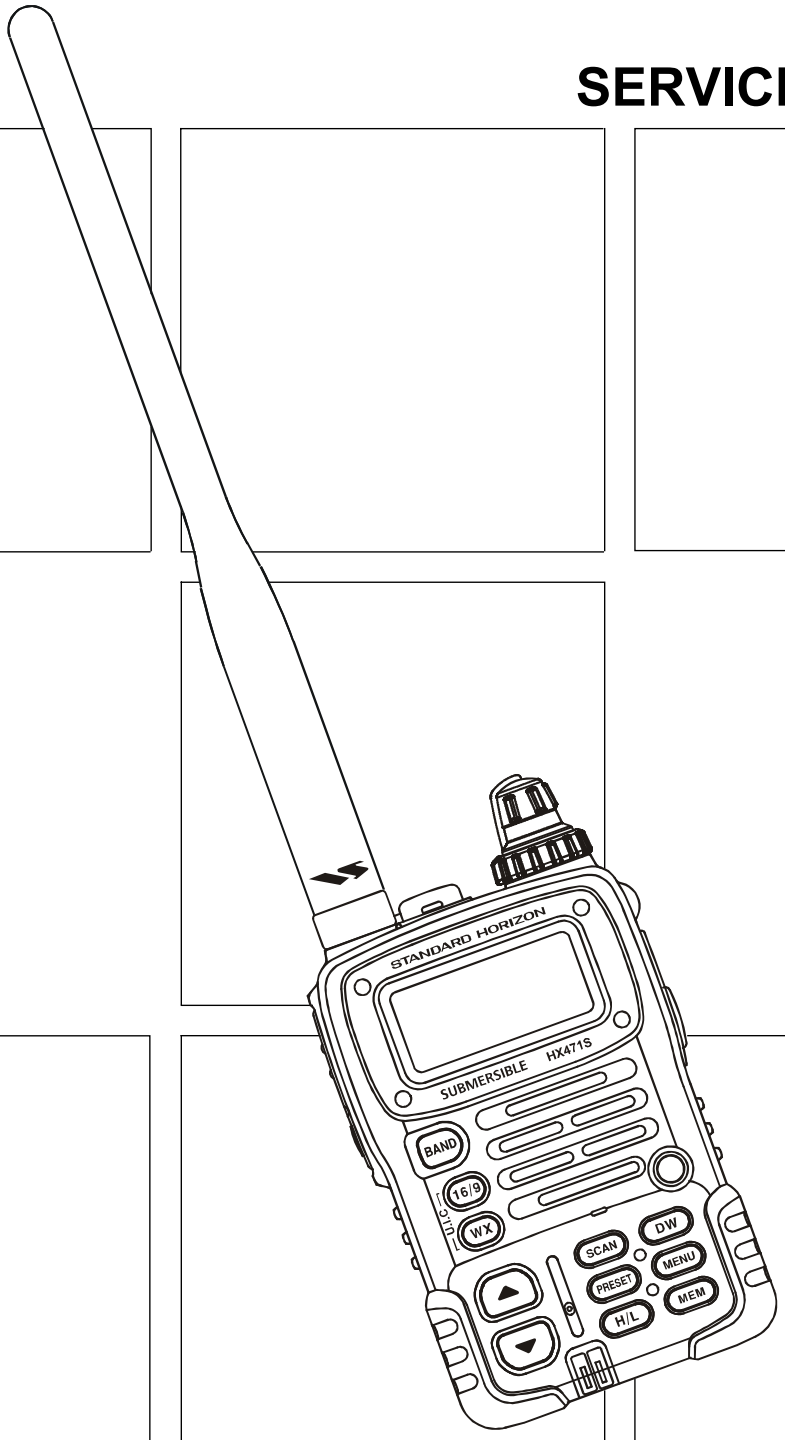
STANDARD HORIZON

Submersible Multi Band Marine Portable

HX471S

SERVICE MANUAL



EM002N95B

Introduction

This manual provides technical information necessary for servicing the HX471S Transceiver.

Servicing this equipment requires expertise in handling surface-mount chip components. Attempts by non-qualified persons to service this equipment may result in permanent damage not covered by the warranty, and may be illegal in some countries.

Two PCB layout diagrams are provided for each double-sided circuit board in the transceiver. Each side of thr board is referred to by the type of the majority of components installed on that side (“leaded” or “chip-only”). In most cases one side has only chip components, and the other has either a mixture of both chip and leaded components (trimmers, coils, electrolytic capacitors, ICs, etc.), or leaded components only.

While we believe the technical information in this manual to be correct, Vertex Standard assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

Specifications

GENERAL

Frequency Ranges (MHz): 156 MHz - 163.275 MHz (Marine Band + WX Band), Channel Steps: 25 kHz
462.5625 MHz - 467.7125 MHz (FRS Band), Channel Steps: 6.25 kHz
151.82 MHz - 154.60 MHz (MURS), Channel Steps: 5 kHz
88 MHz - 108 MHz (FM Broadcast), Channel Steps: 100 kHz
500 kHz - 1800 kHz (AM Broadcast), Channel Steps: 10 / 9 kHz
108 MHz - 137 MHz (AIR Band), Channel Steps: 25 kHz

Frequency Stability: ±2.5 ppm (–22 °F to +140 °F [–30 °C to +60 °C])

Emission Type: 16K0F3E, 11K0F3E, 16K0G2B

Antenna Impedance: 50 Ohms

Supply Voltage: Nominal: 7.4V DC, Negative Ground (Battery Terminal)

Current Consumption: 195 mA (Receive)
68 mA (Standby, Saver Off)
45 mA (Standby, Saver On)
1.7 A (Marine High Power)
1.2 A (Marine Mid Power)
0.8 A (Marine Low Power & FRS)

Operating Temperature: –22 °F to +140 °F (–30 °C to +60 °C)

Case Size (W x H x D): 2.36″ x 3.78″ x 1.12″ (60 x 96 x 29 mm) w/o knob & antenna

Weight (Approx.): 9.3 oz. (265 g) with FNB-80LI

TRANSMITTER

RF Power Output (@7.4 V): 5, 2.5 or 1 W (Marine Band)
0.5W (FRS Band)

Modulation Type: Variable Reactance

Maximum Deviation: ±5 kHz (Marine Band)
±2.5 kHz (FRS Band)

Spurious Emission: At least 65 dB below

Microphone Impedance: 2 k-Ohm

RECEIVER

Circuit Type: Double-Conversion Superheterodyne (NFM, AM)
Triple-Conversion Superheterodyne (WFM)

Intermediate Frequencies:

	NFM, AM	WFM
1st:	47.25 MHz	45.8 MHz
2nd:	450 kHz	10.7 MHz
3rd:	–	1 MHz

Sensitivity: 0.2 µV for 12 dB SINAD (Marine & MURS Band)
0.2 µV for 12 dB SINAD (FRS Band)
1 µV for 12 dB SINAD (FM Broadcast)
0.5 µV for 10 dB SN (AM Broadcast)
0.5 µV for 10 dB SN (AIR Band)

Adjacent Channel Selectivity: 65 dB Typical

Intermodulation: 65 dB Typical

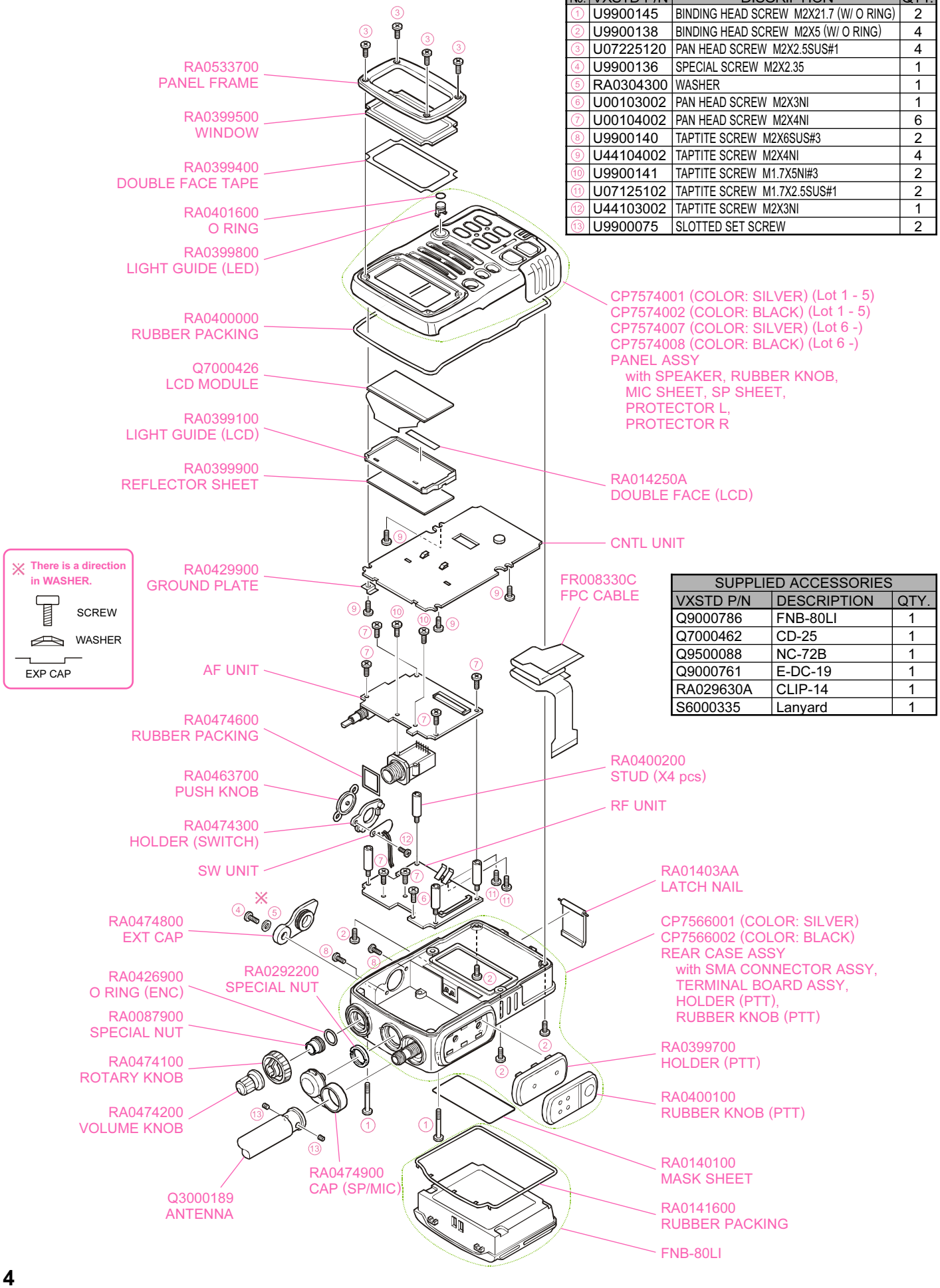
Selectivity: 12 kHz / 25 kHz (–6 dB / –60 dB) NFM / AM
200 kHz / 300 kHz (–6 dB / –20 dB) WFM
6 kHz / 18 kHz (–6 dB / –60 dB) FRS Band

AF Output: 400 mW @ 8 Ohm for 10 % THD (@7.4 V)

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

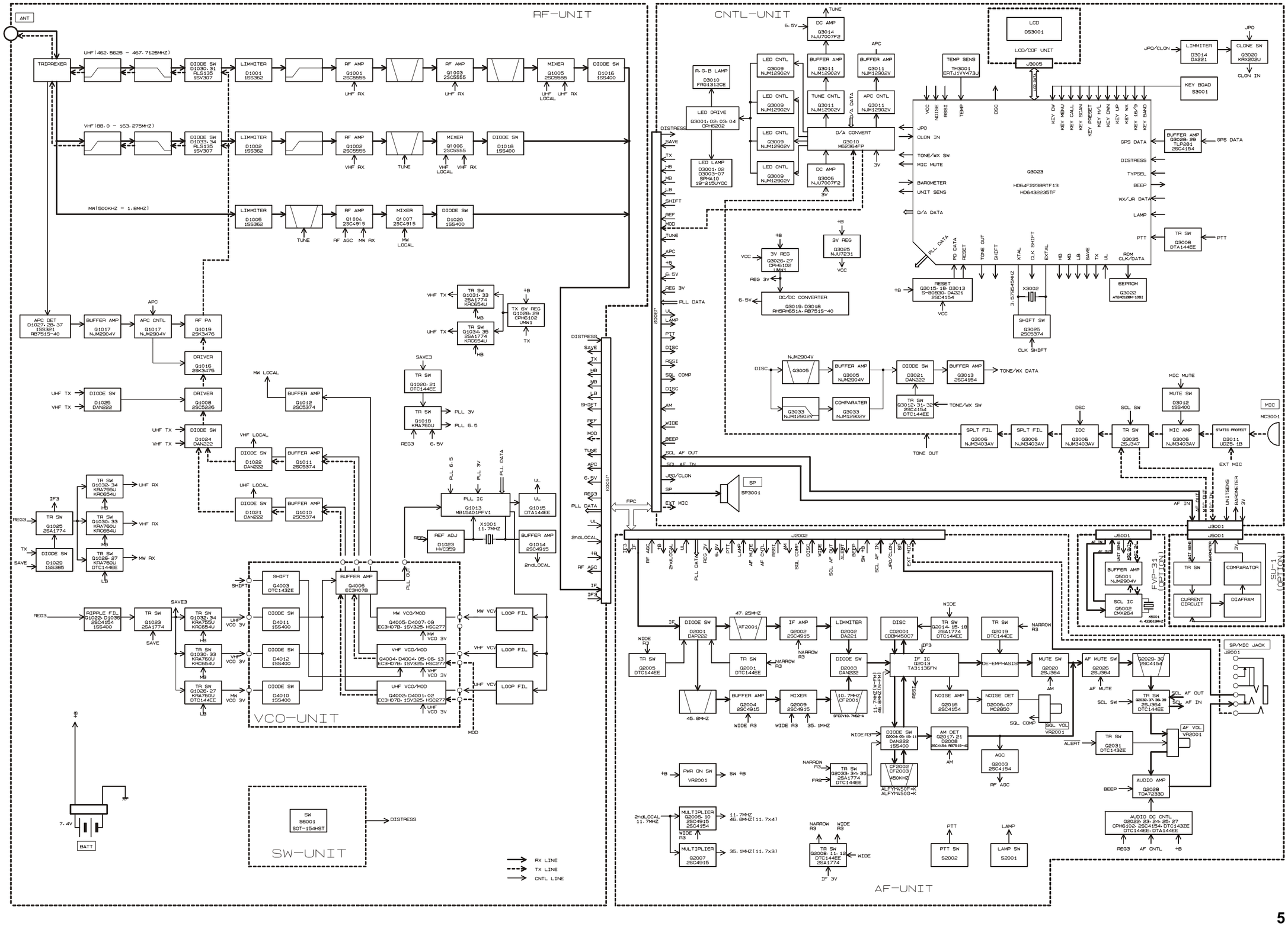
Exploded View & Miscellaneous Parts

No.	VXSTD P/N	DISCRIPTION	QTY.
①	U9900145	BINDING HEAD SCREW M2X21.7 (W/ O RING)	2
②	U9900138	BINDING HEAD SCREW M2X5 (W/ O RING)	4
③	U07225120	PAN HEAD SCREW M2X2.5SUS#1	4
④	U9900136	SPECIAL SCREW M2X2.35	1
⑤	RA0304300	WASHER	1
⑥	U00103002	PAN HEAD SCREW M2X3NI	1
⑦	U00104002	PAN HEAD SCREW M2X4NI	6
⑧	U9900140	TAPTITE SCREW M2X6SUS#3	2
⑨	U44104002	TAPTITE SCREW M2X4NI	4
⑩	U9900141	TAPTITE SCREW M1.7X5NI#3	2
⑪	U07125102	TAPTITE SCREW M1.7X2.5SUS#1	2
⑫	U44103002	TAPTITE SCREW M2X3NI	1
⑬	U9900075	SLOTTED SET SCREW	2

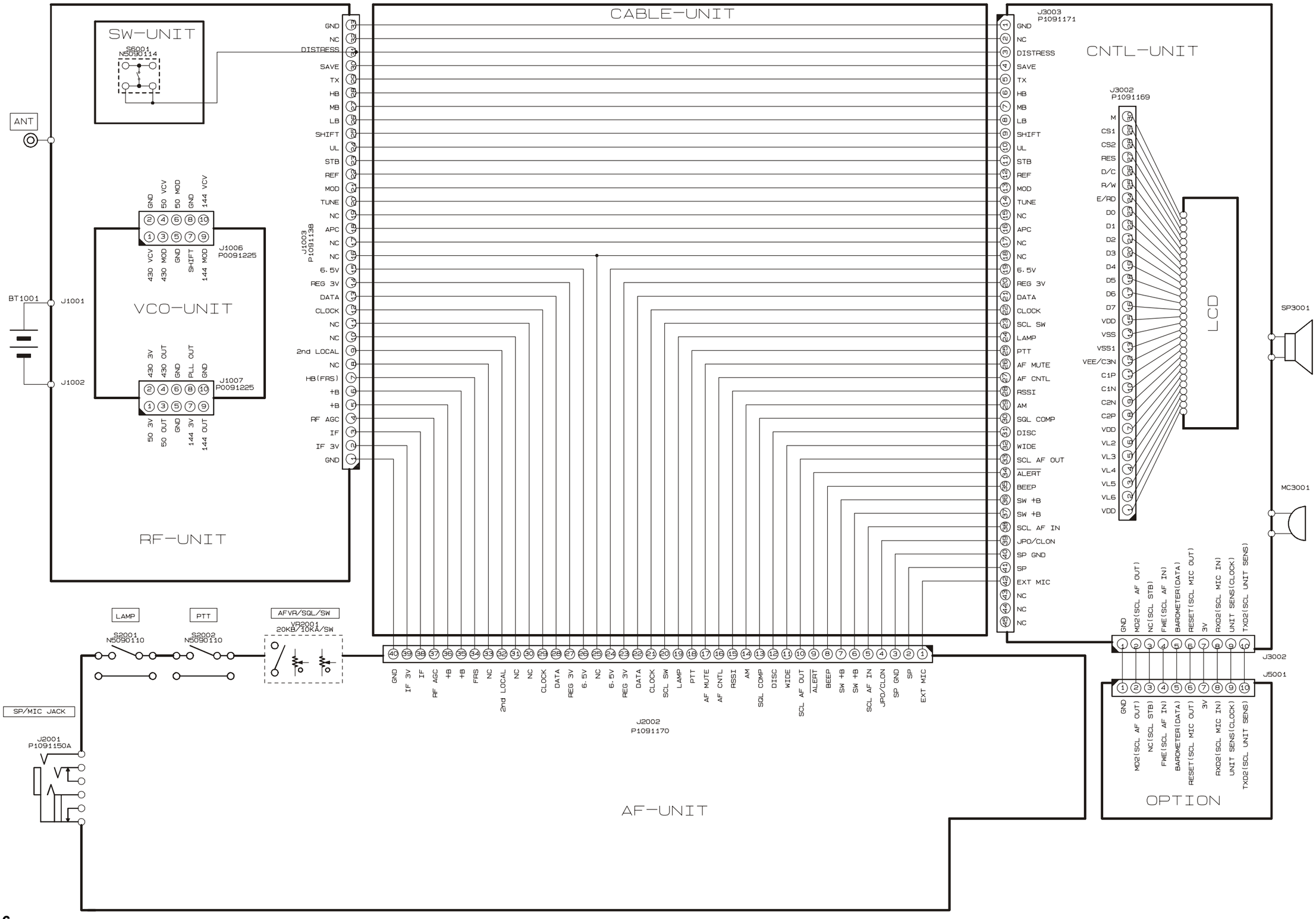


SUPPLIED ACCESSORIES		
VXSTD P/N	DESCRIPTION	QTY.
Q9000786	FNB-80LI	1
Q7000462	CD-25	1
Q9500088	NC-72B	1
Q9000761	E-DC-19	1
RA029630A	CLIP-14	1
S6000335	Lanyard	1

Block Diagram



Connection Diagram



The **HX4710S** consists of RF UNIT, CNTL UNIT, VCO UNIT and AF UNIT. The RF UNIT contains the receiver front end, PLL IC, power and switching circuits, and the VCO UNIT for transmit and receive local signal oscillation. The CNTL UNIT contains the CPU, and audio ICs, and the power circuitry for the LCD. The AF UNIT contains the IF, and audio ICs.

Receiver Signal Flow

The **HX471S** includes three receiver front ends, each optimized for a particular frequency range and mode combination.

Triplexer

Signals between 0.5 and 1.8 MHz received at the antenna terminal pass through a first low-pass filter composed of L1041, L1001, C1203 and C1007.

Received VHF bands signals, after passing through a low-pass filter to the VHF T/R switch circuit composed of diode switch **D1033** (**RLS135**), **D1034** (**1SV307**).

Received UHF bands signals, after passing through a low-pass filter to the UHF T/R switch circuit composed of diode switch **D1030** (**RLS135**) and **D1031** (**1SV307**).

VHF Bands Reception

Received VHF bands signals pass through the Triplexer circuit, low-pass filter/high-pass filter circuit, VHF T/R switch circuit and protector diode **D1002** (**1SS362**) before additional filtering by a band-pass filter prior to application to RF amplifier **Q1002** (**2SC5555**). The amplified RF signal is pass through the band-pass filter to first mixer **Q1006** (**2SC5555**). Meanwhile, VHF output from the VCO UNIT is amplified by **Q1011** (**2SC5374**) and applied through diode T/R switch **D1022** (**DAN222**) to mixer **Q1006** as the first local signal.

The 47.25 MHz (WFM: 45.8 MHz) intermediate frequency product of the mixer is delivered to the AF UNIT.

The TUNE-voltage from the CPU on the CNTL UNIT is amplified by DC amplifier **Q3014** (**NJU7007F2**) and applied to varactors **D1008** and **D1010** (both **HVC369B**), **D1007**, **D1009**, **D1011**, **D1012**, **D1013**, and **D1019** (all **1SV325**) in the variable frequency band-pass filters. By changing the electrostatic capacitance of the varactors, optimum filter characteristics are provided for each specific operating frequency.

UHF Band Reception

Received UHF bands signals pass through the Triplexer circuit, low-pass filter/high-pass filter circuit, UHF T/R switch circuit and protector diode **D1001** (**1SS362**) before additional filtering by a band-pass filter prior to application to RF amplifier **Q1001** (**2SC5555**). The amplified RF signal is pass through the band-pass filter, RF amplifier **Q1003** (**2SC5555**) and band-pass filter to first mixer **Q1005** (**2SC5555**). Meanwhile, UHF output from the VCO UNIT is amplified by **Q1010** (**2SC5374**) and applied through diode T/R switch **D1021** (**DN222**) to mixer **Q1005** as the first local signal.

The 47.25 MHz intermediate frequency product of the mixer is delivered to the AF UNIT.

0.5 - 1.8 MHz Reception

Received MW signals pass through the Triplexer circuit, low-pass filter circuit, protector diode **D1005** (**1SS362**) before additional filtering by a band-pass filter prior to application to RF amplifier **Q1004** (**2SC4915**). The amplified RF signal is pass through the band-pass filter to first mixer **Q1007** (**2SC4915**). Meanwhile, MW output from the VCO UNIT is amplified by **Q1012** to mixer **Q1007** as the first local signal.

The 47.25 MHz intermediate frequency product of the mixer is delivered to the AF UNIT.

The TUNE voltage from the CPU on the CNTL UNIT is amplified by DC amplifier **Q3014** and applied to varactors **D1013** (**HVR100**) in the variable frequency band-pass filters. By changing the electrostatic capacitance of the varactors, optimum filter characteristics are provided for each specific operating frequency.

First Intermediate Frequency (Narrow FM / AM)

The 47.25 MHz first intermediate frequency from first mixers is delivered from the RF UNIT to the AF UNIT through jacks J1003 and J2002. On the AF UNIT, the IF for AM and FM-narrow signals is passed through NAR/WIDE switch **D2001** (**DAP222**) and 47.25 MHz monolithic crystal filter (MCF) **XF2001** to narrow IF amplifier **Q2002** (**2SC4915**) for input to pin 16 of Narrow IF IC **Q2013** (**TA31136FN**) after amplitude limiting by **D2002** (**DA221**).

Meanwhile, a portion of the output of 11.7 MHz crystal **X1001** on RF UNIT is multiplied fourfold by **Q2005** (**2SC4915**) and **Q2010** (**2SC4154E**) to provide the 46.8 MHz second local signal, applied to the Narrow IF IC. Within the IC, this signal is mixed with the 47.25 MHz first intermediate frequency signal to produce the 450 KHz second intermediate frequency.

This second IF is filtered by ceramic filter **CF2002** (**ALFYM450F=K**) and amplified by the limiting amplifier within the Narrow IF IC before quadrate detection by ceramic discriminator **CD2001** (**CDBM450C7**).

Circuit Description

Demodulated audio is output from pin 9 of the Narrow IF IC through narrow mute analog switch **Q2020** (**2SJ364**) and squelch gate **Q2026** (**2SJ364**) before de-emphasis at **Q2019** (**DTC144EE**).

The resulting audio is amplified by AF amplifier **Q2028** (**TDA7233D**) and output through MIC/EAR jack J2001 to internal speaker SP1001 or an external earphone.

First Intermediate Frequency (Wide FM)

The 45.8 MHz first intermediate frequency from first mixers is delivered from the RF UNIT to the AF UNIT through jacks J1003 and J2002. On the AF UNIT, the IF for Wide FM signals is passed through NAR/WIDE switch **D2001** (**DAP222**) and IF amplifier **Q2004** (**2SC4915**) and second mixer **Q2009** (**2SC4915**).

The 10.7 MHz intermediate frequency product of the mixer is delivered to the 10.7 MHz ceramic filter **CF2001** passed through NAR/WIDE switch **D2002** (**DAN222**) for input to pin 16 of IF IC **Q2013** after amplitude.

Meanwhile, a portion of the output of 11.7 MHz crystal **X1001** on RF UNIT is multiplied fourfold by **Q2007** (**2SC4915**) to provide the 35.1 MHz second local signal, applied to the second mixer **Q2009**. Within the second mixer, this signal is mixed with the 45.8 MHz first intermediate frequency signal to produce the 10.7 MHz second intermediate frequency.

Also, a portion of the output of 11.7 MHz crystal **X1001** on RF UNIT is amplitude by **Q2005** and **Q2010** to provide the 11.7 MHz third local signal, applied to the IF IC **Q2013**. Within the IC, this signal is mixed with the 10.7 MHz second intermediate frequency signal to produce the 450 KHz second intermediate frequency.

Demodulated audio is output from pin 9 of the Narrow IF IC through narrow mute analog switch **Q2020** and squelch gate **Q2026** before de-emphasis at **Q2019**.

The resulting audio is amplified by AF amplifier **Q2028** and output through MIC/EAR jack J2001 to internal speaker SP1001 or an external earphone.

Squelch Control

Signal components in the neighborhood of 15 KHz contained in the discriminator output pass through an active band-pass filter composed of R2059, R2060, R2062, C2076, C2078 and the operational amplifier between pins 7 and 8 within IF IC **Q2013**. They are then rectified by D2006 and **D2007** (**MC2850**) to obtain a DC voltage corresponding to the level of noise. This voltage is input to pin 51 of CPU **Q3023** (**HD64F2238RTF13**), which compares the input voltage with a previously set threshold. When the input voltage drops below the threshold, normally due to the presence of a carrier, turning on squelch gate **Q2026** and allowing any demodulated audio to pass. At the same time, **Q3001** and/or **Q3003** and/or **Q3004** goes on, causing the BUSY/TX lamp **D3010** (**FRGB1312CE-10-TF**) to light.

Transmitter Signal Flow

VHF Band Transmit/Receive Switching

Closing PTT switch S2002 on the AF UNIT pulls the base of **Q3008** (**DTA144EE**) low, causing the collector to go high. This signal is input to pin 41 (PTT) of CPU **Q3023**, allowing the CPU to recognize that the PTT switch has been pushed. When the CPU detects closure of the PTT switch, pin 17 (TX/RX) goes high. This control signal is delivered to the RF UNIT, where it switches **Q1029** (**UMW1**) and **Q1028** (**CPH6102**) to produce the TX control signal that activates **Q1035** (**2SA1774**). At the same time, PLL division data is input to PLL IC **Q1013** (**MB15A01PFV1**) from the CPU, to disable the receiver power saver. Also, switching **Q1033** (**KRC654U**) to disable the receiver circuits. Then causing the red side of BUSY/TX lamp **D3033** to light.

