SERVICE MANUAL

MULTIBAND FM TRANSCEIVER

IC-T81A
IC-T81E

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the IC-T81A/E at the time of publication.

MODEL	VERSION	SYMBOL
IC-T81A	U.S.A.	USA-1
	Australia	AUS
	S.E.Asia	SEA
IC-T81E	Europe	EUR
	U.K.	UK
	Italy	ITA

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

DANGER

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

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

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

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

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**>

1130009370 S.IC	TB31242FN	IC-T81A/E	RF UNIT	1 pieces
8810008990 Screw	PH BT M2x10 ZK	IC-T81A/E	Chassis	10 pieces

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

REPAIR NOTES

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

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

• Frequency range :

Version	50 MHz	145 MHz	440 MHz	1200 MHz	91.5 MHz (RX only)
U.S.A.	50 – 53.995	TX: 144 – 148 RX: 118 – 173.995*1	TX: 430 – 450*3 RX: 400 – 469.995*3	1240 – 1300	76 – 107.995*4
Australia	50 – 53.995	144 – 148	430 – 440	1240 – 1300	88 – 107.995*4
S.E.Asia	50 – 53.995	TX: 136 – 173.995*1 RX: 118 – 173.995*1	400 – 469.995*2	1240 – 1300	76 – 107.995*4
Europe, U.K.	50 – 52	144 – 146	430 – 440	1240 – 1300	88 – 107.995*4
Italy	50 – 52	TX: 136 – 173.995*1 RX: 118 – 173.995*1	400 – 469.995*2	1240 – 1300	88 – 107.995*4

*1 Specifications guaranteed 144 – 148 MHz, *2 Specifications guaranteed 430 – 440 MHz
*3 Specifications guaranteed 440 – 450 MHz, *4 Not guaranteed

• Mode : FM and AM (RX only), WFM (Rx only)

• No. of memory channels : 124 (incl. 10 pairs of scan edges and 4 call channels)

• Frequency stability : ±3 ppm max. (–10˚C to +60˚C; 14˚F to 140˚F)

• Tuning steps : 5*, 10, 12.5, 15*, 20, 25, 30, 50 and 100 kHz
*Not available for 1200 MHz band

• Usable tempareture range : –10˚C to +60˚C; 14˚F to 140˚F

• Usable battery pack/case : BP-198, BP-199, BP-200 and BP-197

• Power supply requirement : 4.5 – 16 V DC or specified battery pack

• Polarity : Negative ground

• Frequency resplution : 5 kHz and 12.5 kHz (10 kHz and 12.5 kHz for 1200 MHz band)

• Current drain (at 13.5 V DC) : (typical value)

		50/144 MHz	440 MHz	1200 MHz
TX	High power	1.4 A	1.3 A	0.8 A
	Low power	0.6 A	0.5 A	0.4 A
RX	Rated output	220 mA		
	Standby	80 mA (at 9.6 V)		
	Power saved	40 mA (at 9.6 V)		

• Anntena connector : SMA (50 Ω)

• Dimensions (projections not included) : 58(W) × 106(H) × 28.5(D) mm; 2 5/16(W) × 4 3/16(H) × 1 1/8(D) in

• Weight (with BP-197/Ant.) : 290 g; 10.2 oz

■ TRANSMITTER

• Output power (at 13.5 V DC) : High 5.0 W typical (1.0 W at 1200 MHz band)
Low 1.0 W typical (0.1 W at 1200 MHz band)

• Modulation system : Variable reactance modulation

• Max. freq. deviation : ±5 kHz

• Spurious Emissions : Less than –60 dB (50 MHz, 144 MHz and 440 MHz)
Less than –40 dB (other)
Less than –50 dB (Europe version at 1200 MHz)

• External MIC connector : 3-conductor 2.5(d) mm (1/8"); 2 kΩ

■ RECEIVER

• Receiver system : Double-conversion superheterodyne

• Intermediate frequency : 1st 69.45 MHz (13.35 MHz: WFM)
2nd 450 kHz

• Sensitivity* : (except spurious points; typical values)

Band	FM	AM	WFM
50 MHz	0.18 µV	0.56 µV	–
144 MHz	0.18 µV	–	–
440 MHz	0.18 µV	–	–
1200 MHz	0.25 µV	–	–
91.5 MHz	–	–	2.0 µV

* FM and WFM are measured at 12 dB SINAD, AM is measured at 10 dB S/N.

• Squelch sensitivity : 50, 144, 440 MHz Less than 0.18 µV (Threshold)
1200 MHz Less than 0.25 µV (Threshold)
AM (50 MHz only) Less than 0.56 µV (Threshold)
WFM Less than 5.6 µV (Threshold)

• Selectivity (except WFM) : More than 15 kHz/–6 dB
Less than 30 kHz/–60 dB

• Spurious and image rejection ratio : 50, 144 MHz More than 60 dB
440 MHz More than 50 dB
1200 MHz More than 38 dB
(except half IF, 2nd image, 50 MHz band IF and WFM)

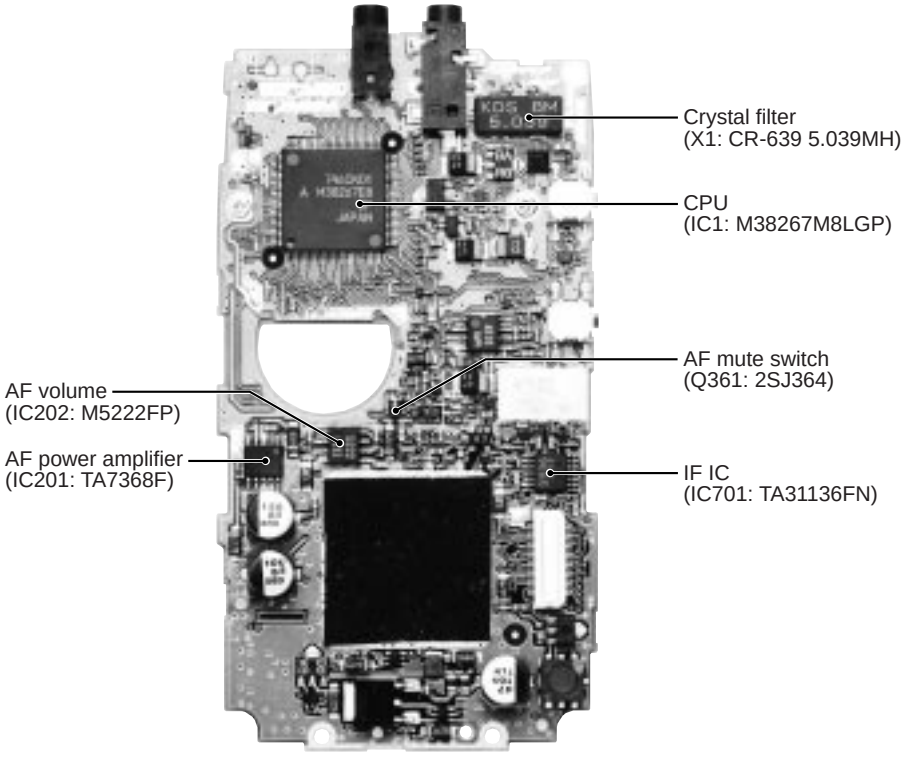
• Audio output power : 250 mW typical at 10 % distortion with an 8 Ω load

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

SECTION 2 INSIDE VIEWS

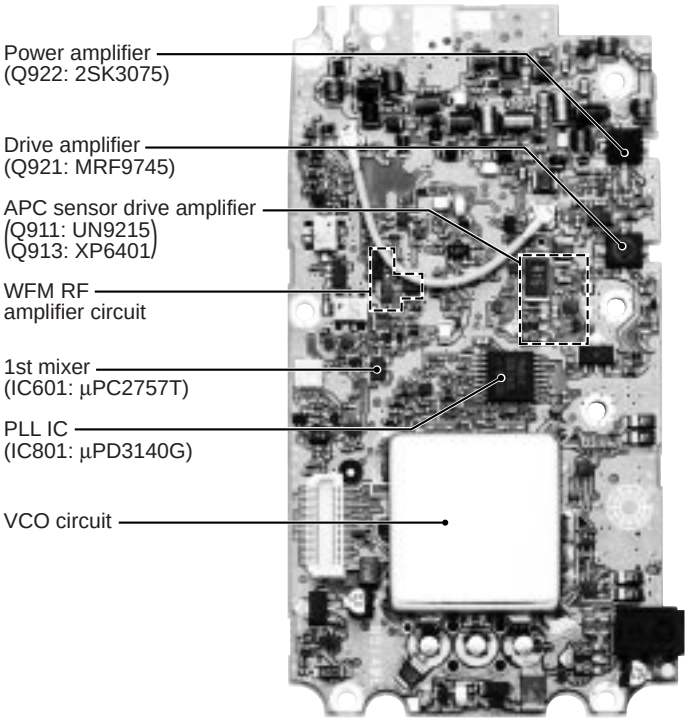
• LOGIC UNIT

BOTTOM VIEW

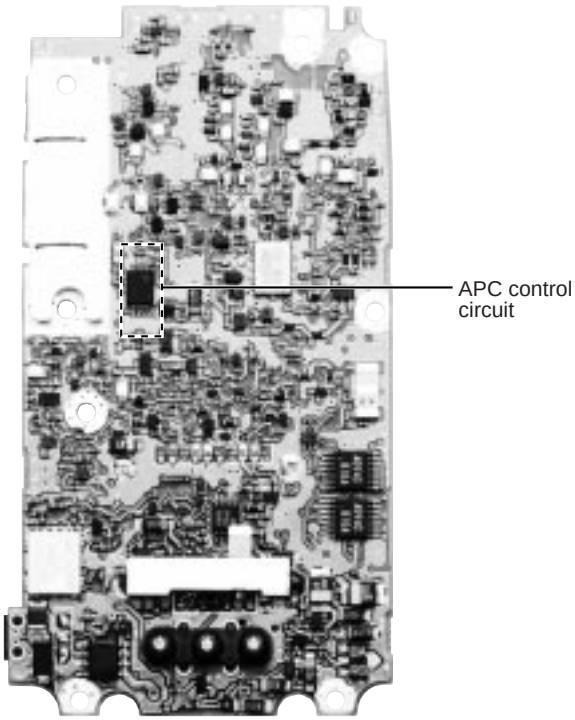


• RF UNIT

TOP VIEW



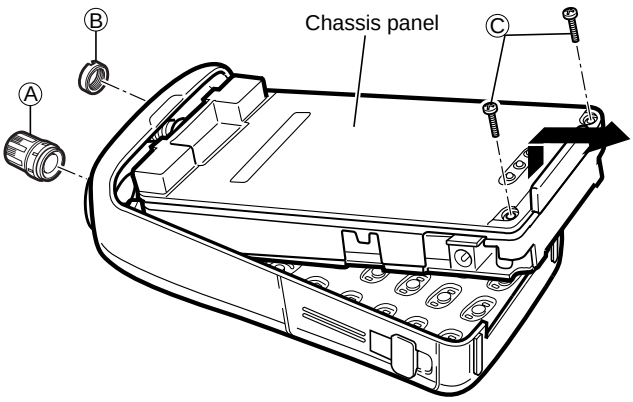
BOTTOM VIEW



SECTION 3 DISASSEMBLY INSTRUCTIONS

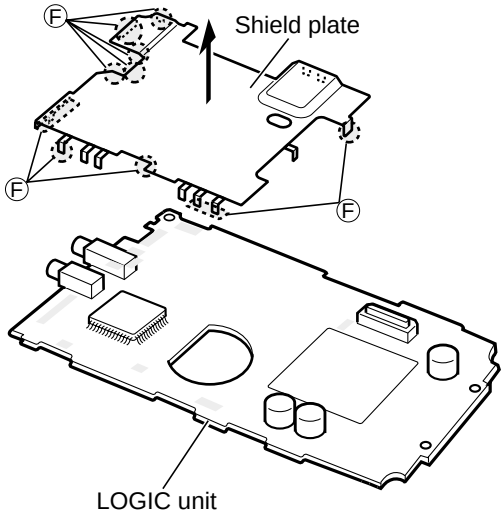
● REMOVING THE CHASSIS PANEL

① Remove 1 knob Ⓐ, and unscrew 1 nut Ⓑ.
② Unscrew 2 screws Ⓒ.
③ Remove the chassis panel in the direction of the arrow.



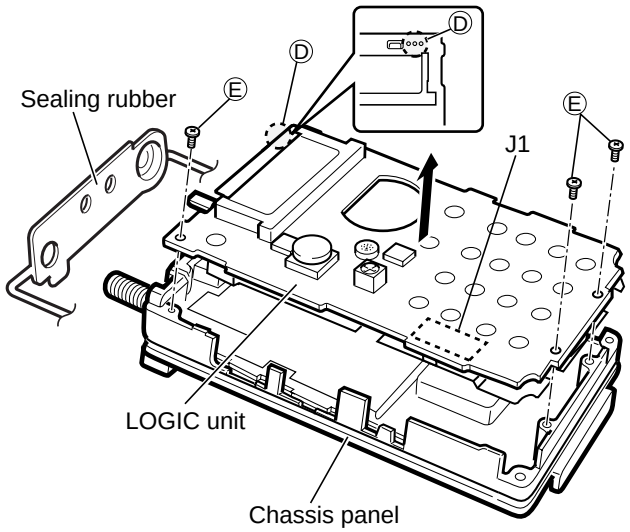
● REMOVING THE SHIELD PLATE

① Unsolder 10 points, Ⓕ, to separate the shield plate and LOGIC unit.



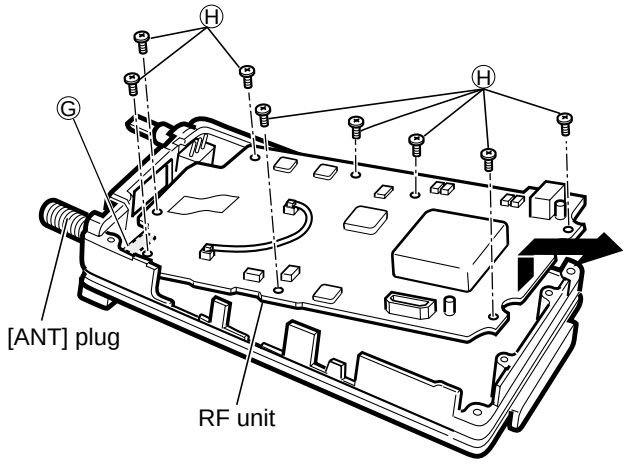
● REMOVING THE LOGIC UNIT

① Remove the sealing rubber.
② Unsolder 1 point, Ⓓ, to separate a SENSOR control.
③ Unscrew 3 screws, Ⓔ.
④ Unplug J1 to separate LOGIC unit and RF unit.
⑤ Remove the LOGIC unit in the direction of the arrow.



● REMOVING THE RF UNIT

① Unsolder 1 point, Ⓖ, to separate [ANT] plug.
② Unscrew 8 screws, Ⓗ, to separate the RF unit.
③ Remove the RF unit in the direction of the thick arrow.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 DUPLEXER CIRCUIT (RF UNIT)

The transceiver has a duplexer (low-pass and high-pass filters) on the frist stage from the antenna connector to separate the signals into below UHF and SHF signals. The high-pass filter (L51–L55, C41–C46 and C48–C50) is for SHF (1200 MHz) signal and the low-pass filter (C9, C10, C12–C14 and L7–L9) is for below UHF (50 MHz, 144 MHz, 440 MHz and WFM) signals. The filtered SHF signal is applied to the low-pass fileter (C51–C54, L56 and L57).

The RF signals below UHF pass through the duplexer circuit and are separated into VHF (50 MHz, 144 MHz and WFM band) and UHF (440 MHz band) signals. The high-pass filter (C4–C8, L5, L6) is for UHF (440 MHz band) signal and the low-pass filter (C15–C20, L10–L12) is for VHF (50 MHz, 144 MHz and WFM band) signals.

The VHF signals are applied to the another duplexer circuit for separation into 50 MHz and above WFM band signals. The high-pass filter (C21–C24, C84 and L13–L15) is for 144 MHz and WFM band signals and the low-pass filter (C27–C33 and L16–L18) is for 50 MHz band signal.

The separated signals are applied to each RF circuits.

4-1-2 ANTENNA SWITCHING CIRCUITS (RF UNIT)

The antenna switching circuit functions as a low-pass filter while receiving. However, its impeadance becomes very high while transmitting by applying a current to D101 and D102 (50 MHz), D302 and D303 (144MHz and WFM), D402 and D403 (440 MHz), D51 and D52 (1200 MHz).

Thus, transmit signals are blocked from entering the receiver circuits. The antenna switching circuit employs a 1/4λ type diode switching system. The passed signals are then applied to each RF amplifier circuit.

4-1-3 50 MHz BAND RF CIRCUIT (RF UNIT)

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

The signals from the antenna switching circuit (D101 and D102) are amplified at the RF amplifier (Q101). The amplified signals pass through the tunable bandpass filter (L108–L110, C115, C117, C120, D106, D107) to suppress out-of-band signals, and are then applied to the 1st mixer circuit (IC601, pin 1).

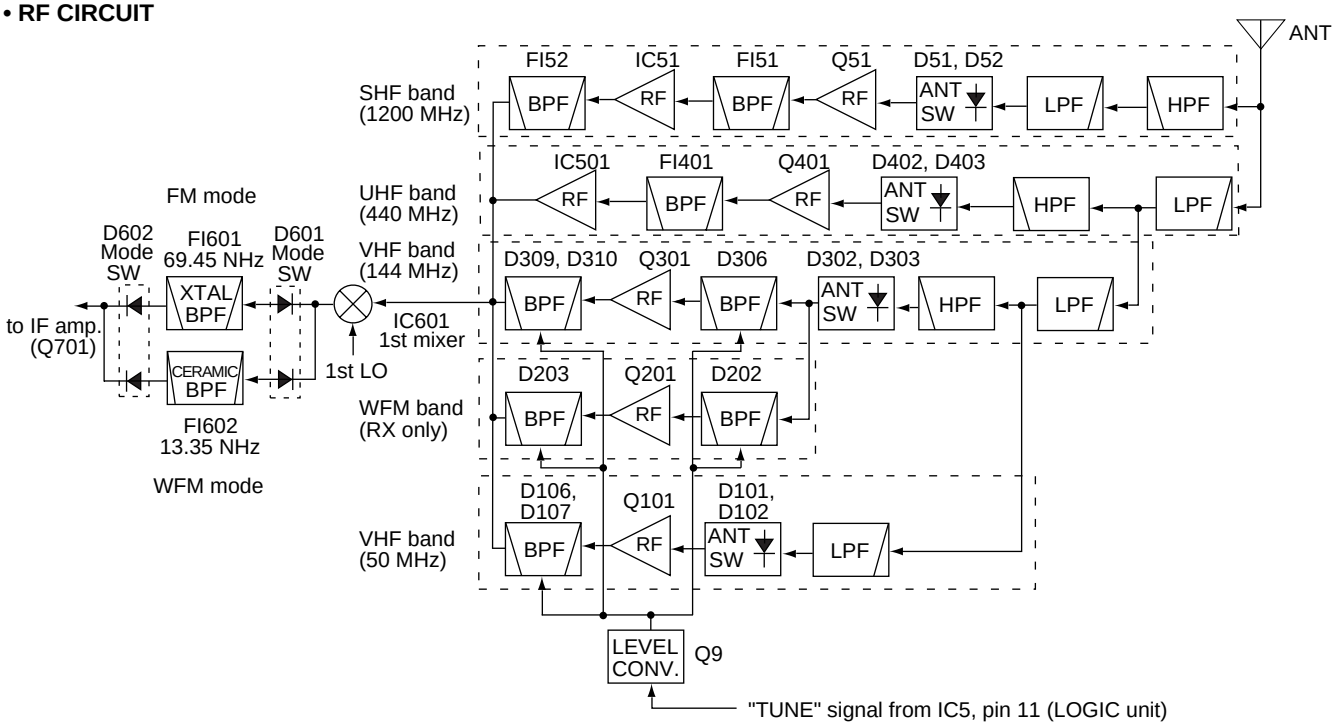
4-1-4 144 MHz AND WFM BANDS RF CIRCUITS (RF UNIT)

The signal from the antenna switching circuit (D302, D303) are applied to the each band-pass fileters and RF amplifier.

• RF signals 144 MHz band

The 144 MHz band signals are applied to the RF amplifier (Q301) via the tunable bandpass filter (L303, L304, C306, D306). The amplified signals pass through the tunable bandpass filter (C318–C321, D309, D310, L305, L306), and are then applied to the 1st mixer circuit (IC601, pin 1).

• RF CIRCUIT



• RF signals WFM band

The WFM band signals are applied to the RF amplifier (Q201) via the tunable band-pass filter (D202). The amplified signals pass through the tunable bandpass filter (D203), and are then applied to the 1st mixer circuit (IC601, pin 1).

Varactor diodes (D106, D107, D202, D203, D306, D309, D310) are employed by the tunable bandpass filter to tune the center frequency of the bandpass filter. These diodes are controlled by the PLL lock voltage and obtain good image response rejection.

4-1-5 440 MHz BAND RF CIRCUIT (RF UNIT)

The signals from the antenna switching circuit (D402 and D403) are amplified at the RF amplifier (Q401). The amplified signals pass through the bandpass filter (FI401), and are then applied to the 1st mixer circuit (IC601, pin 1) after being amplified at another RF amplifier (IC501).

4-1-6 1200 MHz BAND RF CIRCUIT (RF UNIT)

The signals from the antenna switching circuit (D51 and D52) are amplified at the RF amplifier (Q51). The amplified signals pass through the bandpass filter (FI51), and are then applied to the RF amplifier (IC51). The amplified signal is applied to the 1st mixer circuit (IC601, pin 1) via the bandpass filter (FI52).

4-1-7 1ST MIXER CIRCUIT (RF UNIT)

The 1st mixer circuit converts the received RF signals into a fixed frequency of the 1st IF signal with a 1st LO output frequency. By changing the PLL frequency, only the desired frequency will pass through at the next stage of the 1st mixer. 1st mixer circuit produces the different 1st IF signal for WFM and other band signals.

• 50, 144, 440 and 1200 MHz band

The applied RF signals are mixed with 1st LO signals at the 1st mixer (IC601) to produce a 69.45 MHz 1st IF signal. The 1st IF signal is output from the 1st mixer (IC601, pin 6), and then passed through the crystal bandpass filter (FI601) to suppress unwanted harmonic components. The filtered 1st IF signal is applied to the IF amplifier (IC701). The amplified signal is applied to the 2nd mixer circuit (LOGIC unit; IC701, pin 16).

• WFM band

The RF signals are mixed with 1st LO signals at the 1st mixer (IC601) to produce a 13.35 MHz 1st IF signal. The 1st IF signal is output from the 1st mixer (IC601, pin 6), and then passed through the 1st IF filter (FI602) to suppress unwanted harmonic components. The filtered signal is applied to the 2nd mixer circuit (LOGIC unit; IC701, pin 16).

The 1st LO signals are gererated at the VCO circuit which consists of Q301, Q302, D301, Q311, Q312, D302, D311 for 50 MHz, 144 MHz and WFM, Q321, Q322, D321, D322 for 440 MHz, Q350, D351, D352 for 1200 MHz on the VCO unit.

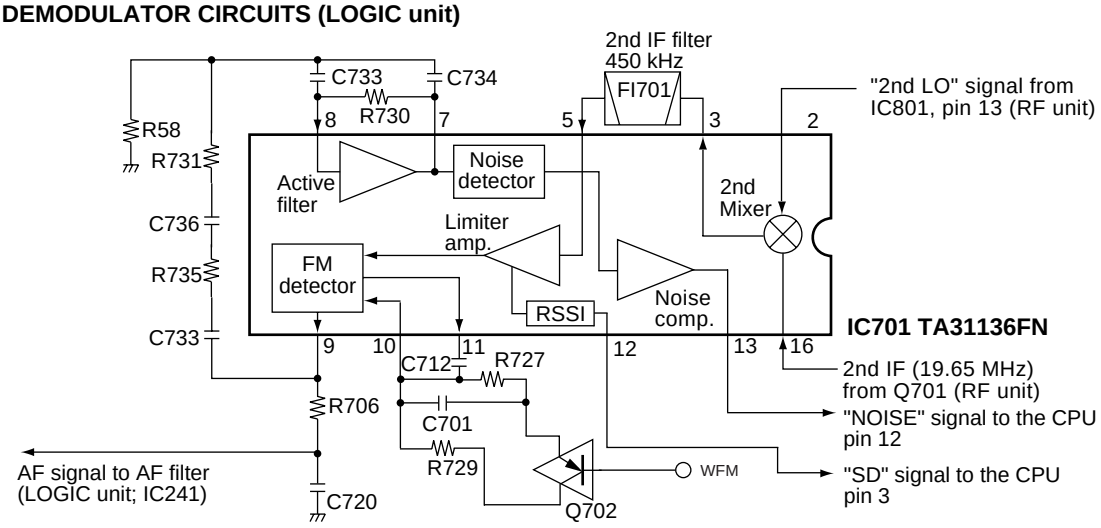
• The 1st LO signal for 50, 144, 440, WFM band

The 1st LO signals which are generated on the VCO unit are applied to the buffer-amplifier (Q313 and D312 for 50 MHz, 144 MHz and WFM, Q323 for 440 MHz). The buffer-amplified signals are applied to the LO-amplifier (Q822 for 50 MHz, 144 MHz and WFM, Q823 for 440 MHz), and are then applied to the 1st mixer circuit via the TX/RX switch (D802 and D803 for 50 MHz, 144 MHz and WFM, D804 and D805 for 440 MHz) on the RF unit.

• The 1st LO signal for 1200 MHz band

The 1st LO signals which are generated on the VCO unit are applied to the buffer-amplifier (Q351). The buffer-amplified signals are applied to the doubler circuit (Q353), and passes through the high-pass and low-pass filter. The filtered signals are applied to the 1st mixer circuit (Q601) on the LOGIC unit after being amplified at the LO-amplifier (Q824).

• 2nd IF AND DEMODULATOR CIRCUITS (LOGIC unit)



4-1-8 2ND IF AND DEMODULATOR CIRCUITS (RF AND LOGIC UNITS)

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

The FM IF IC (LOGIC unit; IC701) contains 2nd local oscillator, 2nd mixer, limiter amplifier, quadrature detector and S-meter detector circuits.

The filtered 1st IF signal from the 1st IF filter (RF unit; FI601 or FI602) is mixed with the 2nd LO signal at the 2nd mixer (LOGIC unit; IC701) to produce the 450 kHz 2nd IF signal. The 2nd IF signal passes through or bypasses (WFM mode signal) 2nd IF filter (FI701) where unwanted heterodyne signals are suppressed via the mode switch (LOGIC unit; D701, D702). The filtered signals are applied to the limiter amplifier section (LOGIC unit; IC701, pin 5), and then applied to the quadrature detector section to demodulate the 2nd IF signal into AF signals.

The demodulated AF signals are output from pin 9 of the IF IC (LOGIC unit; IC701) and are applied to the AF circuit.

4-1-9 AF AMPLIFIER CIRCUIT (LOGIC UNIT)

The AF amplifier circuit which is included a low-pass and high-pass filter, AF mute switch, AF volume controller and AF amplifier amplifies the demodulated AF signals to drive a speaker.

