STANDARD HORIZON

VHF/FM Marine Handheld Transceiver

HX270S

SERVICE MANUAL

EM007N90A

Specifications

General

Frequency range:	156 MHz - 163.275 MHz (Marine Band + WX Band)
Channel Steps:	25 kHz
Frequency stability:	± 5 ppm (–22 °F to +140 °F [–30 °C to +60 °C])
Emission type:	16K0G3E
Antenna impedance:	50 Ohms
Supply voltage:	7.2 VDC
Current consumption:	200 mA (Receive) 40 mA (Standby, Saver Off) TX: 1.4 A (H)/0.9 A (M)/0.5 A (L)
Operating Temperature:	–22 °F to +140 °F (–30 °C to +60 °C)
Waterproof rating:	30 minutes @ 1 meter depth (JIS 7)
Case Size (W x H x D):	2.3″ x 4.7″ x 1.2″ (58 x 120 x 30.5 mm)
Weight (Approx):	13.4 oz (380g) with FNB-83

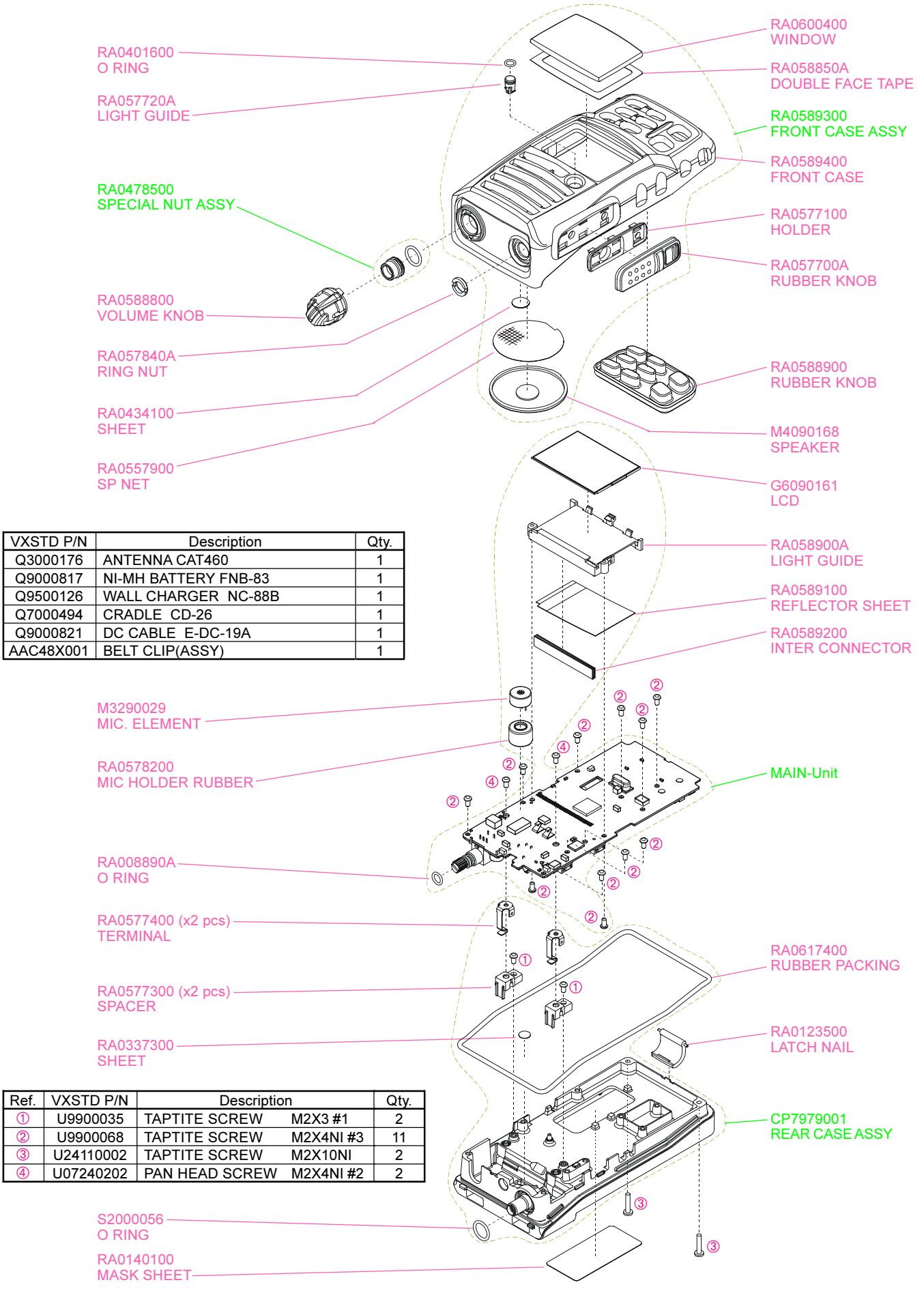
Transmitter

RF output power:	5 W/2.5 W/1 W @7.2 V
Modulation Type:	Variable Reactance
Max deviation:	±5 kHz
Spurious emissions:	At least 73 dB down
Microphone impedance:	2 k-Ohm

Receiver

Circuit type:	Double-conversion superheterodyne
Intermediate Frequencies:	1st: 21.7 MHz 2nd: 450 kHz
Sensitivity:	0.25 μV 12 dB SINAD
Adjacent channel selectivity:	70 dB
Intermodulation response:	70 dB
Selectivity:	12 kHz / 25 kHz (–6 dB/–60 dB)
AF output:	600 mW @ 16 Ohm for 10 % THD (@7.2V)

Exploded View & Miscellaneous Parts



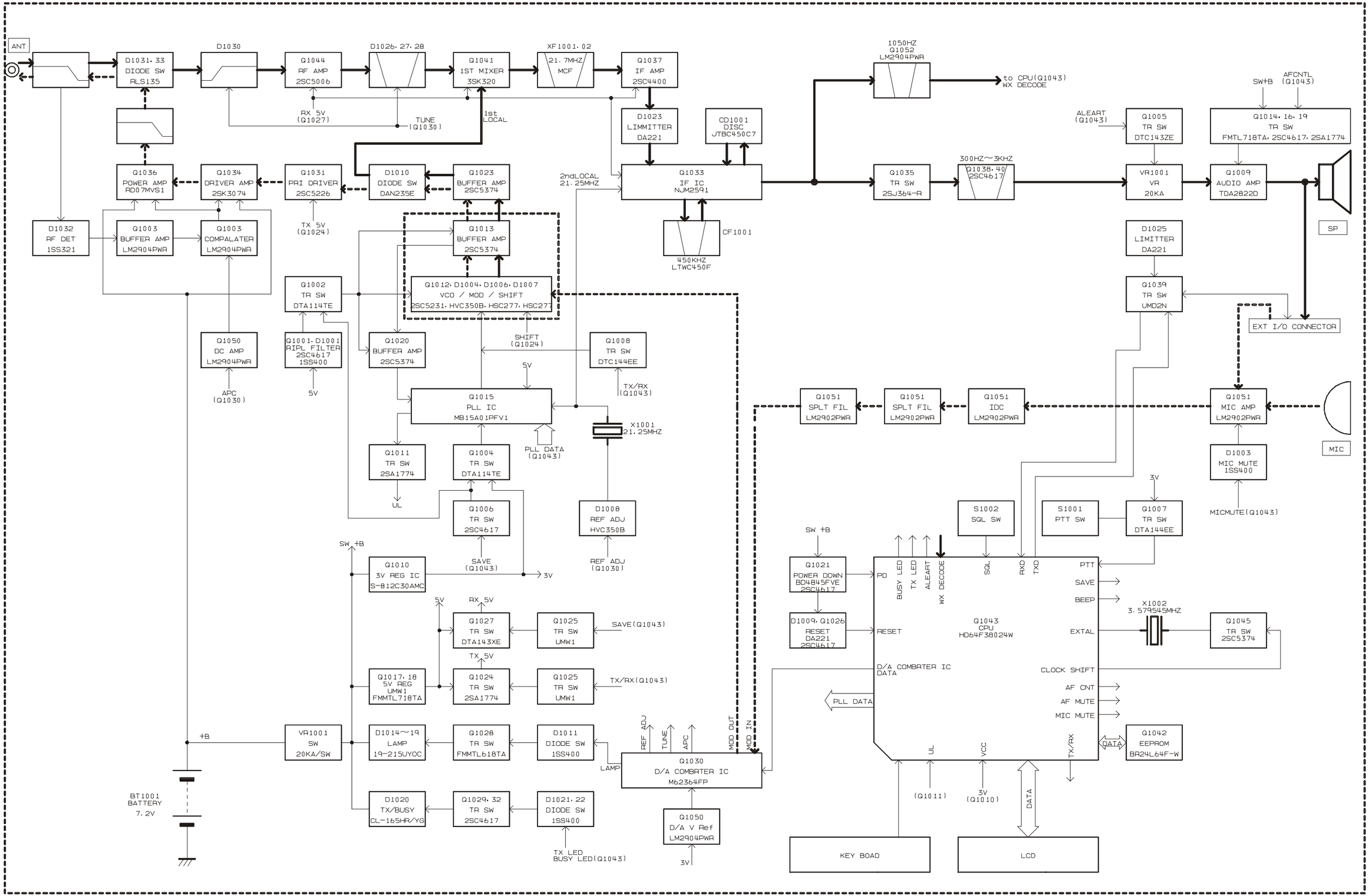
VXSTD P/N	Description	Qty.
Q3000176	ANTENNA CAT460	1
Q9000817	NI-MH BATTERY FNB-83	1
Q9500126	WALL CHARGER NC-88B	1
Q7000494	CRADLE CD-26	1
Q9000821	DC CABLE E-DC-19A	1
AAC48X001	BELT CLIP(ASSY)	1

