



SERVICE MANUAL

VHF FM REPEATER

IC-FR3000

IC-FR3100

INTRODUCTION

This service manual describes the latest service information for the **IC-FR3000/IC-FR3100** VHF FM REPEATER.

| Model | Version | Symbol | Frequency range | AC supply | Power |
|-----------|---------|--------|-----------------|----------------|--------------|
| IC-FR3000 | U.S.A. | USA | 150 –174 [MHz] | 100 –120 [V] | 50 [W] |
| | General | GEN2 | | 148 –172 [MHz] | 220 –240 [V] |
| | | GEN74 | | | |
| IC-FR3100 | Europe | EUR2 | 150 –174 [MHz] | 220 –240 [V] | 25 [W] |
| | Germany | FRG2 | | | |

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

DANGER

USE ONLY the specified AC voltage described on the AC power socket. Other voltages may causes repeater damage or personal injury.

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

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

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



ORDERING PARTS

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

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

<SAMPLE ORDER>

1110003780 S.IC NJM2902V IC-FR3000 LOGIC UNIT 1 piece
8930056450 2368 6-key IC-FR3000 CHASSIS 5 pieces

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

REPAIR NOTES

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

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SECTION 1 SPECIFICATIONS

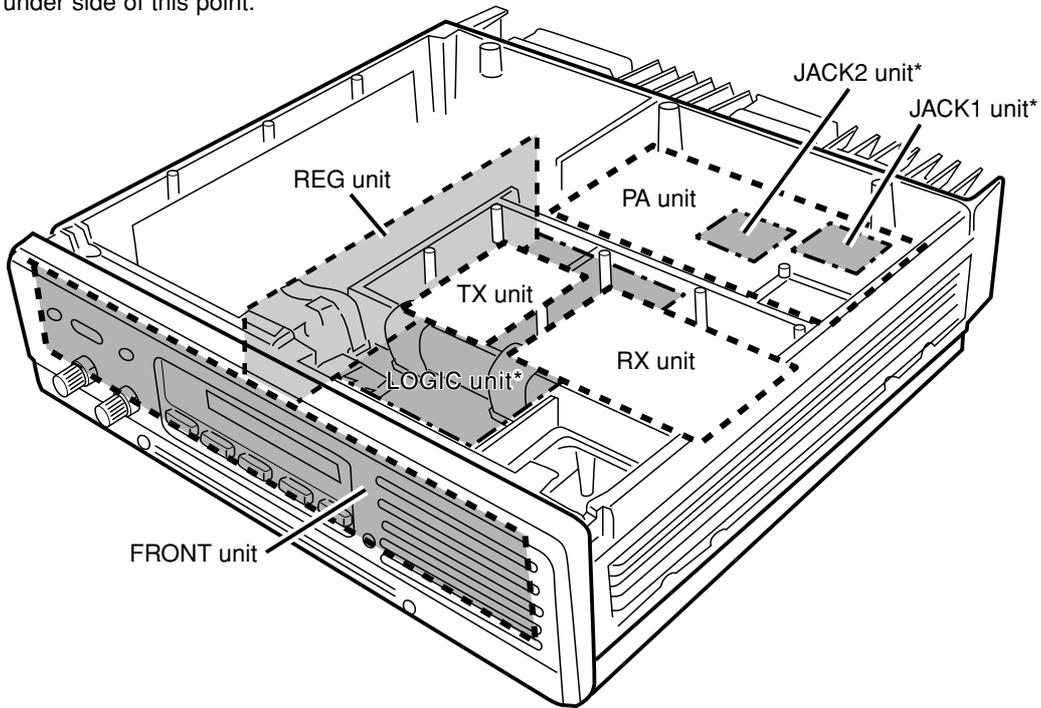
| | | IC-FR3000 | IC-FR3100 | |
|--------------------|--|--|---|-----------------------------|
| GENERAL | Measurement method | EIA / TIA-603 | ETS 300 086 | |
| | Frequency range | [USA2], [GEN2], [GEN4], [GEN74], [EUR2], [FRG2]: 150.000–174.000 MHz [GEN74]: 148.000–172.000 MHz | | |
| | Type of emission | Wide (25 kHz): 16K0F3E Middle (20 kHz): 14K0F3E Narrow (12.5 kHz): 8K50F3E | | |
| | Channel spacing | [USA2], [GEN2], [GEN4], [GEN74], [EUR2]: 25/12.5 kHz [FRG2]: 20/12.5 kHz | | |
| | Frequency stability | ±2.5 ppm | ±1.0 kHz | |
| | Number of channels | Max. 32 channel | | |
| | Antenna connector | Type-N × 2 (50 Ω) | | |
| | Power supply requirement | AC | [USA2], [GEN2]: 100–120 V [GEN4], [GEN74], [EUR2], [FRG2]: 220–240 V | |
| | | DC | 13.6 V DC (negative ground) | 13.2 V DC (negative ground) |
| | Current drain (approx.) | TX | TX (at 50 W) 15.0 A | TX (at 25 W) 10.0 A |
| | | RX | RX (max. audio) 2 A (stand-by) 1 A | |
| | Operating temperature range | –30°C to +60°C (–22°F to +140°F) | | –25°C to +55°C |
| | Dimensions (proj. not included) | 410(W) × 110(H) × 360(D) mm; 16.1 (W) × 4.3 (H) × 14.1 (D) inch | | |
| Weight (approx.) | 12 kg; 26.5 lb | | | |
| TRANSMITTER | RF output power (High/Low) | 50/10 W | 25/5 W | |
| | Modulation system | Variable reactance frequency modulation | | |
| | Maximum frequency deviation | [Wide]: ±5.0 kHz, [Middle]: ±4.0 kHz, [Narrow]: ±2.5 kHz | | |
| | Spurious emissions | 70 dBc typical | 0.25 μW ≤ 1GHz, 1.0 μW > 1 GHz | |
| | Adjacent channel power | [Wide], [Middle]: 70 dB, [Narrow]: 60 dB | | |
| | Input impedance | 600 Ω | | |
| RECEIVER | Receive system | Double-conversion superheterodyne system | | |
| | Intermediate frequencies | 1st: 31.65 MHz, 2nd: 455 kHz | | |
| | Sensitivity (typical) | 0.5 μV at 12 dB SINAD | 6 dBμV (emf) at 20 dB SINAD | |
| | Adjacent channel selectivity (typical) | [Wide], [Middle]: 70 dB, [Narrow]: 60 dB | | |
| | Spurious response | 70 dB | | |
| | Intermodulation (typical) | 70 dB | | |
| | Audio output power | 2.5 W typical at 10% distortion with a 4 Ω load | | |
| | Audio output impedance | 4 Ω | | |

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

SECTION 2 INSIDE VIEWS

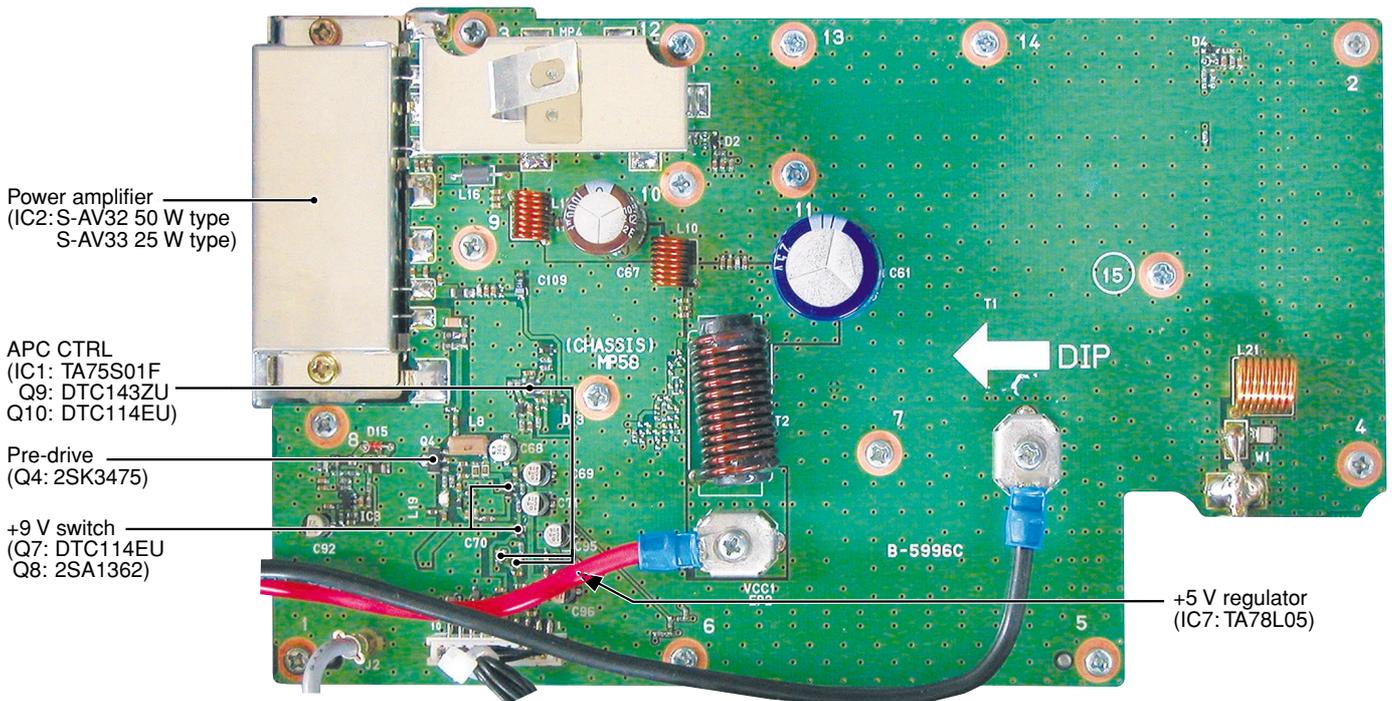
• BOARD LAYOUT

*: Located under side of this point.

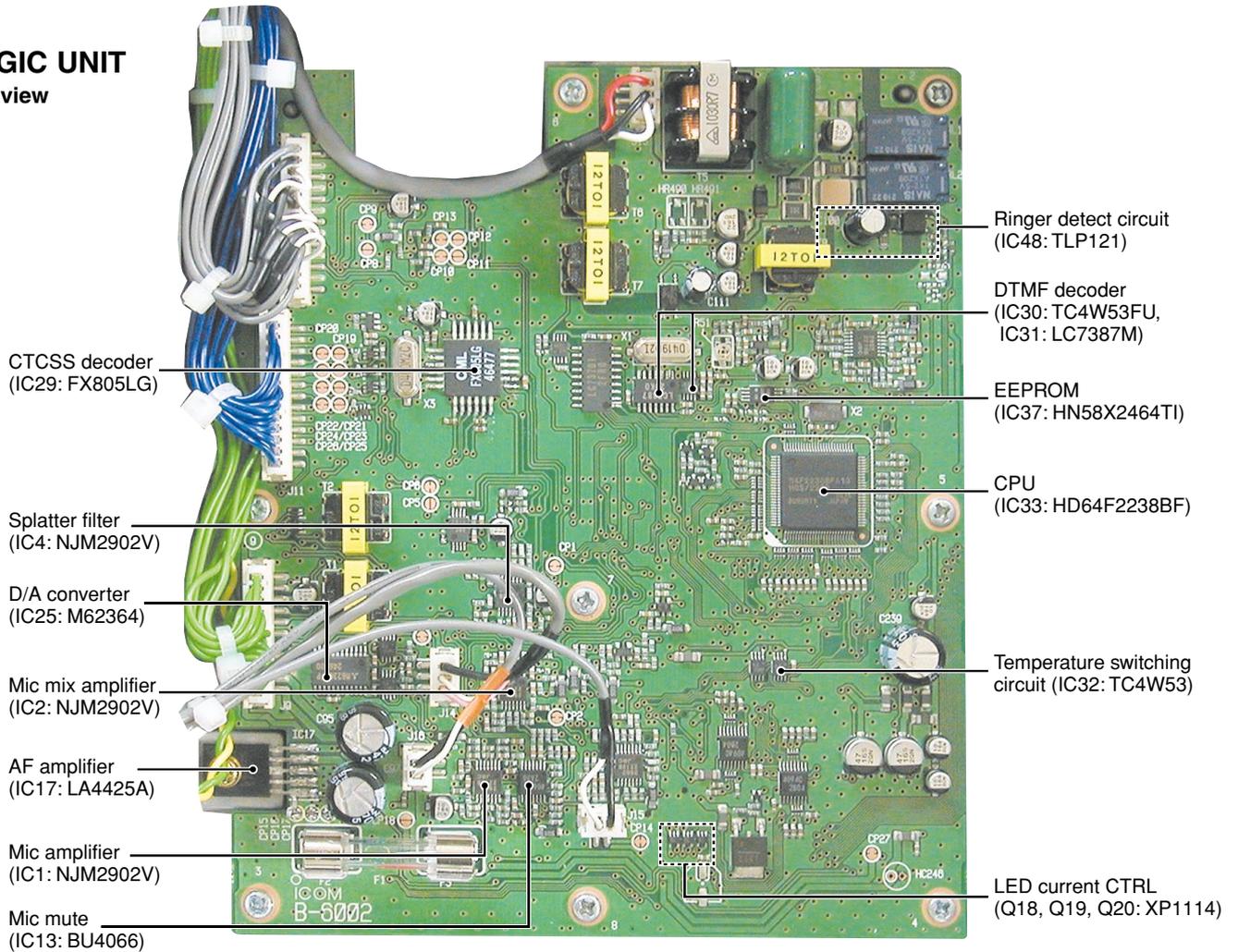


• PA UNIT

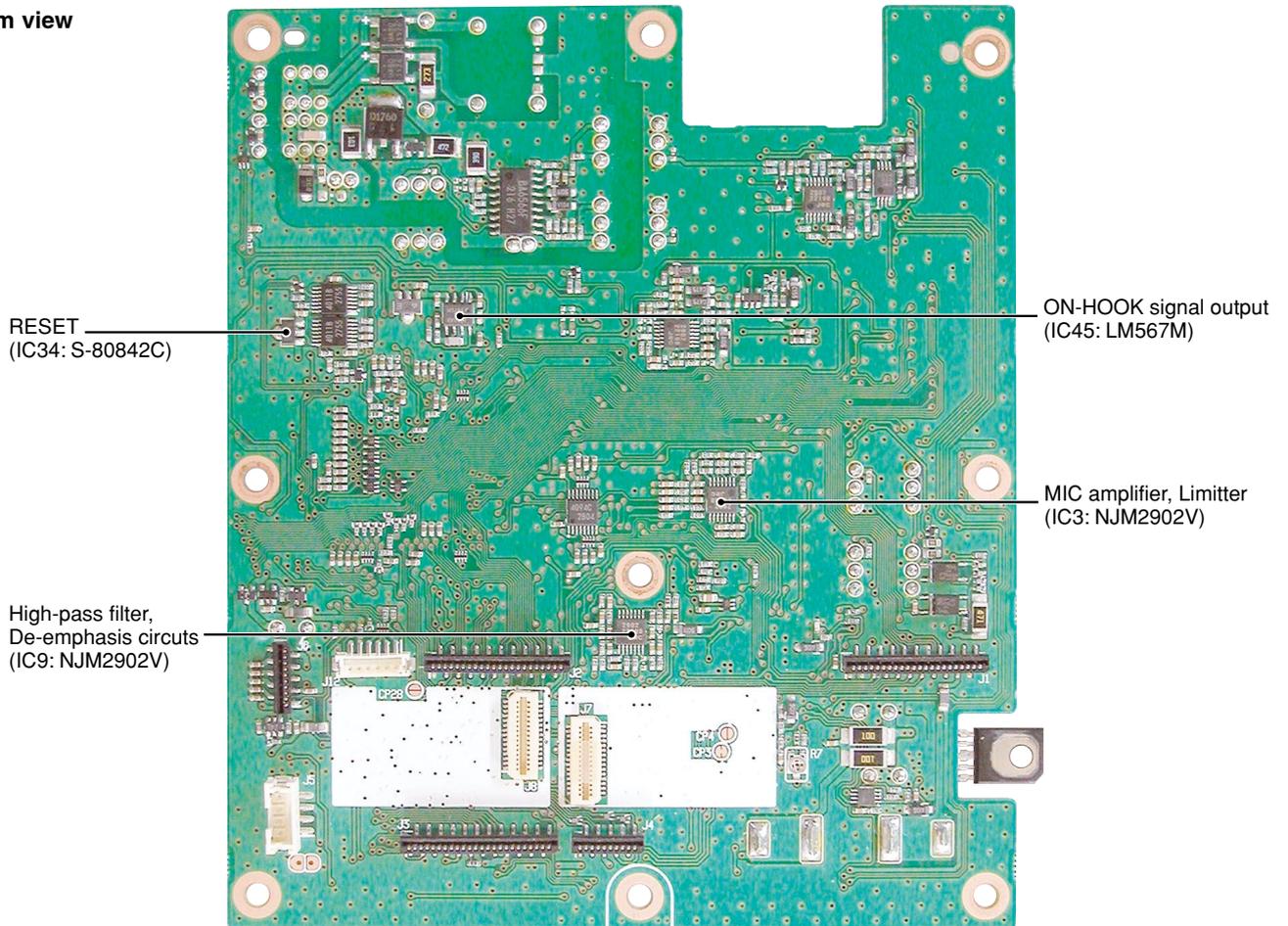
Top view



• **LOGIC UNIT**
Top view



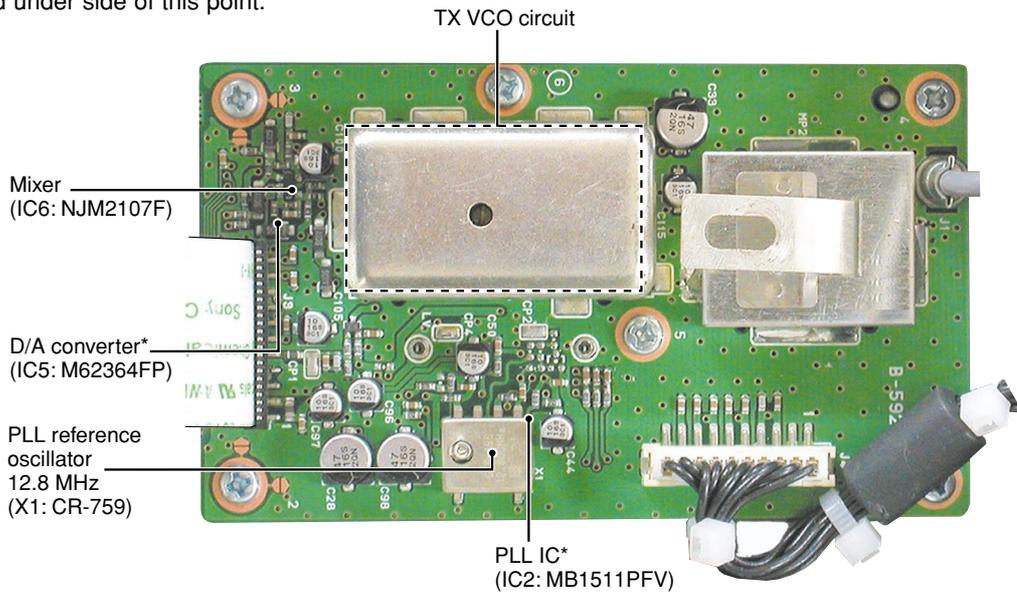
Bottom view



• TX UNIT

Top view

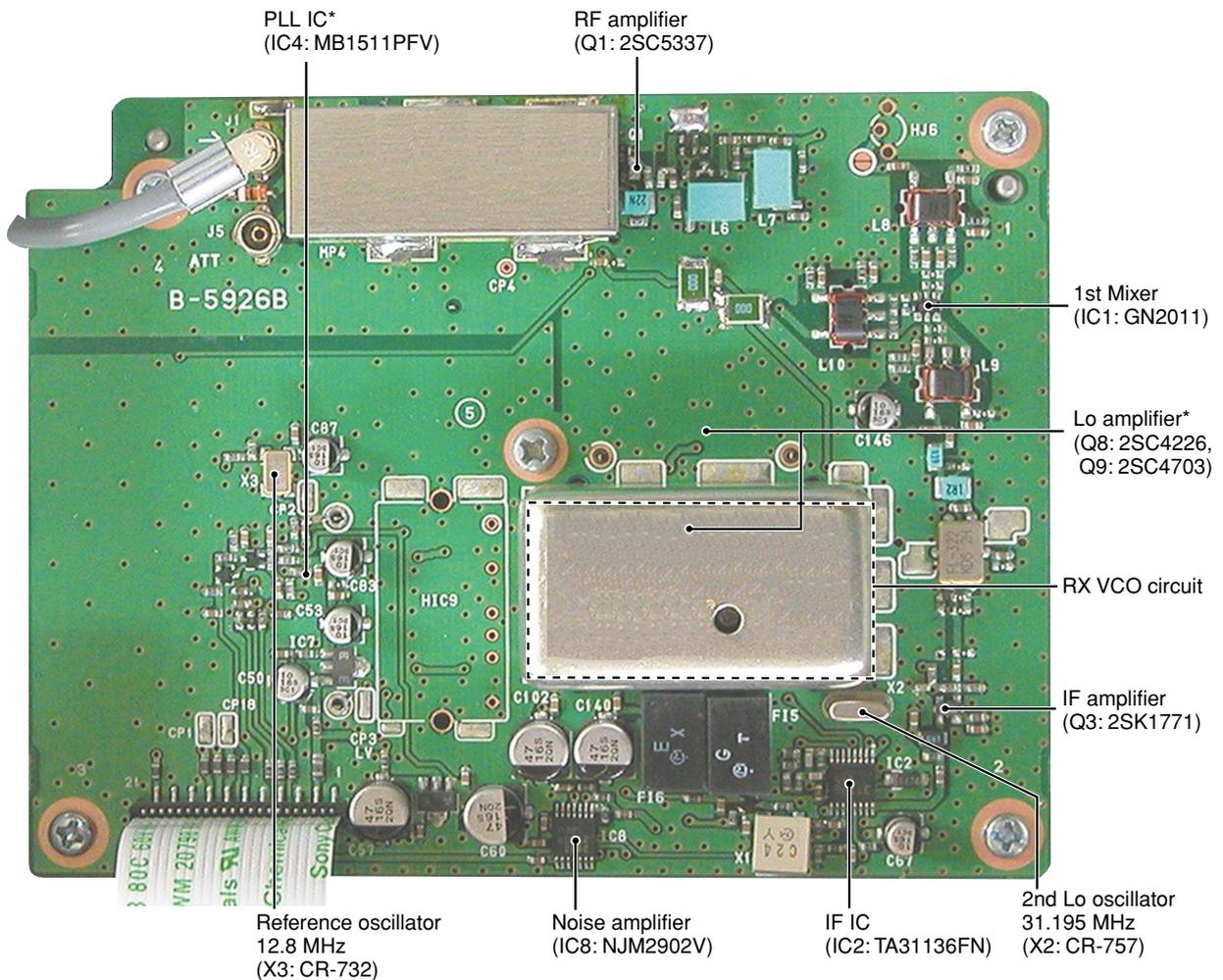
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• RX UNIT

Top view

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SECTION 3 CIRCUIT DESCRIPTION

3-1 RECEIVER CIRCUITS

3-1-1 RF CIRCUIT (RX UNIT)

Received signals from the RX antenna connector enter the RX unit J1 and pass through a tuned bandpass filter (D3, D4, L2, L3, C5–C8, C12, C13, C205, C206, C220, 221) which is controlled by the D/A converter IC (LOGIC unit; IC25). The filtered signals are applied to an RF amplifier (Q1). The amplified signals are applied to a bandpass filter (L6, L7, L12, L13, C9–C11, C14, C15, C21, C22, C24, C30, C207, C208), and are then applied to the 1st mixer circuit.

3-1-2 1ST MIXER AND 1ST IF CIRCUITS (RX UNIT)

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

The filtered signals are applied to the 1st mixer circuit (L8, L9, L10, IC1) and are then mixed with the 1st LO signal from the PLL circuit to produce a 31.65 MHz 1st IF signal.

The 1st IF signal passes through a MCF (Monolithic Crystal Filter; F11) to suppress out-of-band signals. The filtered signal is applied to the 2nd mixer circuit (IC2, pin 16) via the buffer amplifier (Q3).

3-1-3 2ND IF AND DEMODULATOR CIRCUITS (RX UNIT)

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

The amplified signal is applied to the 2nd mixer section of the FM IF IC (IC2, pin 16), and is then mixed with the 2nd LO signal for conversion to a 455 kHz 2nd IF signal.

IC2 contains the 2nd mixer, limiter amplifier, quadrature detector, active filter and noise amplifier circuits, etc. The

local oscillator section and X2 generate 31.195 MHz for the 2nd LO signal.

The 455 kHz 2nd IF signal is applied to a ceramic bandpass filter (narrow; F15, wide; F16) where unwanted signals are suppressed and are then applied to a limiter amplifier section in the system IC (IC2, pin 5).

The 2nd LO signal is then amplified at the limiter amplifier section (IC2, pin 5) and applied to the quadrature detector section (IC2, pins 10, 11 and X1) to demodulate the 2nd IF signal into AF signals.

The AF signals are output from pin 9 (IC2) and are then applied to the AF amplifier circuit on the LOGIC unit.

3-1-5 AF AMPLIFIER CIRCUIT (LOGIC UNIT)

The AF amplifier circuit amplifies the demodulated AF signals to drive a speaker.

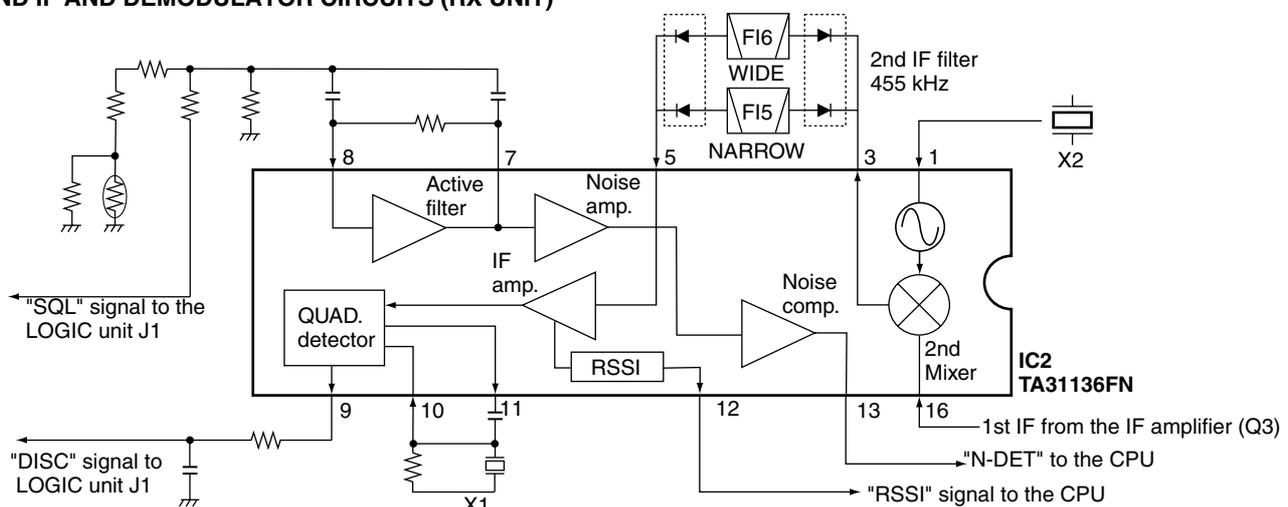
The AF signals from the FM IF IC (RX unit; IC2, pin 9) are applied to a buffer amplifier (IC9, pins 8, 9). The amplified signals pass through the high-pass filter (IC9, pins 5, 7, 12, 14) which removes CTCSS or DTCS signals.

The filtered AF signals are output from pin 7 (IC9), and are applied to the de-emphasis circuit (IC9, pins 1, 2) with frequency characteristics of -6 dB/octave, and then passed through a low-pass filter (IC10, pins 1, 3, 5, 7). The filtered signal is applied to a volume control (VR unit; R1) to control the audio level.

IC2 contains the 2nd mixer, limiter amplifier, quadrature detector, active filter and noise amplifier circuits, etc. The local oscillator section and X2 generate 31.195 MHz for the 2nd LO signal.

The output AF signals from a volume control (VR unit; R1) pass through the analog switch IC (IC16, pins 1, 7), and are then applied to the AF power amplifier (IC17, pins 1, 4) to drive a speaker.

• 2ND IF AND DEMODULATOR CIRCUITS (RX UNIT)



3-1-6 RECEIVER MUTE CIRCUITS (LOGIC UNIT)

• NOISE SQUELCH

The noise 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 mute switch.

Some noise components in the AF signals from the FM IF IC (RX unit; IC2, pin 9) are passed through the SQL level controller (VR unit; R2). The level controlled signals are applied to the active filter section in the FM IF IC (RX unit; IC2, pin 8). Noise components about 10 kHz are amplified and output from pin 7 (RX unit; IC2).

The filtered signals are converted to the pulse-type signals at the noise detector section and output from pin 13 (RX unit; IC2).

The NDET signal from the FM IF IC (RX unit; IC2) is applied to the CPU (IC33, pin 40). The CPU analyses the noise condition and controls the AF mute signal via "AFMUTE1" line (IC40, pin 4) to the AF mute switch (IC16, pin 5).

• TONE SIGNALS

The tone squelch circuit detects AF signals and opens the squelch only when receiving a signal containing a matching subaudible tone (CTCSS or DTCS).

The CTCSS signal passes through a low-pass filter circuit (IC8, pins 1, 3, 5, 7, 8, 10), and is then applied to the signal amplifier (IC8, pins 13, 14). The amplified signal is applied to the CTCSS decoder IC (IC29, pin 16) and the detected sig-

nal is applied to the CPU (IC 33) via the serial signal line.

The DTCS signal passes through a low-pass filter circuit (IC12, pins 1, 3, 8, 10), and is then applied to the signal amplifier (IC12, pins 12, 14). The amplified signal is applied to the DTCS decoder which is inside the CPU (IC33, pin 52) via the "DTCSI" line.

The 2/5TONE signals are passes through a low-pass filter circuit (IC12, pins 5, 7), and are then applied to the 2/5 TONE decoder which is inside the CPU (IC33, pin 51) via "25TI" line.

The DTMF signal is pass through the DTMF switch IC (IC30 pin 7), and is then applied to the DTMF decoder(IC31). The decoded signal is applied to the CPU (IC33, pins 82, 85, 86). The CPU analyzes the DTMF signal.

The DTMF switch (IC30) selects the signal from telephone line or RX unit.

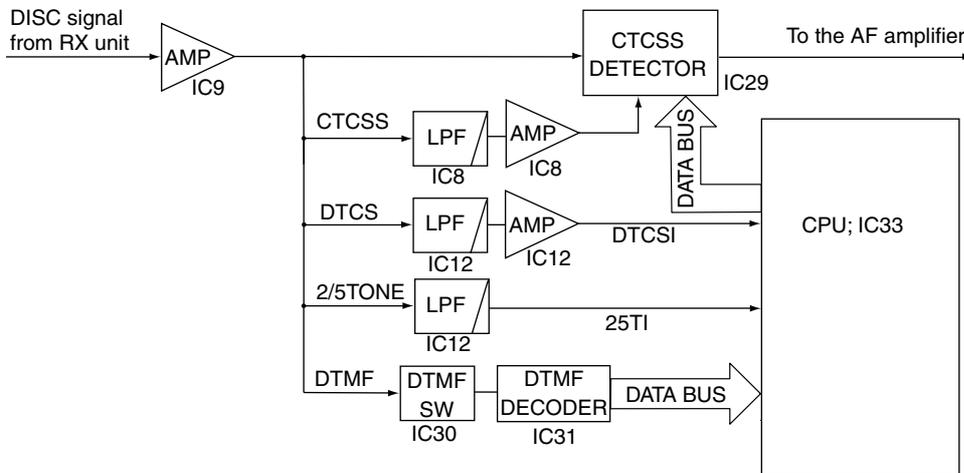
3-2 TRANSMITTER CIRCUITS

3-2-1 AF AMPLIFIER CIRCUIT (LOGIC UNIT)

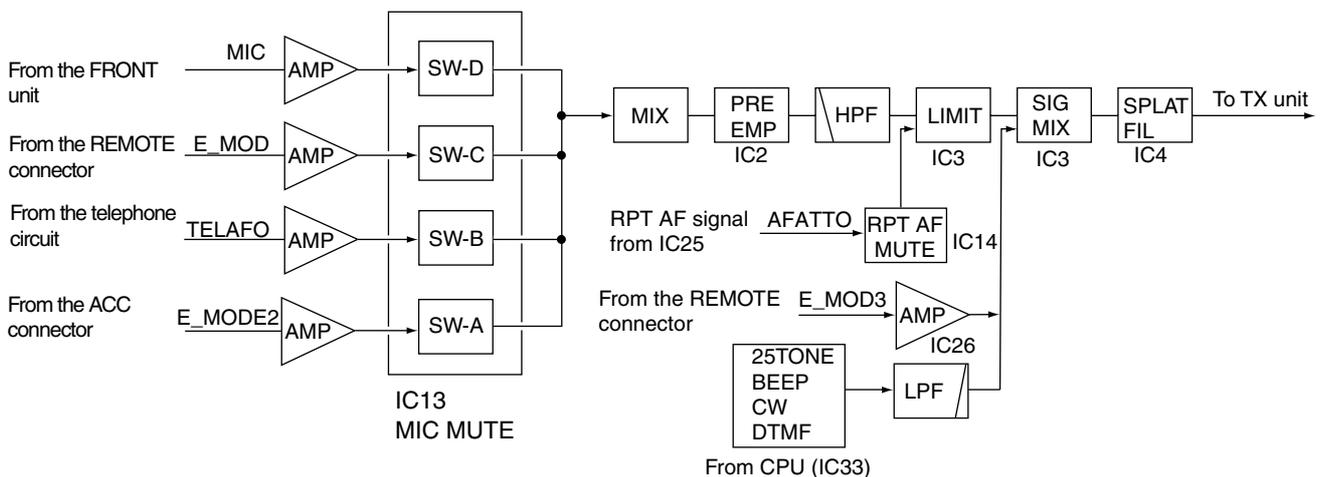
• IN CASE OF THE AF SIGNALS FROM THE MIC JACK

The AF signals from the MIC jack (FRONT unit; J7) are amplified at the AF amplifier (IC1). The amplified signals are mixed with the "E_MOD1", "E_MOD2" and "TELAFO" signals at IC2. The mixed signals pass through the high-pass filter (IC2, pins 1, 2, 6, 7) via the pre-emphasis circuit (IC2, pins 8, 9).

• TONE SIGNALS CIRCUITS (LOGIC UNIT)



• AF AMPLIFIER CIRCUITS (LOGIC UNIT)



The filtered signals are applied to the limiter amplifier (IC3), and are then mixed with the DTMF signal from the CPU (IC33, pin 43) via the TX-signal filter (IC3, pins 8, 10, 12, 14). The mixed signals are applied to the splatter filter (IC4), and are then applied to the PA unit.

• IN CASE OF THE AF SIGNALS FROM THE ANTENNA CONNECTOR

The AF signals (received signals) from the antenna connector (RX unit; J1) are applied to the buffer amplifier (IC9), CTCSS detector (IC29) and AF amplifier (IC6). The amplified signals are applied to the D/A converter IC (IC25, pins 8, 9) to adjust a repeater AF level. The adjusted AF signals pass through the RPT AF mute switch (IC14), and are applied to the limiter amplifier (IC3).

• IN CASE OF THE 2/5TONE SIGNALS

The 2/5TONE signals from the CPU (IC33, pin 43) are applied to the mixer amplifier (IC3) via TX signal filter circuit (IC3, pins 8, 10, 12, 14).

• IN CASE OF THE DTMF SIGNALS FROM DIALER IC

The DTMF from dialer IC (IC47, pin 14) are applied to the mixer amplifier (IC3) via the TX signal filter circuit (IC3, pins 8, 10, 12, 14).

• IN CASE OF THE CTCSS AND DTCS SIGNALS FROM THE CPU

The CTCSS and DTCS signals from the CPU (IC33, pin 44) are applied to the TX-tone filter (IC4, pins 12, 14). The filtered signal are applied to the D/A converter IC (TX unit; IC5 pin 9) to adjust a tone level needed, and are then mixed with AF signal at the mixer amplifier IC (TX unit; IC6).

3-2-2 MODULATION CIRCUIT (TX UNIT)

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

The filtered signals from the LOGIC unit are applied to the D/A converter (IC5, pin 4) to adjust AF level. The adjusted signals are applied to the mixer amplifier IC (IC6, pin 1) with the CTCSS/DTCS signals.

The mixed signals are applied to the TX VCO circuit to mod-

ulate the oscillated signal (TVCO unit; D5) and modulate the oscillated signal at VCO circuit (TVCO; Q1, D1–D4). The modulated VCO output is amplified at the buffer amplifier (Q1) and is then applied to the drive amplifier circuit on the PA unit.

3-2-3 POWER AMPLIFIER CIRCUIT (PA UNIT)

The power amplifier circuit amplifies the driver signal to an output power level.

The RF signal from the TX unit is applied to the pre-drive (Q4) to amplify the level needed at the power amplifier. The amplified signal passes through the attenuator circuit (R29–R31) and is then applied to the power amplifier (IC2).

The RF signal from the pre-drive (Q4) is applied to the power amplifier (IC2) to obtain 50 W ([IC-FR3100]: 25 W) of RF power.

The amplified signal is passed through a low-pass filter circuit (L6, L7, L20, C1–C3, C48, C73, C98, C100) and APC detector (D2, D4, R7, R8, R20, R21, R25, R26, 58, R36, R37, C78, C79), and is then applied to the TX antenna connector (CHASSIS; J1).

Control voltage for the pre-drive (Q4) and power amplifier (IC2) comes from the APC amplifier (IC1, Q9, Q10) to obtain stable output power. The transmit mute switch (Q7, Q8) controls the pre-drive (Q4) and power amplifier (IC2) when transmit mute is necessary.

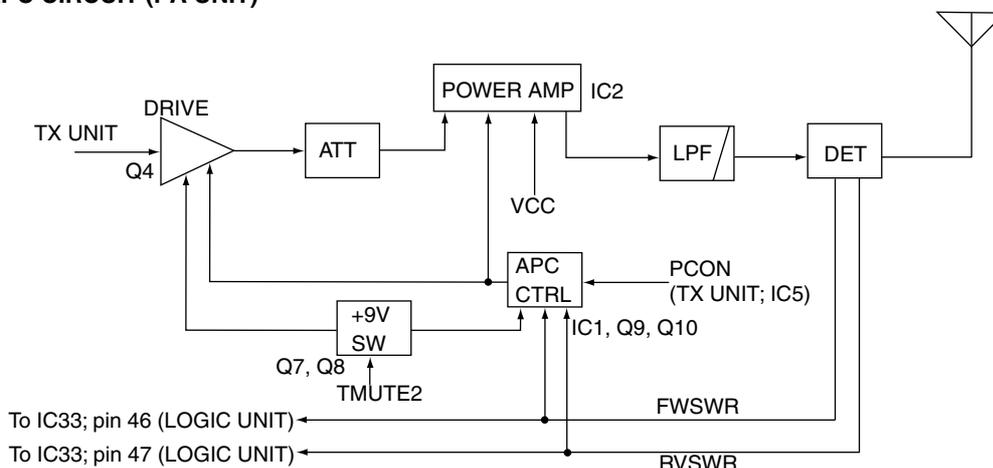
3-2-4 APC CIRCUIT (PA UNIT)

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

The APC detector circuit detects forward signals and reflection signals at D2 and D4 respectively. The combined voltage become minimum level when the antenna impedance is matched at 50 Ω, and the voltage is increased when it is mismatched.