The demodulated AF signals (DETO signal) from the FM IF IC (IC701) are passed through the AF filter (low-pass and high-pass filters). The filtered signals are applied to the AF mute switch (Q361) which is controlled by “RM/MM” signals from the CPU (IC1, pin 31), and are then applied to the electric volume control circuit (IC202, IC203). The level controlled AF signals are output from volume IC (IC202, pin 7) and are then applied to the AF amplifier (IC201, pin 4). The AF signals are then applied to the internal speaker (SP1) via the [EXT SP] jack (LOGIC unit; J3) when no plug is connected to the jack.

The AF filter circuit (IC241) removes AF signals below 300 Hz (CTCSS signals) for clear AF output and these are applied to the CPU (IC1, pin4) for CTCSS squelch detection via the “CTCIN” line.

4-1-10 SQUELCH CIRCUIT (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.

A portion of the AF signals from the FM IF IC (IC701, pin 9) are applied to the active filter section (IC701, pin 7, 8). The active filter section amplifies and filters noise components. The filtered signals are applied to the noise detector section and output from IC701 (pin 13) as “NOISE” signal.

The “NOISE” signal from IC701 (pin 13) is applied to the CPU (IC1, pin 12). The CPU analyzes the noise condition and outputs the “RM/MM” signal to AF mute switch (Q361).

Even when the squelch is closed, the AF mute switch (Q361) opens at the moment of emitting beep tones.

• TONE SQUELCH

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

A portion of the AF signals from the FM IF IC (IC701, pin9) passes through the AF filter (IC241) to remove AF (voice) signals and is applied to the CTCSS decoder inside the CPU (IC1, pin 4) via the “CTCIN” line to control the AF mute switch.

4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHON AMPLIFIER CIRCUIIT (LOGIC UNIT)

The microphone amplifier circuit amplifies the audio signals from the microphone, within +6 dB/octave pre-emphasis characteristics (300 Hz–3 kHz), to a level needed for the modulation circuit.

The AF signals from the internal microphone (MC1) or external [MIC] jack (J4) are applied to the microphone (limiter) amplifier (IC301, pin 3) which has +6 dB/octave pre-emphasis characteristics, and are then passed through the low-pass filter (IC301, pin 6 and 7). The filetered signals are applied to the modulation circuit for each band in the RF unit via the band switch (Q304: for 144 MHz band, Q305: for UHF band, Q306: for 50 MHz band, Q309: for 120MHz band) as the “MOD” signal.

4-2-2 MODULATION CIRCUIT (VCO AND RF UNIT)

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

(1) 50 MHz band

The signals from the limiter amplifier (RF unit; IC301) changes the reactance of a diode (RF unit; D341) to modulate the oscillated signal at the 50-VCO circuit (RF unit; Q341, D341, L341–343). The modulated signals are amplified at the buffer-amplifier (Q342) and the LO amplifier (Q821). The amplified signals are applied to the drive/power amplifier circuits for VHF band.

(2) 144 MHz band

The signals from the limiter amplifier (RF unit; IC301) changes the reactance of a diode (VCO unit; D302) to modulate the oscillated signal at the 144-VCO circuit (VCO unit; Q311, Q312, D302, D311–D313). The modulated signals are amplified at the buffer-amplifier (Q312, Q313) and the LO amplifier (Q822). The amplified signals are applied to the drive/power amplifier circuits for VHF band.

(3) 440 MHz band

The signals from the limiter amplifier (RF unit; IC301) changes the reactance of a diode (VCO unit; D321) to modulate the oscillated signal at the 440-VCO circuit (VCO unit; Q321, Q322, D321, D322, L322). The modulated signals are amplified at the buffer-amplifier (Q323) and the LO amplifier (Q823). The amplified signals are applied to the drive/power amplifier circuits for UHF band.

(4) 1200 MHz band

The signals from the limiter amplifier (RF unit: IC301) changes the reactance of a diode (VCO unit; D352) to modulate the oscillated signal at the 1200-VCO circuit (VCO unit; Q350, D351, D352, L330). The modulated signals are amplified at the buffer-ampifier (Q351). The amplified signals are applied to the doubler circuit (Q353), and then passed through the high-pass (C376–C380, L334, L335) and the low-pass (C381–C386, L336, L337) filters. The filtered signals are amplified at the buffer-amplifier (Q354) and the LO amplifier (Q824). The amplified signals are applied to the drive/power amplifier circuits for SHF band.

4-2-3 DRIVE/POWER AMPLIFIER CIRCUITS (RF UNIT)

The amplifier circuit amplifies the VCO oscillating signal to the output power level.

(1) 50 MHz PA

The signal from the LO amplifiers (Q821) is amplified at the buffer-amplifier (Q133) and the YGR amplifier (Q134). The amplified signal is applied to the driver amplifiers (Q921), and is then amplified at the power amplifier (Q922) to obtain 5.0 W of RF power.

The amplified signal is passed through the antenna switching circuit (D101 and D102) and low-pass filters, and is then applied to the antenna connector.

(2) 144 MHz PA

The signal from the LO amplifiers (Q822) is passed through the Tx/Rx switch (D802 and D803), and is amplified at the buffer-amplifier (Q133) and the YGR amplifier (Q134). The amplified signal is applied to the driver amplifiers (Q921), and is then amplified at the power amplifier (Q922) to obtain 5.0 W of RF power.

The amplified signal is passed through the antenna switching circuit (D101 and D102), low-pass filters and high-pass filters. The signal is applied to the antenna connector.

(3) 440 MHz PA

The signal from the LO amplifiers (Q823) is passed through the Tx/Rx switch (D804 and D805), and is amplified at the buffer amplifier (Q135) and the YGR amplifier (Q136). The amplified signal is applied to the driver amplifier (Q921), and is then amplified at the power amplifier (Q922) to obtain 5.0 W of RF power.

The amplified signal is passed through the antenna switching circuit (D402 and D403), low-pass filters and high-pass filters. The low-pass filtered signal is applied to the antenna connector.

(4) 1200 MHz PA

The signal from the LO amplifiers (Q824) is passed through the Tx/Rx switch (D806 and D807), and is amplified at the buffer-amplifiers (Q131 and Q132) and the YGR amplifier (Q138). The amplified signal is applied to the driver amplifiers (Q921) to obtain 1.0 W of RF power.

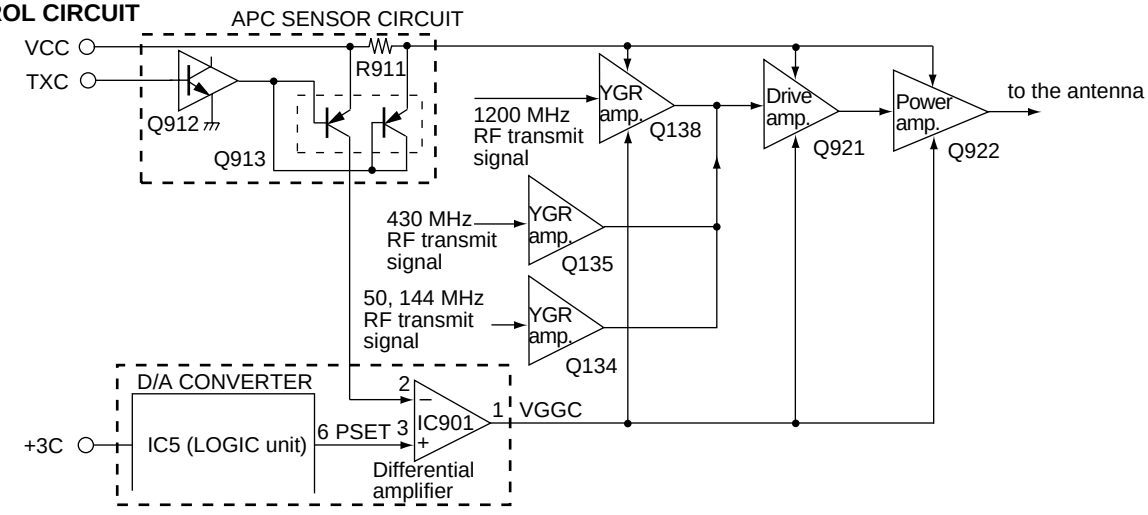
The amplified signal is passed through the antenna switching circuit (D51 and D52), low-pass filter and high-pass filters. The high-pass filtered signal is applied to the antenna connector.

Collector voltages for the drive amplifier (Q921) and control voltage for the power amplifier (Q922) and YGR amplifier (Q138) are controlled by the APC circuit to protect the power module from a mismatched condition as well as to stabilize the output power.

4-2-4 APC CIRCUITS (RF UNIT)

The APC circuit protects the power amplifier from a mismatched output load and stabilizes the output power. The APC circuit is designed to use VHF, UHF and SHF bands commonly.

• APC CONTROL CIRCUIT



The APC sensor (R911) detects driving current from the drive voltage at the YGR (Q138), drive (Q921) and power (Q922) amplifiers. The detected current is converted into DC voltage at Q913, then applied to the APC control circuit (IC901, pin 2). The applied voltage is compared with a "PSET" voltage from the CPU via the D/A converter (LOGIC unit; IC5), and the APC control circuit outputs "VGGC" voltage from pin 1 to control the YGR, drive and power amplifiers.

When the driving current is increased, input voltage of the differential amplifier (IC901, pin 2) will be increased. In such cases, the differential amplifier output voltage (IC901, pin 1) is decreased to reduce the driving current.

4-3 PLL CIRCUITS

4-3-1 50 MHz BAND PLL CIRCUIT (RF UNIT)

The osillated signal at the 6MVCO (Q341, D341) is amplified at the buffer amplifiers (Q342, Q343). The amplified signal is applied to the PLL IC (IC801, pin 2) via the buffer-amplifier (Q813).

The signal which is applied to the PLL IC (IC801) is divided by N-data from the CPU and phase-detected with the divided reference frequency (5 kHz) then output from pin 8. The output signal is converted into DC voltage at the active filter (Q804, Q805) and is fed back to the 6MVCO as the lock voltage.

4-3-2 144 MHz BAND PLL CIRCUIT (VCO BOARD AND RF UNIT)

The osillated signal at the 144-VCO circuit (VCO unit; Q311, Q312, D302 and D311) is amplified at the buffer amplifiers (VCO unit; Q313).The amplified signal is applied to the PLL IC (IC801, pin 19) via a buffer-amplifier (Q807).

The applied signal is divided by serial data from the CPU (N-data) and phase-detected with the divided reference frequency (5 kHz) at the phase detector section in the PLL IC. The phase-detected signal is output from IC801 (pin 13) and converted DC voltage at the active filter (Q811, Q812). The converted DC voltage is fed back to the VCO board as the "VLV" signal of the lock voltage.

While operating in the 144 MHz band, the lock voltage is applied to the CPU (LOGIC unit; IC1) via the tune control circuit (Q803) to track the center frequency of the tunable bandpass filters (D306, D309, D310) as the "TUNE" signal.

4-3-3 440 MHz BAND PLL CIRCUIT (VCO BOARD AND RF UNIT)

The osillated signal at the 440-VCO circuit (VCO unit; Q321, Q322, D321 and Q322) is amplified at the buffer-amplifiers (VCO unit; Q323).The amplified signal is applied to the PLL IC (IC801, pin 19) via a buffer-amplifier (Q807).

The applied signal is divided by serial data from the CPU (N-data) and phase-detected with the divided reference frequency (5 kHz) at the phase detector section in the PLL IC. The phase-detected signal is output from IC801 (pin 13) and converted DC voltage at the active filter (Q811, Q812). The converted DC voltage is fed back to the VCO board as the "VLV" signal of the lock voltage.

4-3-4 1200MHz BAND PLL CIRCUIT (VCO BOARD AND RF UNIT)

The osillated signal at the 1200-VCO circuit (VCO unit; Q350, D351 and D352) is amplified at the buffer-amplifiers (VCO unit; Q351 and Q353). The signal passes through the buffer amplifier (Q354), the high-pass (C376–C380, L334 and L335) and the low-pass filter (C381–C385, L336 and L337). The filtered signal is applied to the PLL IC (IC802, pin 1) via the buffer amplifier (Q816).

The applied signal is divided by serial data from the CPU (N-data) and phase-detected with the divided reference frequency (5 kHz) at the phase detector section in the PLL IC. The phase-detected signal is output from IC801 (pin 13) and converted DC voltage at the active filter (Q811, Q812). The converted DC voltage is fed back to the VCO board as the "VLV" signal of the lock voltage.

4-4 POWER SUPPLY CIRCUITS

VOLTAGE LINE

LINE	DESCRIPTION
HV	The voltage from the external power supply or attached battery pack.
VCC	The same voltage as the "HV" line (external power supply or battery pack) passed through a diode (RF unit; D1).
+3CPU	Common 3V converted from the "VCC" line by +3C CPU regulator IC (LOGIC unit; IC141). The output voltage is supplied to the +3C regulator circuits, etc.
+3C	Common 3V converted from the "VCC" line by the +3C regulator circuit (LOGIC unit; Q142 and Q145) using the +3CPU regulator (LOGIC unit; IC141.)
+3	Common 3V converted from the "VCC" line by the +3 regulator circuit (LOGIC unit; IC5, Q1, Q2 and Q3) using the +3C regulator (LOGIC unit; Q142 and Q145).
R+3	3V for receiver circuit converted from the "VCC" line by the "R+3" regulator circuit (RF unit; Q7 and Q8).
T4	4V for transmitter circuit converted from the "VCC" line by the T4 regulator circuit (RF unit; Q901–Q903 and D901). The T4 regulator circuit is controlled by the CPU (LOGIC unit; IC1, pin 21) via the "TXC" line.

4-5 PORT ALLOCATIONS

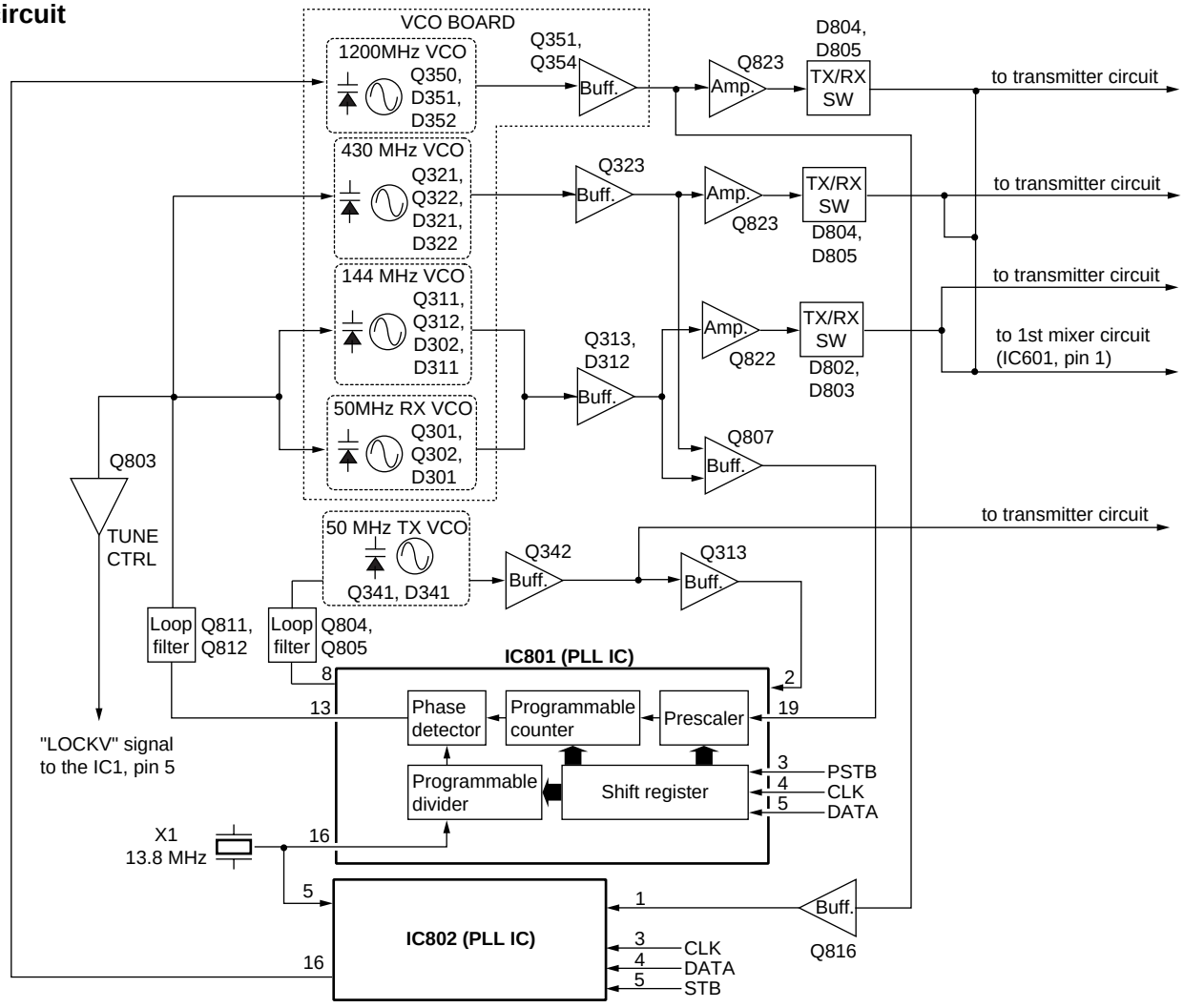
4-5-1 I/O EXPANDER IC (RF UNIT; IC2)

Pin number	Port name	Description
4	Q1	Outputs VHVCO3 regulator control signal.
5	Q2	Outputs VLVCO3 regulator control signal.
6	Q3	Outputs 6MVCO3 regulator control signal.
7	Q4	Outputs VCO shift signal for SHF, UHF, 144 MHz and 50 MHz.
11	Q8	Outputs 12VCO3 regulator control signal.
12	Q7	Outputs UHVCO3 regulator control signal.
13	Q6	Outputs UHF TX and RX regulator control signal.
14	Q5	Outputs 1200 MHz TX and RX regulator control signal.

4-5-2 I/O EXPANDER IC (RF UNIT; IC3)

Pin number	Port name	Description
4	Q1	Outputs 300 MHz band RX regulator control signal.
6	Q3	Outputs AM mode regulator control signal.
7	Q4	Outputs WFM band RX switching control signal.
11	Q8	Outputs WFM band RX regulator control signal.
12	Q5	Outputs 50 MHz band TX and RX regulator control signal.
13	Q6	Outputs VHF band TX and RX regulator control signal.

• PLL circuit



4-5-3 CPU (LOGIC UNIT; IC1)

Pin number	Port name	Description
1	VIN	Input port for the over-voltage detection from connected battery pack or external power supply.
2	REMOTE	Input port for remote control signals from an optional HM-75A microphone via the [MIC] jack.
3	SD	Input port for the S-meter voltage.
4	CTCIN	Input port for CTCSS decoded signals.
5	LOCKV	Input port for the PLL lock voltage.
6	THERMC	Input port for the tranceiver's internal temparature.
7	SBATT	Input port for the VCC voltage (connected battery voltage).
8	CONT	Outputs control signal for the LCD contrast. High : The LCD contrast is deep.
9	CTCOUT	Outputs CTCSS signals while transmitting.
10	BEEP	Output port for: • Beep audio signals while receiving. • DTMF signals or 1750 Hz Europe tone signal while transmitting. [EUR], [ITA], [UK]
11	BPCPI	Input port for the bias control voltage to judge kinds of battery types. High : Supply the bias control voltage.
12	NOISE	Input port for the noise signal (pulse-type) from the IF IC (RF unit; IC 701, pin 13).
13	PDA2/UL	Outputs data signals to the PLL IC2 (RF unit; IC802, pin 4). Input port for the PLL unlock signal from the PLL IC2 (RF unit; IC802, pin 4).
14	PDA1/UL	Outputs data signals to the PLL IC1 (RF unit; IC801, pin 5). Input port for the PLL unlock signal from the PLL IC1 (RF unit; IC801, pin 5).
15	DAST	Outputs strobe signals to the D/A IC (LOGIC unit; IC5, pin2).
16	IOST	Outputs strobe signals to the I/O IC (RF unit; IC2, pin 1 and IC3, pin 1).
17	PLST2	Outputs strobe signals to the PLL IC2 (RF unit, IC802, pin5).
18	PLST1	Outputs strobe signals to the PLL IC1 (RF unit, IC801, pin 3).
19	CLONEOUT	Output port for the cloning signal.
20	CLONEIN	Input port for the cloning signal.
21	TXC	Outputs T4 regulator control signal. High : While transmitting.
22	R3C	Outputs R3 regulator control signal. High : While receiving.
23	CPUHV	Input port for the reset signal from Q151 (LOGIC unit).
24	CHGC	Outputs control signal for charger circuit (RF unit; Q5). High : While battery is charging.
25	AFON	Outputs control signal for the AF amplifier requlator circuit. High : Activates the AF amplifier circuit.
26	PCON	Outputs +3C regulator control signal (LOGIC unit; Q142 and Q145).
27	TCON	Outputs control signal for the Europe tone and DTMF. Low : Activates the Europe tone. High : Activates DTMF.
28	BLED	Outputs BUSY LED control singal. Low : The BUSY LED is ON.
29	LIGHT	Outputs LCD backlight control signal. High : Lights ON.
30	MICC	Outputs control signal for the regulator secton of MIC amplifier (LOGIC unit; IC301). Low : Activates the MIC amplifier circuit.
31	RM/MM	Outputs AF mute and MIC mute control signals. High : Mute is ON.
32	POWER	Input port for the [POWER] switch.
33	RESET	Input port for the RESET signal from IC142, pin 1 (LOGIC unit).
39	PTT	Input port for the [PTT] switch.
41	CK	Outputs clock signal to the PLL IC1 (IC801), PLL IC2 (IC802), D/A IC (IC5) , I/O IC (IC2, IC3) on the RF unit and EEPROM IC (LOGIC unit; IC2).
42	ESIO	Data bus line for the EEPROM (LOGIC unit; IC2).
43–46	KR3–KR0	Input ports for key matrix.
47, 48	I1, I2	Input ports for Initial matrix.
49–54	KS5–KS0	Outputs port for key matrix.
55, 56	DICK, DIUK	Input port for the up/down signal from the main dial (LOGIC unit; S1).

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

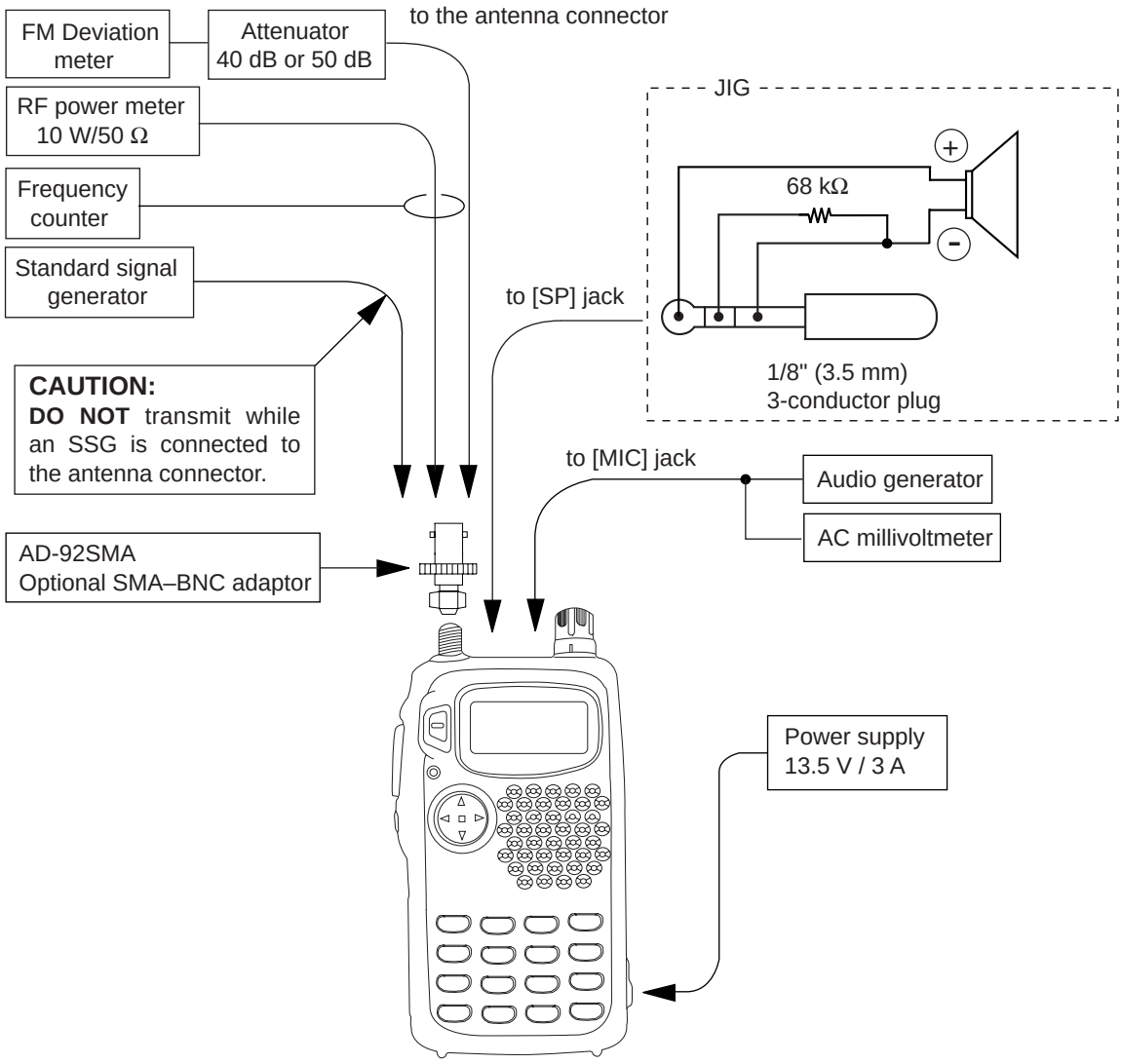
■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.5 V DC Current capacity : 3 A or more	DC voltmeter	Input impedance : 50 kΩ/V DC or better
RF power meter (terminated type)	Measuring range : 1–10 W Frequency range : 28–1500 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
Frequency counter	Frequency range : 0.1–1500 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 28–1300 MHz Output level : 0.1 µV–32 mV (–127 to –17 dBm)
FM deviation meter	Frequency range : 30–1500 MHz Measuring range : 0 to ±10 kHz	Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V
		AC millivoltmeter	Measuring range : 10 mV–10 V
		Attenuator	Power attenuation : 40 or 50 dB

■ ENTERING THE ADJUSTMENT MODE

① Connect a 68 kΩ terminator to the [SP] jack.
② Push and hold the [SQL] key, and then turn power ON.
Note: The frequency of wide range appears at the display using this operation.