Ref.	VXSTD P/N	Description		Qty.
①	U9900035	TAPTITE SCREW	M2X3 #1	2
②	U9900068	TAPTITE SCREW	M2X4NI #3	11
③	U24110002	TAPTITE SCREW	M2X10NI	2
④	U07240202	PAN HEAD SCREW	M2X4NI #2	2

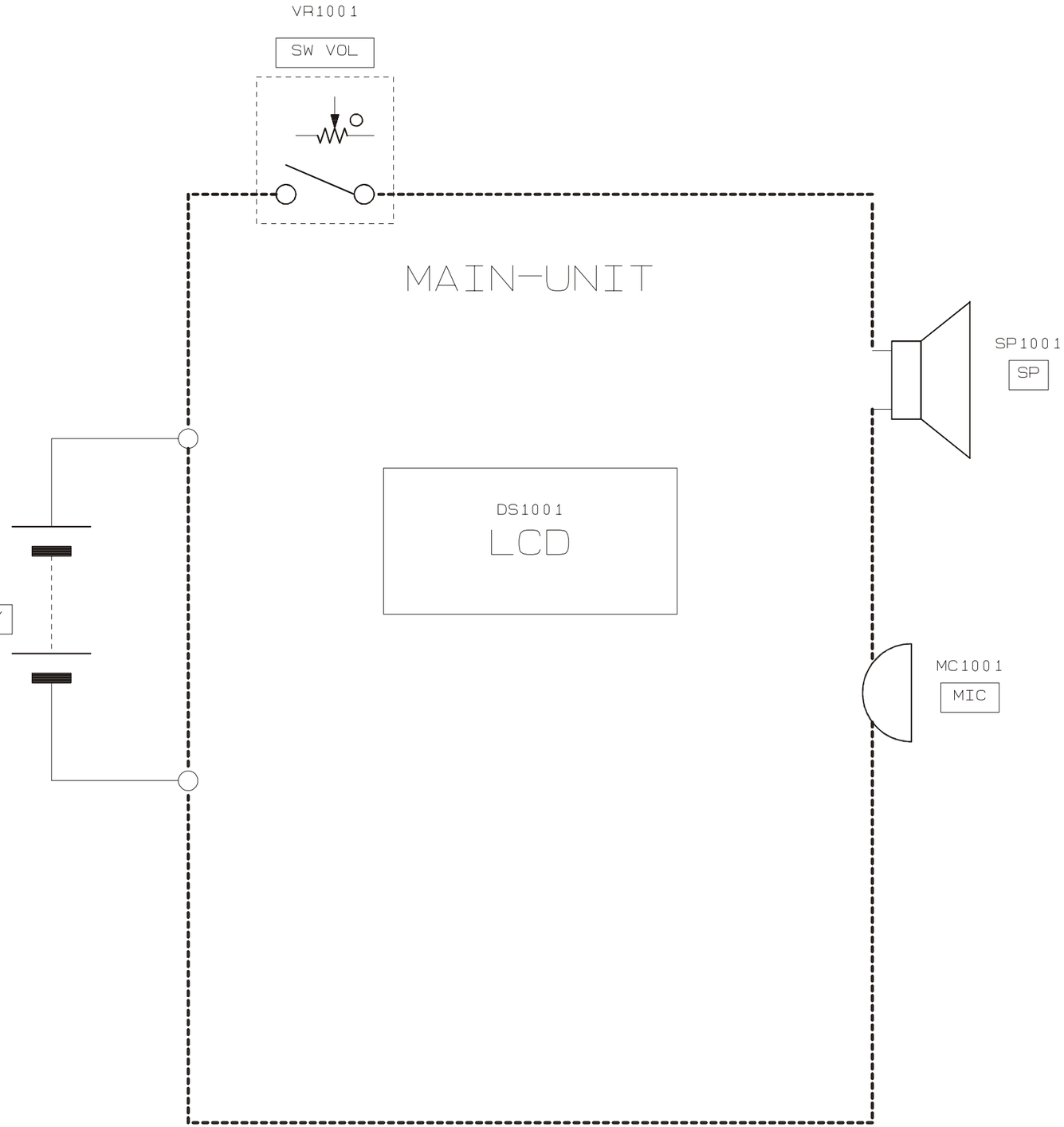
Exploded View & Miscellaneous Parts

Note

Block Diagram



Connection Diagram



1. Receive Signal Path

Incoming RF from the antenna jack is delivered to the RF Unit and passes through a low-pass filter consisting of coils L1025, L1026, and L1027, capacitors C1229, C1235, C1237, C1241, C1243, C1245 and C1246, and antenna switching diode **D1033** (**RLS135**).

Signals within the frequency range of the transceiver enter a Varactor-tuned band-pass filter consisting of coils L1019 and L1022, capacitors C1217, C1218 and C1250, and varactor diode **D1030** (**1SV323**), then amplified by **Q1044** (**2SC5006**) and enter a Varactor-tuned band-pass filter consisting of coils L1016, L1017 and L1018, capacitors C1182, C1184, C1185, C1186, C1187, C1188, C1191, C1192, C1195, C1197, and C1199, and varactor diodes **D1026**, **D1027**, and **D1028** (all **HVC350B**), before first mixing by **Q1041** (**3SK320**).

Buffered output from the VCO is amplified by **Q1023** (**2SC5374**) to provide a pure first local signal between 134.35 and 141.575 MHz for injection to the first mixer **Q1041** (**3SK320**).

The 21.7 MHz first mixer product then passes through monolithic crystal filter XF1001/XF1002 to strip away all but the desired signal, which is then amplified by **Q1037** (**2SC4400**). The amplified first IF signal is applied to FM IF subsystem IC **Q1033** (**NJM2591V**), which contains the second mixer, second local oscillator, limited amplifier, noise amplifier, and RSSI amplifier.

A second local signal is produced from the PLL reference/ second local oscillator of X1001 (21.25 MHz). The 21.25 MHz reference signal is delivered to mixer section of **Q1033** (**NJM2591V**) which produce the 450 kHz second IF mixed with the first IF signal.

The second IF then passes through the ceramic filter CF1001 to strip away unwanted mixer products, and is then applied to the limited amplifier in **Q1033** (**NJM2591V**), which removes amplitude variations in the 450kHz IF, before detection of the speech by the ceramic discriminator CD1001.

2. Audio Amplifier

The demodulated audio signal from the **Q1033** (**NJM2591V**) passes through a band-pass filter and high-pass filter, then applied to the de-emphasis. Then passes through the audio volume and the audio power amplifier **Q1009** (**TDA2822D**), providing up to 600 mW of audio power to the 4 ohm loudspeaker.

3. Squelch Control

The squelch circuitry consists of a noise amplifier and band-pass filter and noise detector within **Q1033** (**NJM2591V**).

When no carrier received, noise at the output of the detector stage in **Q1033** (**NJM2591V**) is amplified and band-pass filtered by the noise amplifier section of **Q1033** (**NJM2591V**) and the network between pins 7 and 8, and then rectified by detection circuit in **Q1033** (**NJM2591V**). The resulting DC squelch control voltage is passed to pin 73 of the microprocessor **Q1043** (**HD64F38024W**). If no carrier is received, this signal causes pin 67 of **Q1043** (**HD64F38024W**) to go low and pin 66 to go high. Pin 66 signals of **Q1043** (**HD64F38024W**) to disable the supply voltage to the audio amplifier **Q1009** (**TDA2822D**), meanwhile pin 18 hold the green (Busy) half of the LED **D1020** (**CL-165HR/YG-D**) off.

Thus, the microprocessor blocks output from the audio amplifier, and silences the receiver, while no signal is being received (and during transmission, as well).

When a carrier appears at the discriminator, noise is removed from the output, causing pin 73 of **Q1043** (**HD64F38024W**) to go low and pin 18 to go high. Pin 66 signals of **Q1043** (**HD64F38024W**) to activate the green (Busy) half of the LED **D1020** (**CL-165HR/YG-D**) via **Q1029** (**2SC4617**).

The microprocessor **Q1043** (**HD64F38024W**) then checks for CTCSS or CDCSS code squelch information, if enabled. If not transmitting and CTCSS or CDCSS is not activated, or if the received tone or code matches that programmed, allows audio to pass through the audio amplifier **Q1009** (**TDA2822D**) to the loudspeaker by enabling the supply voltage to it via **Q1014** (**FMTL718TA**).

4. Transmit Signal Path

The speech input from the microphone MC1001 passes through the audio amplifier **Q1051** (**LM2902PW**), which is adjusted the microphone gain. The speech signal passes through pre-emphasis circuit to **Q1051** (**LM2902PW**), which contains the IDC, and low-pass filter.

The filtered audio signal is applied to **Q1030** (**M62364FP**) which is adjusted the audio level, then is applied to varactor diode **D1007** (**HVC350B**), which frequency modulates the VCO **Q1012** (**2SC5231**). A portion of the audio signal from **Q1030** (**M62364FP**) is applied to X1001 (21.25 MHz).

The processed audio may then be mixed with a CTCSS tone generated by microprocessor **Q1043** (**HD64F38024W**) for frequency modulation of the PLL carrier (up to ±5 kHz from the unmodulated carrier) at the transmitting frequency.

If a CDCSS code is enabled for transmission, the code is generated by **Q1043** (**HD64F38024W**) and delivered to X1001 (21.25 MHz) for CDCSS modulating.

The modulated signal from the VCO **Q1012** (**2SC5231**) is buffered by **Q1013** (**2SC5374**). The low-level transmit signal is then passes through the TX switching diode **D1010** (**DAN235E**) to the buffer amplifier **Q1031** (**2SC5226**), driver amplifier **Q1034** (**2SK3074**), then amplified transmit signal is applied to the final amplifier **Q1036** (**RD07MVS1**) up to 5.0 watts output power.

