



25 Watt VHF/FM Marine Transceiver

QUANTUM Series GX5500S

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):	3.5" x 9.1" x 5.9" (90 x 230 x 150 mm)
Flush-Mount Dimensions (H x W x D):	2.8" x 8.1" x 5.1" (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); 66 dB (Lo)
Audio Response:	within $\pm 1/-3$ of a 6 dB/octave pre-emphasis characteristic at 300 to 3000 Hz
Audio Distortion:	5 %
Modulation:	16K0G3E, for DSC 16K0G2B
Frequency Stability:	$\pm 0.0005\%$ (-4°F to $+140^{\circ}\text{F}$; -20°C to $+60^{\circ}\text{C}$)
FM Hum and Noise:	50 dB

RECEIVER

Frequency Range:	156.050 to 163.275 MHz
Sensitivity:	20 dB Quieting 0.35 μV 12 dB SINAD 0.30 μV Squelch Sensitivity (Threshold) 0.13 μV
Modulation Acceptance Bandwidth:	± 7.5 kHz
Selectivity:	better than -80 dB (Spurious and Image Rejection) better than -80 dB (Intermodulation and Rejection at 12 dB SINAD)
Audio Output:	4.5 W
Audio Response:	within $\pm 1/-3$ of a 6 dB/octave de-emphasis characteristic at 300 to 3000 Hz
Frequency Stability:	$\pm 0.0005\%$ (-4°F to $+140^{\circ}\text{F}$; -20°C to $+60^{\circ}\text{C}$)
Channel Spacing:	25 kHz
DSC Format:	EN 301 025
NMEA Input/Output:	Output - DSC, DSE Input - GLL, GGA, RMC, and GNS

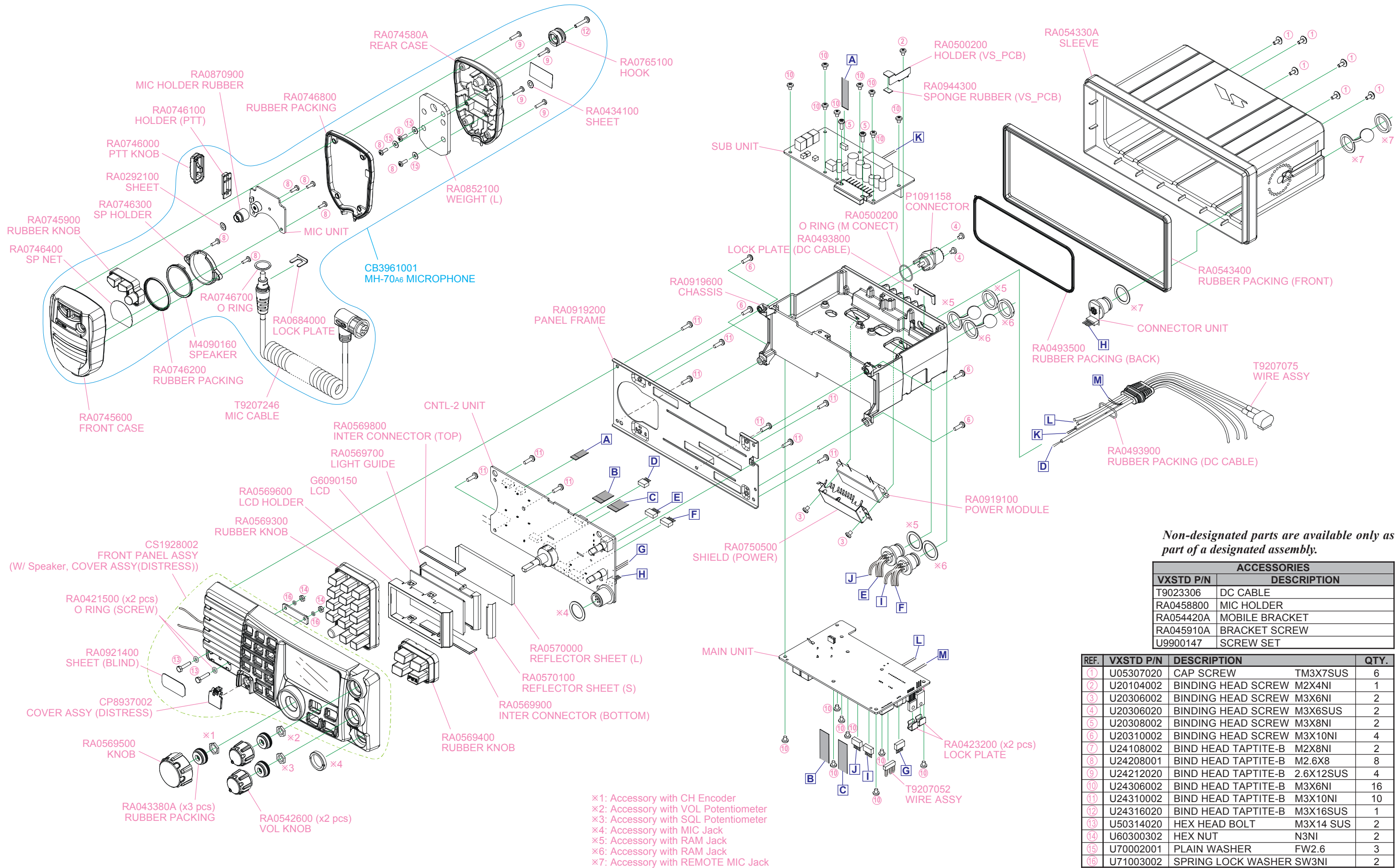
Performance specifications are nominal, unless otherwise indicated, and are subject to change without notice.

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

Important Note

This transceiver was assembled using Pb (lead) free solder, based on the RoHS specification. Only lead-free solder (Alloy Composition: Sn-3.0Ag-0.5Cu) should be used for repairs performed on this apparatus. The solder stated above utilizes the alloy composition required for compliance with the lead-free specification, and any solder with the above alloy composition may be used.

Exploded View & Miscellaneous Parts



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

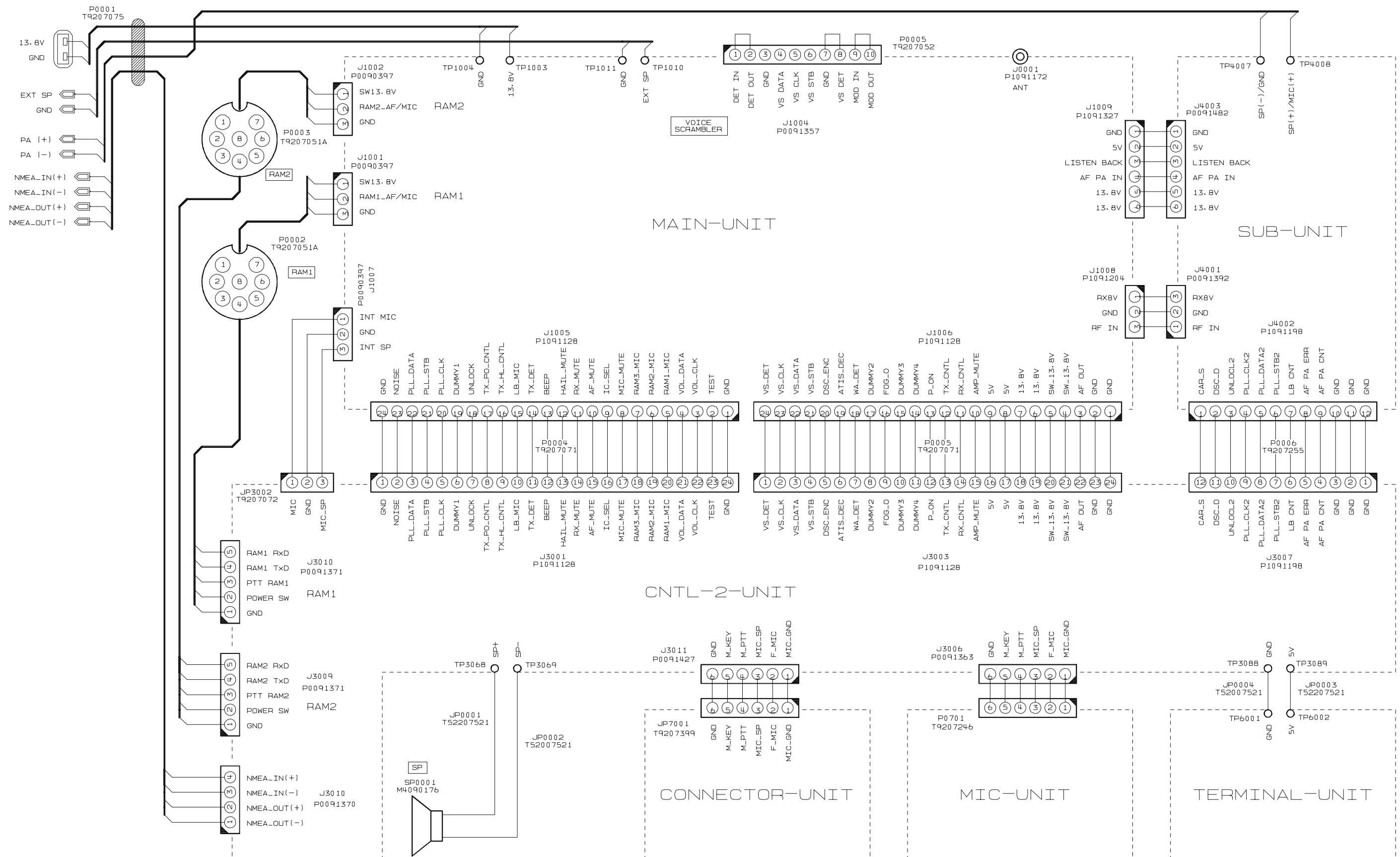
ACCESSORIES	
VXSTD P/N	DESCRIPTION
T9023306	DC CABLE
RA0458800	MIC HOLDER
RA054420A	MOBILE BRACKET
RA045910A	BRACKET SCREW
U9900147	SCREW SET

REF.	VMSTD P/N	DESCRIPTION	QTY.
①	U05307020	CAP SCREW TM3X7SUS	6
②	U20104002	BINDING HEAD SCREW M2X4NI	1
③	U20306002	BINDING HEAD SCREW M3X6NI	2
④	U20306020	BINDING HEAD SCREW M3X6SUS	2
⑤	U20308002	BINDING HEAD SCREW M3X8NI	2
⑥	U20310002	BINDING HEAD SCREW M3X10NI	4
⑦	U24108002	BIND HEAD TAPTITE-B M2X8NI	2
⑧	U24208001	BIND HEAD TAPTITE-B M2.6X8	8
⑨	U24212020	BIND HEAD TAPTITE-B 2.6X12SUS	4
⑩	U24306002	BIND HEAD TAPTITE-B M3X6NI	16
⑪	U24310002	BIND HEAD TAPTITE-B M3X10NI	10
⑫	U24316020	BIND HEAD TAPTITE-B M3X16SUS	1
⑬	U50314020	HEX HEAD BOLT M3X14 SUS	2
⑭	U60300302	HEX NUT N3NI	2
⑮	U70002001	PLAIN WASHER FW2.6	3
⑯	U71003002	SPRING LOCK WASHER SW3NI	2

Exploded View & Miscellaneous Parts

Note

CONNECTION DIAGRAM



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Circuit Description

Reception and transmission are switched by 16-bit MPU IC **Q3008 (M30873FHAGP)** on the CNTL-1 Unit. The receiver uses double-conversion superheterodyne circuitry, with a 30.4 MHz 1st IF and 450 kHz 2nd IF. The 1st local is produced by a PLL synthesizer, yielding the 30.4 MHz 1st IF. The 2nd local uses a 29.950 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 L1001 & L1002 and capacitors C1007, C1014, & C1035, and antenna switching diode **D1005 (L303CCB)** for delivery to the receiver front end.

Signals within the frequency range of the transceiver are passed through a bandpass filter consisting of coils L1003 & L1004 and capacitors C1017, C1019, C1029, C1038, & C1042, before RF amplifier **Q1013 (3SK294)**.

The amplified RF is passed through a bandpass filter consisting of coils L1014, L1015, & L1016 and capacitors C1102, C1104, C1108, C1111, C1112, C1114, & C1117. The pure in-band input signal is delivered to the main 1st mixer which consists of balun transformers (T1001, T1002, and T1003) and FETs **Q1029, Q1030, Q1033, and Q1035** (all **2SK520**).

Buffered output from the MAIN VCO is amplified by **Q1031 (2SC5006)** and **Q1024 (2SC3356)** and low-pass filtered by coils L1020 & L1021 and capacitors C1148, C1155, C1165, C1173, & C1175, to provide a pure 1st local signal between 125.65 and 131.625 MHz for delivery to the main 1st mixer.

The 30.4 MHz 1st mixer product is amplified by **Q1041 (2SC4400)**, then passes through monolithic crystal filters XF1001 and XF1002 (± 6.5 kHz BW), and is amplified by **Q1046 (2SC4400)**.

After that, it is delivered to the input of the FM IF subsystem IC **Q1047 (TA31136FNG)**. This IC contains the 2nd mixer, 2nd local oscillator, limiter amplifier, FM detector, noise amplifier, and squelch gates.

The 2nd local in the FM IF subsystem IC is produced from crystal X1001 (29.950 MHz), and the 1st IF is converted to 450 kHz by the 2nd mixer and stripped of unwanted com-

ponents by ceramic filter CF1001.

After passing through a limiter amplifier, the signal is demodulated by the FM detector. Demodulated audio from the FM IF subsystem IC is amplified by **Q1048** and **Q1050** (both **2SC4154**). The amplified signal is passed through the AF selector switch **Q1057 (CD4066BPWR)** to the amplifier **Q1045 (LM2902PWR)**. The amplified signal is passed through the AF mute switch **Q1057 (CD4066BPWR)** and the electronic volume control IC **Q1044 (M62421FP)**. The adjusted audio signal is passed through the AF mute switch **Q1054 (RT1N441U)** to the AF power amplifier **Q1055 (LA4425A)**.

The amplified audio signal is delivered to the 8 Ohms internal loudspeaker and external Speaker terminal in the accessory cable.

PLL Synthesizer

The 1st Local signal maintains stability from the PLL synthesizer by using a 29.950 MHz reference signal from crystal X1001. PLL synthesizer IC **Q1026 (MB15A2PFV1)** 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 applied to the external charge pump which is comprised of **Q1037 (2SA1162GR)**, **Q1038 (2SC2712GR)** and **D1010 (HZU5ALL)**.

The PLL synthesizer IC divides the 29.950 MHz reference signal by 2396 using the reference counter (12.5 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 consists of **Q1039 (2SK520)** and varactor diodes **D1013, 1014, 1016, & 1017** (all **HVC306B**), which oscillates at 30.4 MHz below from the receiving frequency. The TX VCO consists of **Q1040 (2SC5006)** and varactor diode **D1015 (HVC306B)**, which oscillates at the fundamental transmit frequency during a transmit with direct frequency-modulation using varactor diode **D1012 (HVC306B)**. The VCO output passes through buffer amplifier **Q1031 (2SC5006)** and **Q1024 (2SC3356)** to obtain stable output, then applied to the main 1st mixer of.

The DC supply for the VCO is regulated by **Q1023 (2SC4154)**.

Circuit Description

The SUB VCO (on the SUB Unit) consists of **Q4008 (2SK520)** and varactor diodes **D4002** and **D4003 (both HVC306B)**, which oscillates at 134.225 MHz for the CH70 receiving. The SUB VCO output passes through buffer amplifier **Q4006 (2SC5006)** to obtain stable output. The SUB VCO output is passed through another buffer amplifier **Q4007 (2SC3356)** to the sub 1st mixer which consists of balun transformers (T4001, T4002, and T4003) and FETs **Q4010, Q4011, Q4013, and Q4014 (all 2SK520)** during receiving.

The DC supply for the SUB VCO is regulated by **Q4001 (2SC4154)**.

Transmitter

The voice from the microphone is delivered to the Main Unit via the selector switch **Q3014 (SN74LV4053APWR)** on the CNTL-1 Unit. After passing through microphone amplifier **Q1028 (LM2902PWR)**, a pre-emphasis network, limiter (IDC: instantaneous deviation control), and low-pass filter network, the audio is adjusted for optimum deviation level.

The voice or DSC (Digital Selective Calling) encoded signal from the low-pass filter network **Q1028 (LM2902PWR)** is applied to the TX VCO which oscillates at the fundamental transmit frequency with direct frequency-modulation using varactor diode **D1012 (HVC306B)**. The modulated signal is amplified by the buffer amplifier **Q1031 (2SC5006)** and **Q1024 (2SC3356)**, then passed through the diode switch **D1008 (DAN235U)** to drive amplifiers **Q1017 (2SC3356)** and RF power amplifier module **Q1010 (RA35H1516M)**.

The RF energy then passes through antenna switch **D1006 (HSU277TRF)** and low-pass filter (LPF) consisting of coils L1009 & L1010 and capacitors C1010, C1017, & C1038, and finally to the antenna connector.

RF output power from the RF power amplifier module **Q1010 (RA35H1516M)** is sampled by C1018 and C1022 and is rectified by **D1003 (1SS321)**. The resulting DC is fed through Automatic Power Controllers **Q1034 (LM2904PWR)** to RF power amplifier module **Q1010 (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.

DSC Encoder/ Decoder

Encoder

The DSC (Digital Selective Calling) encode signal which D/A converted in the 16-bit MPU **Q3008 (M30873FHAGP)** on the CNTL-1 Unit is fed through the low-pass filter **Q1028 (LM2902PWR)** on the Main Unit to the TX VCO **Q1040 (2SC5006)**.

Decoder

The RF modulated in DSC code on the CH70 from the antenna connector are passed through a SUB-RX RF amplifier **Q4004 (3SK294)** to the bandpass filter consisting of coils L4007, L4008, & L4012 and capacitors C4044, C4047, C4051, C4056, C4060, C4063, & C4069, then the filtered signal deliver to the sub 1st mixer which consists of balun transformers (T4001, T4002, and T4003) and FETs **Q4010, Q4011, Q4013, and Q4014 (all 2SK520)**.

Buffered output from the SUB VCO **Q4008 (2SK520)** is amplified by **Q4007 (2SC3356)** and **Q4006 (2SC5006)** and bandpass filtered by coils L4015 & L4017 and capacitors C4081, C4085, C4087, C4089, C4090, & C4094, to provide a pure 1st local signal (134.225 MHz) for delivery to the sub 1st mixer.

The 22.3 MHz 1st mixer product then passes through monolithic crystal filters XF4001 and XF4002 (± 6.5 kHz BW) and buffer amplifier **Q4016** and **Q4020 (both 2SC4400)**, then deliver to the SUB-RX FM IF subsystem IC **Q4012 (TA31136FNG)**. 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 (21.850 MHz) then deliver to the 2nd mixer in the SUB-RX FM IF subsystem IC **Q4012 (TA31136FNG)**. The 1st IF is converted to 450 kHz by the 2nd mixer and stripped of unwanted components by a ceramic filter CF4001.

