet (M) ⊕-H-W (F3S)	1
	8930044380	1922 rear sheet (N) ⊕-L-N (F3S)	1
	8930047450	1922 rear sheet (O) ⊕-H-N (F3S)	1
	8930045670	1922 rear sheet (AD) ⊕-EUR (F3S)	1
MP21	8930042350	1922 MIC sheet	1
MP22	8930042560	1922 OPT sheet	1
MP24	8830001250	Nut	1
MP25	8830001010	Hex nut (A)	1
MP26	8810000100	Screw PH M2 × 4 ZK	2
MP27	8810009510	Screw PH B0 2 × 4 NI-ZU (BT)	6
MP28	8810009510	Screw PH B0 2 × 4 NI-ZU (BT)	1
MP29	8810009510	Screw PH B0 2 × 4 NI-ZU (BT)	2
MP30	8810009560	Screw PH B0 2 × 6 ZK (BT)	2
MP31	8810009560	Screw PH B0 2 × 6 ZK (BT)	2
MP34	8930043210	1922 A-rear sheet	1
MP35	8930043760	1923 MIC seal	1
MP36	8930043860	Sponge (FH)	1
MP37	8860001060	1989 antenna rug plate	1
MP38	8510010870	1922 shield cover ⊕ (F3S)	1
MP39	8930043610	Isolating sheet (EZ)	1

[CHASSIS PARTS] for IC-F4/S

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8010016822	1922 Chassis-2	1
MP2	8210014731	1922 Front panel (B) assembly-1 (F4)	1
	8210015161	2066 Front panel (A) assembly-1 (F4S)	1
MP4	8210014330	1922 Contact base	1
MP5	8610010420	Knob N-261	1
MP6	8930042110	1922 10-key (F4) 1	1
	8930043970	2065 7-key (F4S) 1	1
MP7	8930042070	1922 MIC cap	1
MP9	8930042030	1922 Main seal	1
MP10	8110006050	1922 OPT cover	1
MP11	8930042050	1922 DC cap	1
MP12	8930042090	1922 Plus terminal	1
MP13	8930042080	1922 Minus terminal	1
MP17	8310040690	1922 Window plate (D)	1
MP19	8930042750	1922 Rear sheet (D) ⊕-GEN (F4)	1
	8930044950	1922 Rear sheet (W) ⊕-[L]-W (F4)	1
	8930044960	1922 Rear sheet (X) ⊕-[ML]-W (F4)	1
	8930046680	1922 Rear sheet (AE) ⊕-[L]-N (F4)	1
	8930046690	1922 Rear sheet (AF) ⊕-[ML]-N (F4)	1
	8930047000	1922 Rear sheet (AK) ⊕-[MH] (F4)	1
	8930047010	1922 Rear sheet (AL) ⊕-[H] (F4)	1
	8930045550	1922 Rear sheet (AA) ⊕-CE (F4)	1
	8930044400	1922 Rear sheet (P) ⊕-GEN (F4S)	1
	8930046700	1922 Rear sheet (AG) ⊕-[L]-N (F4S)	1
	8930046710	1922 Rear sheet (AH) ⊕-[ML]-N (F4S)	1
	8930046810	1922 Rear sheet (AI) ⊕-[L]-W (F4S)	1
	8930048140	1922 Rear sheet (AT) ⊕-[ML]-W (F4S)	1
	8930047020	1922 Rear sheet (AM) ⊕-[MH] (F4S)	1
	8930047030	1922 Rear sheet (AN) ⊕-[H] (F4S)	1
	8930044460	1922 Rear sheet (AB) ⊕-CE (F4S)	1
MP21	8930042350	1922 MIC sheet	1
MP22	8930042560	1922 OPT sheet	1
MP24	8830001250	Nut	1
MP25	8830001010	Hex nut (A)	1
MP26	8810000100	Screw PH M2 × 4 ZK	2
MP27	8810009510	Screw B0 2 × 4 NI-ZU (BT)	6
MP28	8810009510	Screw PH B0 2 × 4 NI-ZU (BT)	1
MP29	8810009510	Screw PH B0 2 × 4 NI-ZU (BT)	2
MP30	8810009560	Screw PH B0 2 × 6 ZK (BT)	2
MP31	8810009560	Screw PH B0 2 × 6 ZK (BT)	2
MP34	8930043210	1922 A-rear sheet	1
MP36	8950004671	ANT connector-101A	1
MP37	8510011260	1923 Shield cover	1
MP38	8930043760	1923 MIC seal	1
MP39	8930043860	Sponge (FH)	1
MP40	8930043610	Isolating sheet (EZ)	1

[MAIN UNIT] for IC-F3/S

REF NO.	ORDER NO.	DESCRIPTION	QTY.
DS1	5030001460	LCD LM-1462B	1
EP2	8930042590	LCD contact SRCN-1922-SP-N-W	1
MP1	8510011111	1922 VCO case-1	1
MP2	8510011101	1922 VCO cover-1	1
MP3	8930042060	1922 LCD holder	1
MP4	8210014380	1922 Reflector	1
MP5	8410002081	1922 PA heatsink-1	1
SP1	2510000960	K036NA500-26A27	1

[MAIN UNIT] for IC-F4/S

REF NO.	ORDER NO.	DESCRIPTION	QTY.
DS1	5030001460	LCD LM-1462B	1
EP2	8930042590	LCD contact SRCN-1922-SP-N-W	1
MP1	8510011111	1922 VCO case-1	1
MP2	8930042060	1922 LCD holder	1
MP3	8210014380	1922 Reflector	1
MP4	8410002081	1922 PA heatsink-1	1
MP6	8510011180	1922 VCO cover	1
MP7	8510011230	1923 VCO shield	1
MP8	8930046590	Sponge (FO) (F4S) only	1
SP1	2510000960	K036NA500-26A27	1