The transmit signal passes through the low-pass filtere and antenna switch **D1031** (**RLS135**), and then the transmit signal is low-pass filtered to suppress harmonic spurious radiation before delivery to the antenna.

4-1 Automatic Transmit Power Control

Current from the final amplifier is sampled by C1238, C1239, C1242 and C1244, and R1261, and R1267, and is rectified by **D1032** (**1SS321**). The resulting DC is fed back through **Q1003** (**LM2904PW**) to the drive amplifier **Q1034** (**2SK3074**) and final amplifier **Q1036** (**RD07MVS1**), for control of the power output.

The microprocessor selects "High" or "Low" power levels.

4-2 Spurious Suppression

Generation of spurious products by the transmitter is minimized by the fundamental carrier frequency being equal to final transmitting frequency, modulated directly in the transmit VCO. Additional harmonic suppression is provided by a low-pass filter consisting of coils L1012 and L1013 plus capacitors C1148, C1153, C1154, C1159, C1163 and C1172, resulting in more than 60 dB of harmonic suppression prior to delivery to the antenna.

5. PLL Frequency Synthesizer

The PLL circuitry on the Main Unit consists of VCO **Q1012** (**2SC5231**), VCO buffer **Q1013** (**2SC5374**), PLL subsystem IC **Q1015** (**MB15A01PFV1**), which contains a reference divider, serial-to-parallel data latch, programmable divider, phase comparator and charge pump, and crystal X1001 which frequency stability is ±5 ppm –30 °C to +60 °C.

While receiving, VCO **Q1012** (**2SC5231**) oscillates between 134.35 and 141.575 MHz according to the transceiver version and the programmed receiving frequency. The VCO output is buffered by **Q1020** (**2SC5374**), then applied to the prescaler section of **Q1015** (**MB15A01PFV1**). There the VCO signal is divided by 64 or 65, according to a control signal from the data latch section of **Q1015** (**MB15A01PFV1**), before being sent to the programmable divider section of **Q1015** (**MB15A01PFV1**).

The data latch section of **Q1015** (**MB15A01PFV1**) also receives serial dividing data from the microprocessor **Q1043** (**HD64F38024W**), which causes the pre-divided VCO signal to be further divided in the programmable divider section, depending upon the desired receive frequency, so as to produce a 5.0 kHz or 6.25 kHz derivative of the current VCO frequency.

Meanwhile, the reference divider sections of **Q1015** (**MB15A01PFV1**) divides the 21.25 MHz crystal reference from the reference oscillator section of **Q1015** (**MB15A01PFV1**), by 3360 (or 2688) to produce the 5.0 kHz (or 6.25 kHz) loops reference (respectively).

The 5.0 kHz (or 6.25 kHz) signal from the programmable divider (derived from the VCO) and that derived from the reference oscillator are applied to the phase detector section of microprocessor **Q1043** (**HD64F38024W**), which produces a pulsed output with pulse duration depending on the phase difference between the input signals.

This pulse train is filtered to DC and returned to the Varactor diode **D1004** (**HVC350B**).

Changes in the level of the DC voltage applied to the Varactor, affecting the reference in the tank circuit of the VCO according to the phase difference between the signals derived from the VCO and the crystal reference oscillator.

The VCO is thus phase-locked to the crystal reference oscillator. The output of the VCO **Q1012** (**2SC5231**) after buffering by **Q1013** (**2SC5374**) is applied to the first mixer as described previously.

For transmission, the VCO **Q1012** (**2SC5231**) oscillates between 156.025 and 157.425 MHz according to the model version and programmed transmit frequency. The remainder of the PLL circuitry is shared with the receiver. However, the dividing data from the microprocessor is such that the VCO frequency is at the actual transmit frequency (rather than offset for IFs, as in the receiving case). Also, the VCO is modulated by the speech audio applied to **D1006** (**HSC277**), as described previously.

6. Miscellaneous Circuits

Push-To-Talk Transmit Activation

The PTT switch on the internal microphone is connected to **Q1007** (**DTA144EE**), so that when the PTT switch is closed, pin 19 of microprocessor **Q1043** (**HD64F38024W**) goes high. This signal disables the receiver by disabling the 5 V supply bus at **Q1027** (**DTA144EE**) to the front-end, FM IF subsystem IC **Q1033** (**NJM2591V**).

At the same time, **Q1024** (**2SA1774**) and **Q1025** (**UMW1**) activate the transmit 5 V supply line to enable the transmitter.

The **HX270S** has been carefully aligned at the factory for the specified performance across the land mobile band.

Realignment should therefore not be necessary except in the event of a component failure.

All component replacement and service should be performed only by an authorized STANDARD HORIZON representative, or the warranty policy may be voided.

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

We recommend that servicing be performed only by authorized STANDARD HORIZON service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized STANDARD HORIZON service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components. Those who do undertake any of the following alignments are cautioned to proceed at their own risk.

Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, STANDARD HORIZON must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners. Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary. The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Have all test equipment ready before beginning, and follow all of the steps in a section in the order presented.

Required Test Equipment

- ❒ RF Signal Generator with calibrated output level at 200 MHz
- ❒ Deviation Meter (linear detector)
- ❒ AF Millivoltmeter
- ❒ SINAD Meter
- ❒ Inline Wattmeter with 5% accuracy at 200 MHz
- ❒ Regulated DC Power Supply: adjustable from 6 to 17 VDC, 3A
- ❒ 50-ohm Non-reactive Dummy Load: 10W at 200 MHz
- ❒ Frequency Counter: >0.1 ppm accuracy at 200 MHz
- ❒ AF Signal Generator
- ❒ DC Voltmeter: high impedance
- ❒ VHF Sampling Coupler
- ❒ AF Dummy Load: 8 ohm, 2W
- ❒ Oscilloscope
- ❒ Spectrum Analyzer

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 ~ 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).

Alignment

Before Alignment

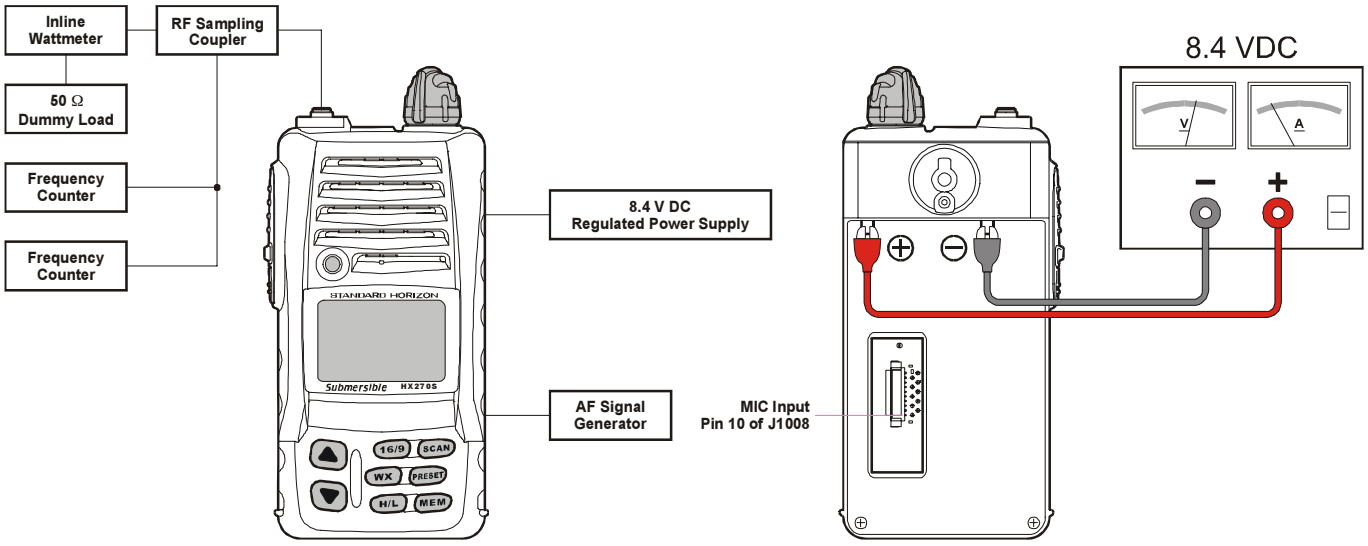
❒ Press and hold in the [▼] key and [**MEM**] key while turning the transceiver on to enter the Alignment Mode.

PLL Reference Frequency

❒ Set up the test equipment as shown below for PLL and Ttransmitter Section Alignment. Maintain the supply voltage at 8.4V DC for all steps.
❒ Press the [▲] or [▼] key to sect the display to "rEF." The transceiver now is in the PLL Reference Frequency Alignment Mode.
❒ Press the [**PRESET**] key to enable adjustment of the PLL Reference Frequency.
❒ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the frequency to 155.500 MHz (±100 Hz).
❒ Press the [**PRESET**] key to exit the PLL Reference Frequency Alignment Mode.

Squelch Threshold and Tight Squelch Adjustment

❒ Set up the test equipment as shown below for Receiver Section Alignment. Maintain the supply voltage at 8.4V DC for all steps.
❒ Press the [▲] key twice to set the display to "tHL." The transceiver now is in the Squelch Threshold Alignment Mode.
❒ Set the RF signal generator output to 155.600 MHz, at a level of –12 dBµ with ±3.5 kHz deviation with a 1 kHz audio tone.
❒ Press the [**PRESET**] key to read the Squelch Threshold data.
❒ Press the [**H/L**] key twice.
❒ Press the [**PRESET**] key to exit the Squelch Threshold Alignment Mode.
❒ Press the [▲] key monentarily to set the display to "tl." The transceiver now is in the Squelch Tight Alignment Mode.
❒ Increase the RF signal generator output to –4 dBµ, then press the [**PRESET**] key to read the Squelch Tight data.
❒ Press the [**H/L**] key twice.
❒ Press the [**PRESET**] key to exit the Squelch Tight Alignment Mode.



