HYT

SERVICE MANUAL

TWO-WAY RADIO

TC-610
TC-620

Free hotline:800-830-7020
www. hyt. com. cn

8130061000100
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Contents

General

Manual Scope

This manual is intended for use by experienced technicians familiar with similar types of communication equipment. It contains all service information required for the equipment and is current as of the publication date.

User Safety Information

The following general safety precautions as would normally apply, should be observed during all phases of operation, service and repair of this equipment.

③ This equipment should be serviced by qualified technicians only.

③ Do not transmit until all RF connectors are verified secure and any open connectors are properly terminated.

③ Use only HYT original batteries and chargers.

③ Turn off your radio prior to entering any area with a potentially explosive atmosphere.

③ To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any facility where posted notices instruct you to do so.

③ When instructed to do so, turn off your radio when on board an aircraft. Any use of a radio must be in accordance with airline regulations or crew instructions.

③ To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in areas posted: “Turn off two-way radio.” Obey all signs and instructions.

③ 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.

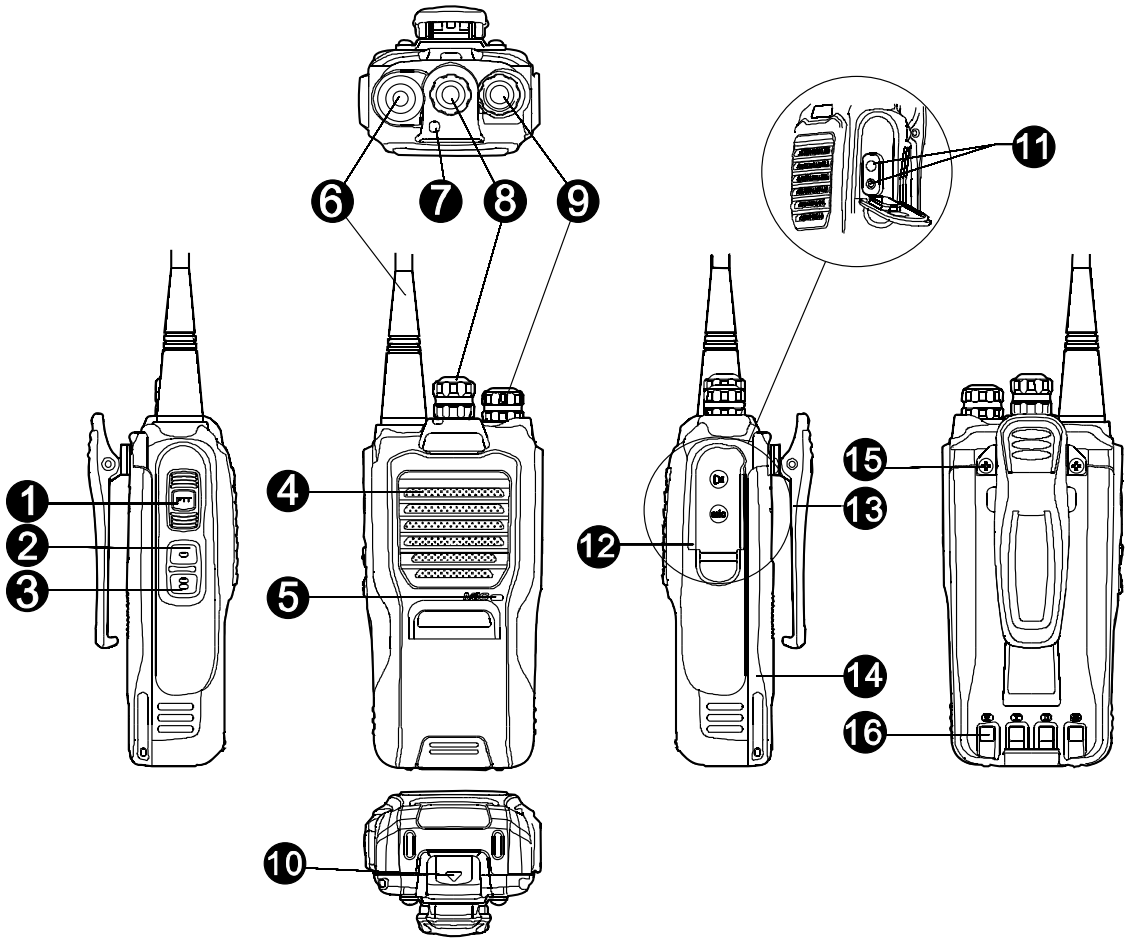
③ Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result.

③ Do not expose the radio to direct sunlight over a long time, nor place it close to heating source.

③ If you wear a radio on your body when transmitting, ensure that the radio and its antenna are at least 2.5cm away from your body.

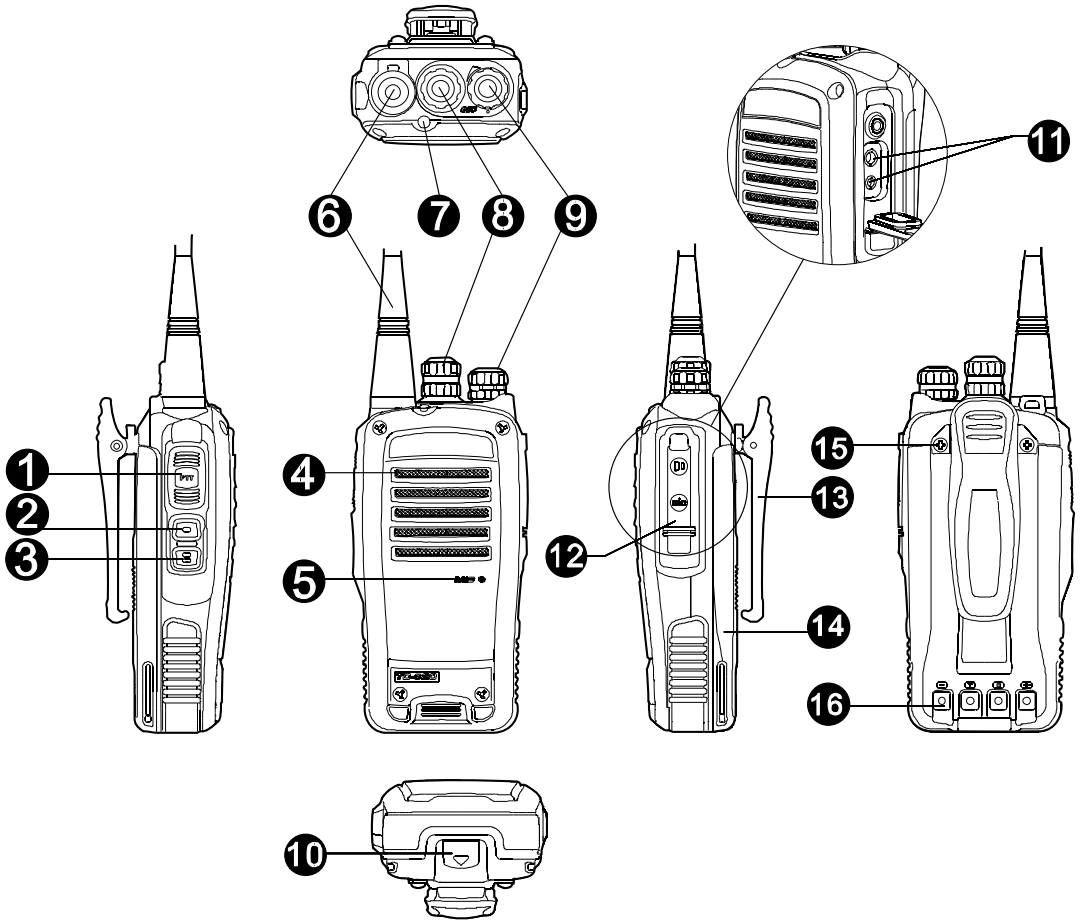
Radio Overview

TC-610



① PTT(Push-to-Talk) Key	② SK1(programmable key)	③ SK2(programmable key)	④ Speaker
⑤ Microphone	⑥ Antenna	⑦ LED Indicator	⑧ Channel Selector Knob
⑨ Radio On-Off/Volume Control Knob	⑩ Battery Latch	⑪ Accessory Jack and Programming Port	⑫ Accessory Cover
⑬ Belt Clip	⑭ Battery	⑮ Screw, Belt Clip	⑯ Charging Piece

TC-620



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(1) PTT (Push-to-Talk) Key

Used to switch between transmit and receive modes. Hold down the PTT key and speak into the microphone to transmit, and release it to receive.

(2) SK1 Key

Side key 1, programmable. Your dealer can assign one function to the key via the programming software.

(3) SK2 Key

Side key 2, programmable. Your dealer can assign one function to the key via the programming software.

(4) Speaker

(5) Microphone

(6) Antenna

(7) LED Indicator

Status		LED Indication and Alert Tone
User Wired Clone	Source Radio: Power on the radio while holding down the SK2 key. Target Radio: Rotate the Radio On-Off knob clockwise to turn the radio on.	The LED flashes orange once.
	Source Radio: Power on the target radio and connect the cloning cable. Then press the SK2 key on the source radio to initiate cloning.	1. The LED flashes red when cloning is in progress. 2. The red LED goes out when cloning is completed. 3. The red LED goes out when cloning fails.
	Target Radio	1. The LED flashes green when cloning is in progress. 2. The green LED goes out when cloning is completed.
Power On		1. The power-on alert tone is heard when the radio is powered on. 2. When the current channel is idle, beeps are heard.
Low Battery Alert		The LED flashes red and the low pitched tone is heard every ten seconds.
Transmitting		1. Red LED. 2. When transmission times out, beeps are heard. 3. TOT Pre-alert: One beep is heard.
Receiving		The LED glows green when carrier presents.

Scanning	1. The LED flashes green every 1 second when detecting. 2. Scan Start Tone (programmable by your dealer): One beep is heard. 3. Scan Stop Tone (programmable by your dealer): One beep is heard. 4. Priority Channel Scan Tone (programmable by your deader): If the radio stays on a priority channel to receive, one beep will be heard.
Programming	Reading: The LED flashes red. Writing: The LED flashes green.
Power Adjust	From High to Low Power: The low pitched tone is heard. From Low to High Power: The high pitched tone is heard
VOX	Enable VOX: The high pitched tone is heard. Disable VOX: The low pitched tone is heard.

(8) Channel Selector Knob

Rotate the knob to select a desired channel among channels 1 to 16.

(9) Radio On-Off/Volume Control Knob

Rotate the knob clockwise to turn the radio on, and rotate the knob fully counter-clockwise until a “click” is heard to turn the radio off.

Turn the knob clockwise to increase the volume, or counter-clockwise to decrease the volume.

(10) Battery Latch

(11) Accessory Jack & Programming Port

(12) Accessory Cover

(13) Belt Clip

(14) Battery

(15) Screw, Belt Clip

(16) Charging Piece

Programmable Functions

The SK1/SK2 key can be assigned with one of the following auxiliary functions by your dealer.

③ None

③ Monitor

③ Monitor Momentary

③ Scan

③ Squelch Off

③ Squelch Off Momentary

③ Power Adjust

③ Battery Power Indication

③ VOX

The following functions are programmed by default at factory:

Key	Operation	TC-610	TC-620
SK1	Short Press	None	None
	Long Press	Battery Power Indication	Battery Power Indication
SK2	Short Press	None	None
	Long Press	Squelch Off Momentary	Squelch Off Momentary

Note:

Short Press: A key is held down for less than 1.5s.

Long Press: A key is held down for 1.5s at least.

Software Specifications

Function Description

1. Available Channels: 1 to 16 channels
2. Channel Spacing: 25KHz/12.5KHz
3. Channel Step: scan channels in steps of 5/6.25/10/12.5KHz
4. Tx/Rx Indication (red/green LED)
5. CTCSS/CDCSS Encode & Decode (CTCSS: 38 groups; CDCSS: 83 groups; the CTCSS squelch tail reverse method is selectable at 180/120 degrees.)
6. Low Battery Alert
7. Auto Battery Save
8. Unlock Detect and Alarm
9. Selectable Squelch Level (0-9)
10. Monitor
11. Time-Out Timer (TOT)
12. Squelch Tail Elimination
13. PC Programming (including PC manual adjustment and PC auto adjustment)
14. High/Low Power Select (2.0/5.0W)
15. Wide/Narrow Band Compatibility
16. Busy Channel Lockout
17. Wired Clone
18. Battery Power Indication
19. Manual Adjustment
20. VOX and Selectable Sensitivity Level (1-5)

Radio Modes

User Mode

User Mode is for conventional communication operations. Turn on the power, and the radio enters User Mode directly.

PC Programming Mode

In User Mode, the PC programming software triggers PC Programming Mode by communication via a special communication protocol. In this mode, functions can be set and parameters can be adjusted via the PC programming software (including user version and factory version).

Wired Clone Mode

Description

Wired Clone Mode is a separate mode. To enter other modes, the radio must be turned off and back on. Wired Clone Mode is classified into User Wired Clone Mode and Factory Wired Clone Mode.

1. User Wired Clone Mode

Connect the two radios with the cloning cable. Power on the source radio while holding down the SK2 key on it. The radio enters Wired Clone Mode in two seconds. Rotate the Radio On-Off knob clockwise to power on the target radio, and the radio enters User Mode. This mode clones the parameter data in EEPROM of the source radio into that of the target radio. The transferred data only includes channel data and shared parameters, excluding adjustment data, information of model version, serial number, etc.

2. Factory Wired Clone Mode

Short out the SELF pin of the source radio's MCU and connect the two radios with the cloning cable. Power on the source radio while holding down the SK2 key on it. The radio enters Wired Clone Mode in two seconds. Rotate the Radio On-Off knob clockwise to power on the target radio, and the radio enters User Mode. The transferred data includes all data in EEPROM except the serial number, and the switch icon of Manual Adjustment Inhibit.

Process

Wired Clone

1. The LED flashes orange once when the source radio enters Wired Clone Mode. Press the SK2 key again to copy data into the target radio.
2. During cloning, the LED of the source radio flashes red, while the LED of the target radio flashes green. When cloning is completed, the red LED of the source radio and green LED of the target radio go out, preparing for the next cloning.
3. During cloning, if an abnormal situation occurs, cloning will be terminated. The red LED of the source radio goes out, preparing for the next cloning.
4. When cloning is completed, the source radio returns to the preparing status. Press the SK2 key to clone again.

Manual Adjustment Mode

Power on the radio while holding down the PTT key and SK2 key. The radio enters Manual Adjustment Mode.

Note: The operation is controlled by the switch of Manual Adjustment Inhibit in the programming software. When the adjustment function is disabled, the radio can not enter this mode. This can prevent radio users' accidental entry and parameter changes, which will affect the performances of the radio.

During production, disable the adjustment switch, to prevent radio users from accidentally entering and changing adjustment values after the values are adjusted. The adjustment values can only be reset in the factory set mode and are adjusted again according to the requirements. They can not be changed in any other mode.

Adjustment Description

1. Enter Manual Adjustment Mode

Hold down the PTT key and SK2 key simultaneously for 2s at least to power on the radio. The orange LED (red LED + green LED) lights, indicating the entry into the adjustment mode. Release the keys to

enter item N (N is dependent on the position of the Channel Selector knob) of Tx Adjustment Items in the adjustment mode. The radio stays at Tx Adjustment Items by default and the LED glows red.

Note: The adjustment item CH15 is invalid, while CH16 is used to toggle between Tx Adjustment Items and Rx Adjustment Items. If the Channel Selector knob locates at CH15 or CH16, the LED glows neither red nor green.

2. Switch between Tx Adjustment Items and Rx Adjustment Items

Rotate the Channel Selector knob to CH16. Hold down the PTT key for 1.5s at least to toggle between Tx Adjustment Items and Rx Adjustment Items. If the LED lights red upon key press, the radio switches to Tx Adjustment Items. If the LED lights green upon key press, the radio switches to Rx Adjustment Items.

The LED glows red for Tx Adjustment Items.

The LED glows green for Rx Adjustment Items.

3. Switch among Tx/Rx Adjustment Items

Switch via the Channel Selector knob.

Tx: CH1-CH14 indicate Tx preset power, Tx low power, Tx medium power, Tx high power, CDCSS deviation, CTCSS deviation (low), CTCSS deviation (medium), CTCSS deviation (high), VOX 1, VOX 2, VOX 3, VOX 4, VOX 5 and Tx low voltage threshold respectively.

Note: The Tx medium power of TC-610/620 is not required to be adjusted. Please skip this item.

The LED glows red for adjustment items CH1-CH14.

CH15 is invalid and the red LED goes out.

Rx: CH1-CH8 indicate SQL ON 1, SQL ON 5, SQL ON 9, SQL OFF 1, SQL OFF 5, SQL OFF 9, Rx low voltage threshold and Rx bandpass filter respectively.

The LED glows green for adjustment items CH1-CH8.

CH9-CH15 are invalid and the green LED goes out.

4. Wide/Narrow Band Switch in an Adjustment Item

In an adjustment item, hold down the PTT key for 1.5s at least. The LED flashes orange, indicating the long key press is valid. Release the key and the radio switches between wide band and narrow band cyclically. After the wide/narrow band switch, the adjustment point is regarded as the first frequency of the current band by default.

5. Frequency Switch in a Band of an Adjustment Item

In a band of an adjustment item, hold down the PTT key for less than 1.5s. The LED flashes orange, indicating the short key press is valid. The radio switches frequencies one after another.

6. Plus-Minus of the Adjustment Value in a Band of an Adjustment Item

In a band of an adjustment item, short press SK1, and the adjustment value increases in steps of 1. Hold down SK1, and the adjustment value increases continuously in steps of 1. When the adjustment value gets to the maximum value allowed by the adjustment item, the adjustment value will remain at the maximum value.

In a band of an adjustment item, short press SK2, and the adjustment value decreases in steps of 1. Hold down SK1, and the adjustment value decreases continuously in steps of 1. When the adjustment

value gets to the minimum value allowed by the adjustment item, the adjustment value will remain at the minimum value.

7. Process on Several Special Items

Tx: CH9-CH14 indicate VOX 1, VOX 2, VOX 3, VOX 4, VOX 5 and Tx low voltage threshold respectively, which are related with the AD sampling. After the above adjustment items are entered, press SK1 or SK2 to start the AD sampling (including calculation process) once. Rotate the Channel Selector knob to save the current AD sampling value. If SK1 or SK2 is not pressed, the AD sampling will not be started and the previous adjustment values can not be updated.

Rx: CH1-CH8 indicate SQL ON 1, SQL ON 5, SQL ON 9, SQL OFF 1, SQL OFF 5, SQL OFF 9 and Rx low voltage threshold respectively, which are related with the AD sampling. After the above adjustment items are entered, press SK1 or SK2 to start the AD sampling (including calculation process) once. Rotate the Channel Selector knob to save the current AD sampling value. If SK1 or SK2 is not pressed, the AD sampling will not be started and the previous adjustment values can not be updated.

8. Key Description

Short Press: A key is held down for less than 1.5s.

Long Press: A key is held down for 1.5s at least.

Circuit Description

Realization Methods for Basic Functional Modules

PLL Frequency Synthesizer

The PLL circuit mainly generates the local oscillator signal for reception and the RF carrier signal for transmission. It consists of the VCO oscillator circuit and baseband processor and enables frequency tracking and channel change under the control of MCU signal.

1. PLL

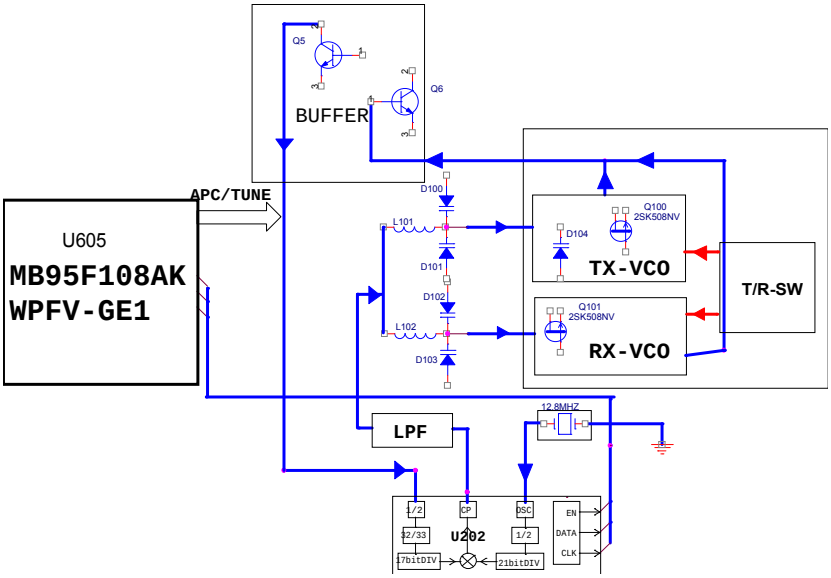


Figure 2

The step frequency of the PLL circuit is 5.0KHz, 6.25KHz, 10.0KHz or 12.5KHz. Therefore, the reference oscillator signal (38.4MHz) is divided into 5.0KHz, 6.25KHz, 10.0KHz or 12.5KHz reference frequency by a fixed counter at U202 in PLL. The output signal from VCO passes through buffer Q102 followed by amplifier Q103 and enters U202 in PLL for frequency division by a variable divider. The signal derived from the frequency division is compared with the reference frequency at the phase comparator PD in PLL. Then the output signal from the phase comparator is filtered by a low-pass filter and passed to varactors D100, D101, D102 and D103 of VCO, to control the output frequency.

2. VCO

The VCO section is realized by the oscillator circuit of three-point capacitance.

The oscillator frequency of VCO is generated by Q100 in transmit mode and by Q101 in receive mode. U202 generates a control voltage via the phase comparator to control varactors (D100 and D101 in transmit mode; D102 and D103 in receive mode), so that the oscillator frequency of VCO is made consistent with the preset frequency in MCU within a broader frequency range.

Transistor Q652 toggles between transmit and receive modes under the control of T/R. In transmit mode, T/R is set to low level, causing Q653 to be on and Q100 to operate. In receive mode, T/R is set to high

level, causing Q653 to be off and Q101 to operate. The output from Q100 and Q101 is amplified by Q102 and sent to the buffer amplifier for process.

If PLL is unlocked, the LD pin of U202 outputs low level. When this situation is detected by the microprocessor, transmit/receive operations are inhibited and a warning tone is heard.

RF Power Amplifier Circuit (Tx Section)

Diagram for RF Power Amplifier Circuit

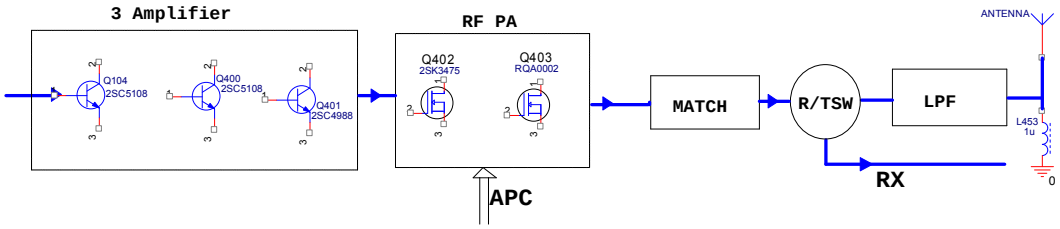


Figure 3

To obtain the required RF power, the output RF signal from VCO is amplified by driver amplifiers Q400 and Q401 after passing through buffer Q104. The amplified RF signal enters driver Q402, which performs power pre-amplification on the input signal, to derive a certain power to drive the final-stage power amplifier. Then the final-stage power amplifier Q403 performs power amplification again on the input RF signal to derive the required power. Finally, the amplified RF signal passes through Tx-Rx switching diode D401 followed by the LC low-pass filter circuit (LPF). The signal is transmitted through the antenna after ultraharmonic is removed by the LPF.

Rx Amplifier and Mixer Circuit (Rx Section)

1. Rx Amplifier (LNA) and RF Bandpass Network (BPF)

To obtain better frequency band selectivity, the Rx bandpass utilizes multi-level electrically tunable circuit. The diagram is shown below:

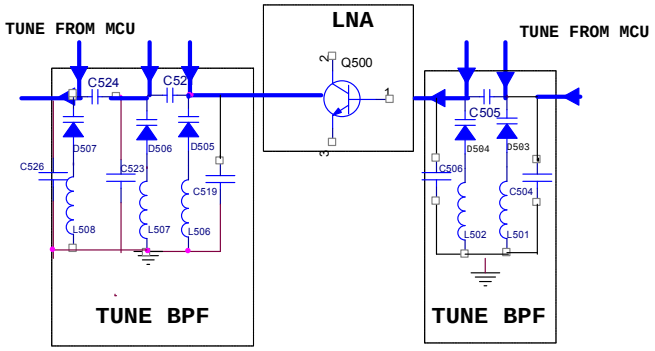


Figure 4

The Rx signal input from the antenna is filtered to remove the out-of-band signal at the electrically tunable bandpass network (D503, D504, L501, L502, C503, C505 and 507) and then amplified by low-noise amplifier (LNA) Q500 to obtain a certain level required for receiving. The signal passes through the three-level bandpass network (mainly consisting of D505, D506, D507 and periphery components) to effectively restrain the out-of-band interference and to derive pure Rx RF signal, which

will be fed to the mixer stage.

MCU provides the electrically tunable control signal, the required level of which can be obtained through table looking up or formula computing, to accurately control varactors to operate within proper voltage range. The control signal forms a bandpass filter with the periphery inductors and capacitors and tracks Rx frequency according to the change of MCU control voltage, to meet the requirements of preset Rx sensitivity and out-of-band rejection.

2. Mixer Circuit (MIXER) and IF Bandpass Network (BPF)

Diagram for Mixer Circuit

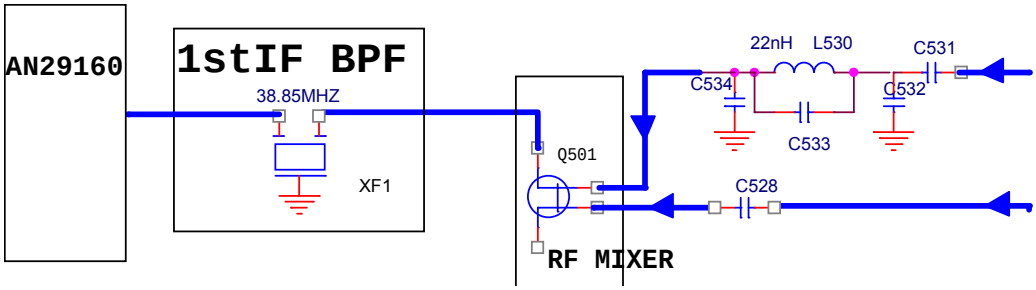


Figure 5

The mixer circuit mainly processes the local oscillator signal and Rx RF signal output by VCO. The first IF from the mixer circuit is used by the demodulator to discriminate frequency. Here the active mixer is utilized.

The mixer transistor (Q501) utilizes dual gate MOS FET (3SK318) and has better noise characteristics and square law characteristics. The isolation between the local oscillator signal and the Rx signal is high. To ensure proper sensitivity, the mixer transistor should have a certain gain, which can be tuned delicately via offset.

The output signal from the mixer circuit passes through inductor L509 to remove residual spurious and then enters the first IF filter, which utilizes the first-class crystal filter to ensure sufficient bandwidth and excellent selectivity. The signal finally enters baseband processor AN29160 for demodulation.

APC/TUNE Automatic Power Control Circuit

Diagram for the Circuit:

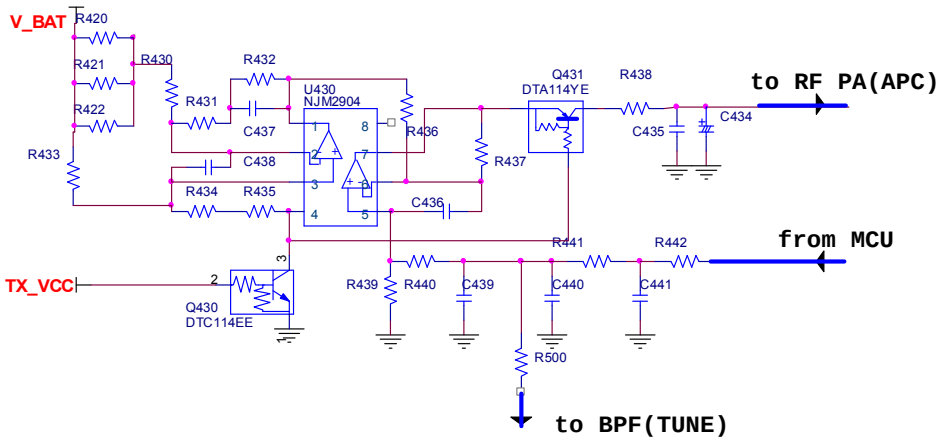


Figure 6

According to the selected channel, MCU outputs the corresponding PWM waveform, which is reshaped by the RC filter network (R441, R442, C440 and C441) to derive the level for the APC/TUNE control signal. One part is used as the control voltage of the Rx electrically tunable circuit after passing through R500. In transmit mode, the level is voltage-divided by R439 and R440 to obtain the APC reference voltage.

The transmit current passes through R420, R421 and R422 to derive the error detect voltage. The voltage is amplified by operational amplifier U430 and then compared with the APC reference voltage to output the APC control voltage and to form control power of closed-loop negative feedback when the transmit current changes.

Audio and Signalling Process Circuit

Baseband processor AN29160 has high integration level and powerful functions. Many of the process functions (as VCO level detect & output, SQ signal level detect & output, Tx-Rx audio process switch, audio amplifier, etc) can be realized inside and can be used in both receive and transmit modes.

1. Diagram for Tx Audio & Signalling Process

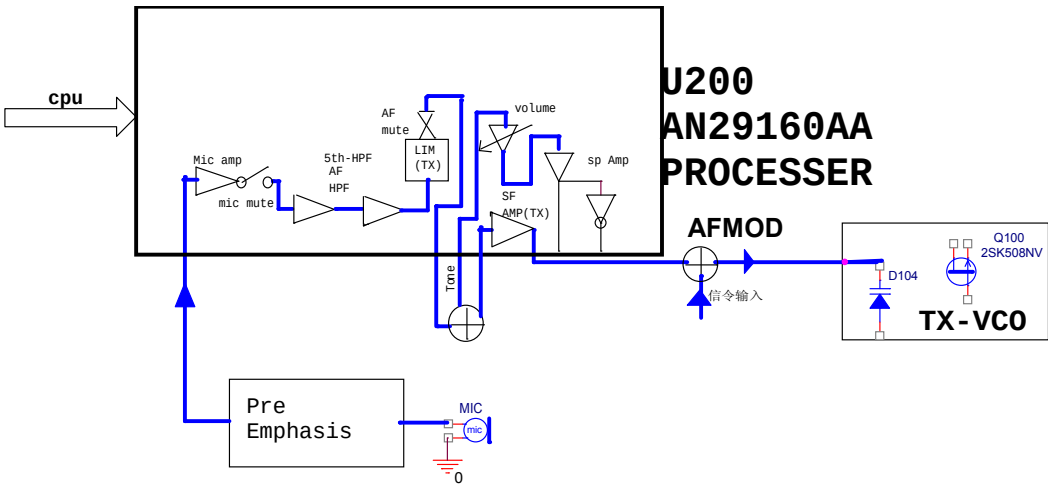


Figure 7

Tx Audio Process: The audio signal input from the MIC is converted to electrical signal through the audioelectric conversion of MIC and the amplitude limit is amplified at U200 after the signal is pre-emphasized. The processed signal goes to the low-pass filter circuit to remove frequencies above 3KHz and then goes to VCO for direct frequency modulation after passing through potentiometer VR200.

Tx Sinalling Process: MCU outputs, via the QTO port, signalling encoder waveform, which is divided into two parts for modulation after passing through the RC network. One part is used to modulate PLL reference frequency oscillator directly, while the other part is used to modulate VCO. VR260 balances the modulation and adjusts the signal amplitude ratio of one part to the other, which optimizes the singalling waveform modulated on the carrier.

2. Diagram for Rx Audio & Signalling Process

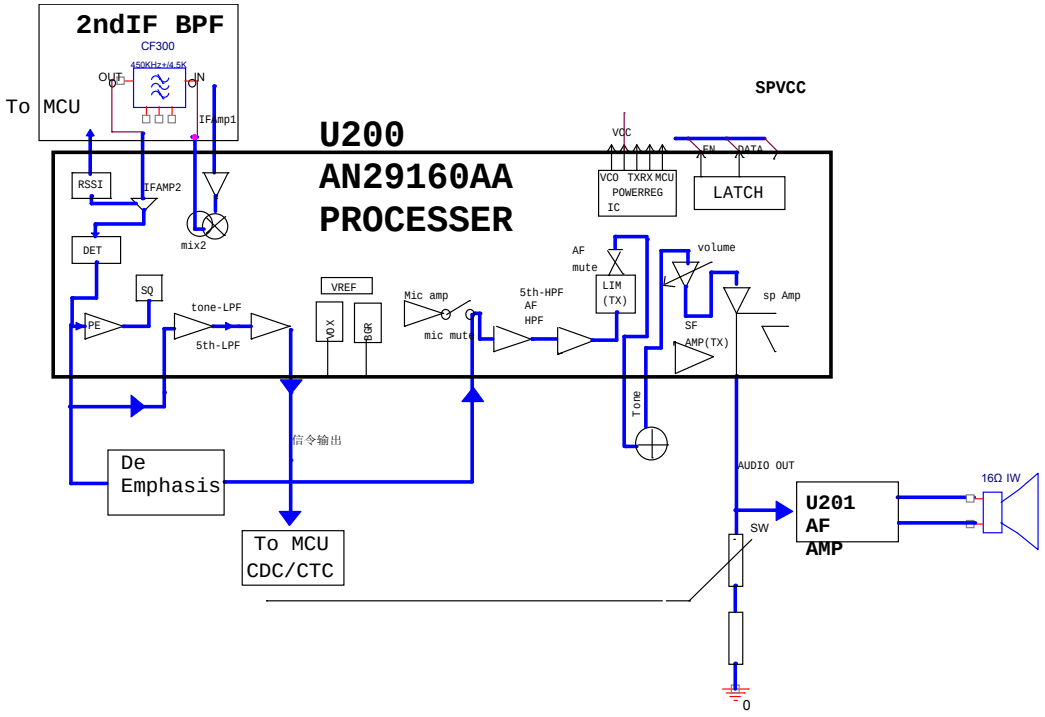


Figure 8

U200 outputs the initial audio signal (including noise, signalling, audio, etc) after performing frequency-discrimination and demodulation on the received signal. Therefore, the audio process is divided into three parts:

Rx Audio Process: One part of the audio signal output by U200 is fed to the RC low-pass filter and de-emphasis circuit and then amplified at U200. The audio signal is recovered after frequencies below 300Hz are removed at U200. The recovered audio signal is adjusted by the potentiometer and then goes to audio power amplifier U201, which amplifies power for the input audio signal to drive the speaker directly. To obtain higher power, the BTL bridge dual-end output is utilized.