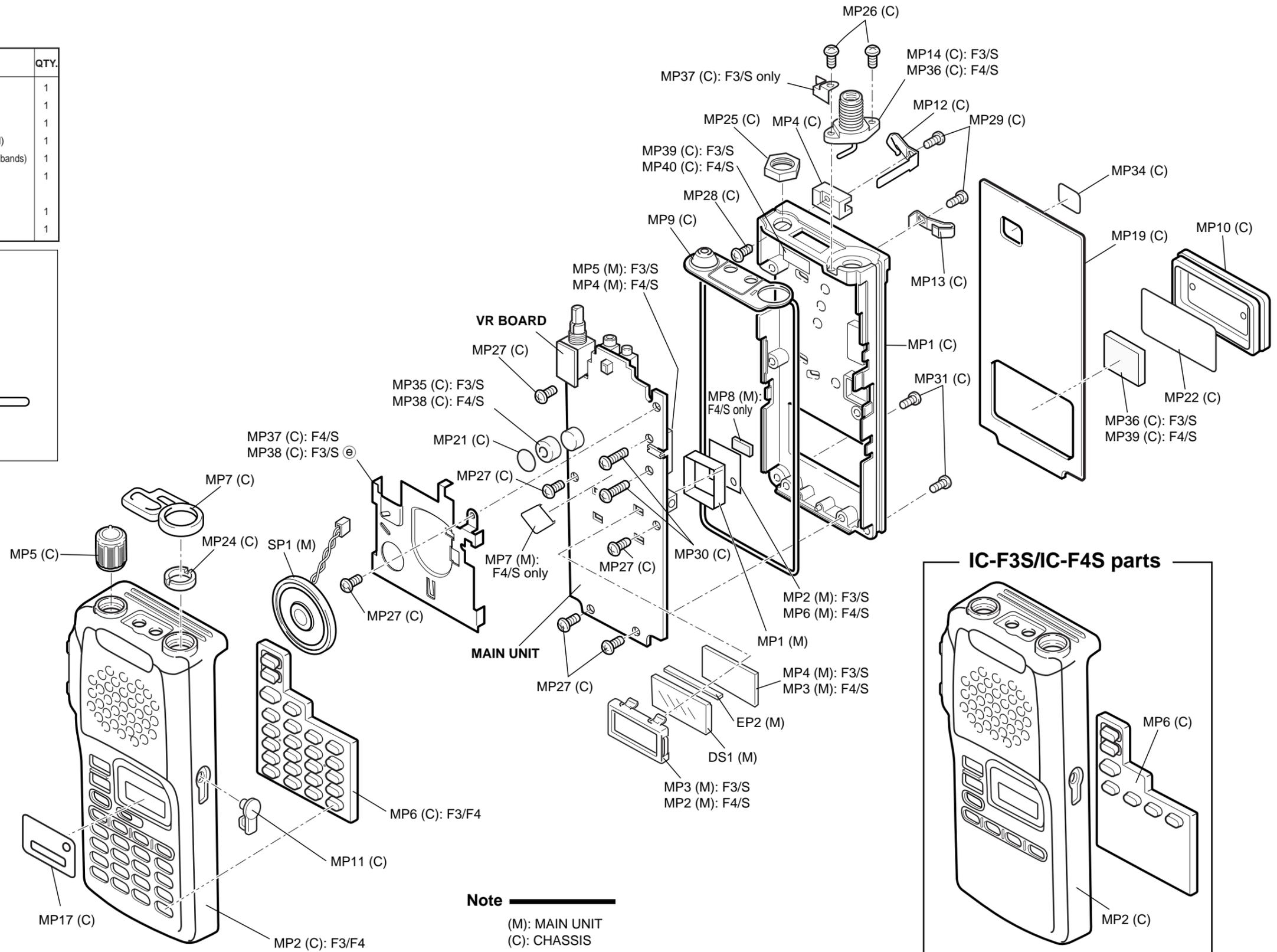
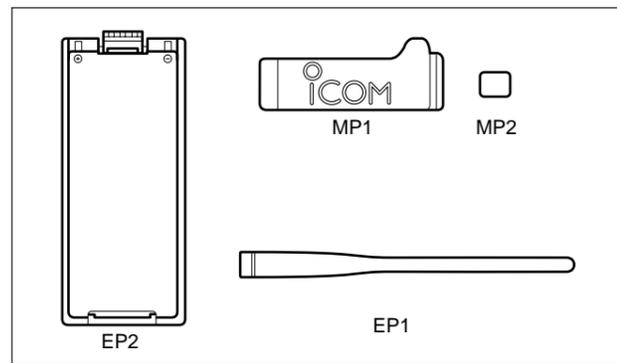
[L], [L]: L-band, [H]: H-band, [ML]: ML-band, [MH]: MH-band, [H1]: H1-band, [H2]: H2-band

CE: CE-type, W: W-type, N: N-type, U: EIA/TIA version, ⊕-GEN, ⊕-EUR: ETS/CEPT version

Screw abbreviations : PH: Pan head A0, B0: Self-tapping NI: Nickel ZK: Black

7-2 ACCESSORIES

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	Optional product	Antenna FA-SC24V-1 (F3/S: L-band)	1
	Optional product	Antenna FA-SC54V-1 (F3/S: H-band)	1
	Optional product	Antenna FA-SC24U-1 (F4/S: L-band)	1
	Optional product	Antenna FA-SC56U-2 (F4/S: ML-band)	1
	Optional product	Antenna FA-SC71U-2 (F4/S: MH, H ₁ and H ₂ bands)	1
EP2	Optional product	Battery BP-196	1
MP1	Optional product	1922 belt clip	1
MP2	8930043210	1922 A-rear sheet	1



SECTION 8 SEMI-CONDUCTOR INFORMATIONS

8-1 TRANSISTORS AND FETs

NAME	SYMBOL	INSIDE VIEW
2SA1362 - GR 2SA1588 - GR	AEG ZG	
2SB1132 - R	BAR	
2SC2712 - Y 2SC2714 - Y 2SC3585 R44 2SC4081 - R 2SC4116 - BL 2SC4215 - O 2SC4226 - R25 2SC5107 - O	LY QY R44 BR LB QO R25 MFO	
2SK2595AXTB	AX	
2SK2596BXTL	BX	
2SK880 - Y	XY	
3SK166 - 2 3SK239XR - TL 3SK241-R	K XR DU	

NAME	SYMBOL	INSIDE VIEW
DTA144EU UN911H	16 6P	
XP1213 XP1214	9L 9H	
XP4601	5C	
XP6401	5O	
XP6501 - AB	5N	

8-2 DIODES

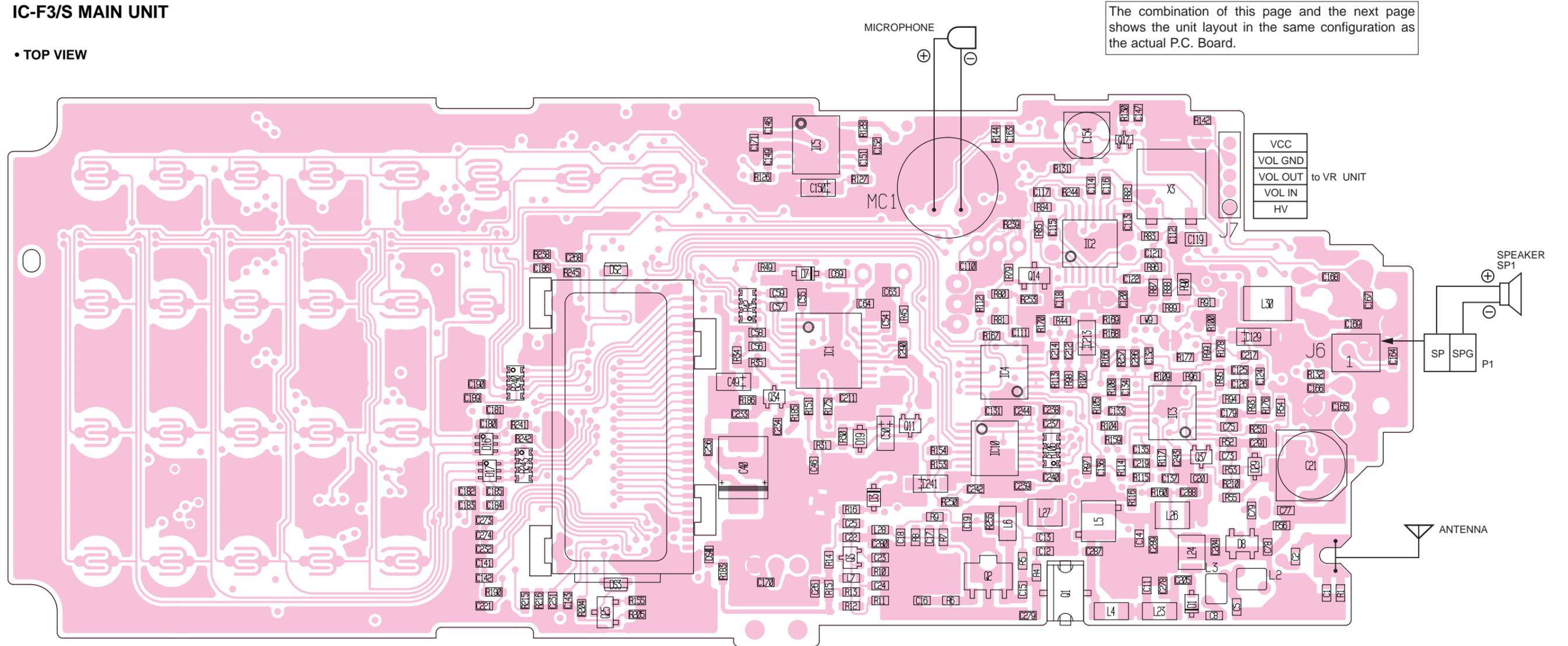
NAME	SYMBOL	INSIDE VIEW
1T365-01	pink line	
1SS375 DA204U HSM88AS	FH K C1	
DAN202U	N	
HSU88TRF HVU17TRF	9 E	
HVU350TRF	4	
MA77	4B	
MA111	1B	