Filtered signal from the ceramic filter CF4001 is applied to the limiter amplifier in the SUB-RX FM IF subsystem IC **Q4012 (TA31136FNG)**, and then demodulate by the FM detector in the SUB-RX FM IF subsystem IC **Q4012 (TA31136FNG)**. Demodulated signal from the SUB-RX FM IF subsystem IC **Q4012 (TA31136FNG)** is passes through the low-pass filter **Q4009 (2SC4154)** to the DSC Decoder IC **Q4015 (NJM2211M)**. The decoded DCS signal delivered to the 16-bit MPU IC **Q3008 (M30873FHAGP)**.

The SUB-RX 1st Local signal maintains stability from the PLL synthesizer by using a 21.850 MHz reference signal from crystal X4001. PLL synthesizer IC **Q4005 (MB15A02PFV1)** 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.

Circuit Description

The PLL synthesizer IC divides the 21.850 MHz reference signal by 1748 using the reference counter (12.5 kHz comparison frequency). The reference oscillator feeds to the PLL synthesizer IC **Q4005 (MB15A02PFV1)** for the 2nd local signal.

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 consists of **Q4008 (2SK520)** and varactor diode **D4002** and **D4003** (both **HVC306B**), which oscillates at 134.225 MHz. The SUB VCO output passes through buffer amplifier **Q4006 (2SC5006)** to obtain stable output.

1050 Hz Weather Alert Decoder

On the Main Unit, 1050 Hz Weather Alert signal from the FM IF subsystem IC **Q1047 (TA31136FNG)** is filtered by **Q1049 (2SC4154)**, then is applied to 16-bit MPU IC **Q3008 (M30873FHAGP)** on the CNTL-1 Unit.

PA (Public Address) Circuit

The voice from the microphone is delivered to the Main Unit. This audio is amplified by **Q1028 (LM2902PWR)**, then passes the MIC select switch **Q1042 (CD4053BPWR)** and the IC/MIC select switch **Q1057 (CD4066BPWR)** to the buffer amplifier **Q1045 (LM2902PWR)**. The amplified audio passes through the LB/HAIL select switch **Q1051 (CD4066BPWR)** to the buffer amplifier **Q1056 (LM2904PWR)**. The amplified audio is delivered to the electronic volume control IC **Q1044 (M62421FP)** for volume control. The adjusted audio is delivered to the audio power amplifier **Q4018 (TA8225HQ)** on the SUB Unit which is amplified the voice audio up to 30 watts, and then passes through the relay switch RL4001 to the external PA speaker.

LB (Listen Back) Circuit

The listen back audio from the PA speaker is delivered to the SUB Unit. The audio is passed through the relay switch RL4001 and buffer amplifier **Q1056 (LM2904PWR)** to the LB/HAIL selector switch **Q1051 (CD4066BPWR)**, then passes through the MUTE switch **Q1057 (CD4066BPWR)** to the buffer amplifier **Q1045 (LM2902PWR)**. The audio then passes through the AF MUTE switch **Q1057 (CD4066BPWR)** to the electronic volume control IC **Q1044 (M62421FP)** for volume control. The adjusted audio is delivered to the audio power amplifier **Q1055 (LA4425A)** which is amplified the voice audio up to 4.5 watts, and then deliver to the internal or external speaker.

A portion of the audio from the **Q1057 (CD4066BPWR)** is passed through the buffer amplifier **Q1045 (LM2902PWR)** and MIC select switch **Q1042 (CD4053BPWR)** to the RAM microphones, if connected.

Fog Horn Circuit

A 400 Hz square wave for foghorn is generated by the microprocessor **Q3008 (M30873FHAGP)** on the CNTL-1 Unit, then deliver to the Main Unit. A 400 Hz square wave passes through the buffer amplifier **Q1056 (LM2904PWR)** to the electronic volume control IC **Q1044 (M62421FP)** for volume control. The adjusted audio is delivered to the audio power amplifier **Q4018 (TA8225HQ)** which is amplified the voice audio up to 30 watts, and then passes through the relay switch RL4001 to the external PA speaker.

MPU

Operation is controlled by 16-bit MPU IC **Q3008 (M30873FHAGP)** on the CNTL-1 Unit. This MPU uses a 14.74560 MHz crystal X2001 for the system clock. IC **Q2007** and a transistor **Q3025 (DTC114YUA)** resets the MPU when the power is on, and monitors the voltage of the regulated 5V power supply line.

EEPROM

The EEPROM **Q3009 (M24256)** on the CNTL-1 Unit 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 **GX5500S** 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
- ☐ 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.

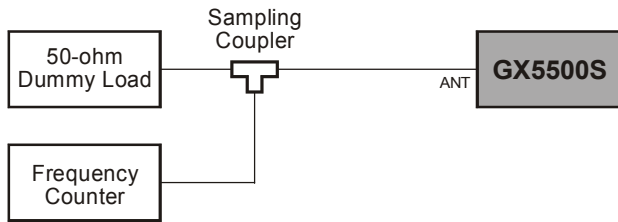
Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 68 °F and 86 °F (20 °C and 30 °C). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for 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

Main Reference Frequency Adjustment

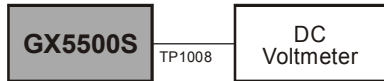
- Setup the test equipment as shown below.



- 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.

Main VCV Adjustment

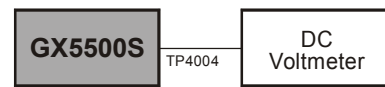
- Setup the test equipment as shown below.



- Set the channel to CH16.
- Set the **SQL** knob fully counter clockwise.
- Adjust **TC1002** so that the DC voltmeter reading is 1.5 V $\pm$ 0.1 V.

Sub Reference Frequency Adjustment

- Setup the test equipment as shown below.



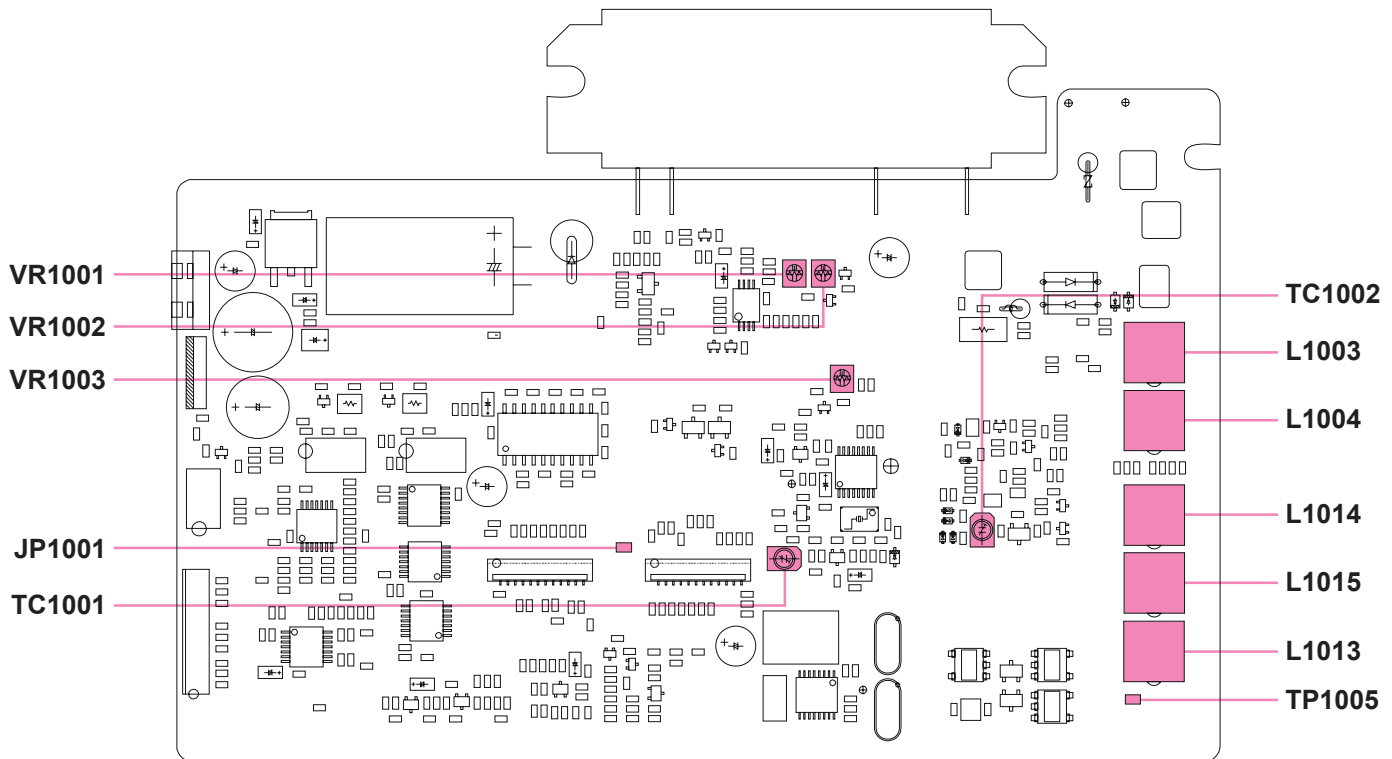
- Adjust **TC4001** so that the Frequency Counter reading is 134.225 MHz $\pm$ 100 Hz.

Transmit Power Adjustment

- Setup the test equipment as shown below.



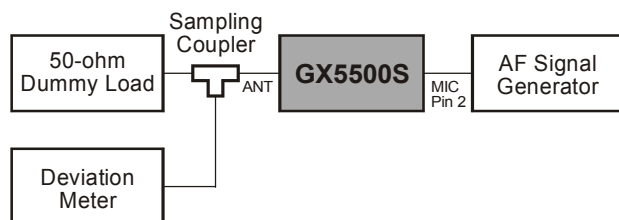
- Set the channel to CH16.
- Use the [H/L] key to set the transceiver to "HI" power.
- With the **PTT** switch pressed, adjust **VR1001** so that RF output power is 24 W $\pm$ 0.3 W.
- Release the **PTT** switch, then set the transceiver to "LOW" power by the [H/L] key.
- With the **PTT** switch pressed, adjust **VR1001** so that RF output power is 0.8 W $\pm$ 0.1 W.
- Release the **PTT** switch.



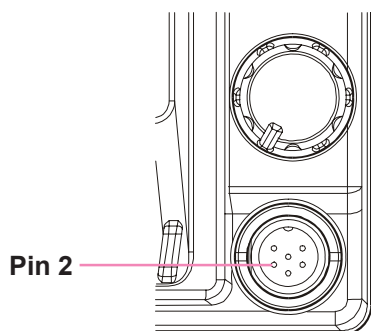
MAIN UNIT ALIGNMENT POINT

TX Deviation Adjustment

- Setup the test equipment as shown below.



- Set the AF Signal Generator output to 100 mVrms at 1 kHz.
- Set the channel to CH16.
- With the **PTT** switch pressed, adjust **VR1003** so that the maximum deviation is 4.4 kHz $\pm$ 0.1 kHz.
- Release the **PTT** switch.

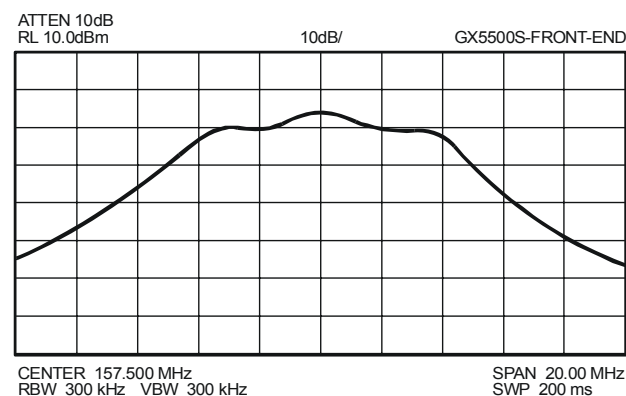


Receiver Front-end Adjustment

- 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 **L1003**, **L1004**, **L1014**, **L1015**, and **L1016** until the wave form shown in below is obtained.

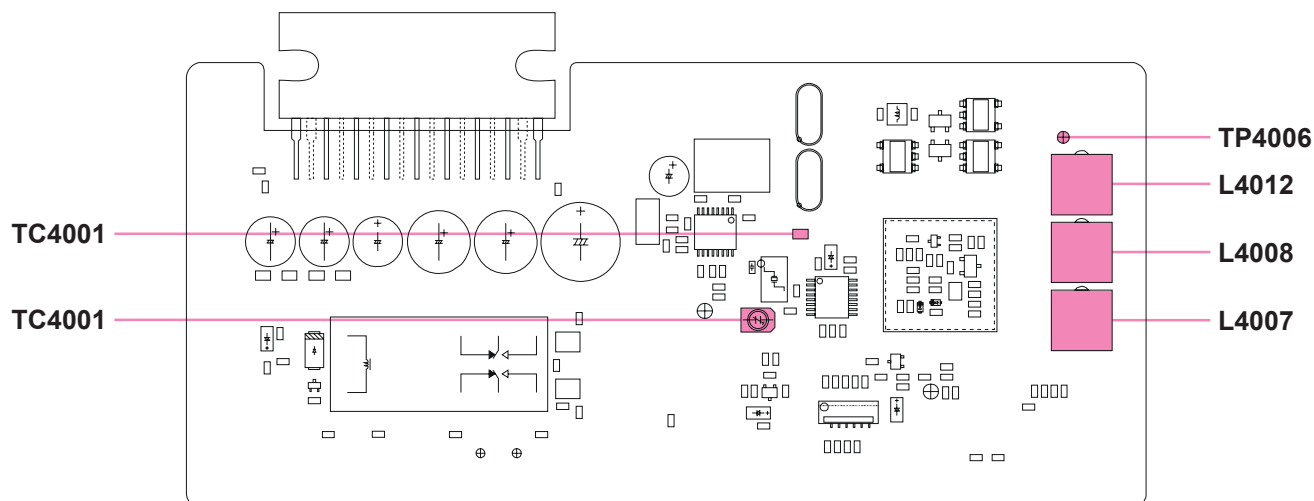


Sub Receiver Front-end Adjustment

- Setup the test equipment as shown below.



- Set the RF Signal Generator output to 156.525 MHz, at a level of +10 dB μ $\pm$ 3.0 kHz deviation with a 1 kHz audio tone.
- Adjust **L4012**, **L4008**, and **L4007** for maximum indication on the DC voltmeter.



SUB-RX UNIT ALIGNMENT POINT

Alignment

Software Alignment/Confirmation Mode

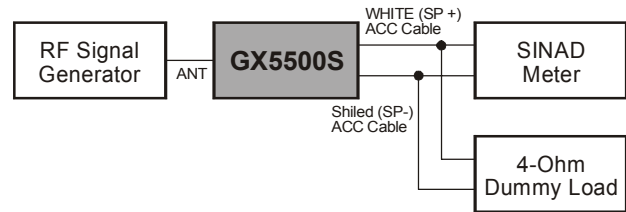
Overview of Software Alignment Mode

The “Software Alignment Mode” has been build 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.

Starting Software Alignment Mode

- ☐ Confirm that the transceiver’s power is turned off.
- ☐ Short the TEST points (**JP1001**).
- ☐ Setup the test equipment as shown below.



- ☐ Press and hold the **PWR** switch until the radio turns on while press and holding the [**CALL(MENU)**] and [**DISTRESS**] keys. The LCD will be as shown in the illustration at the right.
- ☐ Press the [**SCAN**] key to recall the Alignment Item 04: 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 [**ENT**] key to save the new setting.
- ☐ Press the [**SCAN**] key to recall the Alignment Item 05: TIGHT.
- ☐ Set the RF Signal Generator output to 156.800 MHz, at a level of $+2\text{dB}\mu \pm 3.0\text{ kHz}$ deviation with a 1 kHz audio tone.
- ☐ Press the [**DW(IC)**] key.
- ☐ Press the [**ENT**] key to save the new setting.
- ☐ Press the [**SCAN**] key to recall the Alignment Item 06: CH70SQL.
- ☐ Set the RF Signal Generator output to 156.525 MHz, at a level of $-6\text{dB}\mu \pm 3.0\text{ kHz}$ deviation with a 1 kHz audio tone.
- ☐ Press the [**DW(IC)**] key.
- ☐ Press the [**ENT**] key to save the new setting.
- ☐ Press the [**SCAN**] key to recall the Alignment Item 07: DC VOLT.
- ☐ Press the [**DW(IC)**] key.
- ☐ Press the [**ENT**] key to save the new setting.



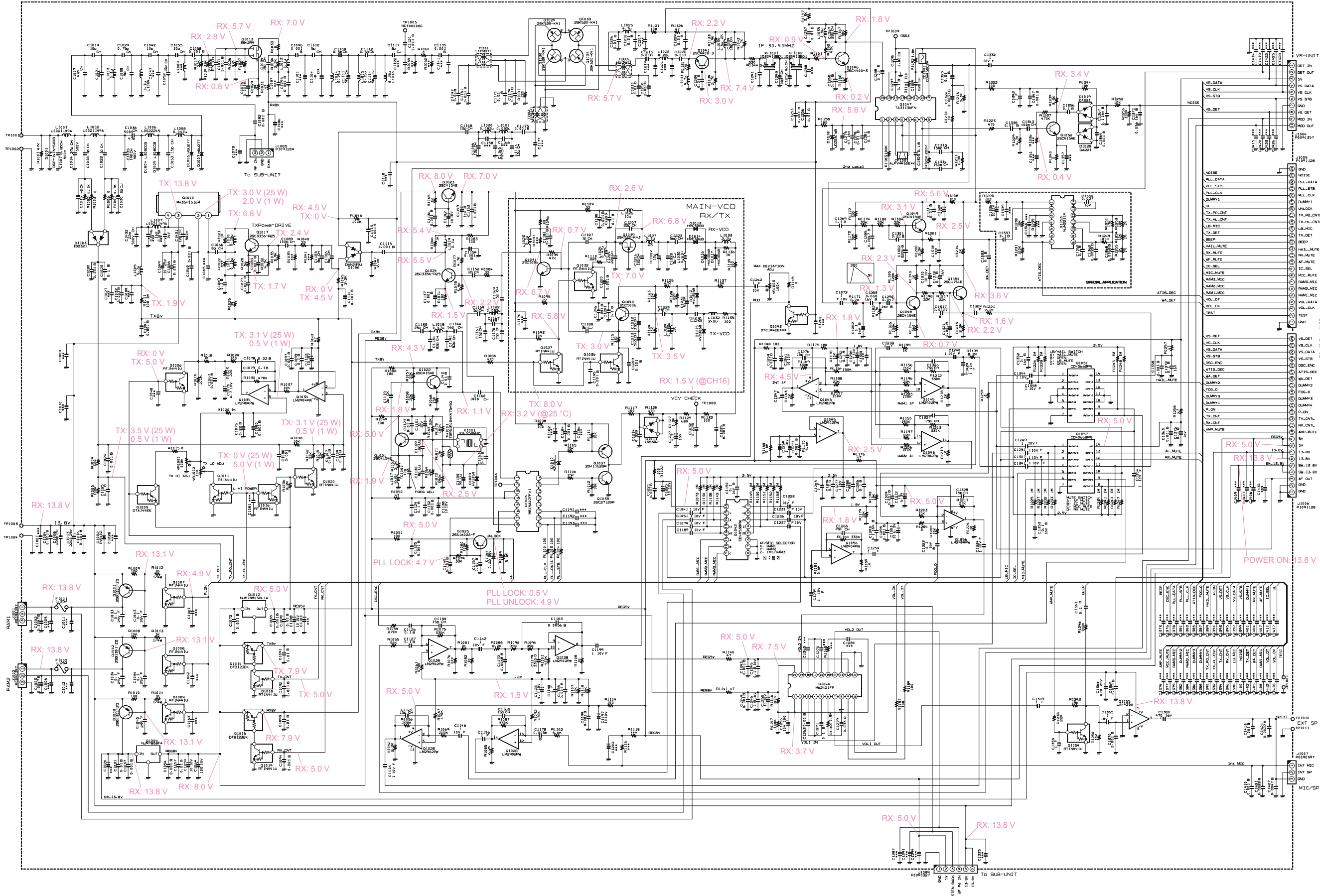
This completes the Software Alignment Mode. To save all settings and exit, press and hold the [**DISTRESS**] key for 2 seconds. Turn the transceiver’s power off, then disconnect the Jumper from the TEST points (JP1001).