The detected voltage is applied to the APC amplifier (IC1 pin 3), and the power setting “PCON” signal from the D/A converter (TX unit; IC5), controlled by the CPU (LOGIC unit; IC33), is applied to the APC amplifier (IC1 pin 1) for reference. When antenna impedance is mismatched, the

• APC CIRCUIT (PA UNIT)



detected voltage exceeds the power setting voltage. Then the output voltage of the APC amplifier IC (IC1, pin 4) controls the input current of the drive amplifier (Q4) and power amplifier IC (IC2, pin 2) to reduce the output power.

3-3 PLL CIRCUITS

3-3-1 GENERAL

Each receiver and transmitter circuit has an independent PLL circuit for controlling frequencies. All PLL circuits are shielded and installed on the RX and TX units.

PLL circuits steadily oscillate the transmit frequency and the receive local frequency. The PLL output frequency is controlled by divided ratio (N-data) of the programmable divider.

3-3-2 RECEIVER PLL CIRCUIT (RX UNIT)

The PLL IC (IC4) which includes in the prescaler, the programmable counter and the phase comparator generates the 1st LO frequency with the VCO circuit (RVCO unit; Q1, D1–D4). The PLL IC sets the divided ratio which bases on N-data from the CPU (LOGIC unit; IC33) to control the programmable counter. The PLL IC compares a phases of the VCO signal with the reference oscillator frequency, and is then applied to the VCO circuit (RVCO unit; Q1, D1–D4).

3-3-3 RECEIVER REFERENCE OSCILLATOR CIRCUIT (RX UNIT)

The 12.8 MHz reference frequency is produced by the oscillator (X3). The frequency is adjusted by the D/A converter IC (LOGIC unit; IC25). The reference frequency is applied to the PLL IC (IC4, pin 1).

3-3-4 RECEIVER VCO CIRCUIT (RVCO UNIT)

The VCO circuit (Q1, D1–D4) generates the receive frequency. The signal is applied to the buffer amplifier (Q2) and is then applied to the PLL IC (RX unit; IC4). The signal is amplified at the amplifiers (RX unit; Q8, Q9) and then passes through the low-pass filter (RX unit; L23, L24, L39, L53, C112–C114, C184, C216, C217) and attenuator (RX unit;

R81, R136, R137). The filtered signal is applied to the 1st mixer circuit (RX unit; IC1) as 1st LO signal.

A part of the signal is applied to the PLL IC (RX unit; IC4) via the amplifier (RX unit; Q14) as RX PLL lock voltage.

3-3-5 TRANSMITTER PLL CIRCUIT (TX UNIT)

The PLL IC (IC2) which includes in the prescaler, the programmable counter and the phase comparator. The PLL IC sets the divided ratio which bases on N-data from the CPU (LOGIC unit; IC33) to control the programmable counter. The PLL IC compares a phases of the VCO signal with the reference oscillator frequency, and is then applied to the VCO circuit (TVCO unit; Q1, D1–D4).

3-3-6 TRANSMITTER REFERENCE OSCILLATOR CIRCUIT (TX UNIT)

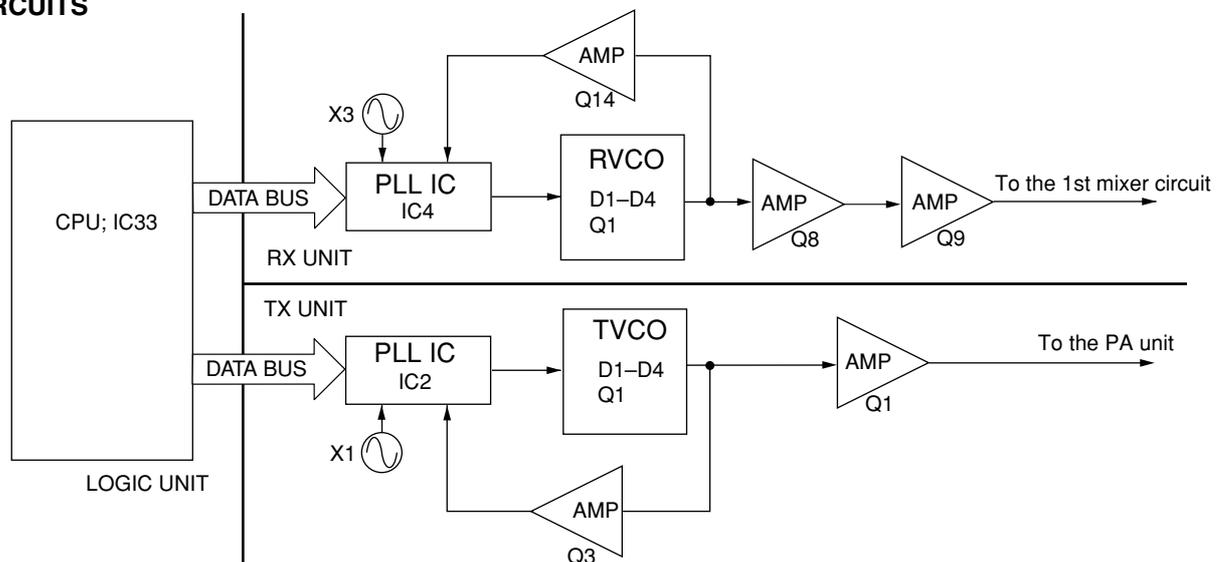
The 12.8 MHz reference frequency is produced by the oscillator (X1). The frequency is adjusted by the D/A converter IC (IC5, pin 14). The reference frequency is applied to the PLL IC (IC2, pin 1).

3-3-7 TRANSMITTER VCO CIRCUIT (TVCO UNIT)

The VCO circuit (Q1, D1–D4) generates the transmit frequency. The signal is applied to the buffer amplifier (Q2) and is then applied to the amplifier (TX unit; Q1). The amplified signal is applied to the PA unit.

A part of the signal is applied to the PLL IC (TX unit; IC2) via the amplifier (TX unit; Q3) as TX PLL lock voltage.

• PLL CIRCUITS



3-4 OTHER CIRCUITS

3-4-1 TELEPHONE IF CIRCUIT (LOGIC UNIT)

The signals from the telephone line (FRONT, J13) are applied to the ringer detect circuit (IC48, D1, D5, R131, R143, R145, C100, C103, C375). The detected signals are applied to the CPU (IC33, pin 73) via "RING" line. The "HOOKC" signal from the CPU (IC33, pin 72) and the "DP" signal from IC47 are applied to the hook switch (RL1, RL2) to off-hook.

Received AF signals from the RX unit pass through the high-pass filter (IC9, pins 5, 7, 12, 14), de-emphasis (IC9, pins 1, 2) and low-pass filter circuits (IC10, pins 1, 3, 5, 7, 8, 9). The filtered AF signals are amplified at IC7 (pins 12, 14) and are then applied to the network IC (IC46, pin 16) via T6. The output signals from IC46 are applied to the J13 (FRONT unit) via L1, L2.

AF signals from J13 (FRONT unit) are applied to the network IC (IC46, pins 8, 9). The output signals from IC46 (pins 8, 9) are applied to the AF amplifier IC (IC1, pins 1, 2) via T8. Amplified signals pass through the MIC mute switch (IC1, pins 3, 4), the MIC mixer amplifier (IC2, pins 13, 14), the pre-emphasis circuit (IC2, pins 8, 9), the high-pass filter circuit (IC2, pins 1, 2, 6, 7), limiter amplifier circuit (IC3, pins 1, 2), S-mixer circuit (IC3, pins 6, 7), and splatter filter circuit (IC4, pins 1, 3, 5, 7, 8, 10). The filtered signals are applied to the TX unit.

After off-hook condition, DTMF signal from telephone line is applied to the decoder IC (IC31) to decode the DTMF signal. The DTMF signal is applied to the CPU (IC33) via serial signal line.

The clear down signal is detected at IC45 and is then applied to the CPU (IC33). The "HOOKC" signal from the CPU (IC33, pin 72) and the "DP" signal from IC47 are applied to the hook switch (RL1, RL2) to on-hook.

3-4-2 EEPROM CIRCUIT (LOGIC UNIT)

The detector IC (IC34) detects power supply ON-OFF voltage. The signal from IC34 is applied to IC33 (CPU). IC35, IC36 are reset signal circuit which stabilizes memory data for the EEPROM (IC37).

EEPROM (IC37) memories clone data and adjust setting condition data.

3-4-3 TEMPERATURE DETECT CIRCUIT (LOGIC UNIT)

The temperature detect circuit protects the power amplifier and power supply circuit from high temperature and stabilizes the output power.

Inside temperature of the PA unit is detected at D15 (PA unit) and is then applied to the amplifier IC (PA unit; IC3). The amplified signal is applied to the CPU (IC33) to analyze the temperature via IC32.

Inside temperature of the REG unit is detected at D6 (REG unit) and is then applied to the amplifier (REG unit; IC9). The amplified signal applied to the CPU (IC33) to analyze the temperature via IC32.

IC32 selects "PATEMP" or "REGTEMP" signals from the PA or REG unit.

3-5 POWER SUPPLY CIRCUITS

3-5-1 LOGIC AND REG UNITS VOLTAGE LINES

| Line | Description |
|--------|--|
| PS 15V | The voltage from the DC power unit (CHASSIS; EP1). |
| VCC1 | The same voltage as the PS 15V line which is controlled by the power switch. |
| M9V | Common 9 V for converted from the VCC1 line by the M9V regulator circuit (REG unit; IC1, Q8, Q9). The voltage is applied to the TX and RX units. |
| L9V | Common 9 V converted from the VCC1 line by the L9V regulator circuit (REG unit; IC2). |
| A5V | Common 5 V converted from the L9V line by the A5V regulator circuit (REG unit; IC3). |
| L5V | Common 5 V converted from the L9V line by the L5V regulator circuit (LOGIC unit; IC38, Q48, D43). |
| C5V | Common 5 V converted from the L9V line by the C5V regulator circuit (LOGIC unit; IC38, Q45, D13). |
| TEL5V | Common 5 V converted from the M9V line by the TEL5V regulator circuit (LOGIC unit; IC11). |

3-5-2 RX UNIT VOLTAGE LINES

| Line | Description |
|------|---|
| +5V | Common 5 V converted from the M9V line by the +5V regulator circuit (RX unit; IC3). |
| +6V | Common 6 V converted from the M9V line by the +6V regulator circuit (RX unit; IC7). |
| R5V | Receive 5 V converted from the R9V line by the R5V regulator circuit (RX unit; IC6). |
| R9V | Receive 9 V controlled by the R9V regulator circuit (RX unit; Q15) using "R9C" signal from IC39 (LOGIC unit). |
| V9V | Common 9 V converted from the M9V line by the V9V regulator circuit (RX unit; Q24). |

3-5-3 TX UNIT VOLTAGE LINES

| Line | Description |
|------|---|
| T5V | Transmit 5 V converted from the M9V line by the T5V regulator circuit (TX unit; IC1). |
| T6V | Transmit 6 V converted from the M9V line by the T6V regulator circuit (TX unit; IC4). |
| V9V | Common 9 V converted from the M9V line by the V9V regulator circuit (TX unit; Q6). |

3-6 PORT ALLOCATIONS**3-6-1 EXPANDER IC (LOGIC UNIT; IC39)**

| Pin number | Port name | Description |
|------------|-----------|--|
| 4 | BASL | Outputs the control signal for "BASE" LED on the FRONT unit. |
| 5 | RMTL | Outputs the control signal for "REMOTE" LED on the FRONT unit. |
| 6 | BUSYL | Outputs the control signal for "BUSY" LED on the FRONT unit. |
| 7 | TXL | Outputs the control signal for "TX" LED on the FRONT unit. |
| 12 | D5C | Outputs the control signal for the D5V on the FRONT unit. |
| 13 | PROGL | Outputs the control signal for "P" LED on the FRONT unit. |
| 14 | DCL | Outputs the control signal for "DC" LED on the FRONT unit. |

3-6-2 EXPANDER IC (LOGIC UNIT; IC40)

| Pin number | Port name | Description |
|------------|-----------|--|
| 4 | AFMUTE1 | Outputs the speaker mute signal for the received AF. |
| 5 | AFMUTE2 | Outputs the speaker mute signal for the received 2/5TONE and DTMF signals. |
| 6 | MICMUTE1 | Outputs the MIC mute signal for the hand microphone. |
| 7 | MICMUTE2 | Outputs the MIC mute signal for the REMOTE connector. |
| 11 | TELBMR | Outputs the pulse control signal for the telephone dialer IC |
| 12 | TELMUTE2 | Outputs the MOD mute signal for AF signal from the telephone line. |
| 13 | TELMUTE1 | Outputs the telephone mute signal for the received AF signal. |
| 14 | MICMUTE3 | Outputs the MIC mute signal for the ACC connector. |

3-6-3 EXPANDER IC (LOGIC UNIT; IC41)

| Pin number | Port name | Description |
|------------|--------------|---|
| 5 | R/BSW | Outputs the switch control signal for the received AF signal to the microphone amplifier. |
| 6 | W/NS | Outputs the control signal for narrow/wide bands. |
| 7 | R9C | Outputs the control signal for the +9V regulator on the RX unit. |
| 12 | M9C | Outputs the control signal for the M9V regulator on the Rx unit and TX unit. |
| 13 14 | OPT1 OPT3 | Output the detection signals whether optional boards are installed or not. |

3-6-4 D/A CONVERTER IC (LOGIC UNIT; IC25)

| Pin number | Port name | Description |
|------------|-----------|---|
| 6 | DA2STB | Input port for the strobe signal. |
| 7 | SCK | Input port for the clock signal. |
| 8 | SDTO | Outputs the serial data to the CPU (LOGIC unit; IC33). |
| 9 | AFFTTI | Input port for the received AF signal. |
| 10 | AFATTO | Outputs the adjusted AF signal for the repeater output. |
| 14 | RVCON | Outputs the adjustment signal for the PLL reference frequency on the RX unit. |
| 15 | TUNE | Outputs the BPF tuning signal to the RX unit. |

3-6-5 D/A CONVERTER IC (TX UNIT; IC5)

| Pin number | Port name | Description |
|------------|-----------|--|
| 1 | ETONE | Input port for the TONE signal from the ACC connector. |
| 2 | ETONEO | Outputs the adjusted external TONE signal. |
| 3 | TXAFO | Outputs the TX AF signal to the TX modulation. |
| 4 | TXAF | Input port for the AF signal. |
| 6 | DA1STB | Input port for the strobe signal. |
| 7 | SCK | Input port for the clock signal. |
| 8 | SDTO | Outputs the serial data signal to the CPU (LOGIC unit; IC33). |
| 9 | TONE | Input port for the TONE signal. |
| 10 | TONEO | Outputs the adjusted TONE signal. |
| 11 | PCON | Outputs the TX power control signal. |
| 14 | TVCON | Outputs the adjustment signal for the TX unit PLL reference frequency. |
| 15 | MODC | Outputs the control signal for modulation balance. |
| 21 | MIXO | Input port for the mixed signal with the external signal, TX AF signal and internal signals. |
| 22 | REFMOD | Outputs the adjustment signal for TONE balance. |
| 23 | MOD | Outputs the adjusted AF signal for the TX modulation. |
| 24 | MIXO | Input port for the mixed signal with the ETONE, TX AF and TONE signals. |

3-6-6 CPU (LOGIC UNIT; IC33)

| Pin number | Port name | Description |
|------------|-----------|---|
| 1 | RPLSTB | Outputs the strobe signal for the PLL IC on the RX unit. |
| 2 | TPLSTB | Outputs the strobe signal for the PLL IC on the TX unit. |
| 3 | TUNLK | Input port for the unlock signal from the PLL IC on the TX unit. |
| 4 | TMUTE | Outputs the TX mute signal for the TX unit. |
| 5 | TMUTE2 | Outputs the TX mute signal for the PA unit. |
| 8 | M_PTT | Input port for the PTT switch signal from the microphone. |
| 9 | SPMUTE | Input port for [SPMUTE] switch. |
| 10 | REMOTE | Input port for [REMOTE] switch. |
| 11 | R/B | Input port for [R/B] switch. |
| 13 | MBEEP | Outputs the BEEP signal for modulation. |
| 15 | MONI | Input port for [MONI] switch. |
| 16 | CHUP | Input port for [CHUP] switch. |
| 17 | CHDN | Input port for [CHDN] switch. |
| 18 | DISP | Input port for [DISP] switch. |
| 19 | PROG | Input port for [PROG] switch. |
| 26 | COAXSW | Outputs the antenna switching signal. |
| 27 | CWO | Outputs the CW signal for transmit. |
| 28 | KBEEP | Outputs the beep audio signals to the speaker. |
| 29 | M/SO | Outputs the master/slave switching signal. |
| 30 | M/SI | Input port for the master/slave switching signal. |
| 33 | E_PTT | Input port for the PTT signal from the REMOTE connector. |
| 34 | E_PT2 | Input port for PTT signal from the ACC connector. |
| 35-39 | D0-D4 | Input port for the memory channel control signal. |
| 40 | NDET | Input port for the noise signal from the FM IF IC (RX unit; IC2). |
| 41 | SW | Outputs the temperature or PLL lock voltage switching signal. |
| 43 | 2/5TDTMF0 | Outputs the 2/5TONE and DTMF signals. |
| 44 | CTDTO | Outputs the CTCSS/DTCS signals. |
| 45 | PSD | Input port for the detection signal from the REG unit. |
| 46 | FWSWR | Input port for FW SWR signal from the PA unit. |

CPU-Continued

| Pin number | Port name | Description |
|------------|-----------|---|
| 47 | RVSWR | Input port for the RV SWR signal from the PA unit. |
| 48 | TEMP | Input port for the temperature signals of PA and REG units. |
| 49 | T/RLV | Input port for the VCO lock voltage to the TX and RX unit. |
| 50 | RSSI | Input port for the RSSI signal from the FM IF IC (RX unit; IC2). |
| 51 | 25TI | Input port for the 2/5TONE signals. |
| 52 | DTCSI | Input port for the DTCS signal. |
| 68 | TEL-BUSY | Input port for the busy signal from the pulse tone dialer IC (LOGIC unit; IC47). |
| 69 | MCK | Outputs the serial clock signal for the EEPROM (LOGIC unit; IC37). |
| 70 | MDT | I/O port for the serial data signal from/to the EEPROM (LOGIC unit; IC37). |
| 71 | TELSTB | Outputs strobe signal for the pulse tone dialer IC (LOGIC unit; IC47). |
| 72 | HOOKC | Outputs the ON/OFF HOOK control signal for the telephone line. |
| 73 | RING | Input port for the ringer detecting signal from the telephone line. |
| 74 | SHIFT | Outputs the control signal for the clock shift circuit. |
| 75 | INT | Input port for the power supply detection signal. |
| 76 | TXDTO | Outputs the serial data signal to the ACC connector. |
| 77 | RXDTO | Input port for the serial data signal from the ACC connector. |
| 78 | DTSEL1 | Outputs the control signal for the DTMF SW IC (LOGIC unit; IC50). |
| 79 | TXDT1 | Outputs the clone data signal. |
| 80 | RXDT1 | Input port for the clone data signal. |
| 81 | DTSEL2 | Outputs the control signal for the DTMF SW IC (LOGIC unit; IC30). |
| 82 | DTSTD | Input port for the TONE detecting signal from the DTMF decoder IC (LOGIC unit; IC31). |
| 85 | DTMFD | Input port for the data decoding signal from the DTMF decoder IC (LOGIC unit; IC31). |
| 86 | DTACK | Outputs the clock signal for the DTMF decoder IC (LOGIC unit; IC31). |
| 87 | ONHOOK | Input port for the detection signal of the ON-HOOK signal. |
| 88 | IOE | Outputs the control signal for the port expander IC (LOGIC unit; IC39–IC41). |

CPU-Continued

| Pin number | Port name | Description |
|------------|-----------|---|
| 89 | PE3STB | Outputs the strobe signal for the port expander IC (LOGIC unit; IC41). |
| 90 | PE2STB | Outputs the strobe signal for the port expander IC (LOGIC unit; IC40). |
| 91 | PE1STB | Outputs the strobe signal for the port expander IC (LOGIC unit; IC39). |
| 95 | D2STB | Outputs the strobe signal for the D/A converter IC (LOGIC unit; IC25). |
| 96 | D1STB | Outputs the strobe signal for the D/A converter IC (TX unit; IC5). |
| 97 | SDTO | Outputs the serial data signal for the PLL IC (RX unit; IC4, TX unit; IC2), dialer IC (LOGIC unit; IC47), port expander IC (LOGIC unit; IC39–IC41) and optional boards. |
| 98 | SCK | Outputs the clock signal for the PLL IC (RX unit; IC4, TX unit; IC2), dialer IC (LOGIC unit; IC47), port expander IC (LOGIC unit; IC39–IC41) and optional boards. |
| 99 | RUNLK | Input port for the unlock signal from the PLL IC (RX unit; IC4). |
| 100 | C/DSW | Outputs the control signal for the TX-TONE filter (LOGIC unit; IC4). |

SECTION 4 ADJUSTMENT PROCEDURES

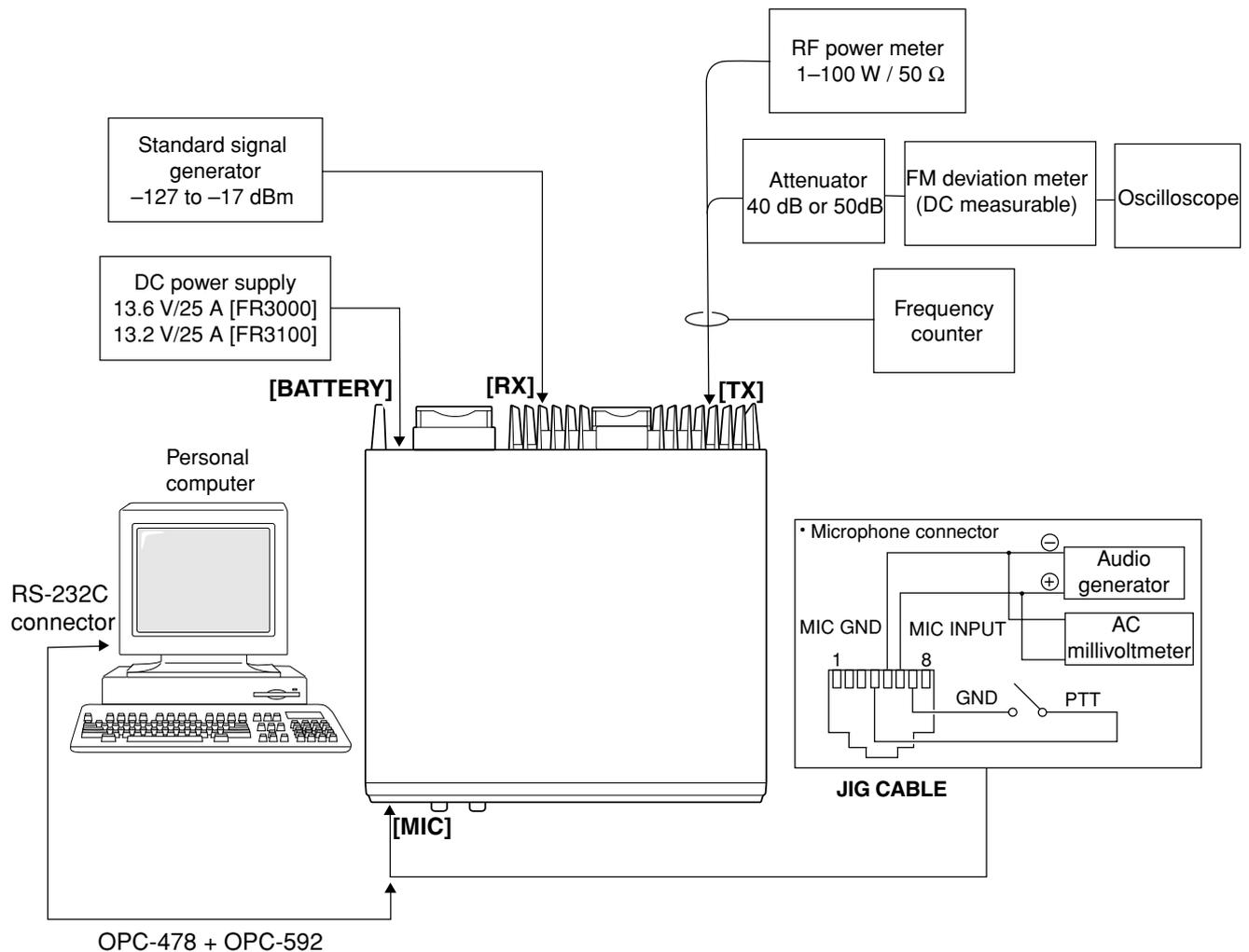
4-1 PREPARATION

Some adjustments must be performed on the "ADJUSTMENT MODE". CS-FR3000 CLONING SOFTWARE, OPC-478 CLONING CABLE and OPC-592 ADAPTOR CABLE are required when entering the adjustment mode. Refer to the next page in detail.

■ REQUIRED TEST EQUIPMENT

| EQUIPMENT | GRADE AND RANGE | EQUIPMENT | GRADE AND RANGE |
|-------------------------------------|---|---------------------------------|--|
| DC power supply | Output voltage : 13.6 V DC [FR3000] 13.2 V DC [FR3100] | Audio generator | Frequency range : 300–3000 Hz Output level : 1–500 mV |
| | Current capacity : 25 A or more | Attenuator | Power attenuation : 40 or 50 dB Capacity : 100 W or more |
| RF power meter (terminated type) | Measuring range : 1–100 W | Standard signal generator (SSG) | Frequency range : 120–600 MHz Output level : 0.1 μ V–32 mV (–127 to –17 dBm) |
| | Frequency range : 100–300 MHz | | AC millivoltmeter |
| Frequency counter | Impedance : 50 Ω | Oscilloscope | Frequency range : DC–20 MHz Measuring range : 0.01–20 V |
| | SWR : Less than 1.2 : 1 | | Digital multimeter |
| FM deviation meter | Frequency range : DC–600 MHz | | |
| | Measuring range : 0 to \pm 5 kHz | | |

• CONNECTION



■ BEFORE ENTERING THE ADJUSTMENT MODE

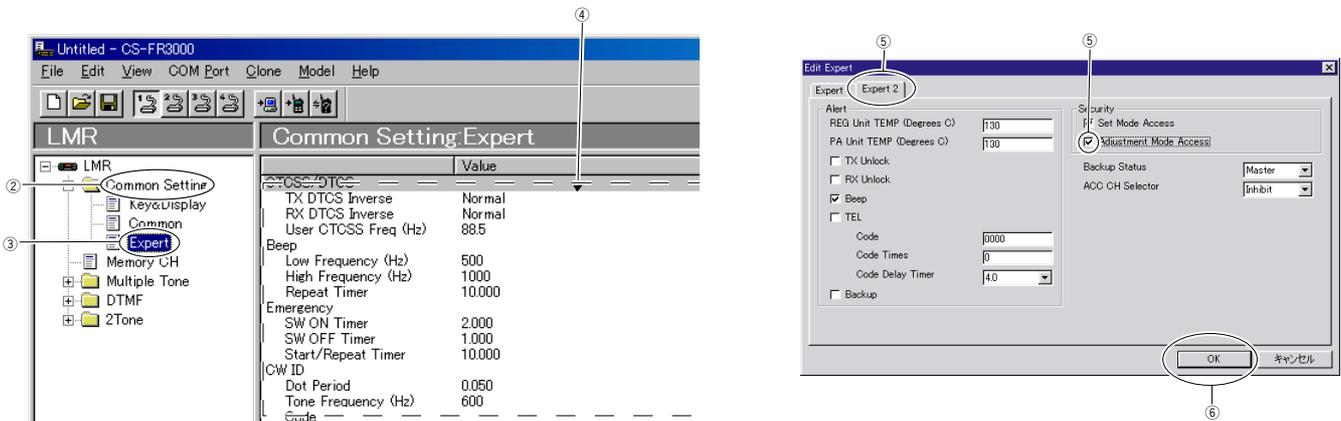
CAUTION!: Need to back up the original memory data using CS-FR3000 before cloning the adjustment frequencies.

When program the adjustment frequencies into the repeater, the repeater's memories channels will be overwritten the data and deleted original memory data at the same time.

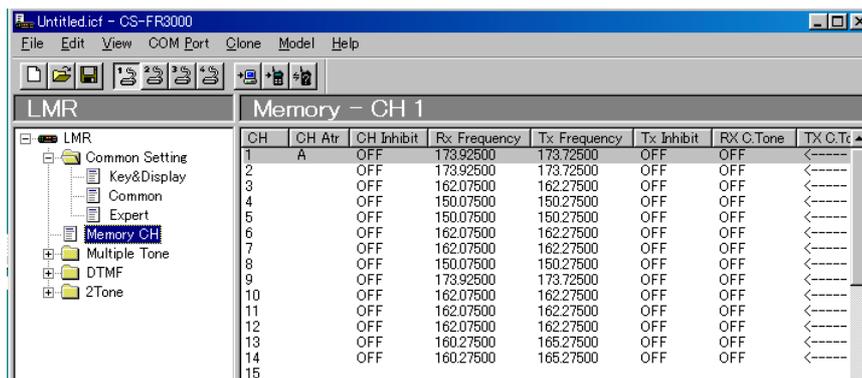
Need to do cloning "Adjustment Mode Access" permitting and adjustment frequency into the CPU using CS-FR3000 before entering the adjustment mode. Otherwise, the repeater can not enter the adjustment mode.

■ PROCESS TO THE PERMIT "ADJUSTMENT MODE ACCESS"

- ① Run the CS-FR3000 CLONING SOFTWARE.
- ② Open the "Common Setting" folder .
- ③ Click the "Expert" card on the tree view window.
- ④ Double-click somewhere on the Common setting screen window, then appear the "Edit Expert" window.
- ⑤ Click the "Expert 2" tab, then click the "Adjustment Mode Access" check box.
- ⑥ Click "OK" button.
- ⑦ Click the "Memory CH" card on the tree view window.
- ⑧ Input adjustment frequencies as following page 4-4.
- ⑨ Cloning to the repeater then the repeater can be enter the adjustment mode.
Show the next page to enter the adjustment mode.

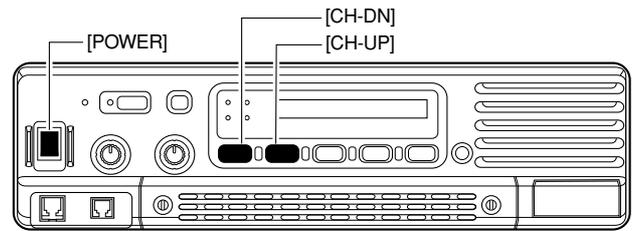


MEMORY CHANNEL SCREEN (Sample only)



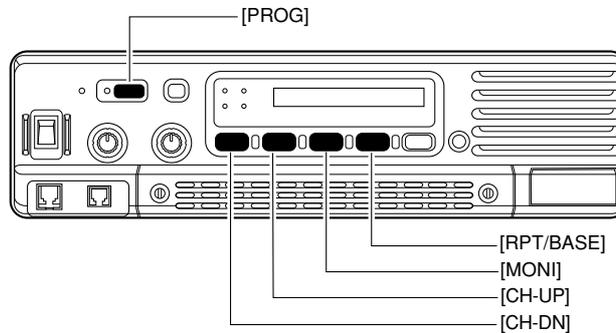
■ ENTERING THE ADJUSTMENT MODE

- ① Turn the power OFF.
- ② While pushing and holding both [CH-DN] and [CH-UP], turn ON. Never release [CH-DN] and [CH-UP] until 1 short beep sounds.
- ③ Push [CH-DN] button, then sounds 2 beep audio.



■ OPERATING IN THE ADJUSTMENT MODE

- Change the item (including frequency) (+1). : Push [CH-UP] button.
 - Change the item (including frequency) (-1). : Push [CH-DN] button.
 - Adjust the specified value (+1). : Push [PRT/BASE] button.
 - Adjust the specified value (-1). : Push [MONI] button.
 - Change the TX and RX's condition. : Push [PROG] button.
- Change the condition TX reference frequency to RX reference frequency.
 Change the condition TX "HIGH POWER" to TX "LOW POWER".



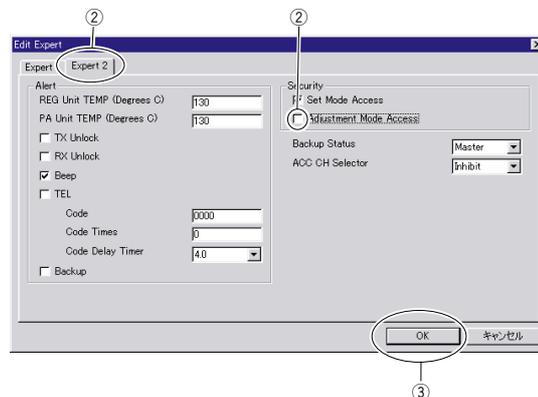
■ EXITING THE ADJUSTMENT MODE

- ① Turn the power OFF.
- ② While pushing and holding and [CH-UP], turn ON. Never release [CH-UP] until 1 short beep sounds.
- ③ Push [CH-UP] button, then sounds 2 beep audio.

■ AFTER FINISHING ADJUSTMENT

CAUTION!: When the adjustment is finished, the repeater need to be canceled adjustment mode. Otherwise the repeater does not work properly.

- ① Perform the step ① to ④, described in the PROCESS TO PERMIT "ADJUSTMENT MODE ACCESS" (see page 4-2).
- ② Click the "EXPERT 2" tag, then clear the check box for the "Adjustment Mode Access".
- ③ Click "OK" button, then cloning with the original memory data.

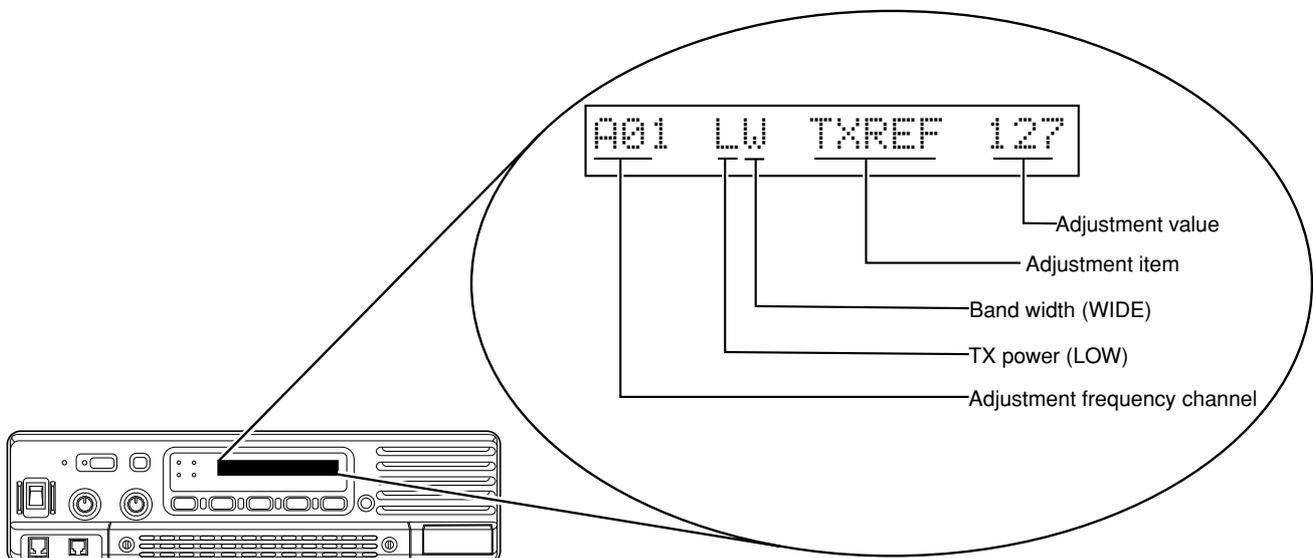


■ ADJUSTMENT MODE CH LIST

| CH | [Other] (MHz) | [GEN74] (MHz) | LCD DISPLAY | W/N | ADJUSTMENT |
|-----|------------------------------|------------------------------|-------------------|-----|--|
| A01 | 173.925 (RX) 173.725 (TX) | 171.925 (RX) 171.725 (TX) | A01 LW TXREF 127 | W | TVCO/RVCO adjustment. Reference frequency adjustment. |
| A02 | 173.925 (RX) 173.725 (TX) | 171.925 (RX) 171.725 (TX) | A02 LW HRTUN 115 | W | RX sensitivity adjustment. |
| A03 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A03 LW MRTUN 088 | W | RX sensitivity adjustment. |
| A04 | 150.075 (RX) 150.275 (TX) | 148.075 (RX) 148.275 (TX) | A04 LW LRTUN 055 | W | RX sensitivity adjustment. |
| A05 | 150.075 (RX) 150.275 (TX) | 148.075 (RX) 148.275 (TX) | A05 LW RPTSQL 150 | W | RPT SQL adjustment. |
| A06 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A06 HW POWER 166 | W | TX power adjustment. |
| A07 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A07 LW M DEV 143 | W | TX modulation adjustment. |
| A08 | 150.075 (RX) 150.275 (TX) | 148.075 (RX) 148.275 (TX) | A08 LW LMODC 073 | W | TX modulation adjustment. |
| A09 | 173.925 (RX) 173.725 (TX) | 171.925 (RX) 171.725 (TX) | A09 LW HMODC 191 | W | TX modulation adjustment. |
| A10 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A10 LW CTCDEV 134 | N | CTCSS modulation adjustment. |
| A11 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A11 LW DTCADJ 159 | W | DTCS modulation adjustment. |
| A12 | 162.075 (RX) 162.275 (TX) | 160.075 (RX) 160.275 (TX) | A12 LN CTCDEV 062 | N | CTCSS modulation adjustment. (NARROW) |
| A13 | 160.275 (RX) 165.275 (TX) | 158.275 (RX) 163.275 (TX) | A13 LW RPTAF 141 | W | RPT modulation adjustment. (WIDE) |
| A14 | 160.275 (RX) 165.275 (TX) | 158.275 (RX) 163.275 (TX) | A14 LN RPTAF 126 | N | RPT modulation adjustment. (NARROW) |

[Other]: 150–174 MHz version, [GEN74]: 148–172 MHz version
 LCD display's detail as shown below. A number of 3 figures is a adjustment value (sample).