Rx Signalling Process: One part of the audio signal output by U200 is fed to the 300Hz low-pass filter circuit (U640). After audio signals above 300Hz are removed, CTCSS/CDCSS goes to the QTIN pin of CPU, which decodes the input signals.

Nuisance Signal Process: One part of the audio signal output by U200 goes to U200 again. After the signal is filtered, amplified and rectified inside U200, a DC voltage signal (SQ) corresponding to the noise component is derived. The DC signal is fed to the BUSY pin of MCU via the ND pin of U200. Then MCU processes the input signal.

MCU Control Section

The diagram for the MCU control section is shown below. MCU works on the 7.3728MHz clock frequency.

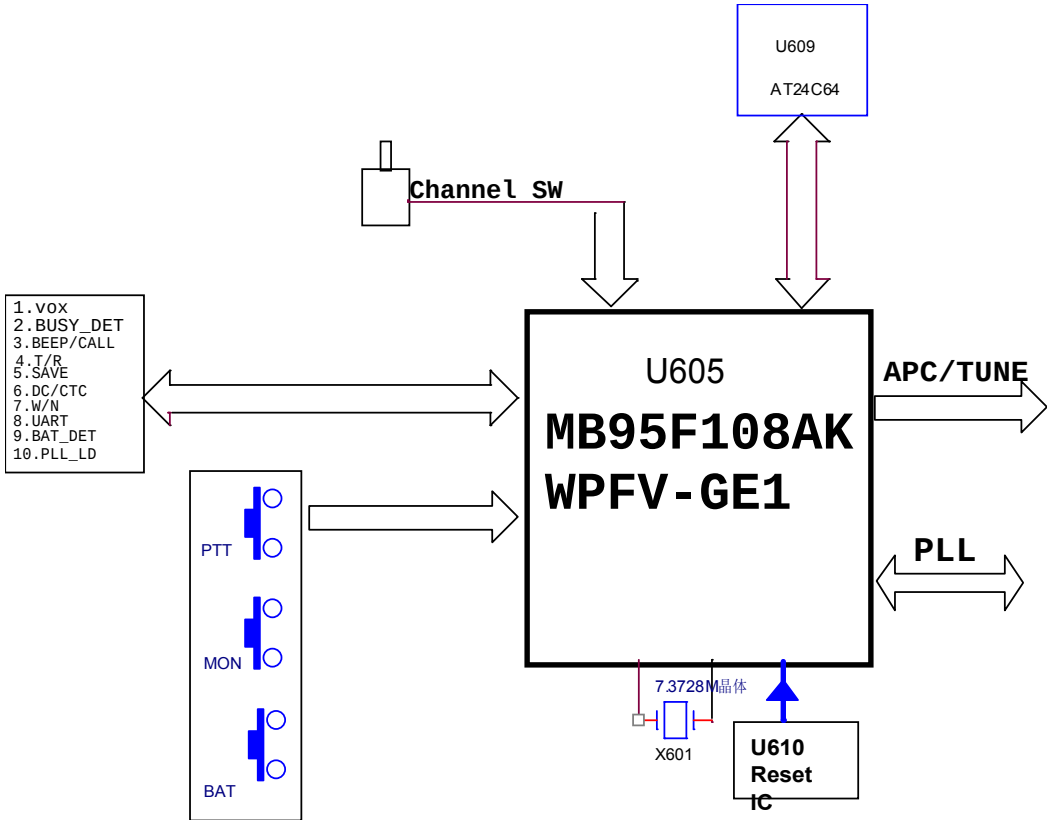


Figure 9

The MCU control section is composed of MCU, EEPROM, RESET IC, keys, Channel Selector knob, etc. Main functions realized by this circuit are:

1. Control Signal:
   - Control of battery save mode
   - Control of high/low power select
   - Control of wide/narrow band select
   - Control of Tx-Rx switch
   - Control of APC/TUNE output voltage
   - Control of Tx power supply and power supply of audio power amplifier
   - Control of squelch ON detect
2. Signal Detect
   - Detect of external PTT, MONI and VOX enable
   - Detect of PLL unlock (UL)
   - Detect of VOX ON level
   - Detect of battery power alert
   - Detect of external earpiece enable and check

3. Data Transmission and Process

EEPROM data initiation

Programming data transmission

Encode process of Channel Selector knob

Signalling encode and decode

Data transmission of baseband processor (PLL)

Power Supply Process

Diagram for the Circuit

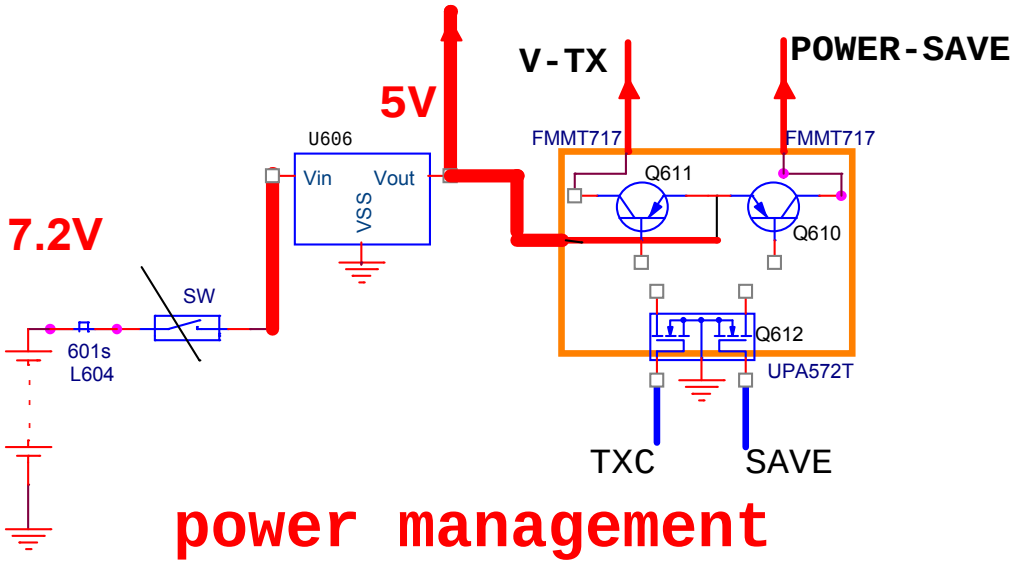


Figure 10

After the radio is powered on, the battery voltage is provided to the RF power amplifier and audio power amplifier, to meet the requirements of sufficient power amplification after filtered by L604 and C682. Another path is input with the 5V regulator (U606) and outputs VCC_5V voltage for use by MCU and the baseband processor after regulated. Because the radio works in half duplex mode, it is required to control the Tx and Rx power supply alternately. To meet the requirement of the battery save mode, MCU should output a pulse signal with fixed duty factor (control signal of SAVE). When the SAVE signal of MCU is of high level, Q610 is on and provides a 5V voltage (V_SAVE) for the operating circuit. PLL and the receive circuit operate. When the SAVE signal is a pulse signal, the radio enters the battery save mode. When transmitting, TXC, control signal of CPU, is of high level. Q611 is on and provides a 5V voltage (TX_VCC) for the transmit circuit. The transmit circuit operates.

Power supplies of the Tx section and Rx section both have symmetrical regulation measures. When the load change changes the output voltage/current, the regulator closed-loop feedback circuit operates, regulating the output voltage at 5V.

VOX Realization

The diagram is shown below:

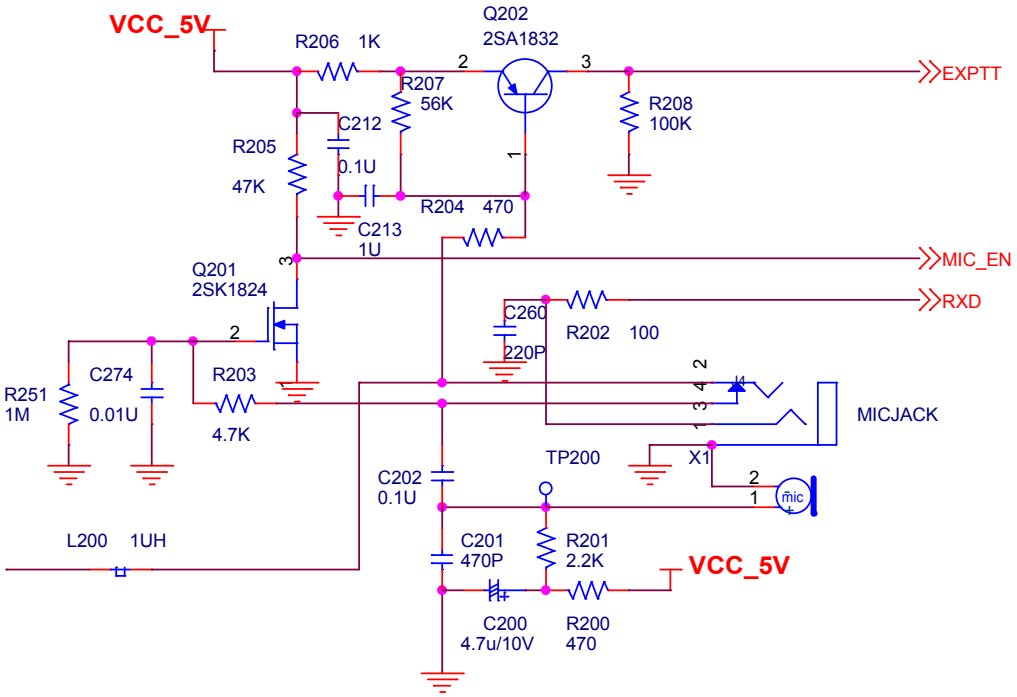


Figure 11

After the function key VOX is held down, the radio enters the VOX mode. The VOX function can only be enabled when MCU detects that MIC enable signal (MIC_EN) and external VOX enable signal (EXT-PTT) switch from low level to high level almost at the same time (within hundreds of milliseconds). Otherwise, it is detected as the earpiece without VOX and the VOX function is off.

1) When the earpiece with VOX is inserted into the accessory jack, Q201 is off. MIC_EN switches from low level to high level and Q202 completes the circuit with R204 and the external earpiece simultaneously. Q202 is on and EXT-PTT switches from low level to high level, which is detected by MCU as the insert of an earpiece with VOX. The VOX function is enabled. When the VOX detect level (5 levels available) meets the preset requirements, the radio transmits and the audio signal goes to baseband processor AN29160 through the process path.
2) If an earpiece without VOX (earpiece with PTT) is inserted, Q201 is off. MIC_EN switches from low level to high level, but Q202 can not complete the circuit and keeps the cut-off status. EXT-PTT is of low level. MCU detects as the earpiece without VOX and the radio returns to normal mode. Press the PTT key on the earpiece to transmit.

CPU Pins

Pin No.	Pin Name	TC-610	TC-620	I/O	Description
1	AVcc	Vcc	Vcc		Power supply pin for A/D, connecting power supply
2	AVR	Vcc	Vcc		A/D reference input pin, connecting power supply
3	PE3/INT13	PTT	PTT	I	PTT key (connected with pull-up resistor) (valid at low level)
4	PE2/INT12	A_KEY	A_KEY	I	SK1, programmable function key (connected with pull-up resistor) (valid at low level)）
5	PE1/INT11	EXT-PTT	EXT-PTT	I	PTT key on the earpiece (connected with pull-down resistor) (valid at high level)）
6	PE0/INT10	B_KEY	B_KEY	I	SK2, programmable function key (connected with pull-up resistor) (valid at low level)
7	P83	ENC3	ENC3	I	Encoder input of channel selector knob (connected with pull-up resistor)
8	P82	ENC2	ENC2	I	
9	P81	ENC1	ENC1	I	
10	P80	ENC0	ENC0	I	
11	P71/TI0	T/R	T/R	O	Tx-Rx switch control H(R)/L(T)
12	P70/TO0	Reserve	Reserve	O	Reserved
13	MOD	For down -loading	For down -loading	I	Operating mode designation pin. When downloading, this pin is connected with Vcc and a resistor of 47K is also connected between the pin and the grounded Vss. When not downloading, only a resistor of 47K is connected between the pin and the grounded Vss.
14	X0	OSC0	OSC0		Connecting pin of 7.3728MHz master crystal oscillator
15	X1	OSC1	OSC1		
16	Vss	GND	GND		Power supply (GND) pin (when downloading, it is connected with the GND downloading port signal.)
17	Vcc	VCC	VCC		MCU 5V power supply (when downloading, it is connected with the VCC downloading port signal)

18	PG0	C	C		This port can not be used as IO and a capacitor is connected between the port and the grounded Vss.
19	PG2/X1A	OSC32K	OSC32K		Subsystem clock pin (reserved）
20	PG1/X0A	OSC32K	OSC32K		
21	/RST	RESET	RESET	I	Reset (when downloading, it is connected with the RSTX downloading port signal.)
22	P00/INT00	Reserve	Reserve	O	Reserved
23	P01/INT01	Reserve	Reserve	O	
24	P02/INT02	Reserve	Reserve	O	
25	P03/INT03	Reserve	Reserve	O	
26	P04/INT04	PLLEN2	PLLEN2	I/O	PLL ENABLE
27	P05/INT05	PLLDATA2	PLLDATA2	I/O	PLL DATA
28	P06/INT06	PLLCLK2	PLLCLK2	I/O	PLL CLOCK
29	P07/INT07	UL2	UL2	I/O	TB31202 PLL circuit unlock detect (H: Lock L: Unlock) (connected with pull-up resistor)
30	P10/UI0	RXD	RXD	I	UART RX (when downloading, it is connected with the UI downloading port signal.)
31	P11/UO0	TXD	TXD	O	UART TX (when downloading, it is connected with the UO downloading port signal.)
32	P12/UCK0	Reserve	Reserve	O	Reserved
33	P13/TRG0/ADTG	Reserve	Reserve	I	Reserved
34	P14/PPG0	MIC_EN	MIC_EN	I	Check whether the MIC is connected (connected with pull-down resistor) (valid at high level)
35	P20/PPG00	CTC_DCS	CTC_DCS	PWM	CTCSS/CDCSS output
36	P21/PPG01	Reserve	Reserve	O	Reserved
37	P22/TO00	TONE	TONE	O	BEEP tone output/CALL tone output
38	P23/TO01	W/N	W/N	O	Wide/Narrow band control W(L)/N(H)
39	P24/EC0	Reserve	Reserve	O	Reserved
40	P50/SCL0	SCL	SCL	SCL	EEPROM CLOCK

41	P51/SDA0	SDA	SDA	SDA	EEPROM DATA
42	P52/PPG1	AP/TU	AP/TU	PWM	Auto power control/adjust
43	P53/TRG1	TX_CTRL	TX_CTRL	O	Tx power supply control "H": valid Transmission is on.
44	P60/PPG10	PLLCLK	PLLCLK	O	PLL CLOCK
45	P61/PPG11	PLLDATA	PLLDATA	O	PLL DATA
46	P62/TO10	PLLEN	PLLEN	O	PLL ENABLE
47	P63/TO11	Reserve	Reserve	O	Reserved
48	P64/EC1	Reserve	Reserve	O	Reserved
49	P65/SCK	Reserve	Reserve	O	Reserved
50	P66/SOT	Reserve	Reserve	O	Reserved
51	P67/SIN	Self	Self	I	For test (used to enter the factory clone mode, connected with pull-up resistor)
52	P43/AN11	SPCNT	SPCNT	O	Main audio power supply control "H": audio ON
53	P42/AN10	PCONT	PCONT	O	Power supply control pin of AN29160AA
54	P41/AN09	RLED	RLED	O	Red LED
55	P40/AN08	GLED	GLED	O	Green LED
56	P37/AN07	Reserve	Reserve	O	Reserved
57	P36/AN06	Reserve	Reserve	O	Reserved
58	P35/AN05	TI	TI	I/AD	CTCSS/CDCSS input
59	P34/AN04	BUSY	BUSY	I/AD	Channel busy detect (requiring 10-digit AD)
60	P33/AN03	BAT_DET	BAT_DET	I/AD	Battery power detect (requiring 10-digit AD)
61	P32/AN02	Reserve	Reserve	O	Reserved
62	P31/AN01	Reserve	VOX	I/AD	VOX detect (requiring 10-digit AD)
63	P30/AN00	Reserve	Reserve		Reserved
64	AVss	GND	GND		Power supply (GND) pin for A/D, ground

TC-610/620 VHF Parts List 1

No.	Material No.	Description	Qty.	Ref. No.	Address
1	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	C222	T2K
2	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R103	T4I
3	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R117	T5H
4	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R119	T4I
5	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R244	B1E
6	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R308	T4J
7	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R317	T3I
8	3001050000000	Chip resistor 0402 0Ω J 1/16W	1	R510	T2G
9	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R116	T3G
10	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R241	B3K
11	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R243	B2A
12	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R247	B2C
13	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R202	B1D
14	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R540	T2G
15	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R653	T4G
16	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R654	T4G
17	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R660	B5J
18	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R670	B5K
19	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R697	B4J
20	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R698	B4J
21	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R101	T4I
22	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R108	T4G
23	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R110	T3G
24	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R206	B1F
25	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R246	B2D
26	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R250	B1C
27	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R253	T3K
28	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R309	T3I
29	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R310	T4J
30	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R640	B3A
31	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R643	T2E
32	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R644	B3I
33	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R649	T2D
34	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R650	T4G
35	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R657	B3I
36	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R658	B3J
37	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R662	B3B
38	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R665	B3A
39	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R666	B3B
40	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R694	B3J
41	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R104	T5I
42	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R112	T3G
43	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R212	T2J

No.	Material No.	Description	Qty.	Ref. No.	Address
44	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R213	T1K
45	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R248	T3K
46	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R256	B1E
47	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R300	T3J
48	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R301	T3J
49	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R302	T3J
50	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R400	T3F
51	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R436	B4C
52	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R439	B4D
53	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R530	T3F
54	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R695	B3J
55	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R696	B3J
56	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R208	B1F
57	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R267	T4H
58	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R311	T2I
59	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R501	T3D
60	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R502	T3D
61	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R507	T2F
62	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R508	T2F
63	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R512	T2G
64	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R514	T2G
65	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R645	B4I
66	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R646	B4I
67	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R647	B3I
68	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R652	T4G
69	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R655	B3J
70	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R251	B1F
71	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R437	B4D
72	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R500	T2F
73	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R667	B4I
74	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R222	T2K
75	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R313	T3I
76	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R314	T3J
77	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R315	T3J
78	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R504	T3F
79	3001051240000	Chip resistor 0402 120KΩ J 1/	1	R109	T3G
80	3001051240000	Chip resistor 0402 120KΩ J 1/	1	R229	T3K
81	3001051520010	Chip resistor 0402 1.5KΩ F 1/	1	R515	T2G
82	3001051530000	Chip resistor 0402 15KΩ J 1/1	1	R210	T3K
83	3001053930000	Chip resistor 0402 39KΩ J 1/1	1	R416	T5E
84	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R107	T4G
85	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R219	T2K
86	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R225	T2K
87	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R266	T4H
88	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R306	T5J

No.	Material No.	Description	Qty.	Ref. No.	Address
89	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R430	B4C
90	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R431	B4C
91	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R432	B4C
92	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R433	B4C
93	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R434	B4C
94	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R435	B4C
95	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R224	T2K
96	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R233	T4K
97	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R239	T4K
98	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R238	T4K
99	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R316	T3I
100	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R511	T2G
101	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R513	T2G
102	3001051850000	Chip resistor 0402 1.8MΩ J 1/	1	R228	T3K
103	3001052200010	Chip resistor 0402 22Ω F 1/16	1	R401	T4F
104	3001052200010	Chip resistor 0402 22Ω F 1/16	1	R406	T5F
105	3001062710000	Chip resistor 0603 270Ω J 1/1	1	R419	B5C
106	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R201	T1F
107	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R235	T4K
108	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R307	T5J
109	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R438	B4D
110	3001052230010	Chip resistor 0402 22KΩ J 1/1	1	R214	T2K
111	3001052230010	Chip resistor 0402 22KΩ J 1/1	1	R221	T2K
112	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R520	T2I
113	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R659	T2E
114	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R663	T2D
115	3001052730010	Chip resistor 0402 27KΩ F 1/1	1	R216	T2K
116	3001052790000	Chip resistor 0402 2.7Ω J 1/1	1	R521	T3E
117	3001053030000	Chip resistor 0402 30KΩ F 1/1	1	R218	T2K
118	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R114	T3G
119	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R403	T4F
120	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R407	T4F
121	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R516	T2G
122	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R656	B4A
123	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R689	B4A
124	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R111	T3G
125	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R113	T3G
126	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R115	T3F
127	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R230	T3K
128	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R236	T4K
129	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R261	B4I
130	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R263	B4H
131	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R312	B1I
132	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R639	T2D
133	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R664	T2D

No.	Material No.	Description	Qty.	Ref. No.	Address
134	3001053340000	Chip resistor 0402 330KΩ J 1/	1	R260	B4I
135	3001053340000	Chip resistor 0402 330KΩ J 1/	1	R262	B4H
136	3001053340000	Chip resistor 0402 330KΩ J 1/	1	R702	B5J
137	3001053630000	Chip resistor 0402 36KΩ J 1/1	1	R226	T2K
138	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R217	T2J
139	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R223	T2K
140	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R227	T2K
141	3001054700000	Chip resistor 0402 47Ω J 1/16	1	R410	T5F
142	3001054700000	Chip resistor 0402 47Ω J 1/16	1	R415	T5E
143	3001054710000	Chip resistor 0402 470Ω J 1/1	1	R200	T1F
144	3001054710000	Chip resistor 0402 470Ω J 1/1	1	R204	B1F
145	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R102	T4I
146	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R203	B1F
147	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R231	T3K
148	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R242	B3K
149	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R412	T5F
150	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R441	B4J
151	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R442	B4J
152	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R651	T5G
153	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R700	B4J
154	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R701	B4K
155	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R205	B1F
156	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R417	T5E
157	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R237	T4K
158	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R245	B2D
159	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R268	T5H
160	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R273	B4J
161	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R274	B4K
162	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R275	B4H
163	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R304	T4J
164	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R305	T4J
165	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R402	T4F
166	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R636	B4I
167	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R637	B4I
168	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R638	B4I
169	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R641	B4I
170	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R668	B4J
171	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R690	B5J
172	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R692	T1E
173	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R693	B5I
174	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R703	T1D
175	3001054740000	Chip resistor 0402 470KΩ J 1/	1	R642	B2I
176	3001054740000	Chip resistor 0402 470KΩ J 1/	1	R648	B3I
177	3001054790000	Chip resistor 0402 4.7Ω J 1/1	1	R249	B1E
178	3001054790000	Chip resistor 0402 4.7Ω J 1/1	1	R255	B2E

No.	Material No.	Description	Qty.	Ref. No.	Address
179	3001055110000	Chip resistor 0402 510Ω J 1/1	1	R503	T3F
180	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R100	T4I
181	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R517	T2H
182	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R518	T2I
183	3001055630000	Chip resistor 0402 56KΩ J 1/1	1	R207	B1F
184	3001055630000	Chip resistor 0402 56KΩ J 1/1	1	R411	T5F
185	3001055640000	Chip resistor 0402 560KΩ J 1/	1	R211	T3J
186	3001055640000	Chip resistor 0402 560KΩ J 1/	1	R519	T2I
187	3001056810000	Chip resistor 0402 680Ω J 1/1	1	R405	T5F
188	3001056820000	Chip resistor 0402 6.8KΩ J 1/	1	R505	T3E
189	3001058210000	Chip resistor 0402 820Ω J 1/1	1	R661	T2D
190	3001058220010	Chip resistor 0402 8.2KΩ F 1/	1	R234	T4K
191	3001058230000	Chip resistor 0402 82KΩ J 1/1	1	R264	B4H
192	3001058240000	Chip resistor 0402 820KΩ F 1/	1	R232	T3K
193	3001058240000	Chip resistor 0402 820KΩ F 1/	1	R240	T4K
194	3001059130000	Chip resistor 0402 91KΩ F 1/1	1	R440	B4D
195	3231351630000	Air-core inductor E2-0.35*1.6*3TR	1	L411	T5C
196	3001070000000	Chip resistor 0805 0Ω J 1/8W	1	L202	B2D
197	3001070000000	Chip resistor 0805 0Ω J 1/8W	1	L455	T5B
198	3002996830000	Trimmer resistor (2*2) 68KΩ(+25%)	1	VR200	B4K
199	3002996830000	Trimmer resistor (2*2) 68KΩ(+25%)	1	VR260	B5H
200	3002996830000	Trimmer resistor (2*2) 68KΩ(+25%)	1	VR300	T4J
201	3002996830000	Trimmer resistor (2*2) 68KΩ(+25%)	1	VR601	B5J
202	3005051020010	Resistor array 0402 1K*4 J 1/16	1	RN1	T4J
203	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R420	B4C
204	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R421	B4C
205	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R422	B4C
206	3101050200010	Chip capacitor 0402 2PF B 50V	1	C501	T3D
207	3101050200010	Chip capacitor 0402 2PF B 50V	1	C560	T2H
208	3101050200010	Chip capacitor 0402 2PF B 50V	1	C561	T2H
209	3101050300000	Chip capacitor 0402 3PF B 50V	1	C500	T4C
210	3101050400010	Chip capacitor 0402 4PF B 50V	1	C532	T3F
211	3101050400010	Chip capacitor 0402 4PF B 50V	1	C534	T2F
212	3101050800000	Chip capacitor 0402 8PF B 50V	1	C524	T2F
213	3101050800000	Chip capacitor 0402 8PF B 50V	1	C645	B5I
214	3101050800000	Chip capacitor 0402 8PF B 50V	1	C691	B4I
215	3101051000020	Chip capacitor 0402 10PF J 50V	1	C121	T3H
216	3101051000020	Chip capacitor 0402 10PF J 50V	1	C132	T3G
217	3101051000020	Chip capacitor 0402 10PF J 50V	1	C137	T3H
218	3101051000020	Chip capacitor 0402 10PF J 50V	1	C321	T5I
219	3101051000020	Chip capacitor 0402 10PF J 50V	1	C322	T5I
220	3101051000020	Chip capacitor 0402 10PF J 50V	1	C449	B5E
221	3101051000020	Chip capacitor 0402 10PF J 50V	1	C505	T3D
222	3101051000020	Chip capacitor 0402 10PF J 50V	1	C541	T2G
223	3101051010030	Chip capacitor 0402 100PF J 50	1	C107	T5I

No.	Material No.	Description	Qty.	Ref. No.	Address
224	3101051010030	Chip capacitor 0402 100PF J 50	1	C110	T5H
225	3101051010030	Chip capacitor 0402 100PF J 50	1	C201	T1F
226	3101051010030	Chip capacitor 0402 100PF J 50	1	C266	B4H
227	3101051010030	Chip capacitor 0402 100PF J 50	1	C303	T3J
228	3101051010030	Chip capacitor 0402 100PF J 50	1	C304	T3J
229	3101051010030	Chip capacitor 0402 100PF J 50	1	C305	T3J
230	3101051010030	Chip capacitor 0402 100PF J 50	1	C334	B1I
231	3101051010030	Chip capacitor 0402 100PF J 50	1	C503	T3D
232	3101051010030	Chip capacitor 0402 100PF J 50	1	C506	T3E
233	3101051010030	Chip capacitor 0402 100PF J 50	1	C514	T3E
234	3101051010030	Chip capacitor 0402 100PF J 50	1	C518	T3F
235	3101051010030	Chip capacitor 0402 100PF J 50	1	C520	T2F
236	3101051010030	Chip capacitor 0402 100PF J 50	1	C531	T3F
237	3101051010030	Chip capacitor 0402 100PF J 50	1	C535	T2F
238	3101051010030	Chip capacitor 0402 100PF J 50	1	C669	T4J
239	3101051020010	Chip capacitor 0402 1000PF K 5	1	C106	T4H
240	3101051020010	Chip capacitor 0402 1000PF K 5	1	C204	T3K
241	3101051020010	Chip capacitor 0402 1000PF K 5	1	C248	B1E
242	3101051020010	Chip capacitor 0402 1000PF K 5	1	C250	B1E
243	3101051020010	Chip capacitor 0402 1000PF K 5	1	C254	B2D
244	3101051020010	Chip capacitor 0402 1000PF K 5	1	C265	T4H
245	3101051020010	Chip capacitor 0402 1000PF K 5	1	C320	T5I
246	3101051020010	Chip capacitor 0402 1000PF K 5	1	C323	T5I
247	3101051020010	Chip capacitor 0402 1000PF K 5	1	C341	T3I
248	3101051020010	Chip capacitor 0402 1000PF K 5	1	C400	T3F
249	3101051020010	Chip capacitor 0402 1000PF K 5	1	C403	T5F
250	3101051020010	Chip capacitor 0402 1000PF K 5	1	C405	T5F
251	3101051020010	Chip capacitor 0402 1000PF K 5	1	C408	T5F
252	3101051020010	Chip capacitor 0402 1000PF K 5	1	C414	T5E
253	3101051020010	Chip capacitor 0402 1000PF K 5	1	C439	B4D
254	3101051020010	Chip capacitor 0402 1000PF K 5	1	C502	T3D
255	3101051020010	Chip capacitor 0402 1000PF K 5	1	C509	T3D
256	3101051020010	Chip capacitor 0402 1000PF K 5	1	C609	B3I
257	3101051020010	Chip capacitor 0402 1000PF K 5	1	C641	B4B
258	3101051020010	Chip capacitor 0402 1000PF K 5	1	C644	B4B
259	3101051020010	Chip capacitor 0402 1000PF K 5	1	C646	T2D
260	3101051020010	Chip capacitor 0402 1000PF K 5	1	C651	T4G
261	3101051020010	Chip capacitor 0402 1000PF K 5	1	C653	T5G
262	3101051020010	Chip capacitor 0402 1000PF K 5	1	C657	T2D
263	3101051020010	Chip capacitor 0402 1000PF K 5	1	C658	T1E
264	3101051020010	Chip capacitor 0402 1000PF K 5	1	C661	T1D
265	3101051020010	Chip capacitor 0402 1000PF K 5	1	C666	B3A
266	3101051020010	Chip capacitor 0402 1000PF K 5	1	C667	B4A
267	3101051020010	Chip capacitor 0402 1000PF K 5	1	C670	B5I
268	3101051020010	Chip capacitor 0402 1000PF K 5	1	C680	B3I

No.	Material No.	Description	Qty.	Ref. No.	Address
269	3101051020010	Chip capacitor 0402 1000PF K 5	1	C684	T1D
270	3101051020010	Chip capacitor 0402 1000PF K 5	1	C685	B5J
271	3101051020010	Chip capacitor 0402 1000PF K 5	1	C686	B2I
272	3101051020010	Chip capacitor 0402 1000PF K 5	1	C689	B4I
273	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C105	T4H
274	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C208	T3K
275	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C237	T3K
276	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C259	B2E
277	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C274	B1F
278	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C277	B4K
279	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C300	T3I
280	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C311	B3I
281	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C416	T4D
282	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C419	B4C
283	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C517	T3F
284	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C527	T2F
285	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C528	T2F
286	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C529	T2G
287	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C540	T1G
288	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C542	T2H
289	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C546	T2I
290	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C547	T2I
291	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C656	B4K
292	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C662	T2D
293	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C677	T1E
294	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C681	B3I
295	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C1	B5I
296	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C118	T4G
297	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C127	T3G
298	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C143	T3G
299	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C205	T3K
300	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C212	B1F
301	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C217	T2K
302	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C231	B2J
303	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C240	T4K
304	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C249	T2B
305	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C253	T4J
306	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C255	B2D
307	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C256	B1E
308	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C257	B2C
309	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C272	B2E
310	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C315	T4J
311	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C324	T2I
312	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C325	T2I
313	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C326	T2J