PLL & Transmitter Section Alignment Setup

Transmitter Power Output

- ❒ Set up the test equipment as shown below for PLL and Ttransmitter Section Alignment. Maintain the supply voltage at 7.5V DC for all steps.
- ❒ Press the [▲] key momentarily to set the display to "HP." The transceiver now is in the Transmitter High Power Output Alignment Mode.
- ❒ Press the [**PRESET**] key to enable adjustment of the Transmitter High Power Output.
- ❒ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 5.0 W (±0.1 W).
- ❒ Press the [**PRESET**] key to exit the Transmitter High Power Output Alignment Mode.
- ❒ Press the [▲] key momentarily to set the display to "CP." The transceiver now is in the Transmitter Medium Power Output Alignment Mode.
- ❒ Press the [**PRESET**] key to enable adjustment of the Medium Power setting.
- ❒ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 2.5 W (±0.1 W).
- ❒ Press the [**PRESET**] key to exit the Transmitter Medium Power Output Alignment Mode.
- ❒ Press the [▲] key momentarily to set the display to "LP." The transceiver now is in the Transmitter Low Power Output Alignment Mode.
- ❒ Press the [**PRESET**] key to enable adjustment of the Low Power setting.
- ❒ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 1.0 W (±0.05 W).
- ❒ Press the [**PRESET**] key to exit the Transmitter Low Power Output Alignment Mode.

Transmitter Modulation

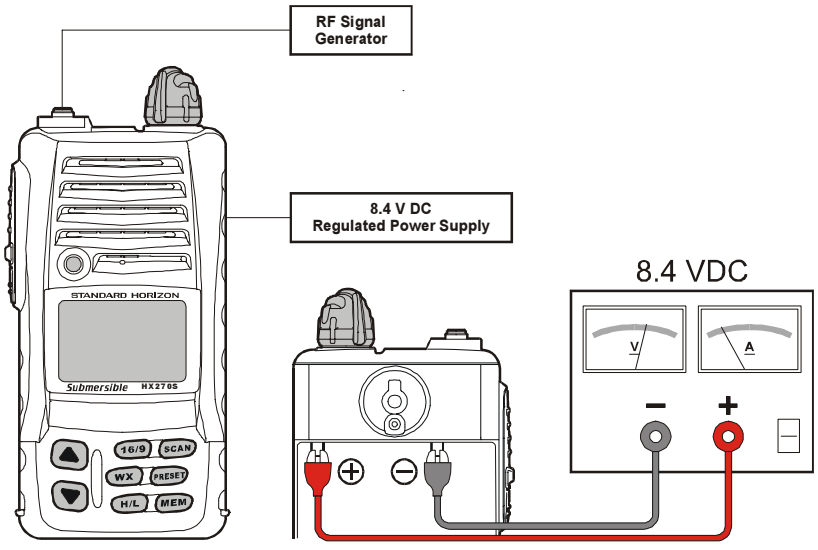
- ❒ Press the [▲] key to set the display to "dEu." The transceiver now is in the Transmitter Modulation Alignment Mode.
- ❒ Set the AF generator output to 50 mV rms @ 1 kHz.
- ❒ Press the [**PRESET**] key to enable adjustment of the Transmitter Modulation.
- ❒ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the deviation to 4.3 kHz (±0.1 kHz).
- ❒ Press the [**PRESET**] key to exit the Transmitter Modulation Alignment Mode.

ATIS Deviation Confirmation

- ❒ Press the [▲] key to set the display to "Ati." The transceiver now is in the ATIS Deviation Confirmation Mode.
- ❒ Press the [**PRESET**] key, then press the [**H/L**] key twice to set the display to "CH."
- ❒ Press the **PTT** key to cause the transceiver to transmit (with no microphone input); confirm the the deviation meter reading is 2.3 kHz (±0.3 kHz).
- ❒ Press the [**PRESET**] key to exit the ATIS Deviation Confirmation Mode.