■ CONNECTION



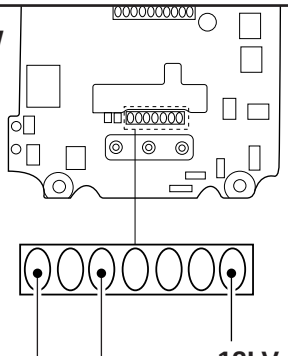
5-2 PLL ADJUSTMENT

The following adjustment must be performed at “ADJUSTMENT MODE”.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1	• Displayed frequency : 51.000 MHz • Receiving	RF	Connect the DC voltmeter or an oscilloscope to VLV.	0.8 V – 1.8 V		Verify
	2	• Transmitting		Connect the DC voltmeter or an oscilloscope to 6MLV.	1.8 V – 2.8 V		
	3	• Displayed frequency : 88.000 MHz • Receiving		Connect the DC voltmeter or an oscilloscope to VLV.	1.4 V – 2.4 V		
	4	• Displayed frequency : 145.000 MHz • Receiving			1.5 V – 2.5 V		
	5	• Transmitting			1.5 V – 2.5 V		
	6	• Displayed frequency : 440.000 MHz • Receiving		Connect the DC voltmeter or an oscilloscope to ULV.	2.0 V – 2.5 V		
	7	• Transmitting			2.0 V – 2.5 V		
	8	• Displayed frequency : 1270.000 MHz • Receiving		Connect the DC voltmeter or an oscilloscope to 12LV.	1.9 V – 2.9 V		
		• Transmitting					
REFERENCE FREQUENCY	1	• Displayed frequency : 1270.000 MHz • Transmitting	Top Pannel	Loosely couple the frequency counter to the antenna connector.	1270.0000 MHz	Top panel	Push and hold the [SQL] key, then turn the [DIAL]
DETECTER OUTPUT VOLTAGE	1	• Displayed frequency : 445.000 MHz [USA-1] only 435.000 MHz [ohter] • Connect an SSG to the antenna connector and set as: Level : 1 mV* (–47dBm) Modulation : OFF • Receiving	LOGIC	Connect a digital-voltmeter to the check point Q.	1.0 V	LOGIC	L702

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

• **RF UNIT BOTTOM VIEW**

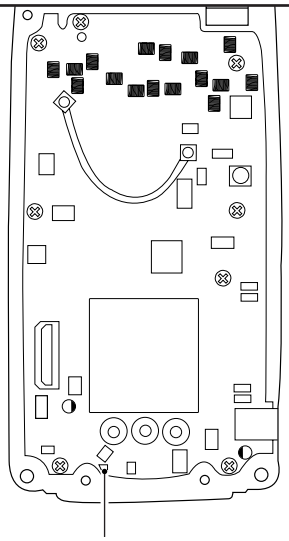


12LV
PLL lock voltage check point
(for 1200 MHz)

ULV
PLL lock voltage check point
(for 440 MHz)

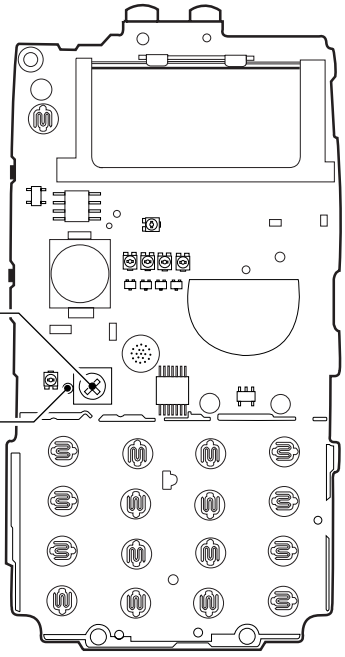
VLV
PLL lock voltage check point
(for 50 MHz RX, WFM and 144 MHz)

• **RF UNIT TOP VIEW**



6MLV
PLL lock voltage check point
(for 50 MHz TX)

• **LOGIC UNIT TOP VIEW**



L702
Detector Output voltage adjustment

Q
Detector Output voltage check point

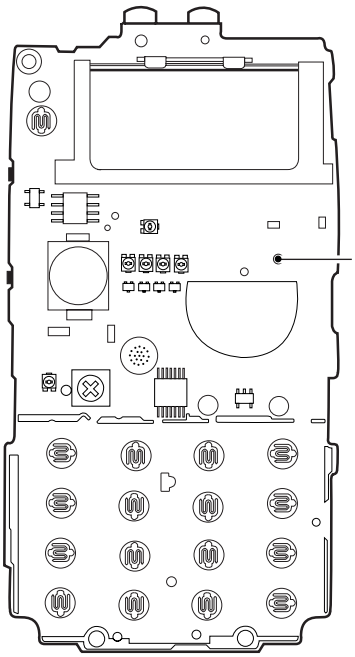
5-3 RECEIVER ADJUSTMENT

The following adjustment must be performed at “ADJUSTMENT MODE”.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
50 MHz SENSITIVITY	1	• Displayed frequency : 50.000 MHz • Connect an SSG to the antenna connector and a SINAD meter with an 8 Ω load to the [SP] jack. • Set an SSG as : Level : 1 µV* (–107 dBm) Deviation : ± 3.5 kHz Modulation : 1 kHz • Receiving	LOGIC	Connect a multimeter to check point SD.	Maximum voltage	Top panel	[DIAL]
	2	• Displayed frequency : 54.000 MHz [EUR], [UK], [ITA] • Receiving					
WFM SENSITIVITY	1	• Displayed frequency : 76.000 MHz [SEA], [USA-1] 88.000 MHz [EUR], [UK], [ITA], [AUS] • Set an SSG as : Level : 3.2 µV* (–97 dBm) Deviation : ± 52.5 kHz Modulation : 1 kHz • Receiving	LOGIC	Connect a multimeter to check point SD.	Maximum voltage	Top panel	[DIAL]
	2	• Displayed frequency : 107.000 MHz • Receiving					
AM SENSITIVITY	1	• Displayed frequency : 108.000 MHz • Set an SSG as : Frequency : 108.000 MHz Level : 1.0 µV* (AM) (–107 dBm) Modulation : 1 kHz Mod. depth : 30 % • Receiving	LOGIC	Connect a multimeter to check point SD.	Maximum voltage	Top panel	[DIAL]
	2	• Displayed frequency : 135.980 MHz • Set an SSG as : Frequency : 135.980 MHz • Receiving					
VHF SENSITIVITY	1	• Displayed frequency : 136.000 MHz • Set an SSG as : Level : 3.2 µV* (–97 dBm) Deviation : ± 3.5 kHz Modulation : 1 kHz • Receiving	LOGIC	Connect a multimeter to check point SD.	Maximum voltage	Top panel	[DIAL]
	2	• Displayed frequency : 160.000 MHz • Receiving					

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

• **LOGIC UNIT TOP VIEW**



SD
50 MHz, WFM BAND, AIR BAND and 145 MHz
Sensitivity check point

RECEIVER ADJUSTMENT (Continued)

The following adjustment must be performed on the normal mode after “SENSITIVITY ADJUSTMENT” in SECTION 5-3.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT
			UNIT	LOCATION		
S-METER (50 MHz band)	1	• Displayed frequency : 51.000 MHz [EUR], [UK], [ITA] 52.000 MHz [AUS], [SEA], [USA-1] • Connect the SSG to the antenna connector and set as: Level : 1 µV* (– 107 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz • Connect a terminator to the [SP] jack. • Receiving	Top panel			Push and hold the [SQL] key
	2	• Set an SSG output level for the S-meter to S3. • Receiving			0.56 µV – 1.8 µV (-112dBm – -102 dBm)	Verify
	3	• Increase an SSG output level. • Receiving	Front panel	S-meter	Full scale	Verify
(WFM band)	4	• Displayed frequency : 92.000 MHz [SEA], [USA-1] 98.000 MHz [EUR], [UK],[ITA], [AUS] • Connect the SSG to the antenna connector and set as: Level : 2 µV* (– 101 dBm) Modulation : 1 kHz Deviation : ± 52.5 kHz • Connect a terminator to the [SP] jack. • Receiving	Top panel			Push and hold the [SQL] key
	5	• Increase an SSG output level. • Receiving	Front panel	S-meter	Full scale	Verify
(144 MHz band)	6	• Displayed frequency : 145.000 MHz [EUR], [UK] 146.000 MHz [ITA], [AUS], [SEA], [USA-1] • Connect the SSG to the antenna connector and set as: Level : 0.5 µV* (– 113 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz • Connect a terminator to the [SP] jack. • Receiving	Top panel			Push and hold the [SQL] key
	7	• Set an SSG output level for the S-meter to S3. • Receiving	SSG	Output level	0.28 µV – 0.89 µV (-118dBm – -108 dBm)	Verify
	8	• Increase an SSG output level. • Receiving	Front panel	S-meter	Full scale	Verify

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

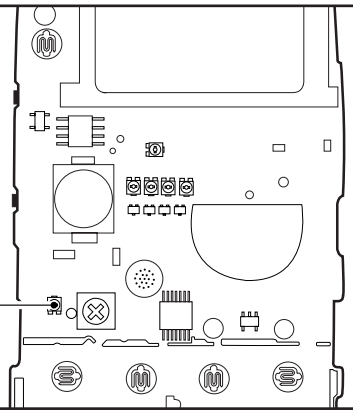
RECEIVER ADJUSTMENT (Continued)

The SQUELCH LEVEL adjustment must be performed on the normal mode after “S-METER ADJUSTMENT”.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
S-METER (440 MHz band)	9	• Displayed frequency : 445.000 MHz [USA-1] 435.000 MHz [other] • Connect the SSG to the antenna connector and set as: Level : 0.63 µV* (– 111 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz • Connect a terminator to the [SP] jack. • Receiving	Top panel			Push and hold the [SQL] key	
	10	• Set an SSG output level for the S-meter to S3. • Receiving	SSG	Output level	0.35 µV – 1.1 µV (-116dBm – -106 dBm)	Verify	
	11	• Increase an SSG output level. • Receiving	Front panel	S-meter	Full scale	Verify	
(1200 MHz band)	12	• Displayed frequency : 1270.000 MHz • Connect the SSG to the antenna connector and set as: Level : 1 µV* (– 107 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz • Connect a terminator to the [SP] jack. • Receiving	Top panel			Push and hold the [SQL] key	
	13	• Set an SSG output level for the S-meter to S3. • Receiving	SSG	Output level	0.56 µV – 1.8 µV (-102dBm – -112 dBm)	Verify	
	14	• Increase an SSG output level. • Receiving	Front panel	S-meter	Full scale	Verify	
SQUELCH LEVEL	1	• Displayed frequency : 445.000 MHz [USA-1] 435.000 MHz [other] • Connect the SSG to the antenna connector and set as: Level : 0.1 µV* (– 127 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz • Pre-set the R733 to maxmum clock-wise. • Receiving	Speaker		At the point where the AF signal just disappears	LOGIC	R733

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

• LOGIC UNIT TOP VIEW



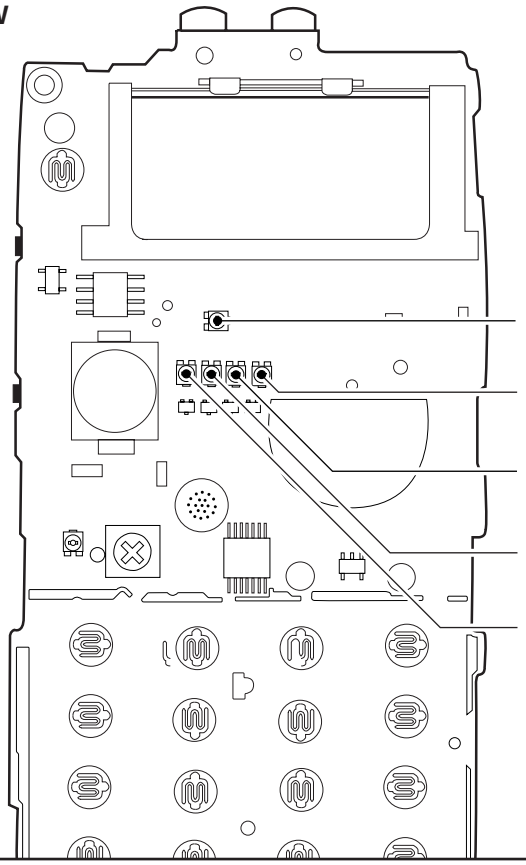
R733
Squelch level adjustment

5-4 TRANSMITTER ADJUSTMENT

The following adjustment must be performed at “ADJUSTMENT MODE”.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT
			UNIT	LOCATION		
OUTPUT POWER (50 MHz)	1	• Displayed frequency : 51.000 MHz [EUR], [UK], [ITA] 52.000 MHz [AUS], [SEA], [USA-1] • Output power : High • transmitting	Top panel	Connect an RF power meter to the antenna connector.	more than 5 W	[DIAL]
	2	• Output power : Low • Transmitting			0.5 W	
(144 MHz)	3	• Displayed frequency : 145.000 MHz [EUR], [UK] 147.000 MHz [ITA], [AUS], [SEA], [USA-1] • Output power : High • Transmitting	Top panel	Connect an RF power meter to the antenna connector.	more than 5 W	[DIAL]
	4	• Output power : Low • Transmitting			0.5 W	
(440 MHz)	5	• Displayed frequency : 445.000 MHz [USA-1] 435.000 MHz [Other] • Output power : High • Transmitting	Top panel	Connect an RF power meter to the antenna connector.	more than 5 W	[DIAL]
	6	• Output power : Low • Transmitting			0.5 W	
(1200 MHz)	7	• Displayed frequency : 1270.000 MHz • Output power : High • Transmitting	Top panel	Connect an RF power meter to the antenna connector.	more than 5 W	[DIAL]
	8	• Output power : Low • Transmitting			0.5 W	

• LOGIC UNIT TOP VIEW



R322
DTMF or TONE CALL deviation adjustment

R326
440 MHz FM deviation adjustment

R327
50 MHz BAND FM deviation adjustment

R338
1200 MHz FM deviation adjustment

R325
144 MHz BAND FM deviation adjustment

TRANSMITTER ADJUSTMENT (Continued)

The following adjustment must be performed after “REFERENCE FREQUENCY ADJUSTMENT” in SECTION 5-2.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
FM DEVIATION (50 MHz)	1	• Displayed frequency : 51.000 MHz [EUR], [UK], [ITA] 52.000 MHz [AUS], [SEA], [USA-1] • Connect the audio generator to the [MIC] connector and set as: 95 mV/1.0 kHz. • Set the FM deviation meter as : HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Output power : High • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	4.5 kHz	LOGIC	R327
(144 MHz)	2	• Displayed frequency : 145.000 MHz [EUR], [UK] 146.000 MHz [ITA], [AUS], [SEA], [USA-1] • Transmitting					R325
(440 MHz)	3	• Displayed frequency : 445.000 MHz [USA-1] 435.000 MHz [Other] • Transmitting					R326
(1200 MHz)	4	• Displayed frequency : 1270.000 MHz • Transmitting					R338
DTMF DEVIATION (AUS, SEA, USA-1 only)	1	• Displayed frequency : 445.000 MHz [USA-1] only 435.000 MHz [AUS], [SEA] only • Push [D] key while transmitting. • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	3.5 kHz	LOGIC	R322
TONE CALL DEVIATION (EUR, UK, ITA only)	1	• Displayed frequency : 435.000 MHz • Push [center of the multi-function] key while transmitting. • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	3.5 kHz	LOGIC	R322
CTCSS DEVIATION (50 MHz)	1	• Displayed frequency : 51.000 MHz [EUR], [UK], [ITA] 52.000 MHz [AUS], [SEA], [USA-1] • Tone frequency : 88.5 Hz • Set an FM deviation meter as : LPF : 3 kHz • Apply no audio signal to the [MIC] jack. • Transmitting	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	0.5 – 1.0 kHz		Verify
(144 MHz)	2	• Displayed frequency : 145.000 MHz [EUR], [UK] 146.000 MHz [ITA], [AUS], [SEA], [USA-1] • Transmitting					
(440 MHz)	3	• Displayed frequency : 445.000 MHz [USA-1] 435.000 MHz [other] • Transmitting					
(1200 MHz)	4	• Displayed frequency : 1270.000 MHz • Transmitting					

SECTION 6 PARTS LIST

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
IC1	1140008110	S.IC	M38267E8GP	[USA-1] only
	1140008100	S.IC	M38267M8L-230GP	[other]
IC2	1130009160	S.IC	X24320S8I-2.5T4	
IC3	1110004890	S.IC	XC6371A500PR	
IC4	1130006220	S.IC	TC4W53FU (TE12L)	
IC5	1110004530	S.IC	M62368GP 70ED	
IC141	1180001720	S.IC	S-81332HG-KC-T1	
IC142	1110004540	S.IC	S-80928ALMP-DAR-T2	
IC201	1110001810	S.IC	TA7368F (TP1)	
IC202	1110004520	S.IC	M5222FP 600C	
IC203	1110002750	S.IC	TA75S01F (TE85R)	
IC241	1110003780	S.IC	NJM2902V-TE1	
IC301	1110004110	S.IC	BA4510F-T1	
IC701	1110003490	S.IC	TA31136FN (D,EL)	
IC751	1130004200	S.IC	TC4S66F (TE85R)	
Q1	1590001690	S.TRANSISTOR	UN9115 (TX)	
Q3	1590001980	S.TRANSISTOR	XP4315 (TX)	
Q7	1590001170	S.TRANSISTOR	XP1501-(TX) AB	
Q8	1520000460	S.TRANSISTOR	2SB1132 T100 R	
Q141	1590001140	S.TRANSISTOR	UN9210 (TX)	
Q142	1590001170	S.TRANSISTOR	XP1501-(TX) AB	
Q145	1520000460	S.TRANSISTOR	2SB1132 T100 R	
Q151	1540000350	S.TRANSISTOR	2SD2216-S (TX)	
Q201	1520000650	S.TRANSISTOR	2SB1201-S-TL	
Q202	1590001170	S.TRANSISTOR	XP1501-(TX) AB	
Q301	1590001690	S.TRANSISTOR	UN9115 (TX)	
Q302	1520000430	S.TRANSISTOR	2SB1462-R (TX)	
Q303	1590001440	S.TRANSISTOR	UN9214 (TX)	
Q304	1550000010	S.FET	2SJ364-Q (TX)	
Q305	1550000010	S.FET	2SJ364-Q (TX)	
Q306	1550000010	S.FET	2SJ364-Q (TX)	
Q307	1590001440	S.TRANSISTOR	UN9214 (TX)	
Q308	1590001210	S.TRANSISTOR	XP5601-(TX) AB	
Q309	1550000010	S.FET	2SJ364-Q (TX)	
Q341	1590001440	S.TRANSISTOR	UN9214 (TX)	
Q361	1550000010	S.FET	2SJ364-Q (TX)	
Q602	1590001690	S.TRANSISTOR	UN9115 (TX)	
Q603	1590001660	S.TRANSISTOR	XP4312 (TX)	
Q702	1590001690	S.TRANSISTOR	UN9115 (TX)	
Q751	1590001170	S.TRANSISTOR	XP1501-(TX) AB	
Q752	1540000350	S.TRANSISTOR	2SD2216-S (TX)	
Q753	1590001690	S.TRANSISTOR	UN9115 (TX)	
Q754	1540000350	S.TRANSISTOR	2SD2216-S (TX)	
D2	1790000970	S.DIODE	MA729 (TX)	
D3	1790001250	S.DIODE	MA2S111-(TX)	
D4	1790001250	S.DIODE	MA2S111-(TX)	
D51	1790000820	S.DIODE	MA132K (TX)	[UK], [AUS]
	1790000830	S.DIODE	MA132HK (TX)	[EUR], [USA-1]
	1790000850	S.DIODE	MA132WK (TX)	[SEA]
D52	1790000830	S.DIODE	MA132HK (TX)	[ITA], [AUS], [SEA], [USA-1]
D53	1790000850	S.DIODE	MA132WK (TX)	except [ITA]
D55	1790001250	S.DIODE	MA2S111-(TX)	except [ITA]
D58	1790001200	S.DIODE	MA6S121 (TX)	
D59	1790001200	S.DIODE	MA6S121 (TX)	
D61	1790001250	S.DIODE	MA2S111-(TX)	except [ITA]
D141	1790001250	S.DIODE	MA2S111-(TX)	
D143	1790001250	S.DIODE	MA2S111-(TX)	
D144	1790001240	S.DIODE	MA2S728-(TX)	
D151	1730002330	S.ZENER	MA8100-M (TX)	
D152	1790001250	S.DIODE	MA2S111-(TX)	
D304	1730000020	S.ZENER	RD5.1M-T2B3	
D701	1750000360	S.DIODE	1SS364 (TE85L)	
D702	1750000360	S.DIODE	1SS364 (TE85L)	
FI701	2020001480	S.CERAMIC	PBFC450R15DR	
X1	6050010530	S.XTAL	CR-639 (5.039 MHz)	

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L1	6200006720	S.COIL	5CA-395KN-0369AQ=P3
L2	6200003550	S.COIL	MLF1608A 4R7K-T
L3	6200001820	S.COIL	LQH 3N 331K 04
L702	6150005010	S.COIL	LS-528 (637AN-0223GW=P3)
R1	7510000910	S.THERMISTOR	NTCCF2012 4AH 473KC-T
R2	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R4	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R5	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R8	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R9	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R10	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R12	7030005840	S.RESISTOR	RR0510R-473-D (47 kΩ)
R13	7030005840	S.RESISTOR	RR0510R-473-D (47 kΩ)
R14	7030005840	S.RESISTOR	RR0510R-473-D (47 kΩ)
R16	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R17	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R18	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R19	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R21	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R22	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R23	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R24	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R25	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R26	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R27	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R28	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R29	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R30	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R31	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R32	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R33	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R34	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R35	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R36	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R37	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R38	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R39	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R42	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R51	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R53	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R54	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R55	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R56	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R141	7030007340	S.RESISTOR	ERJ2GEJ 153 X (15 kΩ)
R142	7030005830	S.RESISTOR	RR0510R-223-D (22 kΩ)
R143	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R144	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R145	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R146	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R148	7030008270	S.RESISTOR	RR0510R-104-D (100 kΩ)
R151	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R153	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R154	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R196	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R197	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R201	7030005530	S.RESISTOR	ERJ2GEJ 100 X (10 Ω)
R202	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R203	7030000240	S.RESISTOR	MCR10EZHJ 68 Ω (680)
R204	7030000240	S.RESISTOR	MCR10EZHJ 68 Ω (680)
R205	7030000240	S.RESISTOR	MCR10EZHJ 68 Ω (680)
R206	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R207	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R208	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R209	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R210	7030005950	S.RESISTOR	RR0510R-123-D (12 kΩ)
R211	7030005820	S.RESISTOR	RR0510P-103-D (10 kΩ)
R212	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R213	7030005830	S.RESISTOR	RR0510R-223-D (22 kΩ)
R214	7030008270	S.RESISTOR	RR0510R-104-D (100 kΩ)
R215	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R241	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R242	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R243	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R244	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)

S.=Surface mount

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R245	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R246	7030005310	S.RESISTOR	ERJ2GEJ 124 X (120 kΩ)
R247	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R248	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R249	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R250	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R251	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R252	7030005230	S.RESISTOR	ERJ2GEJ 334 X (330 kΩ)
R253	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R254	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R267	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R301	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R302	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R303	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R304	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R305	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R306	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R307	7030007320	S.RESISTOR	ERJ2GEJ 225 X (2.2 MΩ)
R308	7030005310	S.RESISTOR	ERJ2GEJ 124 X (120 kΩ)
R309	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R310	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R311	7030005530	S.RESISTOR	ERJ2GEJ 100 X (10 Ω)
R312	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R313	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R314	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R315	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R316	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R317	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R318	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R319	7030007290	S.RESISTOR	ERJ2GEJ 222 X (2.2 kΩ)
R320	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R321	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R322	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R323	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R324	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R325	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R326	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R327	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R328	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R329	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R330	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R331	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R332	7030007350	S.RESISTOR	ERJ2GEJ 393 X (39 kΩ)
R333	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R334	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R335	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R336	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R337	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R338	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R339	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R340	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R341	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R342	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R343	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R361	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R362	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R363	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R706	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R713	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R714	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R715	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R716	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R717	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R718	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R719	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R726	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R727	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R729	7030008400	S.RESISTOR	ERJ2GEJ 182 X (1.8 kΩ)
R730	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R731	7030008300	S.RESISTOR	ERJ2GEJ 184 X (180 kΩ)
R732	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R733	7310003590	S.TRIMMER	EVM-1XSX50 B24 (203)
R734	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R735	7030007340	S.RESISTOR	ERJ2GEJ 153 X (15 kΩ)
R736	7030007340	S.RESISTOR	ERJ2GEJ 153 X (15 kΩ)
R737	7510001040	S.THERMISTOR	TBPS1R153K460H5Q
R751	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R752	7030005230	S.RESISTOR	ERJ2GEJ 334 X (330 kΩ)
R753	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R754	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R755	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R756	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R757	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R758	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R759	7030005110	S.RESISTOR	ERJ2GEJ 224 X (220 kΩ)
R760	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R901	7030000320	S.RESISTOR	MCR10EZHJ 330 Ω (331)
C1	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C2	4030013850	S.CERAMIC	ECUE1E102KBQ
C3	4030014160	S.CERAMIC	ECUE1H270JCQ
C4	4030014160	S.CERAMIC	ECUE1H270JCQ
C5	4030013850	S.CERAMIC	ECUE1E102KBQ
C6	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C7	4030013850	S.CERAMIC	ECUE1E102KBQ
C8	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C9	4030013850	S.CERAMIC	ECUE1E102KBQ
C10	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C11	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C12	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C13	4030013850	S.CERAMIC	ECUE1E102KBQ
C17	4550003260	S.TANTALUM	TEMSVA 1V 684M-8L
C75	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C76	4030013850	S.CERAMIC	ECUE1E102KBQ
C77	4030013850	S.CERAMIC	ECUE1E102KBQ
C82	4030013850	S.CERAMIC	ECUE1E102KBQ
C90	4030013850	S.CERAMIC	ECUE1E102KBQ
C91	4030013850	S.CERAMIC	ECUE1E102KBQ
C92	4030013850	S.CERAMIC	ECUE1E102KBQ
C93	4030013850	S.CERAMIC	ECUE1E102KBQ
C101	4030013850	S.CERAMIC	ECUE1E102KBQ
C102	4030013850	S.CERAMIC	ECUE1E102KBQ
C103	4030013850	S.CERAMIC	ECUE1E102KBQ
C141	4030013850	S.CERAMIC	ECUE1E102KBQ
C142	4550006780	S.TANTALUM	TEMSVB2 0J 476M-8R
C143	4030013850	S.CERAMIC	ECUE1E102KBQ
C145	4030013850	S.CERAMIC	ECUE1E102KBQ
C146	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C147	4550006730	S.TANTALUM	TEMSVB2 0J 226M-8L
C148	4030013850	S.CERAMIC	ECUE1E102KBQ
C149	4550006780	S.TANTALUM	TEMSVB2 0J 476M-8R
C150	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C151	4030013850	S.CERAMIC	ECUE1E102KBQ
C152	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C162	4030013850	S.CERAMIC	ECUE1E102KBQ
C201	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C202	4550003080	S.TANTALUM	TEMSVA 1A 335M-8L
C203	4030014180	S.CERAMIC	ECUE1H470JCQ
C204	4030013850	S.CERAMIC	ECUE1E102KBQ
C205	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C206	4510005320	S.ELECTROLYTIC	ECEV0JA101SP
C207	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C208	4030013850	S.CERAMIC	ECUE1E102KBQ
C209	4030013850	S.CERAMIC	ECUE1E102KBQ
C210	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C211	4030013850	S.CERAMIC	ECUE1E102KBQ
C212	4510006960	S.ELECTROLYTIC	ECEV0JA151WP
C213	4550006680	S.TANTALUM	ECST0JY156R
C214	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C215	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C216	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C217	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C220	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C240	4030009980	S.CERAMIC	C1608 JB 1H 152K-T-A
C241	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C242	4030008910	S.CERAMIC	C1608 JB 1C 393K-T-A
C243	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C244	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C245	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C246	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C247	4030014200	S.CERAMIC	ECUE1H101JCQ
C248	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C249	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C250	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C251	4030013850	S.CERAMIC	ECUE1E102KBQ
C252	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C253	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C301	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C302	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C303	4030010040	S.CERAMIC	C1608 JB 1H 561K-T-A
C304	4030013850	S.CERAMIC	ECUE1E102KBQ
C305	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C306	4550006780	S.TANTALUM	TEMSVB2 0J 476M-8R