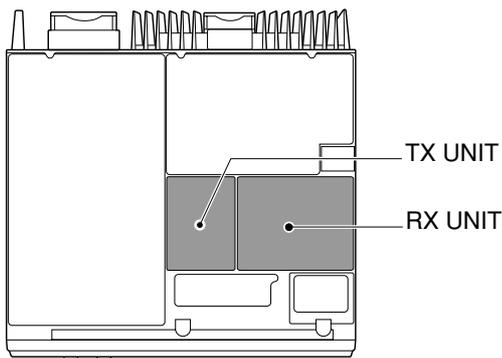
■ EXPLANATION OF LCD DISPLAY IN THE ADJUSTMENT MODE



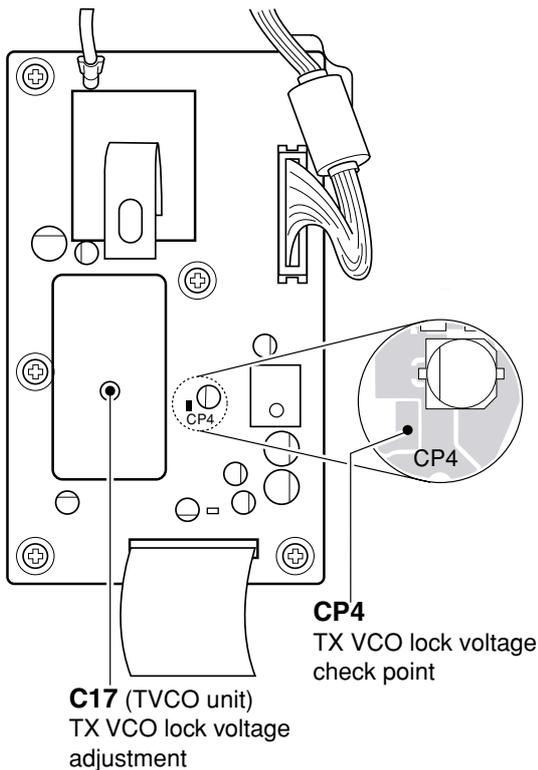
4-2 PLL ADJUSTMENT

| ADJUSTMENT | ADJUSTMENT CONDITIONS | MEASUREMENT | | VALUE | ADJUSTMENT | |
|---------------------|--|-------------|---|--|------------|---------------------|
| | | UNIT | LOCATION | | UNIT | ADJUST |
| TX VCO LOCK VOLTAGE | 1 <ul style="list-style-type: none"> • LCD display : A01 LW TXREF 127 • Transmitting | TX | Connect the digital multi meter or oscilloscope to check point CP4. | 4.0 V | TVCO | C17 |
| RX VCO LOCK VOLTAGE | 1 <ul style="list-style-type: none"> • LCD display : A01 LW TXREF 127 • Receiving | RX | Connect the digital multi meter or oscilloscope to check point CP3. | 4.0 V | RVCO | C17 |
| REFERENCE FREQUENCY | 1 <ul style="list-style-type: none"> • Wait for 5 minutes after power ON. • LCD display : A01 LW TXREF Connect the RF power meter or 50 Ω dummy load to the [TX] antenna connector. • Transmitting | REAR panel | Loosely couple a frequency counter to the [TX] antenna connector. | 171.7250 MHz [GEN74] 173.7250 MHz [Other] | FRONT | [PRT/BASE] / [MONI] |
| | 2 <ul style="list-style-type: none"> • Push the [PROG] button • LCD display : A01 LW RXREF • Receiving | RX | Connect the frequency counter to check point CP2. | 140.2750 MHz [GEN74] 142.2750 MHz [Other] | FRONT | [PRT/BASE] / [MONI] |

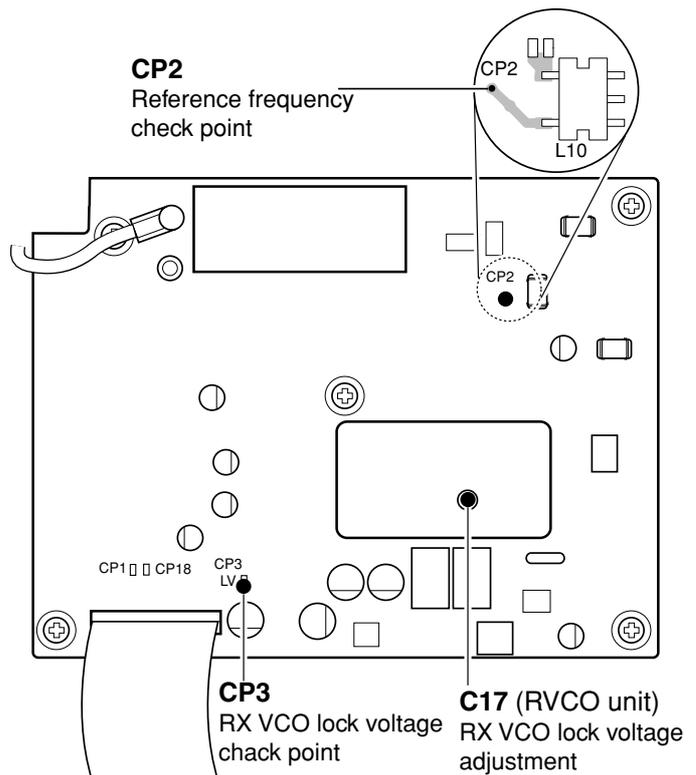
• IC-FR3000 TOP VIEW



• TX UNIT TOP VIEW



• RX UNIT TOP VIEW



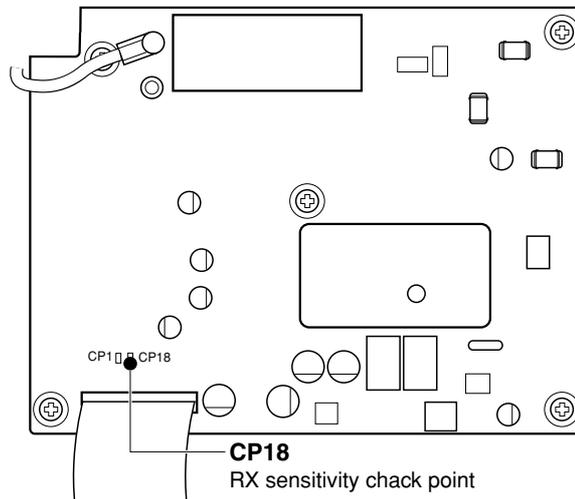
4-3 SOFTWARE ADJUSTMENT

Select an item using [CH-UP] / [CH-DN] buttons, then set specified value using [RPT/BASE] / [MONI] buttons on the FRONT PANEL.

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE |
|----------------------------|---|-------------|--|-----------------|
| | | UNIT | LOCATION | |
| RX SENSITIVITY (HIGH FRQ.) | 1 <ul style="list-style-type: none"> • LCD display : A02 LW HRTUN • Connect the standard signal generator to the [RX] antenna connector and set as: <ul style="list-style-type: none"> Frequency : 171.9250 MHz [GEN74] 173.9250 MHz [Other] Level : 32 μV* (-77 dBm) Modulation : 1 kHz Deviation : \pm3 kHz • Receiving | RX | Connect the digital multi meter or oscilloscope to check point CP18. | Maximum voltage |
| (MID FRQ.) | 2 <ul style="list-style-type: none"> • LCD display : A03 LW MRTUN • Connect the standard signal generator to the [RX] antenna connector and set as: <ul style="list-style-type: none"> Frequency : 160.0750 MHz [GEN74] 162.0750 MHz [Other] • Receiving | | | Maximum voltage |
| (LOW FRQ.) | 3 <ul style="list-style-type: none"> • LCD display : A04 LW LRTUN • Connect the standard signal generator to the [RX] antenna connector and set as: <ul style="list-style-type: none"> Frequency : 148.0750 MHz [GEN74] 150.0750 MHz [Other] • Receiving | | | Maximum voltage |
| REPEATER SENSITIVITY | <ul style="list-style-type: none"> • LCD display : A05 LW RPTSOL • Connect a standard signal generator to the [RX] antenna connector and set as: • Connect the RF power meter or 50 Ω dummy load to the [TX] antenna connector. Frequency : 148.0750 MHz [GEN74] 150.0750 MHz [Other] Level : 0.2 μV* (-121 dBm) [Other] : 0.32 μV* (-117 dBm) [EUR2], [FRG2] Modulation : 1 kHz Deviation : \pm3 kHz [Other] : \pm2.4 kHz [FRG2] • Receiving | FRONT | Speaker | Squelch open |

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

• RX UNIT TOP VIEW



SOFTWARE ADJUSTMENT – continued

Select an item using [CH-UP] / [CH-DN] buttons, then set specified value using [RPT/BASE] / [MONI] buttons on the FRONT PANEL.

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | |
|-------------------------------|--|--|--|--|---|
| | | UNIT | LOCATION | | |
| OUTPUT POWER (HI) | 1 | <ul style="list-style-type: none"> LCD display : A06 HW POWER Operating freq. : 160.2750 MHz [GEN74] 162.2750 MHz [Other] Connect the RF power meter to the [TX] antenna connector. Transmitting | Rear panel | Connect the RF power meter to the [TX] antenna connector. | 50.0 W [Other] 25.0 W [EUR2], [FRG2] |
| | (LOW) | 2 | | | <ul style="list-style-type: none"> Push the [PROG] button LCD display : A06 LW POWER Operating freq. : 160.2750 MHz [GEN74] 162.2750 MHz [Other] Transmitting |
| DEVIATION | <ul style="list-style-type: none"> LCD display : A07 LW M DEV Operating freq. : 160.2750 MHz [GEN74] 162.2750 MHz [Other] IF bandwidth : Wide Connect the audio generator to the [MIC] jack through the JIG cable and set as: 1.0 kHz/40 mVrms Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P-P)/2 Transmitting | Rear panel | Connect the FM deviation meter to the [TX] antenna connector through the attenuator. | ±4.4 kHz [Other] ±3.5 kHz [FRG2] | |
| MODULATION BALANCE (LOW FRQ.) | 1 | <ul style="list-style-type: none"> LCD display : A08 LW LMODC Operating freq. : 148.2750 MHz [GEN74] 150.2750 MHz [Other] IF bandwidth : Wide Connect the audio generator to the [MIC] jack through the JIG cable and set as: 1.0 kHz/40 mVrms Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P-P)/2 Transmitting | Rear panel | Connect the FM deviation meter to the [TX] antenna connector through the attenuator. | ±4.4 kHz [Other] ±3.5 kHz [FRG2] |
| | (HIGH FRQ.) | 2 | | | <ul style="list-style-type: none"> LCD display : A09 LW HMODC Operating freq. : 171.7250 MHz [GEN74] 173.7250 MHz [Other] Transmitting |

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

SOFTWARE ADJUSTMENT – continued

Select an item using [CH-UP] / [CH-DN] buttons, then set specified value using [RPT/BASE] / [MONI] buttons on the FRONT PANEL.

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | |
|---------------------------------|----------------------|---|------------|---|--|
| | | UNIT | LOCATION | | |
| CTCSS DEVIATION (WIDE) | 1 | <ul style="list-style-type: none"> LCD display : A10 LW CDCDEV Operating freq. : 160.2750 MHz [GEN74] 162.2750 MHz [Other] Set the FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P-P)/2 No audio applied to the [MIC] connector. Transmitting | Rear panel | Connect the FM deviation meter to the [TX] antenna connector through the attenuator. | ±0.65 kHz [Other] ±0.52 kHz [FRG2] |
| | (NARROW) | 2 | | | <ul style="list-style-type: none"> LCD display : A12 LN CTCDEV Operating freq : 160.2750 MHz [GEN74] 162.2750 MHz [Other] No audio applied to the [MIC] connector. Transmitting |
| DTCS MODULATION BALANCE | | <ul style="list-style-type: none"> LCD display : A11 LW DTCADJ Operating freq. : 160.2750 MHz [GEN74] 162.2750 MHz [Other] No audio applied to the [MIC] connector. Transmitting. | Rear panel | Connect the FM deviation meter with an oscilloscope to the [TX] antenna connector through the attenuator. | Set to flat wave form  |
| REPEATER DEVIATION (WIDE) | 1 | <ul style="list-style-type: none"> LCD display : A13 LW RPTAF Operating freq : 158.2750 MHz (RX) [GEN74] 160.2750 MHz (TX) [GEN74] 160.2750 MHz (RX) [Other] 162.2750 MHz (TX) [Other] Connect the standard signal generator to the RX antenna connector and set as: Level : 1 mV* (-47 dBm) Modulation : 1 kHz Deviation : ±3 kHz [Other] : ±2.4 kHz [FRG2] Transmitting | Rear panel | Connect the FM deviation meter to the [TX] antenna connector through the attenuator. | ±3.0 kHz [Other] ±2.4 kHz [FRG2] |
| | (NARROW) | 2 | | | <ul style="list-style-type: none"> LCD display : A14 LN RPTAF Operating freq : 158.2750 MHz (RX) [GEN74] 160.2750 MHz (TX) [GEN74] 160.2750 MHz (RX) [Other] 162.2750 MHz (TX) [Other] Transmitting |

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

SECTION 5 PARTS LIST

[REG UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| IC1 | 1180001320 | IC NJM7809FA | T |
| IC2 | 1180002290 | S.IC NJM7809DL1A-TE | B |
| IC3 | 1180001860 | S.IC TA78M05F (TE16L) | B |
| IC4 | 1180002480 | S.REG TA78DL12AF (TE16L) | T |
| IC6 | 1180001540 | S.IC TA78L08F (TE12R) | B |
| IC7 | 1110002860 | S.IC TA75S393F (TE85R) | T |
| IC9 | 1110002400 | S.IC NJM2107F-TE1 | T |
| IC11 | 1110002750 | S.IC TA75S01F (TE85R) | T |
| Q1 | 1590003110 | FET 2SJ533 | T |
| Q4 | 1590003110 | FET 2SJ533 | T |
| Q5 | 1540000550 | S.TRANSISTOR 2SD1664 T100Q | T |
| Q7 | 1590001940 | S.TRANSISTOR DTC144EE TL | B |
| Q8 | 1590003030 | S.FET 2SJ553STR | B |
| Q9 | 1590001940 | S.TRANSISTOR DTC144EE TL | B |
| D2 | 1750000550 | S.DIODE 1SS355 TE-17 | B |
| D3 | 1790000700 | DIODE DSA3A1 | T |
| D4 | 1710001170 | DIODE FCH30A03L | T |
| D6 | 1790000720 | DIODE MA29W-B | T |
| D7 | 1710001170 | DIODE FCH30A03L | T |
| D8 | 1730002340 | S.ZENER MA8047-M (TX) | B |
| R3 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R14 | 7100000830 | RESISTOR 5SG 3.3 Ω | T |
| R16 | 7030003240 | S.RESISTOR ERJ3GEYJ 220 V (22 Ω) | B |
| R17 | 7030003240 | S.RESISTOR ERJ3GEYJ 220 V (22 Ω) | B |
| R18 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R19 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R23 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | T |
| R24 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | B |
| R27 | 7030003420 | S.RESISTOR ERJ3GEYJ 681 V (680 Ω) | B |
| R30 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R31 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R32 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R33 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R34 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R35 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | T |
| R36 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R37 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R38 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R39 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R40 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R41 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R42 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R58 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R59 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | B |
| R60 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R61 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R62 | 7030010510 | S.RESISTOR ERJ1TYJ 8R2U (8.2 Ω) | B |
| R64 | 7030003240 | S.RESISTOR ERJ3GEYJ 220 V (22 Ω) | B |
| R65 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R66 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | T |
| R67 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R68 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| C4 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C5 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C6 | 4510007690 | ELECTROLYTIC LXZ25VB2200 | T |
| C7 | 4510007690 | ELECTROLYTIC LXZ25VB2200 | T |
| C9 | 4510007690 | ELECTROLYTIC LXZ25VB2200 | T |
| C11 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C15 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C17 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C19 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C20 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C22 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C23 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C24 | 4550006770 | S.TANTALUM TEESVD2 1C 476M-12R | T |
| C25 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C26 | 4510007660 | ELECTROLYTIC LXZ25VB100 | T |
| C27 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C28 | 4510007650 | S.ELECTROLYTIC EEVHB1C470P | T |
| C29 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C31 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C33 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C34 | 4510007570 | S.ELECTROLYTIC EEVHB1C220UR | T |

[REG UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|-------------------------------|----|
| C35 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C36 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C37 | 4510007660 | ELECTROLYTIC LXZ25VB100 | T |
| C38 | 4510007660 | ELECTROLYTIC LXZ25VB100 | T |
| C41 | 4510007570 | S.ELECTROLYTIC EEVHB1C220UR | T |
| C42 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C43 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C45 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C47 | 4510007660 | ELECTROLYTIC LXZ25VB100 | T |
| C48 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C49 | 4510007570 | S.ELECTROLYTIC EEVHB1C220UR | T |
| C50 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C51 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C52 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| RL2 | 6330001680 | RELAY ACB32101 | T |
| J13 | 6510018970 | S.CONNECTOR B4B-PH-SM3-TB | T |
| J14 | 6510022620 | S.CONNECTOR 10FMN-BMTTR-A-TBT | T |
| J16 | 6510018960 | S.CONNECTOR B2B-PH-SM3-TB | T |
| J17 | 6510018960 | S.CONNECTOR B2B-PH-SM3-TB | T |
| J18 | 6510018960 | S.CONNECTOR B2B-PH-SM3-TB | T |
| F1 | 5220000300 | HOLDER 1A5600 | T |
| F2 | 5220000300 | HOLDER 1A5600 | T |
| F3 | 5210000850 | FUSE ATC-20 | T |
| F4 | 5220000300 | HOLDER 1A5600 | T |
| F5 | 5220000300 | HOLDER 1A5600 | T |
| F6 | 5210000850 | FUSE ATC-20 | T |
| S1 | 2260001510 | SWITCH RXE160 | T |
| W1 | 7120000490 | JUMPER ERD25T0 | T |
| W2 | 7120000490 | JUMPER ERD25T0 | T |
| W3 | 7120000490 | JUMPER ERD25T0 | T |
| W4 | 7120000490 | JUMPER ERD25T0 | T |
| EP1 | 0910056242 | PCB B 5998B | |
| EP2 | 6910012350 | S.BEAD MMZ1608Y 102BT | T |
| EP3 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP4 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP5 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP6 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP7 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP8 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP9 | 6910011340 | TERMINAL OT-010 M3 | T |
| EP10 | 6910011340 | TERMINAL OT-010 M3 | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

[FRONT UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|--------------|---|----|
| Q1 | 1530002060 | S.TRANSISTOR | 2SC4081 T106 R | T |
| D1 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D2 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D3 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| L1 | 6200001620 | S.COIL | ELJFC 1R0K-F | T |
| R1 | 7030003400 | S.RESISTOR | ERJ3GEYJ 471 V (470 Ω) | T |
| R2 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R3 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R8 | 7030001150 | S.RESISTOR | MCR50JZHJ 150 Ω (151) | B |
| R9 | 7030001150 | S.RESISTOR | MCR50JZHJ 150 Ω (151) | B |
| R10 | 7030001160 | S.RESISTOR | MCR50JZHJ 180 Ω (181) | B |
| R11 | 7030001150 | S.RESISTOR | MCR50JZHJ 150 Ω (151) | B |
| R12 | 7030001150 | S.RESISTOR | MCR50JZHJ 150 Ω (151) | B |
| R13 | 7030001150 | S.RESISTOR | MCR50JZHJ 150 Ω (151) | B |
| R15 | 7030003460 | S.RESISTOR | ERJ3GEYJ 152 V (1.5 kΩ) | B |
| R17 | 7030008220 | S.RESISTOR | MCR100JZHJ 47 Ω (470) | B |
| R18 | 7030008220 | S.RESISTOR | MCR100JZHJ 47 Ω (470) | B |
| R19 | 7540000240 | S.ABSORBER | KU10R29N-4063 | T |
| R21 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R22 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R23 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R24 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R26 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | T |
| R27 | 7030010910 | S.RESISTOR | ERJ1TYJ 150U (15 Ω) | B |
| R28 | 7030010910 | S.RESISTOR | ERJ1TYJ 150U (15 Ω) | B |
| C1 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C2 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C3 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C4 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C5 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C12 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C13 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C14 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C15 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C16 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C17 | 4030017200 | S.CERAMIC | GRM31BR32J102KY01L | T |
| C18 | 4030017200 | S.CERAMIC | GRM31BR32J102KY01L | T |
| C19 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C20 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| J1 | 6510022620 | S.CONNECTOR | 10FMN-BMTR-A-TBT | B |
| J2 | 6510022580 | S.CONNECTOR | 24FMN-BMTR-A-TBT | B |
| J3 | 6510021600 | S.CONNECTOR | S2B-PH-SM3-TB | B |
| J4 | 6510022910 | CONNECTOR | IMS A9201B-1-16Z012Z | T |
| J6 | 6510022790 | CONNECTOR | 95003-2641 | T |
| J7 | 6450001470 | CONNECTOR | 95003-2881 | T |
| J8 | 6510023250 | S.CONNECTOR | S3B-PH-SM3-TB | B |
| J9 | 6510021600 | S.CONNECTOR | S2B-PH-SM3-TB | B |
| F1 | 5210000890 | FUSE | SBR-1A [USA2] | B |
| DS1 | 5040001820 | LED | BG3889S | T |
| DS2 | 5040001820 | LED | BG3889S | T |
| DS3 | 5040001330 | LED | BR3889S | T |
| DS4 | 5040001820 | LED | BG3889S | T |
| DS5 | 5040001820 | LED | BG3889S | T |
| DS6 | 5040001820 | LED | BG3889S | T |
| DS7 | 5030002190 | LCD | MSC-C161UYLY-4W | T |
| S1 | 2260001680 | S.SWITCH | SKQDPB | T |
| S2 | 2260001680 | S.SWITCH | SKQDPB | T |
| S3 | 2260001680 | S.SWITCH | SKQDPB | T |
| S4 | 2260001680 | S.SWITCH | SKQDPB | T |
| S5 | 2260001680 | S.SWITCH | SKQDPB | T |
| S6 | 2260001680 | S.SWITCH | SKQDPB | T |
| S7 | 2260001680 | S.SWITCH | SKQDPB | T |
| S8 | 2260001680 | S.SWITCH | SKQDPB | T |
| W1 | 7030003860 | S.RESISTOR | ERJ3GE JPW V [GEN2], [GEN4], [GEN74], [EUR2], [FRG2] | T |
| EP1 | 0910056251 | PCB | B 5997A | T |
| EP2 | 6910014560 | SPACER | LM-15 | T |
| EP3 | 6910014550 | SPACER | LM-13 | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[FRONT UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|-------------|-------|----|
| EP4 | 6910014540 | SPACER | LM-10 | T |
| EP5 | 6910014540 | SPACER | LM-10 | T |
| EP6 | 6910014540 | SPACER | LM-10 | T |
| EP7 | 6910014540 | SPACER | LM-10 | T |

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|--------------|--------------------|----|
| IC1 | 1110003780 | S.IC | NJM2902V-TE1 | T |
| IC2 | 1110003780 | S.IC | NJM2902V-TE1 | T |
| IC3 | 1110003780 | S.IC | NJM2902V-TE1 | B |
| IC4 | 1110003780 | S.IC | NJM2902V-TE1 | T |
| IC6 | 1110002400 | S.IC | NJM2107F-TE1 | T |
| IC7 | 1110003780 | S.IC | NJM2902V-TE1 | B |
| IC8 | 1110003780 | S.IC | NJM2902V-TE1 | B |
| IC9 | 1110003780 | S.IC | NJM2902V-TE1 | B |
| IC10 | 1110003780 | S.IC | NJM2902V-TE1 | T |
| IC11 | 1180000420 | S.IC | TA78L05F (TE12R) | B |
| IC12 | 1110003780 | S.IC | NJM2902V-TE1 | T |
| IC13 | 1130008090 | S.IC | BU4066BCFV-E1 | T |
| IC14 | 1130004200 | S.IC | TC4S66F (TE85R) | T |
| IC16 | 1130006220 | S.IC | TC4W53FU (TE12L) | B |
| IC17 | 1110003090 | IC | LA4425A | T |
| IC20 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| IC21 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| IC25 | 1190001350 | S.IC | M62364FP 600D | T |
| IC26 | 1110003800 | S.IC | NJM2904V-TE1 | B |
| IC28 | 1110002400 | S.IC | NJM2107F-TE1 | B |
| IC29 | 1190001720 | S.IC | FX805LG | T |
| IC30 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| IC31 | 1130007400 | S.IC | LC7387M-TRM | T |
| IC32 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| IC33 | 1140010140 | S.IC | HD64F2238BFA13 | T |
| IC34 | 1110005710 | S.IC | S-80842CLUA-B63-T2 | B |
| IC35 | 1130009320 | S.IC | BU4011BFV-E2 | B |
| IC36 | 1130009320 | S.IC | BU4011BFV-E2 | B |
| IC37 | 1140008650 | S.IC | HN58X2464TI | T |
| IC38 | 1180002250 | S.IC | S-812C50AMC-C3E-T2 | B |
| IC39 | 1130007570 | S.IC | BU4094BCFV-E2 | T |
| IC40 | 1130007570 | S.IC | BU4094BCFV-E2 | B |
| IC41 | 1130007570 | S.IC | BU4094BCFV-E2 | T |
| IC42 | 1170000280 | S.IC | TLP121 (GB-TPL) | B |
| IC43 | 1170000280 | S.IC | TLP121 (GB-TPL) | B |
| IC44 | 1120002830 | S.IC | NJM2125F-TE1 | T |
| IC45 | 1110005000 | S.IC | LMC567CM | B |
| IC46 | 1190001740 | S.IC | BA6566F-E2 | B |
| IC47 | 1190001730 | S.IC | LC73701M-TLM | T |
| IC48 | 1170000280 | S.IC | TLP121 (GB-TPL) | T |
| IC49 | 1170000280 | S.IC | TLP121 (GB-TPL) | T |
| IC50 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| IC51 | 1110002400 | S.IC | NJM2107F-TE1 | T |
| IC52 | 1110005690 | S.IC | NJM2520V-TE1 | T |
| IC53 | 1130006220 | S.IC | TC4W53FU (TE12L) | T |
| Q1 | 1590001400 | S.TRANSISTOR | XP1214 (TX) | B |
| Q2 | 1530002060 | S.TRANSISTOR | 2SC4081 T106 R | B |
| Q3 | 1590001940 | S.TRANSISTOR | DTC144EE TL | B |
| Q4 | 1530002060 | S.TRANSISTOR | 2SC4081 T106 R | T |
| Q5 | 1510000510 | S.TRANSISTOR | 2SA1576A T106R | T |
| Q6 | 1530002060 | S.TRANSISTOR | 2SC4081 T106 R | T |
| Q7 | 1590001400 | S.TRANSISTOR | XP1214 (TX) | B |
| Q8 | 1590003210 | S.TRANSISTOR | XP1111 (TX) | B |
| Q9 | 1590003210 | S.TRANSISTOR | XP1111 (TX) | B |
| Q10 | 1590003210 | S.TRANSISTOR | XP1111 (TX) | B |
| Q11 | 1590003210 | S.TRANSISTOR | XP1111 (TX) | B |
| Q17 | 1590001940 | S.TRANSISTOR | DTC144EE TL | T |
| Q18 | 1590002010 | S.TRANSISTOR | XP1114 (TX) | T |
| Q19 | 1590002010 | S.TRANSISTOR | XP1114 (TX) | T |
| Q20 | 1590002010 | S.TRANSISTOR | XP1114 (TX) | T |
| Q24 | 1550000020 | S.FET | 2SJ377 (TE16R) | T |
| Q25 | 1530002060 | S.TRANSISTOR | 2SC4081 T106 R | T |
| Q26 | 1590001960 | S.TRANSISTOR | XP4311 (TX) | T |
| Q27 | 1590001960 | S.TRANSISTOR | XP4311 (TX) | T |
| Q28 | 1590001960 | S.TRANSISTOR | XP4311 (TX) | T |
| Q29 | 1590001960 | S.TRANSISTOR | XP4311 (TX) | T |
| Q37 | 1590001940 | S.TRANSISTOR | DTC144EE TL | B |
| Q38 | 1590001400 | S.TRANSISTOR | XP1214 (TX) | B |
| Q40 | 1590001940 | S.TRANSISTOR | DTC144EE TL | B |
| Q44 | 1590002430 | S.TRANSISTOR | DTA144EE TL | B |
| Q45 | 1510000590 | S.TRANSISTOR | 2SA1362-Y (TE85L) | B |

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

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|--|----|
| Q48 | 1160000150 | S.TRANSISTOR IMZ4 T108 | B |
| Q49 | 1590001960 | S.TRANSISTOR XP4311 (TX) | T |
| Q50 | 1590001960 | S.TRANSISTOR XP4311 (TX) | T |
| Q51 | 1540000570 | S.TRANSISTOR 2SD1760 TLQ [FR3100] | B |
| Q52 | 1530001950 | S.TRANSISTOR 2SC2712-GR (TE85R) [FR3100] | B |
| D1 | 1730002650 | S.ZENER PTZ TE25 36B | B |
| D4 | 1710001180 | S.BRIDGE D1UBA80-4062 | B |
| D5 | 1710001180 | S.BRIDGE D1UBA80-4062 | B |
| D6 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D7 | 1790001250 | S.DIODE MA2S111-(TX) | T |
| D8 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D9 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D10 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D11 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D12 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D13 | 1790000670 | S.DIODE SB07-03C-TB | B |
| D14 | 1790001260 | S.DIODE MA2S077-(TX) | B |
| D15 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D16 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D17 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D18 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D19 | 1790001250 | S.DIODE MA2S111-(TX) | T |
| D20 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D21 | 1790001250 | S.DIODE MA2S111-(TX) | T |
| D22 | 1790001250 | S.DIODE MA2S111-(TX) | T |
| D23 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D24 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D25 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D26 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D27 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D28 | 1750000550 | S.DIODE 1SS355 TE-17 | B |
| D29 | 1750000550 | S.DIODE 1SS355 TE-17 | B |
| D33 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D38 | 1730002640 | S.ZENER PTZ TE25 13B | T |
| D43 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D44 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D45 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| D46 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| X1 | 6050011490 | S.XTAL CR-733 (4.194304 MHz) | T |
| X2 | 6050011000 | S.XTAL CR-681 (12.288 MHz) | T |
| X3 | 6050009300 | S.XTAL CR-505 (4 MHz) | T |
| L1 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L2 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L3 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L4 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L5 | 6200009790 | S.COIL BLM31PG121SN1 | B |
| L6 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L7 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L8 | 6200009790 | S.COIL BLM31PG121SN1 | B |
| L9 | 6200009790 | S.COIL BLM31PG121SN1 | T |
| L10 | 6200009790 | S.COIL BLM31PG121SN1 | B |
| L11 | 6200009790 | S.COIL BLM31PG121SN1 | B |
| R2 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R3 | 7030003750 | S.RESISTOR ERJ3GEYJ 394 V (390 kΩ) | T |
| R5 | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ) | T |
| R6 | 7030003710 | S.RESISTOR ERJ3GEYJ 184 V (180 kΩ) | T |
| R7 | 7310004790 | S.TRIMMER EVM-3YSX50 B14 (103) | T |
| R8 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R9 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R10 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R12 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R13 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R14 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R15 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R16 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R17 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R18 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R19 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R22 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R23 | 7030003740 | S.RESISTOR ERJ3GEYJ 334 V (330 kΩ) | B |
| R24 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R25 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R26 | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ) | T |
| R27 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R28 | 7030003420 | S.RESISTOR ERJ3GEYJ 681 V (680 Ω) | T |
| R29 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R30 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R31 | 7030003370 | S.RESISTOR ERJ3GEYJ 271 V (270 Ω) | T |
| R32 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | T |
| R33 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| R34 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R35 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R36 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R37 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R40 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R48 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R50 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R51 | 7310004790 | S.TRIMMER EVM-3YSX50 B14 (103) | T |
| R52 | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | T |
| R53 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | T |
| R54 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R55 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R56 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R57 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R58 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R59 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R60 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R61 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R62 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R63 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R64 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R65 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R66 | 7030003550 | S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ) | B |
| R67 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | B |
| R68 | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω) | B |
| R69 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | B |
| R70 | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) | B |
| R71 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R72 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | B |
| R74 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | B |
| R75 | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) | B |
| R77 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R78 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | B |
| R79 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R80 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R81 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R82 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R83 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R84 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R85 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R86 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R87 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R88 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R89 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R90 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R91 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R92 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R94 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R95 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R96 | 7030003690 | S.RESISTOR ERJ3GEYJ 124 V (120 kΩ) | B |
| R97 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R98 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R99 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R100 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R101 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R102 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R103 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R104 | 7030003750 | S.RESISTOR ERJ3GEYJ 394 V (390 kΩ) | B |
| R105 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R106 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R107 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | T |
| R108 | 7030003710 | S.RESISTOR ERJ3GEYJ 184 V (180 kΩ) | T |
| R109 | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) | T |
| R112 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R113 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R114 | 7030003630 | S.RESISTOR ERJ3GEYJ 393 V (39 kΩ) | B |
| R115 | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | B |
| R116 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R117 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | B |
| R118 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R119 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R121 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | B |
| R122 | 7030003630 | S.RESISTOR ERJ3GEYJ 393 V (39 kΩ) | B |
| R123 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R124 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R127 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R128 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R129 | 7030006480 | S.RESISTOR MCR100JZHJ 10 Ω (100) | B |
| R130 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R131 | 7030001430 | S.RESISTOR MCR50JZHJ 27 kΩ | B |
| R137 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R138 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R139 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R140 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R141 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R143 | 7030000410 | S.RESISTOR MCR10EZHJ 1.8 kΩ | T |
| R144 | 7030000480 | S.RESISTOR MCR10EZHJ 6.8 kΩ | T |
| R145 | 7030000410 | S.RESISTOR MCR10EZHJ 1.8 kΩ | T |

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

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| R148 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | T |
| R149 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R150 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R151 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | B |
| R153 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R154 | 7030008350 | S.RESISTOR ERJ12YJ390U | B |
| R155 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R158 | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) | B |
| R159 | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) | B |
| R160 | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) | B |
| R162 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (2.2 kΩ) | B |
| | | [FR3000] | B |
| | 7030003610 | S.RESISTOR ERJ3GEYJ 273 V (27 kΩ) | B |
| | | [FR3100] | B |
| R163 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | B |
| R164 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | B |
| R165 | 7030003690 | S.RESISTOR ERJ3GEYJ 124 V (120 kΩ) | T |
| R166 | 7030003740 | S.RESISTOR ERJ3GEYJ 334 V (330 kΩ) | B |
| R168 | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω) | B |
| R169 | 7030003750 | S.RESISTOR ERJ3GEYJ 394 V (390 kΩ) | B |
| R170 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R171 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R172 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R175 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R177 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R179 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | B |
| R182 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R183 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R184 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R185 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | B |
| R186 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | B |
| R187 | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) | T |
| R188 | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) | T |
| R189 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R190 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R191 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R192 | 7030003750 | S.RESISTOR ERJ3GEYJ 394 V (390 kΩ) | B |
| R193 | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) | B |
| R194 | 7030003750 | S.RESISTOR ERJ3GEYJ 394 V (390 kΩ) | B |
| R195 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R196 | 7410001150 | S.ARRAY EXB28V471JX | T |
| R197 | 7410001150 | S.ARRAY EXB28V471JX | T |
| R198 | 7410001130 | S.ARRAY EXB28V102JX | B |
| R199 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R200 | 7410001150 | S.ARRAY EXB28V471JX | T |
| R201 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R202 | 7410001150 | S.ARRAY EXB28V471JX | T |
| R203 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R204 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R205 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R206 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R207 | 7030003420 | S.RESISTOR ERJ3GEYJ 681 V (680 Ω) | T |
| R208 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R209 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R210 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R211 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R212 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R213 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R214 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R215 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R216 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R217 | 7410001130 | S.ARRAY EXB28V102JX | B |
| R218 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R219 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R220 | 7410001130 | S.ARRAY EXB28V102JX | B |
| R221 | 7410001150 | S.ARRAY EXB28V471JX | T |
| R222 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R223 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R224 | 7410001130 | S.ARRAY EXB28V102JX | T |
| R225 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R227 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R228 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R229 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R230 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R231 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R232 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R233 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R234 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R235 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R236 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R237 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R238 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R239 | 7410001130 | S.ARRAY EXB28V102JX | B |
| R240 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R241 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R242 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R243 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R245 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | B |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| R246 | 7410001140 | S.ARRAY EXB28V104JX | B |
| R247 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R250 | 7410001140 | S.ARRAY EXB28V104JX | B |
| R251 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R256 | 7030003240 | S.RESISTOR ERJ3GEYJ 220 Ω (22 Ω) | T |
| R257 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R258 | 7030003650 | S.RESISTOR ERJ3GEYJ 563 V (56 kΩ) | T |
| R259 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R260 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R261 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R262 | 7030001210 | S.RESISTOR MCR50JZHJ 470 Ω (471) | B |
| R263 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R264 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R265 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | B |
| R266 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R268 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R269 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R275 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R276 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R277 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R278 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R279 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R280 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R281 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R282 | 7030003740 | S.RESISTOR ERJ3GEYJ 334 V (330 kΩ) | B |
| R283 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R284 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | B |
| R285 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | T |
| R289 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R290 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R291 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R292 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R293 | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | T |
| R294 | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | T |
| R295 | 7030003650 | S.RESISTOR ERJ3GEYJ 563 V (56 kΩ) | T |
| R297 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R300 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R304 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | B |
| R305 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R306 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | B |
| R307 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | T |
| R312 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R313 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R314 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R315 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R316 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R317 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R318 | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω) | T |
| R320 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R321 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R322 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | B |
| R323 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R325 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R326 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R327 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R328 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R329 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R330 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R331 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R332 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | B |
| R334 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R335 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R336 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R337 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R338 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R339 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R340 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R341 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R342 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R345 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R346 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R347 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R348 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R349 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R350 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R351 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R352 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | B |
| R353 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R355 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R356 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | B |
| R358 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R359 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R367 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R368 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R369 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R370 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R371 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R372 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |

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

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| R373 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R375 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R376 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | B |
| R382 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R385 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R386 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R387 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R389 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R390 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R391 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R392 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R396 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R397 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R398 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R399 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R403 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R404 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R405 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R407 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R408 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R409 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R411 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R412 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R414 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R415 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | T |
| R417 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R435 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R436 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R438 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R441 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R442 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | B |
| R443 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R450 | 7030000330 | S.RESISTOR MCR10EZJH 390 Ω (391) | T |
| R451 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R452 | 7030004040 | S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω) | B |
| R453 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R457 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R460 | 7030000330 | S.RESISTOR MCR10EZJH 390 Ω (391) | B |
| R461 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R462 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R463 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | T |
| R464 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R466 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R469 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R470 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R471 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R472 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R473 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R474 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R475 | 7030003740 | S.RESISTOR ERJ3GEYJ 334 V (330 kΩ) | T |
| R476 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R477 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R478 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R479 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| | | [FR3100] | B |
| | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | B |
| | | [FR3000] | B |
| R480 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R481 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | B |
| | | [FR3000] | B |
| | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | B |
| | | [FR3100] | B |
| R486 | 7030001230 | S.RESISTOR MCR50JZHJ 680 Ω (681) | T |
| R487 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R488 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R489 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R492 | 7030003470 | S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ) | T |
| R493 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R494 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R495 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R496 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R497 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R498 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R500 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R501 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R503 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R504 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R505 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R506 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R508 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R509 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R510 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R511 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | T |
| R512 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R519 | 7030003700 | S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) | T |
| R520 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R521 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R522 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|---|----|
| R523 | 7030006480 | S.RESISTOR MCR100JZHJ 10 Ω (100) | B |
| R524 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R525 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R526 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R527 | 7030007180 | S.RESISTOR ERJ12YJ150U (15 Ω) [FR3100] | T |
| R528 | 7030010340 | S.RESISTOR ERJ12YJ103U (10 kΩ) [FR3100] | B |
| R529 | 7030008020 | S.RESISTOR ERJ12YJ472U (4.7 kΩ) | B |
| R530 | 7030006070 | S.RESISTOR ERJ12YJ101U (100 Ω) [FR3100] | T |
| R531 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| | | [FR3000] | T |
| | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| | | [FR3100] | T |
| C1 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C2 | 4030006870 | S.CERAMIC C1608 JB 1H 222K-T | T |
| C3 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C4 | 4550006480 | S.TANTALUM TEESVA 1C 475M8L | T |
| C5 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C6 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C7 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C8 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C9 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C10 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C11 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C12 | 4030017800 | S.CERAMIC C1608 CH 1H 561J-T | T |
| C13 | 4030007120 | S.CERAMIC C1608 CH 1H 820J-T | T |
| C14 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | T |
| C15 | 4030017870 | S.CERAMIC C1608 CH 1H 681J-T | T |
| C16 | 4030007110 | S.CERAMIC C1608 CH 1H 680J-T | T |
| C17 | 4030017870 | S.CERAMIC C1608 CH 1H 681J-T | T |
| C18 | 4030007140 | S.CERAMIC C1608 CH 1H 121J-T | T |
| C20 | 4030010760 | S.CERAMIC C1608 CH 1H 331J-T | T |
| C23 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C24 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C25 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C26 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C27 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C28 | 4550006250 | S.TANTALUM TEESVA 1E 106M8L | T |
| C30 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C31 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C32 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C33 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C34 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C36 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C37 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C38 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C39 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C40 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C42 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C43 | 4030006870 | S.CERAMIC C1608 JB 1H 222K-T | T |
| C44 | 4030007080 | S.CERAMIC C1608 CH 1H 390J-T | T |
| C45 | 4030017800 | S.CERAMIC C1608 CH 1H 561J-T | T |
| C46 | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T | T |
| C47 | 4030009490 | S.CERAMIC C1608 JB 1H 821K-T | T |
| C48 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | T |
| C49 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | T |
| C50 | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T | T |
| C51 | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T | T |
| C52 | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T | T |
| C53 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C54 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C56 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C58 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C59 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C60 | 4030008860 | S.CERAMIC C1608 JB 1H 153K-T | B |
| C61 | 4030008860 | S.CERAMIC C1608 JB 1H 153K-T | B |
| C62 | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T | B |
| C63 | 4030010770 | S.CERAMIC C1608 JB 1H 392K-T | B |
| C64 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C66 | 4030008850 | S.CERAMIC C1608 JB 1H 123K-T | B |
| C67 | 4030010760 | S.CERAMIC C1608 CH 1H 331J-T | B |
| C68 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C70 | 4030009980 | S.CERAMIC C1608 JB 1H 152K-T | B |
| C71 | 4030008900 | S.CERAMIC C1608 JB 1H 333K-T | B |
| C72 | 4030007100 | S.CERAMIC C1608 CH 1H 560J-T | B |
| C74 | 4550006480 | S.TANTALUM TEESVA 1C 475M8L | B |
| C76 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C77 | 4030009490 | S.CERAMIC C1608 JB 1H 821K-T | T |
| C78 | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T | T |
| C80 | 4030008920 | S.CERAMIC C1608 JB 1H 473K-T | T |
| C83 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C84 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C85 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C87 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C88 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C89 | 4030008870 | S.CERAMIC C1608 JB 1H 183K-T | T |
| C90 | 403001600 | S.CERAMIC C1608 JB 1E 104K-T | T |

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

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------|----|
| C91 | 4030009490 | S.CERAMIC C1608 JB 1H 821K-T | T |
| C92 | 4030008650 | S.CERAMIC C1608 JB 1H 332K-T | B |
| C93 | 4030012610 | S.CERAMIC C2012 JB 1C 474K-T | B |
| C94 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C95 | 4510004510 | ELECTROLYTIC 25 MV 470 HC | T |
| C96 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C97 | 4510004510 | ELECTROLYTIC 25 MV 470 HC | T |
| C98 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C99 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C100 | 4510007040 | ELECTROLYTIC 50 MV 10 HWN | T |
| C103 | 4030017200 | S.CERAMIC GRM31BR32J102KY01L | B |
| C106 | 4030008900 | S.CERAMIC C1608 JB 1H 333K-T | T |
| C107 | 4510005310 | S.ELECTROLYTIC ECEV1CA220SR | T |
| C108 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C109 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C110 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C111 | 4510005280 | ELECTROLYTIC 6.3 MV 220 HC | T |
| C112 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C113 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C114 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C115 | 4550003250 | S.TANTALUM TEESVA 1V 474M8L | T |
| C116 | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T | B |
| C117 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C118 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C123 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C124 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C125 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C126 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C127 | 4030008880 | S.CERAMIC C1608 JB 1H 223K-T | T |
| C128 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C129 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C130 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C131 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C132 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C133 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C134 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C135 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C136 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C137 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C138 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C139 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C140 | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T | T |
| C141 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C142 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C143 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C144 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C145 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C146 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C147 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C148 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C149 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C150 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C151 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C152 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C153 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C154 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C155 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C156 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C157 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C158 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C159 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C160 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C161 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C162 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C163 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C164 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C165 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C166 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C167 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C168 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C169 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C170 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C171 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C172 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C173 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C174 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C176 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C177 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C178 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C179 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C180 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C181 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C182 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C184 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C185 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C186 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C187 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C188 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------|----|
| C189 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C190 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C191 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C192 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C193 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C194 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C195 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C197 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C198 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C199 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C200 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C201 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C202 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C203 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C204 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C205 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C206 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C207 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C208 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C209 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C210 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C211 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C212 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C213 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C214 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C215 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C216 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C217 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C218 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C219 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C220 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C221 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C223 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C224 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C225 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C226 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C227 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C228 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C229 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C230 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C231 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C232 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C233 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C234 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C235 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C236 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C237 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C238 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C239 | 4510004510 | ELECTROLYTIC 25 MV 470 HC | T |
| C240 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C241 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C242 | 4030007080 | S.CERAMIC C1608 CH 1H 390J-T | B |
| C244 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C247 | 4510004640 | S.ELECTROLYTIC ECEV1CA470SP | T |
| C248 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C249 | 4510004640 | S.ELECTROLYTIC ECEV1CA470SP | T |
| C250 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C251 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C252 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C253 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C254 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C255 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C260 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C261 | 4550002960 | S.TANTALUM TEESVA 1C 155M8L | B |
| C262 | 4030007070 | S.CERAMIC C1608 CH 1H 330J-T | B |
| C263 | 4030007070 | S.CERAMIC C1608 CH 1H 330J-T | B |
| C264 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C265 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C266 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C270 | 4030008880 | S.CERAMIC C1608 JB 1H 223K-T | T |
| C271 | 4030008920 | S.CERAMIC C1608 JB 1H 473K-T | T |
| C272 | 4030010020 | S.CERAMIC C1608 JB 1H 122K-T | T |
| C273 | 4030009980 | S.CERAMIC C1608 JB 1H 152K-T | T |
| C274 | 4030008900 | S.CERAMIC C1608 JB 1H 333K-T | T |
| C275 | 4030008900 | S.CERAMIC C1608 JB 1H 333K-T | T |
| C276 | 4030010020 | S.CERAMIC C1608 JB 1H 122K-T | T |
| C277 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C282 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C283 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C287 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C288 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C289 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C290 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | B |
| C292 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C294 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C295 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C296 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C297 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |

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

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------|----|
| C301 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C302 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C303 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C307 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C308 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C310 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C311 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C312 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C313 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C316 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C322 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C323 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C325 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C326 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C328 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C329 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C330 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C332 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C335 | 4550006480 | S.TANTALUM TEESVA 1C 475M8L | B |
| C337 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C339 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C340 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C341 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C342 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C343 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C345 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C346 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C347 | 4550000530 | S.TANTALUM TEESVA 1V 104M8L | B |
| C361 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C362 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C363 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C364 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C366 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C371 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C372 | 4030007110 | S.CERAMIC C1608 CH 1H 680J-T | B |
| C373 | 4030008870 | S.CERAMIC C1608 JB 1H 183K-T | B |
| C375 | 4310000900 | MYLAR 250 MMW 105K-EF | T |
| C380 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C382 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C383 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C384 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C386 | 4550006480 | S.TANTALUM TEESVA 1C 475M8L | B |
| C388 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C389 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | B |
| C390 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C395 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C396 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C397 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C398 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C399 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C407 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C408 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C409 | 4030006870 | S.CERAMIC C1608 JB 1H 222K-T | T |
| C411 | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T | T |
| C412 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C413 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C414 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | B |
| C415 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C416 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C417 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C418 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C419 | 4340000060 | S.MYLAR ECH-U 1C103JB5 | T |
| C420 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C421 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C422 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C423 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C424 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | T |
| C425 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C426 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C427 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C428 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C429 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C430 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C431 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C432 | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T | B |
| C433 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C434 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C435 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C436 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C437 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C438 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C439 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C440 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C441 | 4030018060 | S.CERAMIC C5750 JB 2E 474KT | T |
| C442 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C443 | 4030006900 | S.CERAMIC C1608 JB 1H 103K-T | T |
| C447 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C448 | 4550002980 | S.TANTALUM TEESVA 1C 225M8L | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|---|----|
| C449 | 4550000460 | S.TANTALUM TEESVA 1C 105M8L | B |
| C450 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | T |
| C451 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | B |
| C452 | 4030017490 | S.CERAMIC C1608 JB 1A 105K-T | T |
| C453 | 4510005360 | S.ELECTROLYTIC ECEV1HA4R7SR [FR3100] | T |
| C454 | 4030008650 | S.CERAMIC C1608 JB 1H 332K-T [FR3100] | B |
| C455 | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T | B |
| C456 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C457 | 4030011810 | S.CERAMIC C1608 JB 1A 224K-T [FR3100] | T |
| RL1 | 6330001640 | RELAY ATX209 | T |
| RL2 | 6330001640 | RELAY ATX209 | T |
| J1 | 6510022590 | S.CONNECTOR 22FMN-BMTTR-A-TBT | B |
| J2 | 6510022590 | S.CONNECTOR 22FMN-BMTTR-A-TBT | B |
| J3 | 6510022580 | S.CONNECTOR 24FMN-BMTTR-A-TBT | B |
| J4 | 6510022620 | S.CONNECTOR 10FMN-BMTTR-A-TBT | B |
| J5 | 6510018970 | S.CONNECTOR B4B-PH-SM3-TB | B |
| J6 | 6510022620 | S.CONNECTOR 10FMN-BMTTR-A-TBT | B |
| J7 | 6510018430 | S.CONNECTOR AXN330C038P | B |
| J8 | 6510018430 | S.CONNECTOR AXN330C038P | B |
| J9 | 6510020050 | S.CONNECTOR B11B-PH-SM3-TB | T |
| J10 | 6510018940 | S.CONNECTOR B13B-PH-SM3-TB | T |
| J11 | 6510018940 | S.CONNECTOR B13B-PH-SM3-TB | T |
| J12 | 6510021440 | S.CONNECTOR B6B-ZR-SM3-TF | B |
| J13 | 6510022190 | S.CONNECTOR B3B-PH-SM3-TB | T |
| J14 | 6510022190 | S.CONNECTOR B3B-PH-SM3-TB | T |
| J15 | 6510018960 | S.CONNECTOR B2B-PH-SM3-TB | T |
| J16 | 6510018960 | S.CONNECTOR B2B-PH-SM3-TB | T |
| F1 | 5210000030 | FUSE FGB 1A (FGB0 125V) | T |
| F2 | 5220000020 | HOLDER S-N5051 | T |
| F3 | 5220000020 | HOLDER S-N5051 | T |
| T1 | 5920000570 | TRANSFORMER 12T01 | T |
| T2 | 5920000570 | TRANSFORMER 12T01 | T |
| T5 | 5920000860 | TRANSFORMER PLA10AS1030R7R2 | T |
| T6 | 5910000970 | TRANSFORMER ATS-007 [Other] | T |
| T7 | 5920000570 | TRANSFORMER 12T01 [USA2] | T |
| T8 | 5910000970 | TRANSFORMER ATS-007 [Other] | T |
| | 5920000570 | TRANSFORMER 12T01 [USA2] | T |
| W1 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W2 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W3 | 8900008940 | CABLE OPC-886 (P=1 N=10 L=75) | T |
| W4 | 8900009230 | CABLE OPC-908 (P=1 N=10 L=60) | B |
| W5 | 8900008740 | CABLE OPC-867 (P=1 N=24 L=60) | B |
| W7 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W8 | 7030007150 | S.RESISTOR MCR50JZHJ JPW (000) [FR3000] | T |
| W10 | 8900009270 | CABLE OPC-912 (P=1 N=22 L=70) | B |
| W11 | 8900009270 | CABLE OPC-912 (P=1 N=22 L=70) | B |
| W12 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W13 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W14 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W15 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W16 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W17 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W18 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W19 | 7030003860 | S.RESISTOR ERJ3GE JPW V | B |
| W20 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| W21 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| EP1 | 0910056271 | PCB B 6002A | |
| EP2 | 6910014900 | BEAD FRC-50-12-6.5 | B |
| EP3 | 6910014890 | E.OTHER FRC-WC1 | B |

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

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| IC1 | 1190000450 | S.IC GN2011-Q (TX) | T |
| IC2 | 1110003490 | S.IC TA31136FN (D,EL) | T |
| IC3 | 1180000420 | S.IC TA78L05F (TE12R) | T |
| IC4 | 1140002131 | S.IC MB1511PFV-G-BND-ER | B |
| IC5 | 1110002750 | S.IC TA75S01F (TE85R) | B |
| IC6 | 1180000420 | S.IC TA78L05F (TE12R) | B |
| IC7 | 1180000430 | S.IC TA78L06F (TE12L) | T |
| IC8 | 1110003780 | S.IC NJM2902V-TE1 | T |
| Q1 | 1530003820 | S.TRANSISTOR 2SC5337QS-T1 | T |
| Q3 | 1560000670 | S.FET 2SK1771 (TE85R) | T |
| Q6 | 1530001950 | S.TRANSISTOR 2SC2712-GR (TE85R) | B |
| Q7 | 1530001950 | S.TRANSISTOR 2SC2712-GR (TE85R) | B |
| Q8 | 1530002920 | S.TRANSISTOR 2SC4226-T1 R25 | B |
| Q9 | 1530003270 | S.TRANSISTOR 2SC4703-T2 SF | B |
| Q14 | 1530002920 | S.TRANSISTOR 2SC4226-T1 R25 | B |
| Q15 | 1520000270 | S.TRANSISTOR 2SB1182 TL Q | B |
| Q16 | 1530002060 | S.TRANSISTOR 2SC4081 T106 R | B |
| Q18 | 1560000540 | S.FET 2SK880-Y (TE85R) | B |
| Q19 | 1590000440 | S.TRANSISTOR DTA143ZUA T106 | T |
| Q20 | 1510000510 | S.TRANSISTOR 2SA1576A T106R | T |
| Q21 | 1530002060 | S.TRANSISTOR 2SC4081 T106 R | T |
| Q22 | 1530002840 | S.TRANSISTOR 2SC4116-Y (TE85R) | B |
| Q23 | 1590000430 | S.TRANSISTOR DTC144EUA T106 | B |
| Q24 | 1530002050 | S.TRANSISTOR 2SC3661-TB | B |
| D3 | 1720000700 | S.VARICAP 1SV305 (TPL3) | T |
| D4 | 1720000700 | S.VARICAP 1SV305 (TPL3) | T |
| D15 | 1750000140 | S.DIODE 1SS268 (TE85R) | B |
| D16 | 1750000140 | S.DIODE 1SS268 (TE85R) | B |
| D17 | 1750000070 | S.DIODE 1SS226 (TE85R) | B |
| D18 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| FI1 | 2030000260 | S.MONOLITH FL-361 (31.65 MHz) | T |
| FI5 | 2020001030 | CERAMIC CFWLA455KGFA-B0 (CFWS455G) | T |
| FI6 | 2020001010 | CERAMIC CFWLA455KFFA-B0 (CFWS455F) | T |
| | 2020001040 | CERAMIC CFWLA455KEFA-B0 (CFWS455E) | T |
| | | [FRG2] [Other] | |
| X1 | 6070000150 | S.DISCRIMINATOR CDBC455KCA24-R0 | T |
| X2 | 6050011670 | XTAL CR-757 (31.195 MHz) | T |
| X3 | 6050011480 | S.XTAL CR-732 (12.800 MHz) | T |
| L1 | 6200007750 | S.COIL LQW2BHN56NJ01L | T |
| L2 | 6200010570 | S.COIL C6342A-R11J-A | T |
| L3 | 6200010570 | S.COIL C6342A-R11J-A | T |
| L4 | 6200010590 | S.COIL C2520C-22NG-A | T |
| L5 | 6200010210 | S.COIL C2012C-22NG | T |
| L6 | 6200010570 | S.COIL C6342A-R11J-A | T |
| L7 | 6200010570 | S.COIL C6342A-R11J-A | T |
| L8 | 6200010490 | S.COIL 458DB-1011=P3 | T |
| L9 | 6200010490 | S.COIL 458DB-1011=P3 | T |
| L10 | 6200010490 | S.COIL 458DB-1011=P3 | T |
| L11 | 6200008730 | S.COIL ELJND R10J 0.1U | B |
| L12 | 6200010010 | S.COIL C2012C-39NG | B |
| L13 | 6200010540 | S.COIL C2012C-47NG | B |
| L14 | 6200010440 | S.COIL C2520C-1R2G (1.2U) | B |
| L15 | 6200010540 | S.COIL C2012C-47NG | B |
| L20 | 6200002930 | S.COIL ELJFC 1R5K-F | T |
| L21 | 6200008080 | S.COIL LQW2BHN22J01L | B |
| L22 | 6200008090 | S.COIL LQW2BHN68NJ01L | B |
| L23 | 6200007760 | S.COIL LQW2BHN82NJ01L | B |
| L24 | 6200008090 | S.COIL LQW2BHN68NJ01L | B |
| L25 | 6200007230 | S.COIL LQW2BHN15NJ01L | B |
| L27 | 6200007230 | S.COIL LQW2BHN15NJ01L | B |
| L29 | 6200007230 | S.COIL LQW2BHN15NJ01L | B |
| L30 | 6200008080 | S.COIL LQW2BHN22J01L | B |
| L33 | 6200009970 | S.COIL C2012C-R39G | T |
| L39 | 6200008090 | S.COIL LQW2BHN68NJ01L | T |
| L40 | 6200006710 | S.COIL MLF1608E 5R6K 5.6U | B |
| L41 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L42 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L43 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L44 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L45 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L46 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L47 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L48 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L49 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L50 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L51 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L53 | 6200007750 | S.COIL LQW2BHN56NJ01L | B |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|--|----|
| R1 | 7030003350 | S.RESISTOR ERJ3GEYJ 181 V (180 Ω) | T |
| | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ) | T |
| | | [FR3000] | |
| R2 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R3 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R4 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R5 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R6 | 7030000180 | S.RESISTOR MCR10EZHZJ 22 Ω (220) [FR3100] | T |
| | 7030000220 | S.RESISTOR MCR10EZHZJ 47 Ω (470) [FR3000] | T |
| R7 | 7030003290 | S.RESISTOR ERJ3GEYJ 560 V (56 Ω) | T |
| R8 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R9 | 7030000220 | S.RESISTOR MCR10EZHZJ 47 Ω (470) | B |
| R10 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R11 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R14 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R15 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R17 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R19 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R25 | 7030003550 | S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ) | T |
| R35 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R36 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R37 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R39 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R40 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R41 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R42 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R43 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R44 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R45 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R48 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | T |
| R49 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R50 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R52 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ) | B |
| R53 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R54 | 7030003780 | S.RESISTOR ERJ3GEYJ 684 V (680 kΩ) | T |
| R55 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | T |
| R56 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R57 | 7510001670 | S.THRMISTOR NTG16 4BH 103KT | T |
| R58 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R60 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R61 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R62 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R63 | 7030003420 | S.RESISTOR ERJ3GEYJ 681 V (680 Ω) | B |
| R64 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R65 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R66 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R67 | 7030001010 | S.RESISTOR MCR50JZHZ 10 Ω (100) | B |
| R68 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R69 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R70 | 7030010280 | S.RESISTOR ERJ3GEYF 221 V (220 Ω) | B |
| R71 | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω) | B |
| R72 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R73 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | B |
| R74 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R75 | 7030000220 | S.RESISTOR MCR10EZHZJ 47 Ω (470) | B |
| R76 | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω) | B |
| R77 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R81 | 7030003370 | S.RESISTOR ERJ3GEYJ 271 V (270 Ω) | B |
| R85 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R87 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R88 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | B |
| R92 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R93 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | T |
| R112 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R115 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | B |
| R116 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R117 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R118 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R119 | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω) | B |
| R120 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R121 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R122 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R123 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R126 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R134 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | B |
| R135 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R136 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R137 | 7030003370 | S.RESISTOR ERJ3GEYJ 271 V (270 Ω) | B |
| R138 | 7030003470 | S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ) | B |
| R140 | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) | B |
| R148 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | B |
| R149 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R153 | 7030003470 | S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ) [Other] | T |
| | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) [FRG2] | T |
| R155 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R156 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | T |
| R157 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |

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

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|----------------|-------------------------|----|
| R158 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R159 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) | T |
| R160 | 7030003520 | S.RESISTOR | ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R166 | 7030003280 | S.RESISTOR | ERJ3GEYJ 470 V (47 Ω) | T |
| R167 | 7030003740 | S.RESISTOR | ERJ3GEYJ 334 V (330 kΩ) | T |
| | | | [FR3000] | T |
| | 7030003750 | S.RESISTOR | ERJ3GEYJ 394 V (390 kΩ) | T |
| | | | [FR3100] | T |
| R168 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | T |
| R169 | 7030003520 | S.RESISTOR | ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R170 | 7030003520 | S.RESISTOR | ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R171 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | B |
| R172 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R173 | 7030003680 | S.RESISTOR | ERJ3GEYJ 104 V (100 kΩ) | T |
| R174 | 7030003700 | S.RESISTOR | ERJ3GEYJ 154 V (150 kΩ) | T |
| R175 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R176 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | B |
| R177 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R178 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | B |
| R179 | 7030003790 | S.RESISTOR | ERJ3GEYJ 824 V (820 kΩ) | B |
| R180 | 7030003770 | S.RESISTOR | ERJ3GEYJ 564 V (560 kΩ) | B |
| R181 | 7540000250 | ABSORBER | SA05C 401N | |
| R182 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R183 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R184 | 7030003210 | S.RESISTOR | ERJ3GEYJ 120 V (12 Ω) | T |
| | | | [FR3100] | T |
| | 7030003240 | S.RESISTOR | ERJ3GEYJ 220 V (22 Ω) | T |
| | | | [FR3000] | T |
| R185 | 7030003280 | S.RESISTOR | ERJ3GEYJ 470 V (47 Ω) | T |
| | | | [FR3000] | T |
| | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| | | | [FR3100] | T |
| R186 | 7030003210 | S.RESISTOR | ERJ3GEYJ 120 V (12 Ω) | T |
| | | | [FR3100] | T |
| | 7030003240 | S.RESISTOR | ERJ3GEYJ 220 V (22 Ω) | T |
| | | | [FR3000] | T |
| R187 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| R189 | 7030003490 | S.RESISTOR | ERJ3GEYJ 272 V (2.7 kΩ) | T |
| R190 | 7030003500 | S.RESISTOR | ERJ3GEYJ 332 V (3.3 kΩ) | B |
| R191 | 7030003730 | S.RESISTOR | ERJ3GEYJ 274 V (270 kΩ) | B |
| R192 | 7030003520 | S.RESISTOR | ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R193 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | B |
| R194 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | B |
| R195 | 7030003480 | S.RESISTOR | ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R196 | 7030000290 | S.RESISTOR | MCR10EZHJ 180 Ω (181) | B |
| | | | [FR3100] | T |
| R197 | 7030000190 | S.RESISTOR | MCR10EZHJ 27 Ω (270) | T |
| | | | [FR3100] | T |
| C1 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C2 | 4030007060 | S.CERAMIC | C1608 CH 1H 270J-T | T |
| C3 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C4 | 4030007060 | S.CERAMIC | C1608 CH 1H 270J-T | T |
| C5 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C6 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C7 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C8 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C9 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | B |
| C10 | 4030007020 | S.CERAMIC | C1608 CH 1H 120J-T | B |
| C11 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C12 | 4030007060 | S.CERAMIC | C1608 CH 1H 270J-T | T |
| C13 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C14 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | B |
| C15 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | B |
| C18 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C19 | 4030006850 | S.CERAMIC | C1608 JB 1H 471K-T | T |
| C20 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C21 | 4030006970 | S.CERAMIC | C1608 CH 1H 060D-T | T |
| C22 | 4030007040 | S.CERAMIC | C1608 CH 1H 180J-T | T |
| C23 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | T |
| C24 | 4030007020 | S.CERAMIC | C1608 CH 1H 120J-T | T |
| C30 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C31 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C32 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C33 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C34 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C35 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C39 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C40 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C41 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C42 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C43 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C44 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | B |
| C46 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | T |
| C47 | 4030006960 | S.CERAMIC | C1608 CH 1H 050C-T | T |
| C48 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C50 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|----------------|--------------------|----|
| C51 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C52 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C53 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C55 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | T |
| C56 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C57 | 4510004640 | S.ELECTROLYTIC | ECEV1CA470SP | T |
| C58 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C59 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C60 | 4510004640 | S.ELECTROLYTIC | ECEV1CA470SP | T |
| C62 | 4030007120 | S.CERAMIC | C1608 CH 1H 820J-T | T |
| C64 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C65 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C67 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C68 | 4550000460 | S.TANTALUM | TEESVA 1C 105M8L | B |
| C69 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C70 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C71 | 4030007160 | S.CERAMIC | C1608 CH 1H 181J-T | T |
| C72 | 4030007160 | S.CERAMIC | C1608 CH 1H 181J-T | T |
| C73 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C74 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C75 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C76 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C77 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C78 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C79 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C80 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C81 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C82 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C83 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C84 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C85 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C86 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C87 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C102 | 4510004640 | S.ELECTROLYTIC | ECEV1CA470SP | T |
| C103 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C104 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C105 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C106 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C108 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C109 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C110 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C112 | 4030007080 | S.CERAMIC | C1608 CH 1H 390J-T | B |
| C113 | 4030007080 | S.CERAMIC | C1608 CH 1H 390J-T | B |
| C114 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | B |
| C115 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C116 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C117 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C118 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C120 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C121 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C122 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C124 | 4030007070 | S.CERAMIC | C1608 CH 1H 330J-T | B |
| C126 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C131 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | B |
| C132 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C133 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C134 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C137 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C138 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C140 | 4510004640 | S.ELECTROLYTIC | ECEV1CA470SP | T |
| C141 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C142 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C143 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C146 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C151 | 4030007080 | S.CERAMIC | C1608 CH 1H 390J-T | B |
| C152 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C159 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C165 | 4550000550 | S.TANTALUM | TEESVA 1V 224M8L | B |
| C167 | 4550002980 | S.TANTALUM | TEESVA 1C 225M8L | B |
| C173 | 4030017490 | S.CERAMIC | C1608 JB 1A 105K-T | T |
| C174 | 4550000270 | S.TANTALUM | TEESVA 1E 474M8L | T |
| C175 | 4550006350 | S.TANTALUM | TEESVB2 1A 226M8L | B |
| C177 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C180 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C181 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C182 | 4030007100 | S.CERAMIC | C1608 CH 1H 560J-T | T |
| C183 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C184 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | B |
| C186 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C187 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C188 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C193 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C194 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C195 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C196 | 4550000530 | S.TANTALUM | TEESVA 1V 104M8L | B |
| C198 | 4030006880 | S.CERAMIC | C1608 JB 1H 223K-T | T |
| C199 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C200 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|-------------|------------------------------|----|
| C201 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | B |
| C202 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C203 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C204 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | B |
| C205 | 4030006940 | S.CERAMIC | C1608 CH 1H 030C-T | T |
| C206 | 4030006940 | S.CERAMIC | C1608 CH 1H 030C-T | T |
| C207 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | T |
| C208 | 4030007040 | S.CERAMIC | C1608 CH 1H 180J-T | T |
| C210 | 4030006850 | S.CERAMIC | C1608 JB 1H 471K-T | T |
| C211 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C212 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | T |
| C213 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C214 | 4030006980 | S.CERAMIC | C1608 CH 1H 070D-T | T |
| C215 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C216 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | B |
| C217 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | B |
| C218 | 4030007020 | S.CERAMIC | C1608 CH 1H 120J-T | T |
| C219 | 4030006950 | S.CERAMIC | C1608 CH 1H 040C-T | T |
| C220 | 4030007060 | S.CERAMIC | C1608 CH 1H 270J-T | T |
| C221 | 4030007060 | S.CERAMIC | C1608 CH 1H 270J-T | T |
| C223 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C224 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | B |
| C225 | 4030006850 | S.CERAMIC | C1608 JB 1H 471K-T | B |
| C226 | 4550003210 | S.TANTALUM | TEESVD21D226M12R | B |
| | | | | |
| J1 | 6510013360 | CONNECTOR | FL-R-PC (2) | T |
| J2 | 6510022590 | S.CONNECTOR | 22FMN-BMTTR-A-TBT | T |
| J5 | 6510013360 | CONNECTOR | FL-R-PC (2) | T |
| | | | | |
| W1 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W2 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W3 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W4 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W6 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | B |
| W7 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W8 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W9 | 7030008240 | S.RESISTOR | ERJ12YJ0R00U | T |
| W12 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W13 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W14 | 7030008240 | S.RESISTOR | ERJ12YJ0R00U | T |
| W15 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W18 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | B |
| W19 | 7030000010 | S.RESISTOR | MCR10EZJH JPW (000) [FR3000] | T |
| | | | | |
| EP1 | 0910056303 | PCB | B 5926C | |

[RVCO UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|--------------|-------------------------|----|
| Q1 | 1560000490 | S.FET | 2SK508 K52 T2B | T |
| Q2 | 1530002920 | S.TRANSISTOR | 2SC4226-T1 R25 | T |
| | | | | |
| D1 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D2 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D3 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D4 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| | | | | |
| L1 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L2 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L3 | 6200010600 | S.COIL | C6342A-67NG-A | T |
| L4 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L6 | 6200009350 | S.COIL | ELJRE R22G-F3 | T |
| | | | | |
| R1 | 7030003280 | S.RESISTOR | ERJ3GEYJ 470 V (47 Ω) | T |
| R2 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R3 | 7030003400 | S.RESISTOR | ERJ3GEYJ 471 V (470 Ω) | T |
| R4 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R6 | 7030003500 | S.RESISTOR | ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R7 | 7030003370 | S.RESISTOR | ERJ3GEYJ 271 V (270 Ω) | T |
| R13 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) | T |
| | | | | |
| C1 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C2 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C3 | 4550006470 | S.TANTALUM | TEESVB2 1D 106M8L | T |
| C5 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C6 | 4030009510 | S.CERAMIC | C1608 CH 1H 010B-T | T |
| C7 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C8 | 4030006980 | S.CERAMIC | C1608 CH 1H 070D-T | T |
| C9 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C11 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C16 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C17 | 4610001920 | S.TRIMMER | TZC3Z060A110R00 | T |
| C27 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C30 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C32 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| | | | | |
| J1 | 6510022900 | CONNECTOR | IMSA9201B-1-06Z198-T | T |
| | | | | |
| EP1 | 0910056313 | PCB | B 5927C | |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

[TX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| IC1 | 1180000420 | S.IC TA78L05F (TE12R) | B |
| IC2 | 1140002131 | S.IC MB1511PFV-G-BND-ER | B |
| IC3 | 1110002400 | S.IC NJM2107F-TE1 | B |
| IC4 | 1180000430 | S.IC TA78L06F (TE12L) | B |
| IC5 | 1190001350 | S.IC M62364FP 600D | B |
| IC6 | 1110002400 | S.IC NJM2107F-TE1 | T |
| Q1 | 1530002380 | S.TRANSISTOR 2SC4215-Y (TE85R) | T |
| Q3 | 1530003260 | S.TRANSISTOR 2SC5006-T1 | B |
| Q5 | 1530001950 | S.TRANSISTOR 2SC2712-GR (TE85R) | T |
| Q6 | 1530002050 | S.TRANSISTOR 2SC3661-TB | B |
| Q7 | 1510000510 | S.TRANSISTOR 2SA1576A T106R | B |
| Q9 | 1530001950 | S.TRANSISTOR 2SC2712-GR (TE85R) | B |
| Q10 | 1560000540 | S.FET 2SK880-Y (TE85R) | T |
| Q11 | 1510000510 | S.TRANSISTOR 2SA1576A T106R | B |
| Q12 | 1530002060 | S.TRANSISTOR 2SC4081 T106 R | B |
| D1 | 1790001620 | S.DIODE 1SV308 (TPL3) | T |
| D3 | 1790001620 | S.DIODE 1SV308 (TPL3) | T |
| D4 | 1790001250 | S.DIODE MA2S111-(TX) | B |
| X1 | 6050011690 | S.XTAL CR-759 (12.8 MHz) | T |
| L2 | 6200007770 | S.COIL LQW2BHN10J01L | T |
| L8 | 6200004920 | S.COIL MLF1608A 2R2K-T | T |
| L9 | 6200004920 | S.COIL MLF1608A 2R2K-T | T |
| L10 | 6200010210 | S.COIL C2012C-22NG | B |
| L11 | 6200004920 | S.COIL MLF1608A 2R2K-T | T |
| L14 | 6200003850 | S.COIL 36CS-656LZ-09K-P3 | B |
| L17 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L18 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L19 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L20 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L21 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L22 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L23 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L24 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L25 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L26 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L27 | 6200009940 | S.COIL BLM21PG221SN1 | B |
| L28 | 6200009940 | S.COIL BLM21PG221SN1 | B |
| L29 | 6910011690 | S.COIL ACB1608M-600-T | T |
| L30 | 6910011690 | S.COIL ACB1608M-600-T | B |
| L31 | 6200007740 | S.COIL LQW2BHN47N01L | B |
| R1 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R2 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R3 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | B |
| R4 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R5 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R6 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R9 | 7030003230 | S.RESISTOR ERJ3GEYJ 180 V (18 Ω) | T |
| R10 | 7030003370 | S.RESISTOR ERJ3GEYJ 271 V (270 Ω) | T |
| R11 | 7030003370 | S.RESISTOR ERJ3GEYJ 271 V (270 Ω) | T |
| R12 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | B |
| R13 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |
| R14 | 7030003550 | S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ) | B |
| R15 | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) | B |
| R16 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R17 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R18 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R19 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R20 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R21 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R22 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R23 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R24 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R25 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R26 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R27 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R29 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R31 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | B |
| R32 | 7030003510 | S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ) | B |
| R33 | 7030003410 | S.RESISTOR ERJ3GEYJ 561 V (560 Ω) | B |
| R34 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R35 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R36 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | B |
| R37 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R38 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | B |
| R39 | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) | B |
| R40 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R41 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R42 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | B |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[TX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------------|----|
| R43 | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) | B |
| R45 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R50 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | B |
| R51 | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ) | B |
| R52 | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) | B |
| R53 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | B |
| R54 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | B |
| R56 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | B |
| R57 | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω) | T |
| R61 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R64 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (4.7 kΩ) | B |
| R66 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (4.7 kΩ) | B |
| R67 | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) | B |
| R68 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R69 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R70 | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ) | B |
| R71 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R76 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R77 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (4.7 kΩ) | T |
| R78 | 7030003660 | S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) | T |
| R79 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (4.7 kΩ) | T |
| R80 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | T |
| R81 | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (4.7 kΩ) | T |
| R83 | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω) | B |
| R84 | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R85 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R86 | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R87 | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) | T |
| R88 | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) | T |
| R90 | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω) | B |
| R91 | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ) | T |
| R92 | 7030004040 | S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω) | T |
| R93 | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) | T |
| R94 | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) | T |
| R95 | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω) | T |
| R96 | 7030003450 | S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) | B |
| R97 | 7030003420 | S.RESISTOR ERJ3GEYJ 681 V (680 Ω) | T |
| R98 | 7030001010 | S.RESISTOR MCR50JZJH 10 Ω (100) | B |
| C1 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C2 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C4 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C9 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | T |
| C10 | 4030006990 | S.CERAMIC C1608 CH 1H 080D-T | T |
| C15 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C16 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C17 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C18 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C19 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | B |
| C20 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | B |
| C21 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C22 | 4030007040 | S.CERAMIC C1608 CH 1H 180J-T | B |
| C24 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C26 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C27 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C28 | 4510004640 | S.ELECTROLYTIC ECEV1CA470SP | T |
| C29 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C32 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C33 | 4510004640 | S.ELECTROLYTIC ECEV1CA470SP | T |
| C34 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C35 | 4550000510 | S.TANTALUM TEESVA 1V 473M8L | B |
| C36 | 4550006390 | S.TANTALUM TEESVA 1C 335M8L | B |
| C37 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C38 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C39 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C40 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C41 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C42 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C43 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C44 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C45 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | T |
| C46 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | T |
| C47 | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T | T |
| C48 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C49 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C50 | 4510004630 | S.ELECTROLYTIC ECEV1CA100SR | T |
| C51 | 4550006250 | S.TANTALUM TEESVA 1A 106M8L | T |
| C52 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C53 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C57 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C58 | 4030011600 | S.CERAMIC C1608 JB 1E 104K-T | B |
| C60 | 4550003210 | S.TANTALUM TEESVD21D226M12R | B |
| C61 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| C68 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C69 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C72 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | T |
| C73 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |

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

[TX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|----------------|---------------------------------|----|
| C74 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C75 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C76 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C77 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C78 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C79 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C80 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C82 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | T |
| C85 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C92 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C93 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C96 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C97 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C98 | 4510004640 | S.ELECTROLYTIC | ECEV1CA470SP | T |
| C99 | 4550000460 | S.TANTALUM | TEESVA 1C 105M8L | T |
| C100 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C102 | 4030007050 | S.CERAMIC | C1608 CH 1H 220J-T | B |
| C103 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | B |
| C104 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C105 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C106 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | B |
| C107 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C108 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C109 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | T |
| C110 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C111 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C112 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C113 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | B |
| C114 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C115 | 4510004630 | S.ELECTROLYTIC | ECEV1CA100SR | T |
| C116 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C117 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | B |
| C118 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C119 | 4550000460 | S.TANTALUM | TEESVA 1C 105M8L | B |
| C120 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C121 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C122 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | T |
| C123 | 4550006250 | S.TANTALUM | TEESVA 1A 106M8L | B |
| C124 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | B |
| C125 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | B |
| C126 | 4030007100 | S.CERAMIC | C1608 CH 1H 560J-T | T |
| J3 | 6510022590 | S.CONNECTOR | 22FMN-BMTR-A-TBT | T |
| J4 | 6510022800 | S.CONNECTOR | B10B-PH-SM3-TB | T |
| W3 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W4 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| W5 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | B |
| W14 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | B |
| W15 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| WS1 | 8970024070 | | FX2368 1.5D COAXIAL TUBE (1)/TX | T |
| EP1 | 0910056323 | PCB | B 5928C | |

