



# SERVICE MANUAL

UHF MOBILE TRANSCEIVERS

**IC-F2721/D**

**IC-F2710**

**IC-F2821/D**

**IC-F2810**

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## INTRODUCTION

This service manual describes the latest service information for the **IC-F2721/D/F2710/F2821/D/F2810** UHF MOBILE TRANSCEIVER at the time of publication. 6 versions of the **IC-F2721** have been designed. This service manual covers each version.

MODEL	VERSION	10 KEY	TX power
IC-F2721D	USA-02, USA-03, USA-04, USA-05	None	45 W
IC-F2721	USA-06, USA-07		
IC-F2710	EUR-02, EUR-03, GEN-02, GEN-03		
IC-F2821D	USA-02, USA-03, USA-04, USA-05	Yes	45 W
IC-F2821	USA-06, USA-07		
IC-F2810	EUR-02, EUR-03, GEN-02, GEN-03		

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

## DANGER

**NEVER** connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. This will ruin the transceiver.

**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 (100mW) to the antenna connector. This could damage the transceiver's front end.

### IC-F2700 Series



### IC-F2800 Series



## 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>

1130011600 S.IC TA31136FN IC-F2721D MAIN UNIT 5 pieces  
8820001210 Screw 2438 screw IC-F2721 Chassis 12 pieces

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

## REPAIR NOTES

1. Make sure a problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated turning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a signal generator or a sweep generator.
7. **ALWAYS** connect a 40 dB to 50 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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## TABLE OF CONTENTS

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<b>SECTION 1</b>	<b>SPECIFICATIONS</b>	
<b>SECTION 2</b>	<b>INSIDE VIEWS</b>	
<b>SECTION 3</b>	<b>DISASSEMBLY INSTRUCTIONS</b>	
<b>SECTION 4</b>	<b>CIRCUIT DESCRIPTION</b>	
4-1	RECEIVER CIRCUITS .....	4-1
4-2	TRANSMITTER CIRCUITS .....	4-3
4-3	PLL CIRCUITS .....	4-4
4-4	POWER SUPPLY CIRCUITS .....	4-4
4-5	OTHER CIRCUITS .....	4-5
4-6	PORT ALLOCATIONS .....	4-6
<b>SECTION 5</b>	<b>ADJUSTMENT PROCEDURES</b>	
5-1	PREPARATION .....	5-1
5-2	LCD CONTRAST ADJUSTMENT .....	5-4
5-3	SOFT WARE ADJUSTMENT .....	5-5
<b>SECTION 6</b>	<b>PARTS LIST</b>	
<b>SECTION 7</b>	<b>MECHANICAL PARTS AND DISASSEMBLY</b>	
<b>SECTION 8</b>	<b>SEMI-CONDUCTOR INFORMATION</b>	
<b>SECTION 9</b>	<b>BOARD LAYOUTS</b>	
9-1	FRONT-A UNIT (for IC-F2700 Series) .....	9-1
9-2	FRONT-B UNIT (for IC-F2800 Series) .....	9-3
9-3	MAIN UNIT .....	9-5
<b>SECTION 10</b>	<b>BLOCK DIAGRAM</b>	
<b>SECTION 11</b>	<b>VOLTAGE DIAGRAM</b>	
11-1	FRONT-A UNIT (for IC-F2700 Series) .....	11-1
11-2	FRONT-B UNIT (for IC-F2800 Series) .....	11-2
11-3	MAIN UNIT .....	11-3

# SECTION 1 SPECIFICATIONS

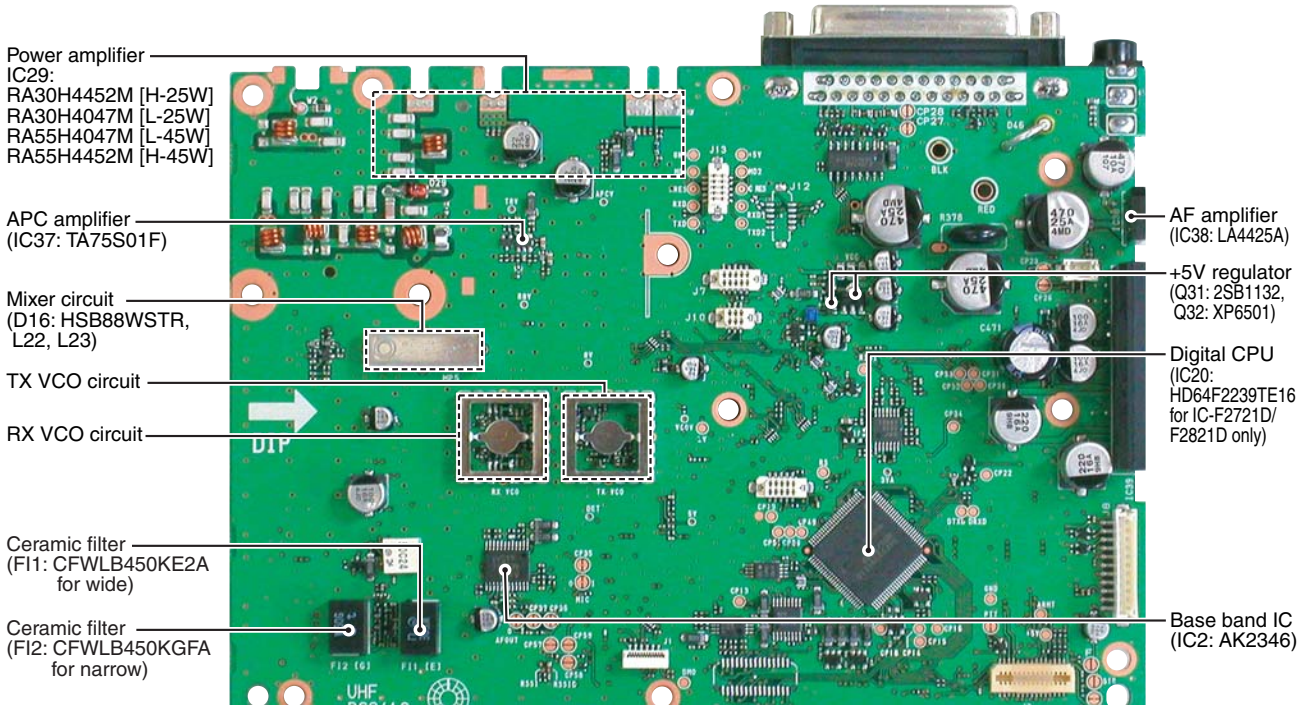
		IC-F2721/D, IC-F2821/D	IC-F2710, IC-F2810		
		USA	GEN	EUR	
GENERAL	Measurement method	EIA-152-C/204D or TIA-603		EN 300 086	
	Frequency coverage	[L] : 400.000–470.000 MHz [H] : 450.000–512.000 MHz	[L] : 400.000–470.000 MHz [H] : 480.000–520.000 MHz		
	Type of emission	8K10F1E/8K10F1D*/ 11K0F3E/16K0F3E *IC-F2721D, IC-F2821D only	8K50F3E/16K0F3E	8K50F3E/14K0F3E/ 16K0F3E	
	Number of conventional channels	Max. 256 channels			
	Power supply voltage (negative ground)	13.6 V DC nominal		13.2 V DC nominal	
	Current drain (approx.)	TX	14.0 A (at 45 W)	7.0 A (at 25 W)	
		RX	Stand-by : 600 mA Max. audio: 1200 mA		
	Frequency error	±2.0 ppm		±1.5 kHz	
	Operating temperature range	–30°C to +60°C (–22°F to +140°F)		–25°C to +55°C	
	Dimensions (proj. not included)	175(W) × 45(H) × 170(D) mm; 6 <sup>7</sup> / <sub>8</sub> (W) × 1 <sup>25</sup> / <sub>32</sub> (H) × 6 <sup>11</sup> / <sub>16</sub> (D) in			
Weight (approx.)	1.5 kg; 3 <sup>5</sup> / <sub>16</sub> lb				
TRANSMITTER	RF output power (Hi/L2/L1)	45 W/25 W/4.5 W	25 W/10 W/2.5 W		
	Modulation system	Variable reactance frequency modulation			
	Maximum permissible deviation	±2.5 kHz [Narrow], ±4.0 kHz [Middle], ±5.0 kHz [Wide]			
	Spurious emissions	75 dB typical	0.25 μW (≤ 1 GHz) 1.0 μW (> 1 GHz)		
	Adjacent channel power	60 dB min. [Narrow], 70 dB min. [Middle]/[Wide]			
	Audio frequency response	+2 dB to –5 dB of 6 dB/octave range from 300 Hz to 2550 Hz [Narrow]/3000Hz [Middle]/[Wide]			
	Audio harmonic distortion	3% typical at 1 kHz, 40% deviation			
	Limiting charact of modulator	70–100% of max. deviation			
	Microphone connector	8-pin modular (600 Ω)			
	RECEIVER	Receive system	Double conversion superheterodyne system		
Intermediate frequencies		1st: 46.35 MHz, 2nd: 450 kHz			
Sensitivity (typical)		0.3 μV at 12 dB SINAD	–4 dBμV (emf) at 20 dB SINAD		
Squelch sensitivity (typical)		0.3 μV	–4 dBμV (emf)		
Adjacent channel selectivity		60 dB min. (75 dB typical) [Narrow], 70 dB min. (80 dB typical) [Middle]/[Wide]			
Spurious response		70 dB min. (80 dB typical)			
Intermodulation		70 dB min. (75 dB typical) [Narrow] 70 dB min. (77 dB typical) [Wide]	65 dB min. (70 dB typical)		
Audio output power		4 W typical at 10% distortion with a 4 Ω load 22 W typical (BTL) at 10% distortion with a 4 Ω load (D-SUB 25 connector)			
External SP connector		2-conductor 3.5 (d) mm (1/8")/4 Ω			

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

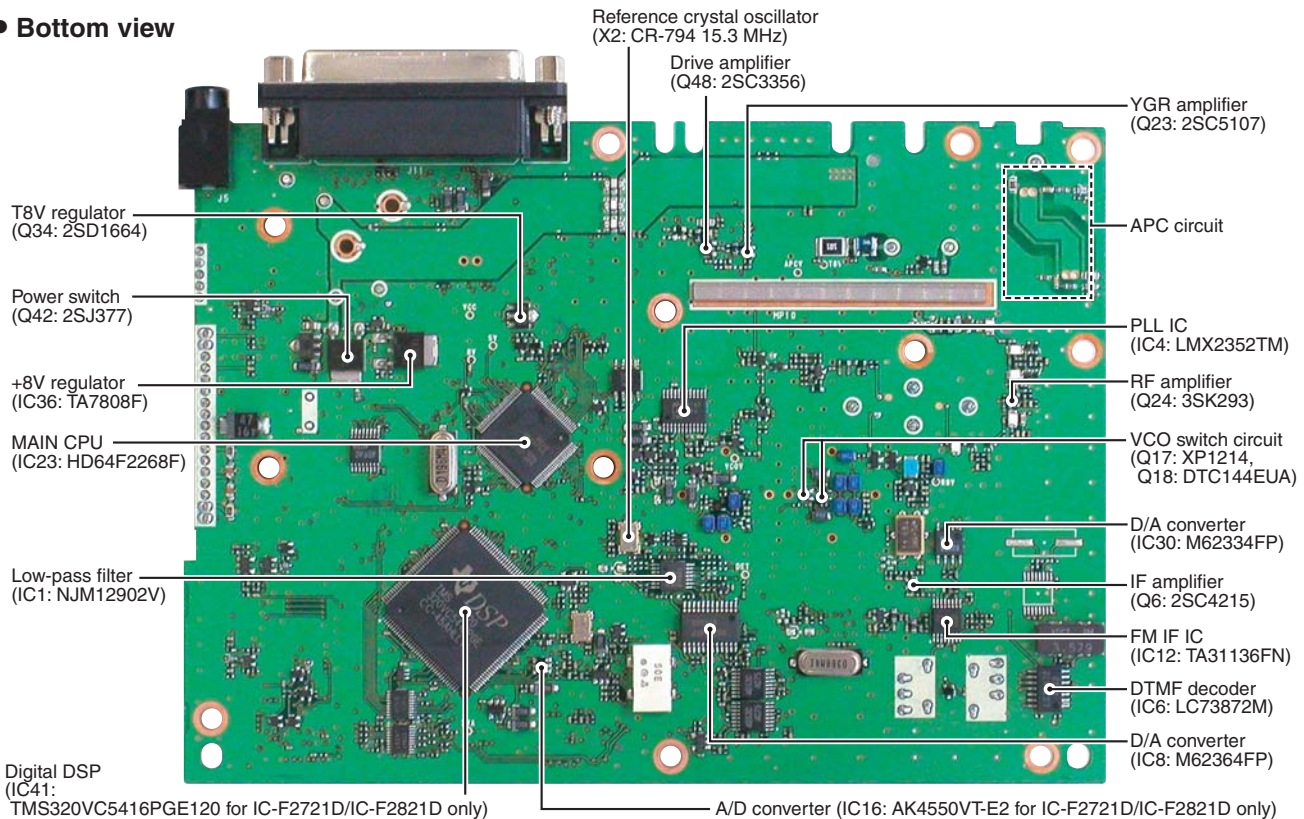
# SECTION 2 INSIDE VIEWS

## ● MAIN UNIT

### Top view

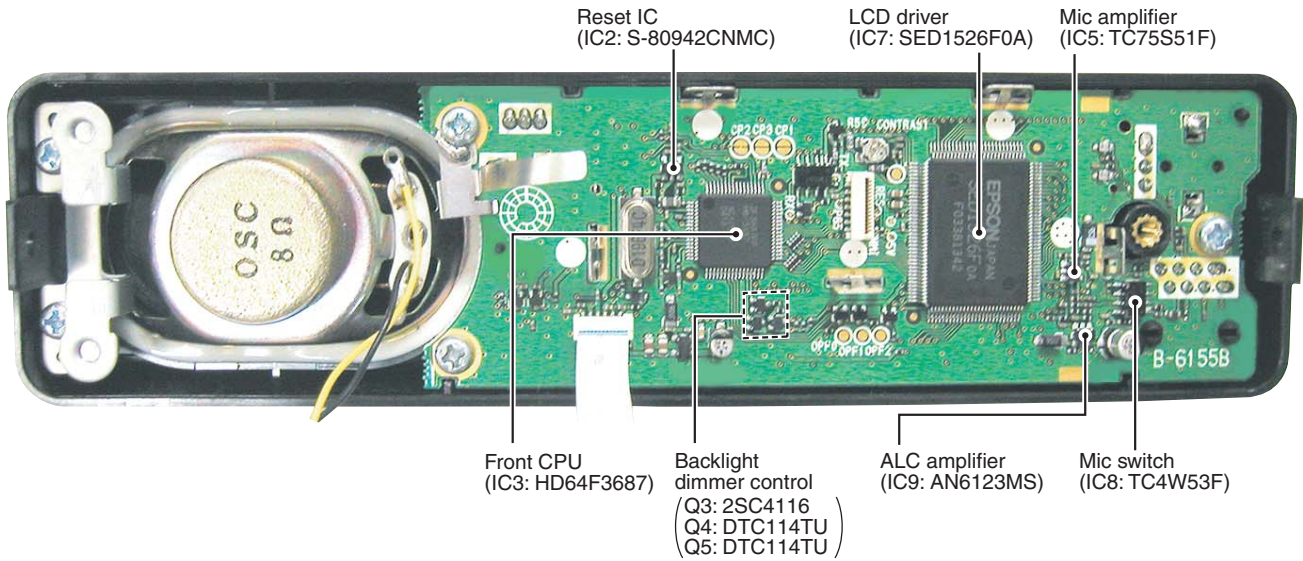


## ● Bottom view

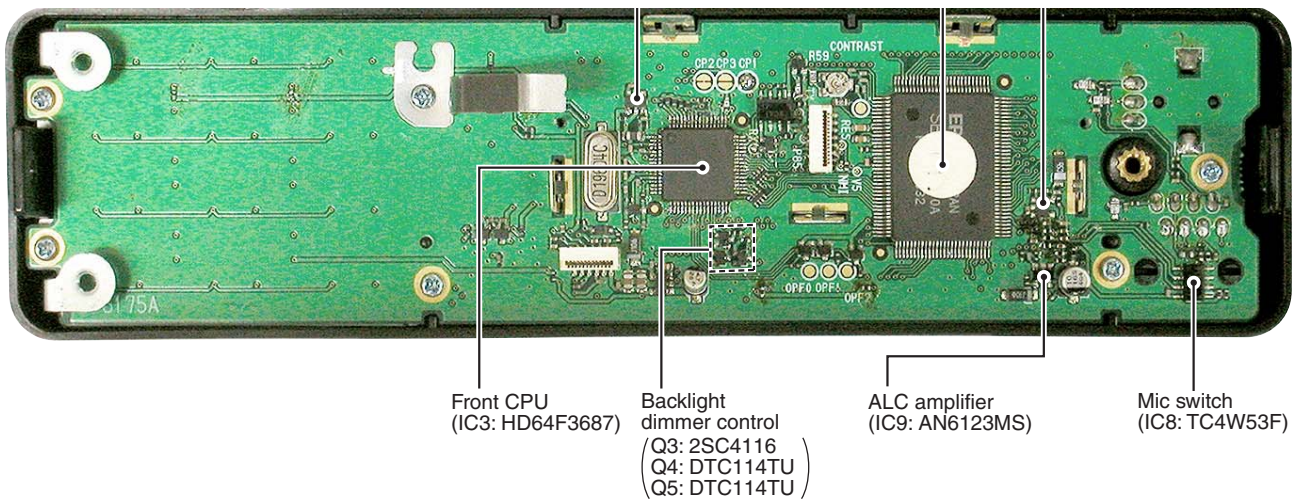




● FRONT-A UNIT (IC-F2700 Series)



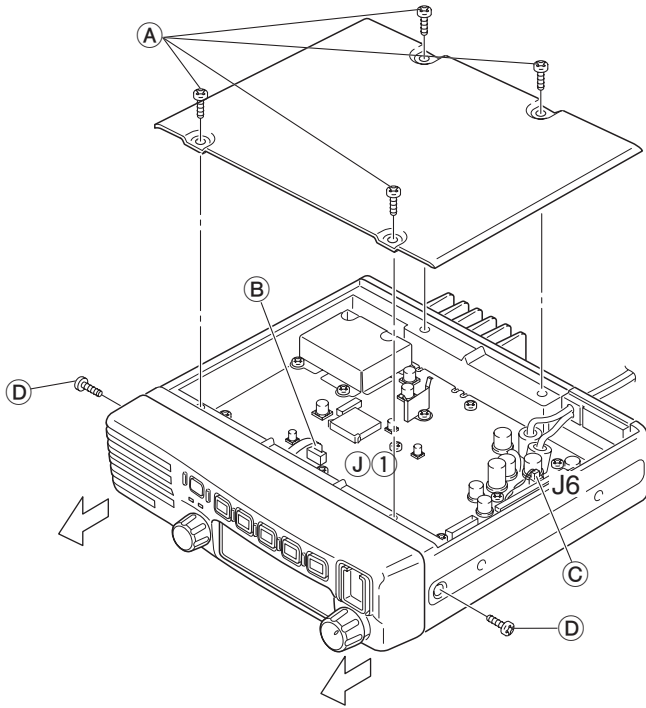
● FRONT-B UNIT (IC-F2800 Series)



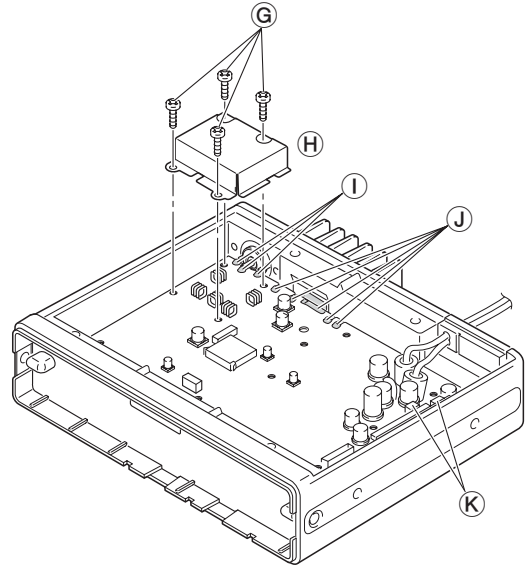
# SECTION 3 DISASSEMBLY INSTRUCTIONS

## ● REMOVING THE FRONT UNIT

- ① Unscrew 4 screws, (A), then remove the bottom cover.
- ② Unplug J1 (B) and J6 (C).
- ③ Unscrew 2 screws, (D).
- ④ Remove the front unit in the direction of the arrow.

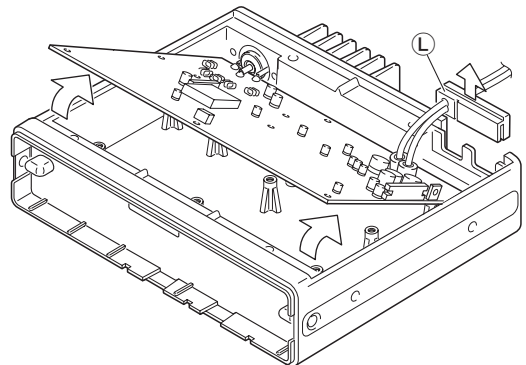


- ② Unscrew 4 screws, (G) and remove the shield cover (H).
- ③ Unsolder 3 points, (I) and 5 points (J).
- ④ Remove 2 clips, (K).



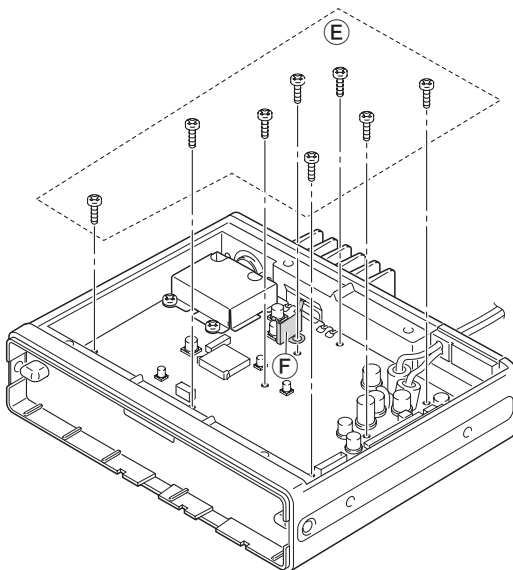
## ● REMOVING THE MAIN UNIT

- ① Remove the bushing, (L).
- ② Remove the MAIN unit in the direction of the arrow.



## ● BEFORE REMOVING THE MAIN UNIT

- ① Unscrew 8 screws, (E) and remove the shield plate (F).



Continue to right above

# SECTION 4 CIRCUIT DESCRIPTION

## 4-1 RECEIVER CIRCUITS

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

The antenna switching circuit functions as a low-pass filter while receiving and a resonator circuit while transmitting. This circuit does not allow transmit signals to enter the receiver circuits.

Received signals enter the antenna connector (CHASSIS; J1) and pass through the low-pass filters (L42–L44, L49 C376, C388, C389, C391, C432, C461, C551, C552). The filtered signals are passed through the ¼ type antenna switching circuit (D29–D31).

While receiving, no voltage is applied to the D29–D31. Thus, the receive line and ground are disconnected and L39, C384 function as a low-pass filter which leads received signals to the RF circuits via the limiter (D27, D28).

### 4-1-2 RF CIRCUIT (MAIN UNIT)

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

The signals from the antenna switching circuit pass through the two-stage tunable bandpass filters (D23, D26, D68, D69, L32, L36). The filtered signals are amplified at the RF amplifier (Q24) and then passed through the another two-stage tunable bandpass filters (D17, D18, L28) to suppress unwanted signals. The filtered signals are applied to the 1st mixer circuit.

D17, D18, D23, D26, D68 and D69 employ varactor diodes, that are controlled by the Main CPU (IC23) via the D/A converter (IC30, pins 1, 2) to track the bandpass filter. These varactor diodes tune the center frequency of an RF passband for wide bandwidth receiving and good image rejection.

### 4-1-3 1ST MIXER AND 1ST IF CIRCUITS (MAIN UNIT)

The 1st mixer circuit converts the received signals into fixed frequency of the 1st IF signal with the PLL output frequency. By changing the PLL frequency, only the desired frequency passes through a monolithic filter at the next stage of the 1st mixer.

The RF signals from the bandpass filter are mixed with the 1st LO signal, where come from the RX VCO circuit (RX VCO1: Q11, D7, D11; RX VCO2: Q12, D9, D13) via the 1st LO amplifier (Q21) and low-pass filter (L24, L26, C246, C264, C516) at the 1st mixer circuit (D16, L22, L23) to produce a 46.35 MHz 1st IF signal. The 1st IF signal is amplified at IF amplifiers (Q10, Q13, Q14), and then passed through a monolithic filter (F14) to suppress unwanted signals and to pass only the desired signals.

The filtered signal is applied to the IF amplifier (Q6) and then applied to the 2nd IF circuit.

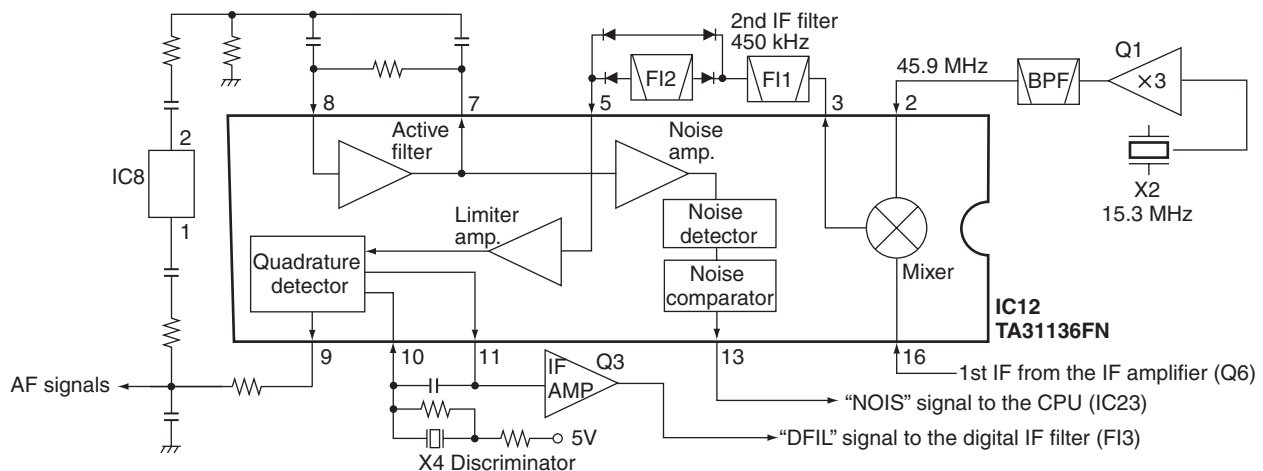
### 4-1-4 2ND IF AND DEMODULATOR CIRCUITS (MAIN UNIT)

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

The 1st IF signal from the IF amplifier (Q6) is applied to the 2nd mixer section of the FM IF IC (IC12, pin 16), and is mixed with the 2nd LO signal to be converted into a 450 kHz 2nd IF signal.

The FM IF IC (IC12) contains the 2nd mixer, limiter amplifier, quadrature detector, active filter and noise amplifier circuits.

### • 2ND IF DEMODULATOR CIRCUIT





A 2nd LO signal (45.9 MHz) is produced at the PLL circuit by tripling its reference frequency (X2: 15.3 MHz).

The 2nd IF signal from the 2nd mixer section (IC12, pin 3) passes through the ceramic filter(s) (Wide: FI1 only, Narrow: both FI1 and FI2) to remove unwanted heterodyned frequencies. It is then amplified at the limiter amplifier section (IC12, pin 5) and applied to the quadrature detector section (IC12, pins 10, 11) to demodulate the 2nd IF signal into AF signals.

The demodulated AF signals are output from pin 9 (IC12) and applied to the base band IC (IC2).

#### 4-1-5 AF AMPLIFIER CIRCUIT (MAIN UNIT)

The AF amplifier circuit amplifies the demodulated AF signals to drive a speaker. This transceiver employs the base band IC which is composed of pre-amplifier, expander, scrambler, MSK de-modulator, etc. at the AF amplifier section.

The AF signals from the FM IF IC (IC12, pin 9) are passed through the DIG/ANA switch (IC42, pins 2, 15) and are then applied to the base band IC (IC2, pin 23). The signals are amplified at the AF amplifier section in the base band IC (IC2, pin 23), and are then applied to the high-pass and low-pass filter sections of it.

The signals pass through the high-pass filter to suppress unwanted harmonic components. The filtered signals pass through (or bypass) scrambler and expander sections. The signals are amplified at the amplifier section in the base band IC (IC2).

The output signals from the base band IC (IC2, pin 20) are passed through the RX/PA switch (IC43, pins 1, 15) and DIG/ANA switch (IC42, pins 3, 4). The signals are applied to the AF volume (IC8, pins 15, 16), and are then applied to the AF amplifiers (IC34, IC38).

The power amplified AF signals are applied to the internal speaker (IC-F2700 series only) that is connected to J6 via [EXT SP] jack (J5).

#### 4-1-6 SQUELCH CIRCUITS (MAIN UNIT)

##### • NOISE SQUELCH

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

Some noise components in the AF signals from the FM IF IC (IC12, pin 9) are passed through the D/A converter (IC8, pins 1, 2). The signals are applied to the active filter section in the FM IF IC (IC12, pin 8). The active filter section filters and amplifies noise components. The amplified signals are converted into the pulse-type signals at the noise detector section. The detected signals output from pin 13 (NOIS) via the noise comparator section.

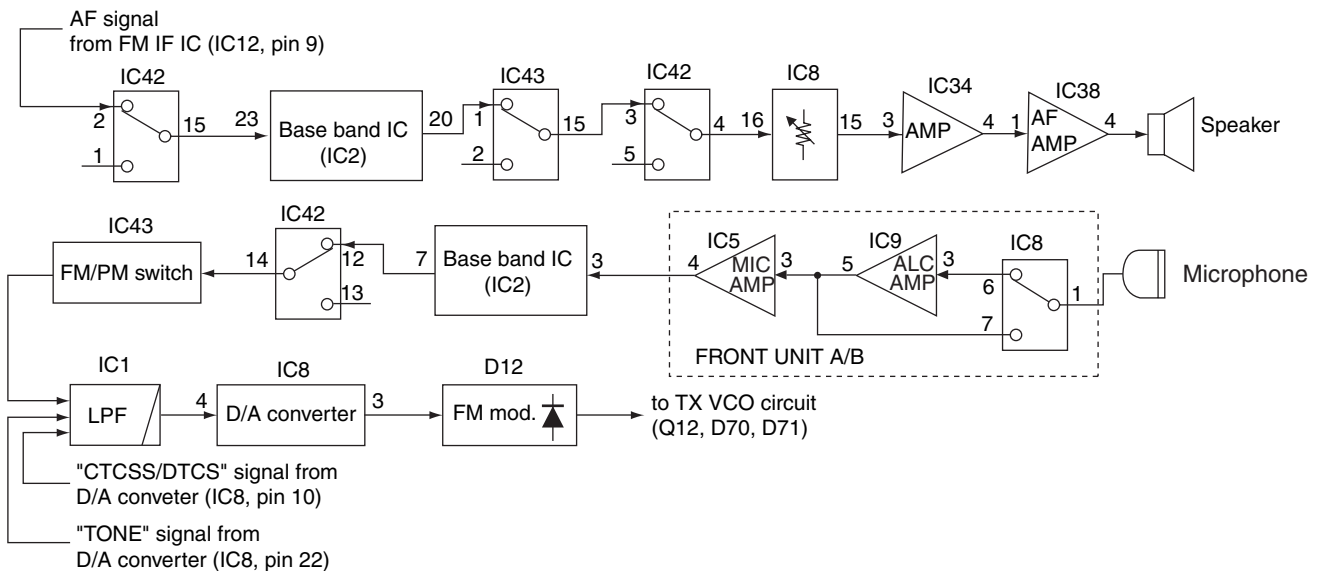
The "NOIS" signal from the FM IF IC is applied to the Main CPU (IC23, pin 37). Then the Main CPU analyzes the noise condition and outputs the AF mute signal as "AFON" from the pin 19 to the AF power controller (Q28, Q29, D34, D36).