S.=Surface mount

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C307	4030013850	S.CERAMIC	ECUE1E102KBQ
C308	4030014500	S.CERAMIC	ECUE1H121JCQ
C309	4030009000	S.CERAMIC	C2012 JB 1C 224K-T-A
C310	4030014220	S.CERAMIC	ECUE1E471KBQ
C311	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C312	4030014220	S.CERAMIC	ECUE1E471KBQ
C313	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C314	4030013850	S.CERAMIC	ECUE1E102KBQ
C315	4030013850	S.CERAMIC	ECUE1E102KBQ
C316	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C317	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C318	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C319	4030013850	S.CERAMIC	ECUE1E102KBQ
C320	4030013850	S.CERAMIC	ECUE1E102KBQ
C321	4030013850	S.CERAMIC	ECUE1E102KBQ
C322	4030013850	S.CERAMIC	ECUE1E102KBQ
C323	4030013850	S.CERAMIC	ECUE1E102KBQ
C324	4030013850	S.CERAMIC	ECUE1E102KBQ
C325	4030013850	S.CERAMIC	ECUE1E102KBQ
C326	4030013850	S.CERAMIC	ECUE1E102KBQ
C328	4030013850	S.CERAMIC	ECUE1E102KBQ
C361	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C362	4030013850	S.CERAMIC	ECUE1E102KBQ
C700	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C701	4030014320	S.CERAMIC	ECUE1H181JCQ
C703	4030013850	S.CERAMIC	ECUE1E102KBQ
C706	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C707	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C708	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C709	4550006680	S.TANTALUM	ECST0JY156R
C712	4030014170	S.CERAMIC	ECUE1H330JCQ
C713	4030013850	S.CERAMIC	ECUE1E102KBQ
C714	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C715	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C716	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C718	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C719	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C720	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C733	4030013850	S.CERAMIC	ECUE1E102KBQ
C734	4030013850	S.CERAMIC	ECUE1E102KBQ
C735	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C736	4030013850	S.CERAMIC	ECUE1E102KBQ
C737	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C751	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C752	4030014150	S.CERAMIC	ECUE1H220JCQ
C753	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C754	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C755	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C756	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C757	4030009000	S.CERAMIC	C2012 JB 1C 224K-T-A
C758	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C759	4030013850	S.CERAMIC	ECUE1E102KBQ
C901	4030013850	S.CERAMIC	ECUE1E102KBQ
C903	4030013850	S.CERAMIC	ECUE1E102KBQ
C904	4030013850	S.CERAMIC	ECUE1E102KBQ
C906	4030013850	S.CERAMIC	ECUE1E102KBQ
C907	4030013850	S.CERAMIC	ECUE1E102KBQ
C909	4030013850	S.CERAMIC	ECUE1E102KBQ
C910	4030013850	S.CERAMIC	ECUE1E102KBQ
C912	4030013850	S.CERAMIC	ECUE1E102KBQ
C913	4030013850	S.CERAMIC	ECUE1E102KBQ
C914	4030013850	S.CERAMIC	ECUE1E102KBQ
C917	4030013850	S.CERAMIC	ECUE1E102KBQ
C918	4030013850	S.CERAMIC	ECUE1E102KBQ
C919	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C923	4030014180	S.CERAMIC	ECUE1H470JCQ
C926	4030013850	S.CERAMIC	ECUE1E102KBQ
C927	4030013850	S.CERAMIC	ECUE1E102KBQ
J1	6510019860	S.CONNECTOR	AXK6S40645P
J3	6450002010	S.CONNECTOR	HSJ1501-011010
J4	6450001680	CONNECTOR	HSJ1122-010010
DS1	5040002230	S.LED	CL-200YG-C-TS
DS3	5010000150	S.LED	LT1EP53A
DS4	5030001700	LCD	LM-1782B
MC1	7700002310	MICROPHONE	EM-140

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
S7	2260002530	S.SWITCH	EVQ-WRR001
S401	2230000900	S.SWITCH	JPM1990-2013R
S402	2230000900	S.SWITCH	JPM1990-2013R
W1	9020720180	WIRE	71/98/040/X98/X98
EP1	0910051324	PCB	B 5136D
EP2	8930048950	LCD CONTACT	SRCN-2135-SP-N-W

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC2	1130007510	S.IC	BU4094BCFV-E1
IC3	1130007510	S.IC	BU4094BCFV-E1
IC6	1180001720	S.IC	S-81332HG-KC-T1
IC51	1110003370	S.IC	µPC2748T-E3
IC501	1110003370	S.IC	µPC2748T-E3
IC601	1110004020	S.IC	µPC2757T-E3
IC801	1130007610	S.IC	µPD3140GS-E1 (DS8)
IC802	1130009370	S.IC	TB31242FN (EL)
IC901	1110004050	S.IC	NJM3404AV-TE1
Q1	1540000350	S.TRANSISTOR	2SD2216-S (TX)
Q2	1590001170	S.TRANSISTOR	XP1501-(TX) AB
Q3	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q4	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q5	1590001140	S.TRANSISTOR	UN9210 (TX)
Q6	1590002580	S.FET	HAT1024R-EL
Q9	1590001650	S.TRANSISTOR	XP4601 (TX)
Q51	1530003650	S.TRANSISTOR	2SC5319 (TE85L)
Q53	1590001690	S.TRANSISTOR	UN9115 (TX)
Q101	1530003560	S.TRANSISTOR	2SC5195-T1
Q131	1530003560	S.TRANSISTOR	2SC5195-T1
Q132	1530003660	S.TRANSISTER	2SC5454-T1 R54
Q133	1530002560	S.TRANSISTOR	2SC4403-3-TL
Q134	1530000371	S.TRANSISTOR	2SC3356 R25-T2B
Q135	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q136	1530000371	S.TRANSISTOR	2SC3356 R25-T2B
Q138	1590002640	S.FET	MXR9745RT1
Q139	1590001690	S.TRANSISTOR	UN9115 (TX)
Q140	1540000350	S.TRANSISTOR	2SD2216-S (TX)
Q201	1580000700	S.FET	3SK292 (TE85R)
Q202	1590001690	S.TRANSISTOR	UN9115 (TX)
Q301	1580000690	S.FET	3SK291 (TE85R)
Q302	1590002380	S.TRANSISTOR	XP1115 (TX)
Q341	1530003640	S.TRANSISTOR	2SC4215-O (T5RICOM)
Q342	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q343	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q401	1530003560	S.TRANSISTOR	2SC5195-T1
Q403	1590001690	S.TRANSISTOR	UN9115 (TX)
Q501	1530003560	S.TRANSISTOR	2SC5195-T1
Q502	1590002380	S.TRANSISTOR	XP1115 (TX)
Q503	1590001860	S.TRANSISTOR	UN9215 (TX)
Q602	1590001980	S.TRANSISTOR	XP4315 (TX)
Q701	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q721	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q803	1560000540	S.FET	2SK880-Y (TE85R)
Q804	1560000540	S.FET	2SK880-Y (TE85R)
Q805	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q807	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q811	1560000540	S.FET	2SK880-Y (TE85R)
Q812	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q813	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q816	1530002930	S.TRANSISTOR	2SC4228 (M) -T1 R45
Q817	1590001150	S.TRANSISTOR	UN9211 (TX)
Q818	1590002560	S.TRANSISTOR	XP1116 (TX)
Q819	1590002560	S.TRANSISTOR	XP1116 (TX)
Q820	1590001850	S.TRANSISTOR	UN9116 (TX)
Q821	1530002560	S.TRANSISTOR	2SC4403-3-TL
Q822	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q823	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q824	1530003560	S.TRANSISTOR	2SC5195-T1
Q825	1590001970	S.TRANSISTOR	UN921E (TX)

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
Q826	1590001910	S.TRANSISTOR	UN911D (TX)
Q827	1590001970	S.TRANSISTOR	UN921E (TX)
Q828	1590001910	S.TRANSISTOR	UN911D (TX)
Q829	1590001970	S.TRANSISTOR	UN921E (TX)
Q901	1590001150	S.TRANSISTOR	UN9211 (TX)
Q902	1540000350	S.TRANSISTOR	2SD2216-S (TX)
Q903	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q904	1590001150	S.TRANSISTOR	UN9211 (TX)
Q905	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q906	1590001150	S.TRANSISTOR	UN9211 (TX)
Q907	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q908	1590001150	S.TRANSISTOR	UN9211 (TX)
Q909	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q910	1590001150	S.TRANSISTOR	UN9211 (TX)
Q911	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q912	1590001860	S.TRANSISTOR	UN9215 (TX)
Q913	1590002160	S.TRANSISTOR	XP6401-(TX)
Q921	1590002600	S.FET	MRF9745 T1
Q922	1560001060	S.FET	2SK3075 (TE12L)
Q923	1540000350	S.TRANSISTOR	2SD2216-S (TX)
Q924	1590001860	S.TRANSISTOR	UN9215 (TX)
Q925	1590001860	S.TRANSISTOR	UN9215 (TX)
Q926	1590001860	S.TRANSISTOR	UN9215 (TX)
Q927	1590001860	S.TRANSISTOR	UN9215 (TX)
Q928	1590001150	S.TRANSISTOR	UN9211 (TX)
Q929	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)
Q931	1590001660	S.TRANSISTOR	XP4312 (TX)
Q932	1540000350	S.TRANSISTOR	2SD2216-S (TX)
D1	1750000540	S.DIODE	RB060L-40 TE-25
D4	1790001240	S.DIODE	MA2S728-(TX)
D5	1790000860	S.DIODE	MA133 (TX)
D6	1790000670	S.DIODE	SB07-03C-TB
D10	1790001250	S.DIODE	MA2S111-(TX)
D12	1790000850	S.DIODE	MA132WK (TX)
D31	1790001260	S.DIODE	MA2S077-(TX)
D32	1790001620	S.DIODE	1SV308 (TPL3)
D51	1790001260	S.DIODE	MA2S077-(TX)
D52	1790001260	S.DIODE	MA2S077-(TX)
D53	1790001620	S.DIODE	1SV308 (TPL3)
D101	1790001620	S.DIODE	1SV308 (TPL3)
D102	1790001620	S.DIODE	1SV308 (TPL3)
D103	1790001260	S.DIODE	MA2S077-(TX)
D106	1720000370	S.VARICAP	HVU350TRF
D107	1720000370	S.VARICAP	HVU350TRF
D108	1790001620	S.DIODE	1SV308 (TPL3)
D132	1790001620	S.DIODE	1SV308 (TPL3)
D134	1790001620	S.DIODE	1SV308 (TPL3)
D141	1790001620	S.DIODE	1SV308 (TPL3)
D142	1790001250	S.DIODE	MA2S111-(TX)
D143	1790001250	S.DIODE	MA2S111-(TX)
D201	1790001620	S.DIODE	1SV308 (TPL3)
D202	1720000730	S.VARICAP	MA2S30400L
D203	1720000730	S.VARICAP	MA2S30400L
D204	1790001620	S.DIODE	1SV308 (TPL3)
D302	1790001260	S.DIODE	MA2S077-(TX)
D303	1790001260	S.DIODE	MA2S077-(TX)
D304	1790001620	S.DIODE	1SV308 (TPL3)
D306	1750000610	S.VARICAP	MA2SV0500L
D309	1750000610	S.VARICAP	MA2SV0500L
D310	1750000610	S.VARICAP	MA2SV0500L
D311	1790001620	S.DIODE	1SV308 (TPL3)
D341	1720000660	S.VARICAP	1SV288 (TPH2)
D402	1790001260	S.DIODE	MA2S077-(TX)
D403	1790001260	S.DIODE	MA2S077-(TX)
D404	1790001260	S.DIODE	MA2S077-(TX)
D405	1790001620	S.DIODE	1SV308 (TPL3)
D406	1790001250	S.DIODE	MA2S111-(TX)
D407	1790001260	S.DIODE	MA2S077-(TX)
D501	1790001620	S.DIODE	1SV308 (TPL3)
D503	1790001620	S.DIODE	1SV308 (TPL3)
D505	1790001620	S.DIODE	1SV308 (TPL3)
D507	1790001620	S.DIODE	1SV308 (TPL3)
D508	1790000850	S.DIODE	MA132WK (TX)
D509	1790001260	S.DIODE	MA2S077-(TX)
D510	1790001200	S.DIODE	MA6S121 (TX)
D601	1750000360	S.DIODE	1SS364 (TE85L)
D602	1750000360	S.DIODE	1SS364 (TE85L)
D721	1750000360	S.DIODE	1SS364 (TE85L)
D801	1790000850	S.DIODE	MA132WK (TX)
D802	1790001260	S.DIODE	MA2S077-(TX)

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
D803	1790001260	S.DIODE	MA2S077-(TX)	
D804	1790001260	S.DIODE	MA2S077-(TX)	
D805	1790001260	S.DIODE	MA2S077-(TX)	
D806	1790001260	S.DIODE	MA2S077-(TX)	
D807	1790001260	S.DIODE	MA2S077-(TX)	
D808	1790001260	S.DIODE	MA2S077-(TX)	
D810	1790001200	S.DIODE	MA6S121 (TX)	
D901	1790000860	S.DIODE	MA133 (TX)	
D902	1750000530	S.DIODE	1SV271 (TPH3)	
D903	1790001260	S.DIODE	MA2S077-(TX)	
D904	1750000530	S.DIODE	1SV271 (TPH3)	
D906	1790001620	S.DIODE	1SV308 (TPL3)	
D907	1790001620	S.DIODE	1SV308 (TPL3)	
D908	1790001260	S.DIODE	MA2S077-(TX)	
D909	1750000530	S.DIODE	1SV271 (TPH3)	
D910	1750000530	S.DIODE	1SV271 (TPH3)	
D913	1790001620	S.DIODE	1SV308 (TPL3)	
D914	1790001620	S.DIODE	1SV308 (TPL3)	
D918	1790001620	S.DIODE	1SV308 (TPL3)	
D919	1730002360	S.ZENER	MA8062-M (TX)	
FI51	2040001360	S.FILTER	LFL30-13C1270B060	
FI52	2040001360	S.FILTER	LFL30-13C1270B060	
FI401	2040001020	S.SAW	EFCH445MWNP1	[USA-1] only
	2040001000	S.SAW	EFCH435MWNP1	[other]
FI601	2010002340	S.FILTER	FL-299 (69.450 MHz)	
FI602	2020001500	S.CERAMIC	SFECV13.35MA	
X1	6050010520	S.XTAL	CR-638 (13.800 MHz)	
L1	6200008510	S.COIL	0.30-0.9-4TR 10.5N	
L2	6200008440	S.COIL	LQN21A 8N2D04	
L3	6200008440	S.COIL	LQN21A 8N2D04	
L4	6200008240	S.COIL	0.30-0.9-5TL 14N	
L5	6200008540	S.COIL	0.26-0.9-6TR 19N	
L6	6200008690	S.COIL	0.26-0.9-7TR 23N	
L7	6200008530	S.COIL	0.30-1.0-4TR 12N	
L8	6200008210	S.COIL	0.45-1.5-5TL 23.2N	
L9	6200008220	S.COIL	0.40-1.4-5TR 21N	
L10	6200008150	S.COIL	0.35-1.6-7TL 44N	
L11	6200008170	S.COIL	0.35-1.6-8TL 54N	
L12	6200008170	S.COIL	0.35-1.6-8TL 54N	
L13	6200008080	S.COIL	LQN21A R22J04	
L14	6200008190	S.COIL	0.25-1.9-8TL 80N	
L15	6200008180	S.COIL	0.25-1.9-10TL 107N	
L16	6200008180	S.COIL	0.25-1.9-10TL 107N	
L17	6200008360	S.COIL	0.25-1.9-13TL	
L18	6200008360	S.COIL	0.25-1.9-13TL	
L51	6200008680	S.COIL	0.26-0.8-3TR 6.8N	
L52	6200008490	S.COIL	0.30-0.9-3TR 7.5N	
L53	6200008680	S.COIL	0.26-0.8-3TR 6.8N	
L54	6200008680	S.COIL	0.26-0.8-3TR 6.8N	
L55	6200008930	S.COIL	0.26-0.7-3TL 5.6N	
L56	6200008680	S.COIL	0.26-0.8-3TR 6.8N	
L57	6200008520	S.COIL	0.30-0.7-3TR 4.9N	
L58	6200005650	S.COIL	ELJRE 8N2Z-F	
L59	6200005600	S.COIL	ELJRE 3N3Z-F	
L61	6200008420	S.COIL	HF50ACC 453215P-T	
L62	6200003590	S.COIL	EXCCL3225U1	
L63	6200003590	S.COIL	EXCCL3225U1	
L64	6200005610	S.COIL	ELJRE 3N9Z-F	
L65	6200005490	S.COIL	NL 322522T-331J	
L101	6200007790	S.COIL	LQN21A R15J04	
L102	6200007790	S.COIL	LQN21A R15J04	
L108	6200007120	S.COIL	ELJND 1R0J 1U	
L109	6200007360	S.COIL	ELJND R47J 0.47U	
L110	6200007360	S.COIL	ELJND R47J 0.47U	
L121	6200005610	S.COIL	ELJRE 3N9Z-F	
L122	6200005630	S.COIL	ELJRE 5N6Z-F	
L123	6200006770	S.COIL	ELJRE 1N5Z-F	
L124	6200005590	S.COIL	ELJRE 2N7Z-F	
L125	6200005590	S.COIL	ELJRE 2N7Z-F	
L134	6200004480	S.COIL	MLF1608D R82K-T	
L135	6200007800	S.COIL	LQN21A R18J04	
L136	6200005720	S.COIL	ELJRE 33NG-F	
L137	6200005710	S.COIL	ELJRE 27NG-F	
L138	6200007700	S.COIL	LQN21A 22NJ04	
L139	6200005630	S.COIL	ELJRE 5N6Z-F	
L142	6200005730	S.COIL	ELJRE 39NG-F	

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
L143	6200006770	S.COIL	ELJRE 1N5Z-F	
L201	6200008730	S.COIL	ELJND R10J 0.1U	
L202	6200008730	S.COIL	ELJND R10J 0.1U	
L205	6200008730	S.COIL	ELJND R10J 0.1U	
L206	6200008730	S.COIL	ELJND R10J 0.1U	
L301	6200007750	S.COIL	LQN21A 56NJ04	
L302	6200007750	S.COIL	LQN21A 56NJ04	
L303	6200007720	S.COIL	LQN21A 33NJ04	
L304	6200007760	S.COIL	LQN21A 82NJ04	
L305	6200007780	S.COIL	LQN21A R12J04	
L306	6200007780	S.COIL	LQN21A R12J04	
L341	6200004920	S.COIL	MLF1608A 2R2K-T	
L342	6200007670	S.COIL	LQN21A 10NJ04	
L343	6200008750	S.COIL	LQN1H R29J04	
L344	6200006980	S.COIL	ELJRE R10G-F	
L345	6200007000	S.COIL	ELJRE 82NG-F	
L346	6200006670	S.COIL	ELJRE 68NG-F	
L347	6200006990	S.COIL	ELJRE 56NG-F	
L348	6200007000	S.COIL	ELJRE 82NG-F	
L401	6200007690	S.COIL	LQN21A 18NJ04	
L402	6200007690	S.COIL	LQN21A 18NJ04	
L403	6200005680	S.COIL	ELJRE 15NG-F	
L404	6200005690	S.COIL	ELJRE 18NG-F	
L501	6200005720	S.COIL	ELJRE 33NG-F	
L502	6200005660	S.COIL	ELJRE 10NG-F	
L503	6200005660	S.COIL	ELJRE 10NG-F	
L504	6200005700	S.COIL	ELJRE 22NG-F	
L505	6200005700	S.COIL	ELJRE 22NG-F	
L507	6200005700	S.COIL	ELJRE 22NG-F	
L701	6200002710	S.COIL	ELJFC 1R8K-F	
L721	6200005190	S.COIL	MLF1608D R56K-T	
L723	6200004720	S.COIL	MLF1608D R10K-T	
L724	6200003640	S.COIL	MLF1608K 100K-T	
L725	6200003640	S.COIL	MLF1608K 100K-T	
L726	6200005190	S.COIL	MLF1608D R56K-T	
L801	6200003550	S.COIL	MLF1608A 4R7K-T	
L802	6200003550	S.COIL	MLF1608A 4R7K-T	
L804	6200003550	S.COIL	MLF1608A 4R7K-T	
L806	6200005630	S.COIL	ELJRE 5N6Z-F	
L807	6200003540	S.COIL	MLF1608D R22K-T	
L808	6200006980	S.COIL	ELJRE R10G-F	
L809	6200005700	S.COIL	ELJRE 22NG-F	
L810	6200005670	S.COIL	ELJRE 12NG-F	
L811	6200005620	S.COIL	ELJRE 4N7Z-F	
L905	6200008700	S.COIL	0.30-0.9-6TR 17.5N	
L906	6200003590	S.COIL	EXCCL3225U1	
L907	6200003590	S.COIL	EXCCL3225U1	
L908	6200008100	S.COIL	LQN1H R14J04	
L909	6200005640	S.COIL	ELJRE 6N8Z-F	
L910	6200005580	S.COIL	ELJRE 2N2Z-F	
L911	6200005580	S.COIL	ELJRE 2N2Z-F	
L912	6200008180	S.COIL	0.25-1.9-10TL 107N	
L913	6200008370	S.COIL	0.40-1.3-2TL	[USA-1] only
	6200008200	S.COIL	0.40-1.4-2TL	[other]
L914	6200008080	S.COIL	LQN21A R22J04	
L915	6200008080	S.COIL	LQN21A R22J04	
L916	6200008210	S.COIL	0.45-1.5-5TL 23.2N	
L917	6200008190	S.COIL	0.25-1.9-8TL 80N	
L918	6200008400	S.COIL	0.35-1.6-6TL 36N	
L919	6200008300	S.COIL	0.35-1.6-9TL 65N	
L920	6200008360	S.COIL	0.25-1.9-13TL	
L921	6200004480	S.COIL	MLF1608D R82K-T	
L922	6200004480	S.COIL	MLF1608D R82K-T	
L923	6200004480	S.COIL	MLF1608D R82K-T	
L924	6200004480	S.COIL	MLF1608D R82K-T	
L925	6200008080	S.COIL	LQN21A R22J04	
L926	6200007770	S.COIL	LQN21A R10J04	
L931	6200004480	S.COIL	MLF1608D R82K-T	
L932	6200003640	S.COIL	MLF1608K 100K-T	
L933	6200005580	S.COIL	ELJRE 2N2Z-F	[EUR], [UK], [ITA]
R1	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)	
R2	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)	
R3	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)	
R4	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)	
R7	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)	
R8	7030000180	S.RESISTOR	MCR10EZHJ 22 Ω (220)	
R9	7030000180	S.RESISTOR	MCR10EZHJ 22 Ω (220)	
R10	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)	
R13	7510000910	S.THERMISTOR	NTCCF2012 4AH 473KC-T	
R14	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)	

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R15	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R16	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R31	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R32	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R33	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R51	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R52	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R53	7030005570	S.RESISTOR	ERJ2GEJ 820 X (82 Ω)
R57	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R58	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R100	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R103	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R106	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R110	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R111	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R112	7030005170	S.RESISTOR	ERJ2GEJ 474 X (470 kΩ)
R113	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R121	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R122	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R123	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R124	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R125	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R126	7030007250	S.RESISTOR	ERJ2GEJ 220 X (22 Ω)
R128	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R131	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R132	7030009160	S.RESISTOR	ERJ2GEJ 181 X (180 Ω)
R133	7030007250	S.RESISTOR	ERJ2GEJ 220 X (22 Ω)
R134	7030005530	S.RESISTOR	ERJ2GEJ 100 X (10 Ω)
R135	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R138	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R139	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R140	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R141	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R142	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R143	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R144	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R145	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R146	7030009290	S.RESISTOR	ERJ2GEJ 562 X (5.6 kΩ)
R147	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R149	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R150	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R152	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R156	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R157	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R158	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R159	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R160	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R161	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R163	7030008410	S.RESISTOR	ERJ2GEJ 392 X (3.9 kΩ)
R165	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R166	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R201	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R202	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R203	7030005310	S.RESISTOR	ERJ2GEJ 124 X (120 kΩ)
R204	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R205	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R206	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R207	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R208	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R209	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R210	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R301	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R302	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R303	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R304	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R306	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R307	7030005310	S.RESISTOR	ERJ2GEJ 124 X (120 kΩ)
R308	7030005530	S.RESISTOR	ERJ2GEJ 100 X (10 Ω)
R309	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R310	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R311	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R312	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R316	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R341	7030006610	S.RESISTOR	ERJ2GEJ 394 X (390 kΩ)
R342	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R343	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R344	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R345	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R346	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R347	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R348	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R349	7030005710	S.RESISTOR	ERJ2GEJ 121 X (120 Ω)

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R351	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω)
R401	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R402	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R403	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R404	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R409	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R410	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R413	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R414	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R501	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R502	7030005070	S.RESISTOR	ERJ2GEJ 683 X (68 kΩ)
R503	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R504	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R505	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R506	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R507	7030007290	S.RESISTOR	ERJ2GEJ 222 X (2.2 kΩ)
R508	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R509	7030007290	S.RESISTOR	ERJ2GEJ 222 X (2.2 kΩ)
R510	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R511	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R512	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R513	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R608	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R609	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R610	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R611	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R612	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R613	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R614	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R615	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R616	7030008370	S.RESISTOR	ERJ2GEJ 561 X (560 Ω)
R701	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R702	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R721	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R722	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R725	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R726	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R727	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R728	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R742	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R802	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R803	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R804	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R805	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R806	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R807	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R811	7030005720	S.RESISTOR	ERJ2GEJ 563 X (56 kΩ)
R812	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R813	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R814	7510001240	S.THEMISTOR	ERTJ0EV 473J (47K)
R815	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R816	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R817	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R818	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R819	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R820	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R821	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R826	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R827	7030005080	S.RESISTOR	ERJ2GEJ 823 X (82 kΩ)
R828	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R829	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R838	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R839	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω)
R841	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R842	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R844	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R845	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R847	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω) [AUS], [SEA], [USA-1]
	7030005570	S.RESISTOR	ERJ2GEJ 820 X (82 Ω) [EUR], [UK], [ITA]
R848	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω) [AUS], [SEA], [USA-1]
	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω) [EUR], [UK], [ITA]
R849	7030007300	S.RESISTOR	ERJ2GEJ 332 X (3.3 kΩ)
R850	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R851	7030008280	S.RESISTOR	ERJ2GEJ 271 X (270 Ω)
R852	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R853	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R854	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R855	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R857	7030008370	S.RESISTOR	ERJ2GEJ 561 X (560 Ω)
R862	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R864	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R865	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R866	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R867	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R868	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R869	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R870	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R871	7030007340	S.RESISTOR	ERJ2GEJ 153 X (15 kΩ)
R872	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R874	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R875	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R876	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R877	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R881	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R882	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R884	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R885	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R887	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R888	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R889	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R890	7030007350	S.RESISTOR	ERJ2GEJ 393 X (39 kΩ)
R892	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R893	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R894	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R895	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R897	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R898	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R899	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R900	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R901	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R902	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R903	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R904	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R905	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R906	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R907	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R908	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R909	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R910	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R911	7030007330	S.RESISTOR	ERJ1WRSJR15U (0.15 Ω)
R912	7030008400	S.RESISTOR	ERJ2GEJ 182 X (1.8 kΩ)
R913	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R914	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R915	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R916	7030005160	S.RESISTOR	ERJ2GEJ 105 X (1 MΩ)
R917	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R918	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R919	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R923	7030005600	S.RESISTOR	ERJ2GEJ 273 X (27 kΩ)
R924	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R925	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R928	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)
R929	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R930	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R931	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R932	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R933	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R934	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R935	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R936	7030005590	S.RESISTOR	ERJ2GEJ 680 X (68 Ω)
R938	7030007260	S.RESISTOR	ERJ2GEJ 330 X (33 Ω)
R939	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R940	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R942	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R943	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R944	7030005240	S.RESISTOR	ERJ2GEJ 473 X (47 kΩ)
R945	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R946	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R949	7030004010	S.RESISTOR	ERJ3GEYJ 2R2 V (2.2 Ω)
R951	7030007280	S.RESISTOR	ERJ2GEJ 331 X (330 Ω)
R952	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
R953	7030005040	S.RESISTOR	ERJ2GEJ 472 X (4.7 kΩ)
R954	7030005000	S.RESISTOR	ERJ2GEJ 471 X (470 Ω)
C1	4030013980	S.CERAMIC	ECUE1H010BCQ
C2	4030014050	S.CERAMIC	ECUE1H030BCQ
C3	4030014050	S.CERAMIC	ECUE1H030BCQ
C4	4030014110	S.CERAMIC	ECUE1H080CCQ
C5	4030014190	S.CERAMIC	ECUE1H680JCQ