[TVCO UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|--------------|-------------------------|----|
| Q1 | 1560000490 | S.FET | 2SK508 K52 T2B | T |
| Q2 | 1530003260 | S.TRANSISTOR | 2SC5006-T1 | T |
| D1 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D2 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D3 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D4 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| D5 | 1720000700 | S.VARICAP | 1SV305 (TPL3) | T |
| L1 | 6200004920 | S.COIL | MLF1608A 2R2K-T | T |
| L2 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L3 | 6200010620 | S.COIL | C6328A-35NG-A | T |
| L4 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L5 | 6200004920 | S.COIL | MLF1608A 2R2K-T | T |
| L6 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| L7 | 6200007120 | S.COIL | ELJND 1R0J 1U | T |
| R2 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R4 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R5 | 7030003360 | S.RESISTOR | ERJ3GEYJ 221 V (220 Ω) | T |
| R6 | 7030003500 | S.RESISTOR | ERJ3GEYJ 332 V (3.3 kΩ) | T |
| R7 | 7030003390 | S.RESISTOR | ERJ3GEYJ 391 V (390 Ω) | T |
| R12 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R13 | 7030003410 | S.RESISTOR | ERJ3GEYJ 561 V (560 Ω) | T |
| R14 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R15 | 7030003610 | S.RESISTOR | ERJ3GEYJ 273 V (27 kΩ) | T |
| C1 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C3 | 4550006080 | S.TANTALUM | TEESVB2 1C 106M8L | T |
| C4 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C5 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C6 | 4030008160 | S.CERAMIC | C1608 UJ 1H 010C-T | T |
| C7 | 4030007080 | S.CERAMIC | C1608 CH 1H 390J-T | T |
| C8 | 4030006980 | S.CERAMIC | C1608 CH 1H 070D-T | T |
| C9 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C10 | 4030006930 | S.CERAMIC | C1608 CH 1H 020C-T | T |
| C11 | 4030007020 | S.CERAMIC | C1608 CH 1H 120J-T | T |
| C12 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C13 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C16 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C17 | 4610001590 | S.TRIMMER | TZC3R100A110R00 | T |
| C18 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C24 | 4030006990 | S.CERAMIC | C1608 CH 1H 080D-T | T |
| C25 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| J1 | 6910008020 | CONNECTOR | IPS-1323 | T |
| J2 | 6910008020 | CONNECTOR | IPS-1323 | T |
| J3 | 6910008020 | CONNECTOR | IPS-1323 | T |
| J4 | 6910008020 | CONNECTOR | IPS-1323 | T |
| J5 | 6910008020 | CONNECTOR | IPS-1323 | T |
| J6 | 6910008020 | CONNECTOR | IPS-1323 | T |
| W1 | 7030003860 | S.RESISTOR | ERJ3GE JPW V | T |
| EP1 | 0910056333 | PCB | B 5929C | |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

[PA UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|--------------|----------------------------------|----|
| IC1 | 1110002750 | S.IC | TA75S01F (TE85R) | T |
| IC2 | 1150002110 | IC | S-AV33 (I) [FR3100] | T |
| | 1150002160 | IC | S-AV32 (I2) [FR3000] | T |
| IC3 | 1110002400 | S.IC | NJM2107F-TE1 | T |
| IC7 | 1180000420 | S.IC | TA78L05F (TE12R) | T |
| Q4 | 1560001160 | S.FET | 2SK3475 (TE12L) | T |
| Q7 | 1590000680 | S.TRANSISTOR | DTC114EUA T106 | T |
| Q8 | 1510000590 | S.TRANSISTOR | 2SA1362-Y (TE85L) | T |
| Q9 | 1590001320 | S.TRANSISTOR | DTC143ZUA T106 | T |
| Q10 | 1590000680 | S.TRANSISTOR | DTC114EUA T106 | T |
| D2 | 1720000360 | S.DIODE | HSU88TRF | T |
| D4 | 1720000360 | S.DIODE | HSU88TRF | T |
| D6 | 1730002340 | S.ZENER | MA8047-M (TX) | T |
| D7 | 1730002340 | S.ZENER | MA8047-M (TX) | T |
| D13 | 1720000360 | S.DIODE | HSU88TRF | T |
| D14 | 1720000360 | S.DIODE | HSU88TRF | T |
| D15 | 1790000720 | DIODE | MA29W-B | T |
| D16 | 1720000360 | S.DIODE | HSU88TRF | T |
| L6 | 6110003810 | COIL | LA-581 | T |
| L7 | 6110003800 | COIL | LA-580 | T |
| L8 | 6200003740 | S.COIL | 36CS-656LZ-07K=P3 | T |
| L10 | 6110003661 | COIL | LA-563A | T |
| L13 | 6110003661 | COIL | LA-563A | T |
| L14 | 6200003960 | S.COIL | MLF1608A 1R0K-T | T |
| L15 | 6200009790 | S.COIL | BLM31PG121SN1 | T |
| L16 | 6910000670 | COIL | BL01RN1A1D2B (BL01RN1-A62) | T |
| L17 | 6200009790 | S.COIL | BLM31PG121SN1 | T |
| L18 | 6200009790 | S.COIL | BLM31PG121SN1 | T |
| L19 | 6200008090 | S.COIL | LQW2BHN68NJ01L | T |
| L20 | 6110003790 | COIL | LA-579 | T |
| L21 | 6110002780 | COIL | LA-462 | T |
| R1 | 7030003540 | S.RESISTOR | ERJ3GEYJ 682 V (6.8 kΩ) | T |
| R2 | 7030003800 | S.RESISTOR | ERJ3GEYJ 105 V (1 MΩ) | T |
| R4 | 7030003800 | S.RESISTOR | ERJ3GEYJ 105 V (1 MΩ) | T |
| R5 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R6 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R7 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R8 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R11 | 7030003530 | S.RESISTOR | ERJ3GEYJ 562 V (5.6 kΩ) | T |
| R13 | 7030003600 | S.RESISTOR | ERJ3GEYJ 223 V (22 kΩ) | T |
| | 7030003630 | S.RESISTOR | ERJ3GEYJ 393 V (39 kΩ) [FR3100] | T |
| R15 | 7030003630 | S.RESISTOR | ERJ3GEYJ 393 V (39 kΩ) [FR3000] | T |
| R16 | 7030003580 | S.RESISTOR | ERJ3GEYJ 153 V (15 kΩ) | T |
| R19 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R20 | 7030003310 | S.RESISTOR | ERJ3GEYJ 820 V (82 Ω) | T |
| R21 | 7030003310 | S.RESISTOR | ERJ3GEYJ 820 V (82 Ω) | T |
| R22 | 7030000180 | S.RESISTOR | MCR10EZHZJ 22 Ω (220) | T |
| R23 | 7030000180 | S.RESISTOR | MCR10EZHZJ 22 Ω (220) | T |
| R25 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) | T |
| R26 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) | T |
| R28 | 7030003520 | S.RESISTOR | ERJ3GEYJ 472 V (4.7 kΩ) | T |
| R29 | 7030000230 | S.RESISTOR | MCR10EZHZJ 56 Ω (560) | T |
| R31 | 7030000270 | S.RESISTOR | MCR10EZHZJ 120 Ω (121) | T |
| R32 | 7030000270 | S.RESISTOR | MCR10EZHZJ 120 Ω (121) | T |
| R33 | 7030003260 | S.RESISTOR | ERJ3GEYJ 330 V (33 Ω) | T |
| R36 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| R37 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| R38 | 7030003450 | S.RESISTOR | ERJ3GEYJ 122 V (1.2 kΩ) | T |
| R39 | 7030003200 | S.RESISTOR | ERJ3GEYJ 100 V (10 Ω) | T |
| R40 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| R41 | 7030003510 | S.RESISTOR | ERJ3GEYJ 392 V (3.9 kΩ) | T |
| R42 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R43 | 7030003600 | S.RESISTOR | ERJ3GEYJ 223 V (22 kΩ) | T |
| R44 | 7030003680 | S.RESISTOR | ERJ3GEYJ 104 V (100 kΩ) | T |
| R45 | 7030003560 | S.RESISTOR | ERJ3GEYJ 103 V (10 kΩ) | T |
| R47 | 7030003620 | S.RESISTOR | ERJ3GEYJ 333 V (33 kΩ) | T |
| R56 | 7030003640 | S.RESISTOR | ERJ3GEYJ 473 V (47 kΩ) | T |
| R57 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) | T |
| R58 | 7030003460 | S.RESISTOR | ERJ3GEYJ 152 V (1.5 kΩ) | T |
| R60 | 7030003320 | S.RESISTOR | ERJ3GEYJ 101 V (100 Ω) | T |
| R61 | 7030003450 | S.RESISTOR | ERJ3GEYJ 122 V (1.2 kΩ) [FR3100] | T |
| R61 | 7030003460 | S.RESISTOR | ERJ3GEYJ 152 V (1.5 kΩ) [FR3000] | T |
| R62 | 7030003370 | S.RESISTOR | ERJ3GEYJ 271 V (270 Ω) | T |
| R63 | 7030003440 | S.RESISTOR | ERJ3GEYJ 102 V (1 kΩ) [FR3100] | T |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

[PA UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|----------------|----------------------------------|----|
| R63 | 7030003460 | S.RESISTOR | ERJ3GEYJ 152 V (1.5 kΩ) [FR3000] | T |
| C1 | 4030018170 | S.CERAMIC | ERF22X 6C2H 4R0C D01L | T |
| C2 | 4030018050 | S.CERAMIC | ERF22X 6C2H 270J D01L | T |
| C3 | 4030018050 | S.CERAMIC | ERF22X 6C2H 270J D01L | T |
| C11 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C12 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C13 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C14 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C15 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C16 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C18 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C19 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C20 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C21 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C22 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C23 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C24 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C25 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C26 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C27 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C28 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C30 | 4030017200 | S.CERAMIC | GRM31BR32J102KY01L | T |
| C31 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C32 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C34 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C37 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C38 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C39 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C40 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C41 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C42 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C44 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C47 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C48 | 4030018410 | S.CERAMIC | ERF22X 6C2H 2R0C D01L | T |
| C52 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C53 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C55 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C56 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C57 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C59 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C60 | 4030007010 | S.CERAMIC | C1608 CH 1H 100D-T | T |
| C61 | 4510007690 | ELECTROLYTIC | LXZ25VB2200 | T |
| C67 | 4510007960 | ELECTROLYTIC | KMY25VB1000 | T |
| C68 | 4510006850 | S.ELECTROLYTIC | ECEV1CA4R7NR (16V 4.7) | T |
| C69 | 4510007670 | S.ELECTROLYTIC | EEVHB1C100R | T |
| C70 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T [FR3100] | T |
| C71 | 4510007670 | S.ELECTROLYTIC | EEVHB1C100R | T |
| C73 | 4030018030 | S.CERAMIC | ERF22X 6C2H 3R0C D01L | T |
| C74 | 4030011340 | S.CERAMIC | C1608 CH 1H 471J-T | T |
| C78 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C79 | 4030007030 | S.CERAMIC | C1608 CH 1H 150J-T | T |
| C80 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C82 | 4030008880 | S.CERAMIC | C1608 JB 1H 223K-T | T |
| C83 | 4030007130 | S.CERAMIC | C1608 CH 1H 101J-T | T |
| C88 | 4030006850 | S.CERAMIC | C1608 JB 1H 471K-T | T |
| C89 | 4030006850 | S.CERAMIC | C1608 JB 1H 471K-T | T |
| C90 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C91 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C92 | 4510007570 | S.ELECTROLYTIC | EEVHB1C220UR | T |
| C95 | 4510007670 | S.ELECTROLYTIC | EEVHB1C100R | T |
| C96 | 4510007670 | S.ELECTROLYTIC | EEVHB1C100R | T |
| C97 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C98 | 4030018460 | S.CERAMIC | ERF22X 6C2H 100J D01L | T |
| C99 | 4030018410 | S.CERAMIC | ERF22X 6C2H 2R0C D01L | T |
| C100 | 4030018450 | S.CERAMIC | ERF22X 6C2H 8R0D D01L | T |
| C101 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C102 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C103 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C104 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C105 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| C106 | 4030006900 | S.CERAMIC | C1608 JB 1H 103K-T | T |
| C107 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T | T |
| C108 | 4030017490 | S.CERAMIC | C1608 JB 1A 105K-T | T |
| C109 | 4550003220 | S.TANTALUM | TEESVA 1E 105M8L [FR3100] | T |
| C110 | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T | T |
| | 4030006860 | S.CERAMIC | C1608 JB 1H 102K-T [FR3000] | T |
| C111 | 4030008920 | S.CERAMIC | C1608 JB 1H 473K-T [FR3100] | T |
| C112 | 4030011600 | S.CERAMIC | C1608 JB 1E 104K-T [FR3000] | T |
| C113 | 4030006950 | S.CERAMIC | C1608 CH 1H 040C-T | T |
| J1 | 6510022800 | S.CONNECTOR | B10B-PH-SM3-TB | T |
| J2 | 6510007020 | CONNECTOR | TMP-J01X-V6 | T |

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

[PA UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|-------------------------|----|
| T2 | 5910001000 | TRANSFORMER TC-7 | T |
| W3 | 7030003860 | S.RESISTOR ERJ3GE JPW V | T |
| EP1 | 6910014490 | TERMINAL OP-100 M3 | T |
| EP2 | 6910014490 | TERMINAL OP-100 M3 | T |
| EP3 | 0910056443 | PCB B 5996C | |

[VR UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|---------------------------|----|
| R1 | 7210003110 | VARIABLE RK0971110 10KA | T |
| R2 | 7210003120 | VARIABLE RK0971110 10KB | T |
| J1 | 6510018950 | S.CONNECTOR B7B-PH-SM3-TB | T |
| EP1 | 0910056261 | PCB B 5999A | |

[JACK1 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. |
|---------|------------|------------------------------|----|
| L1 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L2 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L3 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L4 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L5 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L6 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L7 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| L8 | 6200009940 | S.COIL BLM21PG221SN1 | T |
| R1 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R2 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R3 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R4 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R5 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R6 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R7 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R8 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R9 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| R10 | 7540000210 | S.ABSORBER KU15N14-4063 | T |
| C1 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C2 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C3 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C4 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C5 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C6 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C7 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C8 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C9 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C10 | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T | B |
| C11 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | T |
| C12 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C13 | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T | B |
| C14 | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T | B |
| J1 | 6450001650 | CONNECTOR HSJ0836-01-500 | T |
| J2 | 6510016170 | CONNECTOR 52018-8835 | T |
| J3 | 6510022730 | S.CONNECTOR S13B-PH-SM3-TB | T |
| EP1 | 0910056281 | PCB B 6000A | |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

[JACK2 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|-------------|--------------------|----|
| D1 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D2 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D3 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D4 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D5 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D6 | 1750000930 | S.DIODE | NNCD8.2C-T1 | T |
| D11 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D12 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D13 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D14 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D15 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D16 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D17 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D18 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D19 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D20 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D21 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D22 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| D23 | 1750000930 | S.DIODE | NNCD8.2C-T1 | B |
| L1 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L2 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L3 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L4 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L5 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L6 | 6200009940 | S.COIL | BLM21PG221SN1 | B |
| L11 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L12 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L13 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L14 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L15 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L16 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L17 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L18 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L19 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L20 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L21 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L22 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| L23 | 6200009940 | S.COIL | BLM21PG221SN1 | T |
| C1 | 4030007090 | S.CERAMIC | C1608 CH 1H 470J-T | T |
| C2 | 4030007090 | S.CERAMIC | C1608 CH 1H 470J-T | T |
| C3 | 4030007090 | S.CERAMIC | C1608 CH 1H 470J-T | T |
| C4 | 4030007090 | S.CERAMIC | C1608 CH 1H 470J-T | T |
| C5 | 4030007090 | S.CERAMIC | C1608 CH 1H 470J-T | T |
| C6 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | T |
| C8 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | T |
| C11 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C12 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C13 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C14 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C15 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C16 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C17 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C18 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C19 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C20 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C21 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C22 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| C23 | 4030007170 | S.CERAMIC | C1608 CH 1H 221J-T | B |
| J1 | 6510023290 | CONNECTOR | DBR61-25K1200-B | T |
| J2 | 6510022730 | S.CONNECTOR | S13B-PH-SM3-TB | T |
| J3 | 6510022730 | S.CONNECTOR | S13B-PH-SM3-TB | B |
| EP1 | 0910056291 | PCB | B 6001A | |

[CHASSIS UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | | M. |
|---------|------------|-------------|---|----|
| J1 | 6510022970 | CONNECTOR | N-PA-JJ (NI) | |
| SP1 | 2510001200 | SPEAKER | C057FA510-10 | |
| MF1 | 2710000750 | FAN | FBA08A12LZ | |
| MF2 | 2710000740 | FAN | FBA06A12L [FR3000] | |
| W1 | 8900011510 | CABLE | OPC-1048 (AC INPUT CABLE) | |
| W2 | 8900011521 | CABLE | OPC-1049A (POWER SW CABLE) | |
| W3 | 8900011531 | CABLE | OPC-1050A (BACKUP DC CABLE) | |
| W4 | 8900011540 | CABLE | OPC-1052 (PS OUTPUT CABLE) | |
| W5 | 8900011550 | CABLE | OPC-1053 (REG-LOGIC CABLE) | |
| W6 | 8900011560 | CABLE | OPC-1054 (PA-TX CABLE) | |
| W7 | 8900011571 | CABLE | OPC-1055A (LOGIC-JACK2 CABLEA) | |
| W8 | 8900011580 | CABLE | OPC-1056 (LOGIC-JACK2 CABLEB) | |
| W9 | 8900011590 | CABLE | OPC-1057 (LOGIC-JACK1 CABLE) | |
| W10 | 8900011600 | CABLE | OPC-1058 (REG-PA CABLE RED) | |
| W11 | 8900011610 | CABLE | OPC-1059 (REG-PA CABLE BLK) | |
| W12 | 8900012150 | CABLE | OPC-1247 | |
| W13 | 8900012270 | CABLE | OPC-1255 (2367 TX-ANT CABLE) | |
| W14 | 8900012310 | CABLE | OPC-1265 (REG-FAN/TUBE) | |
| W15 | 8900011660 | CABLE | OPC-1178 (PA-FAN CABLE) [FR3000] | |
| W16 | 8900011681 | CABLE | OPC-1183A (LOGIC-VR CABLE) | |
| W17 | 8900011690 | CABLE | OPC-1184 (LOGIC-FRONT CABLE) | |
| WS1 | 8600036930 | | SX2368 P01CH | |
| WS2 | 8970024130 | | FX2367 J LEAD SET (1) /CH [FR3100] | |
| EP1 | 6910014470 | UNIT BOARD | FP2152A [USA2], [GEN2] | |
| | 6910014480 | UNIT BOARD | FP2153A [GEN4], [GEN74], [EUR2], [FRG2] | |
| EP4 | 6910008330 | E.OTHER | G80-18 | |
| EP5 | 8930030420 | COVER | FG60B | |

[FR3000]: IC-FR3000, [FR3100]: IC-FR3100

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

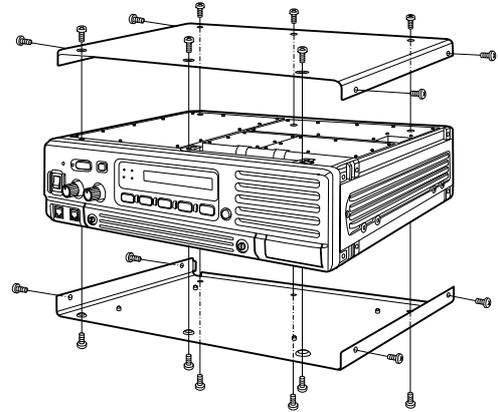
SECTION 6 OPTION UNIT INSTALLATION

6-1 Opening the repeater's case

Follow the case and cover opening procedures shown here when an optional unit is installed or adjust the internal units, etc.

CAUTION: DISCONNECT the AC power cable and/or DC power cable from the repeater. Otherwise, there is danger of electric shock and/or equipment damage.

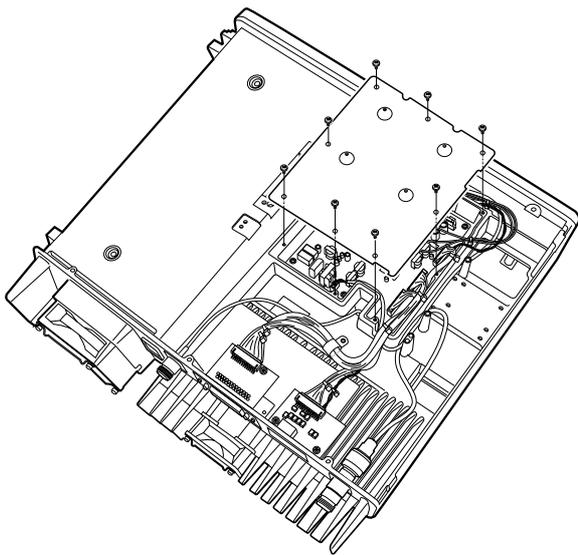
- ① Remove 6 screws from the top of the repeater and 4 screws from the sides, then lift up the top cover.
- ② Turn the repeater upside down.
- ③ Remove 6 screws from the bottom of the repeater, and 4 screws from the sides, then lift up the bottom cover.



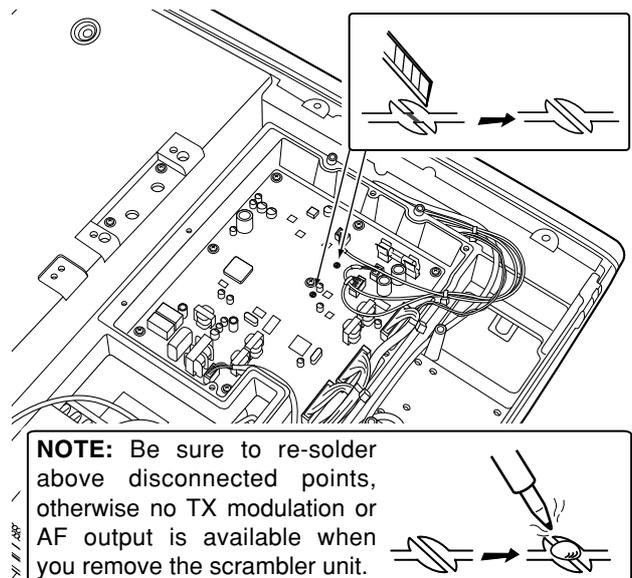
6-2 Voice scrambler unit installation

The UT-109 (#01)/UT-110 (#01) provides high performance private communication for base operating mode. In order to receive or send scrambled transmissions, the UT-109 (#01)/UT-110 (#01) must be installed and to activate the scrambler function.

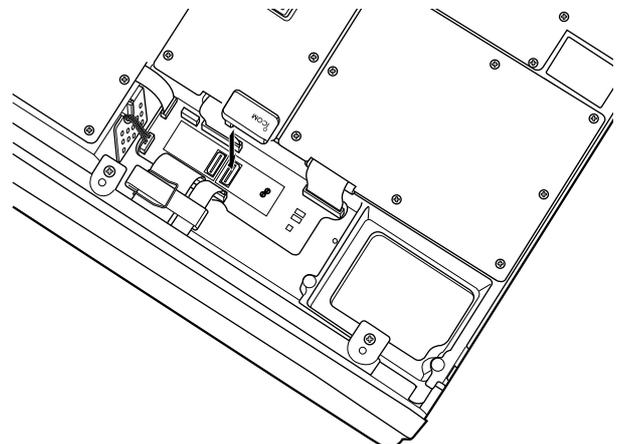
- ① Remove the top and bottom covers as shown above.
- ② Remove 8 screws from the LOGIC shielding plate, then remove the plate.



- ③ Cut the pattern on the PCB at the RX AF circuit (CP1) and TX mic circuit (CP2) on the LOGIC unit as shown at right.



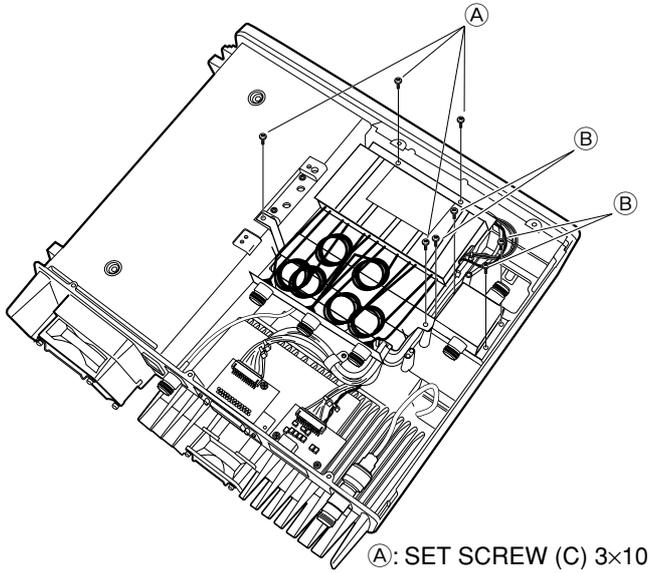
- ④ Turn the repeater upside down, then install the scrambler unit as shown below.



- ⑤ Return the LOGIC shielding plate, top and bottom covers to their original positions.

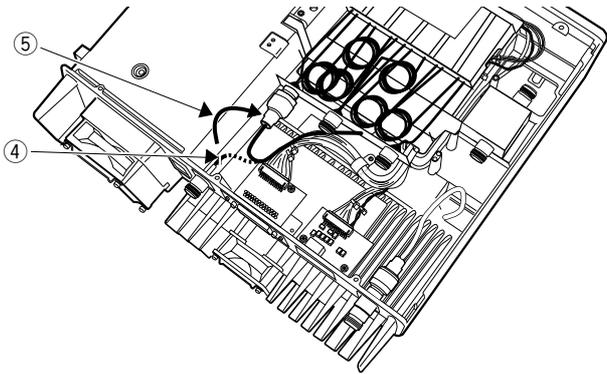
6-3 Duplexer and isolater installation

- ① Remove the top and bottom covers (See page 6-1).
- ② Tighten 4 screws, (A), for installing the duplexer unit.
- ③ Tighten 4 screws, (B), for installing the isolater unit.

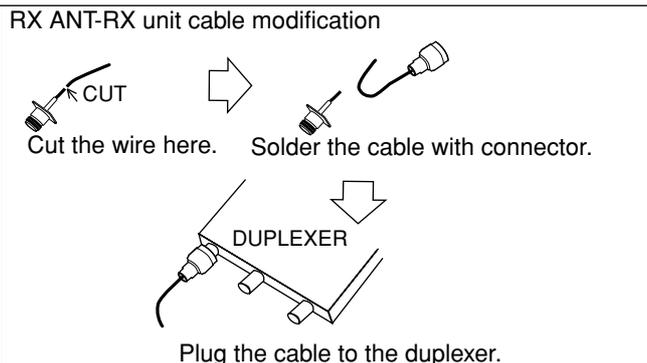


BOTTOM VIEW OF THE REPEATER

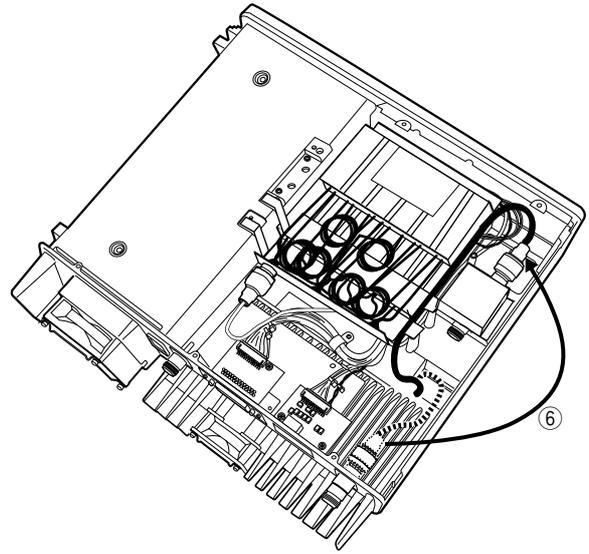
- ④ Cut the RX ANT-RX unit cable and then modify it.
- ⑤ Connect the modified cable to the duplexer unit (RX frequency connector)



BOTTOM VIEW OF THE REPEATER

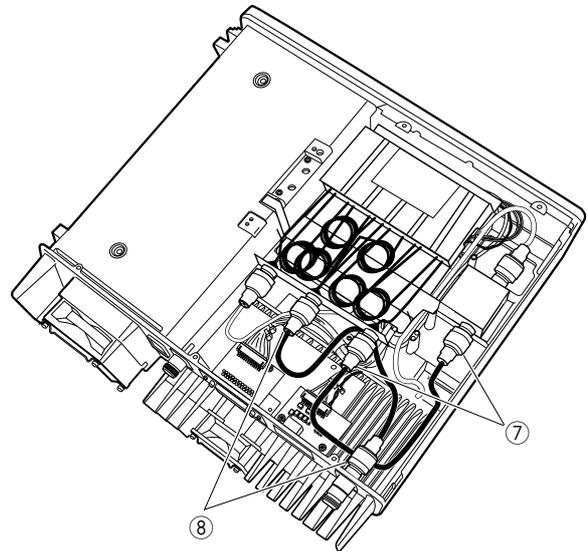


- ⑥ Unplug the TX ANT-PA unit cable from the TX ANT connector (CHASSIS), and then plug to the isolater (input connector).



BOTTOM VIEW OF THE REPEATER

- ⑦ Connect the *cable between the isolater (output connector) and the duplexer (TX frequency connector).
- ⑧ Connect the *cable between the duplexer (ANT connector) and the TX ANT connector (CHASSIS).
- ⑨ Return the top and bottom cover to their original position.

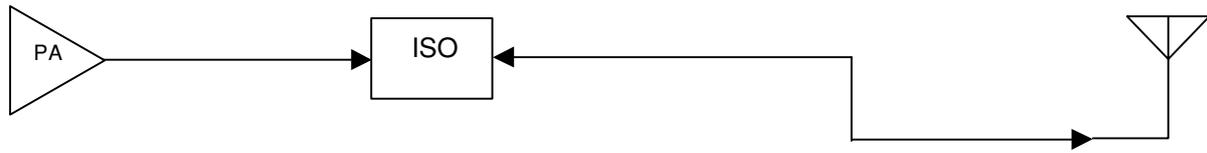


BOTTOM VIEW OF THE REPEATER

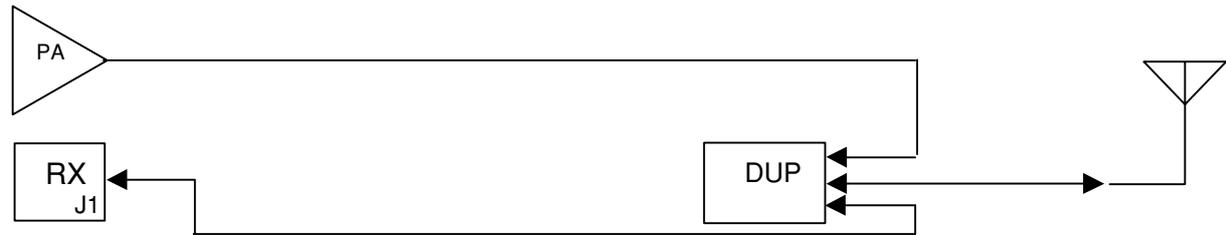
***NOTE:** Connection cable are not supply with the isolater and the duplexer. Therefore, need to make them by yourself.

CONNECTION

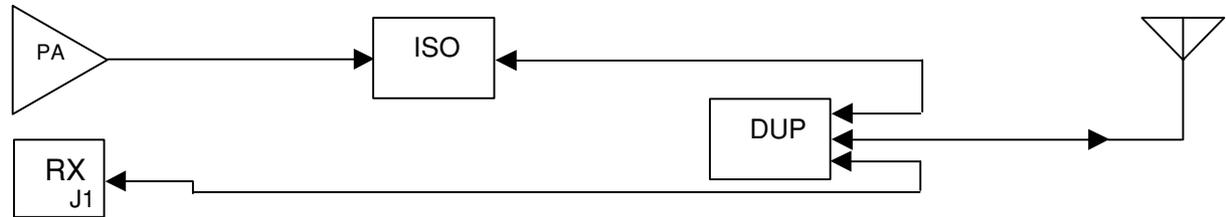
EXAMPLE 1 : ISOLATER CONNECTION



EXAMPLE 2 : DUPLEXER CONNECTION



EXAMPLE 3 : DUPLEXER AND ISOLATER CONNECTION



ISO: ISOLATER DUP: DUPLEXER

SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

[CHASSIS PARTS]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|-----------------------------------|------|
| W2 | 8900011521 | OPC-1049A (Power SW cable) | 1 |
| W7 | 8900011571 | OPC-1055A (LOGIC-JACK2 cable A) | 1 |
| W8 | 8900011580 | OPC-1056 (LOGIC-JACK2 cable B) | 1 |
| W9 | 8900011590 | OPC-1057 (LOGIC-JACK1 cable) | 1 |
| W16 | 8900011681 | OPC-1183A (LOGIC-VR cable) | 1 |
| W17 | 8900011690 | OPC-1184 (LOGIC-FRONT cable) | 1 |
| WS1 | 8600036930 | SX2368 P01CH | 1 |
| WS2 | 8970024130 | FX2367 J lead set (1)/CH [FR3100] | 1 |
| MP1 | 8210018430 | 2368 front panel assembly | 1 |
| MP2 | 8310052480 | 2368 Window plate | 1 |
| MP3 | 8930056450 | 2368 6-key | 1 |
| MP4 | 8930056440 | 2368 2-key | 1 |
| MP5 | 8210018300 | 2368 sub panel | 1 |
| MP6 | 8930058000 | 2368 filter net | 1 |
| MP8 | 8930059660 | 2368 A-sponge | 1 |
| MP9 | 8930059670 | 2368 B-sponge | 1 |
| MP10 | 8930059650 | 2368 front sheet | 1 |
| MP11 | 8860001290 | Grip ring NO.3 | 2 |
| MP12 | 8820001230 | 2368 screw | 2 |
| MP14 | 8610009760 | Knob N233 | 1 |
| MP15 | 8610009760 | Knob N233 | 1 |
| MP16 | 8010018550 | 2368 sub chassis | 1 |
| MP17 | 8010018540 | 2368 chassis | 1 |
| MP19 | 8110007480 | 2368 L-cover | 1 |
| MP20 | 8930057680 | Rubber stand (O) | 4 |
| MP25 | 8110007640 | 2368 LOGIC shield cover | 1 |
| MP26 | 8930056620 | 2368 D-sub plate | 1 |
| MP27 | 8930059060 | 2368 Fin cover Y656 | 1 |
| MP37 | 8950003170 | Nylon clip SL-8N | 1 |
| MP56 | 8810007230 | Set screw H M3 × 8 | 2 |
| MP57 | 8810007230 | Set screw H M3 × 8 | 1 |
| MP65 | 8810008450 | Bind screw M4 × 8 ZK | 10 |
| MP66 | 8810005710 | Screw PH B0 M2 × 6 ZK | 4 |
| MP67 | 8810005710 | Screw PH B0 M2 × 6 ZK | 2 |
| MP68 | 8810009650 | Screw FH BT M3 × 8 NI-ZU | 6 |
| MP69 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 8 |
| MP77 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 8 |
| MP82 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 4 |
| MP84 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 7 |
| MP85 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 9 |
| MP86 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 2 |
| MP87 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 1 |
| MP91 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 2 |
| MP92 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 1 |
| MP101 | 8930018620 | Himelon sheet Y | 4 |
| MP102 | 8930047050 | Himelon sheet BU | 1 |
| MP106 | 8930007510 | Knob spring NO.7800 | 1 |
| MP107 | 8930007510 | Knob spring NO.7800 | 1 |
| MP108 | 8930003580 | Aluminum sheet U [FR3100] | 1 |
| SP1 | 2510001200 | Speaker C057FA510-10 | 1 |

[FRONT UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|--------------|------|
| EP2 | 6910014560 | Spacer LM-15 | 1 |
| EP3 | 6910014550 | Spacer LM-13 | 1 |
| EP4 | 6910014540 | Spacer LM-10 | 1 |
| EP5 | 6910014540 | Spacer LM-10 | 1 |
| EP6 | 6910014540 | Spacer LM-10 | 1 |
| EP7 | 6910014540 | Spacer LM-10 | 1 |

[LOGIC UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|-------------------------------|------|
| EP2 | 6910014900 | FRC-50-12-6.5 | 1 |
| EP3 | 6910014890 | FRC-WC1 | 1 |
| F1 | 5210000030 | Fuse FGB 1A (FGB0 125V) | 1 |
| F2 | 5220000020 | Fuse holder S-N5051 | 1 |
| F3 | 5220000020 | Fuse holder S-N5051 | 1 |
| W3 | 8900008940 | Cable OPC-886 (P=1 N=10 L=75) | 1 |
| W4 | 8900009230 | Cable OPC-908 (P=1 N=10 L=60) | 1 |
| W5 | 8900008740 | Cable OPC-867 (P=1 N=24 L=60) | 1 |
| W10 | 8900009270 | Cable OPC-912 (P=1 N=22 L=70) | 1 |
| W11 | 8900009270 | Cable OPC-912 (P=1 N=22 L=70) | 1 |

[JACK2 UNIT]

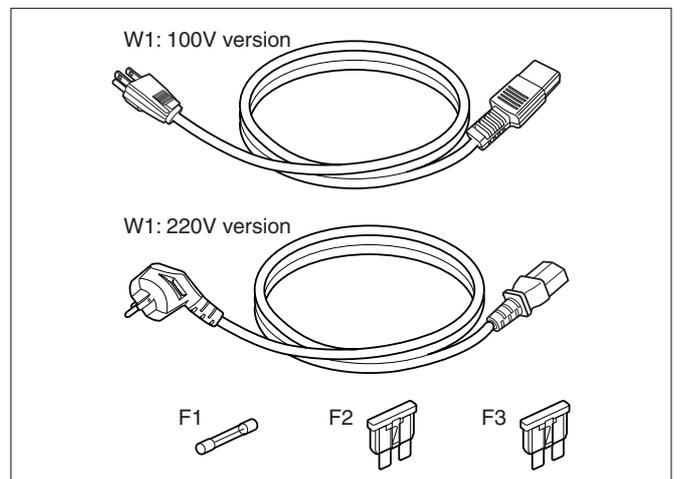
| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|---|------|
| J1 | 6510023290 | Connector DBR61-25K1200-B (Incl. Stand-off) | 1 |

