HYT

SERVICE MANUAL

TWO-WAY RADIO

TC-508

Preface

This manual describes information related with product repair. To repair the product properly, please read this manual carefully.

This manual is applicable to the following model:

TC-508

Contents

1. Introduction

Intended User

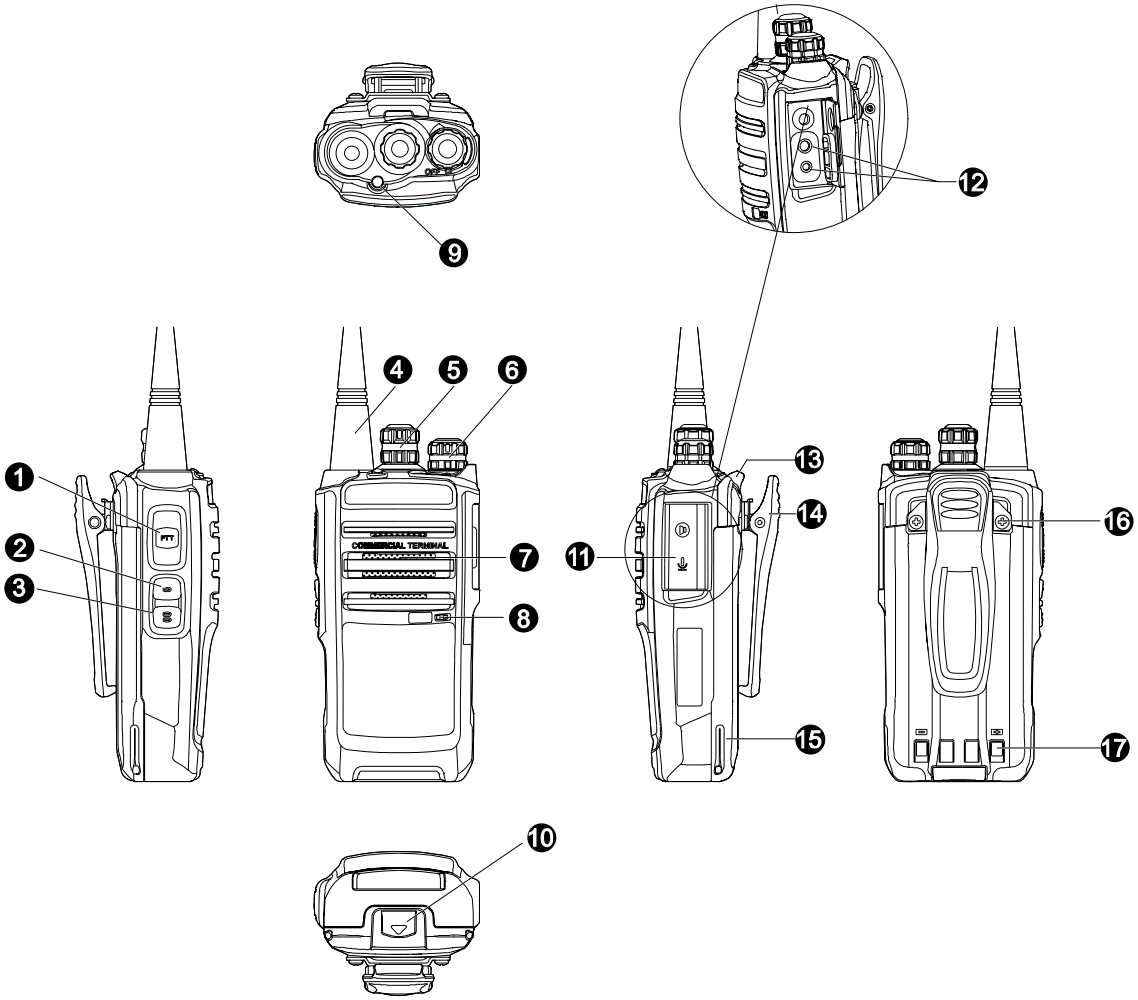
This manual is intended for use by qualified technicians only.

Safety Information

The following safety precautions shall always be observed during operation, service and repair of this equipment.

- This equipment shall be serviced by qualified technicians only.
- Use only our supplied or approved antenna.
- To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any area where posted notices instruct you to do so. Turn off your radio before boarding an aircraft. Any use of the radio must be in accordance with airline regulations or crew instructions.
- For vehicles with an air bag, do not place a radio in the area over an air bag or in the air bag deployment area.
- Turn off your radio prior to entering any area with explosive and flammable materials.
- Do not charge or replace your battery in a location with explosive and flammable materials.
- Turn off your radio before entering a blasting area.
- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn may result.
- Do not expose the radio to direct sunlight for a long time, nor place it close to a heating source.
- When you carry a radio with you, please keep its antenna at least 2.5 centimeters away from your body during transmitting.

2. Product Controls



No.	Part Name	No.	Part Name
①	PTT Key	⑩	Battery latch
②	SK1 (programmable)	⑪	Accessory Jack Cover
③	SK2 (programmable)	⑫	Accessory Jack
④	Antenna	⑬	Strap Hole
⑤	Channel Selector Knob	⑭	Belt clip
⑥	Radio On-Off/Volume Control Knob	⑮	Battery
⑦	Speaker Switch	⑯	Screw for Belt Clip
⑧	Microphone	⑰	Charging Piece
⑨	LED Indicator	/	/

3. Programmable Key Functions

For enhanced convenience, you may request your dealer to program the keys **SK1** and **SK2** as shortcuts to the functions listed below:

No.	Shortcut Key	Function
1	Adjusting the Power Level	To adjust power level quickly.
2	Battery Strength Indicator	To show the remaining battery strength
3	Channel Lock	To lock the channel which would disable the Channel Selector knob.
4	Monitor Button	To adjust the condition for incoming signal match
5	Monitor Momentary	
6	Squelch Off	To always unmute speaker no matter whether carrier is present or not
7	Squelch Off Momentary	
8	Scanning	To receive signals on other channels
9	VOX	To make the radio transmit automatically when you speak.

4. Software Specifications

4.1 Status Indication

See the table below for LED and alert tone indications:

Item		Indication
Wired Clone	To enter Wired Clone Mode ● turn on the source radio with **SK1** held down for approximately 2 seconds; ● Target radio: turn it on directly.	The LED on the source radio flashes red once during the power-on process.
	Status of the source radio in Wired Clone Mode (After the target radio is turned on and the cloning cable is connected, press the **PTT** key of the source radio to begin cloning.)	The LED glows red during cloning process. Error occurs during cloning: ● User Clone Mode: At the start of cloning, frequency band and Model ID will be checked. The LED glows orange for 2 seconds and then goes out to indicate a failed check. If the check is successfully carried out but error occurs during cloning, the LED will flash orange. In this situation, press any key to make it go out. ● Factory Clone Mode: The LED flashes orange in presence of error. Press any key to make it go out. The LED glows green once cloning is completed.
	Status of the target radio in Wired Clone Mode	The LED glows green during cloning. The green LED goes out after cloning is completed.
Power On (to enter User Mode)		When the radio is turned on, a power-on alert tone sounds. When the radio is currently on a blank channel, it sounds beep tones continuously.
Low Battery Alert		The LED flashes red, and the low-pitched tone sounds every 20 seconds (programmable by the dealer).

Item	Indication
Transmitting	● The LED glows red during transmitting. ● When TOT timer expires, the radio sounds beep tone continuously. ● A TOT pre-alert tone sounds before the TOT timer expires.
Receiving	The LED glows green during receiving.
Scanning	● The LED flashes green once per second during scanning. ● Scan Start Alert (programmable by the dealer): one beep will sound. ● Scan End Alert (programmable by the dealer): two continuous beeps will sound.
Writing/Reading	The LED glows red when the PC is reading data from the radio. The LED glows green when the PC is writing data into the radio.
Power Adjustment	A low-pitched tone sounds when the radio switches from high power to low power. A high-pitched tone sounds when the radio switches from low power to high power.
VOX/Channel Lock	One audio alert for enabling; Two audio alerts for disabling;

4.2 Function List

- Channel Capacity: 16
- Channel Spacing: 25KHz/12.5KHz
- Channel Scan
- RX/TX status indication (red/green LED)
- CTCSS/CDCSS (38 groups of CTCSS, 83 groups of CDCSS, and CTCSS Tail Invert by 180 degrees.)
- Low battery alert
- Battery Save
- Unlock Detection and Emergency Alarm
- 2 Selectable Squelch Levels
- Monitor Button
- Time-out Timer (TOT)
- Squelch Tail Elimination
- PC Programming (manual/ automatic tuning)
- High/Low Power Switch (4.0/ 2.0W)
- Wide & Narrow Bandwidth Compatibility*
- Busy Channel Lockout (transmission prohibited in busy status)
- Wired Clone
- Battery Strength Indicator
- Manual Tuning
- VOX and 5 Selectable Sensitivity Levels

Note

* indicates optional functions.

4.3 Description of Modes

4.3.1 User Mode

It is a conventional communication mode. The radio will enter this mode by default after power-on.

4.3.2 PC Programming Mode

The radio in User Mode enters PC Programming Mode through specific protocol based

communication with the programming software. In this mode, radio functions and adjustment parameters can be set through the programming software (including User Version and Factory Version).

4.3.3 Wired Clone Mode

Description

Wired Clone Mode is an independent mode. To access other modes, you must restart the radio.

Wired Clone Mode includes Clone Mode and Factory Clone Mode.

1) User Clone Mode:

Connect two radios using a cloning cable. Power on the source radio while holding down **SK1**; the radio will enter Clone Mode in approximately 2 seconds. Then directly power on the target radio to enter the User Mode. In this mode, data stored in EEPROM of the source radio will be cloned to EEPROM of the target radio. The data transferred only involves channel data and common parameters, excluding tuning data, version and serial No. of the model.

2) Factory Clone Mode:

Connect two radios using a clone cable. Hold down both **SK1** and **Power On/Off Key** of the source radio, it will be turned on and will enter User Clone Mode by default after 2 seconds. Press **SK** afterwards to switch to Factory Clone Mode. The target radio can be directly turned on to enter user mode. The data transferred covers all data in EEPROM (including settings for the Manual Tune Switch), other than the serial No.

Process

Step 1 The LED flashes red once after the source radio enters the Wired Clone Mode. Press **PTT** to begin to clone data to the target radio.

Step 2 During cloning, LED of the source radio solidly glows red, and LED of the target radio solidly glows green. When cloning is completed, LED of the source radio solidly glows green, and the green LED of the target radio goes out, which indicates the preparation for another clone.

Step 3 If any abnormal situation occurs during cloning, the source radio will stop cloning and its LED will flash orange, which indicates the preparation for another clone.

Step 4 When cloning is completed, the source radio goes back to standby status. Press **PTT** again to begin another clone.

4.3.4 Manual Tune Mode

In this mode, you can manually tune the frequency deviation, power level and squelch level and etc.

Description of Tuning:

To enter Manual Tune Mode

Hold down the **PTT** and **SK1** key for 2 seconds while powering on the radio. The LED glows orange to indicate that the radio has entered the Manual Tune Mode. When the keys are released, the radio will enter item N of Tx group (N depends on the position where the **Channel Selector Knob** locates).

Note

To enter the Manual Tune Mode, make sure its switch is set to Open via the programming software. If this option is unchecked, the radio can not enter this mode, which helps avoid change of parameters and degradation of radio performance caused by user's misoperations.) Keep this option unchecked after values are well adjusted from factory, to avoid any unexpected change of values. Such values can only be reset and changed in Manual Tune Mode only.

To switch between TX tuning items and RX tuning items

Rotate the **Channel Selector** knob to switch between TX tuning items and RX tuning items.

The LED glows red for TX tuning items and green for RX tuning items.

- TX group: CH1-CH9 respectively stands for TX Low Power, TX High Power, CDCSS Balance, CDCSS Deviation, CTCSS Deviation (low), CTCSS Deviation (medium), CTCSS Deviation (high), TX Low Voltage Threshold and Max. TX Audio Deviation.

  The LED solidly glows red during TX group tuning (CH1 to CH9).

- RX group: CH10-CH13 respectively stands for SQL Normal Open, SQL Normal Close, Rx Low Voltage Threshold and Bandpass Filter.

  The LED solidly glows green during RX group tuning (CH10 to CH13).

  CH14 to CH16 are unavailable and LED will go out.

To switch between wide and narrow bands *

Under a certain tuning item, long press the **PTT** key (the LED flashes orange to indicate valid press) to switch between wide and narrow bands. After the band is selected, the first frequency of the current band is the frequency for tuning by default.

To switch the frequency

Under a certain band, short press the **PTT** key (the LED flashes green to indicate valid press) to switch the frequency orderly.

To tune the value

Under a certain band, short press **SK1** to increase the value in step of 1, or hold this key to increase the value continuously in steps of 1. The value will remain unchanged once it reaches the allowed maximum value.

Short press the **SK2** key to decrease the value in step of 1, or hold down this key to decrease the value continuously in steps of 1. The value will remain unchanged once it reaches the allowed minimum value.

About several special items

- TX group: CH8 (TX Low Voltage Threshold) which is related to AD sampling. Press the **SK1** or **SK2** key after entering the above item, to activate AD sampling (including calculation) once. Rotate the **Channel Selector** knob to save the current AD sampling value.
- RX group: CH10 to CH12 represent SQL Normal Open, SQL Normal Close and RX Low Voltage Threshold respectively. These items are related to AD sampling. Press the **SK1** or **SK2** key after entering the above items, to activate AD sampling (including calculation) once. Rotate the **Channel Selector** knob to save the current AD sampling value.

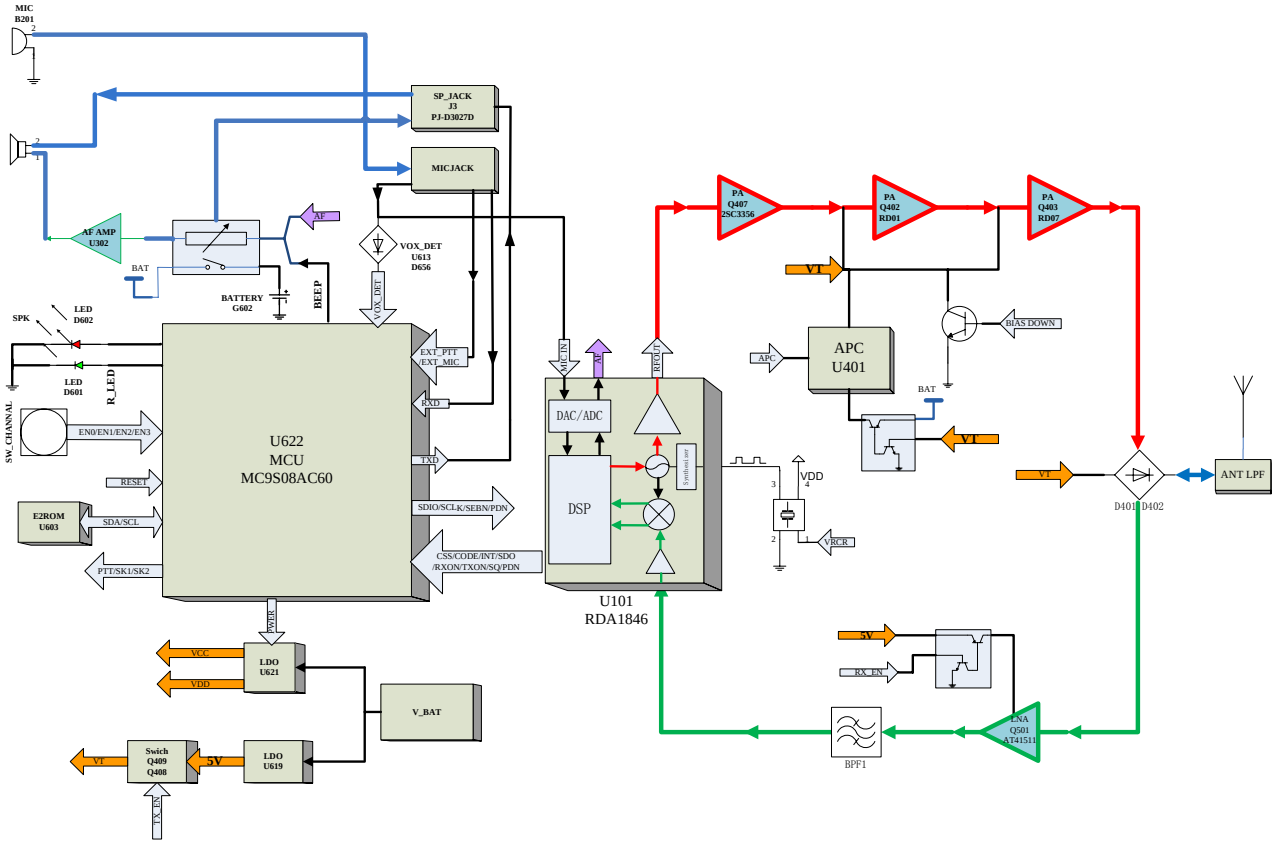
About the key-press

- Short press: key-press time shorter than 1 second;
- Long press: key-press time longer than 1 second.

5. Circuit Description

5.1 General Principle Diagram

The general circuit is composed of RDA chip circuit, TX circuit, RX circuit, power supply circuit, control circuit, etc. See the block diagram below:



RDA Circuit: This chip is highly integrated. Its function includes voice signal processing/modulation/demodulation, DSP, VCO, PLL, LNA and RF IF. The voice signal from MIC goes to RDA chip for amplification. Next, the amplified voice signal will undergo a series of processing including A/D conversion, filtering, pre-emphasizing, gain control, amplitude limit and D/A conversion. Then the analog voice signal is delivered to VCO and amplified to a signal with 8dBm. When the RX RF signal enters this chip, it would experience demodulation, filtering, de-emphasizing and gain control. Finally, the signal is output to the audio amplifier.

- TX section: The modulated RF signal from RDA chip goes to Q407 and Q402 for amplification, and then further amplified by Q403. Then the amplified signal is delivered to low-pass filter to filter out the high-order harmonics. Finally, it is sent via the antenna.
- RX section: After going through LPF and amplitude limiter, the RF signal received from the antenna enters Q501 LNA for amplification. Then the BPF will filter the signal to remove other unwanted

signals. The resulting signal is delivered to RDA chip for demodulation. After that, the voice signal from demodulation is output U302 for amplification, which is finally output from the speaker.

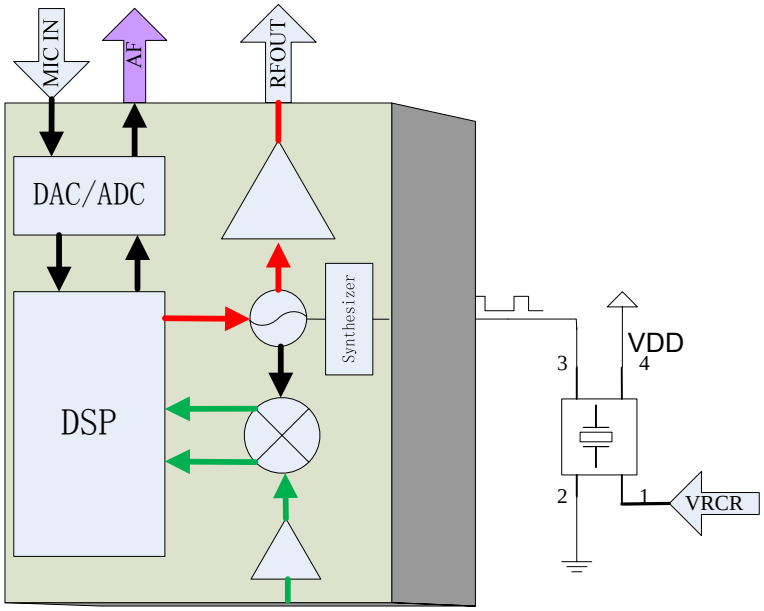
- LDO U619 converts the 7.4V power supply into two 5V, which LDO U621 will convert into two 3.3v power supplies, powering VCC and VDD respectively. VCC powers CPU, while VDD powers RDA chip. Then Q406 converts the 5V power supply to VT to power the TX circuit.

5.2 Realization Methods of Basic Functional Modules

5.2.1 RDA Chip Circuit

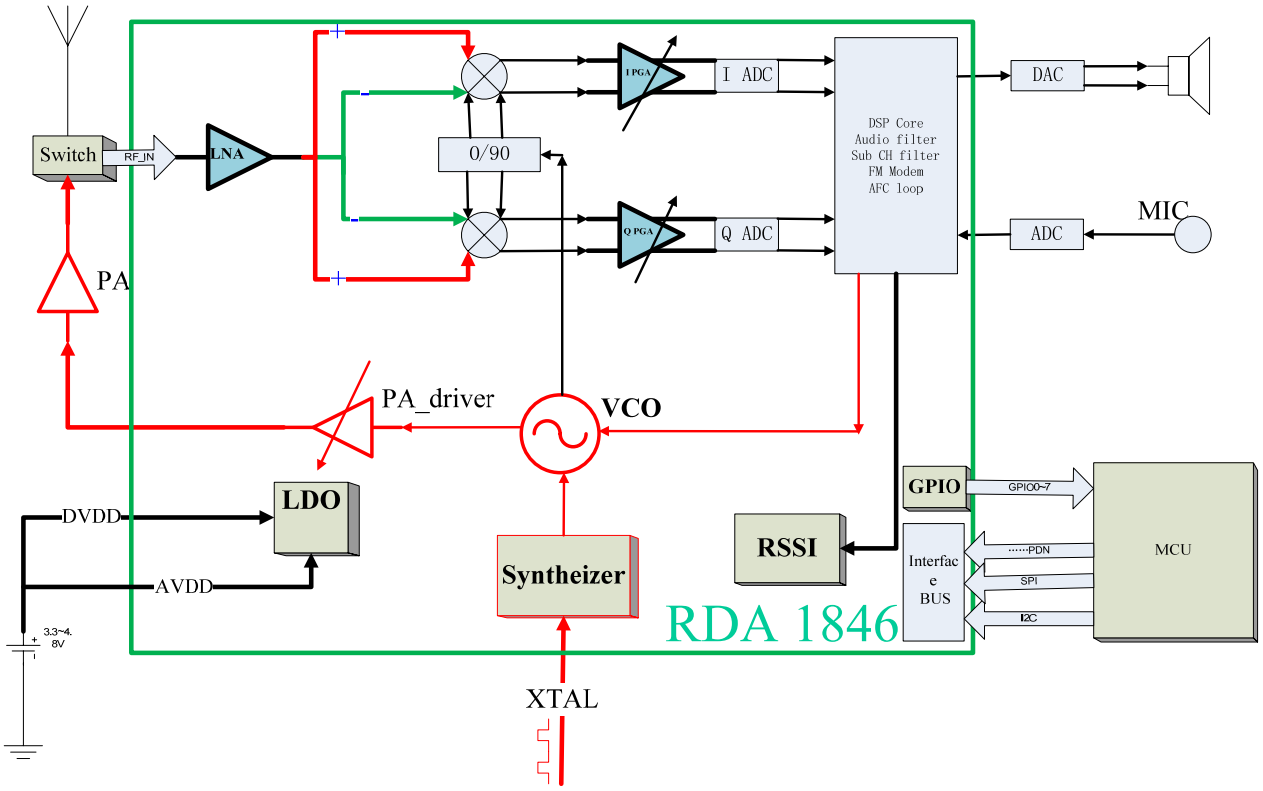
This chip is highly integrated. Its function includes voice signal processing/modulation/demodulation, DSP, VCO, PLL, LNA and RF IF.