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C6	4030014090	S.CERAMIC	ECUE1H060CCQ
C7	4030014170	S.CERAMIC	ECUE1H330JCQ
C8	4030014120	S.CERAMIC	ECUE1H100CCQ
C9	4030014420	S.CERAMIC	ECUE1H0R5BCQ
C10	4030014090	S.CERAMIC	ECUE1H060CCQ
C12	4030014100	S.CERAMIC	ECUE1H070CCQ
C13	4030014420	S.CERAMIC	ECUE1H0R5BCQ
C14	4030014020	S.CERAMIC	ECUE1H020BCQ
C15	4030014050	S.CERAMIC	ECUE1H030BCQ
C16	4030014240	S.CERAMIC	ECUE1H180JCQ
C17	4030014080	S.CERAMIC	ECUE1H050BCQ
C18	4030014150	S.CERAMIC	ECUE1H220JCQ
C19	4030014050	S.CERAMIC	ECUE1H030BCQ
C20	4030014140	S.CERAMIC	ECUE1H150JCQ
C21	4030014180	S.CERAMIC	ECUE1H470JCQ
C22	4030014490	S.CERAMIC	ECUE1E331KBQ
C23	4030014160	S.CERAMIC	ECUE1H270JCQ
C24	4030014500	S.CERAMIC	ECUE1H121JCQ
C25	4030014050	S.CERAMIC	ECUE1H030BCQ
C27	4030014120	S.CERAMIC	ECUE1H100CCQ
C28	4030014190	S.CERAMIC	ECUE1H680JCQ
C29	4030010080	S.CERAMIC	C1005 CH 1E 240J-T-A
C30	4030014440	S.CERAMIC	ECUE1H820JCQ
C31	4030014140	S.CERAMIC	ECUE1H150JCQ
C32	4030014180	S.CERAMIC	ECUE1H470JCQ
C33	4030013850	S.CERAMIC	ECUE1E102KBQ
C34	4030013850	S.CERAMIC	ECUE1E102KBQ
C35	4030013850	S.CERAMIC	ECUE1E102KBQ
C36	4030013850	S.CERAMIC	ECUE1E102KBQ
C37	4030013850	S.CERAMIC	ECUE1E102KBQ
C41	4030014050	S.CERAMIC	ECUE1H030BCQ
C42	4030013850	S.CERAMIC	ECUE1E102KBQ
C43	4030014020	S.CERAMIC	ECUE1H020BCQ
C44	4030013850	S.CERAMIC	ECUE1E102KBQ
C45	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C46	4030014020	S.CERAMIC	ECUE1H020BCQ
C48	4030014050	S.CERAMIC	ECUE1H030BCQ
C49	4030014420	S.CERAMIC	ECUE1H0R5BCQ
C50	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C51	4030014030	S.CERAMIC	ECUE1H2R5BCQ
C52	4030014030	S.CERAMIC	ECUE1H2R5BCQ
C53	4030014030	S.CERAMIC	ECUE1H2R5BCQ
C54	4030013850	S.CERAMIC	ECUE1E102KBQ
C55	4030013850	S.CERAMIC	ECUE1E102KBQ
C56	4030014140	S.CERAMIC	ECUE1H150JCQ
C57	4030013850	S.CERAMIC	ECUE1E102KBQ
C58	4030014070	S.CERAMIC	ECUE1H040BCQ
C59	4030013850	S.CERAMIC	ECUE1E102KBQ
C60	4030013850	S.CERAMIC	ECUE1E102KBQ
C61	4030014110	S.CERAMIC	ECUE1H080CCQ
C62	4030013850	S.CERAMIC	ECUE1E102KBQ
C63	4030013850	S.CERAMIC	ECUE1E102KBQ
C64	4030014020	S.CERAMIC	ECUE1H020BCQ
C65	4030013850	S.CERAMIC	ECUE1E102KBQ
C70	4030013850	S.CERAMIC	ECUE1E102KBQ
C71	4030013850	S.CERAMIC	ECUE1E102KBQ
C72	4030013850	S.CERAMIC	ECUE1E102KBQ
C73	4030013850	S.CERAMIC	ECUE1E102KBQ
C78	4030013850	S.CERAMIC	ECUE1E102KBQ
C82	4030013850	S.CERAMIC	ECUE1E102KBQ
C84	4030014350	S.CERAMIC	ECUE1H560JCQ
C85	4030013850	S.CERAMIC	ECUE1E102KBQ
C86	4550006710	S.TANTALUM	ECST1AX226R
C87	4550006710	S.TANTALUM	ECST1AX226R
C88	4030013850	S.CERAMIC	ECUE1E102KBQ
C89	4030013850	S.CERAMIC	ECUE1E102KBQ
C90	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C91	4030013850	S.CERAMIC	ECUE1E102KBQ
C92	4550005980	S.TANTALUM	TEMSVA 1A 475M-8L
C93	4030013850	S.CERAMIC	ECUE1E102KBQ
C94	4030013850	S.CERAMIC	ECUE1E102KBQ
C95	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C101	4030014190	S.CERAMIC	ECUE1H680JCQ
C102	4030014500	S.CERAMIC	ECUE1H121JCQ
C103	4030014180	S.CERAMIC	ECUE1H470JCQ
C107	4030013850	S.CERAMIC	ECUE1E102KBQ
C108	4030013850	S.CERAMIC	ECUE1E102KBQ
C114	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C115	4030014290	S.CERAMIC	ECUE1H090CCQ
C116	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C117	4030014050	S.CERAMIC	ECUE1H030BCQ
C119	4030013850	S.CERAMIC	ECUE1E102KBQ

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C120	4030016820	S.CERAMIC	ECUE1HR75BCQ
C121	4030013850	S.CERAMIC	ECUE1E102KBQ
C123	4030014120	S.CERAMIC	ECUE1H100CCQ
C124	4030013850	S.CERAMIC	ECUE1E102KBQ
C131	4030013850	S.CERAMIC	ECUE1E102KBQ
C132	4030013850	S.CERAMIC	ECUE1E102KBQ
C133	4030014050	S.CERAMIC	ECUE1H030BCQ
C135	4030013850	S.CERAMIC	ECUE1E102KBQ
C136	4030014050	S.CERAMIC	ECUE1H030BCQ
C137	4030014070	S.CERAMIC	ECUE1H040BCQ
C138	4030013850	S.CERAMIC	ECUE1E102KBQ
C139	4030014050	S.CERAMIC	ECUE1H030BCQ
C141	4030013850	S.CERAMIC	ECUE1E102KBQ
C142	4030013850	S.CERAMIC	ECUE1E102KBQ
C143	4030013850	S.CERAMIC	ECUE1E102KBQ
C144	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C145	4030013850	S.CERAMIC	ECUE1E102KBQ
C146	4030014210	S.CERAMIC	ECUE1H151JCQ
C147	4030014140	S.CERAMIC	ECUE1H150JCQ
C149	4030013850	S.CERAMIC	ECUE1E102KBQ
C150	4030013850	S.CERAMIC	ECUE1E102KBQ
C151	4030013850	S.CERAMIC	ECUE1E102KBQ
C152	4030013850	S.CERAMIC	ECUE1E102KBQ
C153	4030014080	S.CERAMIC	ECUE1H050BCQ
C154	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C155	4030013850	S.CERAMIC	ECUE1E102KBQ
C156	4030014100	S.CERAMIC	ECUE1H070CCQ
C157	4030014120	S.CERAMIC	ECUE1H100CCQ
C159	4030013850	S.CERAMIC	ECUE1E102KBQ
C160	4030013850	S.CERAMIC	ECUE1E102KBQ
C161	4030013850	S.CERAMIC	ECUE1E102KBQ
C163	4030013850	S.CERAMIC	ECUE1E102KBQ
C170	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C171	4030013850	S.CERAMIC	ECUE1E102KBQ
C172	4030013850	S.CERAMIC	ECUE1E102KBQ
C173	4030013850	S.CERAMIC	ECUE1E102KBQ
C175	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C178	4030014080	S.CERAMIC	ECUE1H050BCQ
C180	4030013850	S.CERAMIC	ECUE1E102KBQ
C181	4030013850	S.CERAMIC	ECUE1E102KBQ
C182	4030013850	S.CERAMIC	ECUE1E102KBQ
C183	4030013850	S.CERAMIC	ECUE1E102KBQ
C190	4030013850	S.CERAMIC	ECUE1E102KBQ
C191	4030013850	S.CERAMIC	ECUE1E102KBQ
C192	4030013850	S.CERAMIC	ECUE1E102KBQ
C193	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C194	4030013850	S.CERAMIC	ECUE1E102KBQ
C195	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C196	4030013850	S.CERAMIC	ECUE1E102KBQ
C197	4030013850	S.CERAMIC	ECUE1E102KBQ
C198	4030013850	S.CERAMIC	ECUE1E102KBQ
C199	4030013850	S.CERAMIC	ECUE1E102KBQ
C200	4030013850	S.CERAMIC	ECUE1E102KBQ
C201	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C202	4030013850	S.CERAMIC	ECUE1E102KBQ
C203	4030013850	S.CERAMIC	ECUE1E102KBQ
C204	4030013850	S.CERAMIC	ECUE1E102KBQ
C205	4030013850	S.CERAMIC	ECUE1E102KBQ
C206	4030013850	S.CERAMIC	ECUE1E102KBQ
C207	4030013850	S.CERAMIC	ECUE1E102KBQ
C208	4030013850	S.CERAMIC	ECUE1E102KBQ
C209	4030013850	S.CERAMIC	ECUE1E102KBQ
C210	4030013850	S.CERAMIC	ECUE1E102KBQ
C211	4030013850	S.CERAMIC	ECUE1E102KBQ
C212	4030013850	S.CERAMIC	ECUE1E102KBQ
C213	4030013850	S.CERAMIC	ECUE1E102KBQ
C301	4030014150	S.CERAMIC	ECUE1H220JCQ
C302	4030014170	S.CERAMIC	ECUE1H330JCQ
C303	4030014240	S.CERAMIC	ECUE1H180JCQ
C304	4030013850	S.CERAMIC	ECUE1E102KBQ
C305	4030013850	S.CERAMIC	ECUE1E102KBQ
C306	4030014180	S.CERAMIC	ECUE1H470JCQ
C307	4030013850	S.CERAMIC	ECUE1E102KBQ
C308	4030013850	S.CERAMIC	ECUE1E102KBQ
C310	4030013850	S.CERAMIC	ECUE1E102KBQ
C311	4030013850	S.CERAMIC	ECUE1E102KBQ
C313	4030013850	S.CERAMIC	ECUE1E102KBQ
C314	4030013850	S.CERAMIC	ECUE1E102KBQ
C315	4030013850	S.CERAMIC	ECUE1E102KBQ
C318	4030014280	S.CERAMIC	ECUE1H0R3BCQ
C319	4030014110	S.CERAMIC	ECUE1H080CCQ
C320	4030014180	S.CERAMIC	ECUE1H470JCQ

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C321	4030014180	S.CERAMIC	ECUE1H470JCQ
C322	4030013850	S.CERAMIC	ECUE1E102KBQ
C323	4030014020	S.CERAMIC	ECUE1H020BCQ
C324	4030013850	S.CERAMIC	ECUE1E102KBQ
C325	4030014110	S.CERAMIC	ECUE1H080CCQ
C326	4030013980	S.CERAMIC	ECUE1H010BCQ
C327	4030014080	S.CERAMIC	ECUE1H050BCQ
C341	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C342	4030013850	S.CERAMIC	ECUE1E102KBQ
C343	4030014200	S.CERAMIC	ECUE1H101JCQ
C344	4030013850	S.CERAMIC	ECUE1E102KBQ
C345	4030014200	S.CERAMIC	ECUE1H101JCQ
C346	4030014280	S.CERAMIC	ECUE1H0R3BCQ
C347	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C348	4030014050	S.CERAMIC	ECUE1H030BCQ
C349	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C350	4030013850	S.CERAMIC	ECUE1E102KBQ
C351	4030014180	S.CERAMIC	ECUE1H470JCQ
C352	4030014440	S.CERAMIC	ECUE1H820JCQ
C353	4030014150	S.CERAMIC	ECUE1H220JCQ
C354	4030014340	S.CERAMIC	ECUE1H390JCQ
C355	4030014240	S.CERAMIC	ECUE1H180JCQ
C356	4030014240	S.CERAMIC	ECUE1H180JCQ
C357	4030014340	S.CERAMIC	ECUE1H390JCQ
C358	4030014060	S.CERAMIC	ECUE1H3R5BCQ
C359	4030014150	S.CERAMIC	ECUE1H220JCQ
C401	4030014110	S.CERAMIC	ECUE1H080CCQ
C402	4030014120	S.CERAMIC	ECUE1H100CCQ
C403	4030014050	S.CERAMIC	ECUE1H030BCQ
C404	4030013850	S.CERAMIC	ECUE1E102KBQ
C405	4030013850	S.CERAMIC	ECUE1E102KBQ
C409	4030014110	S.CERAMIC	ECUE1H080CCQ
C410	4030014500	S.CERAMIC	ECUE1H121JCQ
C411	4030013850	S.CERAMIC	ECUE1E102KBQ
C412	4030013850	S.CERAMIC	ECUE1E102KBQ
C413	4030013850	S.CERAMIC	ECUE1E102KBQ
C415	4030013850	S.CERAMIC	ECUE1E102KBQ
C416	4030013850	S.CERAMIC	ECUE1E102KBQ
C417	4030013850	S.CERAMIC	ECUE1E102KBQ
C418	4030014080	S.CERAMIC	ECUE1H050BCQ
C502	4030013850	S.CERAMIC	ECUE1E102KBQ
C503	4030013850	S.CERAMIC	ECUE1E102KBQ
C504	4030013850	S.CERAMIC	ECUE1E102KBQ
C505	4030014020	S.CERAMIC	ECUE1H020BCQ
C506	4030013980	S.CERAMIC	ECUE1H010BCQ
C507	4030014020	S.CERAMIC	ECUE1H020BCQ
C508	4030014110	S.CERAMIC	ECUE1H080CCQ
C509	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C510	4030014080	S.CERAMIC	ECUE1H050BCQ
C511	4030013850	S.CERAMIC	ECUE1E102KBQ
C512	4030013850	S.CERAMIC	ECUE1E102KBQ
C513	4030013850	S.CERAMIC	ECUE1E102KBQ
C514	4030013850	S.CERAMIC	ECUE1E102KBQ
C515	4030013850	S.CERAMIC	ECUE1E102KBQ
C516	4030013850	S.CERAMIC	ECUE1E102KBQ
C517	4030013850	S.CERAMIC	ECUE1E102KBQ
C518	4030013850	S.CERAMIC	ECUE1E102KBQ
C519	4030013850	S.CERAMIC	ECUE1E102KBQ
C521	4030013850	S.CERAMIC	ECUE1E102KBQ
C522	4030014080	S.CERAMIC	ECUE1H050BCQ
C523	4030013850	S.CERAMIC	ECUE1E102KBQ
C524	4030014100	S.CERAMIC	ECUE1H070CCQ
C525	4030013850	S.CERAMIC	ECUE1E102KBQ
C526	4030013850	S.CERAMIC	ECUE1E102KBQ
C527	4030013850	S.CERAMIC	ECUE1E102KBQ
C601	4030013850	S.CERAMIC	ECUE1E102KBQ
C602	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C603	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C608	4030014020	S.CERAMIC	ECUE1H020BCQ
C609	4030013850	S.CERAMIC	ECUE1E102KBQ
C610	4030013850	S.CERAMIC	ECUE1E102KBQ
C612	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C613	4030013850	S.CERAMIC	ECUE1E102KBQ
C702	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C704	4030013850	S.CERAMIC	ECUE1E102KBQ
C705	4030013850	S.CERAMIC	ECUE1E102KBQ
C717	4030013850	S.CERAMIC	ECUE1E102KBQ
C722	4030014120	S.CERAMIC	ECUE1H100CCQ
C724	4030014120	S.CERAMIC	ECUE1H100CCQ
C725	4030014020	S.CERAMIC	ECUE1H020BCQ
C726	4030014100	S.CERAMIC	ECUE1H070CCQ
C727	4030014280	S.CERAMIC	ECUE1H0R3BCQ

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C728	4030014100	S.CERAMIC	ECUE1H070CCQ
C729	4030014020	S.CERAMIC	ECUE1H020BCQ
C730	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C731	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C741	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C748	4030013850	S.CERAMIC	ECUE1E102KBQ
C749	4030013850	S.CERAMIC	ECUE1E102KBQ
C801	4030013850	S.CERAMIC	ECUE1E102KBQ
C802	4030013850	S.CERAMIC	ECUE1E102KBQ
C803	4030013850	S.CERAMIC	ECUE1E102KBQ
C805	4030013850	S.CERAMIC	ECUE1E102KBQ
C806	4030014180	S.CERAMIC	ECUE1H470JCQ
C807	4030014180	S.CERAMIC	ECUE1H470JCQ
C808	4030014180	S.CERAMIC	ECUE1H470JCQ
C815	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C816	4030013850	S.CERAMIC	ECUE1E102KBQ
C817	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C818	4030014170	S.CERAMIC	ECUE1H330JCQ
C821	4030013850	S.CERAMIC	ECUE1E102KBQ
C822	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C823	4550006160	S.TANTALUM	ECST1CY155R
C824	4550006160	S.TANTALUM	ECST1CY155R
C825	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C827	4030014050	S.CERAMIC	ECUE1H030BCQ
C830	4030014050	S.CERAMIC	ECUE1H030BCQ
C831	4030013850	S.CERAMIC	ECUE1E102KBQ
C832	4030013850	S.CERAMIC	ECUE1E102KBQ
C833	4030013850	S.CERAMIC	ECUE1E102KBQ
C835	4030013850	S.CERAMIC	ECUE1E102KBQ
C836	4030013850	S.CERAMIC	ECUE1E102KBQ
C839	4030013850	S.CERAMIC	ECUE1E102KBQ
C840	4030013850	S.CERAMIC	ECUE1E102KBQ
C841	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C842	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C843	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C844	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C845	4030013850	S.CERAMIC	ECUE1E102KBQ
C849	4550004040	S.TANTALUM	TEMSVA 0J 685M-8L
C850	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C851	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C852	4030013850	S.CERAMIC	ECUE1E102KBQ
C853	4030013850	S.CERAMIC	ECUE1E102KBQ
C854	4030013850	S.CERAMIC	ECUE1E102KBQ
C855	4030013850	S.CERAMIC	ECUE1E102KBQ
C856	4030013850	S.CERAMIC	ECUE1E102KBQ
C857	4030014200	S.CERAMIC	ECUE1H101JCQ
C858	4030013850	S.CERAMIC	ECUE1E102KBQ
C860	4030014020	S.CERAMIC	ECUE1H020BCQ [AUS], [SEA], [USA-1]
	4030014110	S.CERAMIC	ECUE1H080CCQ [EUR], [UK], [ITA]
C861	4030013850	S.CERAMIC	ECUE1E102KBQ
C862	4030013850	S.CERAMIC	ECUE1E102KBQ
C863	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C864	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C865	4030013850	S.CERAMIC	ECUE1E102KBQ
C866	4030013850	S.CERAMIC	ECUE1E102KBQ
C867	4030013850	S.CERAMIC	ECUE1E102KBQ
C868	4550006680	S.TANTALUM	ECST0JY156R
C869	4030013850	S.CERAMIC	ECUE1E102KBQ
C870	4550006680	S.TANTALUM	ECST0JY156R
C871	4030013850	S.CERAMIC	ECUE1E102KBQ
C872	4550006680	S.TANTALUM	ECST0JY156R
C873	4030013850	S.CERAMIC	ECUE1E102KBQ
C874	4550006680	S.TANTALUM	ECST0JY156R
C875	4030013850	S.CERAMIC	ECUE1E102KBQ
C876	4550006680	S.TANTALUM	ECST0JY156R
C877	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C878	4030013850	S.CERAMIC	ECUE1E102KBQ
C879	4030014050	S.CERAMIC	ECUE1H030BCQ
C880	4030014080	S.CERAMIC	ECUE1H050BCQ
C881	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C882	4030013850	S.CERAMIC	ECUE1E102KBQ
C883	4030013850	S.CERAMIC	ECUE1E102KBQ
C884	4030013850	S.CERAMIC	ECUE1E102KBQ
C885	4030014150	S.CERAMIC	ECUE1H220JCQ
C886	4030013850	S.CERAMIC	ECUE1E102KBQ
C888	4030013850	S.CERAMIC	ECUE1E102KBQ
C889	4030013850	S.CERAMIC	ECUE1E102KBQ
C890	4030014080	S.CERAMIC	ECUE1H050BCQ
C891	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C892	4030013850	S.CERAMIC	ECUE1E102KBQ
C894	4030013850	S.CERAMIC	ECUE1E102KBQ

S.=Surface mount

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C895	4030013850	S.CERAMIC	ECUE1E102KBQ
C896	4030014050	S.CERAMIC	ECUE1H030BCQ
C897	4030014090	S.CERAMIC	ECUE1H060CCQ
C898	4030013850	S.CERAMIC	ECUE1E102KBQ
C899	4030013850	S.CERAMIC	ECUE1E102KBQ
C900	4030014020	S.CERAMIC	ECUE1H020BCQ [AUS], [SEA], [USA-1]
	4030014090	S.CERAMIC	ECUE1H060CCQ [EUR], [UK], [ITA]
C901	4030013850	S.CERAMIC	ECUE1E102KBQ
C902	4030013850	S.CERAMIC	ECUE1E102KBQ
C903	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C904	4030013850	S.CERAMIC	ECUE1E102KBQ
C907	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C908	4030013850	S.CERAMIC	ECUE1E102KBQ
C911	4030013850	S.CERAMIC	ECUE1E102KBQ
C912	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C913	4030013850	S.CERAMIC	ECUE1E102KBQ
C914	4030013850	S.CERAMIC	ECUE1E102KBQ
C915	4030013850	S.CERAMIC	ECUE1E102KBQ
C916	4030013980	S.CERAMIC	ECUE1H010BCQ
C921	4030013850	S.CERAMIC	ECUE1E102KBQ
C923	4030013850	S.CERAMIC	ECUE1E102KBQ
C924	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C928	4030013850	S.CERAMIC	ECUE1E102KBQ
C930	4030013850	S.CERAMIC	ECUE1E102KBQ
C931	4030013850	S.CERAMIC	ECUE1E102KBQ
C932	4030013850	S.CERAMIC	ECUE1E102KBQ
C933	4030013850	S.CERAMIC	ECUE1E102KBQ
C934	4030013850	S.CERAMIC	ECUE1E102KBQ
C935	4030013850	S.CERAMIC	ECUE1E102KBQ
C937	4030013850	S.CERAMIC	ECUE1E102KBQ
C938	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C939	4030013850	S.CERAMIC	ECUE1E102KBQ
C940	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C941	4030013850	S.CERAMIC	ECUE1E102KBQ
C942	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C943	4030013850	S.CERAMIC	ECUE1E102KBQ
C944	4030009350	S.CERAMIC	C1608 CH 1H 3R5B-T-A
C945	4030014180	S.CERAMIC	ECUE1H470JCQ
C948	4030013850	S.CERAMIC	ECUE1E102KBQ
C949	4030013850	S.CERAMIC	ECUE1E102KBQ
C950	4030013850	S.CERAMIC	ECUE1E102KBQ
C951	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A [AUS], [SEA], [USA-1]
	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A [EUR], [UK], [ITA]
C952	4030013850	S.CERAMIC	ECUE1E102KBQ
C953	4030013850	S.CERAMIC	ECUE1E102KBQ
C954	4030014250	S.CERAMIC	GRH708 CH 150J 200PT
C955	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C956	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C957	4030013850	S.CERAMIC	ECUE1E102KBQ
C958	4030013850	S.CERAMIC	ECUE1E102KBQ
C960	4030004960	S.CERAMIC	C2012 CH 1H 560J-T-A
C961	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C962	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C963	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C964	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C965	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C966	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C967	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C968	4030013850	S.CERAMIC	ECUE1E102KBQ
C969	4030005030	S.CERAMIC	C2012 CH 1H 221J-T-A
C970	4030004960	S.CERAMIC	C2012 CH 1H 560J-T-A
C971	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C972	4030013850	S.CERAMIC	ECUE1E102KBQ
C973	4030013850	S.CERAMIC	ECUE1E102KBQ
C974	4030013850	S.CERAMIC	ECUE1E102KBQ
C975	4030013850	S.CERAMIC	ECUE1E102KBQ
C976	4030013850	S.CERAMIC	ECUE1E102KBQ
C977	4030013850	S.CERAMIC	ECUE1E102KBQ
C978	4030013850	S.CERAMIC	ECUE1E102KBQ
C979	4030013850	S.CERAMIC	ECUE1E102KBQ
C980	4030013850	S.CERAMIC	ECUE1E102KBQ
C981	4030013850	S.CERAMIC	ECUE1E102KBQ
C982	4030013850	S.CERAMIC	ECUE1E102KBQ
C983	4030013850	S.CERAMIC	ECUE1E102KBQ
C985	4030013850	S.CERAMIC	ECUE1E102KBQ
C986	4030013850	S.CERAMIC	ECUE1E102KBQ
C987	4030013850	S.CERAMIC	ECUE1E102KBQ
C988	4030013850	S.CERAMIC	ECUE1E102KBQ
C989	4030013850	S.CERAMIC	ECUE1E102KBQ