Modulation

Voice signal input from either built-in microphone MC1001 (EM-140) on CNTL UNIT or external jack J2001 on the AF UNIT is pre-emphasized by C3011 and R3025, and processed by microphone amplifier **Q3006** (**NJM3403AV**), IDC (instantaneous deviation control) circuit to prevent overmodulation, and active low-pass filter.

During CTCSS operation, the voice signal is mixed with the TONE ENC subaudible tone signal from pin 43 of the CPU and delivered to the RF UNIT through jacks J3003 and J1003.

VHF Band Transmission

Modulating audio from the CNTL UNIT passes through deviation setting D/A converter **Q3010** to VHF MOD of the VCO UNIT mounted on the RF UNIT. This signal is applied to varactor **D4005** (**HSC277**) in the tank circuit of VHF VCO **Q4004** (**EC3H07B**), which oscillates at the desired VHF transmitting frequency. The modulated VCO signal is buffered by amplifier **Q4006** (**EC3H07B**) and **Q1011** and delivered through VHF T/R diode switch **D1022** to the RF UNIT. The modulated low-level VHF transmit signal from the VCO is passed through diode switch **D1024** (**DAN222**) to amplifier **Q1008** (**2SC5226-5**). The modulated VHF transmit signal from the VCO is amplified by **Q1016** (**2SK3475**) and RF power amplifier **Q1019** (**2SK3476**) up to 5 W (Marine). The RF output passes through TX diode switch **D1033**. RF output is passed by T/R switch and low-pass filter to suppress harmonics and spurious products before output to the antenna at the antenna terminal.

UHF Band Transmission

Modulating audio from the CNTL UNIT passes through deviation setting D/A converter **Q3010** to UHF MOD of the VCO UNIT mounted on the RF UNIT. This signal is applied to varactor **D4002** (**HSC277**) in the tank circuit of UHF VCO **Q4002** (**EC3H07B**), which oscillates at the desired UHF transmitting frequency. The modulated VCO signal is buffered by amplifier **Q4006** and **Q1010** and delivered through UHF T/R diode switch **D1021** to the RF-UNIT. The modulated low-level UHF transmit signal from the VCO is passed through diode switch D1024 to amplifier **Q1008**. The modulated UHF transmit signal from the VCO is amplified by **Q1016** and RF power amplifier **Q101**9 up to 0.5 W (FRS). The RF output passes through TX diode switch **D1030**. RF output is passed by T/R switch and low-pass filter to suppress harmonics and spurious products before output to the antenna at the antenna terminal.

PLL Frequency Synthesizer

PLL IC **Q1013** on the RF UNIT consists of a data shift register, reference frequency divider, phase comparator, charge pump, intermittent operation circuit, and band selector switch. Serial PLL data from the CPU is converted into parallel data by the shift register in the PLL IC and is latched into the comparative frequency divider and reference frequency divider to set a frequency dividing ratio for each. An 11.7 MHz reference signal produced by **X1001** is input to REF pin 1 of the PLL IC. The internal reference frequency divider divides the 11.7 MHz reference by 2,050 (or 1,640) to obtain a reference frequency of 5 kHz (or 6.25 kHz), which is applied to the phase comparator. Meanwhile, a sample of the output of VHF VCO **Q4004** or UHF VCO **Q4002** on the VCO UNIT, buffered by **Q4006**, is input to the PLL IC, where it is frequency-divided by the internal comparative frequency divider to produce a comparative frequency also applied to the phase comparator. The phase comparator compares the phase between the reference frequency and comparative frequency to output a pulse corresponding to the phase difference between them. This pulse is input to the charge pump, and the output from the charge pump passes through a loop filter composed of L1018, R1054, C1096, and either R1055, C1110, R1065 and C1113 for VHF, or R1051, C1107, R1064 and C1112 for UHF, or R1056, C1111, R1066 and C1114 for MW band, which convert the pulse into a corresponding smoothed varactor control voltage (VCV). The VCV is applied to varactor **D4004** and **D4013** (**1SV325**) in the VHF VCO tank circuit, or to varactor **D4001** (**HVC355B**) in the UHF VCO tank circuit, or to varactor **D4007** (**1SV325**) in the MW band VCO to eliminate phase difference between the reference frequency and comparative frequency, and so locking the VCO oscillation frequency to the reference crystal. The VCO frequency is determined by the frequency-dividing ratio sent from the CPU to the PLL IC. During receiver power save operation, the PLL circuit operates intermittently to reduce current consumption, for which the intermittent operation control circuit reduces the lock-up time.

Note

The **HX471S** has been carefully aligned at the factory for the specified performance across the marine, FRS, MURS, AIR, AM broadcast and FM broadcast bands.

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 the 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 500 MHz
- ❒ Deviation Meter (linear detector)
- ❒ AF Millivoltmeter
- ❒ SINAD Meter
- ❒ Inline Wattmeter with 5% accuracy at 500 MHz
- ❒ Regulated DC Power Supply: adjustable from 6 to 17 VDC, 3A
- ❒ 50-ohm Non-reactive Dummy Load: 10W at 500 MHz
- ❒ Frequency Counter: >0.1 ppm accuracy at 500 MHz
- ❒ AF Signal Generator
- ❒ DC Voltmeter: high impedance
- ❒ VHF Sampling Coupler
- ❒ AF Dummy Load: 8 ohm, 2W
- ❒ Oscilloscope
- ❒ Spectrum Analyzer
- ❒ Special Screw Driver (VXSTD P/N: S7000421)

Alignment Preparation & Precautions

A dummy load and inline wattmeter must be connected to the main antenna jack in all procedures that call for transmission, except where specified otherwise. 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 20 and 30 °C (68 and 86 °F). 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 dBm = 0.5 μV(closed circuit).

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10900 Walker Street, Cypress, CA 90630, U.S.A
Telephone number: (714) 827-7600

Alignment

Alignment Procedure

- ❒ Before alignment, disconnect the antenna from the transceiver using the Special Screw Driver.
- ❒ Set up the test equipment as shown for transmitter alignment.
- ❒ Maintain the supply voltage at 8.4V DC for all steps.
- ❒ To set up Alignment mode, press the [▼], [**MEM**] and [**16/9**] key while turning the transceiver on.

PLL Reference Frequency

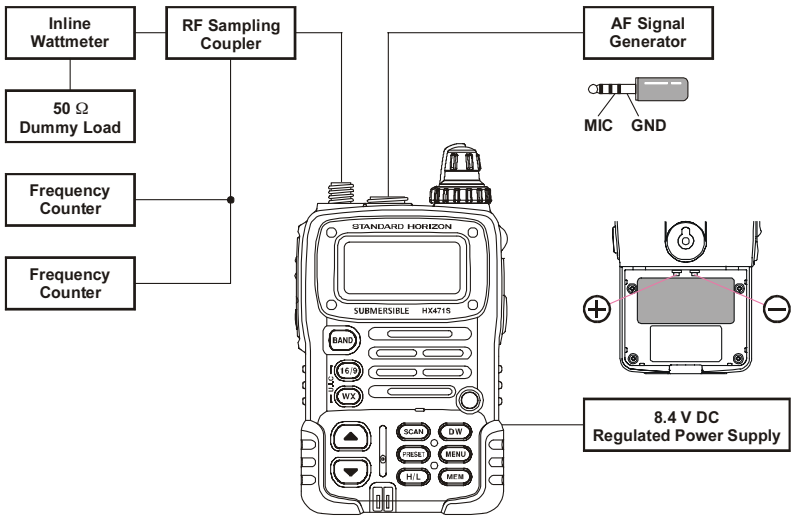
- ❒ With the wattmeter, dummy load and frequency counter connected to the antenna jack.
- ❒ Press the [▲] or [▼] key to select the display to [**PLL REF ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Reference Frequency Alignment Mode.
- ❒ Press the [**MENU**] key to enable adjustment of the PLL Reference Frequency.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the frequency so the counter frequency is 467.7125 MHz (±100 Hz).
- ❒ Press the [**MENU**] key to exit this Alignment Mode.

Receiver Circuit

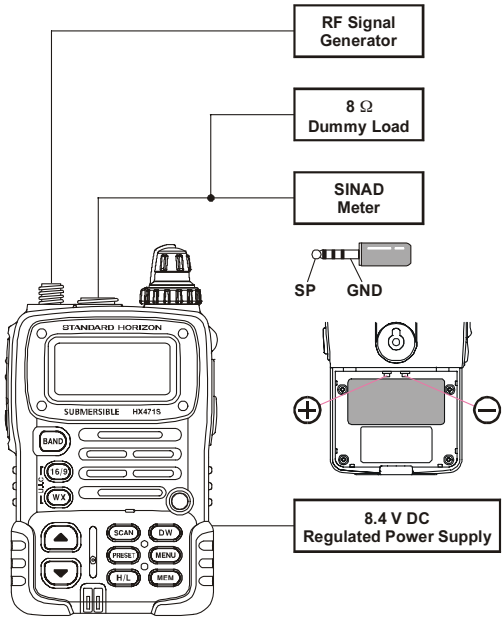
- ❒ Set up the test equipment as shown below for receiver alignment.
- ❒ Maintain the supply voltage at 8.4V DC for all steps.

Sensitivity & Squelch Threshold (Marine Band)

- ❒ Press the [▲] key to select the display to [**MARINE SQL ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Alignment Mode of the Sensitivity & Squelch Threshold of the Marine Band.
- ❒ Set the RF signal generator output to 158.510 MHz, at a level of –8dBμ with ±3.5 kHz deviation with a 1 kHz audio tone.
- ❒ Confirm that the SINAD meter reading is better than –12dBμ.
- ❒ Rotate the **SQL** knob to the 10 o'clock position and press the [**MENU**] key.
- ❒ Reduce the RF signal generator output to –13dBμ, then press the [**SCAN**] key to read the Squelch Threshold data.
- ❒ Press the [**SCAN**] key again to save the new setting .
- ❒ Press the [**MENU**] key to exit this Alignment Mode.



PLL & Transmitter Section Alignment Setup



Receiver Section Alignment Setup

Sensitivity & Squelch Threshold (FRS Band)

- ❒ Press the [▲] key to select the display to [**FRS SQL ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Alignment Mode of the Sensitivity & Squelch Threshold of the FRS Band.
- ❒ Set the RF signal generator output to 465.1375 MHz, at a level of –8dBμ with ±3.5 kHz deviation with a 1 kHz audio tone.
- ❒ Confirm that the SINAD meter reading is better than –12dBμ.
- ❒ Rotate the **SQL** knob to the 10 o'clock position and press the [**MENU**] key.
- ❒ Reduce the RF signal generator output to –13dBμ, then press the [**SCAN**] key to read the Squelch Threshold data.
- ❒ Press the [**SCAN**] key again to save the new setting.
- ❒ Press the [**MENU**] key to exit this Alignment Mode.

Sensitivity & Squelch Threshold (FM Broadcast Band)

- ❒ Press the [▲] key to select the display to [**WFM SQL ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Alignment Mode of the Sensitivity & Squelch Threshold of the FM Broadcast Band.
- ❒ Set the RF signal generator output to 88.100 MHz, at a level of +5dBμ with ±22 kHz deviation with a 1 kHz audio tone.
- ❒ Confirm that the SINAD meter reading is better than –12dBμ.
- ❒ Press the [**MENU**] key.
- ❒ Reduce the RF signal generator output to +7dBμ, then press the [**SCAN**] key to read the Squelch Threshold data.
- ❒ Press the [**SCAN**] key again to save the new setting.
- ❒ Press the [**MENU**] key to exit this Alignment Mode.

Transmitter Circuit

- ❒ Set up the test equipment as shown below for transmitter alignment.
- ❒ Maintain the supply voltage at 8.4V DC for all steps.

Transmitter Output (Marine Band)

- ❒ Press the [▲] key to select the display to [**HIGH POWER ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Alignment Mode of the Transmitter Output of the Marine Band.
- ❒ Press the [**MENU**] key to enable adjustment of this Alignment Mode.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 5.0 W (±0.3 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**MID POWER ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 2.5 W (±0.2 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**LOW POWER ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 1.0 W (±0.1 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [**BAND**] key (Change the frequency display to 162.025 from 155.000 MHz), then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 1.0 W (±0.1 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▼] key to select the display to [**MID POWER ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 2.5 W (±0.2 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▼] key to select the display to [**HIGH POWER ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 4.5 W (±0.3 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key three times to select the display to [**MARINE DEV ****], then press the [**MENU**] key. The radio now is in the Alignment Mode of the TX deviation of the Marine Band.
- ❒ Set the Audio generator output to 50 mV at 1 kHz.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation

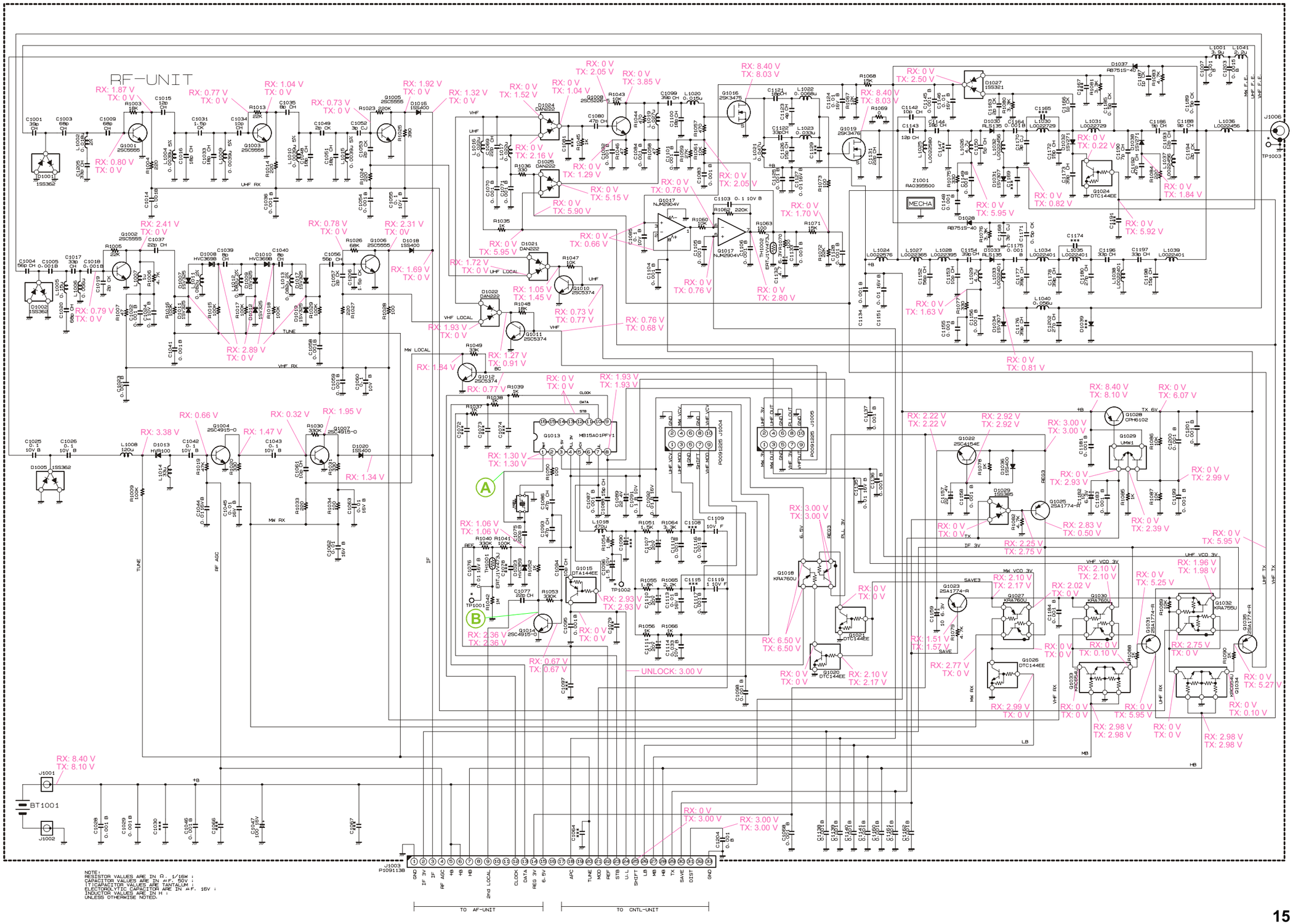
to 4.2 kHz (±0.2 kHz), then press the [**MENU**] key to save the new setting.

- ❒ Press the [**BAND**] key (Change the frequency display to 162.025 from 155.000 MHz), then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 4.2 kHz (±0.2 kHz), then press the [**MENU**] key to save the new setting.

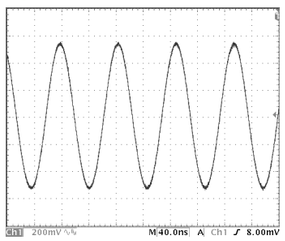
Transmitter Output (FRS Band)

- ❒ Press the [▲] key three times to select the display to [**FRS POWER ****] ([******] is "**00**" to "**FF**" Hex data). The radio now is in the Alignment Mode of the Transmitter Output of the FRS Band.
- ❒ Press the [**MENU**] key to enable adjustment of this Alignment Mode.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 0.5 W (±0.05 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [**BAND**] key (Change the frequency display to 467.712 from 462.562 MHz), then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the output power to 0.5 W (±0.05 W), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**FRS DEV ****], then press the [**MENU**] key. The radio now is in the Alignment Mode of the TX deviation of the FRS Band.
- ❒ Set the Audio generator output to 50 mV at 1 kHz.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 2.1 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [**BAND**] key (Change the frequency display to 467.712 from 462.562 MHz), then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 2.1 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Turn off the Audio generator output.
- ❒ Press the [▲] key to select the display to [**FRS 67.0 ****], then press the [**MENU**] key. The radio now is in the Alignment Mode of the CTCSS deviation of the FRS Band.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**FRS 100.0 ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**FRS 250.3 ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [**BAND**] key (Change the frequency display to 467.712 from 462.562 MHz), then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▼] key to select the display to [**FRS 100.0 ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.
- ❒ Press the [▲] key to select the display to [**FRS 67.0 ****], then press the [**MENU**] key.
- ❒ Press the **PTT** key to transmit the transceiver, if necessary, press the [▲] or [▼] key to adjust the deviation to 0.5 kHz (±0.1 kHz), then press the [**MENU**] key to save the new setting.

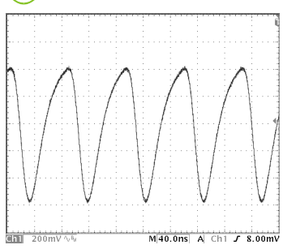
Press the [**16/9**] key to save the new setting and exit to the normal operation.


RF-UNIT
NOTE:
RESISTOR VALUES ARE IN Ω, 1/16W :
CAPACITOR VALUES ARE IN μF, 50V :
†TICAPACITOR VALUES ARE TANTALUM :
ELECTORLYTIC CAPACITOR ARE IN μF, 16V :
INDUCTOR VALUES ARE IN H :
UNLESS OTHERWISE NOTED.
TO AF-UNIT
TO CNTL-UNIT
UNLOCK: 3.00 V

A

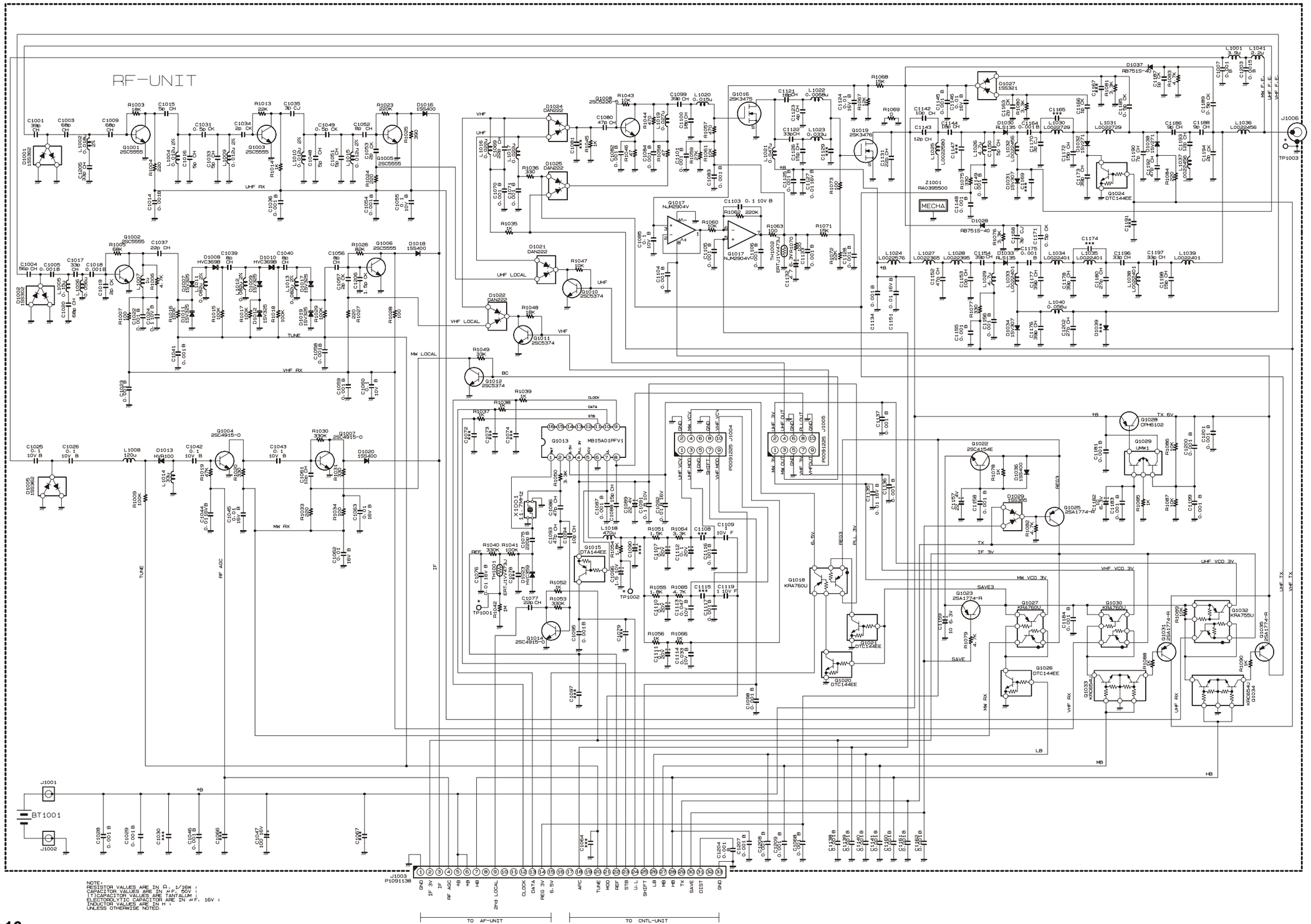

200mV
M40.0ns A Ch1 8.00mV

B


200mV
M40.0ns A Ch1 8.00mV

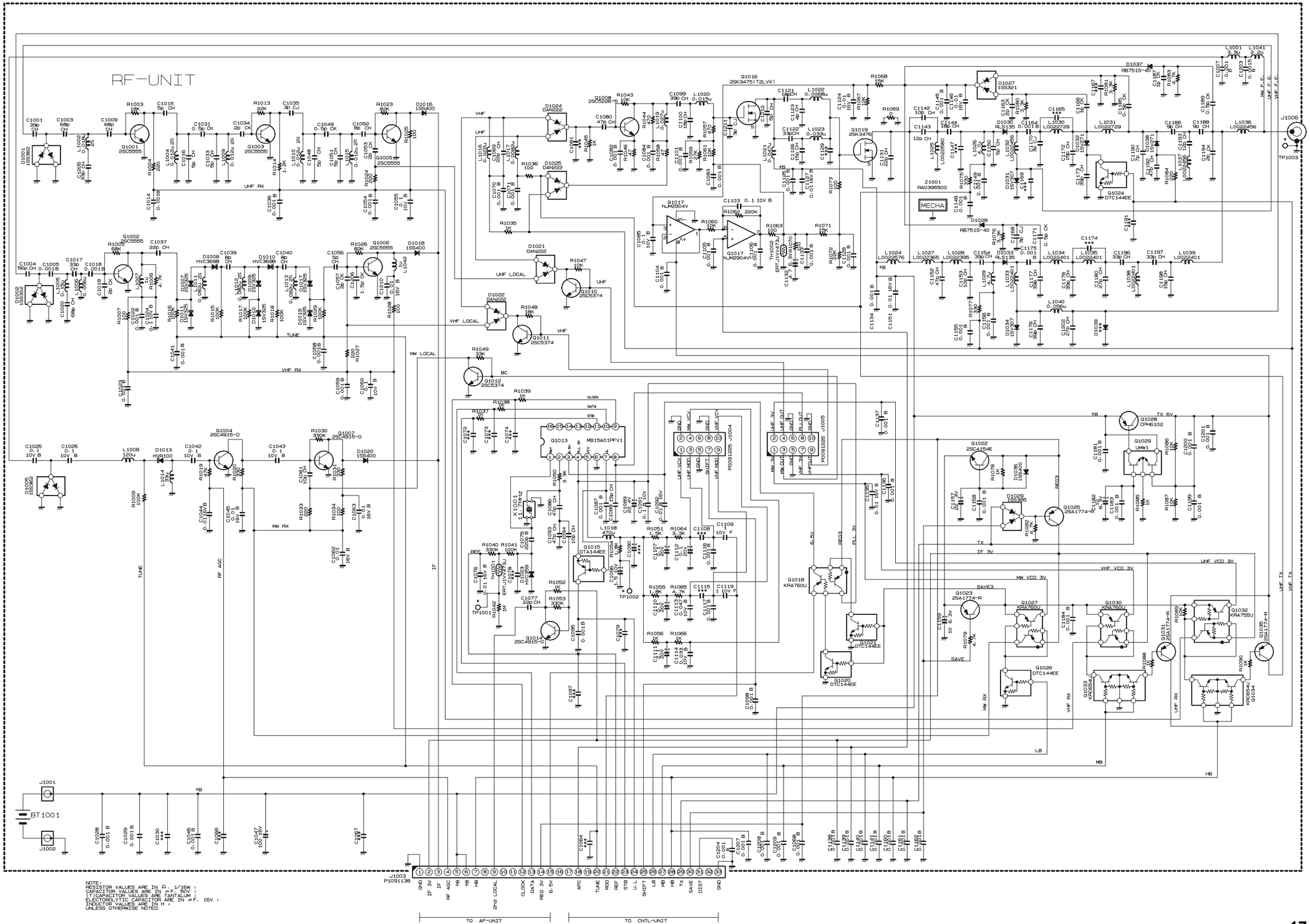
RF Unit (Lot 4 ~ 6)

Circuit Diagram



NOTE:
RESISTOR VALUES ARE IN Ω. 1/16W :
CAPACITOR VALUES ARE IN μF. 50V :
T:TCAPACITOR VALUES ARE TANTALUM :
ELECTORGLYTIC CAPACITOR ARE IN μF. 16V :
INDUCTOR VALUES ARE IN H :
UNLESS OTHERWISE NOTED.