RDA Chip Circuit



U101
RDA1846

The reference clock signal of RDA chip is provided by 26MHZ crystal oscillator. The block diagram is given below:

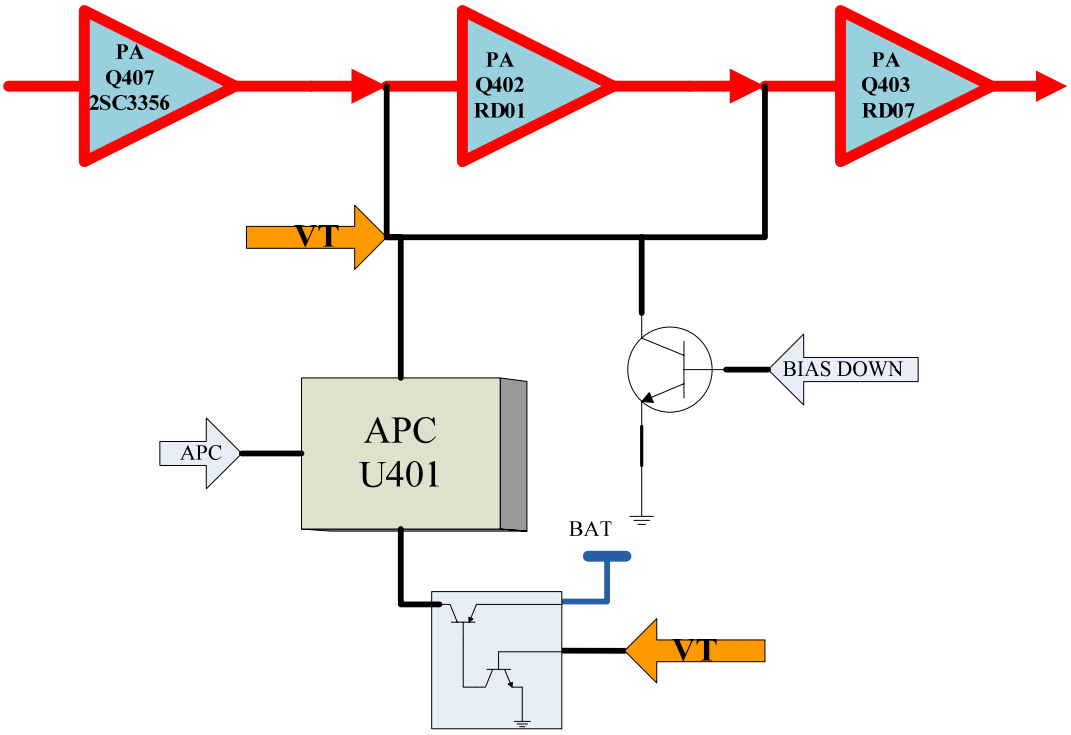


After entering RDA chip via MIC, the voice signal will undergo A/D conversion to get digital signal, which will be delivered to DSP for further processing such as filtering, amplification, amplitude-limiting and pre-emphasizing. Then the resulting voice signal is modulated to the internal VCO and output after being amplified by the driver amplifier. At the RX end, the received RF signal will go to LNA for amplification first, and then go to IF demodulation circuit to get demodulated voice signal. After gain control, such signal is converted into digital signal, which will enter DSP for further processing such as filtering, amplification and de-emphasizing.

The function of RDA is subject to MCU U622 and its reference clock signal is from 26MHZ crystal oscillator. This chip is applicable to UHF (400~520MHZ) and VHF (134~174MHZ). The NF can be up to 3dB and IIP3 up to -6dBm, meeting GB and FCC requirements. Its RF output may reach up to 8dBm.

RF Power Amplifier Circuit (TX Section)

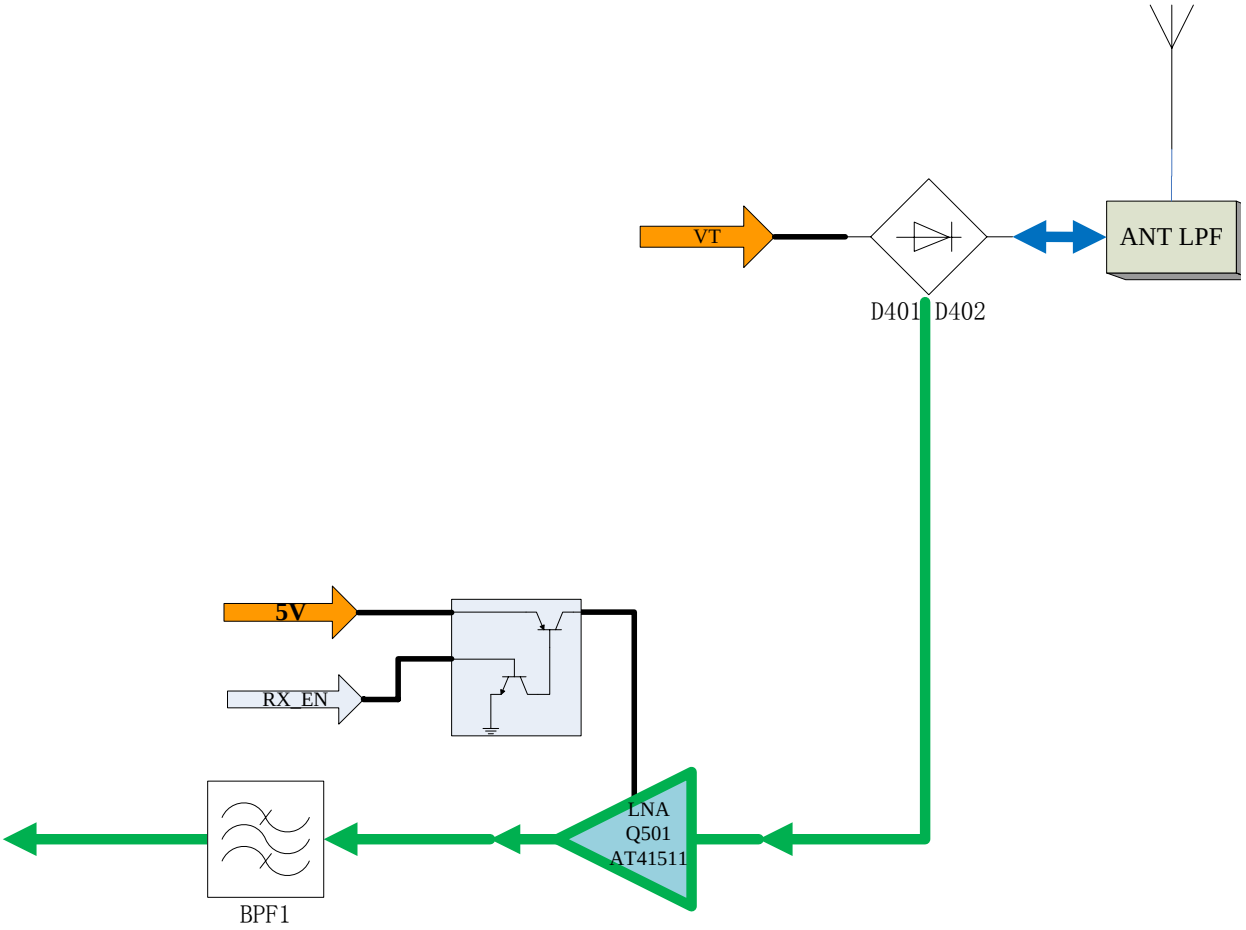
The block diagram of the RF power amplifier circuit is shown in the figure below:



The modulated RF signal from RDA chip goes to Q407 and Q402 for amplification, and then further amplified by Q403. Then the amplified signal is delivered to low-pass filter to filter out the high-order harmonics. Finally, it is sent via the antenna. The control signal “VT” is used to control the operation of driver amplifier (Q407 and Q402). U401 works for auto power control (APC).

Receiver Circuit (RX Section)

The Block Diagram of RX Circuit is shown as below:

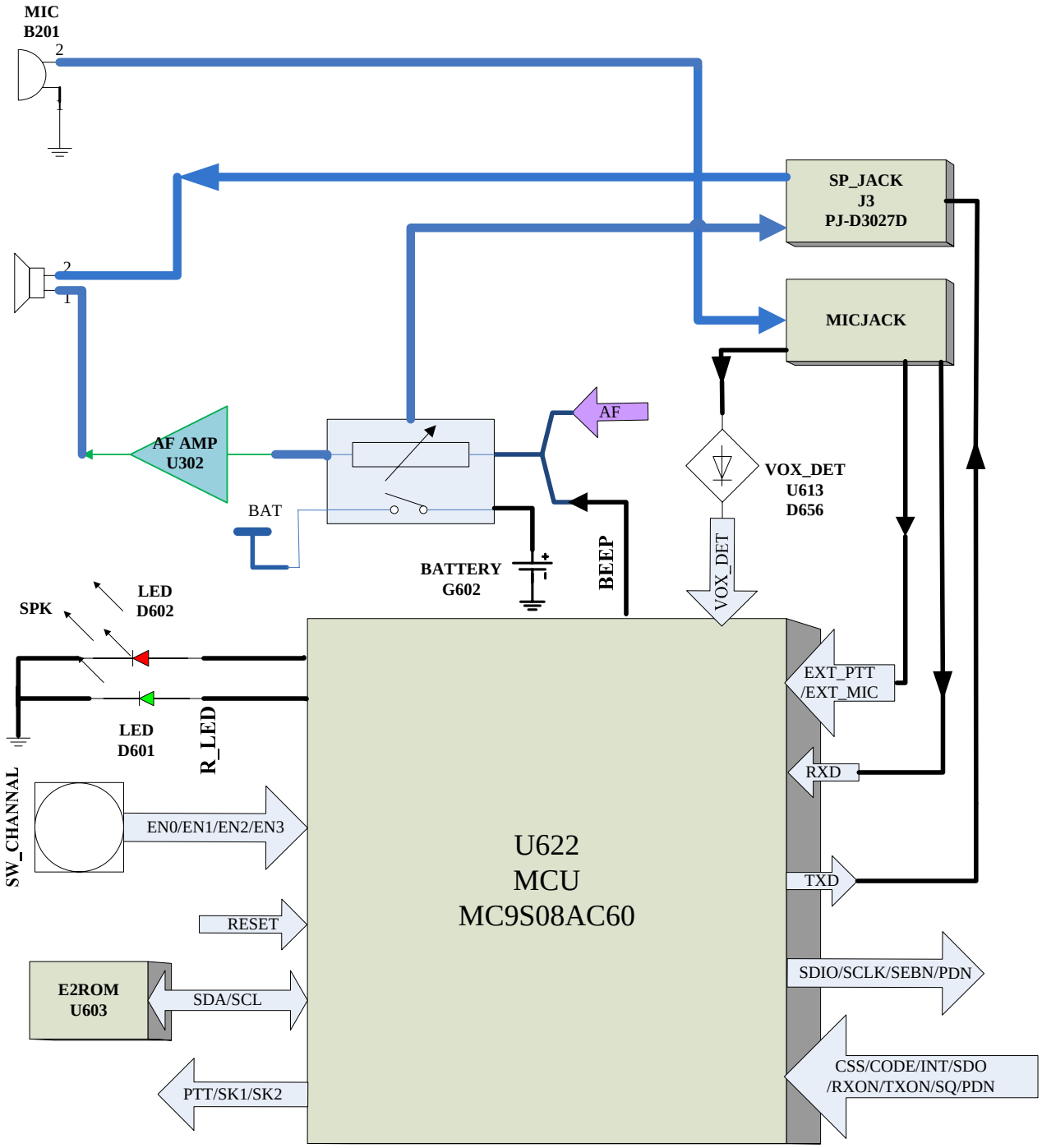


The RF signal is received via the antenna. After going through LPF and amplitude limiter, the signal is amplified by Q501 LNA. The LNA adopts 2SC3356 with current <5mA and its gain is about 12dB.

Next, the BPF will remove the interference signal in amplified RF signal. Then the resulting signal goes to RDA chip for further processing. The processed signal is delivered to U302 for amplification and finally output by the speaker.

MCU Control, Signal Processing and Audio Amplification

Circuit diagram of this section is shown as below:



MCU Control Circuit

MCU control circuit is composed of MCU, EEPROM, keys, etc. This section has the following functions: to initialize data of the radio and save data to EEPROM; to detect battery voltage and signals from external keys, LD and VOX, and to make response; to transmit required data to PLL based on the channel encoding status; to switch and control RX/TX based on the input PTT signal; to switch the squelch circuit on/off based on the input signaling decode signal and squelch level signal; to control circuits of high/low power switch, audio power amplifier, RDA chip power supply, RX power supply and

TX power supply; (for programming) to communicate with PC via RXD/TXD based on the RS232 protocol, and transmit/receive data to/from PC.

RDA Chip Control

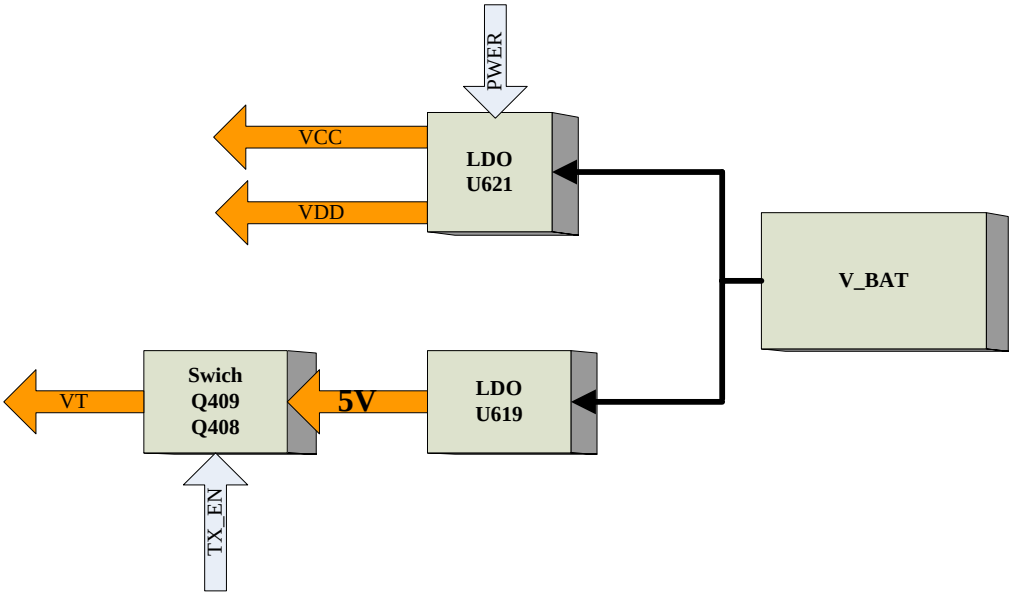
By controlling the RDA chip, the MCU can realize these services: frequency setting, frequency bandwidth, reference clock, sleep mode, SQ, VOX, squelch, frequency deviation, voice filtering, signaling encoding/decoding, pre-emphasizing, gain control, amplitude limiting, de-emphasizing, etc.

Audio Amplifier

The audio signal output from U622 is amplified by the audio power amplifier (U302) to drive the speaker directly.

Power Supply Section

Block diagram of power supply circuit is shown as below:



LDO U619 converts the 7.4V power supply into two 5V, which LDO U621 will convert into two 3.3v power supplies, powering VCC and VDD respectively. VCC powers CPU, while VDD powers RDA chip. Then Q406 converts the 5V power supply to VT to power the TX circuit.

6. CPU Pins

Pin No.	Port Name	Pin Name	Port I/O	Function
1	PTC4	Reserved	I	Reserved
2	IRQ/TPMCLK	Reserved	I	Reserved
3	RESET	RESET	I	Reset
4	PTF0/TPM1CH2	BEEP	O	Tone
5	PTF1/TPM1CH3	VRCR	O	PWM output for frequency adjustment
6	PTF2/TPM1CH4	APC	O	PWM output for PA APC
7	PTF3/TPM1CH5	CSS	I	Detection pin, CDCSS status output
8	PTF4/TPM2CH0	TXON	I	TX status detection pin
9	PTC6	PWER	O	Radio power control pin
10	PTF7	Reserved	I	Reserved
11	PTF5/TPM2CH1	RXON	I	RX status detection pin
12	PTF6	Reserved	I	Reserved
13	PTE0/TxD1	UART_TXD	O	Port
14	PTE1/RxD1	UART_RXD	I	Port
15	PTE2/TPM1CH0	INT	I	Detection pin, programmable
16	PTE3/TPM1CH1	CODE	I/O	Detection pin, modulated digital signal input/output
17	PTE4/SS1	SEBN	O	SPI port of communication
18	PTE5/MISO1	SDO	I	SPI port of communication
19	PTE6/MOSI1	SDIO	O	SPI port of communication
20	PTE7/SPSCK1	SCLK	O	SPI port of communication
21	VSS	VSS	/	Ground

Pin No.	Port Name	Pin Name	Port I/O	Function
22	VDD	VDD	/	Power Supply
23	PTG0/KBI1P0	SQ	I	Detection pin, SQ status check
24	PTG1/KBI1P1	TX_EN	O	TX power supply control
25	PTG2/KBI1P2	RX_EN	O	RX power supply control
26	PTA0	EN1	I	Rotary switch
27	PTA1	EN2	I	Rotary switch
28	PTA2	EN3	I	Rotary switch
29	PTA3	EN4	I	Rotary switch
30	PTA4	Reserved	O	Reserved
31	PTA5	Reserved	O	Reserved
32	PTA6	Reserved	O	Reserved
33	PTA7	PDN	O	Sleep control
34	PTB0/TPM3CH0/ AD1P0	Reserved	O	Reserved
35	PTB1/TPM3CH1/ AD1P1	Reserved	O	Reserved
36	PTB2/AD1P2	Reserved	O	Reserved
37	PTB3/AD1P3	VOX_DET	AD	VOX control
38	PTB4/AD1P4	EXT_MIC	I	External microphone
39	PTB5/AD1P5	EXT_PTT	I	External PTT
40	PTB6/AD1P6	APA_EN	O	Audio power amplifier switch
41	PTB7/AD1P7	R_LED	O	Red LED
42	PTD0/AD1P8	G_LED	O	Green LED
43	PTD1/AD1P9	Reserved	O	Reserved
44	VDDAD	VDD_AD	/	Power supply for digital circuit

Pin No.	Port Name	Pin Name	Port I/O	Function
45	VSSAD	VSS_AD	/	Ground (digital)
46	PTD2/KBI1P5/AD1P10	SDA	I/O	External EEPROM
47	PTD3/KBI1P6/AD1P11	SCL	O	External EEPROM
48	PTG3/KBI1P3	Reserved	O	Reserved
49	PTG4/KBI1P4	Reserved	O	Reserved
50	PTD4/TPM2CLK/AD1P12	BAT_DET	AD	Battery detection
51	PTD5/AD1P13	Reserved	O	Reserved
52	PTD6/TPM1CLK/AD1P14	Reserved	O	Reserved
53	PTD7/KBI1P7/AD1P15	Reserved	O	Reserved
54	VREFH	VREFH	/	AD reference voltage
55	VREFL	VREFL	/	AD reference grounding
56	BKGD/MS	BKGD	/	Tuning communication
57	PTG5/XTAL	XTAL	/	External crystal
58	PTG6/EXTAL	EXTAL	/	External crystal
59	VSS	VSS	/	Power supply grounding
60	PTC0/SCL1	Reserved	O	Reserved
61	PTC1/SDA1	BIAS_DOWN	O	Discharge control for TX PA
62	PTC2/MCLK	SK2	I	SK2
63	PTC3/TxD2	SK1	I	SK1
64	PTC5/RxD2	PTT	I	PTT

7. Parts List 1

7.1 UHF1

No.	Part No.	Description	Qty.	Ref No.	Print No.
1	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C102	T4G
2	3101051000020	Chip capacitor 10PF J 50V C0G 0402 (RoHS)	1	C103	T4G
3	3101051000020	Chip capacitor 10PF J 50V C0G 0402 (RoHS)	1	C104	T4G
4	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C105	T4G
5	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C106	T4G
6	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C107	T4G
7	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C108	T4G
8	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C109	T3G
9	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C110	T3G
10	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C111	T3G
11	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C112	T3G
12	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C113	T3G
13	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C114	T3G
14	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C115	T3G
15	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C116	T3G
16	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C117	T4H
17	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C118	T3H
18	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C119	T3H
19	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C120	T4G
20	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C121	T3H
21	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C122	T3H
22	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C123	T4G
23	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C124	T4G
24	3101061050000	Chip capacitor 1UF Z 25V Y5V 0603 (RoHS)	1	C125	T4G
25	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C126	T5G
26	3101071060010	Chip capacitor 10UF K 10V X5R 0805 (RoHS)	1	C127	T3G
27	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C128	T3H
28	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C129	T3H
29	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C130	T5I
30	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C131	T3G
31	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C132	T4G
32	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C133	T4G
33	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C134	T4G
34	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C137	T4F
35	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C138	T3F
36	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C140	B3F
37	3101061050000	Chip capacitor 1UF Z 25V Y5V 0603 (RoHS)	1	C141	B3F
38	3101074750010	Chip capacitor 4.7UF K 10V X5R 0805 (RoHS)	1	C201	B2F
39	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C202	B2F

