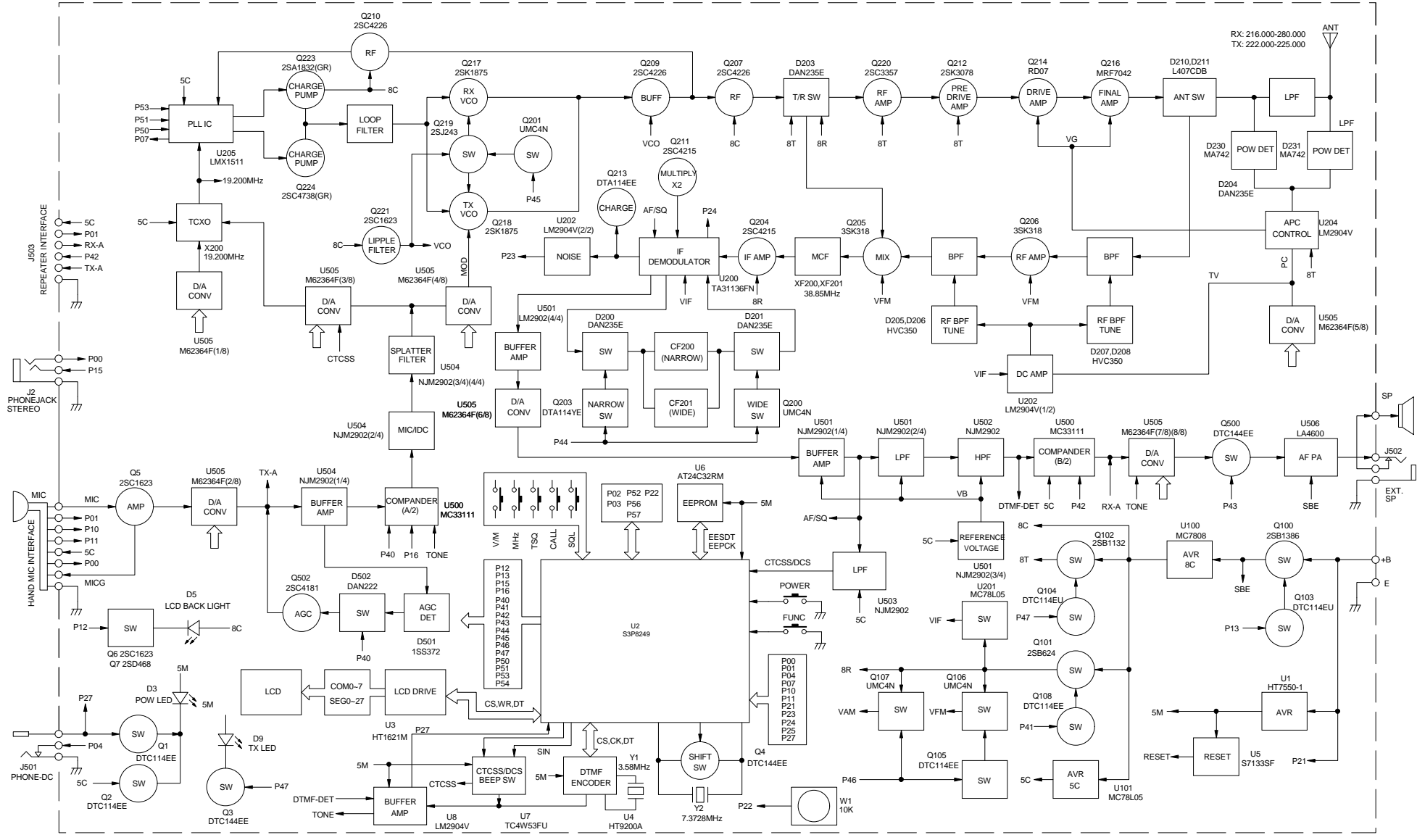


SPECIFICATIONS

General	
Frequency Range	
RX	216~280MHz
TX	222~225MHz
Number of channels	100
Operation mode	FM 16K0F3E (Wide mode)/8K50F3E (Narrow mode)
Channel Stepping	5, 8.33, 10, 12.5, 15, 20, 25, 30, 50KHz
Antenna Impedance	50 Ω
Working temperature	-10°C~+60°C (-14°F~+140°F)
Power Supply	13.8V DC \pm 15% (11.7~15.8V)
Grounding Method	Negative ground
Current	Transmitter: about 9.0A
	Receiver: about 600mA(max.) 400mA (noise reductions)
Frequency Stability	\pm 2.5ppm
Dimensions (W x H x D)	145 x 47 x 190 mm
Weight	Approx. 1.2kg / 2.6lb
RECEIVER	
Circuitry	Double conversion superheterodyne
Intermediate Frequency (1st / 2nd)	38.85MHz / 450kHz
Sensitivity (12dB SINAD)	Wide : 0.25 μ V or less Narrow : 0.35 μ V or less
Selectivity	
-6dB	Wide : 12kHz or more Narrow : 6kHz or more
-60dB	Wide : 28kHz or less Narrow : 14kHz or less
Squelch Sensitivity	0.1 μ V
Audio Output (8 Ω , 10% distortion)	2.0W
TRANSMITTER	
Power Output	
High	50W
Mid	10W
Low	About 5W
Modulation	Changeable impedance
Scattering transmit	-60dB or less than -60dB
Maximum Frequency Deviation	Wide : \pm 5kHz, Narrow : \pm 2.5kHz
Impedance of Microphone	2K Ω

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Frequency configuration

The receiver utilizes double conversion. The first IF is 38.850 MHz and the second IF is 450kHz. The first local oscillator signal is supplied from the PLL circuit.

The PLL circuit in the transmitter generates the necessary frequencies. Fig. 1 shows the frequencies.

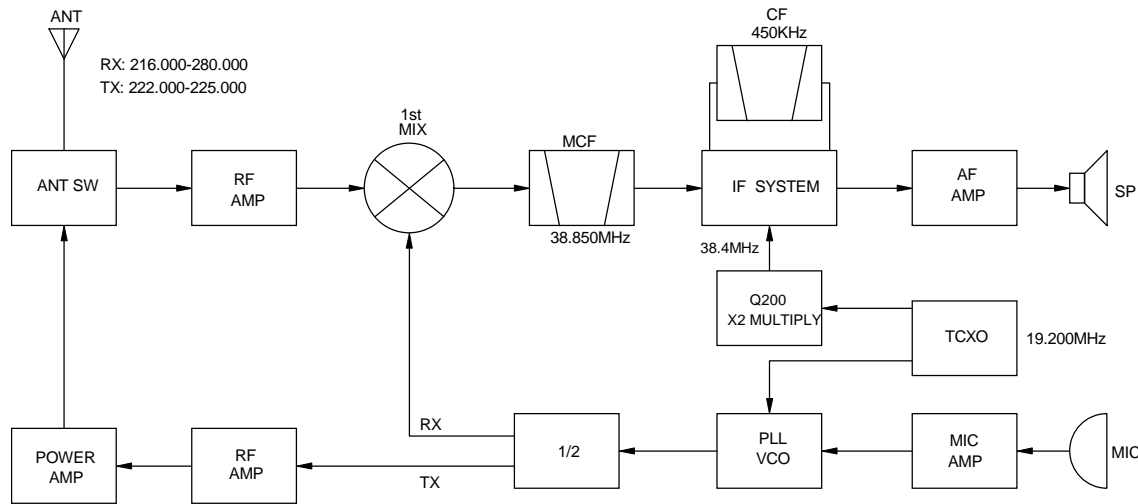


Fig. 1 Frequency configuration

Receiver

The receiver is double conversion super heterodyne, designed to operate in the frequency range of 216 to 280MHz.

The frequency configuration is shown in Fig. 1.

■ Front - end RF amplifier

An incoming signal from the antenna is applied to an RF amplifier (Q206) after passing through a transmit/receive switch circuit (D210 are off) and a band pass filter (L206, L207 and varactor diodes: D207, D208). After the signal is amplified (Q206), the signal is filtered through a band pass filter (L205, L206 and varactor diodes: D205, D206) to eliminate unwanted signals before it is passed to the first mixer.

The voltage of these diodes are controlled by tracking the D/A (U505) center frequency of the band pass filter. (See Fig. 2.)

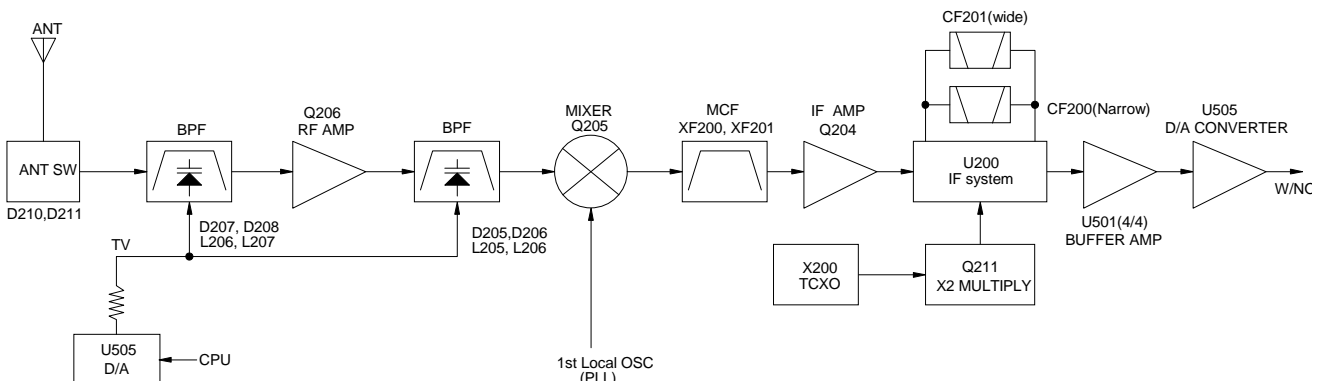


Fig. 2 Receiver section configuration

CIRCUIT DESCRIPTION

■ First Mixer

The signal from the RF amplifier is heterodyned with the first local oscillator signal from the PLL frequency synthesizer circuit at the first mixer (Q205) to create a 38.850MHz first intermediate frequency (1st IF) signal. The first IF signal is then fed through one pair of monolithic crystal filter (MCF : XF200 and XF201) to further remove spurious signals.

■ IF amplifier

The first IF signal is amplified by Q204, and then goes to U200 (FM processing IC). The signal is heterodyned again with a second local oscillator signal within U200 to create a 450kHz second IF signal. The second IF signal is then fed through a 450kHz ceramic filter (Wide : CF201, Narrow : CF200) to further eliminate unwanted signals before it is amplified and FM detected in U200.

■ Wide/Narrow Switching Circuit

The Wide port and Narrow port (pin 75) of the CPU is used to switch between ceramic filters. When the Wide port is high, the ceramic filter SW diodes (D200, D201) cause CF201 to turn on to receive a Wide signal.

When the Narrow port is low, the ceramic filter SW diodes (D200, D201) cause CF200 to turn on to receive a Narrow signal. (See Fig. 3.)

