



Service Manual

DIGITAL PORTABLE RADIO



Preface

This manual describes the information related to the product repair. It is intended for use by qualified technicians only. Before repairing the product properly, please read this manual carefully.

This manual is applicable to the following product:

BP51X Digital Portable Radio (X may represent 2, 5, 6, or 8)

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Documentation Information

This section describes the conventions and revision history of this document.

Conventions

Instruction Conventions

Icon	Description
TIP	Indicates information that can help you make better use of your product.
NOTE	Indicates references that can further describe the related topics.
CAUTION	Indicates situations that could cause data loss or equipment damage.
WARNING	Indicates situations that could cause minor personal injury.
DANGER	Indicates situations that could cause major personal injury or even death.

Notation Conventions

Item	Description	Example
Boldface	Denotes menus, tabs, parameter names, window names, dialogue names, and hardware buttons.	To save the configuration, click Apply .
		The Log Level Settings dialogue box appears.
		Press the PTT key.
" "	Denotes messages, directories, file names, folder names, and parameter values.	The screen displays "Invalid Battery!".
		Open "PSS.exe".
		Go to "D:/opt/local".
		In the Port text box, enter "22".
>	Directs you to access a multi-level menu.	Go to File > New .
<i>Italic</i>	Denotes document titles.	For details about using the DWS, refer to <i>Dispatch Workstation User Guide</i> .
Courier New	Denotes commands and their execution results.	To set the IP address, run the following command: <code>vos-cmd - m name IP</code>

Revision History

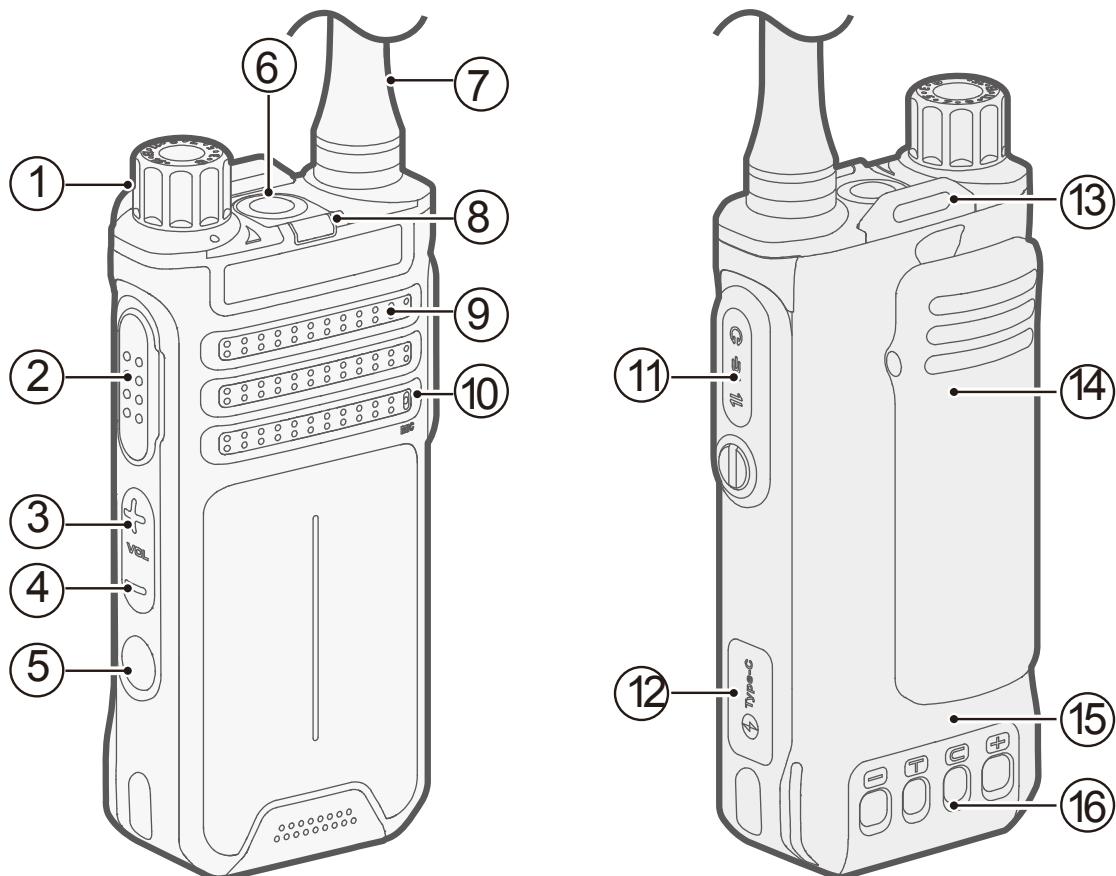
Version	Release Date	Description
V01	July 2022	Added VHF (136–174 MHz).
V00	March 2022	Initial release.