No.	Part No.	Description	Qty.	Ref No.	Print No.
40	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C203	B2D
41	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C209	T2I
42	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C216	B2F
43	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C217	B2F
44	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C218	B2F
45	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C219	B2F
46	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C220	T2I
47	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C314	B1C
48	3101071050020	Chip capacitor 1UF K 16V X5R 0805 (RoHS)	1	C321	B1A
49	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C322	T2D
50	3104081060120	Tantalum capacitor 10UF M 16V -55~+125℃ S (RoHS)	1	C323	T2D
51	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C326	T1D
52	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C327	B2D
53	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C328	B2D
54	3101102260010	Chip capacitor 22uF Z 10V Y5V 1206 (RoHS)	1	C329	B1D
55	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C330	B2E
56	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C331	B2E
57	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C332	T2D
58	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C333	T2I
59	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C334	B1A
60	3101050600010	Chip capacitor 6PF B 50V COG 0402 (RoHS)	1	C404	T4F
61	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C406	T5F
62	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C407	B5F
63	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C408	T4F
64	3101051800010	Chip capacitor 18PF J 50V C0G 0402 (RoHS)	1	C409	T4F
65	3101051500020	Chip capacitor 15PF J 50V COG 0402 (RoHS)	1	C410	T4E
66	3101053340000	Chip capacitor 0.33UF K 6.3V X5R 0402 (RoHS)	1	C412	T4E
67	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C413	T4E
68	3101051500020	Chip capacitor 15PF J 50V COG 0402 (RoHS)	1	C414	T4E
69	3101051200020	Chip capacitor 12PF J 50V COG 0402 (RoHS)	1	C415	T4E
70	3101062710000	Chip capacitor 270PF J 50V C0G 0603 (RoHS)	1	C416	T5E
71	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C417	T5E
72	3101063900000	Chip capacitor 39PF J 50V C0G 0603 (RoHS)	1	C418	T5C
73	3101064790010	Chip capacitor 4.7PF B 50V COG 0603 (RoHS)	1	C419	T5C
74	3104081040020	Tantalum capacitor 0.1UF M 35V S (RoHS)	1	C420	B4F
75	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C422	B4F
76	3101060600010	Chip capacitor 6PF B 50V C0G 0603 (RoHS)	1	C423	T5C
77	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C424	T5E
78	3101061010010	Chip capacitor 100PF J 50V C0G 0603 (RoHS)	1	C425	T4C
79	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C426	B4B
80	3101061010010	Chip capacitor 100PF J 50V C0G 0603 (RoHS)	1	C427	T3C
81	3101060300010	Chip capacitor 3PF B 50V C0G 0603 (RoHS)	1	C428	T3B
82	3101060100010	Chip capacitor 1PF B 50V C0G 0603 (RoHS)	1	C429	T4B
83	3101063690000	Chip capacitor 3.6PF B 50V COG 0603 (RoHS)	1	C430	T3B

No.	Part No.	Description	Qty.	Ref No.	Print No.
84	3101061590010	Chip capacitor 1.5PF B 50V COG 0603 (RoHS)	1	C431	T4B
85	3101063690000	Chip capacitor 3.6PF B 50V COG 0603 (RoHS)	1	C432	T4B
86	3101060100010	Chip capacitor 1PF B 50V C0G 0603 (RoHS)	1	C433	T4B
87	3101063690000	Chip capacitor 3.6PF B 50V COG 0603 (RoHS)	1	C434	T4B
88	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C436	T4D
89	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C437	B4C
90	3101060700020	Chip capacitor 7PF B 50V COG 0603 (RoHS)	1	C438	T5C
91	3101051000020	Chip capacitor 10PF J 50V C0G 0402 (RoHS)	1	C439	T4E
92	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C440	B4D
93	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C441	B3E
94	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C442	B3E
95	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C443	B3F
96	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C444	B3E
97	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C445	B4E
98	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C446	B4F
99	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C447	B4E
100	3101061590010	Chip capacitor 1.5PF B 50V COG 0603 (RoHS)	1	C448	T5C
101	3101060600010	Chip capacitor 6PF B 50V C0G 0603 (RoHS)	1	C449	T4C
102	3101061800000	Chip capacitor 18PF J 50V COG 0603 (RoHS)	1	C451	T4C
103	3104081060120	Tantalum capacitor 10UF M 16V -55~+125℃ S (RoHS)	1	C452	B4C
104	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C453	B4C
105	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C454	T4F
106	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C455	T3E
107	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C456	T3E
108	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C457	B4C
109	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C458	T3F
110	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C463	B4E
111	3101050300000	Chip capacitor 3PF B 50V COG 0402 (RoHS)	1	C501	T4C
112	3101050200010	Chip capacitor 2PF B 50V C0G 0402 (RoHS)	1	C502	T4C
113	3101056800000	Chip capacitor 68PF J 50V COG 0402 (RoHS)	1	C513	T3D
114	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C514	T3E
115	3101050200010	Chip capacitor 2PF B 50V C0G 0402 (RoHS)	1	C515	T3E
116	3101050500010	Chip capacitor 5PF B 50V COG 0402 (RoHS)	1	C517	T3E
117	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C519	T3D
118	3101050500010	Chip capacitor 5PF B 50V COG 0402 (RoHS)	1	C520	T3F
119	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C521	T3E
120	3101054790040	Chip capacitor 4.7PF B 50V COG HQ 0402 (RoHS)	1	C522	T3E
121	3101054790040	Chip capacitor 4.7PF B 50V COG HQ 0402 (RoHS)	1	C523	T3E
122	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C524	T3E
123	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C525	T3E
124	3101052790060	Chip capacitor 2.7PF B 50V COG HQ 0402 (RoHS)	1	C526	T3E
125	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C527	T3E
126	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C528	T3E
127	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C563	T3E

No.	Part No.	Description	Qty.	Ref No.	Print No.
128	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C605	T3J
129	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C606	T2G
130	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C609	T1H
131	3104081060120	Tantalum capacitor 10UF M 16V -55~+125℃ S (RoHS)	1	C611	T2G
132	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C612	T1H
133	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C613	T1H
134	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C615	T2F
135	3104081060120	Tantalum capacitor 10UF M 16V -55~+125℃ S (RoHS)	1	C616	T2B
136	4010000000010	Fuse 6V 0.5A 1206 (RoHS)	1	C617	B1D
137	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C621	T2G
138	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C622	T2J
139	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C623	T3H
140	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C624	T3H
141	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C625	T3H
142	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C626	T3H
143	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C627	T4I
144	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C628	T2J
145	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C629	T2J
146	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C630	T4J
147	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C631	T2G
148	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C632	B5F
149	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C633	B5E
150	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C634	B3J
151	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C635	B4J
152	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C636	T4I
153	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C637	T4J
154	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C638	T3J
155	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C639	T3J
156	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C640	T2F
157	3101074750010	Chip capacitor 4.7UF K 10V X5R 0805 (RoHS)	1	C641	T4H
158	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C642	T4H
159	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C643	T2F
160	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C644	B5E
161	3101052230000	Chip capacitor 0.022UF K 16V X7R 0402 (RoHS)	1	C645	B4J
162	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C646	B4A
163	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C647	B4A
164	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C648	B2A
165	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C649	T2G
166	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C650	T4J
167	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C651	T3J
168	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C652	B2A
169	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C653	T3H
170	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C654	T3H
171	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C655	T4I

No.	Part No.	Description	Qty.	Ref No.	Print No.
172	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C656	T2G
173	3101054720000	Chip capacitor 4700PF K 50V X7R 0402 (RoHS)	1	C657	T4J
174	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C658	T3H
175	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C659	T4H
176	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C660	T4I
177	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C661	T4I
178	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C662	T4H
179	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C663	T4I
180	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C664	T2G
181	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C665	T4I
182	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C666	T4I
183	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C667	T4I
184	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C668	T2F
185	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C669	T1F
186	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C670	T2F
187	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C671	T2F
188	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C672	T2E
189	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C673	B4A
190	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C674	B4A
191	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C675	T1F
192	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C676	T1F
193	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C677	T4I
194	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C678	B3J
195	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C679	T3C
196	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C680	T2I
197	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C681	T1G
198	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C682	T2I
199	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C683	T4I
200	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C684	T2H
201	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C685	T4J
202	3101056800000	Chip capacitor 68PF J 50V COG 0402 (RoHS)	1	C688	T2B
203	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C689	T4I
204	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C690	B1D
205	3399040600020	ESD protection diode VRWM:12V IPP:5A/10us (RoHS)	1	D303	B1A
206	3305180300000	Diode 100mA max 1Ω 125℃ (RoHS)	1	D401	T4C
207	3305180300000	Diode 100mA max 1Ω 125℃ (RoHS)	1	D402	T4C
208	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D403	T5E
209	3303990000060	Switching diode 35V 100mA 1V SOD-523 (RoHS)	1	D502	T4C
210	3303990000060	Switching diode 35V 100mA 1V SOD-523 (RoHS)	1	D503	T4C
211	3399990000260	Rectifier diode 10V 15mA 380mV/1mA (RoHS)	1	D505	T3D
212	3307110100130	LED green 40mcd 30mA 2.1V 0603 (RoHS)	1	D601	B4A
213	3307110100060	LED red 200mcd 30mA 1.9V 1.6X0.8mm (RoHS)	1	D602	B4A
214	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D613	B2A
215	3302030500020	Zener diode 18V 150℃ SOD-323 (RoHS)	1	D655	T2C

No.	Part No.	Description	Qty.	Ref No.	Print No.
216	3303030300000	Schottky diode 40V 30mA 0.26V/1mA (RoHS)	1	D656	T1F
217	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D657	B1A
218	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D658	B2D
219	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D659	T3F
220	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D660	B4G
221	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D661	B3F
222	5205000001530	Battery connector black PA9T (RoHS) (REACH)	1	G1	T3C
223	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L102	T4F
224	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L107	T4G
225	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L108	T3G
226	3213306102000	Multi-layer chip inductor 1uH K 25mA 0.6Ω (RoHS)	1	L110	T4G
227	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L111	T3G
228	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L112	T4H
229	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L402	T4E
230	3213212102000	Wire-wound chip inductor 1uH J 245mA 1.1Ω (RoHS)	1	L406	T4E
231	3221507221000	Ferrite bead 220Ω 100MHz ±25% 2000mA (RoHS)	1	L407	B4E
232	3210306229000	Multi-layer chip inductor 2.2nH S 500mA 0.10ohm (RoHS)	1	L408	T4E
233	3231351680000	Air-core inductor E2-0.35*1.6*8TR (RoHS)	1	L409	T4D
234	3221507221000	Ferrite bead 220Ω 100MHz ±25% 2000mA (RoHS)	1	L410	B4C
235	3210107221000	Wire-wound chip inductor 220nH J 240mA (RoHS)	1	L411	B4B
236	3231351640000	Air-core inductor E2-0.35*1.6*4TL (RoHS)	1	L412	T3B
237	3231351640000	Air-core inductor E2-0.35*1.6*4TL (RoHS)	1	L413	T4B
238	3231351640000	Air-core inductor E2-0.35*1.6*4TL (RoHS)	1	L414	T4B
239	3210209102010	Wire-wound chip inductor 1uH M 445mA 0.5ohm (RoHS)	1	L415	B4A
240	3210306229000	Multi-layer chip inductor 2.2nH S 500mA 0.10ohm (RoHS)	1	L417	T4E
241	3210305150010	Multi-layer chip inductor 15nH J 300mA 0.32ohm (RoHS)	1	L418	T4F
242	3231301030000	Air-core inductor E2 0.3*1.0*3TL (RoHS)	1	L419	T4C
243	3210305120000	Multi-layer chip inductor 12nH J 300mA 0.28ohm (RoHS)	1	L420	T4E
244	3231351640000	Air-core inductor E2-0.35*1.6*4TL (RoHS)	1	L501	T4C
245	3210306101000	Multi-layer chip inductor 100nH J 300mA (RoHS)	1	L506	T3E
246	3210306470000	Multi-layer chip inductor 47nH J 300mA 0.70ohm (RoHS)	1	L508	T3E
247	3212106120000	Multi-layer chip inductor 12nH J 300mA 0.28ohm (RoHS)	1	L509	T3E
248	3212106120000	Multi-layer chip inductor 12nH J 300mA 0.28ohm (RoHS)	1	L510	T3F
249	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L527	T3E
250	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L603	T2I
251	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L604	T3H
252	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA (RoHS)	1	L606	B4J
253	3221507221000	Ferrite bead 220Ω 100MHz ±25% 2000mA (RoHS)	1	L608	T1G
254	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L609	T2H
255	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L610	T2H
256	3503010000010	P-MOSFET VDS:-30V ID:-100mA VGS(th):-1.9V (RoHS)	1	Q103	B3F
257	3503020000030	N-MOSFET VDS:30V ID:100mA VGS(th):3.0V (RoHS)	1	Q104	B3G
258	3411001000000	PNP transistor 50V 150mA 70~700 (RoHS)	1	Q201	B2F
259	3503020000030	N-MOSFET VDS:30V ID:100mA VGS(th):3.0V (RoHS)	1	Q202	B2F

No.	Part No.	Description	Qty.	Ref No.	Print No.
260	3403008000010	Transistor Vce:50V Vloff:0.5V Vlon:3V 100mA (RoHS)	1	Q302	B2E
261	3499000000180	PNP transistor 12V 2.5A 180~270 (RoHS)	1	Q303	B2D
262	3504990000010	MOSFET ID:600mA VGS(th):1.8V 1.4W (RoHS)	1	Q402	T4E
263	3504990000040	PA MOSFET 10uA 25V 10uA 7.2V 7W (RoHS)	1	Q403	T5D
264	3403999000000	Transistor -50V/50V -100mA/100mA 80/80 (RoHS)	1	Q404	B4F
265	3403008000010	Transistor Vce:50V Vloff:0.5V Vlon:3V 100mA (RoHS)	1	Q406	B5F
266	3408002000000	NPN transistor 12V 100mA 120 1GHz (RoHS)	1	Q407	T4F
267	3403008000010	Transistor Vce:50V Vloff:0.5V Vlon:3V 100mA (RoHS)	1	Q408	T3F
268	3503010000010	P-MOSFET VDS:-30V ID:-100mA VGS(th):-1.9V (RoHS)	1	Q409	T4F
269	3408002000000	NPN transistor 12V 100mA 120 1GHz (RoHS)	1	Q501	T3E
270	3403999000000	Transistor -50V/50V -100mA/100mA 80/80 (RoHS)	1	Q502	T3E
271	3403009000010	Transistor NPN*2 50V -100mA 250 (RoHS)	1	Q605	B4A
272	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R101	T4G
273	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R125	T5I
274	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R126	T4G
275	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R127	T4G
276	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R129	T4G
277	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R130	T4G
278	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R131	T4G
279	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R132	T4G
280	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R133	T4H
281	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R134	T3H
282	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R135	T3H
283	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R136	T3H
284	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R137	T3H
285	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R138	T3H
286	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R139	T3H
287	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R141	T3G
288	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R142	T4G
289	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R144	T5I
290	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R145	T4F
291	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R146	B3F
292	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R147	B3G
293	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R148	B3F
294	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R149	B3F
295	3001052210000	Chip resistor 220Ω J 1/16W 0402 (RoHS)	1	R201	B2F
296	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R202	B2F
297	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R213	T2I
298	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R214	B2F
299	3001052230010	Chip resistor 22KΩ J 1/16W 0402 (RoHS)	1	R215	B2F
300	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R216	B2F
301	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R217	B2F
302	3001051050000	Chip resistor 1MΩ F 1/16W 0402 (RoHS)	1	R218	B2F
303	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R219	B2F

No.	Part No.	Description	Qty.	Ref No.	Print No.
304	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R220	B2F
305	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R221	T2I
306	3001051220000	Chip resistor 1.2KΩ J 1/16W 0402 (RoHS)	1	R310	T2D
307	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R311	T2D
308	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R312	B2E
309	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R313	B2E
310	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R315	B2A
311	3001054790000	Chip resistor 4.7Ω J 1/16W 0402 (RoHS)	1	R318	T1D
312	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R323	B2E
313	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R405	B4E
314	3001056810000	Chip resistor 680Ω J 1/16W 0402 (RoHS)	1	R406	T4F
315	3001055110000	Chip resistor 510Ω J 1/16W 0402 (RoHS)	1	R407	B4E
316	3001052200000	Chip resistor 22Ω J 1/16W 0402 (RoHS)	1	R408	T5F
317	3001053310000	Chip resistor 330Ω F 1/16 0402 (RoHS)	1	R409	T4F
318	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R410	T4E
319	3001057520000	Chip resistor 7.5KΩ J 1/16W 0402 (RoHS)	1	R411	T4E
320	3001051820000	Chip resistor 1.8KΩ J 1/16W 0402 (RoHS)	1	R412	T4E
321	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R413	T3F
322	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R414	T4E
323	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R415	T5E
324	3001051220000	Chip resistor 1.2KΩ J 1/16W 0402 (RoHS)	1	R416	T5E
325	3001051820000	Chip resistor 1.8KΩ J 1/16W 0402 (RoHS)	1	R417	T5E
326	3001062710000	Chip resistor 270Ω J 1/10W 0603 (RoHS)	1	R418	B4B
327	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R419	B4C
328	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R420	B4C
329	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R421	B4C
330	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R422	B3E
331	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R423	B3E
332	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R424	B3F
333	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R425	B3F
334	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R426	B3E
335	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R427	B3F
336	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R428	B4F
337	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R438	B4E
338	3001053330010	Chip resistor 33KΩ J 1/16W 0402 (RoHS)	1	R439	B4E
339	3001051520000	Chip resistor 1.5KΩ J 1/16W 0402 (RoHS)	1	R440	T4F
340	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R441	B4E
341	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R442	B5E
342	3001062710000	Chip resistor 270Ω J 1/10W 0603 (RoHS)	1	R444	B4B
343	3210305229010	Multi-layer chip inductor 2.2nH S 300mA (RoHS)	1	R511	T3D
344	3001051330000	Chip resistor 13KΩ F 1/16W 0402 (RoHS)	1	R512	T3E
345	3001052720010	Chip resistor 2.7KΩ F 1/16W 0402 (RoHS)	1	R514	T3E
346	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R515	T3E
347	3001055100020	Chip resistor 51Ω F 1/16W 0402 (RoHS)	1	R519	T3E

No.	Part No.	Description	Qty.	Ref No.	Print No.
348	3210305220000	Multi-layer chip inductor 0402 22nH (RoHS)	1	R520	T3E
349	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R523	T3F
350	3001052240000	Chip resistor 220KΩ J 1/16W 0402 (RoHS)	1	R602	T3J
351	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R603	T3J
352	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R604	T3J
353	3001056810000	Chip resistor 680Ω J 1/16W 0402 (RoHS)	1	R605	B4A
354	3001051530000	Chip resistor 15KΩ J 1/16W 0402 (RoHS)	1	R606	T4J
355	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R614	B1C
356	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R615	B2D
357	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R616	T2J
358	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R617	T2J
359	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R618	T2J
360	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R619	T2J
361	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R621	T2B
362	3001052720010	Chip resistor 2.7KΩ F 1/16W 0402 (RoHS)	1	R624	B1D
363	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R625	B4A
364	3001051530000	Chip resistor 15KΩ J 1/16W 0402 (RoHS)	1	R627	T2F
365	3001051050000	Chip resistor 1MΩ F 1/16W 0402 (RoHS)	1	R628	T1F
366	3001051060000	Chip resistor 10M J 1/16W 0402 (RoHS)	1	R629	T3J
367	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R631	T2E
368	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R632	T2E
369	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R633	T2F
370	3001052240000	Chip resistor 220KΩ J 1/16W 0402 (RoHS)	1	R634	T1F
371	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R635	T3J
372	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R636	T2E
373	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R637	T2F
374	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R638	T2F
375	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R639	T1F
376	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R644	T4I
377	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R645	T4I
378	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R683	T4I
379	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R684	T4I
380	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R685	T4J
381	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R686	T4J
382	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R687	T1G
383	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R688	B3J
384	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R689	B4J
385	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R690	T3H
386	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R691	T3H
387	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R692	T3H
388	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R693	T2H
389	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R694	T4J
390	3613999000020	Baseband IC 3.3V -25~85 5dBm -124dBm (RoHS)	1	U101	T3G
391	3605017005540	Operational amplifier 1.8~15V 220mW 39dB (RoHS)	1	U302	T2D

No.	Part No.	Description	Qty.	Ref No.	Print No.
392	3605008005070	Operational amplifier 3~32V 300mW 100dB (RoHS)	1	U401	B4E
393	3612031000510	Memory EEPROM 16KB 1.7~5.5V (RoHS)	1	U603	T2J
394	3605008005070	Operational amplifier 3~32V 300mW 100dB (RoHS)	1	U613	T2F
395	3608015000060	Power management IC LDO 5V 300mA (RoHS)	1	U619	T1F
396	3608015000210	Power management IC LDO 12V 3.3V 300mA (RoHS)	1	U621	T1G
397	3609042000020	MCU 8 2.8~5V 20MHZ LQFP 64 (RoHS)	1	U622	T3I
398	3701327610060	Crystal 32.768KHz ±20ppm 12.5pF (RoHS)	1	X601	T4J
399	3701002660130	TXCO 26MHz 3.135V~3.465V ±2.5ppm 3225 (RoHS)	1	XT101	T5G
400		Main PCB IT158 4L 4P 101*45*1.2 H (RoHS)	1		

7.2 VHF

No.	Part No.	Description	Qty.	Ref No.	Print No.
1	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C102	T4G
2	3101051000020	Chip capacitor 10PF J 50V C0G 0402 (RoHS)	1	C103	T4G
3	3101051000020	Chip capacitor 10PF J 50V C0G 0402 (RoHS)	1	C104	T4G
4	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C105	T4G
5	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C106	T4G
6	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C107	T4G
7	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C108	T4G
8	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C109	T3G
9	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C110	T3G
10	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C111	T3G
11	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C112	T3G
12	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C113	T3G
13	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C114	T3G
14	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C115	T3G
15	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C116	T3G
16	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C117	T4H
17	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C118	T3H
18	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C119	T3H
19	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C120	T4G
20	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C121	T3H
21	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C122	T3H
22	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C123	T4G
23	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C124	T4G
24	3101061050000	Chip capacitor 1UF Z 25V Y5V 0603 (RoHS)	1	C125	T4G
25	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C126	T5G
26	3101071060010	Chip capacitor 10UF K 10V X5R 0805 (RoHS)	1	C127	T3G
27	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C128	T3H
28	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C129	T3H
29	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C130	T5I
30	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C131	T3G
31	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C132	T4G
32	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C133	T4G
33	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C134	T4G
34	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C137	T4F
35	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C138	T3F
36	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C140	B3F
37	3101061050000	Chip capacitor 1UF Z 25V Y5V 0603 (RoHS)	1	C141	B3F
38	3101074750010	Chip capacitor 4.7UF K 10V X5R 0805 (RoHS)	1	C201	B2F
39	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C202	B2F
40	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C203	B2D
41	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C209	T2I
42	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C216	B2F

