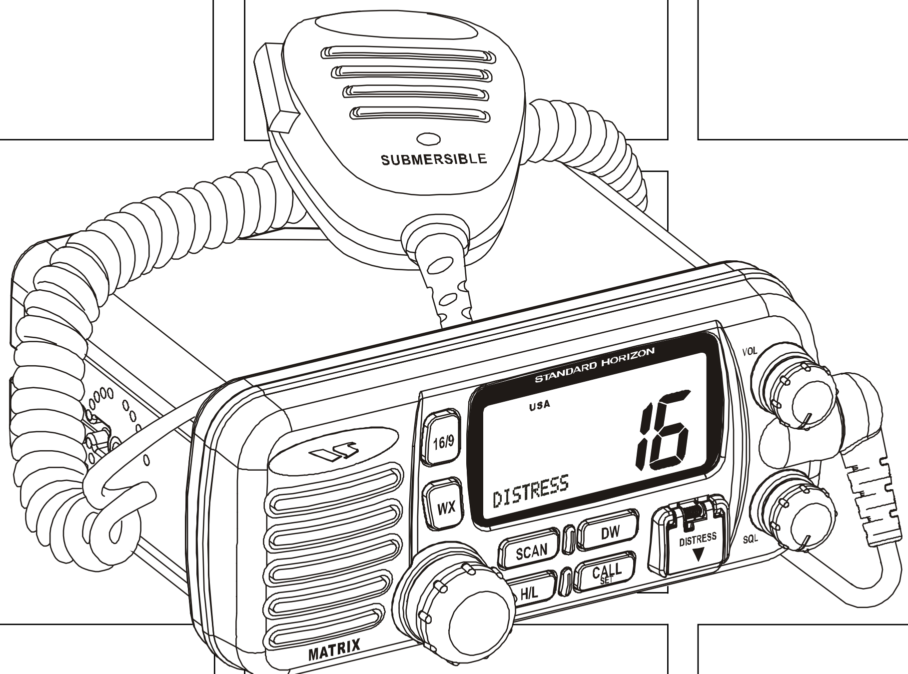
STANDARD HORIZON

25 Watt VHF/FM Marine Transceiver

MATRIX GX1280S

SERVICE MANUAL



EM003N90A

Specifications

GENERAL

Channels:	All USA, International and Canadian
Input Voltage:	13.8 VDC ±20%
Current Drain:	Standby 0.5 A
	Receive 1.5 A
	Transmit 5.0 A (Hi); 1.5 A (Lo)
Dimensions:	2-1/2″ H x 6-5/16″ W x 6-5/16″ D (64 H x 160 W x 160 D mm)
Flush-Mount Dimensions:	2″ H x 5-5/16″ W x 5-1/8″ D (50 H x 136 W x 130 D mm)
Weight:	2.2 lbs (1 kg)

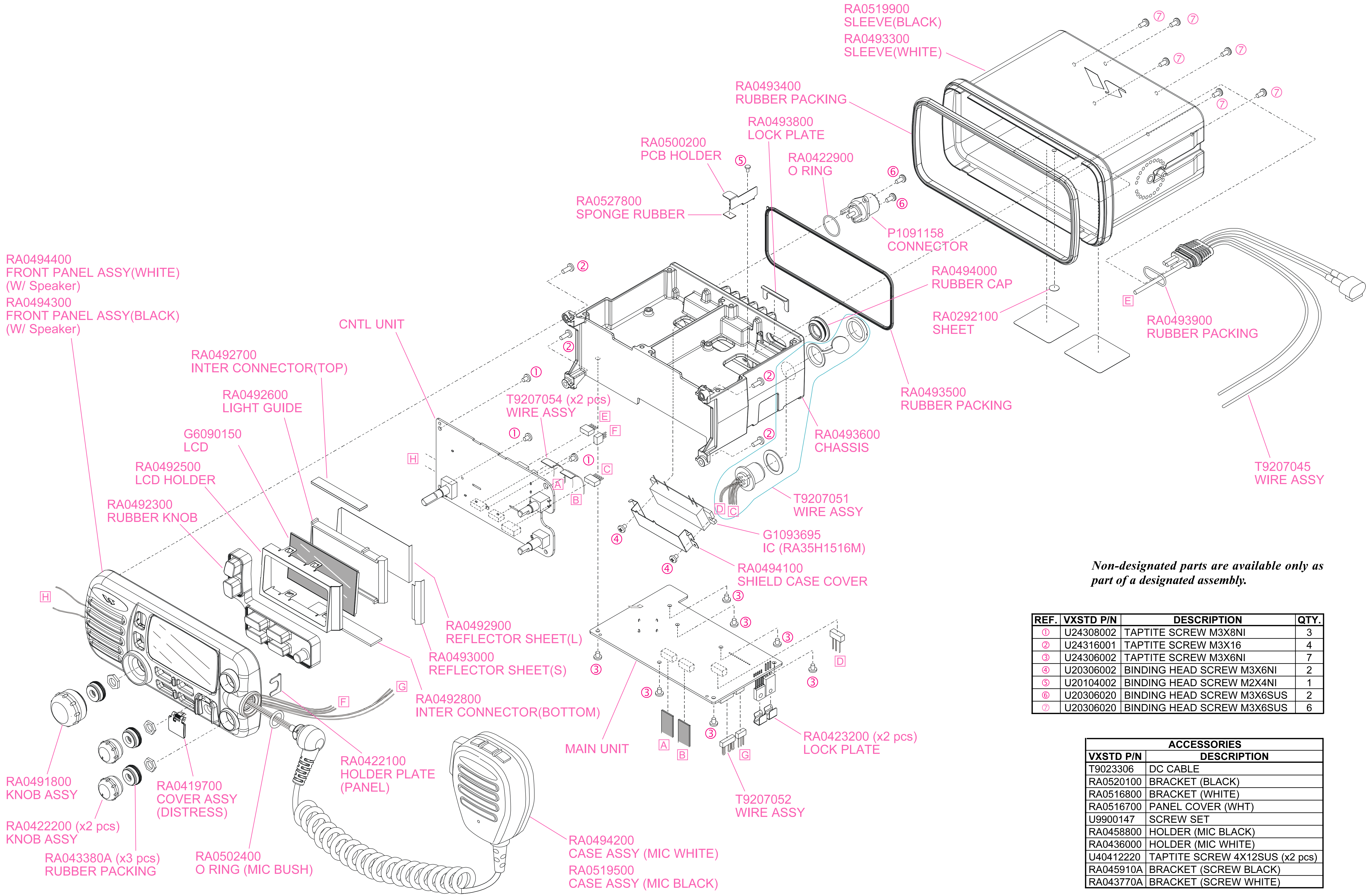
TRANSMITTER

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

RECEIVER

Frequency Range:	156.050 to 163.275 MHz
Sensitivity:	20 dB Quieting: 0.35 μV
	12 dB SINAD: 0.25 μV
	Squelch Sensitivity (Threshold): 0.13 μV
Modulation Acceptance Bandwidth:	±7.5 kHz
Selectivity:	Spurious and Image Rejection: –70 dB
	Intermodulation and Rejection at 12 dB SINAD: –70 dB
Audio Output:	4 W
Audio Response:	within + 2/–8 of a 6 dB/octave (de-emphasis characteristic at 300 to 3000 Hz)
Frequency Stability:	±0.0005 % (–20°C to +50°C)
Channel Spacing:	25 kHz
DSC Format:	RTCMSC101

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

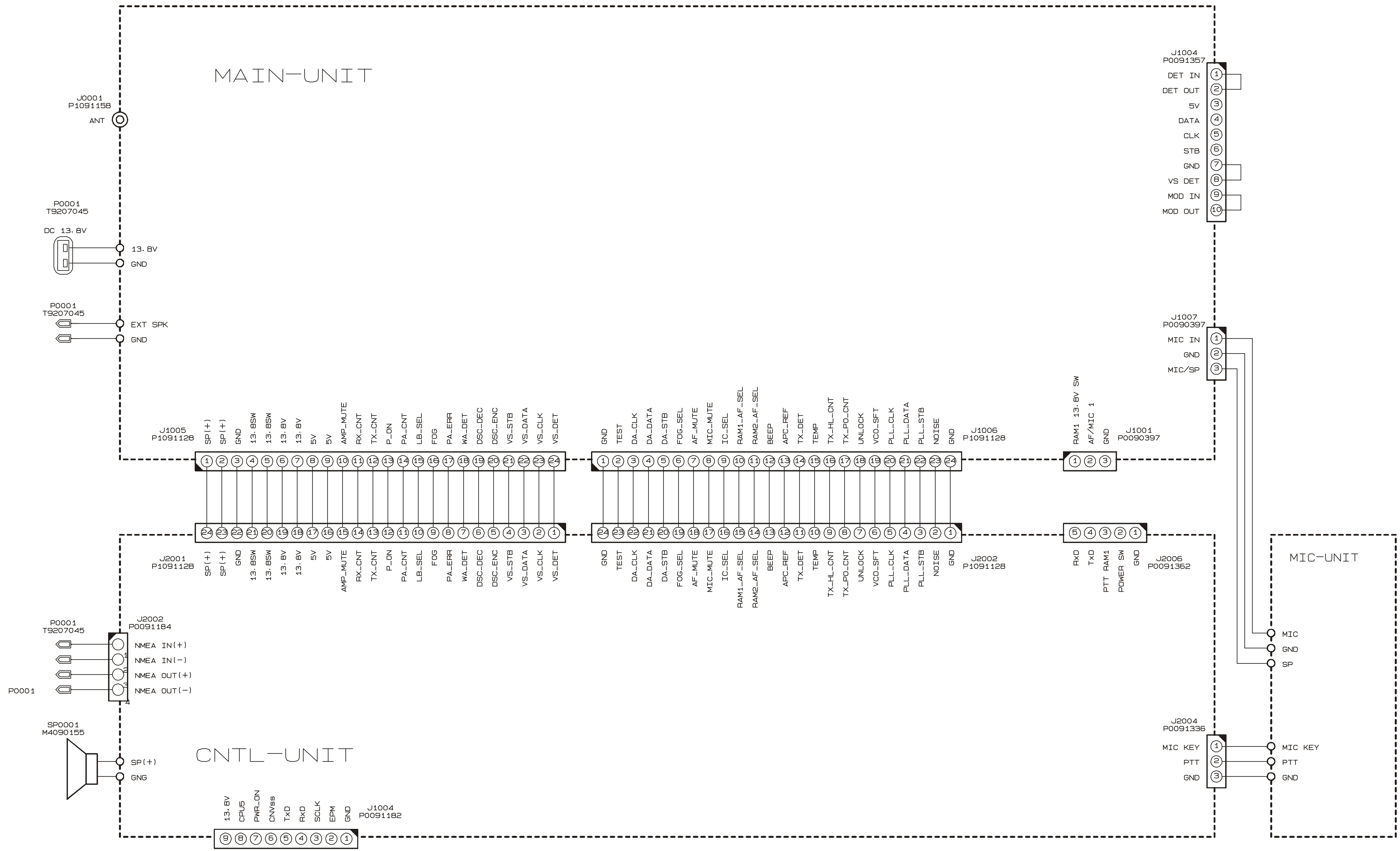


Non-designated parts are available only as part of a designated assembly.

REF.	VXSTD P/N	DESCRIPTION	QTY.
①	U24308002	TAPTITE SCREW M3X8NI	3
②	U24316001	TAPTITE SCREW M3X16	4
③	U24306002	TAPTITE SCREW M3X6NI	7
④	U20306002	BINDING HEAD SCREW M3X6NI	2
⑤	U20104002	BINDING HEAD SCREW M2X4NI	1
⑥	U20306020	BINDING HEAD SCREW M3X6SUS	2
⑦	U20306020	BINDING HEAD SCREW M3X6SUS	6

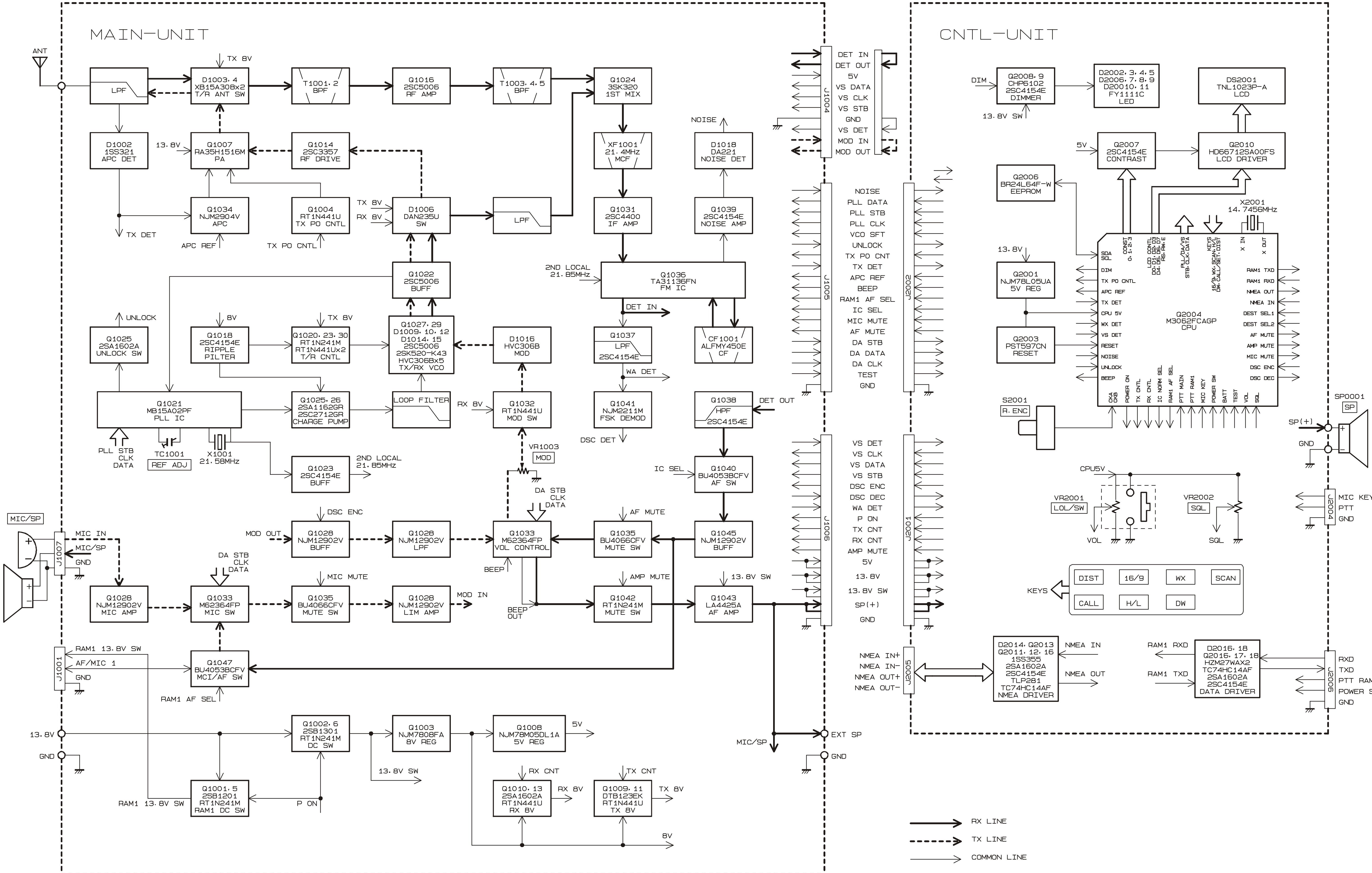
ACCESSORIES	
VXSTD P/N	**DESCRIPTION**
T9023306	DC CABLE
RA0520100	BRACKET (BLACK)
RA0516800	BRACKET (WHITE)
RA0516700	PANEL COVER (WHT)
U9900147	SCREW SET
RA0458800	HOLDER (MIC BLACK)
RA0436000	HOLDER (MIC WHITE)
U40412220	TAPTITE SCREW 4X12SUS (x2 pcs)
RA045910A	BRACKET (SCREW BLACK)
RA043770A	BRACKET (SCREW WHITE)