Exit from the Alignment Mode

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



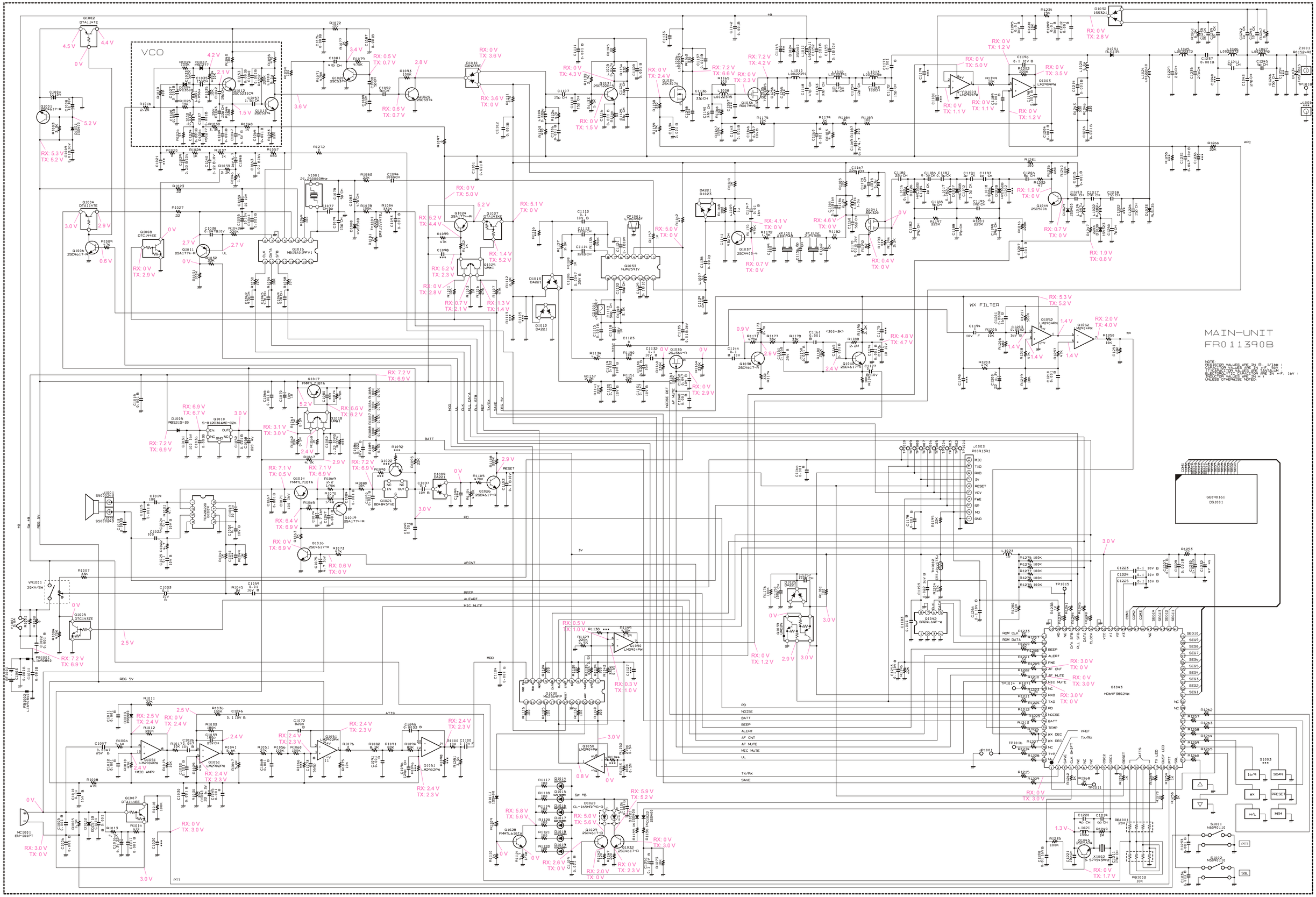
RECEIVER SECTION ALIGNMENT SETUP

Alignment

Note

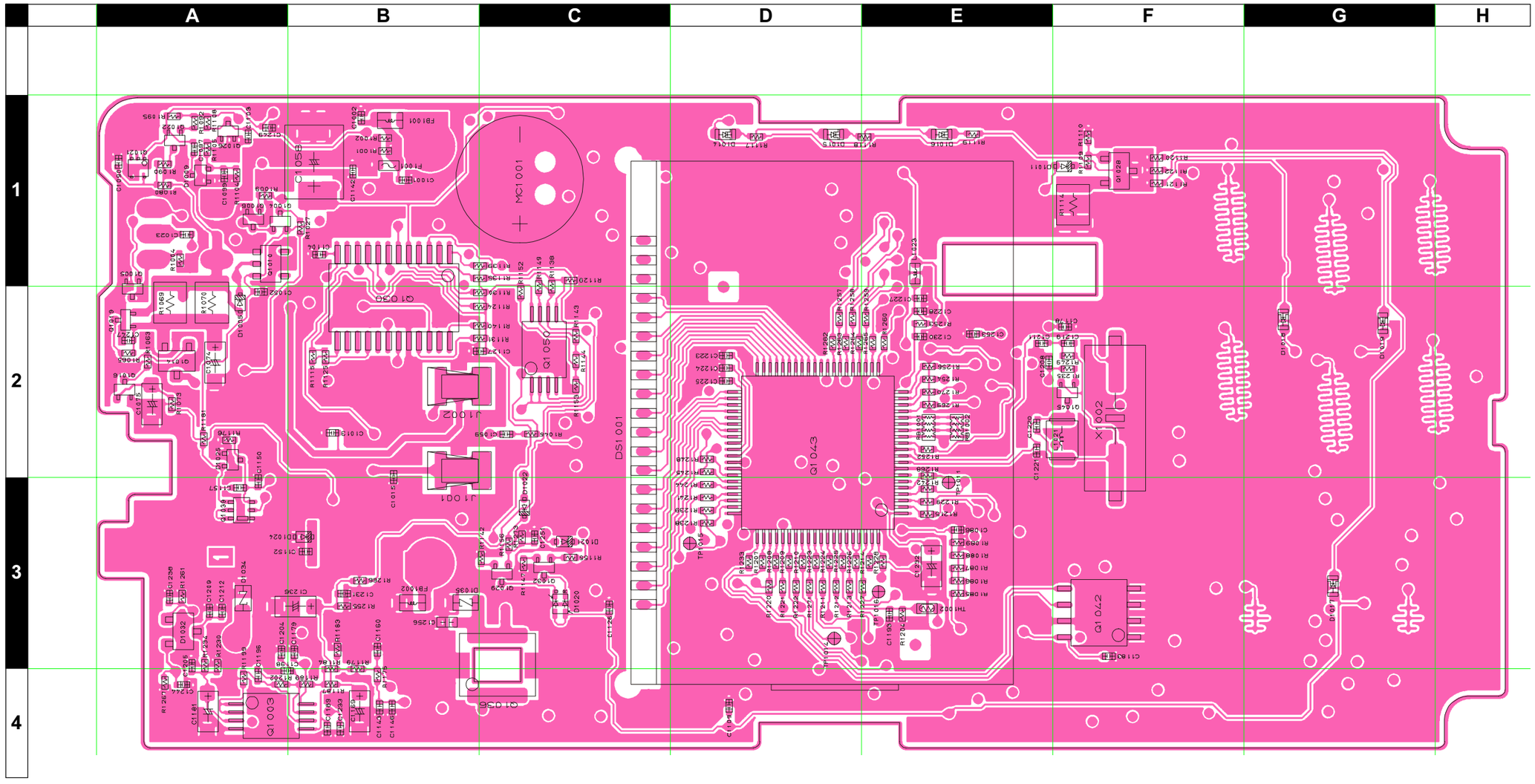
MAIN Unit

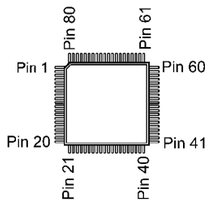
Circuit Diagram



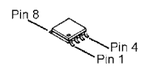
MAIN Unit

Note



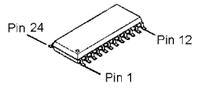


HD64F38024
(Q1043)

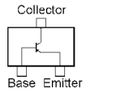


LM2904PWR
(Q1003, 1050)

BR24L64F
(Q1042)



M62364FP
(Q1030)



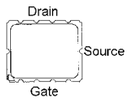
2SA1774 (FR)
(Q1019)

FMMTL718
(Q1014)

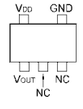
2SC4617 (BR)
(Q1006, 1016, 1026, 1029, 1032)

2SC5374 (NA)
(Q1045)

FMMTL618
(Q1028)



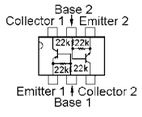
RD07MVS1
(Q1036)



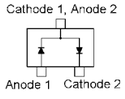
BD4845FVE
(Q1021)

DTC143ZE (E23)
(Q1005)

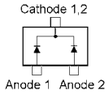
S-812C30AMC
(Q1010)



UMD2N (D2)
(Q1039)



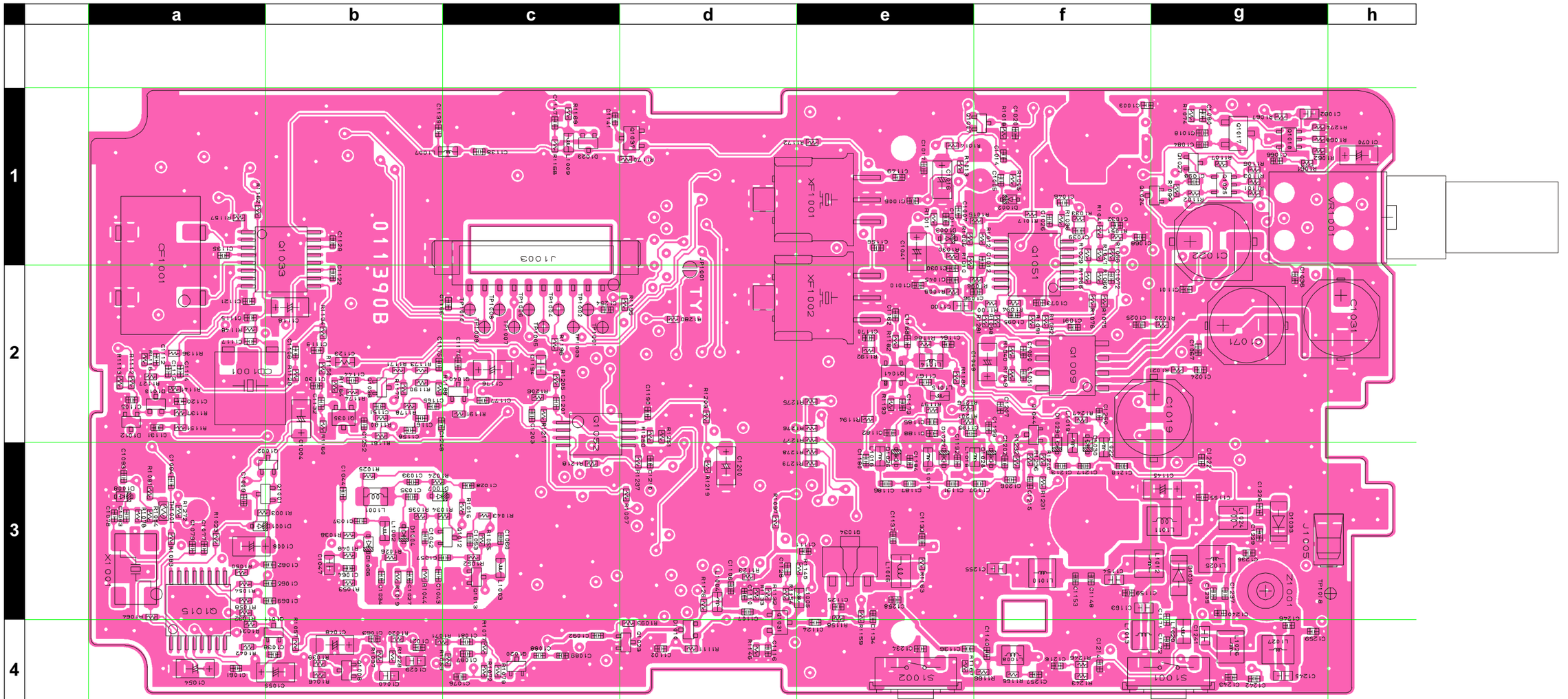
DA221 (K)
(D1009, 1025)

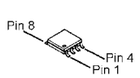


1SS321 (F9)
(D1032)

MAIN Unit

Parts Layout (Side B)





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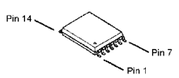

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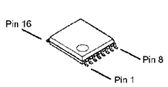

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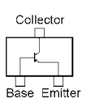

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(Q1011, 1024)

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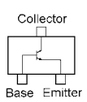
(Q1017)



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(Q1037)

2SC4617 (BR)
(Q1001, 1038, 1040)

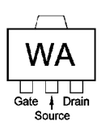
2SC5006 (24)
(Q1044)

2SC5226 (R22)
(Q1031)

2SC5231 (C9)
(Q1012)

2SC5374 (NA)
(Q1013, 1020, 1023)

2SJ364 (4M)
(Q1035)



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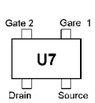
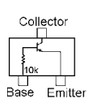
(Q1034)



3SK320 (U7)
(Q1041)



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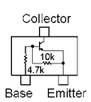
(Q1002)



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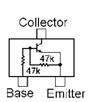
(Q1027)



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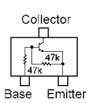
(Q1007)



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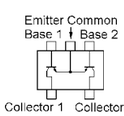
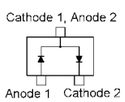
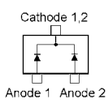
(Q1008)



UMW1 (W1)
(Q1018, 1025)



DA221 (K)
(D1012, 1013, 1023)



DAN235E
(D1010)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2718001 CB2718002 CB2718003	CE OFF, DST USA CE OFF, DST EXP CE ON, DST EU			
	Printed Circuit Board				AM007N000	FR0113900		1-		
C 1001	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B1
C 1002	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B1
C 1003	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1004	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	b2
C 1005	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1006	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e1
C 1007	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	e1
C 1008	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	a3
C 1009	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a3
C 1010	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1011	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e1
C 1012	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1013	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B2
C 1014	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1015	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B2
C 1016	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	B	e1
C 1017	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e1
C 1018	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g1
C 1019	AL.ELECTRO.CAP.	100uF			RVZ-10V101MF55U-R2	K48100008		1-	B	g2
C 1022	AL.ELECTRO.CAP.	100uF			RVZ-10V101MF55U-R2	K48100008		1-	B	g1
C 1023	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	A1
C 1024	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	g2
C 1025	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	f2
C 1026	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	f1
C 1027	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b3
C 1028	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c3
C 1029	CHIP CAP.	0.22uF	10V	B	GRM39B224K10PT	K22104801		1-	B	b4
C 1030	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e2
C 1031	AL.ELECTRO.CAP.	100uF	16V		ECEV1CA101WP	K48120012		1-	B	h2
C 1032	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1033	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	B	b3
C 1034	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b3
C 1035	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	b3
C 1036	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g2
C 1037	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b3
C 1038	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b4
C 1039	CHIP CAP.	180pF	25V	CH	TMK105CH181JW-F	K22148244		1-	B	f1
C 1040	CHIP CAP.	0.22uF	10V	B	GRM39B224K10PT	K22104801		1-	B	b4
C 1041	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	B	e1
C 1042	CHIP CAP.	18pF	50V	CH	UMK105CH180JW-F	K22178264		1-	B	b3
C 1043	CHIP CAP.	20pF	50V	CH	UMK105CH200JW-F	K22178265		1-	B	b3
C 1044	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b3
C 1045	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e2
C 1046	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	f1
C 1047	CHIP CAP.	1uF	6.3V	B	GRM39B105K6.3PT	K22084801		1-	B	b3
C 1048	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B	b4
C 1049	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	f2
C 1050	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	f2
C 1052	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A2
C 1053	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c3
C 1054	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	a4
C 1055	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	b4
C 1057	CHIP CAP.	1.5pF	50V	CK	UMK105CK1R5CW-F	K22178249		1-	B	b3
C 1058	CHIP TA.CAP.	220uF	4V		SK4-0G227M-RD	K78060014		1-	A	B1
C 1059	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1060	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c3
C 1061	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	a4
C 1062	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	b3
C 1063	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b4
C 1064	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b3
C 1065	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	b3
C 1066	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g1
C 1067	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g2
C 1068	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f1
C 1069	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	b3
C 1070	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	h1
C 1071	AL.ELECTRO.CAP.	100uF	16V		ECEV1CA101WP	K48120012		1-	B	g2
C 1072	CHIP CAP.	820pF	50V	B	GRM36B821K50PT	K22178808		1-	B	f2
C 1073	CHIP CAP.	560pF	50V	B	GRM36B561K50PT	K22178806		1-	B	f2

