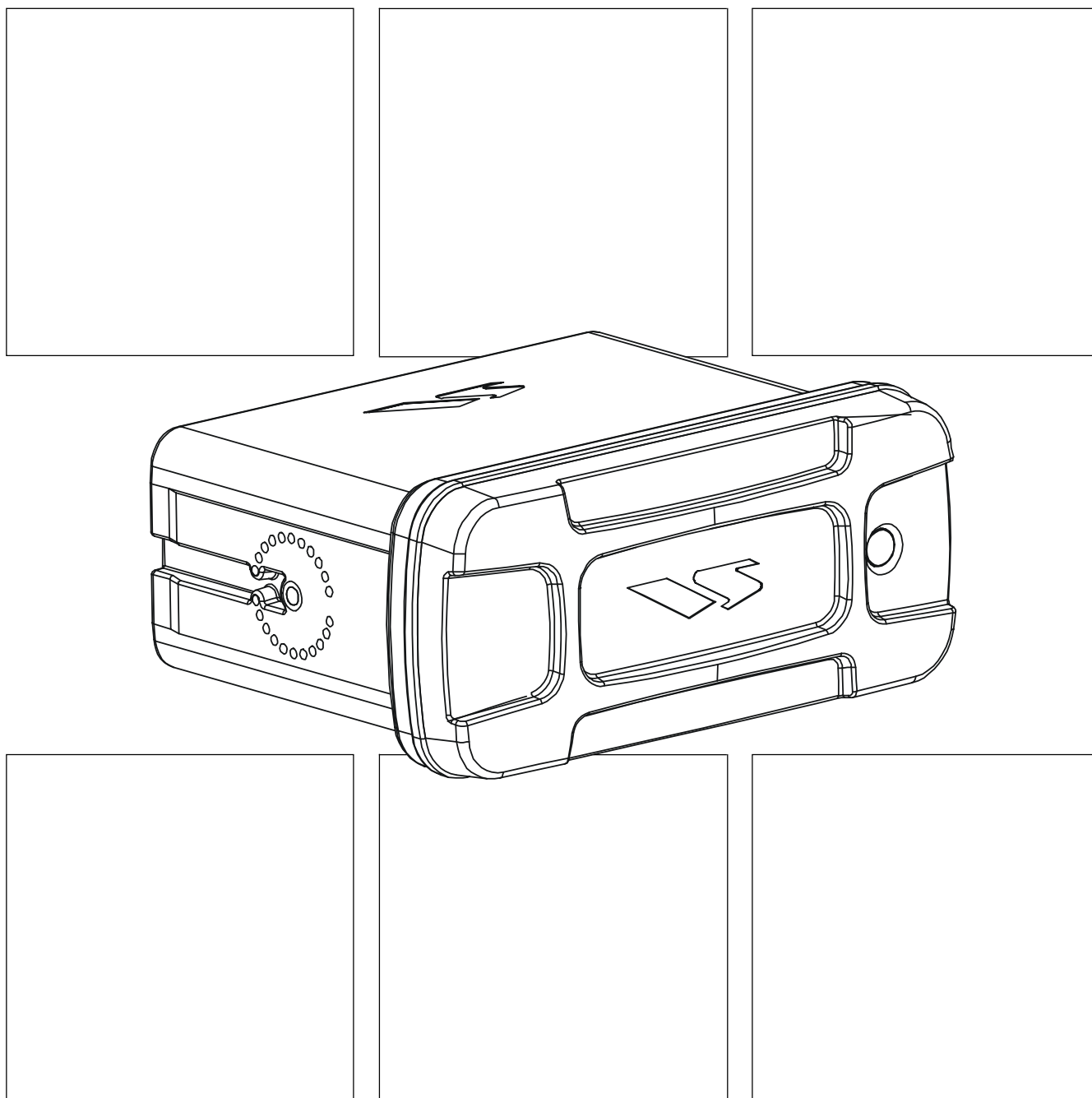




**25 Watt VHF/FM
ITU Class D DSC Marine Transceiver**

PHANTOM Series PS2000

SERVICE MANUAL



Specifications

GENERAL

Channels:	All USA, International, and Canadian
Input Voltage:	13.8 VDC $\pm$ 20%
Current Drain:	Standby 0.5 A Receive 1.5 A Transmit 5.0 A (Hi); 1.5 A (Lo)
Dimensions (H x W x D):	3-9/16" x 9-1/16" x 5-29/32" (90 x 230 x 150 mm)
Flush-Mount Dimensions (H x W x D):	2-27/32" x 8-5/64" x 5-1/8" (72 x 205 x 130 mm)
Weight:	3.2 lbs (1.45 kg)

TRANSMITTER

Frequency Range:	156.025 to 157.425 MHz
RF Output:	25 W (Hi); 1 W (Lo)
Conducted Spurious Emissions:	80 dB (Hi); 60 dB (Lo)
Audio Response:	within +1/–3 of a 6 dB/octave pre-emphasis characteristic at 300 to 3000 Hz
Audio Distortion:	5 %
Modulation:	16K0G3E, for DSC 16K0G2B
Frequency Stability:	$\pm$ 0.0005% (–20°C to +50°C)
FM Hum and Noise:	50 dB

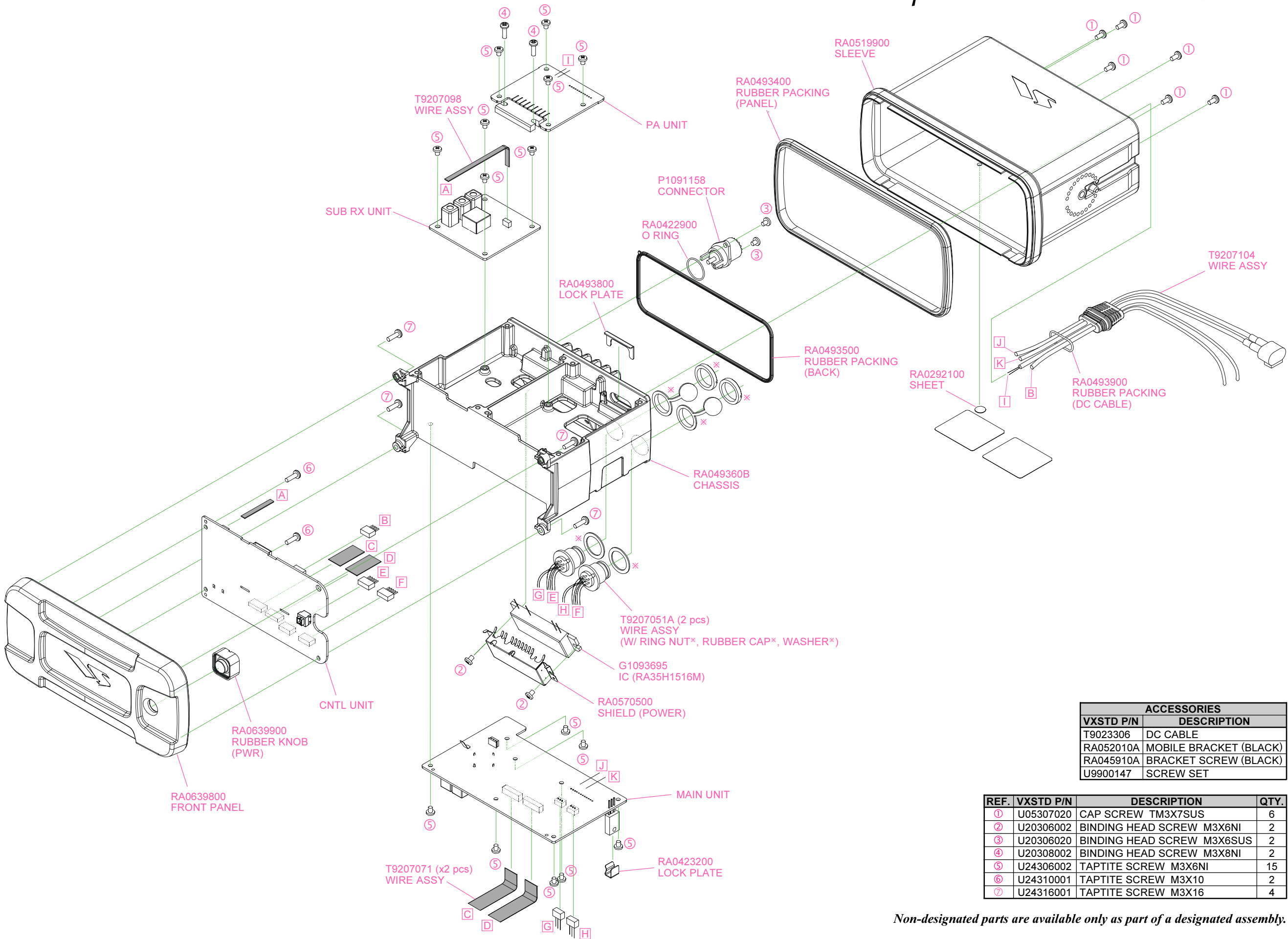
RECEIVER

Frequency Range:	156.050 to 163.275 MHz
Sensitivity:	12 dB SINAD 0.25 μ V 12 dB SINAD (70 CH Receiver) 0.25 μ V Squelch Sensitivity (Threshold) 0.13 μ V
Modulation Acceptance Bandwidth:	$\pm$ 7.5 kHz
Selectivity:	better than –70 dB (Spurious and Image Rejection) better than –70 dB (Intermodulation and Rejection at 12 dB SINAD)
Audio Output (CMP25):	2 W
Audio Response:	within +2/–8 of a 6 dB/octave de-emphasis characteristic at 300 to 3000 Hz
Frequency Stability:	$\pm$ 0.0005 % (–20°C to +50°C)
Channel Spacing:	25 kHz
DSC Format:	RTCMSC101
NMEA Input/Output:	Output - DSC, DSE Input - GLL, GGA, RMC, and GNS

Performance specifications are nominal, unless otherwise indicated, and are subject to change without notice.

Measurements are made in accordance with EN301 025. All stated specifications are subject to change without notice or obligation.

Exploded View & Miscellaneous Parts



ACCESSORIES	
VXSTD P/N	DESCRIPTION
T9023306	DC CABLE
RA052010A	MOBILE BRACKET (BLACK)
RA045910A	BRACKET SCREW (BLACK)
U9900147	SCREW SET

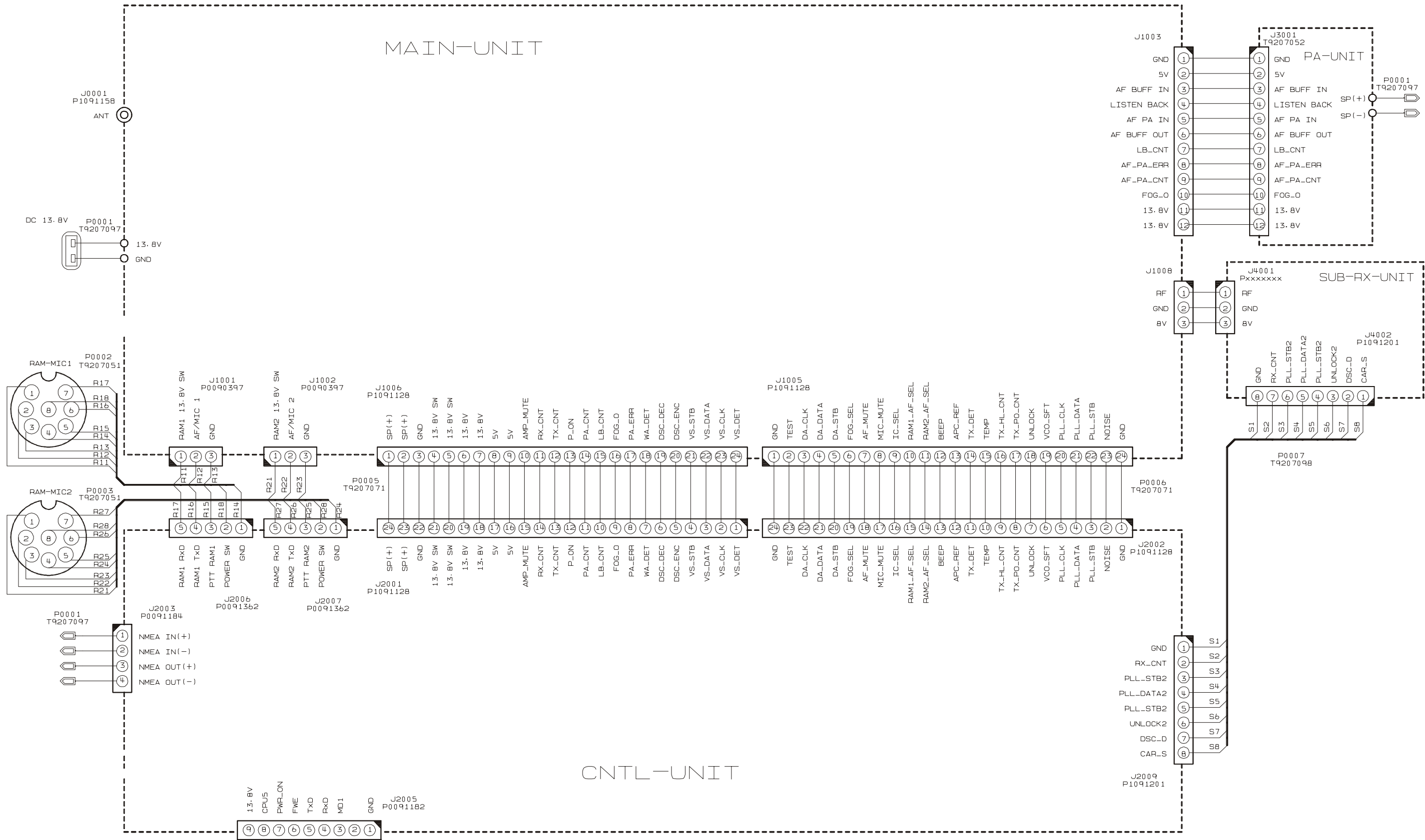
REF.	VXSTD P/N	DESCRIPTION	QTY.
①	U05307020	CAP SCREW TM3X7SUS	6
②	U20306002	BINDING HEAD SCREW M3X6NI	2
③	U20306020	BINDING HEAD SCREW M3X6SUS	2
④	U20308002	BINDING HEAD SCREW M3X8NI	2
⑤	U24306002	TAPTITE SCREW M3X6NI	15
⑥	U24310001	TAPTITE SCREW M3X10	2
⑦	U24316001	TAPTITE SCREW M3X16	4

Non-designated parts are available only as part of a designated assembly.

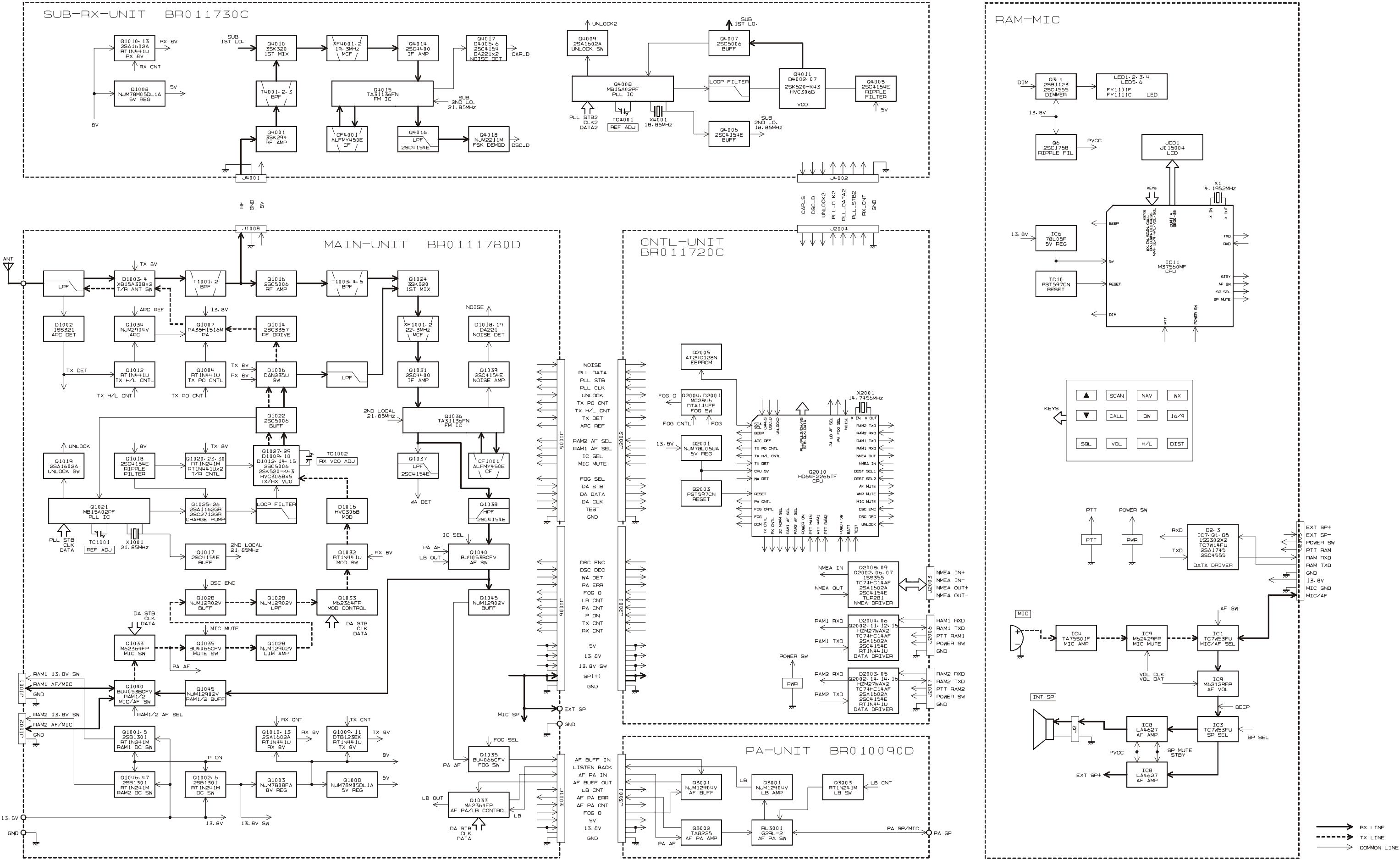
Exploded View & Miscellaneous Parts

Note

Connection Diagram



Block Diagram



Circuit Description

Reception and transmission are switched by “RX-CNTL” and “TX-CNTL” lines from the CNTL Unit. The receiver uses double-conversion superheterodyne circuitry, with a 21.4 MHz 1st IF and 450 kHz 2nd IF. The 1st local is produced by a PLL synthesizer, yielding the 21.4 MHz 1st IF. The 2nd local uses a 21.850 MHz crystal oscillator, yielding the 450 kHz 2nd IF. The 2nd mixer and other circuits use a custom IC to convert and amplify the 2nd IF and detect FM to obtain demodulated signals. During transmit, the PLL synthesizer oscillates at the desired frequency directly, for amplification to obtain RF power output. During transmit, voice modulation is applied to this synthesizer. Transceiver functions, such as TX/RX control, PLL synthesizer settings, and channel programming, are controlled using the MPU.

Receiver

Incoming RF signals from the antenna connector are delivered to the MAIN Unit, and pass through a low-pass filter (LPF) consisting of coils and capacitors, and antenna switching diodes **D1003** and **D1004** (both **XB15A308**) for delivery to the receiver front end.

Signals within the frequency range of the transceiver are then passed through a bandpass filter consisting of T1001 and T1002 before RF amplification by **Q1016** (**2SC5006**).

The amplified RF is then bandpass filtered again by T1003, T1004, and T1005, to ensure pure in-band input to 1st mixer **Q1024** (**3SK320**).

Buffered output from the VCO Unit is amplified by **Q1022** (**2SC5006**) and bandpass filtered by L1013, L1015, C1125, C1131, and C1134, to provide a pure 1st local signal between 133.75 and 140.975 MHz for delivery to the 1st mixer.

The 22.3 MHz 1st mixer product then passes through dual monolithic crystal filter **XF1001** and **XF1002** (± 6.5 kHz BW), and is amplified by **Q1031** (**2SC4400-3**) and delivered to the input of the FM IF subsystem IC **Q1036** (**TA31136FN**). This IC contains the 2nd mixer, 2nd local oscillator, limiter amplifier, FM detector, noise amplifier, and squelch gates.