Note



MAIN-UNIT
J0001
P1091158
ANT
P0001
T9207045
DC 13.8V
13.8V
GND
EXT SPK
J1004
P0091357
DET IN
DET OUT
5V
DATA
CLK
STB
VS DET
MOD IN
MOD OUT
J1007
P0090397
MIC IN
MIC/SP
J1005
P1091128
SP(+)
13.8SW
AMP_MUTE
RX_CNT
TX_CNT
P_ON
PA_CNT
LB_SEL
FOG
PA_ERR
WA_DET
DSC_DEC
DSC_ENC
VS_STB
VS_DATA
VS_CLK
VS_DET
J1006
TEST
DA_CLK
DA_DATA
DA_STB
FOG_SEL
AF_MUTE
MIC_MUTE
IC_SEL
RAM1_AF_SEL
RAM2_AF_SEL
BEEP
APC_REF
TX_DET
TEMP
TX_HL_CNT
TX_PO_CNT
UNLOCK
VCO_SFT
PLL_CLK
PLL_DATA
PLL_STB
NOISE
RAM1 13.8V SW
AF/MIC 1
J1001
J2001
J2002
J2006
P0091362
RxD
TxD
PTT RAM1
POWER SW
MIC-UNIT
MIC
SP
P0091184
NMEA IN(+)
NMEA IN(-)
NMEA OUT(+)
NMEA OUT(-)
SP0001
M4090155
GNG
CNTL-UNIT
J2004
P0091336
MIC KEY
PTT
P0091182
CPU5
PWR_ON
CNVss
SCLK
EPM

Block Diagram



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

Receiver

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

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

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

Buffered output from the VCO Unit is amplified by **Q1022** (**2SC5006**) and bandpass filtered by L1013, L1015, C1125, C1131, and C1134, to provide a pure 1st local signal between 134.65 and 141.875 MHz for delivery to the 1st mixer.

The 21.4 MHz 1st mixer product then passes through dual monolithic crystal filter **XF1001** (±6.5 kHz BW), and is amplified by **Q1031** (**2SC4400-3**) and delivered to the input of the FM IF subsystem IC **Q1036** (**TA31136FN**). This IC contains the 2nd mixer, 2nd local oscillator, limiter amplifier, FM detector, noise amplifier, and squelch gates.

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

After passing through a limiter amplifier, the signal is demodulated by the FM detector. Demodulated receive audio from the IF-IC is amplified by **Q1038** (**2SC4154E**), then the signal is through the AF switch **Q1040** (BU4053BCFV), the AF amplifier **Q1045** (**NJM12902V**) and the AF Mute switch **Q1035** (**BU4066BCFV**).

After volume adjustment by the D/A converter **Q1033** (**M62364FP**) and the AF power amplifier **Q1043** (**LA4425A**), the audio signal is passed to the external Speaker terminal in the accessory cable and 16-Ohm internal loudspeaker.

PLL Synthesizer

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

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

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

The RX VCO is comprised of **Q1027** (**2SK520-K43**) and **D1009**, **D1010**, **D1014**, **D1015** (all **HVC3068**); it oscillates at 21.4 MHz below. The TX VCO is comprised of **Q1029** (**2SC5006**) and **D1012** (both **HVC3068**); it oscillates at the fundamental frequency, with direct frequency-modulation using varactor diode **D1016** (**HVC3068**). The VCO output passes through buffer amplifier **Q1022** (**2SC5006**) to obtain stable output. The VCO DC supply is regulated by **Q1018** (**2SC4154E**). Synthesizer output is fed to the 1st mixer by diode switch **D1006** (**DAN235U**) during receive, and to drive amplifier **Q1014** (**2SC3357**), and the RF power amplifier **Q1007** (**RA35H1516M**)for transmit.

The reference oscillator feeds the PLL synthesizer.

Transmitter

Voice audio from the microphone is delivered via the MIC connector to the MAIN Unit. After passing through amplifier **Q1028** (**NJM12902V**), a pre-emphasis network, the D/A converter **Q1033** (**M62364FP**) for MIC switch, the MIC mute switch **Q1035** (**BU4066BCFV**), limiter (IDC: instantaneous deviation control), and LPF **Q1028** (**NJM12902V**), the audio is adjusted for optimum deviation level and delivered to the next stage.

Voice or DSC(Digital Selective Calling) encode signal inputs from the LPF **Q1028** are FM-modulated in the VCO of the synthesizer. Synthesizer output, after passing through diode switch **D1006** (**DAN235U**), is amplified by driver **Q1014** (**2SC3357**), and the RF power amplifier **Q1007** (**RA35H1516M**) to obtain full RF output.

Circuit Description

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

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

Generation of spurious products by the transmitter is minimized by the fundamental carrier frequency being equal to the final transmitting frequency, modulated directly in the transmit VCO. Additional harmonic suppression is provided by a low-pass filter consisting of coils and capacitors, resulting in more than 70 dB of harmonic suppression prior to delivery of the RF energy to the antenna.

DSC Encoder/ Decoder

Encoder

The DCS (Digital Selective Calling) encode signal which D/A converted in the 16-bit MPU IC **Q2004** is fed through the low-pass filter **Q1028** on the MAIN Unit to the VCO.

Decoder

The receiving DCS code is demodulated by the FM IC **Q1042**, then fed through the low-pass filter **Q1037** (**2SC4154E**) to the DCS Decoder IC **Q1041** (**NJM2211M**) which the receiving DCS code is decoded. The decoded DCS signal delivered to the 16-bit MPU IC **Q2004**.

1050 Hz Weather Alert Decoder

1050Hz Weather Alert signals are demodulated on the CNTL Unit, and are applied to low-pass filter **Q1037** (**2SC4154E**), and delivered to the 16-bit MPU IC **Q2004**.

MPU

Operation is controlled by 16-bit MPU IC **Q2004** (**M30620F**). The system clock uses a 14.7456 MHz crystal for a time base. IC **Q2003** (**PST597CN**) resets the MPU when the power is supplied by the DC power supply, and monitors the voltage of the regulated 5V power supply line.

EEPROM

The EE-PROM **Q2006** (**BR24L64F**) retains TX and RX data for all memory channels , prescaler dividing, IF frequency, local oscillator injection side, and reference oscillator data.

The **GX1280S** has been carefully aligned at the factory for the specified performance across the marine band.

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

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

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

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

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

Required Test Equipment

- ❐ RF Signal Generator with calibrated output level at 200 MHz
- ❐ Deviation Meter (linear detector)
- ❐ AF Millivoltmeter
- ❐ SINAD Meter
- ❐ Inline Wattmeter with 5% accuracy at 200 MHz
- ❐ Regulated DC Power Supply: 13.8 VDC, 10A
- ❐ 50-ohm Non-reactive Dummy Load: 30W at 200 MHz
- ❐ Frequency Counter: >0.1 ppm accuracy at 200 MHz
- ❐ AF Signal Generator
- ❐ DC Voltmeter: high impedance
- ❐ VHF Sampling Coupler
- ❐ AF Dummy Load: 4 Ohms, 10 W
- ❐ Oscilloscope
- ❐ Spectrum Analyzer
- ❐ CP160 GPS/Chart Plotter
- ❐ GX1260S Marine Transceiver

Alignment Preparation & Precautions

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

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

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

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

Alignment

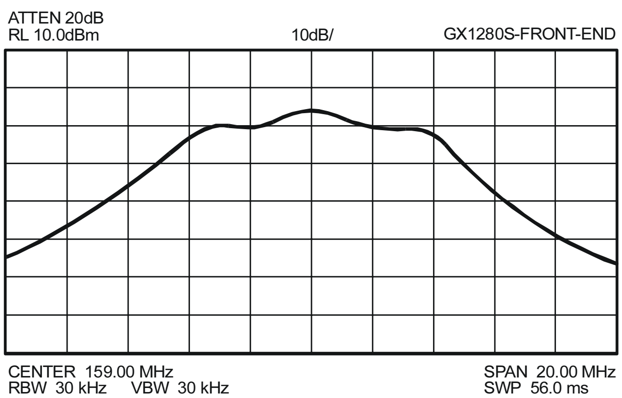
Reference Frequency Adjustment

- ❐ Setup the test equipment as shown below.
- ❐ Set the channel to CH16.
- ❐ Use the [**H/L**] key to set the transceiver to “LOW” power.
- ❐ With the **PTT** switch pressed, adjust **TC1001** so that the Frequency Counter reading is 156.800 MHz ±100 Hz.

Receiver Front-end Adjustment

- ❐ Setup the test equipment as shown below.

- ❐ Set the spectrum analyzer as shown below:
  - ❍ CENTER: 159.000 MHz
  - ❍ SPAN: 20.000 MHz
  - ❍ RBW, VBW: 30 kHz
  - ❍ SWP: 56 ms
- ❐ Adjust **T1001**, **T1002**, **T1003**, **T1004**, and **T1005** until the wave form shown in below is obtained.



Software Alignment/Confirmation Mode

Overview of Software Alignment/Confirmation Mode

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

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

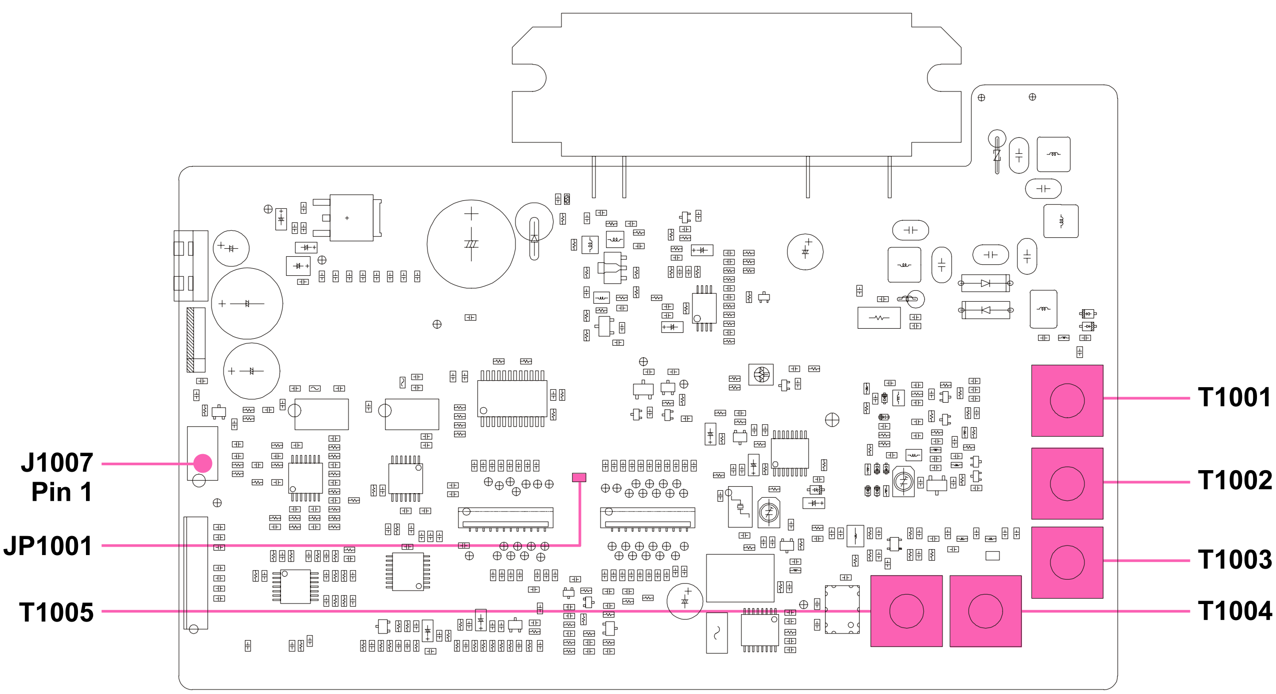
(a) Expansion channels “EXP01 - EXP07” will be set as follows:

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

(b) In CH70, ever time you are in transmit mode, (every time you press PTT), the following test tone can be outputted:
1st transmission: Synthetic tone of 1300 Hz and 2100 Hz
2nd transmission: 1300 Hz
3rd transmission: 2100 Hz
4th transmission: No Modulation
5th transmission: Return to 1st transmission

(c) Scan the channels between WX10 and EXP04 in the SCAN mode.

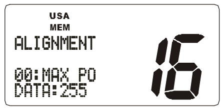
(d) EXP07 is the test channel for the Optional Voice Scrambler/NMEA output. Set the Voice Scramble Code to "0."



MAIN UNIT ALIGNMENT POINT

Starting Software Alignment Mode

- ❒ Confirm that the transceiver's power is turned off.
- ❒ Short the TEST points (**JP1001**).
- ❒ Press and hold the **VOL/PWR** knob until the radio turns on while press and holding the [**DW**], [**CALL/SET**], and [**DISTRESS**] keys. The LCD will be as shown in the illustration at the right.