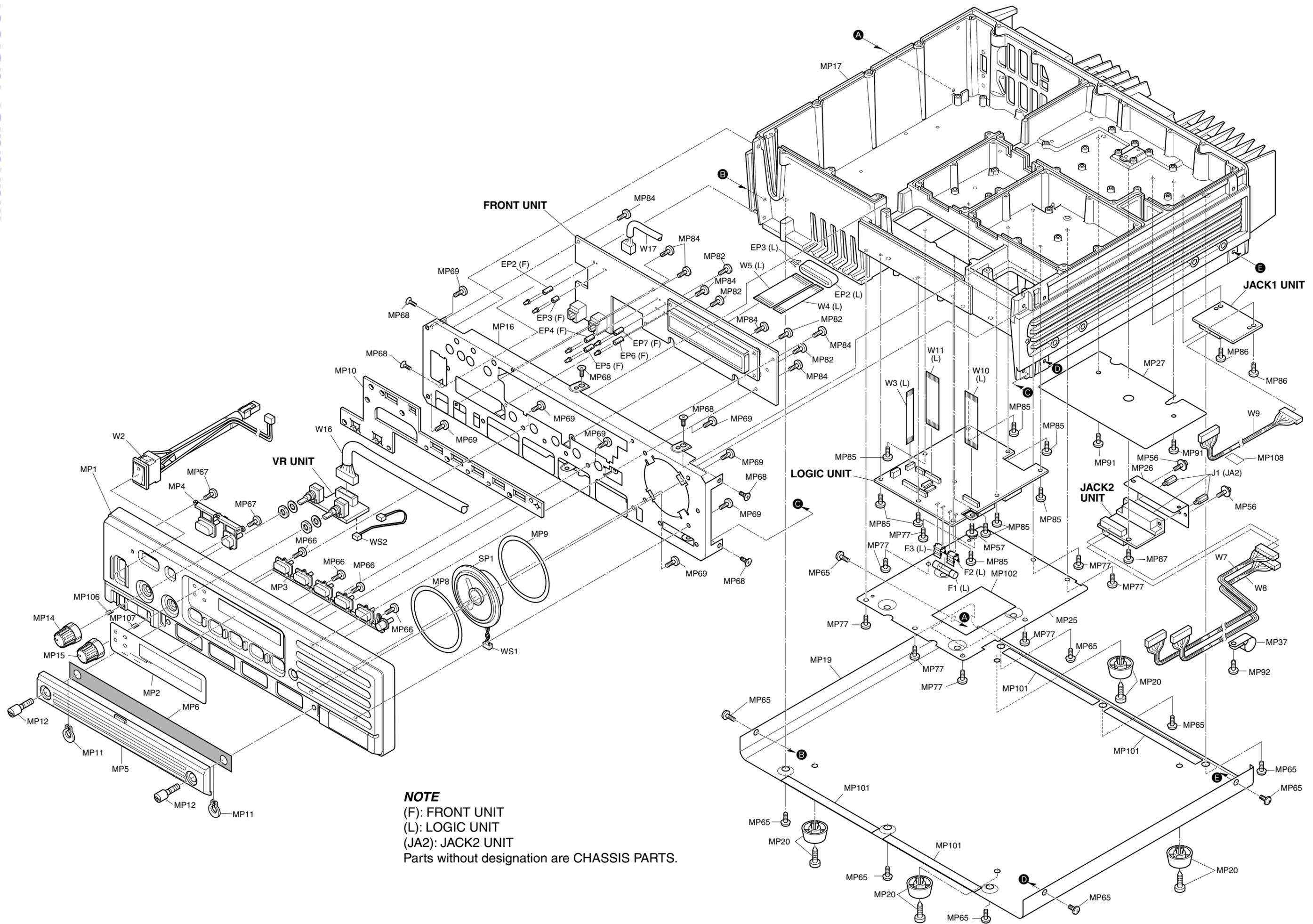
Screw abbreviations

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

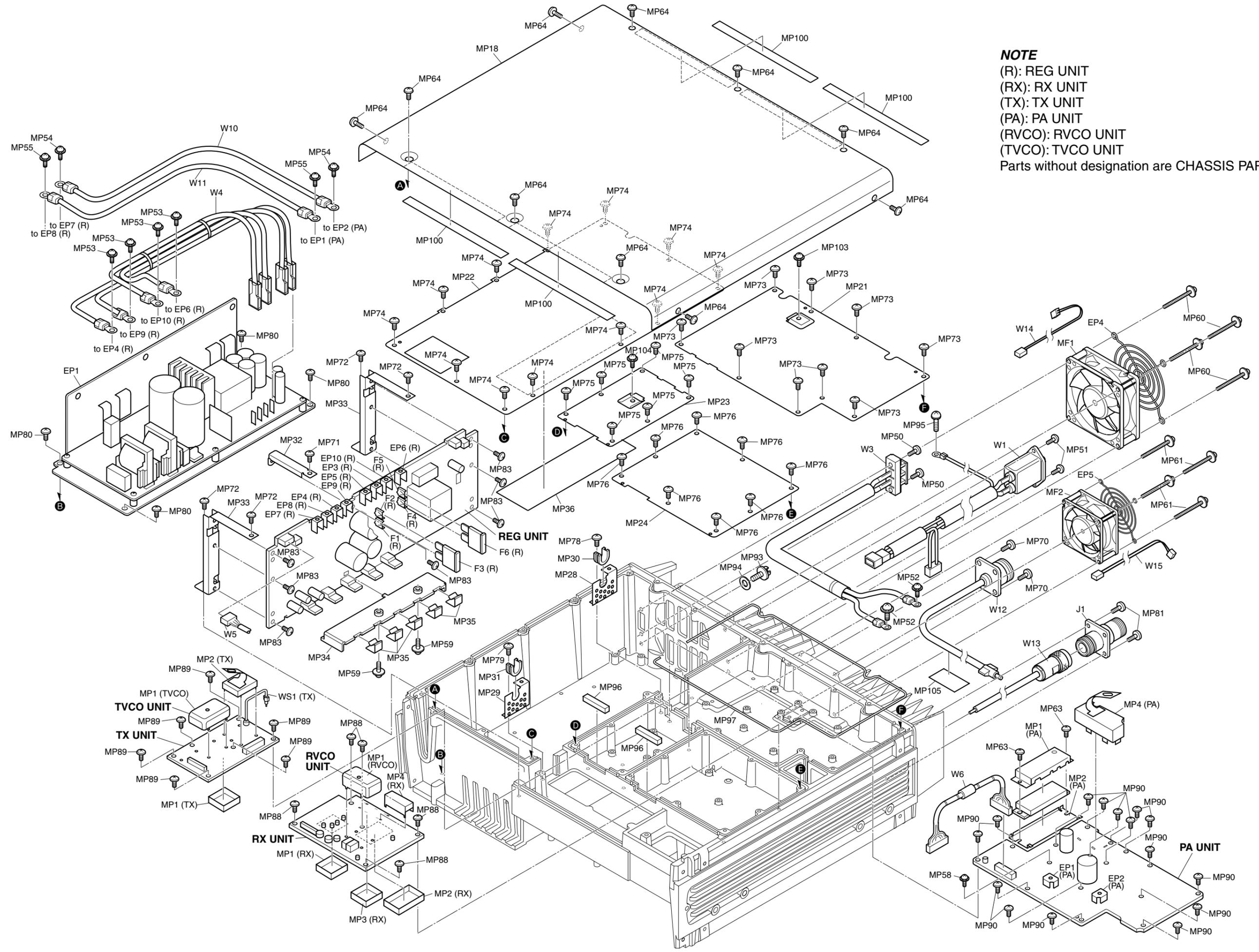
[ACCESSORIES]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|------------------------------|------|
| F1 | 5210000030 | Fuse FGB 1A (FGB0 125V) | 1 |
| F2 | 5210000850 | Fuse ATC-20 | 1 |
| F3 | 5210000850 | Fuse ATC-20 | 1 |
| W1 | 8900005130 | Cable OPC-492 (220V version) | 1 |
| | 8900005250 | Cable OPC-510 (100V version) | 1 |





NOTE
(F): FRONT UNIT
(L): LOGIC UNIT
(JA2): JACK2 UNIT
Parts without designation are CHASSIS PARTS.



NOTE
 (R): REG UNIT
 (RX): RX UNIT
 (TX): TX UNIT
 (PA): PA UNIT
 (RVCO): RVCO UNIT
 (TVCO): TVCO UNIT
 Parts without designation are CHASSIS PARTS.

[CHASSIS PARTS]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|-----------------------------------|------|
| J1 | 6510022970 | Connector N-PA-JJ(NI) | 1 |
| W1 | 8900011510 | OPC-1048 (AC input cable) | 1 |
| W3 | 8900011531 | OPC-1050A (Back up DC cable) | 1 |
| W4 | 8900011540 | OPC-1052 (PS output cable) | 1 |
| W5 | 8900011550 | OPC-1053 (REG-LOGIC cable) | 1 |
| W6 | 8900011560 | OPC-1054 (PA-TX cable) | 1 |
| W10 | 8900011600 | OPC-1058 (REG-PA cable red) | 1 |
| W11 | 8900011610 | OPC-1059 (REG-PA cable black) | 1 |
| W12 | 8900012150 | OPC-1247 (RX-ANT cable) | 1 |
| W13 | 8900012270 | OPC-1255 (2367 TX-ANT cable) | 1 |
| W14 | 8900012310 | OPC-1265 (REF-FAN/tube) | 1 |
| W15 | 8900011660 | OPC-1178 (PA-FAN cable) [FR3000] | 1 |
| EP1 | 6910014470 | Unit board FP2152A (100V version) | 1 |
| | 6910014480 | Unit board FP2153A (220V version) | 1 |
| EP4 | 6910008330 | G80-18 (Fin gured) | 1 |
| EP5 | 8930030420 | Cover FG60B | 1 |
| MF1 | 2710000750 | Fan FBA08A12LZ | 1 |
| MF2 | 2710000740 | Fan FBA06A12L | 1 |
| MP18 | 8110007490 | 2368 U-cover | 1 |
| MP21 | 8510015490 | 2367 PA shield cover | 1 |
| MP22 | 8510013770 | 2368 REG shield cover | 1 |
| MP23 | 8510013790 | 2368 TX shield cover | 1 |
| MP24 | 8510013780 | 2368 RX shield cover | 1 |
| MP28 | 8510013810 | 2368 KC plate Y599 | 1 |
| MP29 | 8510013810 | 2368 KC plate Y599 | 1 |
| MP30 | 8010004340 | Edging rubber FX452 | 1 |
| MP31 | 8010004340 | Edging rubber FX452 | 1 |
| MP32 | 8930056650 | 2368 PCB angle Y600 | 1 |
| MP33 | 8930056660 | 2368 REG PCB angle | 2 |
| MP34 | 8410002510 | 2368 REG heat sink | 1 |
| MP35 | 8930035230 | 1546 TR-A clip | 5 |
| MP36 | 8930005460 | Isolating sheet G | 1 |
| MP50 | 8810000420 | Screw PH M4 × 18 | 2 |
| MP51 | 8810009030 | Screw FH (pan head) M3 × 8 ZK | 2 |
| MP52 | 8810007230 | Set screw H M3 × 8 | 2 |
| MP53 | 8810007230 | Set screw H M3 × 8 | 4 |
| MP54 | 8810007230 | Set screw H M3 × 8 | 2 |
| MP55 | 8810007230 | Set screw H M3 × 8 | 2 |
| MP58 | 8810007230 | Set screw H M3 × 8 | 1 |
| MP59 | 8810003380 | Set screw C M3 × 10 | 2 |
| MP60 | 8810010130 | Set screw (C) 3 × 35 | 4 |
| MP61 | 8810010130 | Set screw (C) 3 × 35 [FR3000] | 4 |
| | 8810003360 | Set screw C 3 × 6 [FR3100] | 4 |
| MP62 | 8810009040 | Set screw H M2.6 × 10 NI | 2 |
| MP63 | 8810004830 | Screw PH M3 × 10 surface BS | 2 |
| MP64 | 8810008450 | Bind screw M4 × 8 ZK | 10 |
| MP70 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 2 |
| MP71 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 1 |
| MP72 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 4 |
| MP73 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 9 |
| MP74 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 12 |
| MP75 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 6 |
| MP76 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 8 |
| MP78 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 1 |
| MP79 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 1 |
| MP80 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 4 |
| MP81 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 2 |
| MP83 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 7 |
| MP88 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 5 |
| MP89 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 6 |
| MP90 | 8810008660 | Screw PH BT M3 × 8 NI-ZU | 15 |
| MP93 | 8820000530 | Flange volt M4 × 8 NI | 1 |
| MP94 | 8850000140 | Flat washer M4 NI BS | 1 |
| MP95 | 8810003860 | Set screw A M4 × 8 | 1 |
| MP96 | 8930059330 | Shield sponge (W) | 2 |
| MP97 | 8930059340 | 2368 A-shield line | 1 |
| MP100 | 8930018620 | Himelon sheet Y | 4 |
| MP103 | 8810005770 | Set screw Bind M3 × 8 Black | 1 |
| MP104 | 8810005770 | Set screw Bind M3 × 8 Black | 1 |
| MP105 | 8930005150 | Aluminum sheet B | 1 |

[RX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|------------------|------|
| MP1 | 8510015120 | 2368 A-case | 1 |
| MP2 | 8510015130 | 2368 B-case | 1 |
| MP3 | 8510015140 | 2368 E-case | 1 |
| MP4 | 8510015480 | 2367 shield case | 1 |

[TX UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|------------------------------------|------|
| MP1 | 8510015120 | 2368 A-case | 1 |
| MP2 | 8510015240 | 2368 TX shield case assembly | 1 |
| WS1 | 8970024070 | FX2368 1.5D coaxial cable (1) / TX | 1 |

[RVCO UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|----------------|------|
| MP1 | 8510014700 | 2368 RVCO case | 1 |

[TVCO UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|----------------|------|
| MP1 | 8510014690 | 2368 TVCO case | 1 |

[REG UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|--------------------|------|
| F1 | 5220000300 | Fuse holder 1A5600 | 1 |
| F2 | 5220000300 | Fuse holder 1A5600 | 1 |
| F3 | 5210000850 | Fuse ATC-20 | 1 |
| F4 | 5220000300 | Fuse holder 1A5600 | 1 |
| F5 | 5220000300 | Fuse holder 1A5600 | 1 |
| F6 | 5210000850 | Fuse ATC-20 | 1 |
| EP3 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP4 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP5 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP6 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP7 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP8 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP9 | 6910011340 | Terminal OT-010 M3 | 1 |
| EP10 | 6910011340 | Terminal OT-010 M3 | 1 |

[PA UNIT]

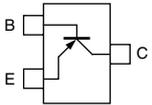
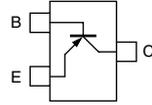
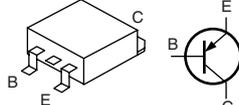
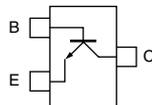
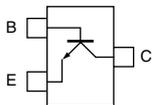
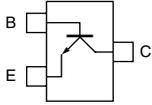
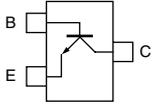
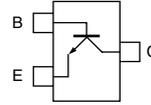
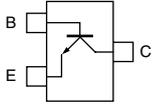
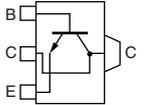
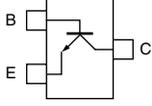
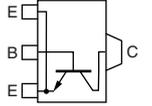
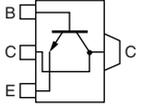
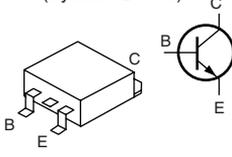
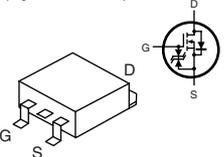
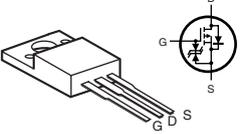
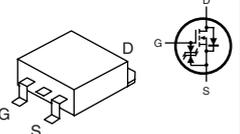
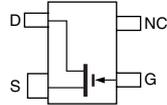
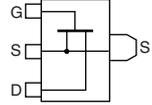
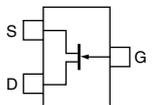
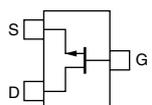
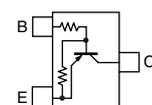
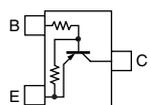
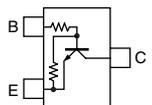
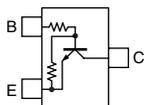
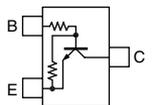
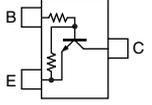
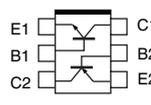
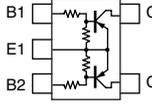
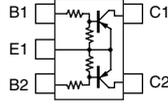
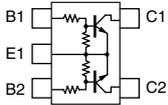
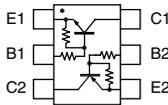
| REF NO. | ORDER NO. | DESCRIPTION | QTY. |
|---------|------------|-----------------------------------|------|
| EP1 | 6910014490 | Terminal OP-100 M3 | 1 |
| EP2 | 6910014490 | Terminal OP-100 M3 | 1 |
| MP1 | 8930060410 | 2367 Module holde | 1 |
| MP2 | 8930060420 | 2367 module plate | 1 |
| MP3 | 8510015550 | 2367 PA shield case assembly Y677 | 1 |

Screw abbreviations

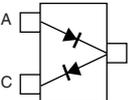
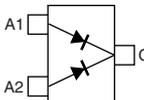
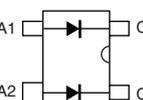
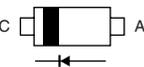
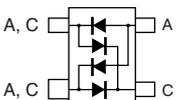
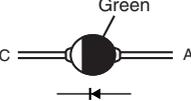
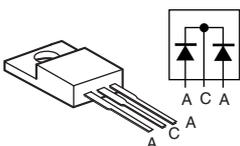
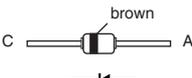
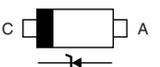
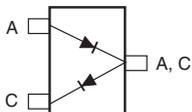
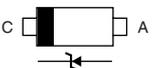
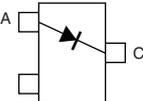
B0, BT: Self-tapping PH: Pan head FH: Flat head
 NI-ZU: Nickel-Zinc ZK: Black

SECTION 8 SEMI-CONDUCTOR INFORMATION

8 - 1 TRANSISTORS AND FETS

| | | | | |
|--|---|--|---|---|
| <p>2SA1362-Y (Symbol: AEY)</p>  | <p>2SA1576A T106R (Symbol: FR)</p>  | <p>2SB1182 TL Q (Symbol: B1182, Q)</p>  | <p>2SC2712-BL (Symbol: LL)</p>  | <p>2SC3661-TB (Symbol: FY)</p>  |
| <p>2SC4081 T106 R (Symbol: BR)</p>  | <p>2SC4116-Y (Symbol: LY)</p>  | <p>2SC4215-O (Symbol: QO)</p>  | <p>2SC4226-T1 R25 (Symbol: R25)</p>  | <p>2SC4703-T2 SF (Symbol: SF)</p>  |
| <p>2SC5006-T1 (Symbol: 24)</p>  | <p>2SC5337QS-T1 (Symbol: QS)</p>  | <p>2SD1664 T100Q (Symbol: DAQ)</p>  | <p>2SD1760 TLQ (Symbol: D1760)</p>  | <p>2SJ377 (TE16R) (Symbol: J377)</p>  |
| <p>2SJ533 (Symbol: J533)</p>  | <p>2SJ553STR (Symbol: J553)</p>  | <p>2SK1771 (TE85R) (Symbol: UB)</p>  | <p>2SK3475 (TE12L) (Symbol: WB)</p>  | <p>2SK508 K53 T1B (Symbol: K53)</p>  |
| <p>2SK880Y (Symbol: XY)</p>  | <p>DTA143ZUA T106 (Symbol: 113)</p>  | <p>DTA144EE TL (Symbol: 16)</p>  | <p>DTC114EUA T106 (Symbol: 24)</p>  | <p>DTC143ZUA T106 (Symbol: 123)</p>  |
| <p>DTC144EE TL (Symbol: 26)</p>  | <p>DTC144EUA T106 (Symbol: 26)</p>  | <p>IMZ4 T108 (Symbol: Z4)</p>  | <p>XP1111 (TX) (Symbol: 9S)</p>  | <p>XP1114(TX) (Symbol: 7Q)</p>  |
| <p>XP1214(TX) (Symbol: 9H)</p>  | <p>XP4311 (TX) (Symbol: 3X)</p>  | | | |

8 - 2 DIODES

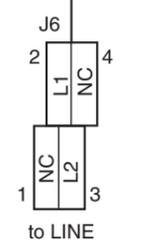
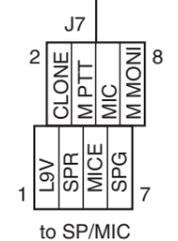
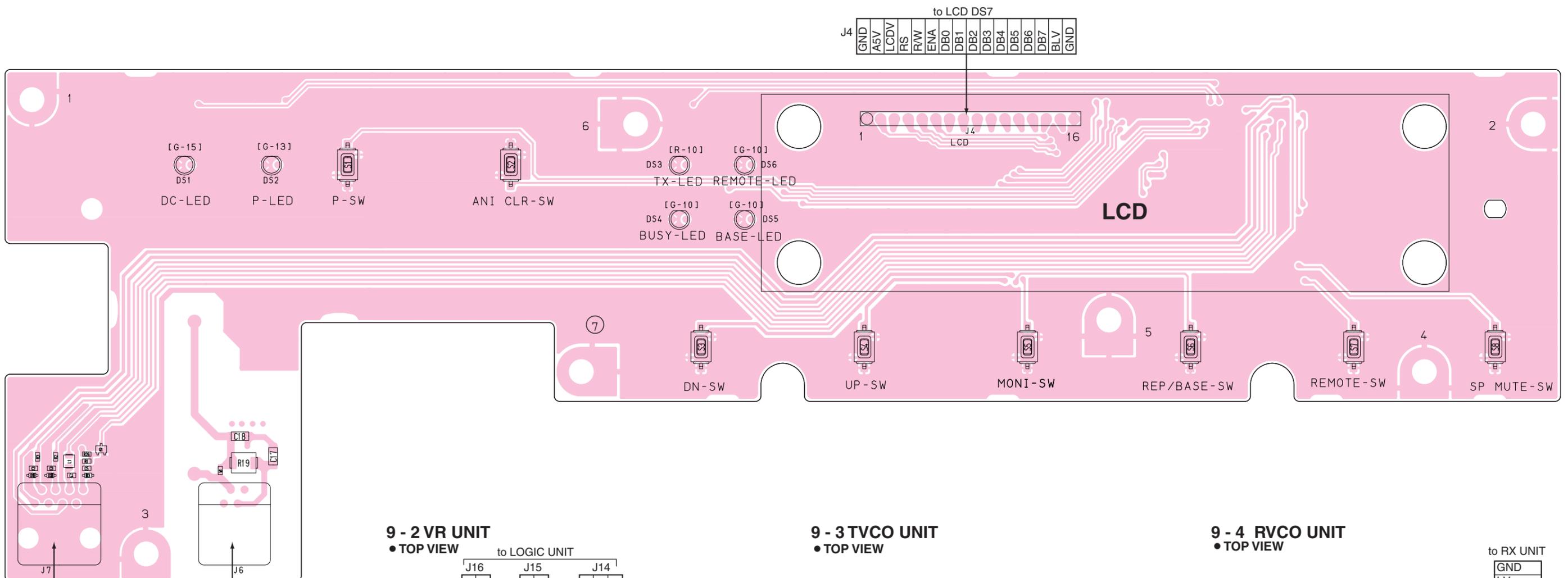
| | | | | |
|---|---|--|---|---|
| <p>1SS226 (TE85R) (Symbol: C3)</p>  | <p>1SS268 (TE85R) (Symbol: BF)</p>  | <p>1SS319 (TE85R) (Symbol: A4)</p>  | <p>1SS355 TE-17 (Symbol: A)</p>  | <p>1SV305 (TPL3) (Symbol: TV)</p>  |
| <p>1SV308 (TPL3) (Symbol: TX)</p>  | <p>D1UBA80-4062 (Symbol: UA80)</p>  | <p>DSA3A1 (Symbol: None)</p>  | <p>FCH30A03L (Symbol: FCH30A03L)</p>  | <p>HSU88TRF (Symbol: 9)</p>  |
| <p>MA29W-B (Symbol: Blown line)</p>  | <p>MA2S077-(TX) (Symbol: S)</p>  | <p>MA2S111-(TX) (Symbol: A)</p>  | <p>MA8047-M(TX) (Symbol: 4-7)</p>  | <p>NNCD8.2C-T1 (Symbol: None)</p>  |
| <p>PTZ TE25 13B (Symbol: 13B)</p>  | <p>PTZ TE25 36B (Symbol: 36, B)</p>  | <p>SB07-03C-TB (Symbol: J)</p>  | | |

SECTION 9 BOARD LAYOUTS

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

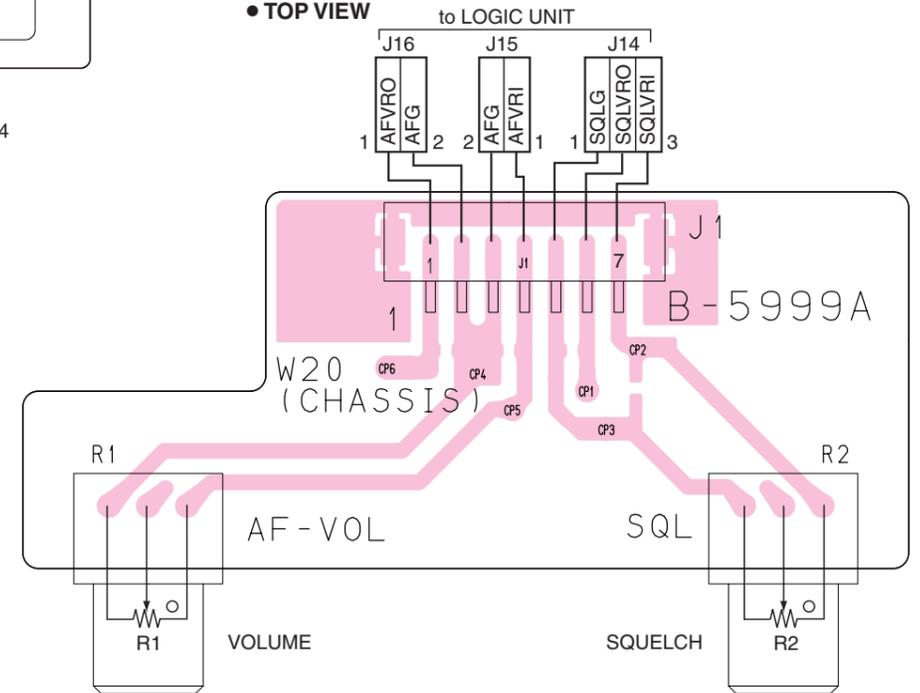
9 - 1 FRONT UNIT

• TOP VIEW



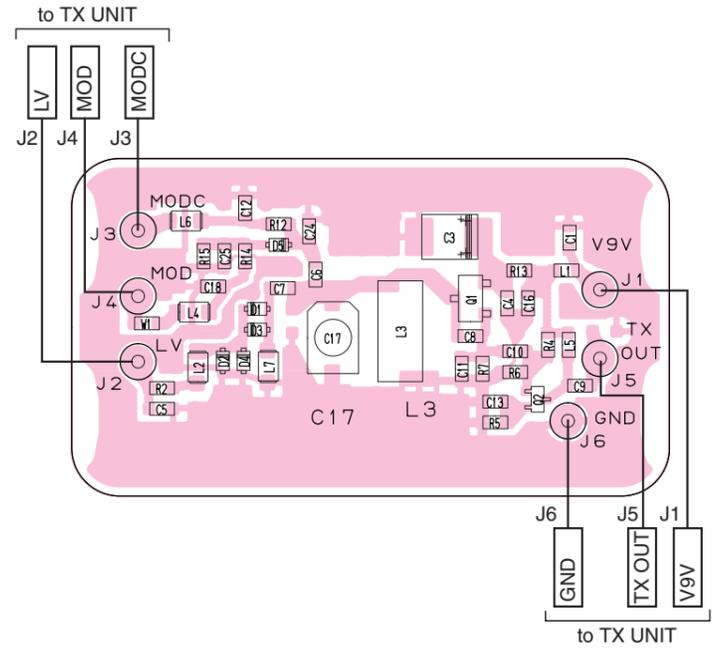
9 - 2 VR UNIT

• TOP VIEW



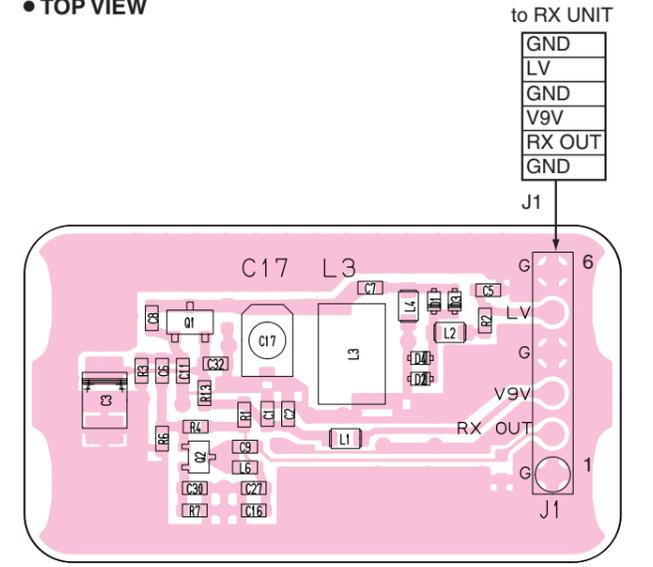
9 - 3 TVCO UNIT

• TOP VIEW



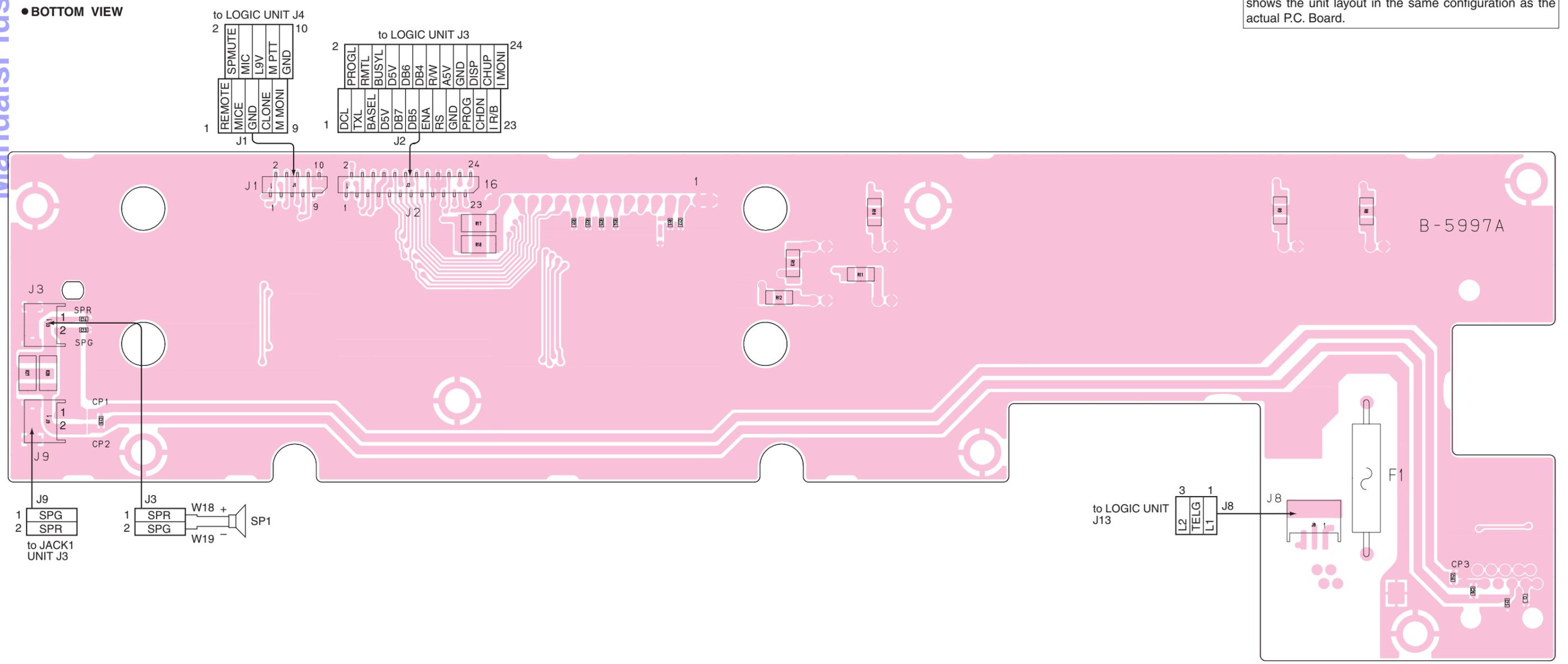
9 - 4 RVCO UNIT

• TOP VIEW



FRONT UNIT
● **BOTTOM VIEW**

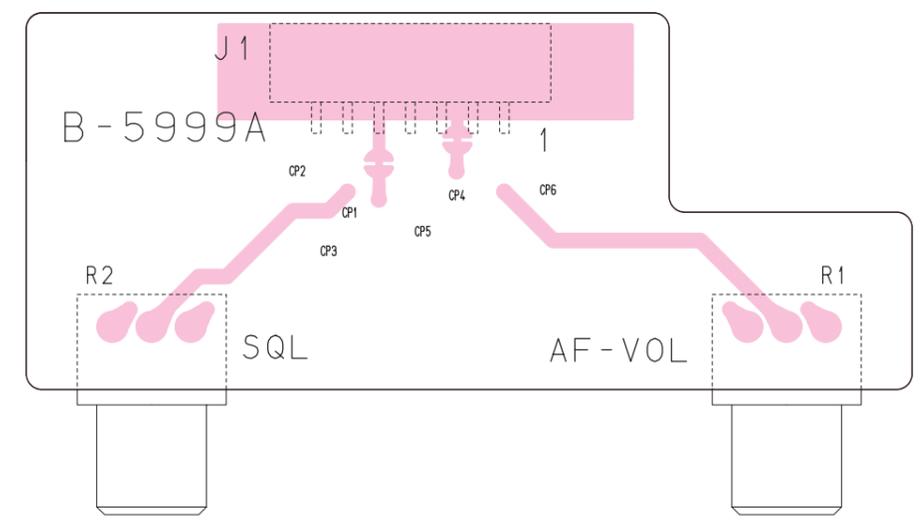
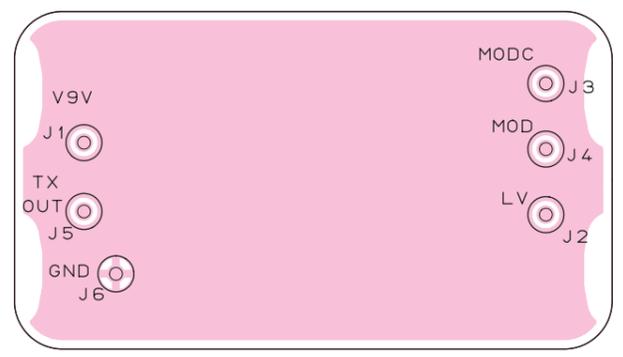
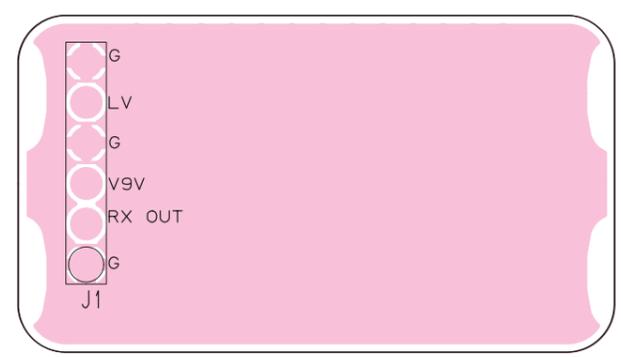
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.



RVCO UNIT
● **BOTTOM VIEW**

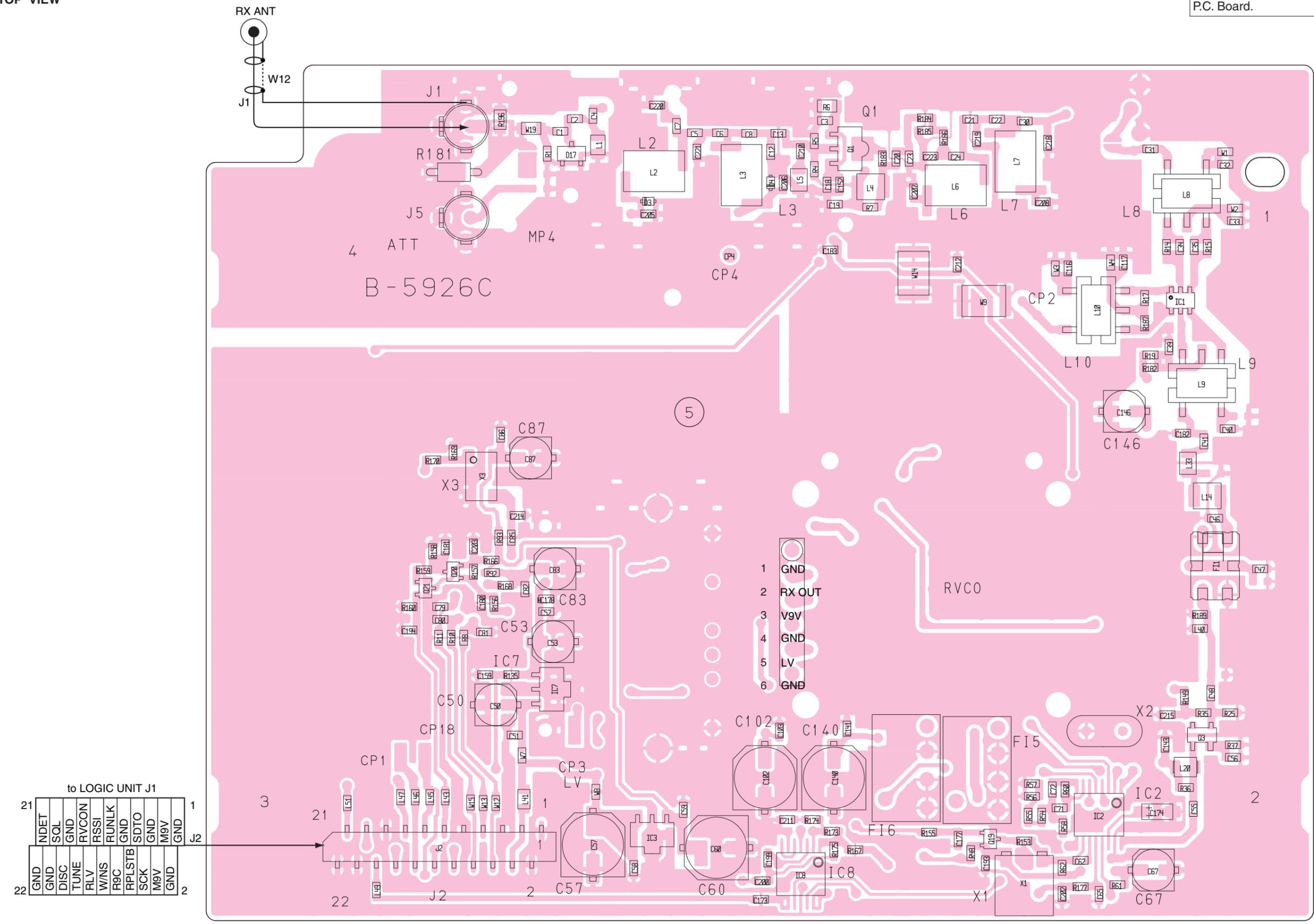
TVCO UNIT
● **BOTTOM VIEW**

VR UNIT
● **BOTTOM VIEW**



9 - 6 RX 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.