NAME	SYMBOL	INSIDE VIEW
MA6S121	M2D	
MA8030 - H MA8033 - L	3^O 3_3	
MA862	M11	
SB07-03C-TB	J	

SECTION 9 BOARD LAYOUTS

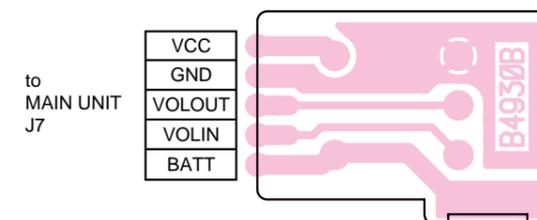
9-1 IC-F3/S MAIN UNIT

• TOP VIEW



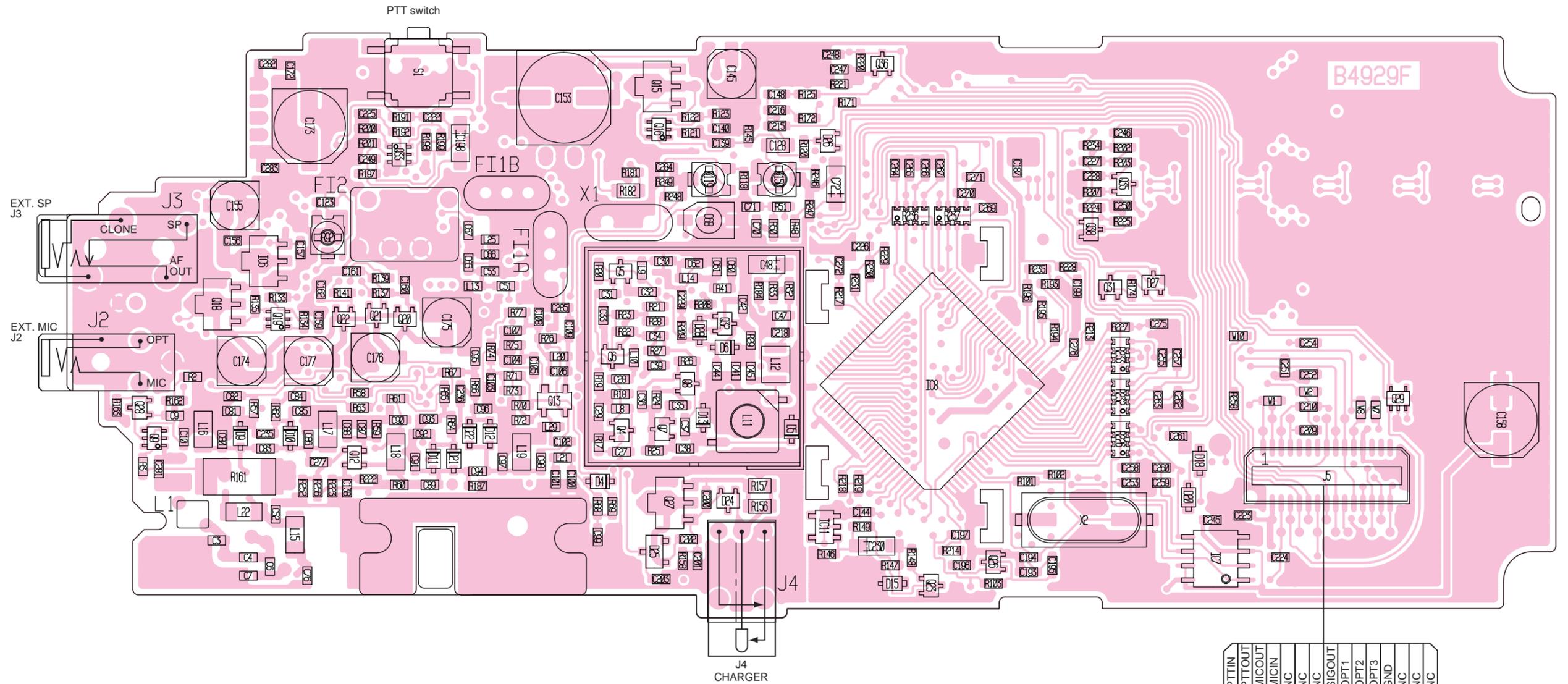
9 - 2 VR BOARD (common)

• TOP VIEW



• BOTTOM VIEW

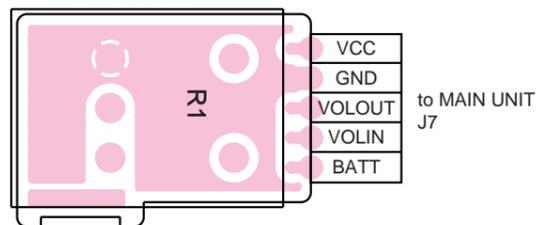
The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.



GND	PTTIN
5 V	PTTOUT
VCC	MICOUT
MICMUTE	MICIN
AFONOP	NC
BEEPOUT	NC
RXMUTE	NC
DISCIN	SIGOUT
AFOUT	OPT1
NC	OPT2
CCS	OPT3
CIRQ	GND
SO	NC
SI	NC
SCK	NC