Circuit Diagram

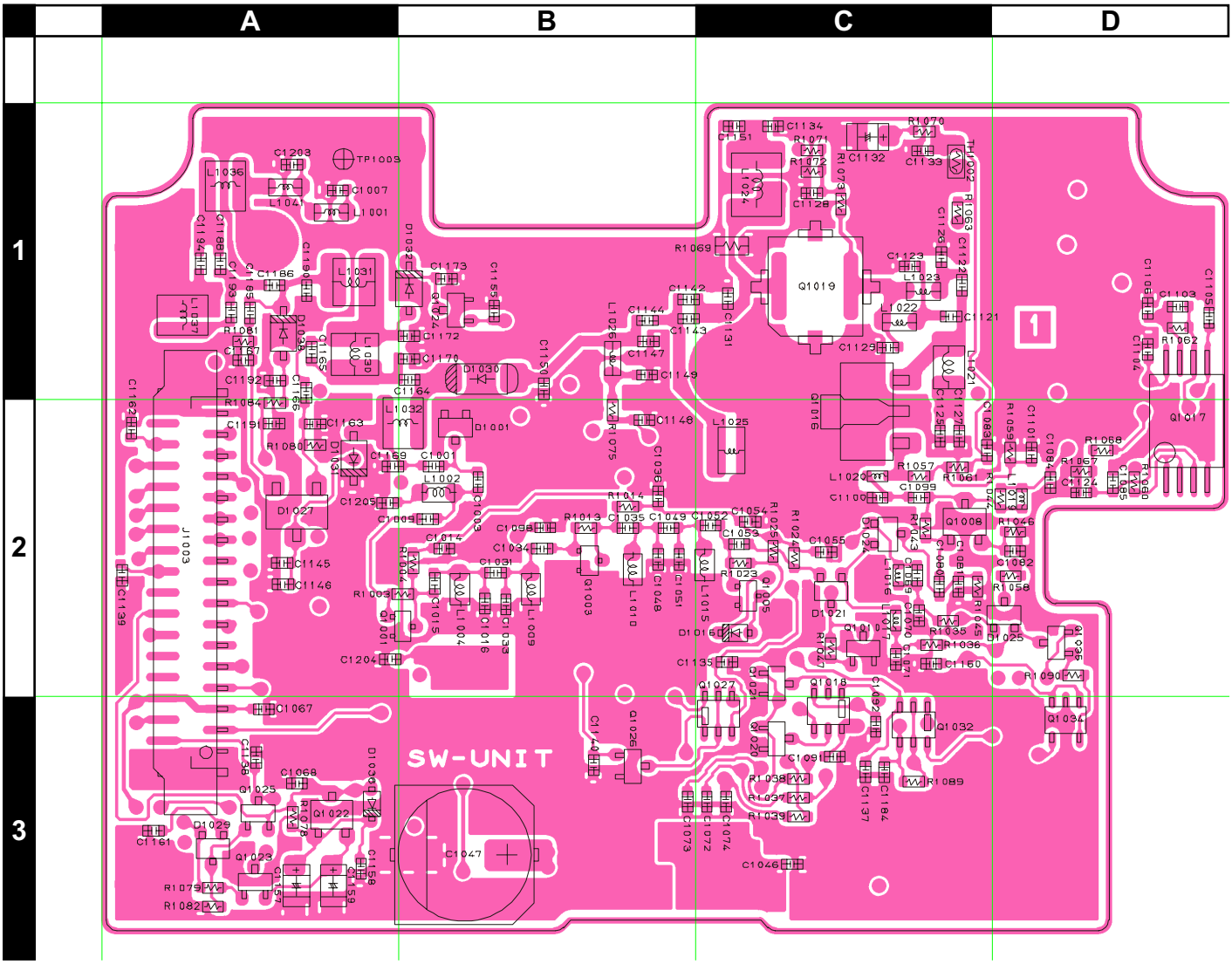


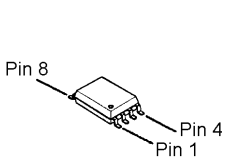
RF Unit

Note

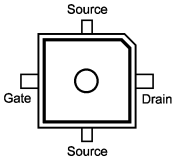
RF Unit (Lot 1 ~ 3)

Parts Layout (Side A)

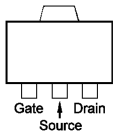




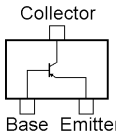
NJM2904V
(Q1017)



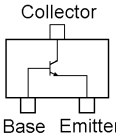
2SK3476
(Q1019)



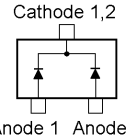
2SK3475
(Q1016)



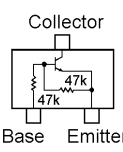
2SA1774 (FR)
(Q1023, 1025, 1035)



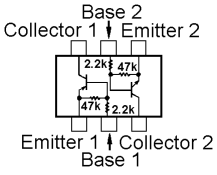
2SC4154 (LE)
(Q1022)
2SC5226 (R22)
(Q1008)
2SC5374 (NA)
(Q1010)
2SC5555 (ZD-)
(Q1001, 1003, 1005)



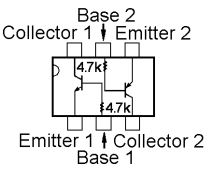
1SS321 (F9)
(D1027)
1SS385 (09)
(D1029)
DAN222 (N)
(D1021, 1024, 1025)



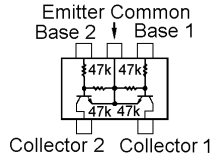
DTC144EE (26)
(Q1020, 1021, 1024, 1026)



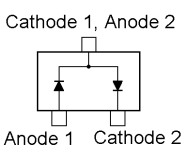
KRA755U (PE)
(Q1032)



KRA760U (PK)
(Q1018, 1027)



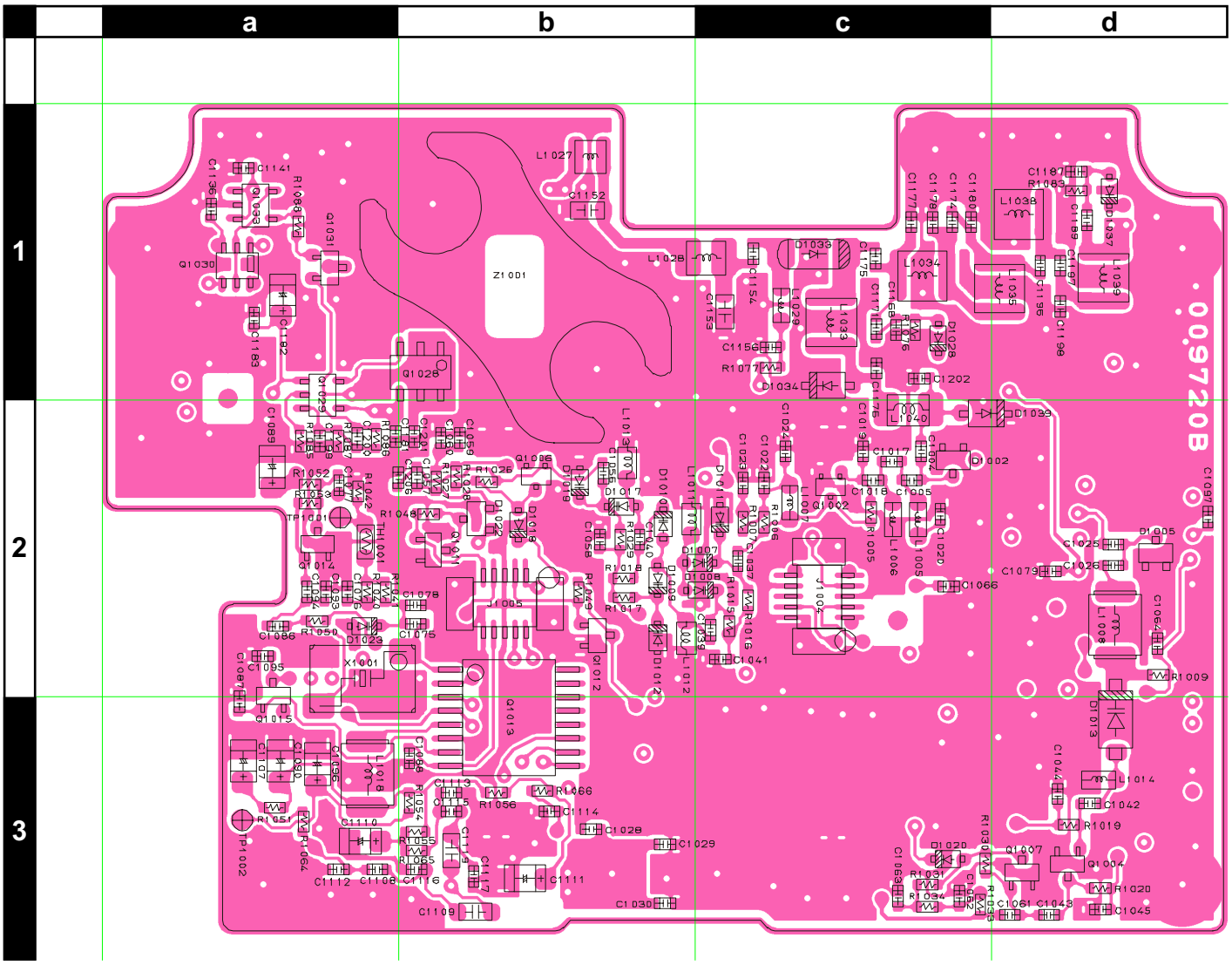
KRC654U (ND)
(Q1034)

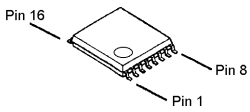


1SS362 (C3)
(D1001)

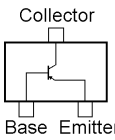
RF Unit (Lot 1 ~ 3)

Parts Layout (Side B)

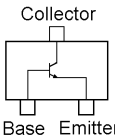




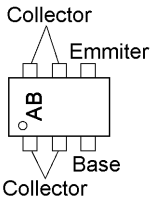
MB15A01PFV
(Q1013)



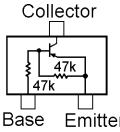
2SA1774 (FR)
(Q1031)



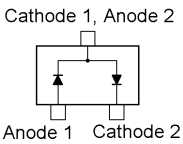
2SC4915 (QY)
(Q1004, 1007, 1014)
2SC5374 (NA)
(Q1011, 1012)
2SC5555 (ZD-)
(Q1002, 1006)



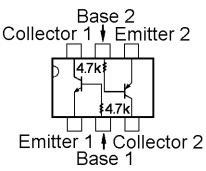
CPH6102 (AB)
(Q1028)



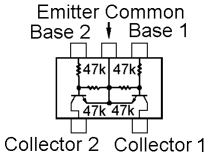
DTA144EE (16)
(Q1015)



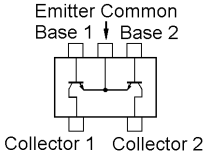
1SS362 (C3)
(D1002, 1005)



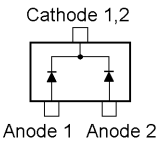
KRA760U (PK)
(Q1030)



KRC654U (ND)
(Q1033)



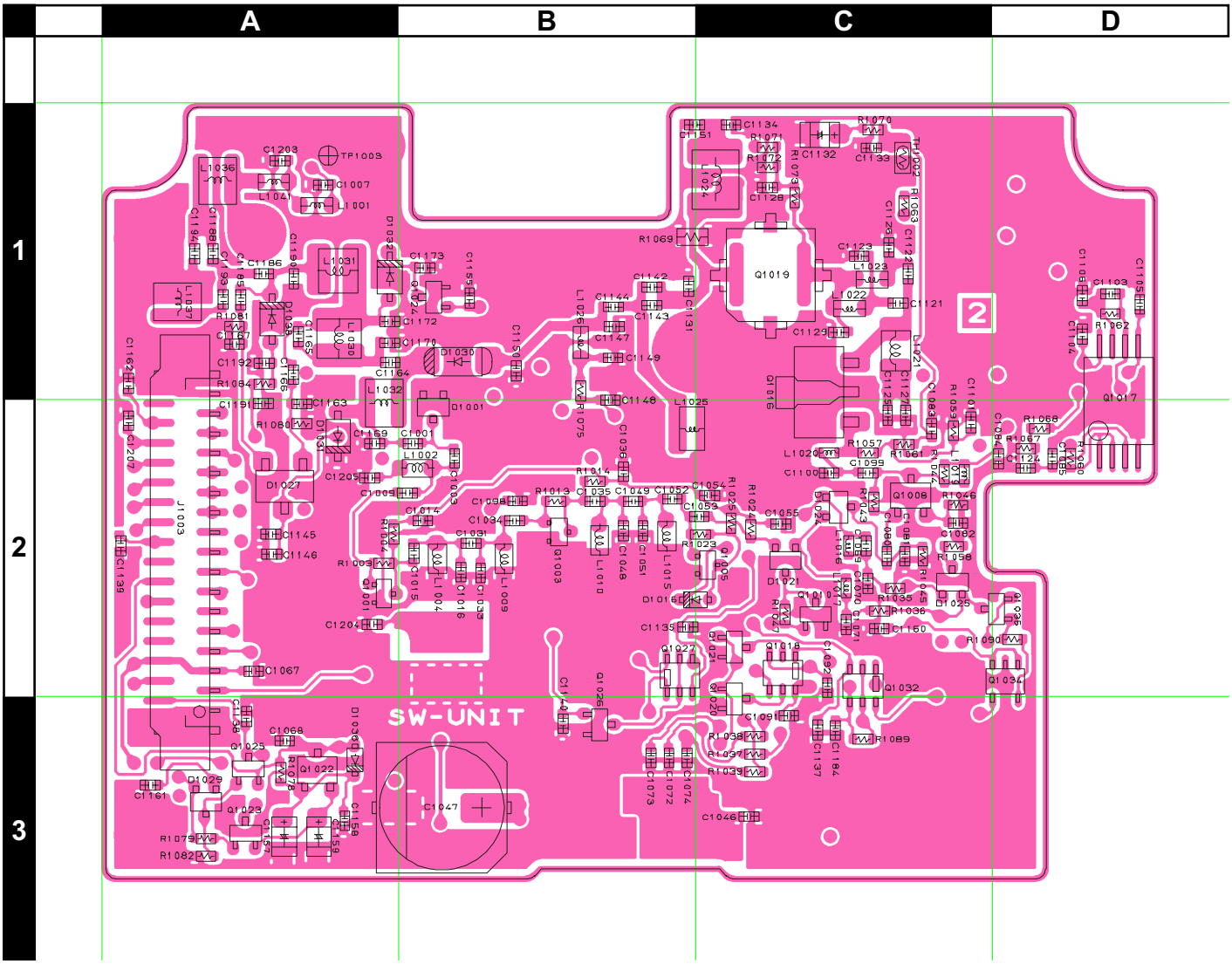
UMW1 (W1)
(Q1029)

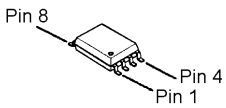


DAN222 (N)
(D1022)

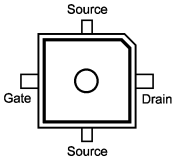
RF Unit (Lot 4 ~ 6)

Parts Layout (Side A)

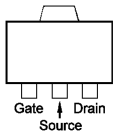




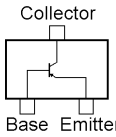
NJM2904V
(Q1017)



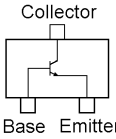
2SK3476
(Q1019)



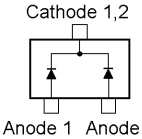
2SK3475
(Q1016)



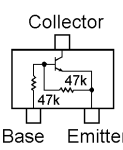
2SA1774 (FR)
(Q1023, 1025, 1035)



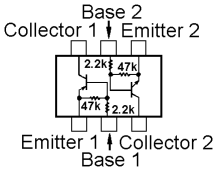
2SC4154 (LE)
(Q1022)
2SC5226 (R22)
(Q1008)
2SC5374 (NA)
(Q1010)
2SC5555 (ZD-)
(Q1001, 1003, 1005)



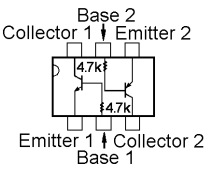
1SS321 (F9)
(D1027)
1SS385 (09)
(D1029)
DAN222 (N)
(D1021, 1024, 1025)



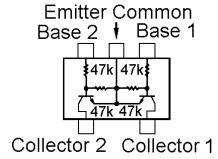
DTC144EE (26)
(Q1020, 1021, 1024, 1026)



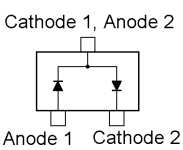
KRA755U (PE)
(Q1032)



KRA760U (PK)
(Q1018, 1027)



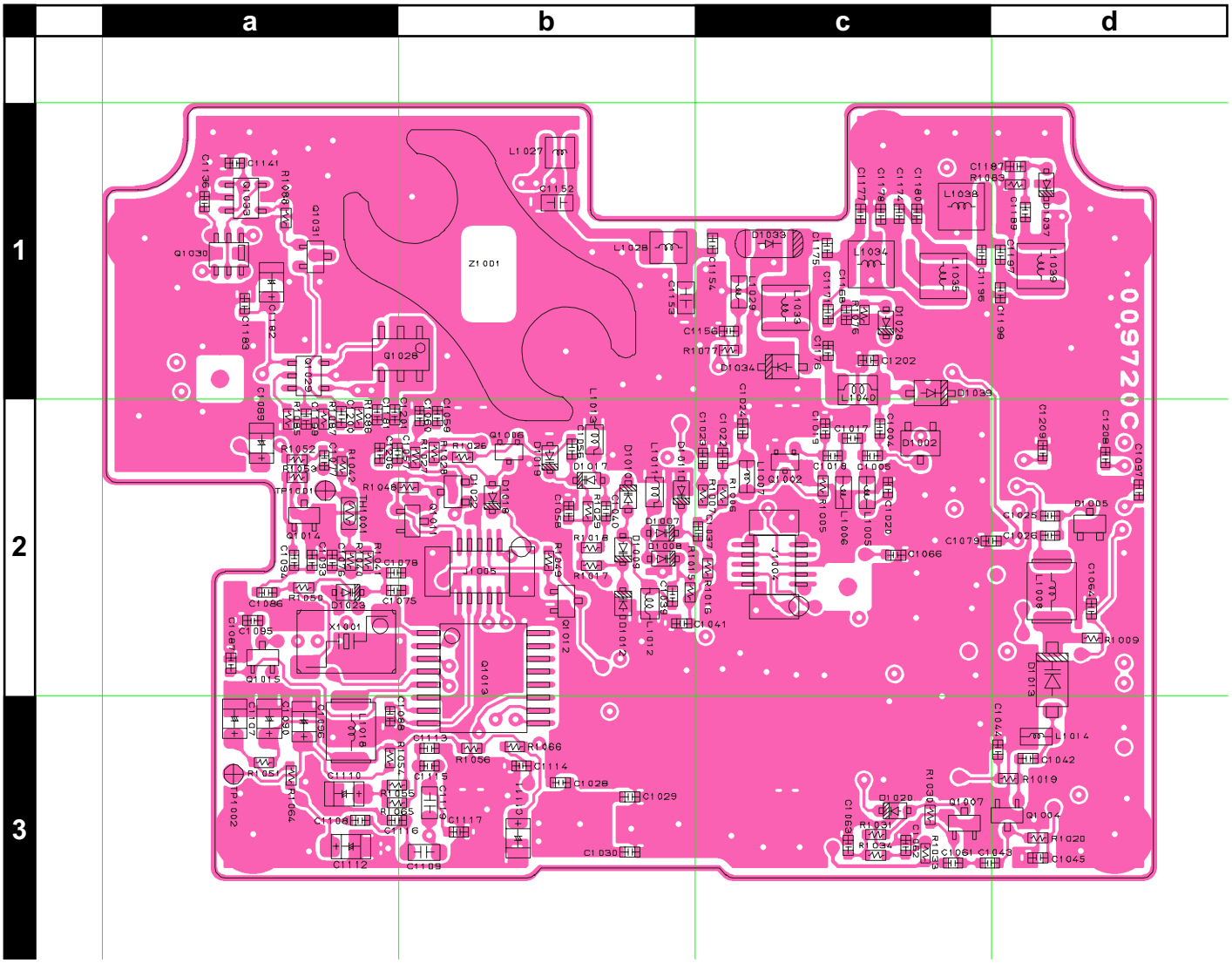
KRC654U (ND)
(Q1034)

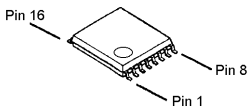


1SS362 (C3)
(D1001)

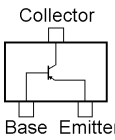
RF Unit (Lot 4 ~ 6)

Parts Layout (Side B)

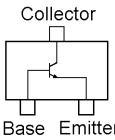




MB15A01PFV
(Q1013)



2SA1774 (FR)
(Q1031)



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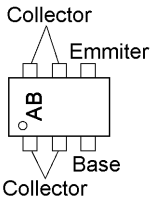
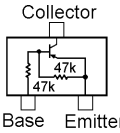
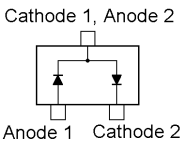
(Q1004, 1007, 1014)
2SC5374 (NA)
(Q1011, 1012)
2SC5555 (ZD-)
(Q1002, 1006)



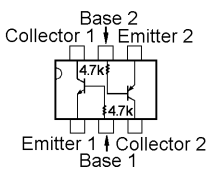
CPH6102 (AB)
(Q1028)



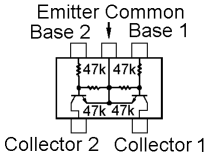
DTA144EE (16)
(Q1015)



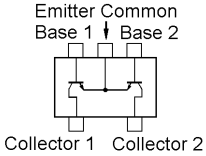
1SS362 (C3)
(D1002, 1005)



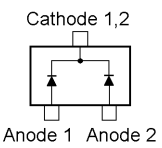
KRA760U (PK)
(Q1030)



KRC654U (ND)
(Q1033)

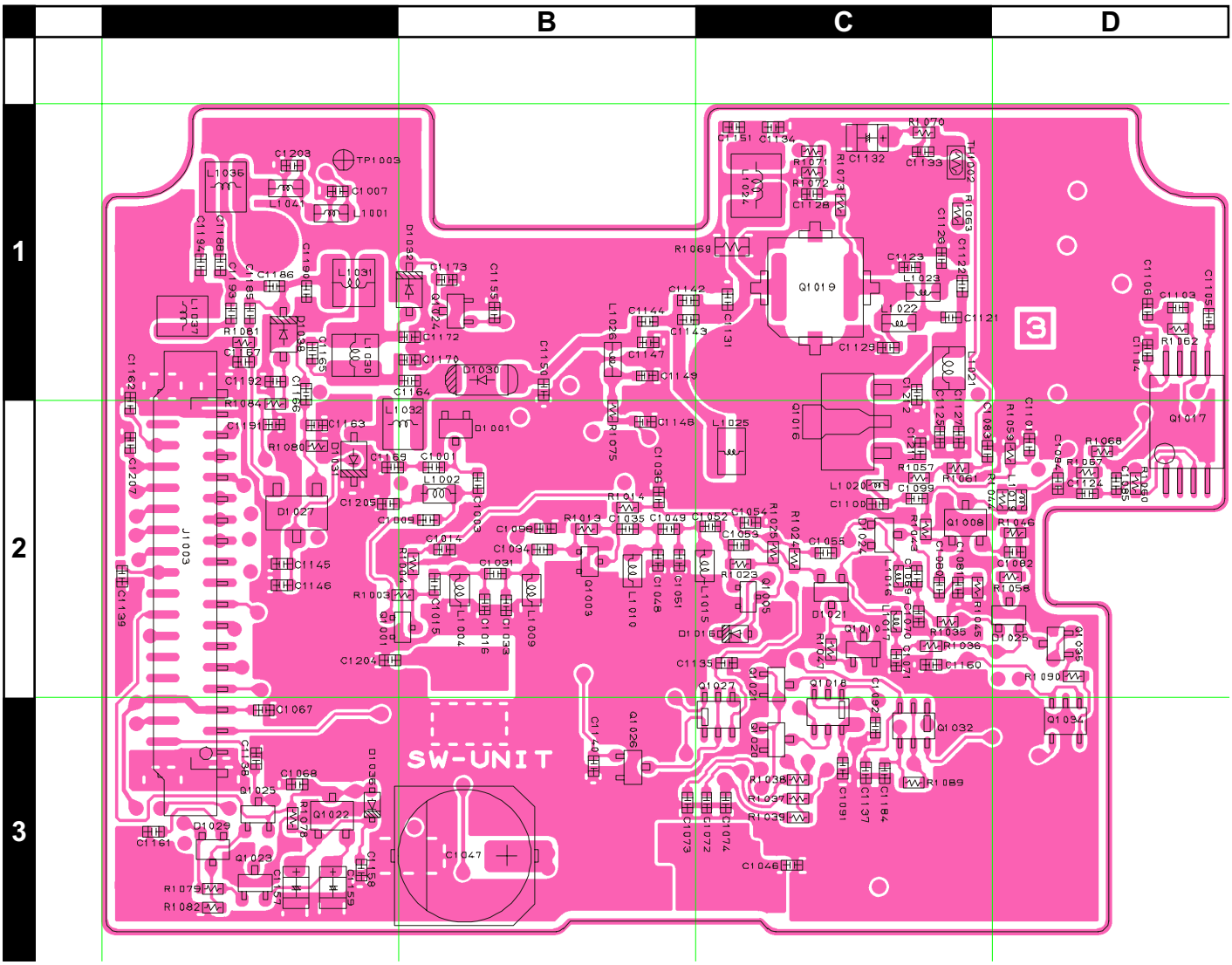


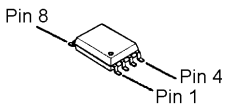
UMW1 (W1)
(Q1029)



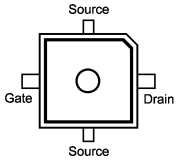
DAN222 (N)
(D1022)

Parts Layout (Side A)





NJM2904V
(Q1017)



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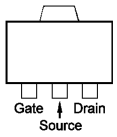
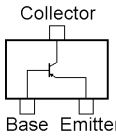
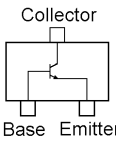
(Q1019)



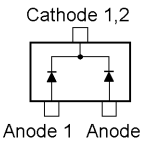
2SK3475
(Q1016)



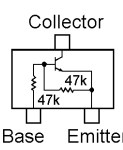
2SA1774 (FR)
(Q1023, 1025, 1035)



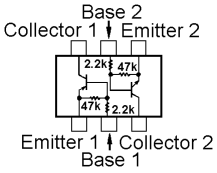
2SC4154 (LE)
(Q1022)
2SC5226 (R22)
(Q1008)
2SC5374 (NA)
(Q1010)
2SC5555 (ZD-)
(Q1001, 1003, 1005)



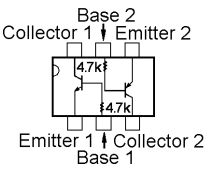
1SS321 (F9)
(D1027)
1SS385 (09)
(D1029)
DAN222 (N)
(D1021, 1024, 1025)



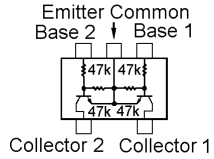
DTC144EE (26)
(Q1020, 1021, 1024, 1026)



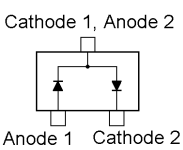
KRA755U (PE)
(Q1032)



KRA760U (PK)
(Q1018, 1027)



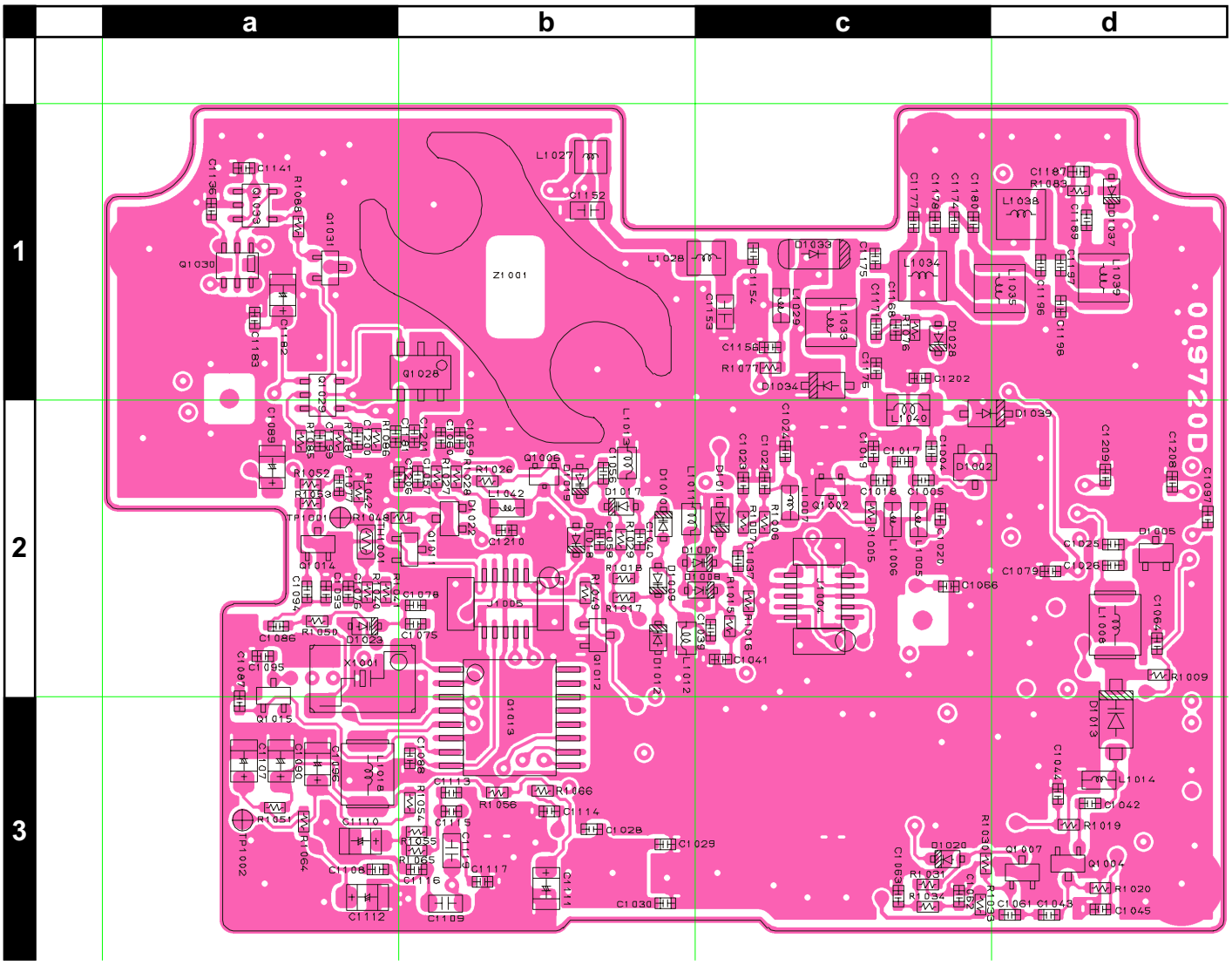
KRC654U (ND)
(Q1034)