[RF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C991	4030014200	S.CERAMIC	ECUE1H101JCQ
C992	4030014200	S.CERAMIC	ECUE1H101JCQ
C993	4030013850	S.CERAMIC	ECUE1E102KBQ
C994	4030014200	S.CERAMIC	ECUE1H101JCQ
C995	4030013850	S.CERAMIC	ECUE1E102KBQ
C997	4030013850	S.CERAMIC	ECUE1E102KBQ
J3	6450000870	CONNECTOR	HEC2711-01-020
J4	6510019870	S.CONNECTOR	AXK5S40045P
J951	6510020400	S.CONNECT	MM7329-2700
J952	6510020400	S.CONNECT	MM7329-2700
W1	8900008750	CABLE	OPC-868 (MXFG76FG0400)
EP1	0910051346	PCB	B 5140F

[VCO BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
Q301	1530003560	S.TRANSISTOR	2SC5195-T1
Q302	1530003560	S.TRANSISTOR	2SC5195-T1
Q311	1530003560	S.TRANSISTOR	2SC5195-T1
Q312	1530003560	S.TRANSISTOR	2SC5195-T1
Q313	1530003560	S.TRANSISTOR	2SC5195-T1
Q321	1530003560	S.TRANSISTOR	2SC5195-T1
Q322	1530003560	S.TRANSISTOR	2SC5195-T1
Q323	1530003560	S.TRANSISTOR	2SC5195-T1
Q350	1530003260	S.TRANSISTOR	2SC5006-T1
Q351	1530003560	S.TRANSISTOR	2SC5195-T1
Q353	1530003560	S.TRANSISTOR	2SC5195-T1
Q354	1530003560	S.TRANSISTOR	2SC5195-T1
D301	1720000690	S.VARICAP	1SV282 (TPH2)
D302	1790001260	S.DIODE	MA2S077-(TX)
D311	1750000610	S.VARICAP	MA2SV0500L
D312	1750000360	S.DIODE	1SS364 (TE85L)
D321	1790001260	S.DIODE	MA2S077-(TX)
D322	1720000370	S.VARICAP	HVU350TRF
D351	1790001310	S.VARICAP	1SV270 (TPH3)
D352	1790001260	S.DIODE	MA2S077-(TX)
L301	6200004480	S.COIL	MLF1608D R82K-T
L302	6200008190	S.COIL	0.25-1.9-8TL 80N
L311	6200004480	S.COIL	MLF1608D R82K-T
L312	6200008280	S.COIL	0.30-1.7-7TL 50N
L313	6200008170	S.COIL	0.35-1.6-8TL 54N
L321	6200004480	S.COIL	MLF1608D R82K-T
L322	6200008330	S.COIL	0.45-1.4-4TL 15N
L330	6200008230	S.COIL	0.30-1.3-5TL 22N
L331	6200003640	S.COIL	MLF1608K 100K-T
L332	6200005680	S.COIL	ELJRE 15NG-F
L333	6200005640	S.COIL	ELJRE 6N8Z-F
L334	6200005640	S.COIL	ELJRE 6N8Z-F
L335	6200005630	S.COIL	ELJRE 5N6Z-F
L336	6200005620	S.COIL	ELJRE 4N7Z-F
L337	6200005640	S.COIL	ELJRE 6N8Z-F
L338	6200005650	S.COIL	ELJRE 8N2Z-F
L360	6200003640	S.COIL	MLF1608K 100K-T
R301	7030005700	S.RESISTOR	ERJ2GEJ 274 X (270 kΩ)
R302	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R303	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R304	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R305	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R306	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R307	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R308	7030007290	S.RESISTOR	ERJ2GEJ 222 X (2.2 kΩ)
R311	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R312	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R313	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)

S.=Surface mount

[VCO BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R314	7030005290	S.RESISTOR	ERJ2GEJ 682 X (6.8 kΩ)
R315	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R316	7030004990	S.RESISTOR	ERJ2GEJ 221 X (220 Ω)
R317	7030005070	S.RESISTOR	ERJ2GEJ 683 X (68 kΩ)
R318	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω)
R319	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R321	7030005120	S.RESISTOR	ERJ2GEJ 102 X (1 kΩ)
R322	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R323	7030005590	S.RESISTOR	ERJ2GEJ 680 X (68 Ω)
R324	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R325	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R326	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R327	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R328	7030007270	S.RESISTOR	ERJ2GEJ 151 X (150 Ω)
R329	7030005070	S.RESISTOR	ERJ2GEJ 683 X (68 kΩ)
R330	7030005300	S.RESISTOR	ERJ2GEJ 150 X (15 Ω)
R360	7030005050	S.RESISTOR	ERJ2GEJ 103 X (10 kΩ)
R361	7030005220	S.RESISTOR	ERJ2GEJ 223 X (22 kΩ)
R362	7030009140	S.RESISTOR	ERJ2GEJ 272 X (2.7 kΩ)
R363	7030009160	S.RESISTOR	ERJ2GEJ 181 X (180 Ω)
R364	7030007290	S.RESISTOR	ERJ2GEJ 222 X (2.2 kΩ)
R365	7030005530	S.RESISTOR	ERJ2GEJ 100 X (10 Ω)
R366	7030005060	S.RESISTOR	ERJ2GEJ 333 X (33 kΩ)
R367	7030008010	S.RESISTOR	ERJ2GEJ 123 (12 kΩ)
R368	7030005570	S.RESISTOR	ERJ2GEJ 820 X (82 Ω)
R369	7030004970	S.RESISTOR	ERJ2GEJ 470 X (47 Ω)
R371	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R372	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
R373	7030004980	S.RESISTOR	ERJ2GEJ 101 X (100 Ω)
R374	7030005090	S.RESISTOR	ERJ2GEJ 104 X (100 kΩ)
C301	4030013850	S.CERAMIC	ECUE1E102KBQ
C302	4030013850	S.CERAMIC	ECUE1E102KBQ
C303	4030013850	S.CERAMIC	ECUE1E102KBQ
C304	4030014020	S.CERAMIC	ECUE1H020BCQ
C305	4030014020	S.CERAMIC	ECUE1H020BCQ
C306	4030013850	S.CERAMIC	ECUE1E102KBQ
C307	4030014280	S.CERAMIC	ECUE1H0R3BCQ
C308	4030013850	S.CERAMIC	ECUE1E102KBQ
C309	4030013850	S.CERAMIC	ECUE1E102KBQ
C310	4030013850	S.CERAMIC	ECUE1E102KBQ
C311	4030013850	S.CERAMIC	ECUE1E102KBQ
C312	4030013850	S.CERAMIC	ECUE1E102KBQ
C313	4030013980	S.CERAMIC	ECUE1H010BCQ
C314	4030013980	S.CERAMIC	ECUE1H010BCQ
C315	4030013850	S.CERAMIC	ECUE1E102KBQ
C316	4030014280	S.CERAMIC	ECUE1H0R3BCQ
C317	4030013850	S.CERAMIC	ECUE1E102KBQ
C318	4030013850	S.CERAMIC	ECUE1E102KBQ
C319	4030013850	S.CERAMIC	ECUE1E102KBQ
C320	4030013850	S.CERAMIC	ECUE1E102KBQ
C321	4030014150	S.CERAMIC	ECUE1H220JCQ
C322	4030014180	S.CERAMIC	ECUE1H470JCQ
C323	4030013850	S.CERAMIC	ECUE1E102KBQ
C324	4030013980	S.CERAMIC	ECUE1H010BCQ
C325	4030013980	S.CERAMIC	ECUE1H010BCQ
C326	4030013850	S.CERAMIC	ECUE1E102KBQ
C327	4030014420	S.CERAMIC	ECUE1H0R5BCQ
C328	4030013850	S.CERAMIC	ECUE1E102KBQ
C329	4030013850	S.CERAMIC	ECUE1E102KBQ
C330	4030013850	S.CERAMIC	ECUE1E102KBQ
C331	4030013850	S.CERAMIC	ECUE1E102KBQ
C332	4030013850	S.CERAMIC	ECUE1E102KBQ
C333	4030013850	S.CERAMIC	ECUE1E102KBQ
C334	4030013850	S.CERAMIC	ECUE1E102KBQ
C360	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
C361	4030013850	S.CERAMIC	ECUE1E102KBQ
C362	4030013850	S.CERAMIC	ECUE1E102KBQ
C363	4030009820	S.CERAMIC	C1005 JB 1C 103K-T-A
C364	4030014130	S.CERAMIC	ECUE1H120JCQ
C365	4030014020	S.CERAMIC	ECUE1H020BCQ
C366	4030014100	S.CERAMIC	ECUE1H070CCQ
C367	4030013850	S.CERAMIC	ECUE1E102KBQ
C368	4030013850	S.CERAMIC	ECUE1E102KBQ
C369	4030014100	S.CERAMIC	ECUE1H070CCQ
C370	4550006120	S.TANTALUM	TEMSVA 0G 226M-8L
C371	4030014090	S.CERAMIC	ECUE1H060CCQ
C372	4030013850	S.CERAMIC	ECUE1E102KBQ
C373	4030013980	S.CERAMIC	ECUE1H010BCQ
C374	4030014050	S.CERAMIC	ECUE1H030BCQ
C375	4030013850	S.CERAMIC	ECUE1E102KBQ

[VCO BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C376	4030014070	S.CERAMIC	ECUE1H040BCQ
C377	4030014110	S.CERAMIC	ECUE1H080CCQ
C378	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C379	4030010080	S.CERAMIC	C1005 CH 1E 240J-T-A
C380	4030014050	S.CERAMIC	ECUE1H030BCQ
C381	4030014000	S.CERAMIC	ECUE1H1R5BCQ
C382	4030013980	S.CERAMIC	ECUE1H010BCQ
C383	4030014050	S.CERAMIC	ECUE1H030BCQ
C384	4030014420	S.CERAMIC	ECUE1H0R5BCQ
C385	4030014020	S.CERAMIC	ECUE1H020BCQ
C386	4030014050	S.CERAMIC	ECUE1H030BCQ
C387	4030013850	S.CERAMIC	ECUE1E102KBQ
C388	4030014020	S.CERAMIC	ECUE1H020BCQ
C389	4030013970	S.CERAMIC	C1005 JB 0J 104K-T-N
J301	6910012160	CONNECTOR	IMSA-9230B-1-07Z057-T
J302	6910011770	CONNECTOR	IMSA-9230B-1-10Z057-T
EP1	0910051333	PCB	B 5137C

S.=Surface mount

SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

[CHASSIS PARTS]

REF. NO.	ODER NO.	DESCRIPTION	QTY.
J1	6510020650	Connector SMA-R224	1
S1	7600000210	Encoder TP70N00E20-15F-1903	1
SP1	2510000960	Speaker CS028014-12	1
MP1	8210016140	2135 Front panel (A) [EUR], [UK], [ITA]	1
	8210016130	2135 Front panel (B) [AUS], [SEA], [USA-1]	1
MP2	8010017680	2135 chassis	1
MP3	8930048450	2135 10-Key	1
MP6	8930048470	2135 PW button	1
MP7	8310045560	2135 Window plate	1
MP9	8930048840	2135 Mic sponge	1
MP10	8830001450	2135 Hex nut	1
MP13	8930048480	2135 Main seal	1
MP14	8930048490	2135 Mic cap	1
MP17	8930045940	1903 Botton sheet	1
MP18	8930046020	1123 Sheet (A)-1	1
MP19	8610010530	Knob N-263	1
MP20	8930044460	1903 Contact rubber	1
MP21	8930044530	1903 Rubber sheet	1
MP22	8950004810	1903 SP spring	2
MP23	8830001220	Nut (F)	1
MP24	8930048630	1903 Rear sheet (G) [USA-1]	1
	8930048640	1903 Rear sheet (H) [AUS], [SEA]	1
	8930048650	1903 Rear sheet (I) [EUR], [UK], [ITA]	1
MP25	8930044470	1903 DC cap	1
MP26	8930044480	1903 Lens	1
MP28	8810008990	Screw PH BT M2x10 ZX	2
MP29	8810009510	Screw FH BT M2x4 NI-ZU	11
MP30	8810009630	Screw FH No.0 M2x4.5 NI B	2
MP31	8930049140	2135 Earth plate	1
MP32	8930049040	Thermally sheet (FQ)	1

[RF UNIT]

REF. NO.	ODER NO.	DESCRIPTION	QTY.
MP1	8410002280	2135 PA heatsink-2	1
MP2	8950004800	1903 Contact spring	1

[LOGIC UNIT]

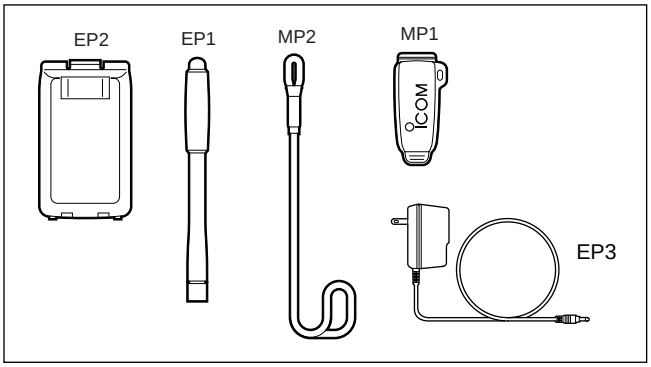
REF. NO.	ODER NO.	DESCRIPTION	QTY.
DS4	5030001700	LCD LM-1782	1
EP2	8930048950	LCD Contact SRCN-2135-SP-N-W	1
MP1	8930048500	2135 LCD Holder	1
MP2	8930015960	2135 Reflector	1
MP4	8610010680	Knob N-271	1
MP5	8810009790	Screw PH BT 1.7x4 NI-ZU	2
MP6	8510012200	2135 LOGIC shield	1
MP9	8930049020	2315 LOGIC sheet	1

[VCO UNIT]

REF. NO.	ODER NO.	DESCRIPTION	QTY.
MP1	8510012100	2135 VCO case	1

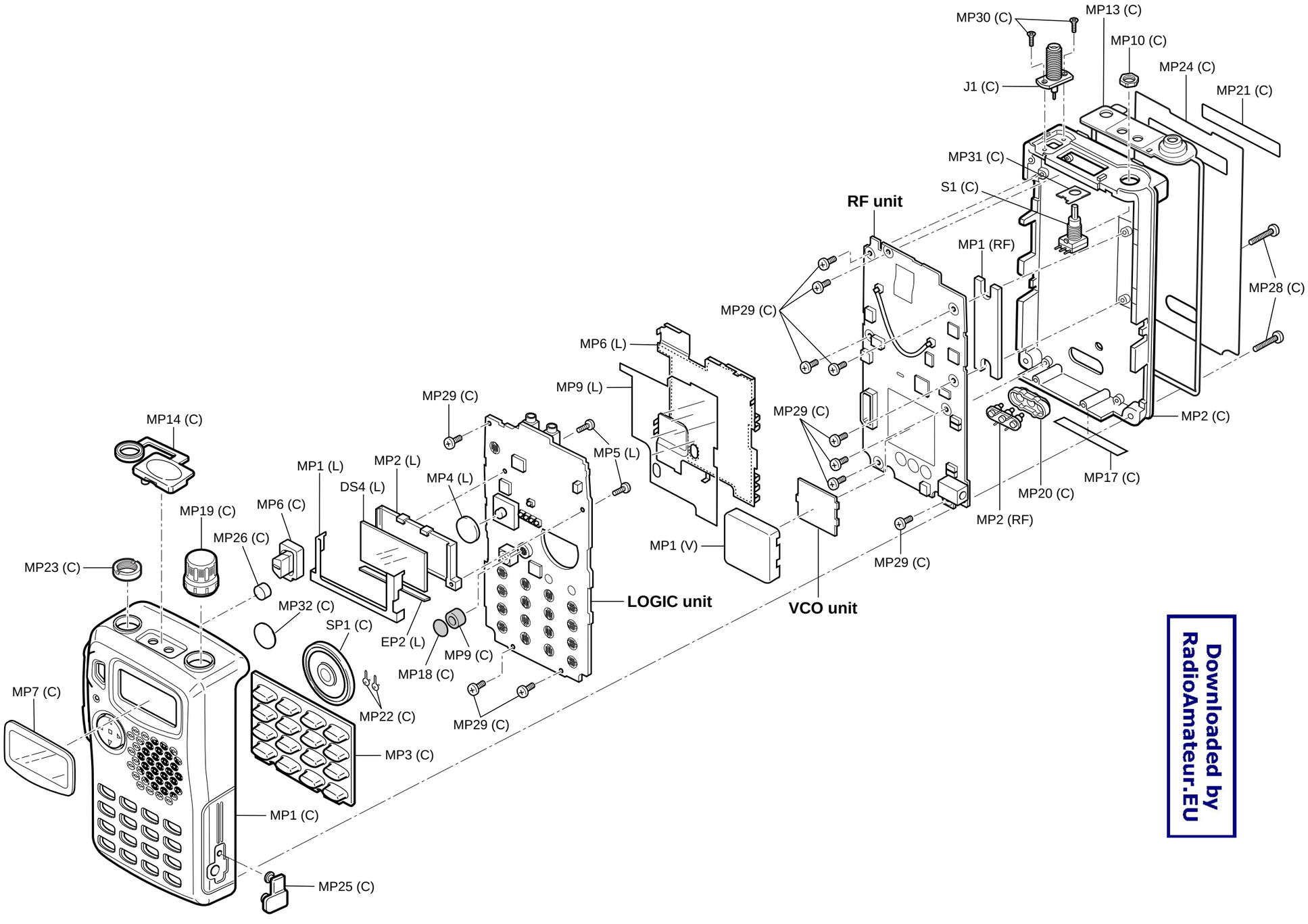
[ACCESSORIES]

REF. NO.	ODER NO.	DESCRIPTION	QTY.
EP1	Optional product	Antenna FA-S6270A	1
EP2	Optional product	Battery BP-200 [USA-1] only	1
	Optional product	Battery BP-199 [EUR], [UK], [ITA], [AUS]	1
EP3	Optional product	Charger BC-110A [USA-1] only	1
	Optional product	Charger BC-110V [AUS] only	1
	Optional product	Charger BC-110D [EUR], [ITA]	1
MP1	8930044450	1903 Belt clip	1
MP2	8010011960	Strap belt HK-005	1



Screw abbreviations

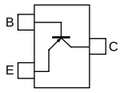
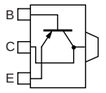
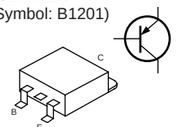
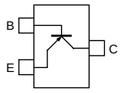
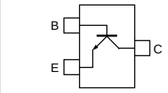
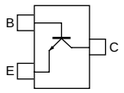
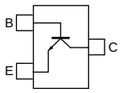
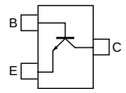
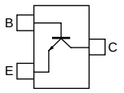
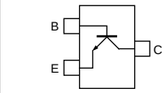
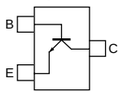
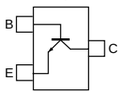
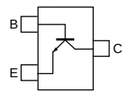
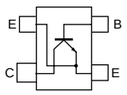
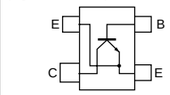
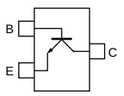
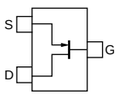
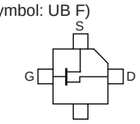
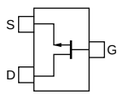
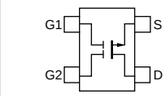
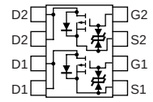
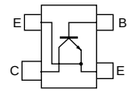
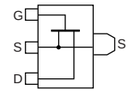
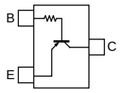
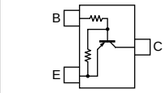
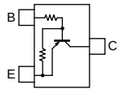
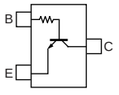
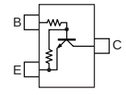
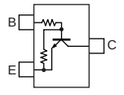
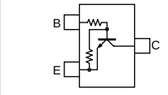
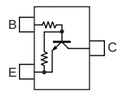
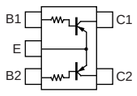
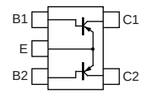
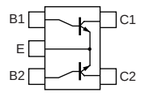
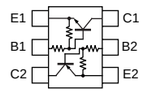
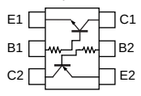
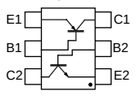
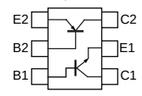
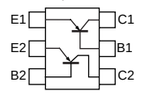
A, B0, BT: Self-tapping
PH: Pan head
FH: Flat head
BiH: Bind head
NI: Nickel
SUS: Stainless
ZK: Black



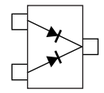
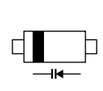
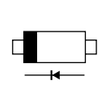
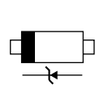
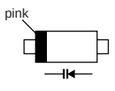
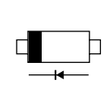
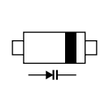
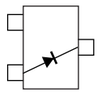
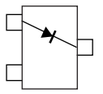
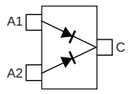
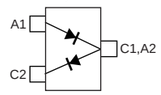
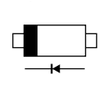
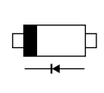
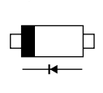
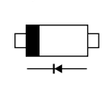
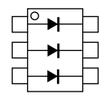
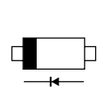
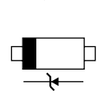
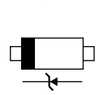
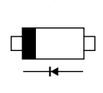
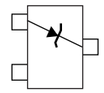
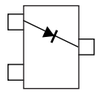
UNIT abbreviation (C): CHASSIS PARTS, (L): LOGIC UNIT (RF): RF UNIT, (V): VCO UNIT

SECTION 8 SEMI-CONDUCTOR INFORMATION

• TRANSISTOR AND FET'S

2SA1588 GR (Symbol: ZG) 	**2SB1132 R** (Symbol: BARB) 	**2SB1201 S** (Symbol: B1201) 	**2SB1462 R** (Symbol: BR) 	**2SC3356 R25** (Symbol: R25) 
2SC4117 BL (Symbol: CL) 	**2SC4215 0** (Symbol: QO) 	**2SC4226 R25** (Symbol: R25) 	**2SC4228 R45** (Symbol: R45) 	**2SC4403 3** (Symbol: LY3) 
2SC5006 (Symbol: 24) 	**2SC5107 0** (Symbol: MFO) 	**2SC5195** (Symbol: 88) 	**2SC5319** (Symbol: MT) 	**2SC5454 R54** (Symbol: R54) 
2SD2216 S (Symbol: Y) 	**2SJ364 Q** (Symbol: 4M) 	**2SK3075** (Symbol: UB F) 	**2SK880 Y** (Symbol: XY) 	**3SK291** (Symbol: UF) 
HAT1024 R (Symbol: 1024) 	**MRF9745** (Symbol: M745) 	**MXR9745-RT1** (Symbol: RG) 	**UN9115** (Symbol: 6E) 	**UN9116** (Symbol: 6F) 
UN911D (Symbol: 6M) 	**UN9210** (Symbol: 8L) 	**UN9211** (Symbol: 8A) 	**UN9214** (Symbol: 8A) 	**UN9215** (Symbol: 8E) 
UN921E (Symbol: 8N) 	**XP1115** (Symbol: 9L) 	**XP1116** (Symbol: 7N) 	**XP1501 AB** (Symbol: 5R) 	**XP4312** (Symbol: 7T) 
XP4315 (Symbol: CB) 	**XP4601** (Symbol: 5C) 	**XP5601 AB** (Symbol: 4N) 	**XP6401** (Symbol: 5O) 	

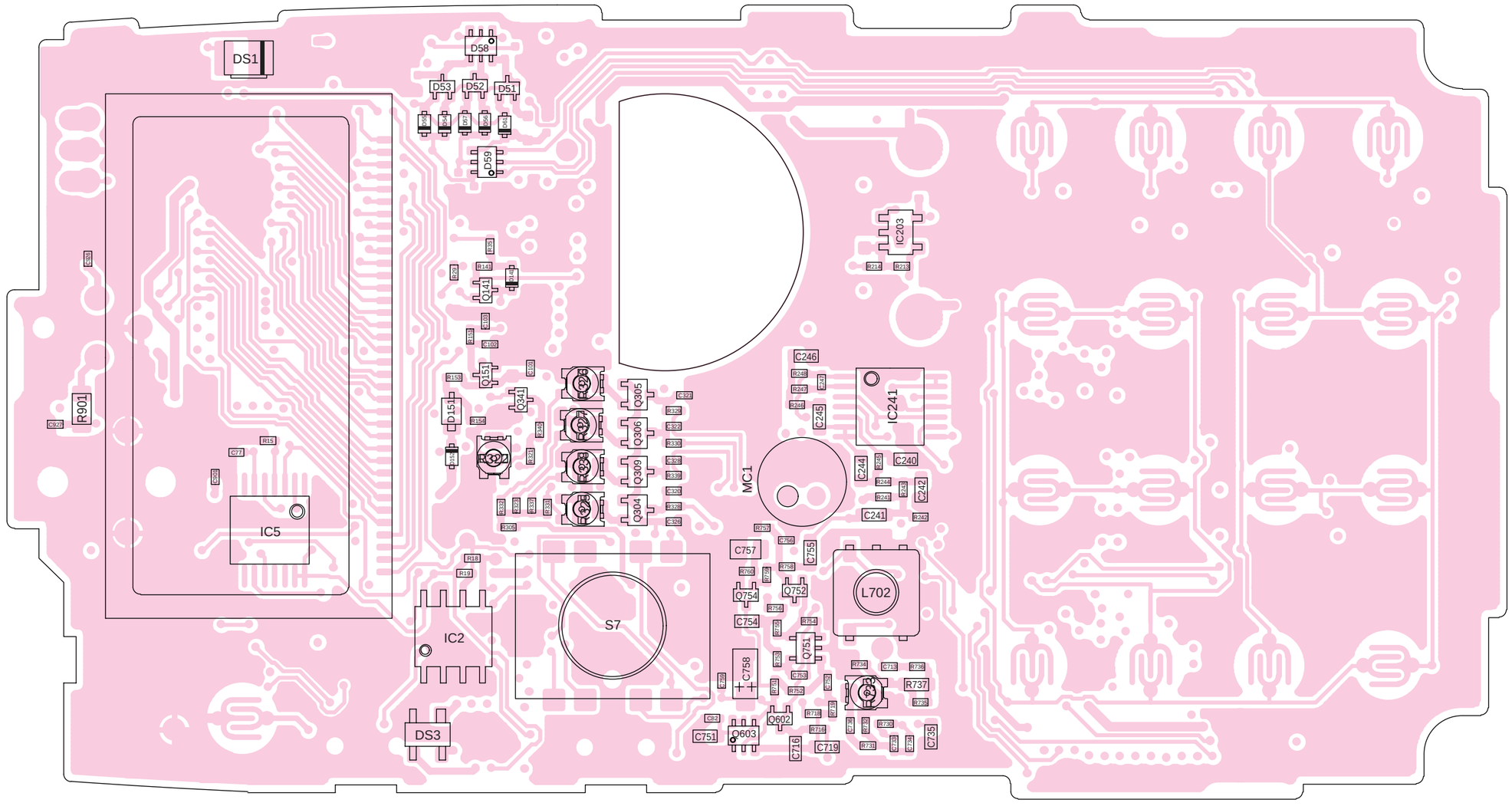
• DIODES

1SS364 (Symbol: BF) 	**1SV270** (Symbol: TF) 	**1SV271** (Symbol: TG) 	**1SV282** (Symbol: TD) 	**1SV288** (Symbol: TJ) 
1SV308 (Symbol: TX) 	**HVU350** (Symbol: 4) 	**MA132HK** (Symbol: M3N) 	**MA132K** (Symbol: 7N) 	**MA132WK** (Symbol: MU) 
MA133 (Symbol: MP) 	**MA2S077** (Symbol: S) 	**MA2S111** (Symbol: A) 	**MA2S728** (Symbol: B) 	**MA2SV05** (Symbol: A) 
MA6S121 (Symbol: M2D) 	**MA729** (Symbol: 2B) 	**MA8062 M** (Symbol: 8^6) 	**MA8100 M** (Symbol: 10-) 	**RB060L-40** (Symbol: 36) 
RD5.1M B3 (Symbol: 513) 	**SB07-03C** (Symbol: J) 			