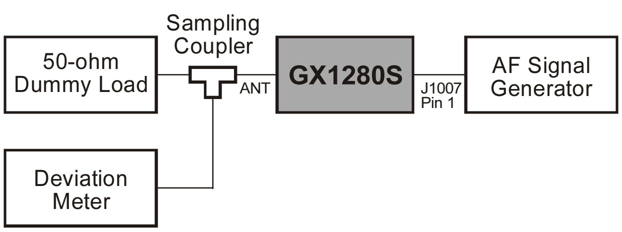
Transmit Power Adjustment

- ❒ Setup the test equipment as shown below.

- ❒ Press the [**SCAN**] key to recall the Alignment Item 01: HI PO.
- ❒ With the **PTT** switch pressed, rotate the **CHANNEL** selector knob so that RF output power is 25 W.
- ❒ Press the [**CALL/SET**] key to save the new setting.
- ❒ Press the [**SCAN**] key to recall the Alignment Item 02: LO PO.
- ❒ With the **PTT** switch pressed, rotate the **CHANNEL** selector knob so that RF output power is 1 W.
- ❒ Press the [**CALL/SET**] key to save the new setting.

TX Deviation Adjustment

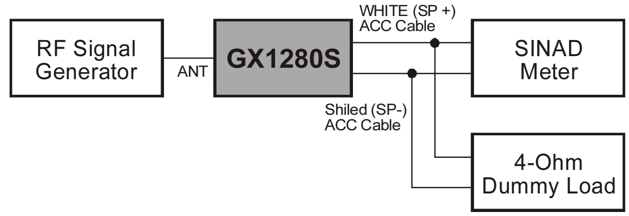
- ❒ Setup the test equipment as shown below.



- ❒ Press the [**SCAN**] key to recall the Alignment Item 03: MAX DEV.
- ❒ Set the AF Signal Generator output to 100 mVrms at 1 kHz.
- ❒ With the **PTT** switch pressed, rotate the **CHANNEL** selector knob so that the maximum deviation is 4.2 kHz ±0.1 kHz.
- ❒ Press the [**CALL/SET**] key to save the new setting.

Squelch Adjustment

- ❒ Setup the test equipment as shown below.

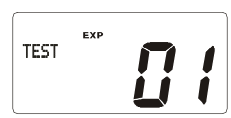


- ❒ Press the [**SCAN**] key to recall the Alignment Item 04: THRESHOLD.
- ❒ Set the RF Signal Generator output to 156.800 MHz, at a level of –12dBμ ±3.0 kHz deviation with a 1 kHz audio tone.
- ❒ Press the [**DW**] key.
- ❒ Press the [**CALL/SET**] key to save the new setting.
- ❒ Press the [**SCAN**] key to recall the Alignment Item 05: TIGHT.
- ❒ Set the RF Signal Generator output to 156.800 MHz, at a level of +5dBμ ±3.0 kHz deviation with a 1 kHz audio tone.
- ❒ Press the [**DW**] key.
- ❒ Press the [**CALL/SET**] key to save the new setting.

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

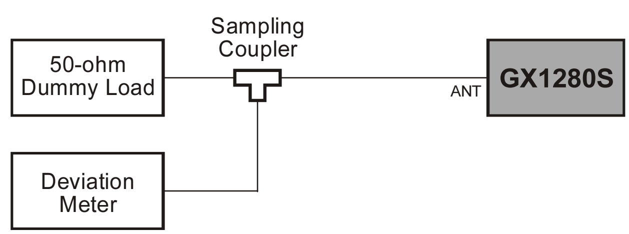
Starting Software Confirmation Mode

- ❒ Confirm that the transceiver's power is turned off.
- ❒ Short the TEST points (**JP1001**).
- ❒ Press and hold the **VOL/PWR** knob until the radio turns on while press and holding the [**DW**] and [**DISTRESS**] keys. Release the keys, the LCD will be as shown for one second in the illustration at the right.



DSC Encoder Confirmation

- ❒ Setup the test equipment as shown below.



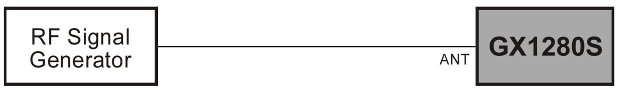
- ❒ Set the channel to CH70.
- ❒ Press the **PTT** switch, confirm that the first tone deviation is 4.0 kHz ±0.3 kHz.

Alignment

Confirmation of Weather Alert Tone

In the weather channel mode, when transceiver receives the specific emergency tone (1050 Hz), weather alert tone will be output (Weather Alert Operation). The Weather Alert mode will be active when a NOAA weather channel is in memory and radio is in memory scan or P-scan mode.

- ❐ Setup the test equipment as shown below.

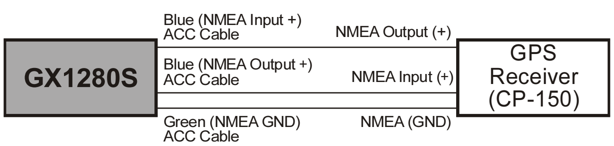


- ❐ Set the **SQL** knob to the “Squelch Tight” position.
- ❐ Press the [**SCAN**] key and start to Memory Scan mode.
- ❐ Set the RF Signal Generator output to 163.275 MHz (WX10), at a level of +20dBμ ±3.0 kHz deviation with a 1050 Hz audio tone.
- ❐ Confirm that the channel of transceiver stops at WX10 and the transceiver outputs the weather alert tone (1050 Hz).

Confirmation of receive/transmit NMEA data

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

- ❐ Setup the test equipment as shown below.

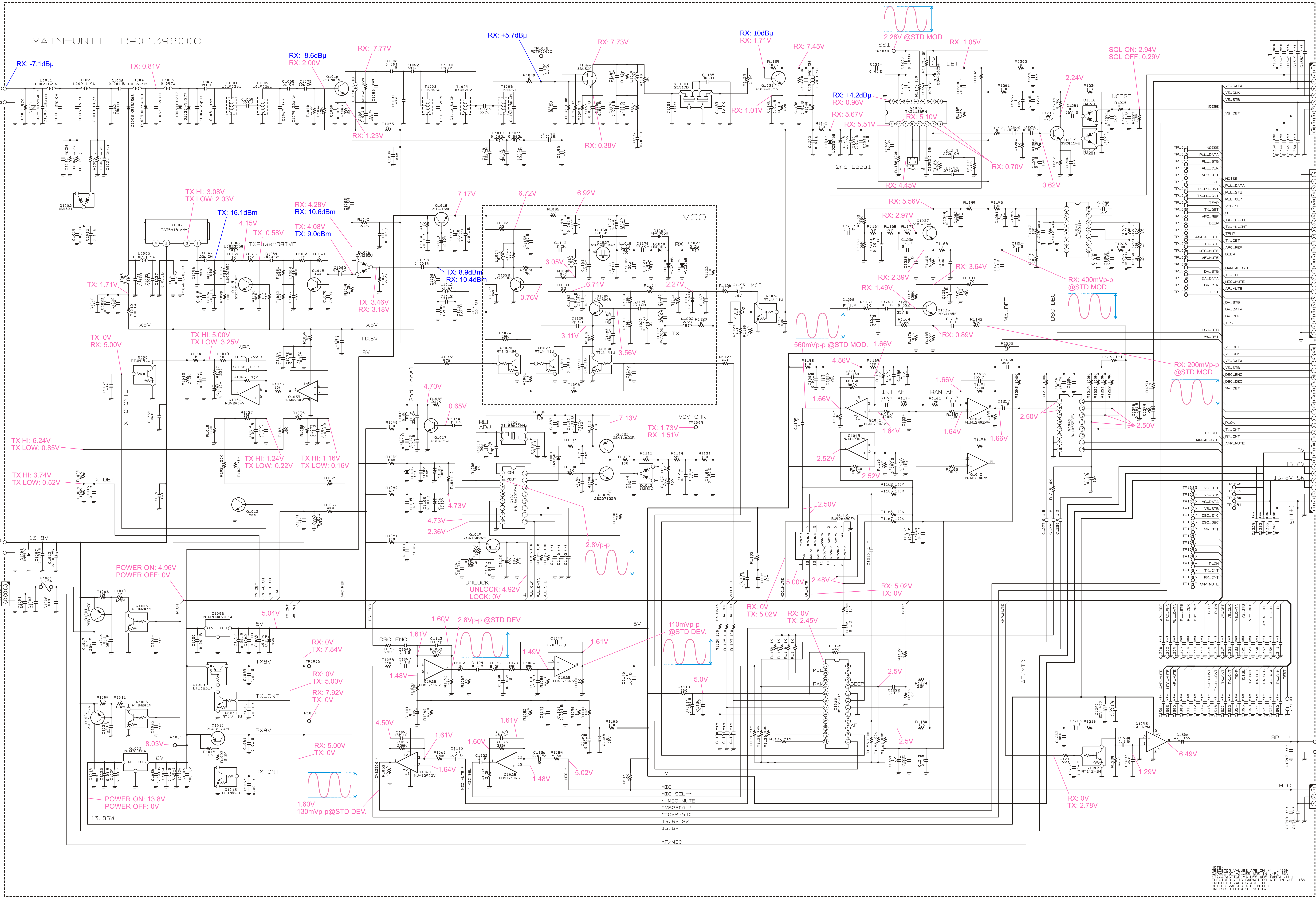


- ❐ Press and hold the [**D/W**] key, confirm that the position data is displayed on the LCD of transceiver.
- ❐ Press the **PTT** switch, confirm that the position data is transmitted.

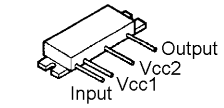
Confirmation of DSC Operation

- ❐ Prepare the confirmation transceiver (GX1260S).
- ❐ Input below data to the confirmation transceiver in advance.
  - ❍ Input “TEST” to NAME of INDIVIDUAL DIRECTORY
  - ❍ Input “123456789” to MMSI of INDIVIDUAL DIRECTORY
  - ❍ Input “123456780” to local MMSI
  - ❍ Channel 13 in U.S.A. mode
- ❐ Turn the test transceiver (GX1280S) to Channel 21 in U.S.A.
- ❐ In 3 seconds, send the INDIVIDUAL CALL from the conformation transceiver (GX1260S).
- ❐ Confirm that the test transceiver (GX1280S) receives the INDIVIDUAL CALL from the conformation transceiver and outputs the beep.
- ❐ Press the [**CALL/SET**] key of the test transceiver (GX1280S) and turn off the beep.
- ❐ Simultaneously, confirm that “123456780” of conformation transceiver’s MMSI is displayed in the LCD of the test transceiver (GX1280S).
- ❐ Confirm that the conformation transceiver (GX1260S) receives the response from the test transceiver and outputs beep.
- ❐ Press the [**CALL/SET**] key of the conformation transceiver and turn off the beep.
- ❐ Simultaneously, confirm that “TEST” of test transceiver’s MMSI is displayed in the LCD of the conformation transceiver.

This completes the Software Confirmation Mode. Disconnect the Jumper from the TEST points (**JP1001**).


MAIN-UNIT BP0139800C
VCO
2nd Local
APC
TX DET
TX PO CNTL
REF ADJ
VCV CHK
MOD
DET
NOISE
DSC ENC
INT AF
RAM AF
UNLOCK
UNLOCK: 4.92V
LOCK: 0V
POWER ON: 4.96V
POWER OFF: 0V
POWER ON: 13.8V
POWER OFF: 0V
SQL ON: 2.94V
SQL OFF: 0.29V
2.28V @STD MOD.
RX: 400mVp-p @STD MOD.
RX: 200mVp-p @STD MOD.
560mVp-p @STD MOD.
110mVp-p @STD DEV.
2.8Vp-p @STD DEV.
130mVp-p@STD DEV.
VS-UNIT
PANEL-UNIT
MIC/SP
EXT SP
RAM

Note



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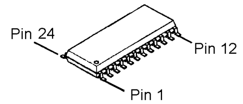
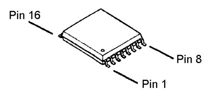
(Q1007)



M62364FP
(Q1033)



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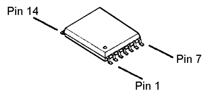
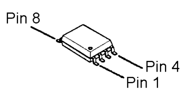
(Q1040)
MB15A02PFV1
(Q1021)
TA31136FN
(Q1036)



BU4066BCFV
(Q1035)
NJM12902V
(Q1028, 1045)



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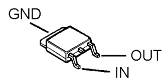
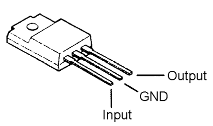
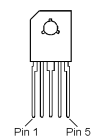
(Q1034)



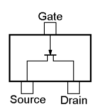
NJM78M05DL1A
(Q1008)



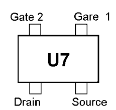
NJM7808FA
(Q1003)



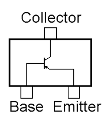
LA4425A
(Q1043)



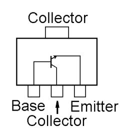
2SK520 (K41)
(Q1027)



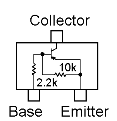
3SK320 (U7)
(Q1024)



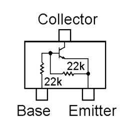
2SA1602A (MF)
(Q1010, 1019)



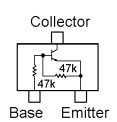
2SC3357 (RK)
(Q1014)
2SC4154 (LE)
(Q1017, 1037,
1038, 1039)
2SC5006 (24)
(Q1022, 1029)



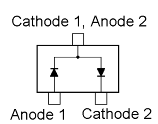
DTB123EK (F52)
(Q1009)