The 2nd local is produced by crystal **X1001** (21.850 MHz) then passes through the amplifier **Q1017** (**2SC4154**), and delivered to the 2nd mixer in the IF-IC. The 1st IF is converted to 450 kHz by the 2nd mixer and stripped of unwanted components by ceramic filter **CF1001**.

Filtered signal from the ceramic filter **CF1001** is applied to the limiter amplifier in the FM IF subsystem IC **Q1036** (**TA31136FN**), and then demodulate by the FM detector in the FM IF subsystem IC **Q1036** (**TA31136FN**). Demodulated receive audio from the FM IF subsystem IC **Q1036** (**TA31136FN**) is amplified by **Q1038** (**2SC4154E**). The

amplified signal passes through the AF switch **Q1040** (**BU4053BCFV**), AF amplifier **Q1045** (**NJM12902V**) and AF Mute switch **Q1035** (**BU4066BCFV**) to the **CMP25** RAM+ Microphone.

PLL Synthesizer

The 1st LO maintains stability from the PLL synthesizer by using a 21.850 MHz reference signal from crystal **X1001**. PLL synthesizer IC **Q1021** (**MB15A02PFV**) consists of a prescaler, reference counter, swallow counter, programmable counter, a serial data input port to set these counters based on the external data, a phase comparator, and a charge pump.

The PLL-IC divides the 21.850 MHz reference signal by 874 using the reference counter (25 kHz comparison frequency). The VCO output is divided by the prescaler, swallow counter and programmable counter. These two signals are compared by the phase comparator and applied to the charge pump.

A voltage proportional to their phase difference is delivered to the low-pass filter circuit, then fed back to the VCO as a voltage with phase error, controlling and stabilizing the oscillating frequency. This synthesizer also operates as a modulator during transmit.

The RX VCO is comprised of **Q1027** (**2SK520-K43**) and **D1009**, **D1010**, **D1014**, **D1015** (all **HVC3068**); it oscillates at 22.3 MHz below the receiving frequency. The TX VCO is comprised of **Q1029** (**2SC5006**) and **D1012** (both **HVC3068**); it oscillates at the fundamental frequency, with direct frequency-modulation using varactor diode **D1016** (**HVC3068**). The VCO output passes through buffer amplifier **Q1022** (**2SC5006**) to obtain stable output. The VCO DC supply is regulated by **Q1018** (**2SC4154E**). Synthesizer output is fed to the 1st mixer **Q1024** (**3SK320**) by diode switch **D1006** (**DAN235U**) during receive, and to drive amplifier **Q1014** (**2SC3357**), and the RF power amplifier **Q1007** (**RA35H1516M**) for transmit.

The reference oscillator feeds the PLL synthesizer.

Transmitter

The amplified voice audio from the **CMP25** RAM+ Microphone is delivered via the MIC connector to the MAIN Unit. After passing through the D/A converter **Q1033** (**M62364FP**) for MIC switch, MIC mute switch **Q1035** (**BU4066BCFV**), limiter (IDC: instantaneous deviation control), and LPF **Q1028** (**NJM12902V**), the audio is adjusted for optimum deviation level and delivered to the next stage.

Voice or DSC (Digital Selective Calling) encode signal inputs from the LPF **Q1028** (**NJM12902V**) are FM-modulated in the VCO of the synthesizer. Synthesizer output, after passing through diode switch **D1006** (**DAN235U**), is

Circuit Description

amplified by driver **Q1014 (2SC3357)**, and the RF power amplifier **Q1007 (RA35H1516M)** to obtain full RF output.

The RF energy then passes through antenna switch **D1003 (XB15A308)** and a low-pass filter circuit and finally to the antenna connector.

RF output power from the final amplifier is sampled by C1013 and C1019 and is rectified by **D1002 (1SS321)**. The resulting DC is fed through Automatic Power Controllers **Q1034 (NJM2904V)** to transmitter RF power amplifier **Q1007 (RA35H1516M)**, thus providing positive control of the power output.

Generation of spurious products by the transmitter is minimized by the fundamental carrier frequency being equal to the final transmitting frequency, modulated directly in the transmit VCO. Additional harmonic suppression is provided by a low-pass filter consisting of coils and capacitors, resulting in more than 80 dB of harmonic suppression prior to delivery of the RF energy to the antenna.

1050 Hz Weather Alert Decoder

1050Hz Weather Alert signals are demodulated on the CNTL Unit, and are applied to low-pass filter **Q1037 (2SC4154E)**, and delivered to the 16-bit MPU IC **Q2010 (HD64F2268TF13)**.

DSC Encoder/Decoder

Encoder

The DCS (Digital Selective Calling) encode signal which D/A converted in the 16-bit MPU IC **Q2010 (HD64F2268TF13)** is fed through the low-pass filter **Q1028 (NJM12902V)** on the MAIN Unit to the VCO.

Decoder

Incoming the receiving DSC code on the CH70 from the antenna connector are delivered to the SUB-RX Unit, and are passed through an RF amplifire **Q4001 (3SK294)** to the bandpass filter consisting of T4002 and T4003. The filtered signal deliver to 1st mixer **Q4010 (3SK320)**.

Buffered output from the SUB VCO Unit is amplified by **Q4007 (2SC5006)** and bandpass filtered by L4004, L4005, C4045, C4046, and C4047, to provide a pure 1st local signal (137.225 MHz) for delivery to the 1st mixer.

The 19.3 MHz 1st mixer product then passes through monolithic crystal filter **XF4001** and **XF4002** (± 6.5 kHz BW), and is amplified by **Q4014 (2SC4400-3)** and delivered to the input of the FM IF subsystem IC **Q4015 (TA31136FN)**. This IC contains the 2nd mixer, 2nd local oscillator, limiter-amplifier, FM detector, noise amplifier, and squelch gates.

The 2nd local is produced by crystal **X4001** (18.850 MHz) then passes through the amplifier **Q4006 (2SC4154)**, and

delivered to the 2nd mixer in the FM IF subsystem IC **Q4015 (TA31136FN)**. The 1st IF is converted to 450 kHz by the 2nd mixer and stripped of unwanted components by ceramic filter **CF4001**.

Filtered signal from the ceramic filter **CF4001** is applied to the limiter amplifier in the FM IF subsystem IC **Q4015 (TA31136FN)**, and then demodulate by the FM detector in the FM IF subsystem IC **Q4015 (TA31136FN)**. Demodulated signal from the FM IF subsystem IC **Q4015 (TA31136FN)** is passes through the low-pass filter **Q4016 (2SC4154E)** to the DSC Decoder IC **Q4018 (NJM2211M)** which the receiving DCS code is decoded. The decoded DCS signal delivered to the 16-bit MPU IC **Q2010 (HD64F2268TF13)**.

The 1st LO maintains stability from the PLL synthesizer by using a 18.850 MHz reference signal from crystal **X4001**. PLL synthesizer IC **Q4008 (MB15A02PFV)** consists of a prescaler, reference counter, swallow counter, programmable counter, a serial data input port to set these counters based on the external data, a phase comparator, and a charge pump.

The PLL-IC divides the 18.850 MHz reference signal by 754 using the reference counter (25 kHz comparison frequency). The VCO output is divided by the prescaler, swallow counter and programmable counter. These two signals are compared by the phase comparator and applied to the charge pump.

A voltage proportional to their phase difference is delivered to the low-pass filter circuit, then fed back to the VCO as a voltage with phase error, controlling and stabilizing the oscillating frequency.

The SUB VCO is comprised of **Q4011 (2SK520-K43)** and **D4002** and **D4007** (both **HVC3068**); it oscillates 137.225 MHz. The SUB VCO output passes through buffer amplifier **Q4007 (2SC5006)** to obtain stable output. The SUB VCO DC supply is regulated by **Q4005 (2SC4154E)**. Synthesizer output is fed to the 1st mixer **Q4010 (3SK320)**.

The reference oscillator feeds the PLL synthesizer.

PA (Public Address) Circuit

The amplified voice audio from the **CMP25** RAM+ Microphone is delivered via the MIC connector to the MAIN Unit. The amplified voice audio passes through the D/A converter **Q1033 (M62364FP)** for MIC switch and MIC switch **Q1040 (BU4053BCFV)** to the buffer amplifier **Q1045 (NJM12902V)**. The audio then passes through the MIC switch **Q1035 (BU4066BCFV)** and buffer amplifier **Q3001 (NJM2904V)** on the PA Unit to the D/A converter **Q1033 (M62364FP)** for volume control. The adjusted audio is delivered to the audio power amplifier **Q3002 (TA8225H)** on the PA Unit which is amplified the voice

Circuit Description

audio up to 30 watts, and then passes through the relay switch **RL3001** to the external PA speaker.

LB (Listen Back) Circuit

The listen back audio from the PA speaker is delivered to the PA Unit. The audio is passed through the relay switch **RL3001** and buffer amplifier **Q3001 (NJM2904V)** to the D/A converter **Q1033 (M62364FP)** for LB switch, then passes through the LB switch **Q1040 (BU4053BCFV)**, buffer amplifier **Q1045 (NJM12902V)**, LB switch **Q1040 (BU4053BCFV)** to the **CMP25** RAM+ Microphone.

Fog Horn Circuit

A 400 Hz square wave for foghorn is generated the microprocessor **Q2010 (HD64F2268TF13)** on the CNTL Unit. The signal passes through the FOG switch **Q2004 (DTA144EE)** and **D2001 (MC2846)** to the PA Unit.

The signal from the CNTL Unit passes through the buffer amplifier **Q3001 (NJM2904V)** to the D/A converter **Q1033 (M62364FP)** for volume control. The adjusted audio is delivered to the audio power amplifier **Q3002 (TA8225H)** on the PA Unit which is amplified the voice audio up to 30 watts, and then passes through the relay switch **RL3001** to the external PA speaker.

MPU

Operation is controlled by 16-bit MPU IC **Q2010 (HD64F2268TF13)**. The system clock uses a 14.7456 MHz crystal for a time base. IC **Q2003 (PST597CN)** resets the MPU when the power is supplied by the DC power supply, and monitors the voltage of the regulated 5V power supply line.

EEPROM

The EE-PROM **Q2005 (AT24C128N)** retains TX and RX data for all memory channels , prescaler dividing, IF frequency, local oscillator injection side, and reference oscillator data.

Circuit Description

Note

The **Phantom PS2000** has been carefully aligned at the factory for the specified performance across the marine band.

Realignment should therefore not be necessary except in the event of a component failure. All component replacement and service should be performed only by an authorized Standard Horizon representative, or the warranty policy may be voided.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts are replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend that servicing be performed only by authorized Standard Horizon service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Standard Horizon service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components.

Those who do undertake any of the following alignments are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Standard Horizon, a division of Vertex Standard must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners. Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Have all test equipment ready before beginning, and follow all of the steps in a section in the order presented.

Required Test Equipment

- ☐ RF Signal Generator with calibrated output level at 200 MHz
- ☐ Deviation Meter (linear detector)
- ☐ AF Millivoltmeter
- ☐ SINAD Meter
- ☐ Inline Wattmeter with 5% accuracy at 200 MHz
- ☐ Regulated DC Power Supply: 13.8 VDC, 10A
- ☐ 50-ohm Non-reactive Dummy Load: 30W at 200 MHz
- ☐ Frequency Counter: >0.1 ppm accuracy at 200 MHz
- ☐ AF Signal Generator
- ☐ DC Voltmeter: high impedance
- ☐ VHF Sampling Coupler
- ☐ AF Dummy Load: 4 Ohms, 10 W
- ☐ Oscilloscope
- ☐ Spectrum Analyzer
- ☐ CMP25 RAM+ Microphone
- ☐ CP160 GPS/Chart Plotter
- ☐ GX2360S Marine Transceiver

Alignment Preparation & Precautions

A dummy load and inline wattmeter must be connected to the main antenna jack in all procedures that call for transmission. Correct alignment is not possible with an antenna.

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

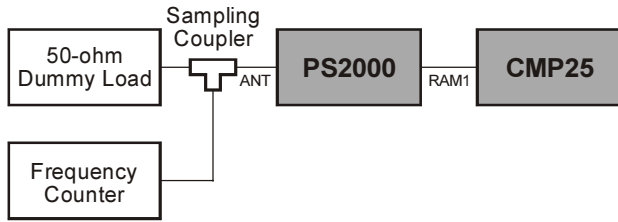
Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 68 °F and 86 °F (20 °C and 30 °C). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization with the environment before alignment. If possible, alignments should be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

Note: Signal levels in dB referred to in this procedure are based on 0 dBμ = 0.5 μV (closed circuit).

Alignment

Reference Frequency Adjustment

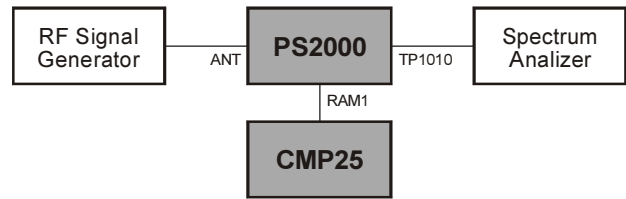
- Setup the test equipment as shown below.



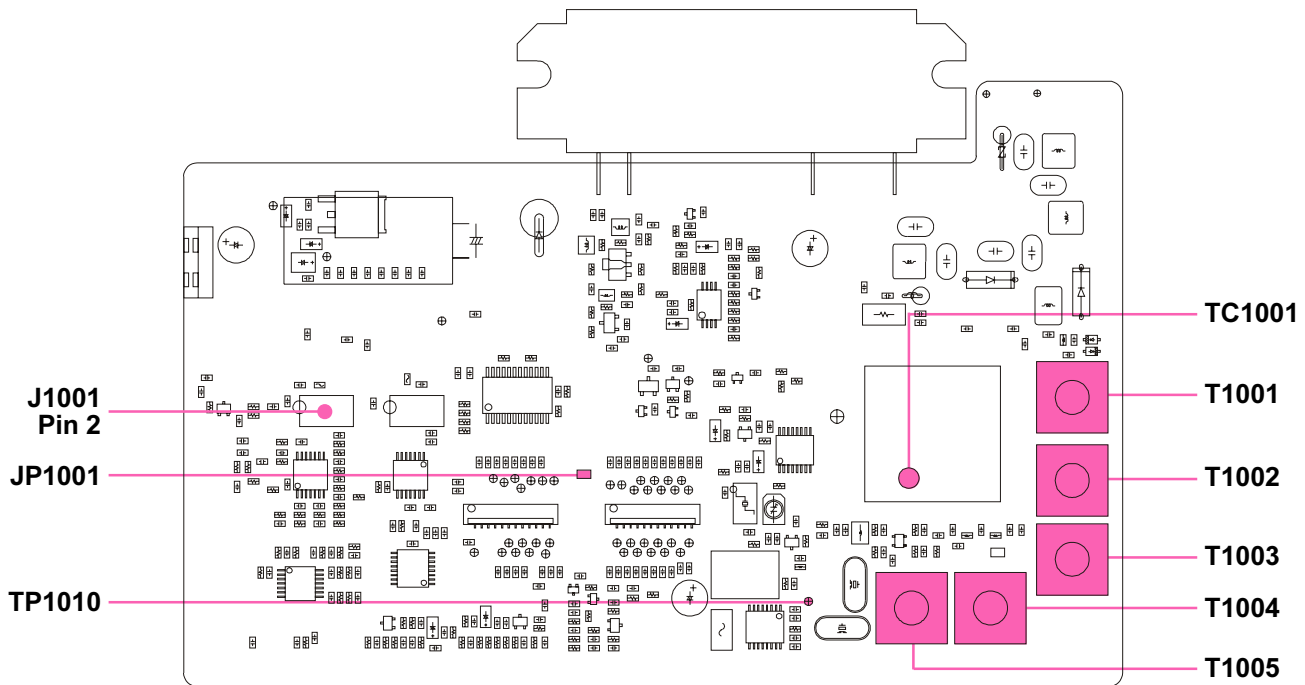
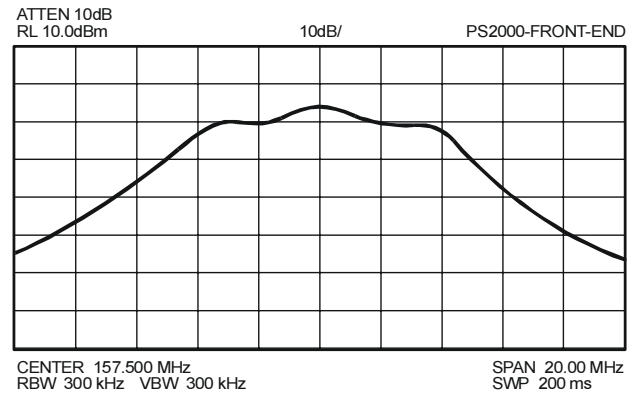
- Set the channel to CH16.
- Use the **[H/L]** key to set the transceiver to "LOW" power.
- With the **PTT** switch pressed, adjust **TC1001** so that the Frequency Counter reading is 156.800 MHz $\pm$ 100 Hz.

Receiver Front-end Adjustment

- Setup the test equipment as shown below.



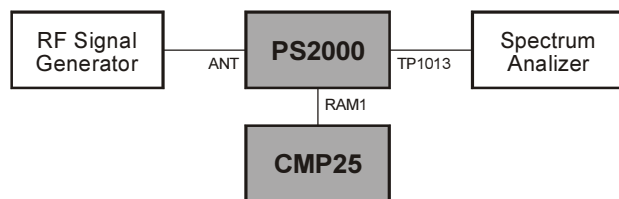
- Set the spectrum analyzer as shown below:
 - CENTER: 157.500 MHz
 - SPAN: 20.000 MHz
 - RBW, VBW: 300 kHz
 - SWP: 200 ms
- Adjust **T1001**, **T1002**, **T1003**, **T1004**, and **T1005** until the wave form shown in below is obtained.



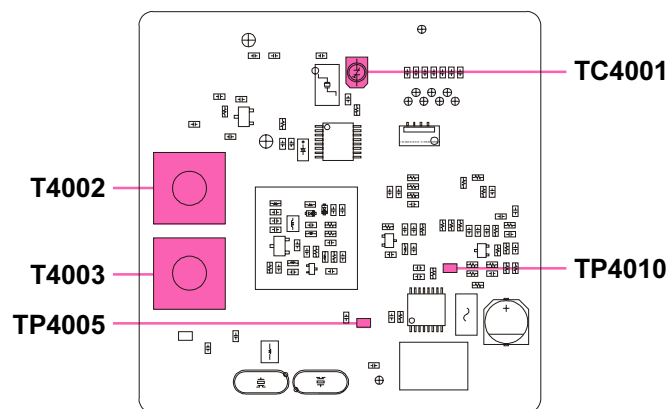
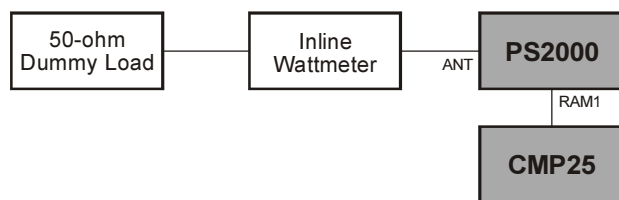
MAIN UNIT ALIGNMENT POINT

Sub Receiver Front-end Adjustment

- Setup the test equipment as shown below.



- Set the RF Signal Generator output to 156.525 MHz, at a level of +10 dBμ, ±3.0 kHz deviation with a 1 kHz audio tone.
- Adjust **T4002** and **T4003** for maximum indication on the DC voltmeter.



SUB-RX UNIT ALIGNMENT POINT

Software Alignment/Confirmation Mode

Overview of Software Alignment/Confirmation Mode

The “Software Alignment/Confirmation Mode” has been built in the microprocessor in order to adjust and confirm the performance of transceiver.

The purpose is to adjust transceiver simply and to confirm the performance of transceiver smoothly.