##### • CTCSS AND DTCS

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

A portion of the AF signals from the FM IF IC (IC12, pin 9) pass through the low-pass filter (Q54) to remove AF (voice) signals, and are then applied to the amplifier (Q54). The amplified signals are applied to the CTCSS or DTCS decoder in the Main CPU (IC23, pin 46) via the "CDEC" line. The Main CPU outputs the AF mute signal as "AFON" from the pin 19 to the AF power controller (Q28, Q29, D34, D36).

#### • AF AND MIC AMPLIFIER CIRCUIT



## 4-2 TRANSMITTER CIRCUITS

### 4-2-1 MICROPHONE AMPLIFIER CIRCUIT (MAIN UNIT)

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

This transceiver employs the base band IC which is composed of microphone amplifier, compressor, scrambler, limiter, splatter filter, MSK modulator, etc. at the microphone amplifier section.

The AF signals from the microphone connector (FRONT UNIT; J2, pin 6) are passed through the microphone switch (FRONT UNIT; IC8, pins 1, 6, 7) and are then applied to the ALC amplifier (FRONT UNIT; IC9) during digital mode operation (bypassed during FM mode operation.) The signals are amplified at the microphone amplifier (FRONT UNIT; IC5, pins 3, 4) and then applied to MAIN UNIT via J1 (pin 10).

The amplified signals are applied to the microphone amplifier section of the base band IC (IC2, pin 3). The amplified signals are passed through (or bypass) the compressor, scrambler sections of IC2, and are then passed through the high-pass, limiter amplifier, splatter filter sections of IC2.

The output signals from the base band IC (IC2, pin 7) are applied to the FM/PM switch (IC43, pins 12–14) after pass through the microphone switch (IC42, pins 12, 14). The signal are passed through the low-pass filter (IC1, pins 4, 13) and then applied to the D/A converter (IC8, pins 3, 4). The output signal from D/A converter (IC8, pin 3) are applied to the modulation circuit (D12).

### 4-2-2 MODULATION CIRCUIT (MAIN UNIT)

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

The AF signals from the D/A converter (IC8, pin 3) change the reactance of varactor diode (D12) to modulate the oscillated signal at the TX VCO circuit (Q16, D70 D71). The modulated VCO signal is amplified at the buffer amplifiers (Q20, Q22) and is then applied to the YGR (Q23) amplifier via the T/R switch (D19).

The CTCSS/DTCS signals ("CENC0", "CENC1", "CENC2") from the Main CPU (IC23, pins 89–91) are combined at resistors (R158, R159, R162) and are then pass through the low-pass filter (IC9, pins 12, 14).

The filtered signals are applied to the D/A converter (IC8, pins 9, 10), and are then mixed with the filtered microphone audio signals. The mixed signals are applied to the D/A converter (IC8, pin 3, 4) after pass through the low-pass filter (IC1, pins 8, 9). The output signal from D/A converter (IC8, pin 3) are applied to the D12 in the TX VCO circuit.

### 4-2-3 POWER AMPLIFIER CIRCUITS (MAIN UNIT)

The power amplifier circuits amplify the VCO oscillating signal to an output power level.

The signal from the T/R switch (D19) is amplified at the YGR (Q23), drive (Q48) and power (IC29) amplifiers to obtain 45 W (IC-F2721/D/F2821/D; 25 W for IC-F2710/F2810) of RF power.

The amplified signal is passed through the low-pass filter (L35, C345, C346, C348, C349), antenna switch (D29, D30), low-pass filters (L42–L44, C376, C388, C389, C391, C551, C552), power detector (D38, D40) and low-pass filter (L49, C432, C461), and is then applied to the antenna connector (CHASSIS unit; J1).

The bias voltage of the power amplifier (IC29) is controlled by the APC circuit.

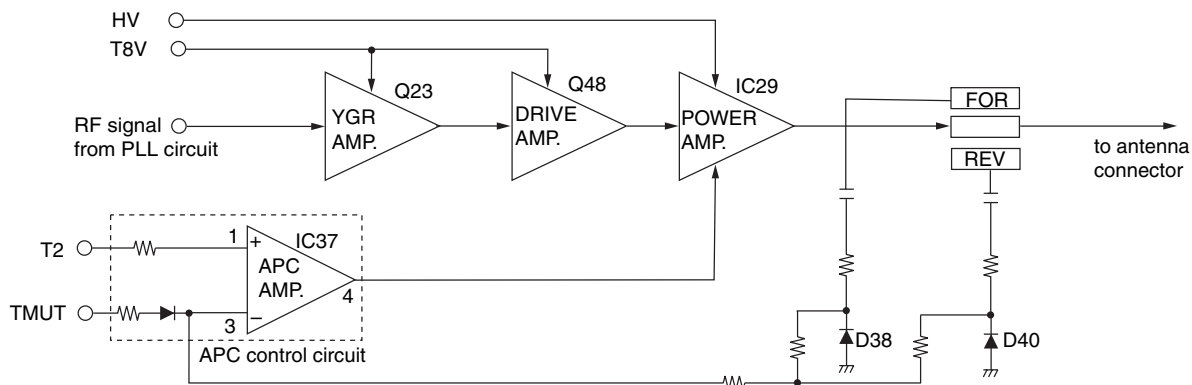
### 4-2-4 APC CIRCUIT (MAIN UNIT)

The APC circuit protects the power amplifier from a mismatched output load and stabilizes the output power.

The power detector circuit (D38, D40) detects the forward signals and reflection signals and converts it into DC voltage. The output voltage is at a minimum level when the antenna impedance is matched with 50  $\Omega$  and is increased when it is mismatched.

The detected voltage is applied to the differential amplifier (IC37; pins 3, 4), and the "T2" signal from the D/A converter (IC30, pin 2), controlled by the main CPU (IC23), is applied to the other input for reference (IC37, pin 1). When antenna impedance is mismatched, the detected voltage exceeds the power setting voltage. Then the output voltage of the differential amplifier (IC37, pin 4) controls the bias voltage of the power amplifier (IC29) to reduce the output power.

### • APC CIRCUIT



## 4-3 PLL CIRCUITS

### 4-3-1 PLL CIRCUIT (MAIN UNIT)

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 RX VCO1 (Q11, D7, D11), RX VCO2 (Q12, D9, D13) and TX VCO (Q16, D70, D71). The oscillated signal is amplified at the buffer amplifier (Q20). The output signal is applied to the buffer amplifier (Q19), and is then applied to the PLL IC (IC4, pin 6).

#### • VCO FREQUENCY LIST

	[L-band]	[H-band]
RX VCO1	400.00–434.995 MHz	450.00–484.995 MHz
RX VCO2	435.00–470.00 MHz	485.00–520.00 MHz
TX VCO	400.00–470.00 MHz	450.00–520.00 MHz

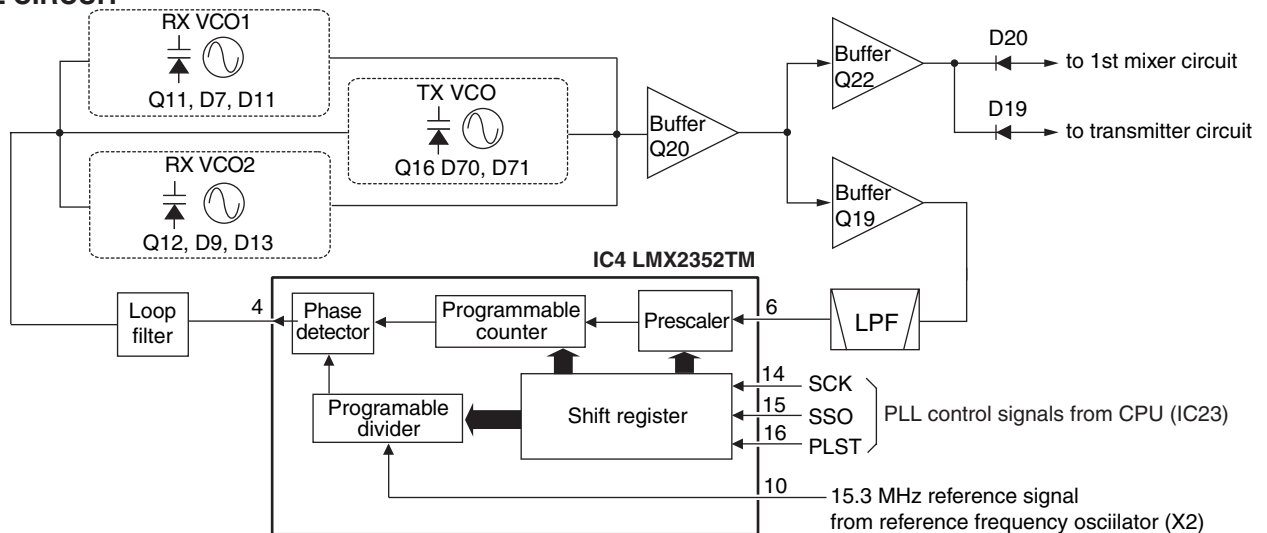
The PLL IC contains a prescaler, programmable counter, programmable divider and phase detector, etc. The applied signal is divided at the prescaler and programmable counter section by the N-data ratio from the main CPU (IC23). The divided signal is detected on phase at the phase detector using the reference frequency and output from pin 4. The output signal is passed through the loop filter (Q46, Q47, Q50) and is then applied to the VCO circuit.

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

### 4-3-2 VCO CIRCUITS (MAIN UNIT)

The VCO circuits contains a separate RX VCO1 (Q11, D9, D13), RX VCO2 (Q12, D9, D13) and TX VCO (Q16, D70, D71). The oscillated signal is amplified at the buffer amplifiers (Q20, Q22) and is then applied to the T/R switch (D19, D20). Then the receive 1st LO (Rx) signal is applied to the 1st mixer (L22, L23, D16) and the transmit (Tx) signal to the YGR amplifier circuit (Q23).

#### • PLL CIRCUIT



A portion of the signal from the buffer amplifier (Q20) is fed back to the PLL IC (IC4, pin 6) via the buffer amplifier (Q19) as the comparison signal.

## 4-4 POWER SUPPLY CIRCUITS

Line	Description
HV	The voltage from a DC power supply.
VCC	The same voltage as the HV line which is controlled by the power switch circuit (Q41, Q42). When the [Φ] is pushed, the Main CPU (IC23) outputs the "PWR" control signal to the power switch circuit to turn the circuit ON.
CPU 5	Common 5 V converted from the HV line at the CPU 5 regulator circuit (IC40). The output voltage is applied to the Main CPU (IC23) and EEPROM (IC26), etc.
5V	Common 5 V converted from the CPU 5 line at the 5 V regulator circuit (Q31, Q32). The output voltage is applied to the PLL IC (IC4) and D/A converter IC (IC8), etc.
8V	Common 8 V converted from the VCC line at the 8 V regulator circuit (IC36). The output voltage is applied to the buffer amplifier (Q22) and AF amplifier (IC34), etc.
T8V	Transmit 8 V controlled by the T8V regulator circuit (Q34) using the "TMUT" signal from the Main CPU (IC23). The output voltage is applied to the YGR (Q23) and driver (Q48) amplifiers, etc.
R8V	Receive 8 V controlled by the R8V regulator circuit (Q30) using the "TXC" signal from the Main CPU (IC23). The output voltage is applied to the RF amplifier (Q24) and 1st IF amplifier (Q6), etc.

## 4-5 OTHER CIRCUITS

### 4-5-1 COMPANDER CIRCUIT (MAIN UNIT)

IC-F2700/2800 series have compander circuit which can improve S/N ratio and become wide dynamic range. The circuit is composed in the base band IC (IC2).

#### (1) WHILE RECEIVING

The demodulated AF signals from the FM IF IC (IC12, pin 9) are applied to the amplifier section in base band IC (IC2, pin 23), and then pass through the low-pass and high-pass filter section to suppress unwanted signals. The filtered signals pass through (or bypass) scrambler section, and are then applied to the expander circuit to expand AF signals.

The output signals from the base band IC (IC2, pin20) is applied to the AF amplifier circuit after amplified at the amplifier section.

#### (2) WHILE TRANSMITTING

The audio signals from the microphone are applied to the base band IC (IC2, pin 3) via microphone amplifier (FRONT UNIT; IC5). The signals are amplified at the amplifier section, and are then applied to the compressor circuit to compress the audio signals. The signals pass through (or bypass) scrambler section, and are then applied to the limiter section after being passed through the high-pass filter.

The filtered signals pass through the splatter filter section, and are then applied to the modulation circuit (D12) via the FM/PM switch (IC43, pins12–14) and D/A converter (IC8, pins 2, 3).

### 4-5-2 DIGITAL MODE CIRCUIT (IC-F2721D/F2821D only)

#### (1) WHILE RECEIVING

A portion of the 2nd IF signal from the limiter amplifier section in the FM IF IC (IC12) output from pin 11 and is applied to the IF amplifier (Q3). The amplified signal is passed through a ceramic bandpass filter (F13) to suppress heterodyne noise, and amplified again at the digital IF amplifier (IC15, pins, 1, 4). The amplified 2nd IF signal is applied to the A/D converter (IC16) to be converted into digital IF signal, then applied to the DSP IC (IC41). The DSP IC converts the digital IF signal into the digital audio signal.

The digital audio signal from DSP IC are converted into analog audio signals at the LINER CODEC IC (IC18) and output from pin 16.

The audio signals are applied to the base band IC (IC2, pin 23) after being pass through the DIG/ANA switch (IC42, pins 1, 15).

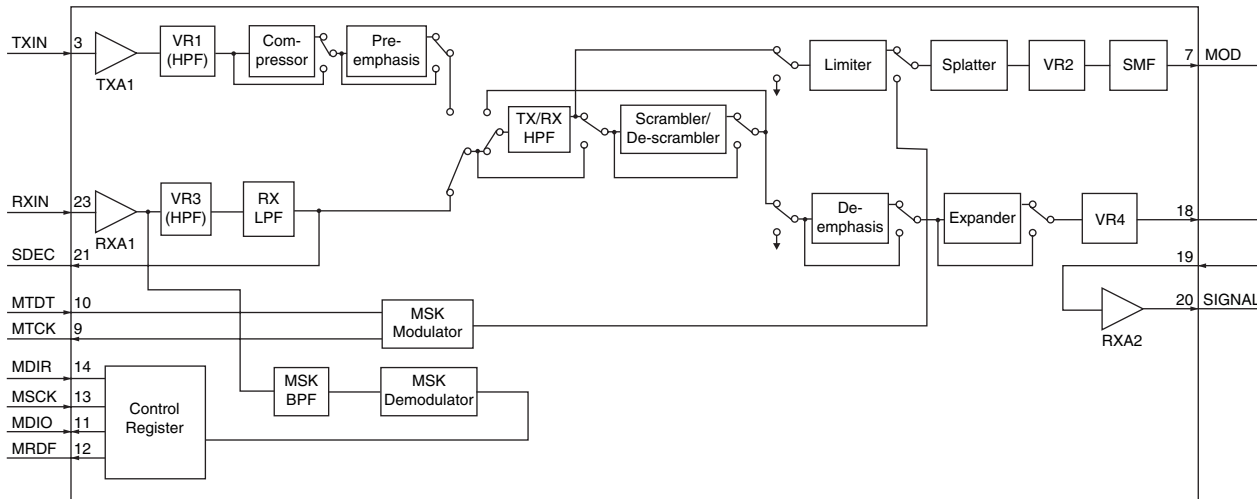
#### (2) WHILE TRANSMITTING

The microphone signal from the base band IC (IC2, pin 7) are amplified at the MOD amplifier (IC44, pins 3, 4) and are then applied to the LINER CODEC IC (IC18, pin 2) to convert into the digital audio signal.

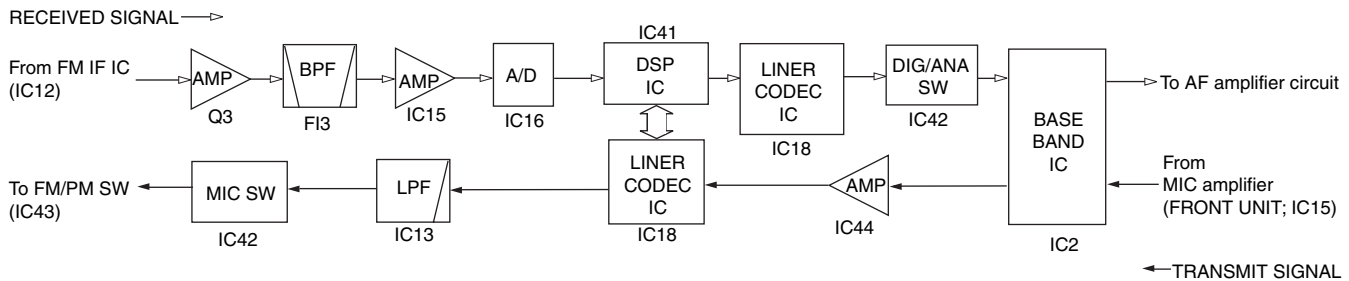
The digital audio signal is processed by DSP IC (IC41), and applied to the LINER CODEC IC (IC18) again.

The signal from the LINER CODEC IC (IC18, pin 15) is passed through the low-pass filter (IC13, pins 1, 3, 6, 7) and then applied to the PM/FM switch (IC43, pins 12–14) after pass through the microphone switch (IC42 pins 13, 14).

### • BASE BAND IC DIAGRAM (IC2: AK2346-E2)



### • DIGITAL MODE CIRCUIT





## 4-6 PORT ALLOCATIONS

### 4-6-1 Main CPU (MAIN UNIT; IC23)

Pin number	Port name	Description
1	DSDA	I/O port for data signal to the D/A converter (IC30 pin 6).
2	DAST	Outputs strobe signals to the D/A converter (IC8, pin 6).
10	SSO	Outputs serial data to the PLL IC (IC4, pin 15) and D/A converter (IC8, pin 8).
11	SCK	Outputs clock signal to the PLL IC (IC4 pin 14), D/A converter (IC8, pin 7), etc.
13	PLST	Outputs strobe signals to the PLL IC (IC4, pin 16).
15	DASW	Outputs control signal to the digital/analog switch (IC42). Low: While analog mode is selected.
16	TXC	Outputs the T8V regulator circuit (Q34) control signal. Low: During transmit.
17	TMUT	Outputs the R8V regulator circuit (Q30) control signal. Low: During receive.
18	AFON	Outputs control signal for AF mute circuit (Q28, Q29). High: While AF amplifier (IC38) is activated.
19	NWC	Outputs wide/narrow switch (D2, D4) control signal. High: When narrow band is selected.
20	DDSD	Input port for serial data from the DTMF decoder IC (IC6, pin 9).
21	DDAC	Outputs clock signals to the DTMF decoder IC (IC6, pin 10).
32	RMUT	Input port for the AF mute signal from the optional unit via J2. Low: While RX audio is muted.
33	MMUT	Input port for the microphone mute signal from the optional unit via J2. Low: While microphone audio is muted.
34–36	OPT1–OPT3	I/O ports for optional unit.
37	NOIS	Input port for the noise signal from the FM IF IC (IC9, pin 13).
38	POSW	Input port for the [⓪] switch. Low: While [⓪] switch is pushed.
39	DDST	Input port for DTMF detection signal from the DTMF decoder IC (IC6, pin 11).
40	IGSW	Input port for the remote power control signal from external connector, J7.
41	PWON	Outputs control signal for the power switch circuit (Q41, Q42). Low: While power ON.
43	SENC	Outputs single tone encoder signal.

Pin number	Port name	Description
44	BEEP	Outputs beep audio signals.
45	SDEC	Input port for single tone decode signal from the base band IC (IC2, pin 21).
46	CDEC	Input port for CTCSS/DTCS signal from the LPF (IC1, pin 7).
47	ULCK	Input port for the PLL unlock signal. Low: The PLL circuit is unlocked.
48	BATV	Input port for the connected battery for the low battery detection.
49	LVIN	Input port for the PLL lock voltage.
50	RSSI	Input port for the S-meter signal from the FM IF IC (IC12, pin 12).
51	TEMP	Input port for the transceiver's internal temperature detecting signal.
68	CLO	Outputs the data signal to the FRONT CPU (FRONT UNIT; IC3).
69	CLI	Input port for the data signal from the FRONT CPU (FRONT UNIT; IC3).
72	HORN	Outputs external device control signal. High: When matched 5/2 tone signals are received.
78	MTCK	Input port for transmitting MSK clock signal from the base band IC (IC2, pin 9).
79	NTXD	Outputs NMEA data signals for the connected unit via external connector (J7).
80	NRXD	Input port for NMEA data signals from the connected unit via external connector (J7).
88	DIM	Input port for the LCD backlight control signal from the external connector (J8). Low: While LCD backlight is dimmed.
89–91	CENC0–CENC2	Output the CTCSS/DTCS signals.
93	MTDT	Outputs the MSK data to the base band IC (IC2, pin 10).
94	MDIR	Outputs serial data control signal to the base band IC (IC2, pin 14).
95	MDIO	I/O port for the serial data signals from/to the base band IC (IC2, pin 11).
96	MSCK	Outputs clock signal for the base band IC (IC2, pin 13).
97	PMFM	Outputs the FM/PM switch (IC43, pin 11) control signal. High: While PM is selected.
98	ESDA	I/O port for data signals from/to the EEPROM (IC26, pin 5).
99	ESCL	Outputs clock signal to the EEPROM (IC26, pin 6).

#### 4-6-2 FRONT CPU (FRONT UNIT; IC3)

Pin number	Port name	Description															
7	RES	Input port for rest signal.															
19–22	KR0–KR3	Input ports for the 10-keypad. (IC-F2800 series only)															
28, 29	LIGT1, LIGT2	Output control signals for LCD back-light.															
		<table border="1"> <thead> <tr> <th>LIGT1</th> <th>LIGT2</th> <th>LIGHT</th> </tr> </thead> <tbody> <tr> <td>HIGH</td> <td>HIGH</td> <td>DIM</td> </tr> <tr> <td>HIGH</td> <td>LOW</td> <td>OFF</td> </tr> <tr> <td>LOW</td> <td>HIGH</td> <td>ON</td> </tr> <tr> <td>LOW</td> <td>LOW</td> <td>OFF</td> </tr> </tbody> </table>	LIGT1	LIGT2	LIGHT	HIGH	HIGH	DIM	HIGH	LOW	OFF	LOW	HIGH	ON	LOW	LOW	OFF
		LIGT1	LIGT2	LIGHT													
		HIGH	HIGH	DIM													
		HIGH	LOW	OFF													
LOW	HIGH	ON															
LOW	LOW	OFF															
47	LEDT	Outputs control signal for the TX LED.															
48	LEDR	Outputs control signal for the RX LED.															
51, 52	DICK, DIUP	Input ports for control signal from the dial (S9). (IC-F2700 series only)															
53, 54	KYUP, KYDN	Input ports for control signal from [▲], [▼] keys. (IC-F2800 series only)															
57	HANG	Input port for the microphone hanger detection signal. Low: While microphone on the hanger.															
58	PTT	Input port for the PTT switch of the connected microphone.															
59–63	KYP0–KYP4	Input ports for the programmable function keys (P0–P4).															

#### 4-6-4 D/A CONVERTER (MAIN UNIT; IC30)

Pin number	Port name	Description
1	T1	Outputs the bandpass filters (D23, D26, D68, D69) tuning signal.
2	T2	• While receiving Outputs the bandpass filters (D17, D18) tuning signal.
		• While transmitting Outputs the TX power control signal which selects TX output power of HIGH, LOW1 or LOW2. The output signal is applied to the APC amplifier (IC37, pin 1).
3	TXLVA	Outputs TX VCO lock voltage.
4	RXLVA	Outputs RX VCO lock voltage.

#### 4-6-3 D/A CONVERTER (MAIN UNIT; IC8)

Pin number	Port name	Description
2	SQL	Outputs AF signal to the squelch circuit (IC12, pin 8).
3	MOD	Outputs modulation signals to the VCO circuit.
10	TENC	Outputs CTCSS/DTCS signals.
11	BAL	Outputs deviation balance control signal.
14	BEPV	Outputs beep audio signals to the speaker via the AF amplifiers (IC34, IC38).
15	SIGNAL	Outputs AF signals to the speaker via the AF amplifiers (IC34, IC38).
22	TONE	Outputs single tone signal.
23	REF	Outputs reference oscillator (X2) control signal.

# SECTION 5 ADJUSTMENT PROCEDURES

## 5-1 PREPARATION

When adjusting IC-F2721/D,F2710,F2821/D,F2810, the optional CS-F70/F1700 ADJ ADJUSTMENT SOFTWARE (Rev. 1.0 or later) and JIG CABLE (modified OPC-1122 CLONING CABLE; see illustration on page 5-3) are required.

### ■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.6 (13.2) V DC Current capacity : 20 A or more	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
Modulation analyzer	Frequency range : DC–600 MHz Measuring range : 0 to ±10 kHz	Attenuator	Power attenuation : 50 or 60 dB Capacity : 100 W
Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 0.1–600 MHz Output level : 0.1 μV to 32 mV (–127 to –17 dBm)
Digital multimeter	Input impedance : 10 MΩ/V DC or more	AC millivoltmeter	Measuring range : 10 mV to 10 V
RF power meter	Measuring range : 1–75 W Frequency range : 100–800 MHz Impedance : 50 Ω SWR : Better than 1.2 : 1	Oscilloscope	Frequency rang : DC–20 MHz Measuring range : 0.01–20 V
		External speaker	Input impedance : 4 Ω Capacity : 10 W or more

### ■ SYSTEM REQUIREMENTS

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

### ■ ADJUSTMENT SOFTWARE INSTALLATION

- ① Quit all applications when Windows is running.
- ② Insert the CD into the appropriate CD drive.
- ③ Double-click the “Setup.exe” contained in the adjustment software folder in the CD drive.
- ④ The “Welcome to the InstallShield Wizard for adjustment software will appear. Click [Next>].
- ⑤ The “Choose Destination Location” will appear. Then click [Next>] to install the software to the destination folder.
- ⑥ After the installation is completed, the “InstallShield Wizard Complete” will appear. Then click [Finish].
- ⑦ Eject the CD.
- ⑧ The adjustment software icon appears on the desk top screen.

### ■ BEFORE STARTING SOFTWARE ADJUSTMENT

Program the adjustment frequencies into the transceiver using with the cloning software before starting the software adjustment. Otherwise, the transceiver can not start software adjustment.

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

Microsoft and Windows are registered trademarks of Microsoft Corporation in the U.S.A. and other countries.

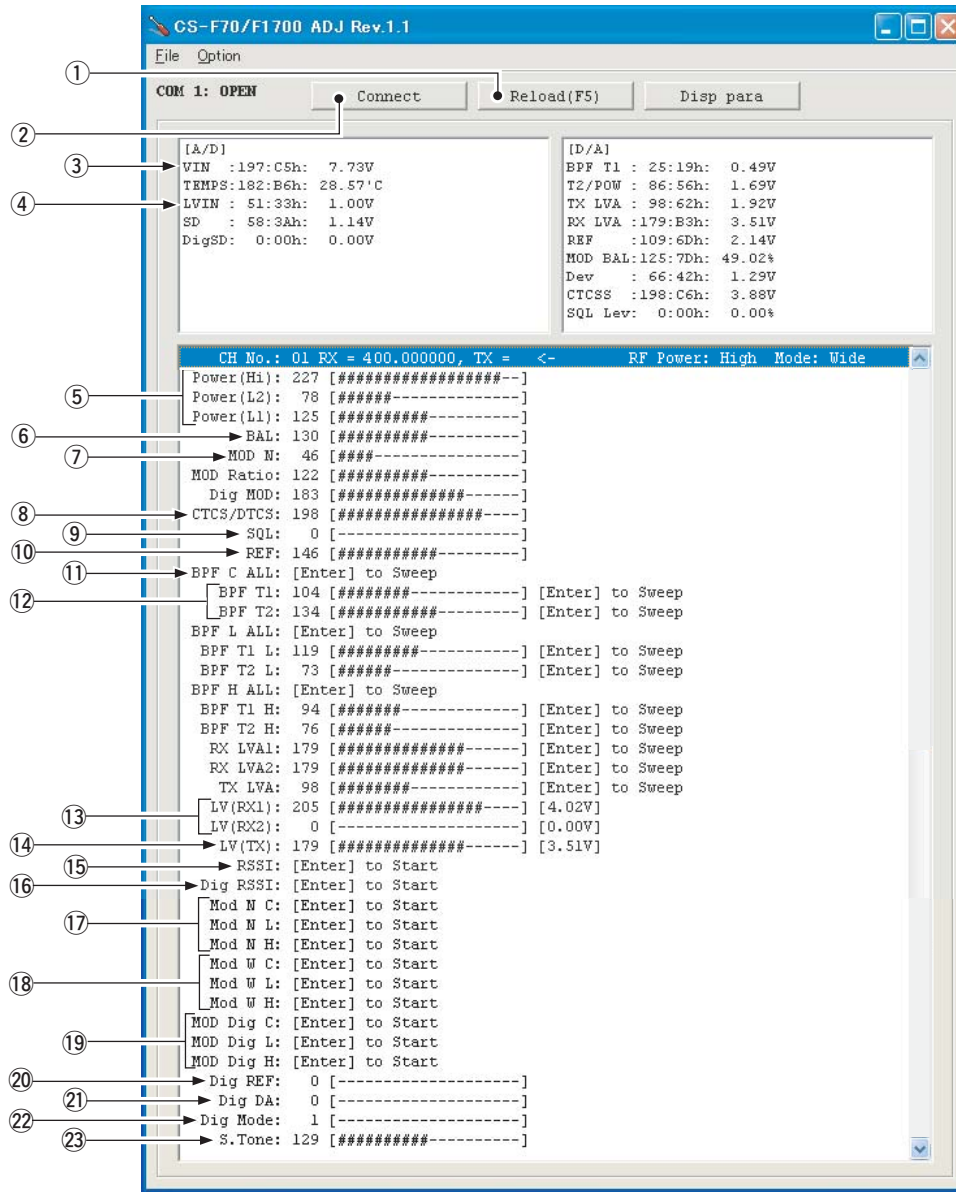
### ■ STARTING SOFTWARE ADJUSTMENT

- ① Connect the transceiver and PC with JIG CABLE.
- ② Turn the transceiver power ON.
- ③ Boot up Windows, and click the adjustment software icon on the screen.
- ④ Click ‘Connect’ on the adjustment software window, then appears transceiver’s adjustment screen.
- ⑤ Set or modify adjustment data as desired.