No.	Part No.	Description	Qty.	Ref No.	Print No.
43	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C217	B2F
44	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C218	B2F
45	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C219	B2F
46	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C220	T2I
47	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C314	B1C
48	3101071050020	Chip capacitor 1UF K 16V X5R 0805 (RoHS)	1	C321	B1A
49	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C322	T2D
50	3104081060120	Tantalum capacitor 10UF M 16V S (RoHS)	1	C323	T2D
51	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C326	T1D
52	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C327	B2D
53	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C328	B2D
54	3101102260010	Chip capacitor 22uF Z 10V Y5V 1206 (RoHS)	1	C329	B1D
55	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C330	B2E
56	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C331	B2E
57	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C332	T2D
58	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C333	T2I
59	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C334	B1A
60	3101052210010	Chip capacitor 220PF K 50V X7R 0402 (RoHS)	1	C404	T4F
61	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C406	T5F
62	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C407	B5F
63	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C408	T4F
64	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C409	T4F
65	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C412	T5E
66	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C413	T4E
67	3101051200020	Chip capacitor 12PF J 50V COG 0402 (RoHS)	1	C414	T4E
68	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	C416	T5E
69	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C417	T5E
70	3101061800000	Chip capacitor 18PF J 50V COG 0603 (RoHS)	1	C419	T5C
71	3104081040020	Tantalum capacitor 0.1UF M 35V S (RoHS)	1	C420	B4F
72	3101062400010	Chip capacitor 24PF J 50V C0G 0603 (RoHS)	1	C421	T5C
73	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C422	B4F
74	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C424	T5E
75	3101061020000	Chip capacitor 1000PF K 50V X7R 0603 (RoHS)	1	C425	T4C
76	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C426	B4B
77	3101061020000	Chip capacitor 1000PF K 50V X7R 0603 (RoHS)	1	C427	T3C
78	3101061200000	Chip capacitor 12PF J 50V C0G 0603 (RoHS)	1	C428	T3B
79	3101060600010	Chip capacitor 6PF B 50V C0G 0603 (RoHS)	1	C429	T4B
80	3101062400010	Chip capacitor 24PF J 50V C0G 0603 (RoHS)	1	C430	T4B
81	3101060600010	Chip capacitor 6PF B 50V C0G 0603 (RoHS)	1	C431	T4B
82	3101062000000	Chip capacitor 20PF J 50V C0G 0603 (RoHS)	1	C432	T4B
83	3101060600010	Chip capacitor 6PF B 50V C0G 0603 (RoHS)	1	C433	T4B
84	3101061000000	Chip capacitor 10PF J 50V C0G 0603 (RoHS)	1	C434	T4B
85	3101065600000	Chip capacitor 56PF J 50V COG 0603 (RoHS)	1	C435	T5C
86	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C436	T4D

No.	Part No.	Description	Qty.	Ref No.	Print No.
87	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C437	B4C
88	3101063300000	Chip capacitor 33PF J 50V COG 0603 (RoHS)	1	C438	T5D
89	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C440	B4D
90	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C441	B3E
91	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C442	B3E
92	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C443	B3F
93	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C444	B3E
94	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C445	B4E
95	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C446	B4F
96	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C447	B4E
97	3101061500010	Chip capacitor 15PF J 50V C0G 0603 (RoHS)	1	C449	T5C
98	3101061010010	Chip capacitor 100PF J 50V C0G 0603 (RoHS)	1	C450	T4E
99	3101063000010	Chip capacitor 30PF J 50V C0G 0603 (RoHS)	1	C451	T5C
100	3104081060120	Tantalum capacitor 10UF M 16V S (RoHS)	1	C452	B4C
101	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C453	B4C
102	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C454	T4F
103	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C455	T3E
104	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C456	T3E
105	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C457	B4C
106	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C458	T3F
107	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C463	B4E
108	3101050300000	Chip capacitor 3PF B 50V COG 0402 (RoHS)	1	C501	T4C
109	3101050200010	Chip capacitor 2PF B 50V C0G 0402 (RoHS)	1	C502	T4C
110	3101056800000	Chip capacitor 68PF J 50V COG 0402 (RoHS)	1	C513	T3D
111	3101053310030	Chip capacitor 330PF COG J 50V C0G 0402 (RoHS)	1	C514	T3E
112	3101050600010	Chip capacitor 6PF B 50V COG 0402 (RoHS)	1	C515	T3E
113	3101054700010	Chip capacitor 47PF J 50V COG 0402 (RoHS)	1	C517	T3E
114	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C519	T3D
115	3101054700010	Chip capacitor 47PF J 50V COG 0402 (RoHS)	1	C520	T3F
116	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C521	T3E
117	3101052400010	Chip capacitor 24PF J 50V J C0G 0402 (RoHS)	1	C522	T3E
118	3101052400010	Chip capacitor 24PF J 50V J C0G 0402 (RoHS)	1	C523	T3E
119	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C524	T3E
120	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C525	T3E
121	3101052000020	Chip capacitor 20PF J 50V C0G 0402 (RoHS)	1	C526	T3E
122	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C527	T3E
123	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C528	T3E
124	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C563	T3E
125	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C605	T3J
126	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C606	T2G
127	3101071060010	Chip capacitor 10UF K 10V X5R 0805 (RoHS)	1	C609	T1H
128	3104082260070	Tantalum capacitor 22uF M 16V A (RoHS)	1	C611	T2G
129	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C612	T1H
130	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C613	T1H

No.	Part No.	Description	Qty.	Ref No.	Print No.
131	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C615	T2F
132	3104082260070	Tantalum capacitor 22uF M 16V A (RoHS)	1	C616	T2B
133	4010000000010	Fuse 6V 0.5A 1206 (RoHS)	1	C617	B1D
134	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C621	T2G
135	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C622	T2J
136	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C623	T3H
137	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C624	T3H
138	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C625	T3H
139	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C626	T3H
140	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C627	T4I
141	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C628	T2J
142	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C629	T2J
143	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C630	T4J
144	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C631	T2G
145	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C632	B5F
146	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C633	B5E
147	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C634	B3J
148	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C635	B4J
149	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C636	T4I
150	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C637	T4J
151	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C638	T3J
152	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C639	T3J
153	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C640	T2F
154	3101074750010	Chip capacitor 4.7UF K 10V X5R 0805 (RoHS)	1	C641	T4H
155	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C642	T4H
156	3101071060010	Chip capacitor 10UF K 10V X5R 0805 (RoHS)	1	C643	T2F
157	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C644	B5E
158	3101052230000	Chip capacitor 0.022UF K 16V X7R 0402 (RoHS)	1	C645	B4J
159	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C646	B4A
160	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C647	B4A
161	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C648	B2A
162	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C649	T2G
163	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C650	T4J
164	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C651	T3J
165	3101064710000	Chip capacitor 470PF K 50V X7R 0603 (RoHS)	1	C652	B2A
166	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C653	T3H
167	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C654	T3H
168	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C655	T4I
169	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C656	T2G
170	3101054720000	Chip capacitor 4700PF K 50V X7R 0402 (RoHS)	1	C657	T4J
171	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C658	T3H
172	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C659	T4H
173	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C660	T4I
174	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C661	T4I

No.	Part No.	Description	Qty.	Ref No.	Print No.
175	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C662	T4H
176	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C663	T4I
177	3101051030020	Chip capacitor 0.01UF K 25V X7R 0402 (RoHS)	1	C664	T2G
178	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C665	T4I
179	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C666	T4I
180	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C667	T4I
181	3101062250000	Chip capacitor 2.2UF K 10V X5R 0603 (RoHS)	1	C668	T2F
182	3101052200010	Chip capacitor 22PF J 50V C0G 0402 (RoHS)	1	C669	T1F
183	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C670	T2F
184	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C671	T2F
185	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C672	T2E
186	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C673	B4A
187	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C674	B4A
188	3101051050000	Chip capacitor 1UF K 6.3V X5R 0402 (RoHS)	1	C675	T1F
189	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C676	T1F
190	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C677	T4I
191	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C678	B3J
192	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C679	T3C
193	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C680	T2I
194	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C681	T1G
195	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C682	T2I
196	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C683	T4I
197	3101054710010	Chip capacitor 470PF K 50V X7R 0402 (RoHS)	1	C684	T2H
198	3101051040060	Chip capacitor 0.1UF K 16V X7R 0402 (RoHS)	1	C685	T4J
199	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C686	B4A
200	3101051020010	Chip capacitor 1000PF K 50V X7R 0402 (RoHS)	1	C687	B4A
201	3101056800000	Chip capacitor 68PF J 50V COG 0402 (RoHS)	1	C688	T2B
202	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C689	T4I
203	3101051010030	Chip capacitor 100PF J 50V C0G 0402 (RoHS)	1	C690	B1D
204	3399040600020	ESD protection diode VRWM:12V IPP:5A/10us (RoHS)	1	D303	B1A
205	3305180300000	Diode 100mA max 1Ω (RoHS)	1	D401	T4C
206	3305180300000	Diode 100mA max 1Ω (RoHS)	1	D402	T4C
207	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D403	T5E
208	3303990000060	Switching diode 35V 100mA 1V (RoHS)	1	D502	T4C
209	3303990000060	Switching diode 35V 100mA 1V (RoHS)	1	D503	T4C
210	3399990000260	Rectifier diode 10V 15mA 380mV/1mA (RoHS)	1	D505	T3D
211	3307110100130	LED green 40mcd 30mA 2.1V 0603 (RoHS)	1	D601	B4A
212	3307110100060	LED red 200mcd 30mA 1.9V 1.6X0.8mm (RoHS)	1	D602	B4A
213	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D613	B2A
214	3302030500020	Zener diode 18V (RoHS)	1	D655	T2C
215	3303030300000	Schottky diode 40V 30mA 0.26V/1mA (RoHS)	1	D656	T1F
216	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D657	B1A
217	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D658	B2D
218	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D659	T3F

No.	Part No.	Description	Qty.	Ref No.	Print No.
219	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D660	B4G
220	3310990000160	ESD protection diode 10 5A/ 8/20uS -40~+85 (RoHS)	1	D661	B3F
221	5205000001530	Battery connector PA9T 4 10.8*9.6*8 (RoHS)	1	G1	T3C
222	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L102	T4F
223	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L107	T4G
224	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L108	T3G
225	3213306102000	Multi-layer chip inductor 1uH K 25mA 0.6Ω (RoHS)	1	L110	T4G
226	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L111	T3G
227	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L112	T4H
228	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L402	T4E
229	3213212102000	Wire-wound chip inductor 1uH J 245mA 1.1Ω (RoHS)	1	L406	T4E
230	3221507600000	Ferrite bead 60Ω 100MHz ±25% 3000mA 0805 (RoHS)	1	L407	B4E
231	3210306560000	Multi-layer chip inductor 0603 56nH (RoHS)	1	L408	T4E
232	3231351680000	Air-core inductor E2-0.35*1.6*8TR (RoHS)	1	L409	T4D
233	3221507600000	Ferrite bead 60Ω 100MHz ±25% 3000mA (RoHS)	1	L410	B4C
234	3210107221000	Wire-wound chip inductor 220nH J 240mA (RoHS)	1	L411	B4B
235	3231351660000	Air-core inductor E2-0.35*1.6*6TR (RoHS)	1	L412	T3B
236	3231351670000	Air-core inductor E2-0.35*1.6*7TR (RoHS)	1	L413	T4B
237	3231351660000	Air-core inductor E2-0.35*1.6*6TR (RoHS)	1	L414	T5B
238	3210209102010	Wire-wound chip inductor 1uH M 445mA 0.5ohm (RoHS)	1	L415	B4A
239	3210305101000	Multi-layer chip inductor 0402 100nH (RoHS)	1	L418	T4F
240	3210305150010	Multi-layer chip inductor 15nH J 300mA (RoHS)	1	L420	T4E
241	3231351630000	Air-core inductor E2-0.35*1.6*3TR (RoHS)	1	L421	T5C
242	3231351640000	Air-core inductor E2-0.35*1.6*4TL (RoHS)	1	L422	T4C
243	3231351650000	Air-core inductor E2-0.35*1.6*5TL (RoHS)	1	L423	T4C
244	3231351680000	Air-core inductor E2-0.35*1.6*8TR (RoHS)	1	L501	T4C
245	3210306561010	Multi-layer chip inductor 560nH K 35mA 1.55ohm (RoHS)	1	L506	T3E
246	3210306470000	Multi-layer chip inductor 47nH J 300mA 0.70ohm (RoHS)	1	L508	T3E
247	3212106220000	Multi-layer chip inductor 22nH J 300mA 0.4ohm (RoHS)	1	L509	T3E
248	3212106220000	Multi-layer chip inductor 22nH J 300mA 0.4ohm (RoHS)	1	L510	T3F
249	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L527	T3E
250	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L603	T2I
251	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L604	T3H
252	3221506601000	Ferrite bead 600Ω 100MHz ±25% 500mA 0603 (RoHS)	1	L606	B4J
253	3221507600000	Ferrite bead 60Ω 100MHz ±25% 3000mA 0805 (RoHS)	1	L608	T1G
254	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L609	T2H
255	3001060000000	Chip resistor 0Ω J 1/10W 0603 (RoHS)	1	L610	T2H
256	3503010000010	P-MOSFE VDS:-30V ID:-100mA VGS(th):-1.9V (RoHS)	1	Q103	B3F
257	3503020000030	N-MOSFET VDS:30V ID:100mA VGS(th):3.0V (RoHS)	1	Q104	B3G
258	3411001000000	PNP transistor 50V 150mA 70~700 (RoHS)	1	Q201	B2F
259	3503020000030	N-MOSFET VDS:30V ID:100mA VGS(th):3.0V (RoHS)	1	Q202	B2F
260	3403008000010	Transistor Vce:50V VIoff:0.5V VIon:3V 100mA (RoHS)	1	Q302	B2E
261	3499000000180	PNP transistor 12V 2.5A 180~270 (RoHS)	1	Q303	B2D
262	3504990000010	PA MOSFET VDS:30V ID:600mA VGS(th):1.8V (RoHS)	1	Q402	T4E

No.	Part No.	Description	Qty.	Ref No.	Print No.
263	3504990000040	PA MOSFET 10uA 25V 10uA 7.2V 7W (RoHS)	1	Q403	T5D
264	3403999000000	Transistor PNP*2 -50V/50V -100mA/100mA 80/80 (RoHS)	1	Q404	B4F
265	3403008000010	Transistor Vce:50V Vloff:0.5V Vlon:3V 100mA (RoHS)	1	Q406	B5F
266	3408002000000	NPN transistor 12V 100mA 120 1GHz (RoHS)	1	Q407	T4F
267	3403008000010	Transistor Vce:50V Vloff:0.5V Vlon:3V 100mA (RoHS)	1	Q408	T3F
268	3503010000010	P-MOSFE VDS:-30V ID:-100mA VGS(th):-1.9V (RoHS)	1	Q409	T4F
269	3408002000000	NPN transistor 12V 100mA 120 1GHz (RoHS)	1	Q501	T3E
270	3403999000000	Transistor PNP*2 -50V/50V -100mA/100mA 80/80 (RoHS)	1	Q502	T3E
271	3403009000010	Transistor NPN*2 50V -100mA 250 SC-88A (RoHS)	1	Q605	B4A
272	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R101	T4G
273	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R125	T5I
274	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R126	T4G
275	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R127	T4G
276	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R129	T4G
277	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R130	T4G
278	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R131	T4G
279	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R132	T4G
280	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R133	T4H
281	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R134	T3H
282	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R135	T3H
283	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R136	T3H
284	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R137	T3H
285	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R138	T3H
286	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R139	T3H
287	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R141	T3G
288	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R142	T4G
289	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R144	T5I
290	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R145	T4F
291	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R146	B3F
292	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R147	B3G
293	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R148	B3F
294	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R149	B3F
295	3001052210000	Chip resistor 220Ω J 1/16W 0402 (RoHS)	1	R201	B2F
296	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R202	B2F
297	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R213	T2I
298	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R214	B2F
299	3001052230000	Chip resistor 22KΩ F 1/16W 0402 (RoHS)	1	R215	B2F
300	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R216	B2F
301	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R217	B2F
302	3001051050000	Chip resistor 1MΩ F 1/16W 0402 (RoHS)	1	R218	B2F
303	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R219	B2F
304	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R220	B2F
305	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R221	T2I
306	3001051220000	Chip resistor 1.2KΩ J 1/16W 0402 (RoHS)	1	R310	T2D

No.	Part No.	Description	Qty.	Ref No.	Print No.
307	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R311	T2D
308	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R312	B2E
309	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R313	B2E
310	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R315	B2A
311	3001054790000	Chip resistor 4.7Ω J 1/16W 0402 (RoHS)	1	R318	T1D
312	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R323	B2E
313	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R405	B4E
314	3001056810000	Chip resistor 680Ω J 1/16W 0402 (RoHS)	1	R406	T4F
315	3001053330000	Chip resistor 33KΩ F 1/16W 0402 (RoHS)	1	R407	B4E
316	3001052200000	Chip resistor 22Ω J 1/16W 0402 (RoHS)	1	R408	T5F
317	3001053310000	Chip resistor 330Ω F 1/16 0402 (RoHS)	1	R409	T4F
318	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R410	T4E
319	3001056830000	Chip resistor 68KΩ J 1/16W 0402 (RoHS)	1	R411	T4E
320	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R412	T5E
321	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R413	T3F
322	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R414	T4E
323	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R415	T5E
324	3001052230000	Chip resistor 22KΩ F 1/16W 0402 (RoHS)	1	R416	T5E
325	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R417	T5E
326	3001062710000	Chip resistor 270Ω J 1/10W 0603 (RoHS)	1	R418	B4B
327	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R419	B4C
328	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R420	B4C
329	3099080398000	Chip resistor 0.39Ω J 1/4W 1206 (RoHS)	1	R421	B4C
330	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R422	B3E
331	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R423	B3E
332	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R424	B3F
333	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R425	B3F
334	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R426	B3E
335	3001061540010	Chip resistor 150KΩ D 1/10W 0603 (RoHS)	1	R427	B3F
336	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R428	B4F
337	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R438	B4E
338	3001053330000	Chip resistor 33KΩ F 1/16W 0402 (RoHS)	1	R439	B4E
339	3001051520000	Chip resistor 1.5KΩ J 1/16W 0402 (RoHS)	1	R440	T4F
340	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R441	B4E
341	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R442	B5E
342	3001062710000	Chip resistor 270Ω J 1/10W 0603 (RoHS)	1	R444	B4B
343	3210305229010	Multi-layer chip inductor 2.2nH S 300mA 0.12ohm (RoHS)	1	R511	T3D
344	3001051330000	Chip resistor 13KΩ F 1/16W 0402 (RoHS)	1	R512	T3E
345	3001052720010	Chip resistor 2.7KΩ F 1/16W 0402 (RoHS)	1	R514	T3E
346	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R515	T3E
347	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R519	T3E
348	3212105470000	Multi-layer chip inductor 47nH J 200mA 0.58ohm (RoHS)	1	R520	T3E
349	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R523	T3F
350	3001052240000	Chip resistor 220KΩ J 1/16W 0402 (RoHS)	1	R602	T3J

No.	Part No.	Description	Qty.	Ref No.	Print No.
351	3001051040000	Chip resistor 100KΩ F 1/16W 0402 (RoHS)	1	R603	T3J
352	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R604	T3J
353	3001056810000	Chip resistor 680Ω J 1/16W 0402 (RoHS)	1	R605	B4A
354	3001051530000	Chip resistor 15KΩ J 1/16W 0402 (RoHS)	1	R606	T4J
355	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R614	B1C
356	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R615	B2D
357	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R616	T2J
358	3001054730000	Chip resistor 47KΩ J 1/16W 0402 (RoHS)	1	R617	T2J
359	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R618	T2J
360	3001054700000	Chip resistor 47Ω J 1/16W 0402 (RoHS)	1	R619	T2J
361	3001051010000	Chip resistor 100Ω J 1/16W 0402 (RoHS)	1	R621	T2B
362	3001052720010	Chip resistor 2.7KΩ F 1/16W 0402 (RoHS)	1	R624	B1D
363	3001052220010	Chip resistor 2.2KΩ F 1/16W 0402 (RoHS)	1	R625	B4A
364	3001051530000	Chip resistor 15KΩ J 1/16W 0402 (RoHS)	1	R627	T2F
365	3001051050000	Chip resistor 1MΩ F 1/16W 0402 (RoHS)	1	R628	T1F
366	3001051060000	Chip resistor 10M J 1/16W 0402 (RoHS)	1	R629	T3J
367	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R631	T2E
368	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R632	T2E
369	3001051000020	Chip resistor 10Ω F 1/16W 0402 (RoHS)	1	R633	T2F
370	3001052240000	Chip resistor 220KΩ J 1/16W 0402 (RoHS)	1	R634	T1F
371	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R635	T3J
372	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R636	T2E
373	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R637	T2F
374	3001051830010	Chip resistor 18KΩ F 1/16W 0402 (RoHS)	1	R638	T2F
375	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R639	T1F
376	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R644	T4I
377	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R645	T4I
378	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R683	T4I
379	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R684	T4I
380	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R685	T4J
381	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R686	T4J
382	3001054720000	Chip resistor 4.7KΩ J 1/16W 0402 (RoHS)	1	R687	T1G
383	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R688	B3J
384	3001050000000	Chip resistor 0Ω J 1/16W 0402 (RoHS)	1	R689	B4J
385	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R690	T3H
386	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R691	T3H
387	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R692	T3H
388	3001051020000	Chip resistor 1KΩ F 1/16W 0402 (RoHS)	1	R693	T2H
389	3001051030000	Chip resistor 10KΩ J 1/16W 0402 (RoHS)	1	R694	T4J
390	3613999000020	Baseband IC 3.3V -25~85 5dBm -124dBm (RoHS)	1	U101	T3G
391	3605017005540	Operational amplifier 1.8~15V 220mW 39dB 2 (RoHS)	1	U302	T2D
392	3605008005070	Operational amplifier 3~32V 300mW 100dB 2 (RoHS)	1	U401	B4E
393	3612031000510	Memory EEPROM 16KB 1.7~5.5V (RoHS)	1	U603	T2J
394	3605008005070	Operational amplifier 3~32V 300mW 100dB (RoHS)	1	U613	T2F

No.	Part No.	Description	Qty.	Ref No.	Print No.
395	3608015000060	Power management IC LDO 5V 300mA (RoHS)	1	U619	T1F
396	3608015000210	Power management IC LDO 12V 3.3V 300mA (RoHS)	1	U621	T1G
397	3609042000020	MCU 2.8~5V 20MHZ -40~+85 LQFP 64 (RoHS)	1	U622	T3I
398	3701327610060	Crystal 32.768KHz ±20ppm 12.5pF (RoHS)	1	X601	T4J
399	3701002660130	TXCO 26MHz 3.135V~3.465V ±2.5ppm (RoHS)	1	XT101	T5G
400	41005001022A0	Main PCB IT158 4L 4P 101*45*1.2 A (RoHS)	1	/	/

8. Tuning Description

8.1 Required Test Instruments

Radio communication test set (HP8921)	1 set
10V/3A regulated DC power supply	1 set
Digital voltmeter	1 set
Ammeter	1 set

8.2 Preparations

Make sure all test instruments work properly and connect the power supply.