- (a) Expansion channels “EXP01 - EXP07” will be set as follows:

DISPLAY	RX FREQUENCY	TX FREQUENCY	SCAN
EXP01	156.050 MHz	156.050 MHz	X
EXP02	157.425 MHz	157.425 MHz	X
EXP03	163.275 MHz	158.675 MHz	X
EXP04	155.050 MHz	155.050 MHz	O
EXP05	162.025 MHz	162.025 MHz	X
EXP06	163.575 MHz	158.975 MHz	X
EXP07	159.050 MHz	159.050 MHz	X
CH70	156.525 MHz	156.525 MHz	X
WX10	163.275 MHz	—	O

- (b) In CH70, every time you are in transmit mode, (every time you press PTT), the following test tone can be outputted:

1st transmission: Synthetic tone of 1300 Hz and 2100 Hz
 2nd transmission: 1300 Hz
 3rd transmission: 2100 Hz
 4th transmission: No Modulation
 5th transmission: Return to 1st transmission

- (c) Scan the channels between WX10 and EXP04 in the SCAN mode.
- (d) EXP07 is the test channel for the Optional Voice Scrambler/NMEA output. Set the Voice Scramble Code to “0.”

Starting Software Alignment Mode

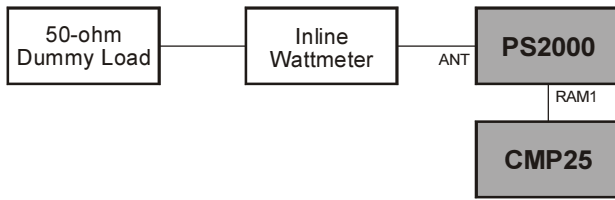
- Confirm that the transceiver’s power is turned off.
- Short the TEST points (**JP1001**).
- Press and hold the **PWR** switch on the **CMP25** RAM+ Microphone until the radio turns on while press and holding the [**DISTRESS**], [**CALL(SET)MENU**], and [**DW(IC)**] keys on the **CMP25** RAM+ Microphone. The LCD will be as shown in the illustration at the right.



Alignment

Transmit Power Adjustment

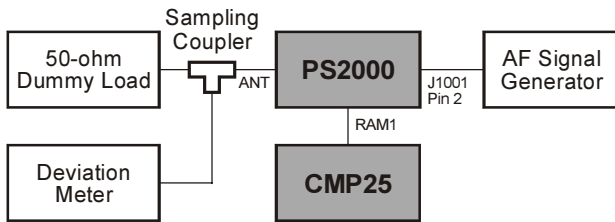
- ❑ Setup the test equipment as shown below.



- ❑ Press the **[SCAN]** key to recall the Alignment Item "HI PO."
- ❑ With the **PTT** switch pressed, press the **[▼]/[▲]** key so that RF output power is $24\text{ W} \pm 0.3\text{ W}$.
- ❑ Press the **[CALL(SET)MENU]** key to save the new setting.
- ❑ Press the **[SCAN]** key to recall the Alignment Item "LO PO."
- ❑ With the **PTT** switch pressed, press the **[▼]/[▲]** key so that RF output power is $0.8\text{ W} \pm 0.1\text{ W}$.
- ❑ Press the **[CALL(SET)MENU]** key to save the new setting.

TX Deviation Adjustment

- ❑ Setup the test equipment as shown below.



- ❑ Press the **[SCAN]** key to recall the Alignment Item "DEVI."
- ❑ Set the AF Signal Generator output to 1 Vrms at 1 kHz.
- ❑ With the **PTT** switch pressed, press the **[▼]/[▲]** key so that the maximum deviation is $4.2\text{ kHz} \pm 0.1\text{ kHz}$.
- ❑ Press the **[CALL(SET)MENU]** key to save the new setting.

Squelch Adjustment

- ❑ Setup the test equipment as shown below.

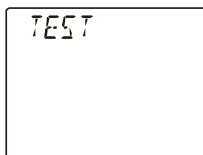


- ❑ Press the **[SCAN]** key to recall the Alignment Item "THRESH."
- ❑ Set the RF Signal Generator output to 156.800 MHz, at a level of $-8\text{ dB}\mu$, $\pm 3.0\text{ kHz}$ deviation with a 1 kHz audio tone.
- ❑ Press the **[DW(IC)]** key.
- ❑ Press the **[CALL(SET)MENU]** key to save the new setting.
- ❑ Press the **[SCAN]** key to recall the Alignment Item "TIGHT."
- ❑ Set the RF Signal Generator output to 156.800 MHz, at a level of $+4\text{ dB}\mu$, $\pm 3.0\text{ kHz}$ deviation with a 1 kHz audio tone.
- ❑ Press the **[DW(IC)]** key.
- ❑ Press the **[CALL(SET)MENU]** key to save the new setting.

This completes the Software Alignment Mode. To save all settings and exit, press and hold the **[DISTRESS]** key for 2 seconds.

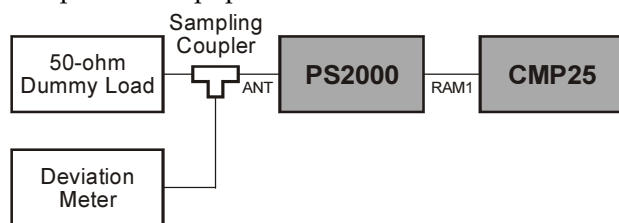
Starting Software Confirmation Mode

- ☐ Confirm that the transceiver's power is turned off.
- ☐ Short the TEST points (**JP1001**).
- ☐ Press and hold the **PWR** switch on the **CMP25** RAM+ Microphone until the radio turns on while press and holding the [**DISTRESS**] and [**DW(IC)**] keys on the **CMP25** RAM+ Microphone. Release the keys, appear "TEST" notation on the LCD for a moment, then return to normal display.



DSC Encoder Confirmation

- ☐ Setup the test equipment as shown below.

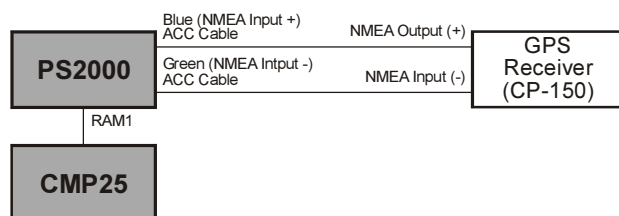


- ☐ Set the channel to CH70.
- ☐ Press the **PTT** switch, confirm that the first tone deviation is 4.0 kHz $\pm$ 0.3 kHz.

Confirmation of receive/transmit NMEA data

Input the NMEA format data output from the GPS receiver to NMEA Input terminal (Blue wire of the ACC Cable) of transceiver and display it to the LCD of the transceiver.

- ☐ Setup the test equipment as shown below.



- ☐ Press the [**NAV**] key, confirm that the position data is displayed on the LCD of transceiver.
- ☐ Press the **PTT** switch, confirm that the position data is transmitted.

Confirmation of DSC Operation

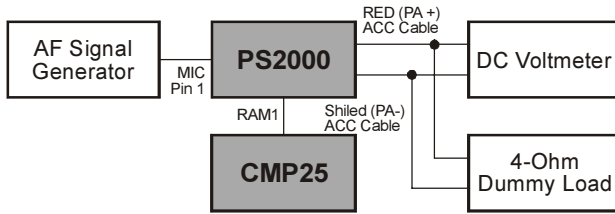
- ☐ Prepare the **confirmation** transceiver (GX2360S).
- ☐ Input below data to the **confirmation** transceiver in advance.
 - Input "TEST" to NAME of INDIVIDUAL DIRECTORY
 - Input "123456789" to MMSI of INDIVIDUAL DIRECTORY
 - Input "123456780" to local MMSI
 - Channel 13 in U.S.A. mode
- ☐ Send the INDIVIDUAL CALL from the **confirmation** transceiver.
- ☐ Confirm that the **test** transceiver receives the INDIVIDUAL CALL from the **confirmation** transceiver and outputs the beep.
- ☐ Press the [**CALL(SET)MENU**] key of the **test** transceiver and turn off the beep.
- ☐ Simultaneously, confirm that "123456780" of **confirmation** transceiver's MMSI is displayed in the LCD of the test transceiver.
- ☐ Confirm that the **confirmation** transceiver receives the response from the **test** transceiver and outputs beep.
- ☐ Press the [**ENT**] key of the **confirmation** transceiver and turn off the beep.
- ☐ Press the [**CALL(SET)MENU**] key of the **test** transceiver.
- ☐ Confirm that "TEST" of **test** transceiver's MMSI is displayed in the LCD of the **confirmation** transceiver.

This completes the Software Confirmation Mode. Turn the transceiver's power off, then disconnect the Jumper from the TEST points (**JP1001**).

Alignment

Confirmation of PA Circuit

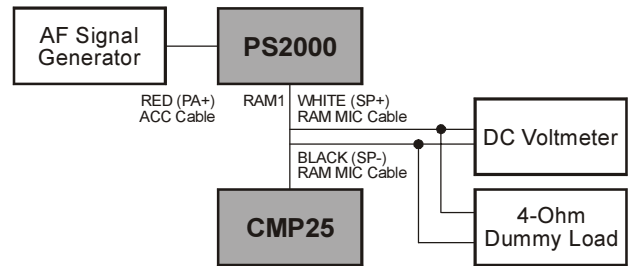
- ❑ Setup the test equipment as shown below.



- ❑ Set the AF Signal Generator output to 1 Vrms at 1 kHz.
- ❑ Press and hold in the **[NAV]** key, then press the **[CALL(SET)MENU]** key to set the transceiver to the "PA" mode.
- ❑ Press the **PTT** switch.
- ❑ Press the **[▲]** key so that the LEV indicator at the top of the LCD is indicated maximum while press and holding the **PTT** switch, confirm that the DC voltmeter reading is more than 10 V.

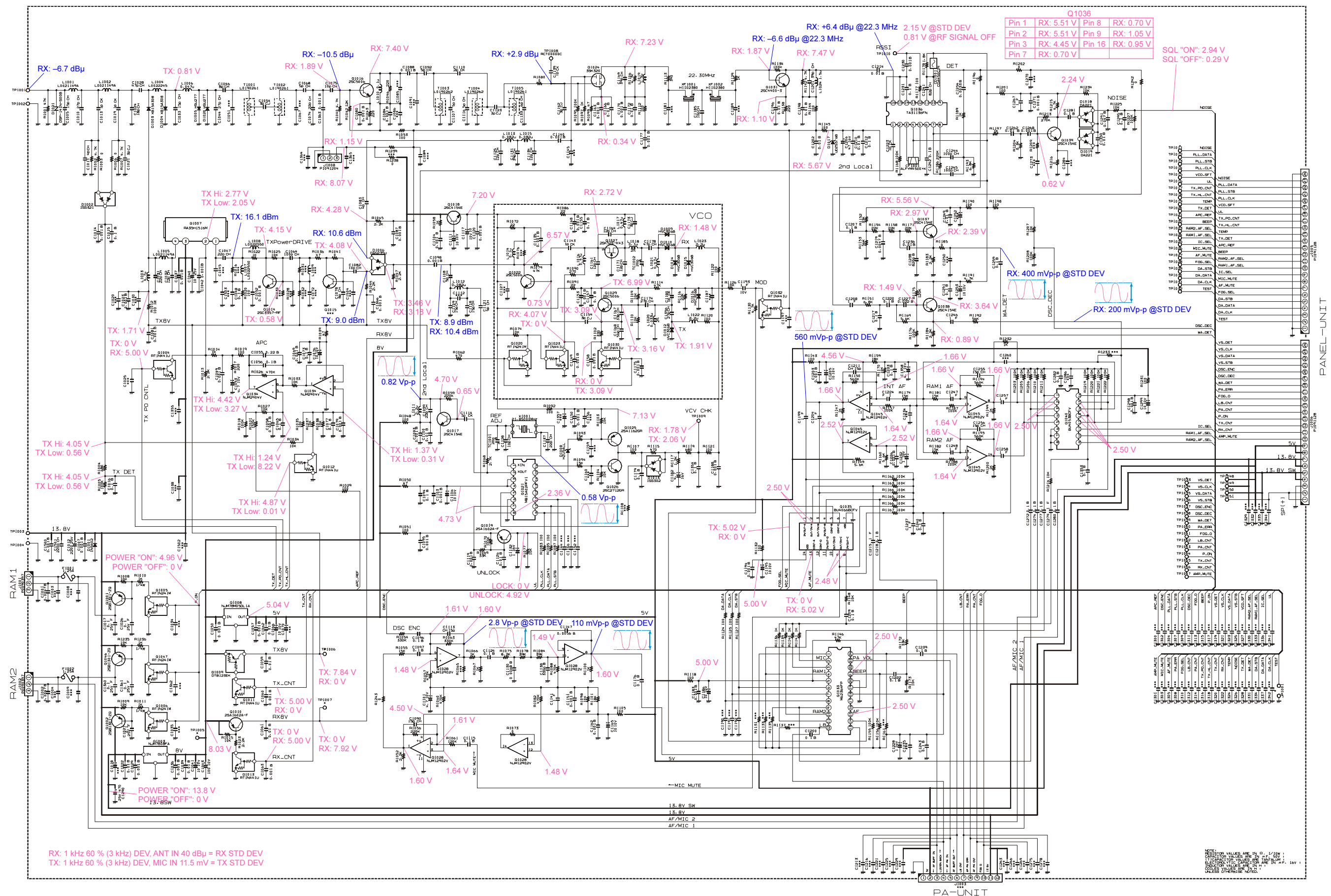
Confirmation of Listen Back Circuit

- ❑ Setup the test equipment as shown below.



- ❑ Set the AF Signal Generator output to 3 mVrms at 1 kHz.
- ❑ Press and hold in the **[NAV]** key, then press the **[CALL(SET)MENU]** key to set the transceiver to the "PA" mode.
- ❑ Press the **[▲]** key so that the LEV indicator at the top of the LCD is indicated maximum.
- ❑ Confirm that the DC voltmeter reading is more than 3.5 V.

Circuit Diagram

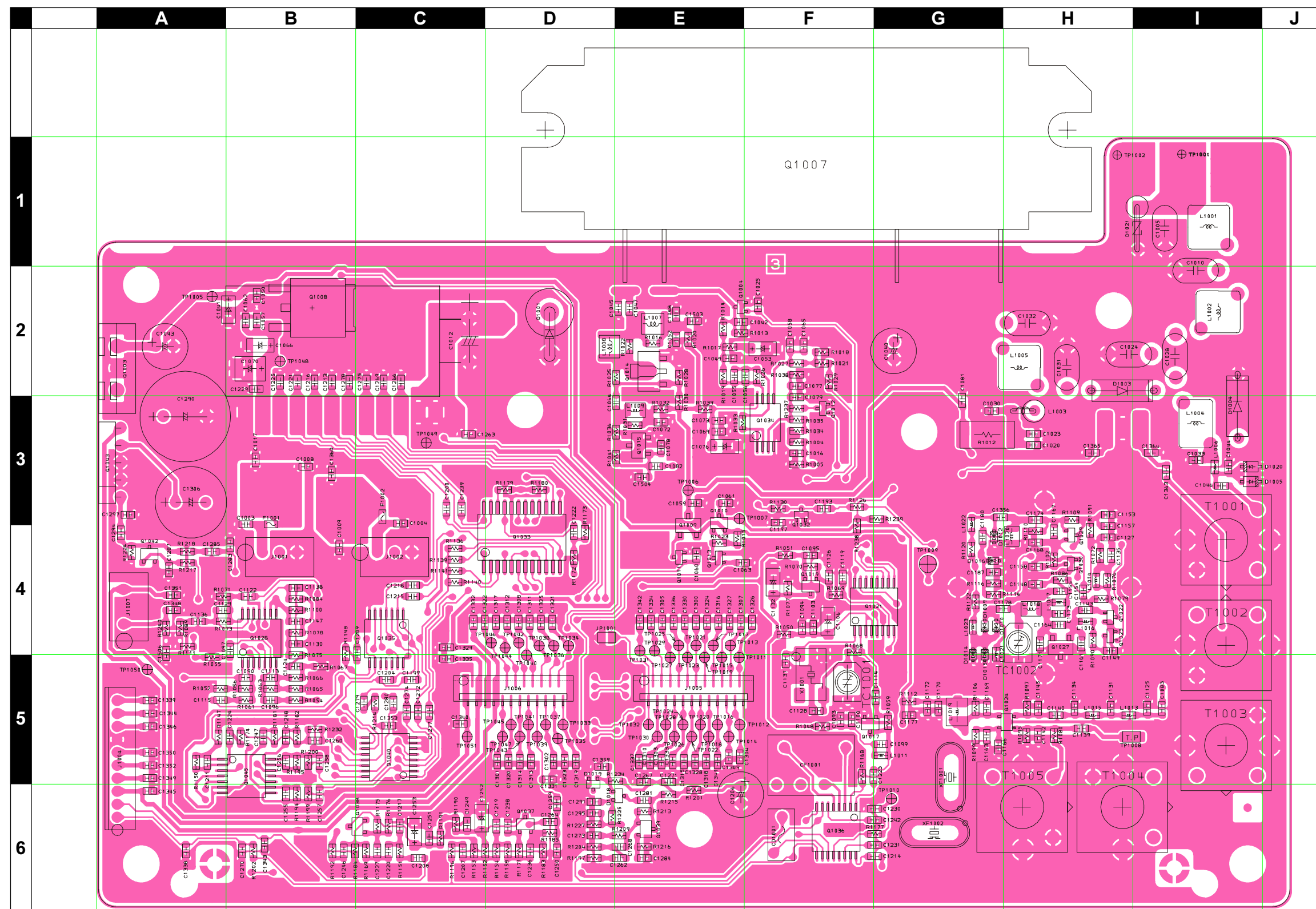
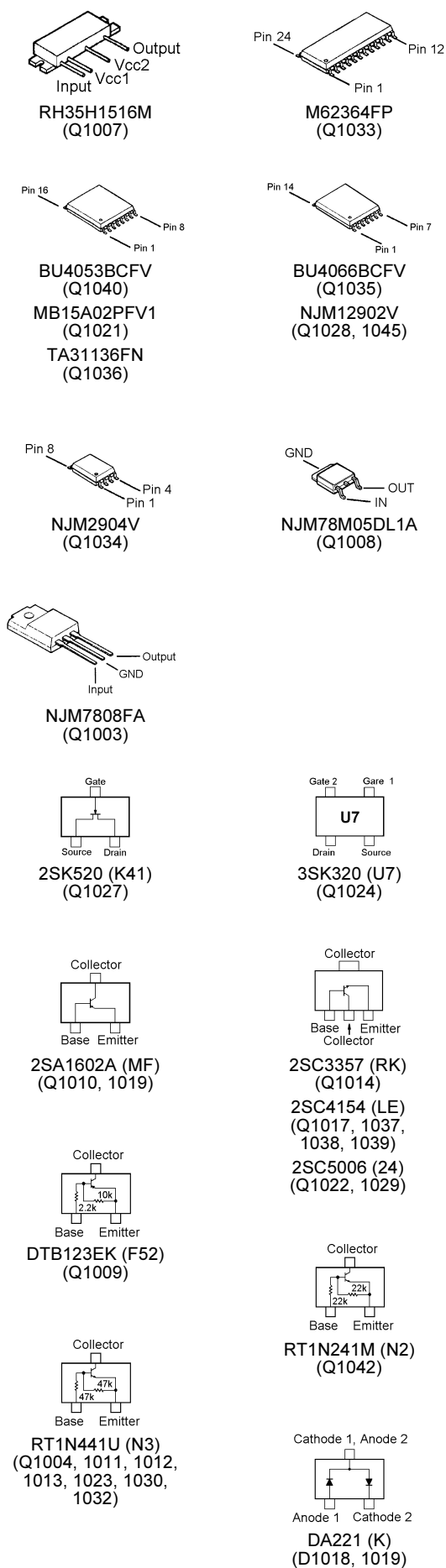