### • ADJUSTMENT FREQUENCY LIST

CH	FREQUENCY	CONDITIONS
1	400.000 MHz [L] 450.000 MHz [H]	TX power : Low1 Mode : Wide
2	400.000 MHz [L] 450.000 MHz [H]	TX power : Low1 Mode : Narrow
3	400.000 MHz [L] 450.000 MHz [H]	TX power : Low1 Mode : Digital
4	400.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Wide CTCSS : 151.4 Hz
5	415.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Wide
6	415.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Narrow
7	415.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Digital
8	435.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Wide
9	435.000 MHz [L] 485.000 MHz [H]	TX power : Low2 Mode : Wide
10	435.000 MHz [L] 485.000 MHz [H]	TX power : High Mode : Wide
11	435.000 MHz [L] 485.000 MHz [H]	TX power : Low1 Mode : Narrow
12	470.000 MHz [L] 520.000 MHz [H]	TX power : Low1 Mode : Wide
13	470.000 MHz [L] 520.000 MHz [H]	TX power : Low1 Mode : Narrow
14	470.000 MHz [L] 520.000 MHz [H]	TX power : Low1 Mode : Digital

• CS-F70/F1700 ADJ'S SCREEN EXAMPLE

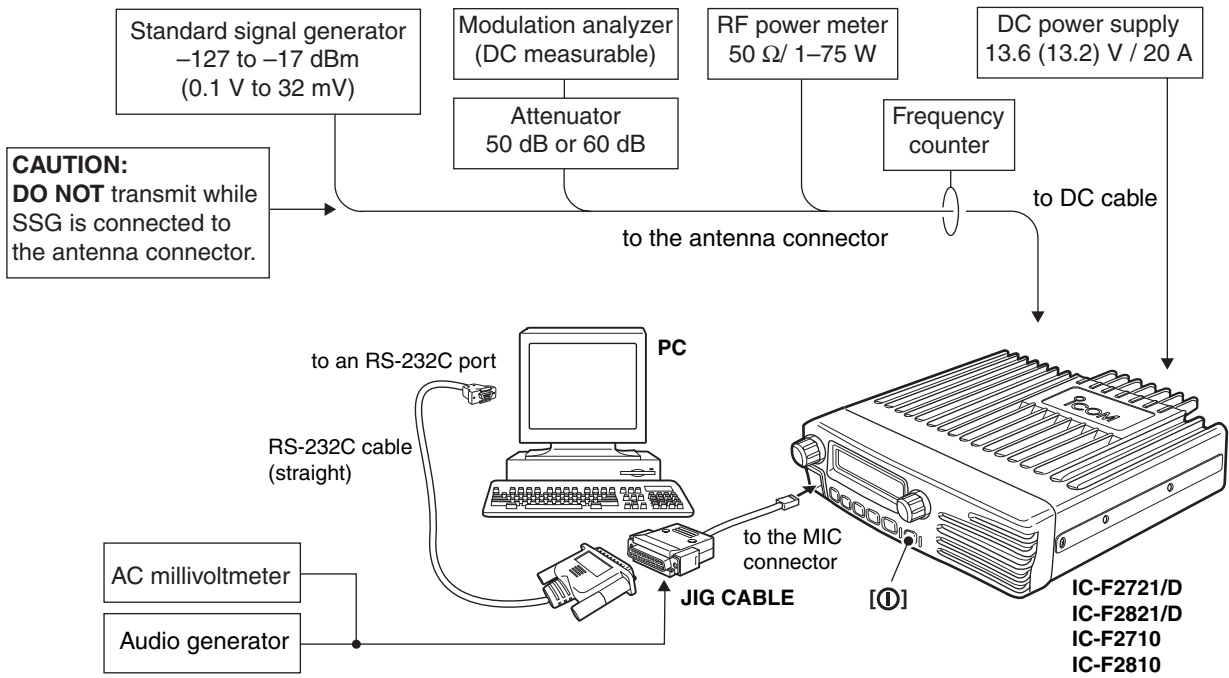


**NOTE:** The above values for settings are example only.  
Each transceiver has its own specific values for each setting.

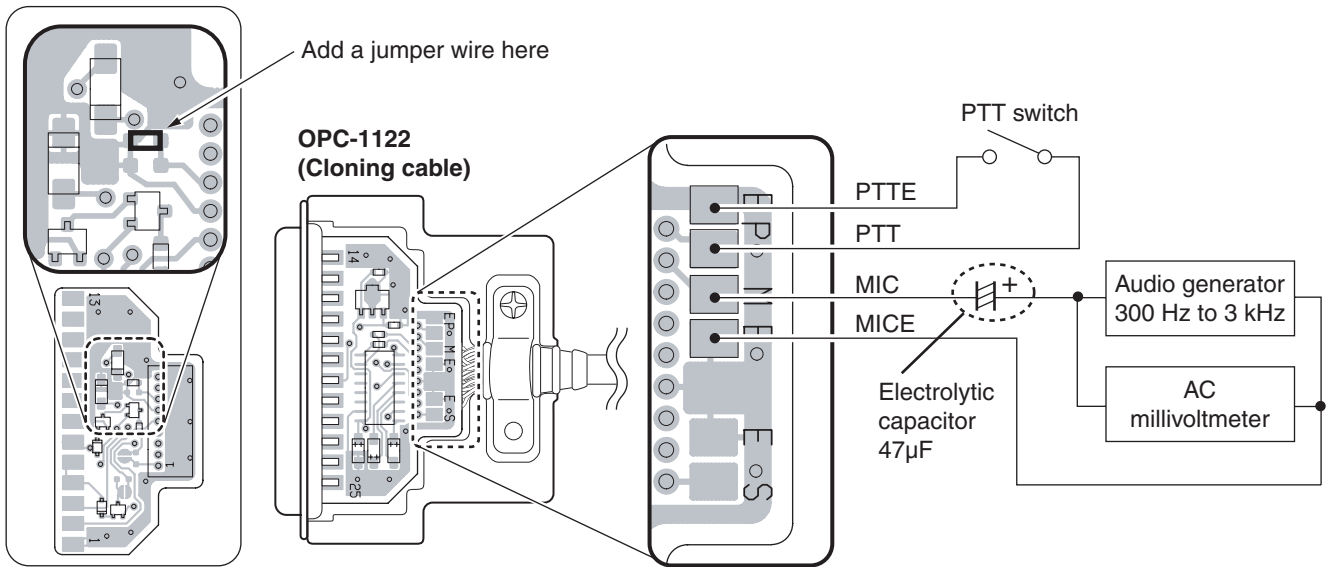
- |                                     |   |                             |
|-------------------------------------|---|-----------------------------|
| ①: Reloads adjustment data          | ⑨: Squelch level                              | ⑰: Deviation (narrow)       |
| ②: Transceiver's connection state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



• CONNECTION



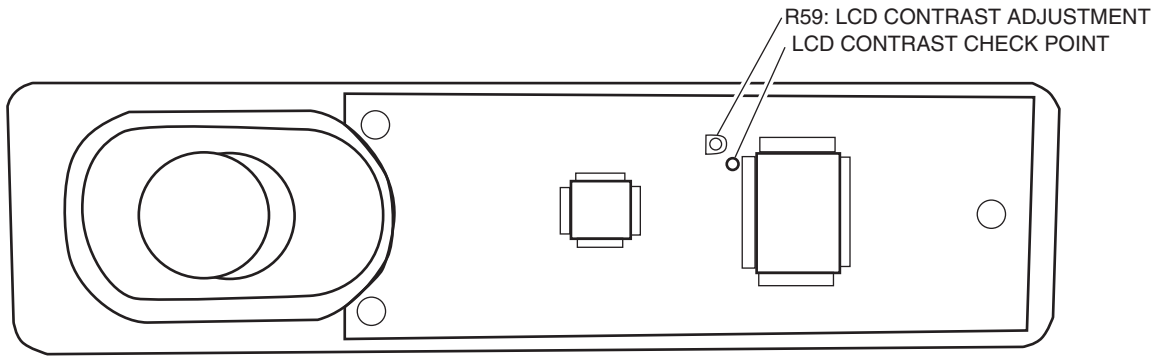
• JIG CABLE



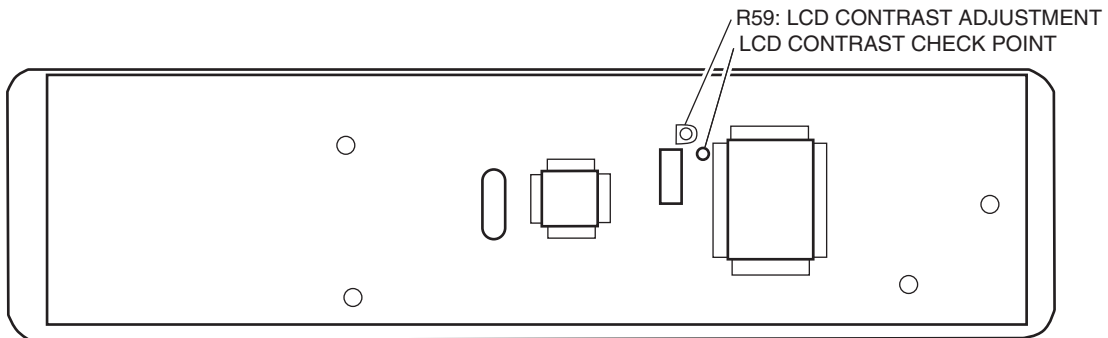
## 5-2 LCD CONTRAST ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
LCD CONTRAST	1 <ul style="list-style-type: none"> <li>• Operating CH. : CH 1</li> <li>• Preset LCD contrast : 64 (user set mode)</li> <li>• Receiving</li> </ul>	FRONT A/B	Connect a digital multimeter or an oscilloscope to the check point "CONTRAST".	-2.0 V	FRONT A/B	R59

### • FRONT-A UNIT for IC-F2700 series



### • FRONT-B UNIT for IC-F2800 series

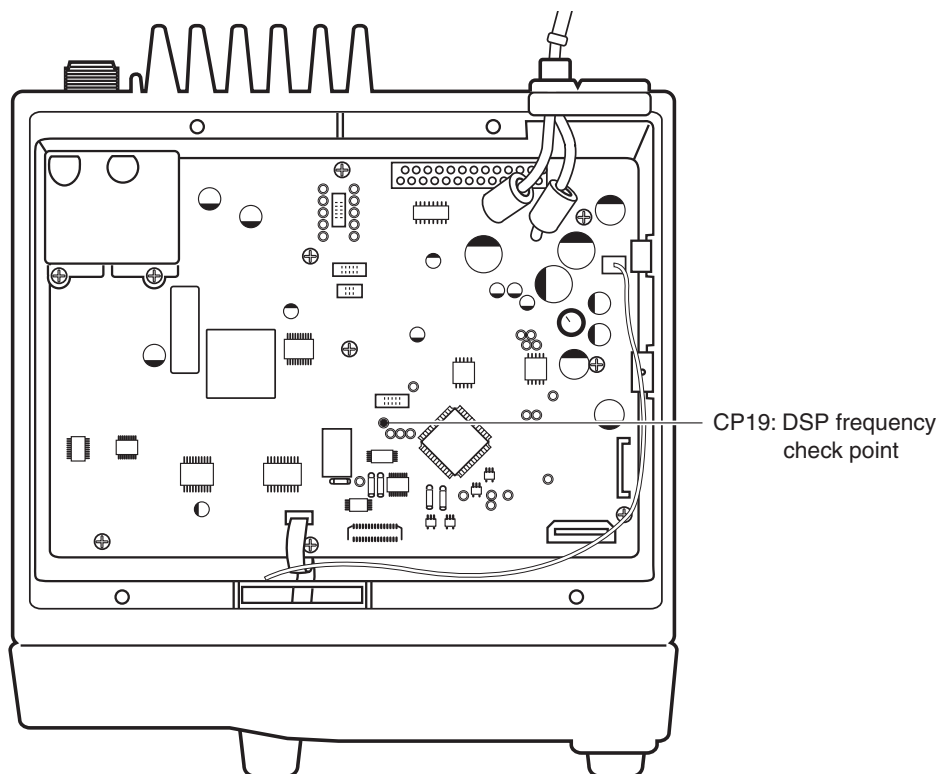


### 5-3 SOFTWARE ADJUSTMENT

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

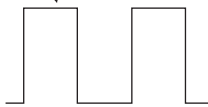
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE
		UNIT	LOCATION	
PLL LOCK VOLTAGE [LV (RX LVA1)] [LV (RX LVA2)] [LV (TX LVA)]	1 • Operating CH. : CH 1 • Preset LV(RX1) : 34 [0.67 V] • Receiving	PC screen	Check the "LVIN" item on the CS-F70/F1700 ADJ's screen.	0.67 V
	2 • Operating CH. : CH 8 • Preset LV(RX2) : 34 [0.67 V] • Receiving			0.67 V
	3 • Operating CH. : CH 1 • Preset LV(TX) : 51 [1.00 V] [L] 34 [0.67 V] [H] • Transmitting			1.00 V [L] 0.67 V [H]
<b>CONVENIENT:</b> The PLL lock voltage can be adjustment automatically. Set the cursor to "RX LVA"/"TX LVA" and then push [ENTER] key.				
REFERENCE FREQUENCY [REF]	1 • Operating CH. : CH 12 • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting	Rear panel	Loosely couple a frequency counter to the antenna connector.	470.0000 MHz [L] 520.0000 MHz [H]
DSP FREQUENCY [Dig REF] (IC-F2721D/ F2821D only)	1 • Operating CH. : CH 14 • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting	MAIN unit	Connect a frequency counter to CP19.	12.288000 MHz
BASE BAND FREQUENCY [Dig DA] (IC-F2721D/ F2821D only)	1 • Operating CH. : CH 14 • Preset Dig Mode : 13 • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting	Rear panel	Loosely couple a frequency counter to the antenna connector.	470.0000 MHz [L] 520.0000 MHz [H]

#### • MAIN UNIT



## SOFTWARE ADJUSTMENT (Continued)

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

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE
		UNIT	LOCATION	
OUTPUT POWER [Power (Hi)]	1 • Operating CH. : CH 10 • Transmitting	Rear panel	Connect an RF power meter to the antenna connector.	25.0 W [25W] 45.0 W [45W]
[Power (L2)]	2 • Operating CH. : CH 9 • Transmitting			10.0 W [25W] 25.0 W [45W]
[Power (L1)]	3 • Operating CH. : CH 8 • Transmitting			2.5 W [25W] 4.5 W [45W]
MODULATION BALANCE [BAL]	1 • Operating CH. : CH 11 • Preset [MOD N] : 100 • No audio applied to the [MIC] connector. • Set a modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Push [P0] while transmitting.	Rear panel	Connect a modulation analyzer with an oscilloscope to the antenna connector through an attenuator.	Set to square wave form 
FM DEVIATION (NARROW) [MOD N C]	1 • Operating CH. : CH 6 • Connect an audio generator to the [MIC] connector and set as : 1.0 kHz/40 mVrms • Set a Modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting	Rear panel	Connect a modulation analyzer to the antenna connector through an attenuator.	±2.10 kHz
(NARROW) [MOD N L]	2 • Operating CH. : CH 2 • Transmitting			
(NARROW) [MOD N H]	3 • Operating CH. : CH 13 • Transmitting			
(WIDE) [MOD W C]	4 • Operating CH. : CH 5 • Transmitting			±4.10 kHz
(WIDE) [MOD W L]	5 • Operating CH. : CH 1 • Transmitting			
(WIDE) [MOD W H]	6 • Operating CH. : CH 12 • Transmitting			
(MIDDLE) [MOD W C] ([EUR] only)	7 • Operating CH. : CH 5 • Transmitting			±3.20 kHz
(MIDDLE) [MOD W L] ([EUR] only)	8 • Operating CH. : CH 1 • Transmitting			
(MIDDLE) [MOD W H] ([EUR] only)	9 • Operating CH. : CH 12 • Transmitting			



## SOFTWARE ADJUSTMENT (Continued)

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

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	
		UNIT	LOCATION		
DIGITAL DEVIATION [MOD Dig C] (IC-F2721D/ F2821D only)	1 • Operating CH. : CH 7 • Preset Dig Mode : 7 • Set a modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting	Rear panel	Connect a modulation ana- lyzer to the antenna connector through an attenuator.	±2.75 kHz	
	[MOD Dig L] (IC-F2721D/ F2821D only)				2 • Operating CH. : CH 3 • Transmitting
	[MOD Dig H] (IC-F2721D/ F2821D only)				3 • Operating CH. : CH 14 • Transmitting
CTCSS/DTCS DEVIATION [CTCSS/DTCS]	1 • Operating CH. : CH 4 • No audio applied to the [MIC] connector. • Set a modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting	Rear panel	Connect a modulation ana- lyzer to the antenna connector through an attenuator.	±0.70 kHz	
2TONE /5TONE /DTMF DEVIATION [S.Tone]	1 • Operating CH. : CH 2 [L] CH 6 [H] • No audio applied to the [MIC] connector. • Set a modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Push [P3] while Transmitting	Rear panel	Connect a modulation ana- lyzer to the antenna connector through an attenuator.	±1.50 kHz	



# SECTION 6 PARTS LIST

## [REPLACEMENT UNITS]

ORDER NO.	UNIT NAME	
0327810101	U F1721 #01 FRONT-A	[F2721/D], [F2710]
0327811102	U F1821 #11 FRONT-B	[F2821/D], [F2810]

## [FRONT-A UNIT] (for IC-F2700 series)

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC2	1110005770	S.IC S-80942CNMC-G9C-T2	B	81.9/29.8
IC3	1140010770	S.IC HD64F3687FP	B	73.5/21.4
IC4	1130005720	S.IC TC7W04F (TE12L)	B	63.1/28.7
IC5	1130008560	S.IC TC75S51F (TE85L)	B	26.9/15.7
IC6	1110005350	S.IC NJM2870F05-TE1	B	80.4/5.9
IC7	1130009120	S.IC SED1526F0A	B	40.6/21.1
IC8	1130005640	S.IC TC4W53F (TE12L)	B	18.2/11.9
IC9	1110005310	S.IC AN6123MS	B	25.3/6.9
Q1	1590001330	S.TR DTA114EUA T106	B	59.8/34.9
Q2	1590000680	S.TR DTC114EUA T106	B	63.9/24.2
Q3	1530002850	S.TR 2SC4116-BL (TE85R)	B	67.7/8.9
Q4	1590001050	S.TR DTC114TUA T106	B	70.6/8.9
Q5	1590001050	S.TR DTC114TUA T106	B	70.1/11.4
Q6	1590001050	S.TR DTC114TUA T106	B	100.3/12.1
Q7	1590001050	S.TR DTC114TUA T106	B	102.9/12.1
D1	1790000620	S.DIO MA77 (TX)	B	82.2/15.3
D4	1790001250	S.DIO MA2S111-(TX)	B	60/31.3
D5	1790000950	S.ZEN MA8056-M (TX)	B	22.7/28.7
D6	1790000950	S.ZEN MA8056-M (TX)	B	22.7/32.6
D7	1790000950	S.ZEN MA8056-M (TX)	T	19.3/16
D8	1750000550	S.DIO 1SS355 TE-17	B	86.7/12.6
D9	1750000130	S.DIO DA204U T106	B	59.1/9.9
D10	1750000130	S.DIO DA204U T106	B	56.5/9.9
D11	1750000130	S.DIO DA204U T106	B	52.4/9.6
D12	1790001250	S.DIO MA2S111-(TX)	B	69.6/29.5
X1	6050011720	S.XTL CR-764 (19.6608 MHz)	B	86.6/20.5
L1	6200003640	S.COL MLF1608E 100K-T	B	12.3/9.7
R4	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	83.4/13.4
R5	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	82.9/16.7
R6	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	82.4/20.8
R7	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	81.1/17
R8	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	81.1/20.8
R9	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	53.5/21.1
R12	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	59.5/29.6
R14	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	62.3/32
R15	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	59.8/27.2
R16	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	59.5/33
R18	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	61.3/25.2
R19	7030009280	S.RES ERJ2GE 331 X (330Ω)	B	67.3/10.6
R20	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	18.6/14.6
R21	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	21.8/31.2
R22	7030009140	S.RES ERJ2GEJ 272 X (2.7 kΩ)	B	67.8/11.6
R24	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	28.3/17.9
R25	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	26.5/11.1
R26	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	24.8/16.5
R28	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	26.5/12
R29	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	26.7/17.9
R30	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	17.6/16.1
R31	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	12.1/21.1
R32	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	11.7/19.7
R33	7030009160	S.RES ERJ2GEJ 181 X (180Ω)	B	50.9/4.8
R34	7030009160	S.RES ERJ2GEJ 181 X (180Ω)	B	65.1/8.5
R35	7210003050	VAR EVU-F2KFK3 B14 (10KB)	B	64.1/8.4
R36	7030009160	S.RES ERJ2GEJ 181 X (180Ω)	B	63.2/8.9
R37	7030009160	S.RES ERJ2GEJ 181 X (180Ω)	B	86.9/11.2
R38	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	88.6/13.9
R39	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	51.7/6.9
R40	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	54.4/8.8
R41	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	60.6/7.8
R42	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	97.6/12.6
R43	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	104.8/12.5
R44	7030005010	S.RES ERJ2GEJ 681 X (680Ω)	B	83.4/34.2
R47	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	

## [FRONT-A UNIT] (for IC-F2700 series)

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R48	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	74.9/29.4
R49	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	75.8/29.6
R50	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	76.7/29.9
R51	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	77.6/30.2
R52	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	78.5/29.9
R55	7510001470	S.TMR NTCG20 4AG 473JT	B	82.3/25.3
R56	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	80.8/26.7
R57	7030003810	S.RES ERJ3GEJY 125 V (1.2 MΩ)	B	57.9/33.2
R58	7030003810	S.RES ERJ3GEJY 125 V (1.2 MΩ)	B	54.2/29.8
R59	7310005130	S.TRI RH03ADCS5X (470 kΩ)	B	55/32.2
R60	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	14.5/10.7
R61	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	19.7/8.6
R62	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	21.3/8.6
R63	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	26.8/4.7
R64	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	26.5/10.2
R65	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	28.2/9.3
R66	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	29.9/9.3
R67	7030009280	S.RES ERJ2GE 331 X (330Ω)	B	24.7/10.2
R68	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	24.7/9.3
R69	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	81.9/33.3
R70	7410001130	S.ARY EXB28V102JX	B	65.2/19.9
R71	7410001130	S.ARY EXB28V102JX	B	65.6/17
R72	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	83.7/27.6
R73	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	21.8/30.1
R74	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	21.7/13.3
R75	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	51.1/23.4
R76	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	73/30.1
R77	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	18.1/8.6
C10	4030016930	S.CER ECJ0EB1A104K	B	81.7/19
C11	4030017030	S.CER ECJ0EB1A273K	B	82.4/32
C12	4030017630	S.CER ECJ0EC1H120J	B	83.4/21.8
C13	4030017580	S.CER ECJ0EC1H060C	B	83.4/19.9
C14	4030017640	S.CER ECJ0EB1H150J	B	83.4/18.3
C15	4030016930	S.CER ECJ0EB1A104K	B	81/13.4
C16	4030016790	S.CER ECJ0EB1C103K	B	82.7/23.6
C17	4030016930	S.CER ECJ0EB1A104K	B	81.1/23.3
C18	4030017420	S.CER ECJ0EC1H470J	B	100.7/8.8
C28	4030017460	S.CER ECJ0EB1E102K	B	60/26
C30	4030016930	S.CER ECJ0EB1A104K	B	79.9/8.1
C31	4030017460	S.CER ECJ0EB1E102K	B	90/5.9
C33	4030017460	S.CER ECJ0EB1E102K	B	11.1/21.1
C35	4030017420	S.CER ECJ0EC1H470J	B	91.5/4.7
C36	4030017460	S.CER ECJ0EB1E102K	B	23.8/30.1
C37	4030017420	S.CER ECJ0EC1H470J	B	7.8/9.4
C38	4030017420	S.CER ECJ0EC1H470J	B	88.7/11.2
C39	4030017460	S.CER ECJ0EB1E102K	B	96.1/10.7
C41	4030017420	S.CER ECJ0EC1H470J	B	94.2/11.5
C42	4030017420	S.CER ECJ0EC1H470J	B	13.2/25.2
C43	4030017460	S.CER ECJ0EB1E102K	B	23.9/15
C44	4030017420	S.CER ECJ0EC1H470J	B	90.5/11.2
C45	4030018860	S.CER ECJ0EB0J105K	B	14.5/9.7
C46	4030017420	S.CER ECJ0EC1H470J	B	92/12.8
C47	4030017420	S.CER ECJ0EC1H470J	B	17.6/15.2
C48	4030017460	S.CER ECJ0EB1E102K	B	29.1/15.3
C49	4030016790	S.CER ECJ0EB1C103K	B	25/17.7
C50	4550006540	S.TAN ECST1C475R	B	24.8/20.8
C51	4030017460	S.CER ECJ0EB1E102K	B	11.7/18.8
C52	4030017420	S.CER ECJ0EC1H470J	B	24.2/12
C53	4030004760	S.CER C2012 JF 1H 104Z-T	B	83.2/5.9
C54	4510006120	S.LEL ECEV1ES4R7SR	B	75.3/6.6
C55	4030004760	S.CER C2012 JF 1H 104Z-T	B	85.1/5.9
C56	4030006900	S.CER C1608 JB 1H 103K-T	B	78/7.7
C57	4550006050	S.TAN TEESVA 0J 106M8L	B	82.2/10.3
C58	4030017730	S.CER ECJ0EB1E471K	B	101.9/14
C59	4030017730	S.CER ECJ0EB1E471K	B	100.1/14
C60	4030016930	S.CER ECJ0EB1A104K	B	80.8/27.6
C61	4030016930	S.CER ECJ0EB1A104K	B	52.8/34.1
C62	4030016930	S.CER ECJ0EB1A104K	B	51.2/33.7
C63	4030016930	S.CER ECJ0EB1A104K	B	51.2/32.8
C64	4030016930	S.CER ECJ0EB1A104K	B	51.1/31.6
C65	4030016930	S.CER ECJ0EB1A104K	B	52/31.6
C66	4030017490	S.CER C1608 JB 1A 105K-T	B	51.6/26.3
C67	4030017490	S.CER C1608 JB 1A 105K-T	B	51.6/24.8
C68	4030017460	S.CER ECJ0EB1E102K	B	50.7/21.7
C69	4030017460	S.CER ECJ0EB1E102K	B	87.9/5.9
C70	4030017460	S.CER ECJ0EB1E102K	B	26.5/12.9
C71	4030017460	S.CER ECJ0EB1E102K	B	22.2/9.5
C72	4510004630	S.LEL ECEV1CA100SR	B	20.3/5.7
C73	4550006050	S.TAN TEESVA 0J 106M8L	B	29.7/6.2
C74	4030016930	S.CER ECJ0EB1A104K	B	26.5/9.3
C75	4030016930	S.CER ECJ0EB1A104K	B	28.2/8.3

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

**[FRONT-A UNIT] (for IC-F2700 series)**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C76	4030018860	S.CER ECJ0EB0J105K	B	24.7/11.1
C77	4030017420	S.CER ECJ0EC1H470J	B	82.2/35.1
C78	4030017420	S.CER ECJ0EC1H470J	B	81/32.4
C79	4030016930	S.CER ECJ0EB1A104K	B	28.2/11.1
J1	6510024520	S.CNR 12FLT-SM1-TB	B	91.2/8.5
J2	6450002210	CNR 3017-8821 <KIN>		
J4	6510022020	S.CNR 14FLT-SM1-TB	B	56.6/24.8
DS1	5030002810	LCD L4-0013TVY-1		
DS5	5040002310	S.LED SML-311YTT86	T	49.9/6.5
DS6	5040002310	S.LED SML-311YTT86	T	35.4/6.5
DS7	5040002310	S.LED SML-311YTT86	T	20.9/6.5
DS8	5040002310	S.LED SML-311YTT86	T	93.4/6.5
DS9	5040002310	S.LED SML-311YTT86	T	78.9/6.5
DS11	5040002310	S.LED SML-311YTT86	T	82.1/27
DS12	5040002310	S.LED SML-311YTT86	T	72.1/27
DS13	5040002310	S.LED SML-311YTT86	T	62.1/27
DS14	5040002310	S.LED SML-311YTT86	T	52.1/27
DS15	5040002310	S.LED SML-311YTT86	T	42.1/27
DS16	5040002310	S.LED SML-311YTT86	T	32.1/27
DS17	5040002930	S.LED SML-512MW T86	T	105.6/14
DS18	5040002990	S.LED SML-512UWT86	T	97.6/14
DS26	5040002310	S.LED SML-311YTT86	T	64.4/6.5
S9	2250000511	ECR RH70N1037E20-13F-2781		
SP1	2510001290	SP C062SB504-11		
W1	8900013690	CBL OPC-1425 (N=12, L=92)		
W2	8900013700	CBL OPC-1426		
EP1	89300065150	LCT SRCN-2781-SP-N-W		

**[FRONT-B UNIT] (for IC-F2800 series)**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC2	1110005770	S.IC S-80942CNMC-G9C-T2	B	84.7/29.8
IC3	1140010770	S.IC HD64F3687FP	B	69.6/14.8
IC4	1130005720	S.IC TC7W04F (TE12L)	B	65.8/28.7
IC5	1130008560	S.IC TC75S51F (TE85L)	B	29.7/15.7
IC6	1110005350	S.IC NJM2870F05-TE1	B	81.4/5.4
IC7	1130009120	S.IC SED1526F0A	B	43.3/21.1
IC8	1130005640	S.IC TC4W53F (TE12L)	B	9.2/5.5
IC9	1110005310	S.IC AN6123MS	B	29.7/6.5
Q1	1590001330	S.TR DTA114EUA T106	B	62.6/34.9
Q2	1590000680	S.TR DTC114EUA T106	B	66.6/24.2
Q3	1530002850	S.TR 2SC4116-BL (TE85R)	B	70.4/8.9
Q4	1590001050	S.TR DTC114TUA T106	B	73.3/8.9
Q5	1590001050	S.TR DTC114TUA T106	B	72.8/11.4
Q6	1590001050	S.TR DTC114TUA T106	B	103/12.1
Q7	1590001050	S.TR DTC114TUA T106	B	105.6/12.1
D1	1790000620	S.DIO MA77 (TX)	B	84.9/15.3
D4	1790001250	S.DIO MA2S111-(TX)	B	62.7/31.3
D5	1790000950	S.ZEN MA8056-M (TX)	B	24/28.5
D6	1790000950	S.ZEN MA8056-M (TX)	B	24/32.2
D7	1790000950	S.ZEN MA8056-M (TX)	B	19.9/15.6
D8	1750000550	S.DIO 1SS355 TE-17	B	89.4/12.6
D9	1750000130	S.DIO DA204U T106	B	61.8/9.9
D10	1750000130	S.DIO DA204U T106	B	59.2/9.9
D11	1750000130	S.DIO DA204U T106	B	55/9.3
D12	1790001250	S.DIO MA2S111-(TX)	B	72.3/29.5
X1	6050011720	S.XTL CR-764 (19.6608 MHz)	B	89.3/20.5
L1	6200003640	S.COL MLF1608E 100K-T	B	10.1/8.9
R4	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	86.1/13.4
R5	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	85.6/16.7
R6	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	85.1/20.8
R7	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	83.8/17