to OPTIONAL UNIT

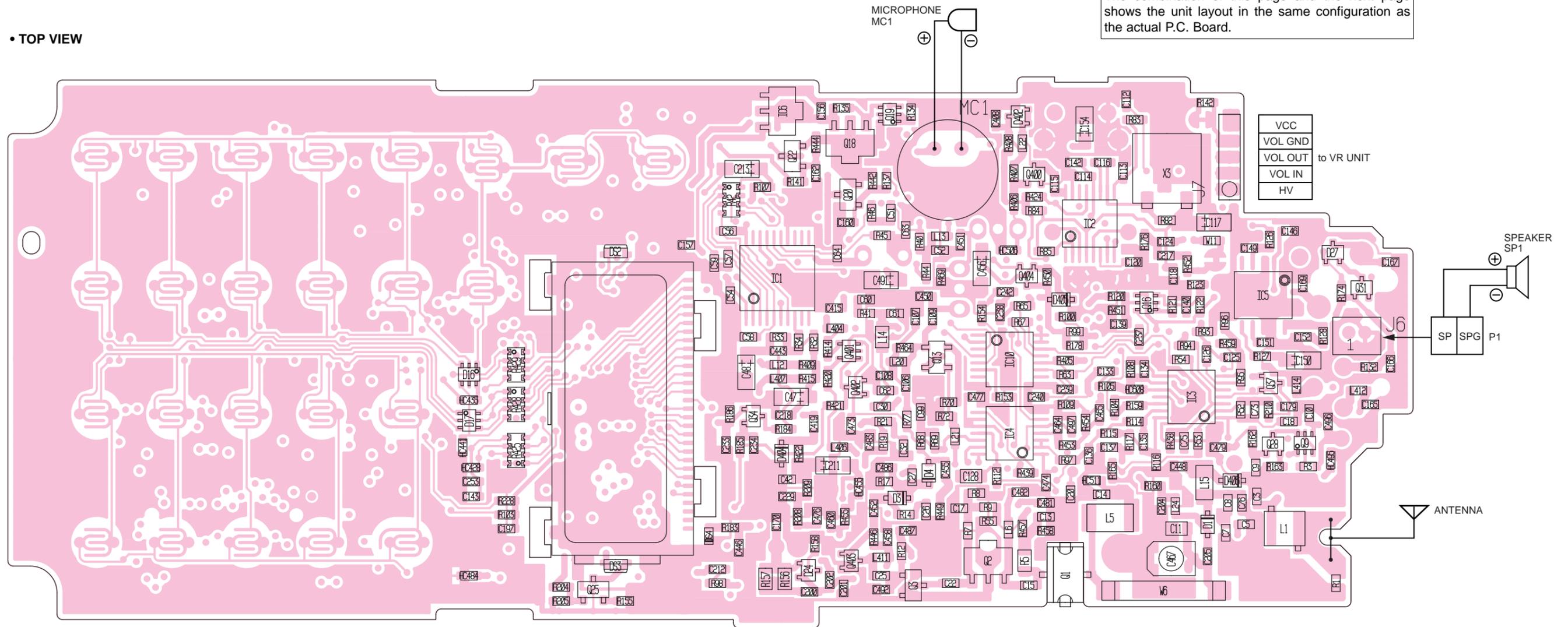
• BOTTOM VIEW



9-3 IC-F4/S MAIN UNIT

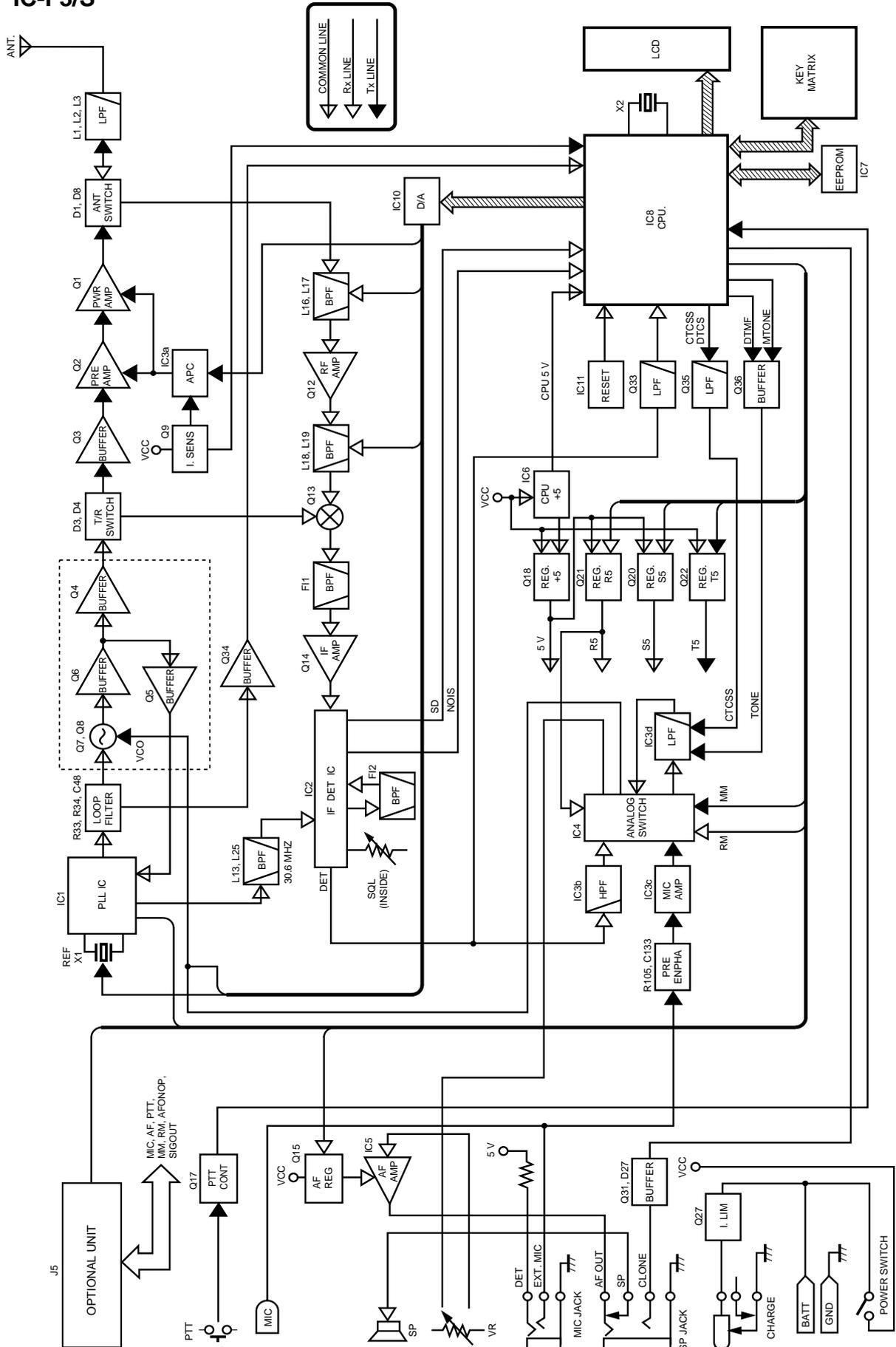
• TOP VIEW

The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.