8.3 Tuning Description

Wired Clone

Instructions:

- Connect two radios using a cloning cable. Simultaneously hold down **SK1** (Side Key 1) to power on the source radio so that the wired clone mode will be entered after 2 seconds, and then press **SK1** to switch to factory wired clone mode (when the wired clone mode is entered, the user wired clone mode is defaulted); then directly power on the target radio to enter the user mode.
- The Status Indicator flashes red once after the source radio enters Wired Clone mode. Press **PTT** to clone data to the target radio.
- During communication, the Status Indicator of the source radio glows red, and the Status Indicator of the target radio glows green. When the communication ends, green LED of the source radio glows and the green LED of the target radio goes out, which indicates the preparation for another clone.
- If any abnormal situation occurs during communication, the source radio will flash orange Status Indicator and will stop communication for another cloning.
- When cloning ends, the source radio goes back to the standby status. Press **PTT** again to begin another cloning operation.

LED Indication during Cloning

- Orange LED flashes: an error occurs during cloning. In this case, press any key other than the power switch to turn it off.
- Green LED glows: the cloning is done successfully.

Difference between Factory Clone Mode and User Clone Mode:

- User Clone Mode: Only clone relevant data in user mode (such as frequencies). Test parameters like test frequency, test item and base band parameter will not be cloned.
- Factory Clone Mode: Clone all the data excluding serial No.

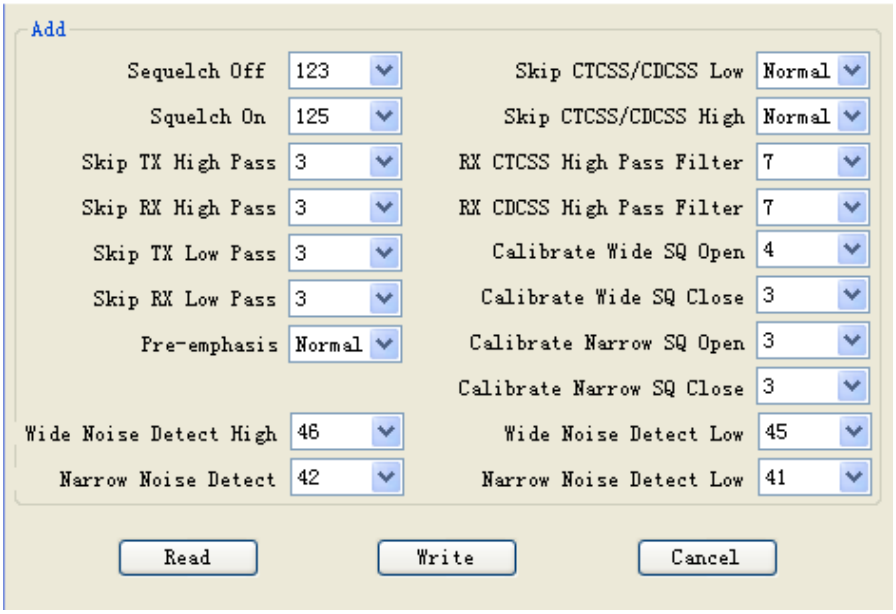
Description of Tuning Items

Channel	Tunable Frequency	Wide Band					Narrow Band				
		Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5	Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5
TX Circuit											
1	Freq. Tolerance	/	/	**Y**	/	/	/	/	/	/	/
2	TX Low Power	**Y**	**Y**	**Y**	**Y**	**Y**	/	/	/	/	/
3	TX High Power	**Y**	**Y**	**Y**	**Y**	**Y**	/	/	/	/	/
4	CDCSS Deviation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
5	CTCSS L Deviation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6	CTCSS M Deviation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
7	CTCSS H Deviation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
8	TX Low Voltage Threshold	/	/	**Y**	/	/	/	/	/	/	/
9	Max. TX Audio Deviation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
RX Circuit											
1	RX Low Voltage Threshold	/	/	**Y**	/	/	/	/	/	/	/
2	Max. RX Audio Power	/	/	**Y**	/	/	/	/	/	/	/

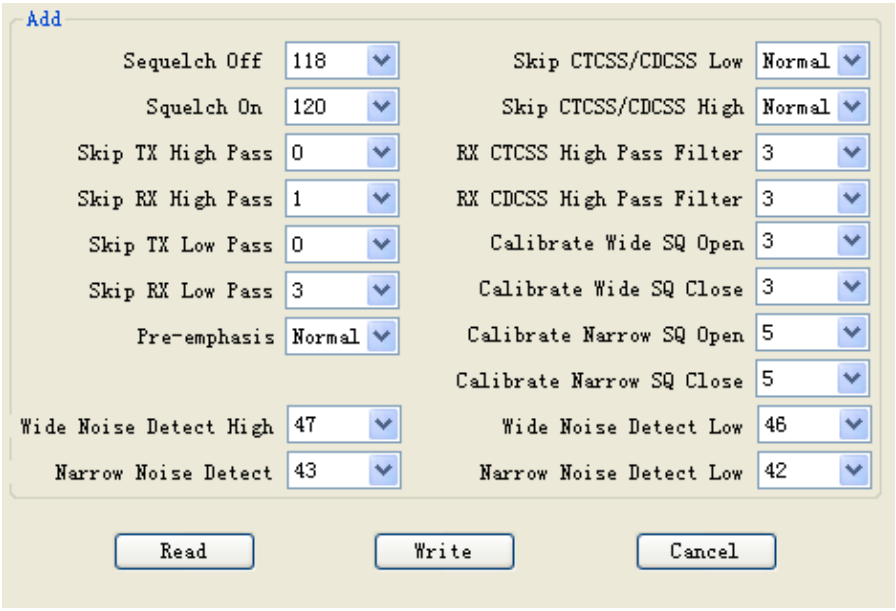
Note: Y indicates frequencies available for tuning, and the rest are blank channels without tuning items.

Baseband Design

Baseband settings for UHF are given below:



Baseband settings for VHF are given below:



Description:

Parameter	Description
Squelch On/Off Threshold	To set the threshold value for enabling/disabling the squelch function.
Calibrate Wide/Narrow SQ Open/Close	To tune the squelch threshold to compensate the circuit difference. It is recommended to apply the same value to one model. Increasing the value may tighten the squelch, while decreasing may loosen it.

Parameter	Description
Skip RX/TX High/Low Pass	To configure the audio filter (0: not skip; 1: to skip one filter; 2: to skip the other filter; 3: to skip two filters).
Pre-emphasis	To configure the pre-emphasis function.
Skip CTCSS/CDCSS High/Low	To set whether to skip CTCSS/CDCSS filter.
CTCSS/CDCSS High Pass Filter	To configure the parameters of CTCSS/CDCSS filter.
Wide/Narrow Noise Detect High/Low	To configure the noise detection threshold.

8.4 Method and Procedure

8.4.1 Tuning Procedures

Step 1 Simultaneously hold down **PTT** key, **SK1** key and **Radio On-Off** key for more than 4s. You will see the LED flash orange, which means the radio has entered tuning mode. After the keys are released, the radio will enter the tuning item in this mode (the item entered depends on the position where the **Channel Selector** Knob locates). And the Status Indicator will glow red or green according to the specific tuning item.

Step 2 Or connect a programming cable to the radio for real-time tuning in PC Programming Mode.

8.4.2 Tuning Items

Switch of Wide/Narrow Bandwidth and Frequency

When adjusting a certain item, long press **PTT** (Status Indicator flashes orange indicating valid press) to switch between wide/narrow bandwidth. After this operation, the first frequency of current bandwidth is the frequency for adjustment by default.

Main Tuning Items

- **TX items:** TX Frequency Tolerance, TX Low Power, TX High Power, CDCSS Deviation, CTCSS Deviation (low), CTCSS Deviation (medium), CTCSS Deviation (high), TX Low Voltage Threshold and Max. Deviation.
- **Rx Items:** RX Low Voltage Threshold and Max. Audio Power

Note:

By default, channel 1, 2, 3, 4 and 5 use wide band, while channel 6, 7, 8, 9 and 10 use narrow band.

Remember to connect the antenna properly.

Tuning in the mode (Make sure the antenna or load is connected before adjustment.)

- Tuning items for TX

Tuning Items		Condition	Measurement		Tuning		Specifications / Remarks
			Test Instrument	Test Point	Component	Method	
Freq. Tolerance		Hold **PTT+SK1** to power on the radio, and then go to channel 1.	Communication test set	Antenna connector	Press **SK1** and **SK2**	Press **SK1** and **SK2** to tune the TX carrier frequency tolerance. Save your change and go to another channel.	＜150Hz
Transmitting TX power	Low	Hold **PTT+SK1** to power on the radio, and then go to channel 2.	Communication Test Set / Ammeter	Antenna connector	Press **SK1** and **SK2**	Press **SK1** and **SK2** to tune the TX power, Then save your change and go to another channel.	UHF: 2.0W±0.3W I≤1.0A
		Short press **PTT** to switch the frequency under test.					VHF: 2.0W±0.3W I≤1.0A
	High	Hold **PTT+SK1** to power on the radio, and then go to channel 3.				Press **SK1/SK2** to tune the TX power. Then	UHF: 4.2W±0.2W I≤1.4A

Tuning Items		Condition	Measurement		Tuning		Specifications / Remarks
			Test Instrument	Test Point	Component	Method	
		Short press **PTT** to switch the frequency under test.				save your change and go to another channel.	VHF: 4.8W±0.2W I≤1.5A
CDCSS Deviation	Wide Band	Hold **PTT**+**SK1** to power on the radio, and then go to channel 4.	Communication test set BPF: <20Hz~300Hz AF Genl Lvl：off	Antenna connector	Press **SK1** and **SK2**	Press **SK1**/**SK2** to tune the CDCSS deviation. Then save your change and go to another channel.	650±50Hz
		Short press **PTT** to switch the frequency under test.					
	Narrow Band	Following wide band test, long press **PTT** to perform narrow band test.					400±50Hz
		Short press **PTT** to switch the frequency under test.					
CTCSS Deviation	L	Hold **PTT**+**SK1** to power on the radio, and then go to channel 5. Short press **PTT** to switch the frequency.	Communication Test Set BPF: <20Hz~300Hz AF Genl Lvl：off	Antenna connector	Press **SK1** and **SK2**	Press **SK1**/**SK2** to tune the CTCSS deviation. Then save your change	Wide band: 675±50Hz Narrow band: 400±50Hz

Tuning Items		Condition	Measurement		Tuning		Specifications / Remarks
			Test Instrument	Test Point	Component	Method	
		Following wide band test, long press **PTT** to perform narrow band test.				and go to another channel.	
	M	Hold **PTT**+**SK1** to power on the radio, and then go to channel 6. Short press **PTT** to switch the frequency.					
		Following wide band test, long press **PTT** to perform narrow band test.					
	H	Hold **PTT**+**SK1** to power on the radio, and then go to channel 7. Short press **PTT** to switch the frequency.					
		Following wide band test, long press **PTT** to perform narrow band test.					

Tuning Items		Condition	Measurement		Tuning		Specifications / Remarks
			Test Instrument	Test Point	Component	Method	
Max. TX Audio Deviation	Wide Band	Hold **PTT+SK1** to power on the radio, and then go to channel 9. Short press **PTT** to switch the frequency.	Communication Test Set BPF: <20Hz~15KHz AF Genl Lvl：120mV	Antenna Earpiece Jack	Press **SK1** and **SK2**	Press **SK1/SK2** to tune the deviation. Then save your change and go to another channel.	4.3KHz - 4.5KHz
	Narrow Band	Following wide band test, long press **PTT** to perform narrow band test.					2.1KHz - 2.3KHz
TX Low Voltage Threshold		Hold **PTT+SK1** to power on the radio, and then go to channel 8.	Digital voltmeter	Power Supply Port	Power Supply	Adjust the power supply to 6.56V and press **SK1** key to sample it. Then save your change and go to another channel.	6.3~6.5V: transmission inhibited.

- Tuning items for RX

Item	Condition	Measurement		Tuning		Specifications / Remarks
		Test Instrument	Test Point	Component	Method	

RX Low Voltage Threshold	Hold **PTT+SK1** to power on the radio, and then go to channel 10.	Digital voltmeter	Power Supply Interface	Power Supply	Adjust the power supply to 6.9V and press **SK1** key to sample it. Then save your change and go to another channel.	6.8~7.0V: the red LED flashes and alert tone sounds.
Max. RX Audio Power	Hold **PTT+SK1** key to power on the radio, and go to channel 11 (wideband only).	Communication Test Set SSG: -47dBm MOD: 1KHz DEV: 3KHz Filter: 0.3~3KHz	Antenna Earpiece Socket	Press **SK1** and **SK2**	Press **SK1/SK2** to tune the volume. Then save your change and go to another channel.	(W/N): 1.1~1.3W

Reference Value for Source Radio

Item	Wide Band					Narrow Band				
	Freq. 1	**Freq. 2**	**Freq. 3**	**Freq. 4**	**Freq. 5**	**Freq. 1**	**Freq. 2**	**Freq. 3**	**Freq. 4**	**Freq. 5**
Tx Item Section										
Freq. Tolerance	/	/	118	/	/	/	/	/	/	/
TX Low Power	108	103	95	86	88	/	/	/	/	/
TX High Power	156	155	150	150	164	/	/	/	/	/
CDCSS Balance	None									
CDCSS Deviation	17	17	17	17	17	18	18	18	18	18
CTCSS L Deviation	26	26	26	26	26	28	28	28	28	28

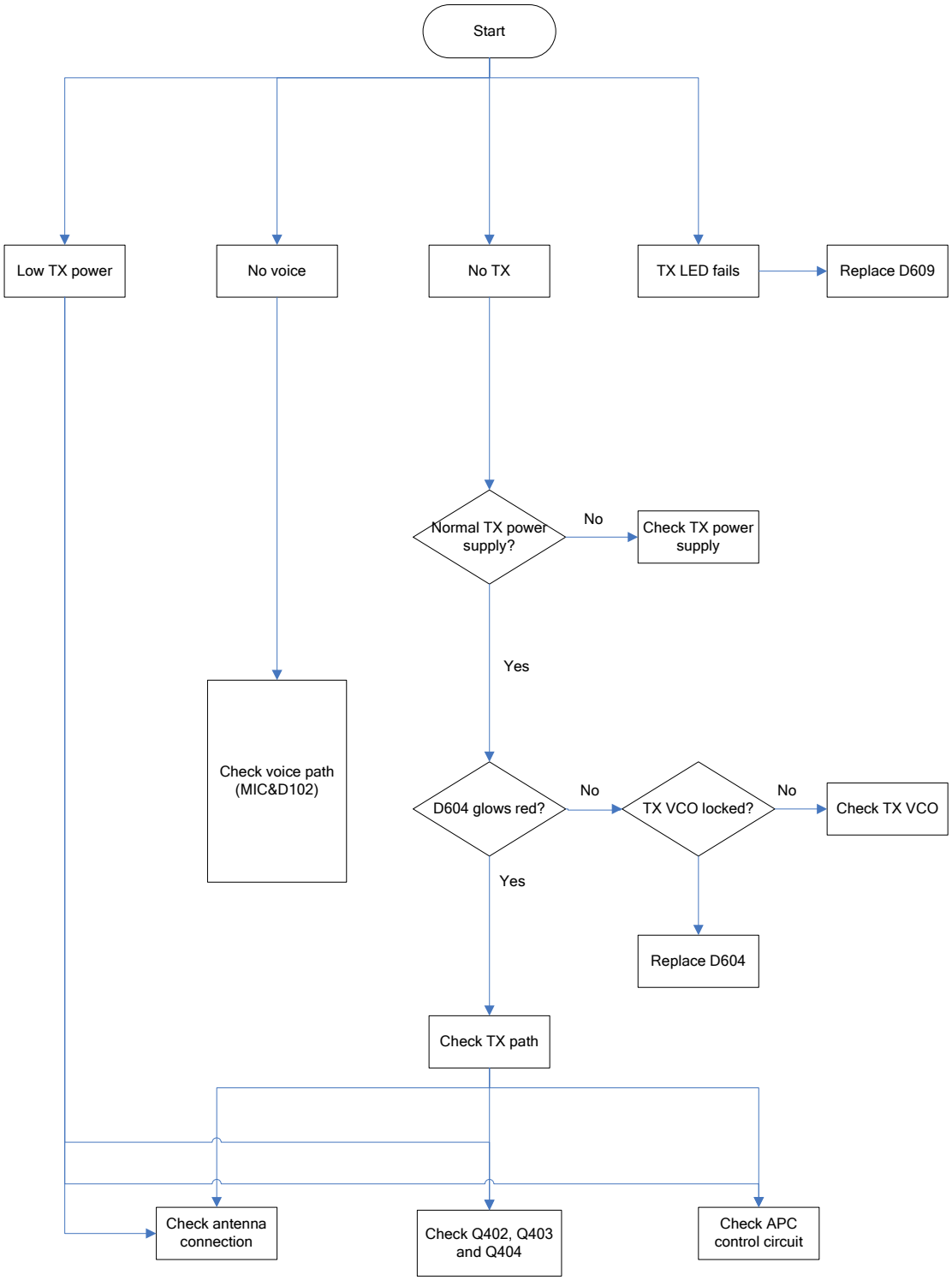
Item		Wide Band					Narrow Band				
		Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5	Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5
CTCSS M Deviation		26	26	26	26	26	28	28	28	28	28
CTCSS H Deviation		28	28	28	28	28	30	30	30	30	30
TX Low Voltage Threshold		/	/	150	/	/	/	/	/	/	/
VOX Gain	VOX GAIN1	/	/	80	/	/	/	/	/	/	/
	VOX GAIN2	/	/	60	/	/	/	/	/	/	/
	VOX GAIN3	/	/	40	/	/	/	/	/	/	/
	VOX Gain4	/	/	25	/	/	/	/	/	/	/
	VOX Gain5	/	/	16	/	/	/	/	/	/	/
Max. TX Audio Deviation		52	52	52	52	52	52	52	52	52	52
Rx Item Section											
SQL Tight On		/	/	/	/	/	/	/	/	/	/
SQL Normal On		/	/	/	/	/	/	/	/	/	/
SQL Tight Off		/	/	/	/	/	/	/	/	/	/
SQL Normal Off		/	/	/	/	/	/	/	/	/	/
RX Low Voltage Threshold		/	/	163	/	/	/	/	/	/	/
Max. RX Audio Power		/	/	176	/	/	/	/	22	/	/

Note:

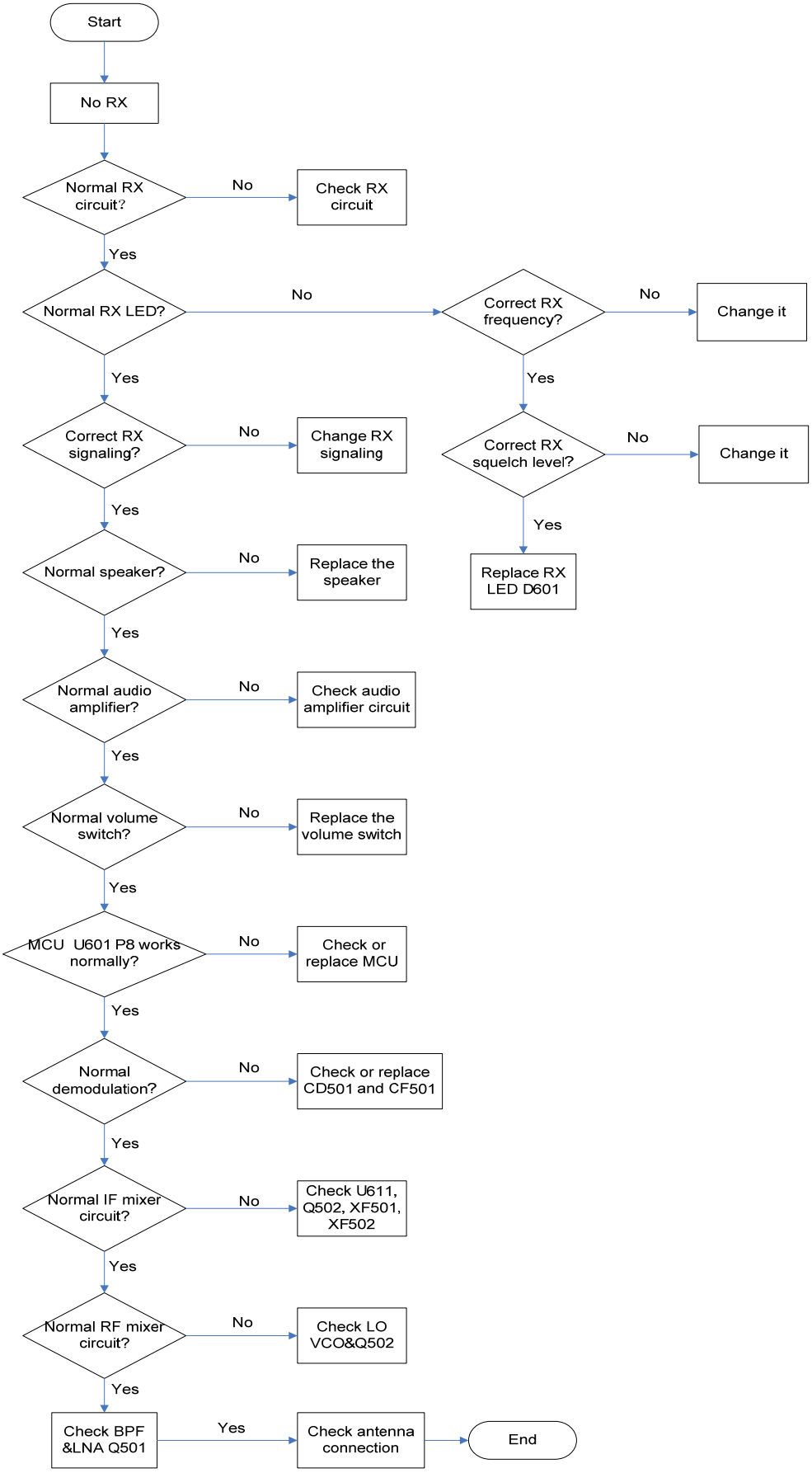
You can set squelch-related parameters in Baseband Design section. The data of source radio is for your reference only.