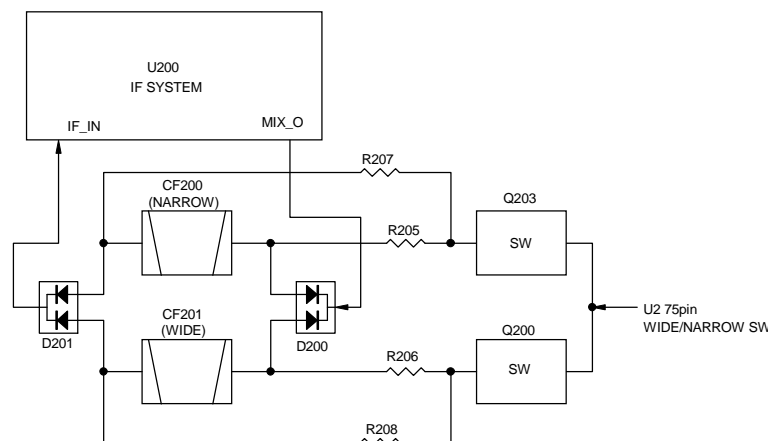


Fig. 3 Wide/Narrow Switching Circuit

■ AF Signal System

The detection signal from IF IC (U200) goes to D/A converter (U505) for adjusting the gain and is output to AF filter (U502) for characterizing the signal. It is also amplified by entering compander amplifier (U500). The AF signal output from U500 and the TONE signal are summed up and the resulting signal goes to the D/A converter (U505). The AFO output level is adjusted by the D/A converter. The signal output from the D/A converter is input to the audio power amplifier (U506). The AF signal from U505 was inputted into (U506).The AF signal from (U506) switches between the internal speaker and speaker jack (J502) output. (See Fig. 4.)

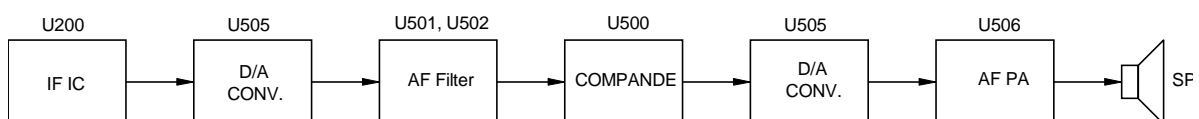


Fig. 4 AF signal system

CIRCUIT DESCRIPTION

■ Squelch Circuit

The detection output from the FM IF IC (U200) passes through a noise amplifier (U201 2/2) to detect noise. A voltage is applied to the CPU (U2). The CPU controls squelch according to the voltage (SQIN) level. The signal from the RSSI pin of U200 is used for S-meter. The electric field strength of the receive signal can be known before the SQIN voltage is input to the CPU, and the scan stop speed is improved.

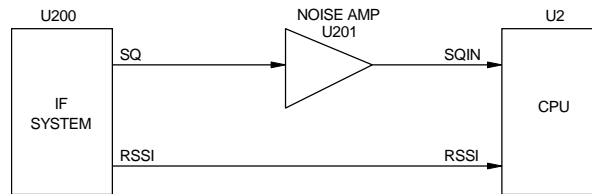


Fig. 5 Squelch Circuit

PLL frequency synthesizer

The PLL circuit generates the first local oscillator signal for reception and the RF signal for transmission.

■ PLL

The frequency step of the PLL circuit is 5 or 6.25kHz. A 19.200MHz reference oscillator signal is divided at U205 by a fixed counter to produce the 5 or 6.25kHz reference frequency. The voltage controlled oscillator (VCO) output signal is buffer amplified by Q209, then divided in U205 by a dualmodule programmable counter. The divided signal is compared in phase with the 5 or 6.25kHz reference signal in the phase comparator in U205. The output signal from the phase comparator is filtered through a low-pass filter and passed to the VCO to control the oscillator frequency. (See Fig. 6.)

■ VCO

The operating frequency is generated by Q218 in transmit mode and Q217 in receive mode. The oscillator frequency is controlled by applying the VCO control voltage, obtained from the phase comparator, to the varactor diodes (D219 and D223 in transmit mode and D217 and D220 in receive mode). The TX/RX pin is set high in receive mode causing Q201 and Q219 to turn Q218 off, and turn Q217 on. The TX/RX pin is set low in transmit mode. The outputs from Q217 and Q218 are amplified by Q209 and sent to the RF amplifiers. (See Fig. 6.)

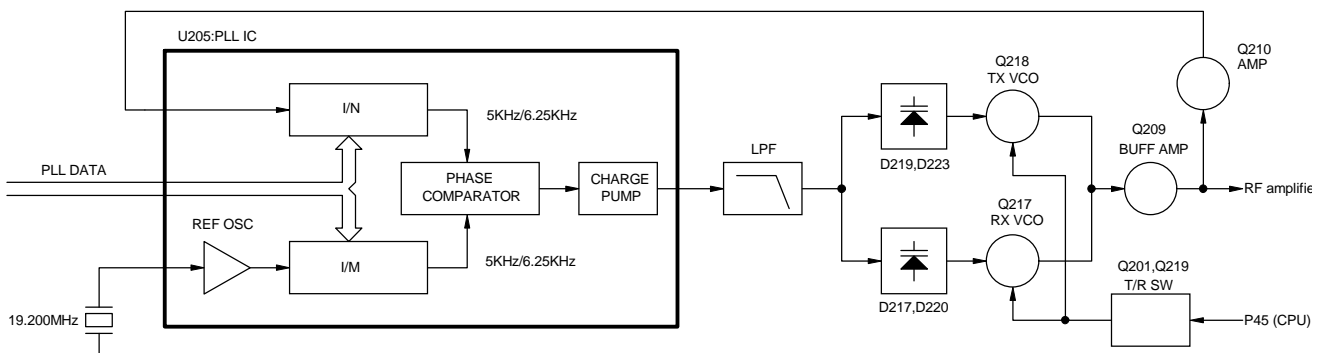


Fig. 6 PLL circuit

■ UNLOCK Circuit

During reception, the RXC signal goes high, the TXC signal goes low, and Q108 turns on. Q101 turns on and a voltage is applied to (8R). During transmission, the RXC signal goes low, the TXC signal goes

CIRCUIT DESCRIPTION

high and Q104 turns on. Q102 turns on and a voltage is applied to (8T).

The CPU in the control unit monitors the PLL (U205) LD signal directly. When the PLL is unlocked during transmission, the PLL LD signal goes low. The CPU detects this signal and makes the TXC signal low. When the TXC signal goes low, no voltage is applied to 8T, and no signal is transmitted. (See Fig. 7.)

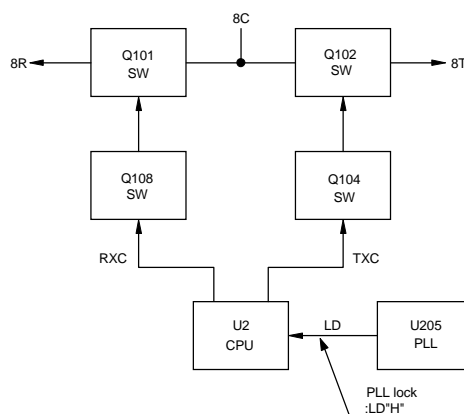


Fig. 7 Unlock circuit

Transmitter

■ Outline

The transmitter circuit produces and amplifies the desired frequency directly. It FM-modulates the carrier signal by means of a varicap diode.

■ Power Amplifier Circuit

The transmit output signal from the VCO passes through the transmission/reception selection diode (D203) and amplified by Q220, Q212 and Q214. The amplified signal goes to the final amplifier (Q216) through a low-pass filter. The low-pass filter removes unwanted high-frequency harmonic components, and the resulting signal is transmitted through the antenna terminal. (See Fig. 8.)

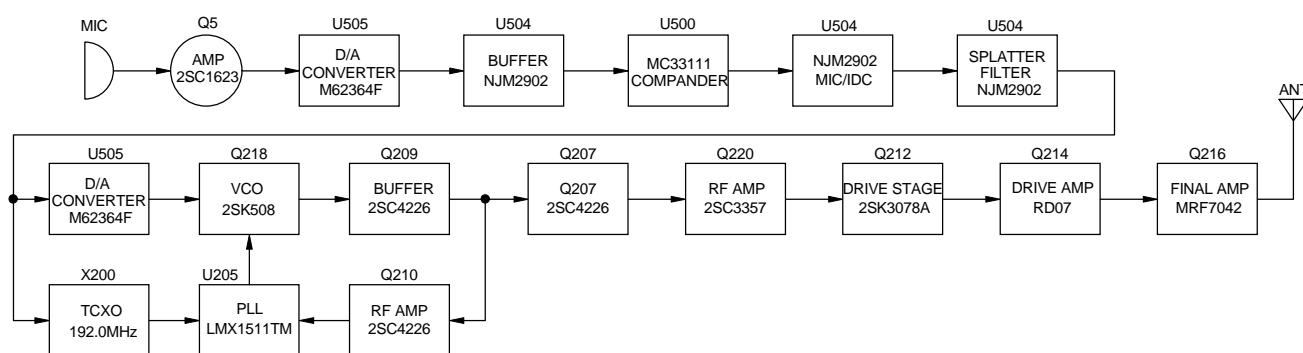


Fig. 8 Transmitter system

■ APC Circuit

The automatic transmission power control (APC) circuit detects part of a final amplifier output with a diode (D230, D231) and applies a voltage to U202. U202 compares the APC control voltage (PC) generated by the D/A converter (U505) with the detection output voltage. U202 generates the voltage to control Q214 and Q216 and stabilizes transmission output.

The APC circuit is configured to protect over current of Q214 and Q216 due to fluctuations of the load

CIRCUIT DESCRIPTION

at the antenna end and to stabilize transmission output at voltage and temperature variations. (See Fig. 9.)

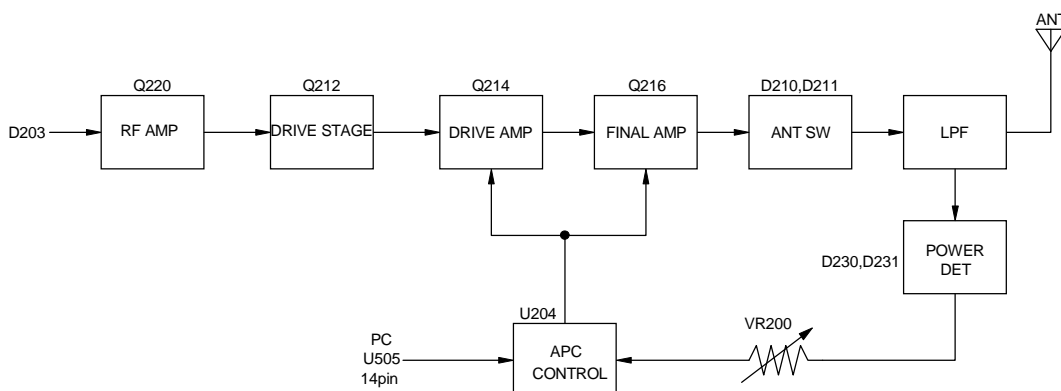


Fig. 9 APC Circuit

Control Circuit

The CPU carries out the following tasks (See Fig. 10.):

- 1) Controls the WIDE, NARROW, TX/RX outputs.
- 2) Controls the display unit.
- 3) Controls the PLL (U205).
- 4) Controls the D/A converter (U505) and adjusts the volume, modulation and transmission power.

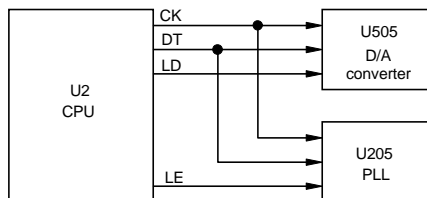


Fig. 10 Control circuit

Memory Circuit

The transceiver has an 64k-bit EEPROM (U6). The EEPROM contains adjustment data. The CPU (U2) controls the EEPROM through two serial data lines. (See Fig. 11.)