MAIN Unit

Note

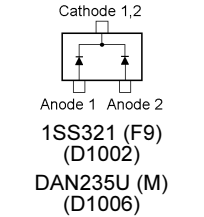
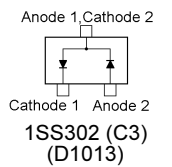
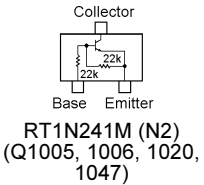
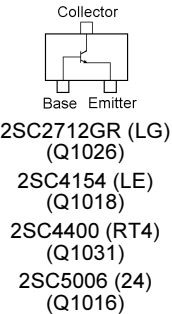
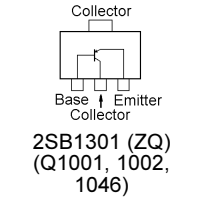
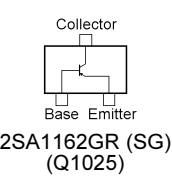
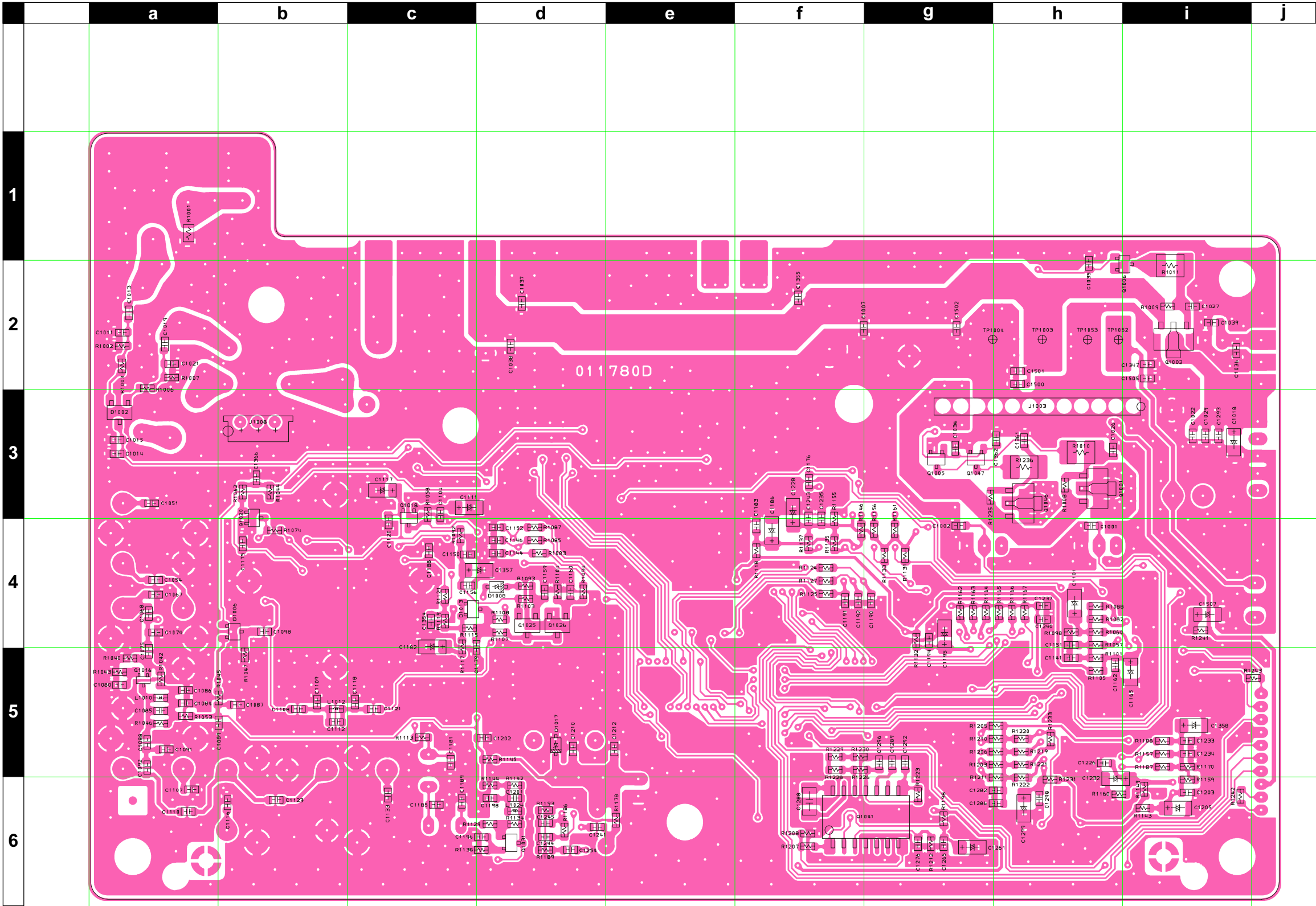
MAIN Unit

Parts Layout (Side A)



MAIN Unit

Parts Layout (Side B)



REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
PCB with Components						CB2926001				
Printed Circuit Board						FR011780D		1-		
					AM006N000					
C 1001	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	B	h4
C 1002	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	B	g4
C 1005	CERAMIC CAP.	15pF	50V	CH	CHU5 150J6	K02179104		1-	A	l1
C 1007	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	f2
C 1010	CERAMIC CAP.	27pF	50V	CH	CHU5 270J6	K02179107		1-	A	l2
C 1011	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		1-	B	a2
C 1012	AL.ELECTRO.CAP.	2200uF	25V		RE3-25V222M	K40149055		1-	A	C2
C 1013	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	B	a2
C 1014	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a3
C 1015	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	a3
C 1016	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F3
C 1017	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	B3
C 1019	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	B	a2
C 1021	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	a2
C 1022	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i3
C 1023	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H3
C 1024	CERAMIC CAP.	18pF	50V	CH	CHU5 180J6	K02179105		1-	A	H2
C 1026	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	h3
C 1027	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	i2
C 1028	CERAMIC CAP.	47pF	50V	CH	CHU5 470J6	K02179110		1-	A	l2
C 1029	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i3
C 1031	CERAMIC CAP.	22pF	50V	CH	CHU5 220J6	K02179106		1-	A	H2
C 1032	CERAMIC CAP.	12pF	50V	CH	CHU5 120J6	K02179103		1-	A	H2
C 1033	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	I3
C 1036	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i2
C 1037	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	d2
C 1039	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i2
C 1040	AL.ELECTRO.CAP.	10uF	25V		RC2-25V100M(5X7)	K40149012		1-	A	G2
C 1041	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	B2
C 1042	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1043	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101M 100UF	K40109024		1-	A	A2
C 1044	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	I3
C 1046	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		1-	A	I3
C 1047	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	E2
C 1048	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E2
C 1049	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1050	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	B2
C 1052	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1053	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	A	F2
C 1054	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	a4
C 1055	CHIP CAP.	0.22uF	10V	B	GRM39B224K10PT	K22104801		1-	A	E2
C 1056	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E2
C 1057	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	B2
C 1058	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F2
C 1059	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	E3
C 1060	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E4
C 1061	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	E3
C 1062	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	B2
C 1063	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E4
C 1064	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	A	D3
C 1065	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F2
C 1066	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	B2
C 1068	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a4
C 1069	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E3
C 1073	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E3
C 1074	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	a4
C 1075	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	B	a5
C 1076	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	E3
C 1077	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F2
C 1078	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		1-	A	E3
C 1079	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F2
C 1080	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1081	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G3
C 1082	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	A	E3
C 1083	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		1-	A	I5
C 1084	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1087	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b5
C 1088	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1090	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B5
C 1092	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a5
C 1093	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F5

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1094	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F4
C 1095	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4
C 1096	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B5
C 1097	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B4
C 1098	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 1099	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	G5
C 1100	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F5
C 1101	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	B	h4
C 1103	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4
C 1104	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c3
C 1106	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F4
C 1107	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a6
C 1108	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	b5
C 1109	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B	b5
C 1110	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		1-	B	a6
C 1111	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c3
C 1113	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B5
C 1114	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G5
C 1115	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	A5
C 1116	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	b6
C 1117	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c3
C 1118	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B	c5
C 1119	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4
C 1120	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 1121	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	c5
C 1123	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	b6
C 1124	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B5
C 1125	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	i5
C 1126	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F4
C 1128	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	A	F5
C 1130	CHIP CAP.	0.0068uF	50V	B	GRM39B682K50PT	K22174834		1-	A	B4
C 1131	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	A	H5
C 1132	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	F4
C 1133	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		1-	B	c6
C 1134	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H5
C 1135	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1137	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	F5
C 1138	CHIP CAP.	330pF	50V	B	GRM39B331K50PT	K22174820		1-	A	B4
C 1139	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	H5
C 1140	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H5
C 1141	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	h5
C 1142	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H5
C 1143	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	H4
C 1147	CHIP CAP.	0.0056uF	50V	B	GRM39B562M50PT	K22174818		1-	A	B4
C 1148	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1149	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1150	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 1151	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h4
C 1153	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H3
C 1154	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H4
C 1155	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	H4
C 1157	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	H3
C 1158	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1161	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1162	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h5
C 1163	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1164	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1165	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	i5
C 1166	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	G5
C 1167	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		1-	A	H4
C 1168	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		1-	A	H4
C 1169	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	A	G5
C 1170	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1171	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1172	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	G5
C 1173	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H4
C 1174	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	H3
C 1175	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 1176	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	f3
C 1177	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1178	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		1-	A	G4
C 1179	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	c4
C 1180	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G4

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1182	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B	c4
C 1183	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	f4
C 1185	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	B	c6
C 1186	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	f4
C 1188	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 1193	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	F3
C 1194	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	g4
C 1195	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	g4
C 1196	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d6
C 1198	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d6
C 1199	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C5
C 1200	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C3
C 1201	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B	d6
C 1202	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d5
C 1203	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i6
C 1204	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C5
C 1205	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	i6
C 1206	AL.ELECTRO.CAP.	47uF	16V		RE2-16V470M 47UF	K40129054		1-	A	E6
C 1207	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1208	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C6
C 1209	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B4
C 1210	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d5
C 1211	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	A5
C 1212	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e5
C 1214	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F6
C 1215	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C4
C 1217	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1218	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C4
C 1219	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	A	D6
C 1220	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1222	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D4
C 1223	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	F5
C 1224	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1226	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h5
C 1227	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	C6
C 1228	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	f3
C 1230	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F6
C 1231	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F6
C 1232	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	h6
C 1233	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	i5
C 1236	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D6
C 1237	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	h4
C 1238	CHIP CAP.	820pF	50V	B	GRM39B821M50PT	K22174808		1-	A	D6
C 1239	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C3
C 1240	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	h4
C 1241	CHIP CAP.	82pF	50V	CH	GRM39CH820J50PT	K22174233		1-	B	d6
C 1242	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F6
C 1243	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	f3
C 1244	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	d6
C 1245	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	d6
C 1246	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B6
C 1247	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1248	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1249	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	C6
C 1251	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1253	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C6
C 1254	CHIP CAP.	0.0033uF	50V	B	GRM39B332K50PT	K22174831		1-	B	d6
C 1255	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B6
C 1256	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B5
C 1257	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B6
C 1258	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1259	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1262	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	E6
C 1267	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	E5
C 1268	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E6
C 1271	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E5
C 1272	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1274	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1277	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1279	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C5
C 1280	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1281	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E6
C 1282	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	h6

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1290	AL.ELECTRO.CAP.	470uF	25V		RE3-25V471M	K40149044		1-	A	A3
C 1291	CHIP CAP.	0.047uF	16V	B	GRM39B473K16PT	K22124804		1-	A	D6
C 1295	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1298	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h6
C 1299	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	h6
C 1353	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1354	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	c4
C 1356	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	G3
C 1358	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	B	i5
C 1359	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D5
C 1360	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	B3
C 1361	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	h3
C 1363	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	I3
C 1366	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b3
C 1500	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h2
C 1501	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		1-	B	h2
CD1001	CERAMIC DISC				CDA450C24	H7901430		1-	A	F6
CF1001	CERAMIC FILTER				ALFYM450E=K	H3900535		1-	A	F5
D 1001	DIODE				1N5402	G2090778		1-	A	D2
D 1002	DIODE				1SS321 TE85R	G2070076		1-	B	a3
D 1003	DIODE				XB15A308A2GB	G2090742		1-	A	I2
D 1004	DIODE				XB15A308A2GB	G2090742		1-	A	I2
D 1005	DIODE				HSU277TRF	G2070118		1-	A	I3
D 1006	DIODE				DAN235U TL	G2070176		1-	B	b4
D 1008	DIODE				HZU5ALL-TR	G2070754		1-	B	d4
D 1009	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1010	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1012	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1013	DIODE				1SS302 TE85R	G2070088		1-	B	c4
D 1014	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1015	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1016	DIODE				HVC306B TRU	G2070918		1-	A	G4
D 1017	DIODE				UDZS TE-17 5.6B	G2070910		1-	B	d5
D 1018	DIODE				DA221 TL	G2070178		1-	A	E6
D 1019	DIODE				DA221 TL	G2070178		1-	A	D5
D 1020	DIODE				HSU277TRF	G2070118		1-	A	I3
D 1021	SURGE ABSORBER				DSP-141N-S00B	Q9000586		1-	A	I1
F 1001	CHIP FUSE	1.25A			FCC16 132ABTP	Q0000109		1-	A	B3
F 1002	CHIP FUSE	1.25A			FCC16 132ABTP	Q0000109		1-	A	C3
J 1001	CONNECTOR				B3B-PH-K-S	P0090397		1-	A	B4
J 1002	CONNECTOR				B3B-PH-K-S	P0090397		1-	A	C4
J 1005	CONNECTOR				24FLT-SM1-TB	P1091128		1-	A	E5
J 1006	CONNECTOR				24FLT-SM1-TB	P1091128		1-	A	D5
J 1008	CONNECTOR				9110S-03	P1091204		1-	B	b3
L 1001	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	I1
L 1002	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	I2
L 1003	M.RFC	4.7uH			LAL03NA4R7K	L1190203		1-	A	H3
L 1004	COIL A1				3.5T4.0D0.8UEW R	L0022245		1-	A	I3
L 1005	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	H2
L 1006	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	A	I3
L 1007	COIL				E2 0.25-1.9-8T-L	L0022550		1-	A	E2
L 1008	COIL				E2 0.25-1.9-8T-L	L0022550		1-	A	D2
L 1010	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	a5
L 1011	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G5
L 1012	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b5
L 1013	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	A	H5
L 1014	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	A	H4
L 1015	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	A	H5
L 1016	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	H4
L 1017	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	H4
L 1018	M.RFC	0.1uH		2%	C2012C-R10G	L1690776		1-	A	H4
L 1019	CHIP COIL	1.5uH			LQH32MN1R5K23L	L1690077		1-	A	G5
L 1020	M.RFC	0.033uH		2%	C2012C-33NG	L1690770		1-	A	H4
L 1021	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	G4
L 1022	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G3
L 1023	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G4
L 1024	M.RFC	1.5uH			LK1608 1R5K-T	L1690846		1-	B	d6
Q 1001	TRANSISTOR				2SB1301-T2 ZQ	G3213017Q		1-	B	h3
Q 1002	TRANSISTOR				2SB1301-T2 ZQ	G3213017Q		1-	B	i2
Q 1003	IC				NJM7808FA	G1093640		1-	A	A2
Q 1004	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E2
Q 1005	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	g3
Q 1006	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	i2

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 1007	IC				RA35H1516M	G1093695		1-	A	D1
Q 1008	IC				NJM78M05DL1A(TE1)	G1093660		1-	A	B2
Q 1009	TRANSISTOR				DTB123EK T146	G3070022		1-	A	E3
Q 1010	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	A	E3
Q 1011	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E4
Q 1012	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	F3
Q 1013	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E4
Q 1014	TRANSISTOR				2SC3357-T2 RF	G3333577F		1-	A	E2
Q 1016	TRANSISTOR				2SC5006-T1	G3350068		1-	B	a5
Q 1017	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	F5
Q 1018	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c3
Q 1019	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	A	F4
Q 1020	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	b3
Q 1021	IC				MB15A02PFV1-G-BND-EF	G1092541		1-	A	F4
Q 1022	TRANSISTOR				2SC5006-T1	G3350068		1-	A	H4
Q 1023	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	H4
Q 1024	FET				3SK320(TE85L)	G4803208		1-	A	H5
Q 1025	TRANSISTOR				2SA1162GR TE85R	G3111627G		1-	B	d4
Q 1026	TRANSISTOR				2SC2712GR TE85R	G3327127G		1-	B	d4
Q 1027	FET				2SK520-T2B K43	G3805207C		1-	A	H4
Q 1028	IC				NJM12902V(TE1)	G1093592		1-	A	B4
Q 1029	TRANSISTOR				2SC5006-T1	G3350068		1-	A	H4
Q 1030	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	H4
Q 1031	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	d6
Q 1032	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	F3
Q 1033	IC				M62364FP 600D	G1093033		1-	A	D4
Q 1034	IC				NJM2904V-TE1	G1091677		1-	A	F3
Q 1035	IC				BU4066BCFV-E2	G1093537		1-	A	C4
Q 1036	IC				TA31136FN(EL)	G1091605		1-	A	F6
Q 1037	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D6
Q 1038	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	C6
Q 1039	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	E6
Q 1040	IC				BU4053BCFV-E2	G1093422		1-	A	C5
Q 1045	IC				NJM12902V(TE1)	G1093592		1-	A	B5
Q 1046	TRANSISTOR				2SB1301-T2 ZQ	G3213017Q		1-	B	h3
Q 1047	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	g3
R 1001	CHIP RES.	47k	1/10W	5%	RMC1/10T 473J	J24205473		1-	B	a1
R 1002	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a2
R 1003	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a2
R 1004	CHIP RES.	68k	1/16W	5%	RMC1/16 683JATP	J24185683		1-	A	F3
R 1005	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1006	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a2
R 1007	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a2
R 1008	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h3
R 1009	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	i2
R 1010	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	h3
R 1011	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	i2
R 1012	CHIP RES.	100	1W	5%	RMC1 101JTE	J24305101		1-	A	G3
R 1013	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	E2
R 1014	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	E2
R 1015	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	E4
R 1017	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	E2
R 1018	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F2
R 1019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E2
R 1020	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E2
R 1021	CHIP RES.	150k	1/16W	5%	RMC1/16 154JATP	J24185154		1-	A	F2
R 1022	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	E2
R 1023	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	E4
R 1025	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 1026	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	A	F2
R 1027	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F2
R 1029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F2
R 1033	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	E3
R 1034	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1035	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1036	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	D3
R 1038	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F2
R 1039	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	E3
R 1040	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a5
R 1041	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D3
R 1042	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	B	a5
R 1043	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	a5
R 1044	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b3

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1045	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	a5
R 1046	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	a5
R 1047	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b5
R 1048	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F5
R 1050	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	F4
R 1051	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F4
R 1052	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A5
R 1053	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	a5
R 1054	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B5
R 1055	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	A5
R 1056	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	B5
R 1057	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1058	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c3
R 1059	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	G5
R 1060	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1061	CHIP RES.	120k	1/16W	5%	RMC1/16 124JATP	J24185124		1-	A	B5
R 1062	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b3
R 1063	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B5
R 1066	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1067	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1068	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	A	F4
R 1069	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	F4
R 1070	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F4
R 1072	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1073	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	A4
R 1074	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b4
R 1075	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	B4
R 1077	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F4
R 1078	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B4
R 1079	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	H4
R 1080	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	H5
R 1082	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1083	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1084	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B4
R 1085	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1086	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1087	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1088	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1090	CHIP RES.	270	1/16W	5%	RMC1/16 271JATP	J24185271		1-	A	H4
R 1091	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1092	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1093	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	d4
R 1094	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	d4
R 1095	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	H5
R 1097	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	H5
R 1098	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h4
R 1099	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	G5
R 1100	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B4
R 1101	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	h5
R 1102	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		1-	A	H4
R 1103	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 1104	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 1105	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h5
R 1106	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	G5
R 1107	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1109	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	H3
R 1110	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	H4
R 1112	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G5
R 1113	CHIP RES.	390	1/16W	5%	RMC1/16 391JATP	J24185391		1-	B	c5
R 1114	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	G4
R 1115	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 1116	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	G4
R 1117	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	c4
R 1118	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1119	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		1-	B	c4
R 1120	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G4
R 1121	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1122	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G4
R 1124	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1125	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1126	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1127	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1129	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	d6