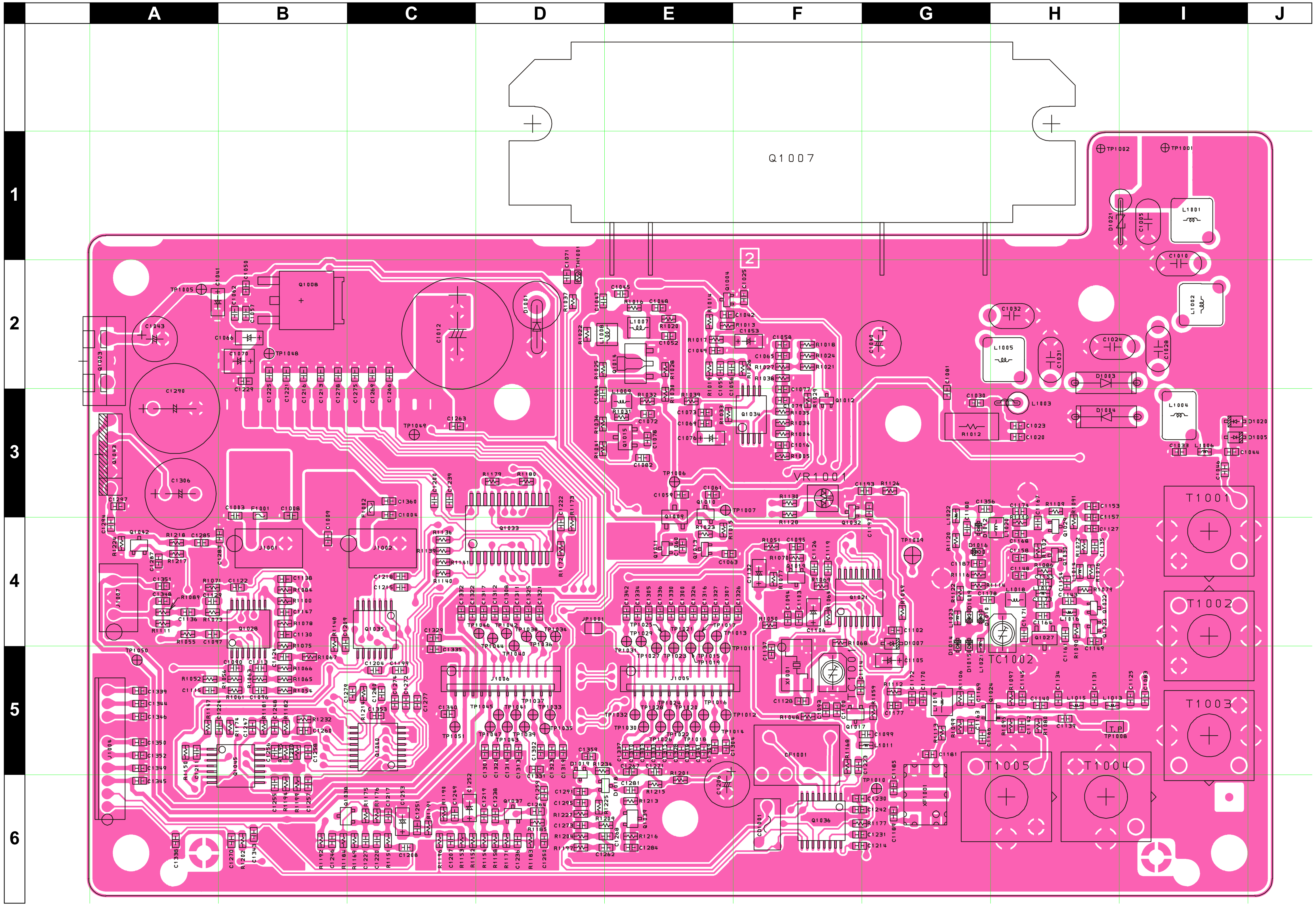
RT1N241M (N2)
(Q1042)



RT1N441U (N3)
(Q1004, 1011, 1013,
1023, 1030, 1032)

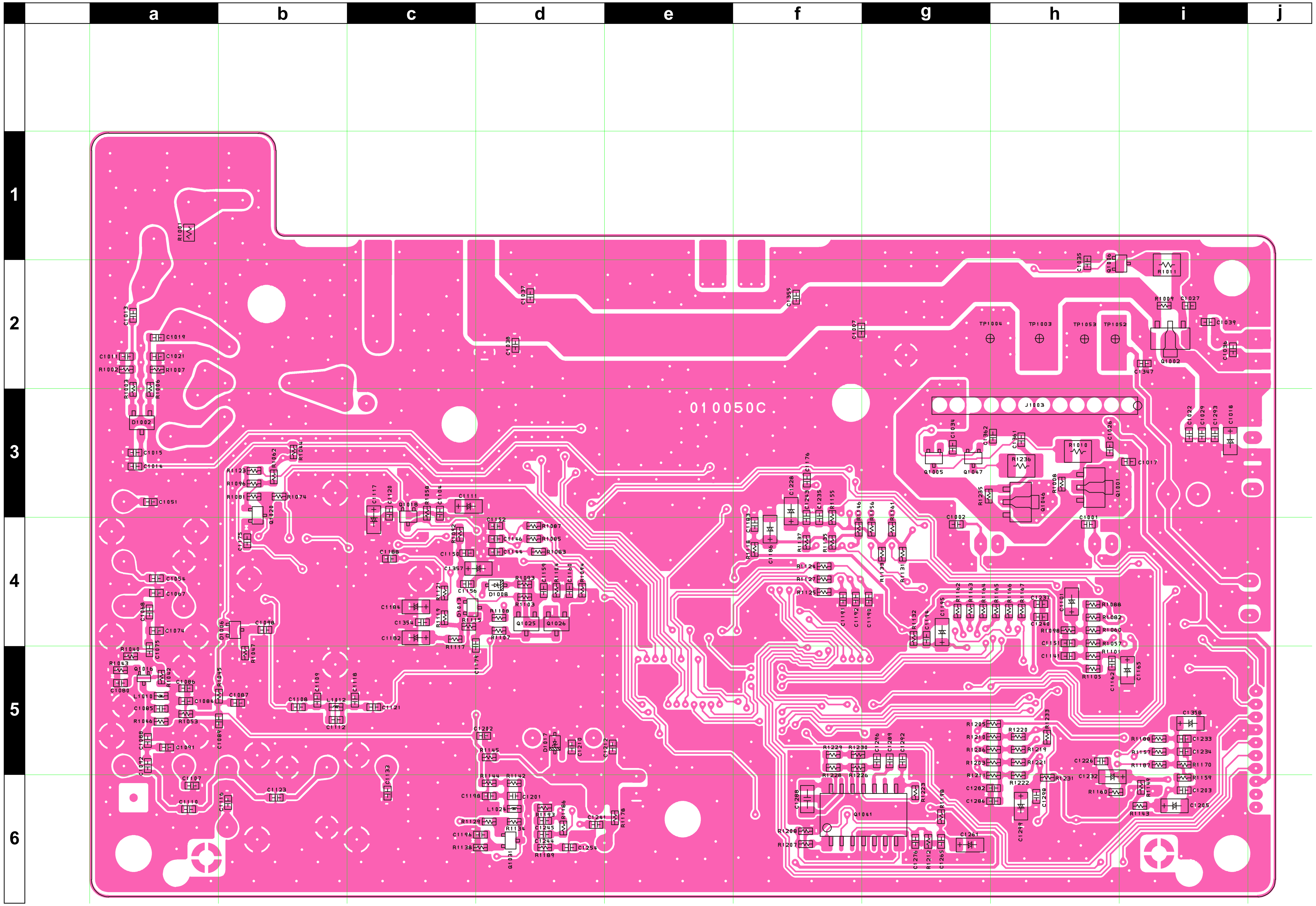


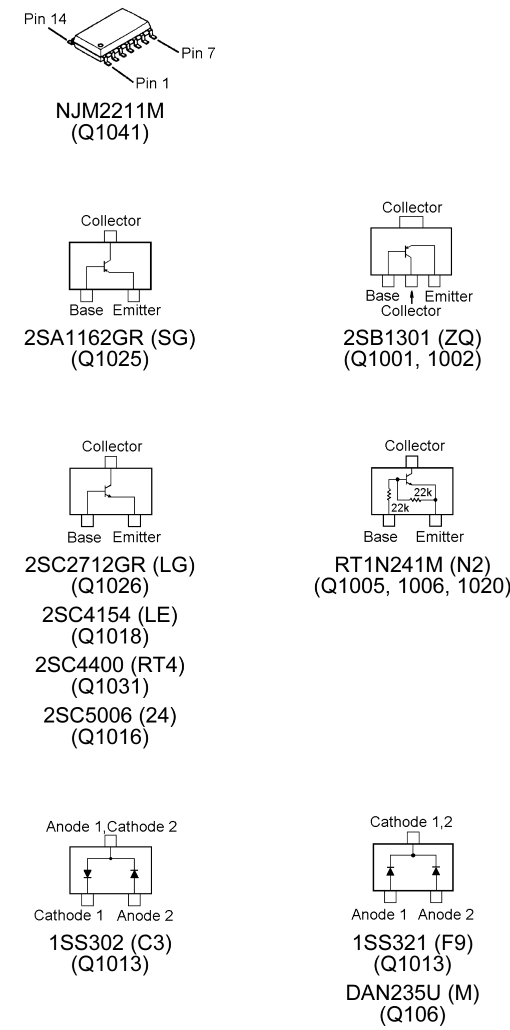
DA221 (K)
(D1018, 1019)



MAIN Unit

Parts Layout (Side B)





REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2400001				
	Printed Circuit Board				AM003N000	FR010050C		1-		
C 1005	CERAMIC CAP.	15pF	50V	CH	CHU5 150J6	K02179104		1-	A	I1
C 1007	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	f2
C 1010	CERAMIC CAP.	27pF	50V	CH	CHU5 270J6	K02179107		1-	A	I2
C 1011	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		1-	B	a2
C 1012	AL.ELECTRO.CAP.	2200uF	25V		RE3-25V222M	K40149055		1-	A	C2
C 1013	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	B	a2
C 1014	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a3
C 1015	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	a3
C 1016	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F3
C 1017	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	i3
C 1019	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	B	a2
C 1021	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	a2
C 1022	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i3
C 1023	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H3
C 1024	CERAMIC CAP.	18pF	50V	CH	CHU5 180J6	K02179105		1-	A	H2
C 1026	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	h3
C 1027	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	i2
C 1028	CERAMIC CAP.	0.001uF	50V	B	BU5 102K6(5MM)	K10179056		1-	A	I2
C 1029	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i3
C 1031	CERAMIC CAP.	22pF	50V	CH	CHU5 220J6	K02179106		1-	A	H2
C 1032	CERAMIC CAP.	12pF	50V	CH	CHU5 120J6	K02179103		1-	A	H2
C 1033	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	I3
C 1036	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i2
C 1037	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	d2
C 1039	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i2
C 1040	AL.ELECTRO.CAP.	10uF	25V		RC2-25V100M(5X7)	K40149012		1-	A	G2
C 1041	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	B2
C 1042	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1043	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101M 100UF	K40109024		1-	A	A2
C 1044	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	I3
C 1046	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		1-	A	I3
C 1047	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	E2
C 1048	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E2
C 1049	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1050	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	B2
C 1052	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E2
C 1053	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	A	F2
C 1054	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	a4
C 1055	CHIP CAP.	0.22uF	10V	B	GRM39B224K10PT	K22104801		1-	A	E2
C 1056	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E2
C 1057	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	B2
C 1058	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F2
C 1059	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	E3
C 1060	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E4
C 1061	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	E3
C 1062	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	B2
C 1063	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E4
C 1064	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	A	D3
C 1065	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F2
C 1066	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	B2
C 1068	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a4
C 1069	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E3
C 1073	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E3
C 1074	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	a4
C 1075	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	B	a5
C 1076	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	E3
C 1077	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F2
C 1078	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		1-	A	E3
C 1079	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F3
C 1080	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1081	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G3
C 1082	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		1-	A	E3
C 1083	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		1-	A	I5
C 1084	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1087	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b5
C 1088	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	a5
C 1090	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B5
C 1092	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a5
C 1093	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F5
C 1094	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F4
C 1095	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1096	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B5
C 1097	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	A4
C 1098	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 1099	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	G5
C 1100	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F5
C 1101	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	B	h4
C 1103	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4
C 1104	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c3
C 1106	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F4
C 1107	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	a6
C 1108	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	b5
C 1109	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B	b5
C 1110	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		1-	B	a6
C 1111	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c3
C 1113	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B5
C 1114	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G5
C 1115	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	A5
C 1116	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	b6
C 1117	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c4
C 1118	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	B	c5
C 1119	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F4
C 1120	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c3
C 1121	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		1-	B	c5
C 1122	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B4
C 1123	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	B	b6
C 1124	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B5
C 1125	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	I5
C 1126	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F4
C 1128	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		1-	A	F5
C 1129	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	A4
C 1130	CHIP CAP.	0.0068uF	50V	B	GRM39B682K50PT	K22174834		1-	A	B4
C 1131	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	A	H5
C 1132	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	F4
C 1133	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		1-	B	c6
C 1134	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H5
C 1135	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1136	CHIP CAP.	0.0056uF	50V	B	GRM39B562M50PT	K22174818		1-	A	A4
C 1137	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	A	F5
C 1138	CHIP CAP.	330pF	50V	B	GRM39B331K50PT	K22174820		1-	A	B4
C 1139	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	H5
C 1140	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H5
C 1141	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	h5
C 1142	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H5
C 1143	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	H4
C 1147	CHIP CAP.	0.0056uF	50V	B	GRM39B562M50PT	K22174818		1-	A	B4
C 1148	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1149	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1150	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 1151	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h4
C 1153	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H3
C 1154	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H4
C 1155	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	H4
C 1157	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	H3
C 1158	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	H4
C 1161	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1162	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h5
C 1163	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1164	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1165	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	i5
C 1166	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	G5
C 1167	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		1-	A	H4
C 1168	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		1-	A	H4
C 1169	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	A	G5
C 1170	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1171	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	H4
C 1172	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	G5
C 1173	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		1-	A	H4
C 1174	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	H3
C 1175	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 1176	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	f3
C 1177	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	G5
C 1178	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		1-	A	G4
C 1180	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G4