No.	Material No.	Description	Qty.	Ref. No.	Address
314	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C329	T2J
315	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C330	T2I
316	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C331	T2I
317	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C332	T2I
318	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C333	B1I
319	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C415	T4D
320	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C418	B4C
321	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C420	T4E
322	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C433	B4D
323	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C510	T3E
324	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C511	T3F
325	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C537	T2G
326	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C642	B3J
327	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C650	T4G
328	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C655	T5G
329	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C683	B2I
330	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C687	B5I
331	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C213	B1F
332	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C216	T1K
333	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C218	T2J
334	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C226	T2K
335	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C230	B2J
336	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C241	T4K
337	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C242	T4K
338	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C301	T3I
339	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C306	T3I
340	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C307	T3I
341	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C309	T3I
342	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C310	B3I
343	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C440	B4J
344	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C441	B4K
345	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C448	B5E
346	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C678	B4K
347	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C690	B3I
348	3101051200020	Chip capacitor 0402 12PF J 50V	1	C508	T3E
349	3101051200020	Chip capacitor 0402 12PF J 50V	1	C521	T3F
350	3101051200020	Chip capacitor 0402 12PF J 50V	1	C533	T3F
351	3101051200020	Chip capacitor 0402 12PF J 50V	1	C544	T2H
352	3101051500020	Chip capacitor 0402 15PF J 50V	1	C111	T5H
353	3101051500020	Chip capacitor 0402 15PF J 50V	1	C133	T3G
354	3101051500020	Chip capacitor 0402 15PF J 50V	1	C135	T3H
355	3101051500020	Chip capacitor 0402 15PF J 50V	1	C413	T4F
356	3101051500020	Chip capacitor 0402 15PF J 50V	1	C507	T3E
357	3101051500020	Chip capacitor 0402 15PF J 50V	1	C522	T2F
358	3101051500020	Chip capacitor 0402 15PF J 50V	1	C523	T2F

No.	Material No.	Description	Qty.	Ref. No.	Address
359	3101051520000	Chip capacitor 0402 1500PF K 5	1	C224	T2J
360	3101051520000	Chip capacitor 0402 1500PF K 5	1	C233	T3K
361	3101051830000	Chip capacitor 0402 0.018UF K	1	C207	T3K
362	3101052200010	Chip capacitor 0402 22PF J 50V	1	C136	T3H
363	3101052200010	Chip capacitor 0402 22PF J 50V	1	C138	T3H
364	3101052200010	Chip capacitor 0402 22PF J 50V	1	C245	T4K
365	3210305150010	Multi-layer chip inductor 0402 15nH	1	L505	T3F
366	3001056830000	Chip resistor 0402 68KΩ J 1/1	1	R118	T4H
367	3101052210010	Chip capacitor 0402 220PF K 50	1	C260	B1D
368	3101052210010	Chip capacitor 0402 220PF K 50	1	C275	B1C
369	3101052210010	Chip capacitor 0402 220PF K 50	1	C412	T5E
370	3101052220010	Chip capacitor 0402 2200pF K 5	1	C243	T4K
371	3101052220010	Chip capacitor 0402 2200pF K 5	1	C258	T4K
372	3101052230000	Chip capacitor 0402 0.022UF K	1	C215	T1K
373	3101052230000	Chip capacitor 0402 0.022UF K	1	C276	B4K
374	3101052230000	Chip capacitor 0402 0.022UF K	1	C663	B4K
375	3101052240010	Chip capacitor 0402 0.22UF Z 1	1	C203	T3K
376	3001054320000	Chip resistor 0402 4.3KΩ J 1/	1	R506	T3E
377	3101053300000	Chip capacitor 0402 33PF J 50V	1	C120	T3H
378	3101053300000	Chip capacitor 0402 33PF J 50V	1	C130	T3G
379	3101053300000	Chip capacitor 0402 33PF J 50V	1	C515	T3E
380	3101053910000	Chip capacitor 0402 390PF J 50	1	C228	T2J
381	3101053910000	Chip capacitor 0402 390PF J 50	1	C234	T3K
382	3101053920000	Chip capacitor 0402 3900PF K 2	1	C679	B4K
383	3101054700010	Chip capacitor 0402 47PF J 50V	1	C280	B1A
384	3101054710010	Chip capacitor 0402 470PF K 50	1	C117	T4G
385	3101054710010	Chip capacitor 0402 470PF K 50	1	C126	T3G
386	3101054710010	Chip capacitor 0402 470PF K 50	1	C131	T4G
387	3101054710010	Chip capacitor 0402 470PF K 50	1	C134	T3G
388	3101054710010	Chip capacitor 0402 470PF K 50	1	C139	T3H
389	3101054710010	Chip capacitor 0402 470PF K 50	1	C140	T3G
390	3101054710010	Chip capacitor 0402 470PF K 50	1	C142	T3G
391	3101054710010	Chip capacitor 0402 470PF K 50	1	C267	T2B
392	3101054710010	Chip capacitor 0402 470PF K 50	1	C316	T4J
393	3101054710010	Chip capacitor 0402 470PF K 50	1	C335	T4I
394	3101054710010	Chip capacitor 0402 470PF K 50	1	C337	T3I
395	3101054710010	Chip capacitor 0402 470PF K 50	1	C342	T3I
396	3101054710010	Chip capacitor 0402 470PF K 50	1	C401	T4F
397	3101054710010	Chip capacitor 0402 470PF K 50	1	C404	T4F
398	3101054710010	Chip capacitor 0402 470PF K 50	1	C410	T4E
399	3101054710010	Chip capacitor 0402 470PF K 50	1	C417	T4D
400	3101054710010	Chip capacitor 0402 470PF K 50	1	C430	B4C
401	3101054710010	Chip capacitor 0402 470PF K 50	1	C432	B4D
402	3101054710010	Chip capacitor 0402 470PF K 50	1	C435	B5D
403	3101054710010	Chip capacitor 0402 470PF K 50	1	C436	B4D

No.	Material No.	Description	Qty.	Ref. No.	Address
404	3101054710010	Chip capacitor 0402 470PF K 50	1	C437	B4C
405	3101054710010	Chip capacitor 0402 470PF K 50	1	C442	B5C
406	3101054710010	Chip capacitor 0402 470PF K 50	1	C512	T3F
407	3101054710010	Chip capacitor 0402 470PF K 50	1	C530	T2G
408	3101054710010	Chip capacitor 0402 470PF K 50	1	C536	T3F
409	3101054710010	Chip capacitor 0402 470PF K 50	1	C538	T2G
410	3101054710010	Chip capacitor 0402 470PF K 50	1	C539	T1G
411	3101054710010	Chip capacitor 0402 470PF K 50	1	C648	B3A
412	3101054710010	Chip capacitor 0402 470PF K 50	1	C649	B3B
413	3101054710010	Chip capacitor 0402 470PF K 50	1	C654	T5G
414	3101054710010	Chip capacitor 0402 470PF K 50	1	C659	B3A
415	3101054710010	Chip capacitor 0402 470PF K 50	1	C660	B3B
416	3101054710010	Chip capacitor 0402 470PF K 50	1	C671	B5F
417	3101054710010	Chip capacitor 0402 470PF K 50	1	C675	B5F
418	3101054710010	Chip capacitor 0402 470PF K 50	1	C676	B5F
419	3101054710010	Chip capacitor 0402 470PF K 50	1	C688	T2B
420	3101054730000	Chip capacitor 0402 0.047UF K	1	C223	T2K
421	3101054730000	Chip capacitor 0402 0.047UF K	1	C225	T2K
422	3101054730000	Chip capacitor 0402 0.047UF K	1	C232	T3K
423	3101054730000	Chip capacitor 0402 0.047UF K	1	R220	T2K
424	3101055600000	Chip capacitor 0402 56PF J 50V	1	C339	T3I
425	3101055600000	Chip capacitor 0402 56PF J 50V	1	C343	T3I
426	3101055620010	Chip capacitor 0402 5600PF K 2	1	C244	T4K
427	3101055620010	Chip capacitor 0402 5600PF K 2	1	C261	B4H
428	3101055630000	Chip capacitor 0402 0.056UF K	1	C236	T3K
429	3101056800000	Chip capacitor 0402 68PF J 50V	1	C219	T2K
430	3101056800000	Chip capacitor 0402 68PF J 50V	1	C220	T2K
431	3101056800000	Chip capacitor 0402 68PF J 50V	1	C221	T2J
432	3101056800000	Chip capacitor 0402 68PF J 50V	1	C340	T3I
433	3101056820000	Chip capacitor 0402 6800PF K 2	1	C239	T3K
434	3101056830000	Chip capacitor 0402 0.068UF K	1	C227	T3K
435	3101052700000	Chip capacitor 0402 27PF J 50V	1	C141	T3G
436	3101052700000	Chip capacitor 0402 27PF J 50V	1	C504	T4D
437	3101052700000	Chip capacitor 0402 27PF J 50V	1	C519	T3F
438	3101062000000	Chip capacitor 0603 20PF J 50V	1	C455	T4B
439	3101060500010	Chip capacitor 0603 5PF B 50V	1	C123	T4G
440	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C112	T5H
441	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C116	T4G
442	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C125	T4G
443	3101060700020	Chip capacitor 0603 7PF B 50V	1	C452	T4C
444	3101060700020	Chip capacitor 0603 7PF B 50V	1	C454	T4C
445	3101060700020	Chip capacitor 0603 7PF B 50V	1	C456	T4C
446	3210107220000	Bobbin inductor 0805 22nH	1	L513	T2F
447	3210107220000	Bobbin inductor 0805 22nH	1	L514	T2E
448	3210107220000	Bobbin inductor 0805 22nH	1	L515	T3E

No.	Material No.	Description	Qty.	Ref. No.	Address
449	3210107220000	Bobbin inductor 0805 22nH	1	L516	T3D
450	3101061000000	Chip capacitor 0603 10PF J 50V	1	C457	T4B
451	3101061000000	Chip capacitor 0603 10PF J 50V	1	C444	T5D
452	3101061020000	Chip capacitor 0603 1000PF K 5	1	C450	T4C
453	3101061020000	Chip capacitor 0603 1000PF K 5	1	C458	T5C
454	3101061050020	Chip capacitor 0603 1UF K 25V	1	C246	B3J
455	3101061050020	Chip capacitor 0603 1UF K 25V	1	C308	B3I
456	3304060300040	Varactor HVC362TRF-E	1	D503	T3D
457	3304060300040	Varactor HVC362TRF-E	1	D504	T3E
458	3304060300040	Varactor HVC362TRF-E	1	D506	T3E
459	3304060300040	Varactor HVC362TRF-E	1	D507	T2F
460	3101062200010	Chip capacitor 0603 22PF J 50V	1	C453	T4B
461	3101063590000	Chip capacitor 0603 3.5PF C 50	1	C122	T3G
462	3001053910010	Chip resistor 0402 390Ω F 1/1	1	R105	T5H
463	3001053910010	Chip resistor 0402 390Ω F 1/1	1	R106	T4G
464	3210108330000	Bobbin inductor 1206 33nH	1	L107	T3H
465	3101071050010	Chip capacitor 0805 1UF K 10V	1	C318	T5J
466	3101102260010	Chip capacitor1206 22uF	1	C251	B1D
467	3102992000040	Trimmer capacitor 3.2*2.5*1.25mm	1	TC100	T5G
468	3102992000040	Trimmer capacitor 3.2*2.5*1.25mm	1	TC101	T4H
469	3104071050010	Tantalum capacitor 0805 1UF M 16V T	1	C264	B4H
470	3104071560020	Tantalum capacitor 0805 15UF M 6.3V	1	C312	B3I
471	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C302	T3I
472	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C643	T2E
473	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C664	T2D
474	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C665	T2E
475	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C200	T1F
476	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C262	B4H
477	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C434	B5D
478	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C229	B2J
479	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C252	B1E
480	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C431	B4C
481	3104081560020	Tantalum capacitor 1206 15UF M 10V	1	C652	T5G
482	3104082260040	Tantalum capacitor 1206 22UF M 10V	1	C673	B3I
483	3104204760020	Tantalum capacitor C-package 47UF M 16V T	1	C682	T3B
484	3101060900010	Chip capacitor 0603 9PF B 50V	1	C114	T4G
485	3210305180000	Multi-layer chip inductor 0402 18nH	1	L116	T4F
486	3210305220000	Multi-layer chip inductor 0402 22nH	1	L530	T2F
487	3101060600010	Chip capacitor 0603 6PF B 50V	1	C113	T4H
488	3210305390000	Multi-layer chip inductor 0402 39nH	1	L531	T2F
489	3212105101000	Multi-layer chip inductor 0402 100nH	1	L111	T4G
490	3212105101000	Multi-layer chip inductor 0402 100nH	1	L115	T3G
491	3212105101000	Multi-layer chip inductor 0402 100nH	1	L400	T4F
492	3210306561010	Multi-layer chip inductor 0603 560nH	1	L304	T3I
493	3210406331000	Multi-layer chip inductor 0603 330nH	1	L303	T3I

No.	Material No.	Description	Qty.	Ref. No.	Address
494	3210406331000	Multi-layer chip inductor 0603 330nH	1	L306	T3I
495	3212105470000	Multi-layer chip inductor 0402 47nH	1	L112	T3G
496	3213212102000	Multi-layer chip inductor 1008 1uH	1	L403	T4E
497	3213212102000	Multi-layer chip inductor 1008 1uH	1	L454	B4B
498	3213212102000	Multi-layer chip inductor 1008 1uH	1	L510	T1G
499	3213212331000	Multi-layer chip inductor 1008 330nH	1	L509	T2G
500	3213212561000	Multi-layer chip inductor 1008 0.56uH	1	L408	T4C
501	3213306102000	Multi-layer chip inductor 0603 1uH	1	L200	T3K
502	3213306102000	Multi-layer chip inductor 0603 1uH	1	L300	T4J
503	3213306102000	Multi-layer chip inductor 0603 1uH	1	L301	T5I
504	3213306102000	Multi-layer chip inductor 0603 1uH	1	L307	T3I
505	3213306102000	Multi-layer chip inductor 0603 1uH	1	L308	T4I
506	3213306221010	Multi-layer chip inductor 0603 0.22uH	1	L607	B3I
507	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L109	T4G
508	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L110	T3G
509	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L305	T3I
510	3215006100010	Multi-layer chip inductor 0603 10nH	1	L512	T3E
511	3221506601000	Chip ferrite bead 0603 600Ω±2	1	L100	T5I
512	3221506601000	Chip ferrite bead 0603 600Ω±2	1	L402	T4F
513	3221506601000	Chip ferrite bead 0603 600Ω±2	1	L650	T4G
514	3221507221000	Chip ferrite bead 0805 220Ω±2	1	L404	T4E
515	3221507600000	Chip ferrite bead 0805 60Ω±25	1	L407	T4D
516	3221507600000	Chip ferrite bead 0805 60Ω±25	1	L604	T2B
517	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L501	T3D
518	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L502	T3E
519	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L506	T3F
520	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L507	T2F
521	3231351680000	Air-core inductor E2-0.35*1.6*8TR	1	L406	T4D
522	3231351680000	Air-core inductor E2-0.35*1.6*8TR	1	L500	T4D
523	3303020100020	Switching diode MA2S11100L	1	D607	B5J
524	3303020100020	Switching diode MA2S11100L	1	D650	T5G
525	3303020100070	Switching diode MA2Z07700L	1	D401	T4C
526	3303020100080	Switching diode MA2S07700L 1.7	1	D400	T3F
527	3303020100080	Switching diode MA2S07700L 1.7	1	D500	T3F
528	3303020100080	Switching diode MA2S07700L 1.7	1	D501	T4D
529	3303020100080	Switching diode MA2S07700L 1.7	1	D502	T4D
530	3304040200000	Varactor BB179 SOD523 P	1	D108	T5H
531	3210108390000	Multi-layer chip inductor 1206 39nH	1	L104	T5H
532	3307110100070	LED KPT-1608S	1	D602	B4A
533	3307110100080	LED KPT-1608S	1	D601	B4A
534	3101061010010	Chip capacitor 0603 100PF J 50	1	C429	T4C
535	3401001000080	Transistor 2SA1362-GR	1	Q654	T1E
536	3401001000490	Transistor 2SA1832-GR	1	Q202	B1F
537	3401002000990	Transistor 2SC5108-Y	1	Q102	T4G
538	3401002000990	Transistor 2SC5108-Y	1	Q103	T3H

No.	Material No.	Description	Qty.	Ref. No.	Address
539	3401002000990	Transistor 2SC5108-Y	1	Q104	T3G
540	3401002000990	Transistor 2SC5108-Y	1	Q105	T3I
541	3401002000990	Transistor 2SC5108-Y	1	Q400	T4F
542	3401002000990	Transistor 2SC5108-Y	1	Q502	T2I
543	3403007000000	Transistor DTA114EE(TL)	1	Q300	T2I
544	3403007000020	Transistor DTA114YE(TL)	1	Q431	B4D
545	3403008000010	Transistor DTC114EE(TL)	1	Q204	B2D
546	3403008000010	Transistor DTC114EE(TL)	1	Q430	B5C
547	3403008000010	Transistor DTC114EE(TL)	1	Q614	B4A
548	3403008000010	Transistor DTC114EE(TL)	1	Q615	B4A
549	3403009000010	Transistor UMG3N(N-TR)	1	Q609	T2D
550	3403009000010	Transistor UMG3N(N-TR)	1	Q613	T2E
551	3406001000090	Transistor 2SC4988FRTR-E	1	Q401	T4F
552	3411002000020	Transistor 2SC5343EG	1	Q301	T3K
553	3411002000020	Transistor 2SC5343EG	1	Q650	T4G
554	3418001000010	Transistor AT-41511-TR1G	1	Q500	T3E
555	3499000000140	Transistor 2SK508-K52-T1B-A	1	Q100	T4H
556	3499000000140	Transistor 2SK508-K52-T1B-A	1	Q101	T3G
557	3499000000150	Transistor UMC4(NTR)	1	Q652	T4G
558	3499000000180	Transistor UFMMT717	1	Q205	B2D
559	3499000000180	Transistor UFMMT717	1	Q610	T2E
560	3499000000180	Transistor UFMMT717	1	Q611	T2D
561	3501020000030	FET 3SK318YB-TL-E-Q	1	Q501	T2G
562	3503010000010	FET 2SJ243-T1-A P-c	1	Q653	T4G
563	3503020000030	FET 2SK1824-T1-A	1	Q201	B1F
564	3503020000030	FET 2SK1824-T1-A	1	Q203	T4K
565	3503040000000	FET UPA572T-A	1	Q612	T1E
566	3504990000010	FET RD01MUS2-T1	1	Q402	T4E
567	3515990000000	FET RQA0002DNSTB-E	1	Q403	T5E
568	3604002055090	PLL TB31202FN-EL	1	U202	T4I
569	3605008005070	Operational amplifier NJM2904V	1	U430	B4D
570	3605017005540	Operational amplifier 1.7V TDA2	1	U201	B2E
571	3608015000000	Power management IC (voltage regulator) XC6201P5	1	U606	B3I
572	3609016000000	RF/IF demodulator HSOP05	1	U200	T3J
573	3612031004440	Memory AT24C64AN-10SU-2	1	U609	B3K
574	3619006005220	Low voltage detector R3111N451C-TR	1	U610	B5J
575	3701012850010	TCXO 12.8MHz NSA0	1	X300	T5J
576	3701737230020	Crystal 7.3728MHz DSX530G	1	X601	B4I
577	3801045030130	Ceramic filter 450KHz ±6.0KHz	1	CF300	T1J
578	3802388540010	Crystal filter 38.850MHz MFT3	1	XF1	T2H
579	5205000001000	TC-610 battery connector Black PA9T	1	G1	T3C
580	3101051230000	Chip capacitor 0402 0.012UF K	1	C238	T3K
581	3101051820000	Chip capacitor 0402 1800PF K 5	1	C235	T3K
582	3101051810010	Chip capacitor 0402 180p J 50V	1	C513	T3F
583	3104086850030	Tantalum capacitor 1206 6.8UF K 16V	1	C101	T4I

No.	Material No.	Description	Qty.	Ref. No.	Address
584	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L101	T4H
585	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L102	T4H
586	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L103	T5H
587	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L105	T5G
588	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L106	T3H
589	3213306682000	Multi-layer chip inductor 0603 6.8uH	1	L108	T4H
590	3304060300010	Varactor HVC376BTRF-E	1	D100	T5H
591	3304060300010	Varactor HVC376BTRF-E	1	D101	T5H
592	3304060300010	Varactor HVC376BTRF-E	1	D102	T3H
593	3304060300010	Varactor HVC376BTRF-E	1	D103	T3H
594	3304060300010	Varactor HVC376BTRF-E	1	D104	T5H
595	3304060300010	Varactor HVC376BTRF-E	1	D105	T5H
596	3304060300010	Varactor HVC376BTRF-E	1	D106	T3H
597	3304060300010	Varactor HVC376BTRF-E	1	D107	T4H
598	3610007000020	MCU MB95F108AMWP	1	U605	B4J
599	3001051820010	Chip resistor 0402 1.8KΩ F 1/	1	R303	T4J
600	3231351670000	Air-core inductor E2-0.35*1.6*7TR	1	L451	T4C
601	3101054740000	Chip capacitor 0402 0.47UF Z 6	1	C202	T1F
602	3231351660000	Air-core inductor E2-0.35*1.6*6TR	1	L450	T4C
603	3231351660000	Air-core inductor E2-0.35*1.6*6TR	1	L452	T4B
604	3210305560000	Multi-layer chip inductor 0402 56nH	1	L114	T3G
605	3101061200000	Chip capacitor 0603 12PF J 50V	1	C451	T3B
606	3101061500010	Chip capacitor 0603 15PF J 50V	1	C445	T5D
607	3101061500010	Chip capacitor 0603 15PF J 50V	1	C446	T5C
608	3101051800010	Chip capacitor 0402 18PF J 50V	1	C421	T4F
609	3210305270000	Multi-layer chip inductor 0402 27nH	1	L113	T3H
610	3101051510000	Chip capacitor 0402 150PF(±5%)	1	C108	T4H
611	3101051510000	Chip capacitor 0402 150PF(±5%)	1	C402	T4F
612	3001053920010	Chip resistor 0402 3.9KΩ J 1/	1	R404	T5F
613	3001061020010	Chip resistor 0603 1KΩ J 1/10	1	C247	B1E
614	3210306820000	Multi-layer chip inductor 0603 82nH	1	L401	T4F
615	3001051800000	Chip resistor 0402 18Ω J 1/16	1	R408	T5F
616	3210306270000	Multi-layer chip inductor 0603 27nH	1	L412	T5F
617	41006101001B0	TC-610/620 VHF PCB F	1		
618	3101055610000	Chip capacitor 0402 560PF K 50	1	C206	T3K
619	3231301340000	Air-core inductor E2 0.3*1.3*4TR	1	L409	T5D
620	3231351650000	Air-core inductor E2-0.35*1.6*5TL	1	L410	T5D
621	3101065600000	Chip capacitor 0603 56PF J 50V	1	C443	T5D
622	3001060000000	Chip resistor 0603 0Ω J 1/10W	1	L405	T5E
623	3212106680000	Multi-layer chip inductor 0603 68nH	1	R413	T4E
624	3104071040010	Tantalum capacitor 0805 0.1UF M 20V	1	C100	T4I
625	3104071040010	Tantalum capacitor 0805 0.1UF M 20V	1	C102	T4I
626	3210106331000	Bobbin inductor 0603 330nH	1	L504	T3F
627	3303010500290	Switching diode 1SS372	1	D300	T3K
628	3303030100010	Switching diode DAN222(TL)	1	D301	T3K

No.	Material No.	Description	Qty.	Ref. No.	Address
629	3001051220000	Chip resistor 0402 1.2KΩ J 1/	1	R252	T3K
630	3399990000080	Zener diode EDZTE616.8B	1	D200	B1D
631	3399990000080	Zener diode EDZTE616.8B	1	D201	B1D
632	3399990000080	Zener diode EDZTE616.8B	1	D202	B1E
633	3399990000080	Zener diode EDZTE616.8B	1	D203	B1C
634	3399990000080	Zener diode EDZTE616.8B	1	D430	B5D
635	3302030500020	Zener diode UDZSTE(1718B)1	1	D655	T2B
636	4100510300000	TC-610/620 PTT key PCB 0.6T/2L/1P	1		
637	3920450300000	Demodulator 450KHz±4kHz JTBM450C24	1		