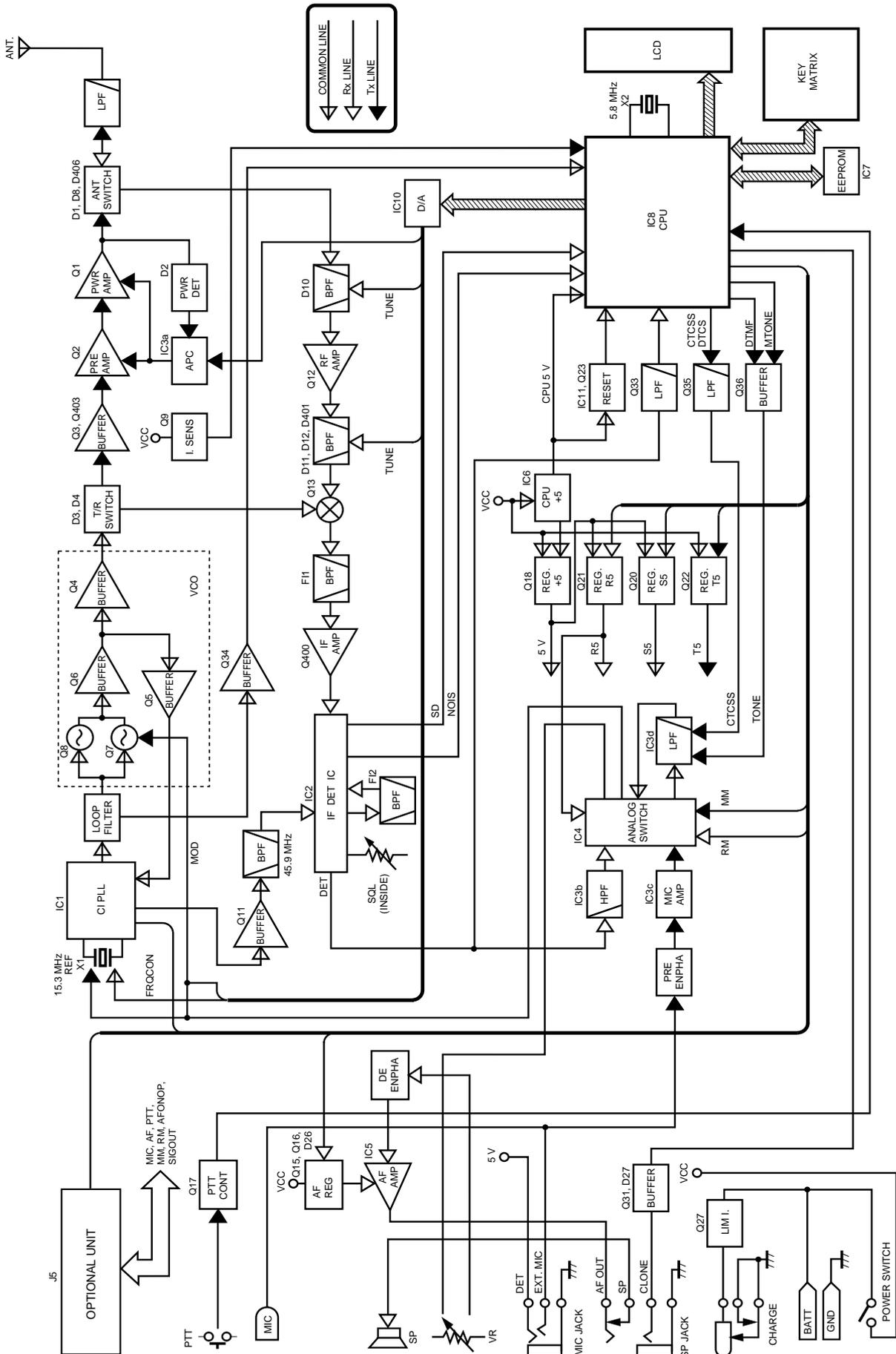


SECTION 10 BLOCK DIAGRAMS

10-1 IC-F3/S

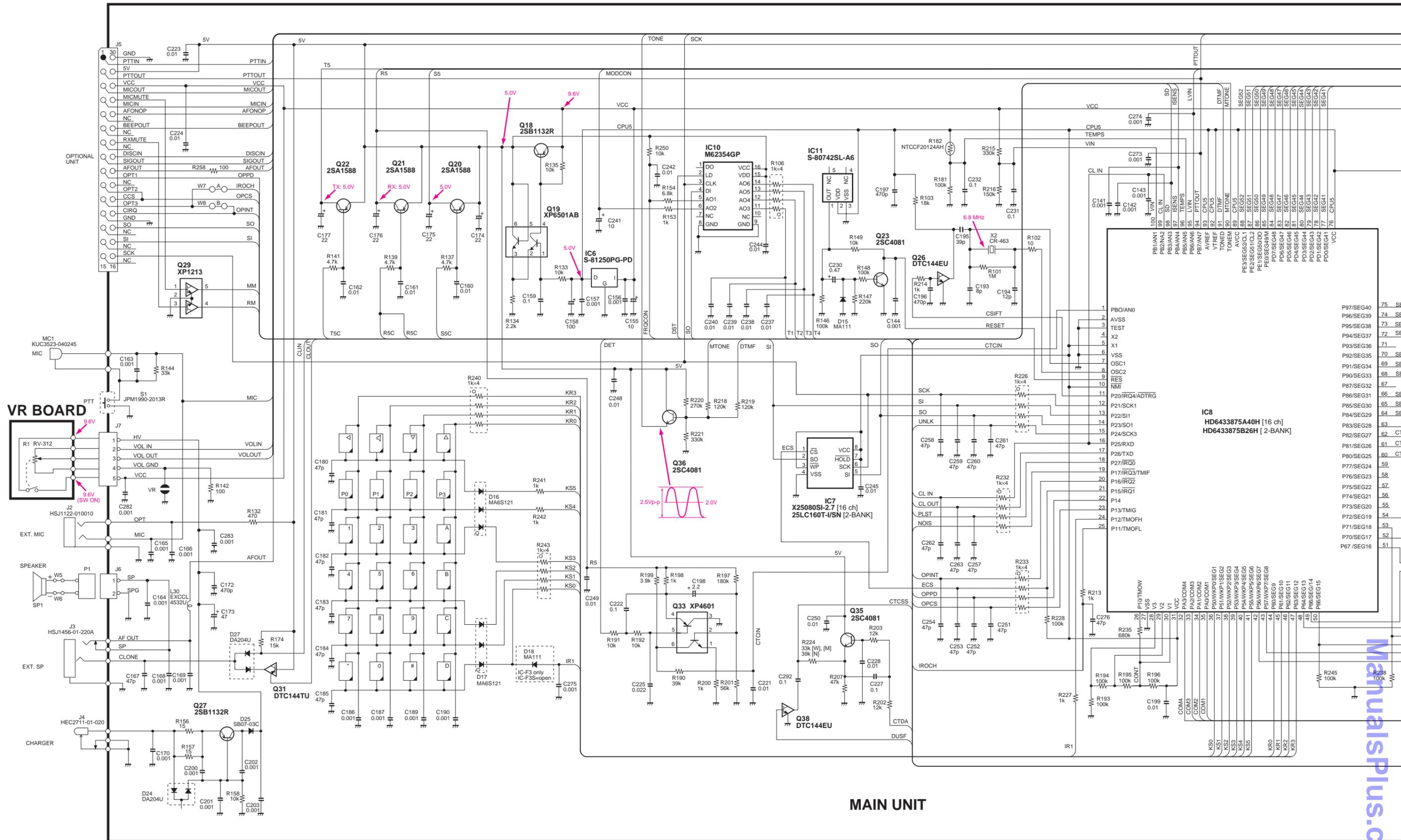


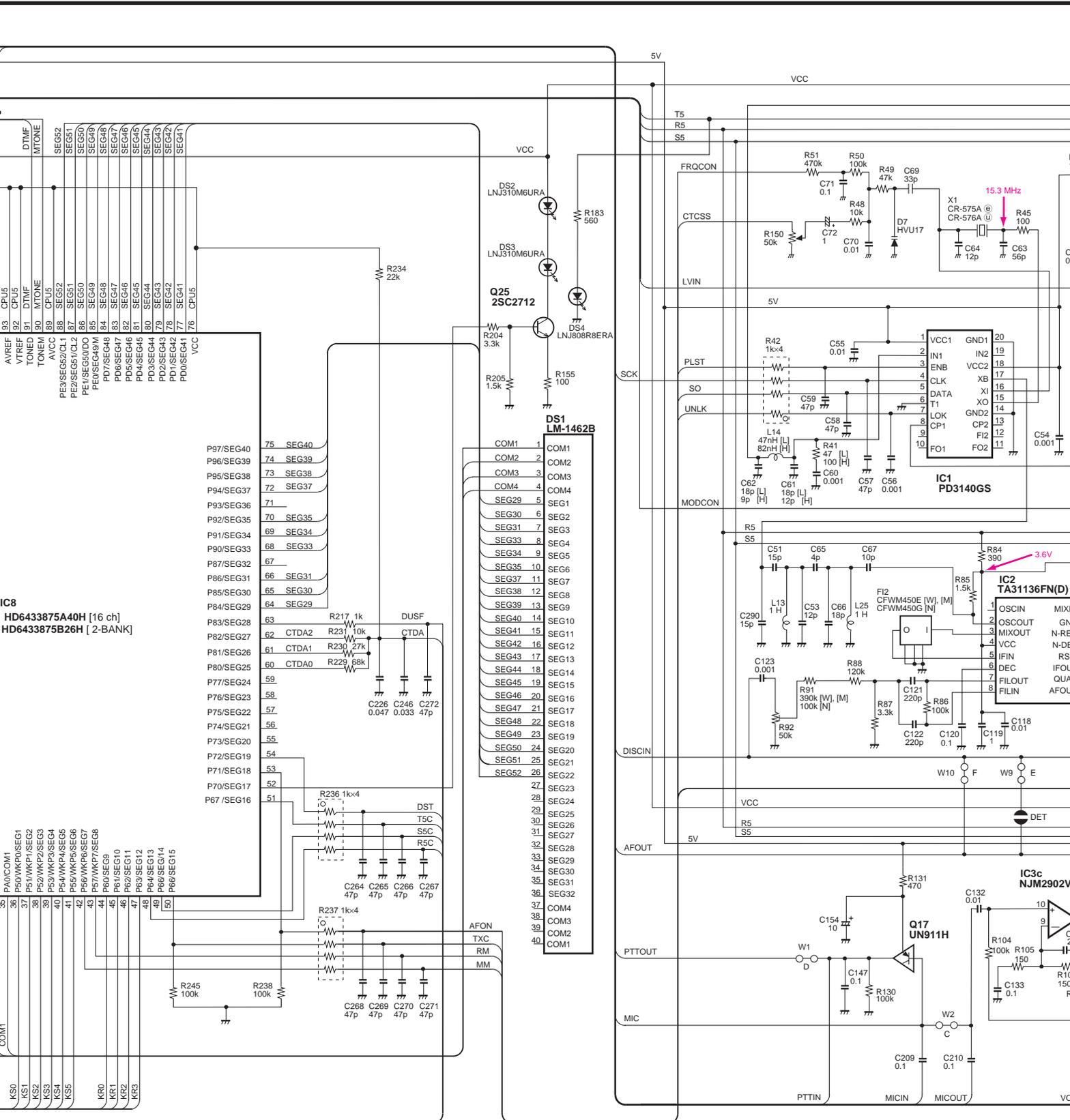
10-2 IC-F4/S



SECTION 11 VOLTAGE DIAGRAM

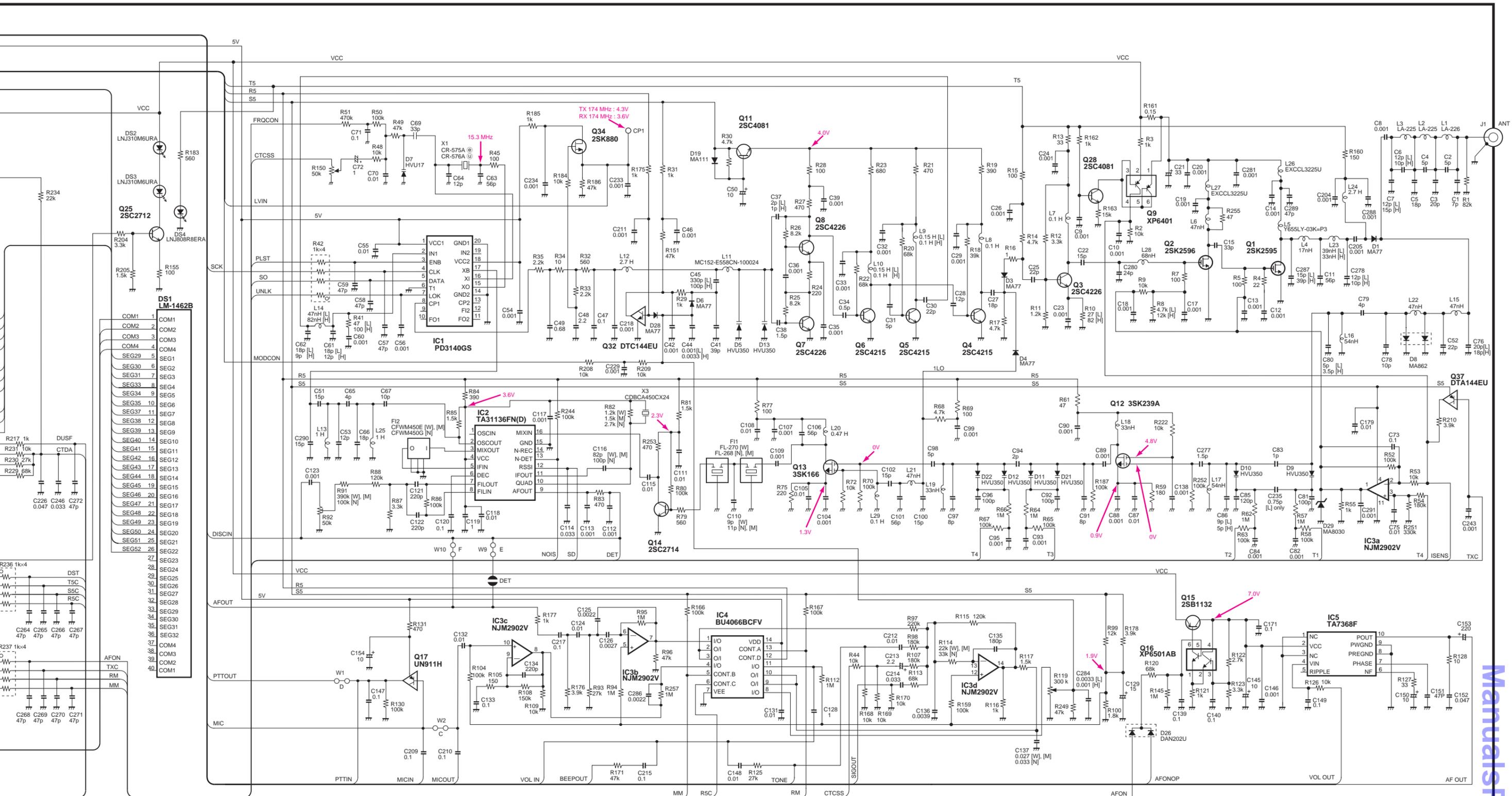
11-1 IC-F3/S





Note

- [L]..... L-band
- [H]..... H-band
- [W]..... W-type