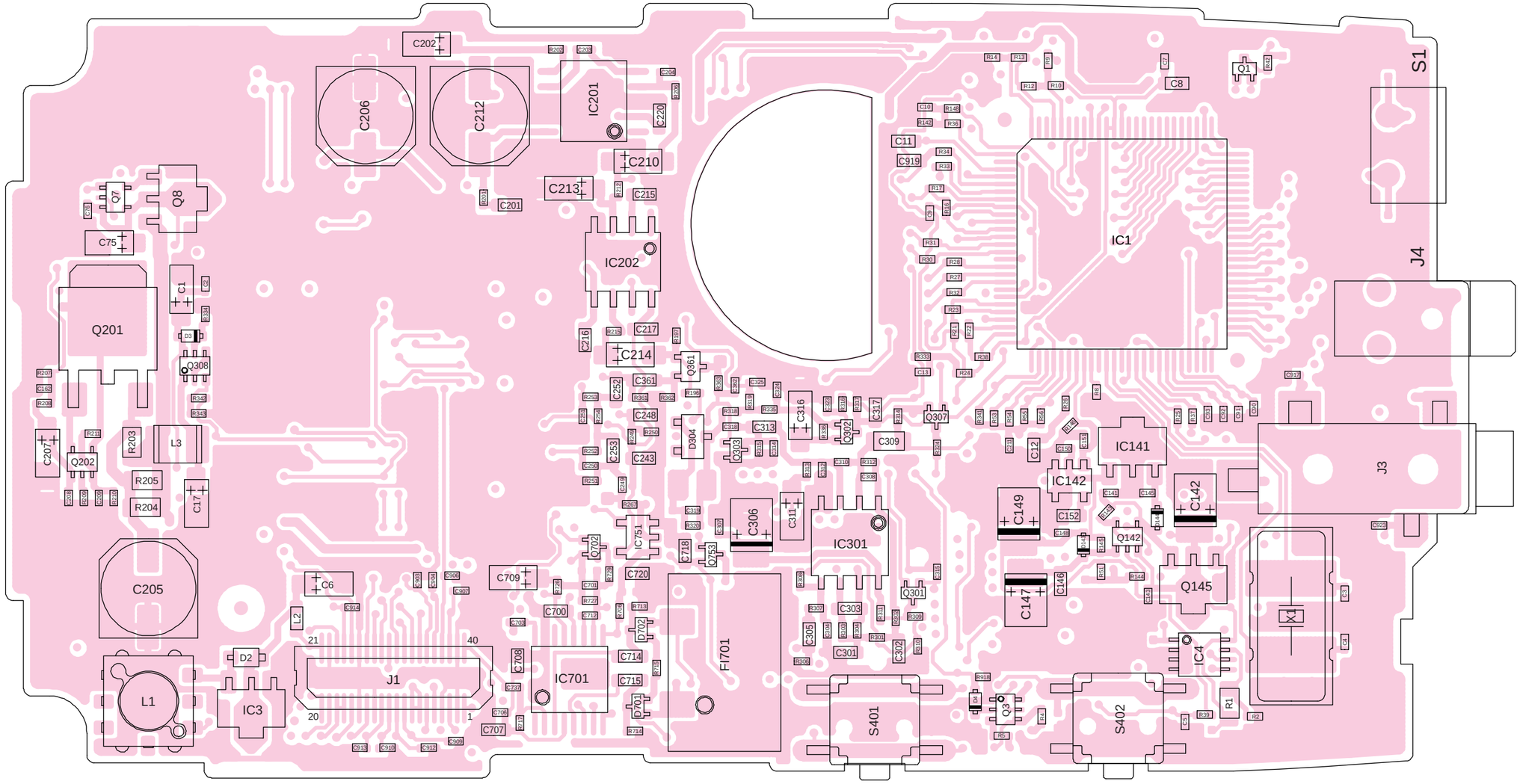
SECTION 9 BOARD LAYOUTS

9-1 LOGIC UNIT

- **TOP VIEW**



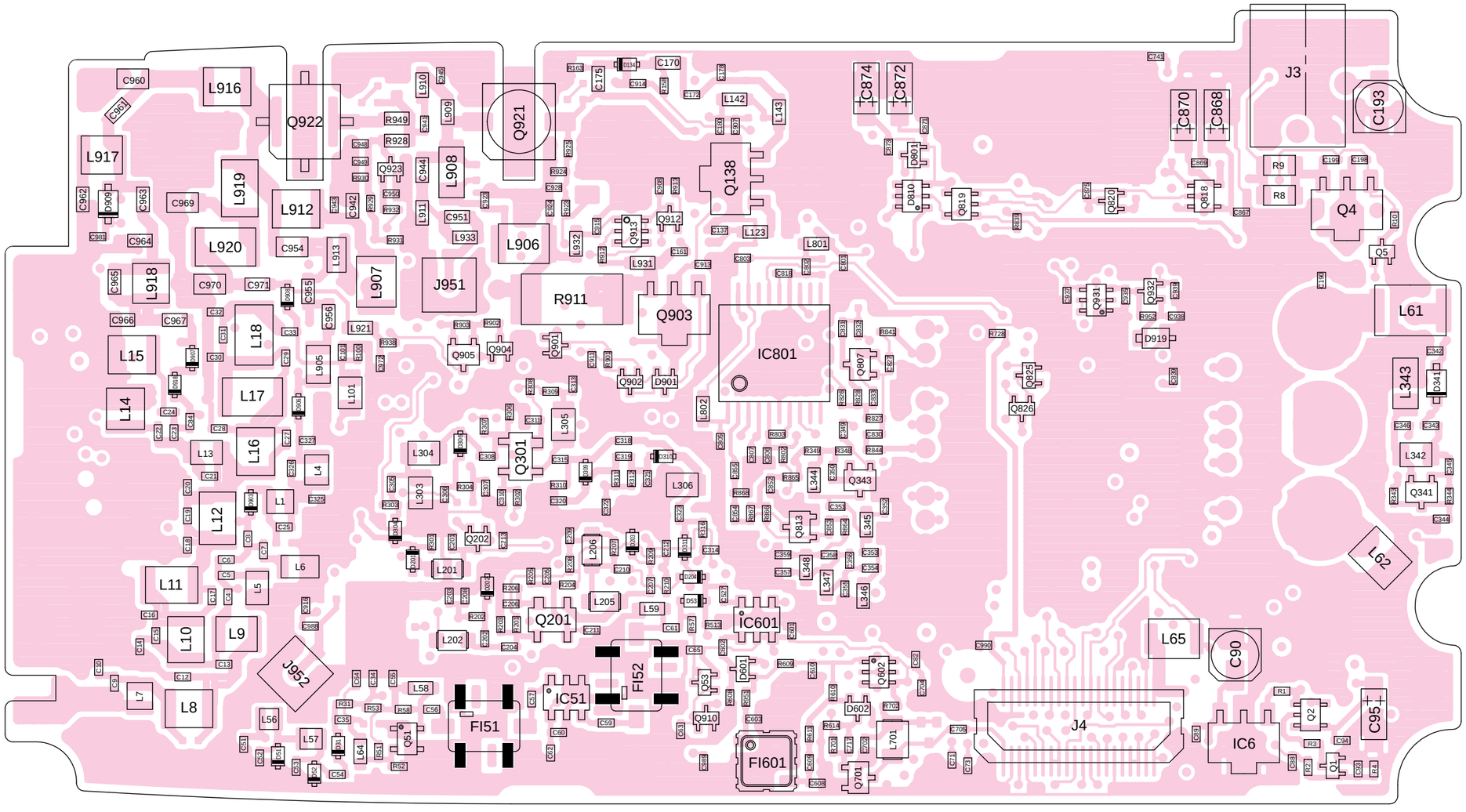
• BOTTOM VIEW



21								J1 to RF unit J4											40
DC-DC	GND	6MVCO	CHGC	R+3	GND	AM	WFM	12VCO	TXC	UVCO	VHVCO	TUNE	AGC	CK	DATA	IOST	THERM	GND	2NDLO
EURDEV	FSET	HV	HV	PLST2	GND	MOD	GND	BDET	PDA1/UL	PLST1	LOCKV	VCC	VCC	PDA2/UL	+3C	GND	PSET	GND	IFIN
20																			1

9-2 RF UNIT

- **TOP VIEW**

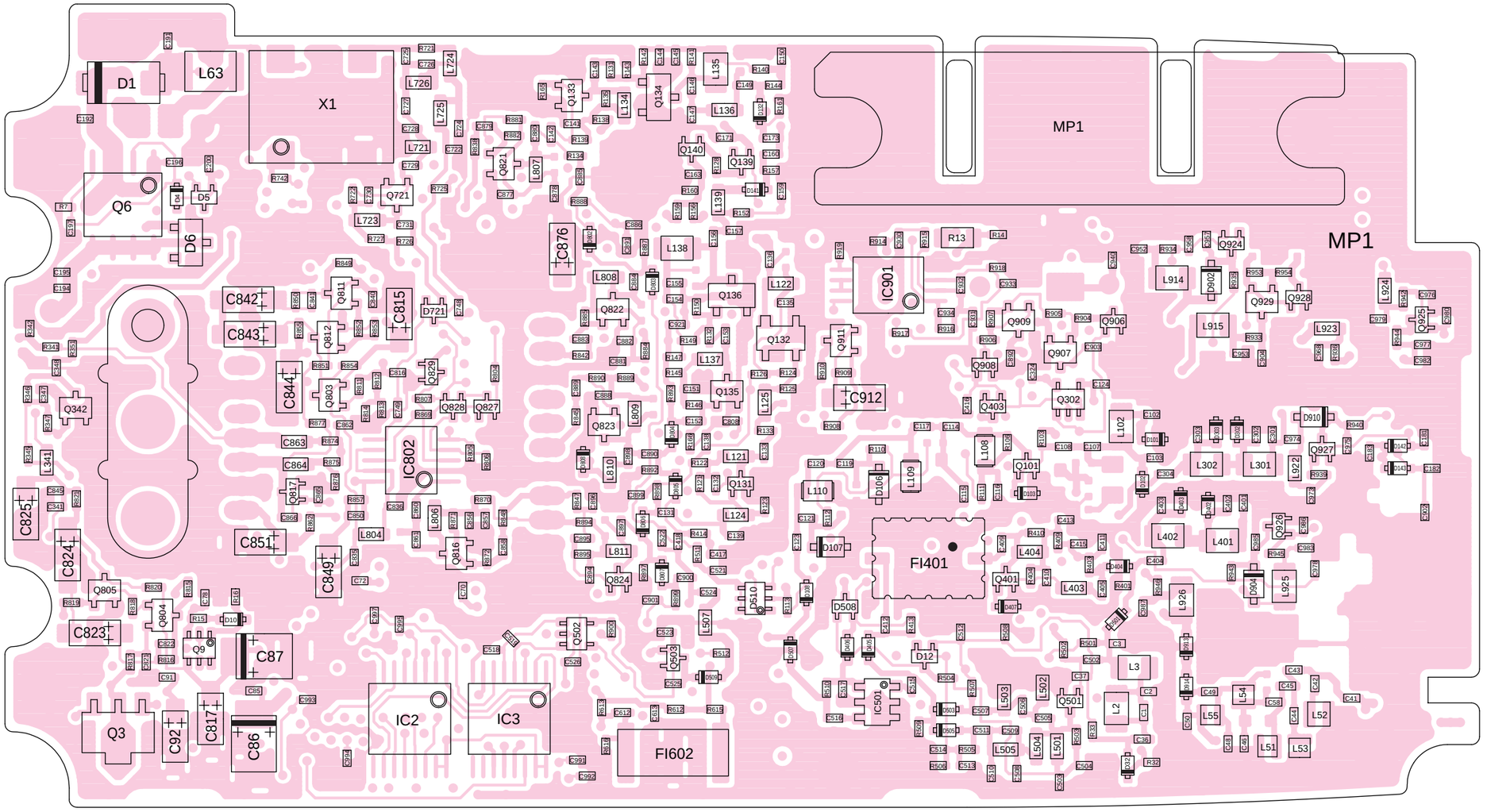


40 J4 to LOGIC unit J1 21

2NDLO	GND	THERM	IOST	DATA	CK	AGC	TUNE	VHVCO	UVCO	TXC	12VCO	WFM	AM	GND	R+3	CHGC	6MVCO	GND	DC-DC
IFIN	GND	PSET	GND	+3C	PDA2/UL	VCC	VCC	LOCKV	PLST1	PDA1/UL	BDET	GND	MOD	GND	PLST2	HV	HV	FSET	EURDEV

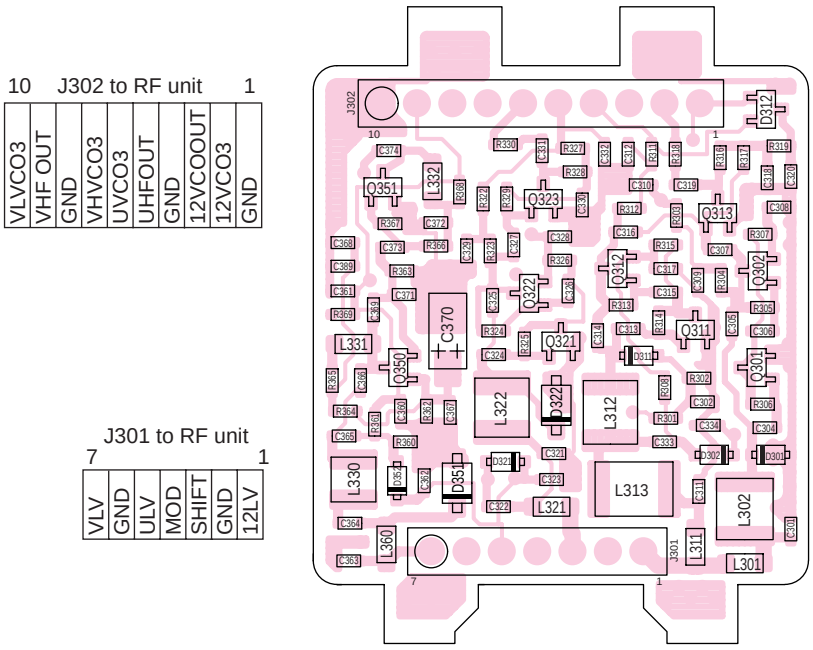
1 20

- **BOTTOM VIEW**

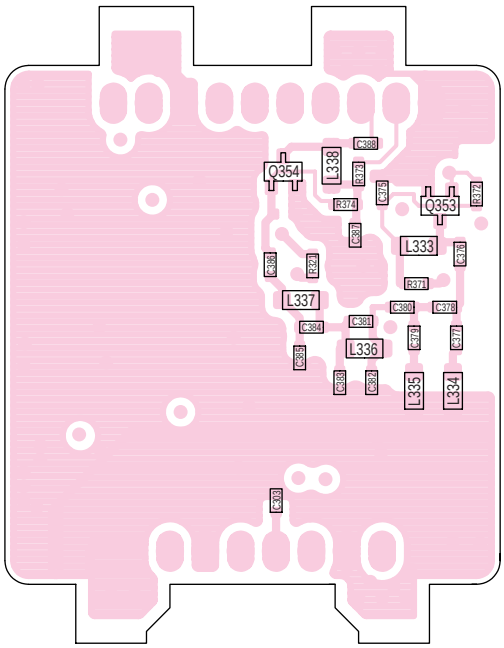

D1
L63
X1
MP1
Q6
D5
D6
C842
C843
C844
C815
D721
Q721
L723
L726
L724
L725
L721
Q821
L807
C876
L808
Q822
L138
Q136
L122
Q132
L135
Q133
Q134
L134
Q140
Q139
L136
L139
Q911
IC901
Q909
Q906
Q907
Q908
Q902
Q929
Q928
Q924
L914
L915
L923
L924
Q925
L925
L926
Q927
D910
L102
L302
L301
L922
Q926
L402
L401
L404
Q401
L403
FI401
Q302
Q403
C912
D508
D12
IC501
L503
L502
Q501
L2
L3
L55
L54
L52
L53
L51
L505
L504
L501
Q912
D106
L109
L108
Q101
L110
D107
Q131
L124
L121
Q135
L137
Q823
L809
L810
Q824
L811
Q502
Q503
L507
D510
IC802
Q803
Q829
Q828
Q827
C863
C864
Q817
C851
C849
L804
Q816
C825
C824
Q805
Q804
C823
Q9
C87
Q3
C92
C817
C86
IC2
IC3
FI602
Q342
L341

9-3 VCO BOARD

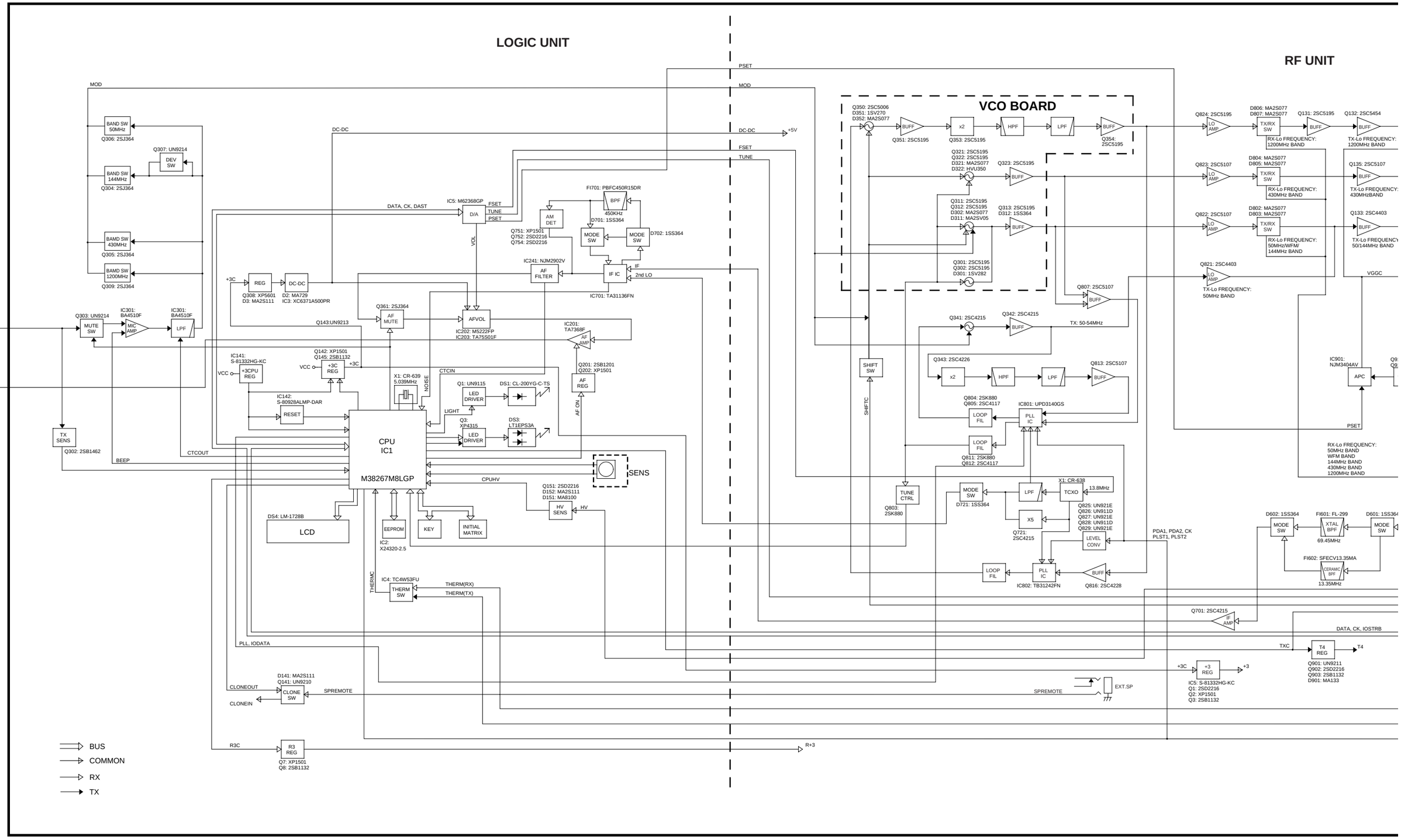
- **TOP VIEW**



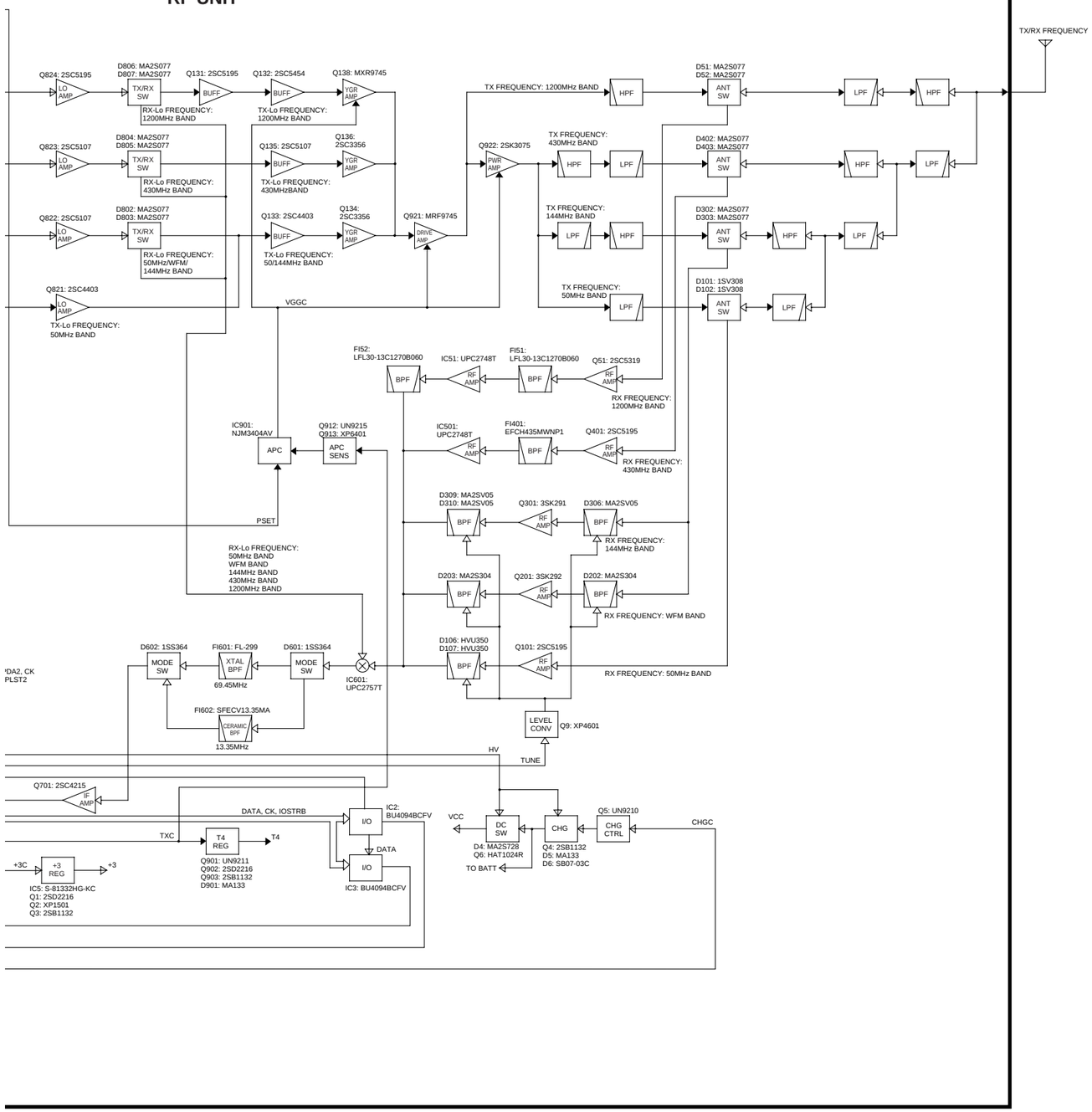
- **BOTTOM VIEW**


C388
L338
Q354
R373
C375
R372
R374
Q353
C383
L333
C386
R23
C376
R371
L337
C380
C378
C384
C381
C379
C377
L336
C385
C388
C382
L335
L334
C303