TC-610/620 UHF Parts List 1

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
1	3001050000000	Chip resistor 0402 0Ω J 1/16	1	C222	T2K	
2	3001050000000	Chip resistor 0402 0Ω J 1/16	1	R244	B1E	
3	3001050000000	Chip resistor 0402 0Ω J 1/16	1	R308	T4J	
4	3001050000000	Chip resistor 0402 0Ω J 1/16	1	R317	T3I	
5	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R116	T3G	
6	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R241	B3K	
7	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R243	B2A	
8	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R247	B2C	
9	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R406	T5F	
10	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R408*	T5F	U1:400-420MHz
11	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U2:450-470MHz
12	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U3:440-470MHz
13	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U4:470-490MHz
14	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U7:420-450MHz
15	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R653	T4G	
16	3001051000020	Chip resistor 0402 10Ω F 1/16	1	R654	T4G	
17	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R108*	T4G	U1:400-420MHz
18	3001051020000	Chip resistor 0402 1KΩ F 1/16	1			U2:450-470MHz
19	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U3:440-470MHz
20	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U4:470-490MHz
21	3001051020000	Chip resistor 0402 1KΩ F 1/16	1			U7:420-450MHz
22	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R202	B1D	
23	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R540	T2G	
24	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R660	B5J	
25	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R697	B4J	
26	3001051010040	Chip resistor 0402 100Ω F 1/1	1	R698	B4J	
27	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R102	T4I	
28	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R110	T3G	
29	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R206	B1F	
30	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R246	B2D	
31	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R250	B1C	
32	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R309*	T3I	U1:400-420MHz
33	3001051020000	Chip resistor 0402 1KΩ F 1/16	1			U2:450-470MHz
34	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U3:440-470MHz
35	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U4:470-490MHz
36	3001051020000	Chip resistor 0402 1KΩ F 1/16	1			U7:420-450MHz
37	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R310	T4J	
38	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R643	T2E	
39	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R644	B3I	
40	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R649	T2D	
41	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R650	T4G	
42	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R657	B3I	
43	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R658	B3J	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
44	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R670	B5K	
45	3001051020000	Chip resistor 0402 1KΩ F 1/16	1	R694	B3J	
46	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R104	T5I	
47	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R112*	T3G	U1:400-420MHz
48	3001051030000	Chip resistor 0402 10KΩ J 1/1	1			U2:450-470MHz
49	3001055620000	Chip resistor 0402 5.6KΩ J 1/	1			U3:440-470MHz
50	3001055620000	Chip resistor 0402 5.6KΩ J 1/	1			U4:470-490MHz
51	3001051030000	Chip resistor 0402 10KΩ J 1/1	1			U7:420-450MHz
52	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R212*	T2J	U1:400-420MHz
53	3001051030000	Chip resistor 0402 10KΩ J 1/1	1			U2:450-470MHz
54	3001053330000	Chip resistor 0402 33KΩ F 1/1	1			U3:440-470MHz
55	3001053330000	Chip resistor 0402 33KΩ F 1/1	1			U4:470-490MHz
56	3001051030000	Chip resistor 0402 10KΩ J 1/1	1			U7:420-450MHz
57	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R213	T1K	
58	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R256	B1E	
59	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R261	B4I	
60	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R300	T3J	
61	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R301	T3J	
62	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R302	T3J	
63	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R400	T3F	
64	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R436	B4C	
65	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R439	B4D	
66	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R530	T3F	
67	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R695	B3J	
68	3001051030000	Chip resistor 0402 10KΩ J 1/1	1	R696	B3J	
69	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R208	B1F	
70	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R260	B4I	
71	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R262	B4H	
72	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R266	T4H	
73	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R311	T2I	
74	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R501	T3D	
75	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R502	T3D	
76	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R507*	T2F	U1:400-420MHz
77	NC	NC	1			U2:450-470MHz
78	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U3:440-470MHz
79	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U4:470-490MHz
80	NC	NC	1			U7:420-450MHz
81	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R509	T2F	
82	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R512	T2G	
83	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R514	T2G	
84	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R645	B4I	
85	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R646	B4I	
86	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R647	B3I	
87	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R652	T4G	
88	3001051040000	Chip resistor 0402 100KΩ F 1/	1	R655	B3J	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
89	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R251	B1F	
90	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R437	B4D	
91	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R500*	T2E	U1:400-420MHz
92	3001051050000	Chip resistor 0402 1MΩ F 1/16	1			U2:450-470MHz
93	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U3:440-470MHz
94	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U4:470-490MHz
95	3001051050000	Chip resistor 0402 1MΩ F 1/16	1			U7:420-450MHz
96	3001051050000	Chip resistor 0402 1MΩ F 1/16	1	R667	B4I	
97	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R222	T2K	
98	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R313	T3I	
99	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R314	T3J	
100	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R315	T3J	
101	3001051230000	Chip resistor 0402 12KΩ J 1/1	1	R504	T3F	
102	3001051240000	Chip resistor 0402 120KΩ J 1/	1	R109	T3G	
103	3001051240000	Chip resistor 0402 120KΩ J 1/	1	R229	T3K	
104	3001051510010	Chip resistor 0402 150Ω F 1/1	1	R105*	T5G	U1:400-420MHz
105	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U2:450-470MHz
106	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U3:440-470MHz
107	3001055600000	Chip resistor 0402 56Ω J 1/16	1			U4:470-490MHz
108	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U7:420-450MHz
109	3001051510010	Chip resistor 0402 150Ω F 1/1	1	R106*	T4H	U1:400-420MHz
110	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U2:450-470MHz
111	3001056800000	Chip resistor 0402 68Ω J 1/16	1			U3:440-470MHz
112	3001055600000	Chip resistor 0402 56Ω J 1/16	1			U4:470-490MHz
113	3001051010040	Chip resistor 0402 100Ω F 1/1	1			U7:420-450MHz
114	3001051520010	Chip resistor 0402 1.5KΩ F 1/	1	R404	T5F	
115	3001051520010	Chip resistor 0402 1.5KΩ F 1/	1	R515	T2G	
116	3001051530000	Chip resistor 0402 15KΩ J 1/1	1	R210	T3K	
117	3001051530000	Chip resistor 0402 15KΩ J 1/1	1	R242*	B3K	U1:400-420MHz
118	3001051530000	Chip resistor 0402 15KΩ J 1/1	1			U2:450-470MHz
119	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1			U3:440-470MHz
120	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1			U4:470-490MHz
121	3001051530000	Chip resistor 0402 15KΩ J 1/1	1			U7:420-450MHz
122	3001051530000	Chip resistor 0402 15KΩ J 1/1	1	R416	T5E	
123	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R219	T2K	
124	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R225	T2K	
125	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R306	T5J	
126	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R430	B4C	
127	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R431	B4C	
128	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R432	B4C	
129	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R433	B4C	
130	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R434	B4C	
131	3001051540000	Chip resistor 0402 150KΩ F 1/	1	R435	B4C	
132	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R224	T2K	
133	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R233	T4K	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
134	3001051830000	Chip resistor 0402 18KΩ J 1/1	1	R239	T4K	
135	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R107	T4G	
136	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R238	T4K	
137	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R316*	T3I	U1:400-420MHz
138	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U2:450-470MHz
139	3001054730000	Chip resistor 0402 47KΩ J 1/1	1			U3:440-470MHz
140	3001054730000	Chip resistor 0402 47KΩ J 1/1	1			U4:470-490MHz
141	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U7:420-450MHz
142	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R511*	T2G	U1:400-420MHz
143	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U2:450-470MHz
144	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U3:440-470MHz
145	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U4:470-490MHz
146	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U7:420-450MHz
147	3001051840000	Chip resistor 0402 180KΩ J 1/	1	R513*	T2G	U1:400-420MHz
148	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U2:450-470MHz
149	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U3:440-470MHz
150	3001051040000	Chip resistor 0402 100KΩ F 1/	1			U4:470-490MHz
151	3001051840000	Chip resistor 0402 180KΩ J 1/	1			U7:420-450MHz
152	3001051850000	Chip resistor 0402 1.8MΩ J 1/	1	R228	T3K	
153	3001052200010	Chip resistor 0402 22Ω F 1/16	1	R401	T4F	
154	3001052210000	Chip resistor 0402 220Ω J 1/1	1	R510*	T2G	U1:400-420MHz
155	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U2:450-470MHz
156	3001051210000	Chip resistor 0402 120Ω J 1/1	1			U3:440-470MHz
157	3001051210000	Chip resistor 0402 120Ω J 1/1	1			U4:470-490MHz
158	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U7:420-450MHz
159	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R103	T4I	
160	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R201	T1F	
161	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R235	T4K	
162	3001052220000	Chip resistor 0402 2.2KΩ J 1/	1	R438	B4D	
163	3001052230010	Chip resistor 0402 22KΩ J 1/1	1	R214*	T2K	U1:400-420MHz
164	3001052230010	Chip resistor 0402 22KΩ J 1/1	1			U2:450-470MHz
165	3001052230010	Chip resistor 0402 22KΩ J 1/1	1			U3:440-470MHz
166	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U4:470-490MHz
167	3001052230010	Chip resistor 0402 22KΩ J 1/1	1			U7:420-450MHz
168	3001052230010	Chip resistor 0402 22KΩ J 1/1	1	R221	T2K	
169	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R520	T2I	
170	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R659	T2E	
171	3001052720000	Chip resistor 0402 2.7KΩ J 1/	1	R663	T2D	
172	3001052730010	Chip resistor 0402 27KΩ F 1/1	1	R216*	T2K	U1:400-420MHz
173	3001052730010	Chip resistor 0402 27KΩ F 1/1	1			U2:450-470MHz
174	3001052730010	Chip resistor 0402 27KΩ F 1/1	1			U3:440-470MHz
175	3001052230010	Chip resistor 0402 22KΩ J 1/1	1			U4:470-490MHz
176	3001052730010	Chip resistor 0402 27KΩ F 1/1	1			U7:420-450MHz
177	3001052790000	Chip resistor 0402 2.7Ω J 1/1	1	R521*	T3E	U1:400-420MHz
178	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U2:450-470MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
179	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U3:440-470MHz
180	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U4:470-490MHz
181	3001050000000	Chip resistor 0402 0Ω J 1/16	1			U7:420-450MHz
182	3001053030000	Chip resistor 0402 30KΩ F 1/1	1	R218*	T2K	U1:400-420MHz
183	3001053030000	Chip resistor 0402 30KΩ F 1/1	1			U2:450-470MHz
184	3001053030000	Chip resistor 0402 30KΩ F 1/1	1			U3:440-470MHz
185	3001055610000	Chip resistor 0402 560Ω J 1/1	1			U4:470-490MHz
186	3001053030000	Chip resistor 0402 30KΩ F 1/1	1			U7:420-450MHz
187	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R114*	T3G	U1:400-420MHz
188	3001053310010	Chip resistor 0402 330Ω J 1/1	1			U2:450-470MHz
189	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U3:440-470MHz
190	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U4:470-490MHz
191	3001053310010	Chip resistor 0402 330Ω J 1/1	1			U7:420-450MHz
192	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R403	T4F	
193	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R407	T4F	
194	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R516	T2G	
195	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R656	B4A	
196	3001053310010	Chip resistor 0402 330Ω J 1/1	1	R689	B4A	
197	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R111	T3G	
198	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R113	T3G	
199	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R115	T3F	
200	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R230	T3K	
201	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R236	T4K	
202	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R263	B4H	
203	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R639	T2D	
204	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1	R664	T2D	
205	3001053330000	Chip resistor 0402 33KΩ F 1/1	1	R417*	T5E	U1:400-420MHz
206	3001053330000	Chip resistor 0402 33KΩ F 1/1	1			U2:450-470MHz
207	3001053330000	Chip resistor 0402 33KΩ F 1/1	1			U3:440-470MHz
208	3001053330000	Chip resistor 0402 33KΩ F 1/1	1			U4:470-490MHz
209	3001053930000	Chip resistor 0402 39KΩ J 1/1	1			U7:420-450MHz
210	3001053340000	Chip resistor 0402 330KΩ J 1/	1	R701	B5J	
211	3001053630000	Chip resistor 0402 36KΩ J 1/1	1	R226	T2K	
212	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R211*	T3J	U1:400-420MHz
213	3001053940000	Chip resistor 0402 390KΩ J 1/	1			U2:450-470MHz
214	3001053940000	Chip resistor 0402 390KΩ J 1/	1			U3:440-470MHz
215	3001053940000	Chip resistor 0402 390KΩ J 1/	1			U4:470-490MHz
216	3001054740000	Chip resistor 0402 470KΩ J 1/	1			U7:420-450MHz
217	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R217	T2J	
218	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R223	T2K	
219	3001053940000	Chip resistor 0402 390KΩ J 1/	1	R227	T2K	
220	3001054700000	Chip resistor 0402 47Ω J 1/16	1	R410	T5F	
221	3001054700000	Chip resistor 0402 47Ω J 1/16	1	R415	T5E	
222	3001054710000	Chip resistor 0402 470Ω J 1/1	1	R200	T1F	
223	3001054710000	Chip resistor 0402 470Ω J 1/1	1	R204	B1F	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
224	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R203	B1F	
225	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R231	T3K	
226	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R312	B1I	
227	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R412*	T5F	U1:400-420MHz
228	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1			U2:450-470MHz
229	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1			U3:440-470MHz
230	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1			U4:470-490MHz
231	3001053320000	Chip resistor 0402 3.3KΩ J 1/	1			U7:420-450MHz
232	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R441	B4J	
233	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R442	B4J	
234	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R506	T3E	
235	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R651	T5G	
236	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R699	B4J	
237	3001054720000	Chip resistor 0402 4.7KΩ J 1/	1	R700	B4K	
238	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	C317	T5J	
239	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R205	B1F	
240	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R237	T4K	
241	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R245	B2D	
242	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R267	T4H	
243	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R304	T4J	
244	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R305	T4J	
245	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R307	T5J	
246	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R402	T4F	
247	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R636	B4I	
248	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R637	B4I	
249	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R638	B4I	
250	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R641	B4I	
251	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R668	B4J	
252	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R690	B5J	
253	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R692	T1E	
254	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R693	B5I	
255	3001054730000	Chip resistor 0402 47KΩ J 1/1	1	R702	T1D	
256	3001054740000	Chip resistor 0402 470KΩ J 1/	1	R642	B2I	
257	3001054740000	Chip resistor 0402 470KΩ J 1/	1	R648	B3I	
258	3001054790000	Chip resistor 0402 4.7Ω J 1/1	1	R249	B1E	
259	3001054790000	Chip resistor 0402 4.7Ω J 1/1	1	R255	B2E	
260	3001055110000	Chip resistor 0402 510Ω J 1/1	1	R503	T3F	
261	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R100	T4I	
262	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R517	T2H	
263	3001055610000	Chip resistor 0402 560Ω J 1/1	1	R518	T2I	
264	3001055630000	Chip resistor 0402 56KΩ J 1/1	1	R207	B1F	
265	3001055630000	Chip resistor 0402 56KΩ J 1/1	1	R411	T5F	
266	3001055640000	Chip resistor 0402 560KΩ J 1/	1	R519	T2I	
267	3001056810000	Chip resistor 0402 680Ω J 1/1	1	R405	T5F	
268	3001056820000	Chip resistor 0402 6.8KΩ J 1/	1	R505	T3E	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
269	3001058210000	Chip resistor 0402 820Ω J 1/1	1	R661	T2D	
270	3001058220010	Chip resistor 0402 8.2KΩ F 1/	1	R234	T4K	
271	3001058230000	Chip resistor 0402 82KΩ J 1/1	1	R264	B4H	
272	3001058240000	Chip resistor 0402 820KΩ F 1/	1	R232	T3K	
273	3001058240000	Chip resistor 0402 820KΩ F 1/	1	R240	T4K	
274	3001059130000	Chip resistor 0402 91KΩ F 1/1	1	R440	B4D	
275	3001061010040	Chip resistor 0603 100Ω F 1/1	1	R419*	B5C	U1:400-420MHz
276	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U2:450-470MHz
277	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U3:440-470MHz
278	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U4:470-490MHz
279	3001051510010	Chip resistor 0402 150Ω F 1/1	1			U7:420-450MHz
280	3001070000000	Chip resistor 0805 0Ω J 1/8W	1	L202	B2D	
281	3001070000000	Chip resistor 0805 0Ω J 1/8W	1	R413*	T5E	U1:400-420MHz
282	3001070000000	Chip resistor 0805 0Ω J 1/8W	1			U2:450-470MHz
283	3001070000000	Chip resistor 0805 0Ω J 1/8W	1			U3:440-470MHz
284	3001070000000	Chip resistor 0805 0Ω J 1/8W	1			U4:470-490MHz
285	3210306279000	Multi-layer chip inductor 0603 2.7nH	1			U7:420-450MHz
286	3002996830000	Trimmer resistor(2*2) 68KΩ(+25%)	1	VR200	B4K	
287	3002996830000	Trimmer resistor(2*2) 68KΩ(+25%)	1	VR260	B5H	
288	3002996830000	Trimmer resistor(2*2) 68KΩ(+25%)	1	VR300	T4J	
289	3002996830000	Trimmer resistor(2*2) 68KΩ(+25%)	1	VR601	B5J	
290	3005051020010	Resistor array 0402 1K*4 J 1/16	1	RN1	T4J	
291	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R420	B4C	
292	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R421	B4C	
293	3099080398000	Chip resistor 1206 0.39Ω J 1/	1	R422	B4C	
294	3101050200010	Chip capacitor 0402 2PF B 50V	1	C133	T3G	
295	3101050200010	Chip capacitor 0402 2PF B 50V	1	C501	T3D	
296	3101050200010	Chip capacitor 0402 2PF B 50V	1	C560	T2H	
297	3101050200010	Chip capacitor 0402 2PF B 50V	1	C561	T2H	
298	3101050300000	Chip capacitor 0402 3PF B 50V	1	C137	T3H	
299	3101050300000	Chip capacitor 0402 3PF B 50V	1	C500	T4D	
300	3101050400010	Chip capacitor 0402 4PF B 50V	1	C505*	T3D	U1:400-420MHz
301	3101050200010	Chip capacitor 0402 2PF B 50V	1			U2:450-470MHz
302	3101050400010	Chip capacitor 0402 4PF B 50V	1			U3:440-470MHz
303	3101050400010	Chip capacitor 0402 4PF B 50V	1			U4:470-490MHz
304	3101050200010	Chip capacitor 0402 2PF B 50V	1			U7:420-450MHz
305	3101050400010	Chip capacitor 0402 4PF B 50V	1	C516*	T3E	U1:400-420MHz
306	NC	NC	1			U2:450-470MHz
307	3101050400010	Chip capacitor 0402 4PF B 50V	1			U3:440-470MHz
308	3101052490010	Chip capacitor 0402 2.4PF B 50	1			U4:470-490MHz
309	NC	NC	1			U7:420-450MHz
310	3101050400010	Chip capacitor 0402 4PF B 50V	1	C521*	T2F	U1:400-420MHz
311	3101050400010	Chip capacitor 0402 4PF B 50V	1			U2:450-470MHz
312	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
313	3101050300000	Chip capacitor 0402 3PF B 50V	1			U4:470-490MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
314	3101050200010	Chip capacitor 0402 2PF B 50V	1			U7:420-450MHz
315	3101050400010	Chip capacitor 0402 4PF B 50V	1	C524*	T2F	U1:400-420MHz
316	3101050200010	Chip capacitor 0402 2PF B 50V	1			U2:450-470MHz
317	3101050400010	Chip capacitor 0402 4PF B 50V	1			U3:440-470MHz
318	3101053690000	Chip capacitor 0402 3.6PF B 50	1			U4:470-490MHz
319	3101050200010	Chip capacitor 0402 2PF B 50V	1			U7:420-450MHz
320	3101050400010	Chip capacitor 0402 4PF B 50V	1	C532	T3F	
321	3101050400010	Chip capacitor 0402 4PF B 50V	1	C534*	T2F	U1:400-420MHz
322	NC	NC	1			U2:450-470MHz
323	3101050400010	Chip capacitor 0402 4PF B 50V	1			U3:440-470MHz
324	3101050400010	Chip capacitor 0402 4PF B 50V	1			U4:470-490MHz
325	NC	NC	1			U7:420-450MHz
326	3101050500010	Chip capacitor 0402 5PF B 50V	1	C136	T3H	
327	3101050500010	Chip capacitor 0402 5PF B 50V	1	C138	T3H	
328	3101050500010	Chip capacitor 0402 5PF B 50V	1	C519	T2F	
329	3101050600010	Chip capacitor 0402 6PF B 50V	1	C130	T3G	
330	3101050600010	Chip capacitor 0402 6PF B 50V	1	C141	T3G	
331	3101050600010	Chip capacitor 0402 6PF B 50V	1	C405*	T5F	U1:400-420MHz
332	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
333	3101050600010	Chip capacitor 0402 6PF B 50V	1			U3:440-470MHz
334	3101050600010	Chip capacitor 0402 6PF B 50V	1			U4:470-490MHz
335	3101050400010	Chip capacitor 0402 4PF B 50V	1			U7:420-450MHz
336	3101050600010	Chip capacitor 0402 6PF B 50V	1	C507	T3E	
337	3101050600010	Chip capacitor 0402 6PF B 50V	1	C531*	T3F	U1:400-420MHz
338	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
339	3101051010030	Chip capacitor 0402 100PF J 50	1			U3:440-470MHz
340	3101051010030	Chip capacitor 0402 100PF J 50	1			U4:470-490MHz
341	3101050600010	Chip capacitor 0402 6PF B 50V	1			U7:420-450MHz
342	3101050600010	Chip capacitor 0402 6PF B 50V	1	C535*	T2F	U1:400-420MHz
343	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
344	3101051010030	Chip capacitor 0402 100PF J 50	1			U3:440-470MHz
345	3101051010030	Chip capacitor 0402 100PF J 50	1			U4:470-490MHz
346	3101050600010	Chip capacitor 0402 6PF B 50V	1			U7:420-450MHz
347	3101050700010	Chip capacitor 0402 7PF B 50V	1	C518	T2F	
348	3101050800000	Chip capacitor 0402 8PF B 50V	1	C508*	T3E	U1:400-420MHz
349	3101050400010	Chip capacitor 0402 4PF B 50V	1			U2:450-470MHz
350	3101050800000	Chip capacitor 0402 8PF B 50V	1			U3:440-470MHz
351	3101050800000	Chip capacitor 0402 8PF B 50V	1			U4:470-490MHz
352	3101050200010	Chip capacitor 0402 2PF B 50V	1			U7:420-450MHz
353	3101050800000	Chip capacitor 0402 8PF B 50V	1	C645	B5I	
354	3101050800000	Chip capacitor 0402 8PF B 50V	1	C691	B4I	
355	3101051000020	Chip capacitor 0402 10PF J 50V	1	C132	T3G	
356	3101051000020	Chip capacitor 0402 10PF J 50V	1	C135	T3H	
357	3101051000020	Chip capacitor 0402 10PF J 50V	1	C321	T5I	
358	3101051000020	Chip capacitor 0402 10PF J 50V	1	C322	T5I	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
359	3101051000020	Chip capacitor 0402 10PF J 50V	1	C435*	B5D	U1:400-420MHz
360	3101051000020	Chip capacitor 0402 10PF J 50V	1			U2:450-470MHz
361	3101054710010	Chip capacitor 0402 470PF K 50	1			U3:440-470MHz
362	3101054710010	Chip capacitor 0402 470PF K 50	1			U4:470-490MHz
363	3101051000020	Chip capacitor 0402 10PF J 50V	1			U7:420-450MHz
364	3101051000020	Chip capacitor 0402 10PF J 50V	1	C541*	T2G	U1:400-420MHz
365	3101051000020	Chip capacitor 0402 10PF J 50V	1			U2:450-470MHz
366	3101051000020	Chip capacitor 0402 10PF J 50V	1			U3:440-470MHz
367	3101050900000	Chip capacitor 0402 9PF B 50V	1			U4:470-490MHz
368	3101051000020	Chip capacitor 0402 10PF J 50V	1			U7:420-450MHz
369	3101051010030	Chip capacitor 0402 100PF J 50	1	C107	T5I	
370	3101051010030	Chip capacitor 0402 100PF J 50	1	C201	T1F	
371	3101051010030	Chip capacitor 0402 100PF J 50	1	C266	B4H	
372	3101051010030	Chip capacitor 0402 100PF J 50	1	C303	T3J	
373	3101051010030	Chip capacitor 0402 100PF J 50	1	C304	T3J	
374	3101051010030	Chip capacitor 0402 100PF J 50	1	C305	T3J	
375	3101051010030	Chip capacitor 0402 100PF J 50	1	C334	B1I	
376	3101051010030	Chip capacitor 0402 100PF J 50	1	C514	T3E	
377	3101051010030	Chip capacitor 0402 100PF J 50	1	C669	T4J	
378	3101051020010	Chip capacitor 0402 1000PF K 5	1	C105	T5H	
379	3101051020010	Chip capacitor 0402 1000PF K 5	1	C106	T4H	
380	3101051020010	Chip capacitor 0402 1000PF K 5	1	C204	T3K	
381	3101051020010	Chip capacitor 0402 1000PF K 5	1	C248*	B1E	U1:400-420MHz
382	3101051020010	Chip capacitor 0402 1000PF K 5	1			U2:450-470MHz
383	NC	NC	1			U3:440-470MHz
384	NC	NC	1			U4:470-490MHz
385	3101051020010	Chip capacitor 0402 1000PF K 5	1			U7:420-450MHz
386	3101051020010	Chip capacitor 0402 1000PF K 5	1	C250	B1E	
387	3101051020010	Chip capacitor 0402 1000PF K 5	1	C254	B2D	
388	3101051020010	Chip capacitor 0402 1000PF K 5	1	C265	T4H	
389	3101051020010	Chip capacitor 0402 1000PF K 5	1	C320	T5I	
390	3101051020010	Chip capacitor 0402 1000PF K 5	1	C323	T5I	
391	3101051020010	Chip capacitor 0402 1000PF K 5	1	C341	T3I	
392	3101051020010	Chip capacitor 0402 1000PF K 5	1	C408	T5F	
393	3101051020010	Chip capacitor 0402 1000PF K 5	1	C414	T5E	
394	3101051020010	Chip capacitor 0402 1000PF K 5	1	C439	B4D	
395	3101051020010	Chip capacitor 0402 1000PF K 5	1	C509	T3E	
396	3101051020010	Chip capacitor 0402 1000PF K 5	1	C527	T2E	
397	3101051020010	Chip capacitor 0402 1000PF K 5	1	C609	B3I	
398	3101051020010	Chip capacitor 0402 1000PF K 5	1	C641	B4A	
399	3101051020010	Chip capacitor 0402 1000PF K 5	1	C644	B4B	
400	3101051020010	Chip capacitor 0402 1000PF K 5	1	C646	T2D	
401	3101051020010	Chip capacitor 0402 1000PF K 5	1	C651	T4G	
402	3101051020010	Chip capacitor 0402 1000PF K 5	1	C653	T5G	
403	3101051020010	Chip capacitor 0402 1000PF K 5	1	C657	T2D	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
404	3101051020010	Chip capacitor 0402 1000PF K 5	1	C658	T1E	
405	3101051020010	Chip capacitor 0402 1000PF K 5	1	C661	T1D	
406	3101051020010	Chip capacitor 0402 1000PF K 5	1	C666	B4A	
407	3101051020010	Chip capacitor 0402 1000PF K 5	1	C667	B3A	
408	3101051020010	Chip capacitor 0402 1000PF K 5	1	C670	B5I	
409	3101051020010	Chip capacitor 0402 1000PF K 5	1	C680	B3I	
410	3101051020010	Chip capacitor 0402 1000PF K 5	1	C684	T1D	
411	3101051020010	Chip capacitor 0402 1000PF K 5	1	C685	B5J	
412	3101051020010	Chip capacitor 0402 1000PF K 5	1	C686	B2I	
413	3101051020010	Chip capacitor 0402 1000PF K 5	1	C689	B4I	
414	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C237	T3K	
415	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C259	B2E	
416	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C274	B1F	
417	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C300	T3I	
418	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C311	B3I	
419	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C416	T4D	
420	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C419	B4C	
421	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C529	T2G	
422	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C540	T1G	
423	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C542	T2H	
424	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C546	T2I	
425	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C547	T2I	
426	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C656	B4K	
427	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C662	T2D	
428	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C677	T1E	
429	3101051030020	Chip capacitor 0402 0.01UF K 2	1	C681	B3I	
430	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C1	B5I	
431	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C118	T4G	
432	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C127	T3G	
433	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C143	T3G	
434	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C205	T3K	
435	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C212	B1F	
436	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C217	T2K	
437	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C231	B2J	
438	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C240	T4K	
439	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C249	T2B	
440	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C253	T4J	
441	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C255	B2D	
442	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C256	B1E	
443	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C257	B2C	
444	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C272	B2E	
445	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C315	T4J	
446	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C324	T2I	
447	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C325	T2I	
448	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C326	T2J	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
449	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C329	T2J	
450	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C330	T2I	
451	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C331	T2I	
452	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C332	T2I	
453	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C333	B1I	
454	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C409	T4E	
455	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C415	T4D	
456	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C418	B4C	
457	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C433	B4D	
458	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C510*	T3E	U1:400-420MHz
459	3101050700010	Chip capacitor 0402 7PF B 50V	1			U2:450-470MHz
460	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
461	3101052210010	Chip capacitor 0402 220PF K 50	1			U4:470-490MHz
462	3101051200020	Chip capacitor 0402 12PF J 50V	1			U7:420-450MHz
463	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C511	T3F	
464	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C515*	T3F	U1:400-420MHz
465	3101050700010	Chip capacitor 0402 7PF B 50V	1			U2:450-470MHz
466	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
467	3101051010030	Chip capacitor 0402 100PF J 50	1			U4:470-490MHz
468	3101050700010	Chip capacitor 0402 7PF B 50V	1			U7:420-450MHz
469	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C537	T2G	
470	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C642	B3J	
471	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C650	T4G	
472	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C655	T5G	
473	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C683	B2I	
474	3101051040060	Chip capacitor 0402 0.1UF K 16	1	C687	B5I	
475	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C213	B1F	
476	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C216	T1K	
477	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C218	T2J	
478	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C226	T2K	
479	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C230	B2J	
480	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C241	T4K	
481	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C242	T4K	
482	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C301	T3I	
483	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C306	T3I	
484	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C307	T3I	
485	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C309	T3I	
486	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C310	B3I	
487	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C440	B4J	
488	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C441	B4K	
489	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C678	B4K	
490	3101051050000	Chip capacitor 0402 1UF K 6.3V	1	C690	B3I	
491	3101051100010	Chip capacitor 0402 11PF J 50V	1	C526*	T2F	U1:400-420MHz
492	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
493	3101050600010	Chip capacitor 0402 6PF B 50V	1			U3:440-470MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
494	3101050800000	Chip capacitor 0402 8PF B 50V	1			U4:470-490MHz
495	3101050800000	Chip capacitor 0402 8PF B 50V	1			U7:420-450MHz
496	3101051200020	Chip capacitor 0402 12PF J 50V	1	C111*	T5H	U1:400-420MHz
497	3101051200020	Chip capacitor 0402 12PF J 50V	1			U2:450-470MHz
498	3101050600010	Chip capacitor 0402 6PF B 50V	1			U3:440-470MHz
499	3101050700010	Chip capacitor 0402 7PF B 50V	1			U4:470-490MHz
500	3101051000020	Chip capacitor 0402 10PF J 50V	1			U7:420-450MHz
501	3101051200020	Chip capacitor 0402 12PF J 50V	1	C502*	T3D	U1:400-420MHz
502	3101050700010	Chip capacitor 0402 7PF B 50V	1			U2:450-470MHz
503	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
504	3101051500020	Chip capacitor 0402 15PF J 50V	1			U4:470-490MHz
505	3101050700010	Chip capacitor 0402 7PF B 50V	1			U7:420-450MHz
506	3101051200020	Chip capacitor 0402 12PF J 50V	1	C544	T2H	
507	3101051500020	Chip capacitor 0402 15PF J 50V	1	C407*	T5E	U1:400-420MHz
508	NC	NC	1			U2:450-470MHz
509	NC	NC	1			U3:440-470MHz
510	NC	NC	1			U4:470-490MHz
511	NC	NC	1			U7:420-450MHz
512	3101051500020	Chip capacitor 0402 15PF J 50V	1	C503*	T3D	U1:400-420MHz
513	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
514	3101050600010	Chip capacitor 0402 6PF B 50V	1			U3:440-470MHz
515	3101050400010	Chip capacitor 0402 4PF B 50V	1			U4:470-490MHz
516	3101050600010	Chip capacitor 0402 6PF B 50V	1			U7:420-450MHz
517	3101051520000	Chip capacitor 0402 1500PF K 5	1	C224	T2J	
518	3101051520000	Chip capacitor 0402 1500PF K 5	1	C233	T3K	
519	3101051590000	Chip capacitor 0402 1.5PF B 50	1	C533	T2F	
520	3101051830000	Chip capacitor 0402 0.018UF K	1	C207	T3K	
521	3101052200010	Chip capacitor 0402 22PF J 50V	1	C245	T4K	
522	3101052210010	Chip capacitor 0402 220PF K 50	1	C260	B1D	
523	3101052210010	Chip capacitor 0402 220PF K 50	1	C275	B1C	
524	3101052220010	Chip capacitor 0402 2200pF K 5	1	C243	T4K	
525	3101052220010	Chip capacitor 0402 2200pF K 5	1	C258	T4K	
526	3101052230000	Chip capacitor 0402 0.022UF K	1	C215*	T1K	U1:400-420MHz
527	3101052230000	Chip capacitor 0402 0.022UF K	1			U2:450-470MHz
528	3101051830000	Chip capacitor 0402 0.018UF K	1			U3:440-470MHz
529	3101051830000	Chip capacitor 0402 0.018UF K	1			U4:470-490MHz
530	3101052230000	Chip capacitor 0402 0.022UF K	1			U7:420-450MHz
531	3101052230000	Chip capacitor 0402 0.022UF K	1	C663	B4K	
532	3101052240010	Chip capacitor 0402 0.22UF Z 1	1	C203	T3K	
533	3101052710000	Chip capacitor 0402 270PF J 50	1	C412	T5E	
534	3101053300000	Chip capacitor 0402 33PF J 50V	1	C120*	T3H	U1:400-420MHz
535	3101051200020	Chip capacitor 0402 12PF J 50V	1			U2:450-470MHz
536	3101051800010	Chip capacitor 0402 18PF J 50V	1			U3:440-470MHz
537	3101050800000	Chip capacitor 0402 8PF B 50V	1			U4:470-490MHz
538	3101053300000	Chip capacitor 0402 33PF J 50V	1			U7:420-450MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
539	3101053340010	Capacitor 0402 0.33UF X5R K	1	C102	T4I	
540	3101053340010	Capacitor 0402 0.33UF X5R K	1	C104	T5I	
541	3101053910000	Chip capacitor 0402 390PF J 50	1	C228	T2J	
542	3101053910000	Chip capacitor 0402 390PF J 50	1	C234	T3K	
543	3101053920000	Chip capacitor 0402 3900PF K 2	1	C679	B4K	
544	3101054700010	Chip capacitor 0402 47PF J 50V	1	C121*	T3H	U1:400-420MHz
545	3101051500020	Chip capacitor 0402 15PF J 50V	1			U2:450-470MHz
546	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
547	3101051000020	Chip capacitor 0402 10PF J 50V	1			U4:470-490MHz
548	3101052200010	Chip capacitor 0402 22PF J 50V	1			U7:420-450MHz
549	3101054700010	Chip capacitor 0402 47PF J 50V	1	C280*	B1A	U1:400-420MHz
550	3101054700010	Chip capacitor 0402 47PF J 50V	1			U2:450-470MHz
551	3101051010030	Chip capacitor 0402 100PF J 50	1			U3:440-470MHz
552	3101051010030	Chip capacitor 0402 100PF J 50	1			U4:470-490MHz
553	3101054700010	Chip capacitor 0402 47PF J 50V	1			U7:420-450MHz
554	3101054700010	Chip capacitor 0402 47PF J 50V	1	C411*	T4E	U1:400-420MHz
555	3101053300000	Chip capacitor 0402 33PF J 50V	1			U2:450-470MHz
556	3101053300000	Chip capacitor 0402 33PF J 50V	1			U3:440-470MHz
557	3101053300000	Chip capacitor 0402 33PF J 50V	1			U4:470-490MHz
558	3101053300000	Chip capacitor 0402 33PF J 50V	1			U7:420-450MHz
559	3101054700010	Chip capacitor 0402 47PF J 50V	1	C528*	T2F	U1:400-420MHz
560	3101050700010	Chip capacitor 0402 7PF B 50V	1			U2:450-470MHz
561	3101051500020	Chip capacitor 0402 15PF J 50V	1			U3:440-470MHz
562	3101051500020	Chip capacitor 0402 15PF J 50V	1			U4:470-490MHz
563	3101051500020	Chip capacitor 0402 15PF J 50V	1			U7:420-450MHz
564	3101054710010	Chip capacitor 0402 470PF K 50	1	C117	T4G	
565	3101054710010	Chip capacitor 0402 470PF K 50	1	C126	T3G	
566	3101054710010	Chip capacitor 0402 470PF K 50	1	C131	T4G	
567	3101054710010	Chip capacitor 0402 470PF K 50	1	C134	T3G	
568	3101054710010	Chip capacitor 0402 470PF K 50	1	C139	T3H	
569	3101054710010	Chip capacitor 0402 470PF K 50	1	C140	T3G	
570	3101054710010	Chip capacitor 0402 470PF K 50	1	C142	T3G	
571	3101054710010	Chip capacitor 0402 470PF K 50	1	C316	T4J	
572	3101054710010	Chip capacitor 0402 470PF K 50	1	C335	T4I	
573	3101054710010	Chip capacitor 0402 470PF K 50	1	C337	T3I	
574	3101054710010	Chip capacitor 0402 470PF K 50	1	C342	T3I	
575	3101054710010	Chip capacitor 0402 470PF K 50	1	C401	T4F	
576	3101054710010	Chip capacitor 0402 470PF K 50	1	C402*	T4F	U1:400-420MHz
577	3101050600010	Chip capacitor 0402 6PF B 50V	1			U2:450-470MHz
578	3101050600010	Chip capacitor 0402 6PF B 50V	1			U3:440-470MHz
579	3101050600010	Chip capacitor 0402 6PF B 50V	1			U4:470-490MHz
580	3101050600010	Chip capacitor 0402 6PF B 50V	1			U7:420-450MHz
581	3101054710010	Chip capacitor 0402 470PF K 50	1	C403	T5F	
582	3101054710010	Chip capacitor 0402 470PF K 50	1	C404	T4F	
583	3101054710010	Chip capacitor 0402 470PF K 50	1	C406	T5F	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
584	3101054710010	Chip capacitor 0402 470PF K 50	1	C410	T4E	
585	3101054710010	Chip capacitor 0402 470PF K 50	1	C417	T4D	
586	3101054710010	Chip capacitor 0402 470PF K 50	1	C430	B5C	
587	3101054710010	Chip capacitor 0402 470PF K 50	1	C432	B4D	
588	3101054710010	Chip capacitor 0402 470PF K 50	1	C436	B4D	
589	3101054710010	Chip capacitor 0402 470PF K 50	1	C437	B4C	
590	3101054710010	Chip capacitor 0402 470PF K 50	1	C442	B5C	
591	3101054710010	Chip capacitor 0402 470PF K 50	1	C512	T3F	
592	3101054710010	Chip capacitor 0402 470PF K 50	1	C530	T2G	
593	3101054710010	Chip capacitor 0402 470PF K 50	1	C536	T3F	
594	3101054710010	Chip capacitor 0402 470PF K 50	1	C538	T2G	
595	3101054710010	Chip capacitor 0402 470PF K 50	1	C539	T1G	
596	3101054710010	Chip capacitor 0402 470PF K 50	1	C648	B3A	
597	3101054710010	Chip capacitor 0402 470PF K 50	1	C649	B2A	
598	3101054710010	Chip capacitor 0402 470PF K 50	1	C654	T5G	
599	3101054710010	Chip capacitor 0402 470PF K 50	1	C659	B3A	
600	3101054710010	Chip capacitor 0402 470PF K 50	1	C660	B3B	
601	3101054710010	Chip capacitor 0402 470PF K 50	1	C671	B5F	
602	3101054710010	Chip capacitor 0402 470PF K 50	1	C675	B5F	
603	3101054710010	Chip capacitor 0402 470PF K 50	1	C676	B5F	
604	3101054730000	Chip capacitor 0402 0.047UF K	1	C223	T2K	
605	3101054730000	Chip capacitor 0402 0.047UF K	1	C225	T2K	
606	3101054730000	Chip capacitor 0402 0.047UF K	1	C232	T3K	
607	3101054730000	Chip capacitor 0402 0.047UF K	1	R220	T2K	
608	3101055600000	Chip capacitor 0402 56PF J 50V	1	C339	T3I	
609	3101055600000	Chip capacitor 0402 56PF J 50V	1	C343	T3I	
610	3101055620010	Chip capacitor 0402 5600PF K 2	1	C244	T4K	
611	3101055620010	Chip capacitor 0402 5600PF K 2	1	C261	B4H	
612	3101055630000	Chip capacitor 0402 0.056UF K	1	C236	T3K	
613	3101056800000	Chip capacitor 0402 68PF J 50V	1	C219	T2K	
614	3101056800000	Chip capacitor 0402 68PF J 50V	1	C220	T2K	
615	3101056800000	Chip capacitor 0402 68PF J 50V	1	C221	T2J	
616	3101056800000	Chip capacitor 0402 68PF J 50V	1	C340	T3I	
617	3101056820000	Chip capacitor 0402 6800PF K 2	1	C239	T3K	
618	3101056830000	Chip capacitor 0402 0.068UF K	1	C227	T3K	
619	3101060100010	Chip capacitor 0603 1PF B 50V	1	C125	T4G	
620	3101060100010	Chip capacitor 0603 1PF B 50V	1	C456*	T4C	U1:400-420MHz
621	3101060100010	Chip capacitor 0603 1PF B 50V	1			U2:450-470MHz
622	3101060100010	Chip capacitor 0603 1PF B 50V	1			U3:440-470MHz
623	3101060100010	Chip capacitor 0603 1PF B 50V	1			U4:470-490MHz
624	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U7:420-450MHz
625	3101060100010	Chip capacitor 0603 1PF B 50V	1	C459	T5C	
626	3101060200010	Chip capacitor 0603 2PF B 50V	1	C452*	T4C	U1:400-420MHz
627	3101060100010	Chip capacitor 0603 1PF B 50V	1			U2:450-470MHz
628	3101060100010	Chip capacitor 0603 1PF B 50V	1			U3:440-470MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
629	NC	NC	1			U4:470-490MHz
630	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U7:420-450MHz
631	3101060300010	Chip capacitor 0603 3PF B 50V	1	C426*	T5C	U1:400-420MHz
632	3101060100010	Chip capacitor 0603 1PF B 50V	1			U2:450-470MHz
633	3101060100010	Chip capacitor 0603 1PF B 50V	1			U3:440-470MHz
634	3101060300010	Chip capacitor 0603 3PF B 50V	1			U4:470-490MHz
635	3101060300010	Chip capacitor 0603 3PF B 50V	1			U7:420-450MHz
636	3101060300010	Chip capacitor 0603 3PF B 50V	1	C428*	T5C	U1:400-420MHz
637	3101060400010	Chip capacitor 0603 4PF B 50V	1			U2:450-470MHz
638	3101060400010	Chip capacitor 0603 4PF B 50V	1			U3:440-470MHz
639	3101060400010	Chip capacitor 0603 4PF B 50V	1			U4:470-490MHz
640	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U7:420-450MHz
641	3101060300010	Chip capacitor 0603 3PF B 50V	1	C455	T4B	
642	3101060400010	Chip capacitor 0603 4PF B 50V	1	C114*	T4H	U1:400-420MHz
643	3101062490000	Chip capacitor 0603 2.4PF B 50	1			U2:450-470MHz
644	3101060400010	Chip capacitor 0603 4PF B 50V	1			U3:440-470MHz
645	3101062490000	Chip capacitor 0603 2.4PF B 50	1			U4:470-490MHz
646	3101062490000	Chip capacitor 0603 2.4PF B 50	1			U7:420-450MHz
647	3101060400010	Chip capacitor 0603 4PF B 50V	1	C123	T3G	
648	3101060400010	Chip capacitor 0603 4PF B 50V	1	C424*	T4D	U1:400-420MHz
649	3101060100010	Chip capacitor 0603 1PF B 50V	1			U2:450-470MHz
650	3101060100010	Chip capacitor 0603 1PF B 50V	1			U3:440-470MHz
651	3101060100010	Chip capacitor 0603 1PF B 50V	1			U4:470-490MHz
652	3101060500010	Chip capacitor 0603 5PF B 50V	1			U7:420-450MHz
653	3101060400010	Chip capacitor 0603 4PF B 50V	1	C427*	T5C	U1:400-420MHz
654	3101060400010	Chip capacitor 0603 4PF B 50V	1			U2:450-470MHz
655	3101060400010	Chip capacitor 0603 4PF B 50V	1			U3:440-470MHz
656	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U4:470-490MHz
657	3101060200010	Chip capacitor 0603 2PF B 50V	1			U7:420-450MHz
658	3101060400010	Chip capacitor 0603 4PF B 50V	1	C454*	T4C	U1:400-420MHz
659	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U2:450-470MHz
660	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U3:440-470MHz
661	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U4:470-490MHz
662	3101060200010	Chip capacitor 0603 2PF B 50V	1			U7:420-450MHz
663	3101060500010	Chip capacitor 0603 5PF B 50V	1	C113*	T4H	U1:400-420MHz
664	3101063690000	Chip capacitor 0603 3.6PF B 50	1			U2:450-470MHz
665	3101060500010	Chip capacitor 0603 5PF B 50V	1			U3:440-470MHz
666	3101063690000	Chip capacitor 0603 3.6PF B 50	1			U4:470-490MHz
667	3101063690000	Chip capacitor 0603 3.6PF B 50	1			U7:420-450MHz
668	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C112	T4H	
669	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C116*	T4G	U1:400-420MHz
670	3101060390000	Chip capacitor 0603 0.3PF B 50	1			U2:450-470MHz
671	3101060390000	Chip capacitor 0603 0.3PF B 50	1			U3:440-470MHz
672	3101060390000	Chip capacitor 0603 0.3PF B 50	1			U4:470-490MHz
673	3101060390000	Chip capacitor 0603 0.3PF B 50	1			U7:420-450MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
674	3101060590010	Chip capacitor 0603 0.5PF B 50	1	C423*	T4D	U1:400-420MHz
675	3101061000000	Chip capacitor 0603 10PF J 50V	1			U2:450-470MHz
676	3101061000000	Chip capacitor 0603 10PF J 50V	1			U3:440-470MHz
677	3101061000000	Chip capacitor 0603 10PF J 50V	1			U4:470-490MHz
678	3101060800010	Chip capacitor 0603 8PF B 50V	1			U7:420-450MHz
679	3101060700020	Chip capacitor 0603 7PF B 50V	1	C115*	T4G	U1:400-420MHz
680	3101060300010	Chip capacitor 0603 3PF B 50V	1			U2:450-470MHz
681	3101060300010	Chip capacitor 0603 3PF B 50V	1			U3:440-470MHz
682	3101060300010	Chip capacitor 0603 3PF B 50V	1			U4:470-490MHz
683	3101060300010	Chip capacitor 0603 3PF B 50V	1			U7:420-450MHz
684	3101060700020	Chip capacitor 0603 7PF B 50V	1	C122*	T3G	U1:400-420MHz
685	3101060500010	Chip capacitor 0603 5PF B 50V	1			U2:450-470MHz
686	3101060500010	Chip capacitor 0603 5PF B 50V	1			U3:440-470MHz
687	3101060500010	Chip capacitor 0603 5PF B 50V	1			U4:470-490MHz
688	3101060600010	Chip capacitor 0603 6PF B 50V	1			U7:420-450MHz
689	3101060700020	Chip capacitor 0603 7PF B 50V	1	C425*	T5D	U1:400-420MHz
690	3101060300010	Chip capacitor 0603 3PF B 50V	1			U2:450-470MHz
691	3101060300010	Chip capacitor 0603 3PF B 50V	1			U3:440-470MHz
692	3101061590010	Chip capacitor 0603 1.5PF B 50	1			U4:470-490MHz
693	3101060200010	Chip capacitor 0603 2PF B 50V	1			U7:420-450MHz
694	3101060800010	Chip capacitor 0603 8PF B 50V	1	C451*	T3B	U1:400-420MHz
695	3101060100010	Chip capacitor 0603 1PF B 50V	1			U2:450-470MHz
696	3101060100010	Chip capacitor 0603 1PF B 50V	1			U3:440-470MHz
697	3101060100010	Chip capacitor 0603 1PF B 50V	1			U4:470-490MHz
698	3101060500010	Chip capacitor 0603 5PF B 50V	1			U7:420-450MHz
699	3101061000000	Chip capacitor 0603 10PF J 50V	1	C124*	T4G	U1:400-420MHz
700	3101061000000	Chip capacitor 0603 10PF J 50V	1			U2:450-470MHz
701	3101061000000	Chip capacitor 0603 10PF J 50V	1			U3:440-470MHz
702	3101061000000	Chip capacitor 0603 10PF J 50V	1			U4:470-490MHz
703	3101060800010	Chip capacitor 0603 8PF B 50V	1			U7:420-450MHz
704	3101061020000	Chip capacitor 0603 1000PF K 5	1	C429*	T4C	U1:400-420MHz
705	3101062700010	Chip capacitor 0603 27PF J 50V	1			U2:450-470MHz
706	3101062700010	Chip capacitor 0603 27PF J 50V	1			U3:440-470MHz
707	3101062700010	Chip capacitor 0603 27PF J 50V	1			U4:470-490MHz
708	3101061100010	Chip capacitor 0603 11PF J 50V	1			U7:420-450MHz
709	3101061020000	Chip capacitor 0603 1000PF K 5	1	C458	T5C	
710	3101061050020	Chip capacitor 0603 1UF K 25V	1	C246	B3J	
711	3101061050020	Chip capacitor 0603 1UF K 25V	1	C308	B3I	
712	3101061590010	Chip capacitor 0603 1.5PF B 50	1	C457	T4B	
713	3101062200010	Chip capacitor 0603 22PF J 50V	1	C421*	T5D	U1:400-420MHz
714	3101061000000	Chip capacitor 0603 10PF J 50V	1			U2:450-470MHz
715	3101061000000	Chip capacitor 0603 10PF J 50V	1			U3:440-470MHz
716	3101061800000	Chip capacitor 0603 18PF J 50V	1			U4:470-490MHz
717	3101060700020	Chip capacitor 0603 7PF B 50V	1			U7:420-450MHz
718	3101062200010	Chip capacitor 0603 22PF J 50V	1	C422*	T4D	U1:400-420MHz