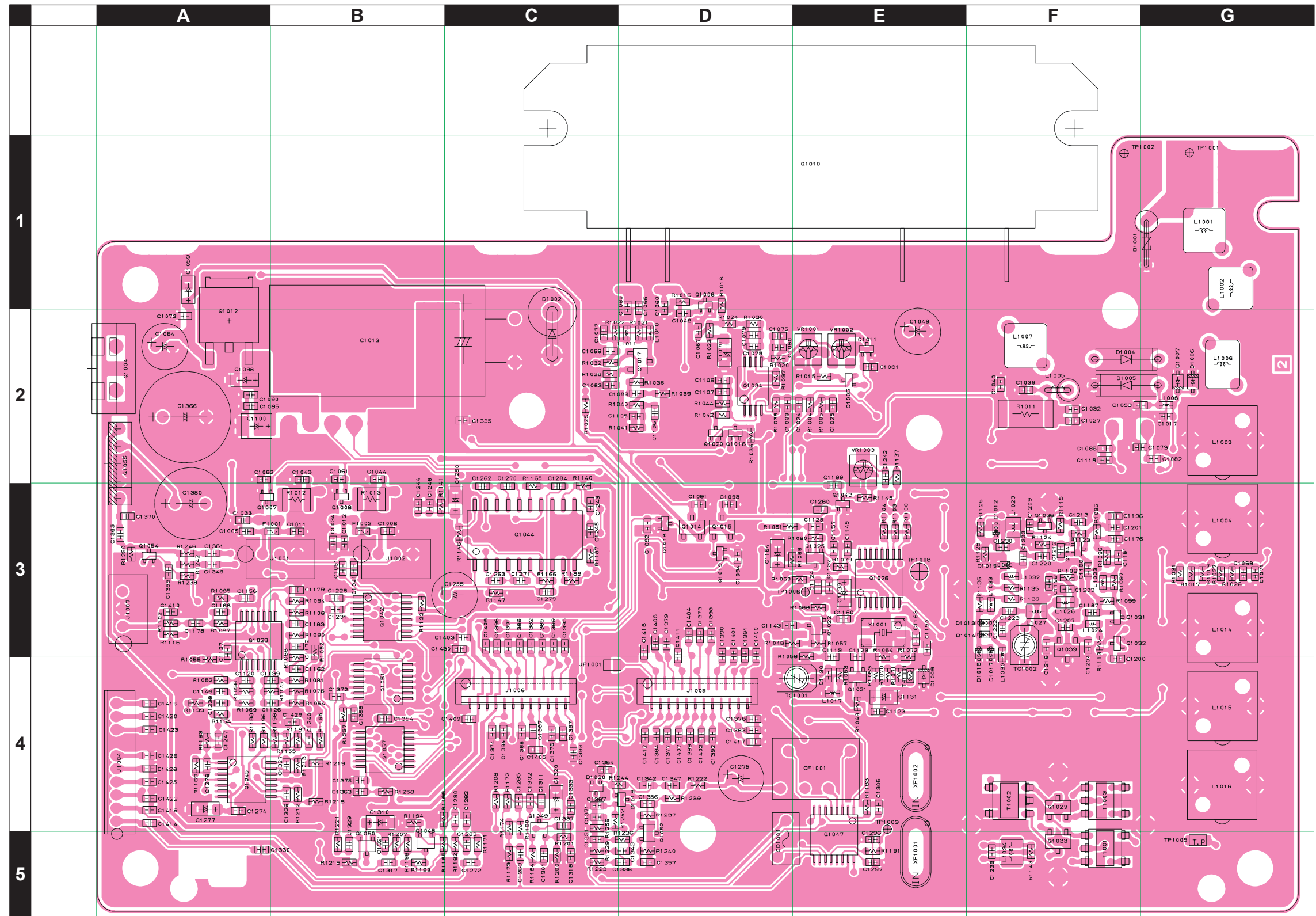
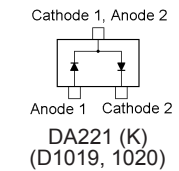
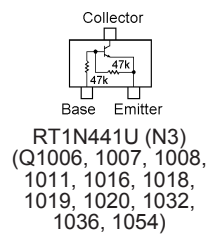
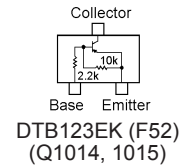
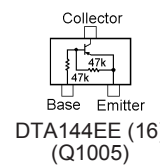
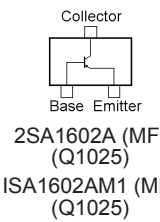
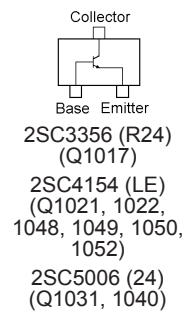
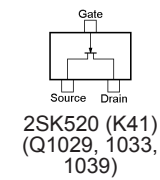
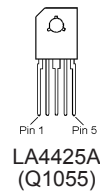
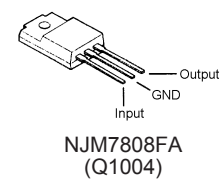
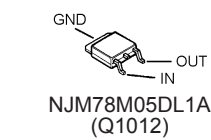
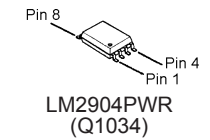
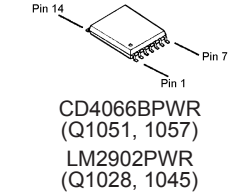
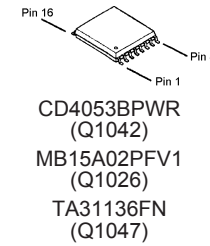
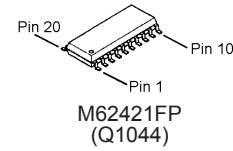
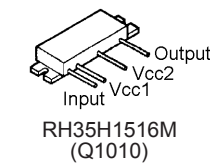
Circuit Diagram



MAIN Unit (Lot. 6 ~)

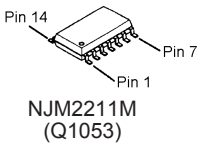
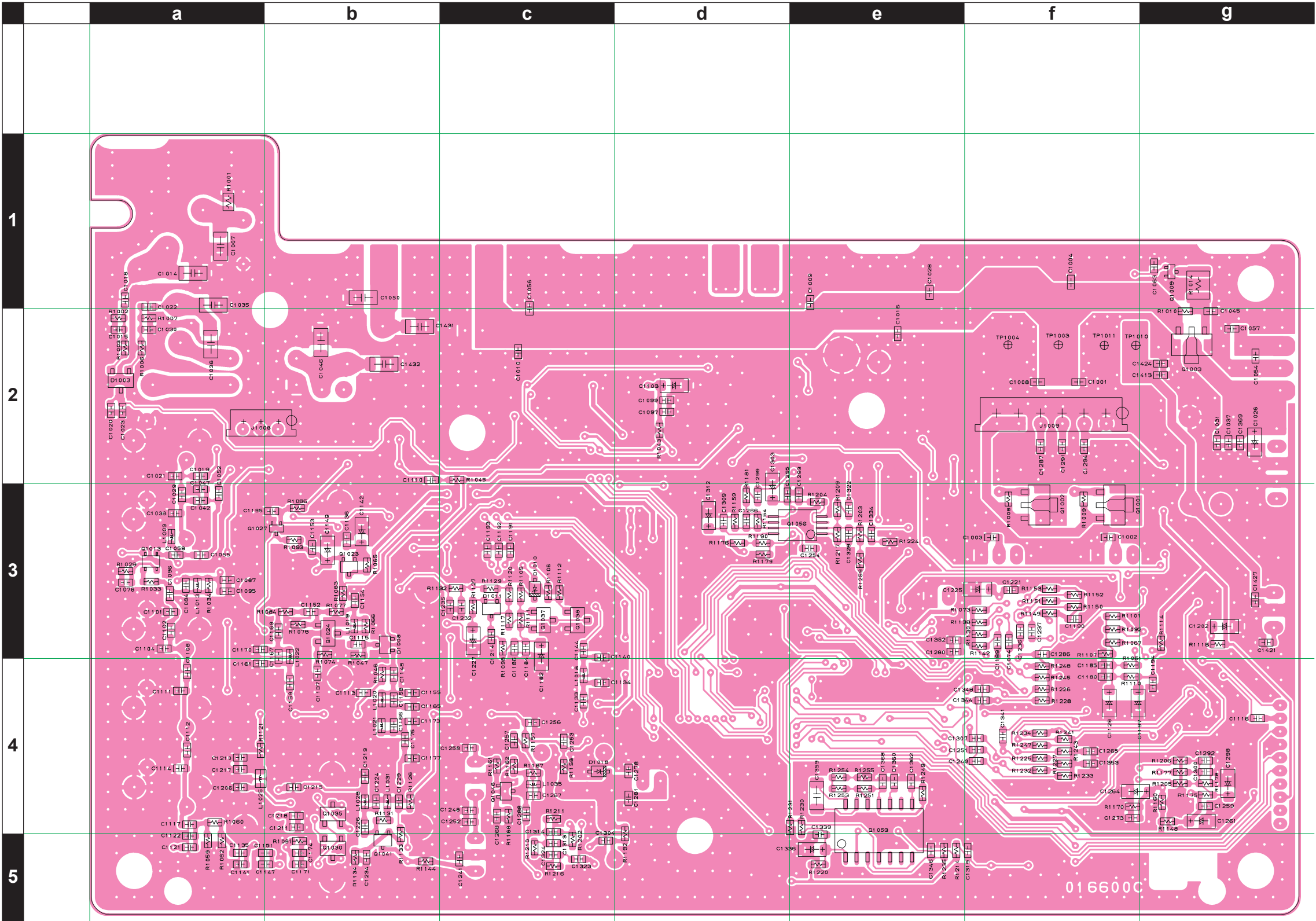
Circuit Diagram



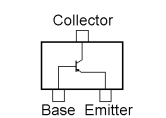


MAIN Unit

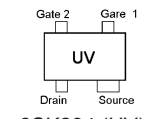
Parts Layout (Side B)



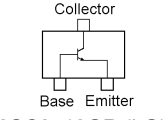
NJM2211M
(Q1053)



2SA1162GR (SG)
(Q1037)



3SK294 (UV)
(Q1013)

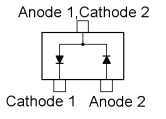


2SC2712GR (LG)
(Q1038)

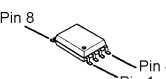
2SC3356 (R24)
(Q1024)

2SC4154 (LE)
(Q1023)

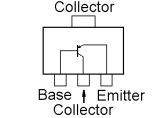
2SC4400 (RT4)
(Q1041, 1046)



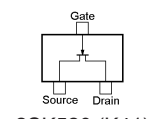
1SS302 (C3)
(D1011)



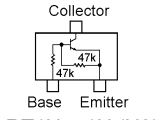
LM2904PWR
(Q1056)



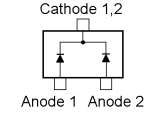
2SB1301 (ZQ)
(Q1001, 1002,
1003)



2SK520 (K41)
(Q1030, 1035)



RT1N441U (N3)
(Q1009, 1027)



1SS321 (F9)
(D1003)

DAN235U (M)
(D1008)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY	ADR
P.C.B. with Components						CB3978002					
Printed Circuit Board						FR0166000		1-			
					AM028N000						
C 1002	CHIP CAP.	0.0047uF	50V	B	GRM188B11H472KA01D	K22174833		1-	B		f3
C 1003	CHIP CAP.	0.0047uF	50V	B	GRM188B11H472KA01D	K22174833		1-	B		f3
C 1004	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		f1
C 1007	CHIP CAP.	8.2pF	500V	CH	1206N8R2D501LT	K22278208		1-	B		a1
C 1008	CHIP CAP.	220pF	50V	CH	GRM1882C1H221JA01D	K22174243		1-	B		f2
C 1013	AL.ELECTRO.CAP.	2200uF	25V		RE3-25V222MI6#	K40149055		1-	A		C2
C 1014	CHIP CAP.	27pF	500V	CH	1206N270J501LT	K22278214		1-	B		a1
C 1015	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B		a2
C 1016	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		e2
C 1017	CHIP CAP.	47pF	50V	CH	GRM1882C1H470JA01D	K22174227		1-	A		G2
C 1018	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	B		a1
C 1019	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B		a2
C 1020	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a2
C 1022	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	B		a1
C 1023	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		a2
C 1024	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		E2
C 1025	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A		E2
C 1029	CHIP CAP.	0.75pF	50V	CK	GRM1884C1HR75CZ01D	K22174260		1-	B		a3
C 1030	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	B		a2
C 1031	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		g2
C 1032	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		F2
C 1033	CHIP CAP.	0.1uF	25V	F	GRM188F11E104ZA01D	K22145001		1-	A		A3
C 1034	CHIP CAP.	0.1uF	25V	F	GRM188F11E104ZA01D	K22145001		1-	A		B3
C 1035	CHIP CAP.	15pF	500V	CH	1206N150J501LT	K22278211		1-	B		a1
C 1036	CHIP CAP.	47pF	500V	CH	1206N470J501LT	K22278217		1-	B		a2
C 1037	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		g2
C 1038	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B		a3
C 1040	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		F2
C 1041	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A		B3
C 1042	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B		a3
C 1043	CHIP CAP.	0.1uF	25V	F	GRM188F11E104ZA01D	K22145001		1-	A		B2
C 1044	CHIP CAP.	0.1uF	25V	F	GRM188F11E104ZA01D	K22145001		1-	A		B2
C 1045	CHIP CAP.	0.1uF	25V	F	GRM188F11E104ZA01D	K22145001		1-	B		g2
C 1049	AL.ELECTRO.CAP.	10uF	25V		RC2-25V100ME1#	K40149012		1-	A		E2
C 1051	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A		B3
C 1052	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B		a3
C 1053	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A		F2
C 1054	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		g2
C 1055	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B		a3
C 1056	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		c1
C 1057	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		g2
C 1058	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a3
C 1059	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A		A1
C 1060	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D1
C 1064	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101ME3#	K40109024		1-	A		A2
C 1066	CHIP CAP.	8pF	50V	CH	GRM1882C1H8R0DZ01D	K22174209		1-	A		D1
C 1067	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D2
C 1068	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	A		G3
C 1069	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A		C2
C 1070	CHIP TA.CAP.	4.7uF	10V		TEESVA1A475M8R	K78100022		1-	A		D2
C 1071	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		G3
C 1072	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		A2
C 1074	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B		f3
C 1075	CHIP CAP.	0.22uF	10V	B	GRM188B11A224KA01D	K22104801		1-	A		D2
C 1076	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a3
C 1077	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		C2
C 1078	CHIP CAP.	0.22uF	10V	B	GRM188B11A224KA01D	K22104801		1-	A		D2
C 1079	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A		D2
C 1080	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D2
C 1082	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		G2
C 1083	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		C2
C 1084	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B		a3
C 1085	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		A2
C 1088	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D2
C 1089	CHIP CAP.	100pF	50V	CH	GRM1882C1H101JA01D	K22174235		1-	A		D2
C 1090	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A		A2
C 1091	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A		D3
C 1092	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D3
C 1093	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A		D3
C 1094	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A		D3
C 1095	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a3

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1096	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	a3
C 1097	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d2
C 1098	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	A2
C 1099	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	d2
C 1102	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	a3
C 1103	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	d2
C 1104	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B	a3
C 1105	CHIP CAP.	8pF	50V	CH	GRM1882C1H8R0DZ01D	K22174209		1-	A	D2
C 1106	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	A	D2
C 1107	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	D2
C 1108	CHIP CAP.	0.5pF	50V	CK	GRM1884C1HR50CZ01D	K22174201		1-	B	a4
C 1109	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	D2
C 1110	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b2
C 1111	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	a4
C 1112	CHIP CAP.	0.5pF	50V	CK	GRM1884C1HR50CZ01D	K22174201		1-	B	a4
C 1113	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b4
C 1114	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	B	a4
C 1115	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b3
C 1116	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	g4
C 1117	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	B	a4
C 1119	CHIP CAP.	2pF	50V	CK	GRM1884C1H2R0CZ01D	K22174203		1-	A	E3
C 1120	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	A4
C 1121	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	a5
C 1123	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	E4
C 1124	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	E3
C 1125	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	E3
C 1126	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	A4
C 1127	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	A3
C 1128	CHIP TA.CAP.	4.7uF	10V		TEESVA1A475M8R	K78100022		1-	B	f4
C 1129	CHIP CAP.	12pF	50V	UJ	GRM1883U1H120JZ01D	K22174302		1-	A	E3
C 1130	CHIP CAP.	8pF	50V	UJ	GRM1883U1H8R0DZ01D	K22174308		1-	A	E4
C 1131	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	E4
C 1132	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	E3
C 1133	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	c4
C 1134	CHIP CAP.	82pF	50V	CH	GRM1882C1H820JA01D	K22174233		1-	B	c4
C 1135	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	a5
C 1136	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b3
C 1137	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b4
C 1138	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	E3
C 1139	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	A4
C 1140	CHIP CAP.	82pF	50V	CH	GRM1882C1H820JA01D	K22174233		1-	B	c3
C 1142	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	b3
C 1143	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	D3
C 1144	CHIP CAP.	56pF	50V	CH	GRM1882C1H560JA01D	K22174229		1-	B	c3
C 1145	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	E3
C 1146	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A4
C 1147	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	a5
C 1148	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	b4
C 1149	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	b3
C 1150	CHIP CAP.	5pF	50V	UJ	GRM1883U1H5R0CZ01D	K22174305		1-	A	E3
C 1151	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	a5
C 1152	CHIP CAP.	2pF	50V	CK	GRM1884C1H2R0CZ01D	K22174203		1-	B	b3
C 1153	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b3
C 1154	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b3
C 1155	CHIP CAP.	12pF	50V	CH	GRM1882C1H120JA01D	K22174213		1-	B	b4
C 1156	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A3
C 1157	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	E3
C 1159	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	b4
C 1160	CHIP CAP.	100pF	50V	CH	GRM1882C1H101JA01D	K22174235		1-	A	E3
C 1161	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	a4
C 1162	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B4
C 1163	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	E3
C 1164	CHIP TA.CAP.	0.22uF	35V		TEESVA1V224M8R	K78160027		1-	A	D3
C 1165	CHIP CAP.	39pF	50V	CH	GRM1882C1H390JA01D	K22174225		1-	B	b4
C 1168	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	A3
C 1169	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	b3
C 1170	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	a3
C 1171	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b5
C 1172	CHIP CAP.	0.0068uF	50V	B	GRM188B11H682KA01D	K22174834		1-	A	B3
C 1173	CHIP CAP.	12pF	50V	CH	GRM1882C1H120JA01D	K22174213		1-	B	b4
C 1174	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b5
C 1175	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b4
C 1178	CHIP CAP.	0.0056uF	50V	B	GRM188B11H562KA01D	K22174818		1-	A	A3