**[FRONT-B UNIT] (for IC-F2800 series)**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R8	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	83.8/20.8
R9	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	56.2/21.1
R12	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	62.2/29.6
R14	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	65/32
R15	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	62.5/27.2
R16	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	62.3/33
R18	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	64/25.2
R19	7030009160	S.RES ERJ2GEJ 181 X (180Ω)	B	70/11.3
R20	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	21/14.5
R21	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	23.2/30.8
R22	7030009140	S.RES ERJ2GEJ 272 X (2.7 kΩ)	B	71/12.3
R24	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	31/17.9
R25	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	29.2/11.1
R26	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	27.5/16.5
R28	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	29.2/12
R29	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	29.4/17.9
R30	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	17.2/16.2
R31	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	12.2/21.6
R32	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	11.7/20.3
R33	7030007280	S.RES ERJ2GEJ 331 X (330Ω)	B	104.3/34.6
R34	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	121.2/29.9
R35	7210003050	VAR EVU-F2KFK3 B14 (10KB)		
R36	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	99.2/28.8
R37	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	99.2/29.8
R38	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	87.2/11.7
R39	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	92.3/13.7
R40	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	54.5/6.9
R41	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	57.5/8.9
R42	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	63.4/7.8
R43	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	100.3/12.6
R44	7030005010	S.RES ERJ2GEJ 681 X (680Ω)	B	107.6/12.5
R48	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	77.6/29.4
R49	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	78.5/29.6
R50	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	79.4/29.9
R51	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	80.3/30.2
R52	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	81.2/29.9
R55	7510001470	S.TMR NTCG20 4AG 473JT	B	85/25.3
R56	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	83.6/26.7
R57	7030003810	S.RES ERJ3GEJY 125 V (1.2 MΩ)	B	60.7/33.2
R58	7030003810	S.RES ERJ3GEJY 125 V (1.2 MΩ)	B	56.9/29.8
R59	7310005130	S.TRI RH03ADCS5X (470 kΩ)	B	57.7/32.2
R60	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	7.2/9
R61	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	5.7/3.9
R62	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	26/10.1
R63	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	31.2/4.3
R64	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	29.2/10.1
R65	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	30.5/9.1
R66	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	32.5/9.1
R67	7030009280	S.RES ERJ2GE 331 X (330Ω)	B	27.6/9.1
R68	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	29.2/9.1
R70	7410001130	S.ARY EXB28V102JX	B	67.9/19.9
R71	7410001130	S.ARY EXB28V102JX	B	68.3/17
R72	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	86.5/27.6
R73	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	23.2/29.9
R74	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	17.2/14.1
R75	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	53.8/23.4
R76	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	75.8/30.1
R77	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	4.7/3.9
R80	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	121.9/11.6
R81	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	67.8/4.3
R82	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	53.7/4.8
R83	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	99.2/26.2
R84	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	99.2/25.2
C10	4030016930	S.CER ECJ0EB1A104K	B	84.4/19
C11	4030017030	S.CER ECJ0EB1A273K	B	85.2/32
C12	4030017630	S.CER ECJ0EC1H120J	B	86.1/21.8
C13	4030017580	S.CER ECJ0EC1H060C	B	86.1/19.9
C14	4030017640	S.CER ECJ0EB1H150J	B	86.1/18.1
C15	4030016930	S.CER ECJ0EB1A104K	B	83.7/13.4
C16	4030016790	S.CER ECJ0EB1C103K	B	85.4/23.6
C17	4030016930	S.CER ECJ0EB1A104K	B	83.8/23.3
C18	4030017420	S.CER ECJ0EC1H470J	B	103.4/8.8
C28	4030017460	S.CER ECJ0EB1E102K	B	62.7/26
C30	4030016930	S.CER ECJ0EB1A104K	B	82.7/8
C31	4030017460	S.CER ECJ0EB1E102K	B	92.5/4.2
C33	4030017460	S.CER ECJ0EB1E102K	B	11.3/21.6
C35	4030017420	S.CER ECJ0EC1H470J	B	92.5/5.1
C36	4030017460	S.CER ECJ0EB1E102K	B	24.8/29.9
C37	4030017420	S.CER ECJ0EC1H470J	B	6.2/9
C38	4030017420	S.CER ECJ0EC1H470J	B	88.7/11.2
C39	4030017460	S.CER ECJ0EB1E102K	B	96/10.5
C41	4030017420	S.CER ECJ0EC1H470J	B	93.9/11.3
C42	4030017420	S.CER ECJ0EC1H470J	B	13.3/25
C43	4030017460	S.CER ECJ0EB1E102K	B	26.7/15.1
C44	4030017420	S.CER ECJ0EC1H470J	B	90.5/11.2
C45	4030018860	S.CER ECJ0EB0J105K	B	8.2/9
C46	4030017420	S.CER ECJ0EC1H470J	B	94.7/12.8

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



**[FRONT-B UNIT] (for IC-F2800 series)**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C47	4030017420	S.CER ECJ0EC1H470J	B	18.5/15.8
C48	4030017460	S.CER ECJ0EB1E102K	B	31.8/15.3
C49	4030016790	S.CER ECJ0EB1C103K	B	27.8/17.7
C50	4550006540	S.TAN ECST1CY475R	B	27.5/20.8
C51	4030017460	S.CER ECJ0EB1E102K	B	11.7/19.3
C52	4030017420	S.CER ECJ0EC1H470J	B	26.9/12
C53	4030004760	S.CER C2012 JF 1H 104Z-T	B	84.1/5.8
C54	4510006120	S.ELE ECEV1ES4R7SR	B	76.7/5.2
C55	4030004760	S.CER C2012 JF 1H 104Z-T	B	85.9/5.8
C56	4030006900	S.CER C1608 JB 1H 103K-T	B	81/7.8
C57	4550006050	S.TAN TEESVA 0J 106M8L	B	84.9/10.3
C58	4030017730	S.CER ECJ0EB1E471K	B	104.6/14
C59	4030017730	S.CER ECJ0EB1E471K	B	102.8/14
C60	4030016930	S.CER ECJ0EB1A104K	B	83.6/27.6
C61	4030016930	S.CER ECJ0EB1A104K	B	55.5/34.1
C62	4030016930	S.CER ECJ0EB1A104K	B	53.9/33.7
C63	4030016930	S.CER ECJ0EB1A104K	B	53.9/32.8
C64	4030016930	S.CER ECJ0EB1A104K	B	53.8/31.6
C65	4030016930	S.CER ECJ0EB1A104K	B	54.8/31.6
C66	4030017490	S.CER C1608 JB 1A 105K-T	B	54.3/26.3
C67	4030017490	S.CER C1608 JB 1A 105K-T	B	54.3/24.8
C68	4030017460	S.CER ECJ0EB1E102K	B	53.4/21.7
C69	4030017460	S.CER ECJ0EB1E102K	B	87.3/5.2
C70	4030017460	S.CER ECJ0EB1E102K	B	29.2/12.9
C71	4030017460	S.CER ECJ0EB1E102K	B	12.7/4.1
C72	4510004630	S.ELE ECEV1CA100SR	B	25.6/6.1
C73	4550006050	S.TAN TEESVA 0J 106M8L	B	34/5.7
C74	4030016930	S.CER ECJ0EB1A104K	B	27.6/10.1
C75	4030016930	S.CER ECJ0EB1A104K	B	31.5/9.1
C76	4030018860	S.CER ECJ0EBOJ105K	B	27.6/11.1
C79	4030016930	S.CER ECJ0EB1A104K	B	30.9/11.1
J1	6510024520	S.CNR 12FLT-SM1-TB	B	90.9/8.5
J2	6450002210	CNR 3017-8821 <KIN>		
J4	6510022020	S.CNR 14FLT-SM1-TB	B	59.4/24.8
DS1	5030002810	LCD L4-0013TVY-1	T	104.3/22.5
DS2	5040002310	S.LED SML-311YTT86	T	104.3/34.5
DS3	5040002310	S.LED SML-311YTT86	T	23.6/6.5
DS7	5040002310	S.LED SML-311YTT86	T	123.5/30.4
DS8	5040002310	S.LED SML-311YTT86	T	139.8/30.4
DS9	5040002310	S.LED SML-311YTT86	T	156.1/30.4
DS10	5040002310	S.LED SML-311YTT86	T	84.9/27
DS11	5040002310	S.LED SML-311YTT86	T	74.9/27
DS12	5040002310	S.LED SML-311YTT86	T	64.9/27
DS13	5040002310	S.LED SML-311YTT86	T	54.9/27
DS14	5040002310	S.LED SML-311YTT86	T	44.9/27
DS15	5040002310	S.LED SML-311YTT86	T	34.9/27
DS16	5040002310	S.LED SML-311YTT86	T	108.3/14
DS17	5040002930	S.LED SML-512MW T86	T	100.3/14
DS18	5040002990	S.LED SML-512UWT86	T	123.5/10.4
DS19	5040002310	S.LED SML-311YTT86	T	139.8/10.4
DS20	5040002310	S.LED SML-311YTT86	T	156.1/10.4
DS21	5040002310	S.LED SML-311YTT86	T	67.1/6.5
DS22	5040002310	S.LED SML-311YTT86	T	81.6/6.5
DS23	5040002310	S.LED SML-311YTT86	T	52.6/6.5
DS24	5040002310	S.LED SML-311YTT86	T	38.1/6.5
DS25	5040002310	S.LED SML-311YTT86	T	96.1/6.5
DS26	5040002310	S.LED SML-311YTT86	T	
W1	8900013690	CBL OPC-1425 (N=12, L=92)		
EP1	8930065150	LCT SRCN-2781-SP-N-W		

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1110005340	S.IC NJM12902V-TE1	B	75.1/36.2
IC2	1110006220	S.IC AK2346-E2	T	48.4/27.8
IC4	1130010100	S.IC LMX2352TMX	B	73.1/64.7
IC6	1130009700	S.IC LC73872M-TRM	B	10.4/16.7
IC8	1190001350	S.IC M62364FP 600D	B	68.7/27.4
IC9	1110005340	S.IC NJM12902V-TE1	T	114.4/51.5
IC12	1110003490	S.IC TA31136FN (D,EL)	B	27.9/28.4
IC13	1110005290	S.IC NJM2115V-TE1		
IC15	1110006230	S.IC NJM2711F-TE1 [F2721D], [F2821D] only	T	87.6/17.2
IC16	1190002080	S.IC AD7476ARTZ-500RL7 [F2721D], [F2821D] only	B	87.5/19.2
IC17	1130008810	S.IC TC7SH32FU (TE85L) [F2721D], [F2821D] only	B	97.7/20.7
IC18	1130011610	S.IC AK4550VT-E2 [F2721D], [F2821D] only	T	122/19.2
IC19	1110006230	S.IC NJM2711F-TE1 [F2721D], [F2821D] only	B	93.1/35.3
IC20	1140011880	S.IC HD64F2239TE16 [F2721D], [F2821D] only	T	111/30.5
IC21	1130011620	S.IC TC7MET374AFK (EC) [F2721D], [F2821D] only	B	122/14
IC22	1130003830	S.IC TC7S04F (TE85R) [F2721D], [F2821D] only	T	120.5/22.4
IC23	1140010190	S.IC HD64F2268TF20	B	100.3/60.1
IC24	1110005730	S.IC S-80928CNMC-G8Y-T2 [F2721D], [F2821D] only	T	116/17.5
IC25	1130011600	S.IC TC7MET541AFK (EC) [F2721D], [F2821D] only	B	122/8
IC26	1140009240	S.IC HN58X24128FPI	B	83/70
IC28	1130010390	S.IC HN58X2416TI [F2721D], [F2821D] only	T	93.5/27
IC29	1150002031	IC RA30H4452M-21 [H-25W]		
	1150002091	IC RA30H4047M-21 [L-25W]		
	1150002210	IC RA55H4047M [L-45W]		
	1150002220	IC RA55H4452M [H-45W]		
IC30	1190001340	S.IC M62334FP 600C	B	27.5/41.8
IC31	1180002590	S.REG XC6204B332MR [F2721D], [F2821D] only	T	109.5/11.5
IC32	1180002640	S.REG R114N151B-TR [F2721D], [F2821D] only	T	105/11.5
IC33	1180002590	S.REG XC6204B332MR [F2721D], [F2821D] only	B	105.5/13.1
IC34	1110002750	S.IC TA75S01F (TE85R)	B	148.9/38.1
IC35	1120002510	S.IC DS14C232TM	T	109.1/98.4
IC36	1180001250	S.IC TA7808F (TE16L)	B	120.8/75.2
IC37	1110002750	S.IC TA75S01F (TE85R)	T	51.3/84.1
IC38	1110003090	IC LA4425A		
IC39	1110005800	IC TA8225L		
IC40	1180000970	S.IC AN78L05M-(E1)	B	138.3/76.1
IC41	1140011890	S.IC TMS320VC5416PGE120 [F2721D], [F2821D] only	B	111/30.5
IC42	1130008230	S.IC BU4053BCFV-E2	B	61.3/12
IC43	1130008230	S.IC BU4053BCFV-E2	B	61.3/17.7
IC44	1110002750	S.IC TA75S01F (TE85R)	B	70.3/7.6
IC45	1130007570	S.IC BU4094BCFV-E2	B	128.2/57.9
IC46	1110005770	S.IC S-80942CNMC-G9C-T2	T	98.5/68.5
Q1	1530002850	S.TR 2SC4116-BL (TE85R)	B	39.3/29.4
Q2	1590001330	S.TR DTA114EUA T106	B	27.6/16.2
Q3	1530002600	S.TR 2SC4215-O (TE85R) [F2721D], [F2821D] only	B	84.6/26.9
Q4	1560000530	S.FET 2SK880-GR (TE85R)	B	82/53.5
Q6	1530002600	S.TR 2SC4215-O (TE85R)	B	33.8/34.8
Q7	1590000430	S.TR DTC144EUA T106	T	107.8/50.6
Q9	1530002850	S.TR 2SC4116-BL (TE85R)	B	71/54.5
Q10	1530002600	S.TR 2SC4215-O (TE85R)	B	34.1/51.4
Q11	1530002920	S.TR 2SC4226-T1 R25	T	50.5/51.6
Q12	1530002920	S.TR 2SC4226-T1 R25	T	50.5/48.8
Q13	1560000990	S.FET PMBFJ310	B	40.2/56.2
Q14	1560000990	S.FET PMBFJ310	B	37.2/56.2
Q15	1590000720	S.TR DTA114EUA T106	T	108.6/58.5
Q16	1530002920	S.TR 2SC4226-T1 R25	T	63.4/49.1
Q17	1590001400	S.TR XP1214 (TX)	B	49/50.2
Q18	1590000430	S.TR DTC144EUA T106	B	52.2/50.2
Q19	1530003310	S.TR 2SC5107-O (TE85R)	B	64.2/59.1
Q20	1530003310	S.TR 2SC5107-O (TE85R)	T	62.7/54.3
Q21	1530003310	S.TR 2SC5107-O (TE85R)	B	50/71.4
Q22	1530003310	S.TR 2SC5107-O (TE85R)	B	59.6/64.3
Q23	1530003310	S.TR 2SC5107-O (TE85R)	B	62.2/92.3
Q24	1580000730	S.FET 3SK293 (TE85L)	B	16.2/66.5
Q26	1560000840	S.FET 2SK1829 (TE85R)	T	17/64.3
Q27	1590000430	S.TR DTC144EUA T106	B	98.7/75.9
Q28	1590000430	S.TR DTC144EUA T106	T	128.6/45.7
Q29	1590000990	S.TR DTC363EK T146	B	148/83.4
Q30	1510000920	S.TR 2SA1577 T106 Q	B	101.2/75.9
Q31	1520000460	S.TR 2SB1132 T100 R	T	108.5/74.2

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
Q32	1590001190	S.TR XP6501-(TX) .AB	T	104.4/72.6
Q33	1590001450	S.FET 2SJ144-GR (TE85R)	B	148.5/21.6
Q34	1540000550	S.TR 2SD1664 T100Q	B	101.2/81.2
Q35	1590001050	S.TR DTC114TUA T106	T	104.4/76.2
Q36	1530002850	S.TR 2SC4116-BL (TE85R)	T	48.3/84.1
		[F2721/D], [F2821/D] only		
Q38	1590000430	S.TR DTC144EUA T106	T	148.6/30.8
Q39	1590000430	S.TR DTC144EUA T106	T	148.6/33.4
Q40	1590000430	S.TR DTC144EUA T106	B	142/41.1
Q41	1590000430	S.TR DTC144EUA T106	B	126/79.9
Q42	1550000100	S.FET 2SJ377 (TE16L1NQ)	B	131.5/75.6
Q43	1590000430	S.TR DTC144EUA T106	B	87.8/65.3
Q44	1590000990	S.TR DTC363EK T146	B	145/38.1
Q45	1590000430	S.TR DTC144EUA T106	T	22.4/28.1
Q46	1530002850	S.TR 2SC4116-BL (TE85R)	B	79/57.1
Q47	1530002850	S.TR 2SC4116-BL (TE85R)	B	81.5/57.1
Q48	1530000370	S.TR 2SC3356-T1B	B	69/92.8
Q49	1590001400	S.TR XP1214 (TX)	B	67.4/48.4
Q50	1560000530	S.FET 2SK880-GR (TE85R)	B	75.4/57.1
Q51	1560001360	S.FET 2SK3019 TL	B	41.3/45.3
Q52	1560001360	S.FET 2SK3019 TL	B	66.4/34.1
Q53	1560001360	S.FET 2SK3019 TL	B	66.8/19.4
Q54	1590001650	S.TR XP4601 (TX)	B	74/42.5
Q55	1590000430	S.TR DTC144EUA T106	B	78.8/42.5
Q56	1560001360	S.FET 2SK3019 TL	B	62.7/22.6
D2	1790001260	S.DIO MA2S077-(TX)	T	28.2/16.3
D3	1790001260	S.DIO MA2S077-(TX)	T	28.2/17.8
D4	1790001260	S.DIO MA2S077-(TX)	T	25.9/21.9
D5	1790001260	S.DIO MA2S077-(TX)	T	27.2/21.9
D7	1750001150	S.VCP HVC383BTRF-E	T	43.6/52.4
D9	1750001150	S.VCP HVC383BTRF-E	T	43.6/48
D11	1750000710	S.VCP HVC350BTRF	T	45.7/53.5
D12	1720000570	S.VCP MA368 (TX)	T	68.5/50.8
D13	1750000710	S.VCP HVC350BTRF	T	45.7/46.9
D14	1750000520	S.DIO DAN222TL	B	110.8/68.3
D15	1790000620	S.DIO MA77 (TX)	B	109.9/51.2
D16	1750000430	S.DIO HSB88WSTR	T	33.7/65.5
D17	1750000710	S.VCP HVC350BTRF	B	23.5/58.8
D18	1750000710	S.VCP HVC350BTRF	B	20.7/58.8
D19	1750000580	S.DIO 1SV307 (TPH3)	B	59.6/73.4
D20	1790000620	S.DIO MA77 (TX)	B	56.9/72.3
D21	1750000520	S.DIO DAN222TL	T	67.4/102.6
D22	1790001250	S.DIO MA2S111-(TX)	T	17.3/66.5
D23	1750000710	S.VCP HVC350BTRF	B	13.7/70.8
D24	1790001250	S.DIO MA2S111-(TX)	T	14.6/66.5
D25	1750000370	S.DIO DA221 TL	T	17/68.3
D26	1750000710	S.VCP HVC350BTRF	B	13.7/75.6
D27	1790000620	S.DIO MA77 (TX)	B	24.1/79.7
D28	1790000660	S.DIO MA728 (TX)	B	25.9/79.7
D29	1710001060	DIO XB15A407		
		[F2721/D], [F2821/D] only		
D30	1750000510	S.DIO UM9401F [F2710], [F2810] only	T	32.3/93
D31	1750000510	S.DIO UM9401F	T	37.1/84.9
D34	1790001250	S.DIO MA2S111-(TX)	B	145.1/82.5
D35	1790001210	S.DIO 1SS375-TL	B	31.8/90.4
D36	1750000520	S.DIO DAN222TL	T	128/42.8
D37	1750000370	S.DIO DA221 TL	T	104.4/78.5
D38	1790000660	S.DIO MA728 (TX)	B	3/86.2
D39	1790001250	S.DIO MA2S111-(TX)	B	151.5/22
D40	1790000660	S.DIO MA728 (TX)	B	4.4/102.9
D41	1790001240	S.DIO MA2S728-(TX)	T	54.6/81.5
D44	1750000520	S.DIO DAN222TL	B	89.4/75.9
D46	1790000700	DIO DSA3A1		
D47	1750000520	S.DIO DAN222TL	B	87.2/75.9
D48	1750000520	S.DIO DAN222TL	B	95.4/75.9
D49	1790001250	S.DIO MA2S111-(TX)	B	142/38.1
D51	1160000050	S.DIO DAP202U T106	B	139.9/19.3
D52	1160000050	S.DIO DAP202U T106	B	138.5/15.9
D53	1790001250	S.DIO MA2S111-(TX)	T	126.1/42.9
D54	1160000050	S.DIO DAP202U T106	T	134.2/13.8
D55	1160000050	S.DIO DAP202U T106	B	140.7/11
D57	1750000370	S.DIO DA221 TL	T	113.6/103.8
D58	1750000370	S.DIO DA221 TL	T	111/103.8
D59	1750000370	S.DIO DA221 TL	T	105.7/103.9
D60	1750000370	S.DIO DA221 TL	T	107.8/103.9
D64	1160000050	S.DIO DAP202U T106	B	143.8/11
D65	1790001250	S.DIO MA2S111-(TX)	B	138/20.5
D66	1750000370	S.DIO DA221 TL	T	130/105
D67	1750000370	S.DIO DA221 TL	T	102.9/103.9
D68	1750000710	S.VCP HVC350BTRF	B	12.4/75.6
D69	1750000710	S.VCP HVC350BTRF	B	12.4/70.8
D70	1750000710	S.VCP HVC350BTRF	T	66.9/46.1
D71	1750001150	S.VCP HVC383BTRF-E	T	69.6/46.1
F11	2020001270	CER CFWLB450KE2A-B0		
F12	2020001410	CER CFWLB450KGFA-B0		

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
F13	2020001780	S.CER CFWCA450KEFA-R0		
		[F2721/D], [F2821/D] only		
F14	2030000410	S.MLH FL-380 MFT46.3P 46.350 MHz	B	78.8/18.5
F15	2040001440	S.LC NFE31PT152Z1E9L	B	34.3/43.2
F16	2040001440	S.LC NFE31PT152Z1E9L	B	85.2/103.6
F17	2040001440	S.LC NFE31PT152Z1E9L	B	85.2/100.3
		[F2721/D], [F2821/D] only		
X1	6050011730	S.XTL CR-765 (3.6864 MHz)	B	48.3/21.2
X2	6050012050	S.XTL CR-794 (15.3 MHz)	B	82.6/42.8
X3	6050009910	S.XTL CR-563 (3.579545 MHz)	B	6.7/25.3
X4	6070000190	S.DCR CDBC450KCA24-R0	T	30.1/29.6
X5	6050011720	S.XTL CR-764 (19.6608 MHz)	B	114.8/55.8
X6	6050012130	S.XTL CR-802 (12.288 MHz)		
		[F2721/D], [F2821/D] only		
L1	6200004660	S.COL MLF1608A 1R8K-T	T	75.8/62.7
L2	6200003540	S.COL MLF1608D R22K-T	B	37/29.4
L3	6200004480	S.COL MLF1608D R82K-T	B	33.6/27.4
L4	6200005680	S.COL ELJRE 15NG-F	B	70.2/59.1
L6	6200004740	S.COL NL 252018T-1R2J	B	46.3/52.2
L9	6200004740	S.COL NL 252018T-1R2J	B	46.3/48.2
L12	6200008510	S.COL 0.30-0.9-4TR 10.5N [L] only	T	48.3/55
L13	6200004740	S.COL NL 252018T-1R2J	T	43.8/52.2
L14	6200008510	S.COL 0.30-0.9-4TR 10.5N [L] only	B	43.8/45.4
L15	6200004740	S.COL NL 252018T-1R2J	B	43.8/48.2
L16	6200003960	S.COL MLF1608A 1R0K-T		
		[F2721/D], [F2821/D] only		
L17	6200002860	S.COL NL 252018T-4R7J	T	101.4/16.4
L18	6200010740	S.COL C2520C-R27G-A	B	29.2/54.8
L19	6200002860	S.COL NL 252018T-4R7J	B	34.1/55
L20	6200003960	S.COL MLF1608A 1R0K-T	B	45.1/56.9
		[F2721/D], [F2821/D] only		
L21	6200005720	S.COL ELJRE 33NG-F	B	97.3/24.7
L22	6130002960	S.COL 617DB-1327-P3	B	66.5/59.9
L23	6130002960	S.COL 617DB-1327-P3	T	40.1/65.5
L24	6200005690	S.COL ELJRE 18NG-F [H]	B	28.4/65.5
		[L]	B	42.8/73
L25	6200005710	S.COL ELJRE 27NG-F [L]	B	42.8/73
L26	6200005690	S.COL ELJRE 33NG-F [H]	T	60.7/54.3
		[L]	B	45.6/73
L27	6200005710	S.COL ELJRE 27NG-F [L]	B	45.6/73
L28	6200007230	S.COL LQW2BHN15NJ01L [L]	B	50.2/68.4
L29	6200007670	S.COL LQW2BHN10NJ01L [H]	B	26.3/58.5
L30	6200005710	S.COL ELJRE 27NG-F [H]	B	23.3/58.5
L31	6200007230	S.COL LQW2BHN15NJ01L [L]	B	59.6/66.5
L32	6200007690	S.COL LQW2BHN18NJ01L [H]	B	64.3/92.7
L33	6200007700	S.COL LQW2BHN22NJ01L [L]	B	16.5/63.3
L34	6200005710	S.COL ELJRE 27NG-F [H]	B	16.5/63.3
L35	6200010150	S.COL AS080340-15N [H]	B	16.1/70.9
L36	6200007690	S.COL LQW2BHN18NJ01L [L]	B	16.1/70.9
L37	6200007720	S.COL LQW2BHN33NJ01L [H]	B	16.1/70.9
L38	6200010420	S.COL FHW1210HC 1R0JGT [L]	B	70.8/94.9
L39	6200005690	S.COL ELJRE 18NG-F [L]	T	74.4/100.7
L40	6200006770	S.COL ELJRE 1NS5-F [H]	T	35.6/101
L41	6200010150	S.COL AS080340-15N [H]	B	16.1/75.2
L42	6200002860	S.COL NL 252018T-4R7J [L]	B	16.1/75.2
L43	6200010150	S.COL AS080340-15N [L]	B	20.4/79.3
L44	6200010150	S.COL AS080340-15N [H]	B	41.9/93
L45	6200003960	S.COL MLF1608A 1R0K-T [L]	B	28.1/78.6
		[F2721/D], [F2821/D] only		
L46	6200004740	S.COL NL 252018T-1R2J [H]	B	28.1/78.6
L47	6200004740	S.COL NL 252018T-1R2J [L]	T	7.5/84.6
L48	6200008490	S.COL 0.30-0.9-3TR 7.5N [H]	T	115.4/20.2
L49	6200010150	S.COL AS080340-15N [L]	B	66.4/45.3
L50	6200007850	S.COL ELJNC R82K-F [H]	B	68.9/45.3
L51	6200007850	S.COL ELJNC R82K-F [L]	T	64.5/45.6
L52	6200004740	S.COL NL 252018T-1R2J [H]	T	9.5/103.5
L53	6200007850	S.COL ELJNC R82K-F [H]	B	49.6/53.8
L54	6200008490	S.COL 0.30-0.9-3TR 7.5N [H] only	B	49.5/46.6
L55	6200008490	S.COL 0.30-0.9-3TR 7.5N [H] only	B	64.5/49.1
L56	6200005640	S.COL ELJRE 6N8Z-F [H] only	T	45.9/55.2
		[L]	B	45.9/45.2
R1	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	74/96.1
R2	7030005700	S.RES ERJ2GEJ 274 X (270 kΩ)	B	75.8/32.6
R3	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	B	79.7/34.2
R4	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	65.9/21.7
R6	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)	B	64.7/21
R7	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)	B	64.7/21
R8	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	49.6/28.5
R9	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	T	49.2/33.9
		[L]	T	148.5/7.3
		[H]	T	50.9/33.9

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R10	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	T	49.2/32.9
R11	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	54.4/26.9
R12	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	54.1/16.2
R13	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	136.7/15.9
R14	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	145.5/16.1
R15	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	144.6/16.1
R16	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	143.7/16.1
R17	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	142.6/17.8
R18	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	142.1/12.9
R19	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	138.8/18.5
R20	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	140.3/15.9
R21	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	80.7/34.2
R22	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	B	82.1/35.4
R23	7410001130	S.ARY EXB28V102JX	T	73.5/66.3
R24	7030010040	S.RES ERJ2GE-JPW	B	79.7/38
R26	7030005230	S.RES ERJ2GEJ 334 X (330 kΩ)	B	53.2/30.2
R27	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	51.1/28.5
R28	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	53.2/28.5
R29	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	62.5/23
R30	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	66.7/16.6
R31	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	59.5/23.4
R32	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	65.5/16.2
R33	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	143.7/13.3
R34	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	144.6/13.3
R35	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	145.5/13.3
R36	7410001130	S.ARY EXB28V102JX	T	72.9/17.5
R37	7030007570	S.RES ERJ2GEJ 122 X (1.2 kΩ)	B	39.2/27.2
R38	7030007060	S.RES ERJ2GEJ 684X (680 kΩ)	B	38.2/27.2
R40	7030010040	S.RES ERJ2GE-JPW	B	70/36.2
R41	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	T	49.3/27.0
R42	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	T	54.4/24.9
R43	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)	T	54.4/25.9
R44	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	49.3/20.7
R45	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	51.4/20.7
R46	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	8.7/21.5
R47	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	7.1/21
R48	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	T	82.3/46.3
R49	7030004970	S.RES ERJ2GEJ 470 X (47Ω)	B	72.4/58
R50	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	28.7/15.1
R53	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	62.9/34.7
R54	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	56.2/24.9
R55	7030007060	S.RES ERJ2GEJ 684X (680 kΩ)	B	72/32.6
R56	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	111.6/47.5
R57	7510001730	S.TMR ERTJOEP 473J	B	85.7/42.7
R58	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	85.7/44.7
R59	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	26.7/15.1
R60	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	66.5/35.8
R62	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)	B	69/34.2
R67	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	85.5/23.1
R68	7030005040	[F2721D], [F2821D] only S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	83.6/25.1
R69	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ) [F2721D], [F2821D] only	B	85.5/25.1
R70	7030004970	S.RES ERJ2GEJ 470 X (47Ω)	T	110.6/47.5
R77	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	80.2/52.8
R79	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	80.2/50.5
R80	7030007280	S.RES ERJ2GEJ 331 X (330Ω)	B	76.2/54.5
R83	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	77.2/54.5
R84	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	28.7/19.1
R85	7030004970	S.RES ERJ2GEJ 470 X (47Ω)	B	31.4/29
R86	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	31.4/27.1
R87	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	28.7/20.1
R88	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	T	25.9/18.1
R89	7030009320	S.RES ERJ2GEJ 473 X (4.7Ω)	T	25.9/20.1
R90	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	B	62.7/25.7
R91	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ)	B	70.8/21.7
R92	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	71.7/21.7
R93	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	T	112.9/65.8
R94	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	135.4/5.3
R95	7030006610	S.RES ERJ2GEJ 394 X (390 kΩ)	T	118.7/49.5
R96	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ) [F2721D], [F2821D] only	B	83.6/23.1
R97	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	T	76.9/37.8
R98	7030005080	S.RES ERJ2GEJ 823 X (82 kΩ)	T	76.9/33.6
R99	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	25.8/24.1
R100	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	24/27.3
R101	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	24/29.3
R103	7030005310	S.RES ERJ2GEJ 124 X (120 kΩ)	B	22.3/28.3
R104	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	20.6/29.3
R105	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	B	24/32
R106	7030008290	S.RES ERJ2GEJ 473 X (47 kΩ)	T	109/52.9
R107	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	111.1/54.6
R108	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	118.7/51.2
R109	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	118.7/52.9
R110	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ) [F2721D], [F2821D] only	T	85.9/14.7
R111	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ) [F2721D], [F2821D] only	T	85.9/12.7