- [M]..... M-type
- [N]..... N-type
- ⓔ..... ETS/CEPT version
- Ⓤ..... EIA/TIA version

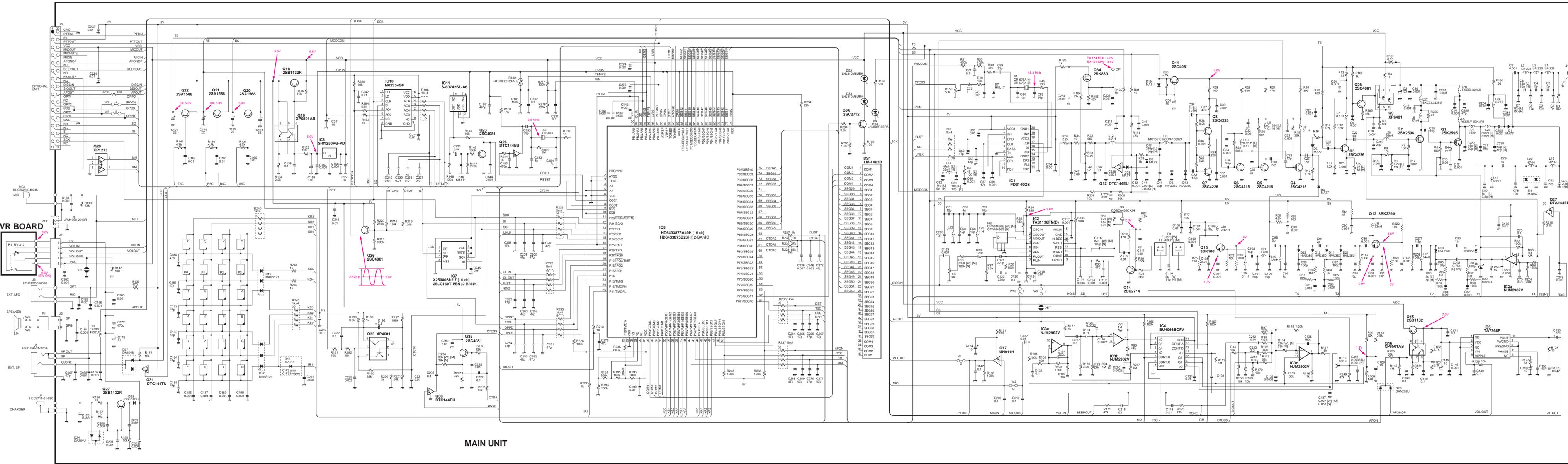


SECTION 11 VOLTAGE DIAGRAM

11-1 IC-F3/S

Note

- [L]..... L-band
- [W]..... W-type
- [H]..... H-band
- [M]..... M-type
- [N]..... N-type
- ⊙..... ETS/CEPT version
- ⊕..... EIA/TIA version