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1181	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G5
C 1182	CHIP TA.CAP.	2.2uF	16V		TEMSVA1C225M-8R	K78120015		1-	B	c4
C 1183	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	f4
C 1185	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		1-	A	G6
C 1186	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	f4
C 1188	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c4
C 1189	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	G6
C 1193	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	G3
C 1194	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	g4
C 1195	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	g4
C 1196	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d6
C 1198	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d6
C 1199	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C5
C 1201	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		1-	B	d6
C 1202	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d5
C 1203	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i6
C 1205	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	i6
C 1206	AL.ELECTRO.CAP.	47uF	16V		RE2-16V470M 47UF	K40129054		1-	A	E6
C 1207	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1208	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C6
C 1209	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	B4
C 1210	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	d5
C 1211	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	A5
C 1212	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	e5
C 1214	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	F6
C 1215	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C4
C 1217	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1219	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	A	D6
C 1220	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1222	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D4
C 1223	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		1-	A	F5
C 1224	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1226	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h5
C 1227	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		1-	A	C6
C 1228	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	f3
C 1230	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	F6
C 1231	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F6
C 1232	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	h6
C 1233	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	i5
C 1236	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D6
C 1237	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	B	h4
C 1238	CHIP CAP.	820pF	50V	B	GRM39B821M50PT	K22174808		1-	A	D6
C 1240	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	h4
C 1241	CHIP CAP.	82pF	50V	CH	GRM39CH820J50PT	K22174233		1-	B	d6
C 1242	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	F6
C 1243	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	f3
C 1244	CHIP CAP.	270pF	50V	CH	GRM39CH271J50PT	K22174251		1-	B	d6
C 1245	CHIP CAP.	270pF	50V	CH	GRM39CH271J50PT	K22174251		1-	B	d6
C 1246	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B6
C 1247	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B5
C 1249	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	C6
C 1251	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C6
C 1253	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C6
C 1254	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	B	d6
C 1255	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		1-	A	B6
C 1257	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	B6
C 1259	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1261	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	g6
C 1262	CHIP CAP.	0.0047uF	50V	B	GRM39B472K50PT	K22174833		1-	A	E6
C 1264	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1267	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	E5
C 1268	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E6
C 1271	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	A	E5
C 1273	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1277	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1279	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	C5
C 1280	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1281	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	E6
C 1282	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	h6
C 1285	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	A4
C 1287	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	A4
C 1288	FILM CAP.	0.027uF	16V		ECHU1C273JB5	K57120012		1-	B	f6
C 1289	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	g5

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1290	AL.ELECTRO.CAP.	470uF	25V		RE3-25V471M	K40149044		1-	A	A3
C 1291	CHIP CAP.	0.047uF	16V	B	GRM39B473K16PT	K22124804		1-	A	D6
C 1292	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		1-	B	g5
C 1293	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	i3
C 1294	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	A4
C 1295	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	D6
C 1296	CHIP CAP.	0.0068uF	50V	B	GRM39B682K50PT	K22174834		1-	B	g5
C 1298	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	h6
C 1299	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	h6
C 1306	AL.ELECTRO.CAP.	470uF	16V		RE3-16V471M 470UF	K40129066		1-	A	A3
C 1353	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C5
C 1354	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	c4
C 1356	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		1-	A	G3
C 1358	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	B	i5
C 1359	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	D5
CD1001	CERAMIC DISC				CDA450C24	H7901430		1-	A	F6
CF1001	CERAMIC FILTER				ALFYM450E=K	H3900535		1-	A	F5
D 1001	DIODE				1N5402	G2090778		1-	A	D2
D 1002	DIODE				1SS321 TE85R	G2070076		1-	B	a3
D 1003	DIODE				XB15A308A2GB	G2090742		1-	A	I2
D 1004	DIODE				XB15A308A2GB	G2090742		1-	A	H3
D 1005	DIODE				HSU277TRF	G2070118		1-	A	I3
D 1006	DIODE				DAN235U TL	G2070176		1-	B	b4
D 1008	DIODE				HZU5ALL-TR	G2070754		1-	B	d4
D 1009	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1010	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1012	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1013	DIODE				1SS302 TE85R	G2070088		1-	B	c4
D 1014	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1015	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1016	DIODE				HVC306B TRF	G2070918		1-	A	G4
D 1017	DIODE				UDZS TE-17 5.6B	G2070910		1-	B	d5
D 1018	DIODE				DA221 TL	G2070178		1-	A	E6
D 1019	DIODE				DA221 TL	G2070178		1-	A	D5
D 1020	DIODE				HSU277TRF	G2070118		1-	A	I3
D 1021	SURGE ABSORBER				DSP-141N-S00B	Q9000586		1-	A	I1
F 1001	CHIP FUSE	1.25A			FCC16 132ABTP	Q0000109		1-	A	B3
J 1001	CONNECTOR				B3B-PH-K-S	P0090397		1-	A	B4
J 1004	CONNECTOR				PI28A10M	P0091357		1-	A	A6
J 1005	CONNECTOR				24FLT-SM1-TB	P1091128		1-	A	E5
J 1006	CONNECTOR				24FLT-SM1-TB	P1091128		1-	A	D5
J 1007	CONNECTOR				B3B-PH-K-S	P0090397		1-	A	A4
L 1001	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	I1
L 1002	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	I2
L 1003	M.RFC	4.7uH			LAL03NA4R7K	L1190203		1-	A	H3
L 1004	COIL A1				3.5T4.0D0.8UEW R	L0022245		1-	A	I3
L 1005	COIL A1				4.5T3.5D0.8UEW R	L0021149A		1-	A	H2
L 1006	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	A	I3
L 1007	COIL				E2 0.25-1.9-8T-L	L0022550		1-	A	E2
L 1008	COIL				E2 0.25-1.9-8T-L	L0022550		1-	A	E2
L 1010	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	a5
L 1011	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G5
L 1012	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b5
L 1013	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	A	H5
L 1014	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	A	H4
L 1015	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	A	H5
L 1016	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	H4
L 1017	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	H4
L 1018	M.RFC	0.1uH		2%	C2012C-R10G	L1690776		1-	A	H4
L 1019	CHIP COIL	1.5uH			LQH3N1R5M02M00-	L1690077		1-	A	G5
L 1020	M.RFC	0.033uH		2%	C2012C-33NG	L1690770		1-	A	H4
L 1021	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	A	G4
L 1022	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G3
L 1023	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	A	G4
L 1024	M.RFC	1.5uH			LK1608 1R5K-T	L1690846		1-	B	d6
Q 1001	TRANSISTOR				2SB1301-T2 ZQ	G3213017Q		1-	B	h3
Q 1002	TRANSISTOR				2SB1301-T2 ZQ	G3213017Q		1-	B	i2
Q 1003	IC				NJM7808FA	G1093640		1-	A	A2
Q 1004	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E2
Q 1005	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	g3
Q 1006	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	i2
Q 1007	IC				RA35H1516M	G1093695		1-	A	D1
Q 1008	IC				NJM78M05DL1A(TE1)	G1093660		1-	A	B2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 1009	TRANSISTOR				DTB123EK T146	G3070022		1-	A	E3
Q 1010	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	A	E3
Q 1011	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E4
Q 1013	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	E4
Q 1014	TRANSISTOR				2SC3357-T2 RF	G3333577F		1-	A	E2
Q 1016	TRANSISTOR				2SC5006-T1	G3350068		1-	B	a5
Q 1017	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	F5
Q 1018	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c3
Q 1019	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	A	F4
Q 1020	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	B	b3
Q 1021	IC				MB15A02PFV1-G-BND-EF	G1092541		1-	A	F4
Q 1022	TRANSISTOR				2SC5006-T1	G3350068		1-	A	H4
Q 1023	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	H4
Q 1024	FET				3SK320(TE85L)	G4803208		1-	A	H5
Q 1025	TRANSISTOR				2SA1162GR TE85R	G3111627G		1-	B	d4
Q 1026	TRANSISTOR				2SC2712GR TE85R	G3327127G		1-	B	d4
Q 1027	FET				2SK520-T2B K43	G3805207C		1-	A	H4
Q 1028	IC				NJM12902V(TE1)	G1093592		1-	A	B4
Q 1029	TRANSISTOR				2SC5006-T1	G3350068		1-	A	H4
Q 1030	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	H4
Q 1031	TRANSISTOR				2SC4400-3-TL	G3344008C		1-	B	d6
Q 1032	TRANSISTOR				RT1N441U-T11-1	G3070247		1-	A	F3
Q 1033	IC				M62364FP 600D	G1093033		1-	A	D4
Q 1034	IC				NJM2904V-TE1	G1091677		1-	A	F3
Q 1035	IC				BU4066BCFV-E2	G1093537		1-	A	C4
Q 1036	IC				TA31136FN(EL)	G1091605		1-	A	F6
Q 1037	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	D6
Q 1038	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	C6
Q 1039	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	A	E6
Q 1040	IC				BU4053BCFV-E2	G1093422		1-	A	C5
Q 1041	IC				NJM2211M(TE1)	G1092943		1-	B	g6
Q 1042	TRANSISTOR				RT1N241M-T11-1	G3070249		1-	A	A4
Q 1043	IC				LA4425A	G1092241		1-	A	A3
Q 1045	IC				NJM12902V(TE1)	G1093592		1-	A	B5
R 1001	CHIP RES.	47k	1/10W	5%	RMC1/10T 473J	J24205473		1-	B	a1
R 1002	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a2
R 1003	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a2
R 1004	CHIP RES.	68k	1/16W	5%	RMC1/16 683JATP	J24185683		1-	A	F3
R 1005	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1006	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	a2
R 1007	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a2
R 1008	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h3
R 1009	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	i2
R 1010	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	h3
R 1011	CHIP RES.	1k	1/4W	5%	RMC1/4 102JATP	J24245102		1-	B	i2
R 1012	CHIP RES.	100	1W	5%	RMC1 101JTE	J24305101		1-	A	G3
R 1013	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	E2
R 1014	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	E2
R 1015	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	E4
R 1017	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	A	E2
R 1018	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F2
R 1019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E2
R 1020	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E2
R 1021	CHIP RES.	150k	1/16W	5%	RMC1/16 154JATP	J24185154		1-	A	F2
R 1022	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D2
R 1023	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	E4
R 1025	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D2
R 1026	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	A	F2
R 1027	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F2
R 1029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F3
R 1033	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	E3
R 1034	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1035	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F3
R 1036	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	D3
R 1038	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	F2
R 1039	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	E3
R 1040	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	a5
R 1041	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D3
R 1042	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	B	a5
R 1043	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	a5
R 1044	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b3
R 1045	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	a5
R 1046	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	a5

MAIN Unit

Parts List

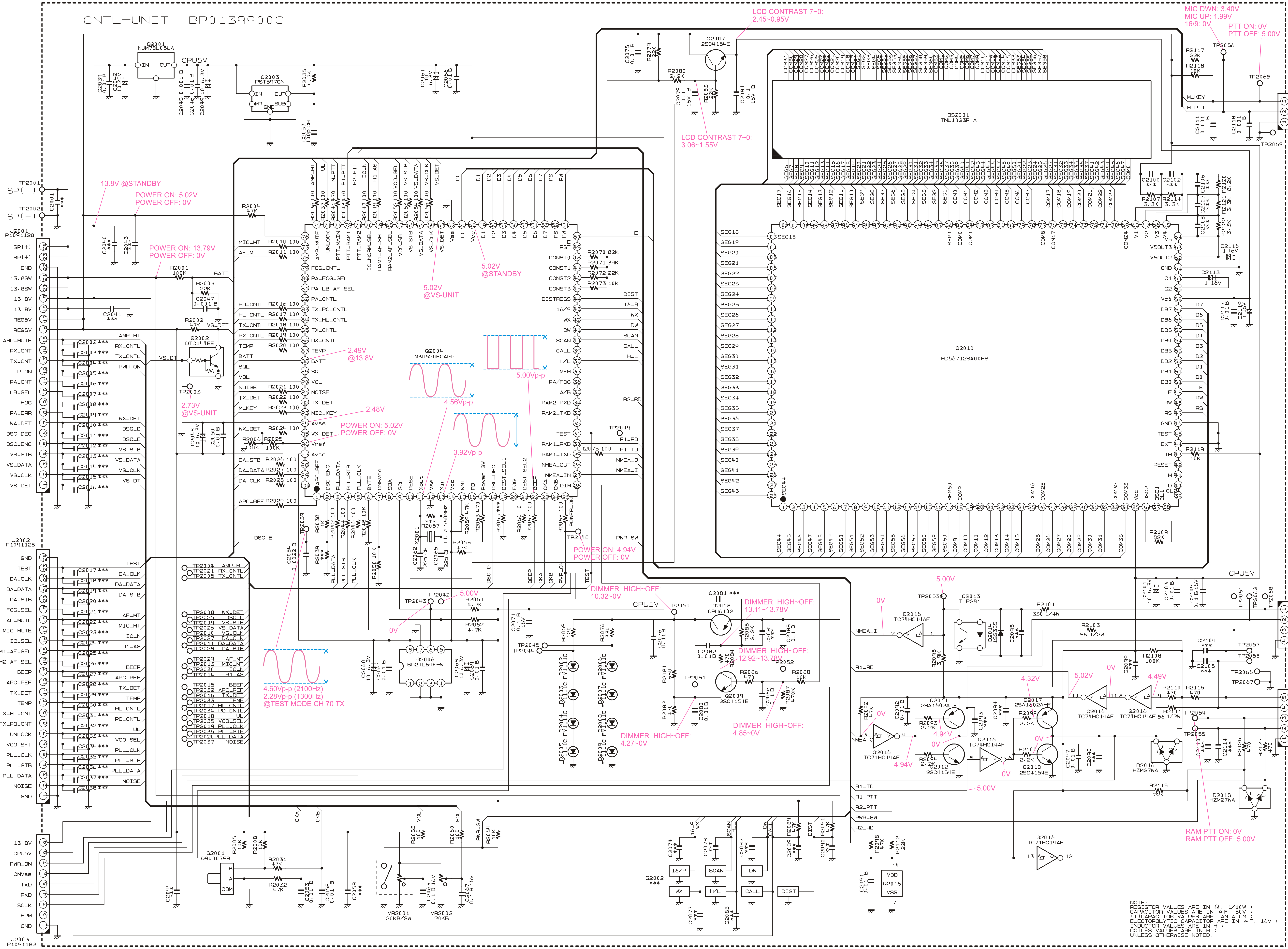
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1047	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b5
R 1048	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F5
R 1050	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	F4
R 1051	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F4
R 1052	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A5
R 1053	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	B	a5
R 1054	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B5
R 1055	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	A4
R 1056	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	B5
R 1057	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1058	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c3
R 1059	CHIP RES.	220k	1/16W	5%	RMC1/16 224JATP	J24185224		1-	A	G5
R 1060	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1061	CHIP RES.	120k	1/16W	5%	RMC1/16 124JATP	J24185124		1-	A	B5
R 1062	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	b3
R 1063	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	B5
R 1064	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	F4
R 1066	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1067	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1068	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	F4
R 1069	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	F4
R 1070	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F4
R 1071	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A4
R 1072	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1073	CHIP RES.	330k	1/16W	5%	RMC1/16 334JATP	J24185334		1-	A	A4
R 1074	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b3
R 1075	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	B4
R 1077	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	F4
R 1078	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B4
R 1079	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	H4
R 1080	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	H5
R 1082	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1083	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1084	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	A	B4
R 1085	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1086	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1087	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1088	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	h4
R 1089	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	A4
R 1090	CHIP RES.	270	1/16W	5%	RMC1/16 271JATP	J24185271		1-	A	H4
R 1091	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	H4
R 1092	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1093	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 1094	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	B	d4
R 1095	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	H5
R 1096	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b3
R 1097	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	H5
R 1098	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h4
R 1099	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		1-	A	G5
R 1100	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B4
R 1101	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	h5
R 1102	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		1-	A	H4
R 1103	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 1104	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 1105	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h5
R 1106	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	G5
R 1107	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d4
R 1109	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	H3
R 1110	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	H4
R 1111	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	A4
R 1112	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		1-	A	G5
R 1113	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	G5
R 1114	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	G4
R 1115	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c4
R 1116	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	G4
R 1117	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c4
R 1118	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1119	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		1-	B	c4
R 1120	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G4
R 1121	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c4
R 1122	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G4
R 1124	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1125	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1126	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	G3
R 1127	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f4
R 1129	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	d6
R 1130	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	F3
R 1132	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g4
R 1134	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d6
R 1136	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1138	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		1-	B	d6
R 1139	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1140	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1141	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	C4
R 1142	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	d6
R 1143	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	i6
R 1144	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d6
R 1145	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d5
R 1146	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f4
R 1147	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	A5
R 1148	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	B4
R 1149	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	i6
R 1150	CHIP RES.	560k	1/16W	5%	RMC1/16 564JATP	J24185564		1-	A	A5
R 1151	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C6
R 1152	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	C6
R 1153	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	C6
R 1154	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1155	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f3
R 1156	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1157	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1158	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1159	CHIP RES.	18k	1/16W	5%	RMC1/16 183JATP	J24185183		1-	B	i6
R 1160	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	B	h6
R 1162	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1163	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g4
R 1166	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h4
R 1167	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h4
R 1168	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F5
R 1169	CHIP RES.	5.6k	1/16W	5%	RMC1/16 562JATP	J24185562		1-	A	C6
R 1170	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	i5
R 1171	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D6
R 1172	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	D4
R 1173	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D4
R 1174	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B5
R 1175	CHIP RES.	120k	1/16W	5%	RMC1/16 124JATP	J24185124		1-	A	C6
R 1176	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C6
R 1177	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	F6
R 1178	CHIP RES.	1.8k	1/16W	5%	RMC1/16 182JATP	J24185182		1-	B	e6
R 1179	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	D3
R 1180	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D3
R 1181	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B5
R 1183	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	D6
R 1184	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	B6
R 1185	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D6
R 1186	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	d6
R 1187	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1188	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	i5
R 1189	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	B	d6
R 1190	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C6
R 1191	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C6
R 1192	CHIP RES.	82k	1/16W	5%	RMC1/16 823JATP	J24185823		1-	A	B6
R 1193	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	B	d6
R 1194	CHIP RES.	560k	1/16W	5%	RMC1/16 564JATP	J24185564		1-	A	B6
R 1195	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	B5
R 1196	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	C6
R 1197	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D6
R 1198	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g6
R 1199	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B6
R 1201	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	E6
R 1202	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	B6
R 1203	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1204	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D6
R 1207	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	f6
R 1208	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	f6
R 1209	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	E6
R 1211	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5