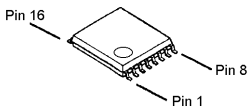


1SS362 (C3)
(D1001)

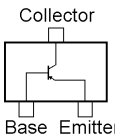
RF Unit (Lot 7 ~)

Parts Layout (Side B)

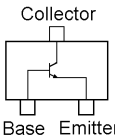




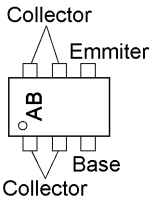
MB15A01PFV
(Q1013)



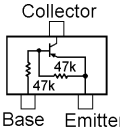
2SA1774 (FR)
(Q1031)



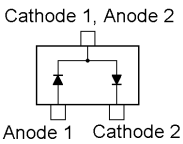
2SC4915 (QY)
(Q1004, 1007, 1014)
2SC5374 (NA)
(Q1011, 1012)
2SC5555 (ZD-)
(Q1002, 1006)



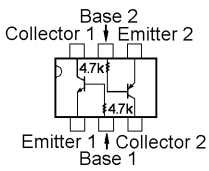
CPH6102 (AB)
(Q1028)



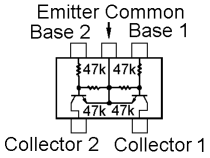
DTA144EE (16)
(Q1015)



1SS362 (C3)
(D1002, 1005)



KRA760U (PK)
(Q1030)



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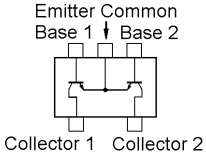
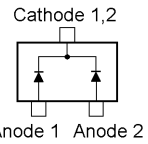
(Q1033)



UMW1 (W1)
(Q1029)



DAN222 (N)
(D1022)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CP7563001				
	Printed Circuit Board				AM002N000	FR009720B		1-		
						FR009720C		4-		
						FR009720D		7-		
C 1001	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	A	B2
C 1003	CHIP CAP.	68pF	50V	CH	UMK105CH680JW-F	K22178278		1-	A	B2
C 1004	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	c2
C 1005	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c2
C 1007	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A1
C 1009	CHIP CAP.	68pF	50V	CH	UMK105CH680JW-F	K22178278		1-	A	B2
C 1014	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 1015	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	A	B2
C 1016	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	A	B2
C 1017	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	c2
C 1018	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c2
C 1019	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	B	c2
C 1020	CHIP CAP.	68pF	50V	CH	UMK105CH680JW-F	K22178278		1-	B	c2
C 1022	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c2
C 1023	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c2
C 1024	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1025	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d2
C 1026	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d2
C 1028	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 1029	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 1031	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	A	B2
C 1033	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	A	B2
C 1034	CHIP CAP.	2pF	50V	CK	GRM36CK020B50PT	K22178289		1-	A	B2
C 1035	CHIP CAP.	3pF	50V	CJ	GRM36CJ030B50PT	K22178290		1-	A	B2
C 1036	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 1037	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	B	b2
C 1039	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		1-	B	b2
C 1040	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		1-	B	b2
C 1041	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b2
C 1042	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d3
C 1043	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c3
C 1044	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d3
C 1045	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d3
C 1046	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C3
C 1047	AL.ELECTRO.CAP.	100uF	16V		ECEV1CA101WP	K48120012		1-	A	B3
C 1048	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	A	B2
C 1049	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	A	B2
C 1051	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	A	B2
C 1052	CHIP CAP.	8pF	50V	CH	GRM36CH080B50PT	K22178295		1-	A	B2
C 1053	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	B2
C 1054	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1055	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C2
C 1056	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		1-	B	b2
C 1056	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		7	B	b2
C 1056	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		8-	B	b2
C 1057	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	B	a2
C 1058	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b2
C 1059	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b2
C 1060	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1061	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	B	c3
C 1062	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1063	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1068	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A3
C 1069	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	A	C2
C 1070	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1071	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1075	CHIP CAP.	220pF	50V	B	UMK105B221KW-F	K22178821		1-	B	a2
C 1076	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1077	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	B	a2
C 1080	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	A	C2
C 1082	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1083	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1084	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D2
C 1085	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1086	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	a2
C 1087	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1088	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	a3
C 1089	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	B	a2
C 1091	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C3

RF Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1092	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1093	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	a2
C 1094	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	B	a2
C 1095	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1096	CHIP TA.CAP.	1.5uF	10V		TESVSP1A155M-8R	K78100050		1-	B	a3
C 1098	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 1099	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	A	C2
C 1100	CHIP CAP.	18pF	50V	CH	UMK105CH180JW-F	K22178264		1-	A	C2
C 1101	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1103	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D1
C 1104	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D1
C 1105	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D1
C 1106	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D1
C 1107	CHIP TA.CAP.	0.1uF	20V		SKF-1D104M-RP	K78130049		1-	B	a3
C 1109	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b3
C 1110	CHIP TA.CAP.	0.1uF	20V		SKF-1D104M-RP	K78130049		1-	B	a3
C 1111	CHIP TA.CAP.	0.1uF	20V		SKF-1D104M-RP	K78130049		1-	B	b3
C 1112	CHIP TA.CAP.	0.1uF	20V		SKF-1D104M-RP	K78130049		1-	B	a3
C 1113	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b3
C 1114	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	B	b3
C 1116	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a3
C 1117	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 1119	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b3
C 1121	CHIP CAP.	18pF	50V	CH	UMK105CH180JW-F	K22178264		1-	A	C1
C 1122	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	A	C1
C 1123	CHIP CAP.	4pF	50V	CH	UMK105CH040CW-F	K22178252		1-	A	C1
C 1124	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1125	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1126	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	A	C1
C 1127	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1128	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C1
C 1131	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	A	B1
C 1132	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	A	C1
C 1133	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C1
C 1134	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C1
C 1135	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 1136	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a1
C 1137	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C3
C 1138	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A3
C 1139	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A2
C 1140	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B3
C 1141	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a1
C 1142	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	A	B1
C 1143	CHIP CAP.	12pF	50V	CH	UMK105CH120JW-F	K22178260		1-	A	B1
C 1144	CHIP CAP.	18pF	50V	CH	UMK105CH180JW-F	K22178264		1-	A	B1
C 1145	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A2
C 1146	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	A2
C 1148	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B1
C 1149	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B1
C 1150	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	A	B1
C 1151	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B1
C 1152	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		1	B	b1
C 1152	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		2-	B	b1
C 1153	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	B	b1
C 1154	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	c1
C 1155	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B1
C 1156	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c1
C 1157	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	A3
C 1158	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A3
C 1159	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	A	A3
C 1160	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C2
C 1161	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A3
C 1162	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A1
C 1163	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	A1
C 1164	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A1
C 1166	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	A	A1
C 1168	CHIP CAP.	3pF	50V	CJ	UMK105CJ030CW-F	K22178251		1-	B	c1
C 1170	CHIP CAP.	3pF	50V	CJ	UMK105CJ030CW-F	K22178251		1-	A	A1
C 1171	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	B	c1
C 1172	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	A	A1
C 1173	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	A	B1
C 1175	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c1
C 1176	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	c1

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1177	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	c1
C 1178	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	c1
C 1180	CHIP CAP.	27pF	50V	CH	UMK105CH270JW-F	K22178268		1-	B	c1
C 1181	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1182	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	B	a1
C 1183	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a1
C 1184	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C3
C 1185	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	A	A1
C 1186	CHIP CAP.	9pF	50V	CH	UMK105CH090DW-F	K22178257		1-	A	A1
C 1187	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	B	d1
C 1188	CHIP CAP.	9pF	50V	CH	UMK105CH090DW-F	K22178257		1-	A	A1
C 1189	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	B	d1
C 1190	CHIP CAP.	7pF	50V	CH	UMK105CH070DW-F	K22178255		1-	A	A1
C 1192	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	A	A1
C 1193	CHIP CAP.	12pF	50V	CH	UMK105CH120JW-F	K22178260		1-	A	A1
C 1194	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	A1
C 1196	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	c1
C 1197	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	d1
C 1198	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	d1
C 1199	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1200	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1201	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	a2
C 1202	CHIP CAP.	27pF	50V	CH	UMK105CH270JW-F	K22178268		1-	B	c1
C 1203	CHIP CAP.	0.0015uF	50V	B	UMK105B152KW-F	K22178831		1-	A	A1
C 1204	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A2
C 1205	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	A	A2
C 1206	CHIP CAP.	1.5pF	50V	CK	UMK105CK1R5CW-F	K22178249		1-	B	a2
C 1207	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		3-	A	A2
C 1208	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		4-	B	d2
C 1209	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		4-	B	d2
C 1210	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		7-	B	b2
C 1211	CHIP CAP.	3pF	50V	CJ	UMK105CJ030CW-F	K22178251		5-	A	C2
C 1212	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		7-	A	C1
D 1001	DIODE				1SS362 TE85R	G2070268		1-	A	B2
D 1002	DIODE				1SS362 TE85R	G2070268		1-	B	c2
D 1002	DIODE				1SS302 TE85R	G2070088		3-	B	c2
D 1005	DIODE				1SS362 TE85R	G2070268		1-	B	d2
D 1007	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1008	DIODE				HVC369B TRF	G2070872		1-	B	b2
D 1009	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1010	DIODE				HVC369B TRF	G2070872		1-	B	b2
D 1011	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1012	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1013	DIODE				HVR100-8TRU	G2070540		1-	B	d2
D 1016	DIODE				1SS400 TE61	G2070634		1-	A	B2
D 1017	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1018	DIODE				1SS400 TE61	G2070634		1-	B	b2
D 1019	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1020	DIODE				1SS400 TE61	G2070634		1-	B	c3
D 1021	DIODE				DAN222 TL	G2070174		1-	A	C2
D 1022	DIODE				DAN222 TL	G2070174		1-	B	b2
D 1023	DIODE				HVC359 TRF	G2070708		1-	B	a2
D 1024	DIODE				DAN222 TL	G2070174		1-	A	C2
D 1025	DIODE				DAN222 TL	G2070174		1-	A	C2
D 1027	DIODE				1SS321 TE85R	G2070076		1-	A	A2
D 1028	DIODE				RB751S-40TE61	G2070850		1-	B	c1
D 1029	DIODE				1SS385(TE85L)	G2070880		1-	A	A3
D 1030	DIODE				RLS135 TE-11	G2070128		1-	A	B1
D 1031	DIODE				1SV307(TPH3)	G2070638		1-	A	A2
D 1032	DIODE				1SV271 TPH3	G2070476		1-	A	A1
D 1033	DIODE				RLS135 TE-11	G2070128		1-	B	c1
D 1034	DIODE				1SV307(TPH3)	G2070638		1-	B	c1
D 1036	DIODE				1SS400 TE61	G2070634		1-	A	A3
D 1037	DIODE				RB751S-40TE61	G2070850		1-	B	d1
D 1038	DIODE				1SV271 TPH3	G2070476		1-	A	A1
J 1003	CONNECTOR				IL-FPR-33S-VF-E1500	P1091138		1-	A	A2
J 1004	CONNECTOR				AXK6F10335YP	P0091225		1-	B	c2
J 1005	CONNECTOR				AXK6F10335YP	P0091225		1-	B	b2
L 1001	M.RFC	3.9uH			LK1608 3R9K-T	L1690849		1-	A	A1
L 1002	M.RFC	0.018uH		2%	C1608CB-18NG	L1691035		1-	A	B2
L 1004	M.RFC	0.012uH		2%	C1608CB-12NG	L1691033		1-	A	B2
L 1005	M.RFC	0.15uH			LK1608 R15K-T	L1690409		1-	B	c2
L 1006	M.RFC	0.056uH			HK1608 56NJ-T	L1690525		1-	B	c2

RF Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 1007	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	c2
L 1008	M.RFC	120uH			FLC32T-121J	L1690228		1-	B	d2
L 1009	M.RFC	0.012uH		2%	C1608CB-12NG	L1691033		1-	A	B2
L 1010	M.RFC	0.012uH		2%	C1608CB-12NG	L1691033		1-	A	B2
L 1011	M.RFC	0.082uH		2%	C1608CB-82NG	L1691044		1-	B	b2
L 1012	M.RFC	0.082uH		2%	C1608CB-82NG	L1691044		1-	B	b2
L 1013	M.RFC	0.082uH		2%	C1608CB-82NG	L1691044		1-	B	b2
L 1014	M.RFC	33uH			LK1608 330M-T	L1690690		1-	B	d3
L 1015	M.RFC	0.012uH		2%	C1608CB-12NG	L1691033		1-	A	B2
L 1016	M.RFC	0.022uH			TFL0510-22N	L1690815		1-	A	C2
L 1017	M.RFC	0.022uH			TFL0510-22N	L1690815		1-	A	C2
L 1017	M.RFC	0.0082uH			TFL0510-8N2	L1690810		4-	A	C2
L 1018	M.RFC	470uH			FLC32T-471J	L1690235		1-	B	a3
L 1019	M.RFC	0.027uH			TFL0510-27N	L1690816		1-	A	C2
L 1020	M.RFC	0.015uH			TFL0510-15N	L1690813		1-	A	C2
L 1021	CHIP COIL	0.047uH			LQN21A47NJ04	L1690617		1-	A	C1
L 1022	M.RFC	0.0068uH			ELJ-RE6N8JF2	L1690712		1-	A	C1
L 1023	M.RFC	0.033uH			ELJ-RE33NJF2	L1690720		1-	A	C1
L 1024	COIL				E2 0.25-1.85-8.5T-L	L0022576		1-	A	C1
L 1025	COIL				E2 0.4-1.3-2T-L	L0022580		1-	A	B2
L 1026	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	A	B1
L 1027	COIL				E2 0.28-1.0-4T-R	L0022365		1-	B	b1
L 1028	COIL				E2 0.28-1.0-4.5T-R	L0022395		1-	B	b1
L 1029	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	c1
L 1030	COIL				E2 0.35-1.4-3.5T-L-B	L0022729		1-	A	A1
L 1031	COIL				E2 0.35-1.4-3.5T-L-B	L0022729		1-	A	A1
L 1032	COIL				E2 0.35-1.6-4T-L	L0022456		1-	A	A1
L 1033	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	c1
L 1034	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	c1
L 1035	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	c1
L 1036	COIL				E2 0.35-1.6-4T-L	L0022456		1-	A	A1
L 1037	COIL				E2 0.35-1.6-4T-L	L0022456		1-	A	A1
L 1038	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	c1
L 1039	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	d1
L 1040	CHIP COIL	0.056uH			LQN21A56NG04	L1690978		1-	B	c1
L 1041	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	A1
L 1042	M.RFC	1uH			LK1608 1R0K-T	L1690687		7-	B	b2
Q 1001	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	A	A2
Q 1002	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	B	c2
Q 1003	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	A	B2
Q 1004	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	d3
Q 1005	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	A	C2
Q 1006	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	B	b2
Q 1007	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	c3
Q 1008	TRANSISTOR				2SC5226-5-TL	G3352268E		1-	A	C2
Q 1010	TRANSISTOR				2SC5374-TL	G3353748		1-	A	C2
Q 1011	TRANSISTOR				2SC5374-TL	G3353748		1-	B	a2
Q 1012	TRANSISTOR				2SC5374-TL	G3353748		1-	B	b2
Q 1013	IC				MB15A01PFV1-G-BND-EF	G1092545		1-	B	b2
Q 1014	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	a2
Q 1015	TRANSISTOR				DTA144EE TL	G3070074		1-	B	a2
Q 1016	FET				2SK3475(TE12L)	G3834758		1-	A	C1
Q 1016	FET				2SK3475(T2LVX)	G3070318		5-	A	C1
Q 1017	IC				NJM2904V-TE1	G1091677		1-	A	D1
Q 1018	TRANSISTOR				KRA760U-RTK	G3070278		1-	A	C2
Q 1019	FET				2SK3476(TE12L)	G3834768		1-	A	C1
Q 1020	TRANSISTOR				DTC144EE TL	G3070075		1-	A	C2
Q 1021	TRANSISTOR				DTC144EE TL	G3070075		1-	A	C2
Q 1022	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	A3
Q 1023	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	A3
Q 1024	TRANSISTOR				DTC144EE TL	G3070075		1-	A	B1
Q 1025	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	A3
Q 1026	TRANSISTOR				DTC144EE TL	G3070075		1-	A	B3
Q 1027	TRANSISTOR				KRA760U-RTK	G3070278		1-	A	B2
Q 1028	TRANSISTOR				CPH6102-TL	G3070223		1-	B	a1
Q 1029	TRANSISTOR				UMW1 TR	G3070078		1-	B	a1
Q 1030	TRANSISTOR				KRA760U-RTK	G3070278		1-	B	a1
Q 1031	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	a1
Q 1032	TRANSISTOR				KRA755U-RTK	G3070292		1-	A	C2
Q 1033	TRANSISTOR				KRC654U-RTK	G3070290		1-	B	a1
Q 1034	TRANSISTOR				KRC654U-RTK	G3070290		1-	A	D2
Q 1035	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	C2
R 1003	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	A	A2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1004	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	A2
R 1005	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	B	c2
R 1005	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		8-	B	c2
R 1006	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c2
R 1007	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c2
R 1009	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d2
R 1013	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	B2
R 1014	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B2
R 1015	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1016	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	c2
R 1017	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1018	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1019	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d3
R 1020	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	d3
R 1023	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	C2
R 1023	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		7-	A	C2
R 1024	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C2
R 1025	CHIP RES.	390	1/16W	5%	RMC1/16S 391JTH	J24189020		1-	A	C2
R 1025	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		7-	A	C2
R 1026	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	B	b2
R 1027	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	b2
R 1028	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b2
R 1029	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1030	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	c3
R 1031	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c3
R 1033	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	c3
R 1034	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 1035	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C2
R 1036	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	A	C2
R 1036	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		3-	A	C2
R 1037	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 1038	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 1039	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 1040	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a2
R 1041	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a2
R 1042	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	a2
R 1043	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 1044	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	C2
R 1045	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C2
R 1046	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	A	C2
R 1047	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 1048	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	B	a2
R 1049	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	b2
R 1050	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	a2
R 1051	CHIP RES.	1.5k	1/16W	5%	RMC1/16S 152JTH	J24189027		1-	B	a3
R 1052	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a2
R 1053	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a2
R 1054	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	B	a3
R 1055	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	B	a3
R 1056	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b3
R 1057	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	C2
R 1058	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	A	C2
R 1059	CHIP RES.	27k	1/16W	5%	RMC1/16S 273JTH	J24189042		1-	A	C2
R 1059	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		8-	A	C2
R 1060	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1061	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 1062	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	D1
R 1063	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C1
R 1064	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	a3
R 1065	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	a3
R 1066	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b3
R 1067	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	D2
R 1068	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	D2
R 1069	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	B1
R 1070	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C1
R 1071	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	C1
R 1072	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	C1
R 1073	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C1
R 1075	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	A	B1
R 1076	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	c1
R 1077	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c1
R 1078	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A3
R 1079	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	A3

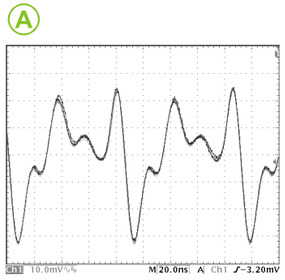
RF Unit

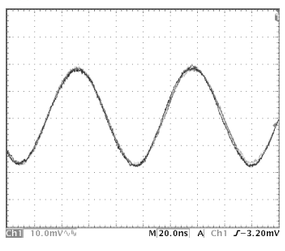
Parts List

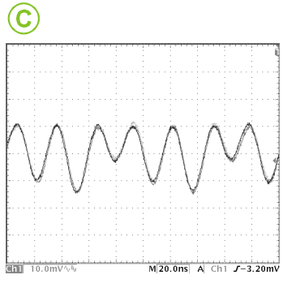
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1080	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	A2
R 1081	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	A1
R 1082	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	A3
R 1083	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	d1
R 1084	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	A1
R 1085	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a2
R 1086	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1087	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1088	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a1
R 1089	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C3
R 1090	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
TH1001	THERMISTOR				ERTJ1VV473J	G9090122		1-	B	a2
TH1002	THERMISTOR				ERTJ1VV473J	G9090122		1-	A	C1
X 1001	XTAL TSS-6	11.7MHz			TSS-5032A 11.7MHZ	H0103264		1-	B	a2
X 1001	XTAL TSS-5032A	11.7MHz			(TSS-6)-1 11.7MHZ	H0103298		8-	B	a2
	HEATSINK PLATE					RA0395500		1-	B	b1
	TERMINAL PLATE					RA0287100		1-		

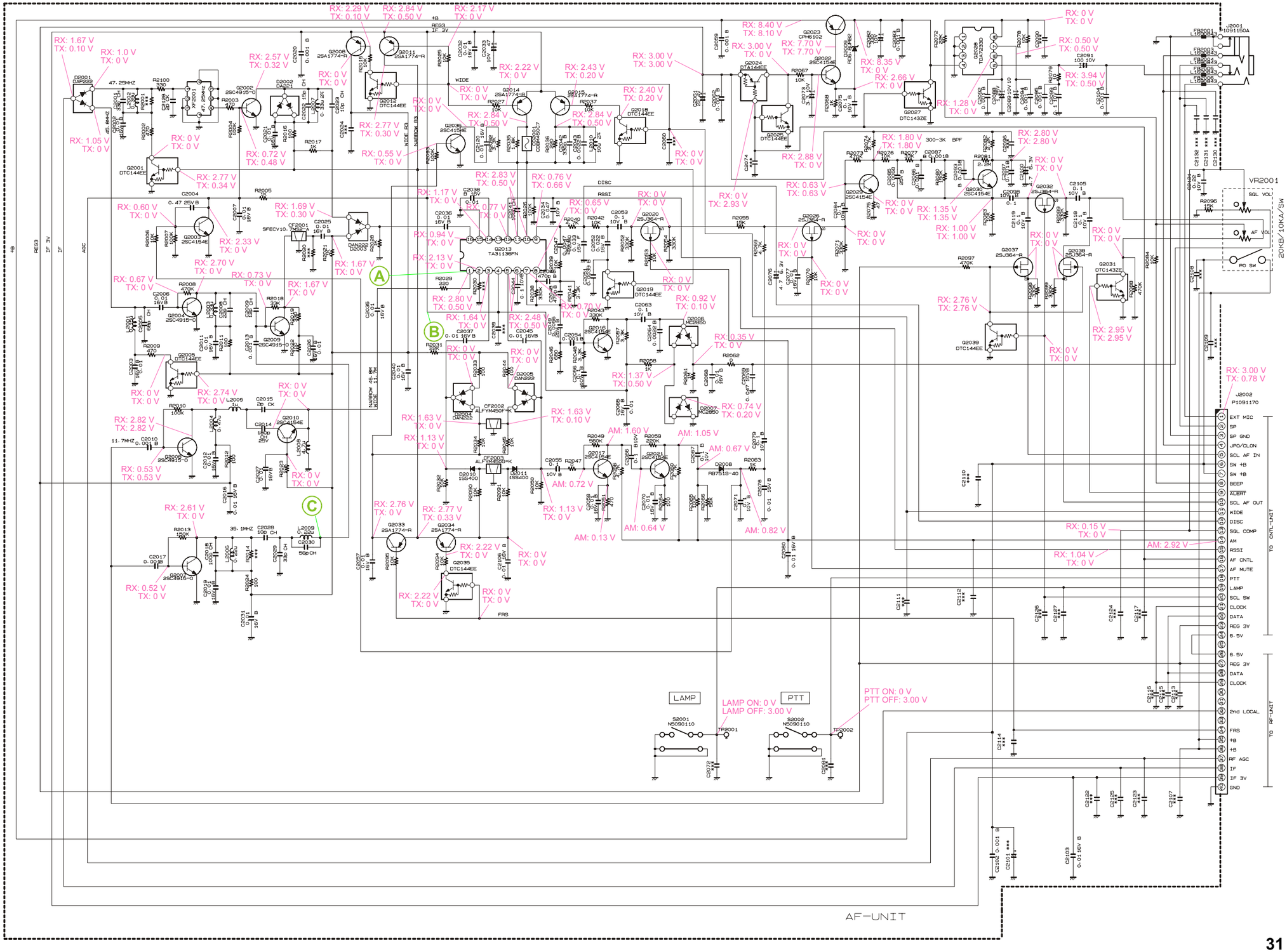
AF Unit (Lot 1 ~ 2)