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R112	7030004980	S.RES ERJ2GEJ 101 X (100Ω) [F2721D], [F2821D] only	T	82.2/13.7
R113	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ) [F2721D], [F2821D] only	T	83.2/17.4
R114	7030004980	S.RES ERJ2GEJ 101 X (100Ω) [F2721D], [F2821D] only	T	87.7/12.7
R115	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	T	103.9/42
R116	7030009710	S.RES ERJ2GEJ 203 X (20 kΩ) [F2721D], [F2821D] only	T	87.7/14.7
R117	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ) [F2721D], [F2821D] only	B	85/15.9
R118	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	B	85/14.9
R119	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ) [F2721D], [F2821D] only	B	85/18.9
R120	7030004980	S.RES ERJ2GEJ 101 X (100Ω) [F2721D], [F2821D] only	B	86.1/21.5
R121	7030007340	S.RES ERJ2GEJ 153 X (15 kΩ) [F2721D], [F2821D] only	B	89.9/19
R122	7030004970	S.RES ERJ2GEJ 470 X (47Ω) [F2721D], [F2821D] only	B	91.9/19
R123	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ) [F2721D], [F2821D] only	B	87/14.9
R124	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	B	85/16.9
R125	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	76.9/38.8
R126	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ) [H]	T	76.9/35.8
	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ) [L]	T	76.9/35.8
R127	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	72.8/54.5
R128	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	42.9/45.4
R129	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	26.2/33.9
R130	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)	T	24.7/31.3
R131	7030005010	S.RES ERJ2GEJ 681 X (680Ω)	B	32.5/32.9
R132	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	34.4/36.7
R133	7030007270	S.RES ERJ2GEJ 151 X (150Ω)	B	36.2/36.7
R134	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	112.6/56.4
R135	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	112.6/58.2
R136	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	116.2/56.4
R137	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	116.2/58.2
R138	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	T	84.6/20.2
R139	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ) [F2721D], [F2821D] only	T	82.2/17.4
R140	7030009290	S.RES ERJ2GEJ 562 X (5.6 kΩ) [F2721D], [F2821D] only	T	81.2/17.4
R141	7030004980	S.RES ERJ2GEJ 101 X (100Ω) [F2721D], [F2821D] only	B	88.9/11.4
R142	7030005000	S.RES ERJ2GEJ 471 X (470Ω) [F2721D], [F2821D] only	B	91.9/11.4
R143	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ) [F2721D], [F2821D] only	B	100.5/40.4
R144	7030007250	S.RES ERJ2GEJ 220 X (22Ω) [F2721D], [F2821D] only	B	100.8/17.2
R145	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ) [F2721D], [F2821D] only	B	95.1/19
R146	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ) [F2721D], [F2821D] only	B	95.1/20.8
R147	7030006020	S.RES RR0510P-682-D (6.8 kΩ)	T	50.1/54.6
R148	7030008250	S.RES RR0510P-562-D (5.6 kΩ)	T	50.1/45.7
R149	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	64.5/45.3
R150	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	69.4/48.3
R151	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	32.5/36.7
R152	7030008280	S.RES ERJ2GEJ 271 X (270Ω)	B	38/36.7
R154	7030007280	S.RES ERJ2GEJ 331 X (330Ω)	B	34.1/48.4
R155	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	31.7/49.4
R156	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	113.6/60
R157	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	119.3/60
R158	7030008300	S.RES ERJ2GEJ 184 X (180 kΩ)	T	95.6/56
R159	7030005720	S.RES ERJ2GEJ 563 X (56 kΩ)	T	95.6/55
R160	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	115.2/60
R161	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	T	119.3/58.2
R162	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	T	95.6/54
R163	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	120.3/58.2
R164	7030004980	S.RES ERJ2GEJ 101 X (100Ω) [F2721D], [F2821D] only	B	92.9/20.8
R165	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ) [F2721D], [F2821D] only	T	81.2/19.2
R166	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ) [F2721D], [F2821D] only	T	82.2/19.2
R167	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ) [F2721D], [F2821D] only	T	97.8/14.2
R168	7030010040	S.RES ERJ2GE-JPW [F2721D], [F2821D] only	T	100.7/15.1
R169	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	T	98.4/38.3
R170	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ) [F2721D], [F2821D] only	T	99.3/44.2
R171	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	

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



[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R172	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	B	97.8/25.9
R173	7030010040	[F2721D], [F2821D] only S.RES ERJ2GE-JPW	B	116.5/17.7
R174	7030006020	S.RES RR0510P-682-D (6.8 kΩ)	T	48/52.4
R175	7030006020	S.RES RR0510P-682-D (6.8 kΩ)	T	50.5/53.4
R176	7030005010	S.RES ERJ2GEJ 681 X (680Ω)	[L]	50.5/47
	7030009280	S.RES ERJ2GE 331X (330Ω)	[H]	49/52
R177	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	49/52
R178	7030010040	S.RES ERJ2GE-JPW	T	53.8/48.4
R179	7030009280	S.RES ERJ2GE 331 X (330Ω)	B	48/49
R180	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	49/48.4
R181	7030005290	S.RES ERJ2GEJ 682 X (6.8 kΩ)	B	31.7/52.4
R182	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	36.3/51.4
R184	7030007250	S.RES ERJ2GEJ 220 X (22Ω)	B	31.7/53.4
R185	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	42.6/56.9
R186	7410000830	S.ARY EXB-V4V 103JV (10 kΩ)	T	103.7/61.3
R187	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	T	104.5/58.9
R188	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	107.4/51.3
R189	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	108.8/55.3
R190	7030008010	S.RES ERJ2GEJ 123 X (12 kΩ)	B	110.2/49.8
R191	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	110.2/48.8
R192	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	110.2/54.5
R193	7030005000	[F2721D], [F2821D] only S.RES ERJ2GEJ 471 X (470Ω)	T	118.7/39.5
R194	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	64.2/62.9
R195	7030008280	S.RES ERJ2GEJ 270 X (270Ω)	B	66.5/50.2
R196	7030007250	S.RES ERJ2GEJ 221 X (22Ω)	B	39.9/72.7
R197	7030008280	S.RES ERJ2GEJ 271 X (270Ω)	B	40.9/72.7
R198	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	42.1/71.5
R199	7030004970	S.RES ERJ2GEJ 470 X (47Ω)	B	110.4/62.4
R201	7030004970	[F2721D], [F2821D] only S.RES ERJ2GEJ 470 X (47Ω)	B	93.9/24.9
R202	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	B	90.5/33.9
R203	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	B	90.5/32.9
R204	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	B	92.3/32.9
R205	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	T	120.8/25.5
R206	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	118.2/15.7
R207	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	117.9/14.2
R208	7030005310	[F2721D], [F2821D] only S.RES ERJ2GEJ 124 X (120 kΩ)	B	118.3/11.7
R209	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	T	60.7/51.8
R210	7030007260	S.RES ERJ2GEJ 330 X (33Ω)	B	64.5/55.4
R211	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	60.2/61.5
R212	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	61.4/64.2
R213	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	[L]	62.4/57.3
	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	[H]	62.5/74.3
	7030004990	S.RES ERJ2GEJ 221 X (220Ω)	[L]	50.1/74.3
	7030007270	S.RES ERJ2GEJ 151 X (150Ω)	[H]	52.4/70
R215	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	B	52.4/70
R217	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	B	50.1/73.3
R218	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	52.5/71.3
R219	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	22.6/56.7
R220	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	21.6/56.7
R221	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	21.6/55
R222	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	B	96.3/35.3
R223	7030005050	[F2721D], [F2821D] only S.RES ERJ2GEJ 103 X (10 kΩ)	T	121.8/25.5
R224	7030009290	[F2721D], [F2821D] only S.RES ERJ2GEJ 562 X (5.6 kΩ)	T	120.8/19.6
R225	7030009290	[F2721D], [F2821D] only S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	117.2/11.6
R226	7030009290	[F2721D], [F2821D] only S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	115.4/11.6
R227	7030009290	[F2721D], [F2821D] only S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	114.5/10.2
R228	7030009290	[F2721D], [F2821D] only S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	114.5/9.2
R229	7030007300	[F2721D], [F2821D] only S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	112.8/9.2
R230	7030007300	[F2721D], [F2821D] only S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	118.3/9.5
R231	7030007300	[F2721D], [F2821D] only S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	118.3/9.5
R232	7030007300	[F2721D], [F2821D] only S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	116.7/8.7
R233	7030007300	[F2721D], [F2821D] only S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	118.4/8.2
R234	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	116.7/7.5
R235	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	T	118.4/7.1
R235	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	T	119.5/5.9

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R236	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	114.5/7.1
R237	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	116.2/5.2
R238	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	62.4/64.2
R239	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	63.2/74.5
R240	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	61.4/74.5
R242	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	62.2/90.5
R244	7030007260	S.RES ERJ2GEJ 330 X (33Ω)	B	62.2/95.1
R245	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	52.5/72.3
R246	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	54.3/73.3
R247	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	52.5/73.3
R248	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	60/69.8
R251	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	69.6/95.4
R252	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	B	65.6/90.5
R253	7030009320	S.RES ERJ2GEJ 4R7 X (4.7Ω)	B	16.6/60.7
R254	7030005720	S.RES ERJ2GEJ 563 X (56 kΩ)	T	14.6/60.3
R255	7030005530	S.RES ERJ2GEJ 100 X (10Ω)	T	16.8/68.9
R256	7030008290	S.RES ERJ2GEJ 183 X (18 kΩ)	B	18/66.9
R257	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	[H]	17/62.3
	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	[L]	18/60.7
R258	7030005710	S.RES ERJ2GEJ 121 X (120Ω)	B	18/60.7
R259	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	12.4/65.9
R261	7410000750	S.ARY EXB-V4V 104JV (100 kΩ)	B	13.4/67.7
R262	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	102.2/63.3
R263	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	84.9/65.3
R264	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	83.6/65.3
R268	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	98.9/62.4
R269	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	126.5/6.1
R270	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	125.7/9.7
R271	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	128.5/9.8
R272	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	128.5/8.7
R273	7030004980	[F2721D], [F2821D] only S.RES ERJ2GEJ 101 X (100Ω)	B	128.5/7.8
R275	7030007270	[F2721D], [F2821D] only S.RES ERJ2GEJ 151 X (150Ω)	B	125.7/7.7
R278	7030008400	S.RES ERJ2GEJ 182 X (1.8 kΩ)	T	74.8/103.6
R279	7030005170	S.RES ERJ2GEJ 474 X (470 kΩ)	T	14.6/62.3
R280	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	14.6/65.3
R281	7030007280	S.RES ERJ2GEJ 331 X (330Ω)	T	14.6/64.3
R282	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	65.3/97.8
R283	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	13.8/72.7
R284	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	13.8/73.7
R285	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	12/72.7
R286	7410001140	S.ARY EXB28V104JX	B	97.1/70.4
R287	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	99.9/52.6
R288	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	91.4/49.4
R290	7410000830	S.ARY EXB-V4V 103JV (10 kΩ)	B	91.2/49.4
R291	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	T	99.4/25
R292	7030005240	[F2721D], [F2821D] only S.RES ERJ2GEJ 473 X (47 kΩ)	T	98.3/27.4
R293	7030008400	[F2721D], [F2821D] only S.RES ERJ2GEJ 182 X (1.8 kΩ)	T	98.3/28.4
R294	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	65.3/100.8
R295	7030005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	T	65.3/98.8
R296	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	65.3/101.8
R297	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	B	28.4/36.4
R298	7030009320	S.RES ERJ2GEJ 4R7 X (4.7Ω)	B	27.3/36.4
R299	7030006070	[F2721D], [F2821D] only S.RES ERJ12YJ101U (100Ω)	T	102.8/13.8
R300	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	47.6/93
R301	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	142.9/82.5
R302	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	148.9/19.8
R303	7030003560	S.RES ERJ3GEYJ 103 V (10 kΩ)	T	148.5/5.6
R304	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	29.6/89.6
R305	7410001130	S.ARY EXB28V102JX	T	129.7/43.2
R306	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	106.5/92.6
R307	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	T	148/11.5
R308	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	147.2/19.8
R309	7030005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	98.1/73.7
R310	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	105/74.4
R311	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	99.8/77.9
R312	7030007270	S.RES ERJ2GEJ 151 X (150Ω)	B	101.5/77.9
R313	7030003320	S.RES ERJ3GEYJ 101 V (100Ω)	T	103.4/74.4
R314	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	6.5/86.2
	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)	[H]	3.9/84.8
R315	7030000220	S.RES MCR10EZJH 47Ω (470)	[L]	3/88
R316	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	52.6/86.4
R317	7030005700	S.RES ERJ2GEJ 274 X (270 kΩ)	B	34.3/88.6
R318	7030004990	S.RES ERJ2GEJ 221 X (220Ω)	T	50.2/87.4
R319	7030005070	S.RES ERJ2GEJ 683 X (68 kΩ)	T	48.3/88.3
R320	7520000240	[F2721D], [F2821D] only S.POS PRF18BC471QB1RB	B	39.4/89.1

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R321	7030010040	S.RES ERJ2GEJ-JPW	T	139.3/79.3
R322	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	148/81.2
R323	7030008410	S.RES ERJ2GEJ 392 X (3.9 kΩ)	B	148/79.2
R324	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	150.5/81.2
R325	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	148.9/41.3
R326	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	147.1/34.9
R327	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	148.9/32.9
R328	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	148/74.1
R329	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	148.9/34.9
R332	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	147.1/35.9
R333	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	148.9/23.4
R334	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	147.1/23.4
R335	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	151.6/20.8
R336	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	151.6/23.4
R337	7030004970	S.RES ERJ2GEJ 470 X (47Ω)	T	147.5/23.2
R338	7030000460	S.RES MCR10EZJH 4.7 kΩ	T	110.2/79.2
R339	7030000460	S.RES MCR10EZJH 4.7 kΩ	T	108.2/79.2
R340	7030000220	S.RES MCR10EZJH 47Ω (470)	B	16.3/103.8
R341	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)	B	5.3/101.5
R342	7030003320	S.RES ERJ3GEYJ 101 V (100Ω)	B	7.7/102.9
R343	7030005100	S.RES ERJ2GEJ 154 X (150 kΩ)	T	53.5/84.1
R344	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	50.3/81.4
R345	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	52.3/81.4
R346	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	T	48.3/81.4
R347	7030006610	S.RES ERJ2GEJ 394 X (390 kΩ)	T	47.3/81.4
R348	7030003560	S.RES ERJ3GEYJ 103 V (10 kΩ)	T	153.4/91
R349	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	148.9/40.3
R350	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	148/76.8
R351	7030003300	S.RES ERJ3GEYJ 680 V (68Ω)	T	142/72.1
R352	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	142.7/59.6
R353	7030003300	S.RES ERJ3GEYJ 680 V (68Ω)	T	151.4/66.7
R354	7030005110	S.RES ERJ2GEJ 224 X (220 kΩ)	B	150.7/40.3
R355	7030005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	148/71.1
R359	7030000460	S.RES MCR10EZJH 4.7 kΩ	T	106.4/79.2
R360	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	131.5/79
R361	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	B	127.8/79.4
R362	7030000620	S.RES MCR10EZJH 100 kΩ	T	16/107.6
R363	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	T	54.6/79.1
R364	7030005210	S.RES ERJ2GEJ 822 X (8.2 kΩ)	T	53.3/81.4
R365	7030003560	S.RES ERJ3GEYJ 103 V (10 kΩ)	T	150.3/109
R366	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	142.5/70.4
R367	7030000020	S.RES MCR10EZJH 1Ω (010)	B	151.5/57.9
R368	7030000020	S.RES MCR10EZJH 1Ω (010)	B	151.5/47.4
R370	7410000750	S.ARY EXB-V4V 104JV (100 kΩ)	T	95.5/75.3
R371	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	T	88.8/74.5
R372	7030005651	S.RES ERA3YKD 304V (300 kΩ)	B	129.6/67.6
R373	7030005871	S.RES ERA3YKD 104V (100 kΩ)	T	126.2/64.5
R374	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	92.6/77.3
R375	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	B	36.3/50.4
R376	7030005290	S.RES ERJ2GEJ 682 X (6.8 kΩ)	B	36.3/49.4
R377	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	142/39.3
R378	7540000290	ABS ERZV10D220		
R383	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	54.6/8.9
R384	7030008300	S.RES ERJ2GEJ 184 X (180 kΩ)	B	55.8/8.6
R387	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	101.3/69.3
R391	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	96.4/73.7
R392	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	101.9/53.2
R393	7410001140	S.ARY EXB28V104JX	T	94.2/50.6
R394	7030005600	S.RES ERJ2GEJ 273 X (27 kΩ)	B	68/8.3
R395	7030007350	S.RES ERJ2GEJ 393 X (39 kΩ)	B	70.9/9.8
R396	7030005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	66/6.1
R397	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	66/6.1
R398	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	89.9/59.1
R399	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	124.4/61.9
R400	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	59.8/8.3
R401	7030007340	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	58.9/8.3
R402	7030004980	S.RES ERJ2GEJ 101 X (100Ω)	T	132.4/14.3
R405	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	129.6/106.9
R406	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	126/106.2
R407	7030000100	S.RES MCR10EZJH 4.7Ω (4R7)	T	110.5/106.8
R408	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	119.8/19.6
R409	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	105.9/106.7
R410	7030000100	S.RES MCR10EZJH 4.7Ω (4R7)	T	114.8/106.8
R411	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	124.2/106.2
R413	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	127/106.9
R414	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	109.5/106.1
R415	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	130.6/106.9
R416	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	132.6/106.9
R417	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	104.9/106.7
R420	7030005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	102.9/96.9
R421	7030005160	S.RES ERJ2GEJ 105 X (1 MΩ)	B	46.1/24.4
R422	7030005000	S.RES ERJ2GEJ 471 X (470Ω)	B	50/69.6
R424	7030005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	148/75.8
R425	7030007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	T	25.9/16.1
R426	7030009320	S.RES ERJ2GEJ 4R7 X (4.7Ω)	T	27.4/19.6
R427	7030005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	70.9/10.8
R428	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	79.2/54.5
R429	7030005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	75.2/59.9

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
R430	70300009290	S.RES ERJ2GEJ 562 X (5.6 kΩ)	B	77.2/59.9
R431	70300005220	S.RES ERJ2GEJ 223 X (2.2 kΩ)	B	78.2/59.9
R432	7030007570	S.RES ERJ2GEJ 122 X (12 kΩ)	B	82.2/51.7
R433	7030007290	S.RES ERJ2GEJ 222 X (2.2 kΩ)	B	83.2/51.1
R434	70300005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	56.9/12.4
R435	70300005240	S.RES ERJ2GEJ 473 X (47 kΩ)	B	64.1/8.3
R436	70300005240	S.RES ERJ2GEJ 473 X (47 kΩ)	T	102.9/97.9
R437	70300005240	S.RES ERJ2GEJ 473 X (47 kΩ)		
R438	70300005240	S.RES ERJ2GEJ 473 X (47 kΩ) [F2721D], [F2821D] only	T	123.3/7.4
R439	70300005120	S.RES ERJ2GEJ 102 X (1 kΩ) [F2721D], [F2821D] only	T	124.2/7.4
R440	70300005120	S.RES ERJ2GEJ 102 X (1 kΩ)	T	82.1/86
R441	70300005120	S.RES ERJ2GEJ 102 X (1 kΩ) [F2721D], [F2821D] only	T	79.2/89.2
R442	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	122.8/25.5
R443	7030000220	S.RES MCR10EZJH 47Ω (470)	B	94.3/52.5
R446	70300005060	S.RES ERJ2GEJ 333 X (33 kΩ)	B	69.4/97.3
R447	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	142.3/15.9
R448	70300005120	S.RES ERJ2GEJ 102 X (1 kΩ) [F2721D], [F2821D] only	B	141.3/15.9
R449	70300005050	S.RES ERJ2GEJ 103 X (10 kΩ) [F2721D], [F2821D] only	B	90.5/36.9
R450	70300005050	S.RES ERJ2GEJ 103 X (10 kΩ) [F2721D], [F2821D] only	B	94.4/30.9
R451	70300006020	S.RES RR0510P-682-D (6.8 kΩ)	T	94.4/31.9
R452	70300006020	S.RES RR0510P-682-D (6.8 kΩ)	T	63.5/47.3
R453	70300009320	S.RES ERJ2GEJ 4R7 X (4.7Ω)	T	65.8/50.3
R454	70300005010	S.RES ERJ2GEJ 681 X (680Ω)	[L] [H] B	65.8/48.3
R455	70300009270	S.RES ERJ2GEJ 821 X (820Ω)	B	64.4/46.9
R456	70300005120	S.RES ERJ2GEJ 102 X (1 kΩ)	B	69.8/48.9
R456	70300005530	S.RES ERJ2GEJ 100 X (100Ω)	T	69.4/49.3
R457	70300004980	S.RES ERJ2GEJ 101 X (100Ω)	B	77.2/56.5
R458	70300005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	77.2/58.2
R459	70300005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	T	79.2/55
R460	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	101/65.3
R461	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	98.4/66.3
R462	70300005230	S.RES ERJ2GEJ 334 X (330 kΩ)	B	56.4/15.8
R463	7030010040	S.RES ERJ2GEJ-JPW	T	56.7/12.1
R464	70300005070	S.RES ERJ2GEJ 683 X (6.8 kΩ)	T	117.7/54.6
R465	70300008410	S.RES ERJ2GEJ 392 X (3.9 kΩ)	B	68/34.2
R466	70300005290	S.RES ERJ2GEJ 682 X (6.8 kΩ)	B	67.2/15.3
R467	7030010040	S.RES ERJ2GEJ-JPW	T	50.9/32.9
R468	7030010040	S.RES ERJ2GEJ-JPW	T	47.4/22.3
R469	70300004980	S.RES ERJ2GEJ 101 X (100Ω)	B	116.7/100.8
R470	75100001730	S.TMR ERJ2JOEP 473J	B	22.3/29.3
R471	70300005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	67.5/39.5
R472	70300005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	69.3/39.5
R473	70300005220	S.RES ERJ2GEJ 223 X (22 kΩ)	B	71.6/40.7
R474	70300007340	S.RES ERJ2GEJ 153 X (15 kΩ)	B	77/39.5
R475	70300007300	S.RES ERJ2GEJ 332 X (3.3 kΩ)	B	73.6/39.5
R476	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	73.6/40.7
R477	70300005070	S.RES ERJ2GEJ 683 X (6.8 kΩ)	B	76.3/41.7
R478	70300007570	S.RES ERJ2GEJ 122 X (12 kΩ)	B	76.3/43.6
R479	70300005050	S.RES ERJ2GEJ 103 X (10 kΩ)	B	79.4/39.5
R480	70300005040	S.RES ERJ2GEJ 472 X (4.7 kΩ)	B	82.1/39.4
R481	70300005030	S.RES ERJ2GEJ 152 X (1.5 kΩ)	B	76.3/42.7
R482	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	B	64.7/22
R483	7510001750	S.TMR NTCG16 4QH 334KT	T	55/10.7
R484	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ) [F2721D], [F2821D] only	T	128.8/40.1
R485	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ) [F2721D], [F2821D] only	T	127.9/40.1
R486	70300005090	S.RES ERJ2GEJ 104 X (100 kΩ)	T	118.7/37.8
C1	4030017420	S.CER ECJ0EC1H470J	T	76.8/8.5
C2	4030017420	S.CER ECJ0EC1H470J	T	76.8/9.5
C3	4030017460	S.CER ECJ0EB1E102K	B	78/63.2
C4	4030017330	S.CER ECJ0EF1C104Z	T	75.4/65.8
C5	4030017420	S.CER ECJ0EC1H470J	T	76.4/65.8
C6	4030017420	S.CER ECJ0EC1H470J	T	76.4/68.2
C7	4030017460	S.CER ECJ0EB1E102K	B	84.6/35.4
C8	4030018860	S.CER ECJ0EBOJ105K	B	62.6/21
C10	4030017460	S.CER ECJ0EB1E102K	T	50.9/34.9
C11	45500003220	S.TAN TEESVA 1E 105M8L	T	54.9/34.9
C12	4030016930	S.CER ECJ0EB1A104K	T	148.5/9
C13	45500003220	S.TAN TEESVA 1E 105M8L	T	54.9/32.8
C14	4030017420	S.CER ECJ0EC1H470J	T	44.9/33.9
C15	4030017420	S.CER ECJ0EC1H470J	T	43.5/23.1
C16	4030017420	S.CER ECJ0EC1H470J	T	44.9/32.9
C17	4030017420	S.CER ECJ0EC1H470J	T	43.5/24.2
C18	4030017420	S.CER ECJ0EC1H470J	T	46.8/32.9
C19	4030016950	S.CER ECJ0EB1A473K	T	54.4/27.9
C20	4030017420	S.CER ECJ0EC1H470J	T	46.8/33.9
C21	4030016930	S.CER ECJ0EB1A104K	T	52.2/16.2
C22	4030017420	S.CER ECJ0EC1H470J	B	52.1/30.2
C24	4030017420	S.CER ECJ0EC1H470J	B	135.2/8.5
C25	4030017460	S.CER ECJ0EB1E102K	B	142.3/17.7

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



[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C26	4030017420	S.CER ECJ0EC1H470J	T	73.4/8.7
C27	4030017420	S.CER ECJ0EC1H470J	T	68.5/14.9
C28	4030017420	S.CER ECJ0EC1H470J	T	70.3/14.9
C29	4030017420	S.CER ECJ0EC1H470J	B	77.5/32.6
C30	4030017510	S.CER ECJ0EC1H680J	B	82.1/36.4
C31	4030017330	S.CER ECJ0EF1C104Z	T	74.3/61.9
C32	4510004630	S.ELE ECEV1CA100SR	T	80.6/62.2
C33	4030017420	S.CER ECJ0EC1H470J	T	75.4/68.2
C34	4030017620	S.CER ECJ0EC1H100C	B	41.2/29.6
C37	4030017710	S.CER ECJ0EC1H181J	T	53/25.4
C38	4030017400	S.CER ECJ0EC1H220J	B	44.3/24.4
C39	4030017910	S.CER ECJ0EB1H152K	B	52.1/28.5
C41	4030017760	S.CER ECJ0EB1H222K	B	66.7/14
C42	4030017460	S.CER ECJ0EB1E102K	B	66.7/17.6
C43	4030017420	S.CER ECJ0EC1H470J	T	137/12.8
C44	4030017460	S.CER ECJ0EB1E102K	B	141.4/6.5
C45	4030017460	S.CER ECJ0EB1E102K	T	130.6/6
C46	4030017420	S.CER ECJ0EC1H470J	T	74.6/16.3
C47	4030017420	S.CER ECJ0EC1H470J	T	72.3/14.9
C48	4030017460	S.CER ECJ0EB1E102K	B	74.9/69.2
C49	4030017460	S.CER ECJ0EB1E102K	B	70.5/60.2
C50	4030017420	S.CER ECJ0EC1H470J	B	72.3/60.2
C51	4030016790	S.CER ECJ0EB1C103K	B	40.2/27.2
C52	4030016930	S.CER ECJ0EB1A104K	B	41.2/27.2
C53	4030016790	S.CER ECJ0EB1C103K	B	37/27.2
C54	4030017500	S.CER ECJ0EC1H560J	B	35.8/29
C55	4030017570	S.CER ECJ0EC1H040B	B	34.8/29
C56	4030017590	S.CER ECJ0EC1H070C	B	34.8/27.1
C60	4510004630	S.ELE ECEV1CA100SR	T	44.9/18.6
C61	4030017760	S.CER ECJ0EB1H222K	B	56.4/18.2
C62	4030017460	S.CER ECJ0EB1E102K	T	46.1/21.5
C63	4030017400	S.CER ECJ0EC1H220J	B	47.9/24.4
C64	4030016930	S.CER ECJ0EB1A104K	T	49.3/21.7
C65	4030016930	S.CER ECJ0EB1A104K	B	54.3/28.5
C66	4030016930	S.CER ECJ0EB1A104K	B	63.1/8.3
C67	4030016930	S.CER ECJ0EB1A104K	B	8.8/11.9
C68	4030017640	S.CER ECJ0EC1H150J	B	6.1/17.2
C69	4030017390	S.CER ECJ0EC1H180J	B	6.1/21
C70	4030016930	S.CER ECJ0EB1A104K	B	85.7/39.7
C71	4030017620	S.CER ECJ0EC1H100C	B	85.7/45.7
C72	4030017460	S.CER ECJ0EB1E102K	B	85.7/41.7
C73	4030017430	S.CER ECJ0EC1H101J	T	80.6/46.3
C75	4030017460	S.CER ECJ0EB1E102K	B	72.4/57
C76	4030016930	S.CER ECJ0EB1A104K	B	62.9/32.9
C77	4030016930	S.CER ECJ0EB1A104K	T	56.2/25.9
C78	4030018080	S.CER ECJ0EB1H182K	T	54.4/23.9
C79	4030016930	S.CER ECJ0EB1A104K	B	75.1/26.4
C80	4030017460	S.CER ECJ0EB1E102K	B	75.1/25.4
C81	4030016930	S.CER ECJ0EB1A104K	B	12/11.9
C82	4030016930	S.CER ECJ0EB1A104K	B	85.7/43.7
C83	4030017460	S.CER ECJ0EB1E102K	B	81.2/51.1
C84	4030017460	S.CER ECJ0EB1E102K	B	80.2/51.1
C85	4030017620	S.CER ECJ0EC1H100C	B	72.4/59
C87	4030017360	S.CER ECJ0EC1H030B	B	32.4/27.1
C88	4030016930	S.CER ECJ0EB1A104K	T	28.7/14.1
C89	4030016930	S.CER ECJ0EB1A104K	T	26.7/14.1
C90	4030016930	S.CER ECJ0EB1A104K	B	62.7/27.3
C91	4030018860	S.CER ECJ0EB0J105K	T	109.6/47.5
C93	4030016930	S.CER ECJ0EB1A104K	B	69/36.2
C94	4030016930	S.CER ECJ0EB1A104K	T	114/46.5
C95	4030016930	S.CER ECJ0EB1A104K	B	62.1/8.3
C96	4030016930	S.CER ECJ0EB1A104K	B	69.9/21.7
C98	4030016930	S.CER ECJ0EB1A104K	B	85.5/24.1
C100	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	83.6/24.1
C104	4030017590	S.CER ECJ0EC1H070C	B	70.5/57
C107	4030016930	S.CER ECJ0EB1A104K	B	29.1/24.1
C108	4030016930	S.CER ECJ0EB1A104K	T	25.9/19.1
C109	4030016930	S.CER ECJ0EB1A104K	T	111.2/65.8
C110	4030016930	S.CER ECJ0EB1A104K	B	137.2/5.3
C111	4030016930	S.CER ECJ0EB1A104K	B	61.4/25.3
C112	4030016930	S.CER ECJ0EB1A104K	B	68.3/21.7
C113	4030016930	S.CER ECJ0EB1A104K	T	119.7/49.5
C114	4030018860	S.CER ECJ0EB0J105K	T	115.7/46.5
C115	4030017420	S.CER ECJ0EC1H470J	T	117.7/49.5
C119	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	85/17.9
C120	4030017460	S.CER ECJ0EB1E102K	T	76.9/39.8
C121	4030018860	S.CER ECJ0EB0J105K	T	76.9/36.8
C122	4030017730	S.CER ECJ0EB1E471K	T	69.4/47.3
C123	4030017590	S.CER ECJ0EC1H070C	B	68.7/58
C124	4550003220	S.TAN TEESVA 1E 105M8L	B	75.7/51
C125	4030017420	S.CER ECJ0EC1H470J	B	74.8/54
C126	4030017380	S.CER ECJ0EC1H050B	B	68/59
C127	4030018860	S.CER ECJ0EB0J105K	T	76.9/34.7
C128	4030017460	S.CER ECJ0EB1E102K	T	76.9/32.6
C129	4030017460	S.CER ECJ0EB1E102K	T	28.8/25.3
C130	4030016930	S.CER ECJ0EB1A104K	B	26.6/23.7