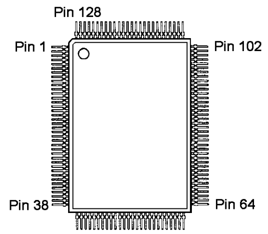
MAIN Unit

Parts List

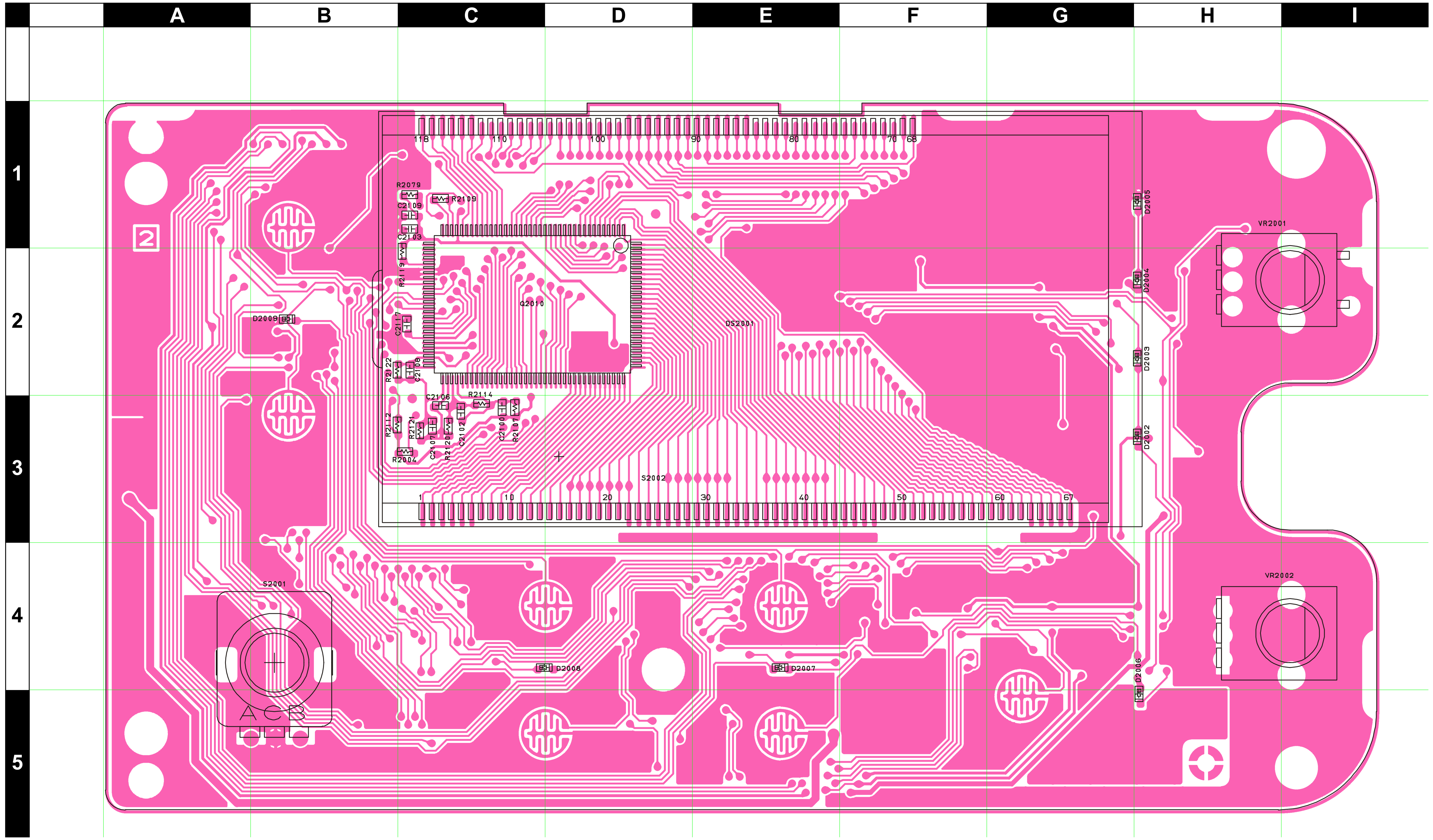
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1213	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	A	E6
R 1214	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C5
R 1215	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	E6
R 1216	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	E6
R 1217	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	A4
R 1218	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	A4
R 1219	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1220	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1221	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1222	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	h5
R 1223	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g6
R 1224	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	A4
R 1225	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D6
R 1226	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	f5
R 1227	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	D6
R 1228	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	f5
R 1229	CHIP RES.	10k	1/16W	1%	RMC1/16 103FTP	J24183103		1-	B	f5
R 1230	CHIP RES.	1k	1/16W	1%	RMC1/16 102FTP	J24183102		1-	B	f5
R 1231	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h6
R 1232	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B5
R 1234	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D5
T 1001	COIL				MC120 E526HNSA-110461	L0190261		1-	A	I4
T 1002	COIL				MC120 E526HNSA-110461	L0190261		1-	A	I4
T 1003	COIL				MC120 E526HNSA-110462	L0190262		1-	A	I5
T 1004	COIL				MC120 E526HNSA-110462	L0190262		1-	A	H6
T 1005	COIL				MC120 E526HNSA-110461	L0190261		1-	A	H6
TC1001	TRIMMER CAP.	20pF			ECR-KN020E61X	K91000213		1-	A	F5
TC1002	TRIMMER CAP.	20pF			ECR-KN020E61X	K91000213		1-	A	H4
TP1008	CHECK TERMINAL				RCT00000C	Q5000103		1-	A	H5
X 1001	XTAL TOP-B	21.85MHz			21.85000MHZ	H0103270		1-	A	F5
XF1001	XTAL FILTER				21S13B	H1102353		1-	A	G6
	SHIELD CASE COVER VC					RA0517200		1-		
	LEAF SPRING					R0140031		1-		

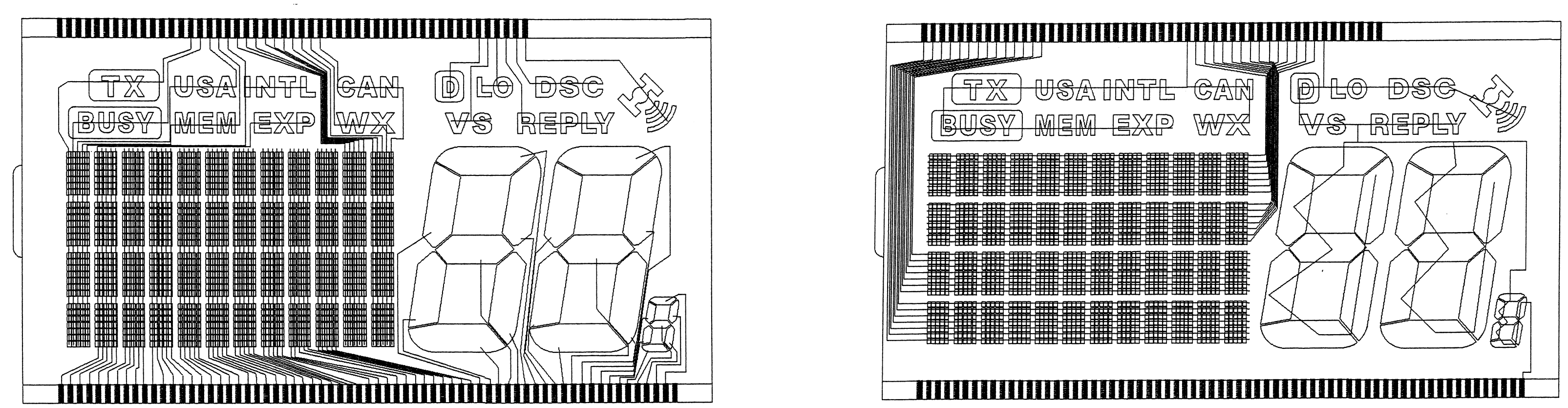

CNTL-UNIT BP0139900C
LCD CONTRAST 7~0: 2.45~0.95V
LCD CONTRAST 7~0: 3.06~1.55V
MIC DWN: 3.40V
MIC UP: 1.99V
16/9: 0V
PTT ON: 0V
PTT OFF: 5.00V
13.8V @STANDBY
POWER ON: 5.02V
POWER OFF: 0V
POWER ON: 13.79V
POWER OFF: 0V
2.49V @13.8V
2.73V @VS-UNIT
2.48V
5.02V @STANDBY
5.02V @VS-UNIT
4.56Vp-p
5.00Vp-p
3.92Vp-p
POWER ON: 4.94V
POWER OFF: 0V
4.60Vp-p (2100Hz)
2.28Vp-p (1300Hz)
@TEST MODE CH 70 TX
DIMMER HIGH~OFF: 10.32~0V
DIMMER HIGH~OFF: 13.11~13.78V
DIMMER HIGH~OFF: 12.92~13.78V
DIMMER HIGH~OFF: 4.27~0V
DIMMER HIGH~OFF: 4.85~0V
RAM PTT ON: 0V
RAM PTT OFF: 5.00V
Q2004 M30620FCAGP
Q2010 HD66712SA00FS
DS2001 TNL1023P-A
FLASH
NOTE:
RESISTOR VALUES ARE IN Ω, 1/10W ;
CAPACITOR VALUES ARE IN μF, 50V ;
(T)CAPACITOR VALUES ARE TANTALUM ;
ELECTROLYTIC CAPACITOR ARE IN μF, 16V ;
INDUCTOR VALUES ARE IN H ;
COILES VALUES ARE IN H ;
UNLESS OTHERWISE NOTED.