Circuit Diagram



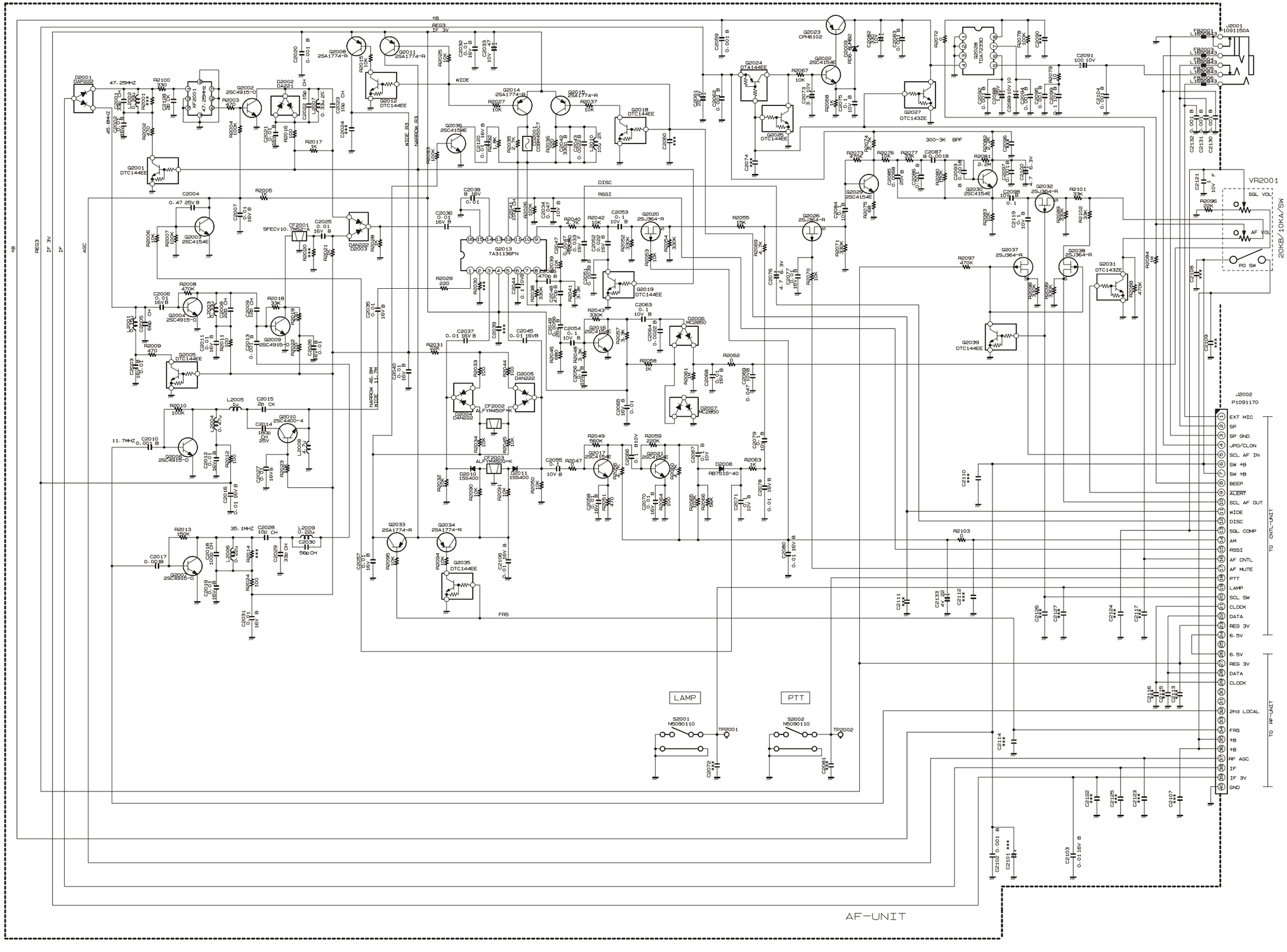






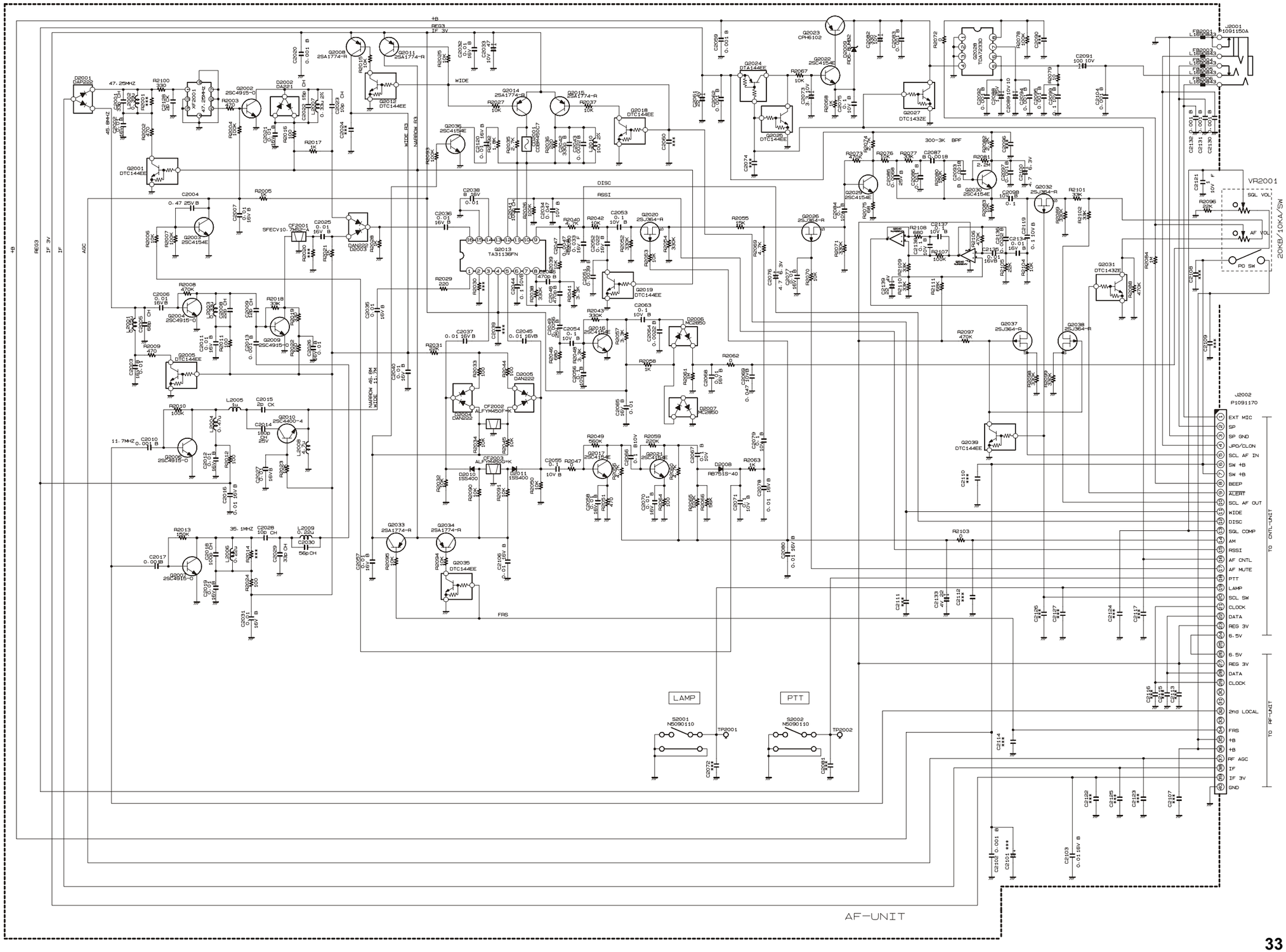
AF Unit (Lot 3 ~ 6)

Circuit Diagram



AF Unit (Lot 7 ~)

Circuit Diagram

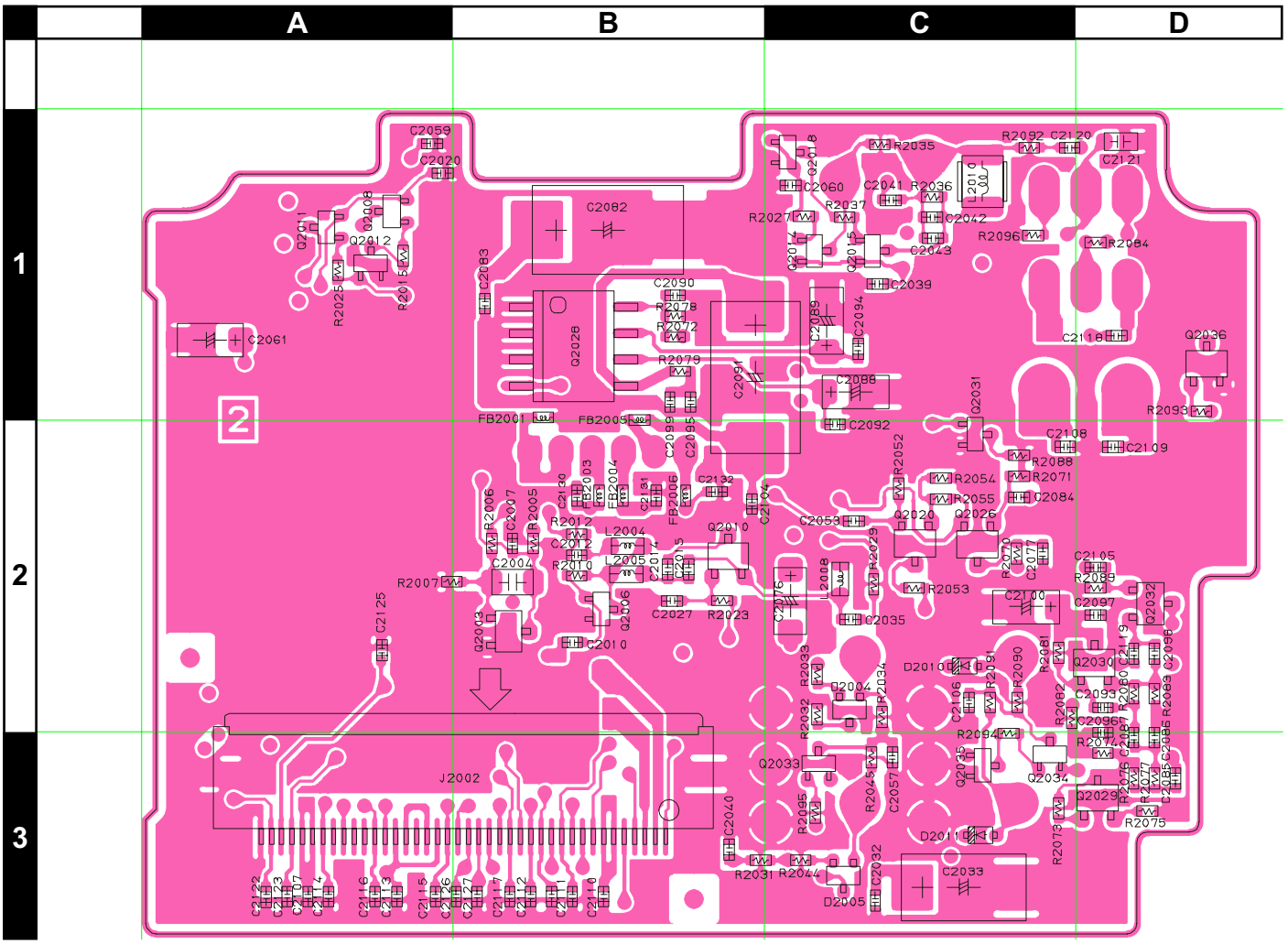


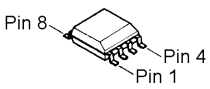
AF Unit

Note

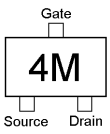
AF Unit (Lot 1 ~ 2)

Parts Layout (Side A)

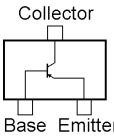




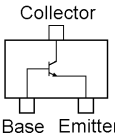
TDA7233D
(Q2028)



2SJ364 (4M)
(Q2020, 2026, 2032)



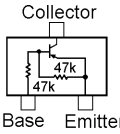
2SA1774 (FR)
(Q2008, 2011, 2014, 2015, 2033, 2034)



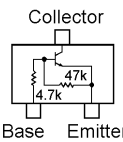
2SC4154 (LE)
(Q2003, 2029, 2030, 2036)

2SC4400 (RT4)
(Q2010)

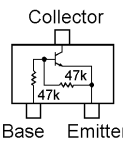
2SC4915 (QY)
(Q2006)



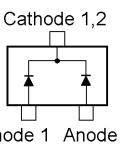
DTA144EE (16)
(Q2024)



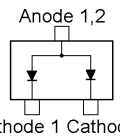
DTC143ZE (E23)
(Q2031)



DTC144EE (26)
(Q2012, 2018, 2035)



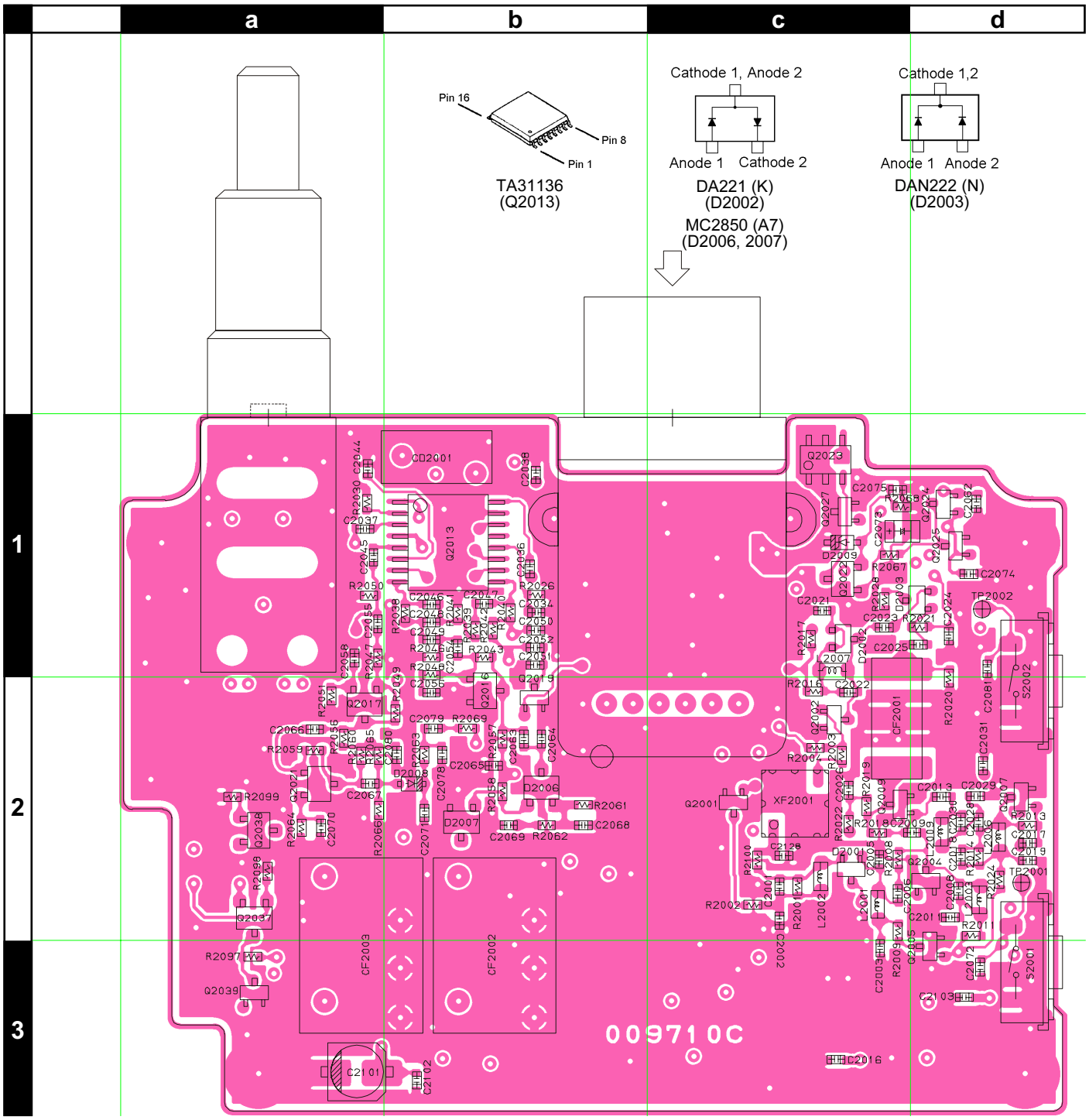
DAN222 (N)
(D2004, 2005)

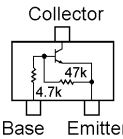


DAP222 (P)
(D2001)

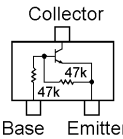
AF Unit (Lot 1 ~ 2)

Parts Layout (Side B)

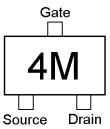




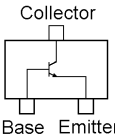
DTC143ZE (E23)
(Q2027)



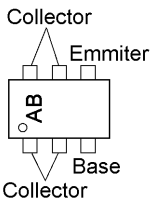
DTC144EE (26)
(Q2001, 2005, 2019, 2025, 2039)



2SJ364 (4M)
(Q2037, 2038)



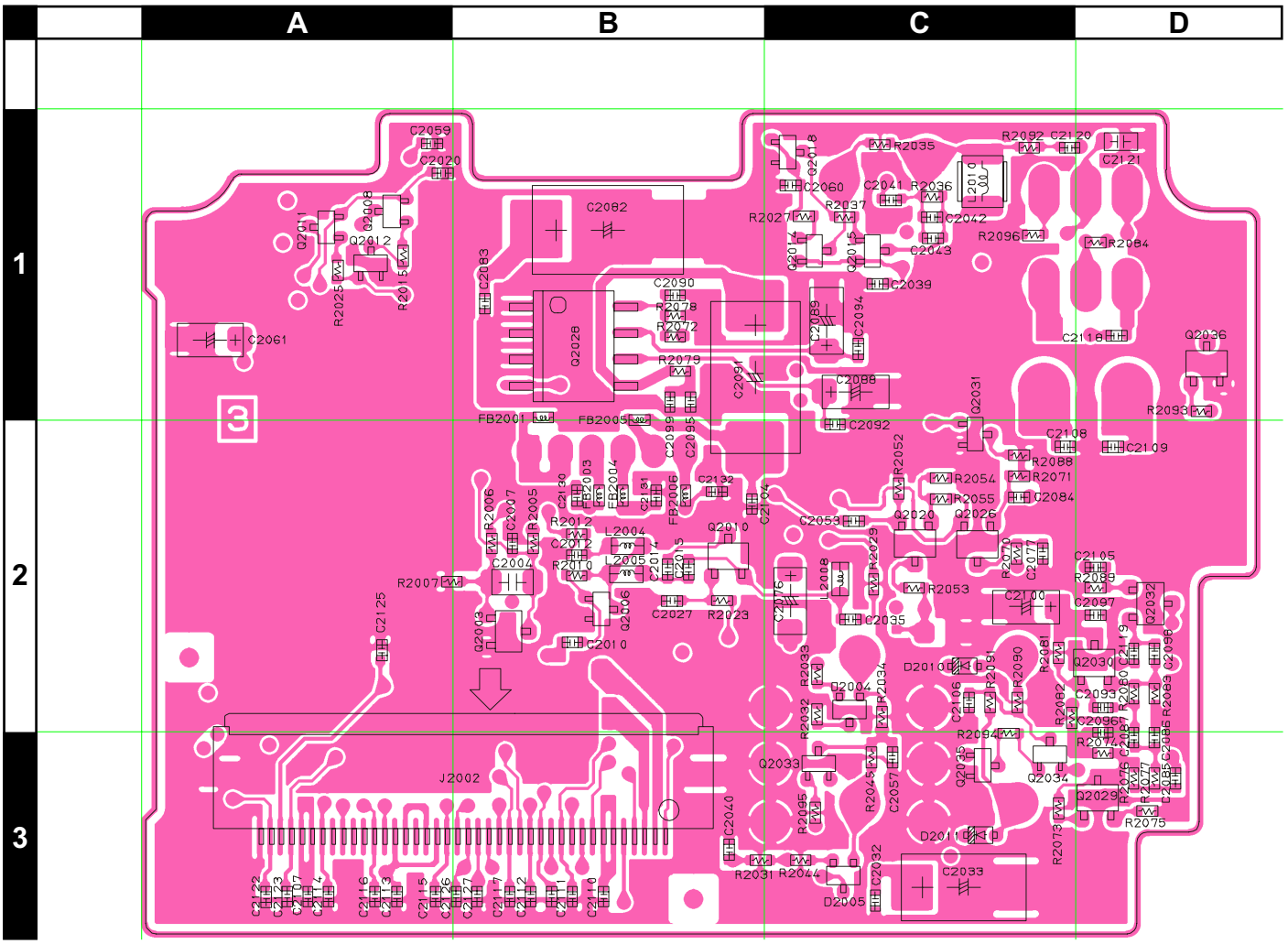
2SC4154 (LE)
(Q2016, 2017, 2021, 2022)
2SC4915 (QY)
(Q2002, 2004, 2007, 2009)

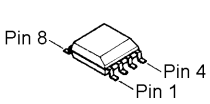


CPH6102 (AB)
(Q2023)

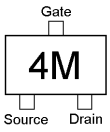
AF Unit (Lot 3 ~ 6)

Parts Layout (Side A)

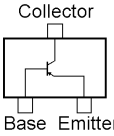




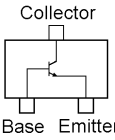
TDA7233D
(Q2028)



2SJ364 (4M)
(Q2020, 2026, 2032)



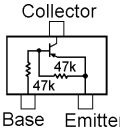
2SA1774 (FR)
(Q2008, 2011, 2014, 2015, 2033, 2034)



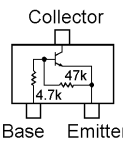
2SC4154 (LE)
(Q2003, 2029, 2030, 2036)

2SC4400 (RT4)
(Q2010)

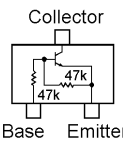
2SC4915 (QY)
(Q2006)



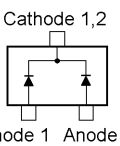
DTA144EE (16)
(Q2024)



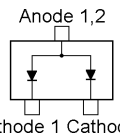
DTC143ZE (E23)
(Q2031)



DTC144EE (26)
(Q2012, 2018, 2035)



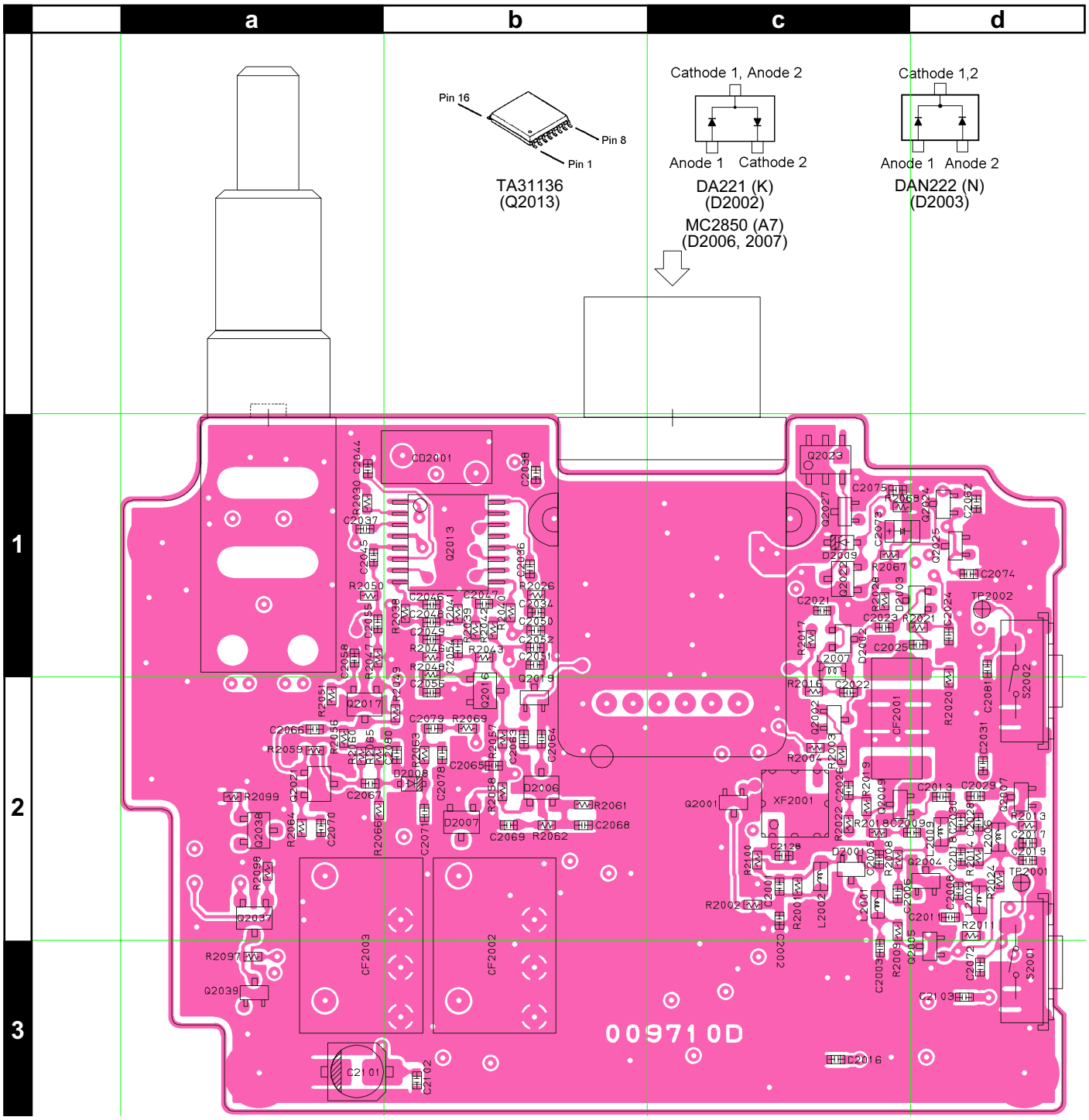
DAN222 (N)
(D2004, 2005)

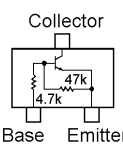


DAP222 (P)
(D2001)

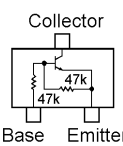
AF Unit (Lot 3 ~ 6)

Parts Layout (Side B)

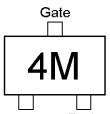




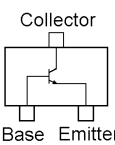
DTC143ZE (E23)
(Q2027)



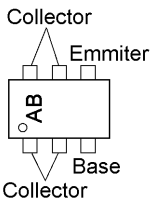
DTC144EE (26)
(Q2001, 2005, 2019, 2025, 2039)



2SJ364 (4M)
(Q2037, 2038)



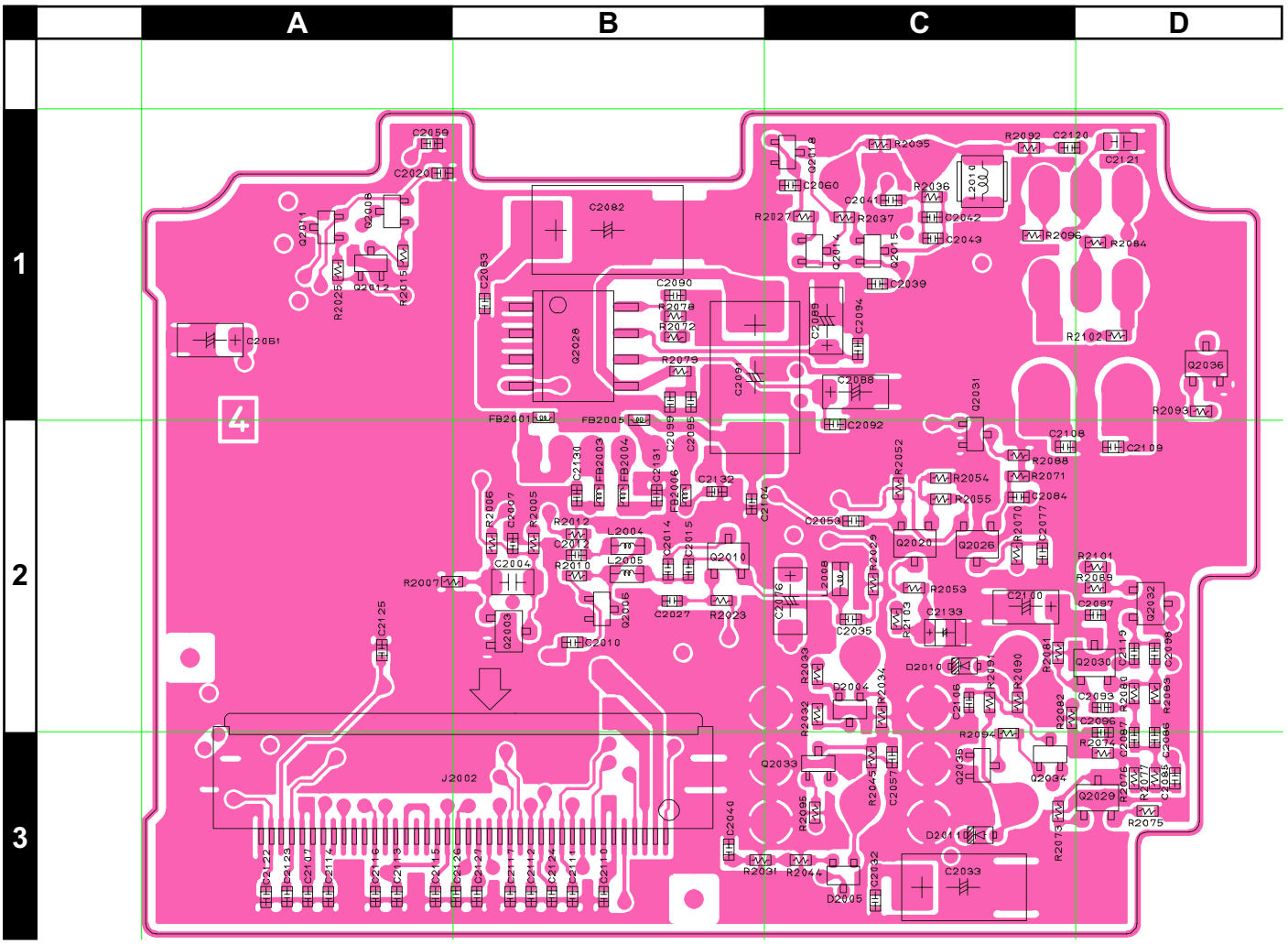
2SC4154 (LE)
(Q2016, 2017, 2021, 2022)
2SC4915 (QY)
(Q2002, 2004, 2007, 2009)

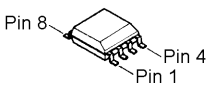


CPH6102 (AB)
(Q2023)

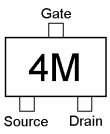
AF Unit (Lot 7 ~)