MAIN Unit

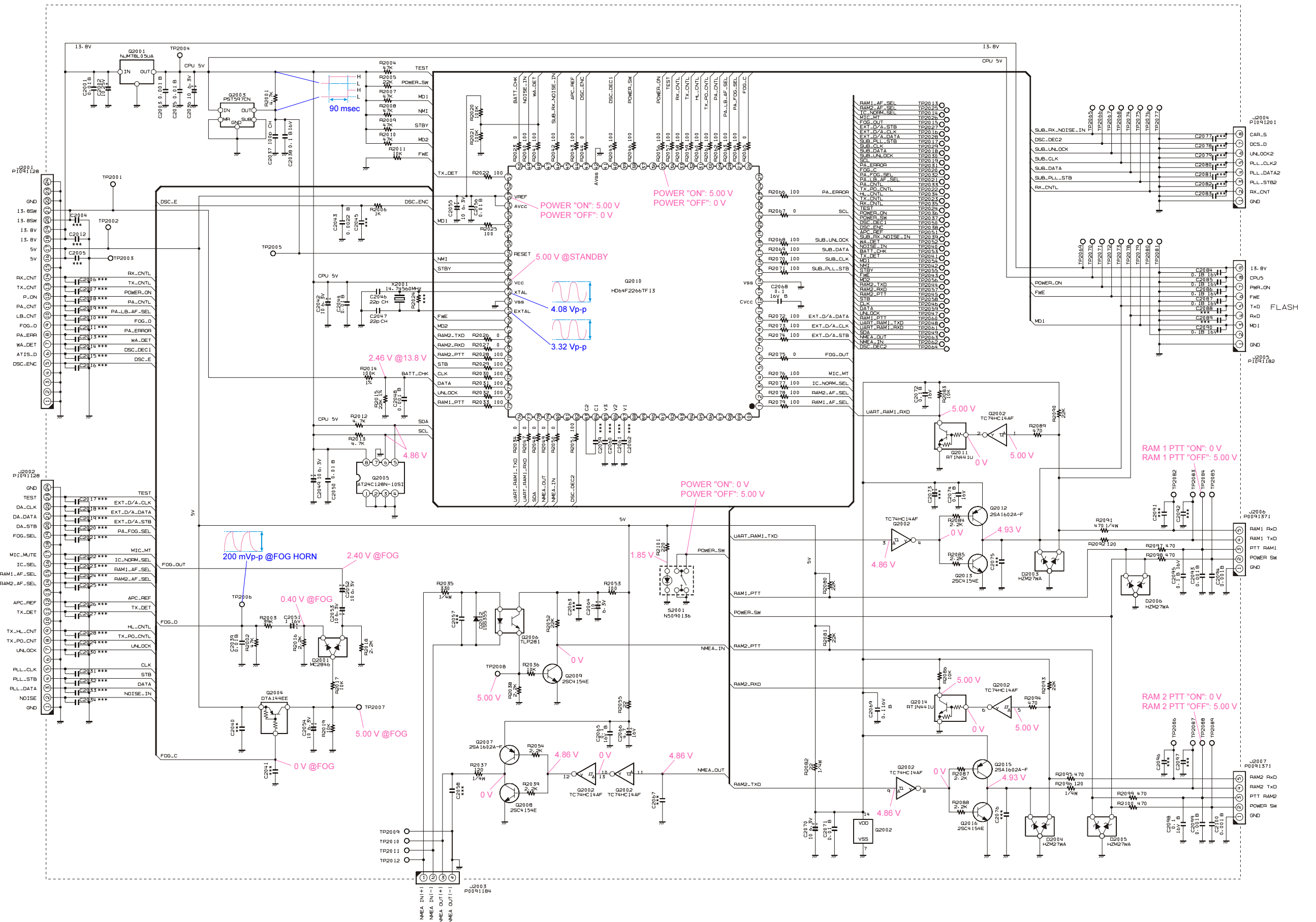
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1130	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	F3
R 1132	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 1134	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d6
R 1136	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1138	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	d6
R 1139	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1140	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1141	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1142	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	d6
R 1143	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	i6
R 1144	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d6
R 1145	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d5
R 1146	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f4
R 1147	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	A5
R 1148	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	B4
R 1149	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	i6
R 1150	CHIP RES.	560k	1/16W	5%	RMC1/16 564JATP	J24185564		1-	A	A5
R 1151	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	A	C6
R 1152	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	C6
R 1153	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	C6
R 1154	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1155	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f3
R 1156	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1157	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1158	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1159	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	i6
R 1160	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	h6
R 1162	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1163	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1164	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1165	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h4
R 1166	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h4
R 1167	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h4
R 1168	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F5
R 1169	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	C6
R 1170	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	i5
R 1171	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1172	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	D4
R 1173	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D4
R 1174	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B5
R 1175	CHIP RES.	120k	1/16W	5%	RMC1/16 124JATP	J24185124		1-	A	C6
R 1176	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C6
R 1177	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F6
R 1178	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	e6
R 1181	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B5
R 1182	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B5
R 1183	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	D6
R 1184	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	B6
R 1185	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D6
R 1186	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	B	d6
R 1187	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1188	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1189	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	d6
R 1190	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C6
R 1191	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C6
R 1192	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	B6
R 1193	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	B	d6
R 1194	CHIP RES.	560k	1/16W	5%	RMC1/16 564JATP	J24185564		1-	A	B6
R 1195	CHIP RES.	560k	1/16W	5%	RMC1/16 564JATP	J24185564		1-	A	B5
R 1196	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	C6
R 1197	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D6
R 1198	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g6
R 1199	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B6
R 1200	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1201	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E6
R 1202	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	B6
R 1203	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1204	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	D6
R 1205	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1206	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1207	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f6
R 1208	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f6
R 1210	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5

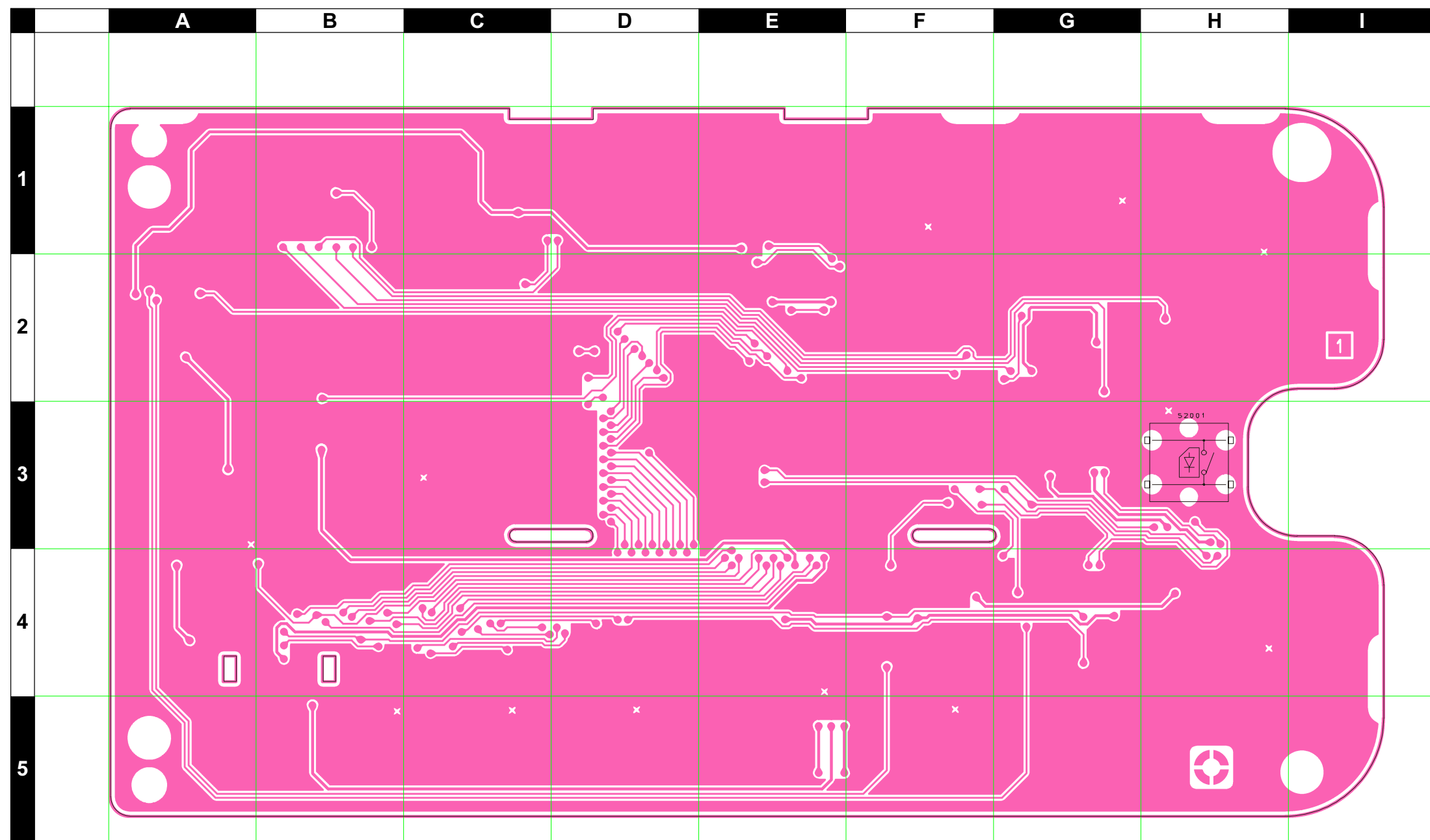
MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1211	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1213	CHIP RES.	270k	1/16W	5%	RMC1/16 274JATP	J24185274		1-	A	E6
R 1214	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C5
R 1215	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	E6
R 1216	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E6
R 1219	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1220	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1221	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1222	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1225	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D6
R 1227	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	D6
R 1231	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h6
R 1232	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1234	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D5
R 1235	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g3
R 1236	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	h3
R 1237	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1238	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F3
R 1242	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
R 1243	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
T 1001	COIL				MC120 E526HNSA-110461	L0190261		1-	A	I4
T 1002	COIL				MC120 E526HNSA-110461	L0190261		1-	A	I4
T 1003	COIL				MC120 E526HNSA-110462	L0190262		1-	A	I5
T 1004	COIL				MC120 E526HNSA-110462	L0190262		1-	A	H6
T 1005	COIL				MC120 E526HNSA-110461	L0190261		1-	A	H6
TC1001	TRIMMER CAP.	20pF			ECR-KN020E61X	K91000213		1-	A	F5
TC1002	TRIMMER CAP.	20pF			ECR-KN020E61X	K91000213		1-	A	H4
TP1008	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	H5
X 1001	XTAL TOP-B	21.85MHz			21.85000MHZ	H0103270		1-	A	F5
XF1001	XTAL FILTER				22M13B	H1102380		1-	A	G6
XF1002	XTAL FILTER				22M13B	H1102380		1-	A	G6
	SHIELD CASE				(VCO)	RA0517200		1-		
	LEAF SPRING					R0140031		1-		

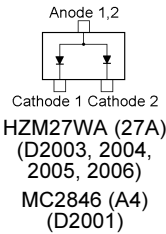
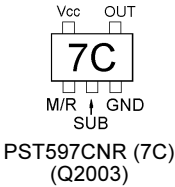
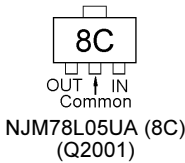
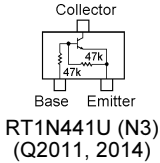
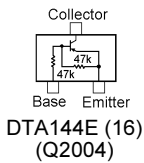
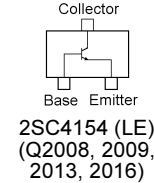
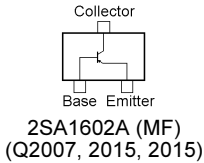
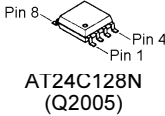
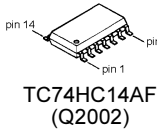
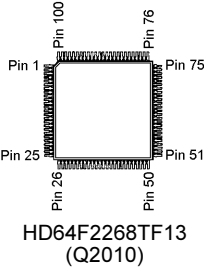
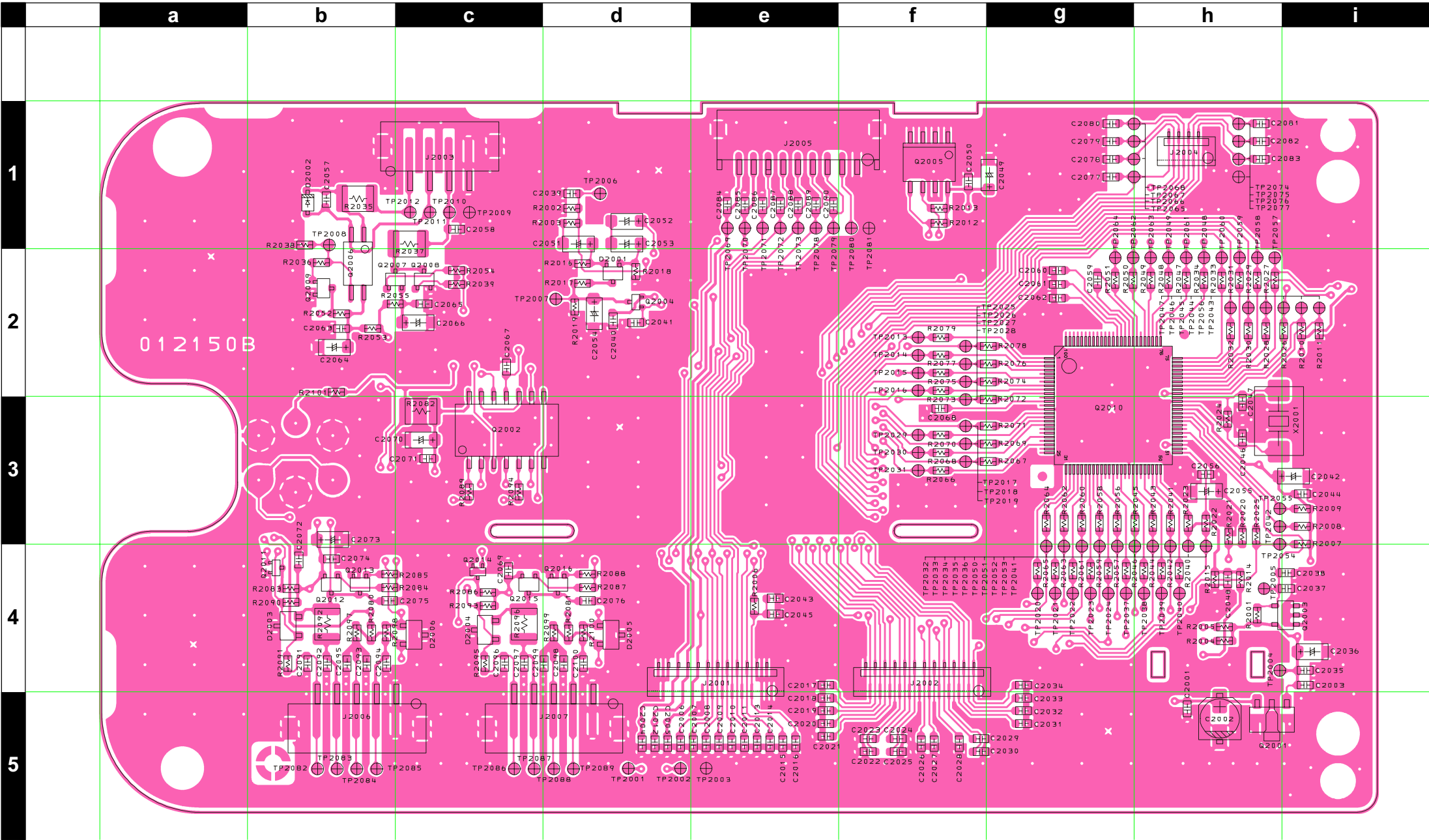


CNTL Unit
Parts Layout (Side A)



CNTL Unit

Parts Layout (Side B)



REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
PCB with Components						CB2927001				
Printed Circuit Board						FR012150B		1-		
					AM013N000					
C 2001	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h5
C 2002	AL.ELECTRO.CAP.	10uF	25V		MVA-25VC10MD55	K48140014		1-	B	h5
C 2003	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i4
C 2035	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i4
C 2036	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	i4
C 2037	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	i4
C 2038	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	i4
C 2039	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d1
C 2042	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	i3
C 2043	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		1-	B	e4
C 2044	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i3
C 2046	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	h3
C 2047	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	h3
C 2048	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		1-	B	h4
C 2049	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	g1
C 2050	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	f1
C 2051	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	d1
C 2052	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	d1
C 2053	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	d1
C 2054	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	d2
C 2055	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	h3
C 2056	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h3
C 2064	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	b2
C 2065	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	c2
C 2066	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B	c2
C 2068	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	f3
C 2069	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	c4
C 2070	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c3
C 2071	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c3
C 2072	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 2074	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 2084	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e1
C 2085	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e1
C 2086	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e1
C 2087	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e1
C 2090	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e1
C 2093	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 2094	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 2095	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 2098	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	d4
C 2099	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 2100	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	d4
D 2001	DIODE				MC2846-T11-1	G2070702		1-	B	d2
D 2002	DIODE				1SS355 TE-17	G2070470		1-	B	b1
D 2003	DIODE				HZM27WA-TR	G2070530		1-	B	b4
D 2004	DIODE				HZM27WA-TR	G2070530		1-	B	c4
D 2005	DIODE				HZM27WA-TR	G2070530		1-	B	d4
D 2006	DIODE				HZM27WA-TR	G2070530		1-	B	c4
J 2001	CONNECTOR				24FLT-SM1-TB	P1091128		1-	B	e4
J 2002	CONNECTOR				24FLT-SM1-TB	P1091128		1-	B	f4
J 2003	CONNECTOR				B4B-PH-SM3-TB	P0091184		1-	B	c1
J 2004	CONNECTOR				08FLT-SM1-TB	P1091201		1-	B	h1
J 2005	CONNECTOR				S9B-ZR-SM3A-TF	P1091182		1-	B	e1
J 2006	CONNECTOR				B5B-PH-SM3-TBT	P0091371		1-	B	b5
J 2007	CONNECTOR				B5B-PH-SM3-TBT	P0091371		1-	B	d5
Q 2001	IC				NJM78L05UA TE1	G1091325		1-	B	h5
Q 2002	IC				TC74HC14AF(EL)	G1092038		1-	B	c3
Q 2003	IC				PST597CNR	G1092589		1-	B	i4
Q 2004	TRANSISTOR				DTA144EE TL	G3070074		1-	B	d2
Q 2005	IC				AT24C128N-10SI-2.7	G1093516		1-	B	f1
Q 2006	PHOTO COUPLER				TLP281(GB-TP)	G0090037		1-	B	b2
Q 2007	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	b2
Q 2008	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c2
Q 2009	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b2
Q 2010	IC				HD64F2268TF13 (FLASH)	✖		1-	B	g3
Q 2011	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	b4
Q 2012	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	b4
Q 2013	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b4
Q 2014	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	c4
Q 2015	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	c4
Q 2016	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	d4