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C131	4030017720	S.CER ECJ0EB1H331K	B	24/28.3
C132	4030018140	S.CER ECJ0EB1H391K	B	22.3/27.3
C133	4030017460	S.CER ECJ0EB1E102K	B	20.6/28.3
C134	4030017460	S.CER ECJ0EB1E102K	B	24/33
C135	4030018910	S.CER C1608 JB 0J 475K-T	T	107.3/53
C136	4030016930	S.CER ECJ0EB1A104K	T	110/52.9
C137	4030017770	S.CER ECJ0EB1E332K	T	119.7/51.2
C138	4030017420	S.CER ECJ0EC1H470J	T	110/54.6
C139	4030017420	S.CER ECJ0EC1H470J	T	117.7/51.2
C140	4550006250	S.TAN TEESVA 1A 106M8L [F2721D], [F2821D] only	T	81/15.3
C141	4030017450	S.CER ECJ0EB1E271K [F2721D], [F2821D] only	T	85.9/13.7
C142	4030017730	S.CER ECJ0EB1E471K [F2721D], [F2821D] only	T	87.7/13.7
C143	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	T	89.5/13.7
C144	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	80.5/13.7
C145	4030017680	S.CER ECJ0EC1H820J [F2721D], [F2821D] only	T	89.5/14.7
C146	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	119.9/40.3
C147	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	114.5/45
C148	4030017590	S.CER ECJ0EC1H070C [F2721D], [F2821D] only	B	90.9/19
C149	4550007080	S.TAN TEESVA 1C 106M8R [F2721D], [F2821D] only	B	87.5/24.6
C150	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	87.9/21.5
C151	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	87/15.9
C152	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	87/16.9
C153	4030017420	S.CER ECJ0EC1H470J	B	68.9/55.6
C155	4030016790	S.CER ECJ0EB1C103K	B	68.9/54.6
C156	4550007080	S.TAN TEESVA 1C 106M8R	B	71.8/50.4
C161	4030016930	S.CER ECJ0EB1A104K	B	62.4/46.9
C162	4550006250	S.TAN TEESVA 1A 106M8L	T	24.7/27.6
C163	4030017430	S.CER ECJ0EC1H101J	B	30.6/32.9
C164	4030017430	S.CER ECJ0EC1H101J	T	25.7/31.3
C165	4030017460	S.CER ECJ0EB1E102K	B	36.2/35.7
C166	4030017420	S.CER ECJ0EC1H470J	B	27.3/33.9
C167	4030017460	S.CER ECJ0EB1E102K	B	28.4/33.9
C168	4030017460	S.CER ECJ0EB1E102K	B	54.8/8.6
C170	4030017740	S.CER ECJ0EB1E821K	T	113.6/56.4
C171	4030017730	S.CER ECJ0EB1E471K	T	117.2/56.4
C172	4030016930	S.CER ECJ0EB1A104K	T	111.6/56.4
C173	4030017420	S.CER ECJ0EC1H470J	T	117.7/52.9
C174	4030017510	S.CER ECJ0EC1H680J	T	115.2/56.4
C175	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	85.6/20.2
C176	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	89.9/11.4
C177	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	90.9/11.4
C178	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	T	102.4/38.5
C179	4030017760	S.CER ECJ0EB1H222K [F2721D], [F2821D] only	B	92.9/11.4
C180	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	91.3/19.1
C181	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	102.6/40.4
C182	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	124.5/26.3
C183	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	92.9/19
C184	4550007080	S.TAN TEESVA 1C 106M8R [F2721D], [F2821D] only	B	97.3/16.8
C185	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	100.8/16.3
C186	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	116.5/16.7
C187	4030017760	S.CER ECJ0EB1H222K [F2721D], [F2821D] only	B	91.9/20.8
C188	4030017600	S.CER ECJ0EC1H080C	T	46.2/52.4
C190	4030017380	S.CER ECJ0EC1H050B	[L] T	46.2/51.4
	4030017590	S.CER ECJ0EC1H070C	[H] T	46.2/51.4
C191	4030017380	S.CER ECJ0EC1H050B	[L] T	43.6/53.6
	4030017590	S.CER ECJ0EC1H070C	[H] T	43.6/53.6
C192	4030017580	S.CER ECJ0EC1H060C	[H] T	46.2/48
	4030017590	S.CER ECJ0EC1H070C	[L] T	46.2/48
C193	4030016930	S.CER ECJ0EB1A104K	B	41.8/48.2
C194	4030017530	S.CER ECJ0EC1H0R5B	T	67.6/49.3
C196	4030017380	S.CER ECJ0EC1H050B	T	46.2/49
C197	4030017380	S.CER ECJ0EC1H050B	[H] T	43.6/46.8
	4030017570	S.CER ECJ0EC1H040B	[L] T	43.6/46.8

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C198	4030016790	S.CER ECJ0EB1C103K	B	34.4/32.9
C199	4030017460	S.CER ECJ0EB1E102K	B	32.5/37.7
C200	4030016790	S.CER ECJ0EB1C103K	B	31.7/50.4
C201	4030017460	S.CER ECJ0EB1E102K	B	31.7/51.4
C202	4030017350	S.CER ECJ0EC1H020B	B	38/35.7
C203	4030017640	S.CER ECJ0EC1H150J	B	38.1/44.3
C204	4030017350	S.CER ECJ0EC1H020B	B	31.7/48.4
C205	4030017460	S.CER ECJ0EB1E102K	B	34.1/49.4
C206	4030017460	S.CER ECJ0EB1E102K	T	120.3/60
C207	4030016780	S.CER ECJ0EB1C153K	T	113.6/58.2
C208	4030017450	S.CER ECJ0EB1E271K	T	115.2/58.2
C209	4030017420	S.CER ECJ0EC1H470J		
C210	4030017460	S.CER ECJ0EB1E102K [F2721D], [F2821D] only	B	92.4/8.6
C212	4030018860	S.CER ECJ0EB0J105K [F2721D], [F2821D] only	B	93.9/20.8
C213	4550006250	S.TAN TEESVA 1A 106M8L [F2721D], [F2821D] only	T	93.1/16
C214	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	100.7/17.5
C215	4550006250	S.TAN TEESVA 1A 106M8L [F2721D], [F2821D] only	T	93.1/21.2
C216	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	121.7/21
C217	4030017390	S.CER ECJ0EC1H180J	[H] T	48/53.4
C218	4030017630	S.CER ECJ0EC1H120J	[L] T	48/53.4
C218	4030017590	S.CER ECJ0EC1H070C	[H] T	48/51.4
C218	4030017630	S.CER ECJ0EC1H120J	[L] T	48/51.4
C219	4030017620	S.CER ECJ0EC1H100C	[L] T	53/51.8
C219	4030017640	S.CER ECJ0EC1H150J	[H] T	53/51.8
C220	4030016790	S.CER ECJ0EB1C103K	T	53/53.8
C221	4030017460	S.CER ECJ0EB1E102K	T	53/47.6
C222	4030017730	S.CER ECJ0EB1E471K	T	53/52.8
C223	4030017420	S.CER ECJ0EC1H470J	T	53/46.6
C224	4030017610	S.CER ECJ0EC1H090C	[L] T	48/47
C224	4030017630	S.CER ECJ0EC1H120J	[H] T	48/47
C225	4030017570	S.CER ECJ0EC1H040B	T	48/48
C226	4030017600	S.CER ECJ0EC1H080C	T	53/48.6
C227	4030017660	S.CER ECJ0EC1H330J	B	32/54.7
C228	4030016790	S.CER ECJ0EB1C103K	B	32/56.4
C229	4030017460	S.CER ECJ0EB1E102K	B	31/56.4
C230	4030016790	S.CER ECJ0EB1C103K	B	41.1/58.9
C231	4030017460	S.CER ECJ0EB1E102K	B	36.3/52.4
C232	4030016930	S.CER ECJ0EB1A104K	B	107.4/50.4
C233	4030017640	S.CER ECJ0EC1H150J	B	110.6/53
C234	4030017580	S.CER ECJ0EC1H060C	B	108.8/53
C235	4030017630	S.CER ECJ0EC1H120J	B	108.8/54
C236	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	96/25.9
C237	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	B	102.2/21.1
C238	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	125.7/11.8
C239	4030017530	S.CER ECJ0EC1H0R5B	T	53/50.8
C240	4030017530	S.CER ECJ0EC1H0R5B	T	53/49.6
C241	4030016930	S.CER ECJ0EB1A104K	B	69.9/52.2
C242	4030017730	S.CER ECJ0EB1E471K	T	65.5/55.4
C243	4030017420	S.CER ECJ0EC1H470J	B	51.8/48.4
C245	4030017350	S.CER ECJ0EC1H020B	T	36.1/65.5
C246	4030017580	S.CER ECJ0EC1H060C	[L] B	43.1/71.5
C246	4030017620	S.CER ECJ0EC1H100C	[H] B	43.1/71.5
C247	4030017460	S.CER ECJ0EB1E102K	B	52.5/74.3
C248	4030016930	S.CER ECJ0EB1A104K	B	110.8/65.8
C249	4030016930	S.CER ECJ0EB1A104K	T	107.5/61.2
C250	4030016930	S.CER ECJ0EB1A104K	B	110.6/57.6
C251	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	93.9/25.9
C252	4030017620	S.CER ECJ0EC1H100C [F2721D], [F2821D] only	B	92.3/31.9
C253	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	90.5/31.9
C254	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	90.5/34.9
C255	4030017420	S.CER ECJ0EC1H470J	B	64.5/53.6
C256	4030017460	S.CER ECJ0EB1E102K	B	64.2/60.9
C257	4030017460	S.CER ECJ0EB1E102K	B	63.4/64.2
C258	4030017340	S.CER ECJ0EC1H010B	B	60.6/57.3
C259	4030017380	S.CER ECJ0EC1H050B	B	60.2/59.5
C260	4030017420	S.CER ECJ0EC1H470J	B	64.2/61.9
C261	4030017580	S.CER ECJ0EC1H060C	[H] B	47.7/72
C261	4030017620	S.CER ECJ0EC1H100C	[L] B	47.7/72
C262	4030017420	S.CER ECJ0EC1H470J	B	52.5/69.3
C263	4030017420	S.CER ECJ0EC1H470J	B	52.5/70.3
C264	4030017390	S.CER ECJ0EC1H180J	[H] B	44.8/71.5
C264	4030017630	S.CER ECJ0EC1H120J	[L] B	44.8/71.5
C265	4030017350	S.CER ECJ0EC1H020B	B	27.8/59.3
C266	4030017530	S.CER ECJ0EC1H0R5B	B	22.1/59.7
C268	4030017530	S.CER ECJ0EC1H0R5B	[L] B	22.7/59.3

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C269	4030017550	S.CER ECJ0EC1H1R5B	[H] B	24.7/59.3
C269	4030017610	S.CER ECJ0EC1H090C	[L] B	23.6/56.7
C269	4030017620	S.CER ECJ0EC1H100C	[H] B	23.6/56.7
C270	4030017460	S.CER ECJ0EB1E102K	B	20.6/55
C271	4030017590	S.CER ECJ0EC1H070C	[H] B	20.6/56.7
C271	4030017610	S.CER ECJ0EC1H090C	[L] B	20.6/56.7
C272	4030018860	S.CER ECJ0EB0J105K [F2721D], [F2821D] only	B	89.7/22.9
C273	4030017460	S.CER ECJ0EB1E102K [F2721D], [F2821D] only	B	89.7/23.9
C275	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	119.5/11
C276	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	114.5/6.1
C277	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	T	121.1/5.9
C278	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	118.6/5.2
C279	4030017420	S.CER ECJ0EC1H470J	B	57.8/64.2
C280	4030017570	S.CER ECJ0EC1H040B	[H] B	59.6/68.3
C280	4030017620	S.CER ECJ0EC1H100C	[L] B	59.6/68.3
C281	4030016790	S.CER ECJ0EB1C103K	B	63/73.1
C282	4030017420	S.CER ECJ0EC1H470J	B	62/73.1
C283	4030017370	S.CER ECJ0EC1H3R5B	B	62.2/89.5
C284	4030017730	S.CER ECJ0EB1E471K	B	62.2/97.3
C285	4030017420	S.CER ECJ0EC1H470J	B	62.2/96.1
C287	4030017390	S.CER ECJ0EC1H180J	[H] B	54.3/72.3
C287	4030017620	S.CER ECJ0EC1H100C	[L] B	54.3/72.3
C288	4030017420	S.CER ECJ0EC1H470J	B	54.3/74.3
C289	4030017340	S.CER ECJ0EC1H010B	B	60/71
C290	4030017460	S.CER ECJ0EB1E102K	B	65.6/89.5
C291	4030017460	S.CER ECJ0EB1E102K	B	15.6/60.7
C292	4030017490	S.CER C1608 JB 1A 105K-T	B	14.7/63.9
C293	4030017460	S.CER ECJ0EB1E102K	B	14.7/60.7
C294	4030016790	S.CER ECJ0EB1C103K	[L] B	18/63.1
C294	4030017460	S.CER ECJ0EB1E102K	[H] B	18/63.1
C295	4030017460	S.CER ECJ0EB1E102K	T	17/60.3
C296	4030016930	S.CER ECJ0EB1A104K	T	14.6/61.3
C297	4030017420	S.CER ECJ0EC1H470J	B	18/65.1
C298	4030017590	S.CER ECJ0EC1H070C	B	15.8/68.9
C299	4030016930	S.CER ECJ0EB1A104K	T	17/61.3
C300	4030017460	S.CER ECJ0EB1E102K	T	19.4/64.3
C301	4030017340	S.CER ECJ0EC1H010B	B	22.6/55
C302	4030017460	S.CER ECJ0EB1E102K	B	13.4/65.9
C303	4030017460	S.CER ECJ0EB1E102K	B	14.4/65.9
C304	4030017420	S.CER ECJ0EC1H470J	B	82.4/65.3
C306	4030016930	S.CER ECJ0EB1A104K	B	93.6/66.4
C308	4030016930	S.CER ECJ0EB1A104K	B	111/16.3
C310	4550005980	S.TAN TEESVA 1A 475M8L [F2721D], [F2821D] only	T	121.8/19.6
C311	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	116/15.3
C312	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	T	113.6/19
C313	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	114.9/14.2
C314	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	106.5/21.3
C315	4030016790	S.CER ECJ0EB1C103K [F2721D], [F2821D] only	T	128.2/8.7
C316	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	T	128.5/10.8
C317	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	125.7/10.7
C318	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	128.5/6.8
C319	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	125.2/6.2
C320	4030017420	S.CER ECJ0EC1H470J [F2721D], [F2821D] only	B	66.9/92.8
C321	4030017370	S.CER ECJ0EC1H3R5B	B	62.2/94.1
C322	4030017420	S.CER ECJ0EC1H470J	B	68.6/95.4
C323	4030017460	S.CER ECJ0EB1E102K	B	67.6/95.4
C324	4030017420	S.CER ECJ0EC1H470J	B	72/95.4
C325	4030017360	S.CER ECJ0EC1H030B	[H] B	72/95.4
C325	4030017570	S.CER ECJ0EC1H040B	[L] B	74.8/98.8
C326	4030017360	S.CER ECJ0EC1H030B	[H] T	74.8/98.8
C326	4030017570	S.CER ECJ0EC1H040B	[L] T	74.8/102.6
C327	4030017570	S.CER ECJ0EC1H040B	T	73.3/103.5
C329	4030017730	S.CER ECJ0EB1E471K	T	14.6/63.3
C330	4030016930	S.CER ECJ0EB1A104K	T	17/73.2
C331	4030017360	S.CER ECJ0EC1H030B	[H] B	17/73.2
C331	4030017560	S.CER ECJ0EC1H2R5B	[L] B	17/73.2
C332	4030017420	S.CER ECJ0EC1H470J	T	65.3/96.8
C333	4550002980	S.TAN TEESVA 1C 225M8L	T	52.6/90.5
C334	4030017600	S.CER ECJ0EB1H080C	B	14.6/69.1
C335	4030017390	S.CER ECJ0EC1H180J	[H] B	15.6/72.7
C335	4030017410	S.CER ECJ0EC1H240J	[L] B	15.6/72.7
C336	4030017460	S.CER ECJ0EB1E102K	B	12/73.7

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

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C337	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	96.7/29.2
C338	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	111.7/11
C339	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	107.2/10.7
C340	4550007080	S.TAN TEESVA 1C 106M8R [F2721D], [F2821D] only	B	101.2/12.8
C341	4550006250	S.TAN TEESVA 1A 106M8L [F2721D], [F2821D] only	T	102.3/21.8
C342	4550007080	S.TAN TEESVA 1C 106M8R [F2721D], [F2821D] only	B	101.2/10.5
C343	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	105/11
C345	4030011050	S.CER GRM31M3C2H3R0CY21L	T	29.9/105.7
C346	4030011050	S.CER GRM31M3C2H3R0CY21L	T	29.9/103.1
C347	4510005750	S.ELE ECEV1EA2205P	T	60/95.1
C348	4030011020	S.CER GRM31M4C2H1R0CY21L [F2710-H], [F2810-H] [Other]	T	29.9/98.9
C349	4030011020	S.CER GRM31M4C2H1R0CY21L [F2710-H], [F2810-H]	T	29.9/98.9
	4030011040	S.CER GRM31M4C2H2R0CY21L [Other]	T	29.9/96.3
	4030011050	S.CER GRM31M3C2H3R0CY21L [2721/D-L], [2821/D-L]	T	29.9/96.3
C350	4550000560	S.TAN TEESVA 1V 334M-8L	T	69.7/101.6
C351	4030017460	S.CER ECJ0EB1E102K	T	71.3/103.5
C352	4030017420	S.CER ECJ0EC1H470J	T	72.3/103.5
C353	4030017420	S.CER ECJ0EC1H470J	T	47/103.2
C354	4030017460	S.CER ECJ0EB1E102K	T	46/103.2
C355	4510005750	S.ELE ECEV1EA2205P	T	51/101.3
C356	4030017730	S.CER ECJ0EB1E471K	T	45/103.2
C357	4030017420	S.CER ECJ0EC1H470J	B	50.3/90.6
C358	4550006250	S.TAN TEESVA 1A 106M8L	T	67.4/98.8
C359	4030017590	S.CER ECJ0EC1H070C	B	18.4/76.7
C360	4030017460	S.CER ECJ0EB1E102K	B	22.3/78.6
C361	4030017390	S.CER ECJ0EC1H180J [H]	B	15.6/73.7
	4030017410	S.CER ECJ0EC1H240J [L]	B	15.6/73.7
C362	4030017460	S.CER ECJ0EB1E102K	B	10.6/73.2
C363	4030017600	S.CER ECJ0EC1H080C	B	16.6/76.7
C364	4030017510	S.CER ECJ0EC1H680J	B	22.3/80
C365	4030016930	S.CER ECJ0EB1A104K	B	26.2/36.4
C366	4510004630	S.ELE ECEV1CA100SR	T	105.2/67.5
C367	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	107.2/12.5
C368	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	T	102.8/12.1
C369	4550005980	S.TAN TEESVA 1A 475M8L [F2721D], [F2821D] only	T	104.3/16.3
C370	4550005980	S.TAN TEESVA 1A 475M8L [F2721D], [F2821D] only	T	108.6/16.3
C371	4550005980	S.TAN TEESVA 1A 475M8L [F2721D], [F2821D] only	T	106.5/16.3
C372	4030016930	S.CER ECJ0EB1A104K [F2721D], [F2821D] only	B	108/14.6
C373	4030011070	S.CER GRM31M2C2H5R0CY21L	T	32.1/89.6
C374	4030017200	S.CER GRM31BR32J102KY01L	T	28/89.6
C375	4030011020	S.CER GRM31M4C2H1R0CY21L [H]	T	22.5/91.7
	4030011050	S.CER GRM31M3C2H3R0CY21L [L]	T	22.5/91.7
C376	4030011040	S.CER GRM31M4C2H2R0CY21L	T	24.8/91.7
C377	4030017420	S.CER ECJ0EC1H470J	B	43.9/90.6
C378	4030017460	S.CER ECJ0EB1E102K	B	82.8/95.3
C379	4030017420	S.CER ECJ0EC1H470J	B	81.8/95.3
C380	4030017400	S.CER ECJ0EC1H220J	B	80.8/95.3
C381	4030017420	S.CER ECJ0EC1H470J	B	52.2/99
C382	4030017460	S.CER ECJ0EB1E102K	T	65.3/99.8
C383	4030009570	S.CER C1608 CH 1H 0R3B-T	B	28.3/89.6
C384	4030017530	S.CER ECJ0EC1H0R5B [H]	B	27.5/80.2
	4030017350	S.CER ECJ0EC1H020B [L]	B	27.5/80.2
C385	4030017380	S.CER ECJ0EC1H050B [H]	B	28.8/80.2
	4030017600	S.CER ECJ0EC1H080C [L]	B	28.8/80.2
C386	4030018900	S.CER ECJ0EB0J474K	B	145.5/83.6
C387	4030017460	S.CER ECJ0EB1E102K	B	99.8/73.7
C388	4030011040	S.CER GRM31M4C2H2R0CY21L [H]	T	19.9/85.6
	4030011050	S.CER GRM31M3C2H3R0CY21L [L]	T	19.9/85.6
C389	4030011040	S.CER GRM31M4C2H2R0CY21L [H]	T	17/91.5
	4030011050	S.CER GRM31M3C2H3R0CY21L [L]	T	17/91.5
C390	4030017460	S.CER ECJ0EB1E102K	B	51.2/99
C391	4030011050	S.CER GRM31M3C2H3R0CY21L [H]	T	13.4/91.5
	4030011070	S.CER GRM31M2C2H5R0CY21L [L]	T	13.4/91.5
C392	4030017460	S.CER ECJ0EB1E102K	T	52.6/87.4
C393	4550005980	S.TAN TEESVA 1A 475M8L	T	100/75.2
C394	4030016930	S.CER ECJ0EB1A104K	T	96.1/77.6
C395	4510004630	S.ELE ECEV1CA100SR	T	150.5/17.1
C396	4510004630	S.ELE ECEV1CA100SR	T	26.5/53.4
C397	4030017460	S.CER ECJ0EB1E102K	T	101.5/76.9
C398	4030017460	S.CER ECJ0EB1E102K	B	101.5/73.7

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C399	4510004630	S.ELE ECEV1CA100SR	T	114.1/75.8
C400	4030017460	S.CER ECJ0EB1E102K	B	110.1/72.2
C401	4030006860	S.CER C1608 JB 1H 102K-T	B	8.9/87
C402	4030006980	S.CER C1608 CH 1H 070D-T [L]	B	11/87.7
	4030007010	S.CER C1608 CH 1H 100D-T [H]	B	11/87.7
C403	4030017420	S.CER ECJ0EC1H470J	B	2.1/84.8
C404	4030017420	S.CER ECJ0EC1H470J	B	32.5/88.6
C405	4030017460	S.CER ECJ0EB1E102K	T	50.2/88.3
C406	4030016970	S.CER ECJ0EB1C103K	T	50.2/86.4
C407	4030017460	S.CER ECJ0EB1E102K [F2721D], [F2821D] only	T	48.3/87.4
C408	4030016930	S.CER ECJ0EB1A104K	B	145.5/81.2
C409	4030016930	S.CER ECJ0EB1A104K	B	150.5/83.4
C410	4030018860	S.CER ECJ0EBOJ105K	B	148/80.2
C412	4030016930	S.CER ECJ0EB1A104K	B	150.7/41.3
C413	4030017730	S.CER ECJ0EB1E471K	B	147.1/33.9
C414	4030016970	S.CER ECJ0EB1C103K	B	147.1/32.9
C415	4030016930	S.CER ECJ0EB1A104K	B	148.9/33.9
C417	4030016930	S.CER ECJ0EB1A104K	B	145.3/35.9
C418	4550003220	S.TAN TEESVA 1E 105M8L	B	111.7/101.2
C419	4550003220	S.TAN TEESVA 1E 105M8L	B	107.3/104.3
C420	4550003220	S.TAN TEESVA 1E 105M8L	T	115.4/99.4
C421	4550003220	S.TAN TEESVA 1E 105M8L	B	113.9/101.2
C422	4030017460	S.CER ECJ0EB1E102K	T	101.5/78.2
C423	4030016930	S.CER ECJ0EB1A104K	B	151.6/24.4
C424	4030016930	S.CER ECJ0EB1A104K	T	148.6/23.2
C428	4510004630	S.ELE ECEV1CA100SR	T	114.1/71
C429	4510004630	S.ELE ECEV1CA100SR	T	114.1/80.6
C430	4030016930	S.CER ECJ0EB1A104K	B	125.2/71.1
C431	4030006860	S.CER C1608 JB 1H 102K-T	B	10.5/102.9
C432	4030011070	S.CER GRM31M4C2H1R5CY21L [L] only	T	17.8/101.7
C433	4030017460	S.CER ECJ0EB1E102K	B	3.5/101.5
C434	4030011810	S.CER C1608 JB 1A 224K-T	T	54.6/84.1
C435	4030017420	S.CER ECJ0EC1H470J	B	34.3/89.6
C436	4030017490	S.CER C1608 JB 1A 105K-T	T	55.9/81.4
C438	4030017780	S.CER ECJ0EB1E472K	T	49.3/81.4
C439	4510008030	S.ELE ECEV1EA471P	T	143.7/87.5
C440	4510006260	S.ELE ECEV1AA471UP	T	152.5/97.5
C442	4030017420	S.CER ECJ0EC1H470J	B	148/77.8
C443	4510006220	S.ELE ECEV1CA101UP	T	147.3/70.1
C444	4510006220	S.ELE ECEV1CA101UP	T	147.3/63
C445	4550006770	S.TAN TEESVD2 1C 476M-12R	B	149.1/62.2
C446	4030016930	S.CER ECJ0EB1A104K	B	148/73.1
C448	4030017460	S.CER ECJ0EB1E102K	B	148/72.1
C452	4030017460	S.CER ECJ0EB1E102K	T	149.6/23.2
C453	4030017460	S.CER ECJ0EB1E102K	B	151.6/25.4
C454	4030017460	S.CER ECJ0EB1E102K	B	124.2/79.4
C455	4030017460	S.CER ECJ0EB1E102K	B	151.6/19.8
C457	4030016930	S.CER ECJ0EB1A104K	B	126.5/75.5
C458	4550007080	S.TAN TEESVA 1C 106M8R	B	138.2/72.5
C459	4510008030	S.ELE ECEV1EA471P	T	129.1/76.9
C460	4030016930	S.CER ECJ0EB1A104K	T	137/72.5
C461	4030011040	S.CER GRM31M4C2H2R0CY21L [H]	T	15.5/105.2
	4030011050	S.CER GRM31M3C2H3R0CY21L [L]	T	15.5/105.2
C462	4030017460	S.CER ECJ0EB1E102K	T	51.3/81.4
C463	4030017420	S.CER ECJ0EC1H470J	T	55.6/79.1
C464	4030017460	S.CER ECJ0EB1E102K	T	150.4/107.8
C465	4030017460	S.CER ECJ0EB1E102K	T	150.4/106.8
C467	4030017420	S.CER ECJ0EC1H470J	T	150.4/104.8
C468	4510006240	S.ELE ECEV1CA221P	T	136.3/53.1
C469	4030017460	S.CER ECJ0EB1E102K	T	141.7/59.6
C470	4510006240	S.ELE ECEV1CA221P	T	148.4/45.3
C471	4510005040	ELE 25 MV 1000 HC		
C472	4030005110	S.CER C2012 JB 1E 473K-T	B	151.5/54.4
C473	4030005110	S.CER C2012 JB 1E 473K-T	B	151.5/50.9
C474	4030017420	S.CER ECJ0EC1H470J	T	150.6/28.3
C475	4030017420	S.CER ECJ0EC1H470J	B	138.4/80.9
C476	4030017460	S.CER ECJ0EB1E102K	B	135.2/78.8
C477	4510008030	S.ELE ECEV1EA471P	T	115.1/88.4
C478	4030004760	S.CER C2012 JF 1H 104Z-T	B	137.5/79.5
C479	4030017460	S.CER ECJ0EB1E102K	T	149.7/82.1
C480	4030017420	S.CER ECJ0EC1H470J	T	149.7/83.1
C482	4030017460	S.CER ECJ0EB1E102K	T	150.6/35.9
C485	4030017460	S.CER ECJ0EB1E102K	B	127.4/96.6
C486	4030018900	S.CER ECJ0EBOJ474K	B	142/36.9
C487	4030016930	S.CER ECJ0EB1A104K	T	26.8/24.1
C488	4030018900	S.CER ECJ0EBOJ474K	B	67/8.3
C489	4030016930	S.CER ECJ0EB1A104K	B	67/6.1
C490	4030016930	S.CER ECJ0EB1A104K	B	70/35.3
C491	4030016930	S.CER ECJ0EB1A104K	B	125/54.4
C492	4030017700	S.CER ECJ0EC1H151J	B	56.4/16.7
C495	4030017420	S.CER ECJ0EC1H470J	T	103.9/106.7
C496	4030017420	S.CER ECJ0EC1H470J	T	133.6/106.9
C497	4030017420	S.CER ECJ0EC1H470J	T	131.6/106.9
C498	4030017420	S.CER ECJ0EC1H470J	T	108.4/106.7
C499	4030017420	S.CER ECJ0EC1H470J	T	126/106.9
C500	4030017420	S.CER ECJ0EC1H470J	B	122.1/106.2
C501	4030017420	S.CER ECJ0EC1H470J	B	125.8/106.2