Parts Layout (Side A)

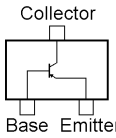




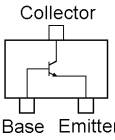
TDA7233D
(Q2028)



2SJ364 (4M)
(Q2020, 2026, 2032)



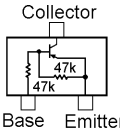
2SA1774 (FR)
(Q2008, 2011, 2014, 2015, 2033, 2034)



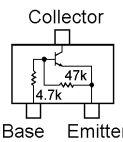
2SC4154 (LE)
(Q2003, 2029, 2030, 2036)

2SC4400 (RT4)
(Q2010)

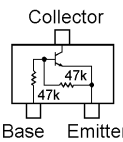
2SC4915 (QY)
(Q2006)



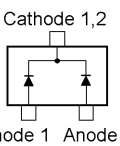
DTA144EE (16)
(Q2024)



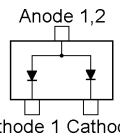
DTC143ZE (E23)
(Q2031)



DTC144EE (26)
(Q2012, 2018, 2035)



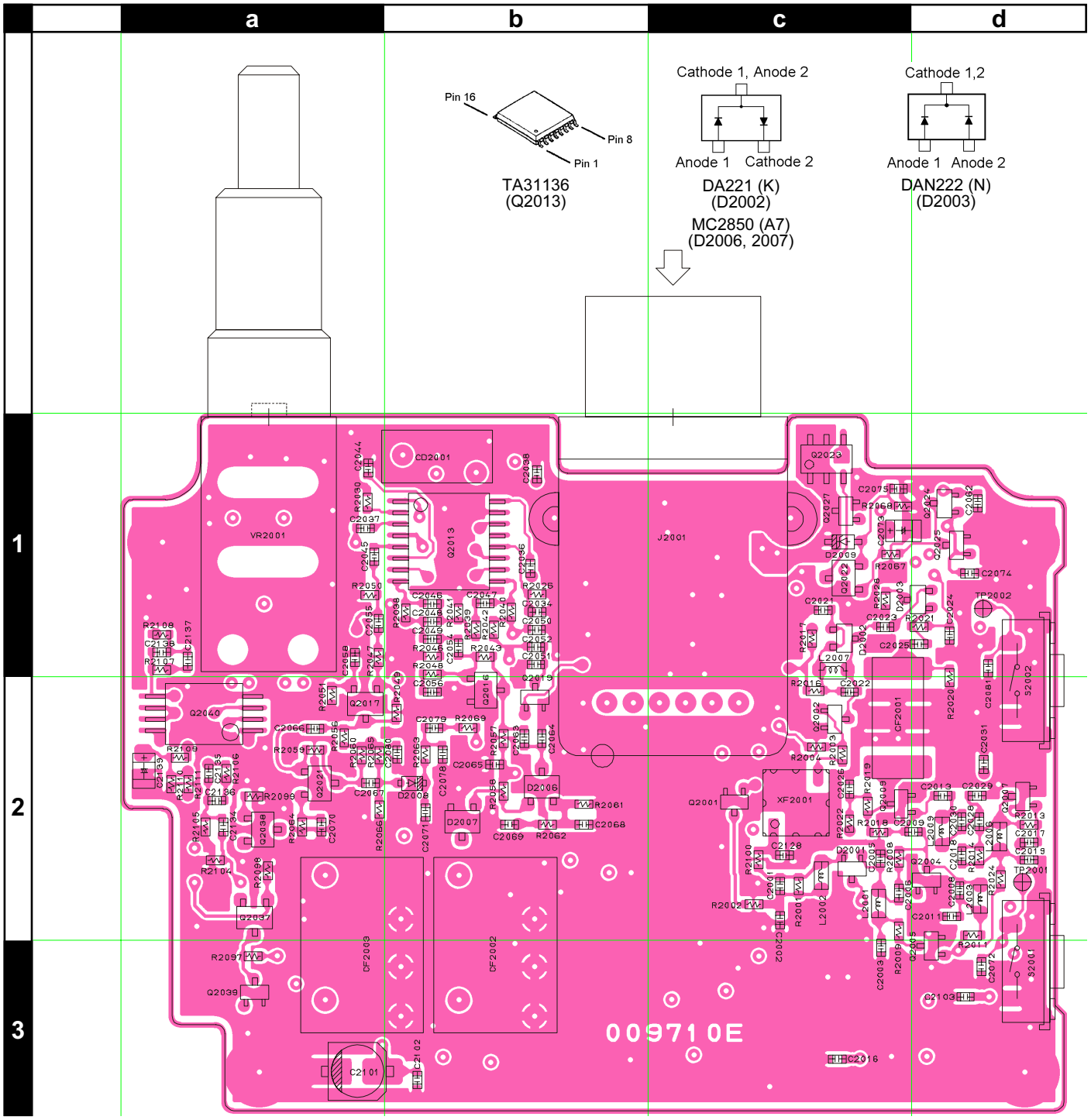
DAN222 (N)
(D2004, 2005)

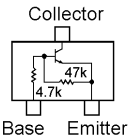


DAP222 (P)
(D2001)

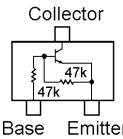
AF Unit (Lot 7 ~)

Parts Layout (Side B)

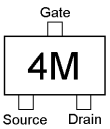




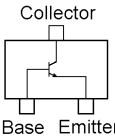
DTC143ZE (E23)
(Q2027)



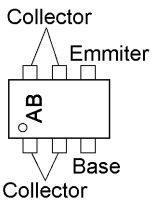
DTC144EE (26)
(Q2001, 2005, 2019, 2025, 2039)



2SJ364 (4M)
(Q2037, 2038)



2SC4154 (LE)
(Q2016, 2017, 2021, 2022)
2SC4915 (QY)
(Q2002, 2004, 2007, 2009)



CPH6102 (AB)
(Q2023)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2313001				
	Printed Circuit Board				AM002N000	FR009710C		1-		
						FR009710D		3-		
						FR009710E		7-		
C 2001	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	c2
C 2002	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 2003	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 2004	CHIP CAP.	0.47uF	25V	B	GRM40B474K25PT	K22140824		1-	A	B2
C 2005	CHIP CAP.	68pF	50V	CH	UMK105CH680JW-F	K22178278		1-	B	c2
C 2006	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 2007	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 2008	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	B	d2
C 2009	CHIP CAP.	12pF	50V	CH	UMK105CH120JW-F	K22178260		1-	B	c2
C 2010	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 2011	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 2012	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 2013	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d2
C 2014	CHIP CAP.	180pF	25V	CH	GRM36CH181J25PT	K22148201		1-	A	B2
C 2015	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	B2
C 2016	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 2017	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d2
C 2018	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	B	d2
C 2019	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 2020	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A1
C 2021	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c1
C 2022	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	c2
C 2023	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	B	c1
C 2025	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 2026	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 2027	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 2028	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	B	d2
C 2029	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	d2
C 2030	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	d2
C 2031	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 2032	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C3
C 2033	CHIP TA.CAP.	47uF	10V		TEMSVC1A476M12R	K78100024		1-	A	C3
C 2034	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b1
C 2035	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 2036	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 2037	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 2038	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 2040	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B3
C 2041	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	A	C1
C 2042	CHIP CAP.	330pF	50V	B	UMK105B331KW-F	K22178823		1-	A	C1
C 2043	CHIP CAP.	0.0022uF	50V	B	GRM36B222K50PT	K22178813		1-	A	C1
C 2044	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 2045	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 2046	CHIP CAP.	470pF	50V	B	UMK105B471KW-F	K22178825		1-	B	b1
C 2047	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	b1
C 2048	CHIP CAP.	470pF	50V	B	UMK105B471KW-F	K22178825		1-	B	b1
C 2049	CHIP CAP.	0.0056uF	25V	B	GRM36B562K50PT	K22148802		1-	B	b1
C 2050	CHIP CAP.	0.033uF	16V	F	GRM36F333Z16PT	K22129003		1-	B	b1
C 2051	CHIP CAP.	0.0039uF	50V	B	UMK105B392KW-F	K22178836		1-	B	b1
C 2052	CHIP CAP.	0.022uF	16V	B	EMK105B223KW-F	K22128813		1-	B	b1
C 2053	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C2
C 2054	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b1
C 2055	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 2056	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2057	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C3
C 2058	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 2059	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	A1
C 2061	CHIP TA.CAP.	22uF	4V		TEMSVA0G226M-8R	K78060023		1-	A	A1
C 2062	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d1
C 2063	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2064	CHIP CAP.	0.0022uF	50V	B	UMK105B222KW-F	K22178833		1-	B	b2
C 2065	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 2066	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 2067	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 2068	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 2069	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b2
C 2070	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 2071	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2073	CHIP TA.CAP.	3.3uF	10V		SKF-1A335M-RP	K78100051		1-	B	c1

AF Unit

Parts Layout

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 2075	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c1
C 2076	CHIP TA.CAP.	4.7uF	6.3V		TEMSVA20J475M-8R	K78080031		1-	A	C2
C 2077	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 2078	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 2079	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2080	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 2082	CHIP TA.CAP.	330uF	10V		TAJD337M010R	K78100067		1-	A	B1
C 2083	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B1
C 2084	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C2
C 2085	CHIP CAP.	0.0068uF	25V	B	GRM36B682J25PT	K22148803		1-	A	D3
C 2086	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D3
C 2087	CHIP CAP.	0.0018uF	50V	B	UMK105B182KW-F	K22178832		1-	A	D3
C 2088	CHIP TA.CAP.	1uF	25V		TEMSVA1E105M-8R	K78140013		1-	A	C1
C 2089	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C1
C 2091	CHIP TA.CAP.	100uF	10V		TEMSVD1A107M12R	K78100031		1-	A	B1
C 2092	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C1
C 2093	CHIP CAP.	0.0018uF	50V	B	UMK105B182KW-F	K22178832		1-	A	D2
C 2094	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	C1
C 2095	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B1
C 2097	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	D2
C 2098	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 2099	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	B1
C 2100	CHIP TA.CAP.	4.7uF	6.3V		TMCMA0J475MTR	K78080026		1-	A	C2
C 2102	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 2103	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d3
C 2104	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 2106	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 2119	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 2119	CHIP CAP.	0.01uF	16V	B	GRP155B11C103JA01E	K22128814		7-	A	D2
C 2120	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C1
C 2121	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	D1
C 2128	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	B	c2
C 2130	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 2131	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 2132	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	B2
C 2133	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	C2
C 2134	CHIP CAP.	0.01uF	16V	B	GRP155B11C103JA01E	K22128814		7-	B	a2
C 2135	CHIP CAP.	0.01uF	16V	B	GRP155B11C103JA01E	K22128814		7-	B	a2
C 2136	CHIP CAP.	0.0022uF	50V	B	GRP155B11H222JA01E	K22178837		7-	B	a2
C 2137	CHIP CAP.	0.1uF	10V	B	GRP155B11A104JA01E	K22108807		7-	B	a1
C 2138	CHIP CAP.	0.1uF	10V	B	GRP155B11A104JA01E	K22108807		7-	B	a1
C 2139	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		7-	B	a2
CD2001	CERAMIC DISC				CDBM450C7	H7900930		1-	B	b1
CF2001	CERAMIC FILTER				SFECV10.7MS2-A-TC	H3900514		1-	B	c2
CF2002	CERAMIC FILTER				ALFYM450F=K	H3900531		1-	B	b2
CF2003	CERAMIC FILTER				ALFYM450G=K	H3900534		1-	B	a2
D 2001	DIODE				DAP222-TL	G2070432		1-	B	c2
D 2002	DIODE				DA221 TL	G2070178		1-	B	c1
D 2003	DIODE				DAN222 TL	G2070174		1-	B	d1
D 2004	DIODE				DAN222 TL	G2070174		1-	A	C2
D 2005	DIODE				DAN222 TL	G2070174		1-	A	C3
D 2006	DIODE				MC2850-T11-1	G2070704		1-	B	b2
D 2007	DIODE				MC2850-T11-1	G2070704		1-	B	b2
D 2008	DIODE				RB751S-40TE61	G2070850		1-	B	b2
D 2009	DIODE				RD6.8UMB2-T1B	G2070438		1-	B	c1
D 2010	DIODE				1SS400 TE61	G2070634		1-	A	C2
D 2011	DIODE				1SS400 TE61	G2070634		1-	A	C3
FB2001	CHIP COIL				BLM10A121SPT	L1690843		1-	A	B1
FB2003	CHIP COIL				BLM10A121SPT	L1690843		1-	A	B2
FB2004	CHIP COIL				BLM10A121SPT	L1690843		1-	A	B2
FB2005	CHIP COIL				BLM10A121SPT	L1690843		1-	A	B1
FB2006	CHIP COIL				BLM10A121SPT	L1690843		1-	A	B2
J 2001	CONNECTOR				KP-269-A1	P1091150A		1-	B	c1
J 2002	CONNECTOR				9637S-40-Y905	P1091170		1-	A	B3
L 2001	M.RFC	0.15uH			LK1608 R15K-T	L1690409		1-	B	c2
L 2002	M.RFC	0.39uH			LK1608 R39K-T	L1690413		1-	B	c2
L 2003	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	B	d2
L 2004	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	B2
L 2005	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	B2
L 2006	M.RFC	0.22uH			LK1608 R22K-T	L1690410		1-	B	d2
L 2007	M.RFC	0.33uH		2%	C1608CB-R33G	L1691106		1-	B	c1
L 2008	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	A	C2
L 2009	M.RFC	0.22uH			LK1608 R22K-T	L1690410		1-	B	d2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 2010	M.RFC	10uH		2%	KQ1008TE100G	L1691216		1-	A	C1
Q 2001	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c2
Q 2002	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	c2
Q 2003	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	B2
Q 2004	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	d2
Q 2005	TRANSISTOR				DTC144EE TL	G3070075		1-	B	d3
Q 2006	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	A	B2
Q 2007	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	d2
Q 2008	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	A1
Q 2009	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	c2
Q 2010	TRANSISTOR				2SC4400-4-TL	G3344008D		1-	A	B2
Q 2011	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	A1
Q 2012	TRANSISTOR				DTC144EE TL	G3070075		1-	A	A1
Q 2013	IC				TA31136FN(EL)	G1091605		1-	B	b1
Q 2014	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	C1
Q 2015	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	C1
Q 2016	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b2
Q 2017	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	a2
Q 2018	TRANSISTOR				DTC144EE TL	G3070075		1-	A	C1
Q 2019	TRANSISTOR				DTC144EE TL	G3070075		1-	B	b2
Q 2020	FET				2SJ364-R(TX)	G3703648R		1-	A	C2
Q 2021	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	a2
Q 2022	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c1
Q 2023	TRANSISTOR				CPH6102-TL	G3070223		1-	B	c1
Q 2024	TRANSISTOR				DTA144EE TL	G3070074		1-	B	d1
Q 2025	TRANSISTOR				DTC144EE TL	G3070075		1-	B	d1
Q 2026	FET				2SJ364-R(TX)	G3703648R		1-	A	C2
Q 2027	TRANSISTOR				DTC143ZE TL	G3070102		1-	B	c1
Q 2028	IC				TDA7233D-TR	G1091112		1-	A	B1
Q 2029	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D3
Q 2030	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D2
Q 2031	TRANSISTOR				DTC143ZE TL	G3070102		1-	A	C2
Q 2032	FET				2SJ364-R(TX)	G3703648R		1-	A	D2
Q 2033	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	C3
Q 2034	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	C3
Q 2035	TRANSISTOR				DTC144EE TL	G3070075		1-	A	C3
Q 2036	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D1
Q 2037	FET				2SJ364-R(TX)	G3703648R		1-	B	a2
Q 2038	FET				2SJ364-R(TX)	G3703648R		1-	B	a2
Q 2039	TRANSISTOR				DTC144EE TL	G3070075		1-	B	a3
Q 2040	IC				NJM2904V-TE1	G1091677		7-	B	a2
R 2002	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c2
R 2003	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c2
R 2004	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	c2
R 2005	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B2
R 2006	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	B2
R 2007	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	A2
R 2008	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	c2
R 2009	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c2
R 2010	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	B2
R 2011	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	d2
R 2012	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 2013	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	d2
R 2015	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A1
R 2016	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c2
R 2017	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 2018	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	c2
R 2019	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c2
R 2021	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	d1
R 2022	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c2
R 2023	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	B2
R 2024	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	d2
R 2025	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A1
R 2026	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b1
R 2027	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C1
R 2028	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 2029	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C2
R 2031	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	B3
R 2032	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2033	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C2
R 2034	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2035	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	A	C1
R 2036	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C1

AF Unit

Parts Layout

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N		LOT	SIDE	LAY ADR
R 2037	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C1
R 2038	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	b1
R 2039	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b1
R 2040	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	b1
R 2041	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	b1
R 2042	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b1
R 2043	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	b1
R 2044	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C3
R 2045	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C3
R 2046	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	b1
R 2047	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a1
R 2048	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	b1
R 2049	CHIP RES.	560k	1/16W	5%	RMC1/16S 564JTH	J24189058		1-	B	b2
R 2050	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a1
R 2051	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	a2
R 2052	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 2053	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2054	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 2055	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	C2
R 2056	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	a2
R 2057	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	b2
R 2058	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b2
R 2059	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a2
R 2060	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	a2
R 2061	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	b2
R 2062	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b2
R 2063	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b2
R 2064	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	a2
R 2065	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a2
R 2066	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	a2
R 2067	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c1
R 2068	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 2069	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	b2
R 2070	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2071	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 2072	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	B1
R 2073	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	C3
R 2074	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	A	D3
R 2075	CHIP RES.	68	1/16W	5%	RMC1/16S 680JTH	J24189011		1-	A	D3
R 2076	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D3
R 2077	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D3
R 2078	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	B1
R 2079	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	B1
R 2080	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	A	D2
R 2081	CHIP RES.	2.2M	1/16W	5%	RMC1/16S 225JTH	J24189065		1-	A	C2
R 2082	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	C2
R 2083	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 2084	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	D1
R 2088	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	C2
R 2089	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D2
R 2090	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2091	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2092	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	A	C1
R 2093	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D1
R 2094	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 2095	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C3
R 2096	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	C1
R 2097	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	a3
R 2098	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a2
R 2099	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a2
R 2100	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c2
R 2100	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		6-	B	c2
R 2101	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D2
R 2102	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D1
R 2103	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		3-	A	C2
R 2104	CHIP RES.	10k	1/16W	0.5%	RR0510P-103-D	J24189143		7-	B	a2
R 2105	CHIP RES.	22k	1/16W	0.5%	RR0510R-223-D	J24189151		7-	B	a2
R 2106	CHIP RES.	470k	1/16W	0.5%	MCR01MZPD4703	J24189332		7-	B	a2
R 2107	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		7-	B	a1
R 2108	CHIP RES.	680	1/16W	0.5%	RR0510P-681-D	J24189115		7-	B	a1
R 2109	CHIP RES.	33k	1/16W	0.5%	RR0510R-333-D	J24189155		7-	B	a2
R 2110	CHIP RES.	33k	1/16W	0.5%	RR0510R-333-D	J24189155		7-	B	a2
R 2111	CHIP RES.	68k	1/16W	0.5%	RR0510R-683-D	J24189163		7-	B	a2

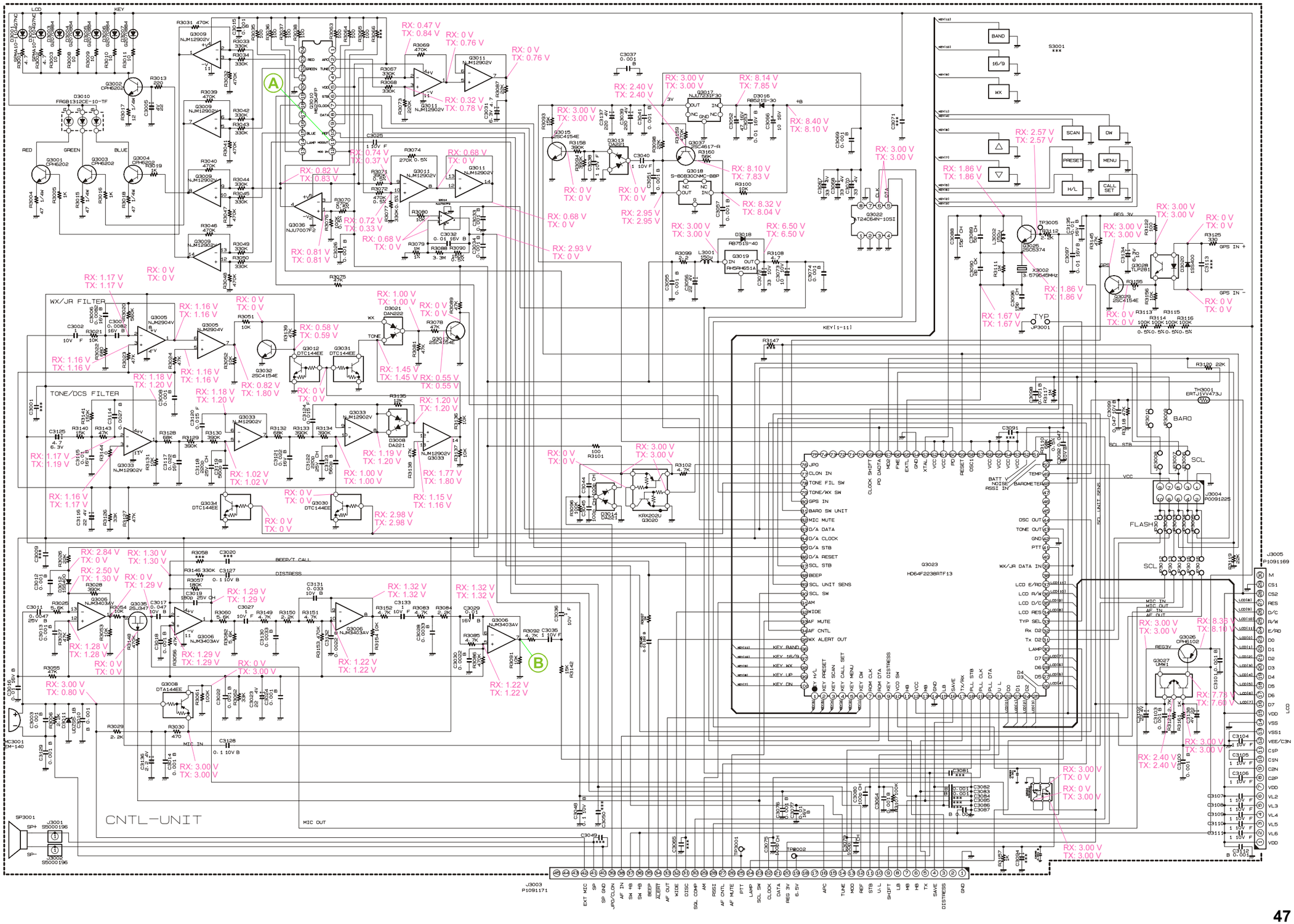
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
S 2001	TACT SWITCH				SKQTLA	N5090110		1-	B	d3
S 2002	TACT SWITCH				SKQTLA	N5090110		1-	B	d2
VR2001	POT.				TP76D275N 20F B203.A203	J62800142		1-	B	a1
XF2001	XTAL FILTER	47.25MHz			MF47R2 47.25MHZ	H1102347		1-	B	c2

AF Unit

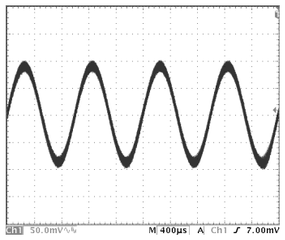
Note

CNTL Unit (Lot 1 ~ 2)

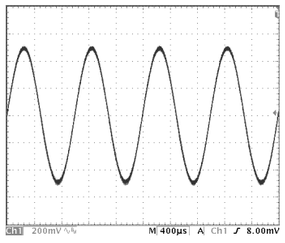
Circuit Diagram



A

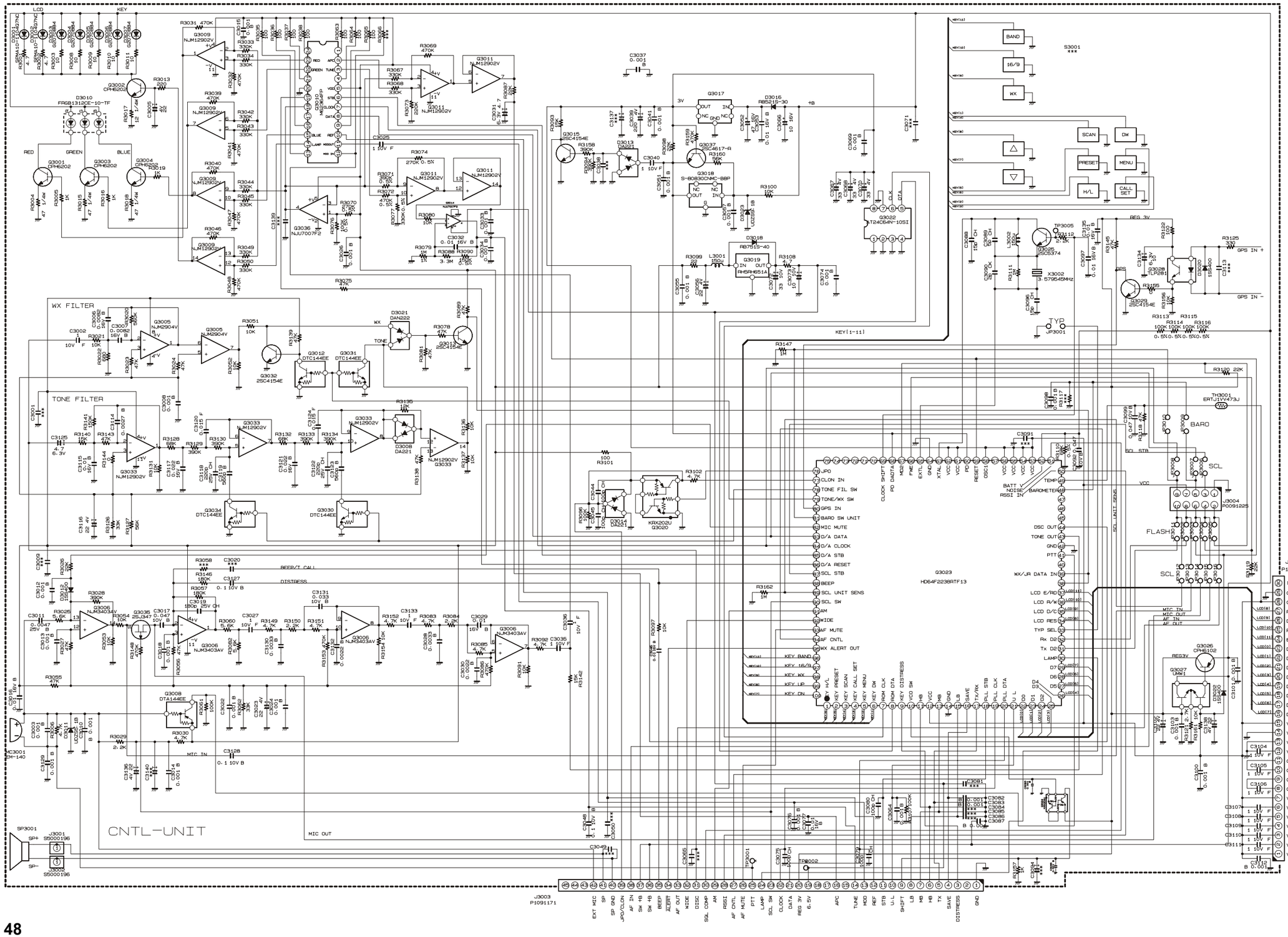


B



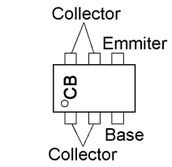
CNTL Unit (Lot 3 ~)

Circuit Diagram

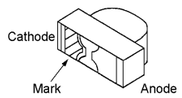


CNTL Unit (Lot 1 ~ 2)