✖: Please contact Vertex Standard

CNTL Unit

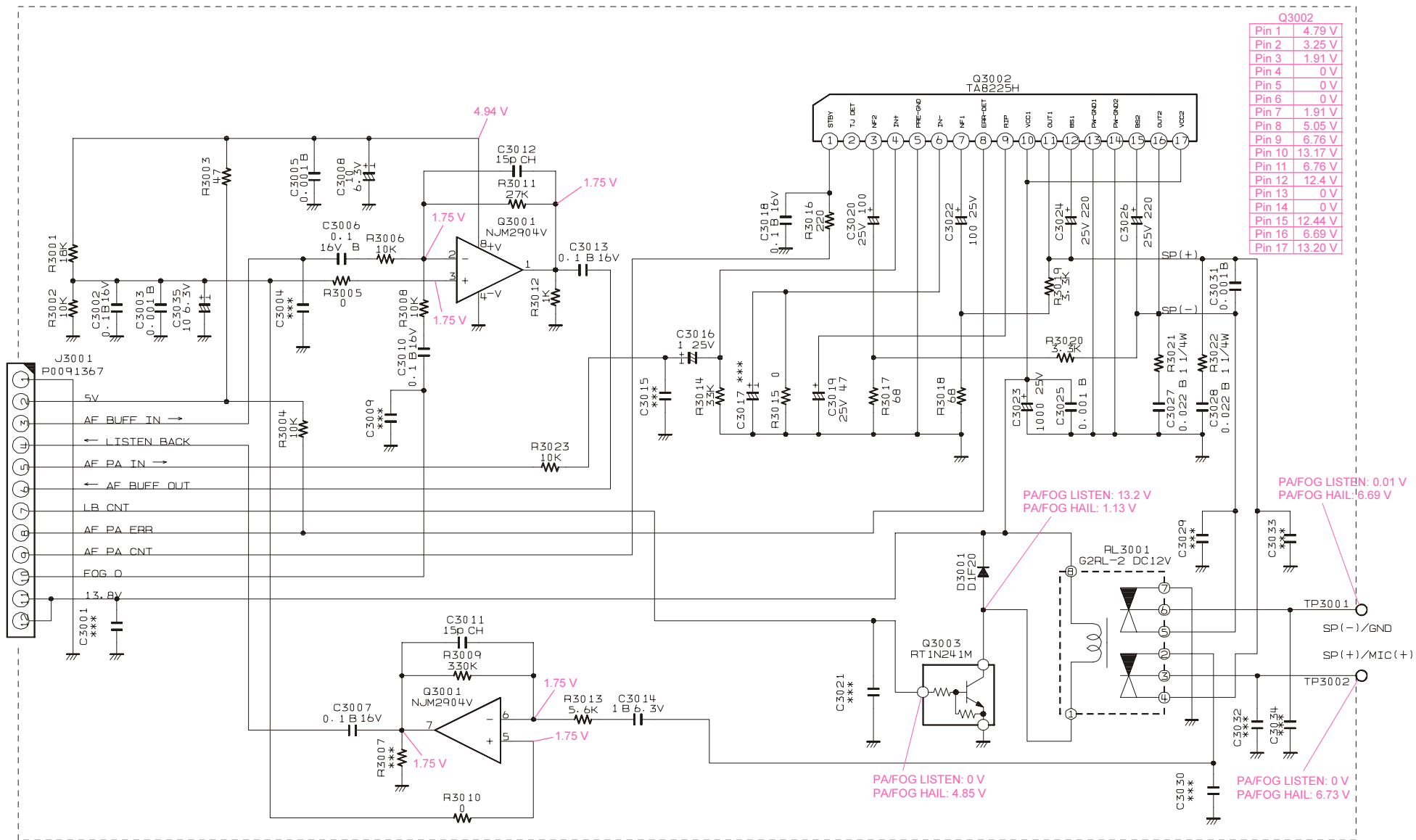
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 2001	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	h4
R 2002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d1
R 2003	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	B	d1
R 2004	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h4
R 2005	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	h4
R 2006	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	e4
R 2007	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	i3
R 2008	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	i3
R 2009	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	i3
R 2010	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	i2
R 2011	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	i2
R 2012	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	f1
R 2013	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	f1
R 2014	CHIP RES.	100k	1/16W	1%	RMC1/16 104FTP	J24183104		1-	B	h4
R 2015	CHIP RES.	22k	1/16W	1%	RMC1/16 223FTP	J24183223		1-	B	h4
R 2016	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	d2
R 2017	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d2
R 2018	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	d2
R 2019	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d2
R 2020	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h3
R 2021	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h3
R 2022	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2023	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h3
R 2025	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2026	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	i2
R 2027	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2028	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2030	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2031	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2032	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2033	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2034	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2035	CHIP RES.	330	1/4W	5%	RMC1/4 331JATP	J24245331		1-	B	b1
R 2036	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b2
R 2037	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	c1
R 2038	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b1
R 2039	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c2
R 2040	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h4
R 2041	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2042	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h4
R 2043	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2044	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h4
R 2045	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2046	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 2047	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2048	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2049	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2050	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	g2
R 2051	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 2052	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	b2
R 2053	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 2054	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c2
R 2055	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	b2
R 2056	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2057	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 2058	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2059	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 2060	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2061	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 2062	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2063	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 2064	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2065	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	g4
R 2066	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 2067	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	g3
R 2068	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 2069	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2070	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 2071	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2072	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2073	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f2
R 2074	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 2075	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	f2
R 2076	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 2077	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f2
R 2078	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 2079	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f2
R 2080	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	b4
R 2081	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d4
R 2082	CHIP RES.	22	1/4W	5%	RMC1/4 220JATP	J24245220		1-	B	c3
R 2083	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b4
R 2084	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 2085	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 2086	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	c4
R 2087	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	d4
R 2088	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	d4
R 2089	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c3
R 2090	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	b4
R 2091	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b4
R 2092	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	b4
R 2093	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	c4
R 2094	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c3
R 2095	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 2096	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	c4
R 2097	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b4
R 2098	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b4
R 2099	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d4
R 2100	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d4
R 2101	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	b2
S 2001	TACT SWITCH				SKHJGSA010	N5090136		1-	A	H3
X 2001	XTAL 94SMX	14.7456MHZ			94M147-18(D) 14.74560MHZ	H0103271		1-	B	h3

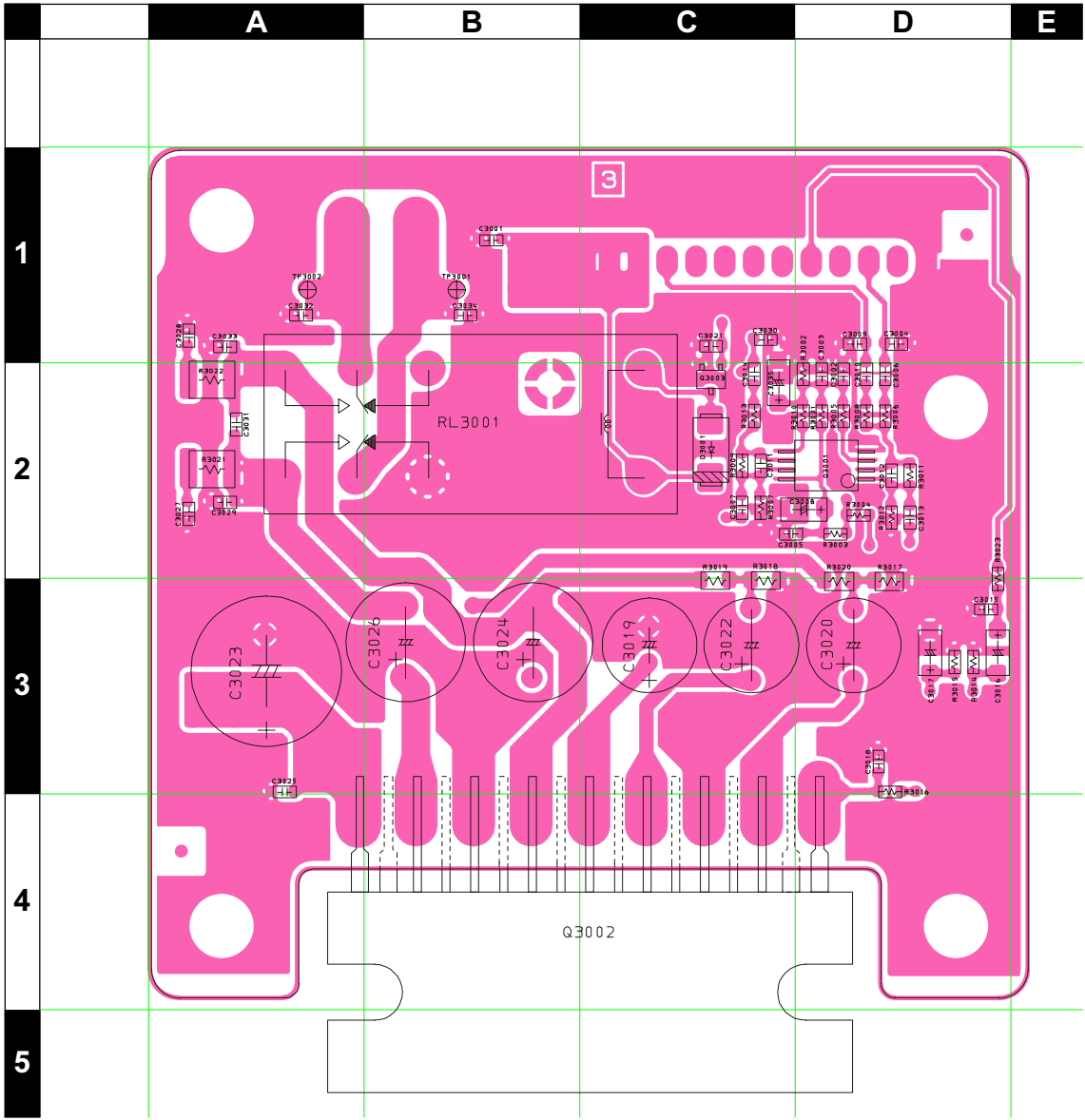
CNTL Unit

Note

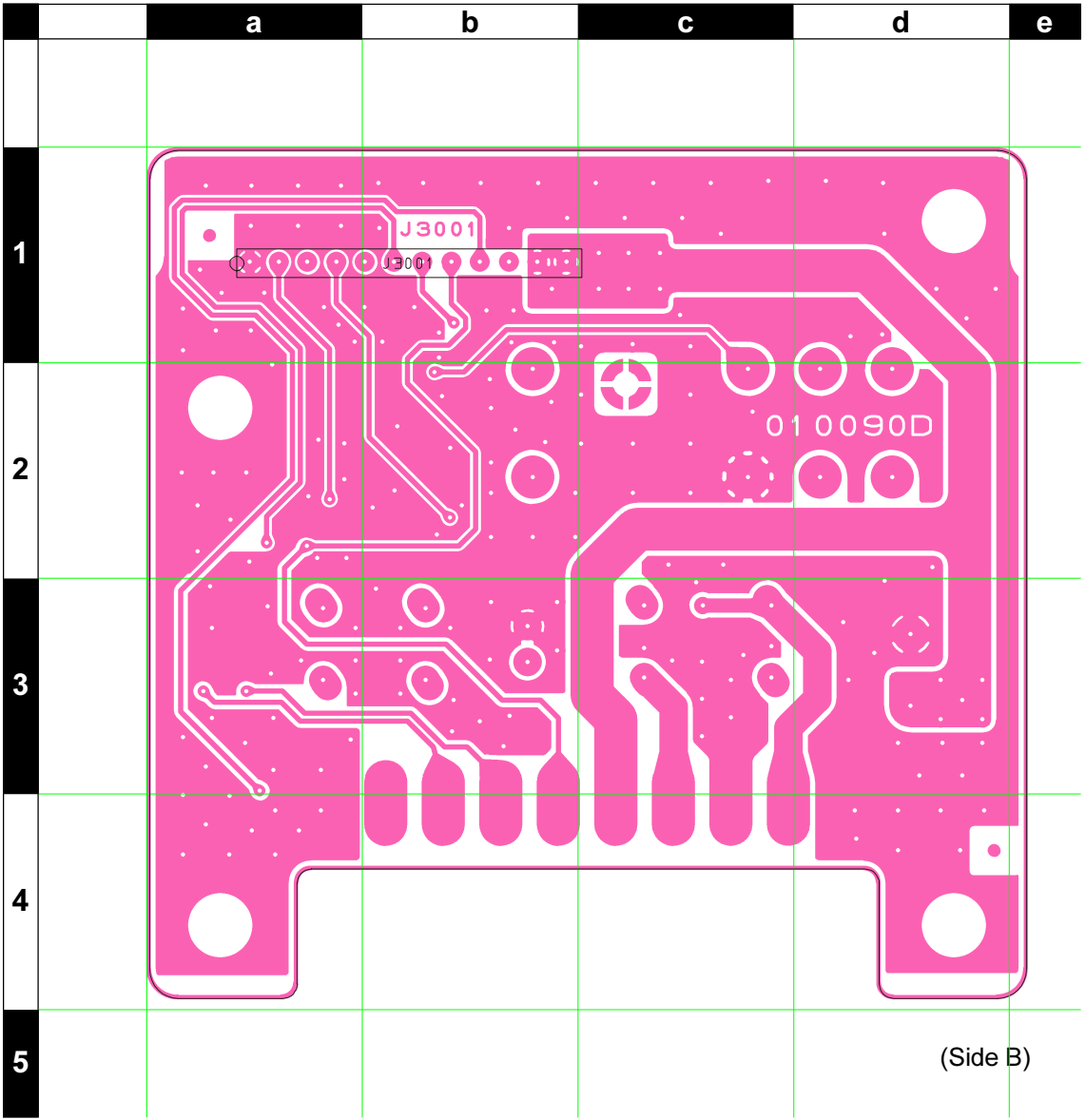


PA Unit

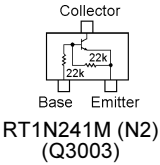
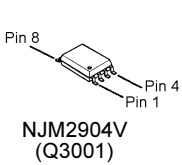
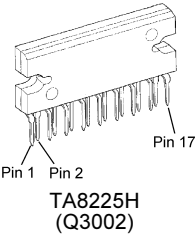
Parts Layout



(Side A)



(Side B)



REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
PCB with Components						CB2928001				
Printed Circuit Board						FR0100900		1-		
					AM004N000					
C 3002	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D2
C 3003	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	D2
C 3005	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	C2
C 3006	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D2
C 3007	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C2
C 3008	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	A	D2
C 3010	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D2
C 3011	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	C2
C 3012	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	D2
C 3013	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D2
C 3014	CHIP CAP.	1uF	6.3V	B	GRM39B105K6.3PT	K22084801		1-	A	C2
C 3016	CHIP TA.CAP.	1uF	25V		TEMSVA1E105M-8R	K78140013		1-	A	D3
C 3018	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D3
C 3019	AL.ELECTRO.CAP.	47uF	25V		RC2-25V470M(6X7)	K40149023		1-	A	C3
C 3020	AL.ELECTRO.CAP.	100uF	25V		25V101M6X11TR5	K46140005		1-	A	D3
C 3022	AL.ELECTRO.CAP.	100uF	25V		25V101M6X11TR5	K46140005		1-	A	C3
C 3023	AL.ELECTRO.CAP.	1000uF	25V		RE3-25V102M 1000UF	K40149045		1-	A	A3
C 3024	AL.ELECTRO.CAP.	220uF	25V		25V221M8X11TR5	K46140006		1-	A	B3
C 3025	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	A3
C 3026	AL.ELECTRO.CAP.	220uF	25V		25V221M8X11TR5	K46140006		1-	A	B3
C 3027	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	A2
C 3028	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	A1
C 3031	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	A2
C 3035	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	A	C2
D 3001	DIODE				D1F20-4063	G2070474		1-	A	C2
J 3001	CONNECTOR				9210B-1-12Z812-T	P0091367		1-	B	a1
Q 3001	IC				NJM2904V-TE1	G1091677		1-	A	D2
Q 3002	IC				TA8225H	G1093878		1-	A	D4
Q 3003	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	A	C2
R 3001	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	A	D2
R 3002	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 3003	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	D2
R 3004	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 3005	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D2
R 3006	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 3008	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 3009	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	C2
R 3010	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D2
R 3011	CHIP RES.	27k	1/16W	5%	RMC1/16 273JATP	J24185273		1-	A	D2
R 3012	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D2
R 3013	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	C2
R 3014	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	D3
R 3015	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D3
R 3016	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	D3
R 3017	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		1-	A	D3
R 3018	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		1-	A	C2
R 3019	CHIP RES.	3.3k	1/10W	5%	RMC1/10T 332J	J24205332		1-	A	C2
R 3020	CHIP RES.	3.3k	1/10W	5%	RMC1/10T 332J	J24205332		1-	A	D3
R 3021	CHIP RES.	1	1/4W	5%	RMC1/4 1R0JATP	J24245010		1-	A	A2
R 3022	CHIP RES.	1	1/4W	5%	RMC1/4 1R0JATP	J24245010		1-	A	A2
R 3023	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
RL3001	RELAY		DC12V		G2RL-2 DC12V	M1190178		1-	A	C2

PA Unit

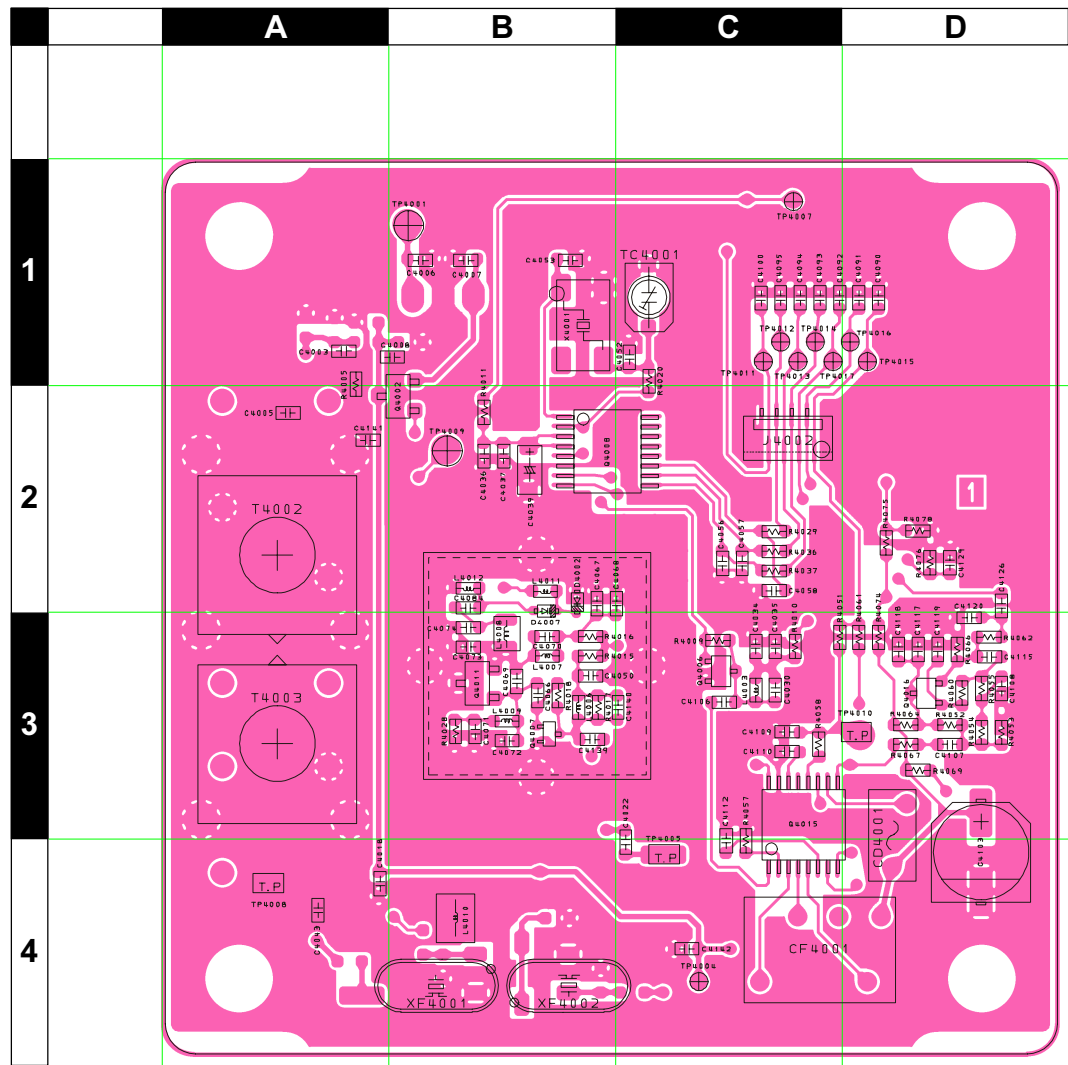
Note

Circuit Diagram

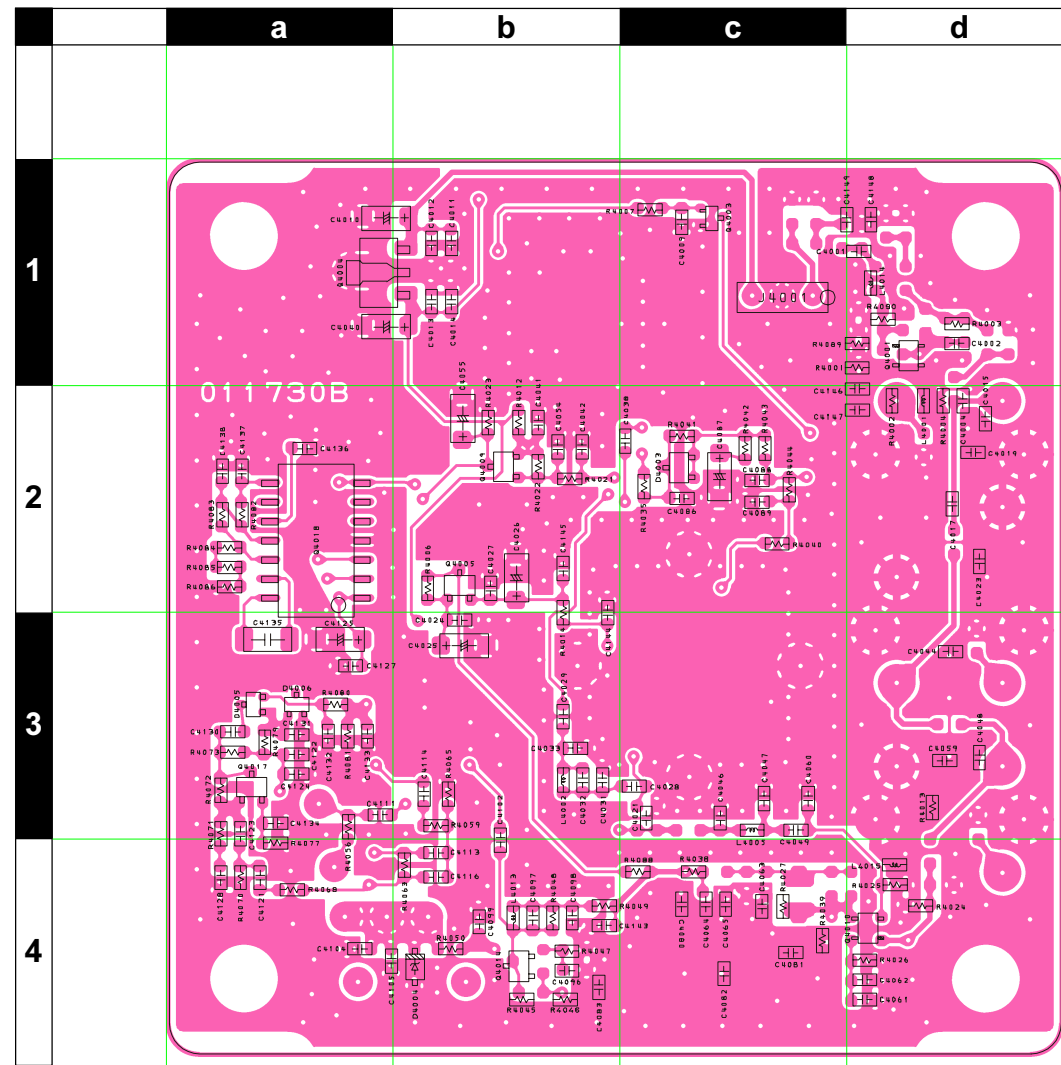


SUB-RX Unit

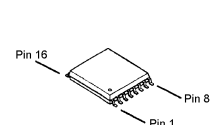
Parts Layout



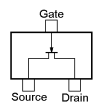
(Side A)