9. Troubleshooting Flow Chart

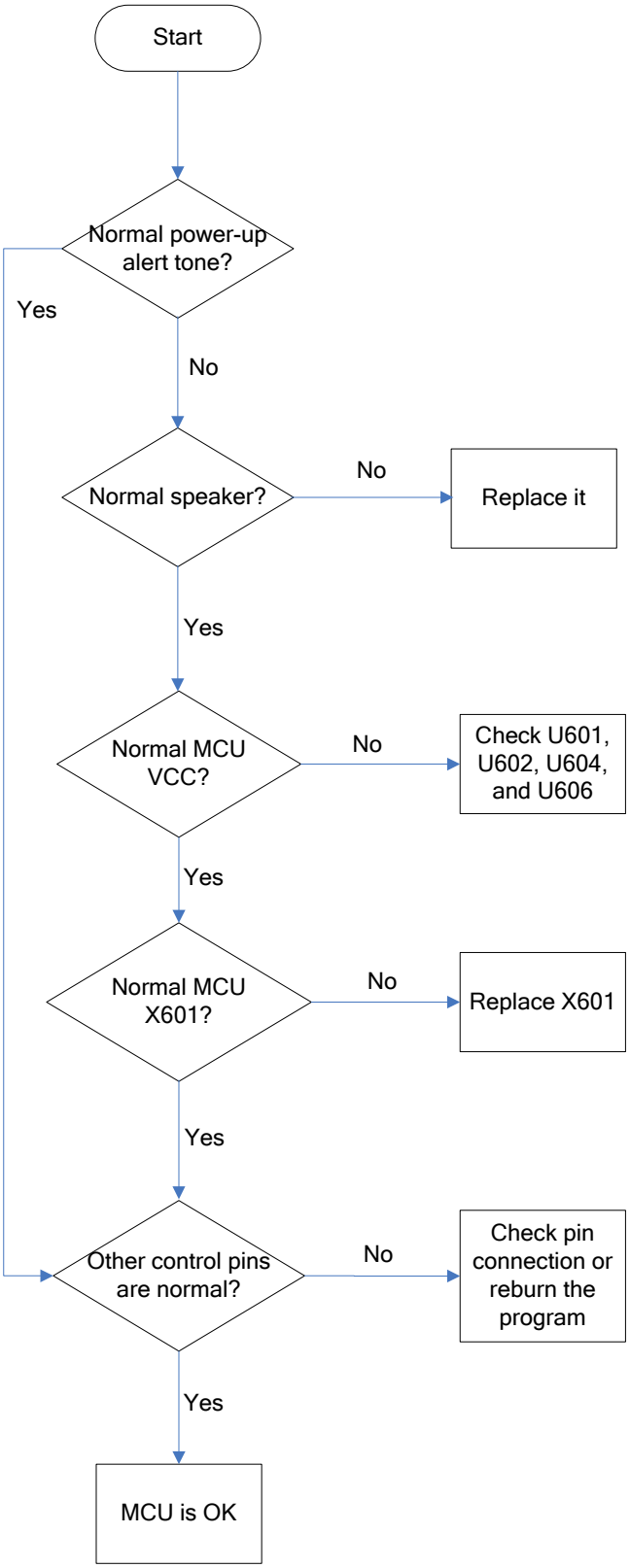
9.1 TX Circuit



9.2 RX Circuit



9.3 MCU Section



10. Disassembly and Assembly

10.1 Disassembling and Assembling the Aluminum Chassis and PCB Kit

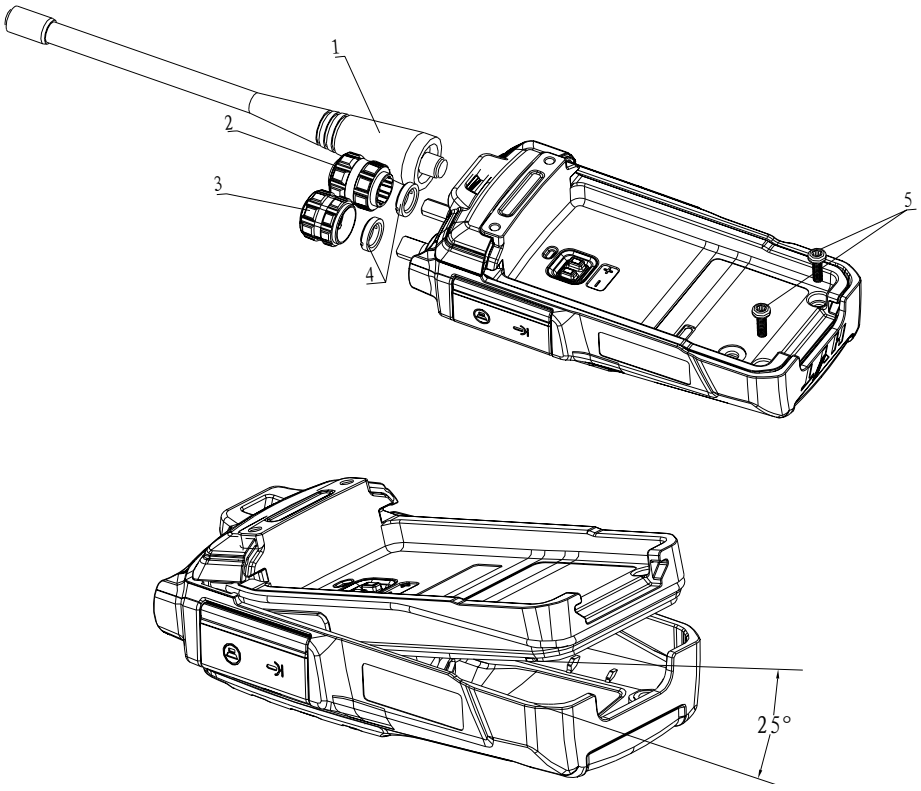
Follow the steps below to remove the aluminum chassis and PCB kit, and take these steps in a reverse way to attach them.

Step 1 Remove the antenna (①), Channel Selector knob (②) and Radio On-Off/Volume Control knob (③).

Step 2 Unscrew the nuts for the **Channel Selector** knob and the **Volume Control** knob.

Step 3 Unfasten the two screws by a screwdriver (⑤).

Step 4 Lift the bottom of the aluminum chassis by about 25 degrees, and take it out.

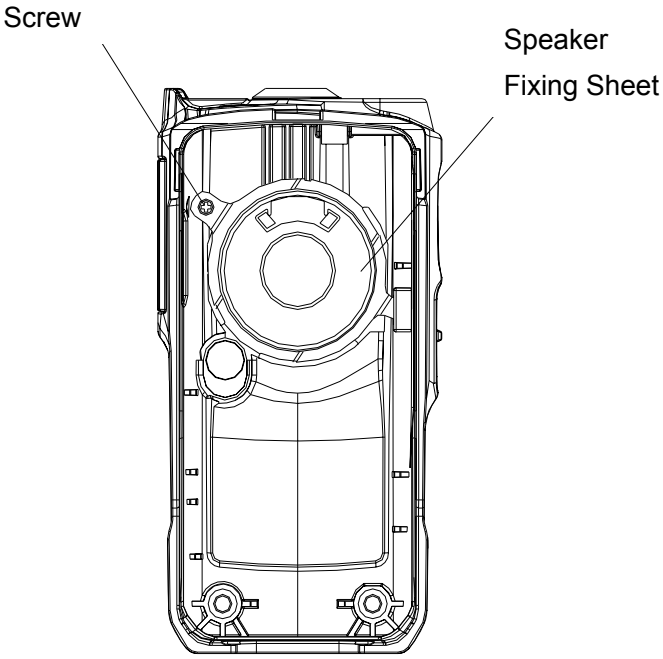


10.2 Disassembling and Assembling the Speaker

Follow the steps below to remove the speaker, and take these steps in a reverse way to attach it.

Step 1 Unfasten the screws for the fixing ring and remove the fixing sheet.

Step 2 Remove the speaker.



10.3 Disassembling and Assembling TX/RX Unit

Follow the steps below to remove the TX/RX unit, and take these steps in a reverse way to attach them.

Step 1 Powering off the radio

Step 2 Removing the belt clip.

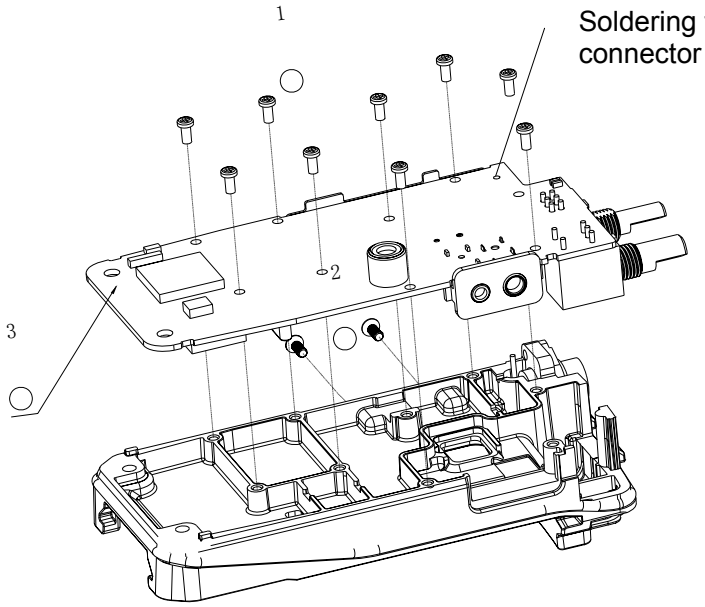
Step 3 Removing the battery.

Step 4 Removing the antenna.

Step 5 Remove the screws for PCB (○1①) and PTT keyboard (○2②).

Step 6 Remove the tin at the antenna terminal by using an electronic iron.

Step 7 Remove the PCB (○3③) from the chassis.

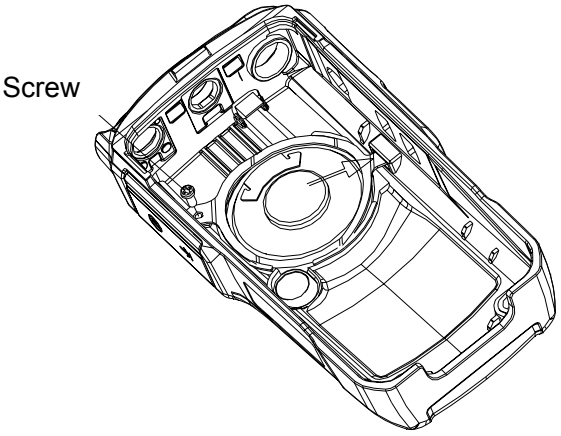


10.4 Instructions on Assembling

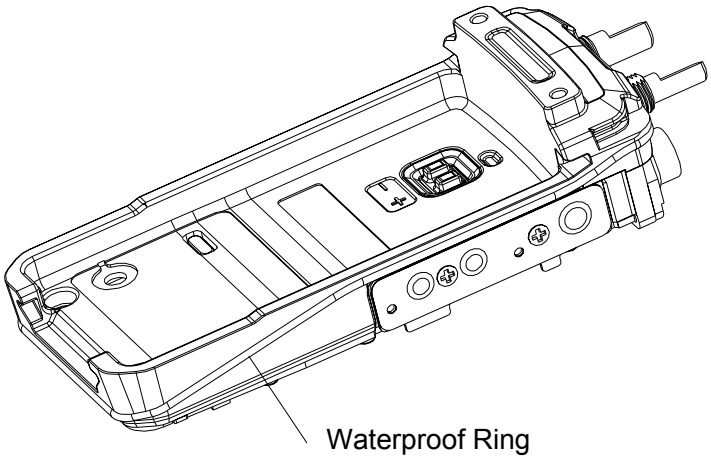
10.4.1 Assembling the Radio Case and Chassis

Step 1 Insert the speaker into the front case properly.

Step 2 Insert the speaker fixing sheet into the front case, and fix it with a screw.



Step 3 Make sure the waterproof ring surrounding the chassis is well fitted into the slot.



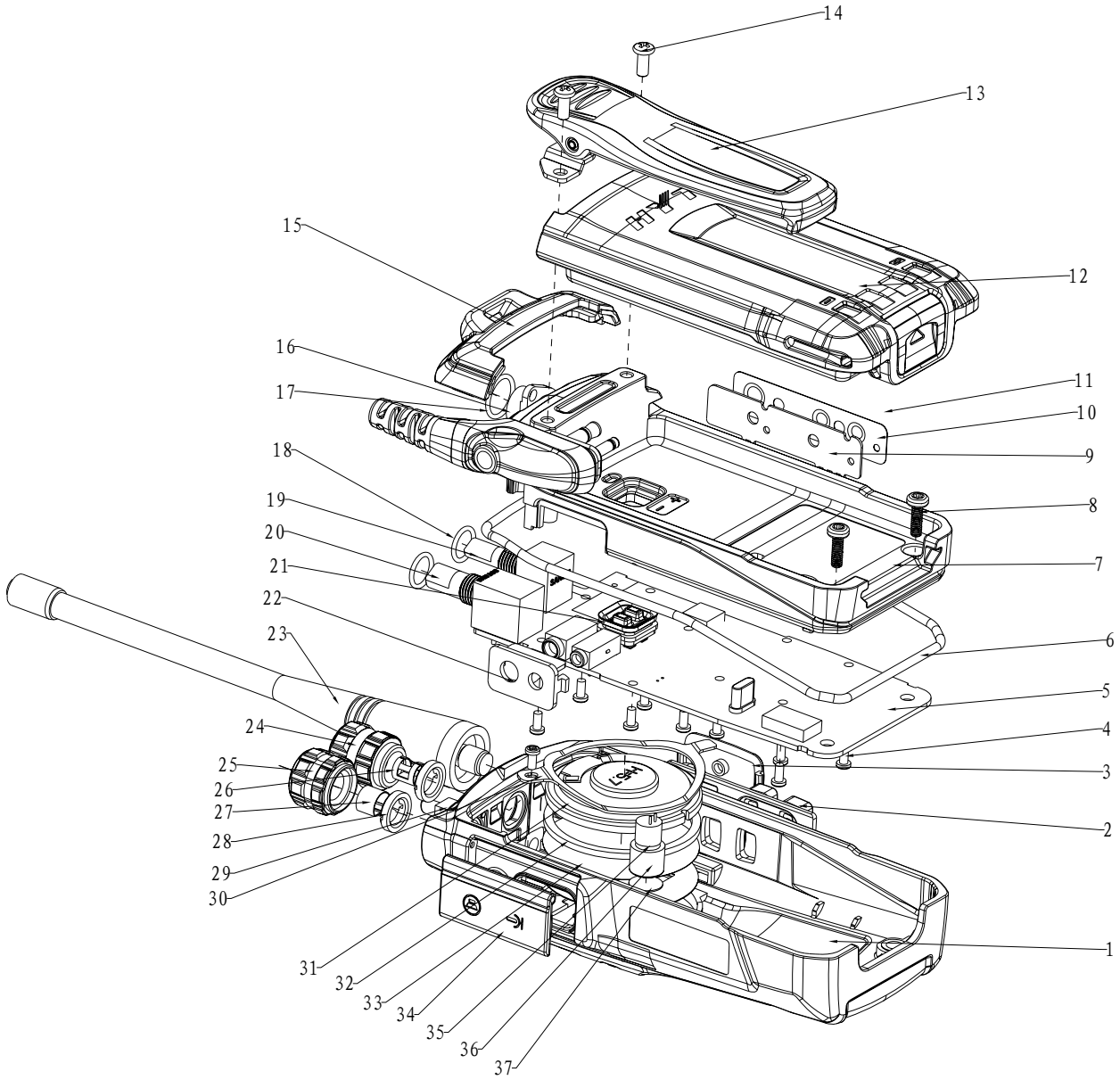
Step 4 Solder the speaker cable to the main board with an electric iron.

Step 5 Press the bottom of the chassis downwards to fit the chassis into the radio case.

Note

If the waterproof ring is not properly positioned, please use your finger to make it in place.

11. Exploded View



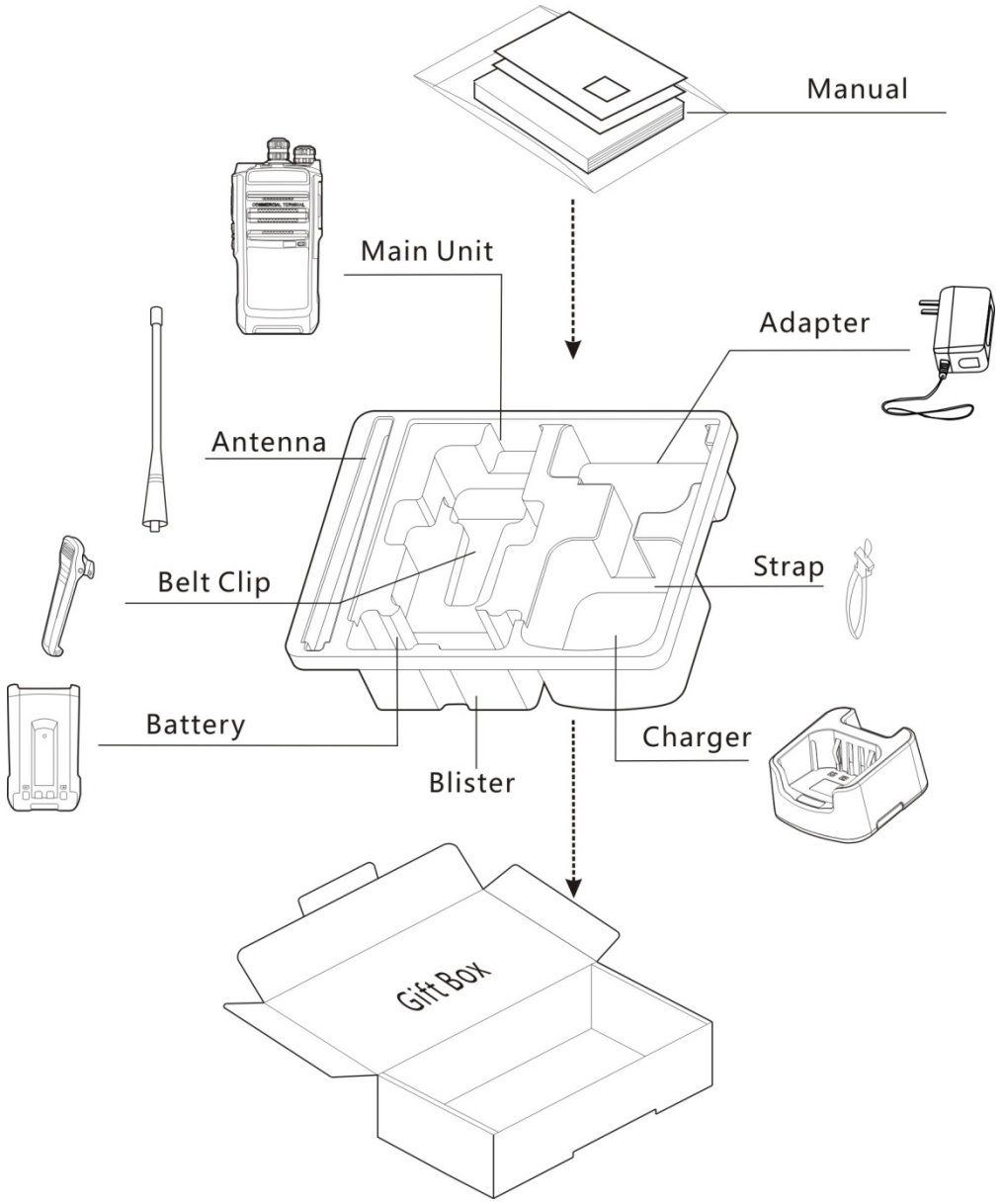
12. Parts List 2

No.	Part No.	Description	Qty.
1	6001139000000	Front case	1
2	6100312000010	Silicone rubber PTT key	1
3	6000842100010	PTT key	1
4	7101904020200	Self-tapping screw ST1.9*4.0mm	10
5	/	Main PCB	1
6	6100542100000	Waterproof ring for terminal	1
7	6300115000000	Aluminum chassis	1
8	7102508000010	Machine screw M2.5*8.0mm	1
9	41005002004B0	PCB for PTT key	1
10	7300032000000	Metal dome for PTT key	1
11	7102504000300	Machine screw M2.5*4.0mm	2
12	1602L13000000	Li-Ion battery pack	1
13	1605040000000	Spring belt clip for metal bracket	1
14	7103006004000	Machine screw M3.0*6.0mm	2
15	6001140000000	Rear cover	1
16	4400100008000	SMA RF connector	1
17	6100335000000	Antenna O_Ring	1
18	6100370000000	O-ring for switch	2
19	4304030000010	Gray code rotary switch	1
20	4302020000140	Volume switch	1
21	6100314000000	Waterproof ring for battery connector	1
22	6000852000000	Earpiece jack bracket	1
23	16010415W0050	Antenna	1
24	6000845100010	Encoder knob	1
25	6000846100000	Volume control knob	1
26	6201739000000	Inner lining for knob	1
27	6201066000000	Inner lining for knob	1
28	7207002200200	Nut	2
29	6000854000000	Light guide	1
30	6201870000000	Speaker fixing sheet	1
31	5001210000470	Speaker	1
32	6100077000000	Speaker washer	1
33	7400322000000	Speaker felt	1
34	6000749000000	Accessory jack cover	1
35	5002220000070	Microphone	1
36	6100345000000	MIC Cover	1
37	7400141000000	MIC Net	1

Note

Parts that are not marked with part number may vary with radio frequency band.