Note



HD66712SA
(Q2010)





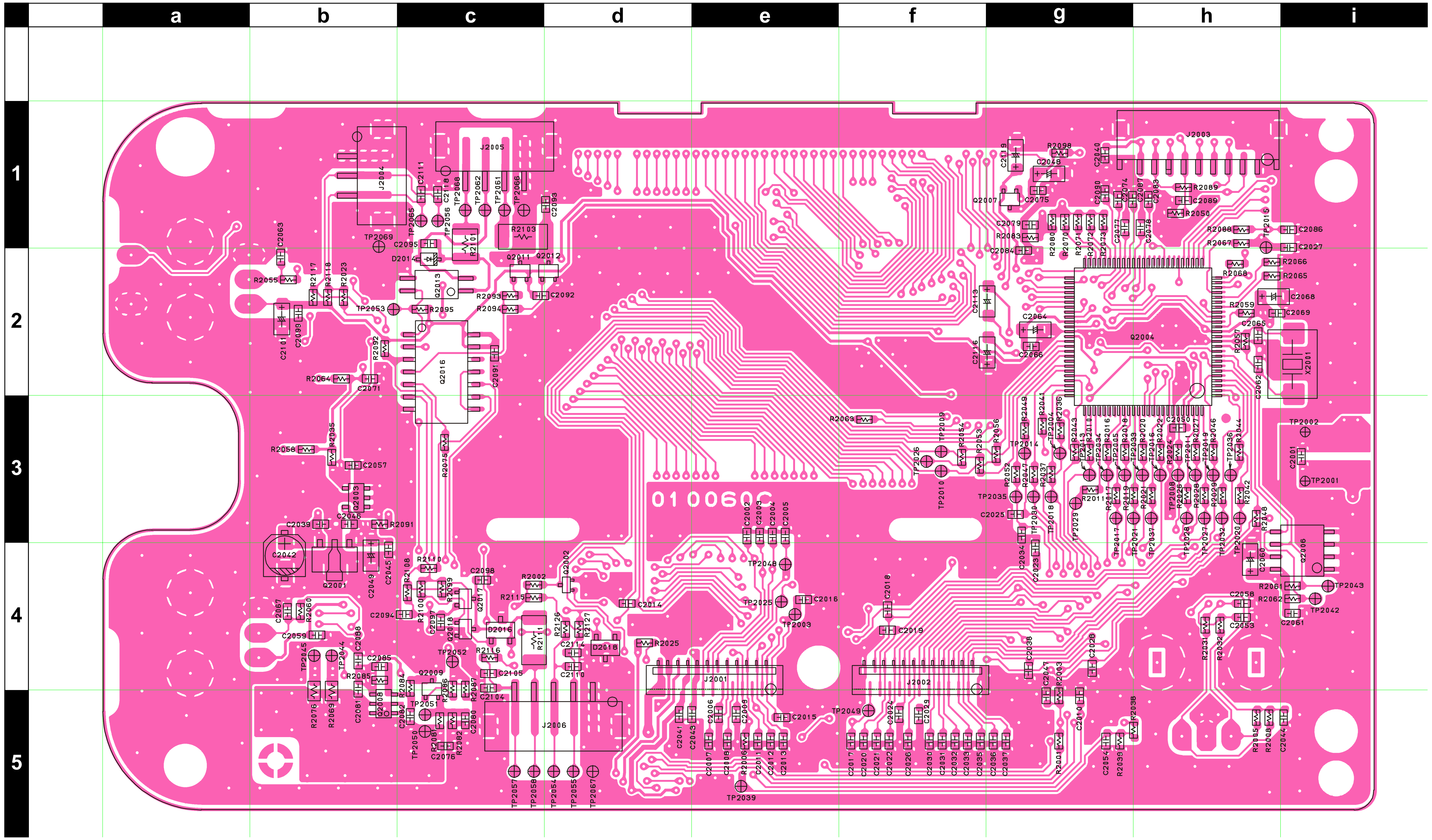
SEGMENT

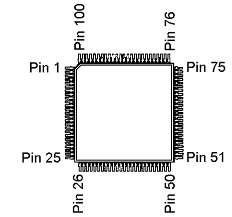
COMMON

LCD (DS2001)

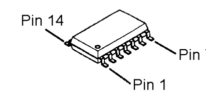
CNTL Unit

Parts Layout (Side B)

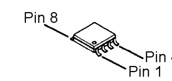




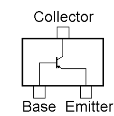
M30620FCAGP
(Q2016)



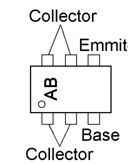
TC74HC14AF
(Q2016)



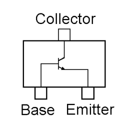
BR24L64F
(Q2006)



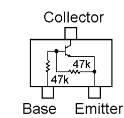
2SA1602A (MF)
(Q2011, 2017)



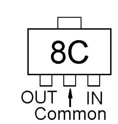
CPH6102 (AB)
(Q2008)

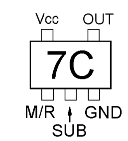


2SC4154 (LE)
(Q2007, 2009,
2012, 2018)

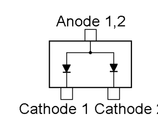


DTC144E (26)
(Q2002)





PST597CNR (7C)
(Q2003)



HZM27WA (27A)
(D2016, 2018)

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB2401001				
	Printed Circuit Board				AM003N000	FR010060C		1-		
C 2039	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	b3
C 2042	AL.ELECTRO.CAP.	10uF	25V		MVA-25VC10MD55	K48140014		1-	B	b4
C 2045	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	b4
C 2046	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	b3
C 2047	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		1-	B	g5
C 2048	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	g1
C 2049	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	b4
C 2050	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h3
C 2053	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h4
C 2054	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		1-	B	g5
C 2057	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		1-	B	b3
C 2058	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h4
C 2060	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	h4
C 2061	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	i4
C 2062	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	h2
C 2063	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b2
C 2064	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	g2
C 2065	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		1-	B	h2
C 2066	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	g2
C 2067	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 2068	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	h2
C 2069	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	h2
C 2071	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b2
C 2075	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	g1
C 2076	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c5
C 2079	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	g1
C 2080	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c5
C 2082	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c5
C 2084	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	g2
C 2086	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	i1
C 2088	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	B	b4
C 2091	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c2
C 2092	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c2
C 2097	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	B	c4
C 2101	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	b2
C 2103	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	C1
C 2109	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	C1
C 2111	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c1
C 2113	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	g2
C 2116	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	g2
C 2117	CHIP CAP.	0.01uF	50V	B	GRM39B103M50PT	K22174823		1-	A	C2
C 2118	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		1-	B	c1
C 2119	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	g1
D 2002	LED				FY1111C-722-TR	G2070916		1-	A	H3
D 2003	LED				FY1111C-722-TR	G2070916		1-	A	H2
D 2004	LED				FY1111C-722-TR	G2070916		1-	A	H2
D 2005	LED				FY1111C-722-TR	G2070916		1-	A	H1
D 2006	LED				FY1111C-722-TR	G2070916		1-	A	H5
D 2007	LED				FY1111C-722-TR	G2070916		1-	A	E4
D 2008	LED				FY1111C-722-TR	G2070916		1-	A	C4
D 2009	LED				FY1111C-722-TR	G2070916		1-	A	B2
D 2014	DIODE				1SS355 TE-17	G2070470		1-	B	c2
D 2016	DIODE				HZM27WA-TR	G2070530		1-	B	c4
D 2018	DIODE				HZM27WA-TR	G2070530		1-	B	d4
DS2001	LCD				TNL1023P-A	G6090150		1-	A	E2
J 2001	CONNECTOR				24FLT-SM1-TB	P1091128		1-	B	e4
J 2002	CONNECTOR				24FLT-SM1-TB	P1091128		1-	B	f4
J 2003	CONNECTOR				S9B-ZR-SM3A-TF	P1091182		1-	B	h1
J 2004	CONNECTOR				B3B-PH-SM3-TB	P0091336		1-	B	b1
J 2005	CONNECTOR				B4B-PH-SM3-TB	P0091184		1-	B	c1
J 2006	CONNECTOR				B5B-PH-SM3-TB	P0091362		1-	B	d5
Q 2001	IC				NJM78L05UA TE1	G1091325		1-	B	b4
Q 2002	TRANSISTOR				DTC144EE TL	G3070075		1-	B	d4
Q 2003	IC				PST597CNR	G1092589		1-	B	b3
Q 2004	IC				M30620FCAGP	※		1-	B	h2
Q 2006	IC				BR24L64F-WE2	G1093876		1-	B	i4
Q 2007	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	g1
Q 2008	TRANSISTOR				CPH6102-TL	G3070223		1-	B	b5
Q 2009	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c4
Q 2010	IC				HD66712SA00FS	G1093817		1-	A	C2
Q 2011	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	c2

※: Please contact Vertex Standard

CNTL Unit

Parts List

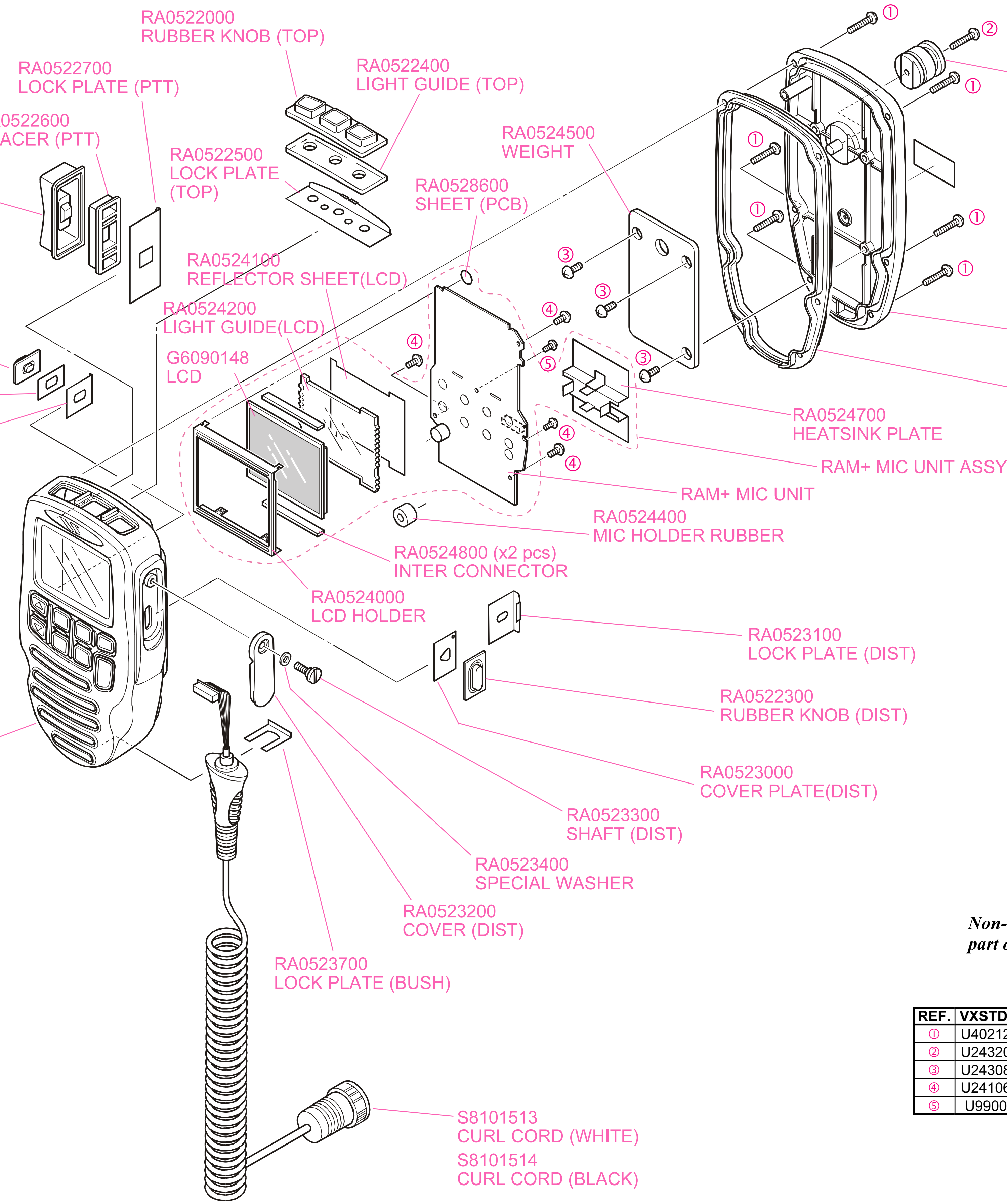
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 2012	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	d2
Q 2013	PHOTO COUPLER				TLP281(GB-TP)	G0090037		1-	B	c2
Q 2016	IC				TC74HC14AF(EL)	G1092038		1-	B	c2
Q 2017	TRANSISTOR				2SA1602A-T11-1F	G3116028F		1-	B	c4
Q 2018	TRANSISTOR				2SC4154-T11-1E	G3341548E		1-	B	c4
R 2001	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	g5
R 2002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c4
R 2003	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	g5
R 2004	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	C3
R 2005	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h5
R 2006	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	e5
R 2008	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h5
R 2010	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2011	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2016	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2017	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2018	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2020	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2021	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2022	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2023	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 2024	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2025	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	d4
R 2026	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2027	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2028	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2031	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h4
R 2032	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h4
R 2035	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b3
R 2036	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2037	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2038	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	h5
R 2041	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	g3
R 2042	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2043	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	g3
R 2044	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2046	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h3
R 2047	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2048	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h3
R 2049	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2050	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h1
R 2052	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2053	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 2054	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	f3
R 2055	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 2056	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	g3
R 2058	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b3
R 2059	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h2
R 2060	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b4
R 2061	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	i4
R 2062	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	i4
R 2063	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	f3
R 2064	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b2
R 2066	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	h2
R 2067	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h1
R 2068	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	h2
R 2069	CHIP RES.	120	1/10W	5%	RMC1/10T 121J	J24205121		1-	B	b4
R 2070	CHIP RES.	82k	1/16W	5%	RMC1/16 823JATP	J24185823		1-	B	g1
R 2071	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	B	g1
R 2072	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	g1
R 2073	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	g1
R 2075	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c3
R 2076	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		1-	B	b4
R 2079	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	C1
R 2080	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	g1
R 2081	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		1-	B	c5
R 2082	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c5
R 2083	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	g1
R 2084	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 2085	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	b4
R 2086	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 2087	CHIP RES.	470k	1/16W	5%	RMC1/16 474JATP	J24185474		1-	B	c4
R 2088	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	h1
R 2089	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	h1
R 2091	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b3
R 2092	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b2
R 2093	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c2
R 2094	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c2
R 2095	CHIP RES.	3.9k	1/16W	5%	RMC1/16 392JATP	J24185392		1-	B	c2
R 2098	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	g1
R 2099	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c4
R 2100	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	c4
R 2101	CHIP RES.	330	1/4W	5%	RMC1/4 331JATP	J24245331		1-	B	c1
R 2103	CHIP RES.	56	1/2W	5%	RMC1/2 560JTE	J24275560		1-	B	c1
R 2107	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	C3
R 2108	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	B	c4
R 2109	CHIP RES.	82k	1/16W	5%	RMC1/16 823JATP	J24185823		1-	A	C1
R 2110	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 2111	CHIP RES.	56	1/2W	5%	RMC1/2 560JTE	J24275560		1-	B	c4
R 2112	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	B3
R 2114	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	C3
R 2115	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	c4
R 2116	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	c4
R 2117	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	b2
R 2118	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	b2
R 2119	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C2
R 2120	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	C3
R 2121	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	C3
R 2122	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	B2
R 2126	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d4
R 2127	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		1-	B	d4
S 2001	ROTARY ENCODER				EC11B20204	Q9000799		1-	A	B4
VR2001	POT.				RH96N220A RY-7330 20KB/SW	J60800264		1-	A	I2
VR2002	POT.				RH96N220 RY-7329 20KB	J60800263		1-	A	I4
X 2001	XTAL 94SMX	14.7456MHz			94M147-18(D) 14.74560MHZ	H0103271		1-	B	i2
	LCD HOLDER					RA0492500		1-		
	LIGHT GUIDE				(LCD)	RA0492600		1-		
	INTER CONNECTOR				(TOP)	RA0492700		1-		
	INTER CONNECTOR				(BOTTOM)	RA0492800		1-		
	REFLECTOR SHEET				(L)	RA0492900		1-		
	REFLECTOR SHEET				(S)	RA0493000		1-		