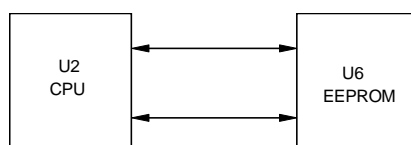


Fig. 11 APC Circuit

Display Circuit

The CPU (U2) controls the display LCD and LEDs. When power is on, the CPU will use the P12 line to control the LCD illumination backlight LEDs.

The brightness function is controlled by the switch Q6 and Q7.

The LCD driver (U3) and CPU (U2) communicate through the CS, WR, DI, lines. (See Fig. 12.)

CIRCUIT DESCRIPTION

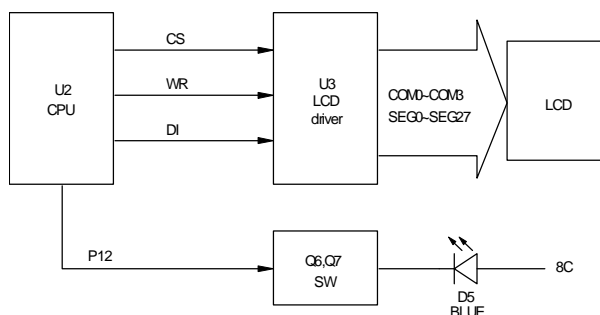


Fig. 12 Display circuit

Encode

The CTCSS and DCS signal that is output from CPU(U2) of P31 pass through two-way digital switches and buffer amplifier(U8A) to amplify. The DTMF signal that is output from DTMF encoder passes through buffer amplifier (U8A) to amplify, and amplified by the other U504 (B/4) to perform IDC operation. The signal then passes through a low-pass filter (splatter filter) U504 (C/4and D/4) and cuts 3kHz and higher frequencies. and the resulting signal goes to the D/A converter (U505).

The D/A converter (U505) adjusts the balance between the MOD and CTCSS/DCS levels. Signal of CTCSS/DCS port is summed with MOD and the resulting signal goes to the VCO. This signal is applied to a varicap diode in the VCO for direct FM modulation. (See Fig. 13.)

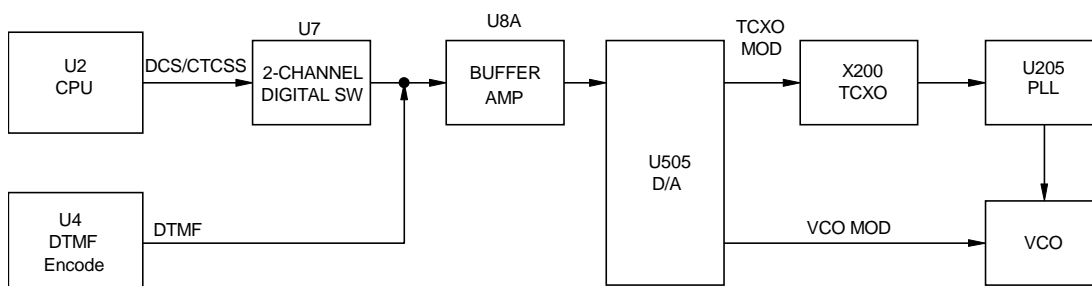


Fig. 13 Encode circuit

Decode

CTCSS/DCS/ DTMF

The signal from (AFWN) entering into AF signal and higher audio frequencies output by pin 1 of U501: A are cut by low-pass filter U503 and amplified. then led to pin 42 of CPU. The input signal is compared with the programmed tone frequency code in the CPU. The squelch will open when they match.

The signal (DTMF-DET) goes to P27 (pin 43) of CPU (U2). The DTMF input signal from the DTMF-DET goes to compared U8B. The compared signal goes to the CPU for processing and be decoded within the CPU (U2). (See Fig. 14.)

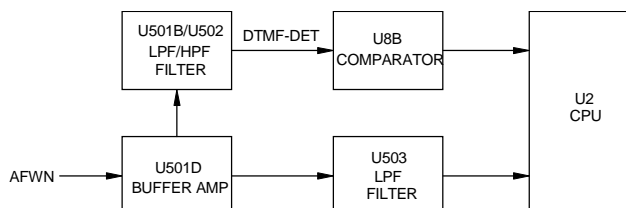


Fig. 14 Decode circuit

CIRCUIT DESCRIPTION

■ D/A Converter

The D/A converter (U505) is used to adjust MO modulation, AF volume, TV voltage, FC reference voltage, and PC POWER CONTROL voltage level.

Adjustment values are sent from the CPU as serial data. The D/A converter has a resolution of 256 and the following relationship is valid.

Power Supply Circuit

When the POWER switch on the display unit is pressed, the power port on the display unit which is connected to CPU port 25 (POWER), goes low, then CPU port 31 (P13) goes high, Q103 turns on, SBE SW (Q100) turns on and power (SBE) is supplied to the radio.

When the DC power supplied to the radio, the voltage regulator IC (U1) supply into the CPU VDD and reset voltage detect IC (U5). U5 will generate signal (RESET) in to the reset terminal on the CPU (U2) to carry out a power ON reset.

During receiving, the CPU port 72 (P41) output "H" level. Q101 and Q108 turn on. and reception circuit is supplied by 8V power supply (8R).

When the receiving is at FM, the CUP port 77 (P46) output "L" level. Q106 turns on and supplies 8V power supply to FM reception circuit (VFM).

During transmitting, CPU port 78 (P47) output "H" level. Q102 and Q104 turn on. Transmitting circuit output 8V power supply (8T). (See Fig. 15.)

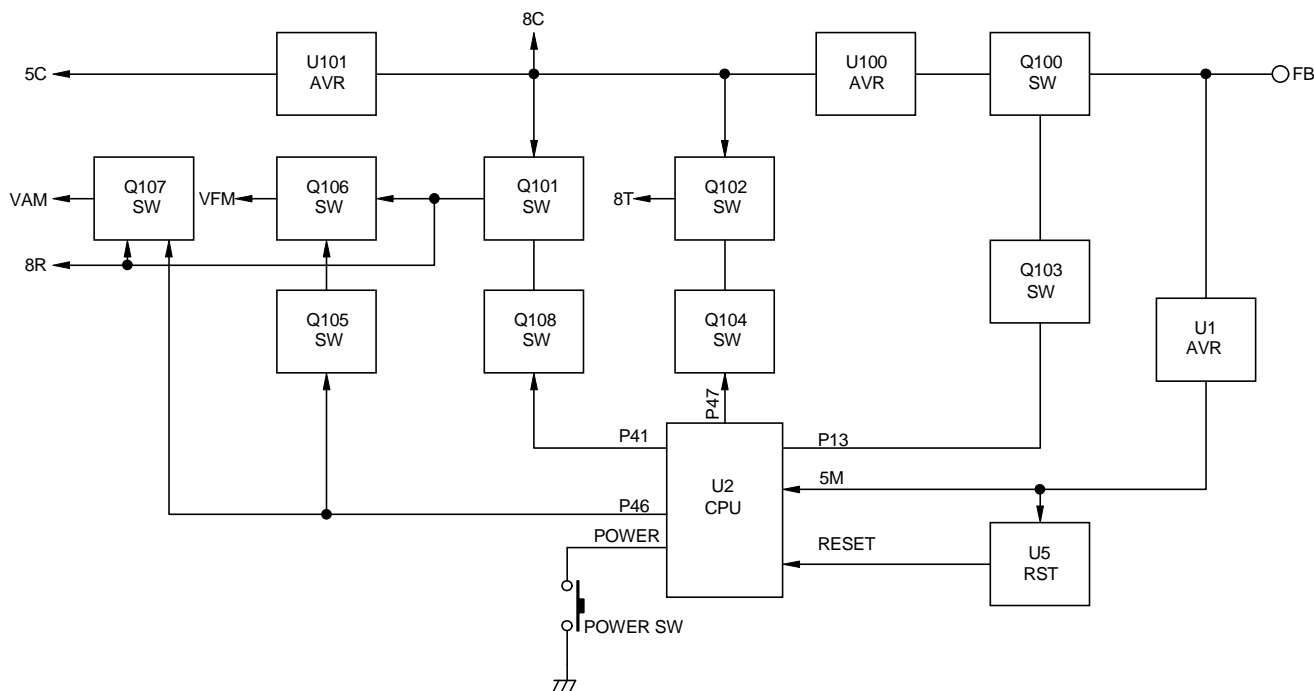


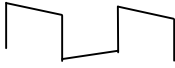
Fig. 15 Power supply circuit

ADJUSTMENT

PCB Section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
1. Setting	1) Power supply voltage DC Power supply terminal : 13.8V					
2. VCO lock voltage	1) CH: TX high	Digital voltmeter	TC2	CV201	3.3 V	±0.5V
	2) CH: RX high			CV200	3.3 V	±0.5V
	3) CH: TX low				Check	More than 0.6V
	4) CH: RX low					

Transmitter section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
1. Frequency	1) CH: TX center 2) Transmit	Frequency counter	ANT	Encoder knob	Adjust to the frequency	Within ±200Hz
2. Maximum power alignment	1) CH : TX high 2) Adjustment HEX value : FF 3) Transmit	Power meter		VR200	55W	
3. High power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit			Encoder knob	50W	±5.0W
					10W	±2W
4. Mid power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit				5W	±1W
5. Low power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit					
6. DCS balance	1) CH : TX center 2) Transmit	Modulation analyzer or Linear detector (LPF : 3kHz) Oscilloscope			Adjust the waveform as below 	
7. Max deviation	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) AG : 1kHz/120mV 3) Transmit	Modulation analyzer or linear detector (LPF15kHz) Oscilloscope AG AF. V. M	ANT MIC	±4.3kHz (Wide) ±2.1kHz (Narrow) According to the large +, -	±200Hz ±100Hz	

ADJUSTMENT

Transmitter section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
8. MIC sensitivity	1) CH : TX center (Narrow) 2) AG : 1kHz/4mV 3) Transmit	Modulation analyzer or linear detector (LPF15kHz) Oscilloscope AG AF. V. M	ANT MIC		Check	±1.7~2.0kHz (Narrow)
9. CTCSS fine deviation	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) Transmit	Modulation analyzer or Linear detector (LPF : 3kHz) Oscilloscope		Encoder Knob	±0.7kHz (Wide) ±0.4kHz (Narrow)	±200Hz ±100Hz
10. DCS fine deviation	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) Transmit				±0.8kHz (Wide) ±0.4kHz (Narrow)	±200Hz ±100Hz
11. DTMF deviation	1) CH : TX center (Wide/Narrow) 2) Transmit				±3.0 kHz (Wide) ±1.5kHz (Narrow)	±100Hz

Receiver Section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
1. Sensitivity	1) CH : RX low (Wide/Narrow) CH : RX center (Wide/Narrow) CH : RX high (Wide/Narrow) 2) SSG output: : -119dBm (0.25μV) (Wide) : -116dBm (0.35μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±1.5kHz (Narrow)	SSG Oscilloscope AF V.M Distortion meter	ANT EXT. SP		Check	SINAD: 12dB or higher
2. Squelch 20	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) SSG output: : -116dBm (0.35μV) (Wide) : -114dBm (0.44μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±1.5kHz (Narrow)			Encoder knob	Adjust to open the squelch	
3. Squelch 1	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) SSG output: : -127dBm (0.1μV) (Wide) : -123dBm (0.16μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±1.5kHz (Narrow)					