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1179	CHIP CAP.	330pF	50V	B	GRM188B11H331KD01D	K22174820		1-	A	B3
C 1180	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1181	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F3
C 1183	CHIP CAP.	0.0056uF	50V	B	GRM188B11H562KA01D	K22174818		1-	A	B3
C 1184	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	c3
C 1185	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f4
C 1187	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	A	F3
C 1188	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	A	F3
C 1189	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f3
C 1190	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	f3
C 1194	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g4
C 1195	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b3
C 1196	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F3
C 1197	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	f4
C 1198	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F3
C 1199	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	E3
C 1200	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F3
C 1201	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	F3
C 1203	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	F3
C 1204	CHIP CAP.	22pF	50V	CH	GRM1882C1H220JA01D	K22174219		1-	A	F3
C 1206	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	a4
C 1207	CHIP CAP.	22pF	50V	CH	GRM1882C1H220JA01D	K22174219		1-	A	F3
C 1209	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F3
C 1210	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	a4
C 1211	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b4
C 1212	CHIP CAP.	33pF	50V	CH	GRM1882C1H330JA01D	K22174223		1-	A	F3
C 1213	CHIP CAP.	56pF	50V	CH	GRM1882C1H560JA01D	K22174229		1-	A	F3
C 1214	CHIP CAP.	0.22uF	10V	B	GRM188B11A224KA01D	K22104801		1-	B	c3
C 1215	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b4
C 1216	CHIP CAP.	12pF	50V	CH	GRM1882C1H120JA01D	K22174213		1-	A	F3
C 1218	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b4
C 1220	CHIP CAP.	27pF	50V	CH	GRM1882C1H270JA01D	K22174221		1-	A	F3
C 1221	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 1222	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	A	F3
C 1223	CHIP CAP.	56pF	50V	CH	GRM1882C1H560JA01D	K22174229		1-	A	F3
C 1225	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	f3
C 1226	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b4
C 1227	CHIP TA.CAP.	4.7uF	16V		TEESVA1C475M8R	K78120031		1-	B	c3
C 1228	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B3
C 1229	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b4
C 1230	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	A	F3
C 1231	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B3
C 1232	CHIP CAP.	0.22uF	10V	B	GRM188B11A224KA01D	K22104801		1-	B	c3
C 1233	CHIP CAP.	27pF	50V	CH	GRM1882C1H270JA01D	K22174221		1-	A	F3
C 1234	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b5
C 1235	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	c3
C 1236	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f3
C 1237	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f3
C 1238	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A4
C 1239	CHIP CAP.	24pF	50V	CH	GRM1882C1H240JZ01D	K22174220		1-	A	F5
C 1240	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B4
C 1242	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	E2
C 1243	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	C3
C 1244	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B3
C 1245	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C3
C 1246	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B3
C 1247	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A4
C 1248	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	c4
C 1249	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1250	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	C3
C 1251	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1252	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B	c4
C 1253	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	c4
C 1254	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	e3
C 1255	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101ME3#	K40109024		1-	A	C3
C 1256	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c4
C 1257	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c4
C 1259	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g4
C 1261	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	g4
C 1263	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	C3
C 1264	CHIP TA.CAP.	1uF	16V		TEESVA1C105M8R	K78120009		1-	B	f4
C 1265	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1266	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	d3

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1267	CHIP CAP.	22pF	50V	CH	GRM1882C1H220JA01D	K22174219		1-	B	c4
C 1268	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c4
C 1269	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C5
C 1271	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C3
C 1272	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	C5
C 1273	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f4
C 1274	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	A4
C 1275	AL.ELECTRO.CAP.	47uF	16V		RE2-16V470ME3#	K40129054		1-	A	D4
C 1276	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	A4
C 1277	CHIP TA.CAP.	1uF	16V		TEESVA1C105M8R	K78120009		1-	A	A4
C 1278	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d4
C 1279	CHIP CAP.	0.033uF	16V	R	GRM188R11C333KA01D	K22124801		1-	A	C3
C 1281	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	d4
C 1282	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C4
C 1283	CHIP CAP.	0.068uF	16V	B	GRM188B11C683KA01D	K22124808		1-	A	C5
C 1285	CHIP CAP.	0.0047uF	50V	B	GRM188B11H472KA01D	K22174833		1-	A	C4
C 1286	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	f3
C 1288	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c4
C 1290	CHIP CAP.	0.047uF	16V	B	GRM39B473K16PT	K22124804		1-	A	C4
C 1292	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	g4
C 1293	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	e3
C 1295	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d3
C 1296	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	E5
C 1297	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	E5
C 1298	CHIP TA.CAP.	4.7uF	10V		TEESVA1A475M8R	K78100022		1-	B	g4
C 1299	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	d3
C 1301	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	C5
C 1302	CHIP CAP.	820pF	50V	B	GRM188B11H821KA01D	K22174808		1-	A	C4
C 1303	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B	d3
C 1304	CHIP CAP.	82pF	50V	CH	GRM1882C1H820JA01D	K22174233		1-	B	c5
C 1305	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	E4
C 1307	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1309	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d3
C 1310	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	B4
C 1311	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	C4
C 1312	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B	d3
C 1313	CHIP CAP.	220pF	50V	CH	GRM1882C1H221JA01D	K22174243		1-	B	c5
C 1314	CHIP CAP.	220pF	50V	CH	GRM1882C1H221JA01D	K22174243		1-	B	c4
C 1317	CHIP CAP.	0.0027uF	50V	B	GRM188B11H272KA01D	K22174814		1-	A	B5
C 1319	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	f5
C 1321	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B5
C 1322	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	e3
C 1323	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c5
C 1324	CHIP CAP.	0.0056uF	50V	B	GRM188B11H562KA01D	K22174818		1-	B	c5
C 1326	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	B4
C 1327	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	B4
C 1328	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	e3
C 1329	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B5
C 1330	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A5
C 1333	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C4
C 1334	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	e3
C 1336	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028	Special Application	6-	B	e5
C 1337	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805	Special Application	6-	A	C4
C 1338	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	D5
C 1341	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1342	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	D4
C 1343	CHIP CAP.	100pF	50V	CH	GRM1882C1H101JA01D	K22174235		1-	A	D5
C 1344	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1347	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	D4
C 1348	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	B	f4
C 1349	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A3
C 1352	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	e3
C 1353	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	f4
C 1354	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B4
C 1355	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	A3
C 1356	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	D4
C 1358	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B4
C 1359	FILM CAP.	0.027uF	16V		ECHU1C273JX5	K57120041	Special Application	6-	B	e4
C 1360	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805	Special Application	6-	B	e4
C 1361	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	A3
C 1362	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174822	Special Application	6-	B	e4
C 1363	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B4
C 1364	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	C4

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REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1365	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001	Special Application	1-	A	A3
C 1366	AL.ELECTRO.CAP.	470uF	25V		RE3-25V471MH3#	K40149044		1-	A	A2
C 1367	CHIP CAP.	0.1uF	16V		GRM188B11C104KA01D	K22124805		1-	A	C4
C 1368	CHIP CAP.	0.0068uF	50V	B	GRM188B11H682KA01D	K22174834		6-	B	e4
C 1369	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g2
C 1370	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	A3
C 1371	CHIP CAP.	0.033uF	16V	R	GRM188R11C333KA01D	K22124801		1-	A	C4
C 1372	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B4
C 1375	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B4
C 1380	AL.ELECTRO.CAP.	470uF	16V		RE3-16V471MG3#	K40129066		1-	A	A3
C 1410	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	A3
C 1413	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g2
C 1421	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174822		1-	B	g3
C 1424	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174822		1-	B	g2
C 1427	CHIP CAP.	0.0047uF	50V	B	GRM188B11H472KA01D	K22174833		1-	B	g3
C 1429	CHIP CAP.	1uF	10V	F	GRM188F11A105ZA01D	K22105001		1-	A	B4
C 1431	CHIP CAP.	10pF	500V	CH	1206N100D501LT	K22278209		1-	B	b2
C 1432	CHIP CAP.	22pF	500V	CH	1206N220J501LT	K22278213		1-	B	b2
CD1001	CERAMIC DISC				CDA450C24	H7901430		1-	A	D5
CF1001	CERAMIC FILTER				ALFYM450E-K	H3900535		1-	A	E4
D 1001	SURGE ABSORBER				DSP-141N-S00B	Q9000586		1-	A	G1
D 1002	DIODE				1N5402	G2090778		1-	A	C2
D 1003	DIODE				1SS321(TE85R.F)	G2070076		1-	B	a2
D 1004	DIODE				L308CCB	G2090792		1-	A	G2
D 1005	DIODE				L308CCB	G2090792		1-	A	F2
D 1006	DIODE				HSU277TRF-E	G2070118		1-	A	G2
D 1007	DIODE				HSU277TRF-E	G2070118		1-	A	G2
D 1008	DIODE				DAN235U TL	G2070176		1-	B	b3
D 1009	DIODE				HVU359 TRF-E	G2070452		1-	A	E4
D 1010	DIODE				HZU5ALL-TRF-E	G2070754		1-	B	c3
D 1011	DIODE				1SS302(TE85R.F)	G2070088		1-	B	c3
D 1012	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1013	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1014	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1015	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1016	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1017	DIODE				HVC306B TRU-E	G2070918		1-	A	F3
D 1018	DIODE				UDZS TE-17 5.6B	G2070910		1-	B	c4
D 1019	DIODE				DA221 TL	G2070178		1-	A	D4
D 1020	DIODE				DA221 TL	G2070178		1-	A	C4
F 1001	CHIP FUSE	1.25A			FCC16 132ABTP	Q0000109		1-	A	B3
F 1002	CHIP FUSE	1.25A			FCC16 132ABTP	Q0000109		1-	A	B3
J 1001	CONNECTOR				B3B-PH-K-S(LF)(SN)	P0090397		1-	A	A3
J 1002	CONNECTOR				B3B-PH-K-S(LF)(SN)	P0090397		1-	A	B3
J 1004	CONNECTOR				PI28A10M	P0091357		1-	A	A4
J 1005	CONNECTOR				24FLT-SM2-TB(LF)(SN)	P1091128		1-	A	D4
J 1006	CONNECTOR				24FLT-SM2-TB(LF)(SN)	P1091128		1-	A	C4
J 1007	CONNECTOR				B3B-PH-K-S(LF)(SN)	P0090397		1-	A	A3
J 1008	CONNECTOR				9110S-03	P1091204		1-	B	b2
J 1009	CONNECTOR				IMSA-9131S-06	P1091327		1-	B	f2
L 1001	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	G1
L 1002	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	G1
L 1003	COIL	0.1uH			#E528SNAS-100075	L0190269		1-	A	G2
L 1004	COIL	0.1uH			#E528SNAS-100075	L0190269		1-	A	G3
L 1005	M.RFC	4.7uH			LAL03NA4R7K	L1190203		1-	A	F2
L 1006	COIL A1				3.5T4.0D0.8UEW R	L0022245		1-	A	G2
L 1007	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	F2
L 1008	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	A	G2
L 1010	M.RFC	0.15uH			HK1608 R15J-T	L1690938		1-	A	D2
L 1011	M.RFC	0.15uH			HK1608 R15J-T	L1690938		1-	A	D2
L 1013	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	a3
L 1014	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	G3
L 1015	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	G4
L 1016	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	G4
L 1017	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	E4
L 1018	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	B	c4
L 1019	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	b3
L 1020	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b4
L 1021	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b4
L 1022	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b3
L 1023	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	A	F3
L 1024	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	F3
L 1025	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	a4

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REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 1026	M.RFC	10uH			LK2125 100K-T	L1690331		1-	A	F3
L 1027	M.RFC	0.1uH		2%	C2012C-R10G-RA	L1690776		1-	A	F3
L 1028	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	b4
L 1029	M.RFC	0.033uH		2%	C2012C-33NG-RA	L1690770		1-	A	F3
L 1030	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	F3
L 1031	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	b4
L 1032	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	F3
L 1033	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	F3
L 1034	CHIP COIL	1.5uH		2%	C2520C-1R5G	L1691311		1-	A	F5
L 1035	M.RFC	1.5uH			LK1608 1R5K-T	L1690846		1-	B	c4
Q 1001	TRANSISTOR				2SB1301-T2 ZQ/ZP	G3213017Q		1-	B	f3
Q 1002	TRANSISTOR				2SB1301-T2 ZQ/ZP	G3213017Q		1-	B	f3
Q 1003	TRANSISTOR				2SB1301-T2 ZQ/ZP	G3213017Q		1-	B	g2
Q 1004	IC				NJM7808FA	G1093640		1-	A	A2
Q 1005	TRANSISTOR				DTA144EE TL	G3070074		1-	A	E2
Q 1006	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	D1
Q 1007	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	A3
Q 1008	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	B3
Q 1009	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	g1
Q 1010	IC				RA35H1516M	G1093695		1-	A	C1
Q 1011	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E2
Q 1012	IC				NJM78M05DL1A-TE1	G1093660		1-	A	A2
Q 1013	FET				3SK294(TE85L)	G4802948		1-	B	a3
Q 1014	TRANSISTOR				DTB123EK T146	G3070022		1-	A	D3
Q 1015	TRANSISTOR				DTB123EK T146	G3070022		1-	A	D3
Q 1016	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	D2
Q 1017	TRANSISTOR				2SC3356-T2B R25	G3333567E		1-	A	D2
Q 1018	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	D3
Q 1019	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	D3
Q 1020	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	D2
Q 1021	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	E4
Q 1022	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	E3
Q 1023	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b3
Q 1024	TRANSISTOR				2SC3356-T2B R25	G3333567E		1-	B	b3
Q 1025	TRANSISTOR				2SA1602A-T111-1F	G3116028F		1-4	A	E3
Q 1025	TRANSISTOR				ISA1602AM1-T111-1F	G3070380		5-	A	E3
Q 1026	IC				MB15A02PFV1	G1092541		1-	A	E3
Q 1027	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	b3
Q 1028	IC				LM2902PWR	G1094009		1-	A	A3
Q 1029	FET				2SK520-T2B K41	G3805207A		1-	A	F4
Q 1030	FET				2SK520-T2B K41	G3805207A		1-	B	b5
Q 1031	TRANSISTOR				2SC5006-T1	G3350068		1-	A	F3
Q 1032	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	F3
Q 1033	FET				2SK520-T2B K41	G3805207A		1-	A	F5
Q 1034	IC				LM2904PWR	G1094010		1-	A	D2
Q 1035	FET				2SK520-T2B K41	G3805207A		1-	B	b4
Q 1036	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	F3
Q 1037	TRANSISTOR				2SA1162GR TE85R	G3111627G		1-	B	c3
Q 1038	TRANSISTOR				2SC2712GR(TE85R.F)	G3327127G		1-	B	c3
Q 1039	FET				2SK520-T2B K43	G3805207C		1-	A	F3
Q 1040	TRANSISTOR				2SC5006-T1	G3350068		1-	A	F3
Q 1041	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	b5
Q 1042	IC				CD4053BPWR	G1093864		1-	A	B3
Q 1044	IC				M62421FP	G1094102		1-	A	C3
Q 1045	IC				LM2902PWR	G1094009		1-	A	A4
Q 1046	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	c4
Q 1047	IC				TA31136FNG(EL)	G1091605		1-	A	E5
Q 1048	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	B5
Q 1049	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	C4
Q 1050	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	B5
Q 1051	IC				CD4066BPWR	G1093865		1-	A	B4
Q 1052	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D5
Q 1053	IC				NJM2211M-TE1	G1092943	Special Application	6-	B	e4
Q 1054	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	A3
Q 1055	IC				LA4425A	G1092241		1-	A	A2
Q 1056	IC				LM2904PWR	G1094010		1-	B	e3
Q 1057	IC				CD4066BPWR	G1093865		1-	A	B4
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	E2
R 1005	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	E2
R 1006	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a2

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REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
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	f3
R 1009	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f3
R 1010	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g2
R 1011	CHIP RES.	100	1W	5%	RMC1 101JTE	J24305101		1-	A	F2
R 1012	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	A	B3
R 1013	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	A	B3
R 1014	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	g1
R 1015	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E2
R 1016	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	D1
R 1017	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	G3
R 1018	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D1
R 1019	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	G3
R 1020	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D2
R 1021	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D2
R 1023	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	D2
R 1024	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D2
R 1025	CHIP RES.	39	1/16W	5%	RMC1/16 390JATP	J24185390		1-	A	C2
R 1026	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	G3
R 1027	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	G3
R 1028	CHIP RES.	56	1/16W	5%	RMC1/16 560JATP	J24185560		1-	A	C2
R 1029	CHIP RES.	39	1/16W	5%	RMC1/16 390JATP	J24185390		1-	B	a3
R 1030	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	A	D2
R 1031	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	G3
R 1032	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C2
R 1033	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a3
R 1034	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	a3
R 1035	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	A	D2
R 1036	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	D2
R 1037	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 1038	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 1040	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	D2
R 1042	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D2
R 1043	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	d2
R 1044	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D2
R 1045	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c2
R 1046	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 1047	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b3
R 1048	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 1049	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E4
R 1050	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	E3
R 1051	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D3
R 1052	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A4
R 1053	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	E4
R 1054	CHIP RES.	270k	1/16W	5%	RMC1/16 274JATP	J24185274		1-	A	B4
R 1055	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	A4
R 1056	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	A4
R 1057	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	E3
R 1058	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	E3
R 1060	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a4
R 1061	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	f4
R 1063	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	E4
R 1064	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	E3
R 1065	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	b3
R 1066	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	b3
R 1067	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	f3
R 1068	CHIP RES.	150	1/16W	5%	RMC1/16 151JATP	J24185151		1-	A	E3
R 1069	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	A4
R 1070	CHIP RES.	180k	1/16W	5%	RMC1/16 184JATP	J24185184		1-	A	E4
R 1071	CHIP RES.	27k	1/16W	5%	RMC1/16 273JATP	J24185273		1-	A	E4
R 1072	CHIP RES.	390k	1/16W	5%	RMC1/16 394JATP	J24185394		1-	A	E3
R 1073	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1074	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b3
R 1075	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	A4
R 1077	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b3
R 1078	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	b3
R 1079	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	E3
R 1080	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	E3
R 1081	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B4
R 1082	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B3
R 1083	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b3
R 1084	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	b3
R 1085	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A3