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
719	3101060400010	Chip capacitor 0603 4PF B 50V	1			U2:450-470MHz
720	3101060500010	Chip capacitor 0603 5PF B 50V	1			U3:440-470MHz
721	NC	NC	1			U4:470-490MHz
722	NC	NC	1			U7:420-450MHz
723	3101062210000	Chip capacitor 0603 220PF J 50	1	C450*	T4C	U1:400-420MHz
724	3101061010010	Chip capacitor 0603 100PF J 50	1			U2:450-470MHz
725	3101061010010	Chip capacitor 0603 100PF J 50	1			U3:440-470MHz
726	3101061010010	Chip capacitor 0603 100PF J 50	1			U4:470-490MHz
727	3101064710000	Chip capacitor 0603 470PF K 50	1			U7:420-450MHz
728	3101062240000	Chip capacitor 0603 0.22UF K 1	1	C100	T4I	
729	3101063900000	Chip capacitor 0603 39PF J 50V	1	C420*	T5D	U1:400-420MHz
730	3101061300000	Chip capacitor 0603 13PF J 50V	1			U2:450-470MHz
731	3101061300000	Chip capacitor 0603 13PF J 50V	1			U3:440-470MHz
732	3101061000000	Chip capacitor 0603 10PF J 50V	1			U4:470-490MHz
733	3101061100010	Chip capacitor 0603 11PF J 50V	1			U7:420-450MHz
734	3101064790010	Chip capacitor 0603 4.7PF B 50	1	C453	T4B	
735	3101071050010	Chip capacitor 0805 1UF K 10V	1	C318	T5J	
736	3101102260010	Chip capacitor1206 22uF	1	C251	B1D	
737	3102992000040	Trimmer capacitor 3.2*2.5*1.25mm	1	TC100	T5G	
738	3102992000040	Trimmer capacitor 3.2*2.5*1.25mm	1	TC101	T4H	
739	3104071050010	Tantalum capacitor 0805 1UF M 16V T	1	C264	B4H	
740	3104071560020	Tantalum capacitor 0805 15UF M 6.3V	1	C312	B2I	
741	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C302	T3I	
742	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C643	T2E	
743	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C664	T2D	
744	3104072250010	Tantalum capacitor 0805 2.2UF M 10V	1	C665	T2E	
745	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C200	T1F	
746	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C262	B4H	
747	3104074750030	Tantalum capacitor 0805 4.7UF M 10V	1	C434	B5D	
748	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C229	B2J	
749	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C252	B1E	
750	3104081060070	Tantalum capacitor 1206 10UF M 16V	1	C431	B4C	
751	3104081560020	Tantalum capacitor 1206 15UF M 10V	1	C652	T5G	
752	3104082260040	Tantalum capacitor 1206 22UF M 10V	1	C673	B3I	
753	3104204760020	Tantalum capacitor C-package 47UF M 16V	1	C682	T3B	
754	3210108230010	Bobbin inductor 1206 23nH	1	L104*	T5H	U1:400-420MHz
755	3210108230010	Bobbin inductor 1206 23nH	1			U2:450-470MHz
756	3210108230010	Bobbin inductor 1206 23nH	1			U3:440-470MHz
757	3210108230010	Bobbin inductor 1206 23nH	1			U4:470-490MHz
758	3210108270000	Bobbin inductor 1206 27nH	1			U7:420-450MHz
759	3210108230010	Bobbin inductor 1206 23nH	1	L107	T3H	
760	3210305180000	Multi-layer chip inductor 0402 18nH	1	L113	T3H	
761	3210305220000	Multi-layer chip inductor 0402 22nH	1	L114	T3G	
762	3210305220000	Multi-layer chip inductor 0402 22nH	1	L400	T4F	
763	3210305220000	Multi-layer chip inductor 0402 22nH	1	L530	T2F	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
764	3210305330000	Multi-layer chip inductor 0402 33nH	1	L115	T3G	
765	3210305390000	Multi-layer chip inductor 0402 39nH	1	L111	T4G	
766	3210306220000	Multi-layer chip inductor 0603 22nH	1	L401	T4F	
767	3210306220000	Multi-layer chip inductor 0603 22nH	1	L505	T2F	
768	3210306561010	Multi-layer chip inductor 0603 560nH	1	L304	T3I	
769	3210406331000	Multi-layer chip inductor 0603 330nH	1	L303	T3I	
770	3210406331000	Multi-layer chip inductor 0603 330nH	1	L306	T3I	
771	3212105470000	Multi-layer chip inductor 0402 47nH	1	L112	T3G	
772	3213212102000	Multi-layer chip inductor 1008 1uH	1	L403	T4E	
773	3213212102000	Multi-layer chip inductor 1008 1uH	1	L453	B4B	
774	3213212102000	Multi-layer chip inductor 1008 1uH	1	L510	T1G	
775	3213212331000	Multi-layer chip inductor 1008 330nH	1	L509	T2G	
776	3213212561000	Multi-layer chip inductor 1008 0.56uH	1	L408*	B5C	U1:400-420MHz
777	3213212820010	Multi-layer chip inductor 1008 82nH	1			U2:450-470MHz
778	3213212820010	Multi-layer chip inductor 1008 82nH	1			U3:440-470MHz
779	3213212820010	Multi-layer chip inductor 1008 82nH	1			U4:470-490MHz
780	3213212561000	Multi-layer chip inductor 1008 0.56uH	1			U7:420-450MHz
781	3213306102000	Multi-layer chip inductor 0603 1uH	1	L200	T3K	
782	3213306102000	Multi-layer chip inductor 0603 1uH	1	L300	T4J	
783	3213306102000	Multi-layer chip inductor 0603 1uH	1	L301	T5I	
784	3213306102000	Multi-layer chip inductor 0603 1uH	1	L307	T3I	
785	3213306102000	Multi-layer chip inductor 0603 1uH	1	L308	T4I	
786	3213306221010	Multi-layer chip inductor 0603 0.22uH	1	L607	B3I	
787	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L101	T5H	
788	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L102	T3H	
789	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L103	T5H	
790	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L105	T4G	
791	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L106	T3H	
792	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L108	T4G	
793	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L109	T4H	
794	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L110	T3G	
795	3213306332000	Multi-layer chip inductor 0603 3.3uH	1	L305	T3I	
796	3215006100010	Multi-layer chip inductor 0603 10nH	1	L405*	T4E	U1:400-420MHz
797	3217106829000	Inductor 0603 8.2nH J 0603	1			U2:450-470MHz
798	3217106829000	Inductor 0603 8.2nH J 0603	1			U3:440-470MHz
799	3217106829000	Inductor 0603 8.2nH J 0603	1			U4:470-490MHz
800	3210306569000	Multi-layer chip inductor 0603 5.6nH	1			U7:420-450MHz
801	3221506601000	Chip ferrite bead 0603 600Ω±25	1	L100	T5I	
802	3221506601000	Chip ferrite bead 0603 600Ω±25	1	L402	T4F	
803	3221506601000	Chip ferrite bead 0603 600Ω±25	1	L650	T4G	
804	3221507221000	Chip ferrite bead 0805 220Ω±25	1	L404	T4E	
805	3221507600000	Chip ferrite bead 0805 60Ω±25%	1	L407	T4D	
806	3221507600000	Chip ferrite bead 0805 60Ω±25%	1	L604	T2B	
807	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L450	T4C	
808	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L451	T4C	

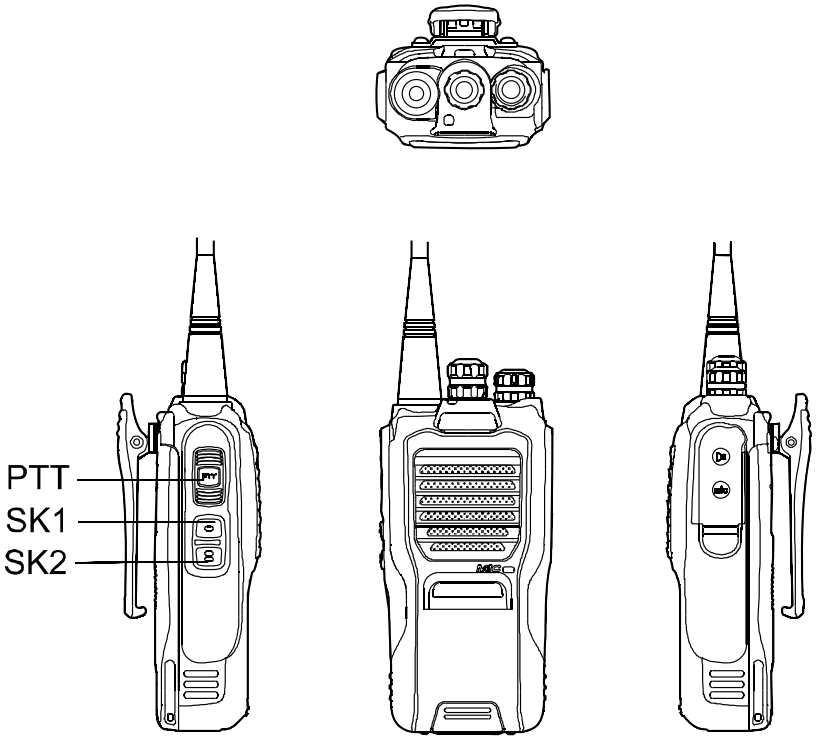
No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
809	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L452	T4B	
810	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L454	T5B	
811	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L500	T4D	
812	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L501*	T3D	U1:400-420MHz
813	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U2:450-470MHz
814	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U3:440-470MHz
815	3231351630000	Air-core inductor E2-0.35*1.6*3TR	1			U4:470-490MHz
816	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U7:420-450MHz
817	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L502*	T3E	U1:400-420MHz
818	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U2:450-470MHz
819	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U3:440-470MHz
820	3231351630000	Air-core inductor E2-0.35*1.6*3TR	1			U4:470-490MHz
821	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U7:420-450MHz
822	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L506*	T3F	U1:400-420MHz
823	NC	NC	1			U2:450-470MHz
824	3231351440000	Air-core inductor E2-0.35*1.4*4TR	1			U3:440-470MHz
825	3231351630000	Air-core inductor E2-0.35*1.6*3TR	1			U4:470-490MHz
826	NC	NC	1			U7:420-450MHz
827	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1	L508*	T2F	U1:400-420MHz
828	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U2:450-470MHz
829	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U3:440-470MHz
830	3231351630000	Air-core inductor E2-0.35*1.6*3TR	1			U4:470-490MHz
831	3231351640000	Air-core inductor E2-0.35*1.6*4TL	1			U7:420-450MHz
832	3231351680000	Air-core inductor E2-0.35*1.6*8TR	1	L406	T4D	
833	3303020100020	Switching diode MA2S11100L	1	D607	B5J	
834	3303020100020	Switching diode MA2S11100L	1	D650	T5G	
835	3303020100070	Switching diode MA2Z07700L	1	D401	T4C	
836	3303020100080	Switching diode MA2S07700L 1.7	1	D400	T3F	
837	3303020100080	Switching diode MA2S07700L 1.7	1	D500	T3F	
838	3303020100080	Switching diode MA2S07700L 1.7	1	D501	T3D	
839	3303020100080	Switching diode MA2S07700L 1.7	1	D502	T3D	
840	3304040200000	Varactor BB179 SOD523	1	D104	T4H	
841	3304060300050	Varactor HVC350BTRF-E	1	D100*	T5H	U1:400-420MHz
842	3304060300050	Varactor HVC350BTRF-E	1			U2:450-470MHz
843	3303210200000	Varactor MA2S37600L	1			U3:440-470MHz
844	3304060300050	Varactor HVC350BTRF-E	1			U4:470-490MHz
845	3304060300050	Varactor HVC350BTRF-E	1			U7:420-450MHz
846	3304060300050	Varactor HVC350BTRF-E	1	D101*	T5H	U1:400-420MHz
847	3304060300050	Varactor HVC350BTRF-E	1			U2:450-470MHz
848	3303210200000	Varactor MA2S37600L	1			U3:440-470MHz
849	3304060300050	Varactor HVC350BTRF-E	1			U4:470-490MHz
850	3304060300050	Varactor HVC350BTRF-E	1			U7:420-450MHz
851	3304060300050	Varactor HVC350BTRF-E	1	D102	T3H	
852	3304060300050	Varactor HVC350BTRF-E	1	D103	T3H	
853	3304060300050	Varactor HVC350BTRF-E	1	D503	T3D	

No.	Material No.	Description	Qty.	Ref. No.	Address	Remarks
854	3304060300050	Varactor HVC350BTRF-E	1	D504	T3E	
855	3304060300050	Varactor HVC350BTRF-E	1	D505*	T2F	U1:400-420MHz
856	NC	NC	1			U2:450-470MHz
857	3304060300050	Varactor HVC350BTRF-E	1			U3:440-470MHz
858	3304060300050	Varactor HVC350BTRF-E	1			U4:470-490MHz
859	NC	NC	1			U7:420-450MHz
860	3304060300050	Varactor HVC350BTRF-E	1	D507	T2F	
861	3307110100070	LED KPT-1608SR	1	D602	B4A	
862	3307110100080	LED KPT-1608SG	1	D601	B4A	
863	3399990000260	Diode HSM88ASTL-E	1	D508	T3E	
864	3401001000080	Transistor 2SA1362-GR	1	Q654	T1E	
865	3401001000490	Transistor 2SA1832-GR	1	Q202	B1F	
866	3401002000990	Transistor 2SC5108-Y	1	Q102	T4G	
867	3401002000990	Transistor 2SC5108-Y	1	Q103	T3H	
868	3401002000990	Transistor 2SC5108-Y	1	Q104	T3G	
869	3401002000990	Transistor 2SC5108-Y	1	Q105	T3I	
870	3401002000990	Transistor 2SC5108-Y	1	Q400	T4F	
871	3401002000990	Transistor 2SC5108-Y	1	Q502	T2I	
872	3403007000000	Transistor DTA114EE(TL)	1	Q300	T2I	
873	3403007000020	Transistor DTA114YE(TL)	1	Q431	B4D	
874	3403008000010	Transistor DTC114EE(TL)	1	Q204	B2D	
875	3403008000010	Transistor DTC114EE(TL)	1	Q430	B5C	
876	3403008000010	Transistor DTC114EE(TL)	1	Q614	B4A	
877	3403008000010	Transistor DTC114EE(TL)	1	Q615	B4A	
878	3403009000010	Transistor UMG3N(N-TR)	1	Q609	T2D	
879	3403009000010	Transistor UMG3N(N-TR)	1	Q613	T2E	
880	3406001000090	Transistor 2SC4988FRTR-E	1	Q401	T4F	
881	3411002000020	Transistor 2SC5343EG	1	Q650	T4G	
882	3418001000010	Transistor AT-41511-TR1G	1	Q500	T3E	
883	3499000000140	Transistor 2SK508-K52-T1B-A	1	Q100	T4H	
884	3499000000140	Transistor 2SK508-K52-T1B-A	1	Q101	T3G	
885	3499000000150	Transistor UMC4(NTR)/PN	1	Q652	T4G	
886	3499000000180	Transistor UFMMT717	1	Q205	B2D	
887	3499000000180	Transistor UFMMT717	1	Q610	T2E	
888	3499000000180	Transistor UFMMT717	1	Q611	T2D	
889	3501020000030	FET 3SK318YB-TL-E-Q	1	Q501	T2G	
890	3503010000010	FET 2SJ243-T1-A	1	Q653	T4G	
891	3503020000030	FET 2SK1824-T1-A	1	Q201	B1F	
892	3503020000030	FET 2SK1824-T1-A	1	Q203	T4K	
893	3503040000000	FET UPA572T-A	1	Q612	T1E	
894	3504990000010	FET RD01MUS2-T1	1	Q402	T5E	
895	3515990000000	FET RQA0002DNSTB-E	1	Q403	T5E	
896	3604002055090	PLL TB31202FN-EL	1	U202	T4I	
897	3605008005070	Operational amplifier NJM2904V	1	U430	B4D	
898	3605017005540	Operational amplifier 1.7V TDA28	1	U201	B2E	

No.	Material No.	Description	Qty.	Ref. No	Address	Remarks
899	3608015000000	Power management IC (voltage regulator) XC6201P5	1	U606	B3I	
900	3609016000000	RF/IF demodulator HSOP05	1	U200	T3J	
901	3612031004440	Memory AT24C64AN-10SU-2	1	U609	B3K	
902	3619006005220	Low voltage detector R3111N451C-TR	1	U610	B5J	
903	3701012850010	TCXO 12.8MHz NSA0	1	X300	T5J	
904	3701737230020	Crystal 7.3728MHz DSX530G	1	X601	B4I	
905	3801045030130	Ceramic filter 450KHz ±6.0KHz	1	CF300	T1J	
906	3802388540010	Crystal filter 38.850MHz MFT3	1	XF1	T2H	
907	5205000001000	TC-610 Battery connector PA9T	1	G1	T3C	
908	3101051230000	Chip capacitor 0402 0.012UF K	1	C238	T3K	
909	3101051820000	Chip capacitor 0402 1800PF K 5	1	C235	T3K	
910	3210306101000	Multi-layer chip inductor 0603 100nH	1	L504	T3F	
911	3101051810010	Chip capacitor 0402 180p J 50V	1	C513	T3F	
912	3001052220010	Chip resistor 0402 2.2KΩ F 1/	1	R101	T4I	
913	3104086850000	Tantalum capacitor 1206 6.8UF±20% 1	1	C101	T4I	
914	3101051200010	Chip capacitor 0402 12PF J 50V	1	C110*	T5H	U1:400-420MHz
915	3101050800000	Chip capacitor 0402 8PF B 50V	1			U2:450-470MHz
916	3101050900000	Chip capacitor 0402 9PF B 50V	1			U3:440-470MHz
917	3101050600010	Chip capacitor 0402 6PF B 50V	1			U4:470-490MHz
918	3101051500020	Chip capacitor 0402 15PF J 50V	1			U7:420-450MHz
919	3610007000020	MCU MB95F108AMWP	1	U605	B4J	
920	3001051820010	Chip resistor 0402 1.8KΩ F 1/	1	R303	T4J	
921	3001060000000	Chip resistor 0603 0Ω J 1/10W	1	C247*	B1E	U1:400-420MHz
922	3001060000000	Chip resistor 0603 0Ω J 1/10W	1			U2:450-470MHz
923	3101061050020	Chip capacitor 0603 1UF K 25V	1			U3:440-470MHz
924	3101061050020	Chip capacitor 0603 1UF K 25V	1			U4:470-490MHz
925	3001060000000	Chip resistor 0603 0Ω J 1/10W	1			U7:420-450MHz
926	3001061020010	Chip resistor 0603 1KΩ J 1/10	1	R409*	T5F	U1:400-420MHz
927	NC	NC	1			U2:450-470MHz
928	NC	NC	1			U3:440-470MHz
929	NC	NC	1			U4:470-490MHz
930	NC	NC	1			U7:420-450MHz
931	3101050590020	Chip capacitor 0402 0.5PF B 50	1	C400*	T3F	U1:400-420MHz
932	3101050590020	Chip capacitor 0402 0.5PF B 50	1			U2:450-470MHz
933	3101050590020	Chip capacitor 0402 0.5PF B 50	1			U3:440-470MHz
934	3101050590020	Chip capacitor 0402 0.5PF B 50	1			U4:470-490MHz
935	3101052210010	Chip capacitor 0402 220PF K 50	1			U7:420-450MHz
936	3101054740000	Chip capacitor 0402 0.47UF Z 6	1	C202*	T1F	U1:400-420MHz
937	3101054740000	Chip capacitor 0402 0.47UF Z 6	1			U2:450-470MHz
938	3101051040060	Chip capacitor 0402 0.1UF K 16	1			U3:440-470MHz
939	3101051040060	Chip capacitor 0402 0.1UF K 16	1			U4:470-490MHz
940	3101054740000	Chip capacitor 0402 0.47UF Z 6	1			U7:420-450MHz
941	3101058210010	Chip capacitor 0402 820PF K 50	1	C206	T3K	
942	41006101000D0	TC-610/620 UHF PCB FR	1			

Adjustment Description

Diagram of Operation Key (Take TC-610 for example)



Instrument

Radio Communication Test Set (HP8921)	1 set
10V/3A DC Regulated Power Supply	1 set
Digital Voltmeter	1 set
Ammeter	1 set

Preparation Before Adjustment

Put the board to be tested on the test clamp and turn the power on.

Note: Each test point must be in good contact with the clamp.

Adjustment Steps

Operations Before Adjustment

1. Adjustment of PCB Board

After program is downloaded onto the PCB board and EEPROM is initialized with the configuration file (program is downloaded with the test frame and initialization can be done through the programming software or wired clone), check relative specifications at each position. If adjustment is required, connect the programming cable and enter the adjustment mode for PC adjustment

2. Adjustment of Radio Unit

1) Rotate to CH1. Power on the radio while holding down the PTT key and SK2 key for 2s at least.

The orange LED (red LED + green LED) lights, indicating the entry into the adjustment mode. Release the keys to enter the corresponding Tx adjustment item (preset power) of the adjustment mode. The red LED lights. Adjust each specification according to the operation instructions.

2) Or connect the programming cable for real time adjustment in PC mode.

Description of Adjustment Items

TC-610/620 Adjustment Items											
Channel	Adjustable Freq.	Wide					Narrow				
		Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5	Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5
Tx Section											
1	Adjust Preset RF Power			Y							
2	Tx Low Power	Y	Y	Y	Y	Y					
3	Reserved Channel (not adjust)										
4	Tx High Power	Y	Y	Y	Y	Y					
5	CDCSS Deviation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	CTCSS (67Hz) Deviation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	CTCSS (151.8Hz) Deviation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	CTCSS (254.1Hz) Deviation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	VOX 1			Y							
10	VOX 2			Y							
11	VOX 3			Y							
12	VOX 4			Y							
13	VOX 5			Y							
14	Tx Low Voltage Threshold			Y							
Rx Section											
1	Carrier SQL Level 1 ON	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	Carrier SQL Level 5 ON	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3	Carrier SQL Level 9 ON	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4	Carrier SQL Level 1 OFF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Carrier SQL Level 5 OFF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Carrier SQL Level 9 OFF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	Tx Low Voltage Threshold			Y							
8	Bandpass Filter	Y	Y	Y	Y	Y					
Note: Y indicates the valid adjustment frequency. The rest channels are idle and have no adjustment items.											

1. Switch between Tx Adjustment Items and Rx Adjustment Items

Rotate the Channel Selector knob to CH16. Hold down the PTT key for 1.5s at least to toggle between Tx Adjustment Items and Rx Adjustment Items. If the LED lights red upon key press, the radio switches to Tx Adjustment Items. If the LED lights green upon key press, the radio switches to Rx Adjustment Items.

The LED glows red for Tx Adjustment Items.

The LED glows green for Rx Adjustment Items.

2. Wide/Narrow Band Switch and Frequency Switch in an Adjustment Item

In an adjustment item, hold down the PTT key for 1.5s at least to switch between wide band and narrow band cyclically. The adjustment point is regarded as the first frequency of the current band by default. Hold down the PTT key for less than 1.5s to switch frequencies cyclically.

3. Adjustment Items

Tx

Tx frequency tolerance, VCO lock voltage, maximum deviation and modulation sensitivity

Note: These items are adjusted outside the adjustment mode (unnecessary to enter the adjustment mode) via hardware.

Tx low power, Tx high power, CDCSS waveform, CDCSS deviation, CTCSS deviation (low), CTCSS deviation (medium), CTCSS deviation (high) and Tx low voltage threshold.

Note: These items are adjusted inside the adjustment mode via software.

Rx

VCO lock voltage (outside the mode), squelch, Rx bandpass filter, Rx low voltage threshold.

Specific Operations and Requirements

1. Conventional Adjustment Items (outside the adjustment mode): Tx frequency tolerance, VCO lock voltage, maximum deviation, modulation sensitivity.

Note: The configuration file has preset CH1, CH2 and CH3 as wide band with low, medium and high frequency respectively and CH4, CH5 and CH6 as narrow band with low, medium and high frequency respectively. Make sure the antenna or load is connected before adjustment.

TC-610/620 VHF

<table>
<tr><th rowspan="2">Item</th><th rowspan="2" colspan="2">Condition</th><th colspan="2">Measurement</th><th colspan="2">Adjustment</th><th rowspan="2">Specifications /Remarks</th></tr>
<tr><th>Test Equipment</th><th>Test Point</th><th>Parts</th><th>Method</th></tr>
<tr><td>Tx frequency tolerance</td><td colspan="2">Rotate to CH2. Press PTT to transmit.</td><td>Radio communication test set</td><td>Antenna</td><td>VR300</td><td>Adjust VR300 with a ceramic tuning toolto limit the center frequency to the error range.</td><td>≤150Hz</td></tr>
<tr><td rowspan="2">Tx VCO lock voltage</td><td colspan="2">Rotate to CH3. Press PTT to transmit.</td><td rowspan="4">Digital voltmeter</td><td rowspan="4">CV</td><td rowspan="2">TC100</td><td>Adjust TC100 with a ceramic tuning tooluntil the lock voltage is within the required range.</td><td>2.8～2.9V</td></tr>
<tr><td colspan="2">Rotate to CH1. Press PTT to transmit.</td><td>Check</td><td>≥0.8</td></tr>
<tr><td rowspan="2">Rx VCO lock voltage</td><td colspan="2">Rotate to CH3.</td><td rowspan="2">TC101</td><td>Adjust TC101 with a ceramic tuning tooluntil the lock voltage is within the required range.</td><td>2.7～2.9V</td></tr>
<tr><td colspan="2">Rotate to CH1.</td><td>Check</td><td>≥0.8</td></tr>
<tr><td rowspan="2">Max. Deviation</td><td>W</td><td>Rotate to CH1, CH2 and CH3 respectively. Press PTT to transmit.</td><td rowspan="2">Radio communication test set
BPF:
<20Hz~15kHz
AF: 1kHz
150mV</td><td rowspan="2">Antenna Accessory jack</td><td rowspan="2">VR200</td><td>Adjust VR200 with a ceramic tuning toolto limit the deviation to the specified range.</td><td>3.8～4.5KHz (It is recommended to adjust to 4.2KHz at the maximum deviation end.)</td></tr>
<tr><td>N</td><td>Rotate to CH4, CH5 and CH6 respectively. Press PTT to transmit.</td><td>Check</td><td>1.8～2.3KHz</td></tr>
</table>

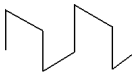
Modulation Sensitivity	W	Rotate to CH1, CH2 and CH3 respectively. Press PTT to transmit.	Radio communication test set BPF: 0.3 KHz～3KHz AF: 1KHz			Adjust the output audio signal of the radio communication test set to get the deviation to 3.0KHz.	8～15mV
	N	Rotate to CH4, CH5 and CH6 respectively. Press PTT to transmit.				Adjust the output audio signal of the radio communication test set to get the deviation to 1.5KHz.	8～15mV

TC-610/620 UHF

Item	Condition		Measurement		Adjustment		Specifications /Remarks
			Test Equipment	Test Point	Parts	Method	
Tx frequency tolerance	Rotate to CH2. Press PTT to transmit.		Radio communication test set	Antenna	VR300	Adjust VR300 with a ceramic tuning toolto limit the center frequency to the error range.	≤150Hz
Tx VCO lock voltage	Rotate to CH1. Press PTT to transmit.		Digital voltmeter	CV	TC100	Adjust TC100 with a ceramic tuning tooluntil the lock voltage is within the required range.	0.7V (+0.1V)
	Rotate to CH3. Press PTT to transmit.					Check	≥2.3V
Rx VCO lock voltage	Rotate to CH1.				TC101	Adjust TC101 with a ceramic tuning tooluntil the lock voltage is within the required range.	0.7V (+0.1V)
	Rotate to CH3.					Check	≥2.3V
Max. Deviation	W	Rotate to CH1, CH2 and CH3 respectively. Press PTT to transmit.	Radio communication test set BPF:<20Hz~15kHz AF: 1kHz 150mV	Antenna Accessory jack	VR200	Adjust VR200 with a ceramic tuning toolto limit the deviation to the specified range.	3.7 ～ 4.3KHz
	N	Rotate to CH4, CH5 and CH6 respectively. Press PTT to transmit.				Check	1.7 ～ 2.2KHz
Modulation Sensitivity	W	Rotate to CH1, CH2 and CH3 respectively. Press PTT to transmit.	Radio communication test set BPF: 0.3-3KHz AF: 1KHz			Adjust the output audio signal of the radio communication test set to get the deviation to 3.0KHz.	8～18mV
	N	Rotate to CH4, CH5 and CH6 respectively. Press PTT to transmit.				Adjust the output audio signal of the radio communication test set to get the deviation to 1.5KHz.	8～18mV

2. Adjustments in the adjustment mode

Note: The antenna or load must be connected before adjustment.