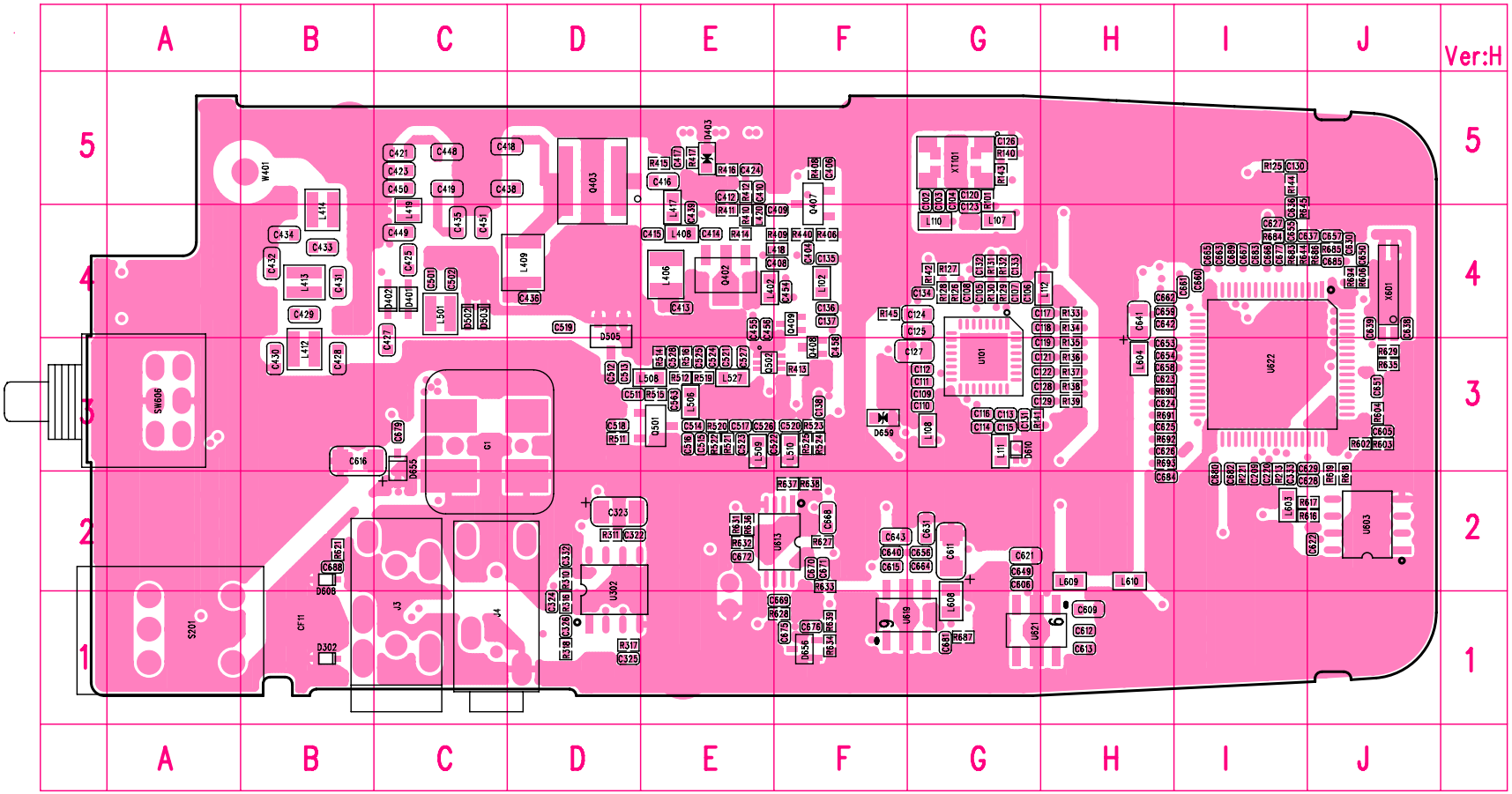
13. Packing Guide



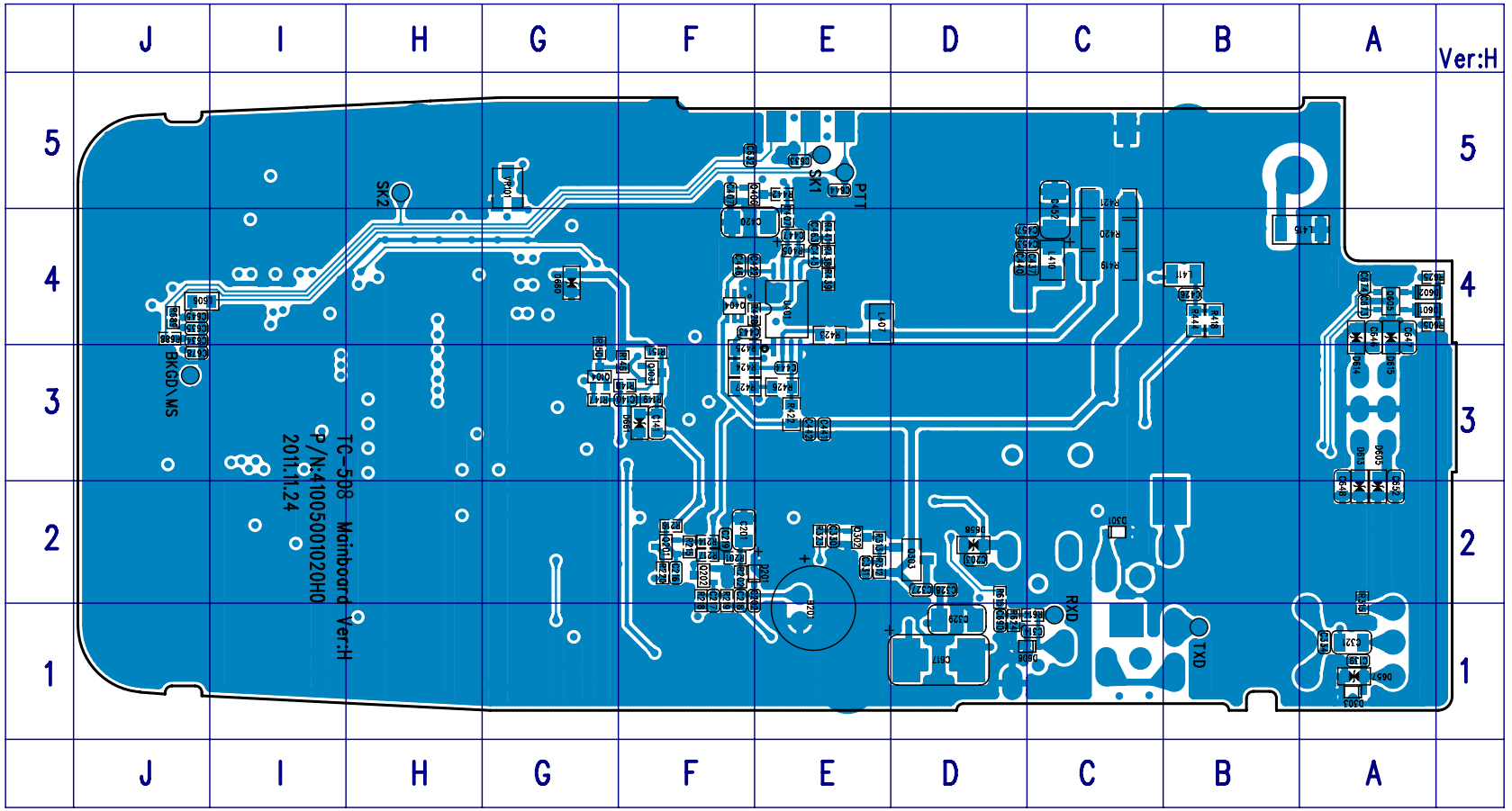
14. PCB View

14.1 UHF

PCB View
Top Layer

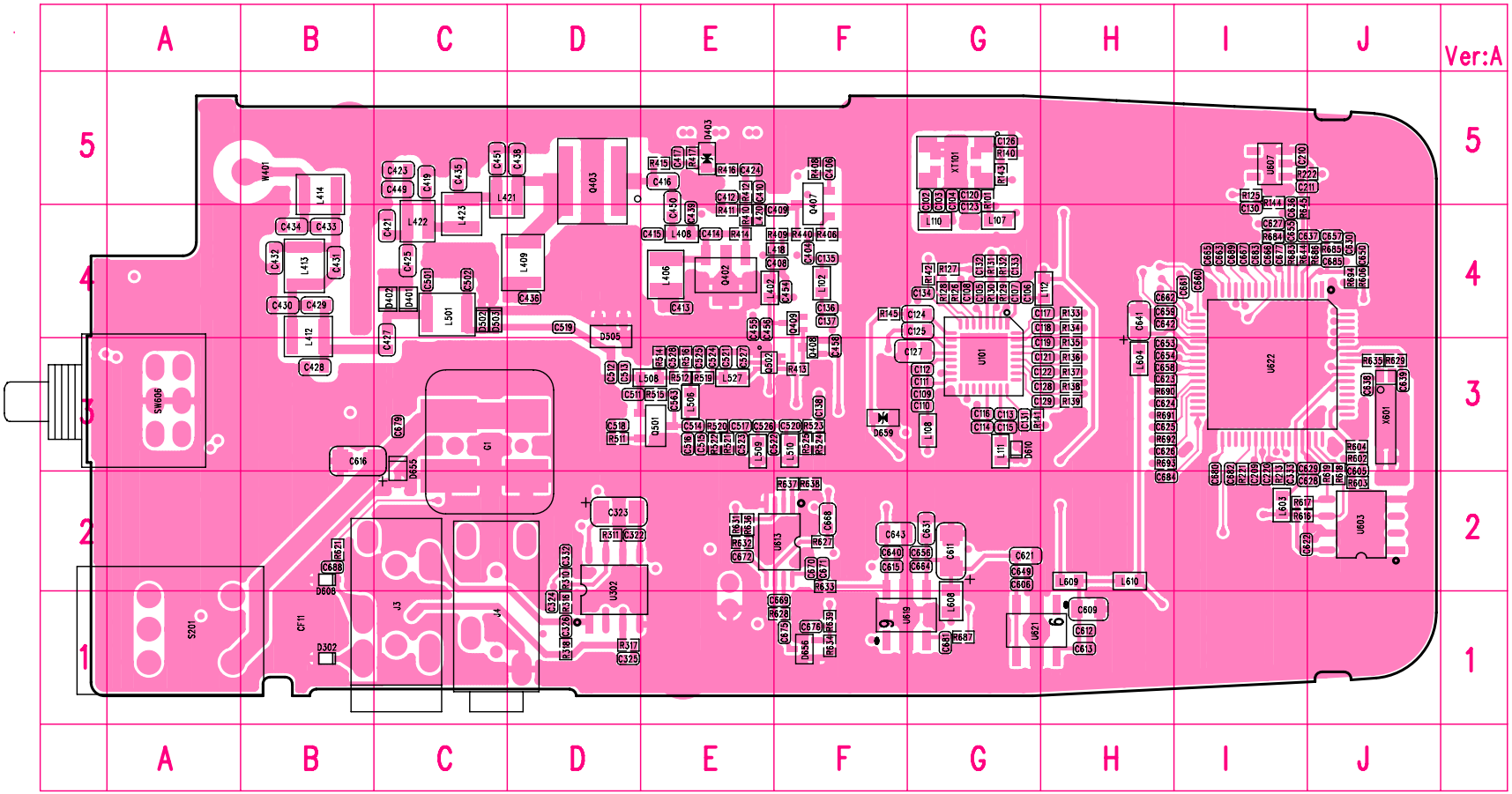


PCB View
Bottom Layer

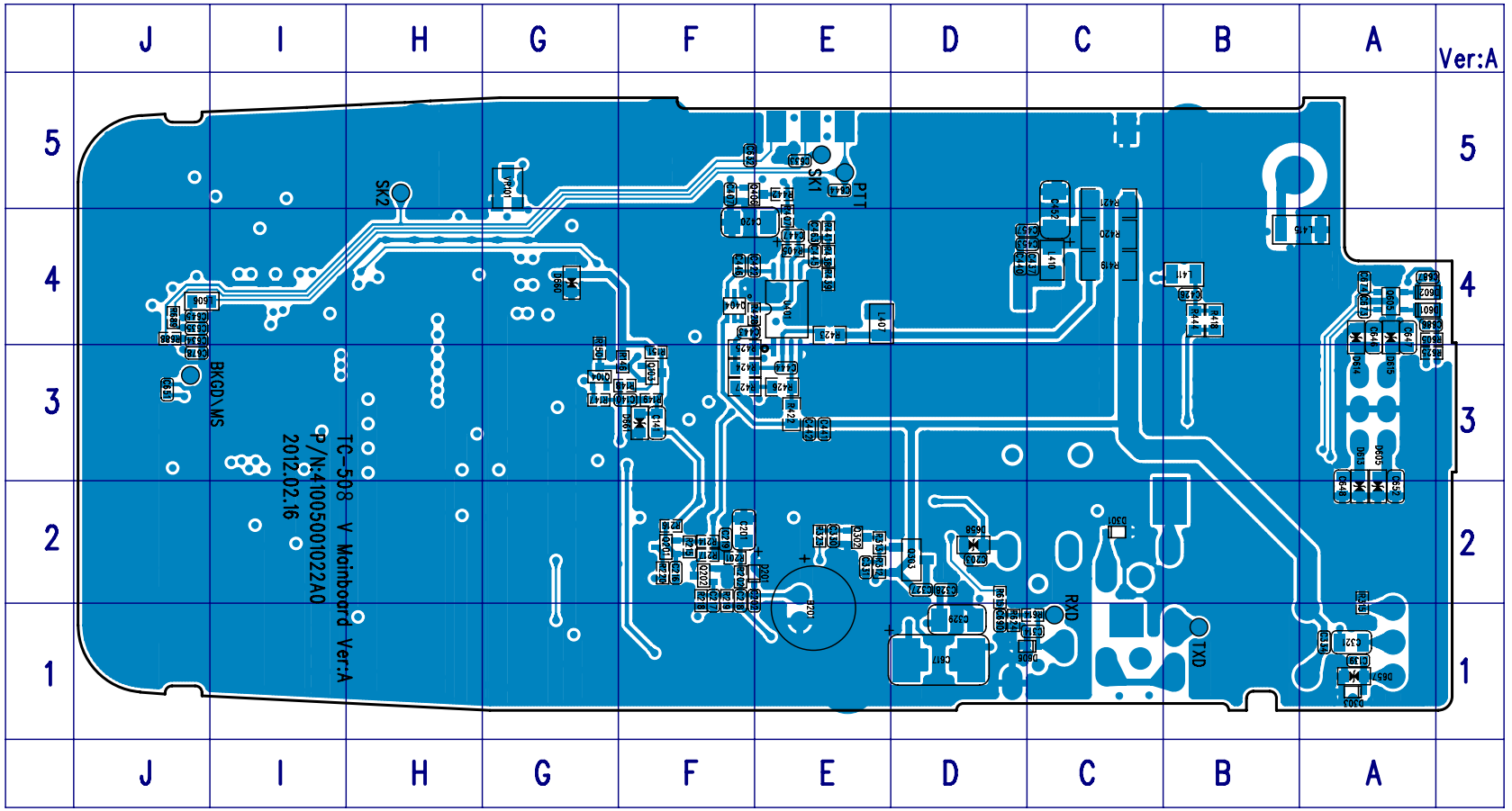


14.2 VHF

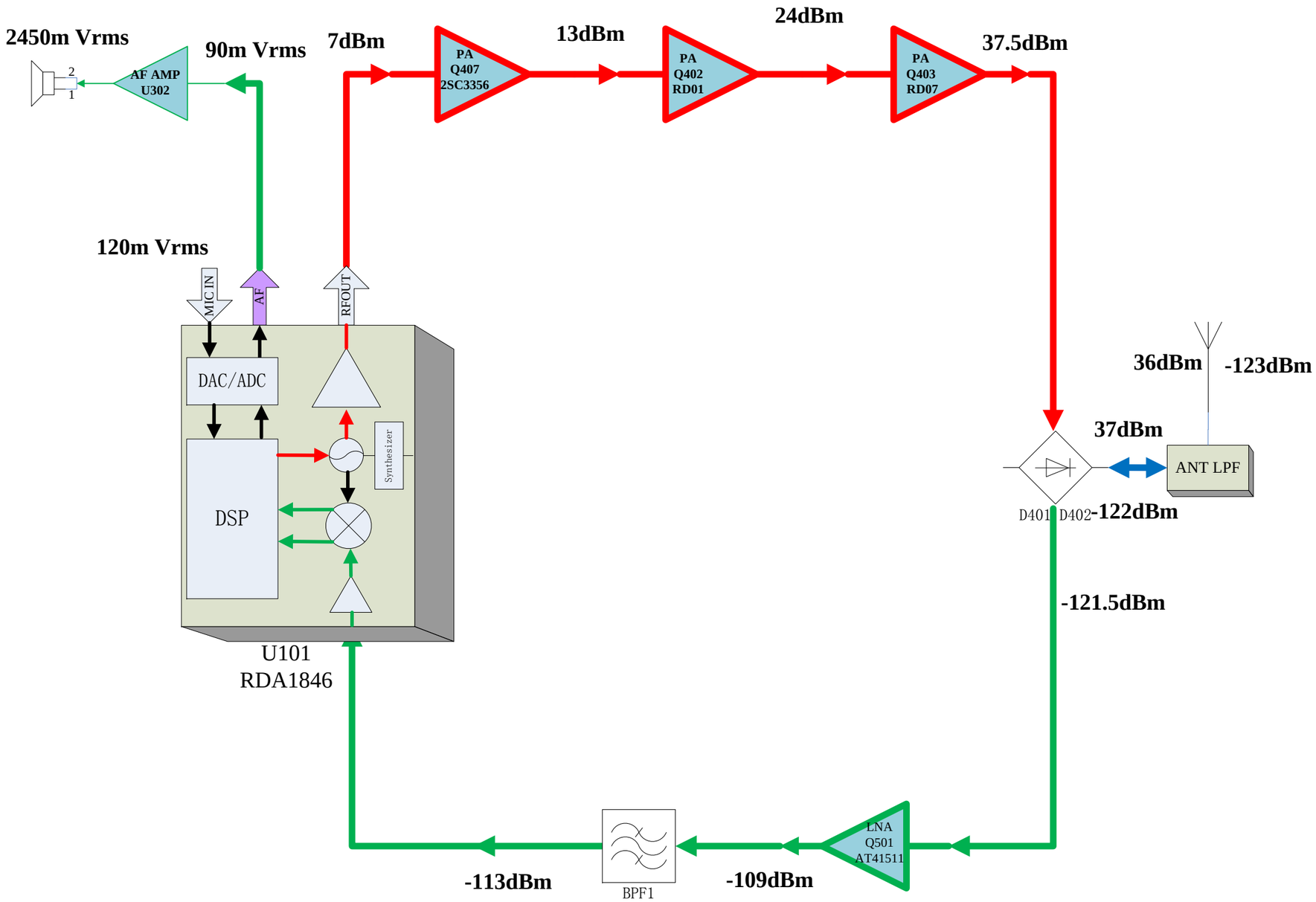
PCB View
Top Layer



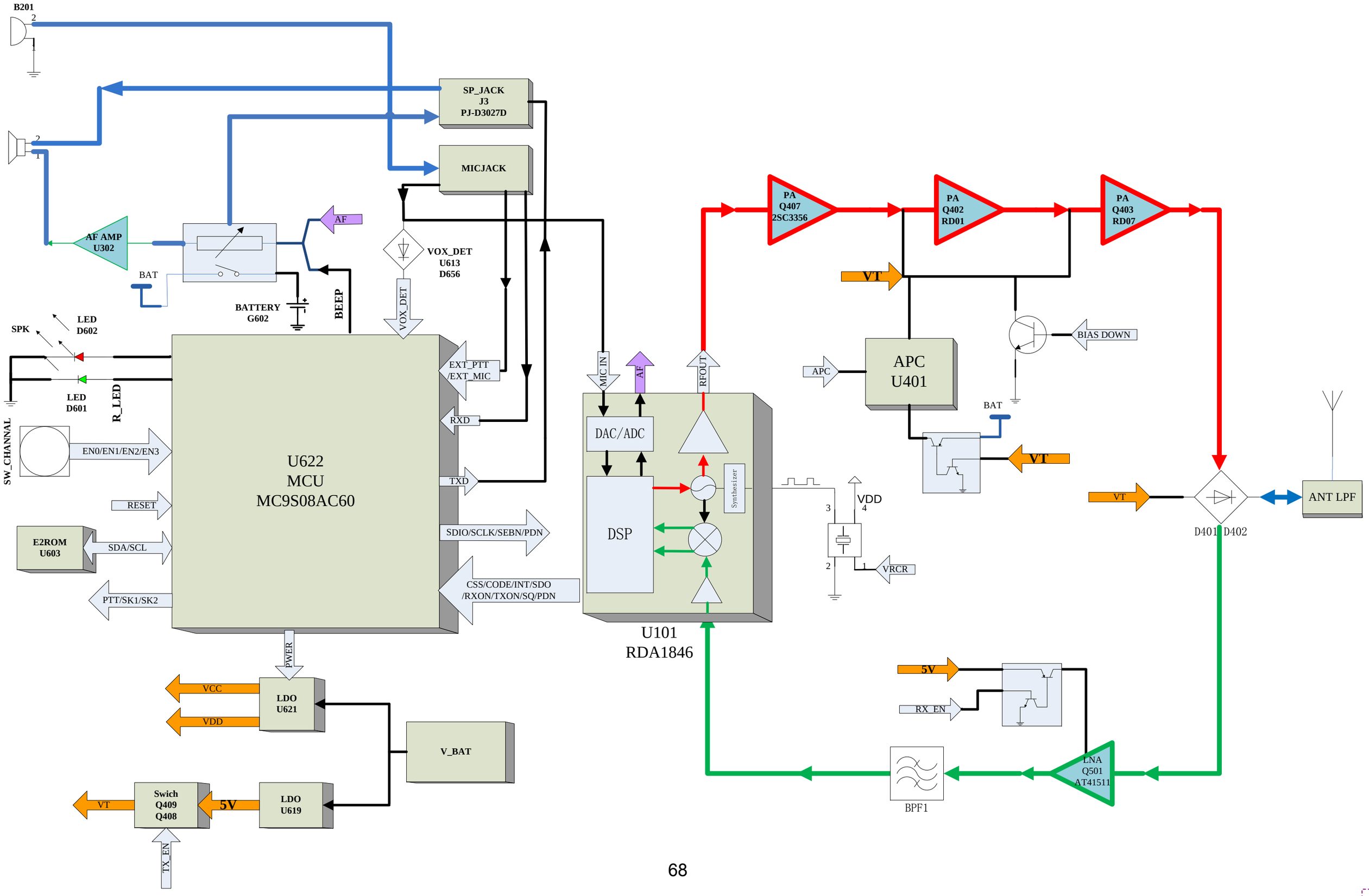
PCB View
Bottom Layer



15. Level Diagram

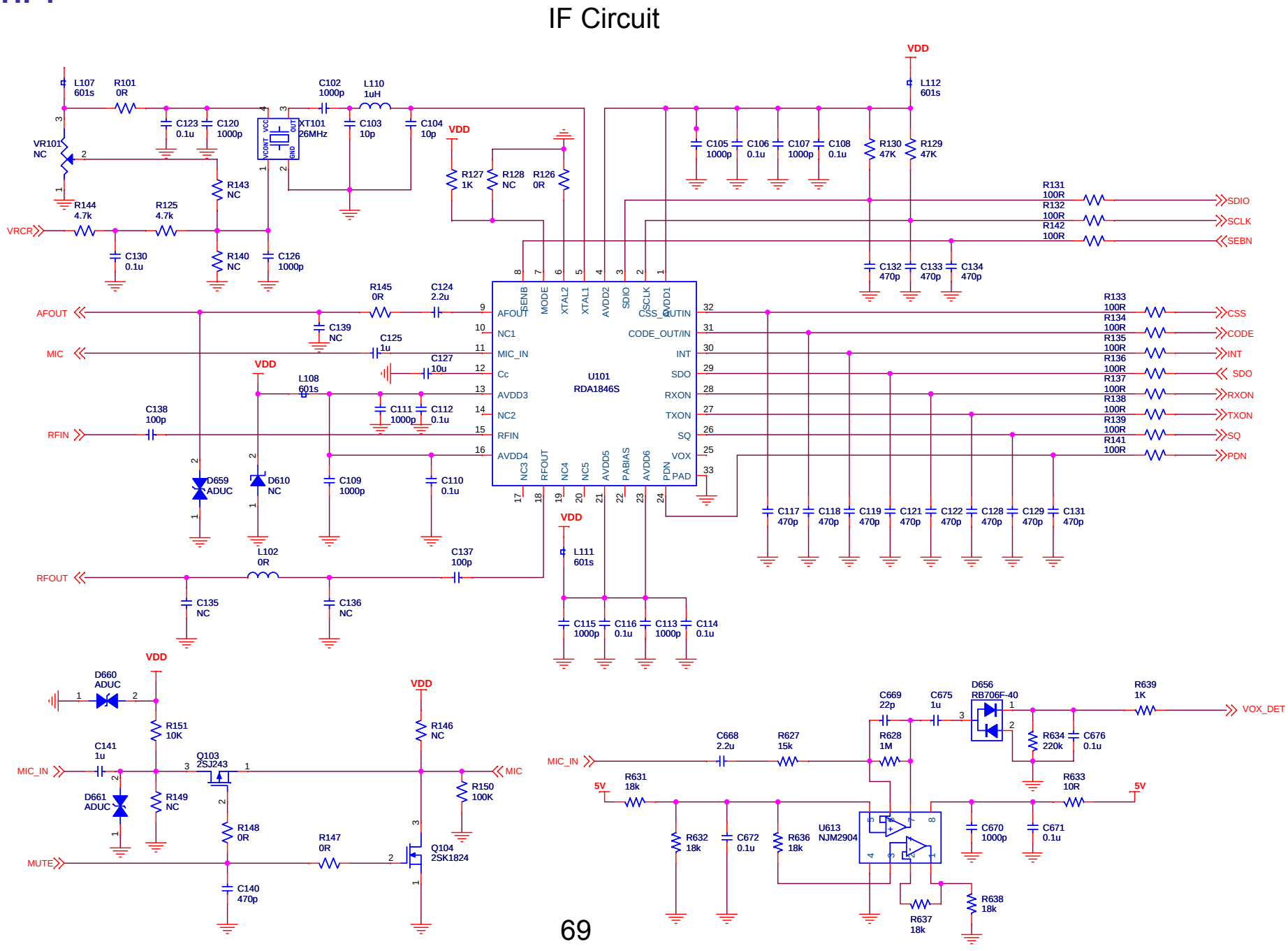


16. Block Diagram

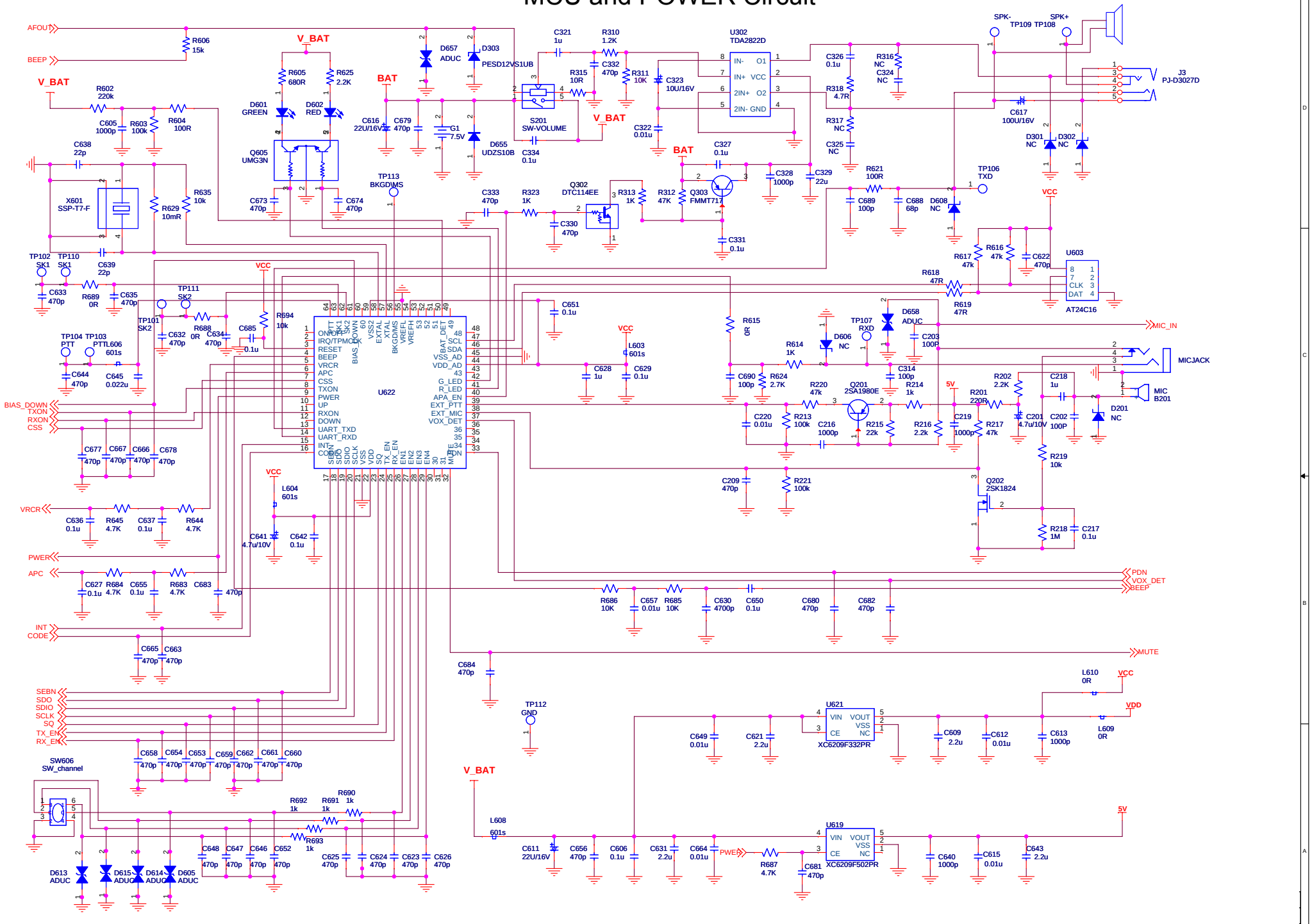


17. Schematic Diagram

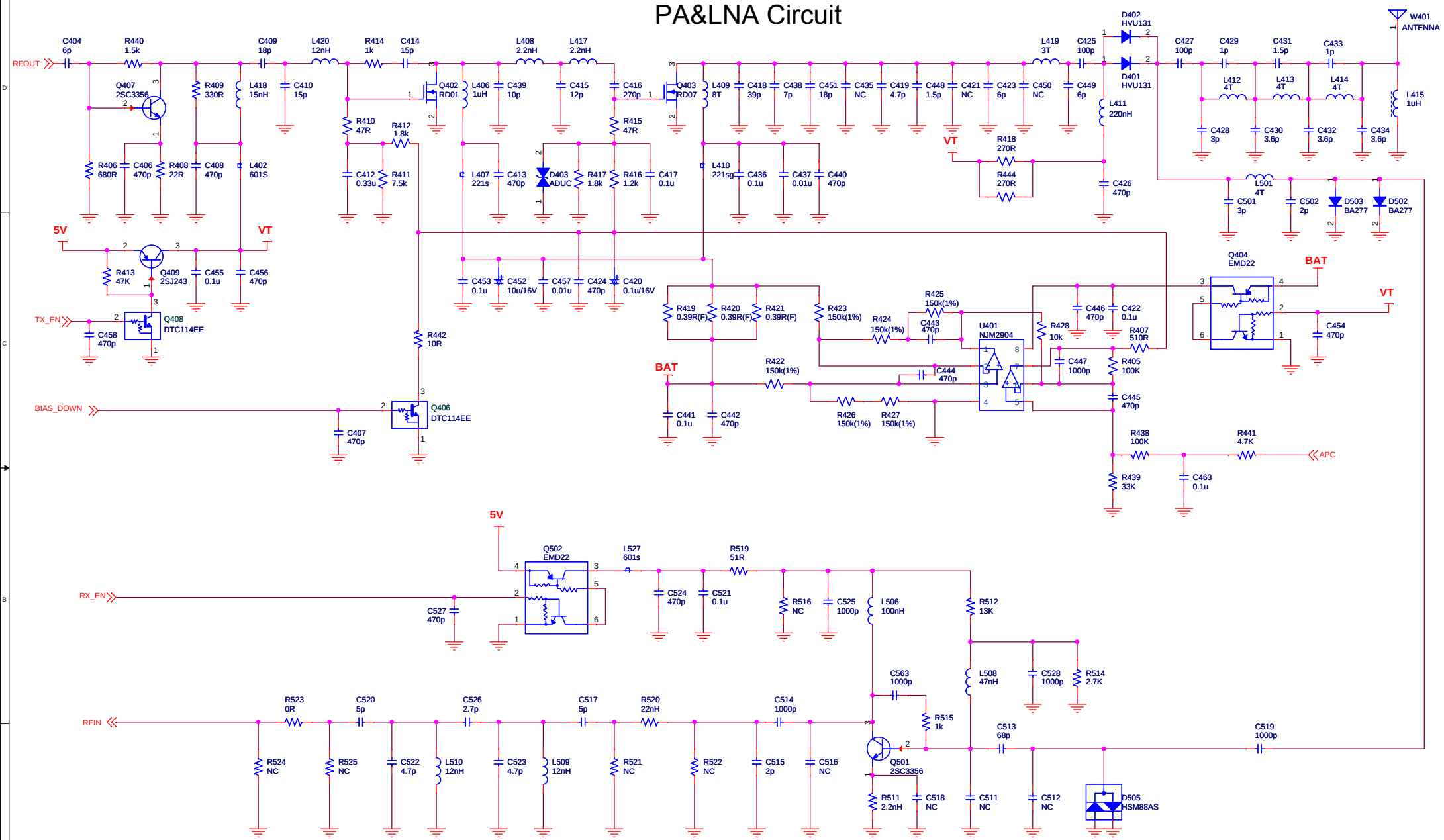
17.1 UHF1



MCU and POWER Circuit

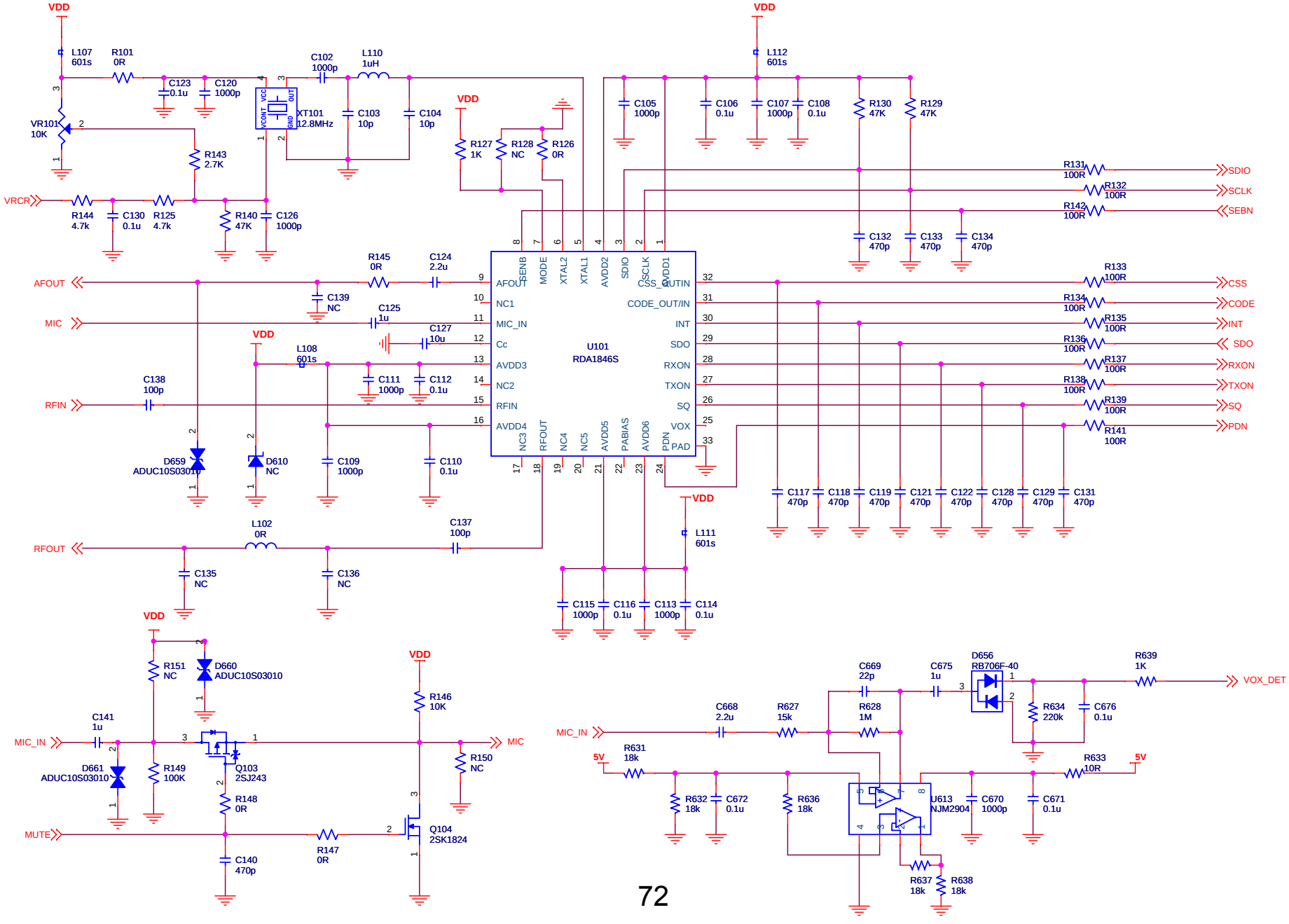


PA&LNA Circuit

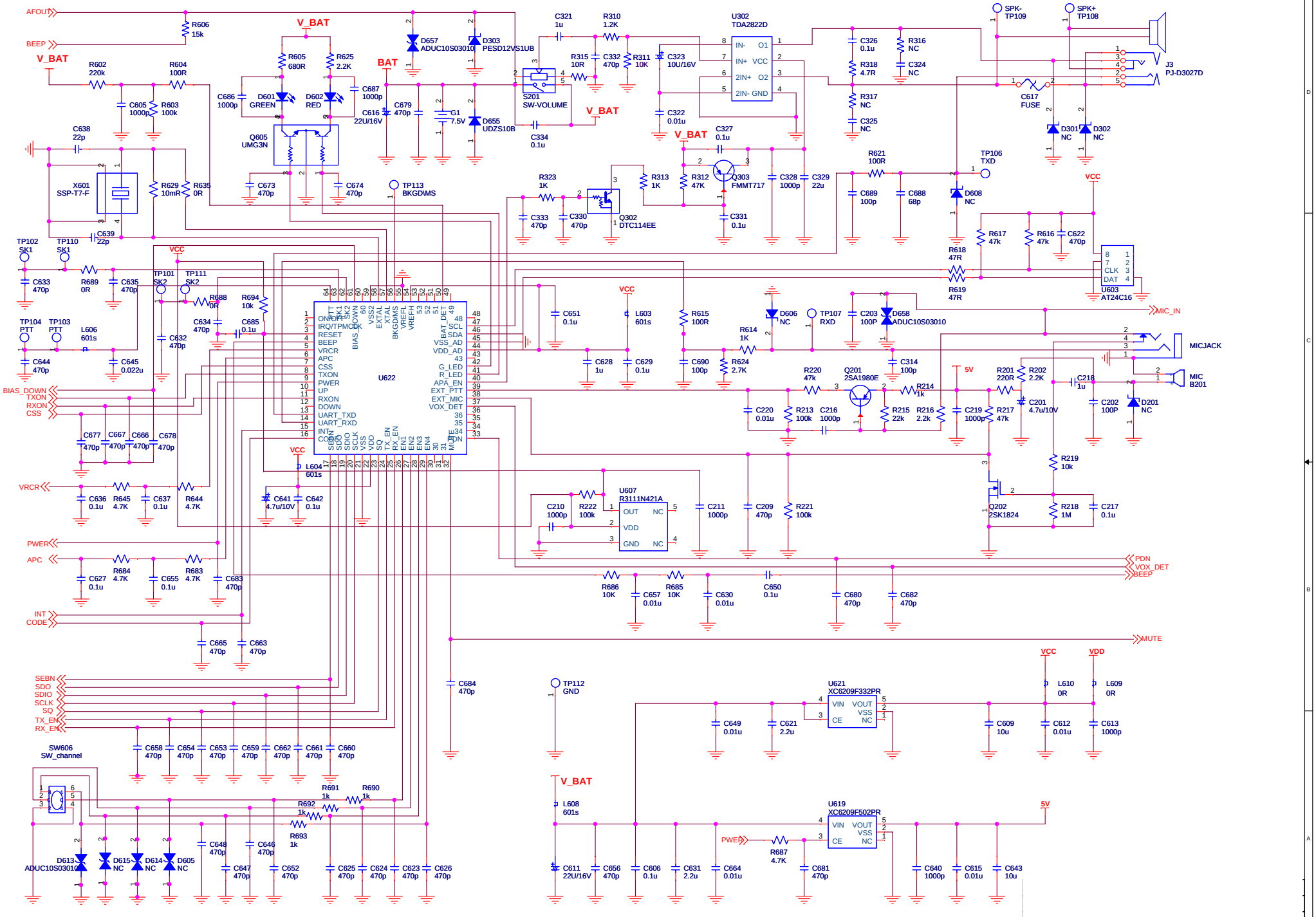


17.2 VHF

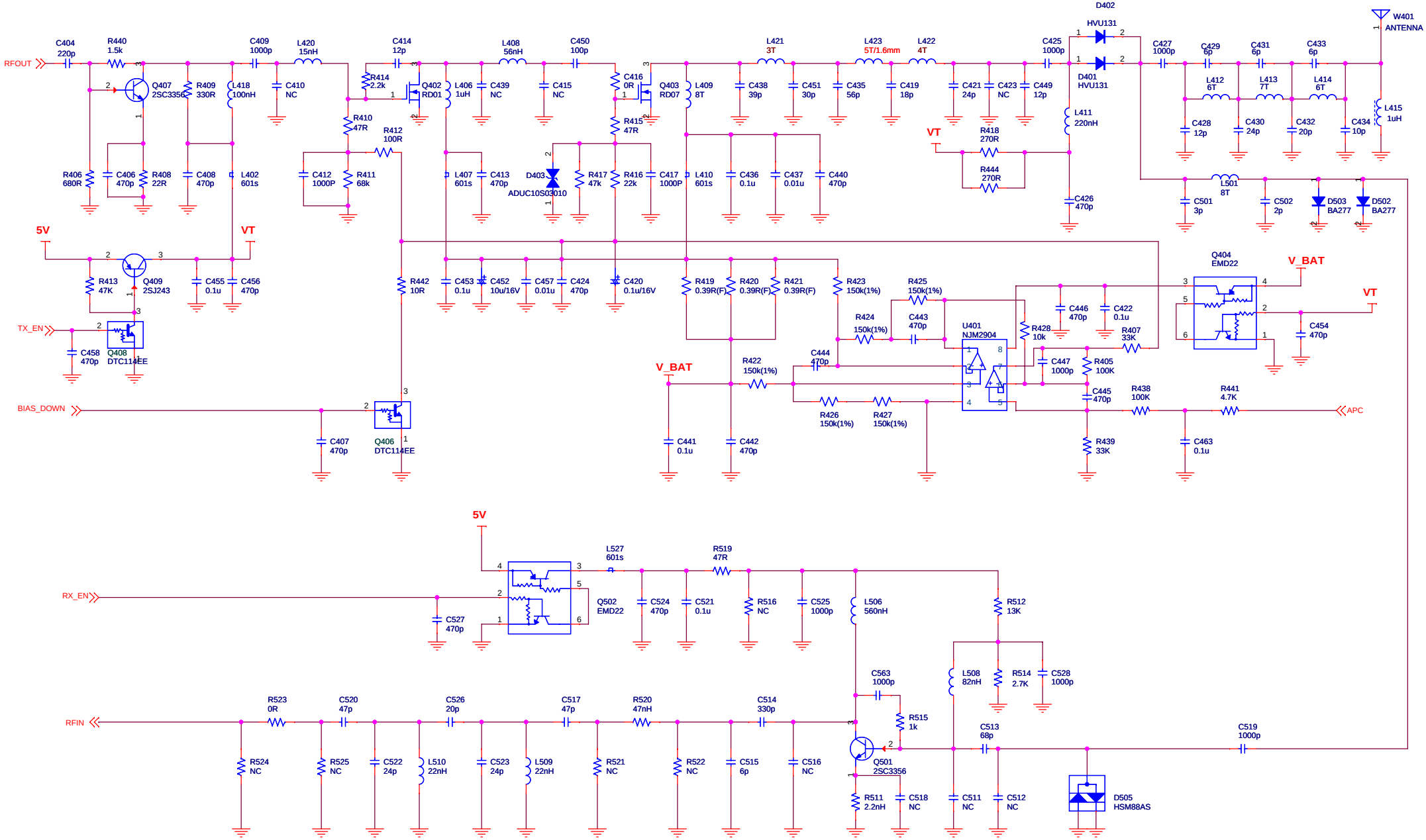
IF Circuit



MCU&PWER Circuit



PA&LNA Circuit



18. Specifications

General	
Frequency Range	UHF1: 400~420MHz, 450~470MHz, 400~470MHz VHF: 136-174MHz
Channel Capacity	16
Channel Spacing	25 KHz /12.5KHz
Operating Voltage	7.4V DC
Battery	1300mAh Li-Ion battery
Battery Life (5-5-90 Duty Cycle)	Above 11 Hours
Operating Temperature	-20℃~+60℃
Dimensions (H×W×D) (with standard battery, without antenna)	113x 54x32mm
Weight (with standard antenna & battery)	250g
Frequency Stability	±2.5ppm
Receiver	
Sensitivity	≤0.224μV
RX S/N	≥45dB/40dB
Adjacent Channel Selectivity	65dB/55dB
Intermodulation	60dB
Spurious Response Rejection	65dB
Rated Audio Power Output	0.5W (Speaker impedance: 16 ohm)
Rated Audio Distortion	≤5% (0.5W)
Transmitter	
RF Power Output	UHF: 4W

	VHF: 5W
Spurious and Harmonics	≤-26dBm
Modulation Limiting	Wide: ≤5KHz; narrow: ≤2.5KHz
FM Noise	≥45db/40dB
Modulation Distortion	≤5%
Adjacent Channel Power	≤-70dB/-60dB

Note

All Specifications are tested according to TIA/EIA-603, and subject to change without notice due to continuous development.

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