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Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1086	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b3
R 1087	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	A3
R 1088	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	B3
R 1089	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	D3
R 1090	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B3
R 1091	CHIP RES.	120	1/16W	5%	RMC1/16 121JATP	J24185121		1-	B	b5
R 1092	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	f3
R 1093	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b3
R 1094	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B3
R 1095	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	F3
R 1096	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	F3
R 1098	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c3
R 1099	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	F3
R 1100	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E3
R 1101	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	f3
R 1102	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	A3
R 1103	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E3
R 1104	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E3
R 1105	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	c3
R 1106	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	c3
R 1107	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f3
R 1108	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B3
R 1109	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	F3
R 1110	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	f4
R 1111	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	c3
R 1112	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	c3
R 1113	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	F3
R 1114	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 1115	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		1-	A	F3
R 1117	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c3
R 1120	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c3
R 1121	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	a4
R 1122	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	B3
R 1123	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1124	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1125	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	F3
R 1126	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	b4
R 1127	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	c3
R 1128	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	F3
R 1129	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		1-	B	c3
R 1130	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1131	CHIP RES.	270	1/16W	5%	RMC1/16 271JATP	J24185271		1-	B	b4
R 1132	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c3
R 1133	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	b4
R 1134	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	B	b5
R 1135	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F3
R 1136	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	F3
R 1137	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	E2
R 1138	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1139	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F3
R 1140	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	C3
R 1141	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	B3
R 1142	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1143	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	F5
R 1144	CHIP RES.	390	1/16W	5%	RMC1/16 391JATP	J24185391		1-	B	b5
R 1145	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E3
R 1146	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C3
R 1147	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C3
R 1148	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 1149	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1150	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1151	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1152	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1153	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f3
R 1154	CHIP RES.	150k	1/16W	5%	RMC1/16 154JATP	J24185154		1-	A	A4
R 1155	CHIP RES.	150k	1/16W	5%	RMC1/16 154JATP	J24185154		1-	A	B4
R 1156	CHIP RES.	150k	1/16W	5%	RMC1/16 154JATP	J24185154		1-	A	B4
R 1157	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	B	c4
R 1158	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1159	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	d3
R 1160	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	g4
R 1161	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	c4
R 1162	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c4

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Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1163	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	A4
R 1164	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	B	d3
R 1166	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	A	C3
R 1167	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	c4
R 1168	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1169	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	A4
R 1170	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	f4
R 1171	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	C5
R 1172	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	C4
R 1173	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	C5
R 1174	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	C4
R 1175	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	g4
R 1176	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	d3
R 1177	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1178	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g4
R 1179	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d3
R 1180	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	C4
R 1181	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	d3
R 1182	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C5
R 1183	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	E4
R 1184	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	C5
R 1185	CHIP RES.	120k	1/16W	5%	RMC1/16 124JATP	J24185124		1-	A	B5
R 1186	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	B4
R 1187	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C3
R 1188	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	A4
R 1189	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C3
R 1190	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	d3
R 1191	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E5
R 1192	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	d4
R 1193	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1194	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	A	B4
R 1195	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	B4
R 1196	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	A4
R 1197	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	B4
R 1198	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	B5
R 1199	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	A4
R 1200	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	C5
R 1201	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	C5
R 1202	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	B	c5
R 1203	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e3
R 1204	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	e3
R 1205	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1206	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1207	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	B5
R 1208	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C4
R 1209	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e3
R 1210	CHIP RES.	1.5k	1/16W	5%	RMC1/16 152JATP	J24185152		1-	B	c5
R 1211	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	B	c4
R 1212	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B4
R 1213	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B4
R 1214	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	e5
R 1215	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	B5
R 1216	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	B	c5
R 1217	CHIP RES.	27k	1/16W	5%	RMC1/16 273JATP	J24185273		1-	B	e3
R 1218	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B4
R 1219	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B4
R 1220	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e5
R 1221	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	B5
R 1222	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D4
R 1223	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	A	C5
R 1224	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	e3
R 1225	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1226	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1227	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1228	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1229	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C5
R 1230	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e4
R 1231	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d4
R 1232	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1233	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1234	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1237	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	D4
R 1238	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	A3

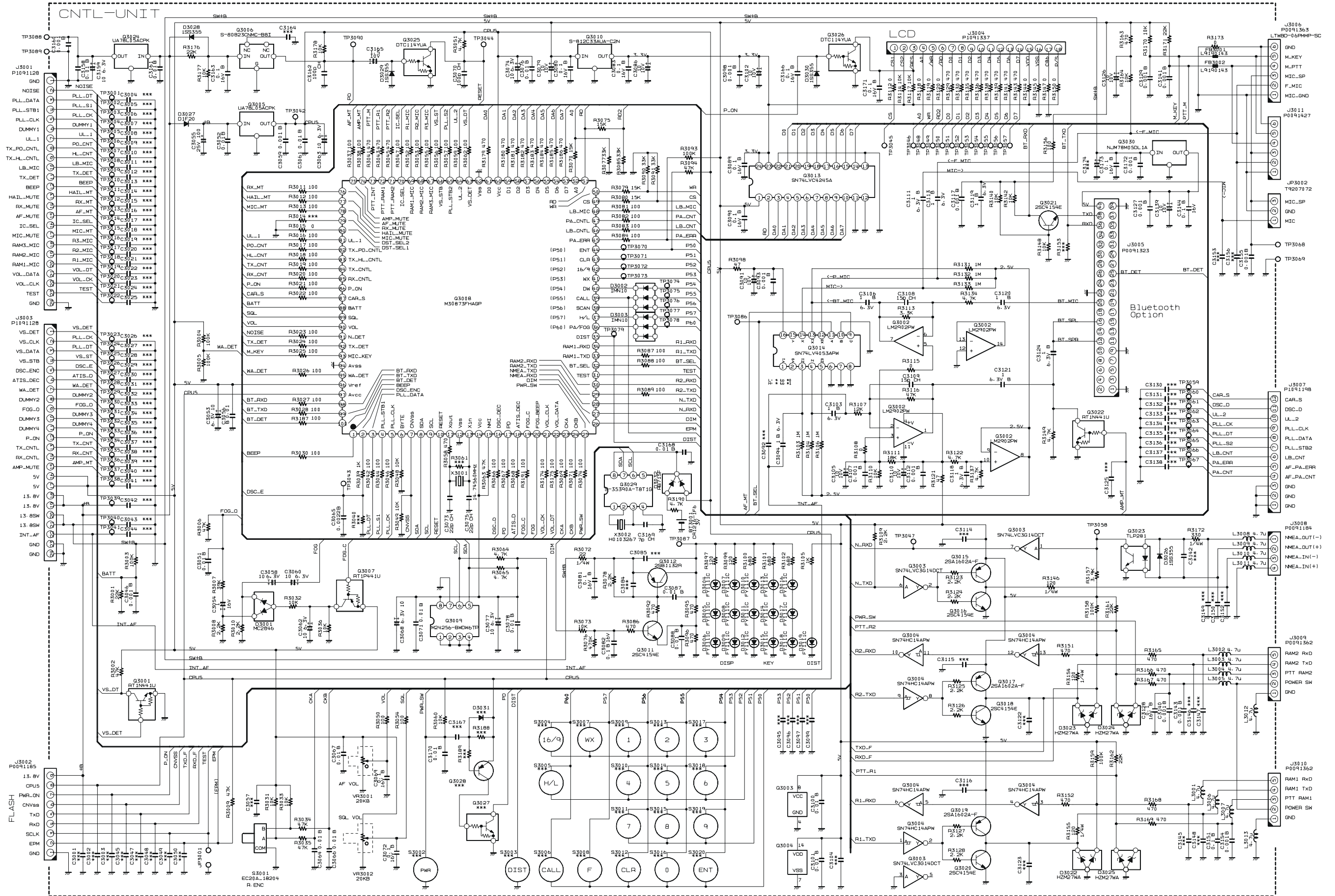
MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1239	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	D4
R 1240	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D5
R 1241	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1242	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	A3
R 1243	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1244	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C4
R 1245	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1246	CHIP RES.	180k	1/16W	5%	RMC1/16 184JATP	J24185184		1-	A	A3
R 1247	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1248	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	f4
R 1249	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104	Special Application	6-	B	e4
R 1250	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	A3
R 1251	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473	Special Application	6-	B	e4
R 1252	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C4
R 1253	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103	Special Application	6-	B	e4
R 1254	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103	Special Application	6-	B	e4
R 1255	CHIP RES.	1k	1/16W	1%	RMC1/16 102FTP	J24183102	Special Application	6-	B	e4
R 1256	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C4
R 1257	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	B4
R 1258	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	B4
R 1259	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	e3
T 1001	BALUN TRANSFORMERS				#617DB-1714=PH3	L0190271		1-	A	F5
T 1002	BALUN TRANSFORMERS				#617DB-1714=PH3	L0190271		1-	A	F4
T 1003	BALUN TRANSFORMERS				#617DB-1714=PH3	L0190271		1-	A	F4
TC1001	TRIMMER CAP.	10pF			ECR-KN010C61X	K91000226		1-	A	E4
TC1002	TRIMMER CAP.	10pF			ECR-KN010C61X	K91000226		1-	A	F3
TH1001	THERMISTOR				TBPS1R104K475H5Q	G9090069		1-	A	E4
TP1005	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	G5
VR1001	POT.	100k			EVN-5ESX50B15	J51811104		1-	A	E2
VR1002	POT.	10k			EVN-5ESX50B14	J51811103		1-	A	E2
VR1003	POT.	100k			EVN-5ESX50B15	J51811104		1-	A	E2
X 1001	XTAL DSX531S	29.95MHz			DSX531S 29.950MHZ	H0103316		1-	A	E3
XF1001	XTAL FILTER				1Q30413BD1	H1102396		1-	A	E5
XF1002	XTAL FILTER				1Q30413BD1	H1102396		1-	A	E4
	SHIELD CASE				(VCO)	RA0517200		1-		
	SHIELD				(VCO2)	RA0751200		1-		

CNTL-2 Unit

Circuit Diagram

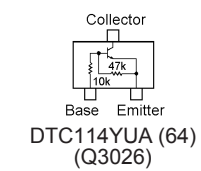
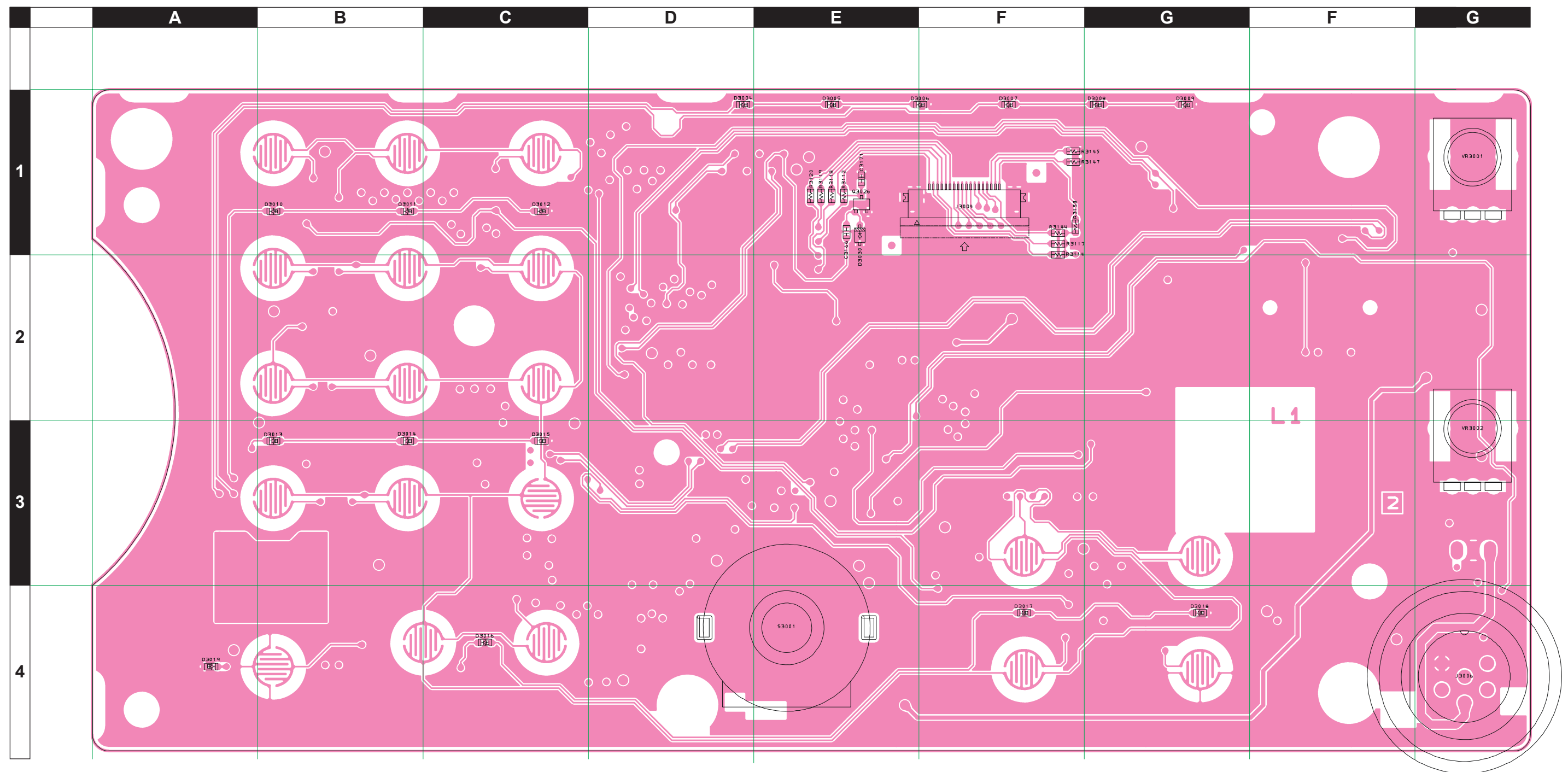


CNTL-2 Unit

Note

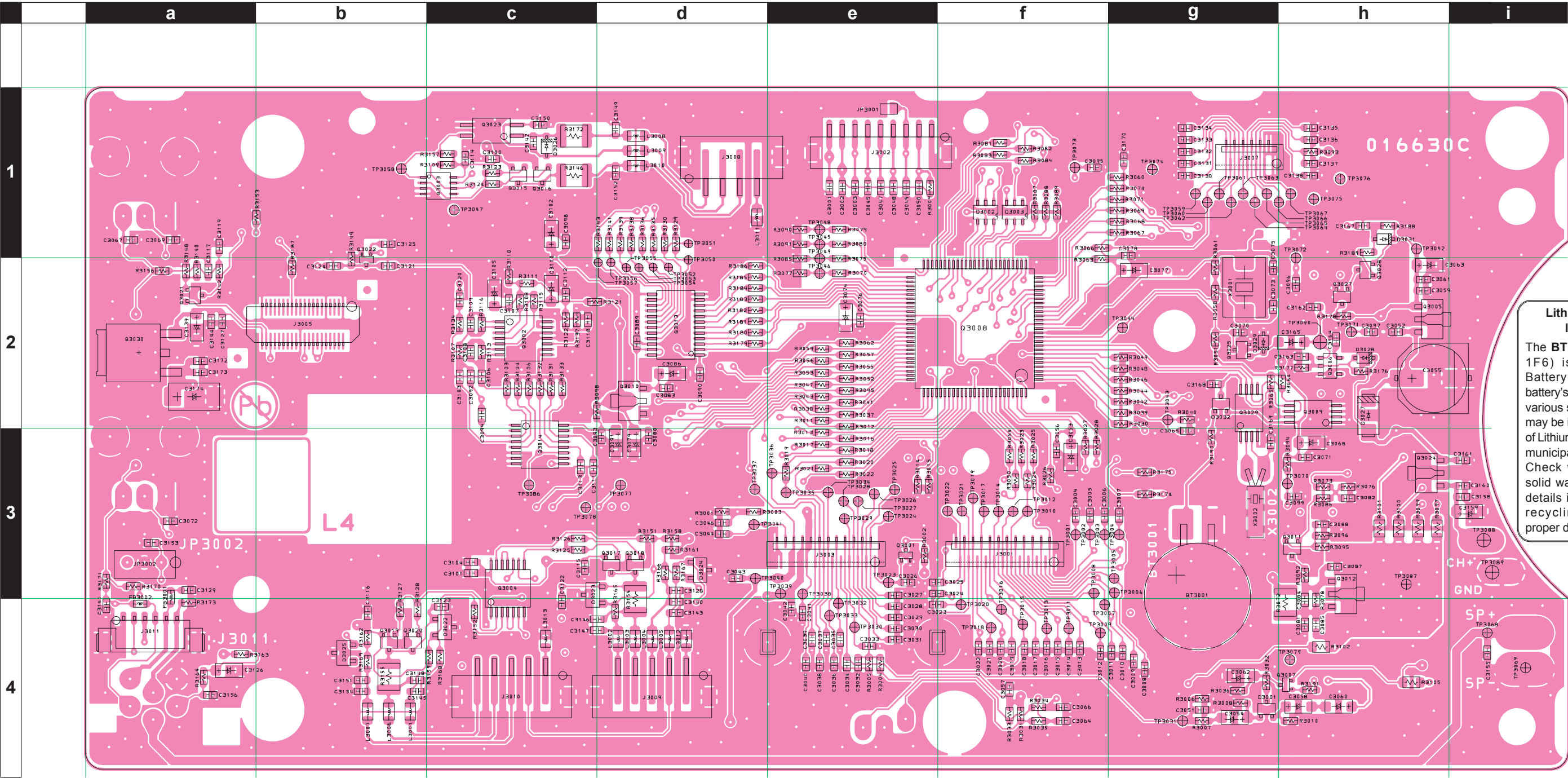
CNTL-2 Unit

Parts Layout (Side A)



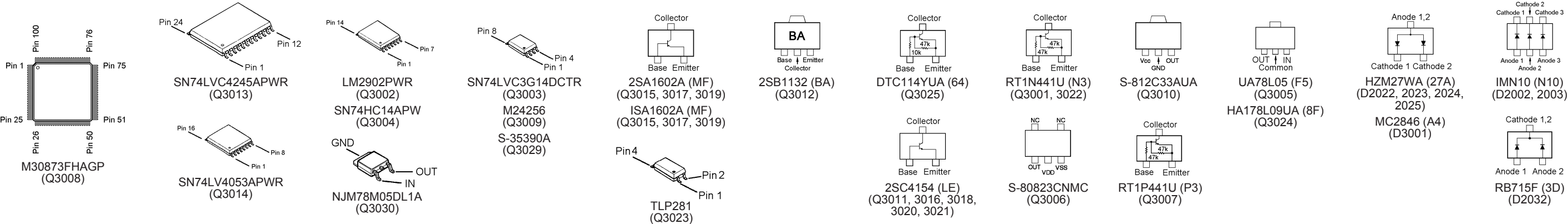
CNTL-2 Unit

Parts Layout (Side B)



Lithium Battery Included

The **BT3001** (CR1216-1F6) is the Lithium Battery. At the end of battery's useful life, under various state and lows, it may be illegal to dispose of Lithium Battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.