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1074	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	A	A2
C 1075	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	A	A2
C 1076	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c4
C 1077	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	a3
C 1078	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	a3
C 1079	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	a3
C 1081	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	c4
C 1082	CHIP CAP.	0.22uF	10V	B	GRM39B224K10PT	K22104801		1-	B	g1
C 1083	CHIP CAP.	47pF	50V	CH	GRM36CH470J50PT	K22178228		1-	B	a3
C 1084	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g1
C 1086	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A	E3
C 1087	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c4
C 1088	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	c4
C 1089	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	c4
C 1090	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A1
C 1091	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f2
C 1092	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	c4
C 1093	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	a3
C 1094	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	B	a3
C 1095	CHIP CAP.	0.0033uF	50V	B	GRM36B332K50PT	K22178815		1-	B	f2
C 1096	CHIP CAP.	120pF	50V	CH	GRM36CH121J50PT	K22178238		1-	B	f2
C 1097	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	A1
C 1100	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	e2
C 1101	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g2
C 1102	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	d4
C 1103	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	A1
C 1104	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B1
C 1106	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	d3
C 1107	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	d3
C 1108	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	b2
C 1109	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	D4
C 1110	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	d3
C 1111	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e3
C 1112	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 1113	CHIP CAP.	120pF	50V	CH	UMK105CH121JW-F	K22178284		1-	B	a2
C 1114	CHIP CAP.	120pF	50V	CH	UMK105CH121JW-F	K22178284		1-	B	a2
C 1115	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	a2
C 1116	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	d4
C 1117	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	a2
C 1118	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	b2
C 1119	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	B	b2
C 1120	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	a2
C 1121	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 1122	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	b2
C 1123	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b2
C 1124	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	e4
C 1125	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	e3
C 1126	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	C3
C 1128	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	d3
C 1129	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b1
C 1130	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803	W/ CE	1-	B	b2
C 1130	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806	W/O CEL	1-	B	b2
C 1131	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	a2
C 1132	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1134	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e3
C 1135	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 1136	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	e4
C 1137	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e3
C 1138	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c1
C 1139	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	b1
C 1140	CHIP CAP.	33pF	50V	CH	GRM36CH330J50PT	K22178224		1-	B	f4
C 1141	CHIP CAP.	43pF	50V	CH	UMK105CH430JW-F	K22178273		1-	B	c1
C 1142	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B1
C 1143	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B4
C 1144	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1146	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A	B4
C 1147	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c1
C 1148	CHIP CAP.	47pF	50V	CH	UMK105CH470JW-F	K22178274		1-	B	f3
C 1150	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	A	A3
C 1151	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804	W/ CE	1-	B	b2
C 1151	CHIP CAP.	0.0068uF	25V	B	GRM36B682J25PT	K22148803	W/O CE	1-	B	b2
C 1152	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B3
C 1153	CHIP CAP.	33pF	50V	CH	UMK105CH330JW-F	K22178270		1-	B	f3

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1154	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B	f3
C 1155	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	g3
C 1156	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		1-	B	e1
C 1157	CHIP CAP.	100pF	50V	CH	UMK105CH101JW-F	K22178282		1-	A	A3
C 1158	CHIP CAP.	0.0022uF	50V	B	GRM36B222K50PT	K22178813	W/ CE	1-	B	b2
C 1158	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809	W/O CE	1-	B	b2
C 1159	CHIP CAP.	12pF	50V	CH	UMK105CH120JW-F	K22178260		1-	B	f3
C 1160	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B3
C 1161	CHIP CAP.	0.0022uF	50V	B	GRM36B222K50PT	K22178813	W/ CE	1-	B	b2
C 1161	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809	W/O CE	1-	B	b2
C 1162	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	B	e2
C 1163	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	B	f3
C 1164	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1165	CHIP CAP.	0.0022uF	50V	B	GRM36B222K50PT	K22178813	W/ CE	1-	B	b2
C 1165	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809	W/O CE	1-	B	b2
C 1166	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c2
C 1167	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	B	e2
C 1168	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	e2
C 1169	CHIP TA.CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		1-	A	B4
C 1170	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1171	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g3
C 1172	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	g4
C 1173	CHIP CAP.	5pF	50V	CH	UMK105CH050CW-F	K22178253		1-	B	e2
C 1174	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	c2
C 1176	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c2
C 1177	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1178	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	F2
C 1180	CHIP CAP.	22pF	50V	CH	UMK105CH220JW-F	K22178266		1-	B	e3
C 1182	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	e2
C 1183	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	F3
C 1184	CHIP CAP.	1pF	50V	CK	GRM36CK010B50PT	K22178287		1-	B	e3
C 1185	CHIP CAP.	5pF	50V	CH	GRM36CH050B50PT	K22178292		1-	B	e2
C 1186	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	B	e3
C 1187	CHIP CAP.	0.5pF	50V	CK	GRM36CK0R5B50PT	K22178285		1-	B	e3
C 1188	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	e2
C 1189	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B4
C 1191	CHIP CAP.	1pF	50V	CK	GRM36CK010B50PT	K22178287		1-	B	e3
C 1192	CHIP CAP.	1.5pF	50V	CK	GRM36CK1R5C50PT	K22178203		1-	B	e3
C 1193	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A	E3
C 1194	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	c2
C 1195	CHIP CAP.	10pF	50V	CH	GRM36CH100B50PT	K22178297		1-	B	e2
C 1196	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	A4
C 1197	CHIP CAP.	1pF	50V	CK	GRM36CK010B50PT	K22178287		1-	B	f3
C 1198	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A3
C 1199	CHIP CAP.	39pF	50V	CH	UMK105CH390JW-F	K22178272		1-	B	f2
C 1200	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	B	d3
C 1201	CHIP CAP.	0.0082uF	16V	B	EMK105B822KW-F	K22128809		1-	B	c2
C 1203	CHIP CAP.	0.0082uF	16V	B	EMK105B822KW-F	K22128809		1-	B	c2
C 1204	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A3
C 1205	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	A3
C 1206	CHIP CAP.	8pF	50V	CH	UMK105CH080DW-F	K22178256		1-	B	f3
C 1207	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f2
C 1208	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E2
C 1209	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	A3
C 1210	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	d3
C 1211	CHIP CAP.	15pF	50V	CH	GRM36CH150J50PT	K22178216		1-	A	E2
C 1212	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A3
C 1213	CHIP CAP.	56pF	50V	CH	UMK105CH560JW-F	K22178276		1-	B	f3
C 1214	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f4
C 1215	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f3
C 1216	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	f4
C 1217	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	f3
C 1218	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	f3
C 1219	CHIP CAP.	6pF	50V	CH	UMK105CH060DW-F	K22178254		1-	A	F2
C 1220	CHIP CAP.	4pF	50V	CH	UMK105CH040CW-F	K22178252		1-	A	E2
C 1221	CHIP CAP.	15pF	50V	CH	GRM36CH150J50PT	K22178216		1-	A	E2
C 1223	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1224	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1225	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1226	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	g3
C 1227	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	E2
C 1228	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	E2
C 1229	CHIP CAP.	27pF	50V	CH	UMK105CH270JW-F	K22178268		1-	B	g3