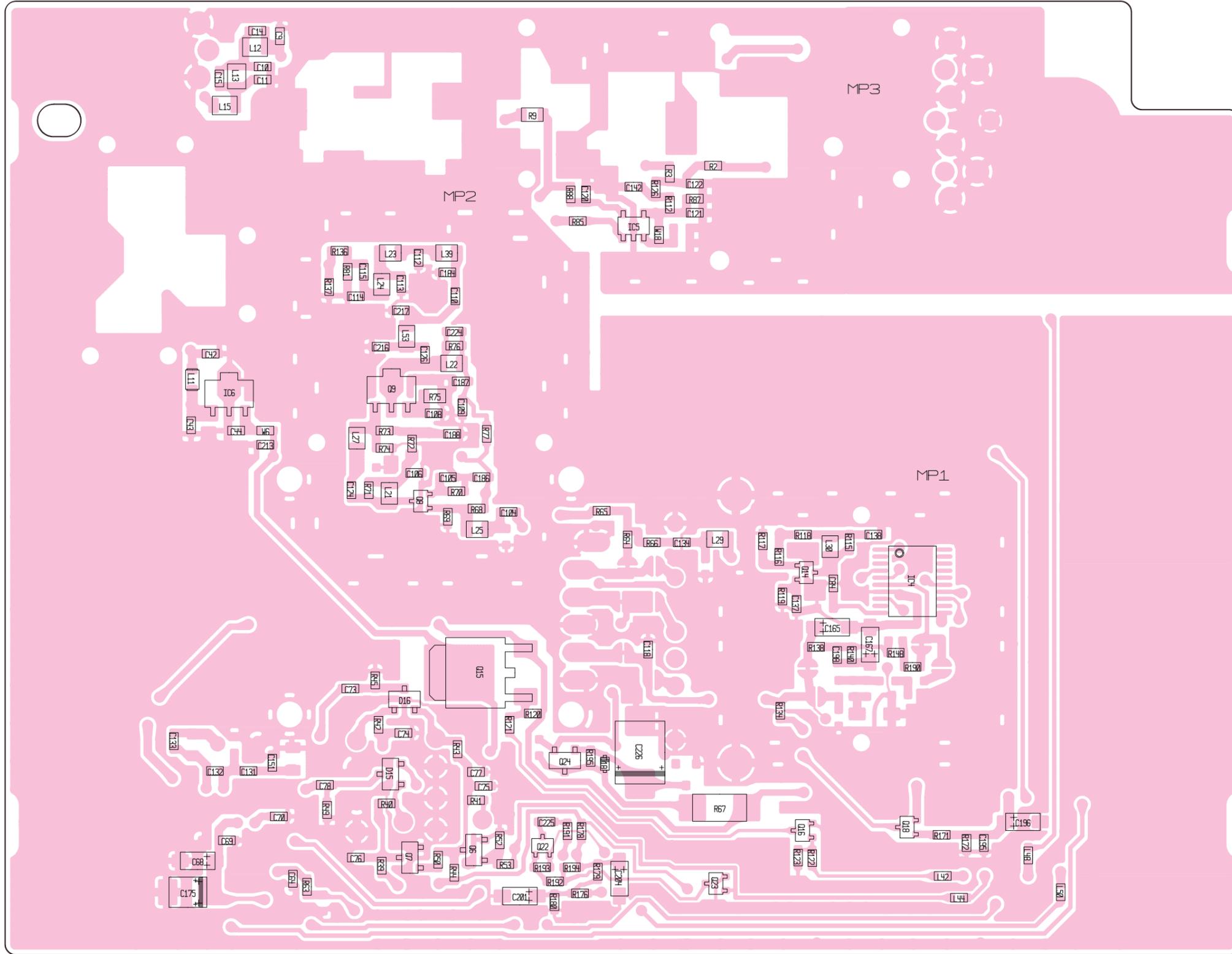


to LOGIC UNIT J1

| | | |
|----|--------|---|
| 21 | GND | 1 |
| | NDET | |
| | SQL | |
| | DISC | |
| | TUNE | |
| | RVCON | |
| | FLV | |
| | RSSI | |
| | RUNLK | |
| | R9C | |
| | RPLSTB | |
| | SCK | |
| | M9V | |
| | GND | |
| 22 | GND | 2 |

RX UNIT
● BOTTOM VIEW

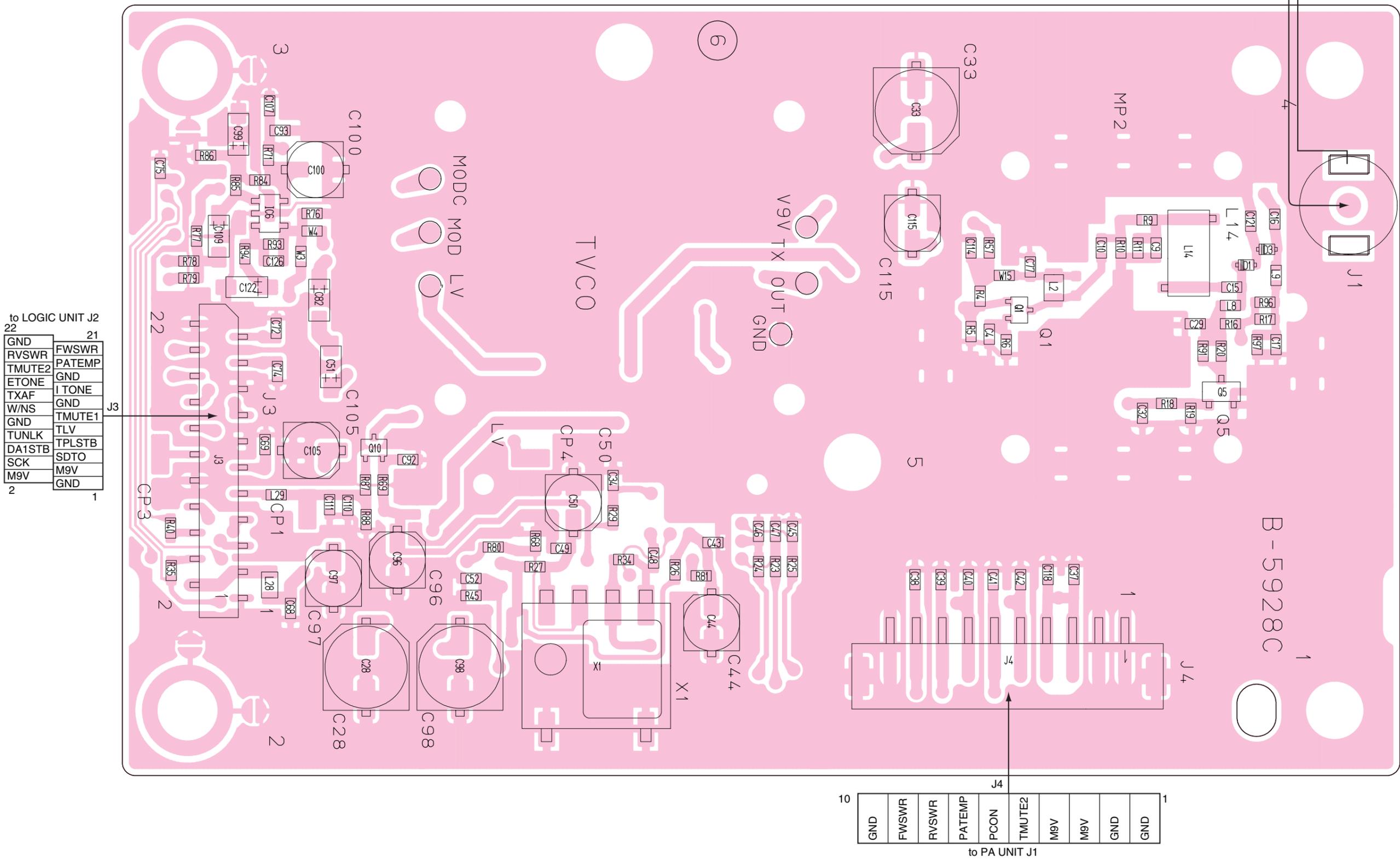
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.



9 - 7 TX 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.



to LOGIC UNIT J2

| | |
|--------|--------|
| 22 | 21 |
| GND | FWSWR |
| RVSWR | PATEMP |
| TMUTE2 | GND |
| ETONE | ITONE |
| TXAF | GND |
| W/NS | TMUTE1 |
| GND | TLV |
| TUNLK | TPLSTB |
| DA1STB | SDTO |
| SCK | M9V |
| M9V | GND |
| 2 | 1 |

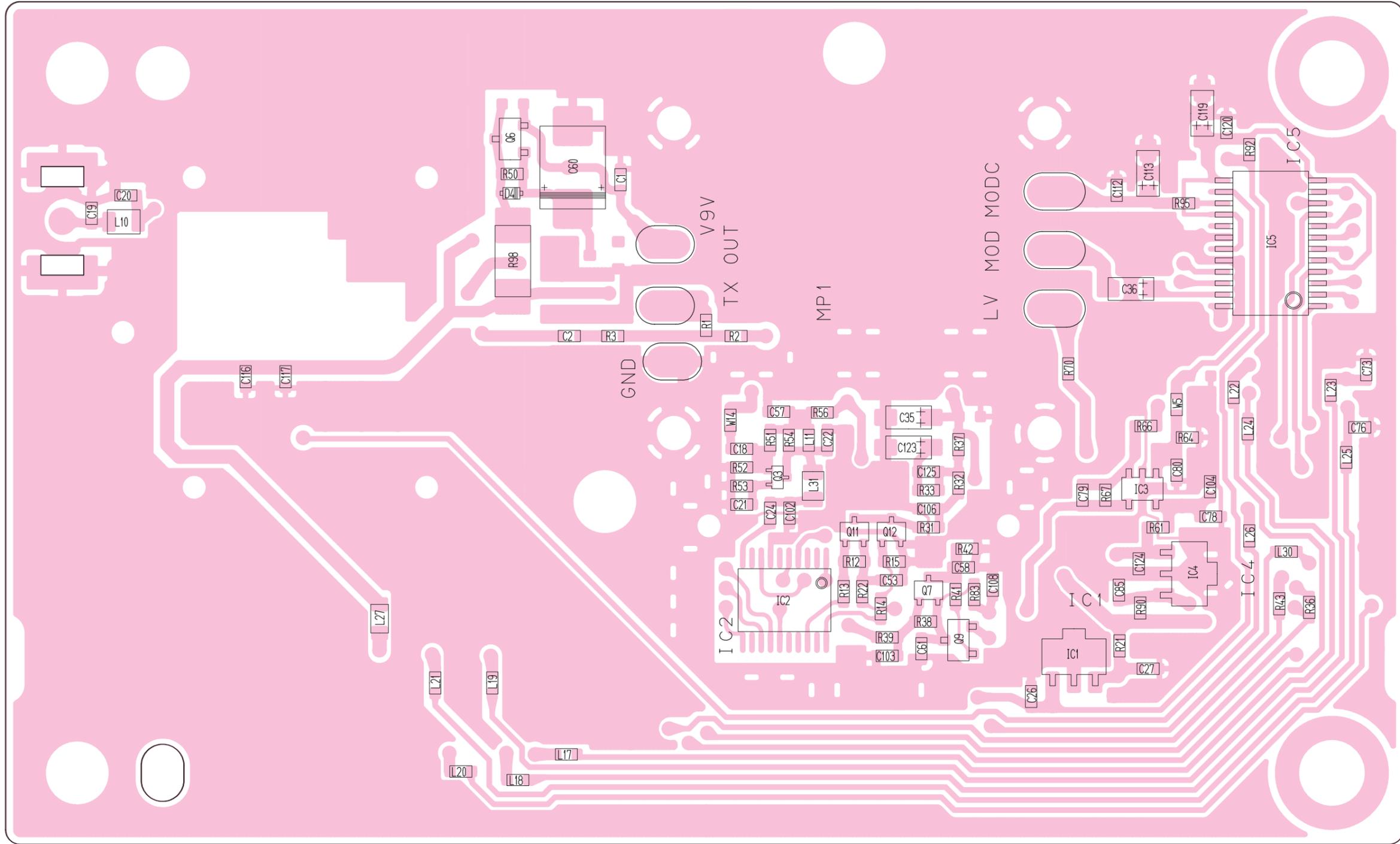
to PA UNIT J1

| | |
|--------|--------|
| 10 | 1 |
| GND | FWSWR |
| FWSWR | RVSWR |
| RVSWR | PATEMP |
| PATEMP | PCON |
| PCON | TMUTE2 |
| TMUTE2 | M9V |
| M9V | M9V |
| M9V | GND |
| GND | GND |
| 1 | 1 |

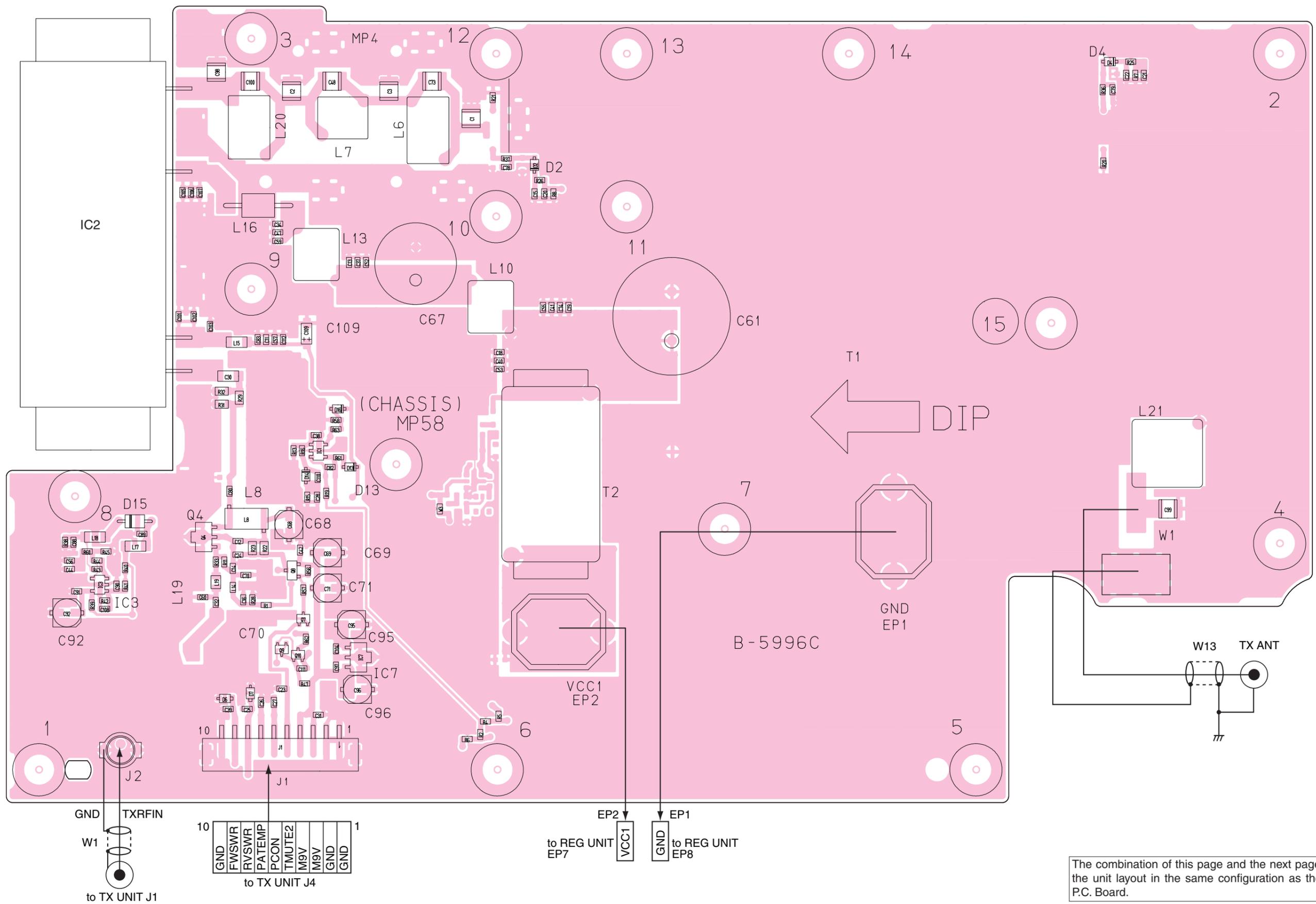
TX UNIT

• 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.



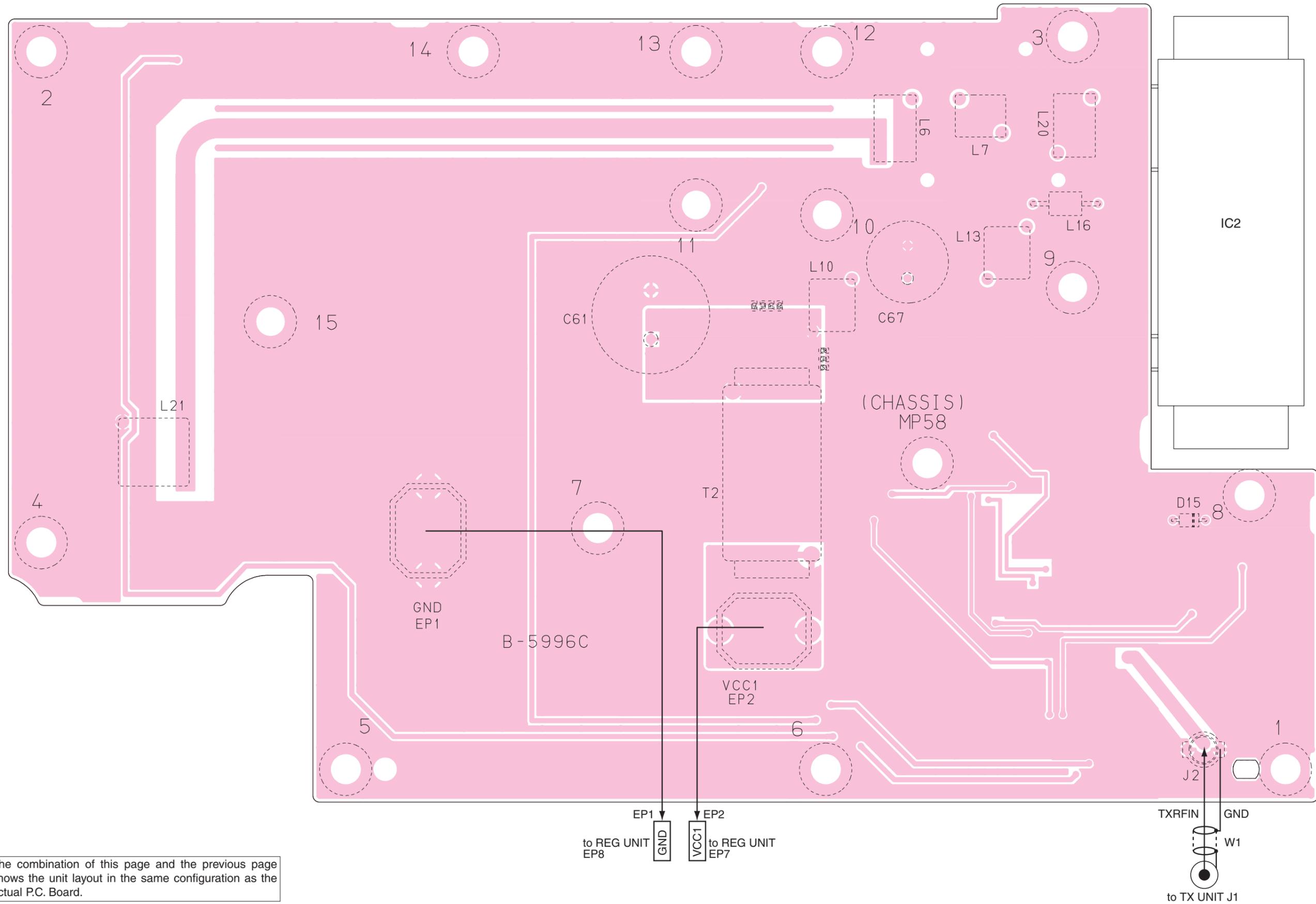
9 - 8 PA UNIT
 • TOP VIEW



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

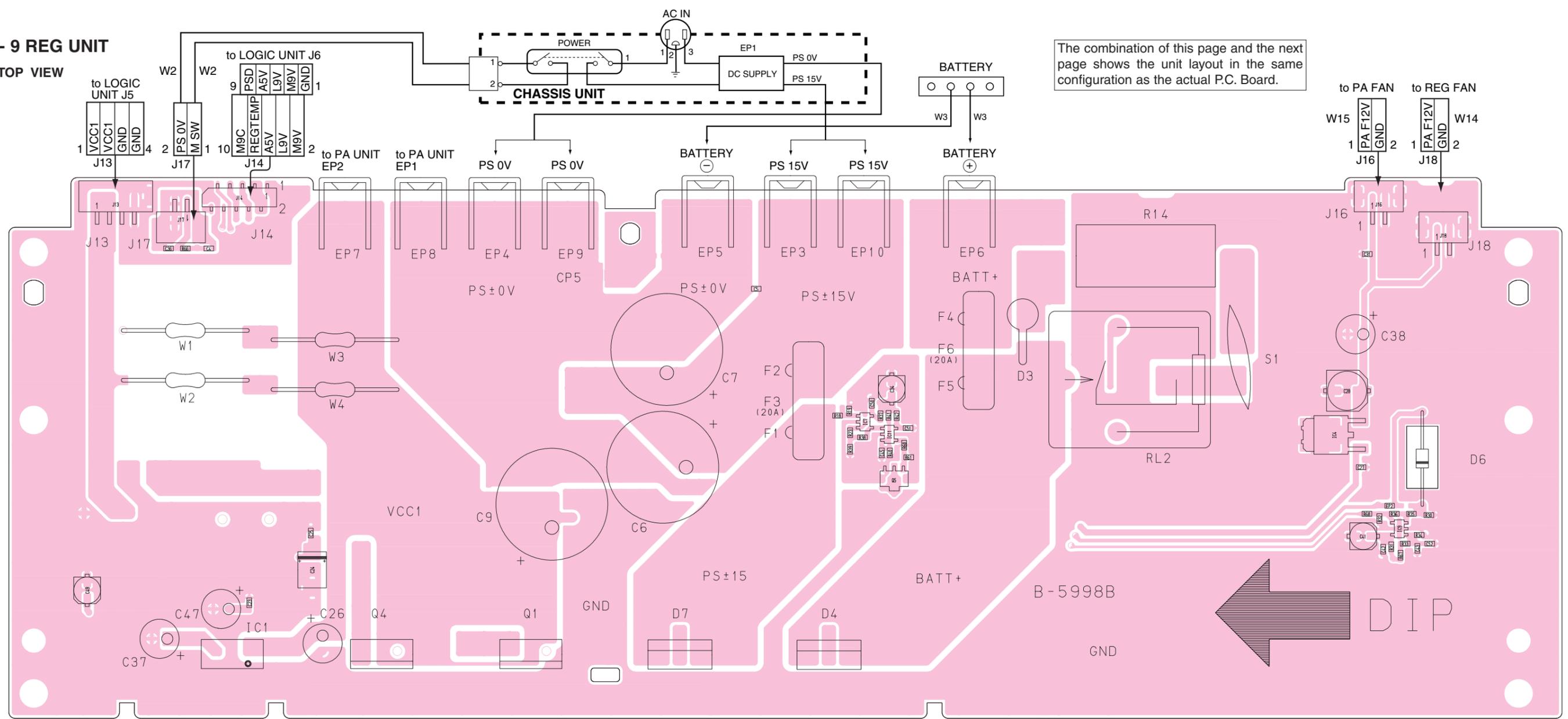
PA UNIT

• BOTTOM VIEW



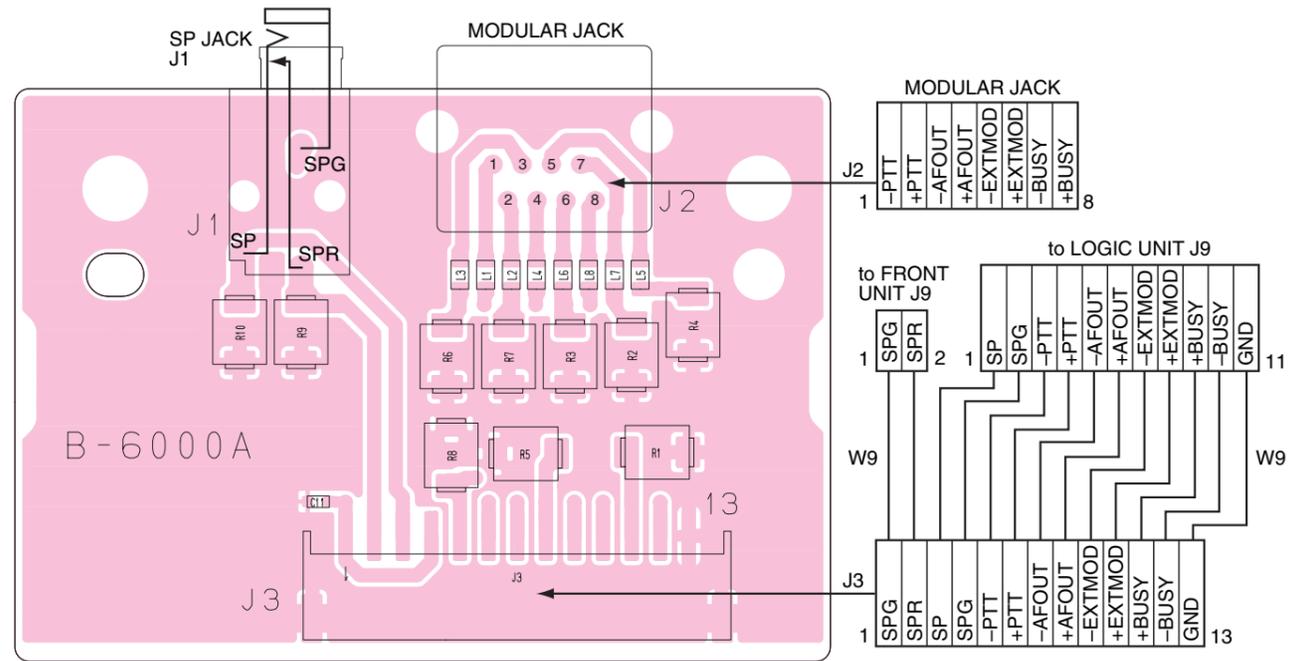
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.

9 - 9 REG UNIT
• TOP VIEW

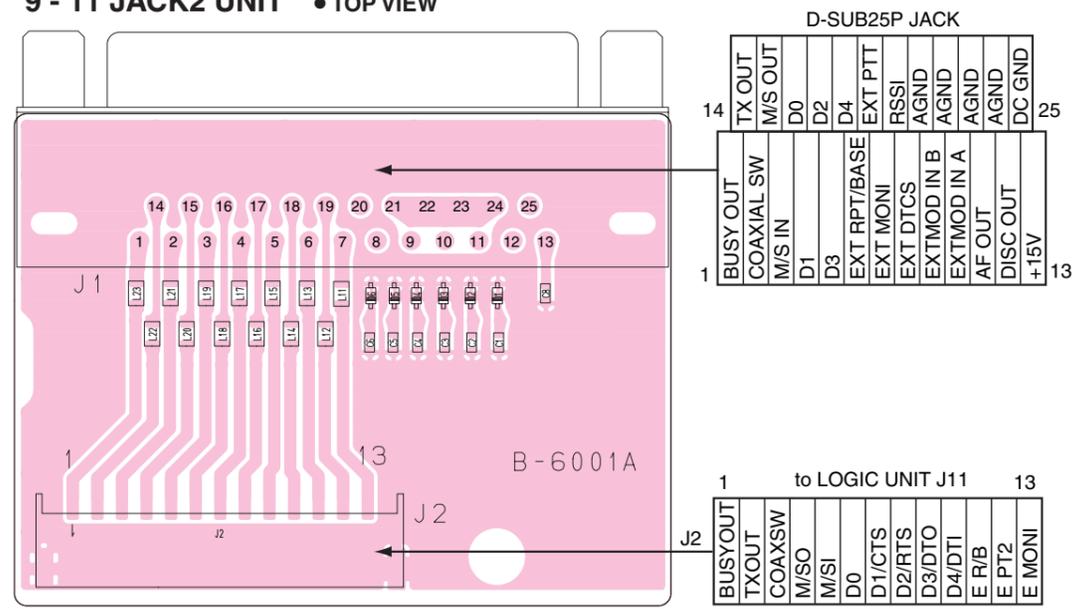


The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.

9 - 10 JACK1 UNIT
• TOP VIEW

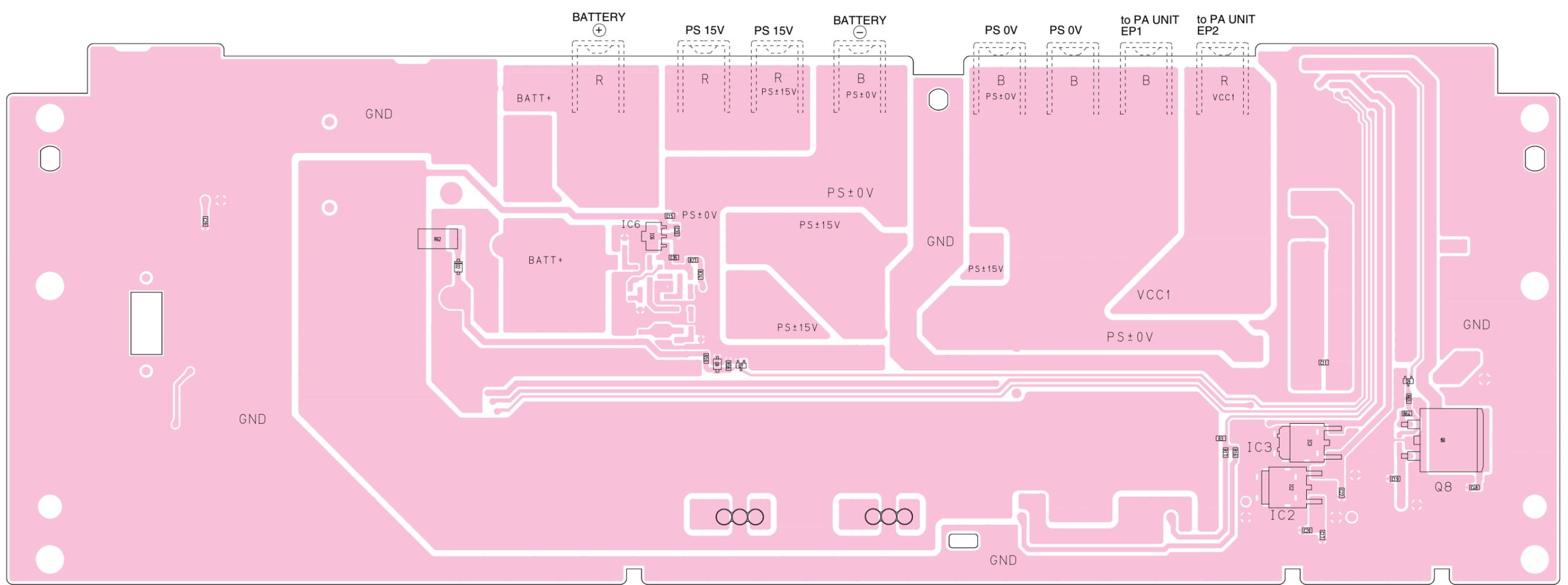


9 - 11 JACK2 UNIT • TOP VIEW

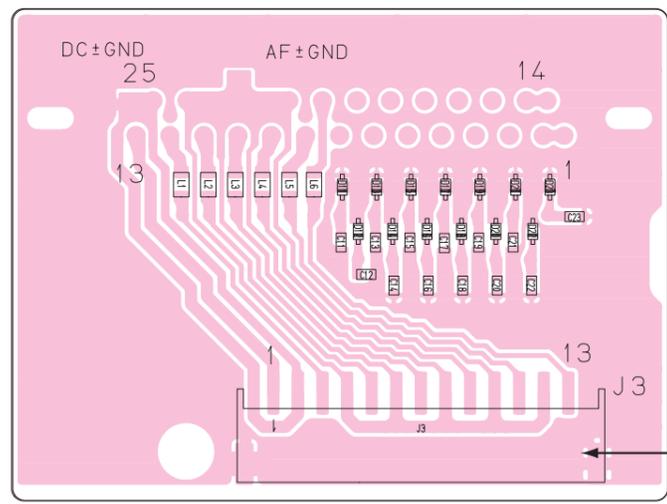


REG UNIT
• **BOTTOM VIEW**

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

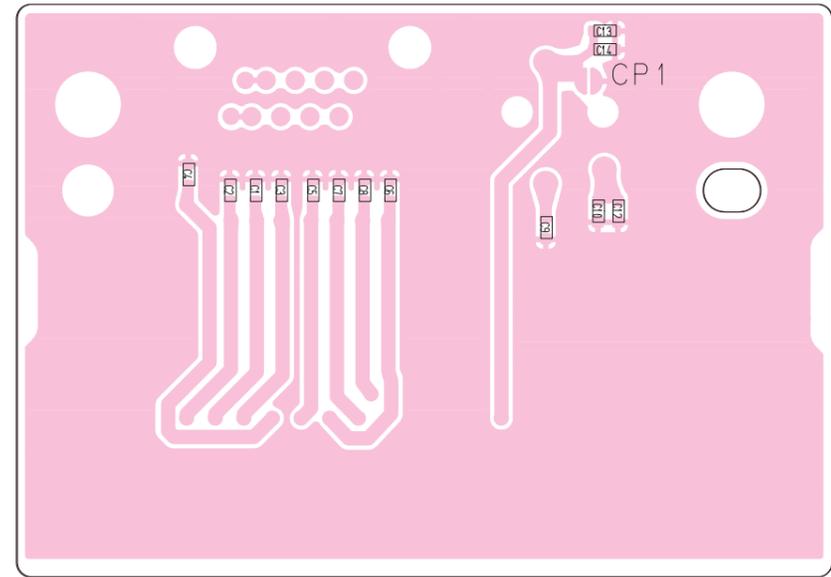


JACK2 UNIT
• **BOTTOM VIEW**

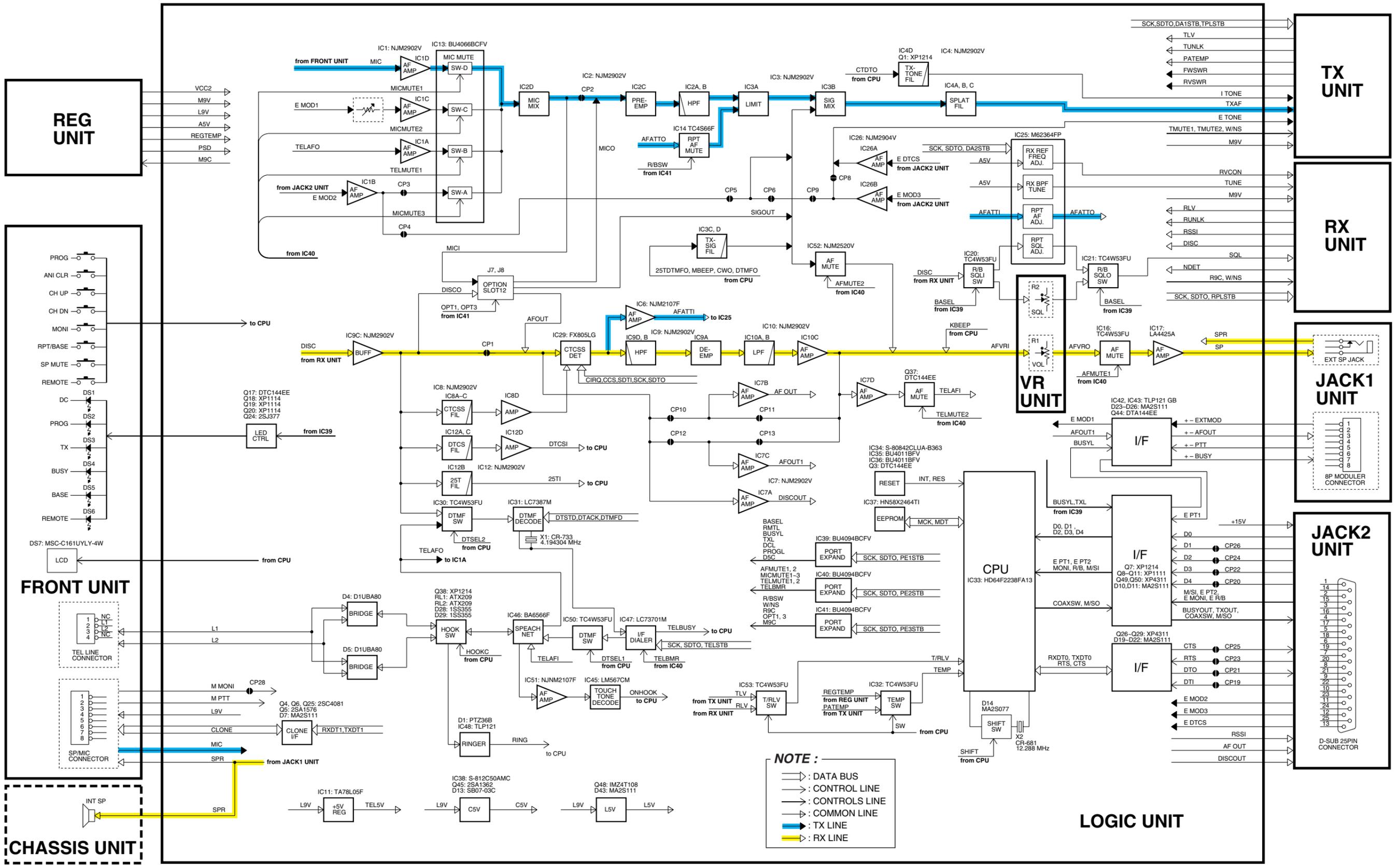


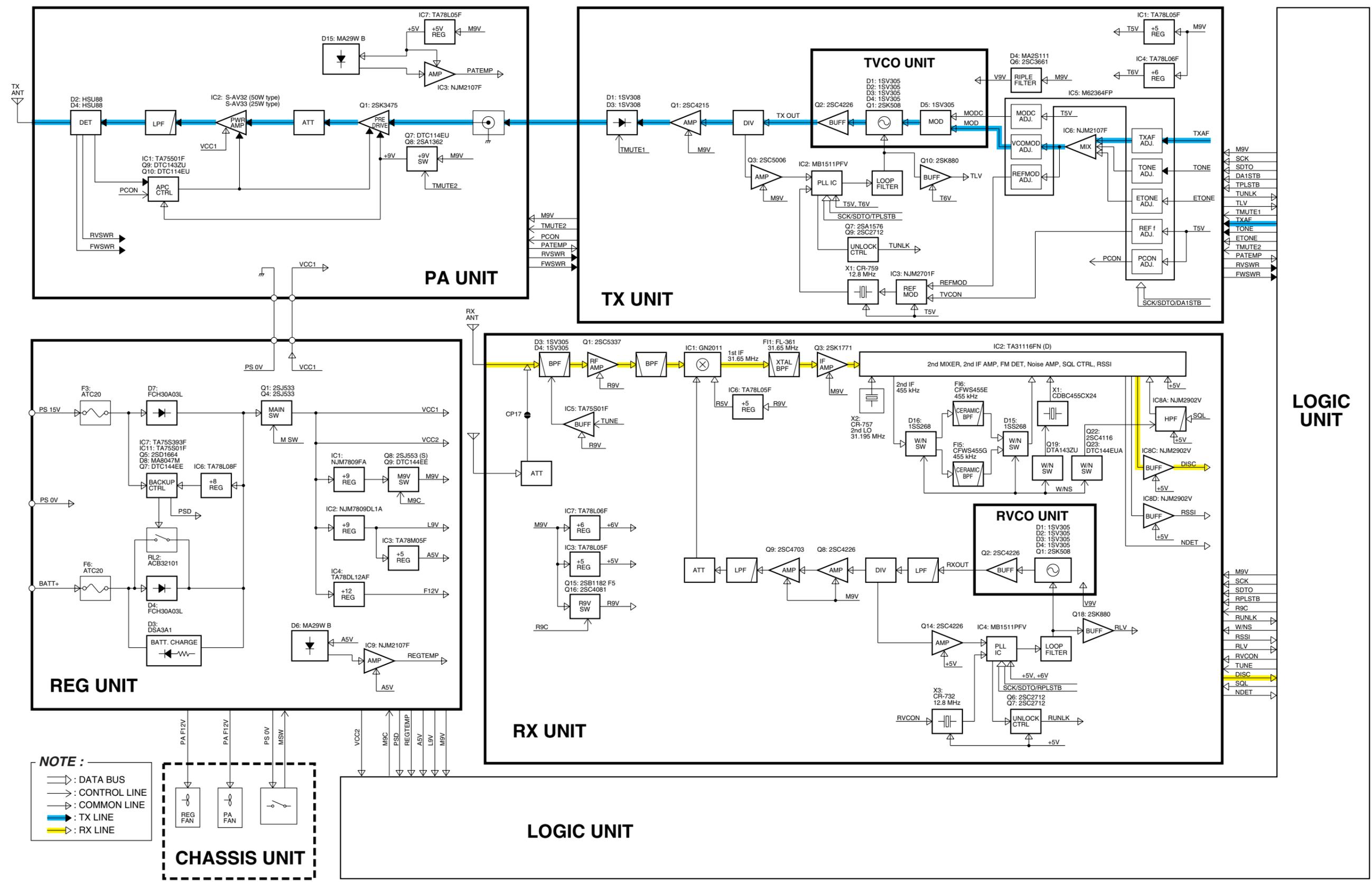
| 1 | to LOGIC UNIT J10 | 13 |
|----------|-------------------|----|
| +E15V | | |
| DC GND | | |
| DISC OUT | | |
| AF GND | | |
| AF OUT | | |
| AF GND | | |
| E MODG | | |
| E MODG | | |
| E MODG | | |
| E DTCS | | |
| E MODG | | |
| RSI | | |