CNTL-2 Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY	ADR
P.C.B. with Components						CS1927001					
Printed Circuit Board						FR0166300		1-			
BT3001	LITHIUM BATT.		3V		CR1216-1F6	Q9000627		1-	B		g3
C 3046	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	B		d3
C 3051	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		g4
C 3052	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		h2
C 3053	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		f3
C 3054	CHIP TA.CAP.	1uF	16V		TEESVA0J105M8R	K78120009		1-	B		g4
C 3055	AL.ELECTRO.CAP.	100uF	25V		EEE1EA101UP	K48140018		1-	B		h2
C 3056	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		f3
C 3058	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		h4
C 3059	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		h2
C 3060	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		h4
C 3061	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		h2
C 3062	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		g4
C 3063	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		h2
C 3064	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		f4
C 3065	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174822		1-	B		g3
C 3066	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		f4
C 3067	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		a1
C 3068	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		h3
C 3069	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		a1
C 3070	CHIP CAP.	100pF	50V	CH	GRM188C1H101JA01D	K22174235		1-	B		g2
C 3071	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		h3
C 3072	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		a3
C 3073	CHIP CAP.	22pF	50V	CH	GRM188C1H220JA01D	K22174219		1-	B		g2
C 3074	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		e2
C 3075	CHIP CAP.	22pF	50V	CH	GRM188C1H220JA01D	K22174219		1-	B		g2
C 3076	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		e2
C 3077	CHIP TA.CAP.	10uF	6.3V		TEESVA0J106M8R	K78080027		1-	B		g2
C 3078	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		g1
C 3079	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		d3
C 3080	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		d3
C 3081	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		h4
C 3082	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		h3
C 3083	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		d2
C 3086	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		d2
C 3087	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		h3
C 3088	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		h3
C 3089	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		d2
C 3090	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		d2
C 3091	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		d3
C 3093	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		d3
C 3094	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c2
C 3098	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		c1
C 3100	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		c1
C 3101	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B		c3
C 3102	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		c1
C 3103	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c2
C 3105	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		c2
C 3106	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c2
C 3107	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		c2
C 3108	CHIP CAP.	15pF	50V	CH	GRM188C1H150JA01D	K22174215		1-	B		c2
C 3109	CHIP CAP.	15pF	50V	CH	GRM188C1H150JA01D	K22174215		1-	B		c2
C 3110	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		c2
C 3111	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c3
C 3112	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		c2
C 3113	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c3
C 3117	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a2
C 3118	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c2
C 3119	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		a1
C 3120	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		c2
C 3121	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		b2
C 3124	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		b2
C 3126	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		a4
C 3127	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		a2
C 3128	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B		d3
C 3129	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	B		a3
C 3139	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B		a2
C 3140	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		d4
C 3141	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	B		a4
C 3143	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B		d4
C 3144	CHIP CAP.	100pF	50V	CH	GRM188C1H101JA01D	K22174235		1-2	B		a2

CNTL-2 Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 3144	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		3-	B	a2
C 3151	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	b4
C 3154	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b4
C 3155	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	i4
C 3158	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	i3
C 3159	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	B	i3
C 3160	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	i3
C 3161	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	i3
C 3162	CHIP CAP.	100pF	50V	CH	GRM1882C1H101JA01D	K22174235		1-	B	h2
C 3163	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	h2
C 3165	CHIP TA.CAP.	1.5uF	10V		TEESVA1A155M8R	K78100009		1-	B	h2
C 3166	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	E1
C 3168	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	g2
C 3169	CHIP CAP.	7pF	50V	CH	GRM1882C1H7R0DZ01D	K22174208		1-	B	g3
C 3170	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	g1
C 3171	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	E1
C 3172	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		3-	B	a2
C 3173	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		3-	B	a2
D 3001	DIODE				MC2846-T111-1	G2070702		1-	B	g4
D 3002	DIODE				IMN10 T108	G2070078		1-	B	f1
D 3003	DIODE				IMN10 T108	G2070078		1-	B	f1
D 3004	LED				FY1111C-722-TR	G2070916		1-	A	D1
D 3005	LED				FY1111C-722-TR	G2070916		1-	A	E1
D 3006	LED				FY1111C-722-TR	G2070916		1-	A	F1
D 3007	LED				FY1111C-722-TR	G2070916		1-	A	F1
D 3008	LED				FY1111C-722-TR	G2070916		1-	A	G1
D 3009	LED				FY1111C-722-TR	G2070916		1-	A	G1
D 3010	LED				FY1111C-722-TR	G2070916		1-	A	B1
D 3011	LED				FY1111C-722-TR	G2070916		1-	A	B1
D 3012	LED				FY1111C-722-TR	G2070916		1-	A	C1
D 3013	LED				FY1111C-722-TR	G2070916		1-	A	B3
D 3014	LED				FY1111C-722-TR	G2070916		1-	A	B3
D 3015	LED				FY1111C-722-TR	G2070916		1-	A	C3
D 3016	LED				FY1111C-722-TR	G2070916		1-	A	C4
D 3017	LED				FY1111C-722-TR	G2070916		1-	A	F4
D 3018	LED				FY1111C-722-TR	G2070916		1-	A	G4
D 3019	LED				FY1111C-722-TR	G2070916		1-	A	A4
D 3022	DIODE				HZM27WA TR-E	G2070530		1-	B	c4
D 3023	DIODE				HZM27WA TR-E	G2070530		1-	B	c3
D 3024	DIODE				HZM27WA TR-E	G2070530		1-	B	d3
D 3025	DIODE				HZM27WA TR-E	G2070530		1-	B	b4
D 3026	DIODE				1SS355 TE-17	G2070470		1-	B	c1
D 3027	DIODE				D1F20-5063	G2070474		1-	B	h2
D 3028	DIODE				1SS355 TE-17	G2070470		1-	B	h2
D 3029	DIODE				1SS355 TE-17	G2070470		1-	B	g2
D 3030	DIODE				1SS355 TE-17	G2070470		1-	A	E1
D 3032	DIODE				RB715F T106	G2070752		1-	B	g2
DS3001	LCD MODULE				231-3077-0818 A01	Q7000589		1-		
FB3001	FERRITE BEADS				BLM18BD601SN1D	L9190143		1-	B	a3
FB3002	FERRITE BEADS				BLM18BD601SN1D	L9190143		1-	B	a4
J 3001	CONNECTOR				24FLT-SM2-TB(LF)(SN)	P1091128		1-	B	f3
J 3002	CONNECTOR				B9B-ZR-SM4-TF(LF)(SN)	P0091185		1-	B	e1
J 3003	CONNECTOR				24FLT-SM2-TB(LF)(SN)	P1091128		1-	B	e3
J 3004	CONNECTOR				IMS9632S-18Y922	P1091337		1-	A	F1
J 3005	CONNECTOR				AXK6S40635P	P0091323		1-	B	b2
J 3006	CONNECTOR				VERBD-06PMMP-SC	P0091363		1-	A	l4
J 3007	CONNECTOR				12FLT-SM2-TB(LF)(SN)	P1091198		1-	B	g1
J 3008	CONNECTOR				B4B-PH-SM4-TB(LF)(SN)	P0091184		1-	B	d1
J 3009	CONNECTOR				B5B-PH-SM4-TB(LF)(SN)	P0091362		1-	B	d4
J 3010	CONNECTOR				B5B-PH-SM4-TB(LF)(SN)	P0091362		1-	B	c4
J 3011	CONNECTOR				53398-0671	P0091427		1-	B	a4
JP3002	WIRE ASSY				AM004N	T9207072		1-	B	a3
L 3001	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	b4
L 3002	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d4
L 3003	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d4
L 3004	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d4
L 3005	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d4
L 3006	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	b4
L 3007	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	b4
L 3008	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d1
L 3009	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d1
L 3010	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d1
L 3011	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d1

CNTL-2 Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 3012	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	d4
L 3013	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	c4
Q 3001	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	e3
Q 3002	IC				LM2902PWR	G1094009		1-	B	c2
Q 3003	IC				SN74LVC3G14DCTR	G1094258		1-	B	c1
Q 3004	IC				SN74HC14APW(TAPE)	G1094227		1-	B	c3
Q 3005	IC				UA78L05ACPKE6(TAPE)	G1094229		1-	B	h2
Q 3006	IC				S-80823CNMC-B8I-T2G	G1093635		1-	B	h2
Q 3007	TRANSISTOR				RT1P441U-T11-1	G3070248		1-	B	h4
Q 3008	IC				M30873FHAGP	G1094438		1-5	B	f2
Q 3008	IC				M30876FJBGP	G1094522		6-	B	f2
Q 3009	IC				M24256-BWDW6TP	G1094409		1-	B	h2
Q 3010	IC				S-812C33AUA-C2N-T2G	G1094056		1-	B	d2
Q 3011	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	h3
Q 3012	TRANSISTOR				2SB1132 T100 R	G3211327R		1-	B	h3
Q 3013	IC				SN74LVC4245APWR	G1094430		1-	B	d2
Q 3014	IC				SN74LV4053APWR	G1093870		1-	B	c3
Q 3015	TRANSISTOR				2SA1602A-T111-1F	G3116028F		1-4	B	c1
Q 3015	TRANSISTOR				ISA1602AM1-T111-1F	G3070380		5-	B	c1
Q 3016	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c1
Q 3017	TRANSISTOR				2SA1602A-T111-1F	G3116028F		1-4	B	d3
Q 3017	TRANSISTOR				ISA1602AM1-T111-1F	G3070380		5-	B	d3
Q 3018	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	d3
Q 3019	TRANSISTOR				2SA1602A-T111-1F	G3116028F		1-4	B	b4
Q 3019	TRANSISTOR				ISA1602AM1-T111-1F	G3070380		5-	B	b4
Q 3020	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b4
Q 3021	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	a2
Q 3022	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	B	b2
Q 3023	PHOTO COUPLER				TLP281(GB-TP)	G0090037		1-	B	c1
Q 3024	IC				HA178L09UA-TL-E	G1094350		1-	B	h3
Q 3025	TRANSISTOR				DTC114YUA T106	G3070298		1-	B	g2
Q 3026	TRANSISTOR				DTC114YUA T106	G3070298		1-	A	E1
Q 3029	IC				S-35390A-T8T1G	G1094439		1-	B	g2
Q 3030	IC				NJM78M05DL1A-TE1	G1093660		3-	B	a2
R 3001	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d3
R 3002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e3
R 3003	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d3
R 3004	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	e4
R 3005	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	e4
R 3006	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	g4
R 3007	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	B	g4
R 3008	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	g4
R 3009	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e1
R 3010	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	h4
R 3011	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3012	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3013	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3015	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	e3
R 3016	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3017	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3018	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3020	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3021	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3022	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 3023	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3024	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3025	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3026	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3027	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3028	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3030	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 3031	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f4
R 3032	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g4
R 3033	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f4
R 3034	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f4
R 3035	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f4
R 3036	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g4
R 3037	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3038	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3039	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	g2
R 3041	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	e2
R 3042	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2

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REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 3043	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	e2
R 3044	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 3045	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	e2
R 3046	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g2
R 3047	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3048	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g2
R 3049	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g2
R 3050	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3051	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	g2
R 3052	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3053	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3054	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 3055	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3056	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3057	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3058	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	g2
R 3059	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3060	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g1
R 3062	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 3063	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f2
R 3064	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	h2
R 3065	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	g2
R 3066	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3067	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g1
R 3068	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g1
R 3069	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g1
R 3070	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	e2
R 3071	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g1
R 3072	CHIP RES.	22	1/4W	5%	RMC1/4 220JATP	J24245220		1-	B	h4
R 3073	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h3
R 3074	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g1
R 3075	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	e2
R 3076	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h3
R 3077	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	e2
R 3078	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	h4
R 3079	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	e1
R 3080	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	e1
R 3081	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3082	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3083	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3084	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3085	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	e2
R 3086	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	h3
R 3087	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3088	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3089	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f1
R 3090	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	e1
R 3091	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	e1
R 3092	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	h3
R 3093	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h1
R 3094	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h3
R 3095	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	h3
R 3096	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	h3
R 3097	CHIP RES.	120	1/10W	5%	RMC1/10T 121J	J24205121		1-	B	h3
R 3098	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	d2
R 3099	CHIP RES.	120	1/10W	5%	RMC1/10T 121J	J24205121		1-	B	h3
R 3100	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		1-	B	h3
R 3101	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		1-	B	h3
R 3102	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		1-	B	h4
R 3103	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3104	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3105	CHIP RES.	1k	1/10W	5%	RMC1/10T 102J	J24205102		1-	B	h4
R 3106	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3107	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	B	c2
R 3108	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	c2
R 3109	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c1
R 3110	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	c2
R 3111	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	c2
R 3112	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E1
R 3113	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	B	c2
R 3114	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F1
R 3115	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	c2
R 3116	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c2