Item		Condition	Measurement		Adjustment		Specifications/ Remarks
			Test Equipment	Test Point	Parts	Method	
Tx Power	H	Rotate to CH4. Press PTT to enable the function. Low frequency Short press PTT to switch frequencies cyclically (refer to the adjustment list)	Radio communication test set Ammeter	Antenna port	SK1 SK2	Press SK1/SK2 to increase/decrease the output power and rotate the Channel Selector knob to save.	4.5-5W I≤1.7A
	L	Rotate to CH2. Press PTT to enable the function. Low frequency Short press PTT to switch frequencies cyclically (refer to the adjustment list)				Press SK1/SK2 to increase/decrease the output power and rotate the Channel Selector knob to save.	2W±0.3W I≤1.2A
CDCSS Waveform		Rotate to CH5. Press PTT to enable the function. Wide band Low frequency	Radio communication test set BPF: <20Hz~300Hz	Antenna	VR260	Adjust VR260 with a ceramic tuning toolto make the waveform approximate to the rectangular wave.	
		Short press PTT to switch frequencies cyclically and long press PTT to switch between wide band and narrow band.				Check	
CDCSS Deviation	W	Rotate to CH5. Press PTT to enable the function. Wide band Low frequency Press PTT to switch to other frequencies (medium-low, medium, medium-high and high).			VR601 SK1 SK2	Adjust VR601 with a ceramic tuning tooland check each frequency. Enter the mode to adjust finely with SK1/SK2 to limit the CDCSS deviation to the required range if necessary.	500～900Hz (It is recommended to adjust to 550-650Hz)
	N	Long press PTT (≥1.5s) to enter narrow band. Low frequency Press PTT to switch to other frequencies (medium-low, medium, medium-high and high).				Enter the mode to adjust finely with SK1/SK2 to limit the CDCSS deviation to the required range if necessary.	300～500Hz

CTCSS Deviation	W	Rotate to CH6, CH7 and CH8 respectively and CTCSS is set to low, medium and high respectively. Press PTT to enable this function. Wide band Short press PTT to switch frequencies on each channel.	Radio communication test set BPF: <20Hz~300Hz	Antenna	VR601 SK1 SK2	Adjust VR601 with a ceramic tuning tooland check each frequency. Enter the mode to adjust finely with SK1/SK2 to limit the CTCSS deviation to the required range if necessary.	500~900Hz (It is recommended to adjust to 550-650Hz)
	N	Long press PTT (≥1.5s) to enter narrow band on CH6, CH7 and CH8 and short press PTT to switch frequencies.				Enter the mode to adjust finely with SK1/SK2 to limit the CTCSS deviation to the required range if necessary.	300~500Hz

VOX	Rotate to CH9. VOX 1 Press SK1 or SK2 to enable the function.	Radio communication test set BPF: <20Hz~15kHz AF:1kHz 10mV	Antenna Accessory jack	SK1 SK2	Adjust with SK1/SK2 rotate the Channel Selector knob to Save after one-point adjustment.	
	Rotate to CH10. VOX 2 Press SK1 or SK2 to enable the function.	Radio communication test set BPF: <20Hz~15kHz AF:1kHz 6mV			Adjust with SK1/SK2 rotate the Channel Selector knob to save after one-point adjustment	
	Rotate to CH11. VOX 3 Press SK1 or SK2 to enable the function.	Radio communication test set BPF: < 20Hz~15kHz AF:1kHz 4.5mV			Adjust with SK1/SK2 rotate the Channel Selector knob to Save after one-point adjustment	
	Rotate to CH12 VOX 4 Press SK1 or SK2 to enable the function.	Radio communication test set BPF: < 20Hz~15kHz AF:1kHz 3.5mV			Adjust with SK1/SK2 rotate the Channel Selector knob to Save after one-point adjustment	
	Rotate to CH13. VOX 5 Press SK1 or SK2 to enable the function.	Radio communication test set BPF: <20Hz~15kHz AF:1kHz 2mV			Adjust with SK1/SK2 rotate the Channel Selector knob to Save after one-point adjustment	
Tx Low Voltage Threshold		Digital voltmeter	Power supply port	Power supply	Adjust the output voltage of the power supply and check the alarm level	6.2V-7.0V (≤7.0V: LED flashes; ≤6.2V: a warning tone is heard and transmission is suspended)
Rx Sensitivity (bandpass)	Rotate to CH8. Low frequency Short press PTT to switch to other frequencies.	Radio communication test set SSG: -119dBm MOD: 1KHz DEV: 3.0KHz Filter: 0.3～3KHz	Antenna Accessory jack	SK1 SK2	Check bandpass waveform. Adjust with SK1/SK2. Rotate the Channel Selector knob to Save after five-point adjustment.	Check: Rotate the Volume Control knob to an appropriate position to make the output unlimited. SINAD: ≥12dB

SQL ON	W	Rotate to CH1 and SQL level 1 ON is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: -122dBm MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz	Antenna Accessory jack	SK1 SK2	Adjust the output signals of SSG to the squelch level. Rotate the Channel Selector knob to save after five-point adjustment.	Squelch Level 1: -122±1dB
		Rotate to CH2 and SQL level 5 ON is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: -119dB MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz				Squelch Level 5: -119±1dB
		Rotate to CH3 and SQL level 9 ON is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: 114dBm MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz				Squelch Level 9 -114±1dB
	N	Long press PTT (≥1.5s) to enter narrow band on the above three channels. Press SK1 or SK2 to enable this function. Short press PTT to switch frequencies.	Radio communication test set SSG: -121dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz			Same as above	Squelch Level 1: -121±1dB
			Radio communication test set SSG: -118dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz				Squelch Level 5: -118±1dB
			Radio communication test set SSG: -113dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz				Squelch Level 5: -113±1dB

SQL OFF	W	Rotate to CH4 and SQL level 1 OFF is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: -124dBm MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz	Antenna Accessory jack	SK1 SK2	Adjust the output signals of SSG to the squelch level. Rotate the Channel Selector knob to save after five-point adjustment.	Squelch Level 1: -124±1dB
		Rotate to CH5 and SQL level 5 OFF is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: -121dBm MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz				Squelch Level 5: -121±1dB
		Rotate to CH6 and SQL level 9 OFF is set. Press SK1 or SK2 to enable the function. The channel spacing is wide band. Low frequency Short press PTT to switch frequencies.	Radio communication test set SSG: -116dBm MOD: 1KHz DEV: 3KHz Filter: 0.3～3KHz				Squelch Level 9: -116±1dB
	N	Long press PTT (≥1.5s) to enter narrow band on the above three channels. Press SK1 or SK2 to enable this function. Short press PTT to switch frequencies.	Radio communication test set SSG: -123dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz	Antenna Accessory jack	SK1 SK2	Same as above	Squelch Level 1: -123±1dB
			Radio communication test set SSG: -120dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz				Squelch Level 5: -120±1dB
			Radio communication test set SSG: -115dBm MOD: 1KHz DEV: 1.5KHz Filter: 0.3～3KHz				Squelch Level 9: -115±1dB
Rx Low Voltage Threshold			Digital voltmeter	Power supply port	Power supply	Adjust the output voltage of the power supply and check the alarm level (LED flashes red and a warning tone is heard)	≤6.50V

Appendix 1: Reference Software Values for TC-610/620 Source Radio

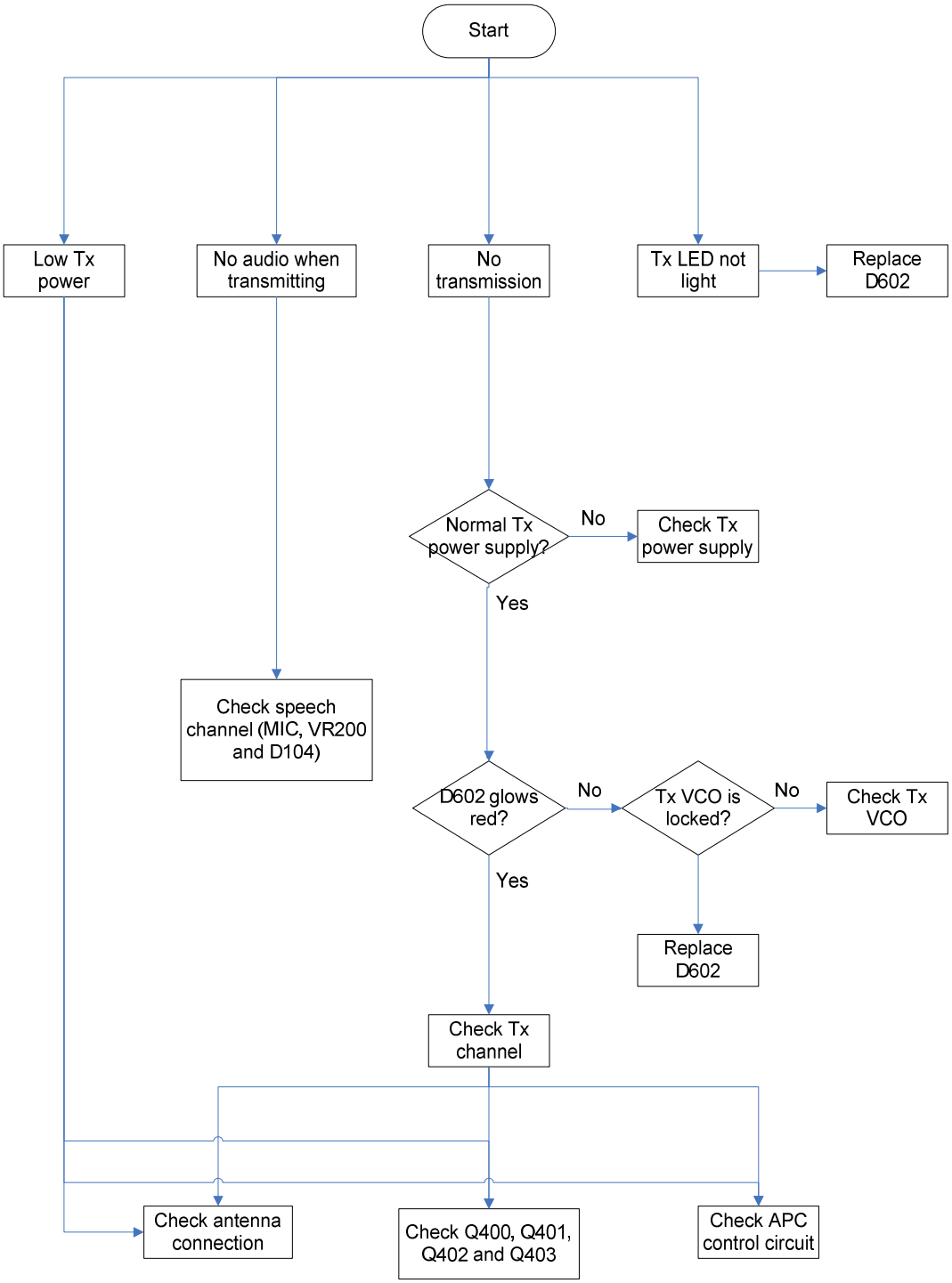
Test Items	Wide					Narrow				
	Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5	Freq. 1	Freq. 2	Freq. 3	Freq. 4	Freq. 5
Adjust Preset Tx Power			446							
Tx Low Power	742	714	692	676	672					
Tx High Power	1111	1076	1055	1047	1072					
CDCSS Deviation	66	67	67	67	69	38	38	39	40	39
CTCSS (67Hz) Deviation	121	125	128	131	135	69	72	72	75	77
CTCSS(151.8Hz) Deviation	121	124	126	128	131	68	70	72	73	75
CTCSS(254.1Hz) Deviation	133	135	137	140	143	75	77	78	78	81
VOX 1			55							
VOX 2			45							
VOX 3			25							
VOX 4			19							
VOX 5			15							
Tx Low Voltage Threshold			158							
Squelch Level 1 ON	27	25	27	25	24	18	18	17	17	20
Squelch Level 5 ON	21	19	19	18	19	14	13	13	13	14
Squelch Level 9 ON	9	9	9	9	9	7	7	7	7	7
Squelch Level 1 OFF	39	30	31	32	32	27	26	24	25	26
Squelch Level 5 OFF	28	25	25	25	26	21	21	19	17	19
Squelch Level 9 OFF	12	11	12	11	13	8	8	8	8	8
Rx Low Voltage Threshold			166							
Bandpass Filter	353	401	428	470	500					

Appendix 2: Reference Voltage Setting of Battery Power

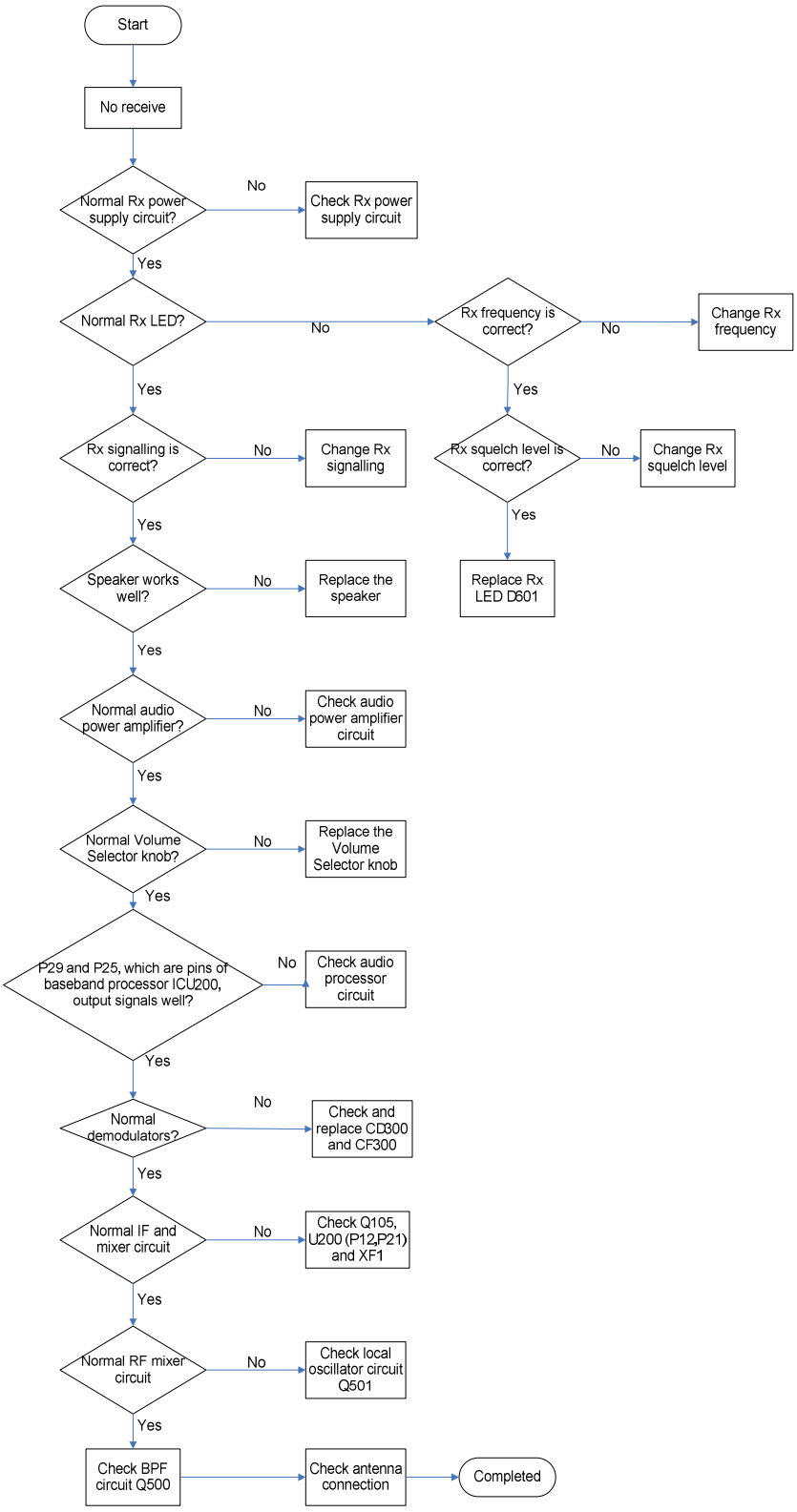
Check in transmit mode		
Green LED (70%-100%)	>7.35V	18min
Orange LED (50%-70%)	7.15V - 7.35V	12min
Red LED (30%-50%)	7.00V - 7.15V	12min
LED flashes red（<30%）	6.20V - 7.00V	18min
LED flashes red with a warning tone	5.80V - 6.20V	
Halt	<5.80V	
Check in transmit and standby modes (or press the battery power check key.		
Green LED (70%-100%)	>7.55V	18min
Orange LED (50%-70%)	7.35V -7.55V	12min
Red LED (30%-50%)	7.00V - 7.35V	20min
LED flashes red (<30%)	6.50V - 7.00V	18min
LED flashes red and a warning tone is heard every 10 seconds.	5.80V - 6.50V	

Troubleshooting Flow Chart

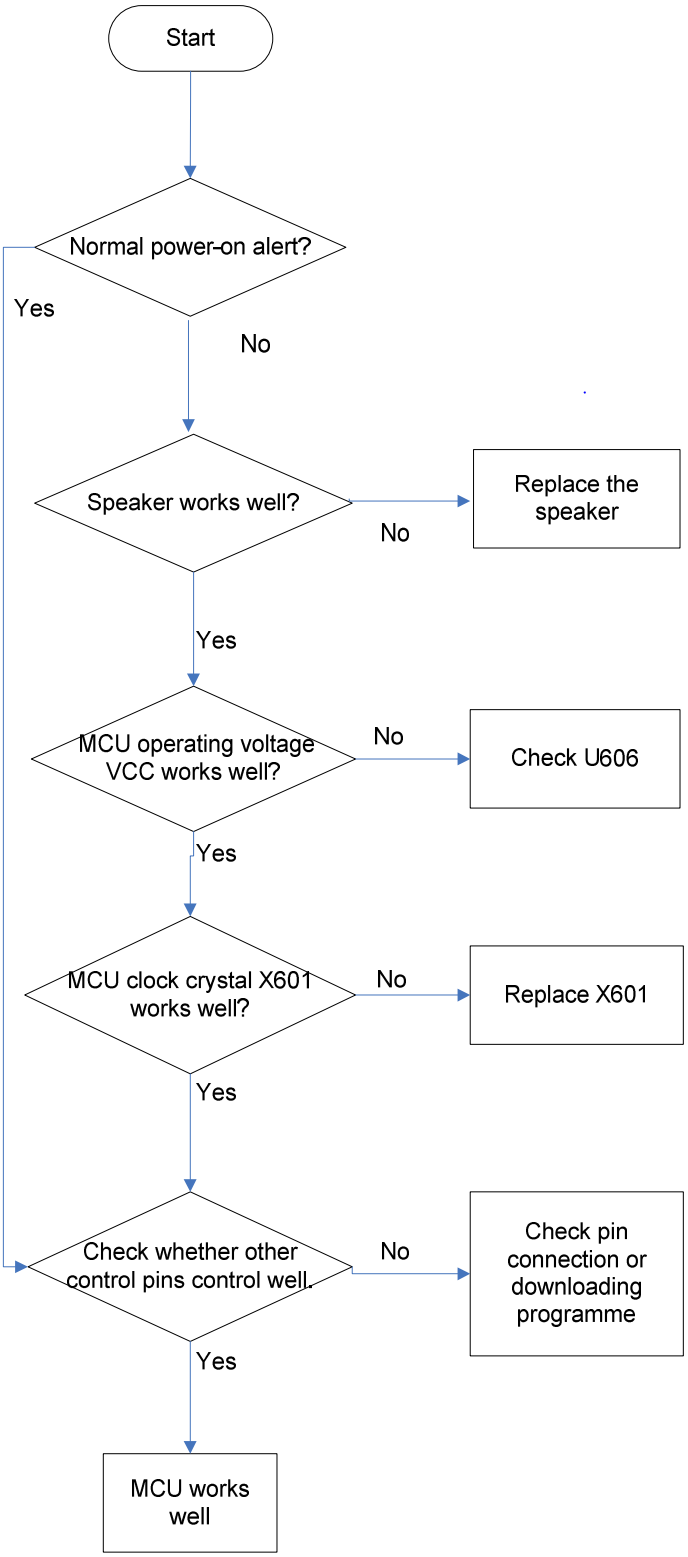
Tx Section



Rx Section



MCU



Disassembly and Assembly for Repair (Take TC-610 for example)

Removing the Battery

1. Turn off the radio. Hold the upper side of the radio and press the belt clip until it tilts. Push the battery latch upwards along the slot of the battery latch at the bottom of the battery, as indicated by the arrow. See figure 1.

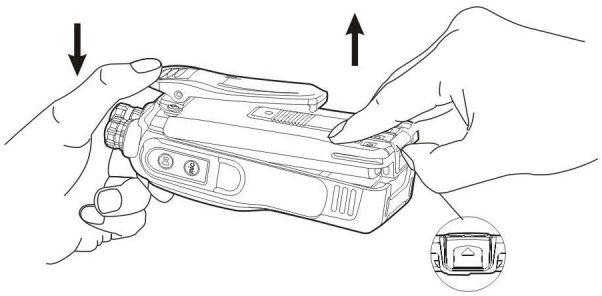


Figure 1

2. Release the battery latch and remove the battery when the bottom of the battery tilts. See figure 2.
   Note: To avoid serious abrasion between the extensions at the top of the battery and the slots at the top of the radio, the angel between the radio unit and the tilting battery must not be too large.

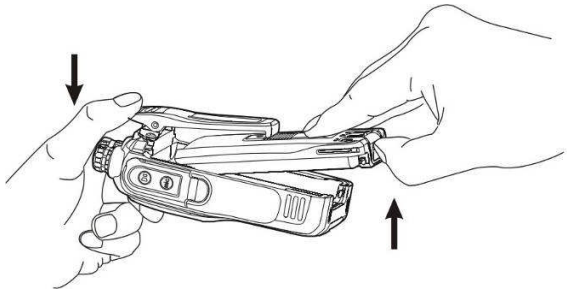


Figure 2

Attaching the Battery

1. Hold the battery and push it towards the top of the aluminum chassis under the belt clip. See figure 3.
   Note: Insert the extensions at the top of the battery into the slots at the top of the radio.

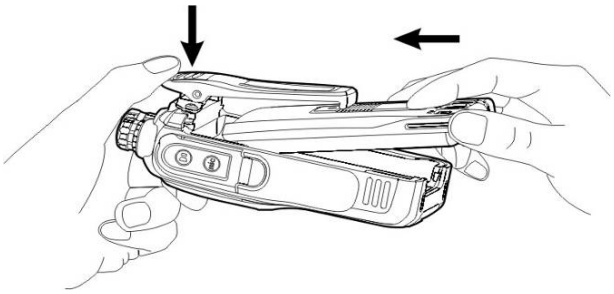


Figure 3

2. Press the bottom of the battery until a “click” is heard to fasten the battery on the bottom of the radio. See figure 4.

Note: If the battery is not fastened or is still adrift, please remove the battery and install it again.

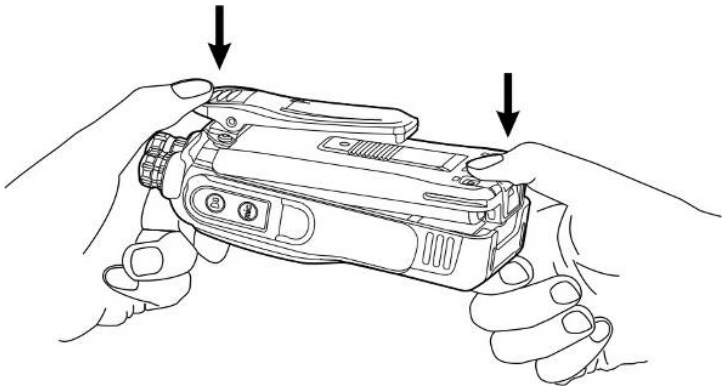


Figure 4

Removing the Aluminum Chassis

① Remove the two screws at the bottom of the radio.

② Pull out the Volume Control knob and Channel Selector Knob.

③ Unscrew the two fixing nuts with a special instrument.

④ Remove the antenna at the top of the radio. See figure 5.

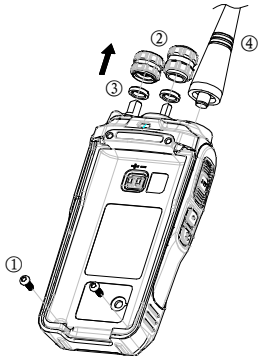


Figure 5

⑤ Lift the chassis bottom with an instrument and pull out the chassis backwards.

⑥ Remove the rear cover of the radio. See figure 6.

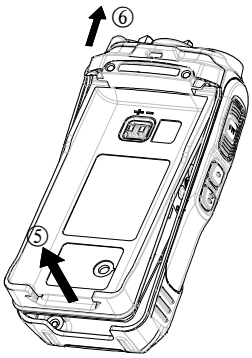


Figure 6

⑦ The disassembled radio is shown as figure 7.

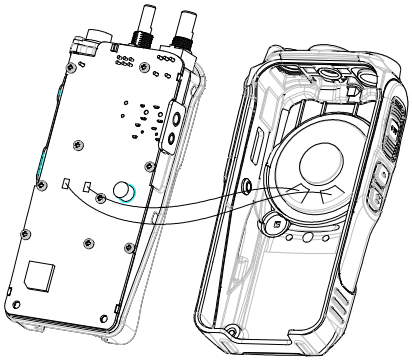


Figure 7

Attaching the Aluminum Chassis

The attaching procedures are contrary with those for removing the chassis.

Removing the Antenna

Rotate the antenna counter-clockwise to remove the antenna. See figure 8.

Figure 8

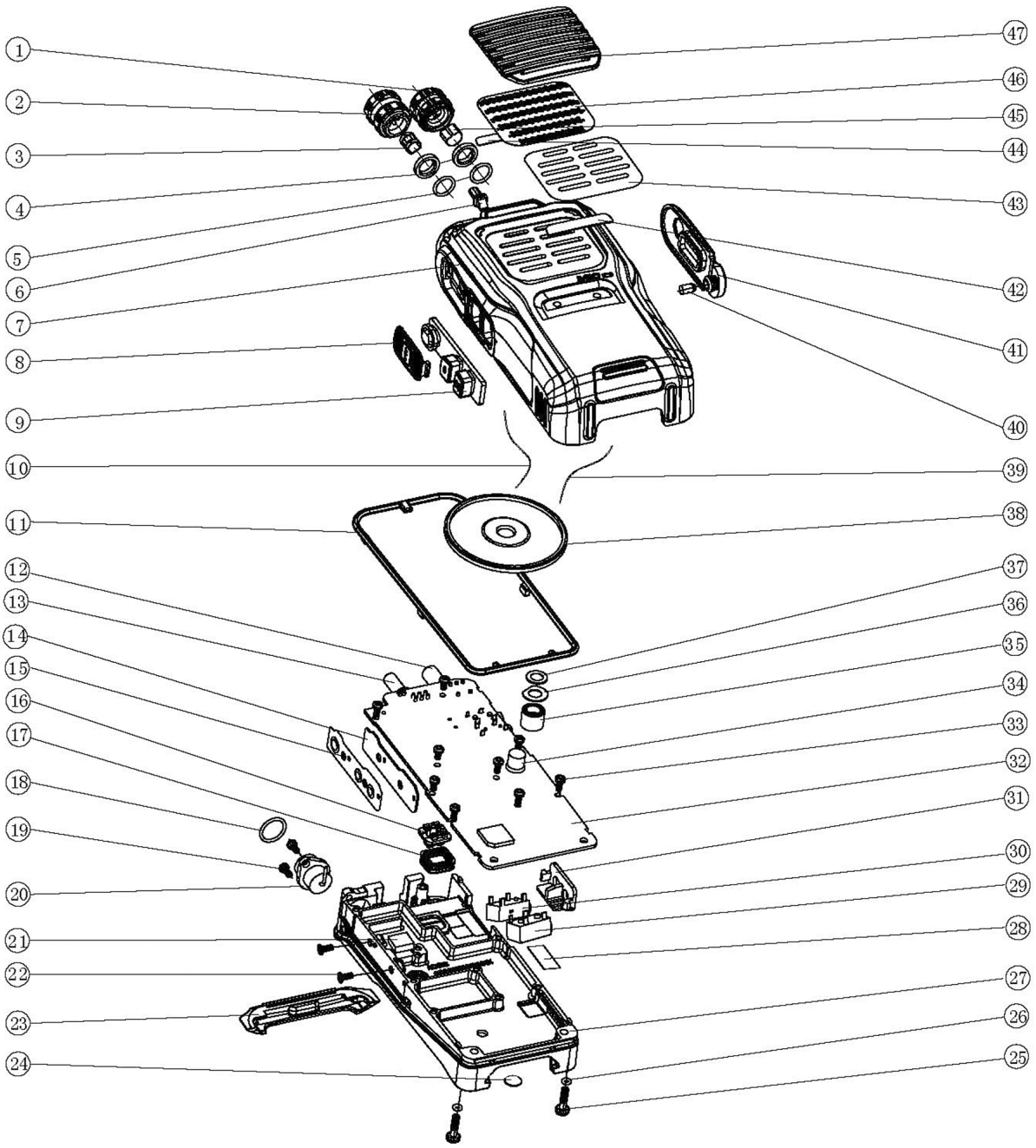
Attaching the Antenna

1. Insert the threaded end of the antenna into the big threaded port at the top of the radio.
2. Rotate the antenna clockwise until it is fastened. See figure 9.