CNTL Unit

Note

Exploded View & Miscellaneous Parts

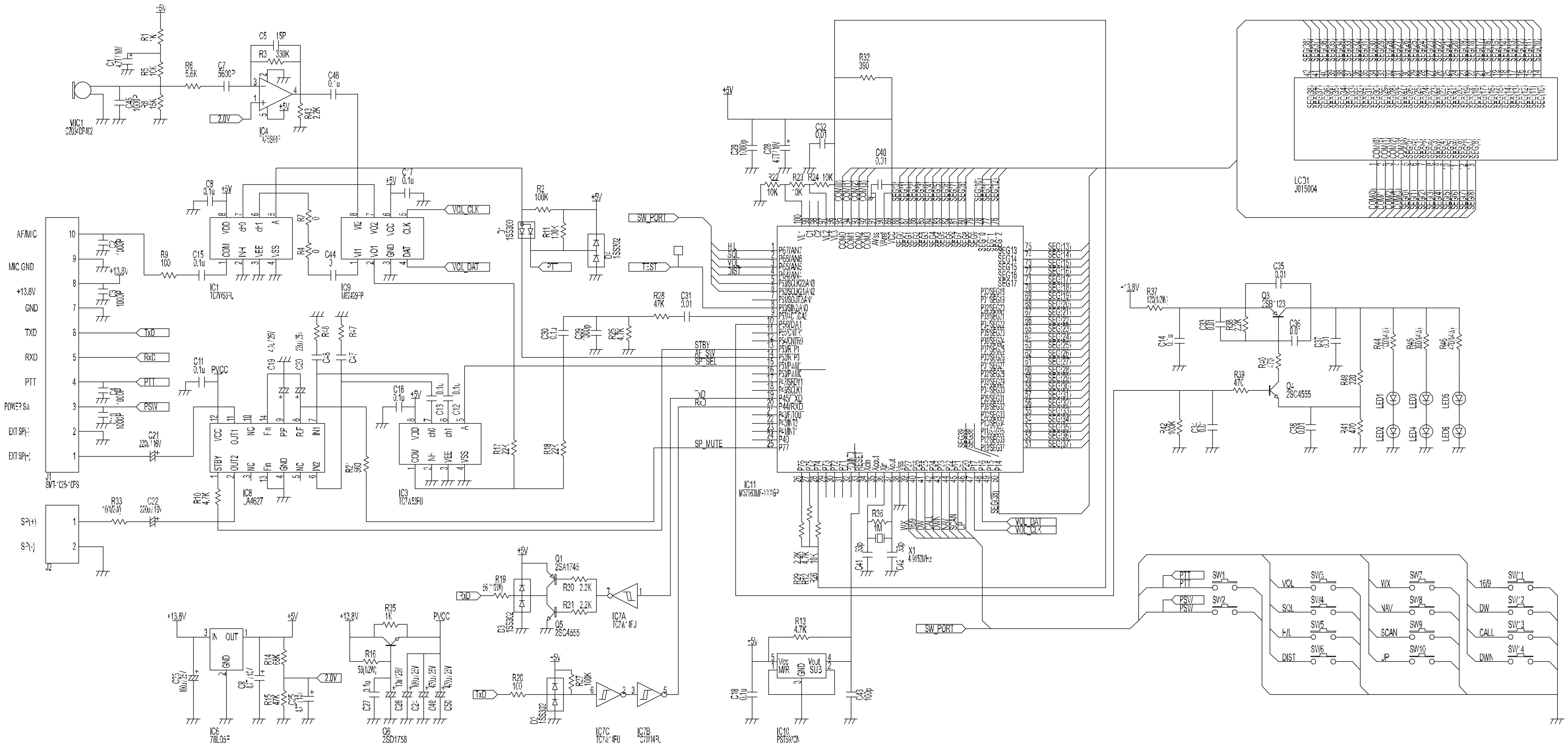


Non-designated parts are available only as part of a designated assembly.

REF.	VXSTD P/N	DESCRIPTION	QTY.
①	U40212220	TAPTITE SCREW M2.6X12SUS#2	6
②	U24320020	TAPTITE SCREW M3X20SUS	1
③	U24308002	TAPTITE SCREW M3X8NI	3
④	U24106001	TAPTITE SCREW M2X6	4
⑤	U9900159	TAPTITE SCREW M1.7X6	1

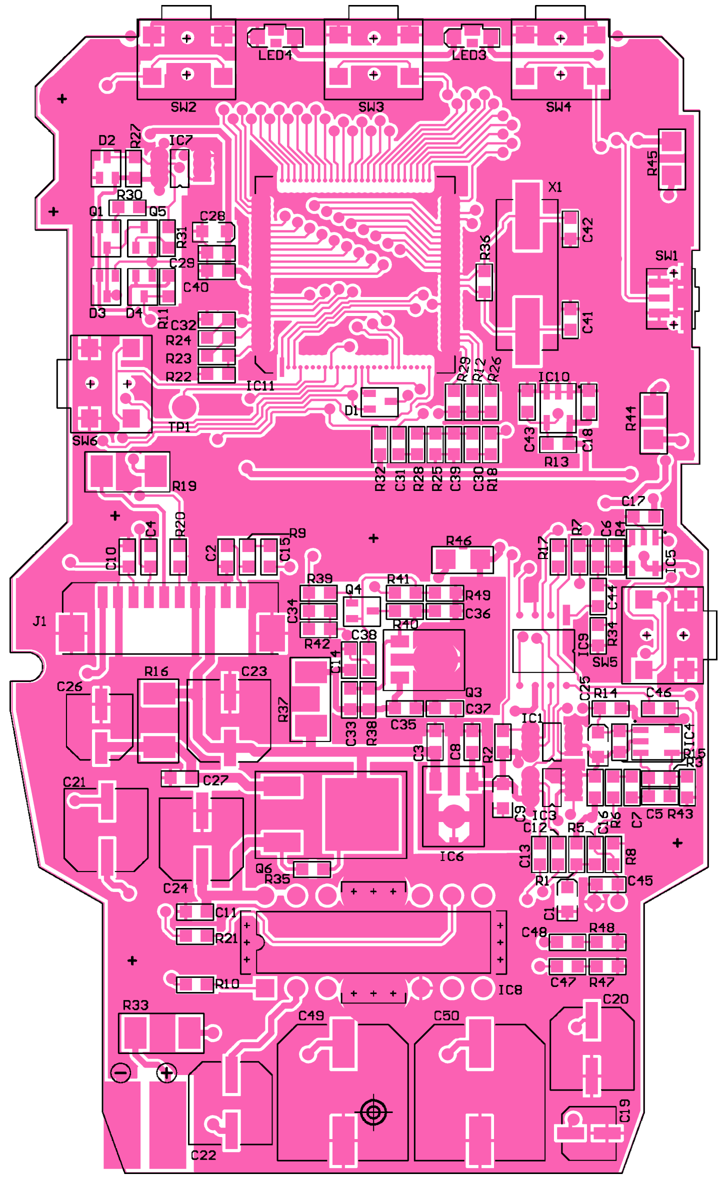
CMP25 RAM+ MIC (Option)

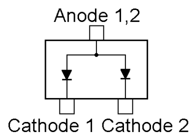
Circuit Diagram



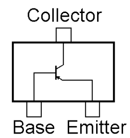
CMP25 RAM+ MIC (Option)

Parts Layout (Side A)

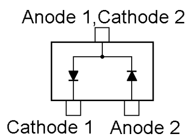




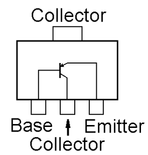
1SS300 (A3)
(D1)



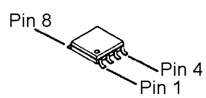
2SA1745 (ES)
(Q1)



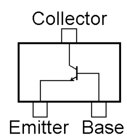
1SS302 (C3)
(D2, 3, 4)



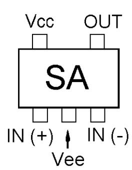
2SB1123 (BF)
(Q3)



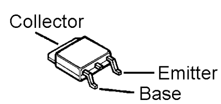
TC7W53FU
(IC01, 03)
TC7W14FU
(IC07)



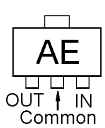
2SC4555 (UT)
(Q4, 5)



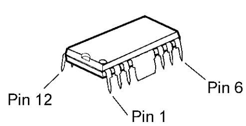
TA75S01F (SA)
(IC04, 05)



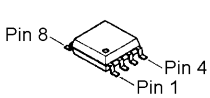
2SD1801S
(Q6)



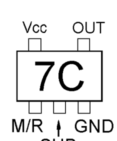
TA78L05F (AE)
(IC06)



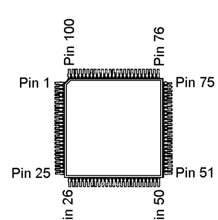
LA4627
(IC08)



M62429FP
(IC09)



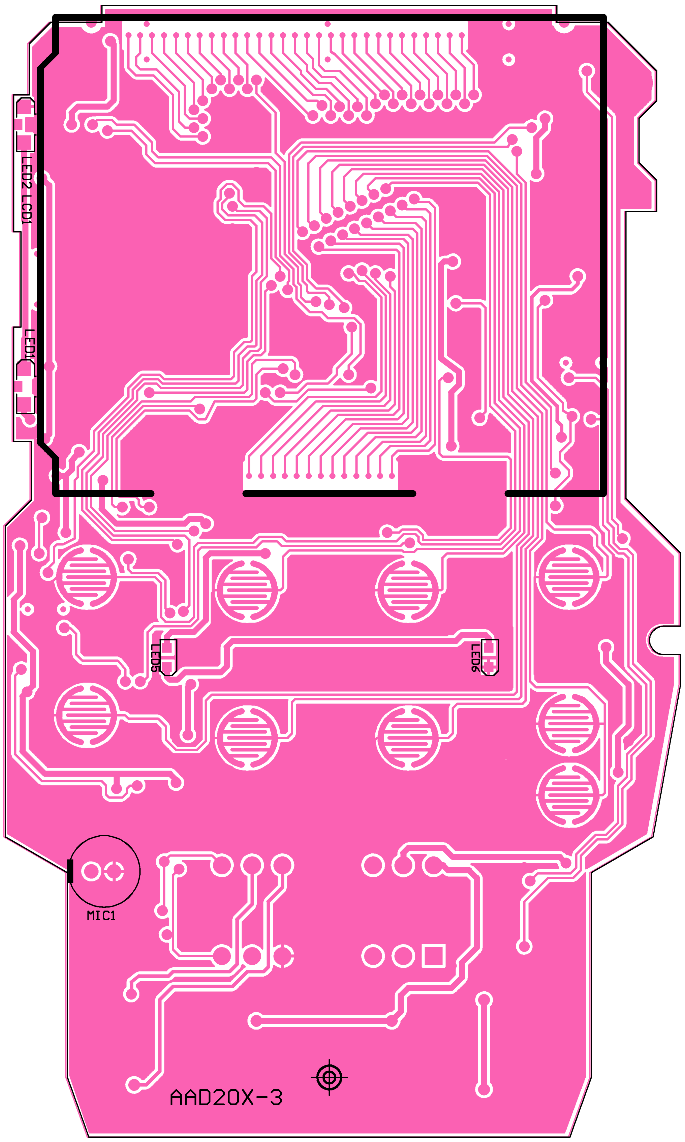
PST597CN (7C)
(IC10)

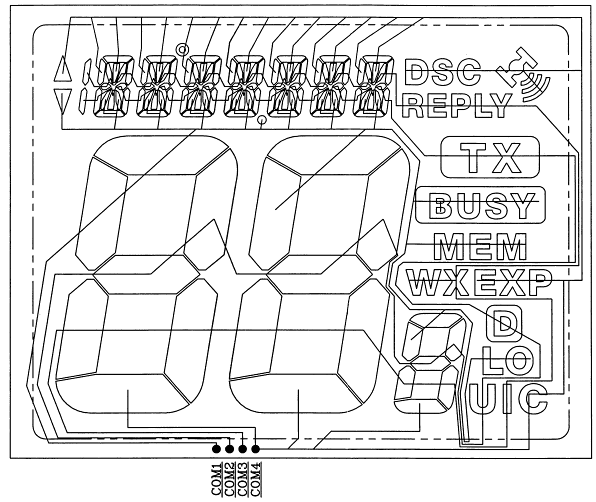


M37560MF
(IC11)

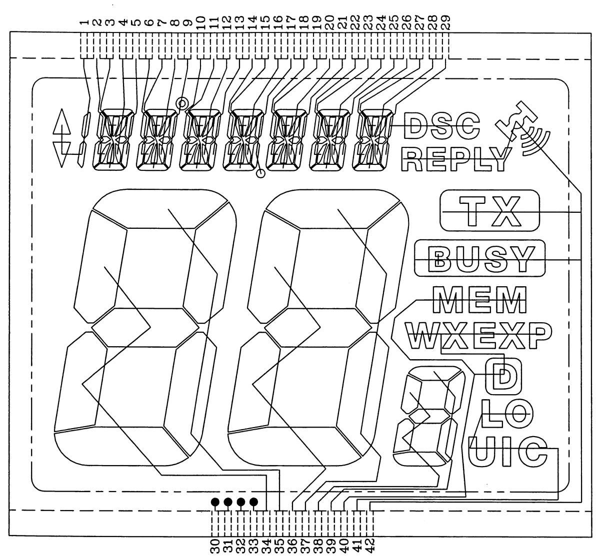
CMP25 RAM+ MIC (Option)

Parts Layout (Side B)





COMMON



SEGMENT

LCD (LCD1)

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

※: Please contact Vertex Standard

CMP25 RAM+ MIC (Option)

Parts List

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

STANDARD HORIZON

Marine Division of VERTEX STANDARD

US Headquarters

10900 Walker Street, Cypress, CA 90630, U.S.A.

WWW. standardhorizon.com