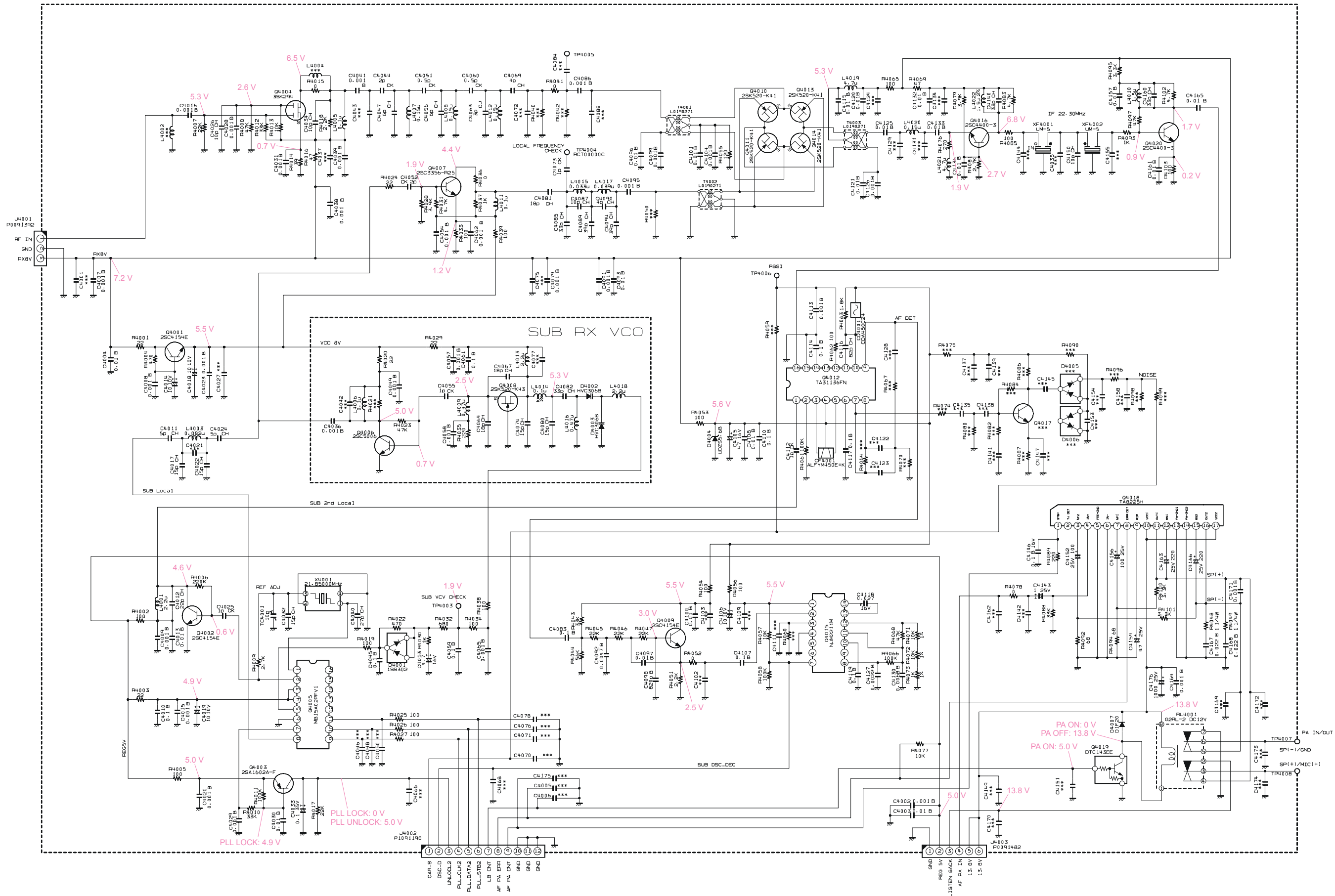
CNTL-2 Unit

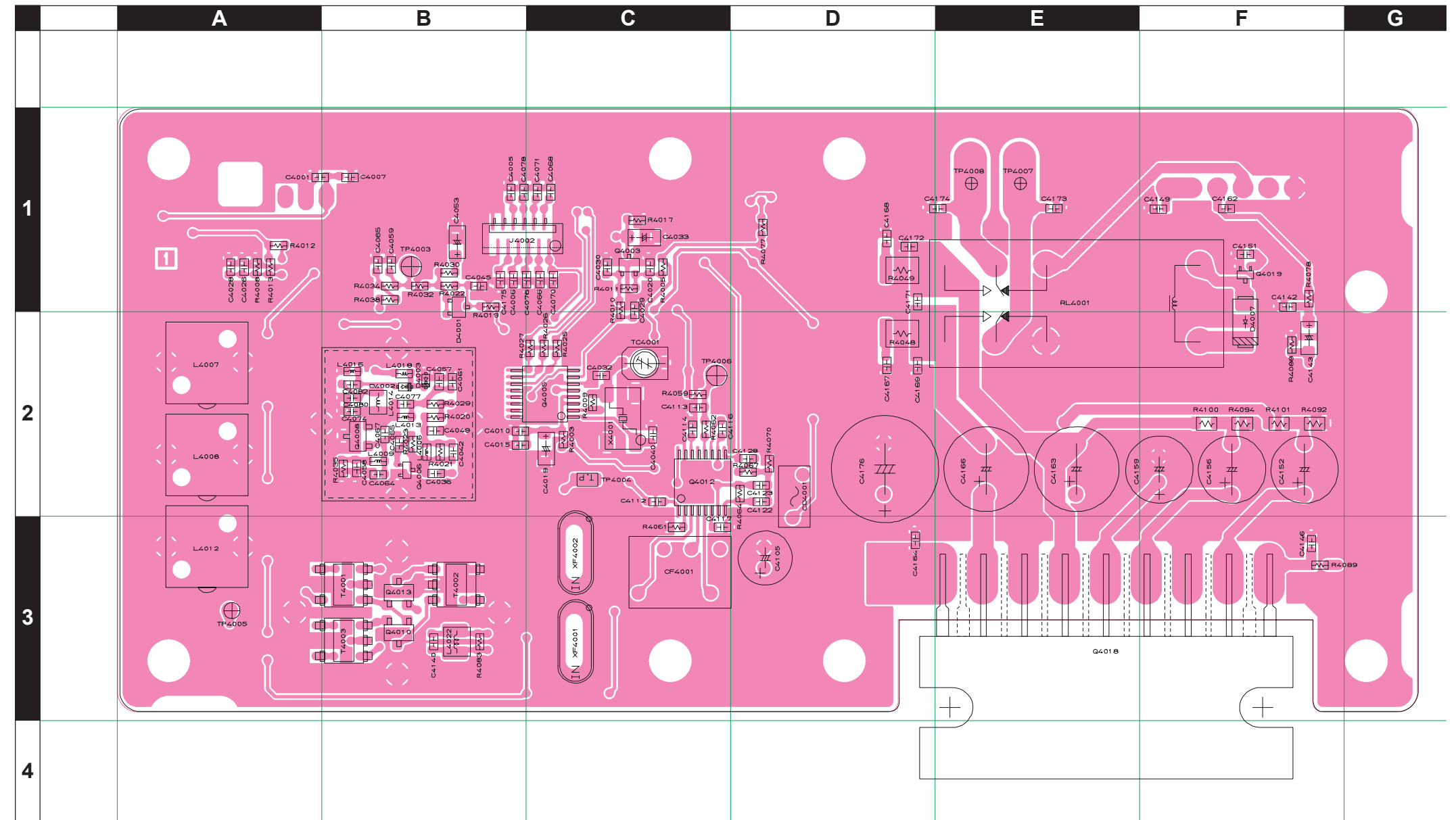
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 3117	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F1
R 3118	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E1
R 3119	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E1
R 3120	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E1
R 3121	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	c2
R 3122	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	c2
R 3123	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c1
R 3124	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c1
R 3125	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c3
R 3126	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c3
R 3127	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 3128	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 3129	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3130	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3131	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3132	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3133	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		1-	B	c2
R 3134	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	c2
R 3135	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3136	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3137	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	c2
R 3138	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3139	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3140	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a2
R 3141	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3142	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a2
R 3143	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d1
R 3144	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F1
R 3145	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F1
R 3146	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	c1
R 3147	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F1
R 3148	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a2
R 3149	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b2
R 3150	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F1
R 3151	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d3
R 3152	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 3154	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	d4
R 3155	CHIP RES.	120	1/4W	5%	RMC1/4 121JATP	J24245121		1-	B	b4
R 3156	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	a2
R 3157	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	c1
R 3158	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d3
R 3159	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	c4
R 3160	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-2		
R 3161	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d3
R 3162	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	b4
R 3163	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	a4
R 3164	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a4
R 3165	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d4
R 3166	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d3
R 3167	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d3
R 3168	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 3169	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b4
R 3170	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	a3
R 3171	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	a3
R 3172	CHIP RES.	330	1/4W	5%	RMC1/4 331JATP	J24245331		1-	B	c1
R 3173	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a4
R 3174	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 3175	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 3176	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	h2
R 3177	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h2
R 3178	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h2
R 3179	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3180	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3181	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3182	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3183	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3184	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3185	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3186	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d2
R 3187	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 3190	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	g3
R 3191	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h4
S 3001	ROTARY ENCODER				EC20A 18204	Q9000809		1-	A	E4

Parts List

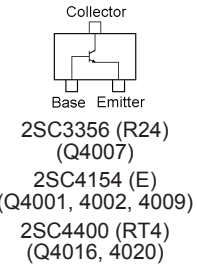
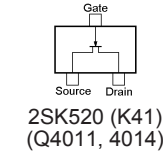
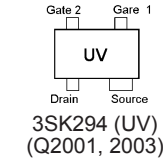
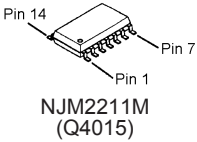
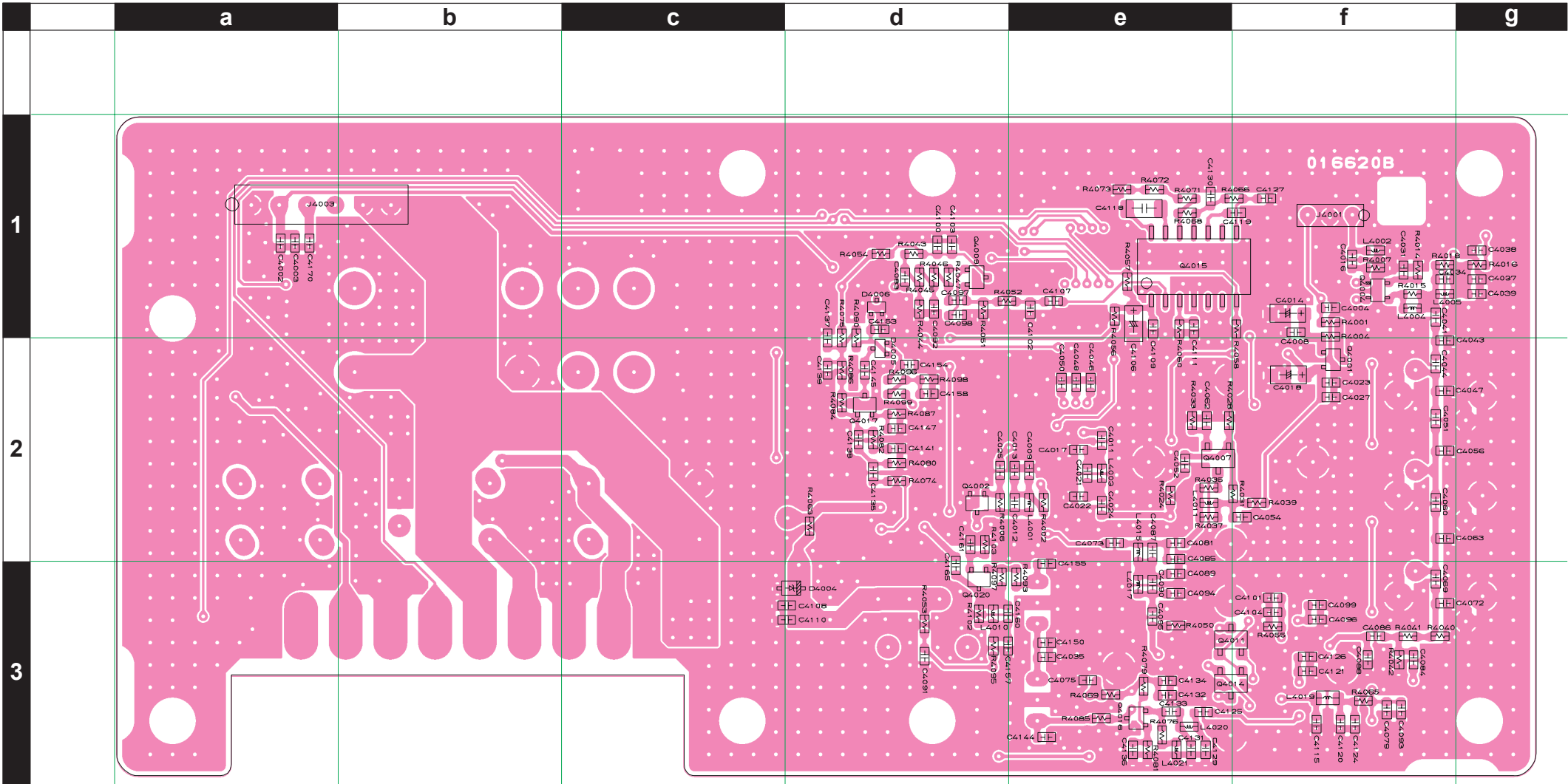
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SUB Unit

Parts Layout (Side B)



REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
P.C.B. with Components						CB3981001				
Printed Circuit Board						FR0166200		1-		
					AM028N000					
C 4002	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	a1
C 4003	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	a1
C 4004	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f1
C 4007	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B1
C 4008	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f1
C 4009	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2
C 4010	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B2
C 4011	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	e2
C 4012	CHIP CAP.	22pF	50V	CH	GRM1882C1H220JA01D	K22174219		1-	B	e2
C 4013	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e2
C 4014	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	f1
C 4015	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B2
C 4016	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f1
C 4017	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	e2
C 4018	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	f2
C 4019	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	A	C2
C 4020	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	C1
C 4022	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	B	e2
C 4023	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f2
C 4024	CHIP CAP.	5pF	50V	CH	GRM1882C1H5R0CZ01D	K22174206		1-	B	e2
C 4025	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	B	d2
C 4026	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	A	A1
C 4028	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	A1
C 4029	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	C1
C 4030	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	C1
C 4031	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f1
C 4032	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	C2
C 4033	CHIP TA.CAP.	0.1uF	35V		TEESVA1V104M8R	K78160025		1-	A	C1
C 4034	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	f1
C 4036	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B2
C 4038	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g1
C 4039	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	g1
C 4040	CHIP CAP.	27pF	50V	CH	GRM1882C1H270JA01D	K22174221		1-	A	C2
C 4041	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f1
C 4044	CHIP CAP.	2pF	50V	CK	GRM1884C1H2R0CZ01D	K22174203		1-	B	f2
C 4045	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B1
C 4047	CHIP CAP.	6pF	50V	CH	GRM1882C1H6R0DZ01D	K22174207		1-	B	f2
C 4049	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B2
C 4051	CHIP CAP.	0.5pF	50V	CK	GRM1884C1HR50CZ01D	K22174201		1-	B	f2
C 4052	CHIP CAP.	2pF	50V	CK	GRM1884C1H2R0CZ01D	K22174203		1-	B	e2
C 4053	CHIP TA.CAP.	4.7uF	16V		TEESVA1C475M8R	K78120031		1-	A	B1
C 4054	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f2
C 4055	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	A	B2
C 4056	CHIP CAP.	6pF	50V	CH	GRM1882C1H6R0DZ01D	K22174207		1-	B	f2
C 4057	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B2
C 4058	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B2
C 4059	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B1
C 4060	CHIP CAP.	0.5pF	50V	CK	GRM1884C1HR50CZ01D	K22174201		1-	B	f2
C 4061	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	B2
C 4062	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2
C 4063	CHIP CAP.	3pF	50V	CJ	GRM1883C1H3R0CZ01D	K22174204		1-	B	f2
C 4064	CHIP CAP.	18pF	50V	CH	GRM1882C1H180JA01D	K22174217		1-	A	B2
C 4065	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B1
C 4067	CHIP CAP.	18pF	50V	CH	GRM1882C1H180JA01D	K22174217		1-	A	B2
C 4069	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B	f3
C 4073	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	B	e2
C 4074	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	B2
C 4079	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 4080	CHIP CAP.	15pF	50V	CH	GRM1882C1H150JA01D	K22174215		1-	A	B2
C 4081	CHIP CAP.	18pF	50V	CH	GRM1882C1H180JA01D	K22174217		1-	B	e2
C 4082	CHIP CAP.	33pF	50V	CH	GRM1882C1H330JA01D	K22174223		1-	A	B2
C 4083	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	d1
C 4085	CHIP CAP.	33pF	50V	CH	GRM1882C1H330JA01D	K22174223		1-	B	e2
C 4086	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 4087	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	e2
C 4089	CHIP CAP.	39pF	50V	CH	GRM1882C1H390JA01D	K22174225		1-	B	e3
C 4090	CHIP CAP.	4pF	50V	CH	GRM1882C1H4R0CZ01D	K22174205		1-	B	e3
C 4091	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d3
C 4092	CHIP CAP.	0.0047uF	50V	B	GRM188B11H472KA01D	K22174817		1-	B	d1
C 4093	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4094	CHIP CAP.	39pF	50V	CH	GRM1882C1H390JA01D	K22174225		1-	B	e3

SUB Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 4095	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e3
C 4096	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4097	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d1
C 4098	CHIP CAP.	820pF	50V	B	GRM188B11H821KA01D	K22174808		1-	B	d1
C 4099	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 4100	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d1
C 4101	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4104	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 4105	AL.ELECTRO.CAP.	47uF	16V		RE2-16V470ME3#	K40129054		1-	A	D3
C 4106	CHIP TA.CAP.	10uF	10V		TEESVA1A106M8R	K78100028		1-	B	e1
C 4107	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	e1
C 4108	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c3
C 4110	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	c3
C 4112	CHIP CAP.	1pF	50V	CK	GRM1884C1H1R0CZ01D	K22174202		1-	A	C2
C 4113	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	C2
C 4114	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C2
C 4115	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4116	CHIP CAP.	82pF	50V	CH	GRM1882C1H820JA01D	K22174233		1-	A	C2
C 4117	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C3
C 4118	FILM CAP.	0.027uF	16V		ECHU1C273JX5	K57120041		1-	B	e1
C 4119	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	f1
C 4120	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4121	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3
C 4125	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e3
C 4126	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3
C 4127	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174822		1-	B	f1
C 4130	CHIP CAP.	0.0068uF	50V	B	GRM188B11H682KA01D	K22174834		1-	B	e1
C 4132	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e3
C 4133	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e3
C 4136	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e3
C 4140	CHIP CAP.	33pF	50V	CH	GRM1882C1H330JA01D	K22174223		1-	A	B3
C 4143	CHIP TA.CAP.	1uF	25V		TEESVA1E105M8R	K78140013		1-	A	F2
C 4146	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	F3
C 4150	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	e3
C 4152	AL.ELECTRO.CAP.	100uF	25V		RE2-25V101MF3#-T2	K46140005		1-	A	F2
C 4156	AL.ELECTRO.CAP.	100uF	25V		RE2-25V101MF3#-T2	K46140005		1-	A	F2
C 4157	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d3
C 4159	AL.ELECTRO.CAP.	47uF	25V		RC2-25V470MF1#	K40149023		1-	A	F2
C 4160	CHIP CAP.	33pF	50V	CH	GRM1882C1H330JA01D	K22174223		1-	B	d3
C 4161	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d2
C 4163	AL.ELECTRO.CAP.	220uF	25V		RE2-25V221MG3#-T2	K46140006		1-	A	E2
C 4164	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	D3
C 4165	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d3
C 4166	AL.ELECTRO.CAP.	220uF	25V		RE2-25V221MG3#-T2	K46140006		1-	A	E2
C 4167	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	D2
C 4168	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	D1
C 4171	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	D1
C 4176	AL.ELECTRO.CAP.	1000uF	25V		RE3-25V102MH5#	K40149045		1-	A	D2
CD4001	CERAMIC DISC				CDA450C24	H7901430		1-	A	D2
CF4001	CERAMIC FILTER				ALFYM450E=K	H3900535		1-	A	C3
D 4001	DIODE				1SS302(TE85R.F)	G2070088		1-	A	B1
D 4002	DIODE				HVC306B TRU-E	G2070918		1-	A	B2
D 4003	DIODE				HVC306B TRU-E	G2070918		1-	A	B2
D 4004	DIODE				UDZS TE-17 5.6B	G2070910		1-	B	d3
D 4007	DIODE				D1F20-5063	G2070474		1-	A	F2
J 4001	CONNECTOR				IMSA-9210B1-03Z862-PT1	P0091392		1-	B	f1
J 4002	CONNECTOR				12FLT-SM2-TB(LF)(SN)	P1091198		1-	A	B1
J 4003	CONNECTOR				6065B-06Z115-PT1	P0091482		1-	B	a1
L 4001	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	B	e2
L 4003	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	e2
L 4005	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	f1
L 4006	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	A	B2
L 4007	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	A2
L 4008	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	A2
L 4009	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	B2
L 4010	M.RFC	1.5uH			LK1608 1R5K-T	L1690846		1-	B	d3
L 4011	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	e2
L 4012	COIL	0.15uH			#E528SNAS-100076	L0190270		1-	A	A3
L 4013	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	B2
L 4014	M.RFC	0.1uH		2%	C2012C-R10G-RA	L1690776		1-	A	B2
L 4015	M.RFC	0.033uH			HK1608 33NJ-T	L1690522		1-	B	e2
L 4016	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	B2
L 4017	M.RFC	0.039uH			HK1608 39NJ-T	L1690523		1-	B	e3

SUB Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 4018	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	B2
L 4019	M.RFC	4.7uH			LK2125 4R7K-T	L1690327		1-	B	f3
L 4020	M.RFC	0.15uH			HK1608 R15J-T	L1690938		1-	B	e3
L 4021	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	e3
L 4022	CHIP COIL	1.5uH		2%	C2520C-1R5G	L1691311		1-	A	B3
Q 4001	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	f2
Q 4002	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	d2
Q 4003	TRANSISTOR				2SA1602A-T111-1F	G3116028F		1-4	A	C1
Q 4003	TRANSISTOR				ISA1602AM1-T111-1F	G3070380		5-	A	C1
Q 4004	FET				3SK294(TE85L)	G4802948		1-	B	f1
Q 4005	IC				MB15A02PFV1-G-BND-EFE1	G1092541		1-	A	C2
Q 4006	TRANSISTOR				2SC5006-T1	G3350068		1-	A	B2
Q 4007	TRANSISTOR				2SC3356-T2B R25	G3333567E		1-	B	e2
Q 4008	FET				2SK520-T2B K43	G3805207C		1-	A	B2
Q 4009	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	d1
Q 4010	FET				2SK520-T2B K41	G3805207A		1-	A	B3
Q 4011	FET				2SK520-T2B K41	G3805207A		1-	B	e3
Q 4012	IC				TA31136FNG(EL)	G1091605		1-	A	C2
Q 4013	FET				2SK520-T2B K41	G3805207A		1-	A	B3
Q 4014	FET				2SK520-T2B K41	G3805207A		1-	B	e3
Q 4015	IC				NJM2211M-TE1	G1092943		1-	B	e1
Q 4016	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	e3
Q 4018	IC				TA8225HQ	G1093878		1-	A	F3
Q 4019	TRANSISTOR				DTC143EE TL	G3070114		1-	A	F1
Q 4020	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	d3
R 4001	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	f1
R 4002	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 4003	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	C2
R 4004	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	f1
R 4005	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C1
R 4006	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	B	d2
R 4007	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	f1
R 4008	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	A1
R 4009	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	A	C2
R 4010	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	C1
R 4011	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C1
R 4012	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	A1
R 4013	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	A1
R 4014	CHIP RES.	39	1/16W	5%	RMC1/16 390JATP	J24185390		1-	B	f1
R 4015	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	f1
R 4016	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	g1
R 4017	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	C1
R 4018	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	f1
R 4019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	B1
R 4020	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	B2
R 4022	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	A	B1
R 4023	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	B2
R 4024	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	e2
R 4025	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4026	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4027	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4028	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	e2
R 4029	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	B2
R 4030	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B1
R 4031	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	e2
R 4032	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		1-	A	B1
R 4033	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 4034	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	B1
R 4035	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	B2
R 4036	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	e2
R 4037	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	e2
R 4038	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	B1
R 4039	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f2
R 4041	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	f3
R 4043	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	B	d1
R 4044	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	B	d1
R 4045	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d1
R 4046	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d1
R 4047	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	d1
R 4048	CHIP RES.	1	1/4W	5%	RMC1/4 1R0JATP	J24245010		1-	A	D2
R 4049	CHIP RES.	1	1/4W	5%	RMC1/4 1R0JATP	J24245010		1-	A	D1
R 4051	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	d1
R 4052	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	d1