PARTS LIST

DISPLAY UNIT

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C1-C6		SMT CAPACITOR	0603	6	104±10% 50V
C7-C20		SMT CAPACITOR	0603	14	102±10% 50V
C21-C30		SMT CAPACITOR	0603	10	103±10% 50V
C31-C32		SMT CAPACITOR	0603	2	105±10% 50V
C33-C34		SMT CAPACITOR	0603	2	473±10% 50V
C35-C36		SMT CAPACITOR	0603	2	273±10% 50V
C37		SMT CAPACITOR	1206	1	225±10% 50V
C38		SMT CAPACITOR	0603	1	103±10% 50V
C39-C40		SMT CAPACITOR	0603	2	22P±5% 50V
C41		SMT CAPACITOR	0603	1	120P±5% 50V
C42-C43		SMT CAPACITOR	0603	2	20P±5% 50V
C44		SMT CAPACITOR	0603	1	473±10% 50V
C46		SMT CAPACITOR	0603	1	182P±10% 50V
C47-C48		SMT CAPACITOR	0603	2	NOUSE
C49		SMT CAPACITOR	0603	1	225±10% 50V
C50		SMT CAPACITOR	0603	1	104±10% 50V
C51		SMT CAPACITOR	0603	1	10P±5% 50V
E1		ELECTRO	4×8	1	22uF25V
E2-E4		ELECTRO	4×8	3	47uF/10V
R1		SMT RESISTOR	0603	1	1K±5%
R2		SMT RESISTOR	0603	1	22K±5%
R3-R7		SMT RESISTOR	0603	4	1K±5%
R8		SMT RESISTOR	0603	1	24K±5%
R9-R16		SMT RESISTOR	0603	8	1K±5%
R17		SMT RESISTOR	0603	1	33K±5%
R18		SMT RESISTOR	0603	1	2.2K±5%
R20		SMT RESISTOR	0603	1	1K±5%

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R21		SMT RESISTOR	0603	1	51K±5%
R22		SMT RESISTOR	0603	1	33K±5%
R27-R35		SMT RESISTOR	0603	9	10K±5%
R36		SMT RESISTOR	0603	1	220K±5%
R37-R46		SMT RESISTOR	0603	10	47K±5%
R47-R48		SMT RESISTOR	0603	2	12K±5%
R49-R51		SMT RESISTOR	0603	3	470R±5%
R53		SMT RESISTOR	0603	1	220R±5%
R54		SMT RESISTOR	0603	1	100R±5%
R55		SMT RESISTOR	0603	1	470R±5%
R56		SMT RESISTOR	0603	1	4.7K±5%
R57		SMT RESISTOR	0603	1	2.2K±5%
R58		SMT RESISTOR	0603	1	4.7K±5%
R59		SMT RESISTOR	0603	1	470K±5%
R60		SMT RESISTOR	0603	1	22K±5%
R61		SMT RESISTOR	0603	1	56K±5%
R62		SMT RESISTOR	0603	1	33K±5%
R63-R64		SMT RESISTOR	0805	2	56R±5%
R65		SMT RESISTOR	0603	1	1K±5%
R66		SMT RESISTOR	0603	1	8.2K
R67		SMT RESISTOR	0603	1	39K
R68-R70		SMT RESISTOR	0603	3	100K±5%
R71		SMT RESISTOR	0603	1	24K±5%
D1-D2		SMT ZENER DIODE	0805	2	5V1
D5		LCD BACK LIGHT		1	BLUE
D3/D9		SMT LIGHTED DIODE	0603	2	ORANGE
D10-D14		SMT DIODE	SOT-323	5	DA221
DS1		LCD		1	GDH-706W

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
Q1-Q2		SMT DIGITAL TRANSISTOR	EMT3	2	DTC114EE
Q3-Q4		SMT DIGITAL TRANSISTOR	EMT3	2	DTC144EE
Q5-Q6		SMT TRANSISTOR	SOT-23	2	2SC1623
Q7		TRANSISTOR	TO-92	1	2SD468
U1		SMT IC	TO-92	1	HT7550-1
U2		SMT IC	QFP80	1	S3P8249
U3		SMT IC	MSK48	1	HT1621M
U4		SMT IC	SOP-8	1	HT9200A
U5		SMT IC	SOT-23	1	S7133SF
U6		SMT IC	SOP-8	1	AT24C64RM(8)
U7		SMT IC	SSOP8-P	1	TC4W53FU
U8		SMT IC	SSOP8	1	LM2904V
L1-L3		SMT FERRITE BEAD (BLACK)	0805	3	271T
L4-L6		SMT FERRITE BEAD (BLACK)	0603	3	271T
J1		FLAT CABLE CONNECTOR	SSOI32F	1	0.5S-1X-32PWB
J2		Jack	PJ-3542	1	PHONEJACK STEREO
J3		Mic Connector	SKY8	1	HAND MIC INTERFACE
S1		SWITCH	6×3.8×2.5	1	POWER
S2		SWITCH	6×3.8×2.5	1	FUNC
S3		DIAL		1	ENCODER
S4		SWITCH	6×3.8×2.5	1	V/M
S5		SWITCH	6×3.8×2.5	1	MHz
S6		SWITCH	6×3.8×2.5	1	TSQ
S7		SWITCH	6×3.8×2.5	1	CALL
S8		SWITCH	6×3.8×2.5	1	SQL
W1		VARIOUS RESISTOR		1	10K
Y1		CRYSTAL		1	3.58MHz
Y2		SMT CRYSTAL RESONATOR		1	7.3728MHz

PARTS LIST

MAIN UNIT

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C100-C104		SMT CAPACITOR	0603	5	103±10% 50V
C105-C109		SMT CAPACITOR	0603	5	102±10% 50V
C110-C111		SMT CAPACITOR	0603	2	104±10% 50V
C112-C113		SMT CAPACITOR	0805	2	104±10% 50V
C200-C213		SMT CAPACITOR	0603	14	103±10% 50V
C214		SMT CAPACITOR	0603	1	NOUSE
C215		SMT CAPACITOR	0603	1	103±10% 50V
C216		SMT RESISTOR	0603	1	0R±5%
C217		SMT CAPACITOR	0603	1	470P±10% 50V
C218-C225		SMT CAPACITOR	0603	8	103±10% 50V
C226		SMT CAPACITOR	0603	1	NOUSE
C227-C230		SMT CAPACITOR	0603	4	104±10% 50V
C231		SMT CAPACITOR	0603	1	NOUSE
C232-C237		SMT CAPACITOR	0603	6	104±10% 50V
C238		SMT CAPACITOR	0805	1	104±10% 50V
C240-C246		SMT CAPACITOR	0603	8	104±10% 50V
C248		SMT CAPACITOR	0603	1	104P±5% 50V
C249-C252		SMT CAPACITOR	0603	4	102±10% 50V
C253		SMT CAPACITOR	0603	1	103±10% 50V
C254-C257		SMT CAPACITOR	0603	4	102±10% 50V
C258		SMT CAPACITOR	0603	1	100P±5% 50V
C259-C262		SMT CAPACITOR	0603	3	102±10% 50V
C263		SMT CAPACITOR	0603	1	24P±5% 50V
C264-C265		SMT CAPACITOR	0603	2	102±10% 50V
C268		SMT CAPACITOR	1206	1	102±10% 50V
C268		SMT CAPACITOR	1210	1	102±10% 50V
C269		SMT CAPACITOR	0603	1	102±10% 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C270		SMT CAPACITOR	1210	1	102±10% 50V
C271-C280		SMT CAPACITOR	0603	10	102±10% 50V
C281		SMT CAPACITOR	0805	1	470P±10% 50V
C282-C283		SMT CAPACITOR	0603	2	102±10% 50V
C284		SMT CAPACITOR	1206	1	102±10% 50V
C285		SMT CAPACITOR	0603	1	102±10% 50V
C286		SMT CAPACITOR	0603	1	104±10% 50V
C287-C288		SMT CAPACITOR	0603	2	102±10% 50V
C289		SMT CAPACITOR	0603	1	82P±5% 50V
C290		SMT CAPACITOR	0603	1	24P±5% 50V
C291-C292		SMT CAPACITOR	0603	2	NOUSE
C293		SMT CAPACITOR	0603	1	18P±5% 50V
C294-C295		SMT CAPACITOR	0603	2	NOUSE
C296		SMT CAPACITOR	0603	1	18P±5% 50V
C297-C298		SMT CAPACITOR	0603	2	2P±0.1P 50V
C299		SMT CAPACITOR	0603	1	1P±0.1P 50V
C300-C301		SMT CAPACITOR	0603	2	2P±0.1P 50V
C302		SMT CAPACITOR	0603	1	12P±0.25P 50V
C303		SMT CAPACITOR	0603	1	6P±0.1P 50V
C304		SMT CAPACITOR	0603	1	5P±0.1P 50V
C305		SMT CAPACITOR	0603	1	3P±0.1P 50V
C306		SMT CAPACITOR	0603	1	5P±0.1P 50V
C307		SMT CAPACITOR	0603	1	2P±0.1P 50V
C308-C309		SMT CAPACITOR	0603	2	NOUSE
C310-C311		SMT CAPACITOR	1210	2	NOUSE
C312		SMT CAPACITOR	1206	1	1P±0.1P 50V
C313		SMT CAPACITOR	1206	1	NOUSE
C314		SMT CAPACITOR	1210	1	NOUSE