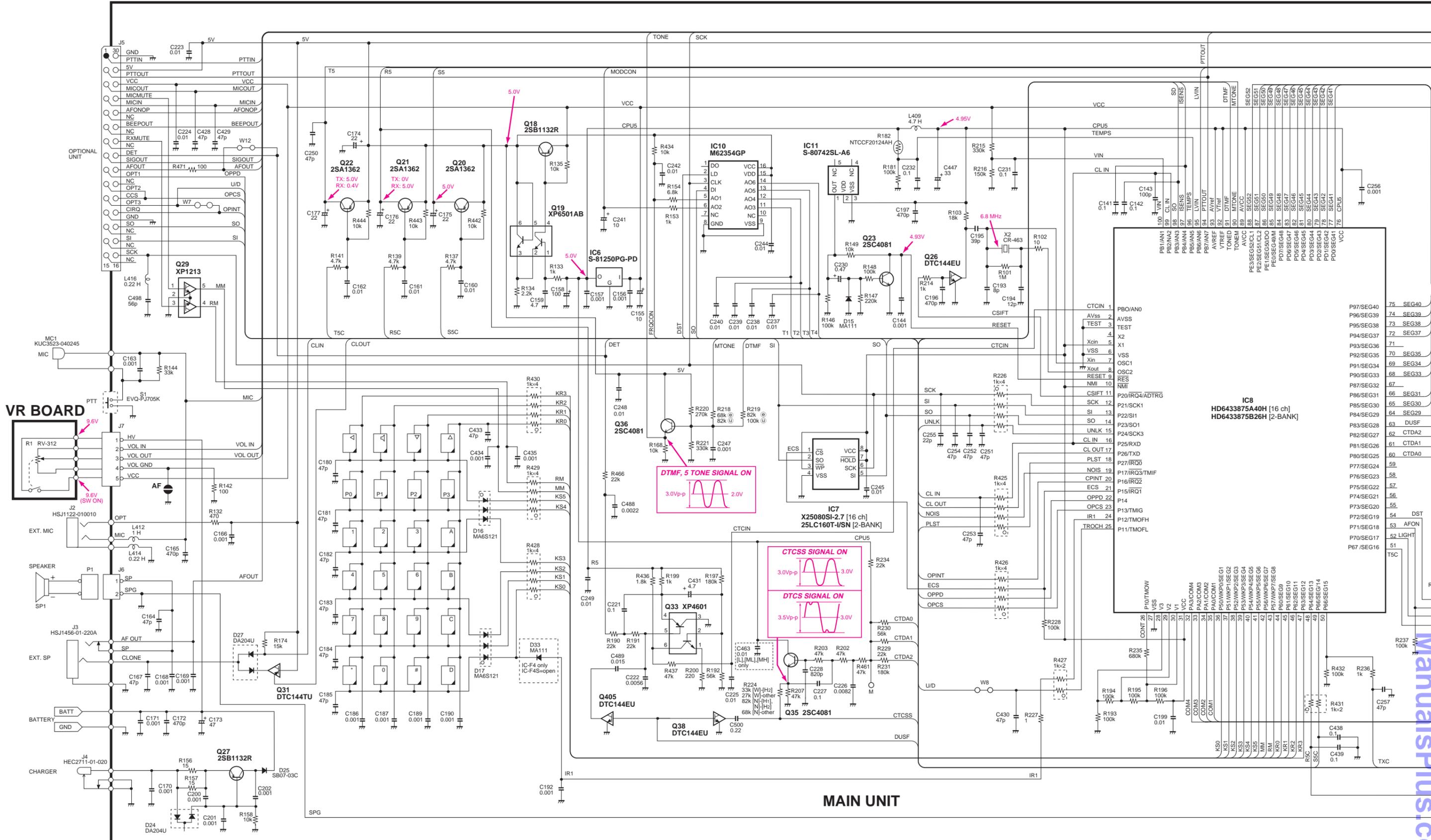


LEFT SIDE

CENTER

RIGHT SIDE

11-2 IC-F4/S

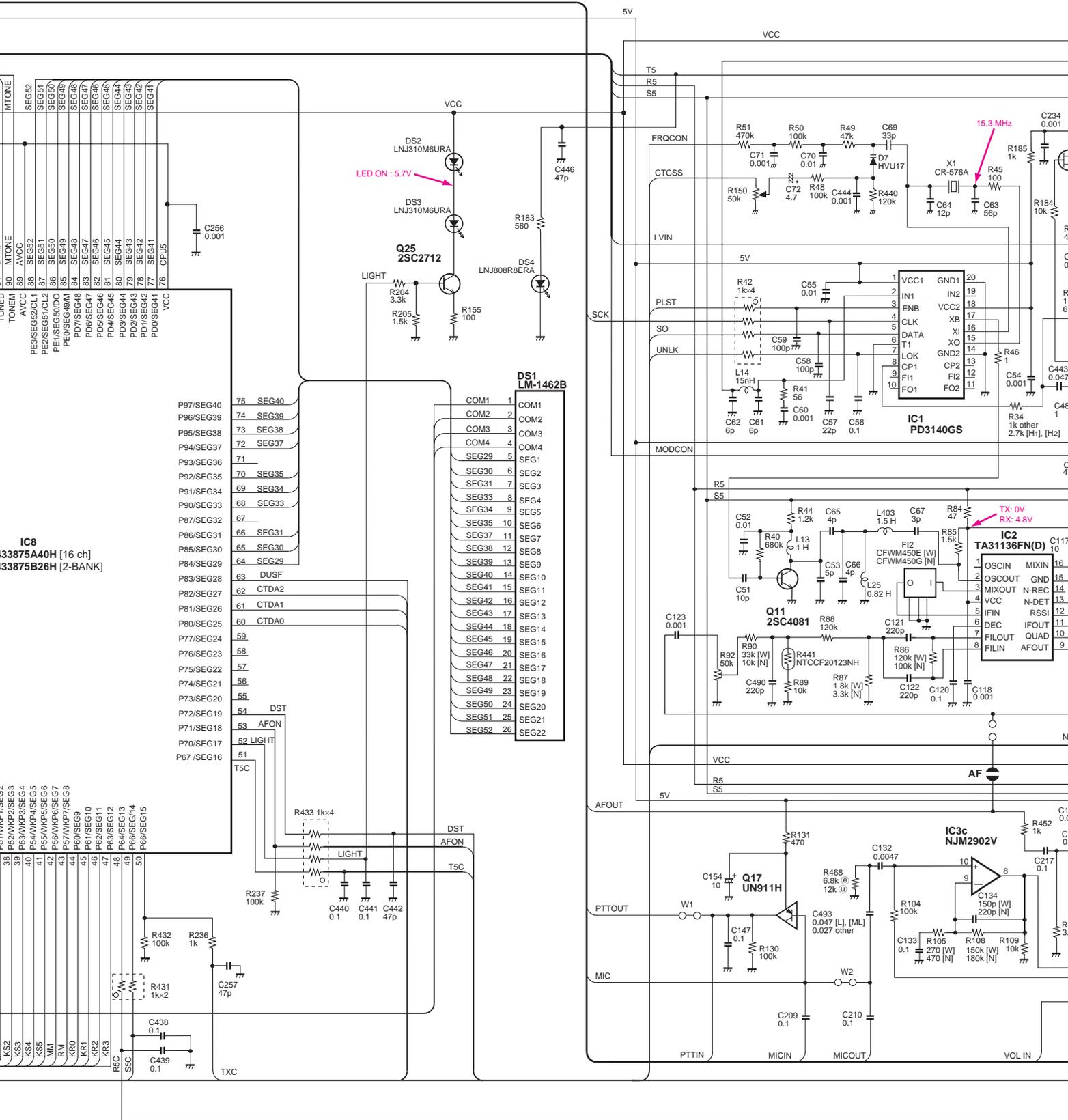


COMPLETE VIEW



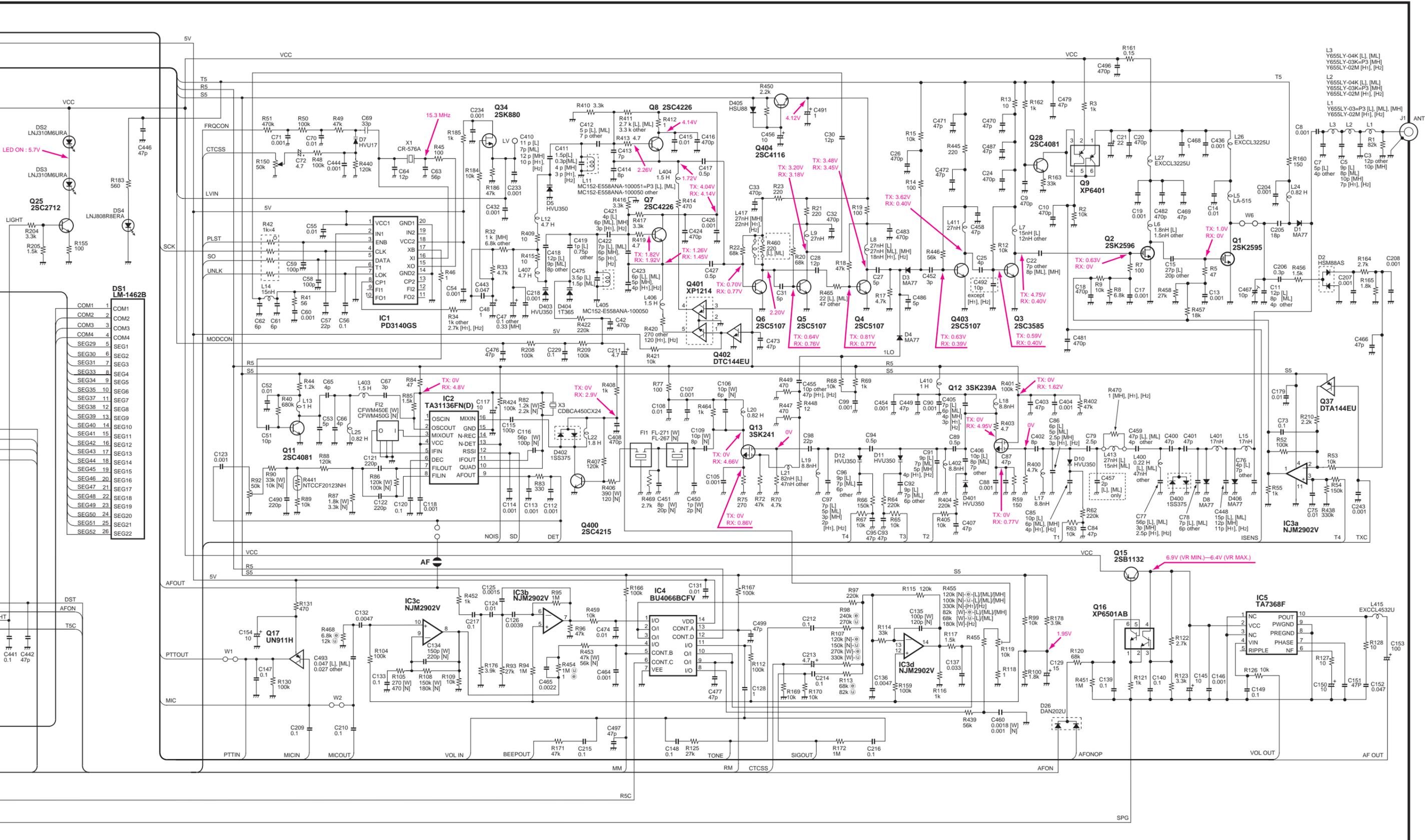
Note

[L] L-band (400 - 430 MHz) [H1] H1
 [ML] ML-band (440 - 470 MHz) [H2] H2
 [MH].....MH-band (470—500 MHz)



Note

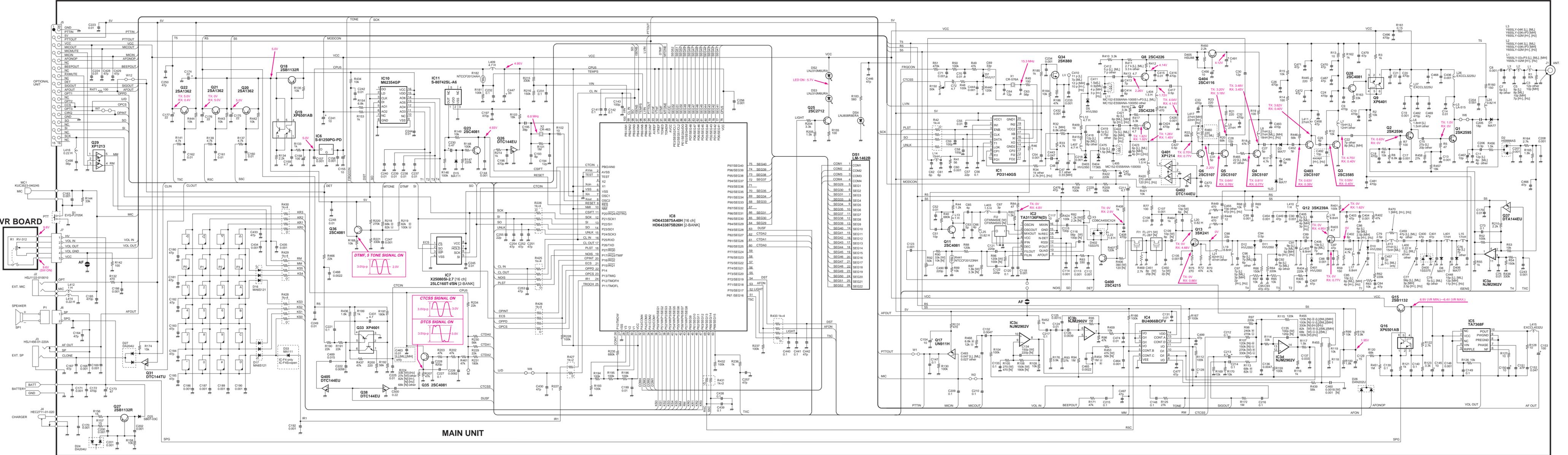
- [L] L-band (400 - 430 MHz)
- [ML] ML-band (440 - 470 MHz)
- [MH].....MH-band (470—500 MHz)
- [H1] H1-band (490—512 MHz)
- [H2] H2-band (490—520 MHz)
- [W]..... W-type
- [N]..... N-type
- ⊙..... ETS/CEPT version
- ⊙..... EIA/TIA version



11-2 IC-F4/S

Note

- [L] L-band (400 - 430 MHz)
- [H1] H1-band (490—512 MHz)
- [W]..... W-type
- ⊙..... ETS/CEPT version
- [ML] ML-band (440 - 470 MHz)
- [H2] H2-band (490—520 MHz)
- [N]..... N-type
- ⊖..... EIA/TIA version
- [MH].....MH-band (470—500 MHz)



LEFT SIDE

CENTER

RIGHT SIDE

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