JACK1 UNIT
• **BOTTOM VIEW**

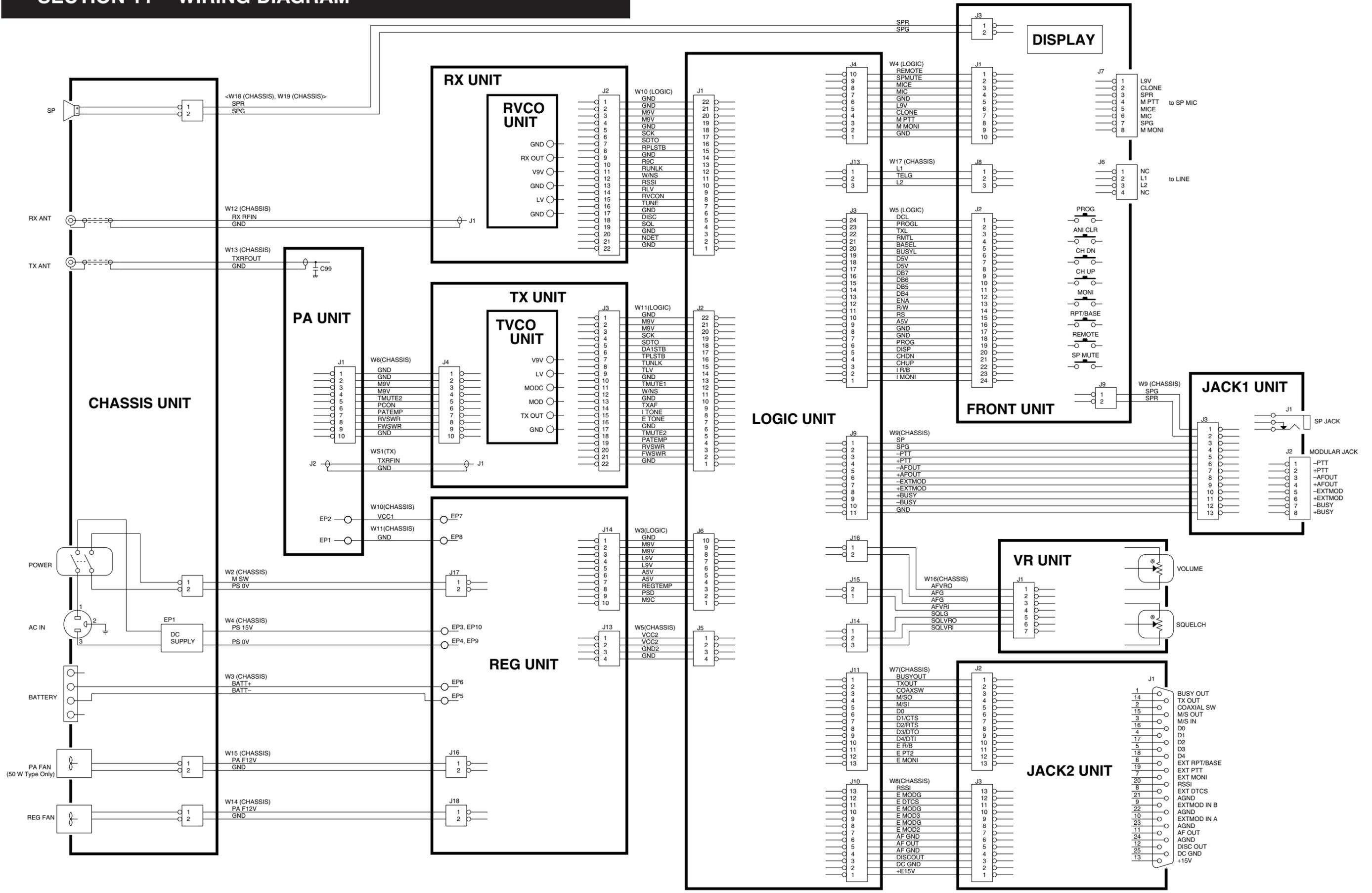


SECTION 10 BLOCK DIAGRAM

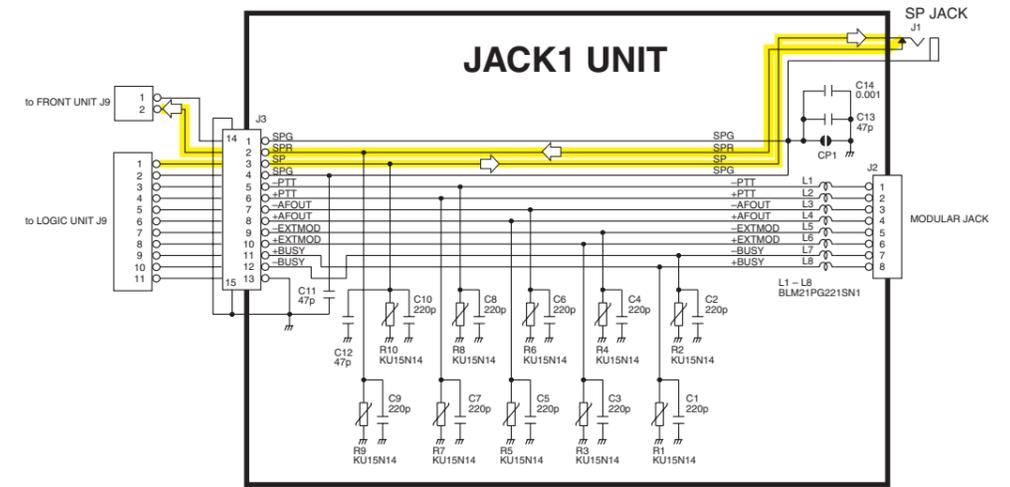
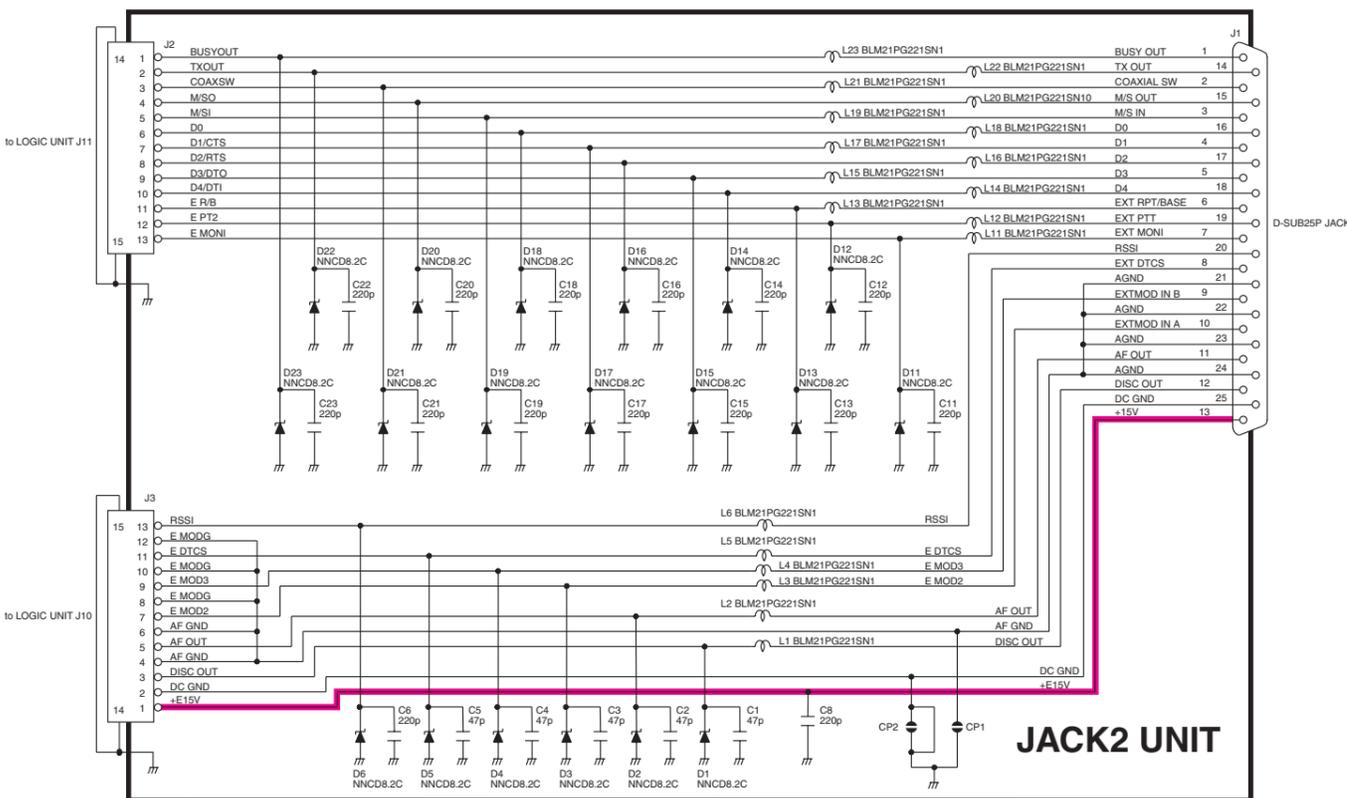
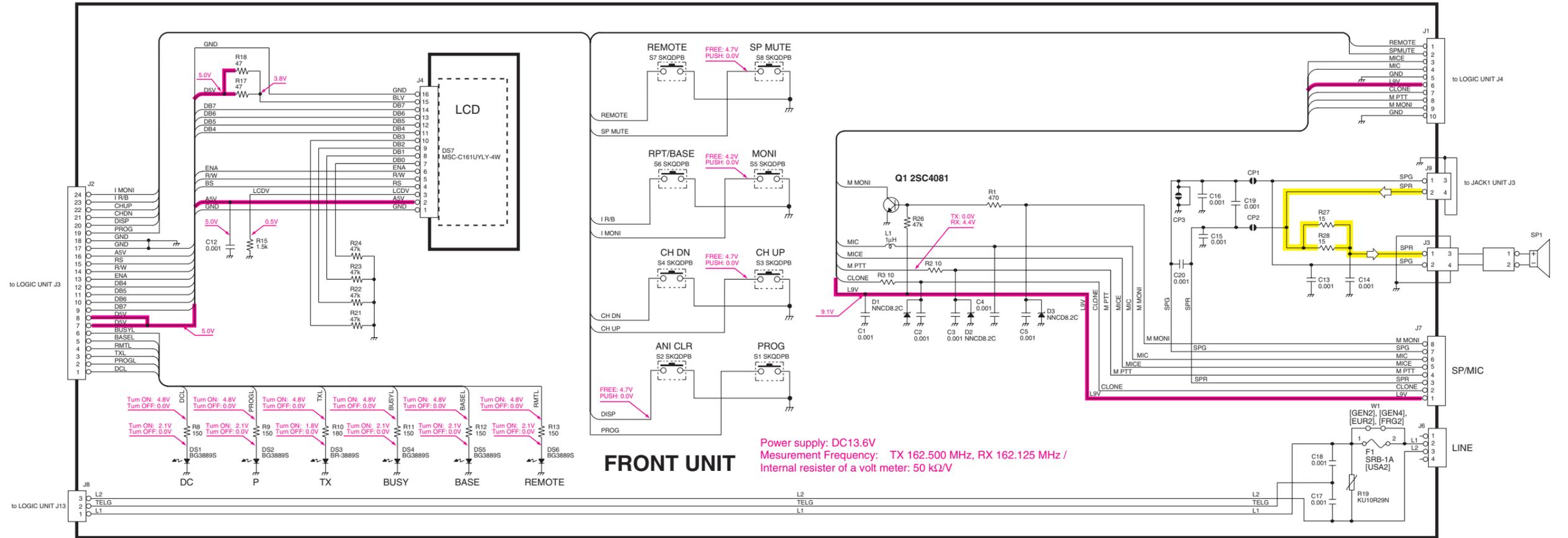




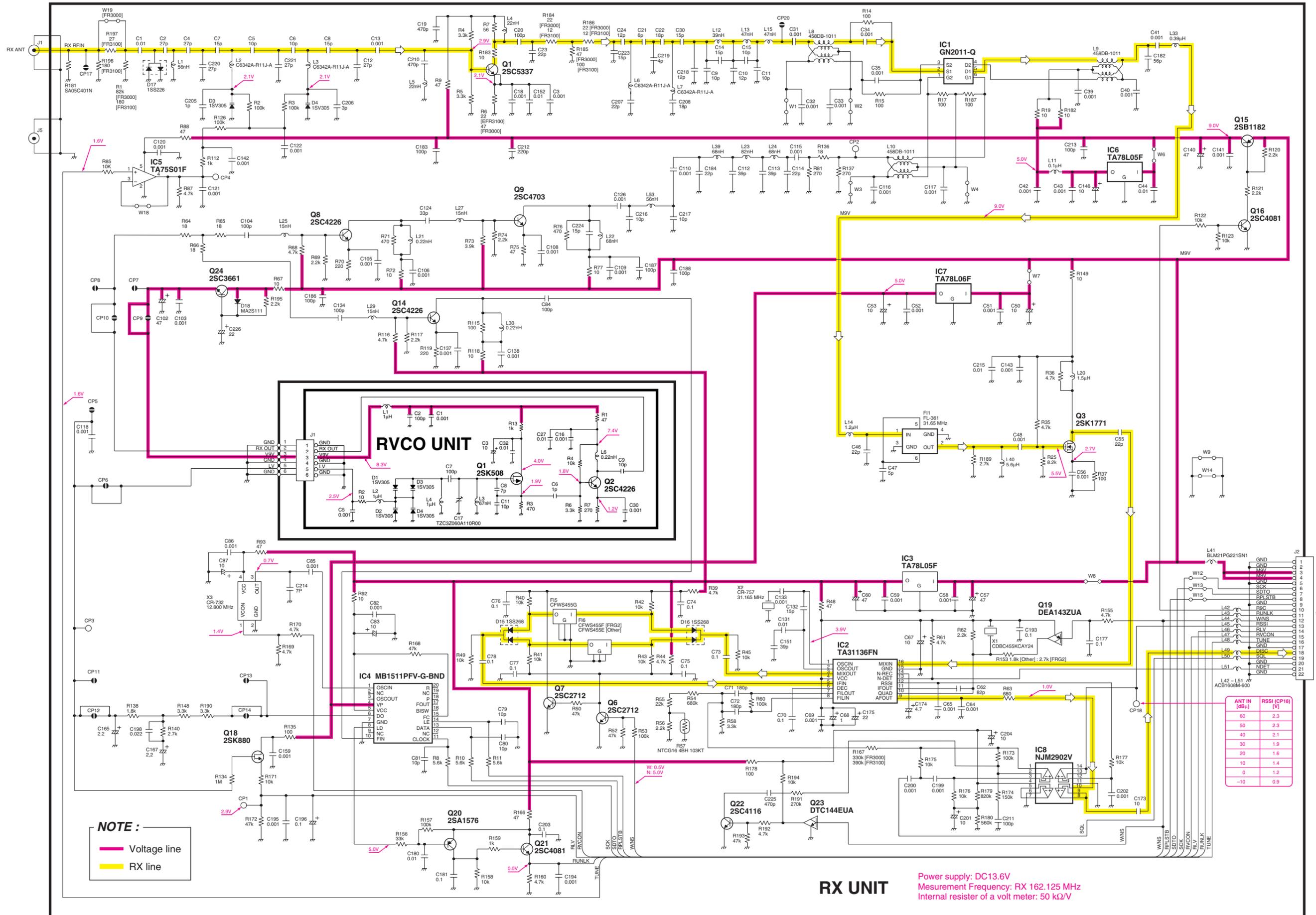
SECTION 11 WIRING DIAGRAM



SECTION 12 VOLTAGE DIAGRAM



NOTE :
— Voltage line
— RX line

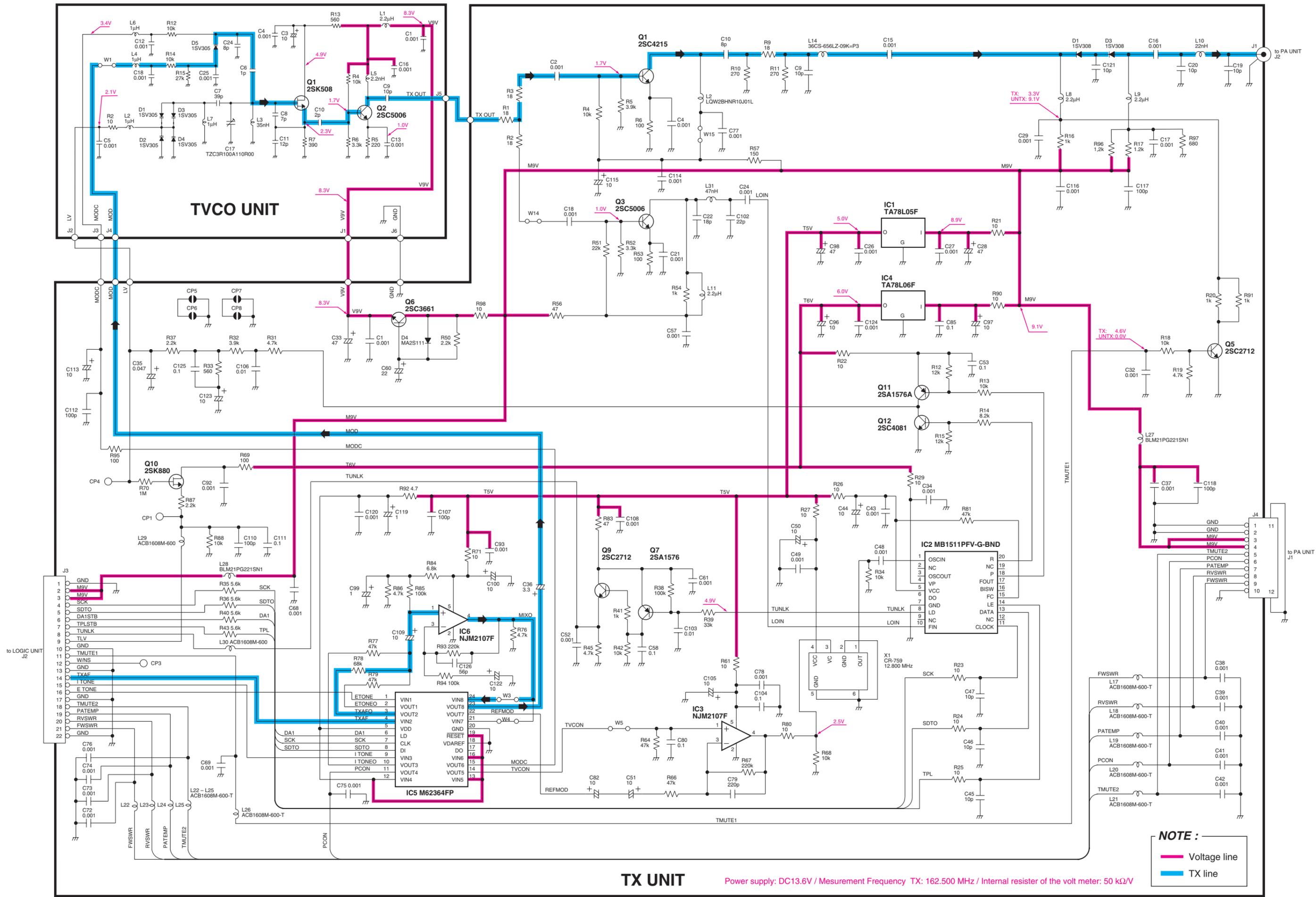


NOTE :
— Voltage line
— RX line

RX UNIT

Power supply: DC13.6V
 Measurement Frequency: RX 162.125 MHz
 Internal resistor of a volt meter: 50 kΩ/V

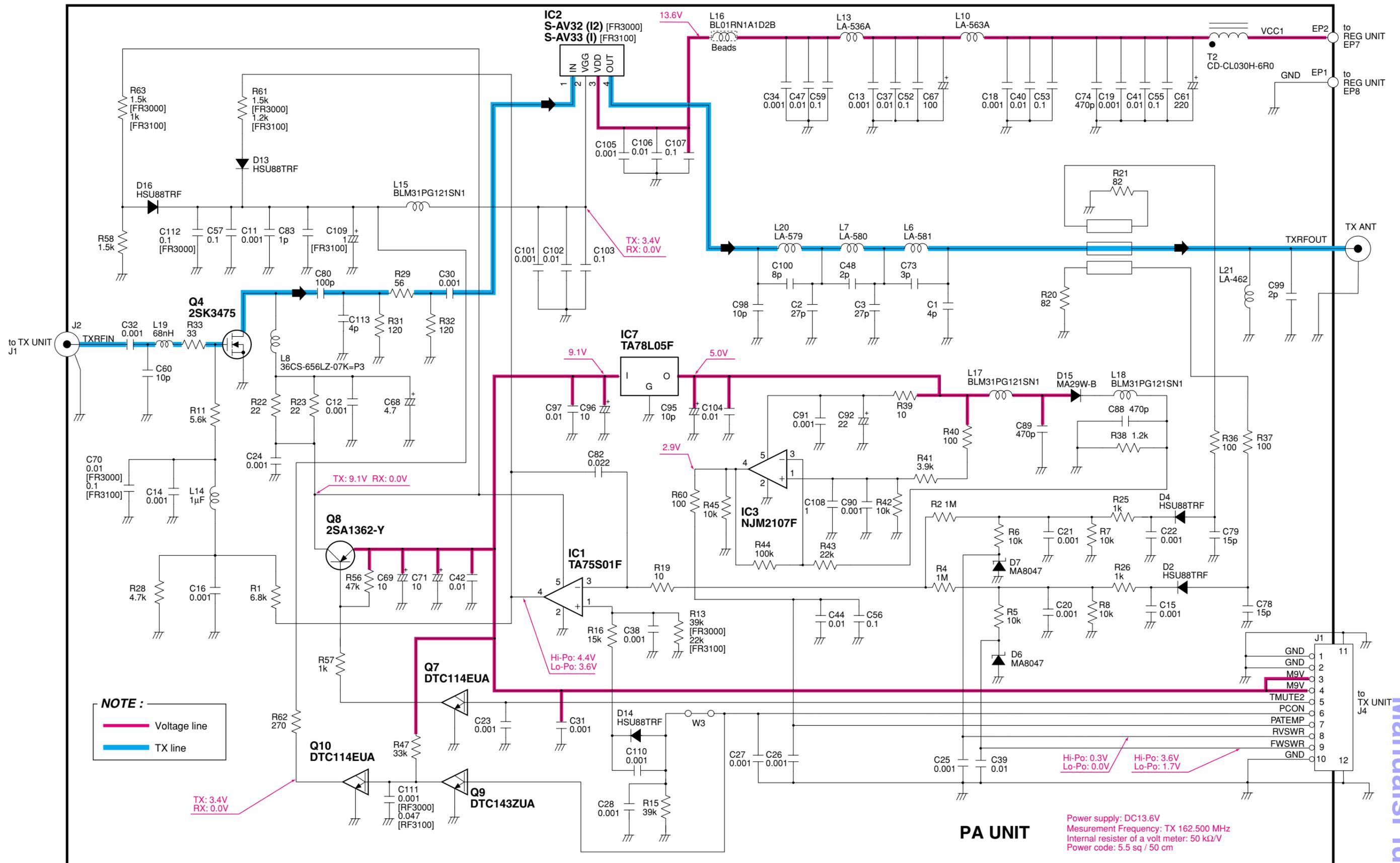
| ANT IN [dBm] | RSSI (CP18) [V] |
|--------------|-----------------|
| 60 | 2.3 |
| 50 | 2.3 |
| 40 | 2.1 |
| 30 | 1.9 |
| 20 | 1.6 |
| 10 | 1.4 |
| 0 | 1.2 |
| -10 | 0.9 |

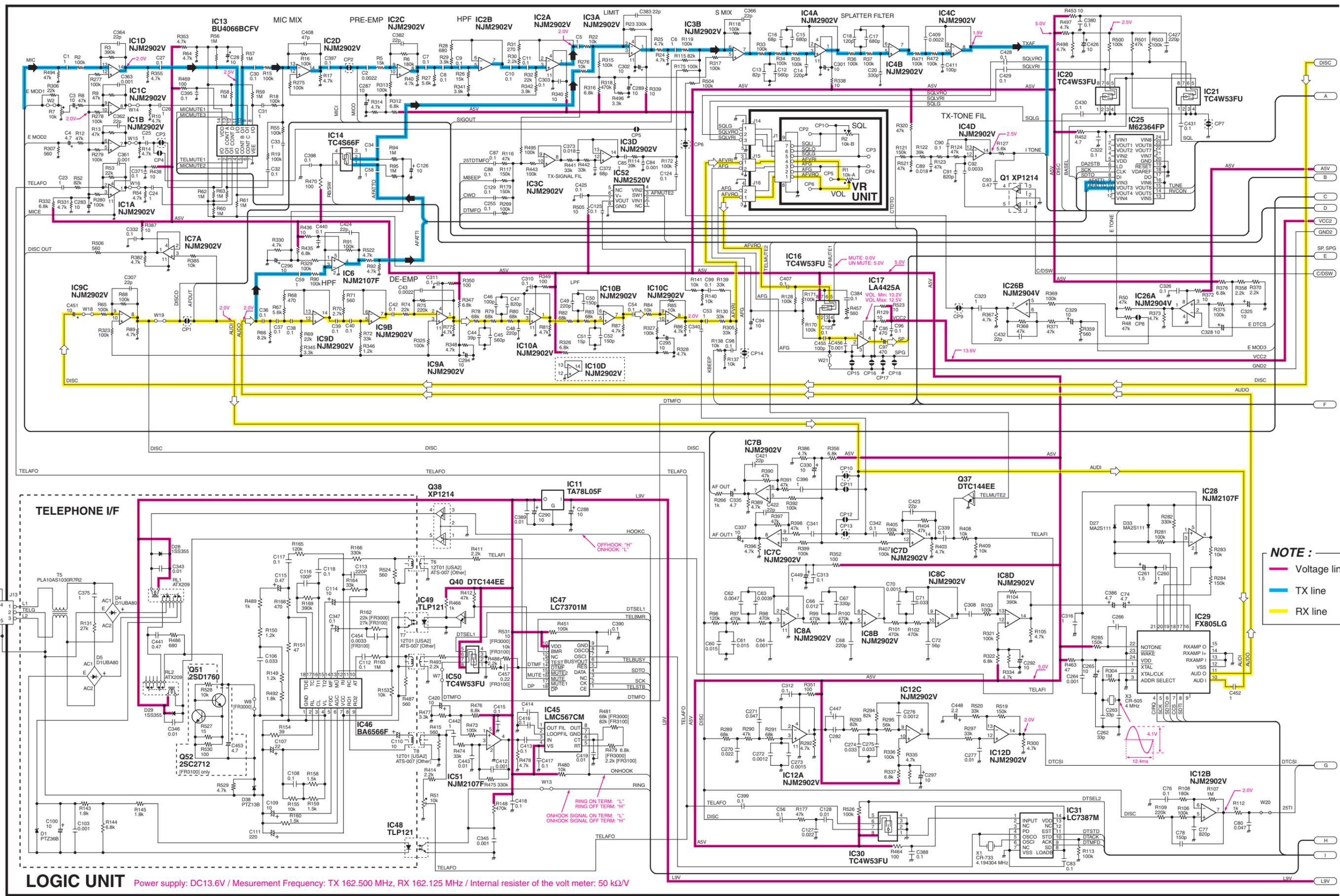


NOTE :
— Voltage line
— TX line

TX UNIT

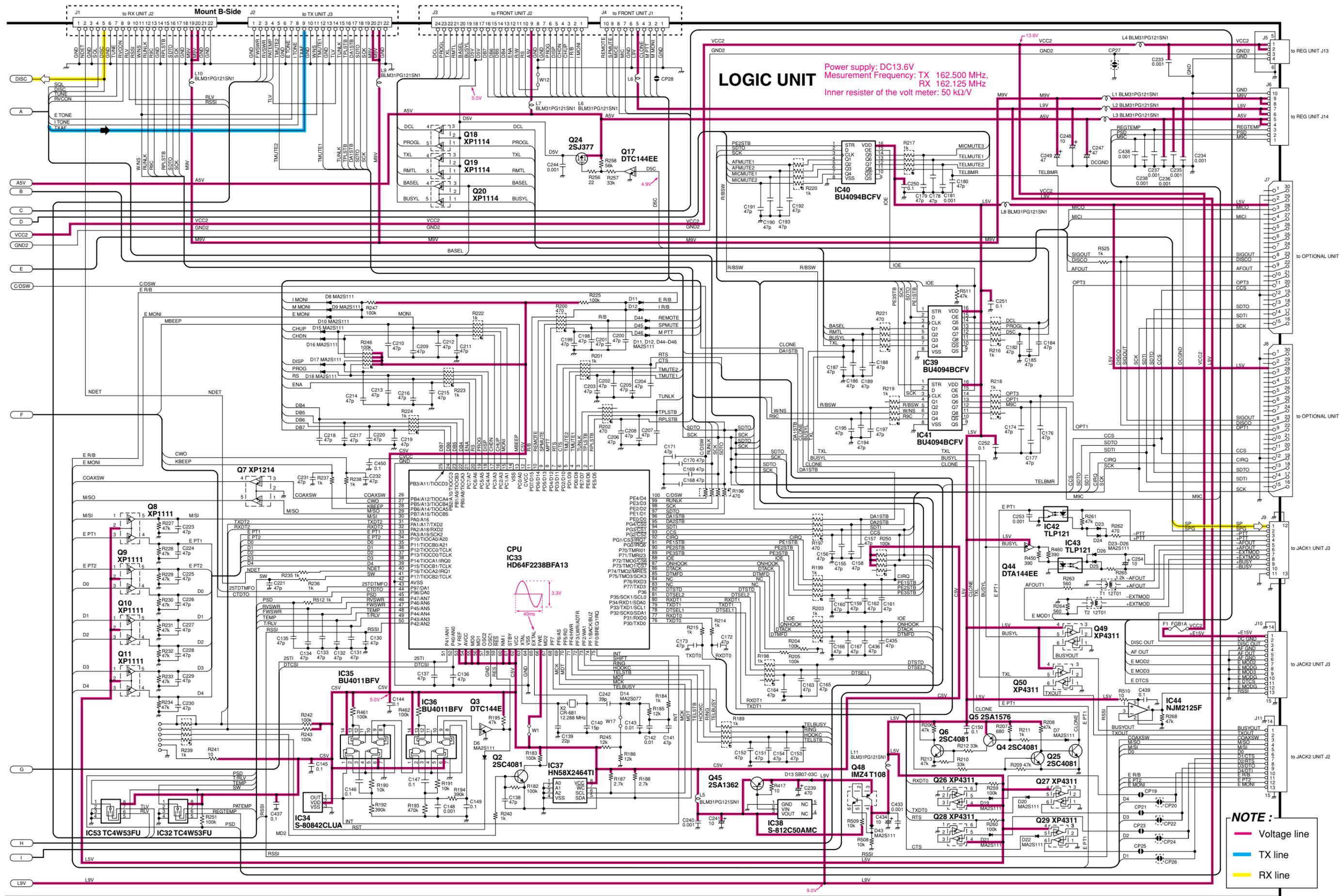
Power supply: DC13.6V / Measurement Frequency TX: 162.500 MHz / Internal resistor of the volt meter: 50 kΩ/V

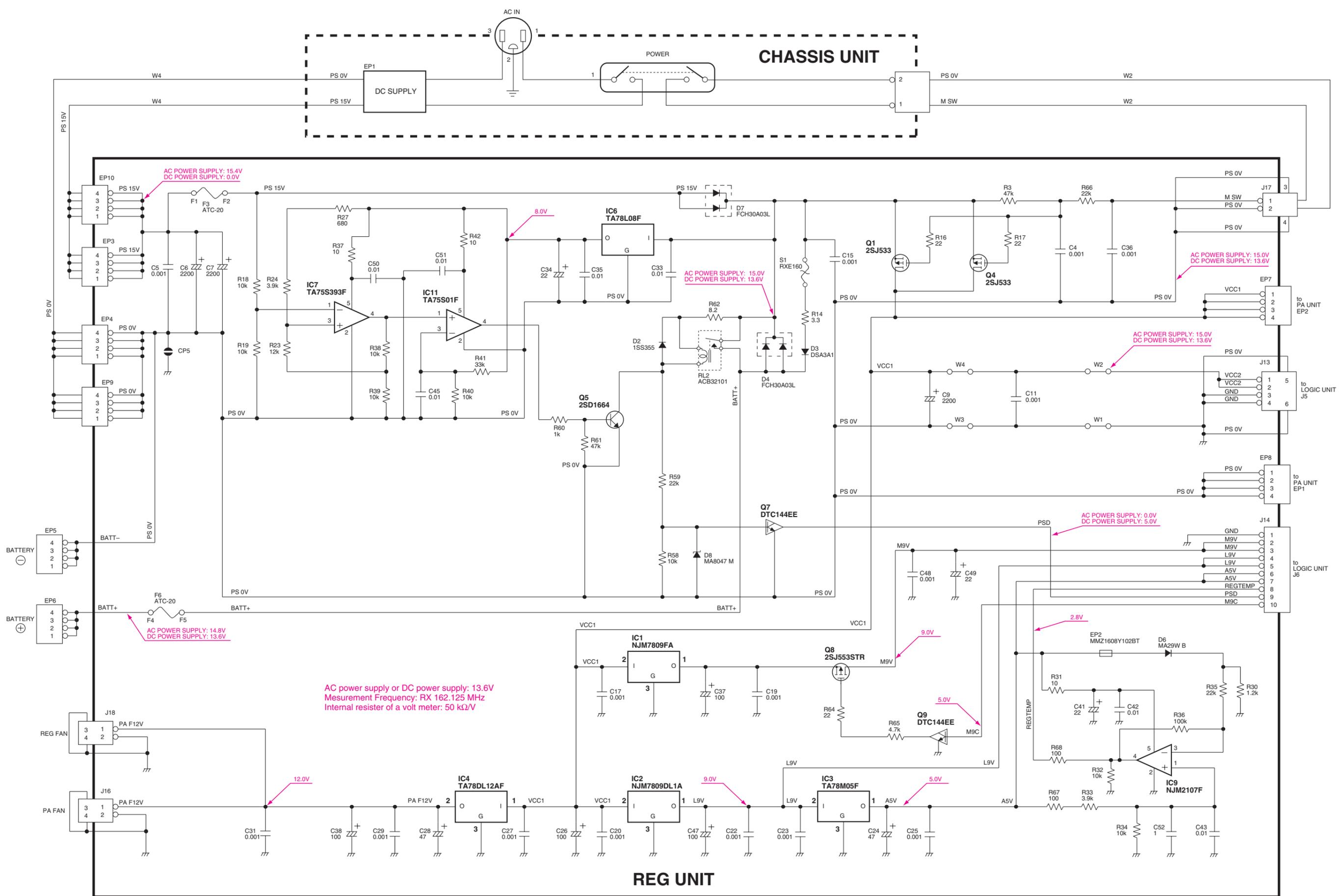




NOTE :
 Voltage line
 TX line
 RX line

LOGIC UNIT Power supply: DC13.6V / Measurement Frequency: TX 162.500 MHz, RX 162.125 MHz / Internal resistance of the volt meter: 50 kΩ/V





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