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C315		SMT CAPACITOR	0603	1	NOUSE
C316		SMT CAPACITOR	0603	1	470P±10% 50V
C317		SMT CAPACITOR	0603	1	NOUSE
C318-C319		SMT CAPACITOR	1206	2	NOUSE
C320		SMT CAPACITOR	0603	1	103±10% 50V
C321		SMT CAPACITOR	0603	1	22P±5% 50V
C322		SMT CAPACITOR	0603	1	27P±5% 50V
C323		SMT CAPACITOR	1210	1	12P±5% 50V
C324		SMT CAPACITOR	0603	1	4P±0.1P 50V
C325		SMT CAPACITOR	0603	1	24P±5% 50V
C326		SMT CAPACITOR	0603	1	470P±10% 50V
C327		SMT RESISTOR	0603	1	0R±5%
C328-C340		SMT CAPACITOR	0603	13	470P10% 50V
C341		SMT CAPACITOR	0603	1	5P±0.1P 50V
C342-C344		SMT CAPACITOR	0603	3	16P±5% 50V
C345-C346		SMT CAPACITOR	1210	2	NOUSE
C347		SMT CAPACITOR	1210	1	10P±5% 50V
C348		SMT CAPACITOR	0603	1	NOUSE
C349-C350		SMT CAPACITOR	1210	2	15P±5% 50V
C351-C353		SMT CAPACITOR	0603	2	12P±5% 50V
C354		SMT CAPACITOR	0805	1	120P±5% 50V
C355		SMT CAPACITOR	0603	1	5P±0.1P 50V
C356		SMT CAPACITOR	0603	1	6P±0.1P 50V
C357		SMT CAPACITOR	0603	1	9P±0.1P 50V
C358		SMT CAPACITOR	0603	1	12P±5% 50V
C359		SMT CAPACITOR	0603	1	16P±5% 50V
C360		SMT CAPACITOR	0603	1	3.6P±0.1P 50V
C361		SMT CAPACITOR	1210	1	6P±0.1P 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C362		SMT CAPACITOR	0603	1	7P±0.25P 50V
C363		SMT CAPACITOR	1210	1	8P±5% 50V
C364-C366		SMT CAPACITOR	0603	3	10P±5% 50V
C367		SMT CAPACITOR	0603	1	10P±0.25P 50V
C368		SMT SMALL FIXED INDUCTOR	0603	1	47NH
C369		SMT CAPACITOR	1210	1	82P±5% 50V
C370		SMT CAPACITOR	1210	1	68P±5% 50V
C371		SMT CAPACITOR	0603	1	56P±5% 50V
C372-C373		SMT CAPACITOR	0603	2	180P±5% 50V
C374		SMT CAPACITOR	1210	1	220P±5% 50V
C375-C377		SMT CAPACITOR	0603	3	100P±5% 50V
C378		SMT CAPACITOR	0603	1	33P±5% 50V
C379		SMT CAPACITOR	0603	1	68P±5% 50V
C380		SMT CAPACITOR	0603	1	680P±10% 50V
C381		SMT CAPACITOR	0805	1	474±10% 50V
C382-C383		SMT CAPACITOR	1210	2	100P±5% 50V
C384		SMT CAPACITOR	1210	1	8P±5% 50V
C385		SMT CAPACITOR	1210	1	12P±5% 50V
C386		SMT CAPACITOR	0603	1	5P±0.1P 50V
C387		SMT CAPACITOR	1210	1	NOUSE
C388-C392		SMT CAPACITOR	0603	5	NOUSE
C393		SMT CAPACITOR	1206	1	1P±0.1P 50V
C394		SMT CAPACITOR	0603	1	3P±0.1P 50V
C395		SMT CAPACITOR	0603	1	NOUSE
C396		SMT CAPACITOR	0603	1	10P±5% 50V
C397		SMT CAPACITOR	0603	1	9P±0.25P 50V
C398-C401		SMT CAPACITOR	0603	4	0.5P±0.1P 50V
C402		SMT CAPACITOR	0603	1	3P±0.1P 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C403		SMT CAPACITOR	0603	1	0.75P±0.1P 50V
C404		SMT CAPACITOR	0603	1	22P±5% 50V
C405		SMT CAPACITOR	0603	1	18P±5% 50V
C406		SMT CAPACITOR	0603	1	103±10% 50V
C407		SMT CAPACITOR	0603	1	27P±5% 50V
C408		SMT CAPACITOR	0603	1	2P±0.1P 50V
C409		SMT CAPACITOR	0603	1	30P±5% 50V
C410-C411		SMT CAPACITOR	0603	2	47P±5% 50V
C500-C509		SMT CAPACITOR	0603	10	103±10% 50V
C510-C515		SMT CAPACITOR	0603	5	102±10% 50V
C516-C521		SMT CAPACITOR	0603	6	104±10% 50V
C522		SMT CAPACITOR	0603	1	104P±5% 50V
C523-C526		SMT CAPACITOR	0603	4	104P±5% 50V
C527		SMT CAPACITOR	0603	1	82P±10% 50V
C528-C530		SMT CAPACITOR	0603	3	NOUSE
C531		SMT CAPACITOR	0603	1	39P±5% 50V
C532		SMT CAPACITOR	0603	1	33P±5% 50V
C533		SMT CAPACITOR	0603	1	680P±10% 50V
C534		SMT CAPACITOR	0805	1	474±10% 50V
C535		SMT CAPACITOR	0805	1	474±5% 50V
C536-C537		SMT CAPACITOR	0603	2	390P±10% 50V
C538		SMT CAPACITOR	0603	1	273±5% 50V
C539		SMT CAPACITOR	0603	1	224±5% 50V
C540		SMT CAPACITOR	0603	1	222±5% 50V
C541		SMT CAPACITOR	0603	1	393±5% 50V
C542-C551		SMT CAPACITOR	0603	10	103±5% 50V
C552		SMT CAPACITOR	0805	1	104±10% 50V
C553		SMT CAPACITOR	0603	2	473±5% 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
C554		SMT CAPACITOR	0603	1	272±5% 50V
C556		SMT CAPACITOR	0603	1	102±5% 50V
C557		SMT CAPACITOR	0805	1	105±10% 50V
C558		SMT CAPACITOR	0603	1	332±5% 50V
C559		SMT CAPACITOR	0603	1	680P±5% 50V
C560		SMT CAPACITOR	0603	1	102±5% 50V
C561		SMT CAPACITOR	0603	1	47P±5% 50V
C562		SMT CAPACITOR	0603	1	333±5% 50V
C563		SMT CAPACITOR	0603	1	103±10% 50V
C564-C565		SMT CAPACITOR	0603	2	104±10% 50V
C800-C807		SMT CAPACITOR	0603	7	NOUSE
E100-E101		ELECTRO	10×15	2	470uF25V
E102-E105		ELECTRO	4×8	4	47uF25V
E200		ELECTRO	4×8	1	47uF25V
E202		SMT TANTALUM CAPACITOR	A type	1	0.22uF±20% 35V
E203		ELECTRO	5×8	1	100uF16V
E204		ELECTRO	5×8	1	47uF25V
E205		SMT TANTALUM CAPACITOR	B type	1	33uF±20% 10V
E206-E208		SMT TANTALUM CAPACITOR	A type	3	10uF±20% 10V
E209		SMT TANTALUM CAPACITOR	A type	1	0.22uF±20% 35V
E210		SMT CAPACITOR	1206	1	220P±5% 50V
E211		SMT TANTALUM CAPACITOR	A type	1	4.7uF±20% 16V
E212		SMT TANTALUM CAPACITOR	A type	1	0.1uF±20% 35V
E500-E509		SMT TANTALUM CAPACITOR	A type	10	1uF±20% 16V
E510-E515		SMT TANTALUM CAPACITOR	A type	6	10uF±20% 10V
E516		SMT TANTALUM CAPACITOR	A type	1	4.7uF±20% 6.3V
E517		SMT TANTALUM CAPACITOR	A type	1	2.2uF±20% 16V
E518		SMT CAPACITOR	1206	1	563±10% 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
E519		ELECTRO	4x8	1	4.7uF16V
E520		ELECTRO	4x8	1	10uF16V
E521		ELECTRO	8x15	1	330uF25V
E522		SMT TANTALUM CAPACITOR	A type	1	2.2uF±20% 10V
E523		SMT TANTALUM CAPACITOR	A type	1	2.2uF±20% 16V
R100		SMT RESISTOR	2010	1	470R±5%
R101		SMT RESISTOR	0603	1	4.7K±5%
R102		SMT RESISTOR	0603	1	10K±5%
R103		SMT RESISTOR	0603	1	3.3K±5%
R104-R105		SMT RESISTOR	0603	2	47K±5%
R106		SMT RESISTOR	0805	1	1K±5%
R200-R201		SMT RESISTOR	0603	2	15K±5%
R202		SMT RESISTOR	0603	1	3.9K±5%
R203		SMT RESISTOR	0603	1	3.3K±5%
R204-R210		SMT RESISTOR	0603	7	10K±5%
R211		SMT RESISTOR	0603	1	330K±5%
R212		SMT RESISTOR	0603	1	27K±5%
R213		SMT RESISTOR	0603	1	10K±5%
R214		SMT RESISTOR	0603	1	15K±5%
R215-R216		SMT RESISTOR	0603	2	10K±5%
R217-R218		SMT RESISTOR	0603	2	100K±5%
R219-R220		SMT RESISTOR	0603	2	10K±5%
R221		SMT RESISTOR	0603	1	1K±5%
R222		SMT RESISTOR	0603	1	NOUSE
R223-R224		SMT RESISTOR	0603	2	22K±5%
R226-R227		SMT RESISTOR	0603	2	22K±5%
R228		SMT RESISTOR	0603	1	5.6K±5%
R229		SMT RESISTOR	0603	1	820R±5%

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R230		SMT RESISTOR	0603	1	1K±5%
R231		SMT RESISTOR	0603	1	470R±5%
R232		SMT RESISTOR	0603	1	NOUSE
R233		SMT RESISTOR	2010	1	470R±5%
R234-R235		SMT RESISTOR	0603	2	470R±5%
R236-R237		SMT RESISTOR	0603	2	100R±5%
R238		SMT RESISTOR	0603	1	150R±5%
R239		SMT RESISTOR	0603	1	1K±5%
R240		SMT RESISTOR	0603	1	100R±5%
R241		SMT RESISTOR	0603	1	NOUSE
R242-R244		SMT RESISTOR	0603	3	100R±5%
R245		SMT RESISTOR	2010	1	100R±5%
R246		SMT RESISTOR	0603	1	100R±5%
R247-R249		SMT RESISTOR	0603	3	100K±5%
R250		SMT RESISTOR	0603	1	39K±5%
R251-R256		SMT RESISTOR	0603	6	100K±5%
R257		SMT RESISTOR	0603	1	300K±5%
R258-R260		SMT RESISTOR	0603	3	100K±5%
R261-R262		SMT RESISTOR	0603	2	680R±5%
R263-R265		SMT RESISTOR	0603	3	1 K±5%
R266		SMT RESISTOR	0603	1	NOUSE
R267		SMT RESISTOR	0603	1	330R±5%
R268-R271		SMT RESISTOR	0603	4	1 K±5%
R272-R274		SMT RESISTOR	0603	3	220R±5%
R275		SMT RESISTOR	0603	1	NOUSE
R276-R277		SMT RESISTOR	0603	2	470K±5%
R278		SMT RESISTOR	0603	1	47K±5%
R279		SMT RESISTOR	0603	1	NOUSE

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R280-R281		SMT RESISTOR	0603	2	10K±5%
R282		SMT RESISTOR	0603	1	0R±5%
R283-R284		SMT RESISTOR	0603	2	NOUSE
R285		SMT RESISTOR	0603	1	100R±5%
R286		SMT RESISTOR	0603	1	100K±5%
R287		SMT RESISTOR	0603	1	NOUSE
R288		SMT RESISTOR	0603	1	10K±5%
R289		SMT RESISTOR	0603	1	12K±5%
R290		SMT RESISTOR	0603	1	47R±5%
R291		SMT RESISTOR	0603	1	330K±5%
R292		SMT RESISTOR	0603	1	4.7K±5%
R293-R294		SMT RESISTOR	0603	2	NOUSE
R295		SMT RESISTOR	0603	1	2.2K±5%
R296		SMT RESISTOR	0603	1	180K±5%
R297-R299		SMT RESISTOR	0603	3	NOUSE
R300		SMT RESISTOR	0603	1	2.2K±5%
R301		SMT RESISTOR	0603	1	220R±5%
R302		SMT RESISTOR	0603	1	1K±5%
R303-R304		SMT RESISTOR	0603	2	47K±5%
R305		SMT RESISTOR	0603	1	4.7K±5%
R306-R310		SMT RESISTOR	0603	5	47K±5%
R311-R312		SMT RESISTOR	0603	2	270R±5%
R313		SMT RESISTOR	0603	1	470R±5%
R314		SMT RESISTOR	0603	1	18R±5%
R315-R316		SMT RESISTOR	0603	2	22R±5%
R317		SMT RESISTOR	0603	1	470K±5%
R319		SMT RESISTOR	0603	1	3.9K±5%
R320		SMT RESISTOR	0805	1	68R±5%