UHF (400–470 MHz)

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1. Product Layout



No.	Part Name	No.	Part Name	No.	Part Name
1	Channel Selector Knob	7	Antenna	13	Strap Hole
2	Push-to-Talk (PTT) Key	8	LED Indicator	14	Belt Clip
3	Volume Up Key	9	Speaker	15	Battery
4	Volume Down Key	10	Microphone	16	Charging Contacts
5	Side Key 3 (SK3)	11	Accessory Connector	/	/
6	On-Off Key	12	USB Type-C Port	/	/

2. Disassembly and Reassembly

This section introduces how to disassemble the radio. To reassemble the radio, do vice versa.

2.1 Tools

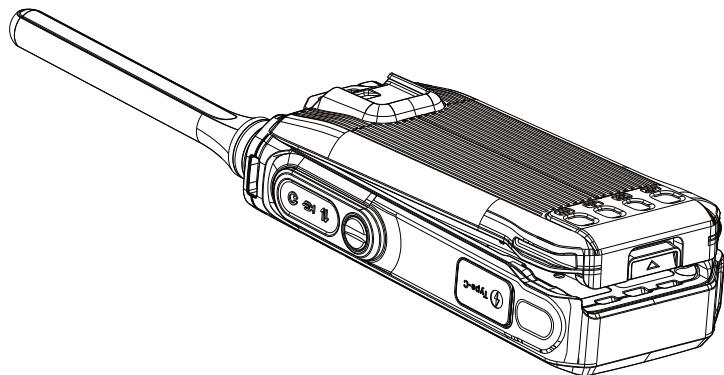
- Socket wrench
- Torx screwdriver
- Tweezers
- Soldering iron

2.2 Procedure

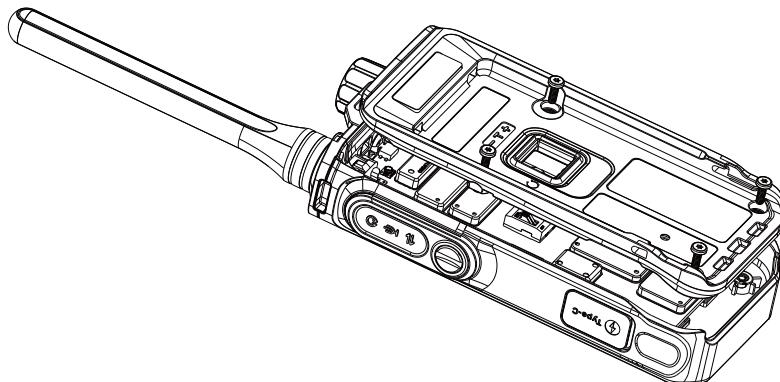
⚠ CAUTION

Make sure the waterproof ring is attached in place during reassembly.

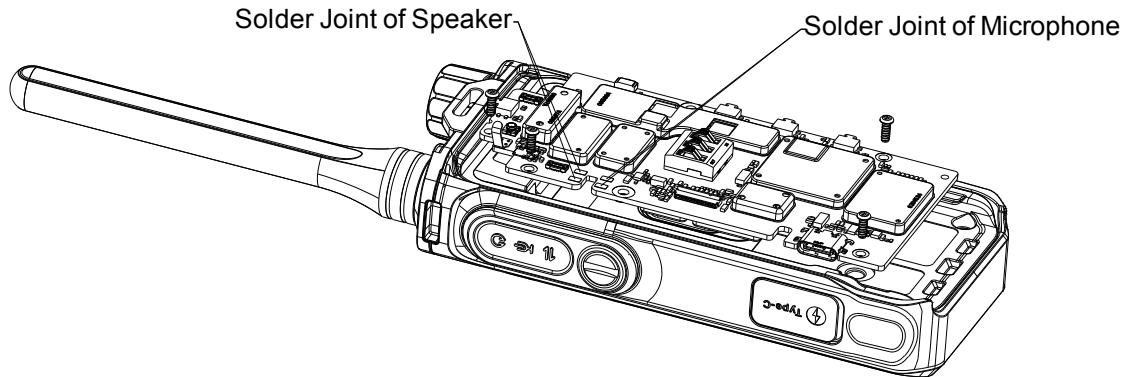
1. Turn off the radio, move the battery latch upwards to release it, and then remove the battery from the radio.