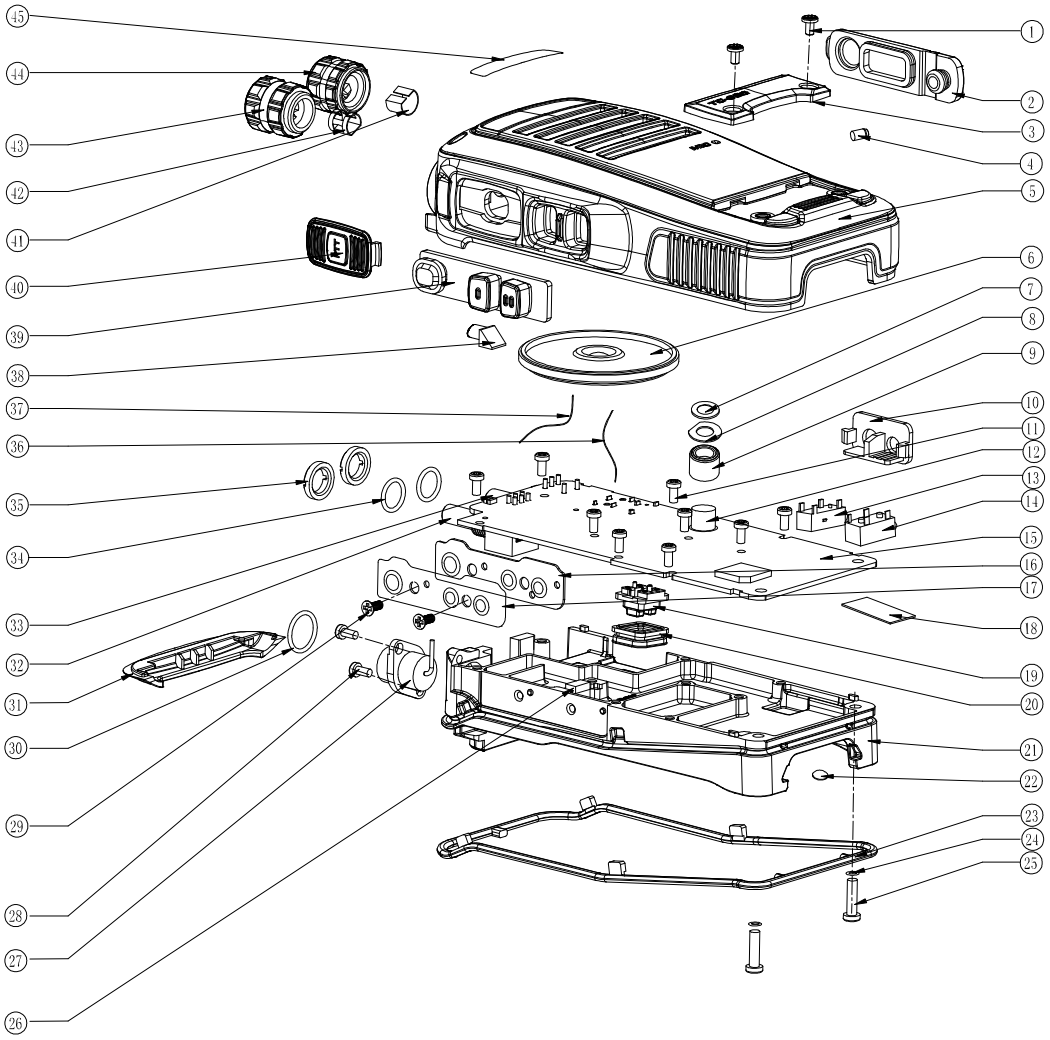
Figure 9

Exploded View

TC-610



TC-620



TC-610/620 VHF/UHF Parts List 2

TC-610

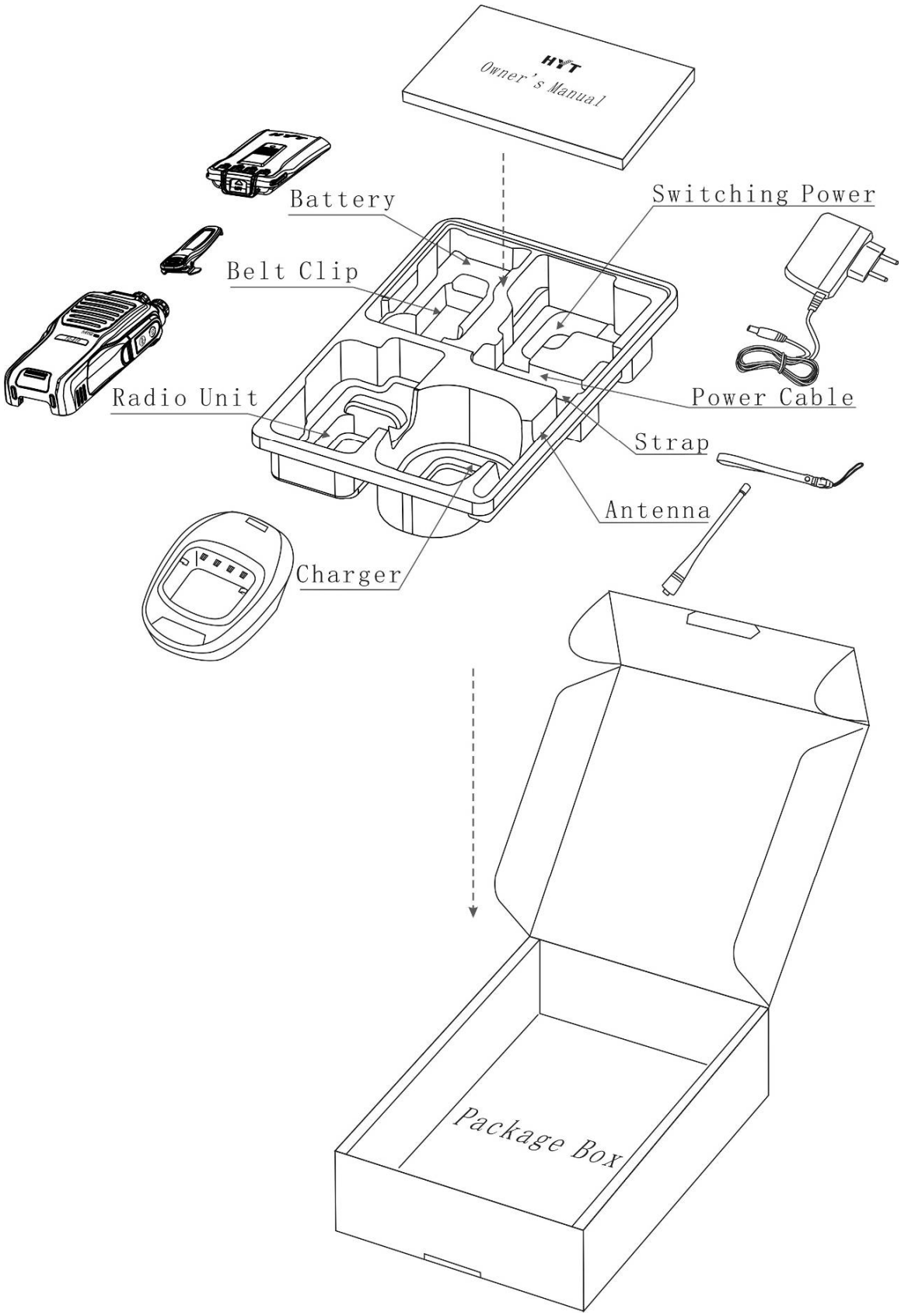
No.	Material No.	Description	Qty.
1	6000631001010	Volume control knob 01(RoHS)	1
2	6000630001010	Channel selector knob 01(RoHS)	1
3	6201006000000	Inner liner knob 00(RoHS)	1
4	7207002200200	Nut 00(RoHS)	2
5	6100334000000	O-RING, channel selector knob 00(RoHS)	2
6	6000640001000	Light guide 00(RoHS)	1
7	6000613000010	Front case, radio unit 01(RoHS)	1
8	6000634000000	Plastic PTT key 00 (RoHS)	1
9	6100312000010	Silica rubber PTT key 01 (RoHS)	1
10	4210060000000	Lead Φ0.5*60mm Red (RoHS)	1
11	6100307000010	Waterproof ring, radio unit 01(RoHS)	1
12	4303020000020	Volume switch (RoHS)	1
13	4304030000010	Gray code channel selector knob (RoHS)	1
14	4100610300000	PTT key 00(RoHS)	1
15	7300032000000	Metal dome, PTT key 00(RoHS)	1
16	5205000001000	Battery connector 00 (RoHS)	1
17	6100314000000	Waterproof ring, battery connector 00(RoHS)	1
18	6100335000000	O_RING, antenna 00 (RoHS)	1
19	7102504000300	Machine screw M2.5*4.0mm 00(RoHS)	2
20	4400100008000	SMA-connector (RoHS)	1
21	7500116000020	Cooler pad 02(RoHS)	1
22	7102005000000	Machine screw M2.0*5.0mm 00(RoHS)	2
23	6000627100000	Rear cover, radio unit 00(RoHS)	1
24	7400218000000	Protective vent 00 (RoHS)	1
25	7102508000000	Machine screw M2.5*8.0mm (RoHS)	2
26	7400216000000	Waterproof and transparent PC sheet 00 (RoHS)	2
27	6300051000000	Aluminum chassis 00 (RoHS)	1
28	7400023010010	PC sheet 01(RoHS)	1
29	5205000000190	Earpiece jack (RoHS)	1
30	5205000000280	Speaker jack (RoHS)	1
31	6100323000000	Bracket, earpiece jack 00 (RoHS)	1
32		PCB	1
33	7102004021030	Self-tapping screw ST1.9*4.0mm 03(RoHS)	9
34	5002220000050	MIC (RoHS)	1
35	6100123000000	Mic cover 00(RoHS)	1
36	7400217100000	Mic washer 00 (RoHS)	1
37	7400184000000	Waterproof mic net 00(RoHS)	1
38	5001210000030	Speaker (RoHS)	1
39	4210060000100	Lead 60mm Black (RoHS)	1
40	6000700000000	Earpiece cover stopper 00(RoHS)	1
41	6000635001000	Earpiece cover 00(RoHS)	1
42	8600610500000	HYT model type label 00(RoHS)	1
43	7400202000000	Felt, speaker 00(RoHS)	1
44	8600610600000	HYT LOGO PC label 00(RoHS)	1
45	6201066000000	Inner liner knob 00(RoHS)	1
46	6201540000000	Stainless steel mesh 00 (RoHS)	1
47	6000645000000	Front cover (RoHS)	1

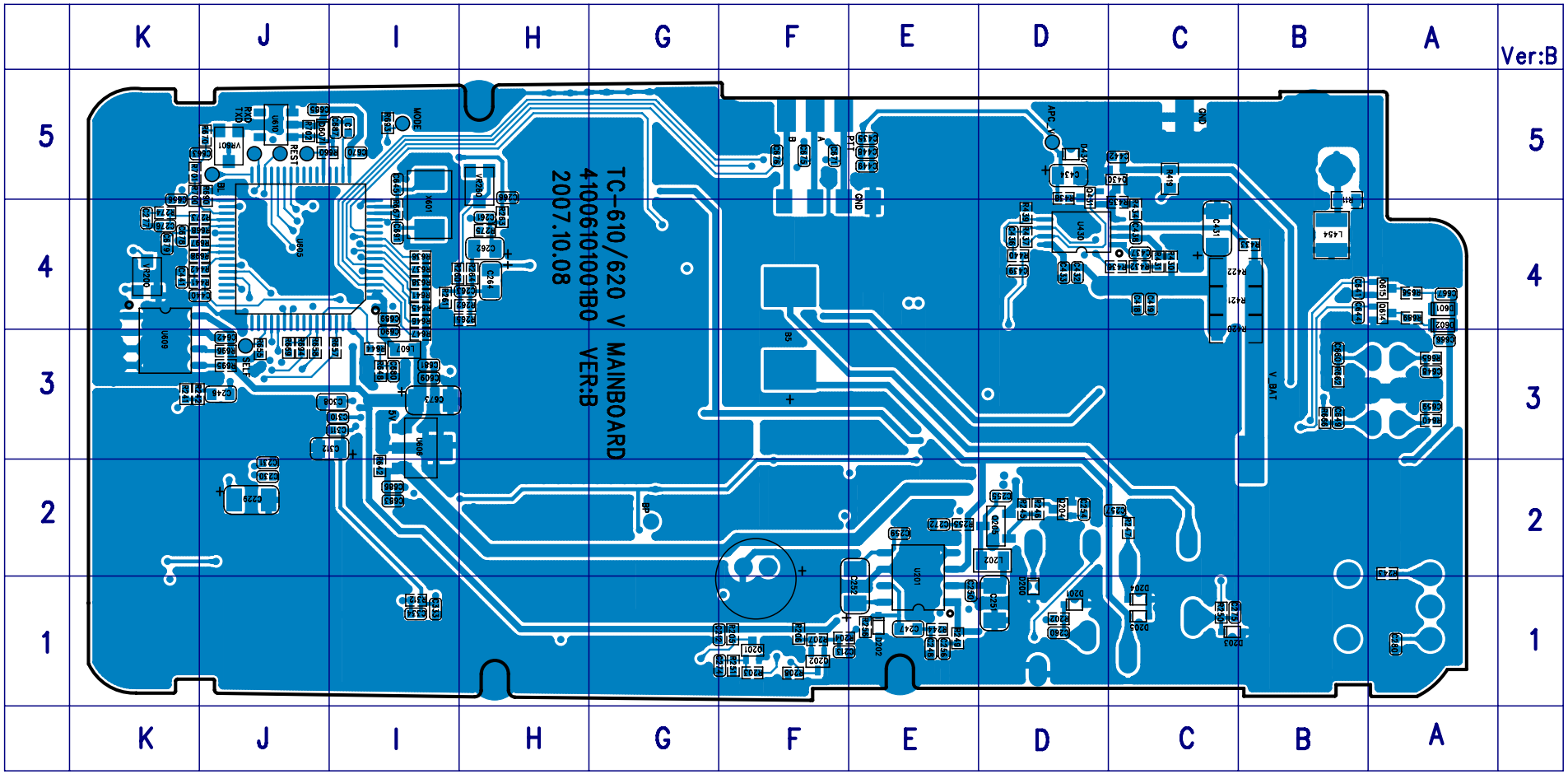
TC-620

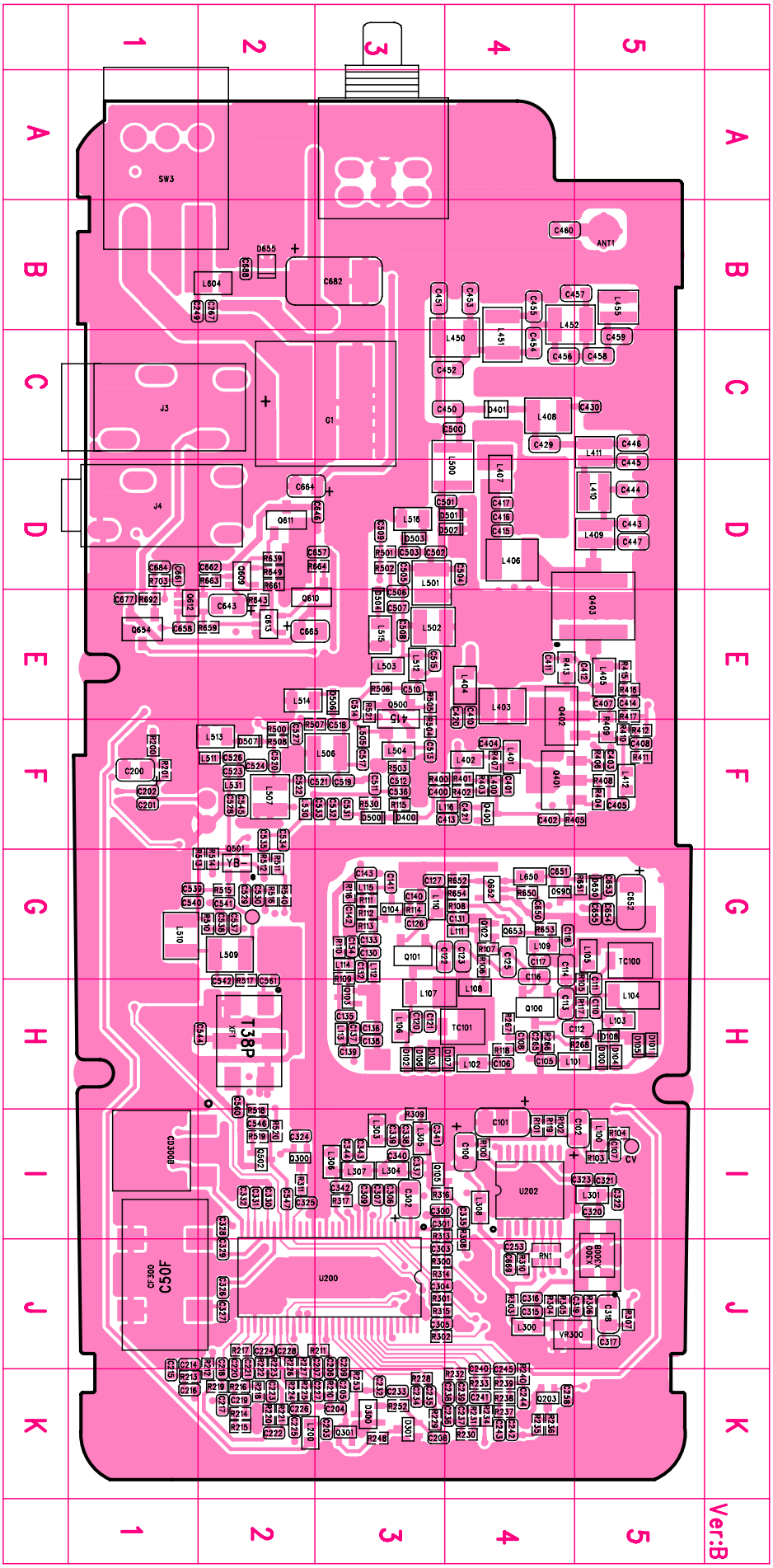
No.	Material No.	Description	Qty.
1	7102003500100	Self-tapping screw ST2.0X3.5 00(RoHS)	2
2	6000639000000	Mic cover 00(RoHS)	1
3	6300040000000	Decorative sheet, zinc alloy 00 (RoHS)	1
4	6000700000000	Earpiece cover stopper 00(RoHS)	1
5	1500006200020	Front case kit 02(RoHS)	1
6	5001210000170	Speaker (RoHS)	1
7	7400184000000	Waterproof mic net 00(RoHS)	1
8	7400217100000	Mic pad 00 (RoHS)	1
9	6100123000000	Mic cover 00(RoHS)	1
10	6100323000000	Bracket, earpiece jack 00 (RoHS)	1
11	7102004021030	Self-tapping screw ST1.9*4.0mm 03(RoHS)	9
12	5002220000050	MIC (RoHS)	1
13	5205000000280	Speaker jack (RoHS)	1
14	5205000000190	Earpiece jack (RoHS)	1
15		PCB	1
16	4100610300000	PTT key 00(RoHS)	1
17	7300032000000	Metal dome, PTT key 00(RoHS)	1
18	7400023010010	PC sheet 01(RoHS)	1
19	5205000001000	Battery connector (RoHS)	1
20	6100314000000	Waterproof ring, battery connector 00(RoHS)	1
21	6300051000000	Aluminum chassis 00 (RoHS)	1
22	7400218000000	Protective vent 00 (RoHS)	1
23	6100307000010	Waterproof ring, radio unit 01(RoHS)	1
24	7400216000000	Waterproof and transparent PC sheet 00 (RoHS)	2
25	7102508000000	Machine screw M2.5*8.0mm 00(RoHS)	2
26	7500116000020	Cooler pad 02(RoHS)	1
27	4400100008000	SMA-connector RoHS)	1
28	7102504000300	Machine screw M2.5*4.0mm 00(RoHS)	2
29	7102005000000	Machine screw M2.0*5.0mm 00(RoHS)	2
30	6100335000000	O_RING, antenna 00 (RoHS)	1
31	6000629000010	Rear cover, radio unit 01(RoHS)	1
32	4304030000010	Gray code channel selector knob (RoHS)	1
33	4303020000020	Volume switch (RoHS)	1
34	6100334000000	O-RING, channel selector knob 00(RoHS)	2
35	7207002200200	Nut 00(RoHS)	2
36	4210060000000	Lead Φ0.5*60mm Red (RoHS)	1
37	4210060000100	Lead 60mm Black (RoHS)	1
38	6000624000000	Light guide 00(RoHS)	1
39	6100312000010	Plastic PTT key 01 (RoHS)	1
40	6000634000000	Silica rubber PTT key 00 (RoHS)	1
41	6201066000000	Inner liner knob 00(RoHS)	1
42	6201006000000	Inner liner knob 00(RoHS)	1
43	6000630001010	Channel selector knob 01(RoHS)	1
44	6000631001010	Volume control knob 01(RoHS)	1
45	8600620600000	HYT LOGO PC label 00(RoHS)	1

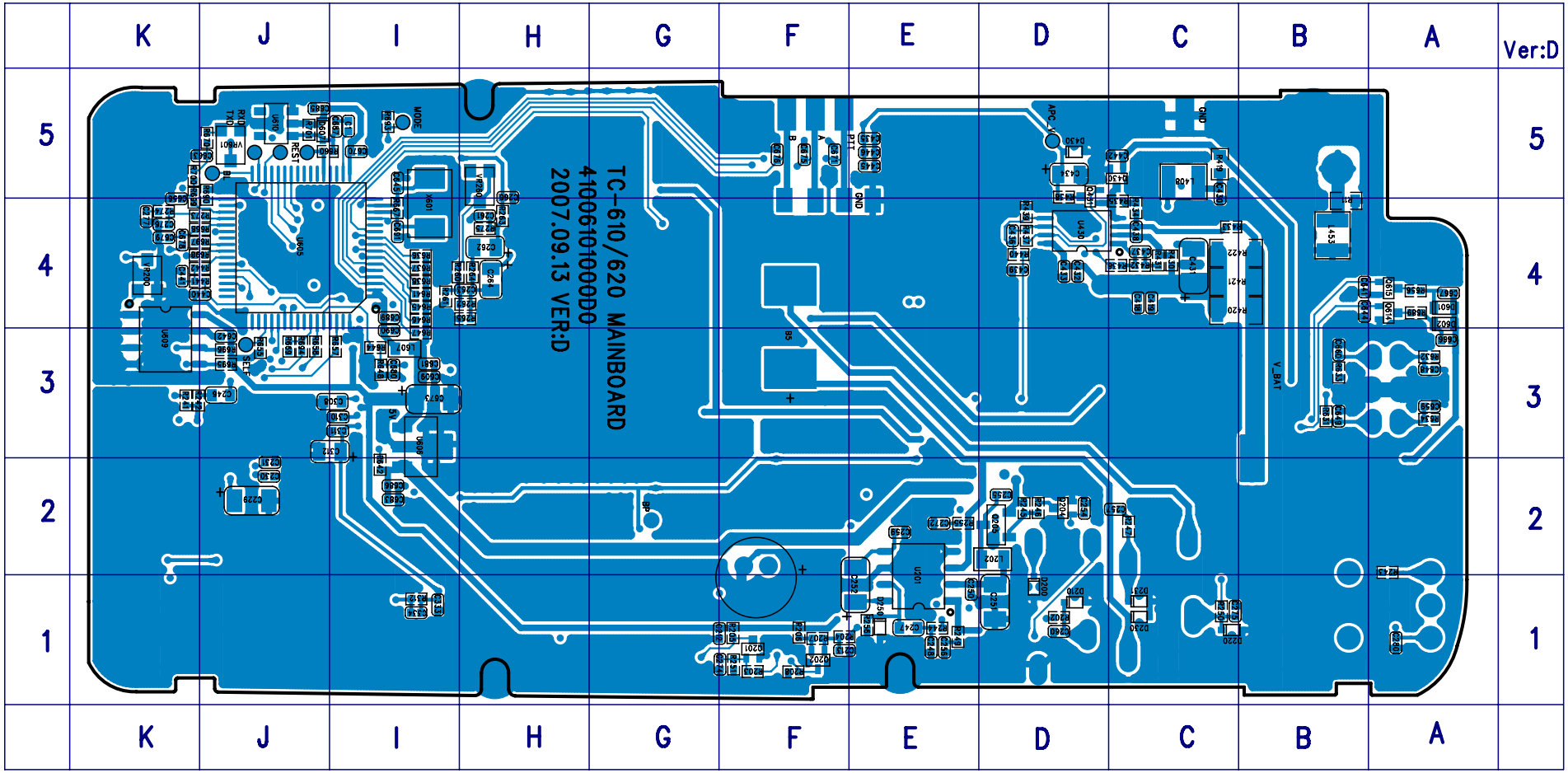
Remarks: Parts that are not marked with material number can vary according to changes of their corresponding frequencies.

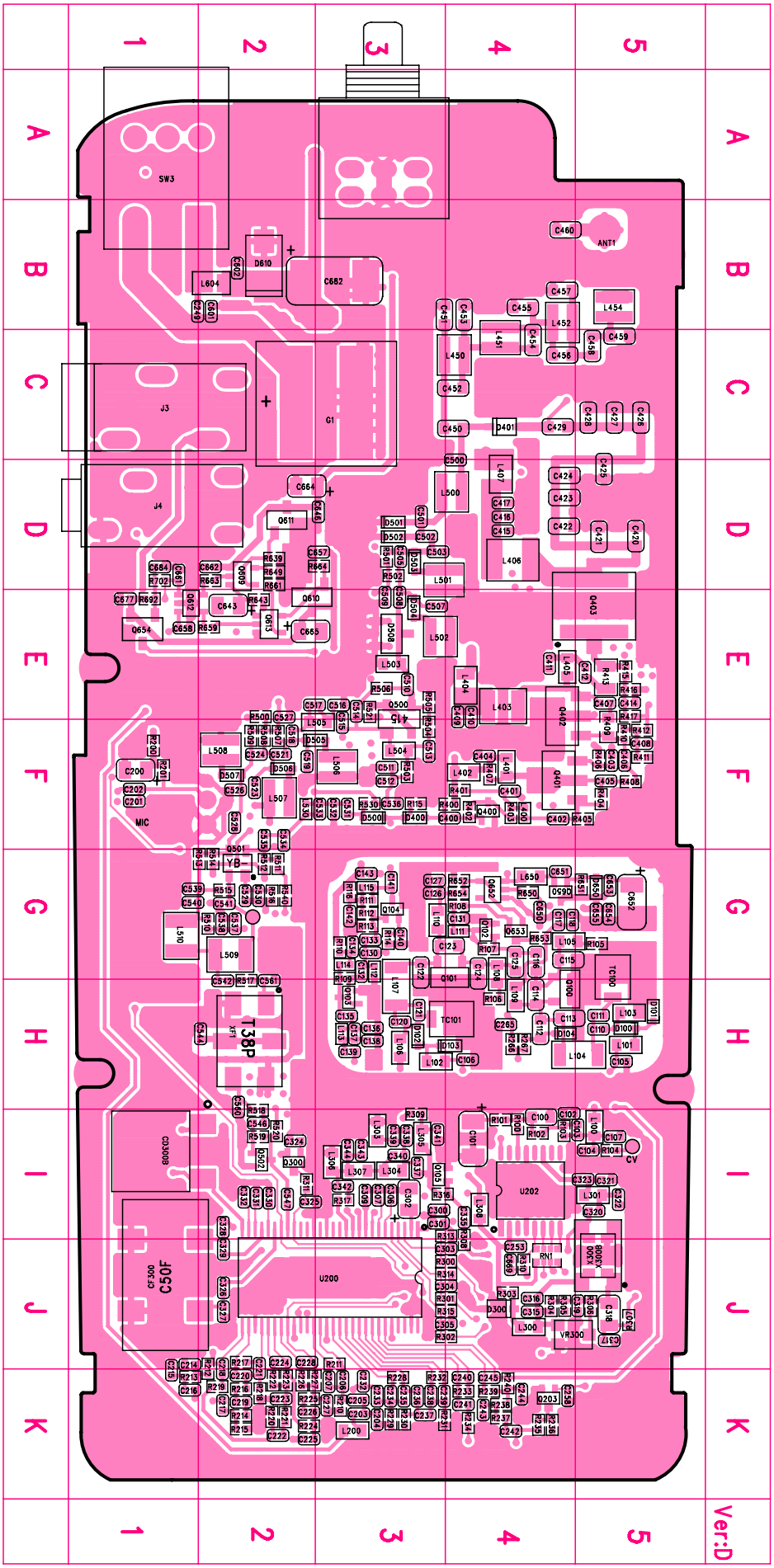
Packing (Take TC-610 for example)