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R321		SMT RESISTOR	0603	1	1K±5%
R322		SMT RESISTOR	0603	1	NOUSE
R323		SMT RESISTOR	0603	1	18K±5%
R325		SMT RESISTOR	1206	1	68R±5%
R326		SMT RESISTOR	0603	1	470R±5%
R327		SMT RESISTOR	0603	1	330R±5%
R328-R329		SMT RESISTOR	0603	2	NOUSE
R330		SMT RESISTOR	0603	1	220K±5%
R331		SMT RESISTOR	0603	1	120K±5%
R332		SMT RESISTOR	0603	1	10R±5%
R333		SMT RESISTOR	0603	1	47R±5%
R334		SMT RESISTOR	0603	1	51K±5%
R335		SMT RESISTOR	0603	1	4.7K±5%
R336		SMT RESISTOR	0603	1	1.5K±5%
R337		SMT RESISTOR	1206	1	33R±5%
R338		SMT RESISTOR	0603	1	270R±5%
R339		SMT RESISTOR	0603	1	470K±5%
R340		SMT RESISTOR	0603	1	270K±5%
R341		SMT RESISTOR	0603	1	15K±5%
R342		SMT RESISTOR	0603	1	1K±5%
R343		SMT RESISTOR	0603	1	330K±5%
R344		SMT RESISTOR	0603	1	1.8K±5%
R345		SMT RESISTOR	0603	1	NOUSE
R500		SMT RESISTOR	0603	1	470R±5%
R501		SMT RESISTOR	0603	1	8.2K±5%
R502-R506		SMT RESISTOR	0603	5	10K±5%
R507		SMT RESISTOR	0603	1	3.3K±5%
R508-R510		SMT RESISTOR	0603	3	47K±5%

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R511-R517		SMT RESISTOR	0603	7	1K±5%
R518		SMT RESISTOR	0603	1	10K±5%
R519		SMT RESISTOR	0603	1	2K±5%
R520		SMT RESISTOR	0603	1	1K±5%
R521		SMT RESISTOR	0603	1	20K±5%
R522		SMT RESISTOR	0603	1	22K±5%
R523		SMT RESISTOR	0603	1	1.5K±5%
R524		SMT RESISTOR	0603	1	100R±5%
R525-R539		SMT RESISTOR	0603	15	100K±5%
R540		SMT RESISTOR	0603	1	NOUSE
R541		SMT RESISTOR	0603	1	1K±5%
R542-R544		SMT RESISTOR	0603	3	NOUSE
R545		SMT RESISTOR	0603	1	30K±5%
R546		SMT RESISTOR	0603	1	22K±5%
R547		SMT RESISTOR	0603	1	0R±5%
R548-R549		SMT RESISTOR	0603	2	2.2K±5%
R550		SMT RESISTOR	0603	1	1K±5%
R551		SMT RESISTOR	0603	1	3.9K±5%
R552-R553		SMT RESISTOR	0603	2	1M±5%
R554-R559		SMT RESISTOR	0603	6	0R±5%
R560		SMT RESISTOR	0603	1	18K±5%
R561		SMT RESISTOR	0603	1	120K±5%
R562		SMT RESISTOR	0603	1	33K±5%
R563		SMT RESISTOR	0603	1	470K±5%
R564		SMT RESISTOR	0603	1	390K±5%
R565		SMT RESISTOR	0603	1	39K±5%
R566		SMT RESISTOR	0603	1	56K±5%
R567		SMT RESISTOR	0603	1	120K±5%

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
R568		SMT RESISTOR	0603	1	56K±5%
R569		SMT RESISTOR	0603	1	12K±5%
R570		SMT RESISTOR	0603	1	68K±5%
R571		SMT RESISTOR	0603	1	25.5K±1%
R572		SMT RESISTOR	0603	1	5.11K±1%
R573		SMT RESISTOR	0603	1	634K±1%
R574		SMT RESISTOR	0603	1	15.8K±1%
R575		SMT RESISTOR	0603	1	29.4K±1%
R576		SMT RESISTOR	0603	1	11.5K±1%
R577		SMT RESISTOR	0603	1	150K±1%
R578		SMT RESISTOR	0603	1	4.22K±1%
R579		SMT RESISTOR	0603	1	715K±1%
R580		SMT RESISTOR	0603	1	22K±5%
R581		SMT RESISTOR	0603	1	39K±5%
R582		SMT RESISTOR	0603	1	680K±5%
R583		SMT RESISTOR	0603	1	100K±5%
R584		SMT RESISTOR	0603	1	9.1K±5%
R585		SMT RESISTOR	0603	1	8.2K±5%
R586		SMT RESISTOR	0603	1	12K±5%
R587		SMT RESISTOR	0603	1	560R±5%
R589		SMT RESISTOR	0603	1	56K±5%
R800-R807		SMT RESISTOR	0603	8	NOUSE
RT200		SMT RESISTOR ARRAY	0603	1	NOUSE
D100		SURGE ABSORBER		1	ZSA5A27
D200-D201		SMT DIODE	SOT-416	2	DAN235E
D202		SMT RESISTOR	0603	1	0R±5%
D203		SMT DIODE	SOT-416	1	DAN235E
D204		SMT CAPACITOR	0603	1	470P±5% 50V

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
D205-D208		SMT VARIABLE CAPACITANCE DIODE	SC-79	4	HVC350
D210-C211		DIODE	DO-35	2	L407CDB
D212-D213		SMT DIODE	1206	2	NOUSE
D214		SMT DIODE	SOT-523	1	NOUSE
D215		SMT VARIABLE CAPACITANCE DIODE	0603	1	NOUSE
D216		SMT VARIABLE CAPACITANCE DIODE	0805	1	NOUSE
D217		SMT VARIABLE CAPACITANCE DIODE	0805	1	JDV2S14E(FH)
D218		SMT VARIABLE CAPACITANCE DIODE	0805	1	NOUSE
D219-D220		SMT VARIABLE CAPACITANCE DIODE	0805	2	JDV2S14E(FH)
D221-D222		SMT VARIABLE CAPACITANCE DIODE	0805	2	NOUSE
D223		SMT VARIABLE CAPACITANCE DIODE	0805	1	JDV2S14E(FH)
D224-D225		SMT DIODE	0805	2	1SS355
D226-D227		SMT DIODE	SC-79	2	MA2S111
D228		SMT ZENER DIODE	0805	1	5.1V
D229		SMT ZENER DIODE	0805	1	8.2V
D230-D231		SMT DIODE	SC-70	2	MA742
D232		SMT VARIABLE CAPACITANCE DIODE	0805	1	1SV214
D233-D234		SMT CAPACITOR	0805	2	120P±5% 50V
D500		SMT DIODE	SOT323	1	NOUSE
D501		SMT DIODE	SC70	1	1SS372
D502		SMT DIODE	SOT-416	1	DAN222
Q100		SMT TRANSISTOR	SC-62	1	2SB1386
Q101		SMT TRANSISTOR	SOT-23	1	2SB624
Q102		SMT TRANSISTOR	SC-62	1	2SB1132
Q103-Q104		SMT DIGITAL TRANSISTOR	SC70	2	DTC114EU
Q105		SMT DIGITAL TRANSISTOR	EMT3	1	DTC144EE
Q106-Q107		SMT DUAL DIGITAL TRANSISTOR	SC-88A	2	UMC4N
Q108		SMT DIGITAL TRANSISTOR	EMT3	1	DTC114EE

PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
Q200-Q201		SMT DUAL DIGITAL TRANSISTOR	SC-88A	2	UMC4N
Q202		SMT DUAL DIGITAL TRANSISTOR	SC-88A	1	NOUSE
Q203		SMT DIGITAL TRANSISTOR	EMT3	1	DTA114YE
Q204		SMT TRANSISTOR	SC-70	1	2SC4215
Q205-Q206		SMT FET	SOT-143	2	3SK318
Q207		SMT TRANSISTOR	SC-70	1	2SC4226
Q208		SMT TRANSISTOR	SC-70	1	NOUSE
Q209-Q210		SMT TRANSISTOR	SC-70	2	2SC4226
Q211		SMT TRANSISTOR	SC-70	1	2SC4215
Q212		SMT FET	SOT-89	1	2SK3078A
Q213		SMT DIGITAL TRANSISTOR	EMT3	1	DTA114EE
Q214		SMT FET	PLD	1	RD07
Q216		SMT FET	TO500	1	MRF7042
Q217-Q218		SMT FET	SOT-323	2	2SK1875
Q219		SMT FET	SOT-523	1	2SJ243
Q220		SMT TRANSISTOR	SOT-89	1	2SC3357
Q221		SMT TRANSISTOR	SOT-23	1	2SC1623
Q223		SMT TRANSISTOR	SOT-523	1	2SA1832
Q224		SMT TRANSISTOR	SOT-523	1	2SC4738
Q225		SMT DIGITAL TRANSISTOR	EMT3	1	NOUSE
Q500		SMT DIGITAL TRANSISTOR	EMT3	1	DTC144EE
Q502		SMT TRANSISTOR	SC-70	1	2SC4181
U100		SMT IC	TO-220	1	MC7808
U101		SMT IC	TO-92	1	MC78L05
U200		SMT IC	SSOP16	1	TA31136F
U201		SMT IC	TO-92	1	MC78L05
U202		SMT IC	SSOP8	1	LM2904V
U203		SMT IC	TO-220	1	KIA278R06PI

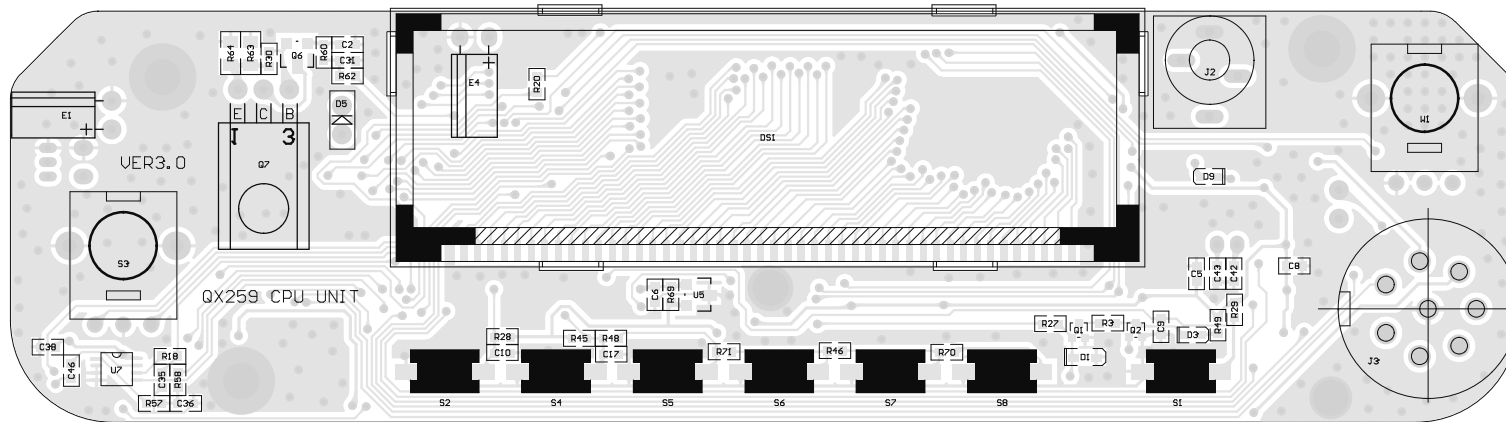
PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
U204		SMT IC	SSOP8	1	LM2904V
U205		SMT IC	SSOP20	1	LMX1511TM
U500		SMT IC	SOP16	1	MC33111
U501-U504		SMT IC	SSOP14	4	NJM2902
U505		SMT IC	SSOP24	1	M62364F
U506		SMT IC	SIP10F	1	LA4600
U800		SMT IC	SSOP16	1	NOUSE
L200		SMT CAPACITOR	0805	1	4P±0.1P 50V
L201		SMT WIRE WOUND INDUCTOR	0805	1	560NH
L202		SMT WIRE WOUND INDUCTOR	0805	1	270NH
L203		SMT SMALL FIXED INDUCTOR	0603	1	NOUSE
L204-L207		SMT AIR-CORE COIL		4	0.35×1.4×6T
L208		SMT CAPACITOR	0805	1	2P±0.1P 50V
L209		SMT RESISTOR	0805	1	0R±5%
L210-L211		SMT SMALL FIXED INDUCTOR	0603	1	47NH
L212		SMT WIRE WOUND INDUCTOR	0805	1	39NH
L213-L214		SMT WIRE WOUND INDUCTOR	0805	2	NOUSE
L215		SMT WIRE WOUND INDUCTOR	0805	1	33NH
L216-L217		SMT FERRITE BEAD (BLACK)	0805	2	30T
L218		SMT WIRE WOUND INDUCTOR	0603	1	8.2NH
L219		SMT WIRE WOUND INDUCTOR	0603	1	6.8NH
L220		SMT AIR-CORE COIL		1	0.5×1.8×3T
L221		SMT RESISTOR	0805	1	0R±5%
L222		AIR-CORE COIL		1	0.8×3.5×5.5T
L223		SMT WIRE WOUND INDUCTOR	0805	1	NOUSE
L224		AIR-CORE COIL		1	SHOT
L225		AIR-CORE COIL		1	0.8×2.9×1.5T
L226		AIR-CORE COIL		1	0.6×2.5×5.5T
L227-L229		AIR-CORE COIL		3	0.8×3.3×3.5T