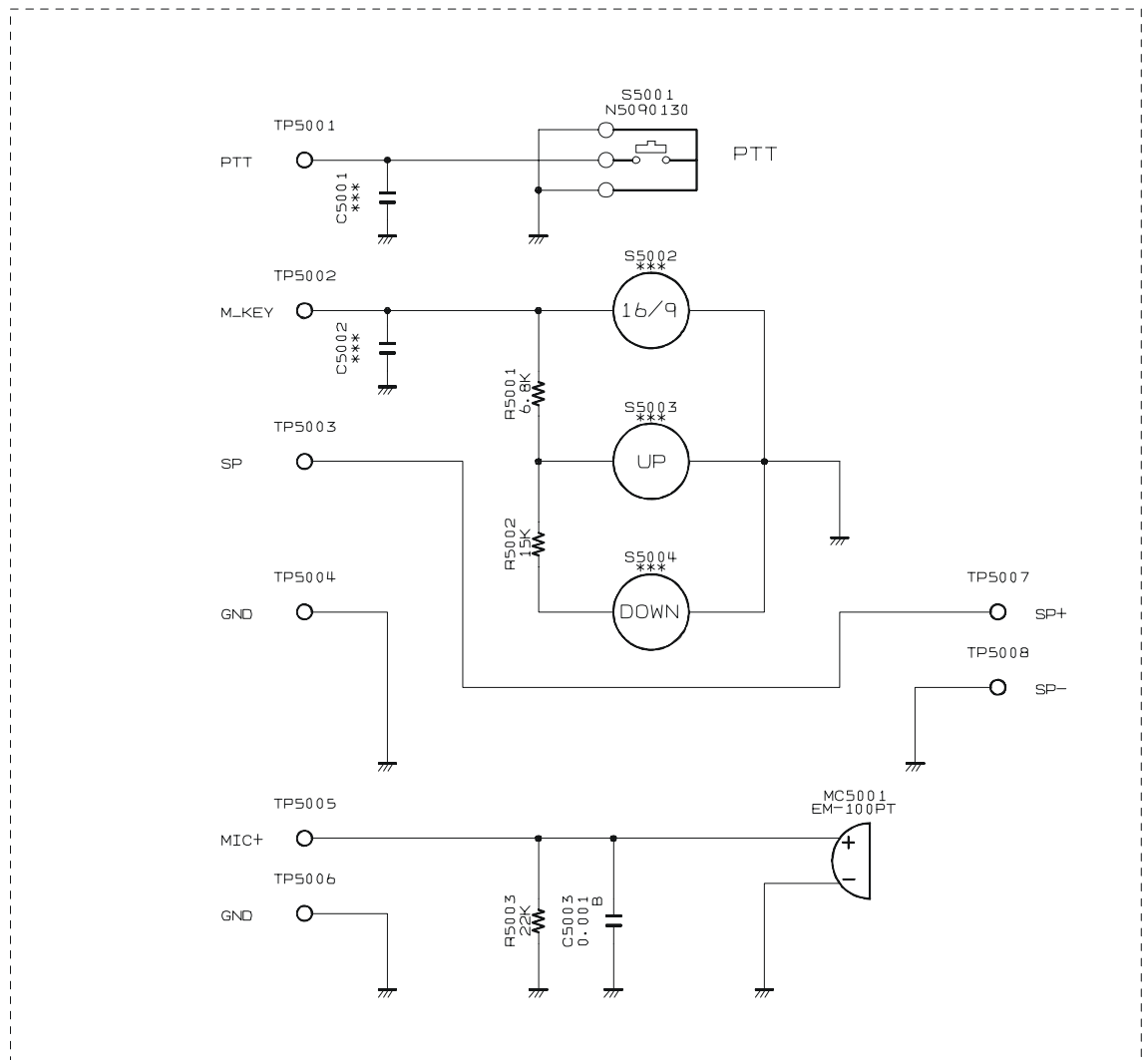
SUB Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 4053	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d3
R 4054	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d1
R 4055	CHIP RES.	120	1/16W	5%	RMC1/16 121JATP	J24185121		1-	B	f3
R 4056	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e1
R 4057	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e1
R 4058	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f1
R 4059	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	C2
R 4061	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C3
R 4062	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C2
R 4063	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	d2
R 4065	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 4066	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f1
R 4068	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e1
R 4069	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	B	e3
R 4071	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	e1
R 4072	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	e1
R 4073	CHIP RES.	1k	1/16W	1%	RMC1/16 102FTP	J24183102		1-	B	e1
R 4076	CHIP RES.	270	1/16W	5%	RMC1/16 271JATP	J24185271		1-	B	e3
R 4077	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D1
R 4078	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F1
R 4079	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	e3
R 4081	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	B	e3
R 4083	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	B3
R 4085	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e3
R 4088	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	F2
R 4089	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	F3
R 4092	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		1-	A	F2
R 4093	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	e3
R 4094	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		1-	A	F2
R 4095	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	B	d3
R 4097	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d3
R 4100	CHIP RES.	3.3k	1/10W	5%	RMC1/10T 332J	J24205332		1-	A	F2
R 4101	CHIP RES.	3.3k	1/10W	5%	RMC1/10T 332J	J24205332		1-	A	F2
R 4102	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	d3
R 4103	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
RL4001	RELAY		DC12V		G2RL-2 DC12V	M1190178		1-	A	F1
T 4001	BALUN TRANSFOMERS				#617DB-1714=PH3	L0190271		1-	A	B3
T 4002	BALUN TRANSFOMERS				#617DB-1714=PH3	L0190271		1-	A	B3
T 4003	BALUN TRANSFOMERS				#617DB-1714=PH3	L0190271		1-	A	B3
TC4001	TRIMMER CAP.	10pF			ECR-KN010C61X	K91000226		1-	A	C2
TP4004	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	C2
X 4001	XTAL TOP-B	21.85MHz			21.85000MHZ	H0103270		1-	A	C2
XF4001	XTAL FILTER				UM-5 22.300MHZ	H1102393		1-	A	C3
XF4002	XTAL FILTER				UM-5 22.300MHZ	H1102393		1-	A	C3
	SHIELD				(VCO2)	RA0570400		1-		
	SHIELD				(VCO2)	RA0751200		1-		

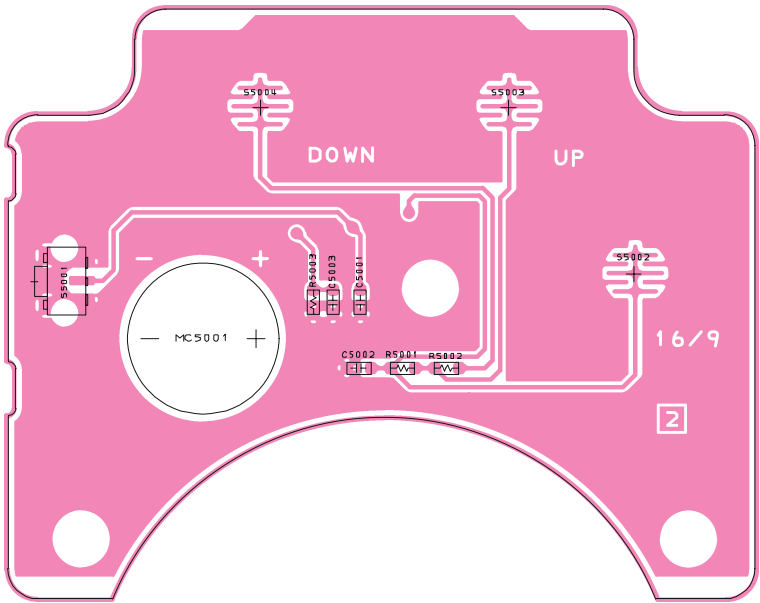
MIC Unit

Circuit Diagram

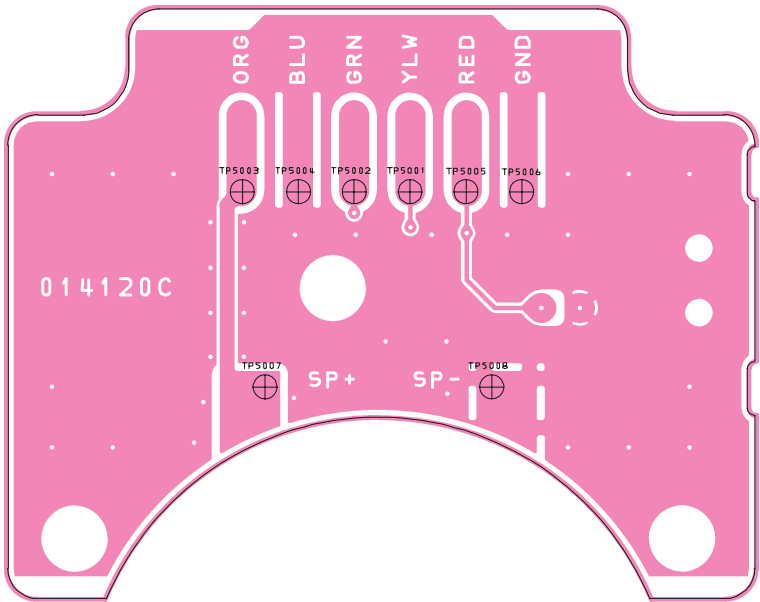


MIC Unit (Lot. 1 ~ 5)

Parts Layout



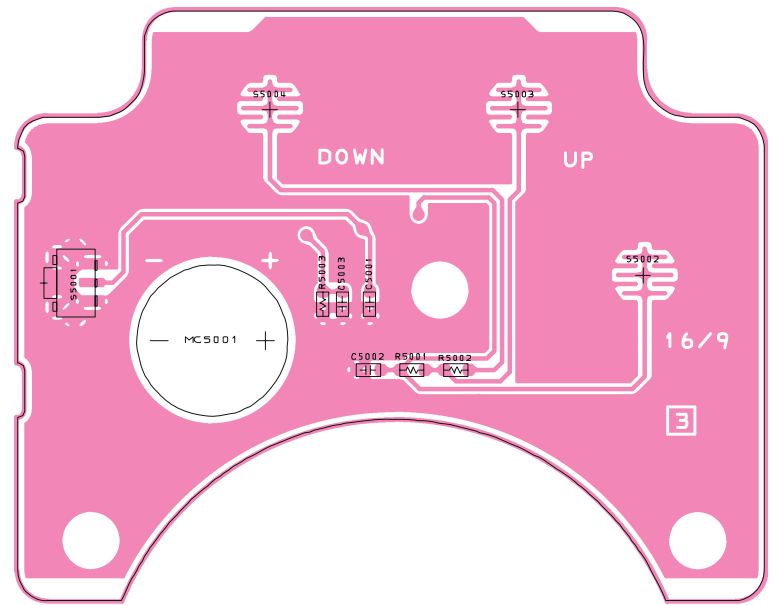
(Side A)



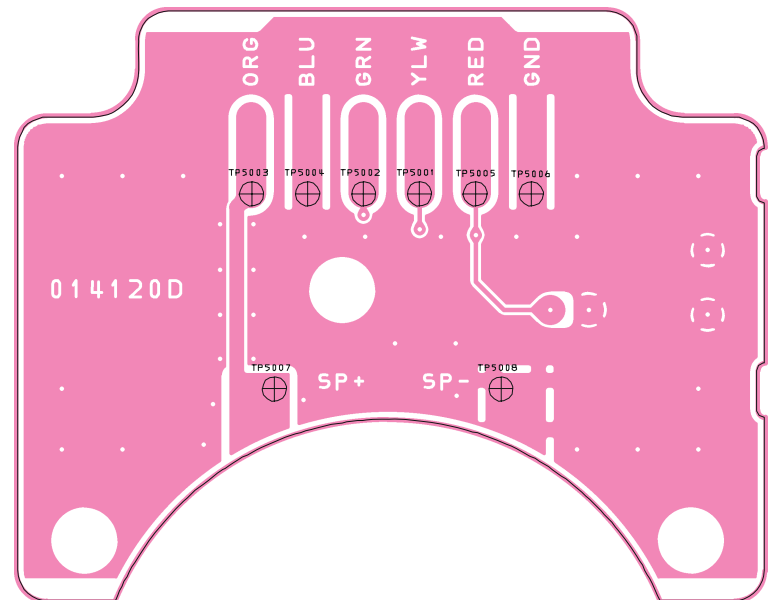
(Side B)

MIC Unit (Lot. 6 ~)

Parts Layout



(Side A)



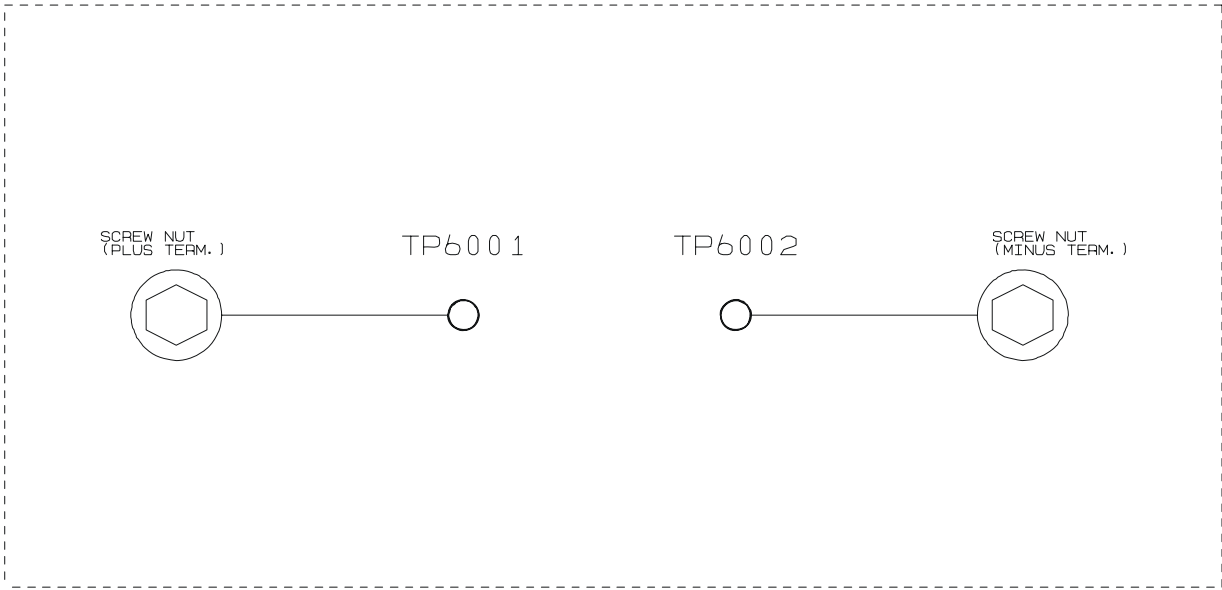
(Side B)

Parts List

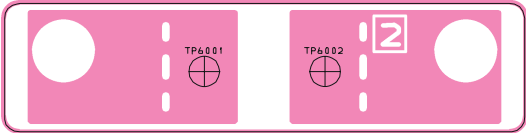
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
P.C.B. with Components						CB4046001				
Printed Circuit Board						AM016N000	FR0141200	1-		
C 5003	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-		
MC5001	MIC. ELEMENT				EM-100PT	M3290029		1-		
R 5001	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-		
R 5002	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-		
R 5003	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-		
S 5001	TACT SWITCH				SKRTLAE010	N5090130		1-		

TERMINAL-2 Unit

Circuit Diagram



Parts Layout



(Side A)



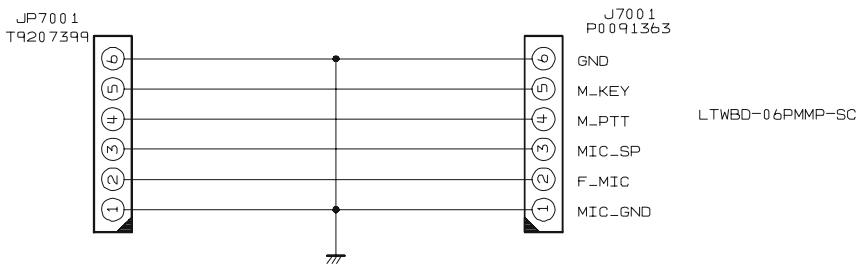
(Side B)

Parts List

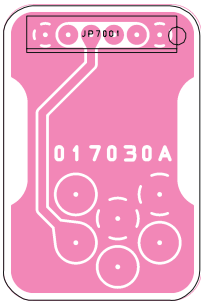
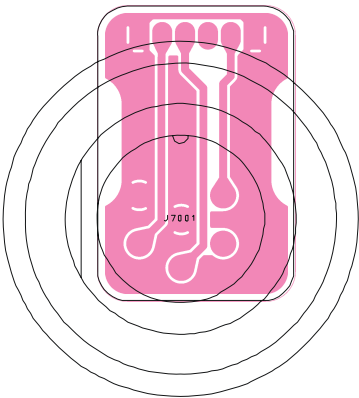
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	P.C.B. with Components					CB4099001				
	Printed Circuit Board				AM028N000	FR0167900		1-		

CONNECTOR Unit

Circuit Diagram



Parts Layout



Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
P.C.B. with Components						CB4052001				
Printed Circuit Board						AM028N000	FR0170300	1-		
J 7001	CONNECTOR				VERBD-06PMMP-SC	P0091363		1-		
JP7001	WIRE ASSY				EXT MIC 170MM6PS	T9207399		1-		



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