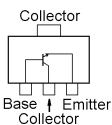
(Side B)



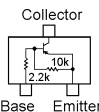
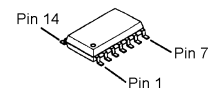
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(Q4008)
TA31136FN
(Q4015)



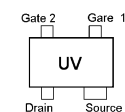
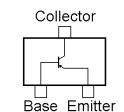
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(Q4011)



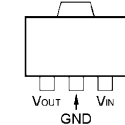
2SC4154 (LE)
(Q4006, 4016)
2SC5006 (24)
(Q4007)

DTB123EK (F52)
(Q4002)

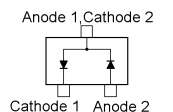
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(Q4018)

3SK294
(Q4001)

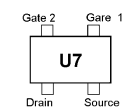
2SA1602A (MF)
(Q4009)



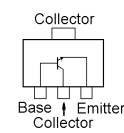
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(Q4004)



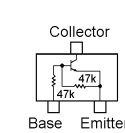
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(D4003)



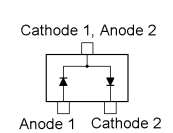
3SK320 (U7)
(Q4010)



2SC4154 (LE)
(Q4005, 4017)
2SC4400 (RT4)
(Q4014)



RT1N441U (N3)
(Q4003)



Cathode 1, Anode 2



Anode 1 Cathode 2

DA221 (K)
(D4005, 4006)

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY	ADR
PCB with Components						CB2929001					
Printed Circuit Board						FR011790C		1-			
					AM006N000						
C 4001	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		d1
C 4002	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		d1
C 4003	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		A1
C 4008	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A		B1
C 4009	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c1
C 4010	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B		b1
C 4011	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b1
C 4012	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		b1
C 4013	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		b1
C 4014	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b1
C 4015	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		d2
C 4017	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		1-	B		d2
C 4021	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c3
C 4022	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A		C4
C 4023	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B		d2
C 4024	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		b3
C 4025	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B		b3
C 4026	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B		b2
C 4027	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		b2
C 4028	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B		c3
C 4029	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B		b3
C 4030	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A		C3
C 4031	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B		c3
C 4033	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B		b3
C 4034	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		C3
C 4035	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A		C3
C 4036	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A		B2
C 4037	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		B2
C 4038	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	B		c2
C 4039	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A		B2
C 4040	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B		b1
C 4041	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		b2
C 4042	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c2
C 4043	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A		A4
C 4044	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		1-	B		d3
C 4046	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B		c3
C 4047	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B		c3
C 4048	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		1-	B		d3
C 4049	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c3
C 4050	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		B3
C 4052	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	A		C1
C 4053	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A		B1
C 4054	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b2
C 4055	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B		b2
C 4061	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		d4
C 4062	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		d4
C 4063	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B		c4
C 4064	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c4
C 4065	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		c4
C 4066	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A		B3
C 4067	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		B2
C 4068	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A		B2
C 4069	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		1-	A		B3
C 4071	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A		B3
C 4072	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		1-	A		B3
C 4073	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A		B3
C 4074	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A		B3
C 4080	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c4
C 4082	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		1-	B		c4
C 4084	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		1-	A		B2
C 4086	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B		c2
C 4087	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B		c2
C 4088	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B		c2
C 4089	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B		c2
C 4096	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b4
C 4097	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B		b4
C 4098	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b4
C 4099	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b4
C 4102	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b3
C 4103	AL.ELECTRO.CAP.	47uF	16V		ECEV1CA470SP	K48120005		1-	A		D4
C 4104	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B		b4

SUB-RX Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 4105	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 4106	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	C3
C 4107	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D3
C 4108	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		1-	A	D3
C 4109	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	C3
C 4110	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C3
C 4111	CHIP CAP.	82pF	50V	CH	GRM39CH820J50PT	K22174233		1-	B	b3
C 4112	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C3
C 4113	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	b4
C 4114	CHIP CAP.	0.0033uF	50V	B	GRM39B332K50PT	K22174831		1-	B	b3
C 4115	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D3
C 4116	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	b4
C 4117	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D3
C 4119	CHIP CAP.	820pF	50V	B	GRM39B821M50PT	K22174808		1-	A	D3
C 4121	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	a4
C 4122	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	a3
C 4123	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a3
C 4124	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a3
C 4125	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	a3
C 4126	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D2
C 4130	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	a3
C 4131	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	a3
C 4132	CHIP CAP.	0.047uF	16V	B	GRM39B473K16PT	K22124804		1-	B	a3
C 4133	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b3
C 4135	FILM CAP.	0.027uF	16V		ECHU1C273JB5	K57120012		1-	B	a3
C 4136	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	a2
C 4137	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		1-	B	a2
C 4138	CHIP CAP.	0.0068uF	50V	B	GRM39B682K50PT	K22174834		1-	B	a2
C 4139	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	B3
C 4141	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	A2
C 4143	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 4146	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	d2
CD4001	CERAMIC DISC				CDA450C24	H7901430		1-	A	D3
CF4001	CERAMIC FILTER				ALFYM450E=K	H3900535		1-	A	C4
D 4002	DIODE				HVC306B TRU	G2070918		1-	A	B2
D 4003	DIODE				1SS302 TE85R	G2070088		1-	B	c2
D 4004	DIODE				UDZS TE-17 5.6B	G2070910		1-	B	b4
D 4005	DIODE				DA221 TL	G2070178		1-	B	a3
D 4006	DIODE				DA221 TL	G2070178		1-	B	a3
D 4007	DIODE				HVC306B TRU	G2070918		1-	A	B2
J 4001	CONNECTOR				IMSA-9210B1-03Z862-PT1	P0091392		1-	B	d1
J 4002	CONNECTOR				08FLT-SM1-TB	P1091201		1-	A	C2
L 4001	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	d2
L 4002	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b3
L 4003	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	C3
L 4005	M.RFC	0.056uH			HK1608 56NJ-T	L1690525		1-	B	c3
L 4006	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	A	B3
L 4007	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	B3
L 4008	M.RFC	0.1uH		2%	C2012C-R10G	L1690776		1-	A	B3
L 4009	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	B3
L 4010	CHIP COIL	1.5uH			LQH32MN1R5K23L	L1690077		1-	A	B4
L 4011	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	B2
L 4012	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	B2
L 4013	M.RFC	1.5uH			LK1608 1R5K-T	L1690846		1-	B	b4
L 4014	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	d1
Q 4001	FET				3SK294(TE85L)	G4802948		1-	B	d1
Q 4002	TRANSISTOR				DTB123EK T146	G3070022		1-	A	B2
Q 4003	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	c1
Q 4004	IC				M5278L05M 600C	G1093101		1-	B	b1
Q 4005	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b2
Q 4006	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	C3
Q 4007	TRANSISTOR				2SC5006-T1	G3350068		1-	A	B3
Q 4008	IC				MB15A02PFV1-G-BND-EF	G1092541		1-	A	B2
Q 4009	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	b2
Q 4010	FET				3SK320(TE85L)	G4803208		1-	B	d4
Q 4011	FET				2SK520-T2B K43	G3805207C		1-	A	B3
Q 4014	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	b4
Q 4015	IC				TA31136FN(EL)	G1091605		1-	A	C3
Q 4016	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D3
Q 4017	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	a3
Q 4018	IC				NJM2211M(TE1)	G1092943		1-	B	a2
R 4001	CHIP RES.	47kohm	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d1
R 4002	CHIP RES.	10kohm	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d2

SUB-RX Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 4003	CHIP RES.	82ohm	1/16W	5%	RMC1/16 820JATP	J24185820		1-	B	d1
R 4004	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	d2
R 4005	CHIP RES.	82ohm	1/16W	5%	RMC1/16 820JATP	J24185820		1-	A	A1
R 4006	CHIP RES.	470ohm	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b2
R 4007	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c1
R 4009	CHIP RES.	220kohm	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	C3
R 4010	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C3
R 4011	CHIP RES.	22ohm	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	B2
R 4012	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 4013	CHIP RES.	0ohm	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	d3
R 4014	CHIP RES.	0ohm	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b2
R 4015	CHIP RES.	22ohm	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	B3
R 4016	CHIP RES.	22ohm	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	B3
R 4018	CHIP RES.	47kohm	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	B3
R 4020	CHIP RES.	2.7kohm	1/16W	5%	RMC1/16 272JATP	J24185272		1-	A	C1
R 4021	CHIP RES.	33kohm	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	b2
R 4022	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	b2
R 4023	CHIP RES.	10kohm	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b2
R 4024	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d4
R 4025	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	d4
R 4026	CHIP RES.	39ohm	1/16W	5%	RMC1/16 390JATP	J24185390		1-	B	d4
R 4027	CHIP RES.	2.2kohm	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c4
R 4028	CHIP RES.	220ohm	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	B3
R 4029	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4035	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c2
R 4036	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4037	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4038	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 4039	CHIP RES.	1.2kohm	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	d4
R 4040	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c2
R 4041	CHIP RES.	470ohm	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c2
R 4042	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c2
R 4043	CHIP RES.	680ohm	1/16W	5%	RMC1/16 681JATP	J24185681		1-	B	c2
R 4044	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c2
R 4045	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	b4
R 4046	CHIP RES.	1.8kohm	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	b4
R 4047	CHIP RES.	220ohm	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	b4
R 4048	CHIP RES.	4.7kohm	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b4
R 4049	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 4050	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b4
R 4052	CHIP RES.	33kohm	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	D3
R 4053	CHIP RES.	56kohm	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	D3
R 4054	CHIP RES.	22kohm	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D3
R 4055	CHIP RES.	22kohm	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D3
R 4056	CHIP RES.	1.8kohm	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	a3
R 4057	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C3
R 4058	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C3
R 4059	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	b3
R 4060	CHIP RES.	22kohm	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D3
R 4061	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 4062	CHIP RES.	0ohm	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D3
R 4063	CHIP RES.	220kohm	1/16W	5%	RMC1/16 224JATP	J24185224		1-	B	b4
R 4064	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 4065	CHIP RES.	6.8kohm	1/16W	5%	RMC1/16 682JATP	J24185682		1-	B	b3
R 4066	CHIP RES.	2.2kohm	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	D3
R 4067	CHIP RES.	0ohm	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D3
R 4068	CHIP RES.	1kohm	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	a4
R 4069	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 4070	CHIP RES.	3.3kohm	1/16W	5%	RMC1/16 332JATP	J24185332		1-	B	a4
R 4072	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	a3
R 4073	CHIP RES.	4.7kohm	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a3
R 4074	CHIP RES.	100ohm	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 4075	CHIP RES.	10kohm	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 4077	CHIP RES.	0ohm	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a4
R 4078	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	D2
R 4079	CHIP RES.	10kohm	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a3
R 4080	CHIP RES.	10kohm	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a3
R 4081	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	a3
R 4082	CHIP RES.	100kohm	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	a2
R 4083	CHIP RES.	47kohm	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	a2
R 4084	CHIP RES.	10kohm	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	a2
R 4085	CHIP RES.	10kohm	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	a2
R 4086	CHIP RES.	1kohm	1/16W	1%	RMC1/16 102FTP	J24183102		1-	B	a2

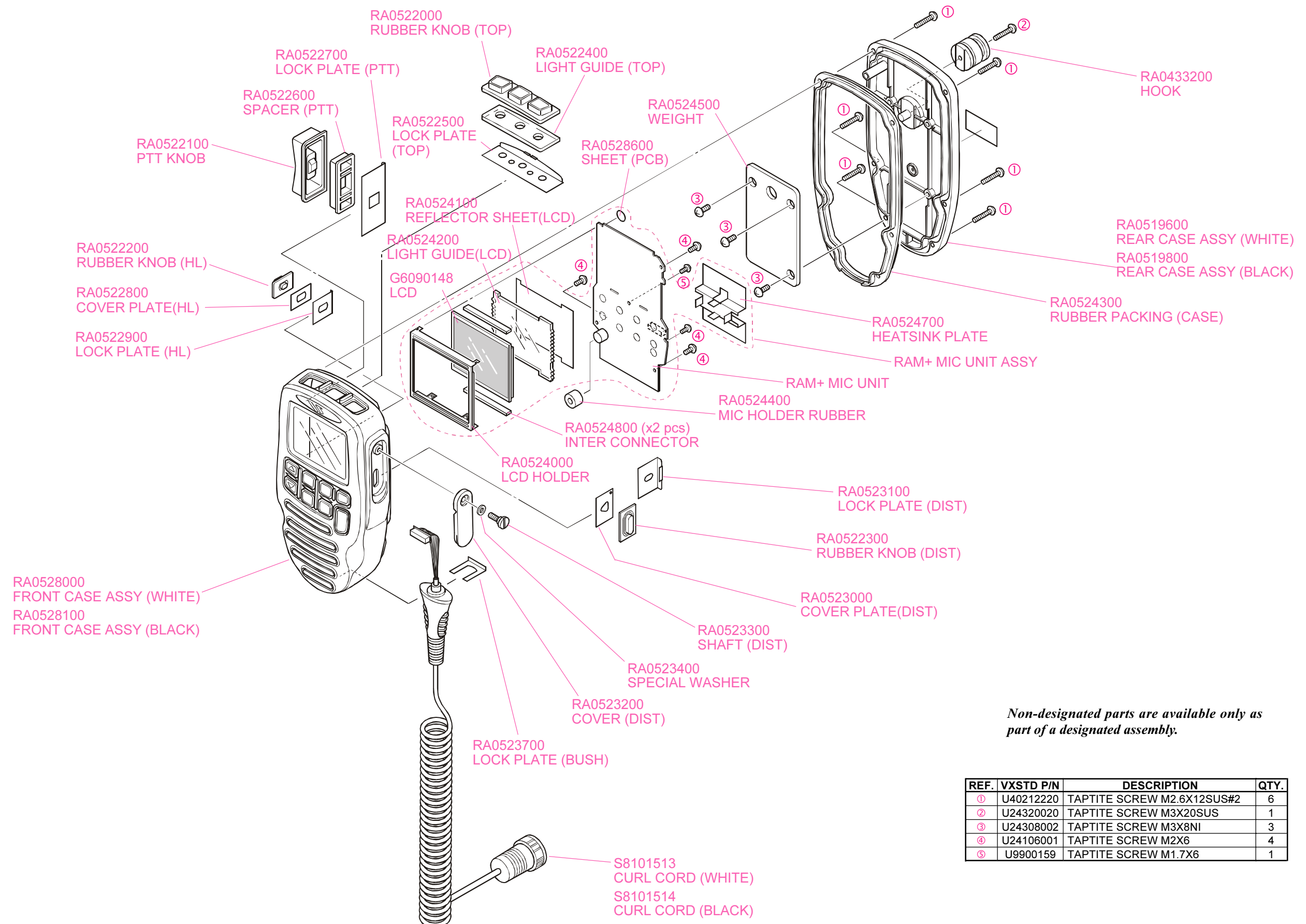
SUB-RX Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 4088	CHIP RES.	22ohm	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	c4
R 4089	CHIP RES.	22kohm	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d1
R 4090	CHIP RES.	33kohm	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	d1
T 4002	COIL				MC120 E526HNSA-110461	L0190261		1-	A	A2
T 4003	COIL				MC120 E526HNSA-110461	L0190261		1-	A	A3
TC4001	TRIMMER CAP.	20pF			ECR-KN020E61X	K91000213		1-	A	C1
TP4005	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	C4
TP4008	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	A4
TP4010	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	D3
X 4001	XTAL TOP-B	18.85MHz			18.850MHZ	H0103306		1-	A	B1
XF4001	XTAL FILTER				19M13B	H1102379		1-	A	B4
XF4002	XTAL FILTER				19M13B	H1102379		1-	A	B4
	SHIELD				(VCO2)	RA0570400		1-		

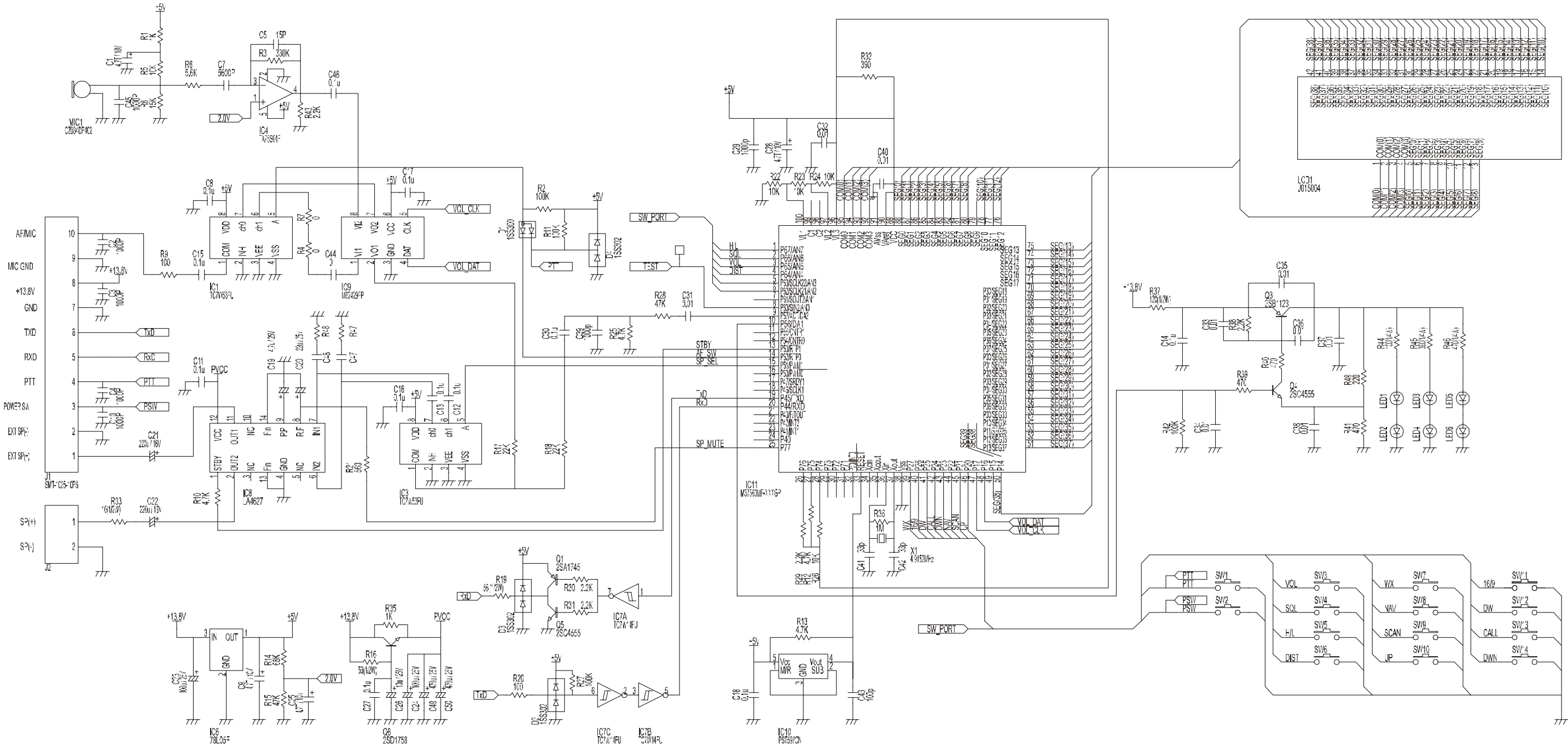
CMP25 RAM+ MIC (Option)