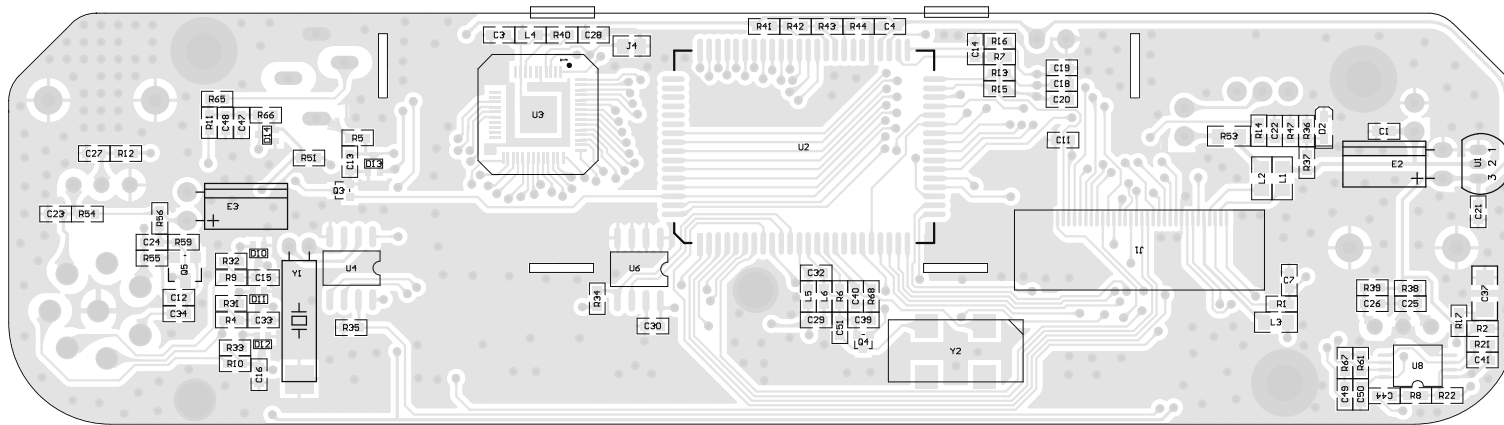
PARTS LIST

Ref. No	Parts No.	Description of item	Size (LxW)(mm)	Qty	Specification
L230-L231		SMT WIRE WOUND INDUCTOR	0805	2	NOUSE
L232		SMT AIR-CORE COIL		1	NOUSE
L233-L234		SMT SMALL FIXED INDUCTOR	0603	2	10uH
L235		SMT WIRE WOUND INDUCTOR	0805	1	33NH
L236-L237		SMT WIRE WOUND INDUCTOR	0603	2	100NH
L238		SMT SMALL FIXED INDUCTOR	0603	1	10uH
L239		SMT WIRE WOUND INDUCTOR	0603	1	220NH
L240-L243		SMT FERRITE BEAD (BLACK)	0603	4	271T
L244		SMT SMALL FIXED INDUCTOR (BLOVE)	2520	1	10uH
L245-L246		AIR-CORE COIL		2	0.5×3×9.5T
L247		SMT WIRE WOUND INDUCTOR	0805	1	22NH
L248		SMT SMALL FIXED INDUCTOR	0603	1	27NH
L249-L250		SMT FERRITE BEAD (BLACK)	0603	2	271T
L251-L252		SMT SMALL FIXED INDUCTOR	0603	2	560NH
CB200		CERAMIC FILTER		1	C24
CF200		CERAMIC FILTER		1	CFW450G
CF201		CERAMIC FILTER		1	CFW450F
CV200-CV201		CERAMIC TRIMMER	CAPVAR3	2	3-10P
J500		FLAT CABLE CONNECTOR (Erection type)	SIPM32	1	0.5S-1-32PB
J501		MIC SOCKET 3.5mm	SD-3.5A	1	PHONE-DC
J502		JACK		1	SP JACK
J503		JACK		1	CON6
LS500		SPEAKER		1	SPK-8R-56
X200		SMT TCXO		1	19.200MHz
XF200-XF201		SMT CRYSTAL FILTER		2	38.5MHz
VR200		SMT VARIOUS RESISTOR	VER2×3	1	47K±5%
VR500		SMT VARIOUS RESISTOR	VER2×3	1	47K±5%
F100		SMT RESISTOR	1206	1	0R