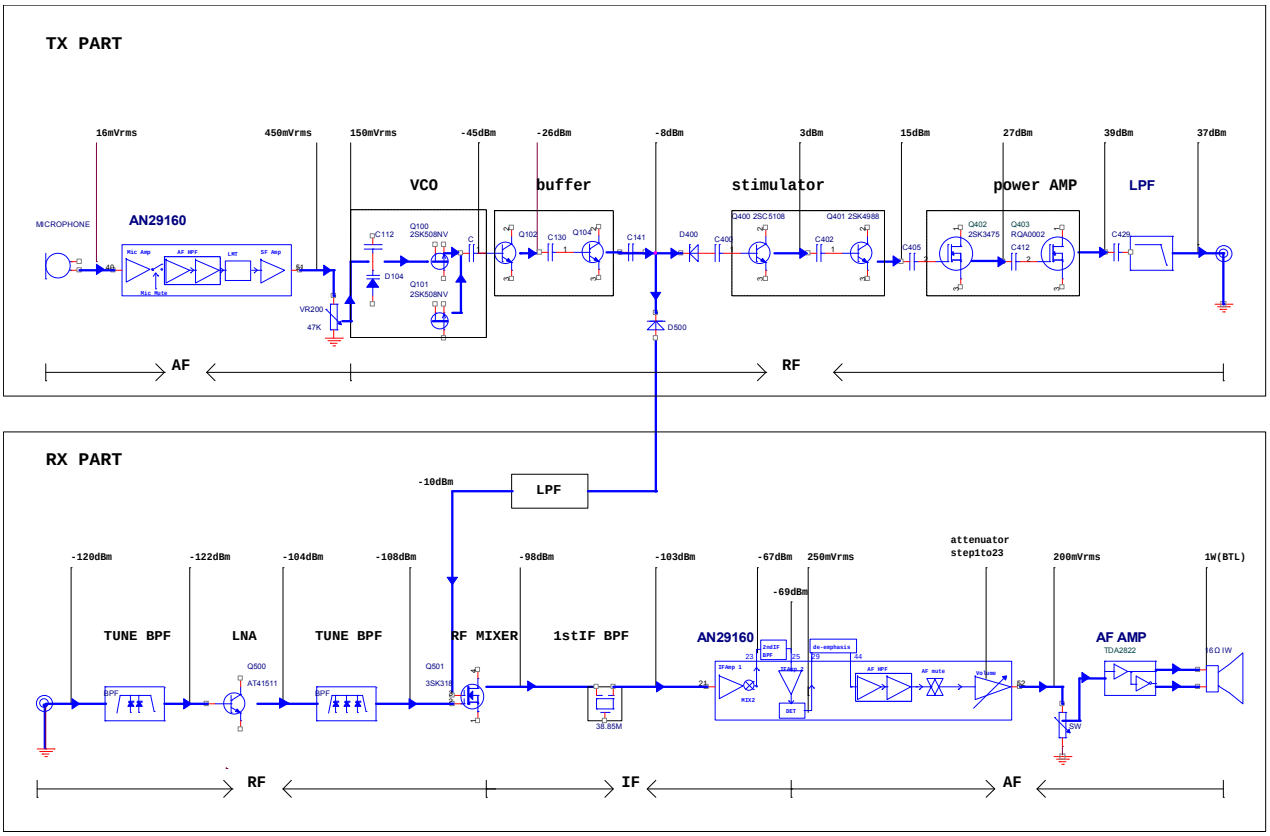




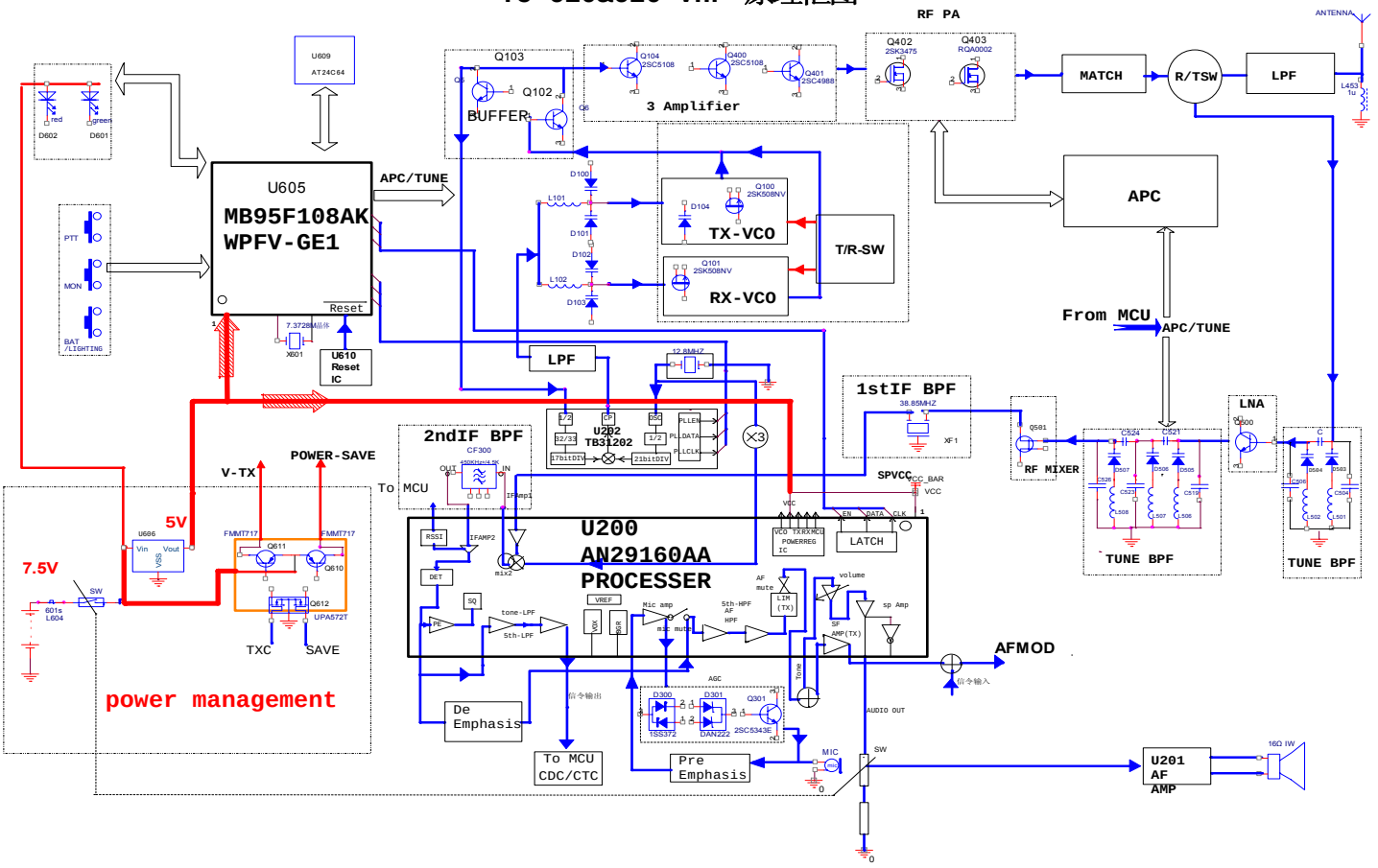


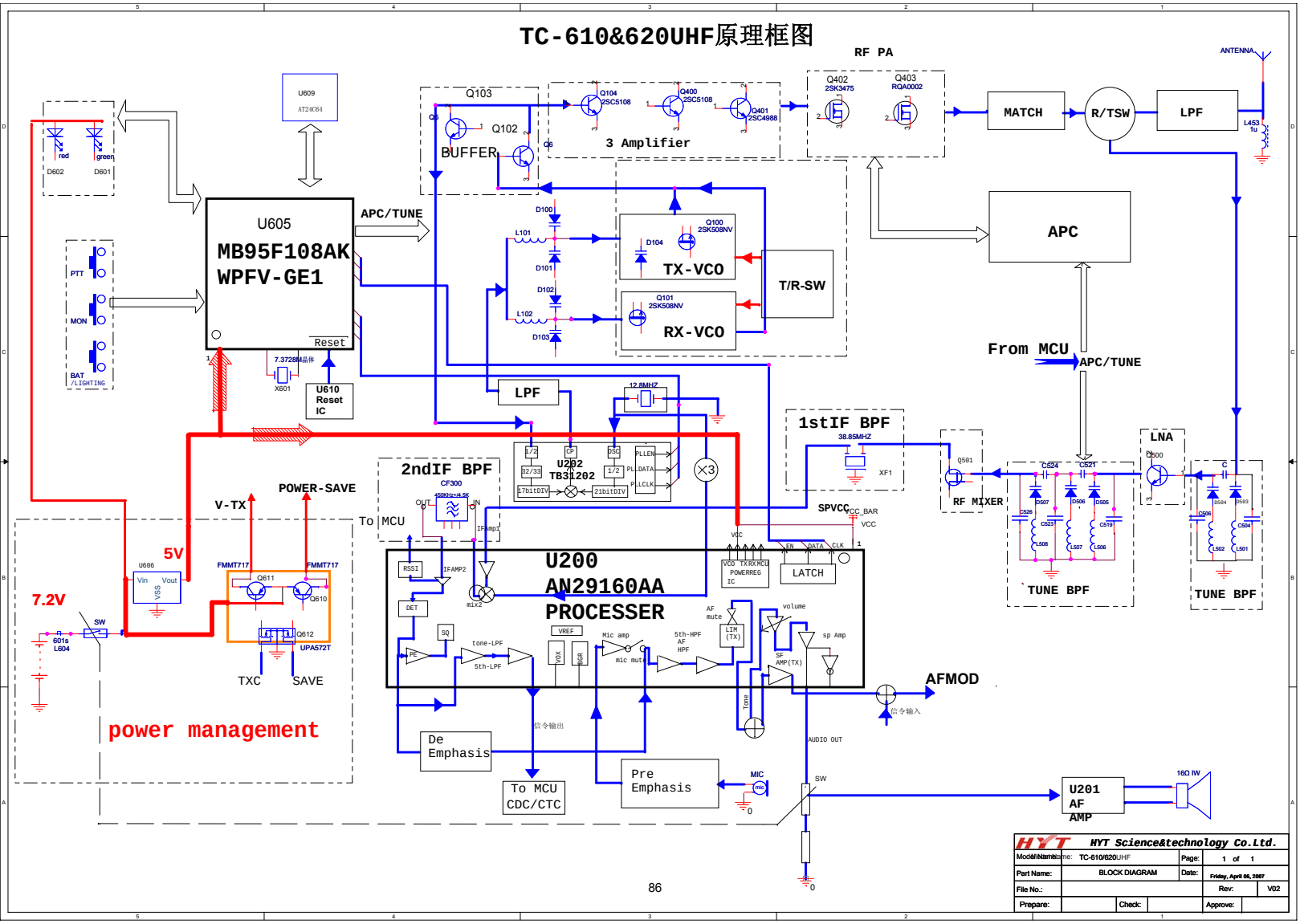


TC-610/620 VHF/UHF Level Diagram

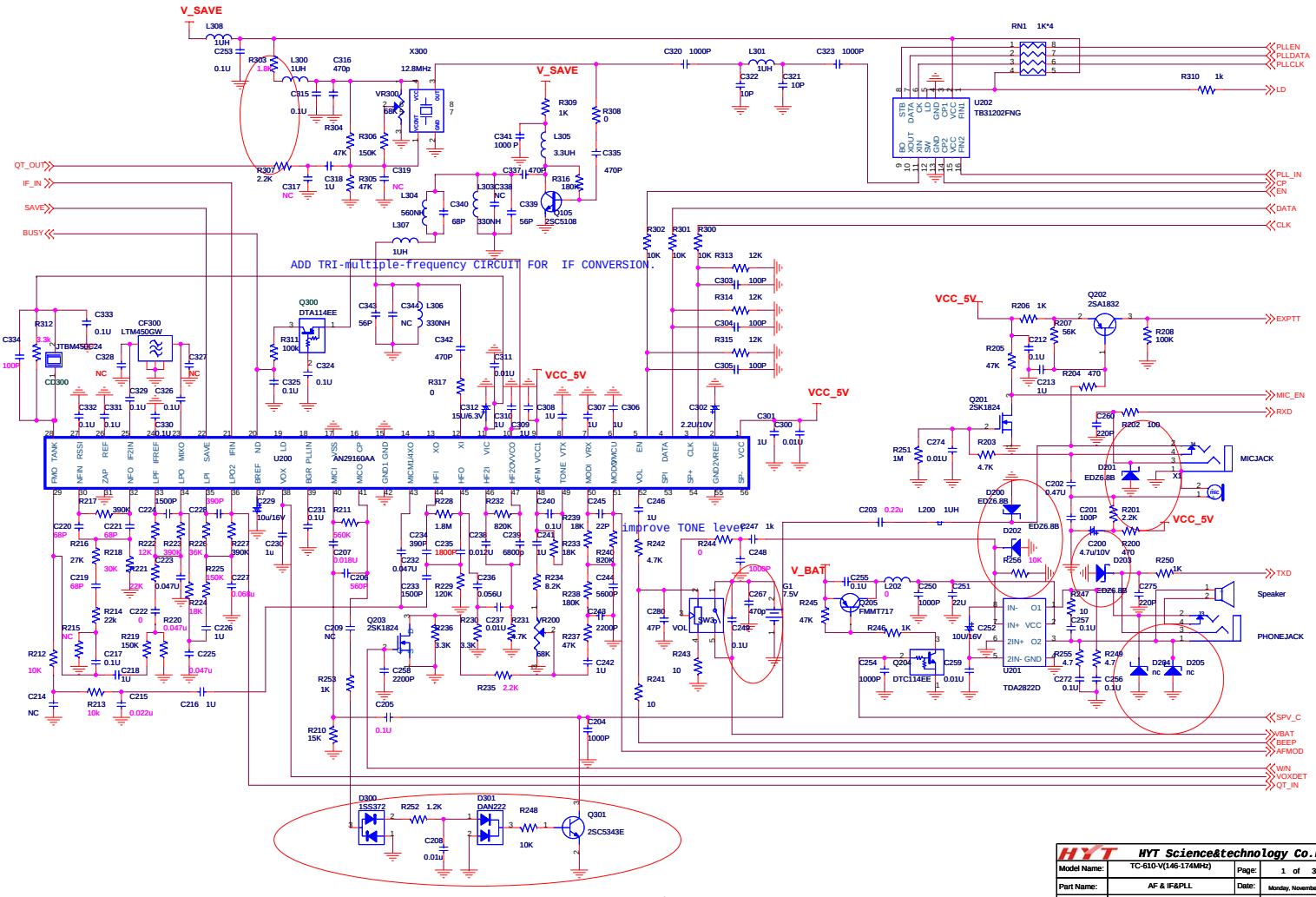


TC-610&620 VHF 原理框图



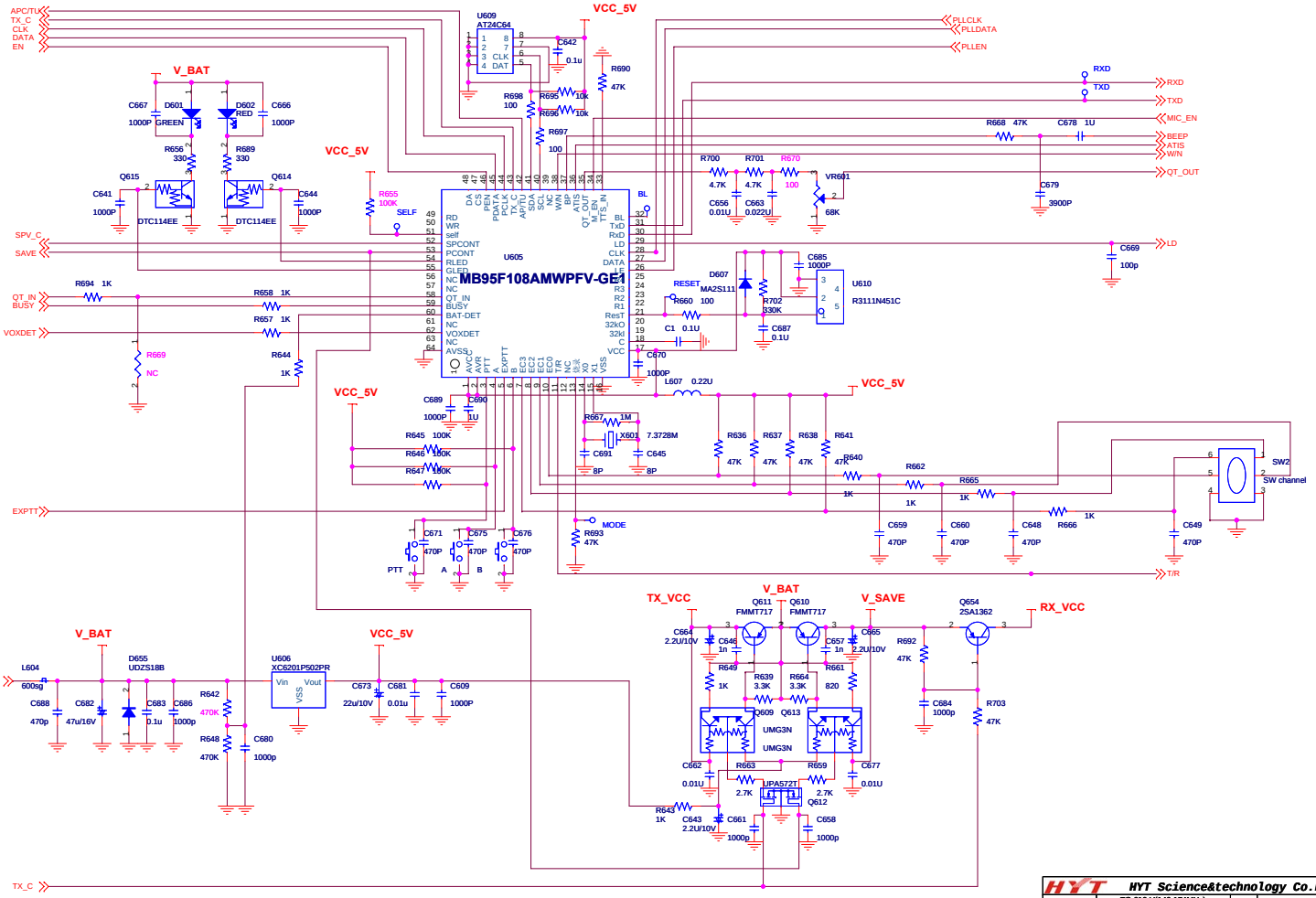


TC610/620 VHF 原理图



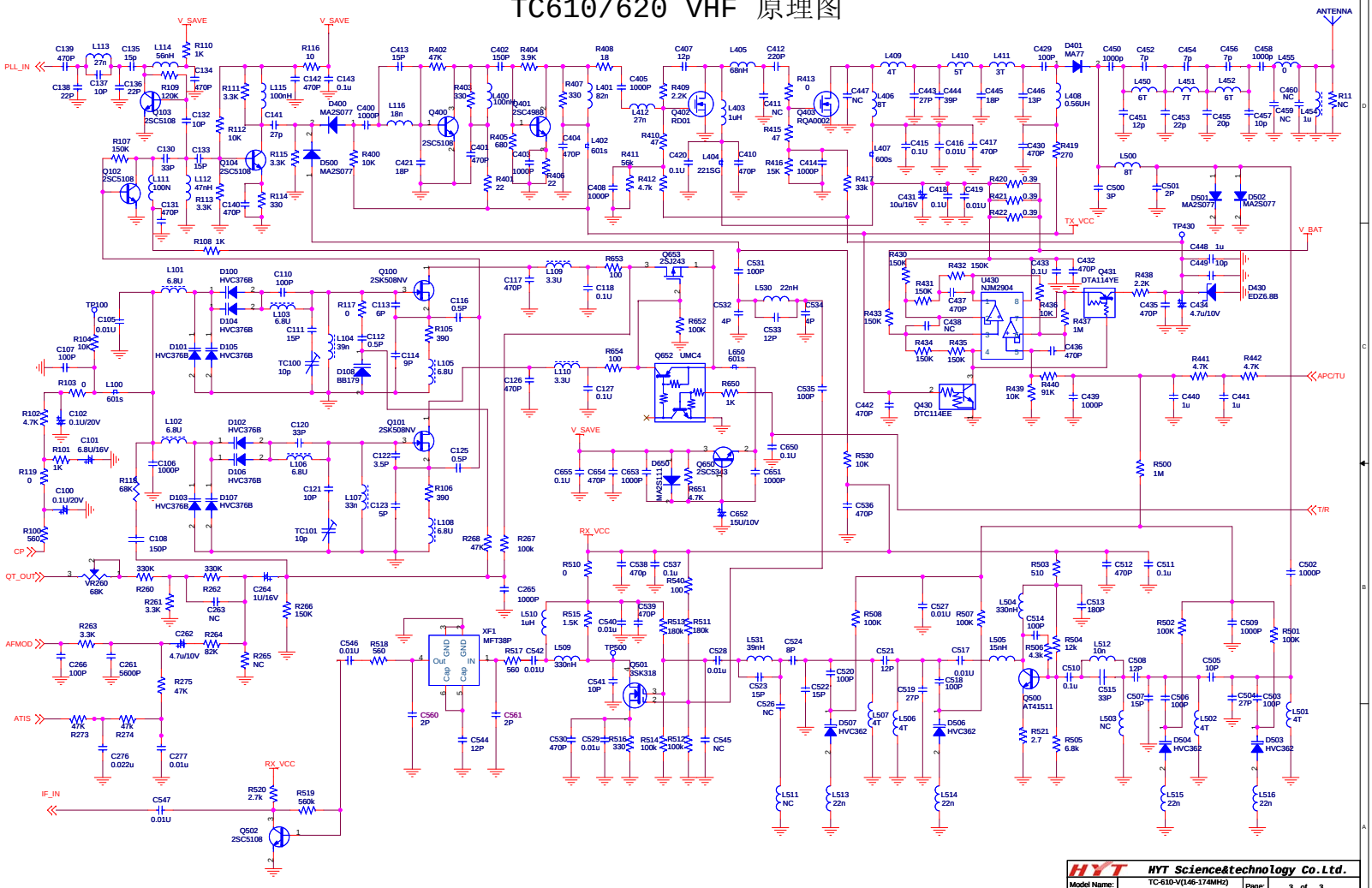
HYT	HYT Science&technology Co.Ltd.		
Model Name:	TC-610-V(146-174MHz)	Page:	1 of 3
Part Name:	AF & IF&PLL	Date:	Monday, November 05, 2007
File No.:	HYT-RD-BLD-CD-	Rev:	1.0
Prepare:	Check:	Approve:	

TC610/620 VHF 原理图



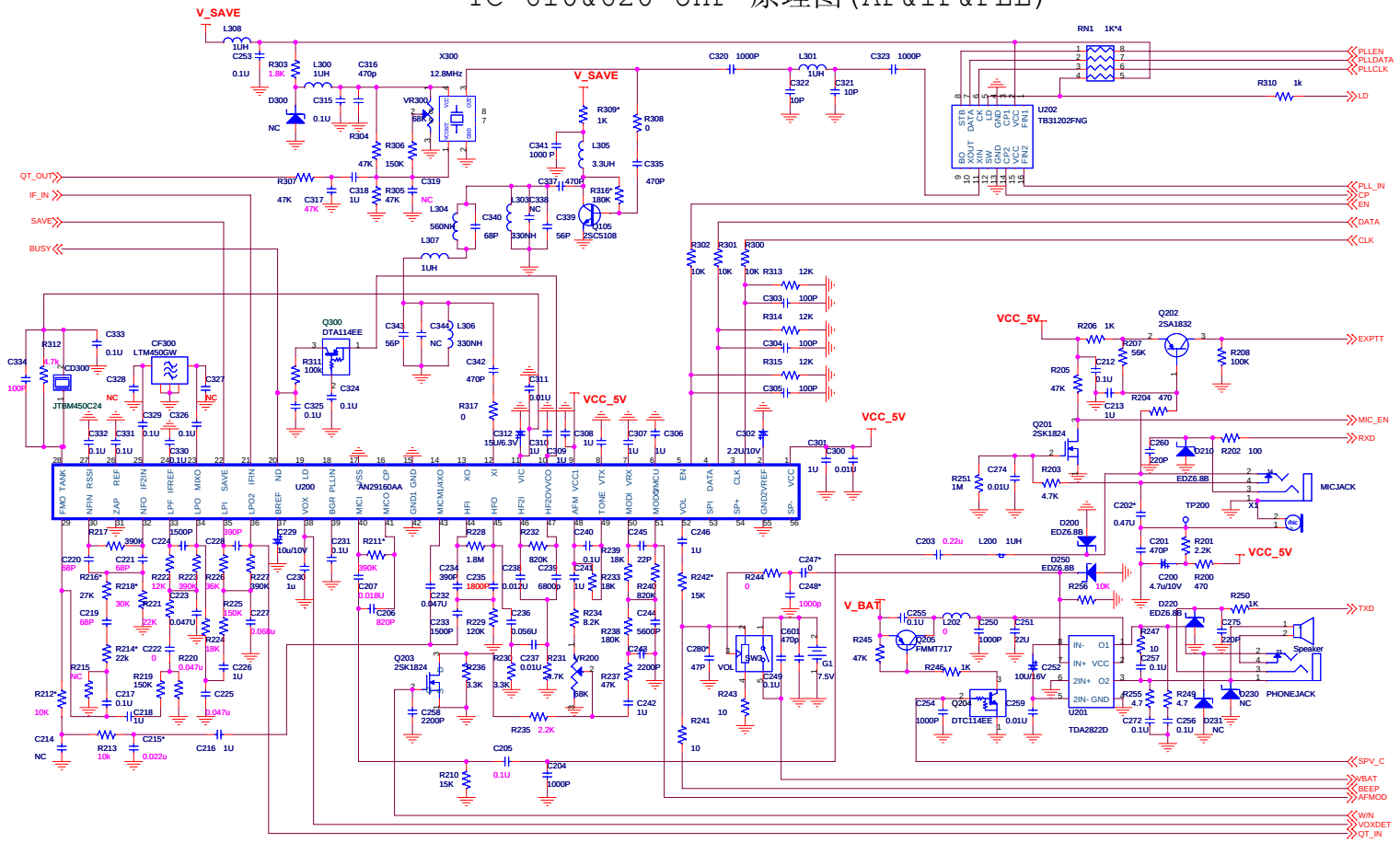
HYT	HYT Science&technology Co.Ltd.		
Model Name:	TC-610-V(146-174MHz)	Page:	2 of 3
Part Name:	MCU & POWER	Date:	Monday, November 05, 2007
File No.:	HYT-RD-BLD-CD-	Rev:	1.0
Prepare:		Check:	Approve:

TC610/620 VHF 原理图



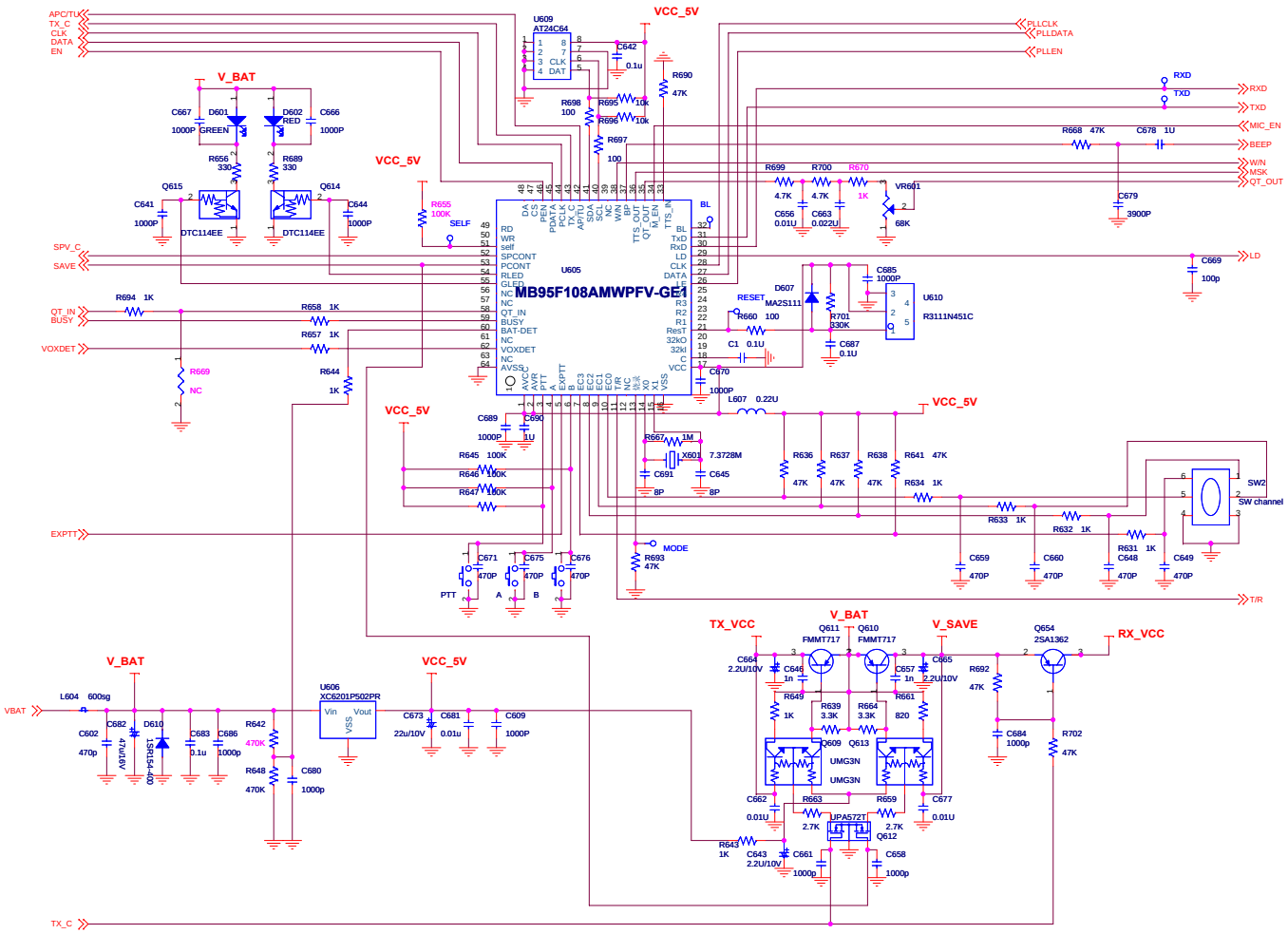
HYT	HYT Science&technology Co.Ltd.		
Model Name:	TC-610-V(146-174MHz)	Page:	3 of 3
Part Name:	VCO&RF	Date:	Monday, November 05, 2007
File No.:	HYT-RD-BLD-CD-	Rev:	1.0
Prepare:	Check:	Approve:	

TC-610&620 UHF 原理图(AF&IF&PLL)

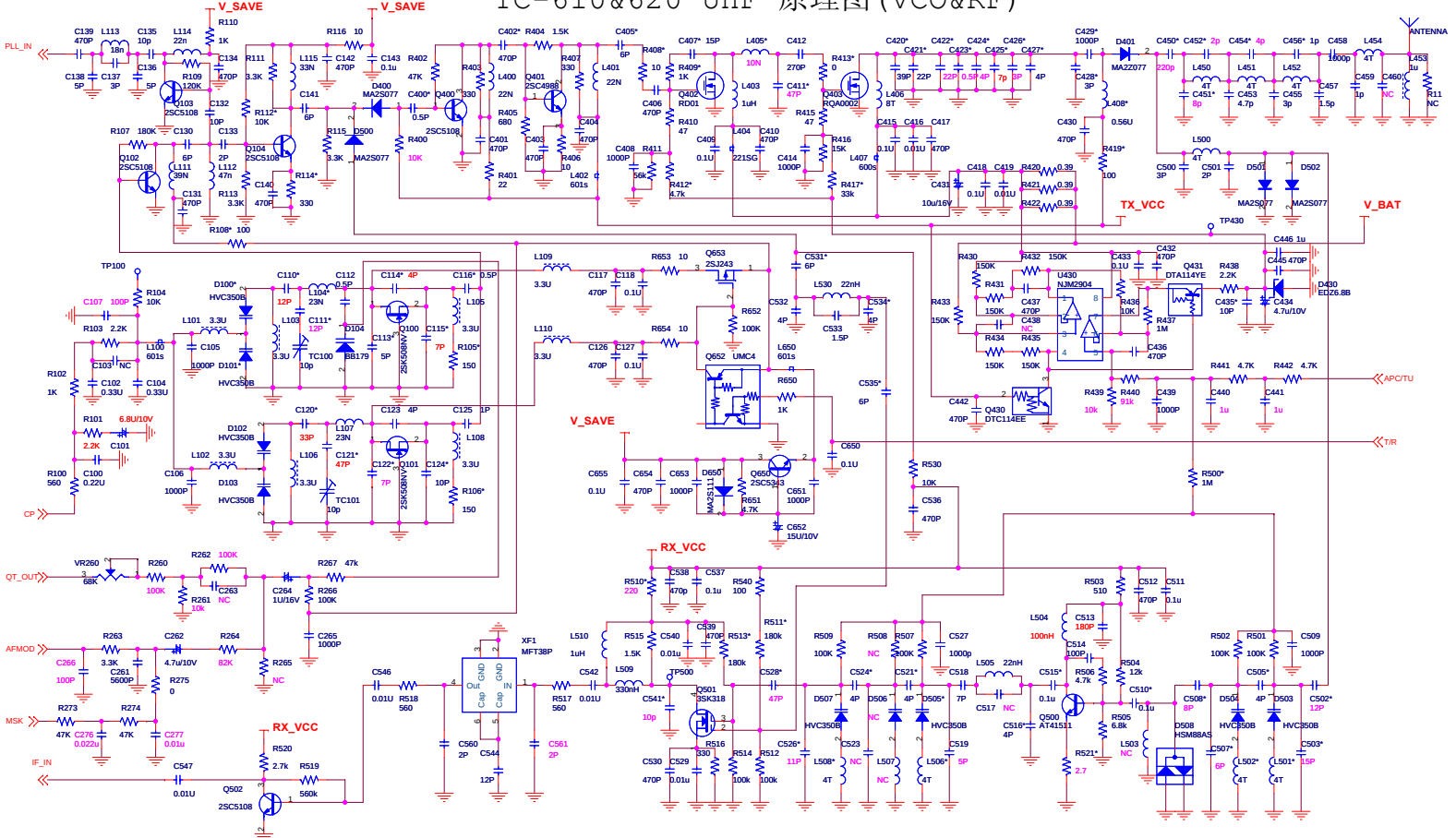


	R408*	C423*	C425*	C451*	C429*	C421*	C422*	C450*	C435*	C420*	L408*	L405*	R409*	R419*	R417*	R413*	R412*	C515*	C526*	C502*	C503*	C528*	R507*	L501*	L502*	L506*	L508*	D505*	R510*	R521*	C505*	C516*	C524*	C534*	C519*	C508*	C510*	C541*	R500*	R511*	R513*	C521*	C531*	C535*
U1(400-420)MHz	10Ω	0.5P	7P	8P	1000P	22P	22P	220P	10P	39P	0.56uH	10nH	1K	100Ω	33K	0Ω	4.7K	0.1U	11P	12P	15P	47P	100K	4T	4T	4T	4T	BVC350	220Ω	2.7Ω	4P	4P	4P	4P	5P	8P	0.1U	10P	1M	180K	180K	4P	6P	6P
U2(450-470)MHz	0Ω	10P	3P	1P	27P	10P	4P	100P	10P	13P	82nH	8.2nH	NC	150Ω	33K	0Ω	4.7K	7P	6P	7P	6P	7P	NC	4T	4T	NC	4T	NC	0Ω	0Ω	2P	NC	2P	NC	NC	4P	7P	10P	1M	180K	180K	4P	6P	6P
U3(440-470)MHz	0Ω	10P	3P	1P	27P	10P	5P	100P	470P	13P	82nH	8.2nH	NC	150Ω	33K	0Ω	4.7K	15P	6P	15P	6P	15P	100K	4T	4T	4T	4T	BVC350	120Ω	0Ω	4P	4P	4P	4P	6P	8P	15P	10P	100K	100K	100K	15P	100P	100P
U4(470-490)MHz	0Ω	10P	1.5P	1P	27P	18P	NC	100P	470P	10P	82nH	8.2nH	NC	150Ω	33K	0Ω	4.7K	100P	8P	15P	4P	15P	100K	3T	3T	3T	3T	BVC350	120Ω	0Ω	4P	2.4P	3.6P	4P	3P	8P	220P	9P	100K	100K	100K	3P	100P	100P
U5(350-370)MHz																																												
U6(370-390)MHz																																												
U7(420-450)MHz	0Ω	8P	2P	5P	11P	7P	NC	470P	10P	11P	0.56uH	5.6nH	NC	150Ω	39K	2.7nH	3.3K	7P	8P	7P	6P	15P	NC	4T	4T	NC	4T	NC	0Ω	0Ω	2P	NC	2P	NC	NC	2P	12P	10P	1M	180K	180K	2P	6P	6P

TC-610&620 UHF 原理图(MCU&POWER)



TC-610&620 UHF 原理图(VCO&RF)



	R108*	R105*	R106*	C120*	C121*	C124*	C114*	C113*	C116*	C115*	C122*	C110*	C111*	R112*	R114*	D100*	D101*	L104*	R211*	R212*	R214*	R216*	R218*	R242*	C248*	C215*	C280*	C247*	C202*	R309*	R316*	C400*	C405*	C407*	C411*	C402*	C452*	C426*	C427*	C428*	C424*	C454*	C456*
U1(400-420)MHz	100Ω	150Ω	150Ω	33P	47P	10P	4P	5P	0.5P	7P	7P	12P	12P	10K	330Ω	HVC350	HVC350	23nH	390K	10K	22K	27K	30K	15K	1000P	0.022U	47P	0Ω	0.47U	1K	180K	0.5P	6P	15P	47P	470P	2P	3P	4P	3P	4P	4P	1P
U2(450-470)MHz	1K	100Ω	100Ω	12P	15P	10P	2.4P	3.6P	0.3P	3P	5P	8P	12P	10K	330Ω	HVC350	HVC350	23nH	390K	10K	22K	27K	30K	15K	1000P	0.022U	47P	0Ω	0.47U	1K	180K	0.5P	6P	NC	33P	6P	1P	1P	4P	4P	1P	1.5P	1P
U3(440-470)MHz	100Ω	150Ω	68Ω	18P	15P	10P	4P	5P	0.3P	3P	5P	9P	6P	5.6K	150Ω	MA2837600	MA2837600	23nH	390K	33K	22K	27K	30K	4.7K	NC	0.018U	100P	1U	0.1U	100Ω	47K	0.5P	6P	NC	33P	6P	1P	1P	4P	4P	1P	1.5P	1P
U4(470-490)MHz	100Ω	56Ω	56Ω	8P	10P	10P	2.4P	3.6P	0.3P	3P	5P	6P	7P	5.6K	150Ω	HVC350	HVC350	23nH	390K	33K	0Ω	22K	560Ω	4.7K	NC	0.018U	100P	1U	0.1U	100Ω	47K	0.5P	6P	NC	33P	6P	NC	3P	1.5P	4P	1P	1.5P	1P
U5(350-370)MHz																																											
U6(370-390)MHz																																											
U7(420-450)MHz	1K	100Ω	100Ω	33P	22P	8P	2.4P	3.6P	0.3P	3P	6P	15P	10P	10K	330Ω	HVC350	HVC350	27nH	470K	10K	22K	27K	30K	15K	1000P	0.022U	47P	0Ω	0.47U	1K	180K	220P	4P	NC	33P	6P	1.5P	3P	2P	1.5P	5P	2P	1.5P

Specifications

General	
Frequency Range	VHF: 136-174MHz 146-174MHz UHF: 350-370MHz 370-390MHz 400-420MHz 420-450MHz 440-470MHz 450-470MHz 470-490MHz
Channel Capacity	16
Channel Spacing	25/12.5 KHz
Operating Voltage	7.5V DC
Battery	1200mAh Li-Ion battery
Battery Life (5-5-90 duty cycle)	About 10 hours
Operating Temperature	-20～+50℃
Dimensions（H×W×D） (with battery, without antenna)	TC-610: 119mm x 55mm x 33mm TC-620: 117mm x 54mm x 31mm
Weight (with antenna & battery)	TC-610: 270g TC-620: 275g
Frequency Stability	±2.5ppm
Receiver	
Sensitivity	-119dBm/-118dBm
Selectivity	≥70dB(W)/60dB(N)
Intermodulation	≥65dB
Spurious Response Rejection	≥70dB
Rated Audio Power Output	800mW
Rated Audio Distortion	≤5% (800mW)
Transmitter	
RF Power Output	4.8±0.2W(H)/2.0±0.2W(L)
Spurious and Harmonics	-36dBm (frequency below 1GHz) -30dBm (frequency above 1GHz)
Modulation Limiting	≤5KHz/2.5KHz
FM Noise	40dB(W)/35dB(N)
Modulation Distortion	≤5%

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