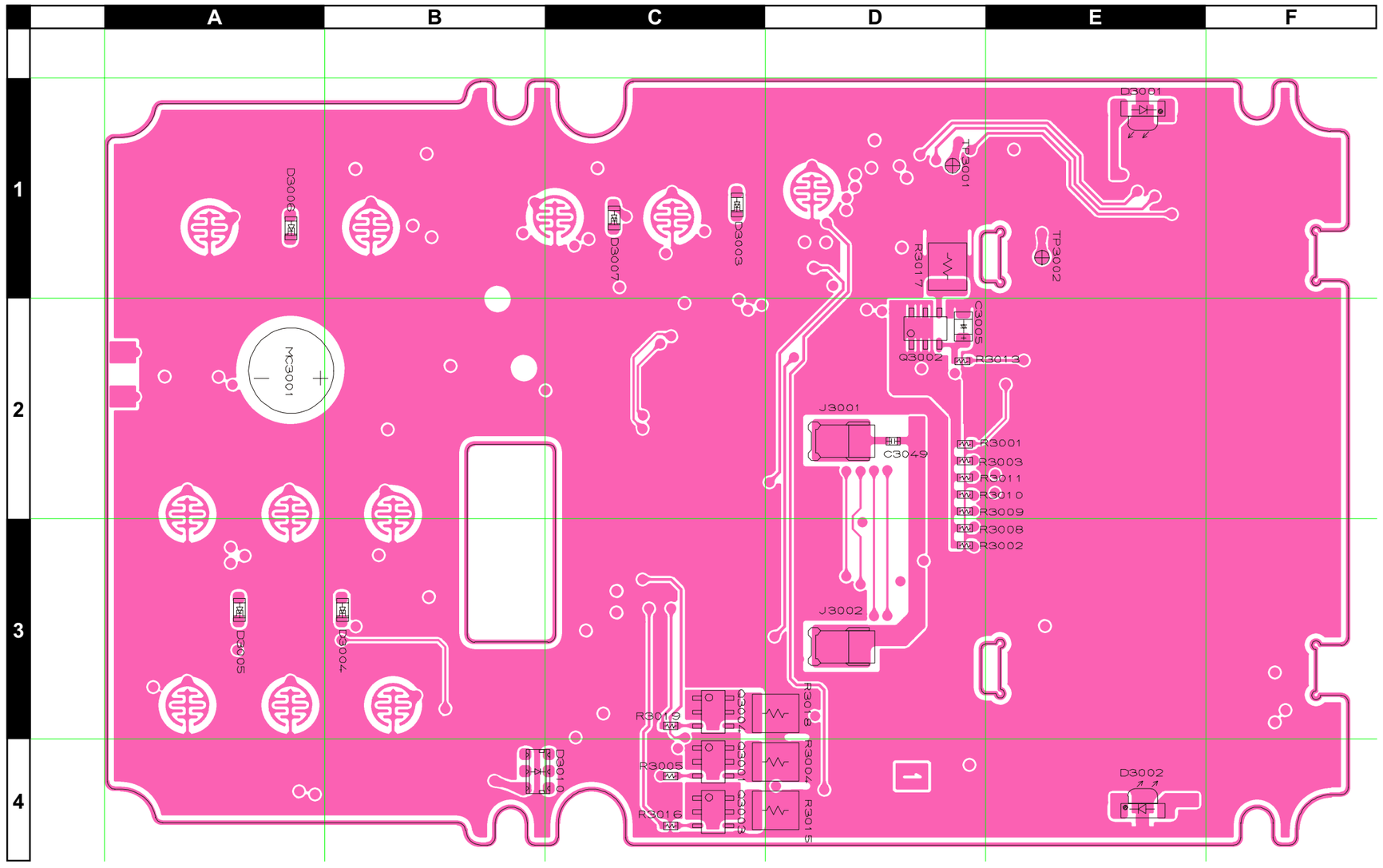
Parts Layout (Side A)



CPH6202 (CB)
(Q3001, 3002, 3003, 3004)

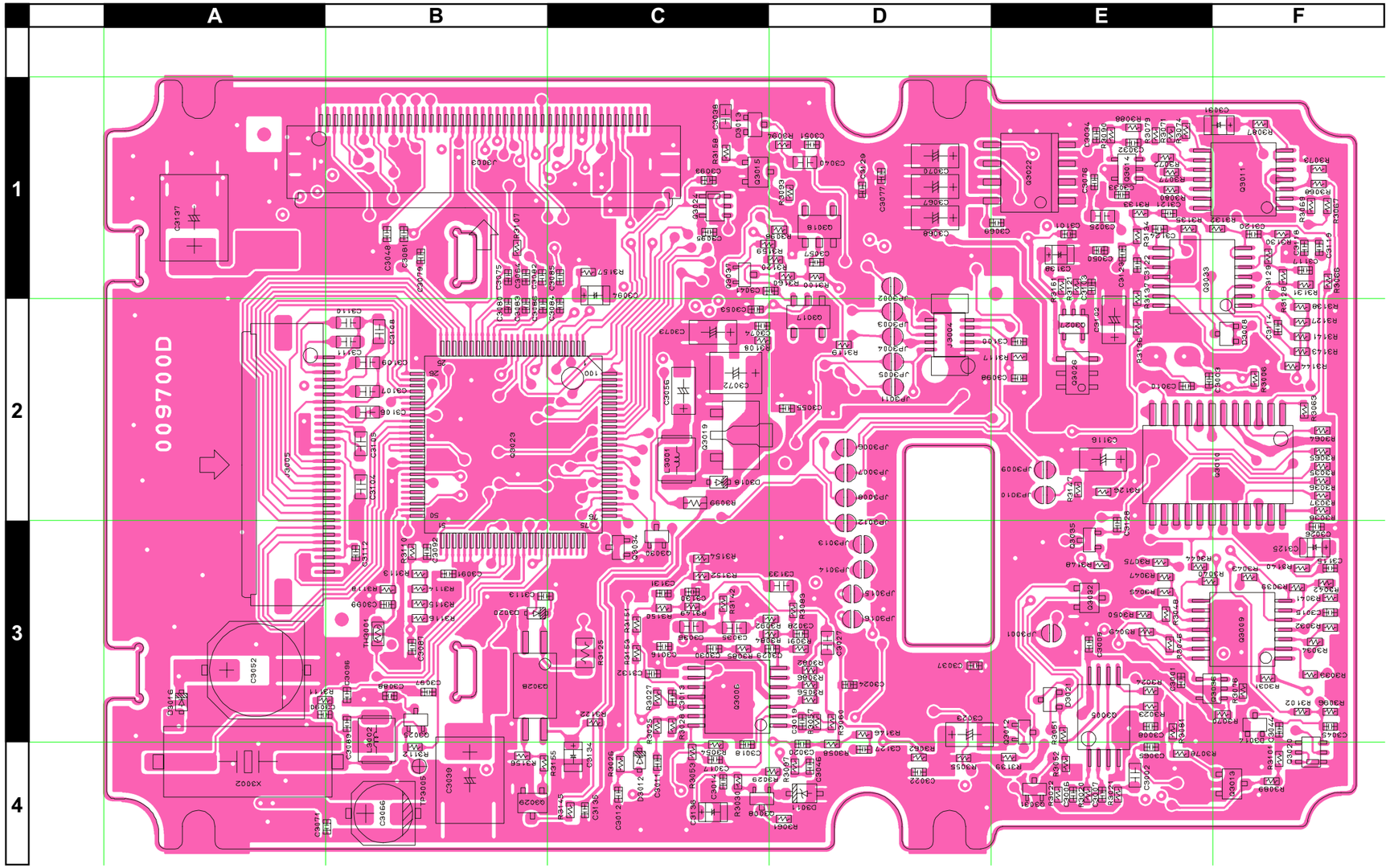


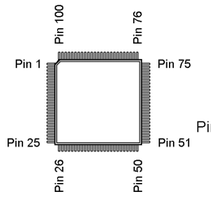
SPMA10
(D3001, 3002)



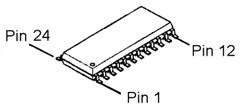
CNTL Unit (Lot 1 ~ 2)

Parts Layout (Side B)

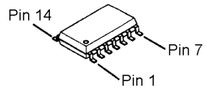




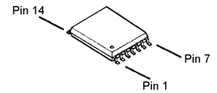
HD64F2238RTF13
(Q3023)



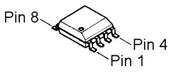
M62364FP
(Q3010)



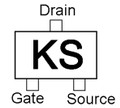
NJM3403AV
(Q3006)



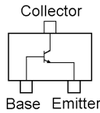
NJM12902V
(Q3009, 3011, 3033)



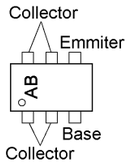
AT24C64
(Q3022)
NJM2904V
(Q3005)



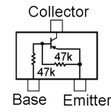
2SJ347 (KS)
(Q3035)



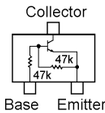
2SC4154 (LE)
(Q3013, 3015,3029, 3032)
2SC4617 (BR)
(Q3037)
2SC5374 (NA)
(Q3025)
2SC5555 (ZD-)
(Q1002, 1006)



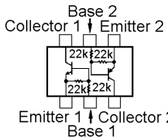
CPH6102 (AB)
(Q3026)



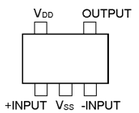
DTA144EE (16)
(Q3008)



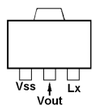
DTC144EE (26)
(Q3012, 3030, 3031, 3034)



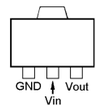
KRX202U
(Q3020, 3024)



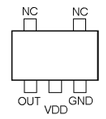
NJU7007
(Q3014, 3036)



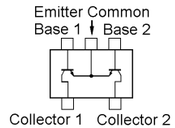
RH5RH651
(Q3019)



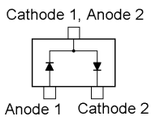
S-812C30AMC
(Q3017)



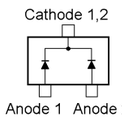
S-80830CNMC
(Q3018)



UMW1 (W1)
(Q3027)

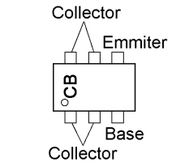


DA221 (K)
(D3008, 3013, 3014)

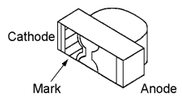


DAN222 (N)
(D3021)

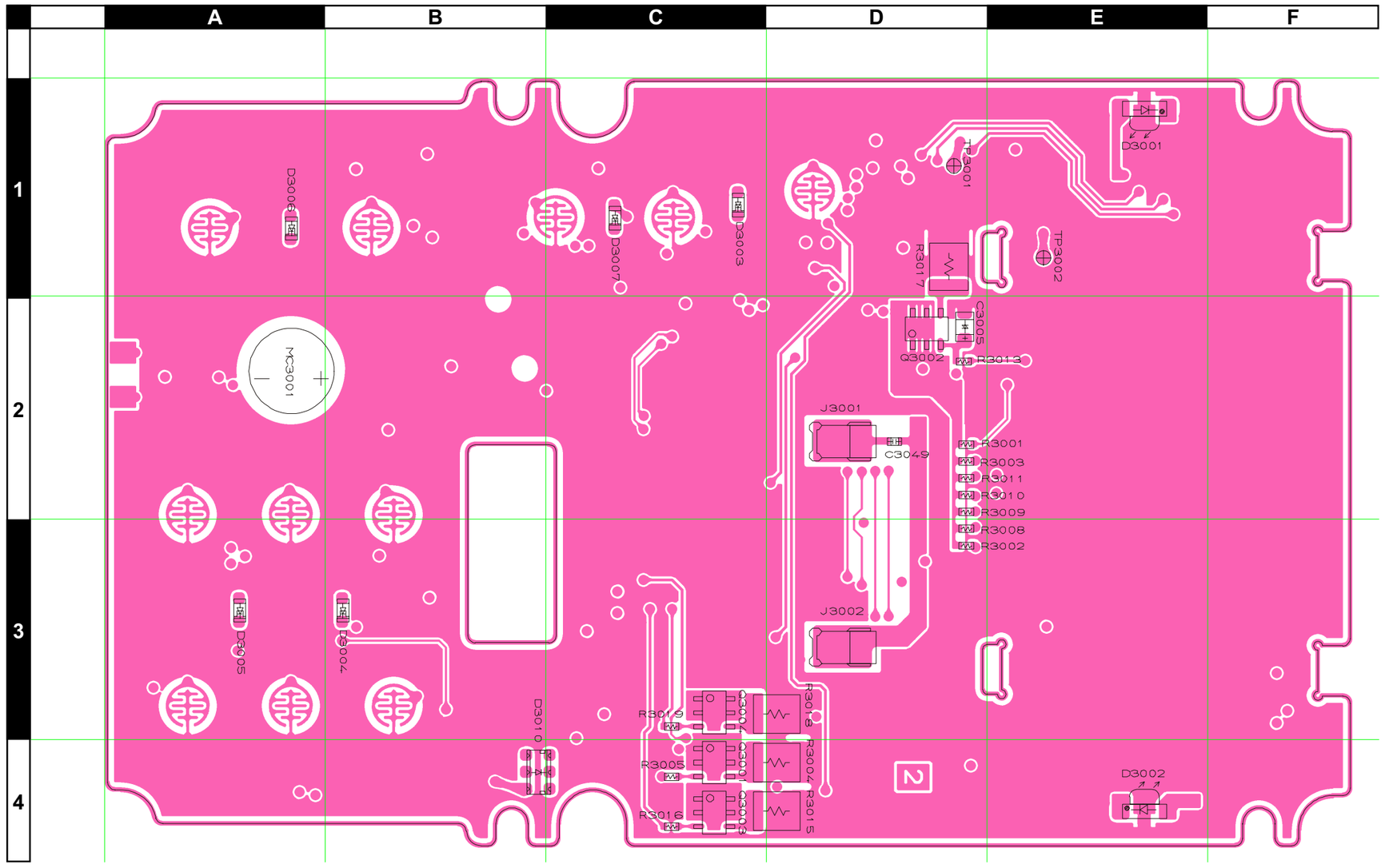
Parts Layout (Side A)



CPH6202 (CB)
(Q3001, 3002, 3003, 3004)

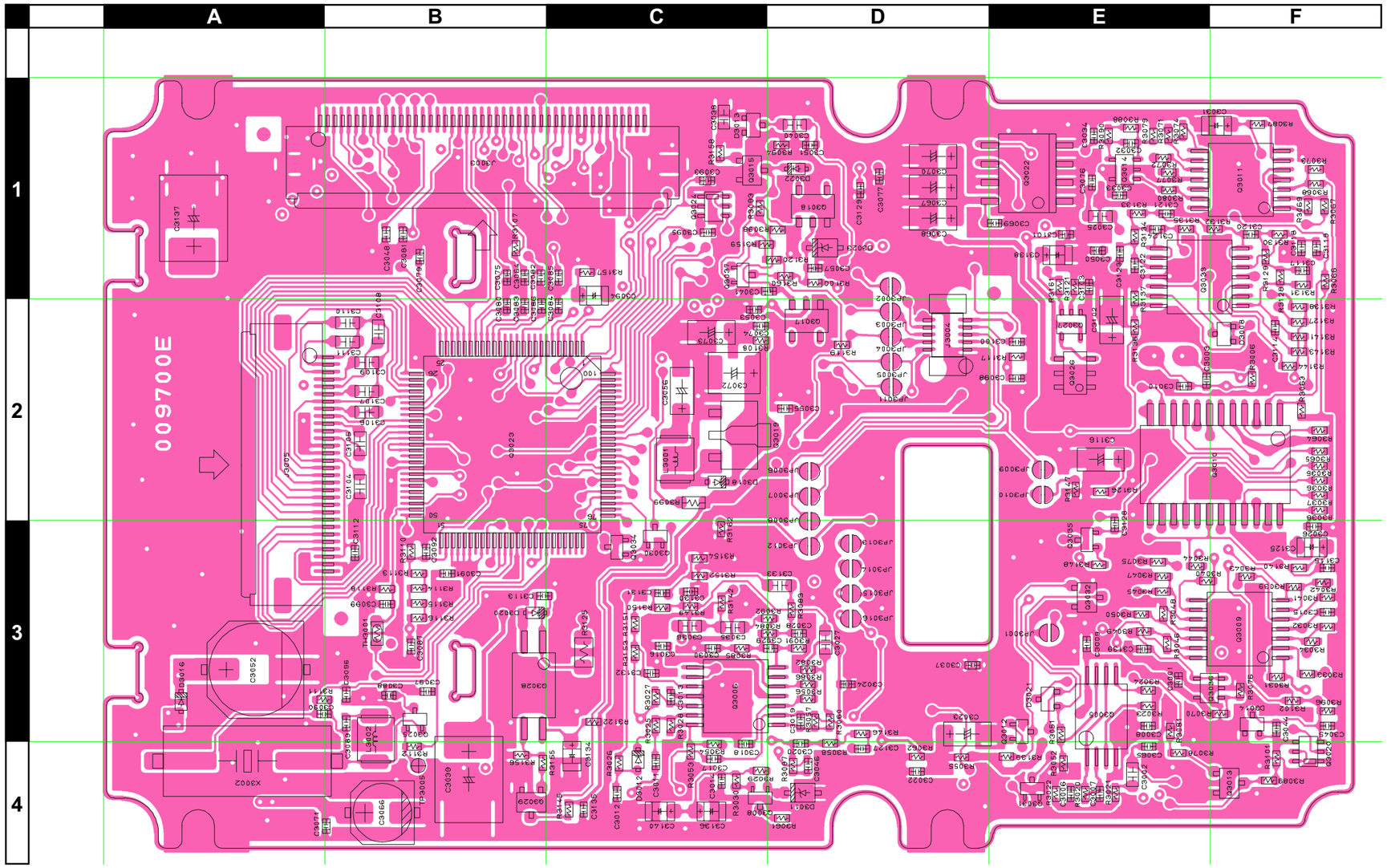


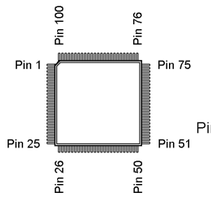
SPMA10
(D3001, 3002)



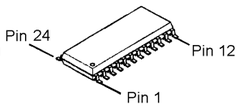
CNTL Unit (Lot 3 ~)

Parts Layout (Side B)

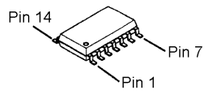




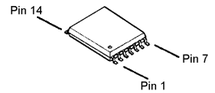
HD64F2238RTF13
(Q3023)



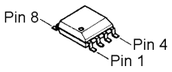
M62364FP
(Q3010)



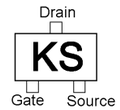
NJM3403AV
(Q3006)



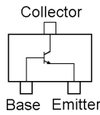
NJM12902V
(Q3009, 3011, 3033)



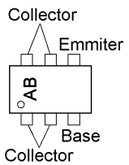
AT24C64
(Q3022)
NJM2904V
(Q3005)



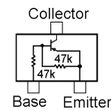
2SJ347 (KS)
(Q3035)



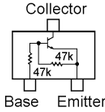
2SC4154 (LE)
(Q3013, 3015,3029, 3032)
2SC4617 (BR)
(Q3037)
2SC5374 (NA)
(Q3025)
2SC5555 (ZD-)
(Q1002, 1006)



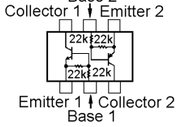
CPH6102 (AB)
(Q3026)



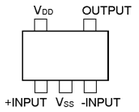
DTA144EE (16)
(Q3008)



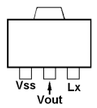
DTC144EE (26)
(Q3012, 3030, 3031, 3034)



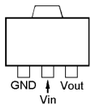
KRX202U
(Q3020, 3024)



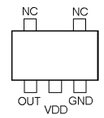
NJU7007
(Q3014, 3036)



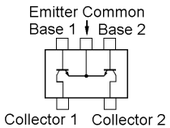
RH5RH651
(Q3019)



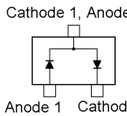
S-812C30AMC
(Q3017)



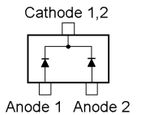
S-80830CNMC
(Q3018)



UMW1 (W1)
(Q3027)



DA221 (K)
(D3008, 3013, 3014)



DAN222 (N)
(D3021)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2312001				
	Printed Circuit Board				AM002N000	FR009700D FR009700E		1- 3-		
C 3002	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	e4
C 3003	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e2
C 3005	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	D2
C 3006	CHIP CAP.	0.0082uF	16V	B	EMK105B822KW-F	K22128809		1-	B	e4
C 3007	CHIP CAP.	0.0082uF	16V	B	EMK105B822KW-F	K22128809		1-	B	e4
C 3008	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e3
C 3010	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e2
C 3011	CHIP CAP.	0.0047uF	25V	B	TMK105B472KW-F	K22148831		1-	B	c4
C 3012	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c4
C 3013	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c3
C 3014	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c4
C 3015	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	f3
C 3016	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 3017	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	c4
C 3018	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c3
C 3019	CHIP CAP.	180pF	25V	CH	TMK105CH181JW-F	K22148244		1-	B	d3
C 3022	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d4
C 3023	CHIP TA.CAP.	22uF	4V		TEMSVA0G226M-8R	K78060023		1-	B	d3
C 3024	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d3
C 3025	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	e1
C 3026	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	f3
C 3027	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	d3
C 3028	CHIP CAP.	0.0033uF	50V	B	UMK105B332KW-F	K22178835		1-	B	d3
C 3029	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d3
C 3030	CHIP CAP.	0.0022uF	50V	B	UMK105B222KW-F	K22178833		1-	B	c3
C 3031	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	f1
C 3032	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e1
C 3033	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3034	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3035	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	c3
C 3036	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	c3
C 3037	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d3
C 3039	CHIP TA.CAP.	220uF	4V		SK4-0G227M-RD	K78060014		1-	B	b4
C 3040	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	d1
C 3041	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c1
C 3044	CHIP CAP.	100pF	50V	CH	GRM36CH101J50PT	K22178236		1-	B	f3
C 3045	CHIP CAP.	100pF	50V	CH	GRM36CH101J50PT	K22178236		1-	B	f3
C 3046	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d4
C 3048	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b1
C 3051	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d1
C 3052	AL.ELECTRO.CAP.	47uF	16V		RV4-16V470MF46-RR2	K48120019		1-	B	a3
C 3053	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 3055	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d2
C 3056	CHIP TA.CAP.	22uF	4V		TEMSVA0G226M-8R	K78060023		1-	B	c2
C 3057	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d1
C 3064	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b1
C 3066	AL.ELECTRO.CAP.	10uF	16V		RV4-16V100MD46-RR2	K48120018		1-	B	b4
C 3067	CHIP TA.CAP.	33uF	4V		TEMSVA0G336M-8R	K78060036		1-	B	d1
C 3068	CHIP TA.CAP.	33uF	4V		TEMSVA0G336M-8R	K78060036		1-	B	d1
C 3069	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3070	CHIP TA.CAP.	33uF	4V		TEMSVA0G336M-8R	K78060036		1-	B	d1
C 3072	CHIP TA.CAP.	33uF	10V		TEMSVB21A336M-8R	K78100047		1-	B	c2
C 3073	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c2
C 3074	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c2
C 3075	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	B	b1
C 3076	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3077	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 3079	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	B	b1
C 3080	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	B	b2
C 3082	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b1
C 3083	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b2
C 3087	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 3088	CHIP CAP.	15pF	50V	CH	GRM36CH150J50PT	K22178216		1-	B	b3
C 3089	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	b3
C 3090	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	B	a3
C 3092	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b3
C 3093	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c1
C 3095	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	c1
C 3096	CHIP CAP.	15pF	50V	CH	GRM36CH150J50PT	K22178216		1-	B	b3
C 3097	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b3

CNTL Unit

Parts Layout

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 3098	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e2
C 3099	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b3
C 3100	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e2
C 3101	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3102	CHIP TA.CAP.	22uF	4V		TEMSVA0G226M-8R	K78060023		1-	B	e2
C 3103	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	e1
C 3104	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3105	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3106	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3107	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3108	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3109	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3110	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3111	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	b2
C 3112	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	b3
C 3114	CHIP CAP.	0.0027uF	50V	B	UMK105B272KW-F	K22178834		1-	B	f2
C 3115	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	f3
C 3116	CHIP TA.CAP.	22uF	4V		TEMSVA0G226M-8R	K78060023		1-	B	e2
C 3117	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	f1
C 3118	CHIP CAP.	220pF	25V	CH	TMK105CH221JW-F	K22148246		1	B	f1
C 3118	CHIP CAP.	150pF	50V	CH	GRM36CH151J50PT	K22178240		2	B	f1
C 3118	CHIP CAP.	150pF	25V	CH	TMK105CH151JW-F	K22148242		3-	B	f1
C 3119	CHIP CAP.	560pF	50V	B	UMK105B561KW-F	K22178826		1-	B	f1
C 3120	CHIP CAP.	0.015uF	50V	F	UMK105F153ZW-F	K22179018		1-	B	f1
C 3121	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	e1
C 3122	CHIP CAP.	220pF	25V	CH	TMK105CH221JW-F	K22148246		1	B	e1
C 3122	CHIP CAP.	150pF	50V	CH	GRM36CH151J50PT	K22178240		2	B	e1
C 3122	CHIP CAP.	150pF	25V	CH	TMK105CH151JW-F	K22148242		3-	B	e1
C 3123	CHIP CAP.	560pF	50V	B	UMK105B561KW-F	K22178826		1-	B	e1
C 3124	CHIP CAP.	0.015uF	50V	F	UMK105F153ZW-F	K22179018		1-	B	e1
C 3125	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	f3
C 3127	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d4
C 3128	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e3
C 3129	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	B	d1
C 3130	CHIP CAP.	0.0033uF	50V	B	UMK105B332KW-F	K22178835		1-	B	c3
C 3131	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	B	c3
C 3132	CHIP CAP.	0.0022uF	50V	B	UMK105B222KW-F	K22178833		1-	B	c3
C 3133	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	d3
C 3134	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	B	c4
C 3135	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c4
C 3136	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	B	c4
C 3138	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	B	e1
D 3001	LED				SPMA10-1104Q7NC	G2070878		1-	A	E1
D 3002	LED				SPMA10-1104Q7NC	G2070878		1-	A	E4
D 3003	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	C1
D 3004	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	B3
D 3005	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	A3
D 3006	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	A1
D 3007	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	C1
D 3008	DIODE				DA221 TL	G2070178		1-	B	f2
D 3010	LED				FRGB1312CE-10-TF	G2070870		1-	A	B4
D 3011	DIODE				UDZS TE-17 5.1B	G2070908		1-	B	d4
D 3012	DIODE				1SS400 TE61	G2070634		1-	B	c4
D 3013	DIODE				DA221 TL	G2070178		1-	B	c1
D 3014	DIODE				DA221 TL	G2070178		1-	B	f3
D 3016	DIODE				RB521S-30 TE61	G2070642		1-	B	a3
D 3018	DIODE				RB751S-40TE61	G2070850		1-	B	c2
D 3020	DIODE				1SS400 TE61	G2070634		1-	B	b3
D 3021	DIODE				DAN222 TL	G2070174		1-	B	e3
D 3022	DIODE				1SS270	G2090408		1-		
D 3022	DIODE				1SS400 TE61	G2070634		3-		
D 3023	DIODE				UDZS TE-17 9.1B	G2070868		1-		
DS3001	LCD MODULE				LM7910FWTU	Q7000426		1-		
J 3001	SHIELD FINGER				2026 3100012	S5000196		1-	A	D2
J 3002	SHIELD FINGER				2026 3100012	S5000196		1-	A	D3
J 3003	CONNECTOR				9637S-45-Y905	P1091171		1-	B	b1
J 3004	CONNECTOR				AXK6F10335YP	P0091225		1-	B	d2
J 3005	CONNECTOR				9637S-30-Y905	P1091169		1-	B	a2
L 3001	M.RFC	150uH			FLC32P-T-151K	L1690661		1-	B	c2
L 3002	M.RFC	150uH			FLC32T-151J	L1690229		1-	B	b3
L 3002	M.RFC	120uH			FLC32T-121J	L1690228		3-	B	b3
MC3001	MIC. ELEMENT				EM-140	M3290032		1-	A	A2
Q 3001	TRANSISTOR				CPH6202-TL	G3070265		1-	A	C4

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 3002	TRANSISTOR				CPH6202-TL	G3070265		1-	A	D2
Q 3003	TRANSISTOR				CPH6202-TL	G3070265		1-	A	C4
Q 3004	TRANSISTOR				CPH6202-TL	G3070265		1-	A	C3
Q 3005	IC				NJM2904V-TE1	G1091677		1-	B	e3
Q 3006	IC				NJM3403AV(TE1)	G1092215		1-	B	c3
Q 3008	TRANSISTOR				DTA144EE TL	G3070074		1-	B	c4
Q 3009	IC				NJM12902V(TE1)	G1093592		1-	B	f3
Q 3010	IC				M62364FP 600D	G1093033		1-	B	f2
Q 3011	IC				NJM12902V(TE1)	G1093592		1-	B	f1
Q 3012	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e3
Q 3013	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	f4
Q 3014	IC				NJU7007F2-TE1	G1093617		1-	B	e1
Q 3015	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c1
Q 3017	IC				S-812C30AMC-C2K-T2	G1093670		1-	B	d2
Q 3018	IC				S-80830CNMC-B8P-T2	G1093618		1-	B	d1
Q 3019	IC				RH5RH651A-T1	G1092598		1-	B	c2
Q 3019	IC				XC6371A650PR	G1094017		9-	B	c2
Q 3020	TRANSISTOR				KRX202U-RTK	G3070277		1-	B	f4
Q 3022	IC				AT24C64N-10SI-1.8	G1093171		1-	B	e1
Q 3023	IC				HD64F2238RTF13	*		1-	B	b2
Q 3024	TRANSISTOR				KRX202U-RTK	G3070277		1-	B	c1
Q 3025	TRANSISTOR				2SC5374-TL	G3353748		1-	B	b3
Q 3026	TRANSISTOR				CPH6102-TL	G3070223		1-	B	e2
Q 3027	TRANSISTOR				UMW1 TR	G3070078		1-	B	e2
Q 3028	PHOTO COUPLER				TLP281(GB-TP)	G0090037		1-	B	b3
Q 3029	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	b4
Q 3030	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c3
Q 3031	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e4
Q 3032	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	e3
Q 3033	IC				NJM12902V(TE1)	G1093592		1-	B	e1
Q 3034	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c3
Q 3035	FET				2SJ347 TE85R	G3703477		1-	B	e3
Q 3036	IC				NJU7007F2-TE1	G1093617		1-	B	e3
Q 3037	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	c1
R 3001	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	A	D2
R 3002	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	A	D3
R 3003	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	D2
R 3004	CHIP RES.	47	1/4W	5%	RMC1/4 470JATP	J24245470		1-	A	D4
R 3005	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C4
R 3006	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	f2
R 3008	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	D3
R 3009	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	D2
R 3010	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	D2
R 3011	CHIP RES.	10	1/16W	5%	RMC1/16S 100JTH	J24189001		1-	A	D2
R 3013	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	D2
R 3015	CHIP RES.	47	1/4W	5%	RMC1/4 470JATP	J24245470		1-	A	D4
R 3016	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C4
R 3017	CHIP RES.	12	1/4W	5%	RMC1/4 120JATP	J24245120		1-	A	D1
R 3018	CHIP RES.	47	1/4W	5%	RMC1/4 470JATP	J24245470		1-	A	D3
R 3019	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 3020	CHIP RES.	560k	1/16W	5%	RMC1/16S 564JTH	J24189058		1-	B	e4
R 3021	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e4
R 3022	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	e4
R 3023	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e3
R 3024	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e3
R 3025	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	c3
R 3026	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c4
R 3027	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c3
R 3028	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	c3
R 3029	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d4
R 3030	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c4
R 3031	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	f3
R 3032	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	f3
R 3033	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f3
R 3034	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f3
R 3035	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3036	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3037	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3038	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3039	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	f3
R 3040	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e3
R 3041	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	f3
R 3042	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f3

*: Please contact VERTEX STANDARD.