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



**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C503	4030017420	S.CER ECJ0EC1H470J	T	106.9/106.7
C504	4030017420	S.CER ECJ0EC1H470J	T	112.6/106.7
C505	4030017420	S.CER ECJ0EC1H470J	T	128.6/106.9
C508	4030017420	S.CER ECJ0EC1H470J	B	110.8/106.6
C509	4030017420	S.CER ECJ0EC1H470J	T	99.9/87.6
C511	4030017420	S.CER ECJ0EC1H470J	T	102.9/106.7
C513	4030017420	S.CER ECJ0EC1H470J	T	135.9/106.9
C515	4030017030	S.CER ECJ0EB1A273K	T	99.1/70.8
C516	4030017580	S.CER ECJ0EC1H060C	[L] B	46.3/71.5
	4030017620	S.CER ECJ0EC1H100C	[H] B	46.3/71.5
C522	4550000560	S.TAN TEESVA 1V 334M-8L	B	81.2/61.9
C523	4550003250	S.TAN TEESVA 1V 474M8L	B	81.2/59.6
C525	4030017770	S.CER ECJ0EB1E332K	B	76.2/59.9
C526	4030016930	S.CER ECJ0EB1A104K	T	25.4/14.7
C527	4030016930	S.CER ECJ0EB1A104K	T	25.9/17.1
C529	4510006220	S.ELE ECEV1CA101UP	T	24.4/40.4
C533	4030017420	S.CER ECJ0EC1H470J	B	66.9/96.7
C534	4030017400	S.CER ECJ0EC1H220J	B	66.9/97.7
C535	4030017460	S.CER ECJ0EB1E102K	B	41.9/50.2
C536	4030017460	S.CER ECJ0EB1E102K	B	41.8/49.2
C537	4030017380	S.CER ECJ0EC1H050B		
		[F2721D], [F2821D] only	B	95.3/35.3
C538	4030016930	S.CER ECJ0EB1A104K		
		[F2721D], [F2821D] only	B	90.5/35.9
C539	4030016930	S.CER ECJ0EB1A104K		
		[F2721D], [F2821D] only	B	94.4/32.9
C540	4030017530	S.CER ECJ0EC1H0R5B	T	61.7/51.8
C541	4030017600	S.CER ECJ0EC1H080C	[L] T	65.8/49.3
	4030017630	S.CER ECJ0EC1H120J	[H] T	65.8/49.3
C542	4030017580	S.CER ECJ0EC1H060C	[H] T	61/50.3
	4030017620	S.CER ECJ0EC1H100C	[L] T	61/50.3
C543	4030017640	S.CER ECJ0EC1H150J	T	65.8/47.3
C544	4030017630	S.CER ECJ0EC1H120J	[H] T	67.6/47.3
	4030017670	S.CER ECJ0EC1H390J	[L] T	67.6/47.3
C545	4030017460	S.CER ECJ0EB1E102K	B	62.4/47.9
C546	4030017600	S.CER ECJ0EC1H080C	[H] T	67.6/48.3
	4030017640	S.CER ECJ0EC1H150J	[L] T	67.6/48.3
C547	4030017460	S.CER ECJ0EB1E102K	T	61/49.3
C548	4030017420	S.CER ECJ0EC1H470J	T	61/48.3
C549	4030017420	S.CER ECJ0EC1H470J	T	53/55.8
C550	4030017420	S.CER ECJ0EC1H470J	B	66.5/51.2
C551	4030011050	S.CER GRM31M3C2H3R0CY21L	[H] T	11.3/91.5
	4030011060	S.CER GRM31M2C2H4R0CY21L		
		[F2710-L], [F2810-L]	T	11.3/91.5
	4030011070	S.CER GRM31M2C2H5R0CY21L		
		[F2721/D-L], [F2821/D-L]	T	11.3/91.5
C552	4030011030	S.CER GRM31M4C2H1R5CY21L	[Other] T	6.5/91.5
	4030011060	S.CER GRM31M2C2H4R0CY21L		
		[F2710-H], [F2810-H]	T	6.5/91.5
	4030011070	S.CER GRM31M2C2H5R0CY21L		
		[F2721/D-L], [F2821/D-L]	T	6.5/91.5
C554	4030017550	S.CER ECJ0EC1H1R5B	[H] T	62.7/46.3
	4030017570	S.CER ECJ0EC1H040B	[L] T	62.7/46.3
C555	4550007080	S.TAN TEESVA 1C 106M8R	B	66.6/53
C556	4030016930	S.CER ECJ0EB1A104K	T	28.7/21.1
C557	4030017460	S.CER ECJ0EB1E102K	T	55.8/8.5
C568	4030017720	S.CER ECJ0EB1H331K	T	118.7/54.6
C569	4030017420	S.CER ECJ0EC1H470J	T	75.3/34.7
C570	4030016930	S.CER ECJ0EB1A104K	B	66.2/15.3
C571	4030017520	S.CER ECJ0EC1H0R3B	[H] B	69/90.5
	4030017530	S.CER ECJ0EC1H0R5B	[L] B	69/90.5
C572	4030016790	S.CER ECJ0EB1C103K	B	64.8/34.2
C573	4030011060	S.CER GRM31M2C2H4R0CY21L	[L] T	5.8/103.3
	4030011070	S.CER GRM31M2C2H5R0CY21L	[H] T	5.8/103.3
C575	4030017550	S.CER ECJ0EC1H1R5B	B	76.2/96.1
C576	4030016930	S.CER ECJ0EB1A104K	T	51.1/45.7
C577	4030016930	S.CER ECJ0EB1A104K	T	51.1/54.6
C578	4030017420	S.CER ECJ0EC1H470J	B	13.7/60.7
C580	4030016930	S.CER ECJ0EB1A104K	B	115.7/100.8
C581	4030016940	S.CER ECJ0EB1A393K	B	69.3/40.7
C582	4030016930	S.CER ECJ0EB1A104K	B	71.6/39.5
C583	4030017790	S.CER ECJ0EB1E682K	B	71.6/41.7
C584	4030016970	S.CER ECJ0EB1C223K	B	79.4/40.5
C585	4030016930	S.CER ECJ0EB1A104K	B	62.6/24.2
C586	4030016930	S.CER ECJ0EB1A104K		
J1	6510024520	S.CNR 12FLT-SM1-TB	T	72.5/12.1
J2	6510018430	S.CNR AXN330C038P	T	139.7/8.3
J3	6510021300	S.CNR 52365-1091		
		[F2721D], [F2821D] only	T	96/41.5
J4	6510018430	S.CNR AXN330C038P		
		except [F2721D], [F2821D] only	T	91.5/8.5
J5	6450000140	CNR HSJ0807-01-010		
J6	6510014960	S.CNR B2B-ZR-SM3-TF	T	147.7/79.4
J7	6510021300	S.CNR 52365-1091	T	88/77.7
J8	6510019250	S.CNR B11B-ZR-SM3-TF	T	155.6/27.9
J10	6510019270	S.CNR 52365-0691	T	88/71

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
J11	6510023210	CNR CD6125SA1J0 <CVI>		
J13	6510021300	S.CNR 52365-1091	T	84.9/93.5
W2	7120000470	JMP ERDS2T0		
W3	8900013680	CBL OPC-1414 <CMI>T!		
EP5	6910015370	S.BEA ACZ1005Y-102-T	B	85.7/40.7
EP6	6910015370	S.BEA ACZ1005Y-102-T	T	53/54.8
EP7	6910011560	BEA HF70BB4.5X5X1.6		
EP8	6910011560	BEA HF70BB4.5X5X1.6		
EP9	6910015370	S.BEA ACZ1005Y-102-T	B	62.4/50.7
EP10	6910010280	BEA HF70BB9.5X10.4X4.9		
EP11	6910010280	BEA HF70BB9.5X10.4X4.9		

**[CHASSIS UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510004880	CNR MR-DS-E 01		

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

# SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

## [CHASSIS PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510004880	Connector MR-DS-E 01	1
MP1	8010019801	2781 chassis-1	1
MP2	8110008270	2781 cover	1
MP3	8810008660	Screw PH BT M3 × 8 NI-ZU	12
MP4	8810008660	Screw PH BT M3 × 8 NI-ZU	2
MP5	8810008660	Screw PH BT M3 × 8 NI-ZU	2
MP6	8810009990	Screw PH BT M3 × 8 ZK	2
MP7	8810009990	Screw PH BT M3 × 8 ZK	4
MP8	8930064590	Plate 2781 D-SUB PLATE	1
MP9	8510016740	Case 2781 FILTER CASE Y755	1
MP10	8930048550	2177 clip	1
MP11	8930048520	2156 clip	1
MP12	8810009990	Screw PH BT M3 × 8 ZK	2

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W3	8900013680	Cable OPC-1414 <CMI>T	1
J11	6510023210	CD6125SA1J0	1
EP10	6910010280	Bead HF70BB9.5 × 10.4 × 4.9	1
EP11	6910010280	Bead HF70BB9.5 × 10.4 × 4.9	1
MP1	8510016470	2775 VCO case	1
MP2	8510016460	2775 VCO cover	1
MP3	8510016470	2775 VCO case	1
MP4	8510016460	2775 VCO cover	1
MP5	8510014890	2577 DBM case	1
MP8	8930065060	2781 M-plate	1
MP9	8510016820	2781 shield plate	1

## [FRONT-A UNIT] (IC-F2700 Series)

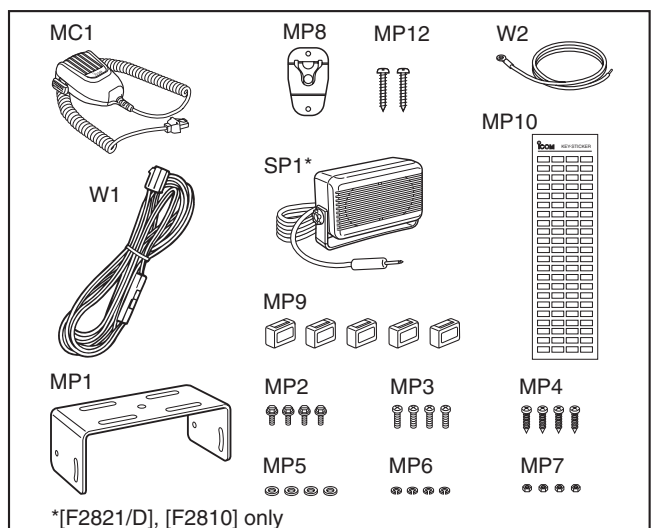
REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900013690	Cable OPC-1425 (N=12, L=92)	1
W2	8900013700	Cable OPC-1426	1
EP1	8930065150	LCD contact SRCN-2781-SP-N-W	2
MP1	8930064250	2781 angle Y754	1
MP2	8930064190	2781 front key	1
MP3	8210021431	2781 front panel assembly	1
MP4	8930064220	2781 knob rubber	1
MP5	8930064260	2781 LCD holder Y753	1
MP7	8210021190	2781 reflector	1
MP9	8610012160	Knob N324	1
MP10	8610012150	Knob N325	1
MP11	8810008660	Screw PH BT M3 × 8 NI-ZU	3
MP12	8810008660	Screw PH BT M3 × 8 NI-ZU	2
MP16	8930051500	Seal O-ring (AB)	1
MP18	8830000030	VR nut (C)	1
MP19	8930065250	2781 A-lens	1
MP20	8930065240	2781 B-lens	1
SP1	2510001290	Speaker C062SB504-11	1

## [ACCESSORIES]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900010990	DC power cable OPC-1132 [USA]	1
	8900011780	DC power cable OPC-1194 [EUR], [GEN]	1
W2	8900000730	Microphone hanger cable OPC-049	1
MC1	Optional product	Microphone HM-100N [EUR], [GEN]	1
	Optional product	Microphone HM-148 [USA]	1
MP1	8010019880	2781 mounting bracket assembly	1
MP2	8820000530	Screw bracket bolts M4 × 8 NI	4
MP3	8810000470	Screw M5 × 12 (+ -)	4
MP4	8810000950	Screw (PH) A0 M5 × 16	4
MP5	8850000150	Flat washer M5 NI BS	4
MP6	8850000390	Spring washer M5	4
MP7	8830000120	Nut M5	4
MP8	8950005110	2289 mic hanger	1
MP9	8930064670	2781 key cap	5
MP10	8930064820	2781 key sheet	1
MP10	8930064820	2781 key sheet	1
MP12	8810004700	Screw (PH) A0 M3 × 16 SUS	2
SP1	Optional product	Speaker SP-22 [F2821/D], [F2810] only	1

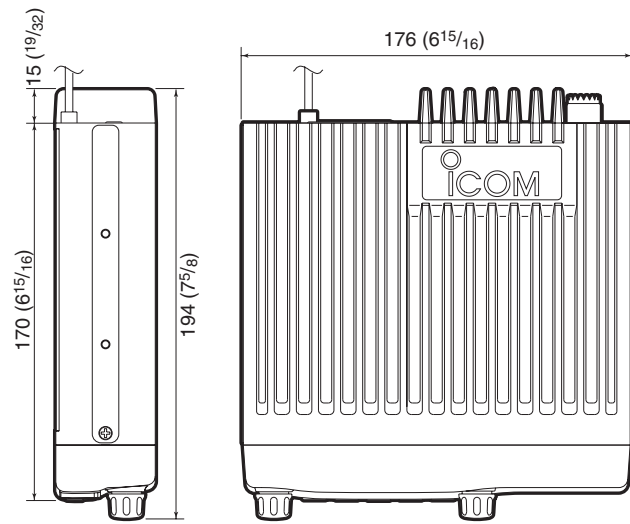
## [FRONT-B UNIT] (IC-F2800 Series)

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900013690	Cable OPC-1425 (N=12, L=92)	1
EP1	8930065150	LCD contact SRCN-2781-SP-N-W	2
MP1	8930064190	2781 front key	1
MP2	8930064220	2781 knob rubber	1
MP3	8930064260	2781 LCD holder Y753	1
MP5	8210021190	2781 reflector	1
MP6	8930064370	2781 T-angle	1
MP7	8210021440	2781 T-front panel assembly	1
MP8	8930064520	2781 UP/DOWN key	1
MP10	8930064380	2781 10-key	1
MP11	8610012160	Knob N324	1
MP12	8810008760	Screw PH BT M2 × 8 NI-ZU	6
MP14	8930064890	2781 T-sheet	1
MP17	8930065250	2781 A-lens	1
MP18	8930065240	2781 B-lens	1
MP20	8930065170	2781 LED sheet	2

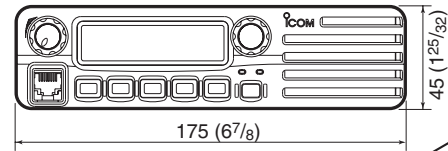


**Screw abbreviations** A0, B0, BT: Self-tapping  
 PH: Pan head  
 NI: Nickel  
 SUS: Stainless  
 NI-ZU: Nickel-Zinc



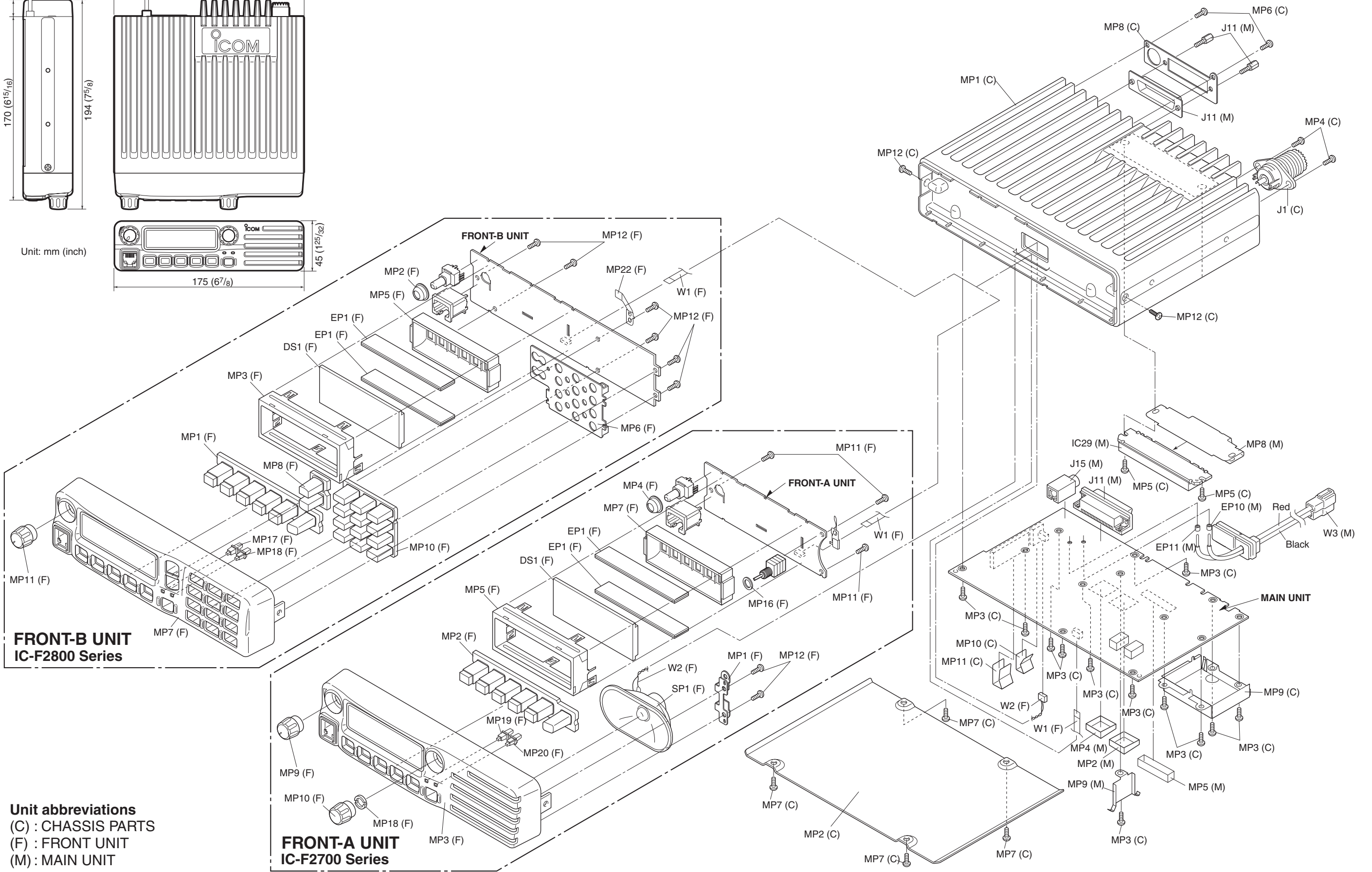


Unit: mm (inch)



**FRONT-B UNIT  
IC-F2800 Series**

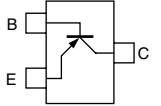
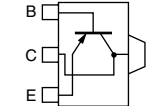
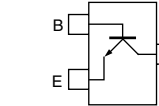
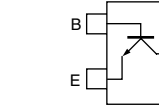
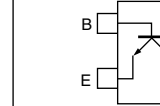
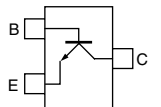
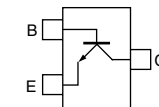
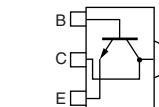
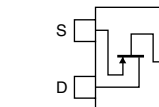
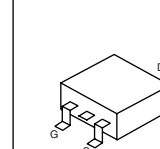
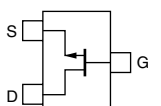
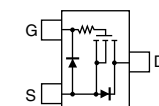
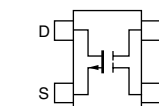
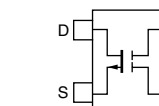
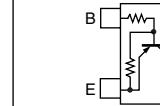
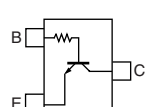
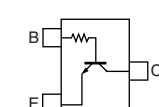
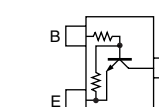
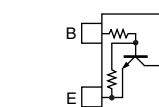
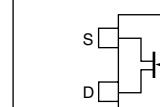
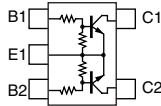
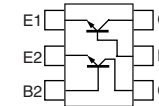
**FRONT-A UNIT  
IC-F2700 Series**



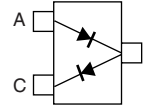
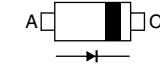
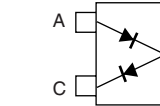
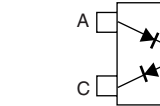
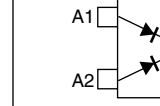
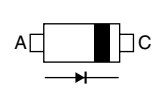
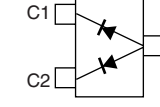
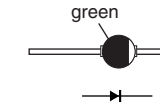
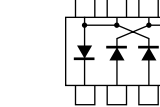

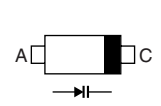
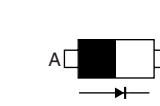
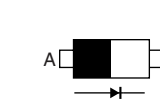
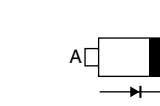
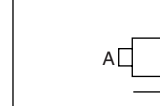
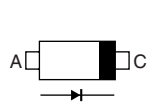
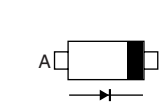
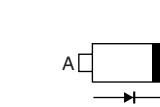
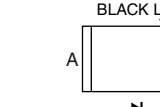
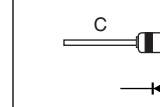
**Unit abbreviations**  
 (C) : CHASSIS PARTS  
 (F) : FRONT UNIT  
 (M) : MAIN UNIT

# SECTION 8 SEMI-CONDUCTOR INFORMATION

## • TRANSISTOR AND FET'S

<b>2SA1577 T106 Q</b> (Symbol: HQ) 	<b>2SB1132 Q</b> (Symbol: BAQ) 	<b>2SC3356 T1B R25</b> (Symbol: R25) 	<b>2SC4116 BL</b> (Symbol: LL) 	<b>2SC4215 O</b> (Symbol: QO) 
<b>2SC4226 T1 R25</b> (Symbol: R25) 	<b>2SC5107 O</b> (Symbol: MFO) 	<b>2SD1664 T100Q</b> (Symbol: DAQ) 	<b>2SJ144 GR</b> (Symbol: VG) 	<b>2SJ377</b> (Symbol: 4L) 
<b>2SK880 Y</b> (Symbol: XY) 	<b>2SK1829</b> (Symbol: K1) 	<b>3SK293</b> (Symbol: UF) 	<b>DTA114EUA T106</b> (Symbol: U73) 	<b>DTA144EUA T106</b> (Symbol: 16) 
<b>DTC114EUA T106</b> (Symbol: 04) 	<b>DTC114TUA T106</b> (Symbol: 04) 	<b>DTC144EUA T106</b> (Symbol: 26) 	<b>DTC363 EK</b> (Symbol: H27) 	<b>PMBFJ310</b> (Symbol: 50*) 
<b>XP1214</b> (Symbol: 9H) 	<b>XP6501 AB</b> (Symbol: 5N) 			

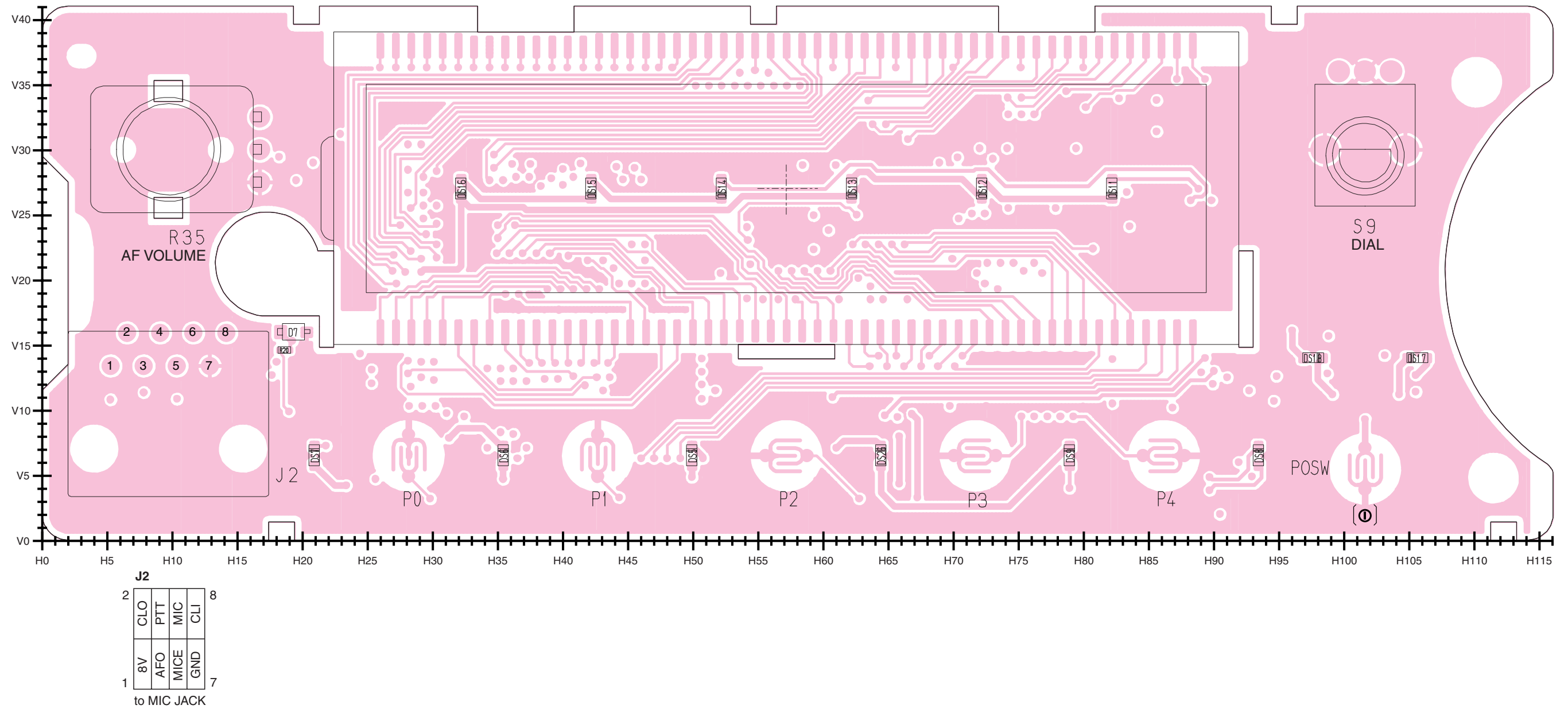
## • DIODES

<b>1SS375-TL</b> (Symbol: FH) 	<b>1SV307</b> (Symbol: TX) 	<b>DA204U</b> (Symbol: K) 	<b>DA221 TL</b> (Symbol: K) 	<b>DAN202U T106</b> (Symbol: N) 
<b>DAN222TL</b> (Symbol: N-4) 	<b>DAP202U T106</b> (Symbol: P) 	<b>DSA3A1</b> (Symbol: Green) 	<b>HSB88WSTR</b> (Symbol: Silver line) 	<b>HVC350BTRF</b> (Symbol: B0) 
<b>HVC383BTRF-E</b> (Symbol: F4) 	<b>MA77</b> (Symbol: 4B) 	<b>MA368</b> (Symbol: 6L) 	<b>MA728</b> (Symbol: 2A) 	<b>MA2S111</b> (Symbol: A) 
<b>MA2S077</b> (Symbol: S) 	<b>MA2S728</b> (Symbol: B) 	<b>MA8056 M</b> (Symbol: 5-6) 	<b>UM9401F</b> (Symbol: none) 	<b>XB15A407</b> (Symbol: None) 

# SECTION 9 BOARD LAYOUTS

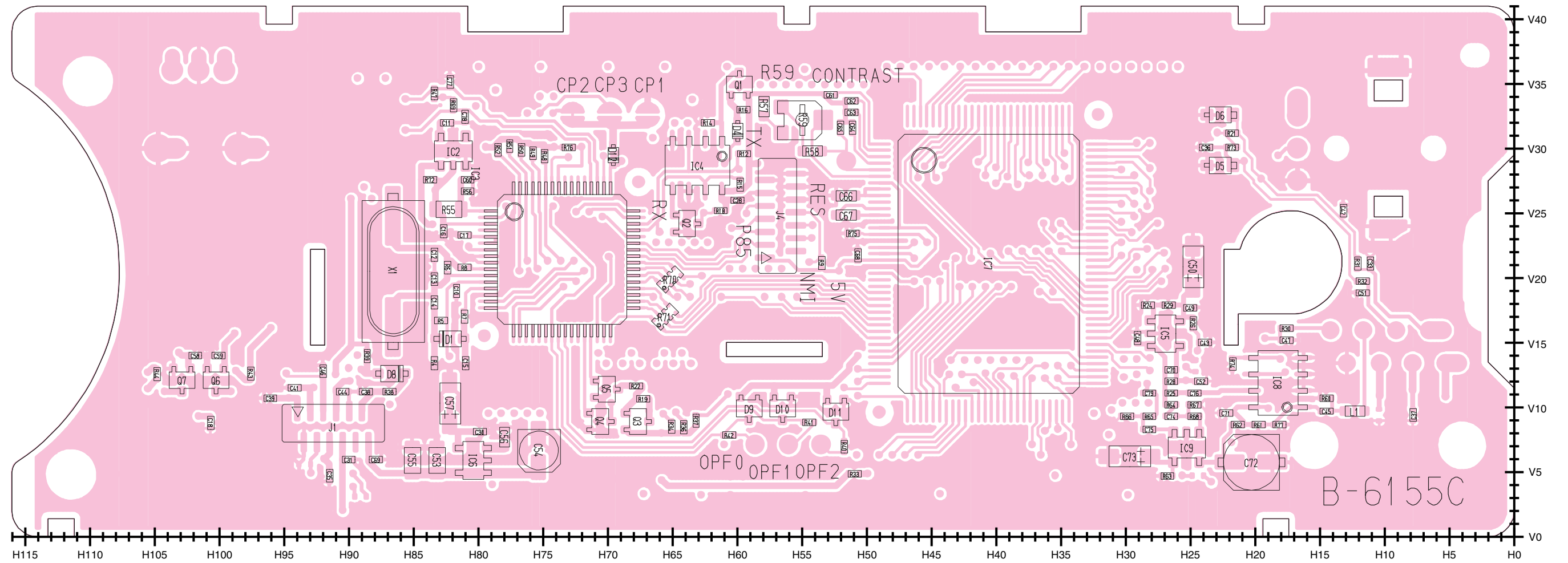
## 9-1 FRONT-A UNIT (for IC-F2700 Series) • TOP VIEW

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



**FRONT-A UNIT**  
**• BOTTOM VIEW (for IC-F2700 series)**

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



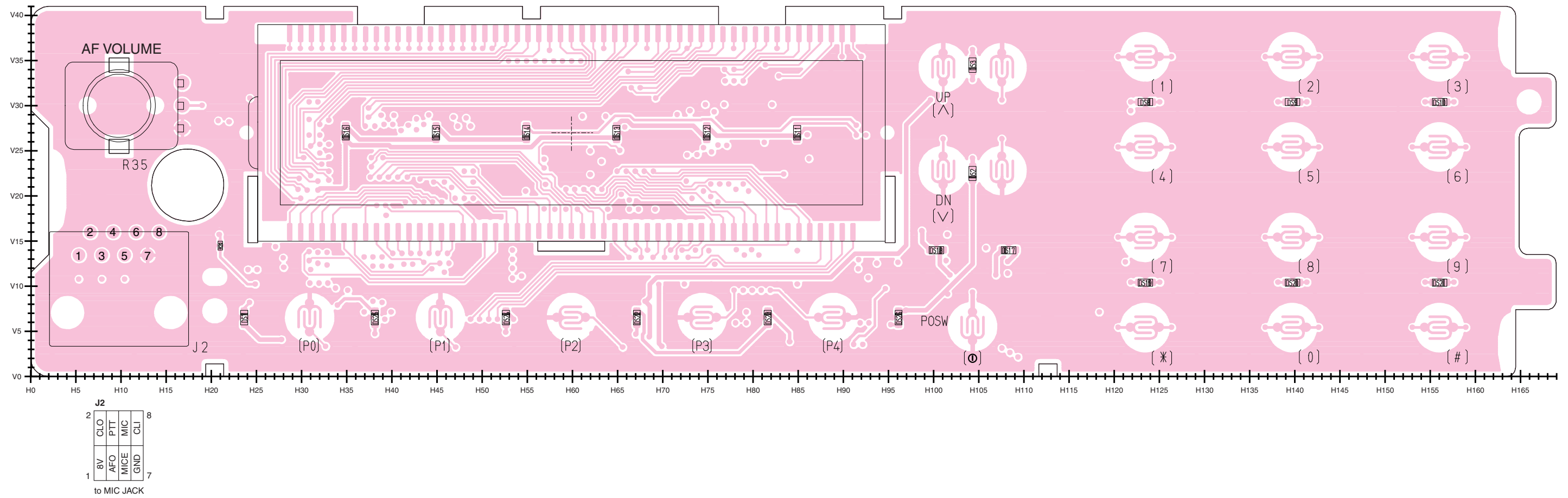
**J1**

1	AFO	MIC	POSW	MFDA	GND	SLQ	11
2	GND	MICE	FMDA	8V	GND	VCC	12

to MAIN UNIT

**9-2 FRONT-B UNIT (for IC-F2800 Series)**  
**• TOP VIEW**

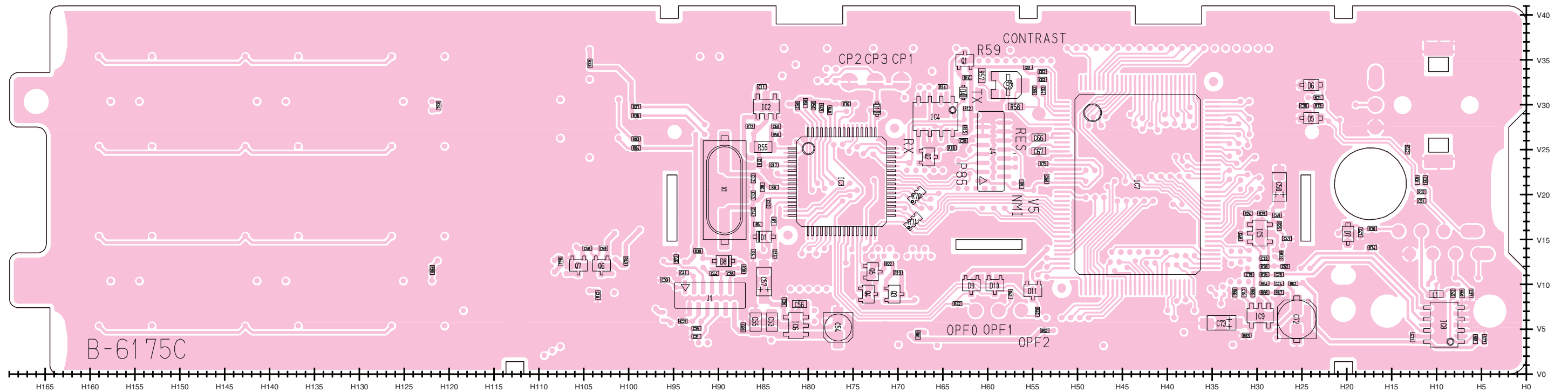
The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.