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1230	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	E2
C 1231	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A	B3
C 1232	CHIP TA.CAP.	47uF	4V		SK7-0G476M-RA	K78060048		1-	A	E3
C 1233	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	B4
C 1234	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	e4
C 1235	CHIP CAP.	27pF	50V	CH	UMK105CH270JW-F	K22178268		1-	B	g3
C 1237	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	g3
C 1238	CHIP CAP.	2pF	50V	CK	GRM36CK020C50PT	K22178204		1-	A	A3
C 1239	CHIP CAP.	1pF	50V	CK	GRM36CK010B50PT	K22178287		1-	B	g3
C 1241	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		1-	B	g4
C 1242	CHIP CAP.	1pF	50V	CK	GRM36CK010B50PT	K22178287		1-	B	g4
C 1243	CHIP CAP.	27pF	50V	CH	UMK105CH270JW-F	K22178268		1-	B	g4
C 1244	CHIP CAP.	1pF	50V	CK	UMK105CK010CW-F	K22178248		1-	A	A4
C 1245	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	g4
C 1246	CHIP CAP.	15pF	50V	CH	UMK105CH150JW-F	K22178262		1-	B	g4
C 1247	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A2
C 1248	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	B	b2
C 1249	CHIP CAP.	0.001uF	50V	B	GRM36B102K50PT	K22178809		1-	A	A1
C 1250	CHIP CAP.	7pF	50V	CH	GRM36CH070D50PT	K22178209		1-	B	f2
C 1251	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C3
C 1252	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	b2
C 1253	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	E2
C 1254	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
CD1001	CERAMIC DISC				JTBC450C7	H7901500		1-	B	a2
CF1001	CERAMIC FILTER				LTWC450F	H3900563		1-	B	a1
D 1001	DIODE				1SS400 TE61	G2070634		1-	B	a3
D 1002	DIODE				EDZ TE61 5.1B	G2070998		1-	B	f1
D 1003	DIODE				1SS400 TE61	G2070634		1-	B	e1
D 1004	DIODE				HVC350B-TRF	G2070596		1-	B	b3
D 1005	DIODE				RB521S-30 TE61	G2070642		1-	A	A2
D 1006	DIODE				HSC277TRF	G2070584		1-	B	b3
D 1007	DIODE				HSC277TRF	G2070584		1-	B	b3
D 1008	DIODE				HVC350B-TRF	G2070596		1-	B	a3
D 1009	DIODE				DA221 TL	G2070178		1-	A	A1
D 1010	DIODE				DAN235E TL	G2070612		1-	B	d4
D 1011	DIODE				1SS400 TE61	G2070634		1-	A	F1
D 1012	DIODE				DA221 TL	G2070178		1-	B	a2
D 1013	DIODE				DA221 TL	G2070178		1-	B	a2
D 1014	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	D1
D 1015	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	D1
D 1016	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	E1
D 1017	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	G3
D 1018	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	G2
D 1019	LED				19-215UYOC/S530-A2/TR8	G2070884		1-	A	G2
D 1020	LED				CL-165HR/YG-D-T	G2070860		1-	A	C3
D 1021	DIODE				1SS400 TE61	G2070634		1-	A	C3
D 1022	DIODE				1SS400 TE61	G2070634		1-	A	C3
D 1023	DIODE				DA221 TL	G2070178		1-	B	c1
D 1024	DIODE				1SS400 TE61	G2070634		1-	A	B3
D 1025	DIODE				DA221 TL	G2070178		1-	A	A2
D 1026	DIODE				HVC350B-TRF	G2070596		1-	B	e3
D 1027	DIODE				HVC350B-TRF	G2070596		1-	B	e3
D 1028	DIODE				HVC350B-TRF	G2070596		1-	B	f3
D 1029	DIODE				1SS400 TE61	G2070634		1-	B	f2
D 1030	DIODE				1SV323(TPH3)	G2071006		1-	B	f2
D 1031	DIODE				RLS135 TE-11	G2070128		1-	B	g3
D 1032	DIODE				1SS321 TE85R	G2070076		1-	A	A3
D 1033	DIODE				RLS135 TE-11	G2070128		1-	B	g3
D 1034	SURGE ABSORBER				TVSF0805	Q9000807		1-	A	A3
D 1035	SURGE ABSORBER				TVSF0805	Q9000807		1-	A	B3
DS1001	LCD				AM007N	G6090161		1-	A	D2
F 1001	CHIP FUSE	3.15A			FHC16 322AD TP	Q0000118	W/ CE	1-	A	B1
FB1001	CHIP COIL				BLM21P300SPT	L1690840		1-	A	B1
FB1002	CHIP COIL				BLM21P300SPT	L1690840		1-	A	B3
J 1001	CONTACT				OG-503040	S5000243		1-	A	B2
J 1002	CONTACT				OG-503040	S5000243		1-	A	B2
J 1003	CONNECTOR				53398-1071	P0091391		1-	B	c1
L 1001	CHIP COIL	0.056uH			LQN21A56NG04	L1690978		1-	B	b3
L 1002	CHIP COIL	0.018uH			LQW1608A18NG00	L1690883		1-	B	b3
L 1003	M.RFC	0.1uH			TFL0816-100N	L1690981		1-	B	c3
L 1004	M.RFC	0.082uH			TFL0816-82N	L1690980		1-	B	d3
L 1005	M.RFC	0.047uH			TFL0816-47	L1690499		1-	B	e3
L 1006	COIL				E2 0.28-1.0-8TR	L0022423		1-	B	e3

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	c1
L 1008	COIL				E2 0.28-1.0-4.5T-R	L0022395		1-	B	f4
L 1009	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	c1
L 1010	COIL				E2 0.45-1.4-4T-L	L0022391		1-	B	f3
L 1011	COIL				E2 0.25-1.9-8.5T-L	L0022611		1-	B	g3
L 1012	COIL				E2 0.45-1.4-4T-L	L0022391		1-	B	f3
L 1013	COIL				E2 0.35-1.6-4T-L	L0022456		1-	B	f4
L 1014	M.RFC	1uH			ELJ-ND1R0JF	L1690977		1-	B	e2
L 1015	M.RFC	0.1uH			TFL0816-100N	L1690981		1-	B	e2
L 1016	CHIP COIL	0.082uH			LQW1608A82NG00	L1690891		1-	B	e3
L 1017	CHIP COIL	0.082uH			LQW1608A82NG00	L1690891		1-	B	e3
L 1018	CHIP COIL	0.082uH			LQW1608A82NG00	L1690891		1-	B	e3
L 1019	M.RFC	0.047uH			TFL0816-47	L1690499		1-	B	f2
L 1020	M.RFC	1uH			ELJ-ND1R0JF	L1690977		1-	B	g4
L 1021	M.RFC	150uH			FLC32T-151J	L1690229		1-	A	F2
L 1022	CHIP COIL	0.082uH			LQW1608A82NG00	L1690891		1-	B	f3
L 1023	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	E1
L 1024	COIL				E2 0.25-1.9-5.5T-R	L0022610		1-	B	g3
L 1025	COIL				E2 0.3-1.7-7T-R	L0022372		1-	B	g3
L 1026	COIL				E2 0.3-1.7-7T-R	L0022372		1-	B	g4
L 1027	COIL				E2 0.35-1.6-7T-L	L0022390		1-	B	g4
MC1001	MIC. ELEMENT				EM-100PT	M3290029		1-	A	C1
Q 1001	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	a3
Q 1002	TRANSISTOR				DTA114TE TL	G3070264		1-	B	b3
Q 1003	IC				LM2904PWR	G1094010		1-	A	A4
Q 1004	TRANSISTOR				DTA114TE TL	G3070264		1-	A	A1
Q 1005	TRANSISTOR				DTC143ZE TL	G3070102		1-	A	A2
Q 1006	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	A1
Q 1007	TRANSISTOR				DTA144EE TL	G3070074		1-	B	f1
Q 1008	TRANSISTOR				DTC144EE TL	G3070075		1-	B	b4
Q 1009	IC				TDA2822D013TR	G1091542		1-	B	f2
Q 1010	IC				S-812C30AMC-C2K-T2	G1093670		1-	A	A1
Q 1011	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	b4
Q 1012	TRANSISTOR				2SC5231C9-TL	G3352318I		1-	B	c3
Q 1013	TRANSISTOR				2SC5374-TL	G3353748		1-	B	c3
Q 1014	TRANSISTOR				FMMTL718TA	G3070335		1-	A	A2
Q 1015	IC				MB15A01PFV1-G-BND-EF	G1092545		1-	B	a3
Q 1016	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	A2
Q 1017	TRANSISTOR				FMMTL718TA	G3070335		1-	B	g1
Q 1018	TRANSISTOR				UMW1 TR	G3070078		1-	B	g1
Q 1019	TRANSISTOR				2SA1774 TL R	G3117748R		1-	A	A2
Q 1020	TRANSISTOR				2SC5374-TL	G3353748		1-	B	c4
Q 1021	IC				BD4845FVE-TR	G1093784		1-	A	A1
Q 1023	TRANSISTOR				2SC5374-TL	G3353748		1-	B	d4
Q 1024	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	g1
Q 1025	TRANSISTOR				UMW1 TR	G3070078		1-	B	g1
Q 1026	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	A1
Q 1027	TRANSISTOR				DTA143XE TL	G3070093		1-	B	g1
Q 1028	TRANSISTOR				FMMTL618TA	G3070334		1-	A	F1
Q 1029	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	C3
Q 1030	IC				M62364FP 600D	G1093033		1-	A	B2
Q 1031	TRANSISTOR				2SC5226-5-TL	G3352268E		1-	B	d4
Q 1032	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	C3
Q 1033	IC				NJM2591V-TE1	G1094024		1-	B	b1
Q 1034	FET				2SK3074(TE12L)	G3830748		1-	B	e3
Q 1035	FET				2SJ364-R(TX)	G3703648R		1-	B	b2
Q 1036	FET				RD07MVS1-T12	G3070320		1-	A	C3
Q 1037	TRANSISTOR				2SC4400-4-TL	G3344008D		1-	B	d1
Q 1038	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	b2
Q 1039	TRANSISTOR				UMD2N TR	G3070076		1-	A	A3
Q 1040	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	c2
Q 1041	FET				3SK320(TE85L)	G4803208		1-	B	e2
Q 1042	IC				BR24L64F-WE2	G1093876		1-	A	F3
Q 1043	IC				HD64F38024W	※		1-	A	D2
Q 1044	TRANSISTOR				2SC5006-T1	G3350068		1-	B	f2
Q 1045	TRANSISTOR				2SC5374-TL	G3353748		1-	A	F2
Q 1050	IC				LM2904PWR	G1094010		1-	A	C2
Q 1051	IC				LM2902PWR	G1094009		1-	B	f1
Q 1052	IC				LM2904PWR	G1094010		1-	B	c2
R 1001	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070	W/O CE	1-	A	B1
R 1002	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070	W/O CE	1-	A	B1
R 1003	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	a3
R 1004	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	A1