Exploded View & Miscellaneous Parts



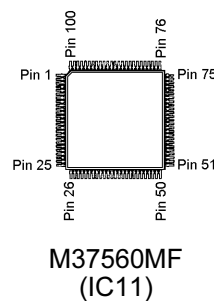
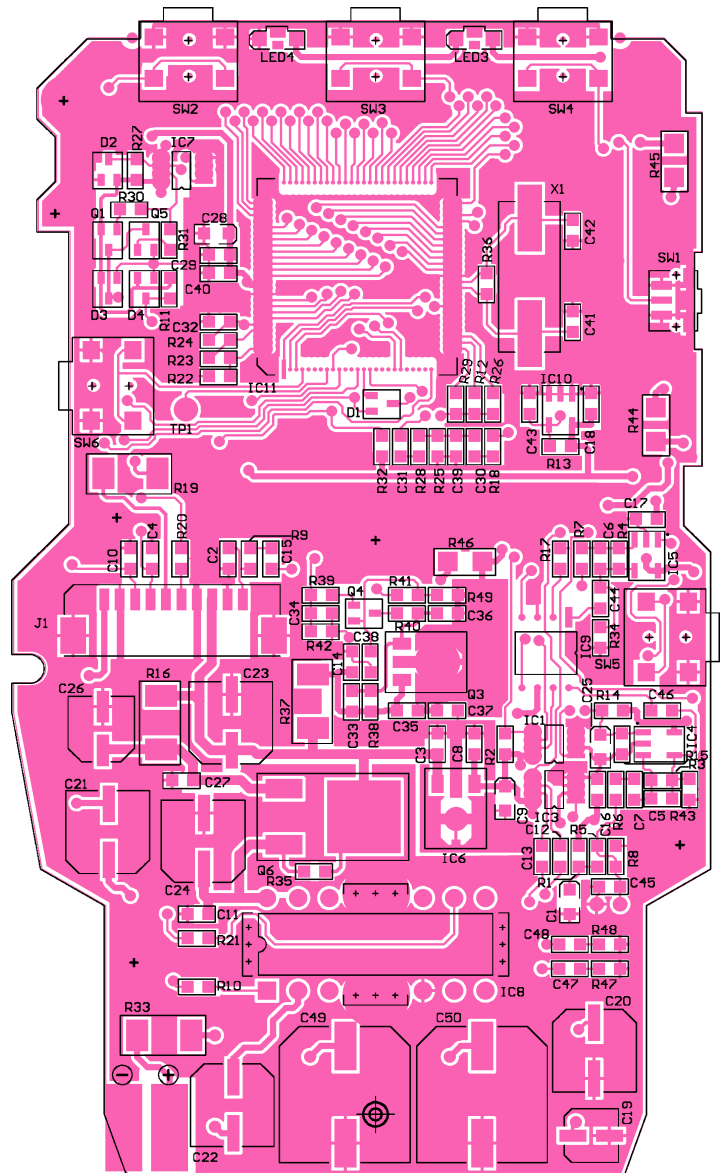
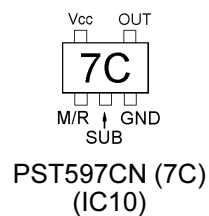
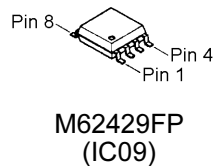
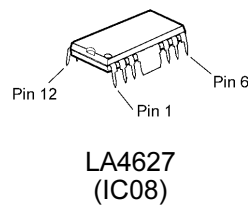
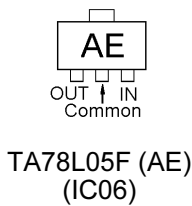
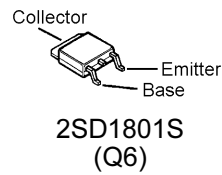
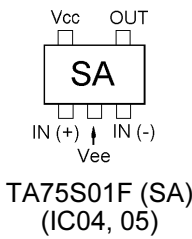
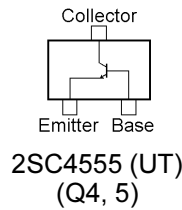
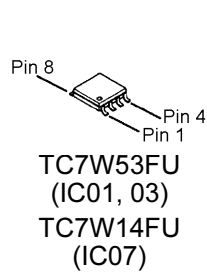
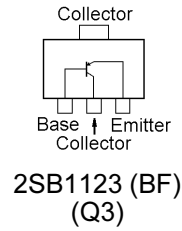
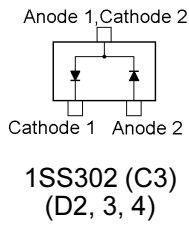
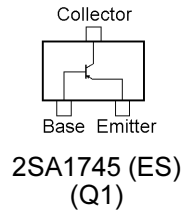
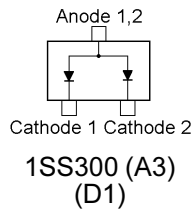
CMP25 RAM+ MIC (Option)

Circuit Diagram



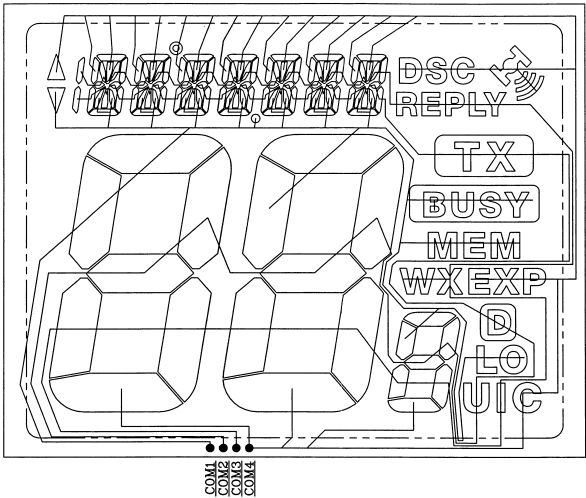
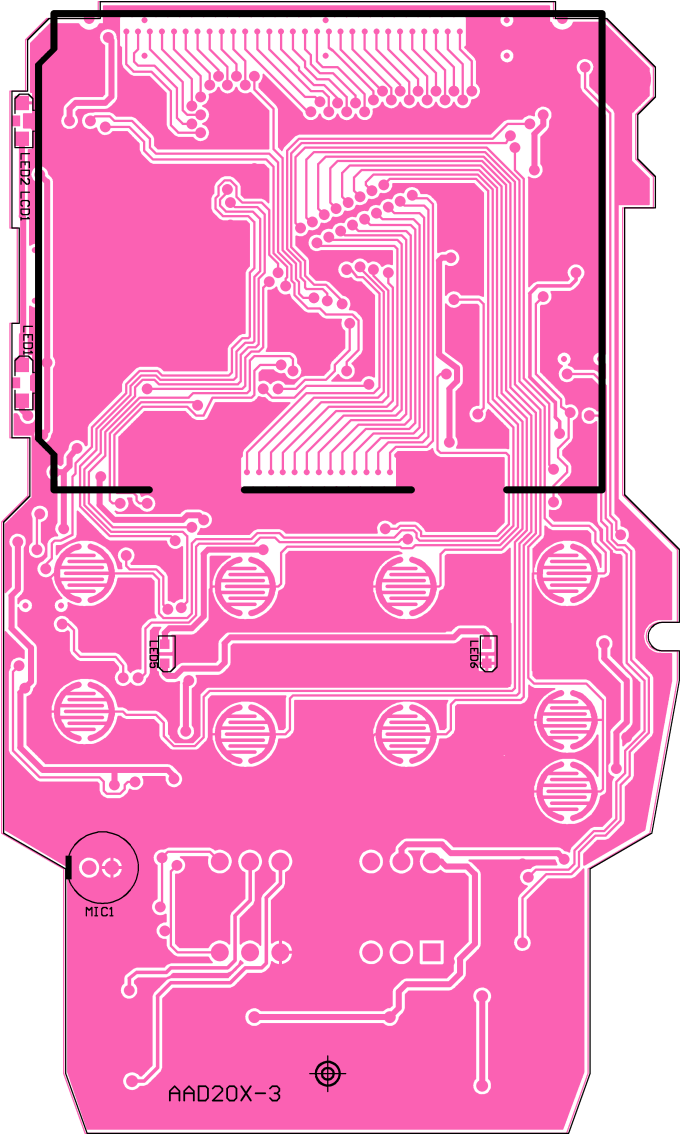
CMP25 RAM+ MIC (Option)

Parts Layout (Side A)

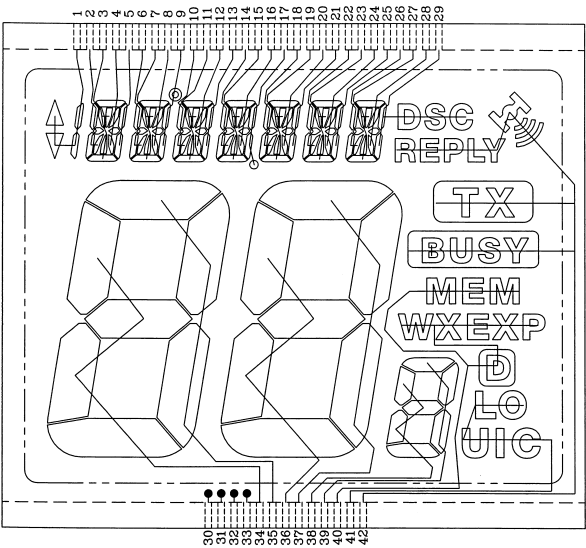


CMP25 RAM+ MIC (Option)

Parts Layout (Side B)



COMMON



SEGMENT
LCD (LCD1)

CMP25 RAM+ MIC (Option)

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					S8101542				
C1	Chip Tantal	4.7uF	16V		ESVP1A4R7M	K48120031	1-	A		
C2	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C3	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C4	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C5	Chip Cap	15P	50V	CH	GRM39CH150J 50PT	K22174215	1-	A		
C6	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C7	Chip Cap	5600P	50V	B	GRM39B562K50PT	K22174818	1-	A		
C8	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C9	Chip Tantal	4.7T	16V		ESVP1A4R7M	K78120031	1-	A		
C10	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C11	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C12	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C13	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C14	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C15	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C16	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C17	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C18	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C19	Electro. Chip Cap	4.7u	25V		25CV4.7BS	S8101534	1-	A		
C20	Electro. Chip Cap	100u	25V		25CV22BS	K48140010	1-	A		
C21	Electro. Chip Cap	220u	16V		16CV220BS	S8101535	1-	A		
C22	Electro. Chip Cap	220u	16V		16CV220BS	S8101535	1-	A		
C23	Electro. Chip Cap	100u	25V		25CV100BS	S8101536	1-	A		
C24	Electro. Chip Cap	100u	25V		25CV100BS	S8101536	1-	A		
C25	Chip Tantal	4.7T	16V		ESVP1A4R7M	K78120031	1-	A		
C26	Electro. Chip Cap	10u	25V		25CV10BS	K48140009	1-	A		
C27	Chip Cap	0.1u	25V		GRM39F104Z50PT	K22145001	1-	A		
C28	Chip Tantal	4.7T	16V		ESVP1A4R7M	K78120031	1-	A		
C29	Chip Cap	1000p	50V	B	GRM39B102K50PT	K22174821	1-	A		
C30	Chip Cap	0.1u	50V	F	GRM39F104Z50PT	K22145001	1-	A		
C31	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C32	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C33	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C34	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C35	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C36	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C37	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C38	Chip Cap	0.01	50V	B	GRM39B103K25PT	K22144803	1-	A		
C39	Chip Cap	1000p	50V	B	GRM39B102K50PT	K22174821	1-	A		
C40	Chip Cap	0.01	25V	B	GRM39B103K25PT	K22144803	1-	A		
C41	Chip Cap	33p	50V	CH	GRM39CH330J 50PT	K22174223	1-	A		
C42	Chip Cap	33p	50V	CH	GRM39CH330J 50PT	K22174223	1-	A		
C43	Chip Cap	100p	50V	CH	GRM39CH101J 50PT	K22174235	1-	A		
C44	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C45	Chip Cap	1000P	50V	B	GRM39B102K50PT	K22174821	1-	A		
C46	Chip Cap	0.1u	25V	F	GRM39F104Z50PT	K22145001	1-	A		
C49	Electro. Chip Cap	470uF	25V		25CV470BS	S8101537	1-	A		
C50	Electro. Chip Cap	470uF	25V		25CV470BS	S8101537	1-	A		
D1	Switching Diode (Anode Com.)		1SS300		1SS300	G2070084	1-	A		
D2	Switching Diode (Series conn.)		1SS302		1SS302	G2070088	1-	A		
D3	Switching Diode (Series conn.)		1SS302		1SS302	G2070088	1-	A		
D4	Switching Diode (Series conn.)		1SS302		1SS302	G2070088	1-	A		
IC1	Analog Switch MPX	TC4W53FU			TC7W53FU	S8101529	1-	A		
IC3	Analog Switch MPX	TC4W53FU			TC7W53FU	S8101529	1-	A		
IC4	Ope. Amp.	TA75S01F			TA75S01F	G1091593	1-	A		
IC5	Ope. Amp.	TA75S01F			TA75S01F	G1091593	1-	A		
IC6	3 Terminal Regulator	78L05F			78L05F	G1091014	1-	A		
IC7	Schmitt Invertor	TC7W14FU			TC7W14FU	G1093321	1-	A		
IC8	Audio Amp.	LA4627			LA4627	S8101528	1-	A		
IC9	Electronic Volume	M62429FP			M62429FP	G1093655	1-	A		
IC10	Reset IC	PST597CN			PST597CN	G1092589	1-	A		
IC11	CPU	M37560MF			M37560MF	✖	1-	A		
J01		CON-10P2			SMT-1025-10PS	S8101539	1-	A		
LCD1		J015004			J015004	G6090148	1-	B		
LED1	Chip LED Front View	SML-712WW			FY1101F	S8101532	1-	B		
LED2	Chip LED Front View	SML-712WW			FY1101F	S8101532	1-	B		
LED3	Chip LED Front View	SML-712WW			FY1101F	S8101532	1-	A		
LED4	Chip LED Front View	SML-712WW			FY1101F	S8101532	1-	A		
LED5	Chip LED Side View	SML-712WW			FY1111C	S8101533	1-	B		
LED6	Chip LED Side View	SML-712WW			FY1111C	S8101533	1-	B		
MIC1	EMC Condenser Mic	WM-61B			CZ034DP402	S8101540	1-	B		
Q1	Low Freq. Amp	2SA1577			2SA1745	S8101526	1-	A		

✖: Please contact Vertex Standard

CMP25 RAM+ MIC (Option)

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q3	Power Switching/Power Drive	2SB1188			2SB1123	S8101525	1-	A		
Q4	Low Freq. Amp	2SC4097			2SC4555	S8101527	1-	A		
Q5	Low Freq. Amp	2SC4097			2SC4555	S8101527	1-	A		
Q6	Power Switching	2SD1758			2SD1801S	G3418018S	1-	A		
R1	Chip Resister	1K	1/16W		CR1/16-102KJV	J24185102	1-	A		
R2	Chip Resister	100K	1/16W		CR1/16-104KJV	J24185104	1-	A		
R3	Chip Resister	330K	1/16W		CR1/16-334KJV	J24185334	1-	A		
R4	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R5	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R6	Chip Resister	5.6K	1/16W		CR1/16-562KJV	J24185562	1-	A		
R7	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R8	Chip Resister	15K	1/16W		CR1/16-153KJV	J24185153	1-	A		
R9	Chip Resister	100	1/16W		CR1/16-101JV	J24185101	1-	A		
R10	Chip Resister	4.7K	1/16W		CR1/16-472KJV	J24185472	1-	A		
R11	Chip Resister	100K	1/16W		CR1/16-104KJV	J24185104	1-	A		
R12	Chip Resister	4.7K	1/16W		CR1/16-472KJV	J24185472	1-	A		
R13	Chip Resister	4.7K	1/16W		CR1/16-472KJV	J24185472	1-	A		
R14	Chip Resister	68K	1/16W		CR1/16-683KJV	J24185683	1-	A		
R15	Chip Resister	47K	1/16W		CR1/16-473KJV	J24185473	1-	A		
R16	Chip Resister	56(1/2W)	1/2W		CR1/2-560JV	J24275560	1-	A		
R17	Chip Resister	22K	1/16W		CR1/16-223KJV	J24185223	1-	A		
R18	Chip Resister	22K	1/16W		CR1/16-223KJV	J24185223	1-	A		
R19	Chip Resister	56	1/2W		CR1/2-560JV	J24275560	1-	A		
R20	Chip Resister	100	1/16W		CR1/16-101JV	J24185101	1-	A		
R21	Chip Resister	560	1/16W		CR1/16-561JV	J24185561	1-	A		
R22	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R23	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R24	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R25	Chip Resister	4.7K	1/16W		CR1/16-472KJV	J24185472	1-	A		
R26	Chip Resister	10K	1/16W		CR1/16-103KJV	J24185103	1-	A		
R27	Chip Resister	100K	1/16W		CR1/16-104KJV	J24185104	1-	A		
R28	Chip Resister	47K	1/16W		CR1/16-473KJV	J24185473	1-	A		
R29	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R30	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R31	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R32	Chip Resister	390	1/16W		CR1/16-391JV	J24185391	1-	A		
R33	Chip Resister	10	1/2W		CR1/2-100JV	J24275100	1-	A		
R34	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R35	Chip Resister	1K	1/16W		CR1/16-102KJV	J24185102	1-	A		
R36	Chip Resister	1M	1/16W		CR1/16-105MJV	J24185105	1-	A		
R37	Chip Resister	120	1/2W		CR1/2-121JV	J24275121	1-	A		
R38	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R39	Chip Resister	120	1/2W		CR1/2-121JV	J24275121	1-	A		
R40	Chip Resister	470	1/16W		CR1/16-471JV	J24185471	1-	A		
R41	Chip Resister	470	1/16W		CR1/16-471JV	J24185471	1-	A		
R42	Chip Resister	100K	1/16W		CR1/16-104KJV	J24185104	1-	A		
R43	Chip Resister	2.2K	1/16W		CR1/16-222KJV	J24185222	1-	A		
R44	Chip Resister	100	1/4W		CR1/4-101JV	J24275101	1-	A		
R45	Chip Resister	100	1/4W		CR1/4-391JV	J24279024	1-	A		
R46	Chip Resister	100	1/4W		CR1/4-471JV	J24275471	1-	A		
R49	Chip Resister	220	1/16W		CR1/16-221JV	J24185221	1-	A		
SW1	TACT Switch	SW-PB			SKRT	N5090130	1-	A		
SW2	TACT Switch	SW-PB			SKQLLCE012	S8101530	1-	A		
SW3	TACT Switch	SW-PB			SKQLLCE012	S8101530	1-	A		
SW4	TACT Switch	SW-PB			SKQLLCE012	S8101530	1-	A		
SW5	TACT Switch	SW-PB			SKQLLCE012	S8101530	1-	A		
SW6	TACT Switch	SW-PB			SKQLLCE012	S8101530	1-	A		
W1	Carl Cable Black					S8101514	1-	A		
W2	Carl Cable White					S8101513	1-	A		
W3	Extension Cable					S8101512	1-	A		
X1	49/U LP-5.OS.2S(SMD)	4.9152MHz			4.915200MHz	S8101541	1-	A		



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