**FRONT-B UNIT**  
**• BOTTOM VIEW (for IC-F2800 series)**

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



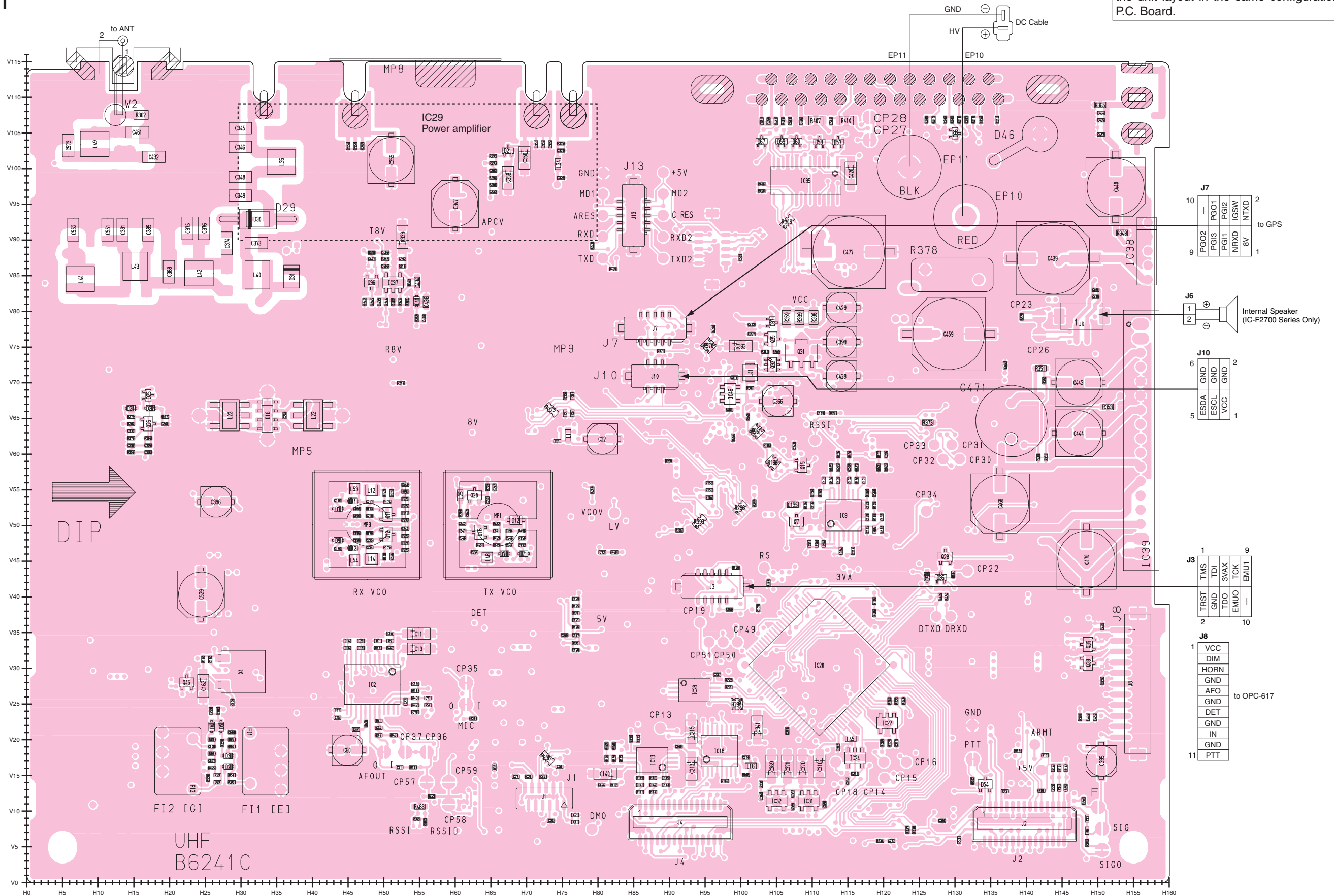
**J1**

1	AFO	11
	MIC	
	POSW	
	MFDA	
	8V	
	GND	
2	VCC	12
	SLQ	

to MAIN UNIT

**9-3 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.



**J7**

10	PGO2	PGI3	PGI2	IGSW	NTXD	2
9	PGO1	PGI1	NRXD	8V	1	

to GPS

**J6**

1	+	Internal Speaker
2	-	(IC-F2700 Series Only)

**J10**

6	GND	GND	2
5	ESDA	ESCL	VCC
5			1

**J3**

1	TMS	TDI	3VAX	TCK	EMU1	9
2	TRST	GND	TDO	EMU0	10	

**J8**

1	VCC	DIM	HORN	GND	AFO	GND	DET	GND	IN	GND	PTT	11
---	-----	-----	------	-----	-----	-----	-----	-----	----	-----	-----	----

to OPC-617

**J1**

12	AFO	MIC	FMSW	FMDA	8V	MFDA	GND	VCC	2
11	GND	GND	FMDA	8V	MFDA	GND	VCC	1	

to FRONT UNIT

**J4**

1	PTTI	OPTT	DMO	VCC	DMIT	DMI	DAFON	RSSIO	3VA	BUSY	DRMT	TEMP	TXD2	CTS1	DAFO	C.RES	MO2	RXD2	CCS	DFIL	IRGD	GND	CSO	RTSI	DTXO	CS1	DTXO	DRXD	15	
30	GND	5V	OPTT	DMO	VCC	DMIT	DMI	DAFON	RSSIO	3VA	BUSY	DRMT	TEMP	TXD2	CTS1	DAFO	C.RES	MO2	RXD2	CCS	DFIL	IRGD	GND	CSO	RTSI	DTXO	CS1	DTXO	DRXD	16

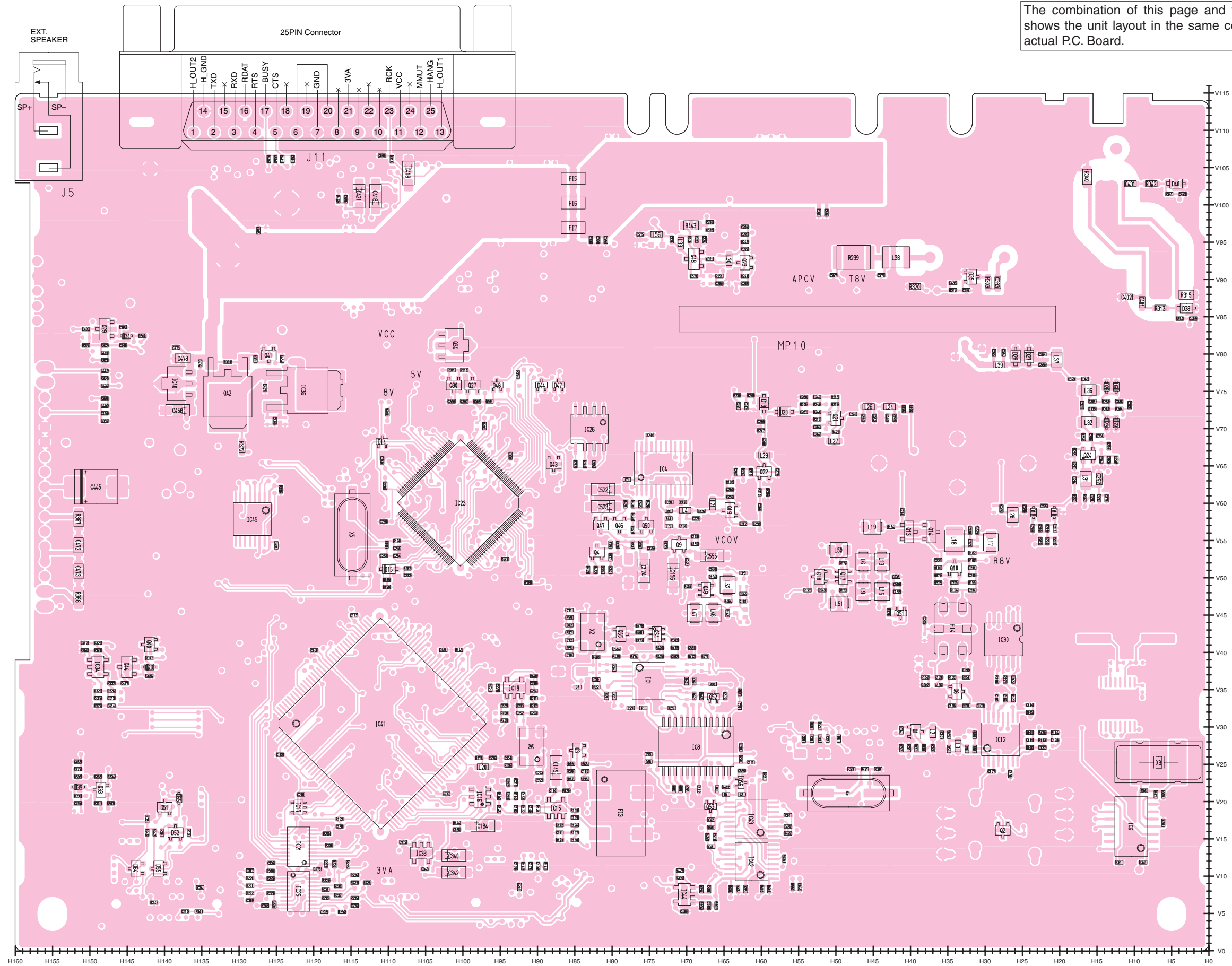
**J2**

1	PTTI	PITTO	VCC	MCOT	AMMT	AUX	AFONO	AUX	BEFO	BUSY	ARMT	IMOWN	DISC	SIG	AFOUT	OPT1	REM	OPT2	CCS	OPT3	IRQA	OPV3	CSIA	OPV2	OPV1	15
30	GND	5V	VCC	MCOT	AMMT	AUX	AFONO	AUX	BEFO	BUSY	ARMT	IMOWN	DISC	SIG	AFOUT	OPT1	REM	OPT2	CCS	OPT3	IRQA	OPV3	CSIA	OPV2	OPV1	16

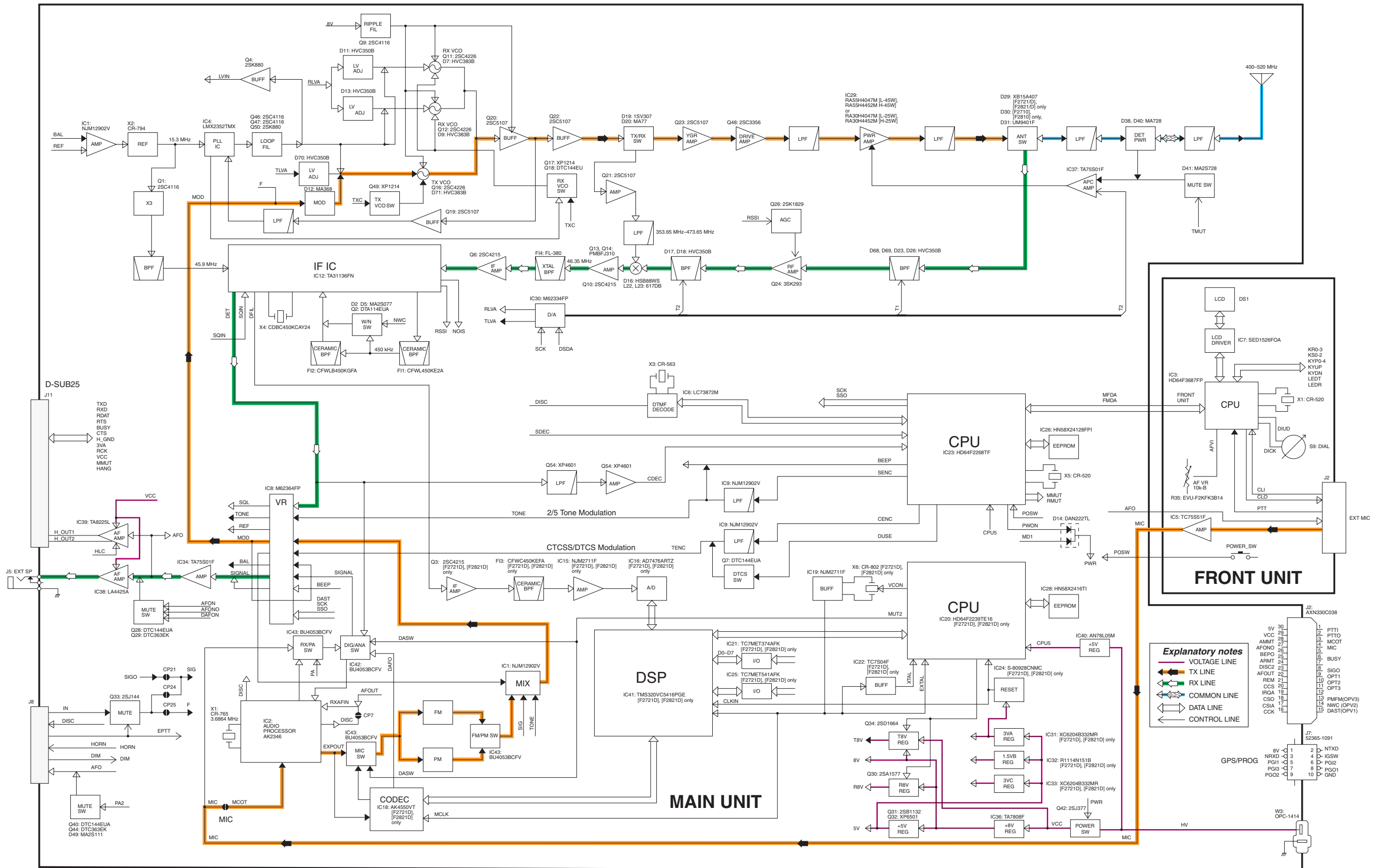
to OPTIONAL UNIT  
UT-109, UT-110, UT-111

**MAIN UNIT**  
• **BOTTOM VIEW**

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



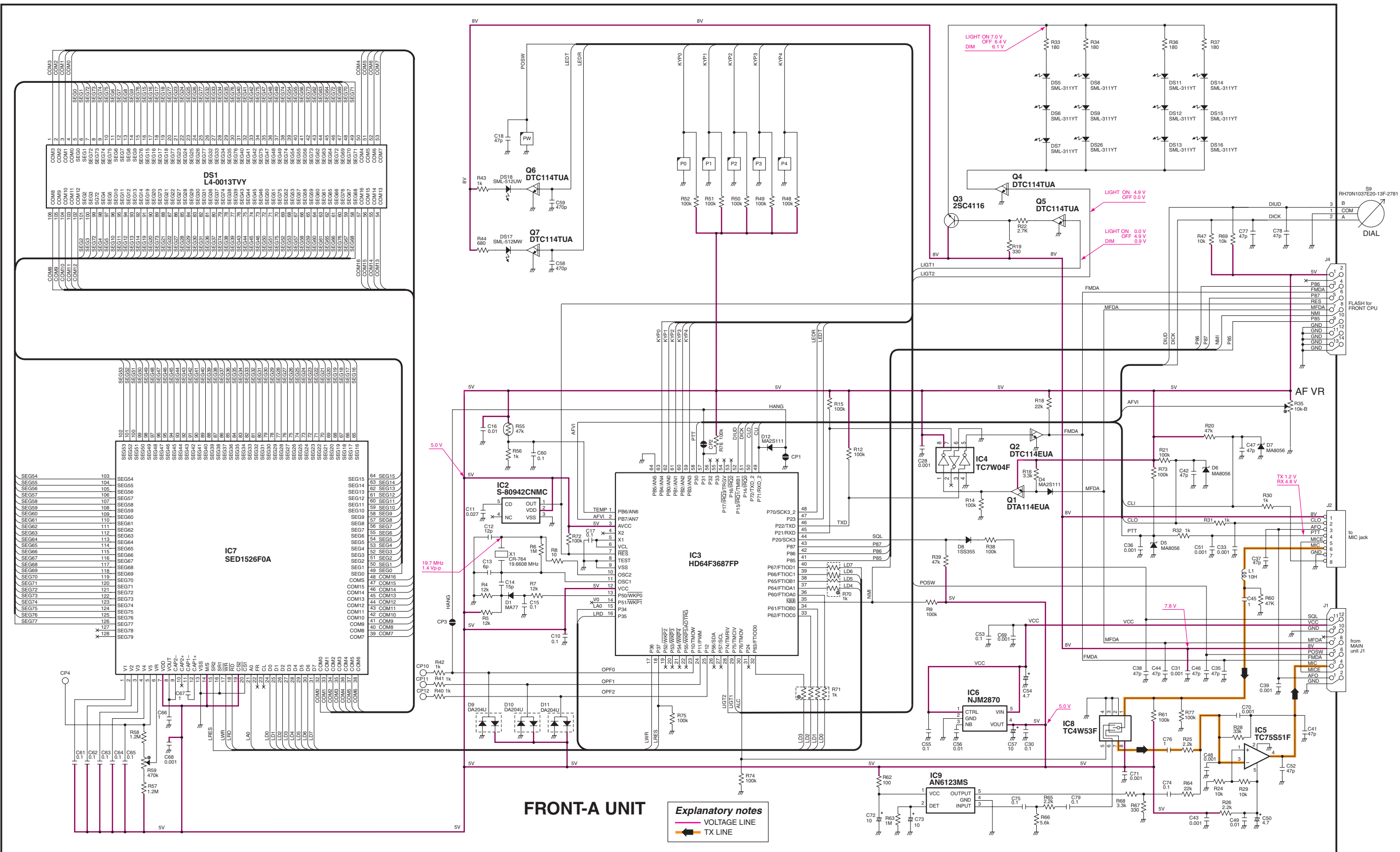
# SECTION 10 BLOCK DIAGRAM





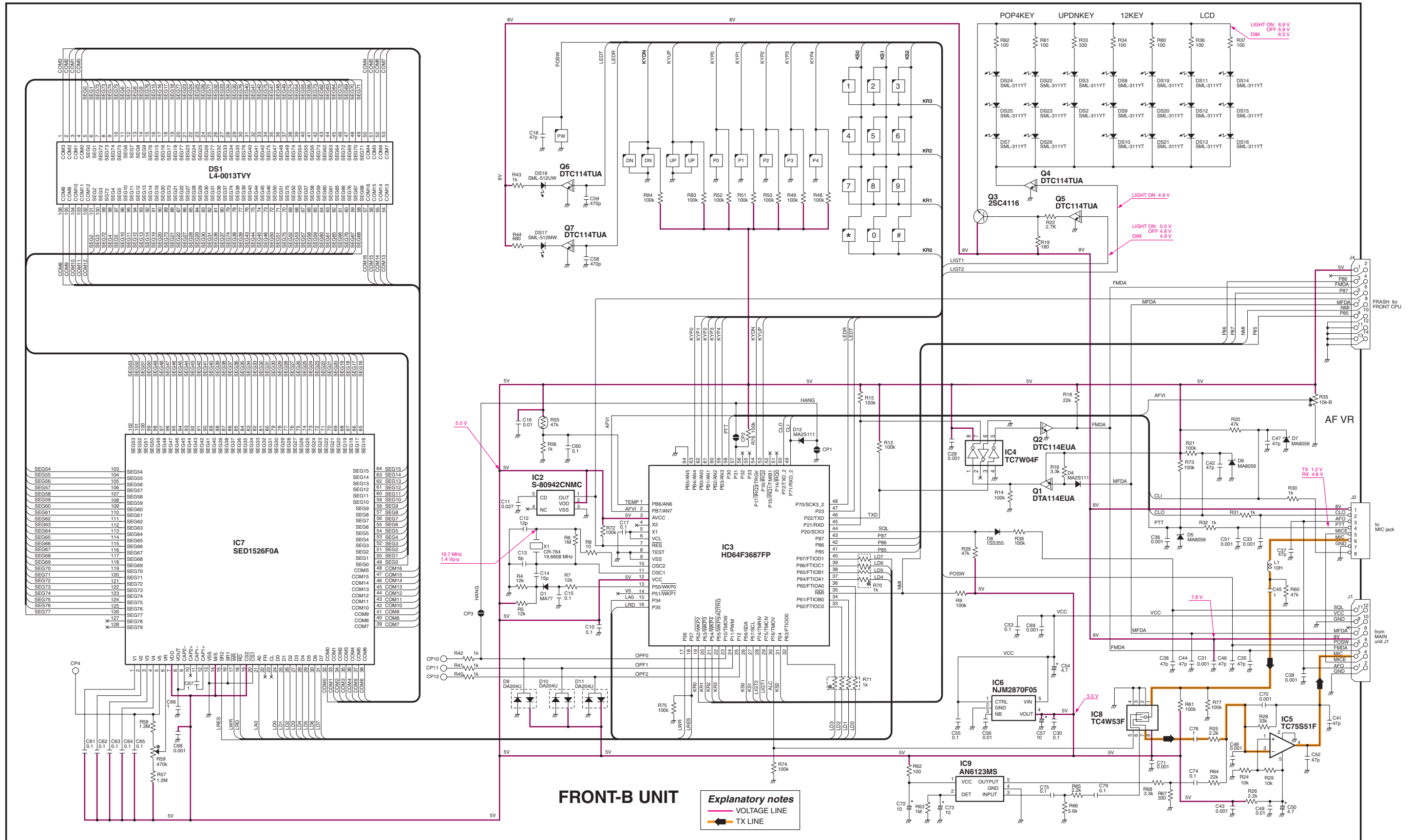
# SECTION 11 VOLTAGE DIAGRAM

## 11-1 FRONT-A UNIT (for IC-F2700 Series)

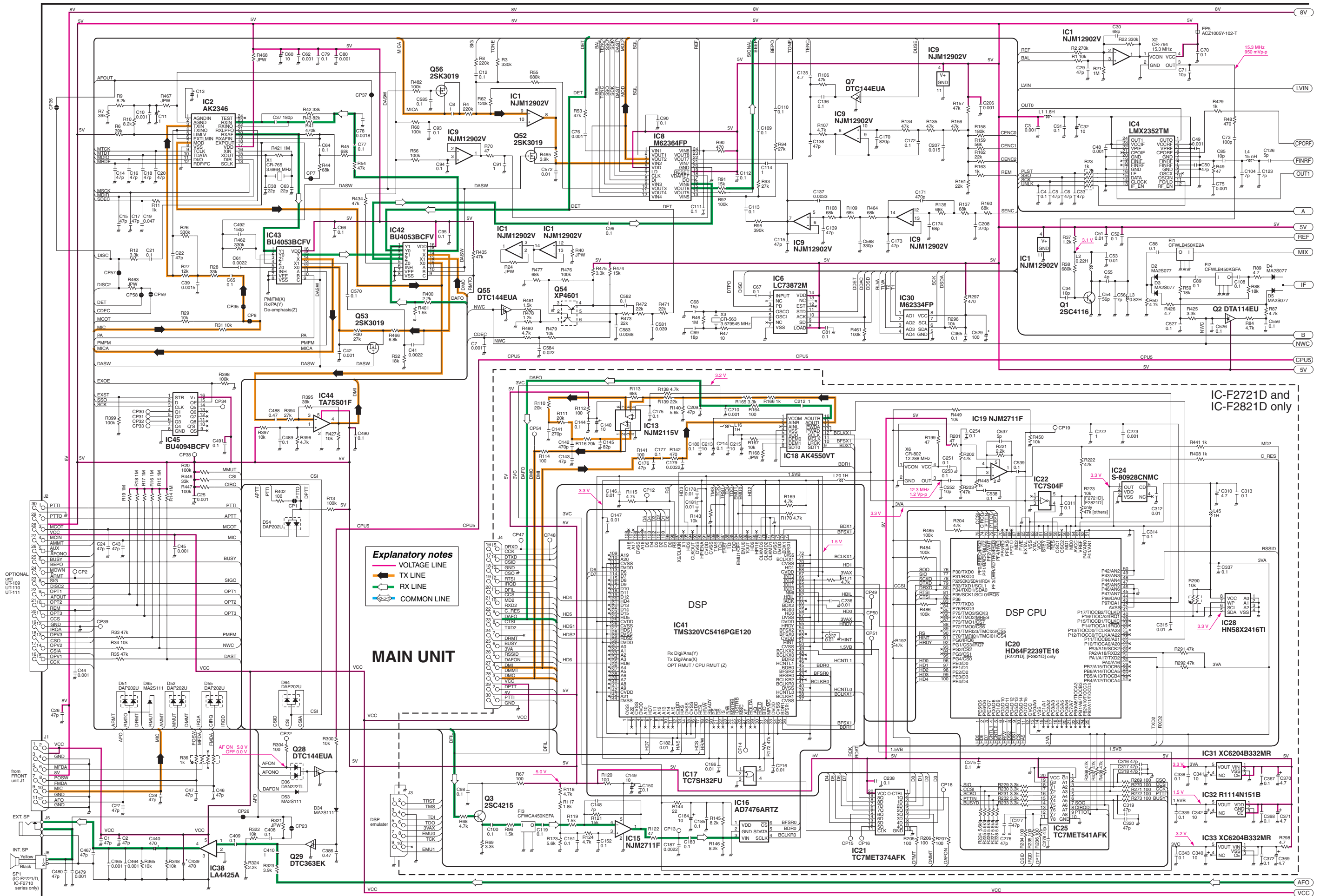


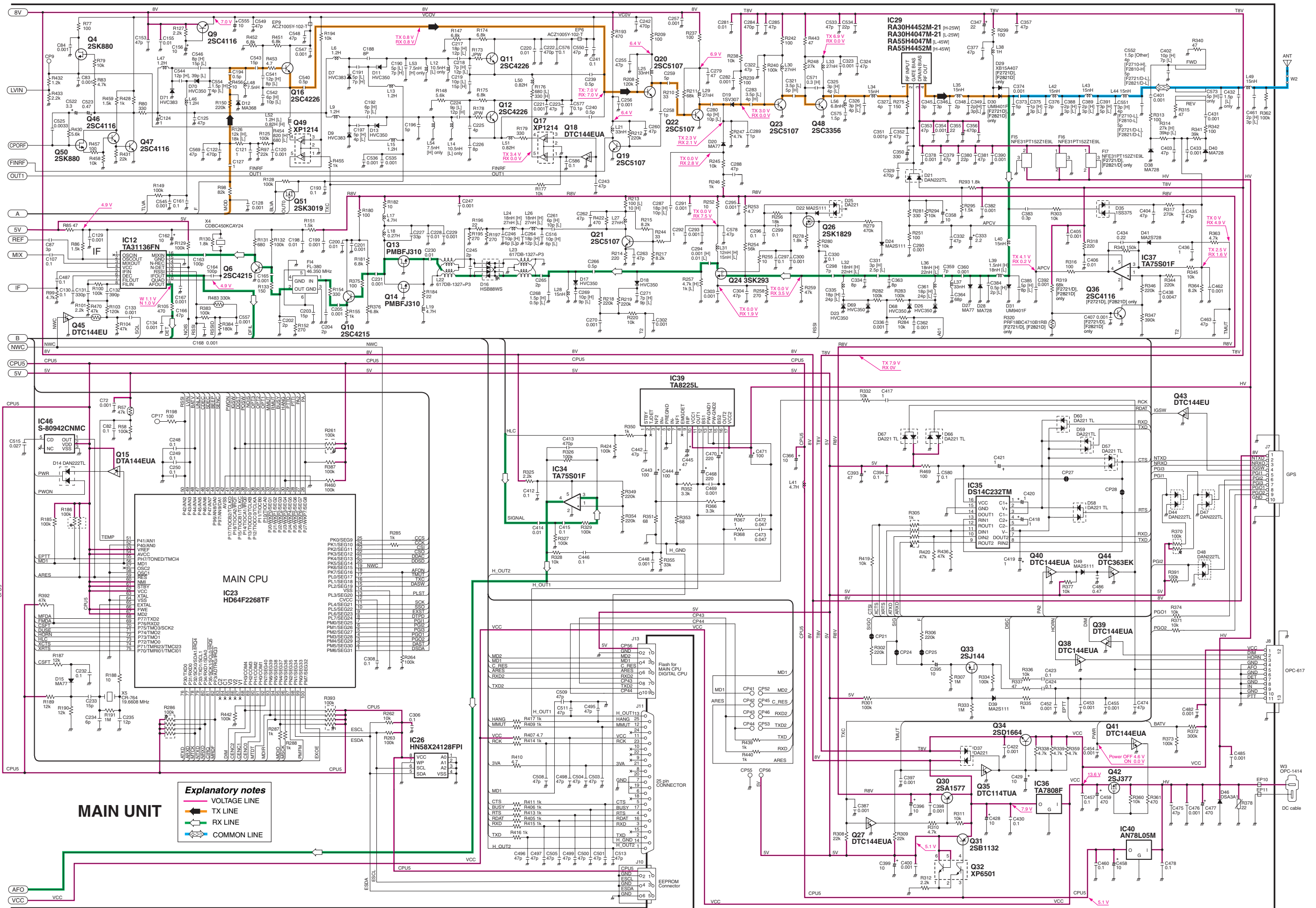


# 11-2 FRONT-B UNIT (for IC-F2800 Series)



# 11-3 MAIN UNIT





**MAIN UNIT**

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



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