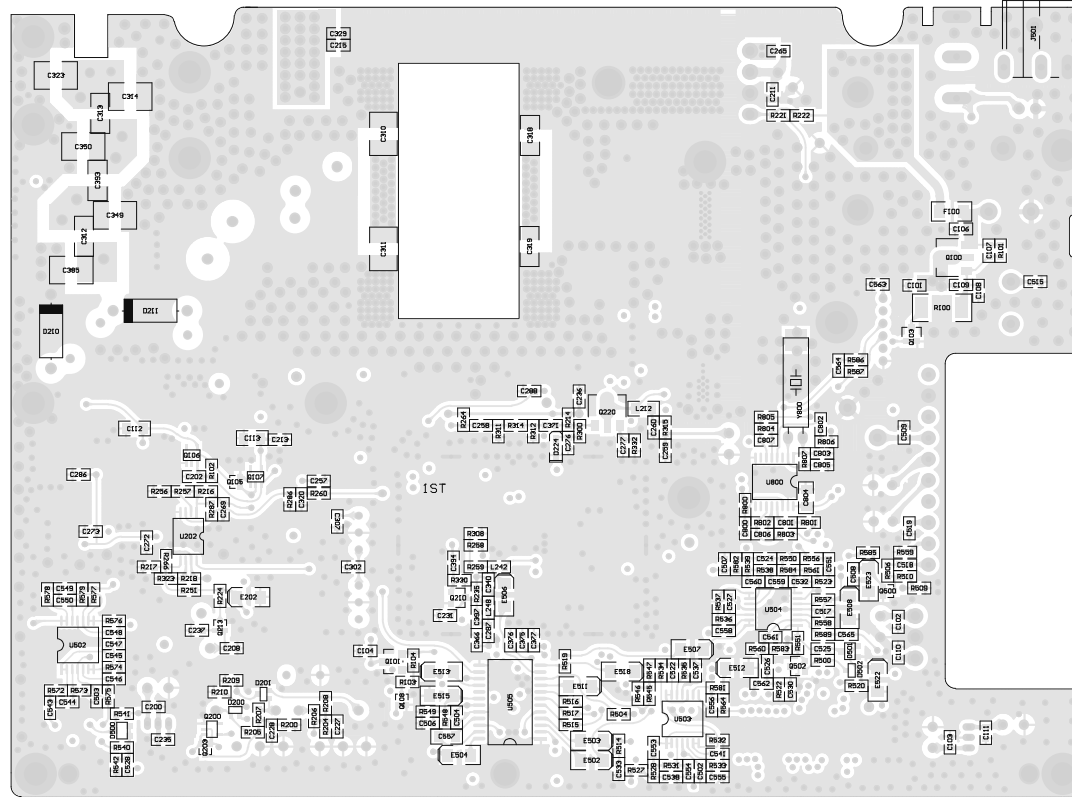
PC board views



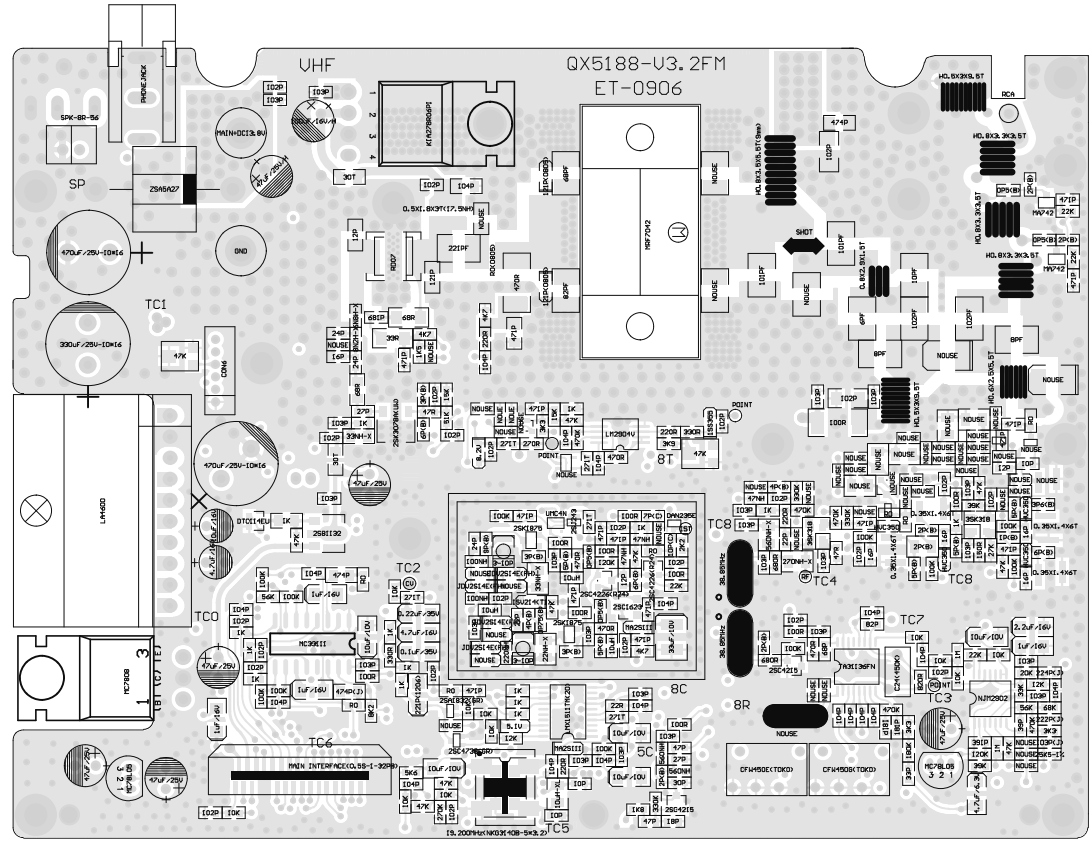
PC board views



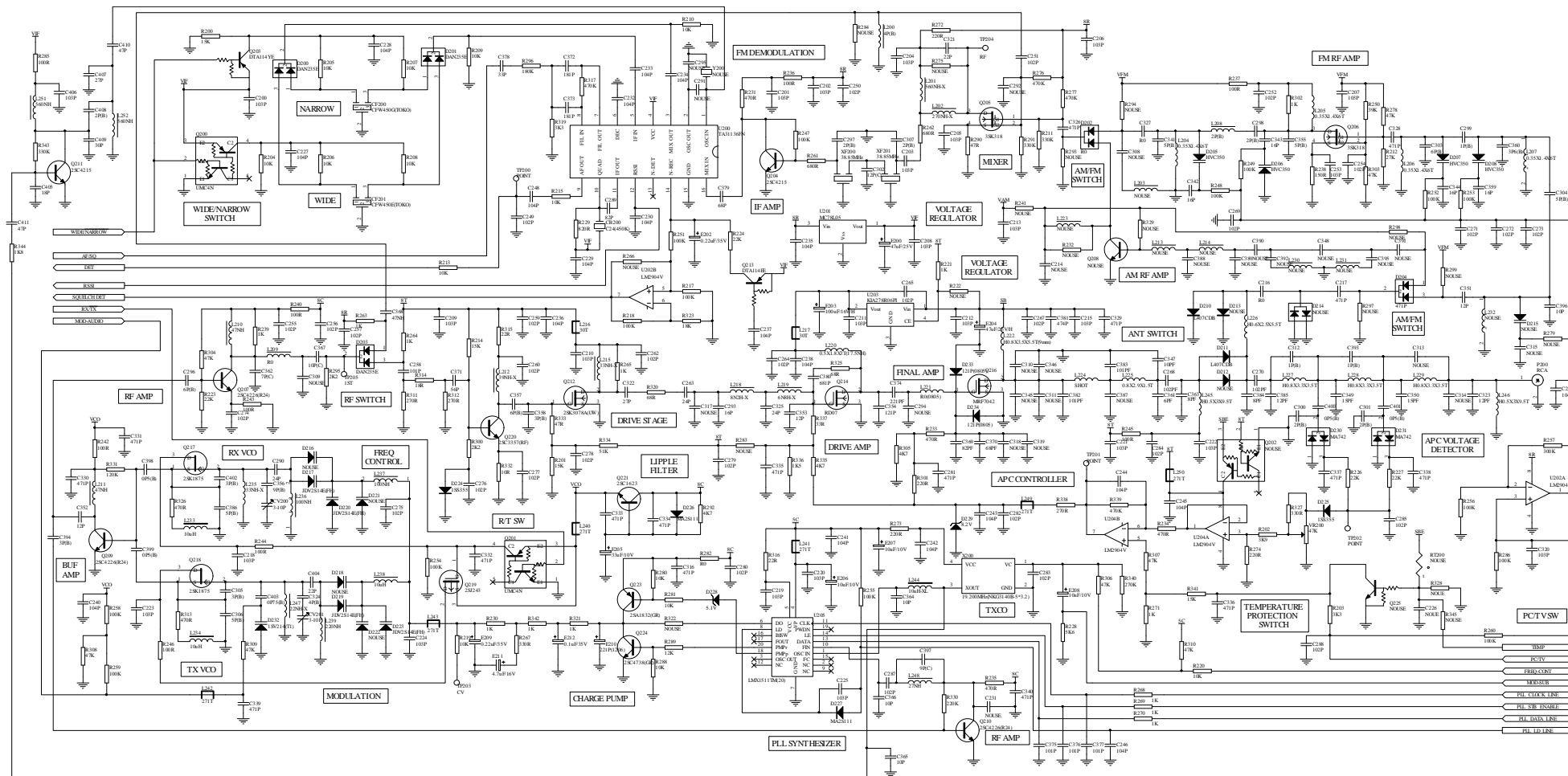
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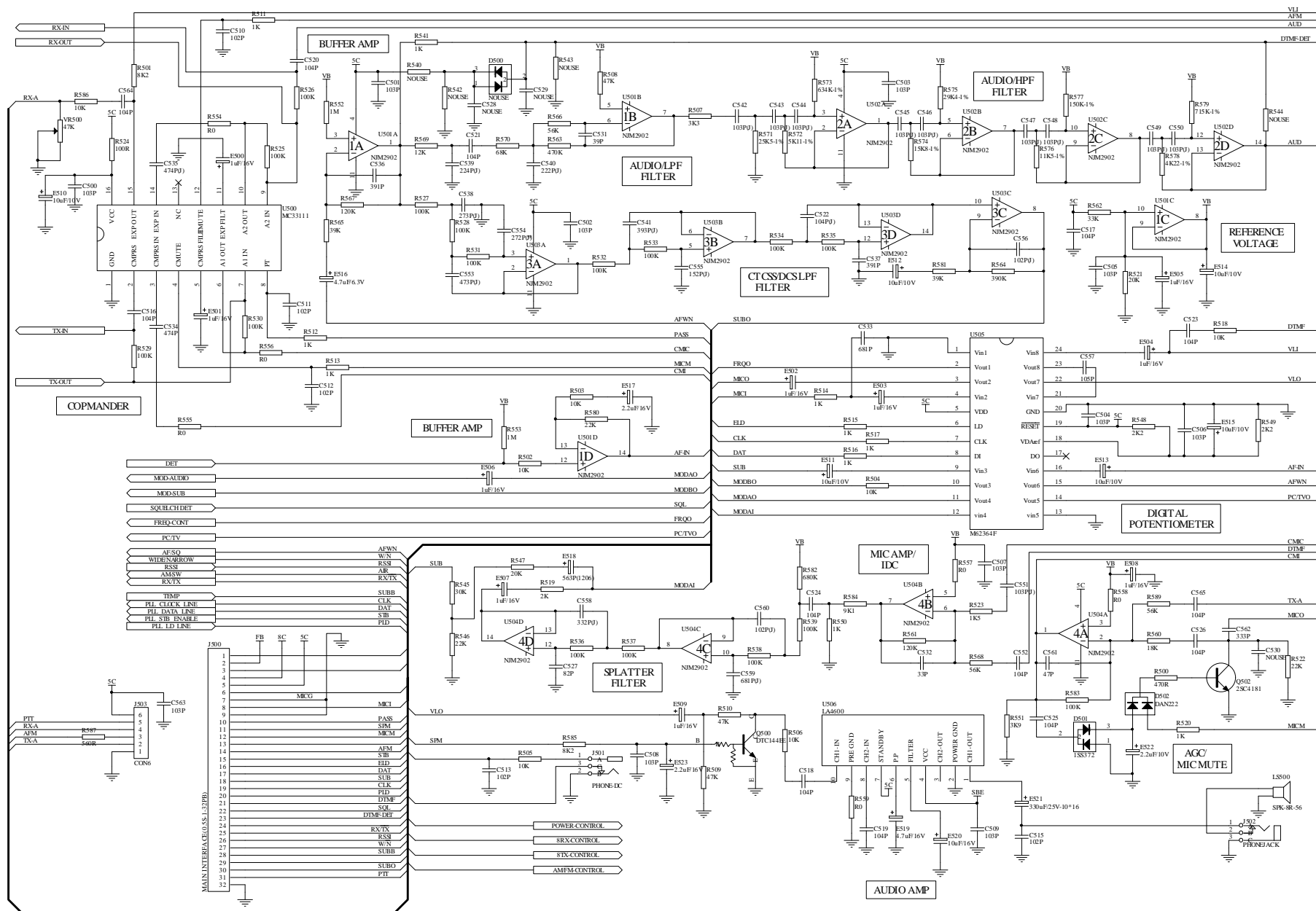
PC board views



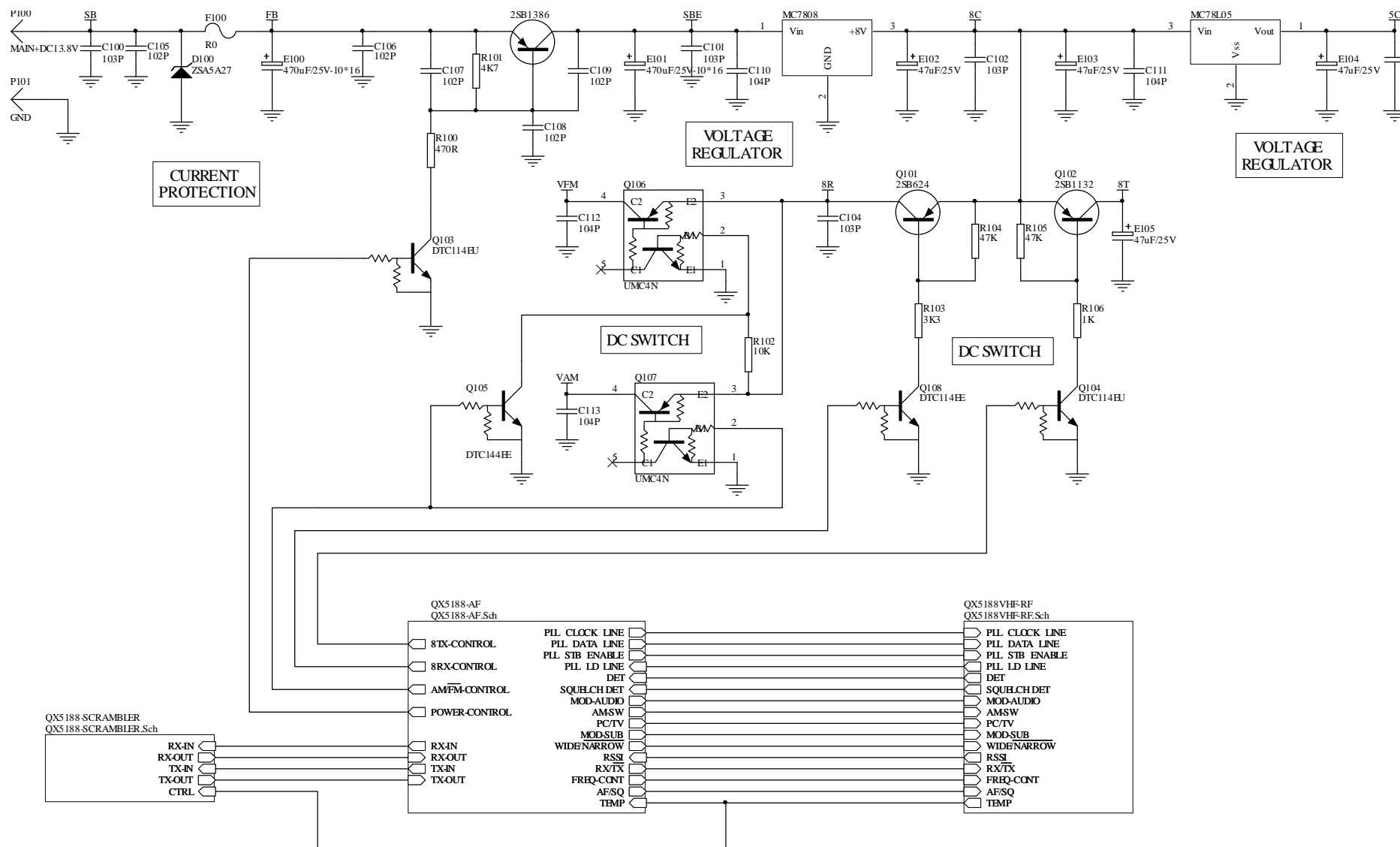
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM