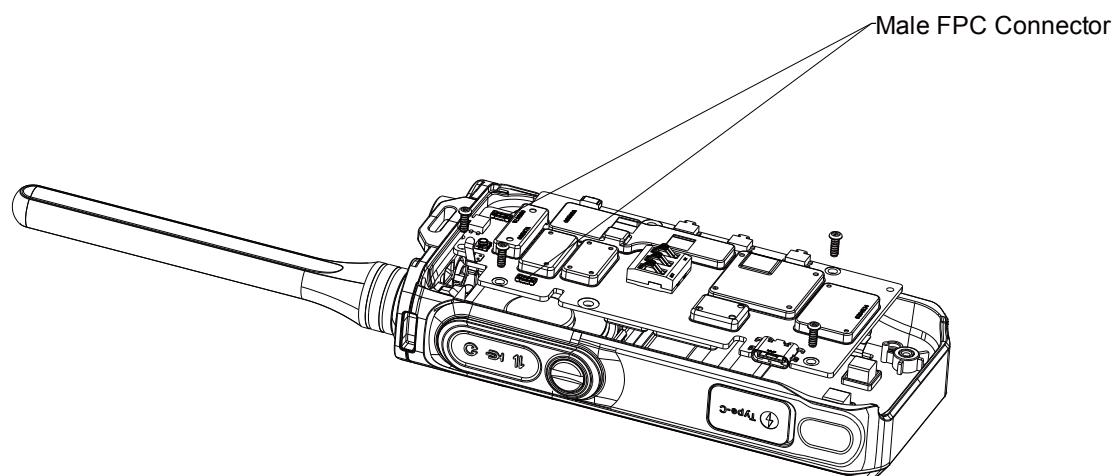
2. Use a Torx screwdriver to remove the four screws on the chassis, and then remove the chassis.



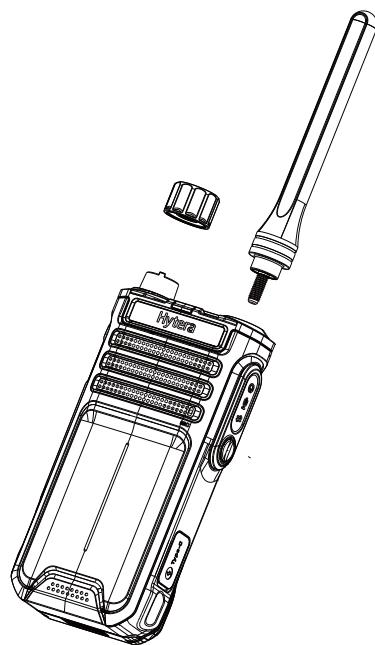
3. Use a Torx screwdriver to remove the four screws on the main board, and then use a soldering iron to unsolder the solder joint of the speaker and microphone.



4. Use tweezers to remove the male FPC connectors, and then remove the main board.

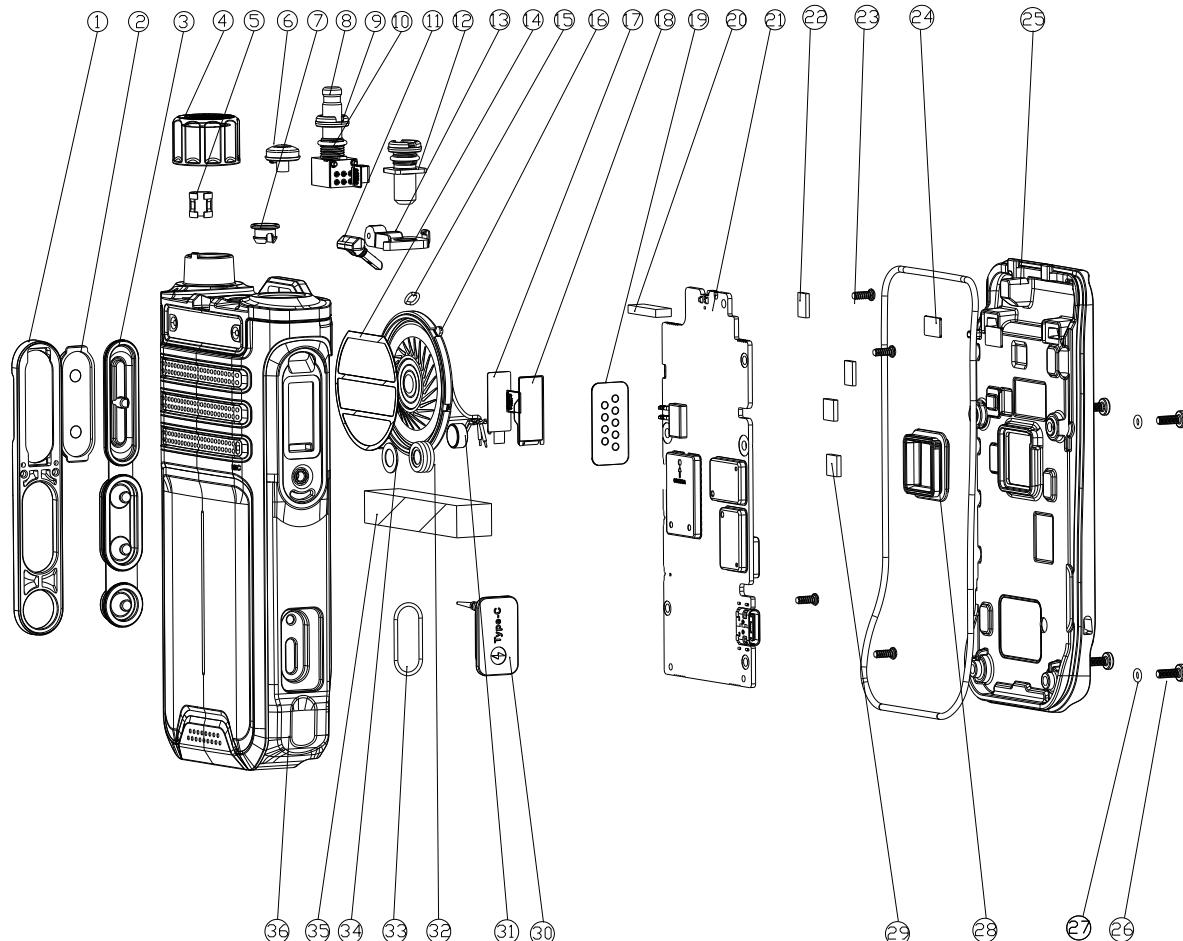


5. Rotate the antenna counter-clockwise to remove it, pull out the **Channel Selector** knob, and then use a socket wrench to remove the nuts from the **Channel Selector** knob.



3. Exploded View and Packaging Guide

3.1 Exploded View



Parts list:

No.	Part No.	Description	Qty.
1	5116000081705A	Side key bracket	1
2	511600000229A	PTT key cover	1
3	5110020081520A	Silicone rubber PTT key	1
4	5116000081706A	Channel selector knob	1
5	5111000000193A	Inner lining for knob	1
6	511000000265A	Silicone rubber emergency key	1

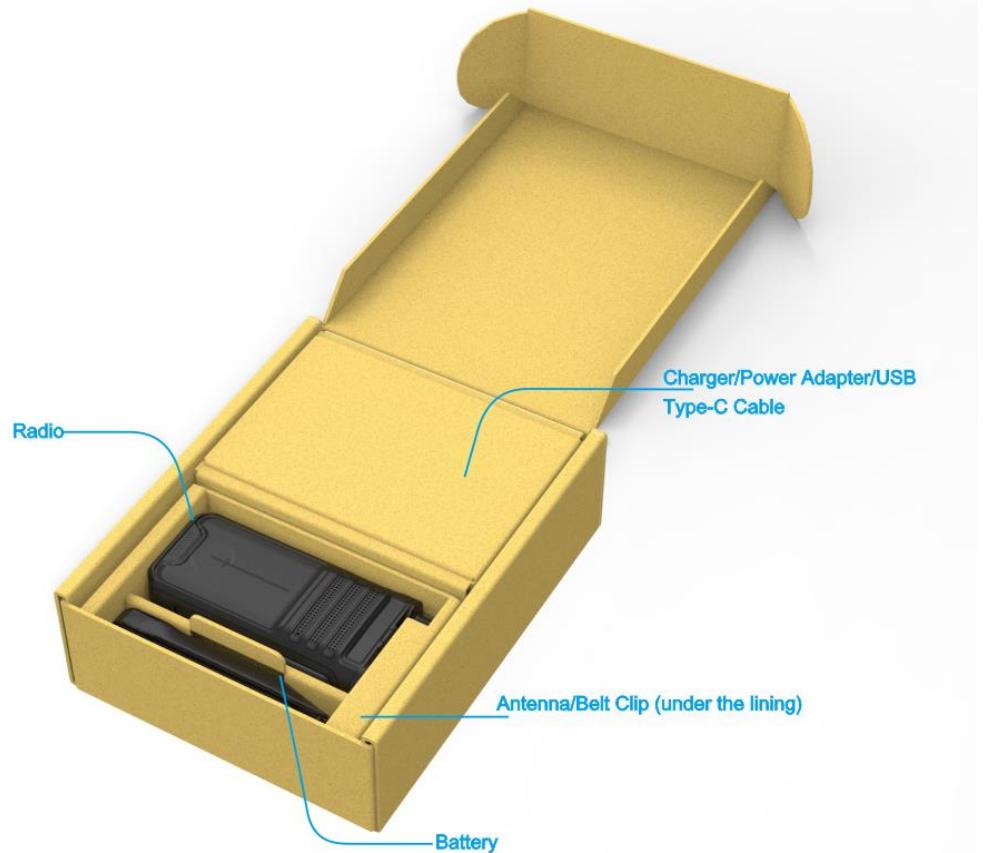
No.	Part No.	Description	Qty.
19	5113010081525A	Earpiece PC sheet	1
20	5113050091517A	Blackout foam	1
21	11500000059653	Main board	1
22	511305000341A	Protective foam for filter	4
23	5107000000625A	Self-tapping screw	4
24	5113010061001A	Waterproof sheet for aluminum chassis	2

No.	Part No.	Description	Qty.	No.	Part No.	Description	Qty.
7	5116000000082A	Emergency key bracket	1	25	5117000081542A	Aluminum chassis	1
8	11500000059470	Knob adapter board	1	26	510700000477B	Metric screw	4
9	5107020060322A	M6 x 2.5 nut	2	27	5110000000402A	Waterproof ring for M2 screw	4
10	5110000000558A	Waterproof ring for adapter	2	28	5110990060065B	Waterproof ring for battery connector	1
11	5116000081717A	Light guide	1	29	5119020060166A	Thermally conductive pad	2
12	5118000081549A	Antenna connector	1	30	5116000081709A	USB cover	1
13	5116000081720A	SMA bracket	1	31	51020200081506	Microphone	1
14	5113040081504A	Dustproof net for speaker	1	32	5110000000033A	Silicone rubber microphone cover	1
15	5110030061384A	Waterproof ring	1	33	5116000001029A	Waterproof ring for USB cover	1
16	51020600000038	Speaker	1	34	5113030000026A	Waterproof and breathable film for microphone	1
17	5113070081517A	Double-sided adhesive tape for earpiece board	1	35	5113050091508A	Acoustic foam	1
18	11500000059471	Audio accessory board	1	36	5116000081718A	Front housing	1



The part number is subject to change without notice due to product upgrade.

3.2 Packaging Guide



4. Specifications

General		
Frequency Range	400–470 MHz	
Dimensions (H x W x D) (with battery and without antenna)	115 mm x 55 mm x 29.5 mm	
Weight (with battery and antenna)	210 g ($\pm 5\%$)	
Zone Capacity	4	
Channel Capacity	64	
Channel Spacing	12.5 KHz/20 KHz/25 KHz	
Operating Voltage	7.4 V (rated)	
Battery	1500 mAh Li-ion battery	
Battery Life (5/5/90 duty cycle, high TX power)	<ul style="list-style-type: none"> ● Analog: 12 hours (1500 mAh)/16 hours (2000 mAh) ● Digital: 16 hours (1500 mAh)/21 hours (2000 mAh) 	
Antenna Impedance	50 Ω	
RX Section		
Sensitivity (Analog)	<ul style="list-style-type: none"> ● Analog: 0.18 μV (12 dB SINAD) ● Digital: 0.18 μV 	
Adjacent Channel Selectivity	TIA-603	60 dB@12.5 kHz/70 dB@20/25 kHz
	ETSI	60 dB@12.5 kHz/70 dB@20/25 kHz
Spurious Response Rejection	TIA-603	70 dB@12.5/20/25 kHz
	ETSI	70 dB@12.5/20/25 kHz
Intermodulation	TIA-603	70 dB@12.5/20/25 kHz
	ETSI	65 dB@12.5/20/25 kHz
Conducted Emission	< -57 dBm	
Blocking	TIA-603	80 dB
	ETSI	84 dB
Rated Audio Distortion	$\leq 3\%$	

Rated Audio Power Output	1 W	
Audio Response	+1 dB to -3 dB	
TX Section		
Frequency Stability	±0.5 ppm	
Power Output	Low	1 W
	High	4 W
FM Modulation	11K0F3E@12.5 kHz	
	14K0F3E@20 kHz	
	16K0F3E@25 kHz	
4FSK Modulation	12.5 kHz (data only): 7K60FXD	
	12.5 kHz (data and voice): 7K60FXW	
Spurious Emission	-36 dBm < 1 GHz	
	-30 dBm > 1 GHz	
Modulation Deviation	± 2.5 kHz@12.5 kHz	
	± 4.0 kHz@20 kHz	
	± 5.0 kHz@25 kHz	
Adjacent Channel Power	60 dB@12.5 kHz	
	70 dB@20/25 kHz	
Audio Response	+1 dB to -3 dB	
Audio Distortion	≤ 3%	
Environment		
Operating Temperature	-20 °C to +60 °C	
Storage Temperature	-40 °C to +85 °C	
Electrostatic Discharge (ESD)	IEC 61000-4-2 (level 4)	±15 kV (air) ±8 kV (contact)
Water & Dust Protection	IP54	

Humidity, Shock & Vibration	GJB150A-2009: MIL-STD-810 G
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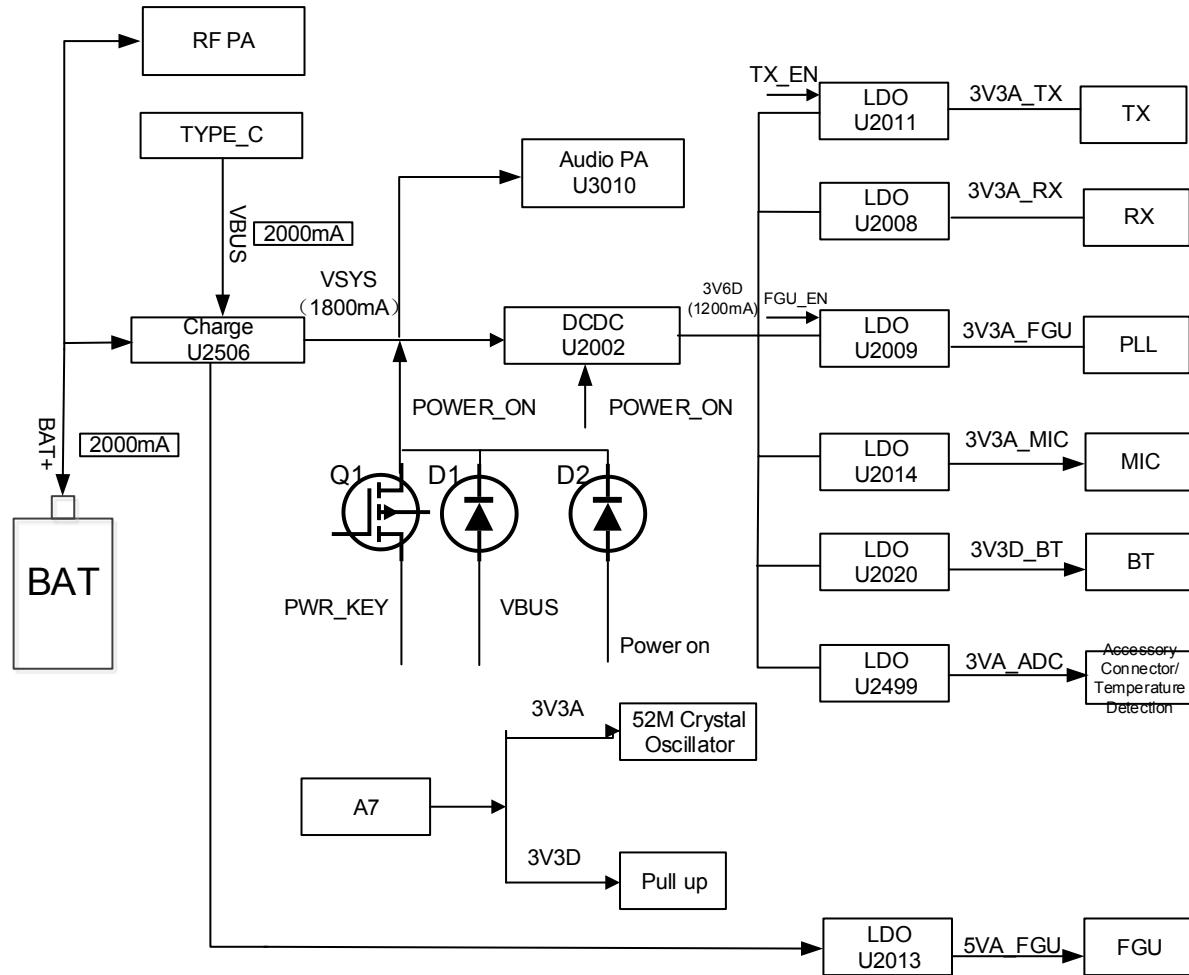
 **NOTE**

All specifications are tested according to applicable standards, and subject to change without notice due to continuous technological development.

5. Circuit Description

5.1 Baseband Section

5.1.1 Power Supply Module



The power supply module employs two 7.4 V Li-ion batteries. The 7.4 V voltage powers the RF board and baseband board in the following ways:

RF Board

- The LDO converts the 7.4 V voltage into a 5.0 V voltage, which powers the VCO circuit.
- The DC/DC (U2002) converts the 7.4 V voltage into a 3.6 V voltage. Then the LDOs (U2011, U2008, and U2009) regulate the 3.6 V voltage into 3.3 V voltages, which power the PLL circuit, RX circuit, and TX circuit.

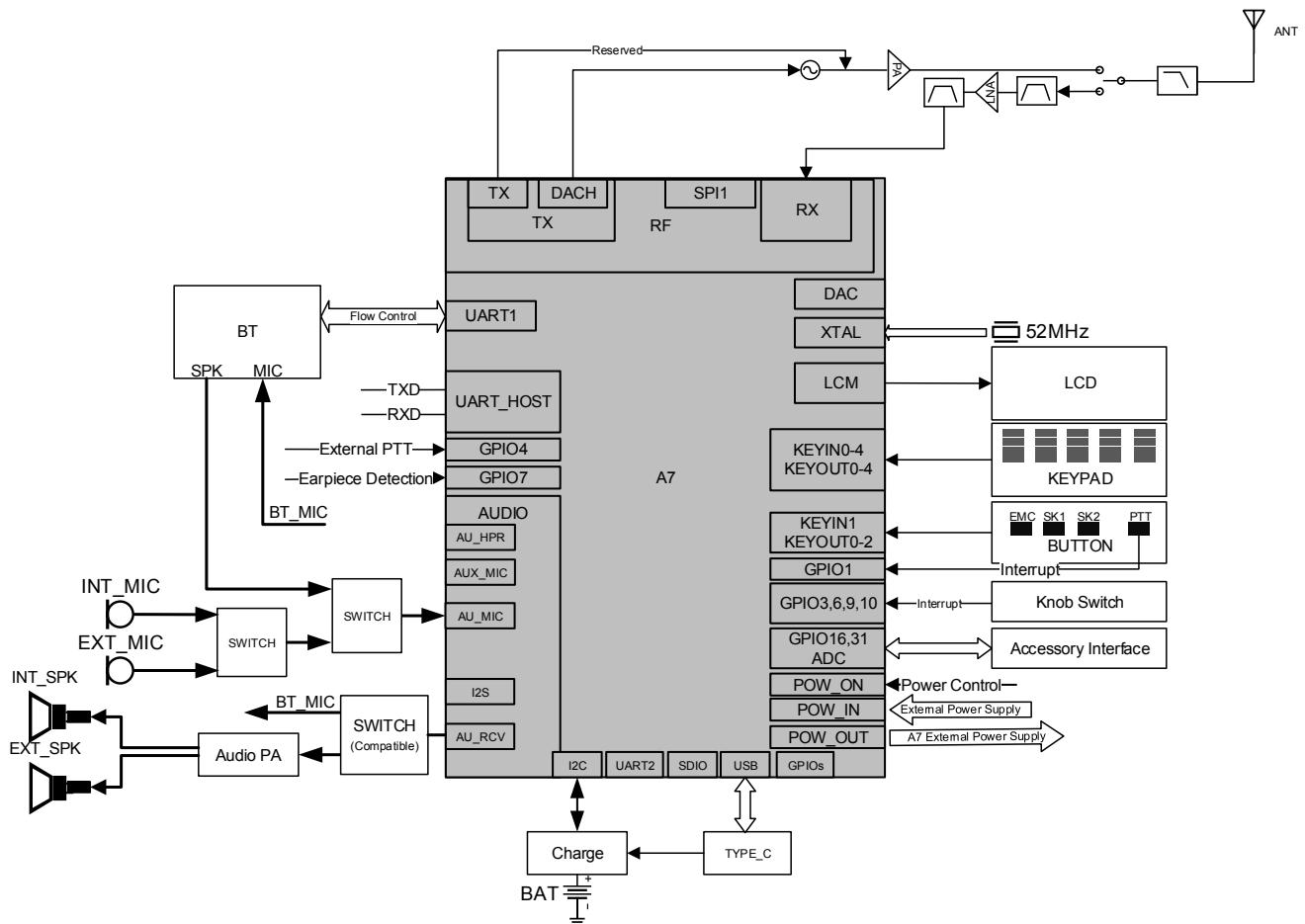
Baseband Board

- The DC/DC (U2002) converts the 7.4 V voltage into a 3.6 V voltage.
- The LDOs (U2014, U2020, and U2499) convert the 3.6 V voltage into 3.3 V voltages, which power the MIC, BT, and accessory connector/temperature detection modules.

The test points and voltage range of each power supply are shown in the table below.