CNTL Unit

Parts Layout

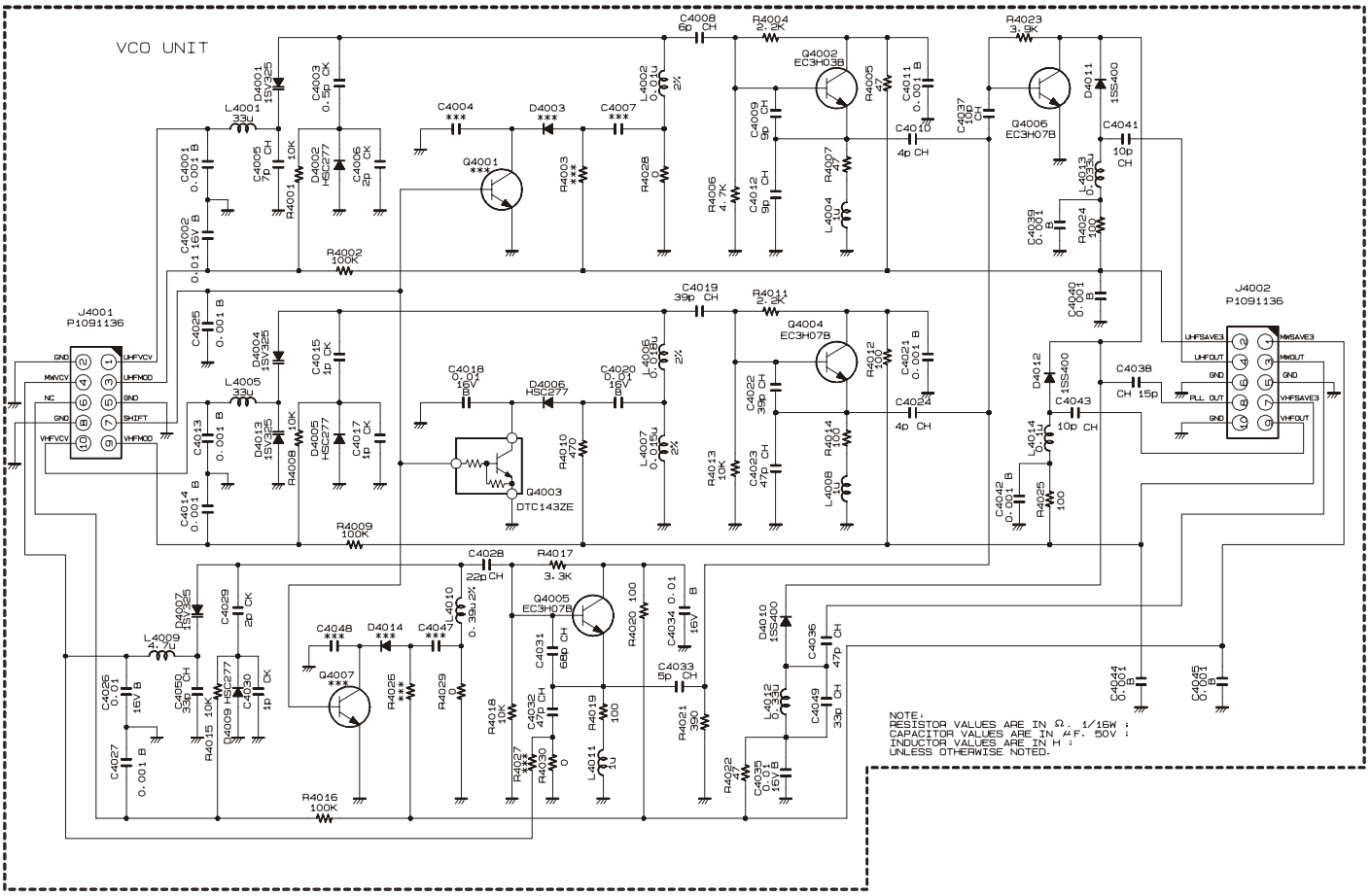
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 3043	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f3
R 3044	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	e3
R 3045	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	e3
R 3046	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e3
R 3047	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e3
R 3048	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e3
R 3049	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	e3
R 3050	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	e3
R 3051	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e3
R 3052	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e4
R 3053	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c4
R 3054	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c3
R 3055	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d4
R 3056	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d3
R 3057	CHIP RES.	180k	1/16W	5%	RMC1/16S 184JTH	J24189052		1-	B	d3
R 3060	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	d3
R 3061	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d4
R 3062	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	d4
R 3063	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3064	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3065	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f2
R 3067	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f1
R 3068	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	f1
R 3069	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	f1
R 3070	CHIP RES.	270k	1/16W	0.5%	MCR01MZPD2703	J24189329		1-	B	f3
R 3071	CHIP RES.	390k	1/16W	0.5%	MCR01MZPD3903	J24189331		1-	B	e1
R 3072	CHIP RES.	470k	1/16W	0.5%	MCR01MZPD4703	J24189332		1-	B	e1
R 3073	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	f1
R 3074	CHIP RES.	270k	1/16W	0.5%	MCR01MZPD2703	J24189329		1-	B	e1
R 3075	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e3
R 3076	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		1-	B	f3
R 3077	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	B	e1
R 3078	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e4
R 3079	CHIP RES.	1M	1/16W	1%	MCR01MZSF1004	J24189333		1-	B	e1
R 3080	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e1
R 3081	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e3
R 3082	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	d3
R 3083	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	d3
R 3084	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c3
R 3085	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c3
R 3086	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	d3
R 3087	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	f1
R 3088	CHIP RES.	3.3M	1/16W	5%	RMC1/16S 335JTH	J24189324		1-	B	e1
R 3089	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	f4
R 3090	CHIP RES.	150k	1/16W	0.5%	MCR01MZPD1503	J24189328		1-	B	e1
R 3091	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d3
R 3092	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c3
R 3093	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	d1
R 3094	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	d1
R 3096	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f3
R 3097	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d4
R 3098	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d1
R 3099	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	c2
R 3100	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d1
R 3101	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f4
R 3102	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	f3
R 3107	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b1
R 3108	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	c2
R 3110	CHIP RES.	68k	1/16W	0.5%	RR0510R-683-D	J24189163		1-	B	b3
R 3111	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	a3
R 3112	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b4
R 3113	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		1-	B	b3
R 3114	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		1-	B	b3
R 3115	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		1-	B	b3
R 3116	CHIP RES.	100k	1/16W	0.5%	RR0510R-104-D	J24189167		1-	B	b3
R 3118	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	b3
R 3119	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d2
R 3120	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d1
R 3121	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	B	e1
R 3122	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 3125	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		1-	B	c3
R 3126	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	e2
R 3127	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	f2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 3128	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	B	f1
R 3129	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	f1
R 3130	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	f1
R 3131	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f1
R 3132	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	B	f1
R 3133	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	e1
R 3134	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	e1
R 3135	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	e1
R 3136	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e2
R 3137	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e1
R 3138	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	f2
R 3139	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e4
R 3140	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	f3
R 3141	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	f2
R 3142	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	c3
R 3143	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	f2
R 3144	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	f2
R 3145	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c4
R 3146	CHIP RES.	180k	1/16W	5%	RMC1/16S 184JTH	J24189052		1-	B	d3
R 3147	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	e2
R 3148	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e3
R 3149	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c3
R 3150	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c3
R 3151	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c3
R 3152	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c3
R 3153	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	c3
R 3154	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c3
R 3155	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b4
R 3156	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b4
R 3157	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 3158	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1	B	c1
R 3158	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		2-	B	c1
R 3159	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	c1
R 3160	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	d1
R 3161	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e1
R 3162	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-		
TH3001	THERMISTOR				ERTJ1VV473J	G9090122		1-	B	b3
X 3002	XTAL SX-1319	3.579545MHz			3.579545MHZ	H0103229		1-	B	a4
	REFLECTOR SHEET					RA0399900		1-		
	DOUBLE FACE				(LCD)	RA014250A		1-		
	LIGHT GUIDE				(LCD)	RA0399100		1-		

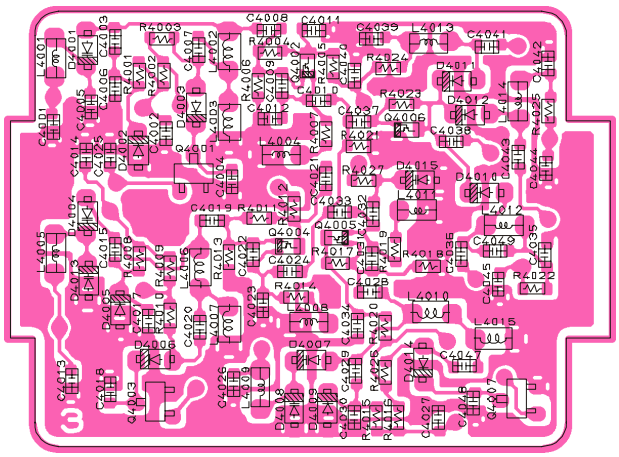
Note

VCO Unit

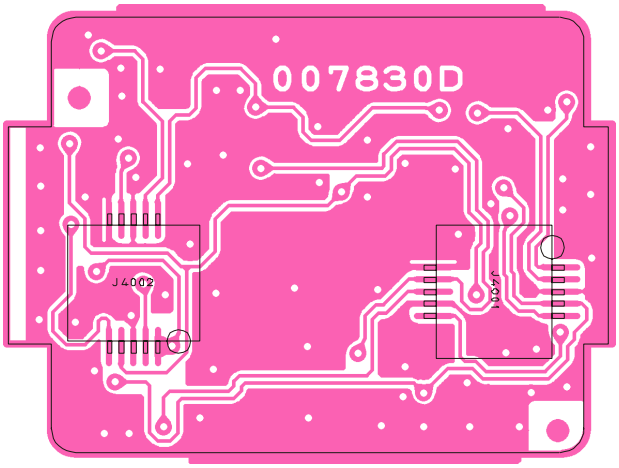
Circuit Diagram



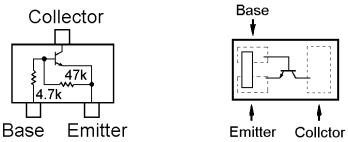
Parts Layout



Side A



Side B



DTC143ZE (E23)
(Q4003)

EC3H03B (C)
(Q4002)

EC3H07B (G)
(Q4004, 4005, 4006)

VCO Unit

Parts List

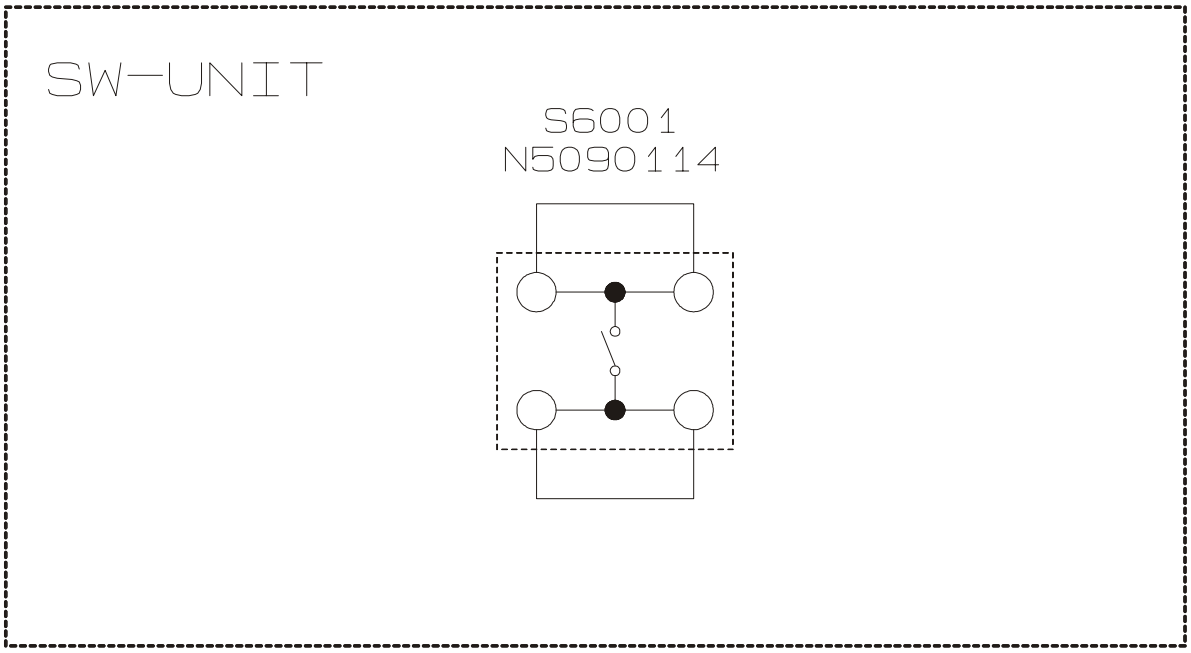
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2315001				
	Printed Circuit Board				AH009M000	FR007830D		1-		
C 4001	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4002	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4003	CHIP CAP.	0.5pF	50V	CK	UMK105CK0R5CW-F	K22178247		1-	A	
C 4005	CHIP CAP.	7pF	50V	CH	UMK105CH070DW-F	K22178255		1-	A	
C 4006	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	
C 4008	CHIP CAP.	6pF	50V	CH	UMK105CH060DW-F	K22178254		1	A	
C 4008	CHIP CAP.	6pF	50V	CH	GRM36CH060B50PT	K22178293		2-	A	
C 4009	CHIP CAP.	9pF	50V	CH	UMK105CH090DW-F	K22178257		1	A	
C 4009	CHIP CAP.	9pF	50V	CH	GRM36CH090B50PT	K22178296		2-	A	
C 4009	CHIP CAP.	8pF	50V	CH	GRM36CH080B50PT	K22178295		4-	A	
C 4010	CHIP CAP.	4pF	50V	CH	UMK105CH040CW-F	K22178252		1-	A	
C 4011	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4012	CHIP CAP.	9pF	50V	CH	UMK105CH090DW-F	K22178257		1	A	
C 4012	CHIP CAP.	8pF	50V	CH	GRM36CH080B50PT	K22178295		2-	A	
C 4013	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4014	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4015	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	A	
C 4017	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	A	
C 4018	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4019	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	A	
C 4020	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4021	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4022	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	A	
C 4023	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	A	
C 4024	CHIP CAP.	4pF	50V	CH	UMK105CH040CW-F	K22178252		1-	A	
C 4025	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4026	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4027	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4028	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	A	
C 4029	CHIP CAP.	2pF	50V	CK	UMK105CK020CW-F	K22178250		1-	A	
C 4030	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	A	
C 4031	CHIP CAP.	68pF	50V	CH	UMK105CH680JW-F	K22178278		1-	A	
C 4032	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	A	
C 4033	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	A	
C 4034	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4035	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	
C 4036	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	A	
C 4037	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	A	
C 4038	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	A	
C 4039	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4040	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4041	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	A	
C 4042	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4043	CHIP CAP.	10pF	50V	CH	UMK105CH100DW-F	K22178258		1-	A	
C 4044	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4045	CHIP CAP.	0.001uF	50V	B	UMK105B102KW-F	K22178829		1-	A	
C 4049	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	A	
C 4050	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		1-		
D 4001	DIODE				1SV325(TPH3)	G2070848		1-	A	
D 4002	DIODE				HSC277TRF	G2070584		1-	A	
D 4004	DIODE				1SV325(TPH3)	G2070848		1-	A	
D 4005	DIODE				HSC277TRF	G2070584		1-	A	
D 4006	DIODE				HSC277TRF	G2070584		1-	A	
D 4007	DIODE				1SV325(TPH3)	G2070848		1-	A	
D 4009	DIODE				HSC277TRF	G2070584		1-	A	
D 4010	DIODE				1SS400 TE61	G2070634		1-	A	
D 4011	DIODE				1SS400 TE61	G2070634		1-	A	
D 4012	DIODE				1SS400 TE61	G2070634		1-	A	
D 4013	DIODE				1SV325(TPH3)	G2070848		1-	A	
J 4001	CONNECTOR				AXK5F10335YP	P1091136		1-	B	
J 4002	CONNECTOR				AXK5F10335YP	P1091136		1-	B	
L 4001	M.RFC	33uH			LK1608 330M-T	L1690690		1-	A	
L 4002	M.RFC	0.01uH		2%	C1608CB-10NG	L1691032		1-	A	
L 4004	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	
L 4005	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	A	
L 4006	M.RFC	0.018uH		2%	C1608CB-18NG	L1691035		1-	A	
L 4007	M.RFC	0.015uH		2%	C1608CB-15NG	L1691034		1-	A	
L 4008	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	
L 4009	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	A	
L 4010	M.RFC	0.39uH		2%	C1608CB-R39G	L1691107		1-	A	
L 4011	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 4012	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	A	
L 4013	M.RFC	0.033uH			HK1608 33NJ-T	L1690522		1-	A	
L 4014	M.RFC	0.1uH			LK1608 R10K-T	L1690407		1-	A	
Q 4002	TRANSISTOR				EC3H03B-TL	G3070314		1-	A	
Q 4003	TRANSISTOR				DTC143ZE TL	G3070102		1-	A	
Q 4004	TRANSISTOR				EC3H07B-TL	G3070286		1-	A	
Q 4005	TRANSISTOR				EC3H07B-TL	G3070286		1-	A	
Q 4006	TRANSISTOR				EC3H07B-TL	G3070286		1-	A	
R 4001	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	
R 4002	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	
R 4004	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	
R 4005	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	A	
R 4006	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	
R 4007	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	A	
R 4008	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	
R 4009	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	
R 4010	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	
R 4011	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	
R 4012	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4013	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	
R 4014	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4015	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	
R 4016	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	
R 4017	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	
R 4018	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	
R 4019	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4020	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4021	CHIP RES.	390	1/16W	5%	RMC1/16S 391JTH	J24189020		1-	A	
R 4022	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	A	
R 4023	CHIP RES.	3.9k	1/16W	5%	RMC1/16S 392JTH	J24189032		1-	A	
R 4024	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4025	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	
R 4028	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
R 4029	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
R 4030	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
	SHIELD CASE VCO					RA0400300		1-		

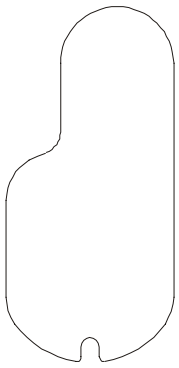
VCO Unit

Note

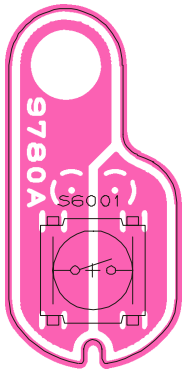
Circuit Diagram



Parts Layout



Side A



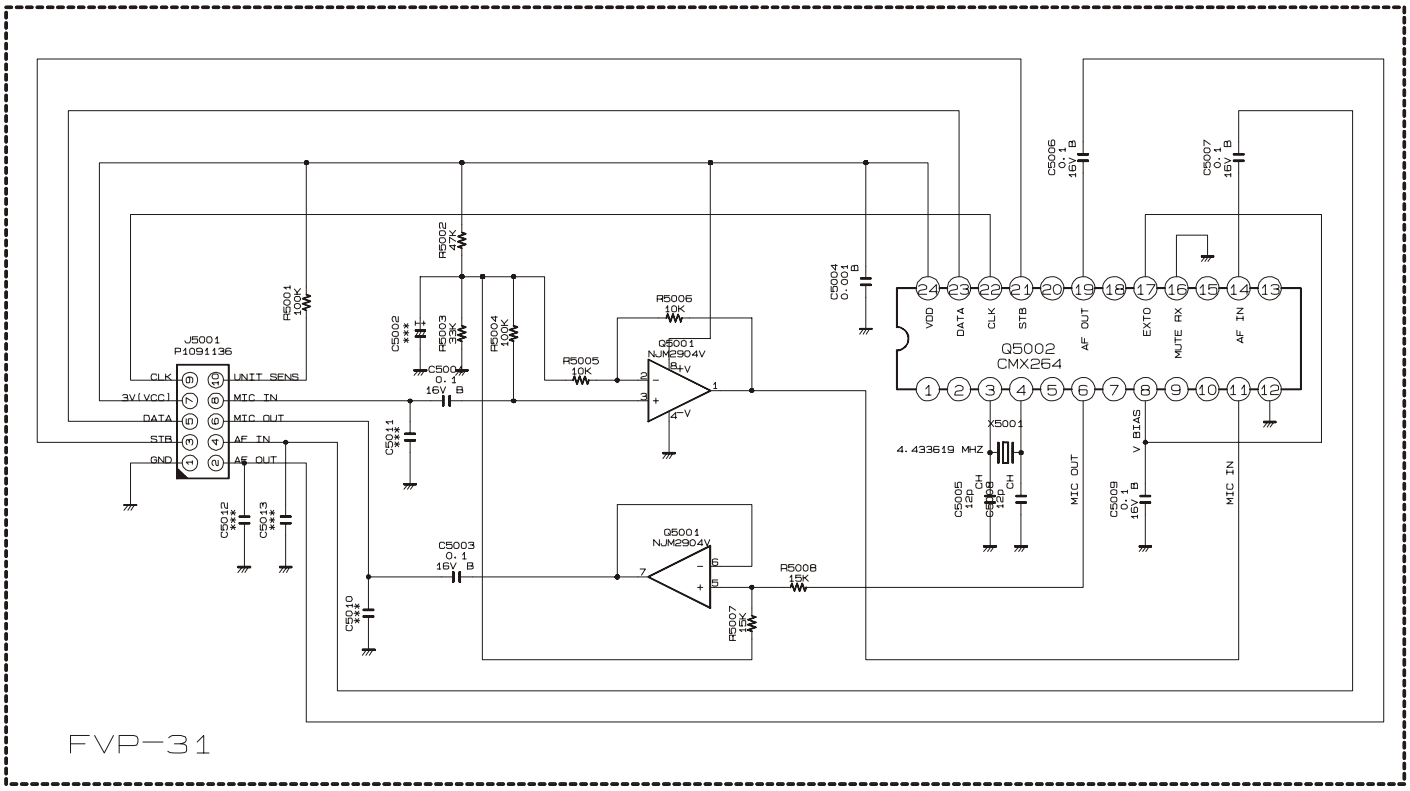
SideB

Parts List

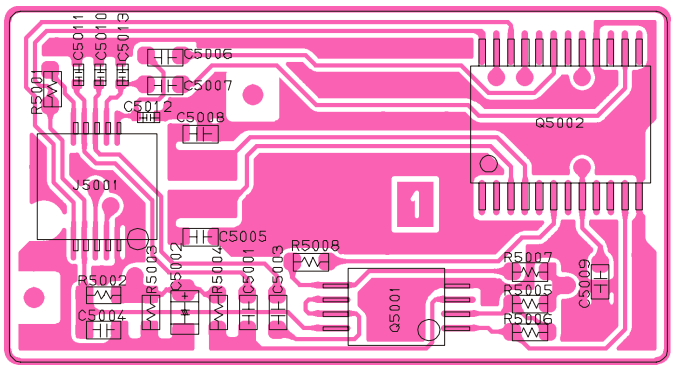
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2374001				
	Printed Circuit Board				AM002N000	FR009780A				
JP6001	WIRE ASSY				GRN 40 2/2	T50504000				
JP6002	WIRE ASSY				GRN 40 2/2	T50504000				

FVP-31 (Option)

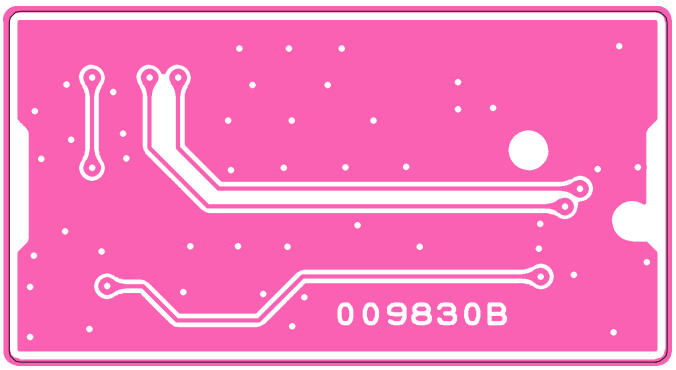
Circuit Diagram



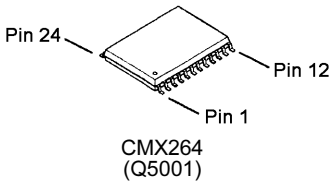
Parts Layout



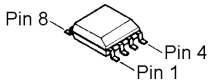
Side A



SideB



CMX264
(Q5001)



NJM2904V
(Q5002)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	Printed Circuit Board				AAD17X000	FR0098300		1-		
C 5001	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
C 5002	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	
C 5003	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
C 5004	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	
C 5005	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	
C 5006	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	
C 5007	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	
C 5008	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	
C 5009	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
J 5001	CONNECTOR				AXK5F10335P	P1091136		1-	A	
Q 5001	IC				NJM2904V-TE1	G1091677		1-	A	
Q 5002	IC				CMX264	G1093777		1-	A	
R 5001	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	
R 5002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	
R 5003	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	
R 5004	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	
R 5005	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	
R 5006	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	
R 5007	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	
R 5008	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	
X 5001	XTAL CSA-309	4.433619MHz			4.433619MHZ	H0103287		1-	A	

STANDARD HORIZON

Marine Division of VERTEX STANDARD

US Headquarters

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