※: Please contact Vertex Standard

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1005	CHIP RES.	1.5k	1/16W	5%	RMC1/16S 152JTH	J24189027		1-	B	f1
R 1006	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	e1
R 1007	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	d3
R 1008	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e2
R 1009	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	A1
R 1010	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e1
R 1011	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	e1
R 1012	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	f1
R 1013	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	e1
R 1014	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	e1
R 1015	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f1
R 1016	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c3
R 1017	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f1
R 1018	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f1
R 1019	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b3
R 1020	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b4
R 1021	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	g2
R 1022	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	g2
R 1023	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	a3
R 1024	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b3
R 1025	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	b3
R 1026	CHIP RES.	33	1/16W	5%	RMC1/16S 330JTH	J24189007		1-	B	b3
R 1027	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	A	B1
R 1028	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b4
R 1029	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	f1
R 1030	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	B	e1
R 1031	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a4
R 1032	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a3
R 1033	CHIP RES.	180k	1/16W	5%	RMC1/16S 184JTH	J24189052		1-	B	f1
R 1034	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b3
R 1035	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b3
R 1036	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	f1
R 1037	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b4
R 1038	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	b3
R 1039	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b4
R 1040	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	f2
R 1041	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	f1
R 1042	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a4
R 1043	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 1044	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	b3
R 1045	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	C2
R 1046	CHIP RES.	1.2k	1/16W	5%	RMC1/16S 122JTH	J24189026		1-	B	b4
R 1047	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	f1
R 1048	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b3
R 1049	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	f2
R 1050	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a3
R 1051	CHIP RES.	27k	1/16W	5%	RMC1/16S 273JTH	J24189042		1-	B	f1
R 1052	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	c3
R 1053	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	b3
R 1054	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a3
R 1055	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c3
R 1056	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f1
R 1057	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	b4
R 1058	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a3
R 1059	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c4
R 1060	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f2
R 1061	CHIP RES.	15k	1/16W	0.5%	MCR01MZPD1502	J24189376		1-	B	g1
R 1062	CHIP RES.	22k	1/16W	0.5%	MCR01MZPD2202	J24189378		1-	B	g1
R 1063	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A2
R 1064	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	a3
R 1065	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A2
R 1067	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	g1
R 1068	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	g1
R 1069	CHIP RES.	2.2	1/4W	5%	RMC1/4 2R2JATP	J24245229		1-	A	A2
R 1070	CHIP RES.	2.2	1/4W	5%	RMC1/4 2R2JATP	J24245229		1-	A	A2
R 1071	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	b4
R 1072	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c4
R 1073	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	A2
R 1074	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	g1
R 1075	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f2
R 1076	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	f2
R 1077	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c4
R 1078	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a3

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1079	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	c4
R 1080	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A1
R 1081	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	a3
R 1082	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	f2
R 1083	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a3
R 1084	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a3
R 1085	CHIP RES.	100k	1/16W	0.5%	MCR01MZPD1003	J24189386		1-	A	E3
R 1086	CHIP RES.	100k	1/16W	0.5%	MCR01MZPD1003	J24189386		1-	A	E3
R 1087	CHIP RES.	100k	1/16W	0.5%	MCR01MZPD1003	J24189386		1-	A	E3
R 1088	CHIP RES.	100k	1/16W	0.5%	MCR01MZPD1003	J24189386		1-	A	E3
R 1089	CHIP RES.	68k	1/16W	0.5%	MCR01MZPD6802	J24189384		1-	A	E3
R 1091	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	B	f2
R 1093	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d4
R 1094	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	B	f2
R 1095	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	A1
R 1097	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	d3
R 1099	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	g1
R 1100	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f2
R 1101	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	g1
R 1102	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	g1
R 1103	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	g1
R 1104	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	A1
R 1105	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	A1
R 1106	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	g1
R 1107	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	g1
R 1108	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	A1
R 1109	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	F1
R 1110	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	F1
R 1111	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	d4
R 1112	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1114	CHIP RES.	4.7	1/4W	5%	RMC1/4 4R7JATP	J24245479		1-	A	F1
R 1115	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1117	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	D1
R 1118	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	D1
R 1119	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	E1
R 1120	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	F1
R 1121	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	F1
R 1122	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	F1
R 1123	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	d3
R 1124	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1125	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1126	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	d3
R 1127	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1128	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b2
R 1129	CHIP RES.	220k	1/16W	0.5%	MCR01MZPD2203	J24189389		1-	A	C1
R 1130	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1131	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1132	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	B	d3
R 1133	CHIP RES.	1.5k	1/16W	5%	RMC1/16S 152JTH	J24189027		1-	B	d3
R 1134	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	b2
R 1135	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	A	B1
R 1136	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	a2
R 1137	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1139	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B1
R 1140	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B2
R 1141	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a2
R 1142	CHIP RES.	120	1/16W	5%	RMC1/16S 121JTH	J24189014		1-	A	B3
R 1143	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	A	C2
R 1145	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	e3
R 1146	CHIP RES.	33	1/16W	5%	RMC1/16S 330JTH	J24189007		1-	B	d4
R 1147	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C3
R 1148	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	a2
R 1149	CHIP RES.	470k	1/16W	0.5%	MCR01MZPD4703	J24189332		1-	A	C1
R 1150	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b2
R 1151	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a2
R 1152	CHIP RES.	270k	1/16W	0.5%	MCR01MZPD2703	J24189329		1-	A	C2
R 1153	CHIP RES.	100k	1/16W	0.5%	MCR01MZPD1003	J24189386		1-	A	C2
R 1154	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	d3
R 1155	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 1156	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C3
R 1157	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a1
R 1158	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	e3
R 1159	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e3

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1160	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	b2
R 1161	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1162	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	a1
R 1163	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	e3
R 1164	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	b2
R 1165	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f4
R 1166	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f4
R 1167	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	e4
R 1168	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	c1
R 1169	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 1170	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	d1
R 1171	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	b2
R 1172	CHIP RES.	1.5k	1/16W	5%	RMC1/16S 152JTH	J24189027		1-	B	e1
R 1173	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	B	b2
R 1174	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	b2
R 1175	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	B4
R 1176	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	A2
R 1177	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033	W/ CE	1-	B	b2
R 1177	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/O CE	1-	B	b2
R 1178	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/ CE	1-	B	b2
R 1178	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043	W/O CE	1-	B	b2
R 1179	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B3
R 1180	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046	W/ CE	1-	B	b2
R 1180	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051	W/O CE	1-	B	b2
R 1181	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	A2
R 1182	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e2
R 1183	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	B3
R 1184	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B3
R 1185	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	e2
R 1186	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e2
R 1187	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B4
R 1188	CHIP RES.	2.2M	1/16W	5%	RMC1/16S 225JTH	J24189065		1-	B	b2
R 1189	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	B4
R 1190	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 1191	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c2
R 1192	CHIP RES.	82	1/16W	5%	RMC1/16S 820JTH	J24189012		1-	B	e2
R 1194	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e2
R 1195	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d2
R 1196	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c2
R 1197	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	e2
R 1199	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A4
R 1201	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	e2
R 1202	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	A4
R 1203	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d2
R 1204	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E3
R 1205	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c2
R 1206	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	c2
R 1207	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1208	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1209	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1210	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1211	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1212	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1213	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1214	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1215	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1216	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	e2
R 1217	CHIP RES.	560k	1/16W	5%	RMC1/16S 564JTH	J24189058		1-	B	c2
R 1218	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c3
R 1219	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	B	d3
R 1220	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D3
R 1221	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1222	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1223	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	D3
R 1224	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1225	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1226	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	D3
R 1227	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1228	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1229	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1230	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A3
R 1231	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	f3
R 1232	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	f3

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1233	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1234	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	A3
R 1235	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	F2
R 1236	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	f3
R 1237	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d3
R 1238	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1239	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1240	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f3
R 1241	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1242	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1243	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	f4
R 1244	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1245	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1246	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	f4
R 1247	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	f2
R 1248	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1249	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	F2
R 1250	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d2
R 1251	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	B	d2
R 1252	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1253	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	A	E2
R 1254	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1256	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1257	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1258	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1259	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1260	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1261	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	A	A3
R 1262	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1263	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1264	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1265	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1266	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	B3
R 1267	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	A	A4
R 1268	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1269	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1270	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1271	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1272	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1273	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C3
R 1275	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1276	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1277	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1278	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e3
R 1279	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e3
R 1280	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d2
R 1281	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	f2
RB1001	BLOCK RES.	20k			SR4E203JT	J42900028		1-	A	E2
RB1002	BLOCK RES.	10k			SR4E103JT	J42900027		1-	A	E2
S 1001	TACT SWITCH				SKQTLA	N5090110		1-	B	g4
S 1002	TACT SWITCH				SKQTLA	N5090110		1-	B	e4
TH1001	THERMISTOR				ERTJ1VV473J	G9090122		1-	B	a3
TH1002	THERMISTOR				ERTJ1VV473J	G9090122		1-	A	E3
VR1001	POT.				TP76N00N 20KA/SW	J60800236		1-	B	h1
X 1001	XR0021250000T0051123	21.25MHz			21.25MHZ	H0103303		1-	B	a3
X 1002	XTAL XPFEGC	3.579545MHz			3.579545MHZ	H0103304		1-	A	F2
XF1001	XTAL FILTER				UM-5J 21R15AB	H1102374		1-	B	e1
XF1002	XTAL FILTER				UM-5J 21R15AB	H1102374		1-	B	e2
	SPRING CONNECTOR					R0152490		1-	B	g3
	MIC HOLDER RUBBER					RA0578200		1-		
	LIGHT GUIDE				LCD	RA058900A		1-		
	REFLECTOR SHEET					RA0589100		1-		
	INTER CONNECTOR					RA0589200		1-		

Note

STANDARD HORIZON

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