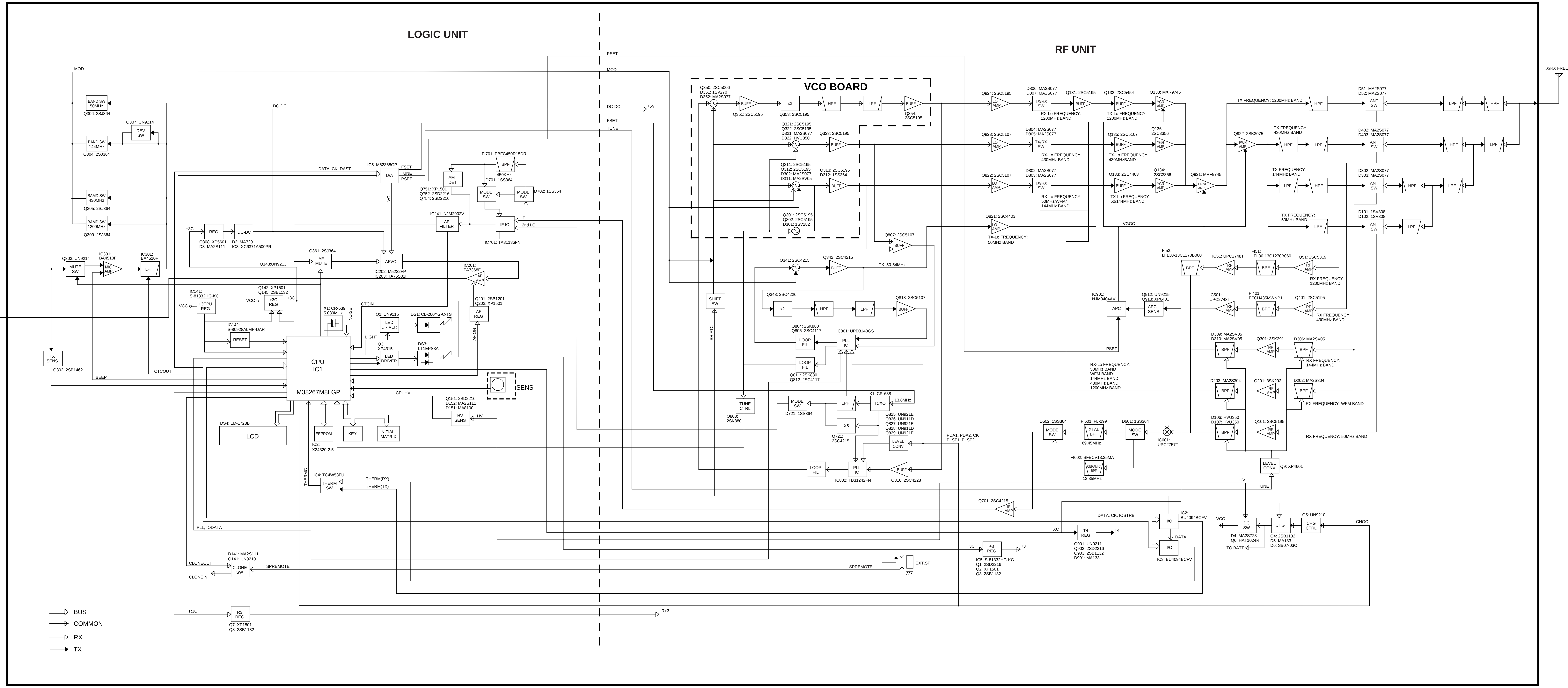
SECTION 10 BLOCK DIAGRAM



RF UNIT

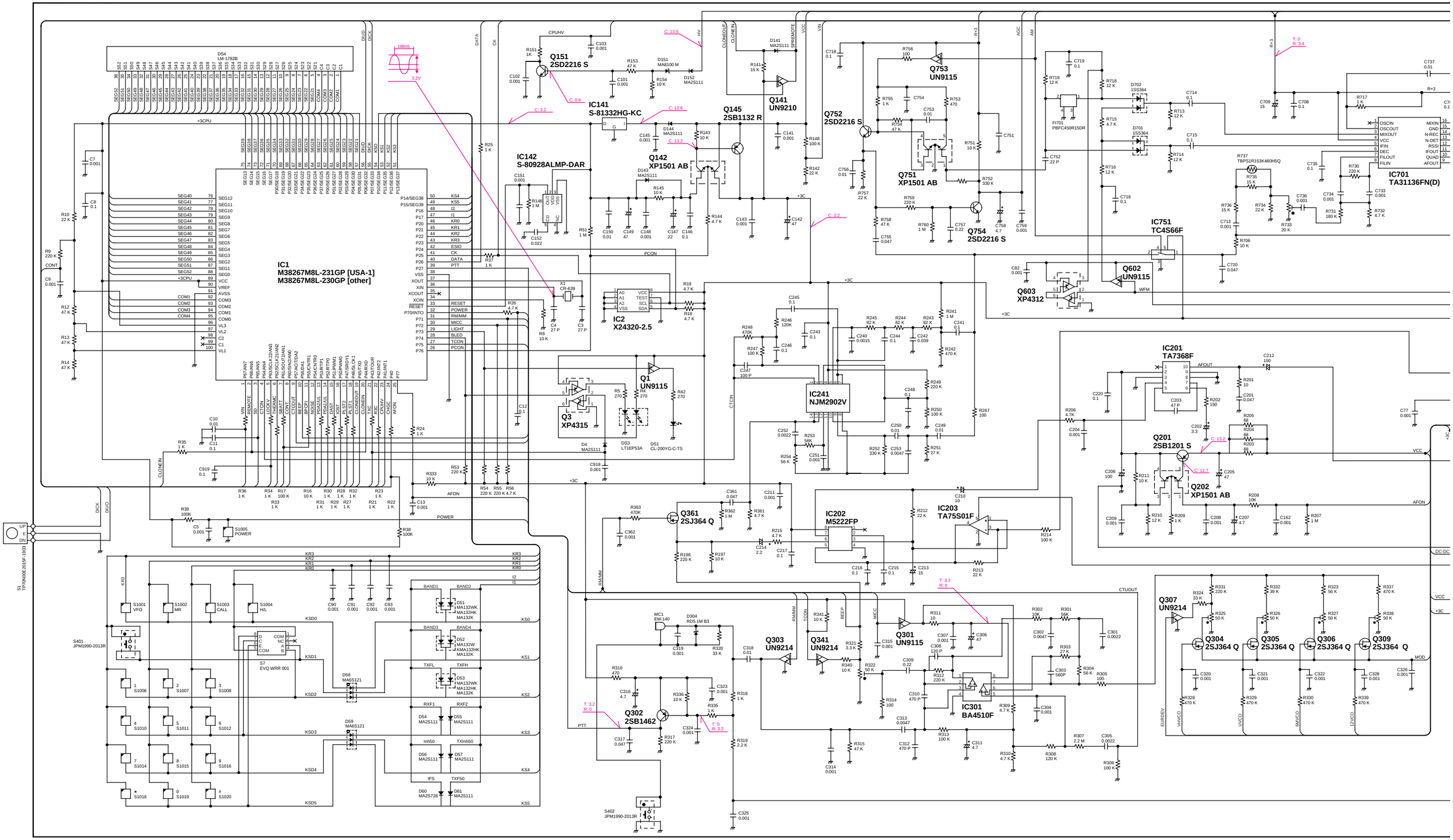


COMPLETE VIEW

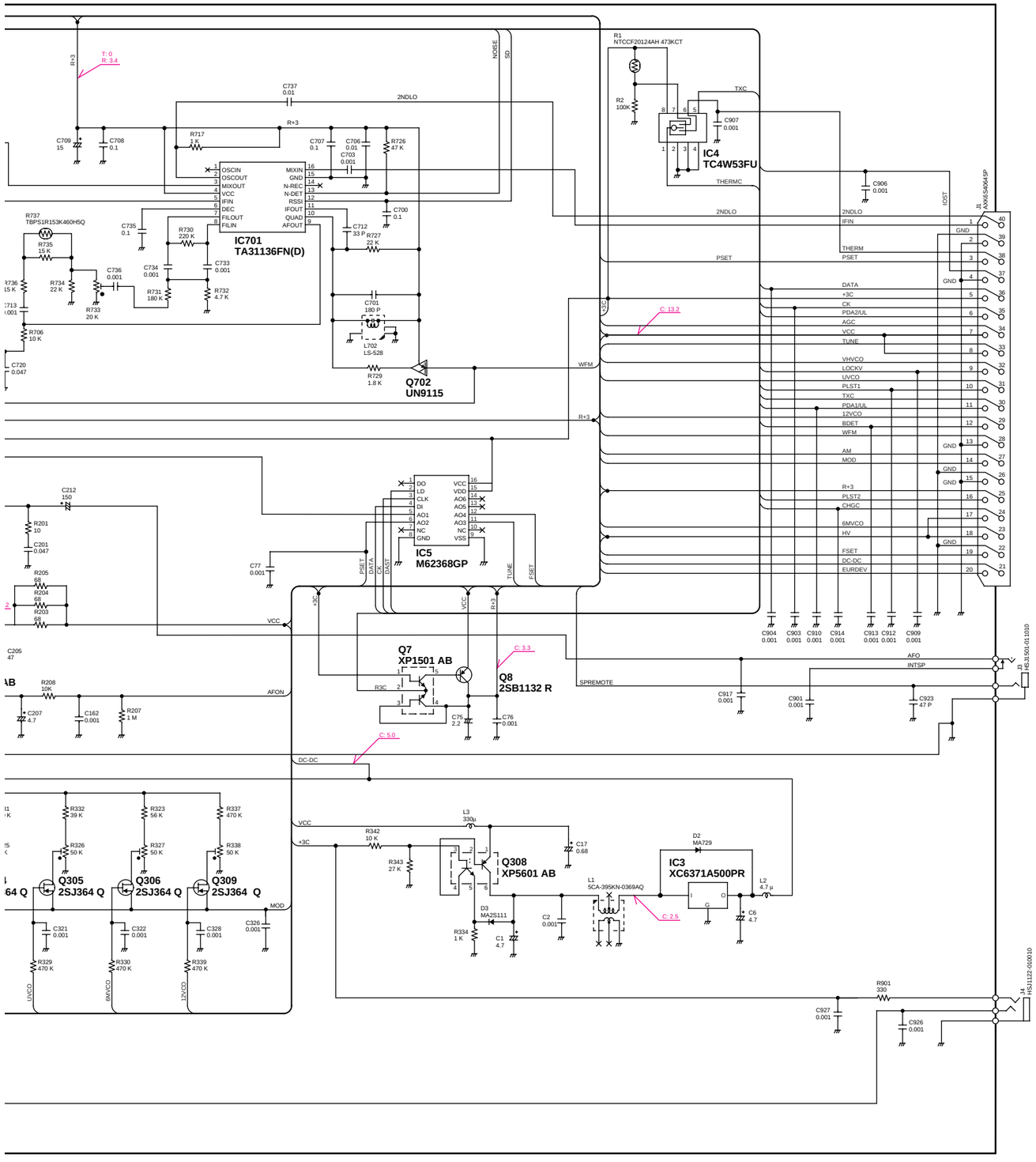

LOGIC UNIT
RF UNIT
VCO BOARD
CPU
IC1
M38267M8LGP
LCD
SENS
BUS
COMMON
RX
TX

SECTION 11 VOLTAGE DIAGRAM

11-1 LOGIC UNIT



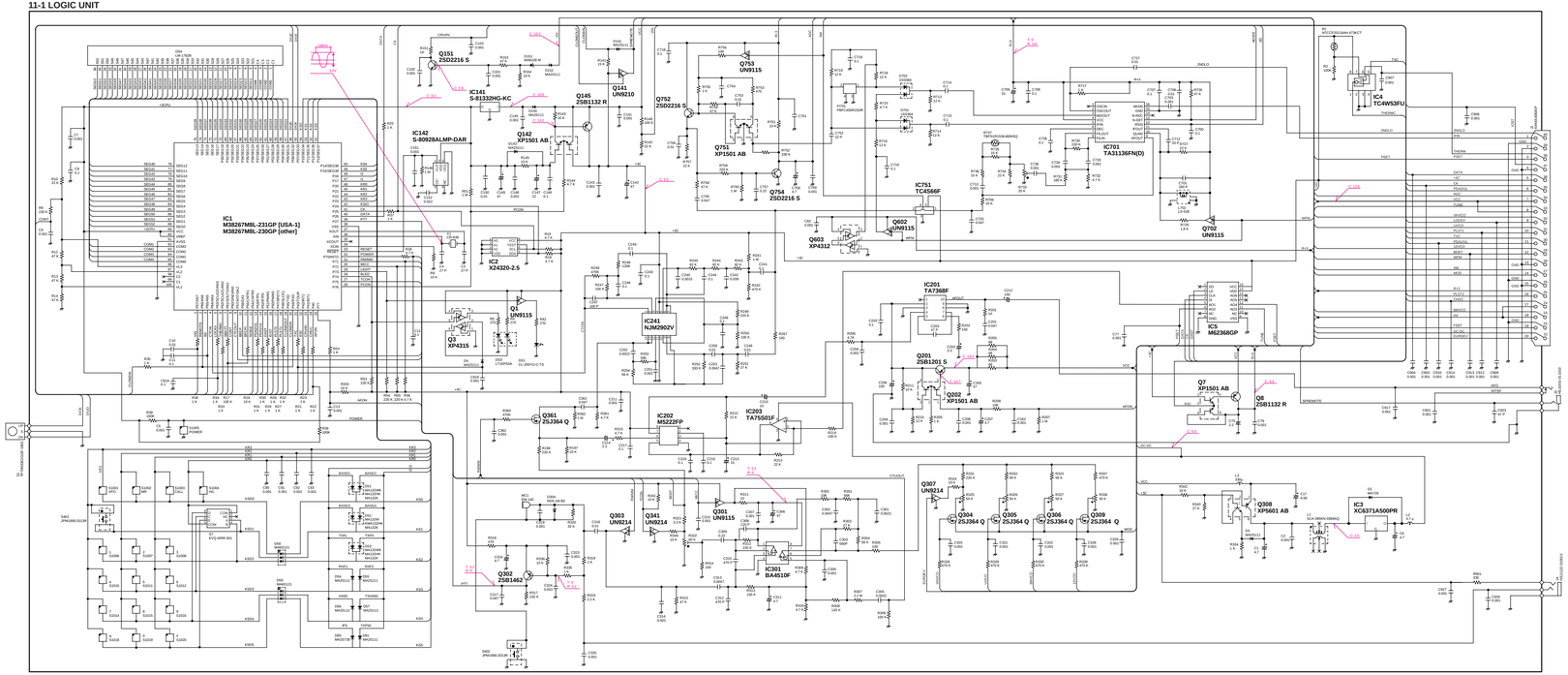
COMPLETE VIEW

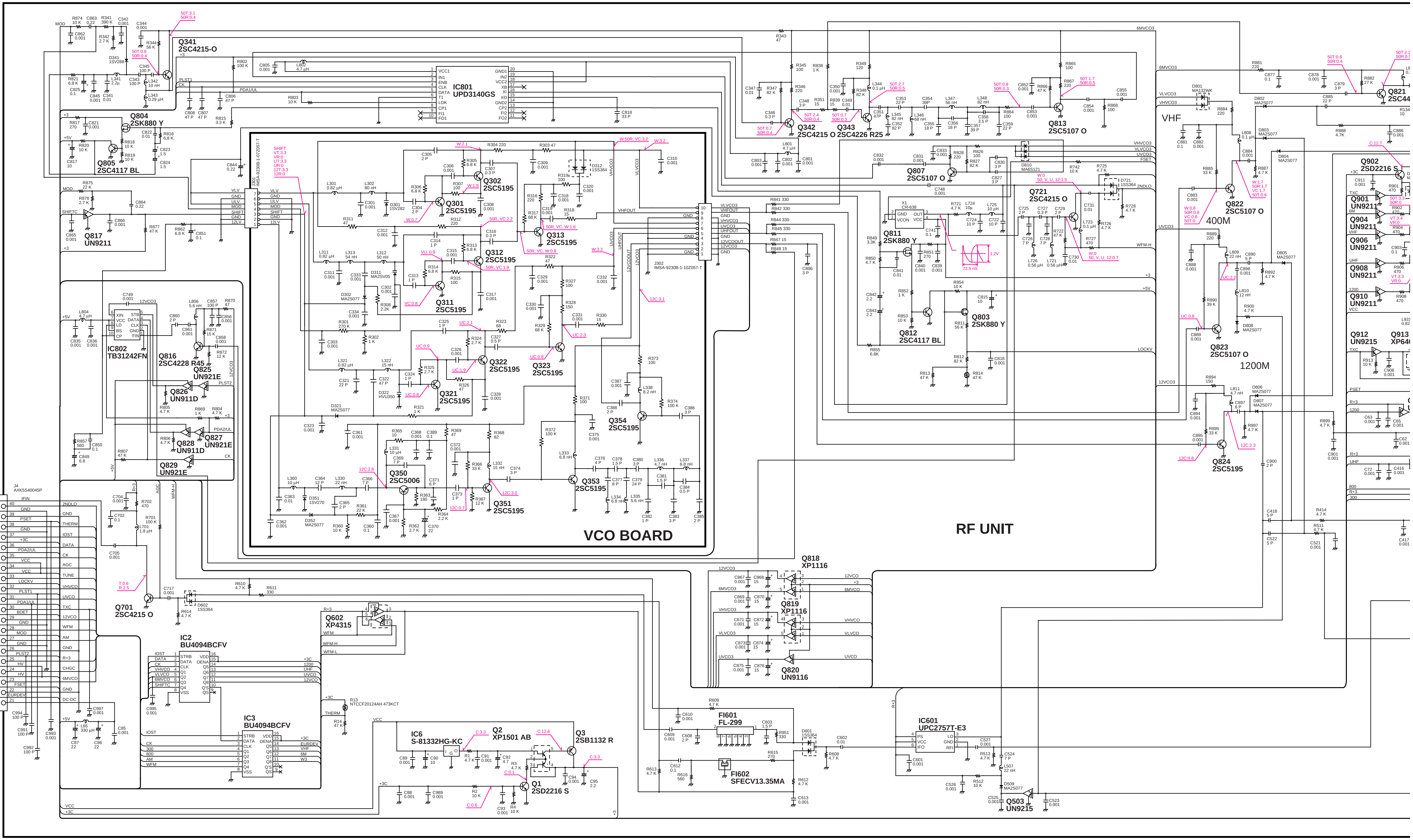


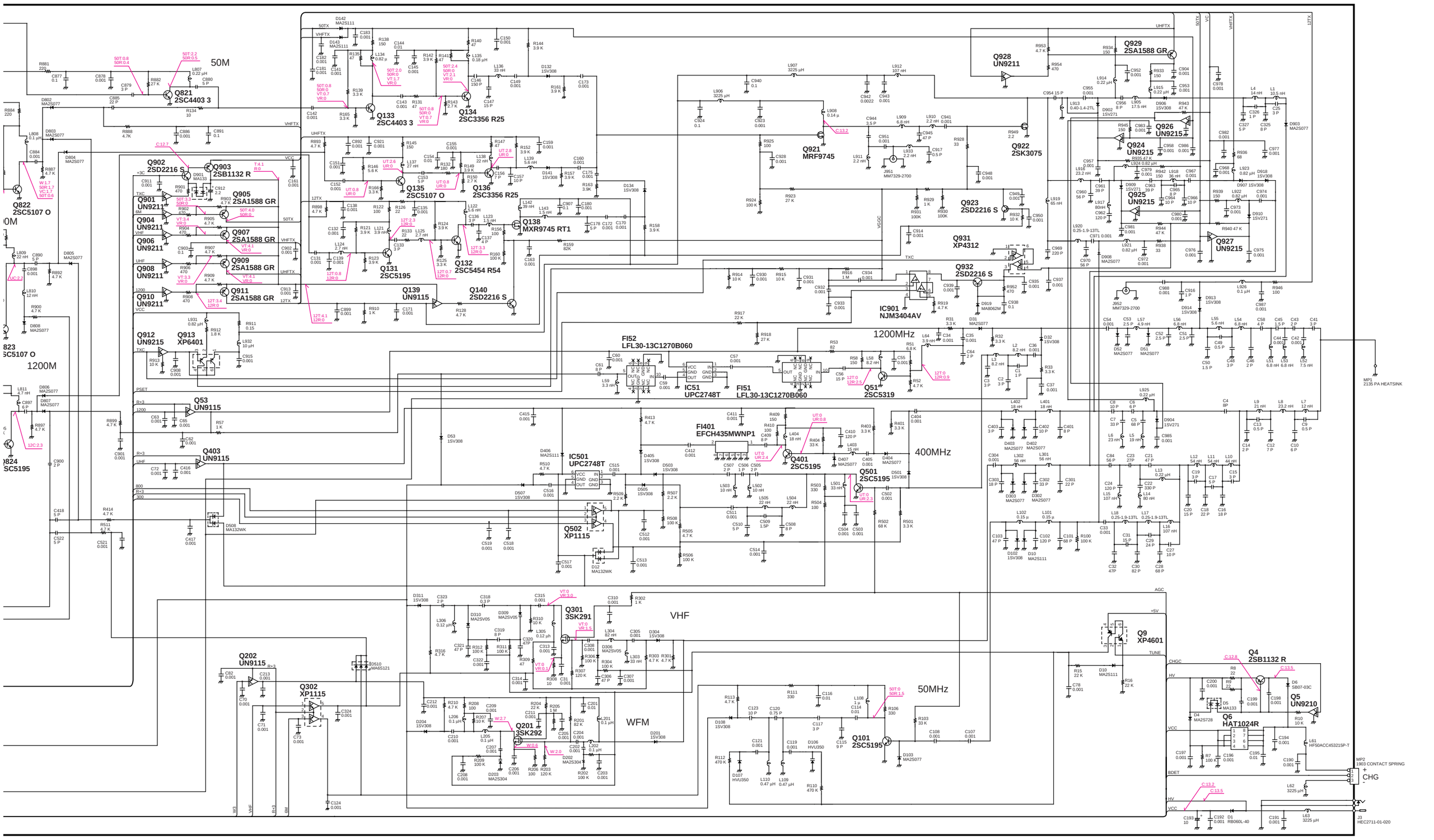
COMPLETE VIEW

SECTION 11 VOLTAGE DIAGRAM

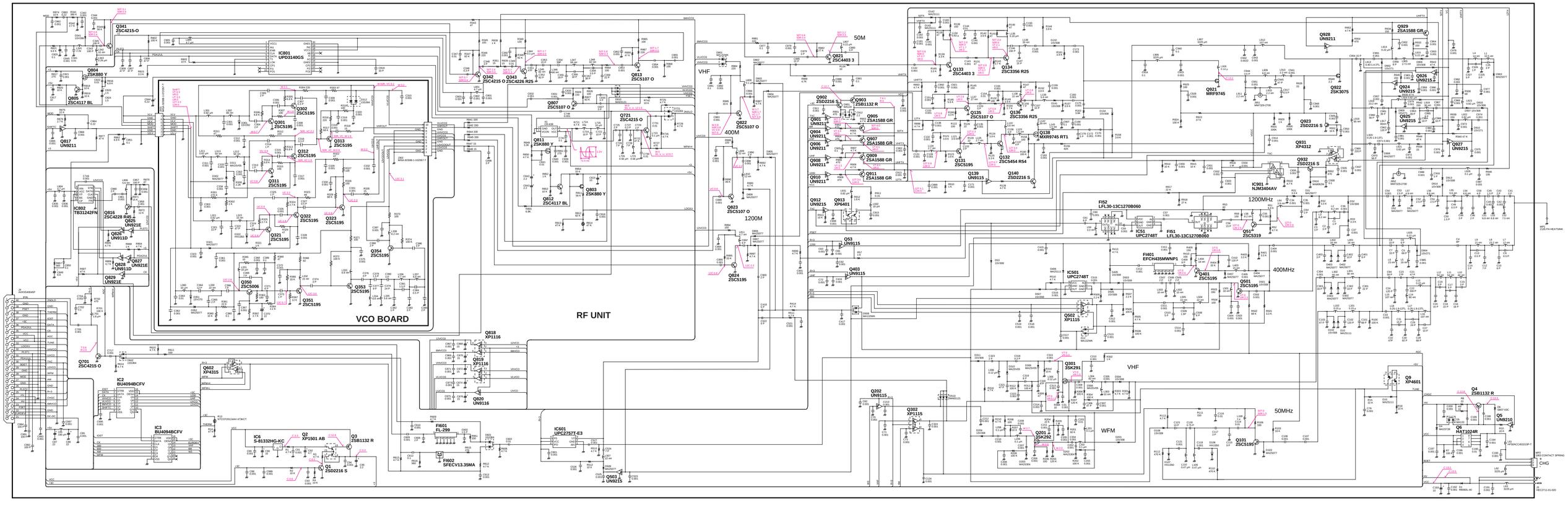
11-1 LOGIC UNIT




VCO BOARD
RF UNIT
IC801
UPD3140GS
IC802
TB31242FN
IC601
UPC2757T-E3
IC2
BU4094BCFV
IC3
BU4094BCFV
IC6
S-81332HG-KC
FI601
FL-299
FI602
SFECV13.35MA
VHF
400M
1200M



COMPLETE VIEW


VCO BOARD
RF UNIT
VHF
50M
400M
1200M
1200MHz
400MHz
50MHz
WFM
Q341 2SC4215-O
Q804 2SK880 Y
Q805 2SC4117 BL
Q817 UN9211
IC801 UPD3140GS
IC802 TB31242FN
IC2 BU4094BCFV
IC3 BU4094BCFV
IC6 S-81332HG-KC
IC601 UPC2757T-E3
Q602 XP4315
Q701 2SC4215 O
Q818 XP1116
Q819 XP1116
Q820 UN9116
Q342 2SC4215 O
Q343 2SC4226 RS
Q813 2SC5107 O
Q807 2SC5107 O
Q721 2SC4215 O
Q811 2SK880 Y
Q812 2SC4117 BL
Q822 2SC5107 O
Q823 2SC5107 O
Q824 2SC5195
Q803 2SK880 Y
Q353 2SC5195
Q354 2SC5195
Q351 2SC5195
Q350 2SC5006
Q311 2SC5195
Q321 2SC5195
Q322 2SC5195
Q323 2SC5195
Q312 2SC5195
Q313 2SC5195
Q301 2SC5195
Q302 2SC5195
Q826 UN911D
Q827 UN921E
Q828 UN911D
Q829 UN921E
Q825 UN921E
Q2 XP1501 AB
Q3 2SB1132 R
Q5 2SD2216 S
Q902 2SD2216 S
Q903 2SB1132 R
Q901 UN9211
Q904 UN9211
Q906 UN9211
Q908 UN9211
Q910 UN9211
Q912 UN9215
Q913 XP6401
Q905 2SA1588 GR
Q907 2SA1588 GR
Q909 2SA1588 GR
Q911 2SA1588 GR
Q823 2SC5107 O
Q824 2SC5195
Q53 UN9115
Q403 UN9115
Q202 UN9115
Q302 XP1115
Q201 2SK292
Q301 2SK291
Q133 2SC4403 3
Q134 2SC3356 R25
Q135 2SC5107 O
Q136 2SC3356 R25
Q138 MXR9745 RT1
Q139 UN9115
Q132 2SC5454 RS4
Q140 2SD2216 S
Q928 UN9211
Q929 2SA1588 GR
Q926 UN9215
Q924 UN9215
Q925 UN9215
Q923 2SD2216 S
Q931 XP4312
Q932 2SD2216 S
Q927 UN9215
Q501 2SC5319
Q503 2SC5195
Q502 XP1115
Q501 2SC5195
Q9 XP4601
Q4 2SB1132 R
Q6 HAT1024R
Q101 2SC5195
Q5 UN9210
IC501 UPC2748T
IC901 NJM3404AV
FI52 LFL30-13C1270B060
FI51 LFL30-13C1270B060
FI401 EFCH435MWNP1
FI601 FL-299
FI602 SFECV13.35MA
LEFT SIDE
RIGHT SIDE
11 - 2

Icom Inc.

6-9-16, Kamihigashi, Hirano-ku, Osaka 547-0002, Japan
Phone : 06 6793 5302
Fax : 06 6793 0013

Icom America Inc.

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

Icom Canada

A Division of Icom America Inc.
3071 #5 Road, Unit 9, Richmond, B.C., V6X 2T4, Canada
Phone : (604) 273-7400 Fax : (604) 273-1900

Icom (Australia) Pty. Ltd.

A.C.N. 006 092 575
290-294 Albert Street, Brunswick, Victoria, 3056, Australia
Phone : 03 9387 0666 Fax : 03 9387 0022
URL : http://www.icom.net.au

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan R.O.C.
Phone : (02) 2559 1899 Fax : (02) 2559 1874

Icom (Europe) GmbH

Communication Equipment
Himmelgeister Str. 100, D-40225 Düsseldorf, Germany
Phone : 0211 346047 Fax : 0211 333639
URL : http://www.icomeurope.com

Icom Spain S.L.

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

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.
Phone : 01227 741741 Fax : 01227 741742
URL : http://www.icomuk.co.uk

Icom France S.a

Zac de la Plaine, Rue Brindejonc des Moulinais
BP 5804, 31505 Toulouse Cedex, France
Phone : 561 36 03 03 Fax : 561 36 03 00
URL : http://www.icom-france.com

Count on us!

Icom Inc.
6-9-16, Kamihigashi, Hirano-ku, Osaka, 547-0002, Japan

A-5566I-S
Printed in Japan