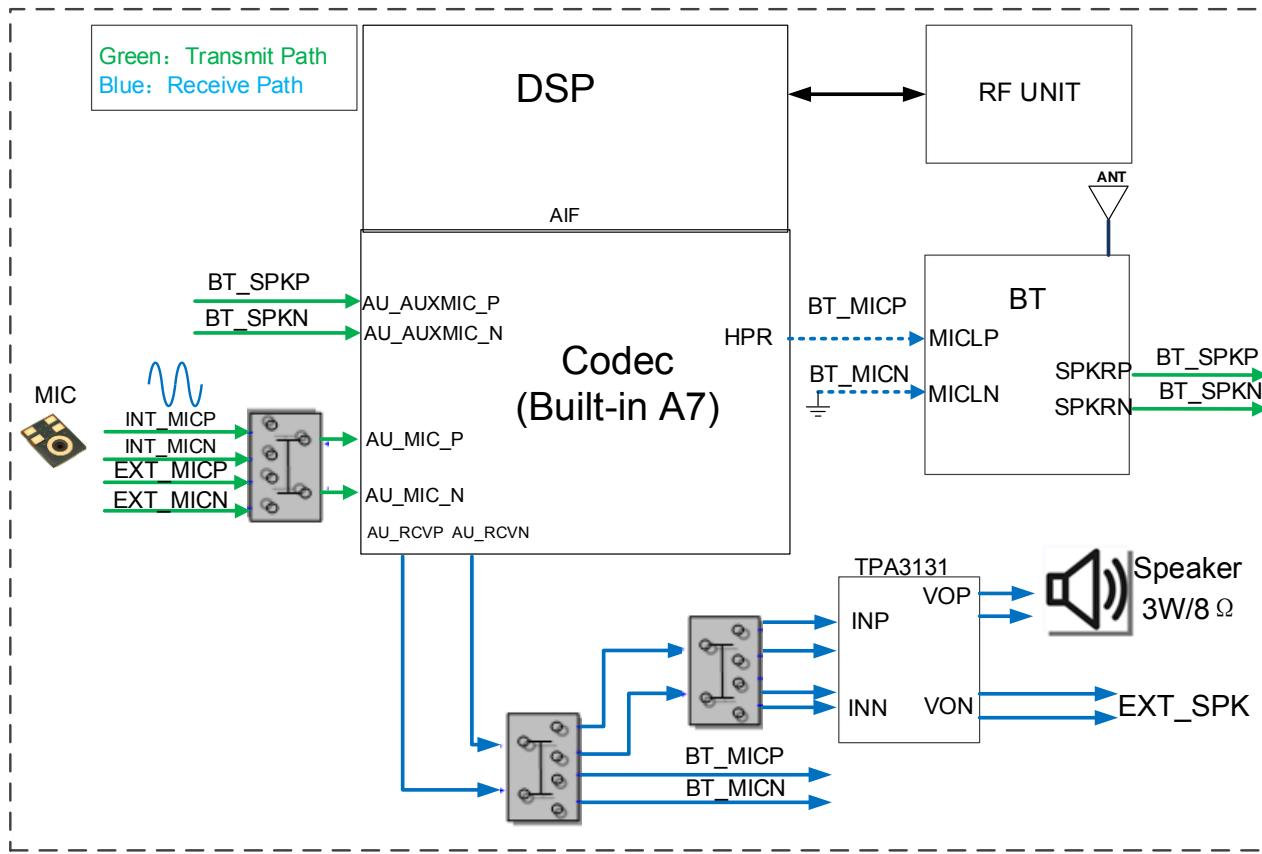
No.	Network	Test Point	Voltage Range (V)
1	3V3D_BT	TP9505	$3.3 \pm 10\% \text{ V}$
2	3V6D	L2008	$3.6 \pm 10\% \text{ V}$
3	5VA_FGU	FB2015	$5 \pm 10\% \text{ V}$
4	3V3A_TX	FB2088	$3.3 \pm 10\% \text{ V}$
5	3V3A_MIC	FB2017	$3.3 \pm 10\% \text{ V}$
6	3V3A_FGU	FB2010	$3.3 \pm 10\% \text{ V}$
7	3V3A_RX	FB2008	$3.3 \pm 10\% \text{ V}$

5.1.2 Control Module



The control module (A7) consists of the baseband, CPU, power management IC, RF transceiver, Codec, and storage, and uses 52 MHz crystal oscillator as the clock signal.

5.1.3 Audio Module



The audio module consists of the Codec (built-in A7), class D audio power amplifier (PA) (U3010), BT module (U9504), microphone, analog switch circuit, and internal and external speakers.

Audio Path

- RX Path

The audio signal received from the RF section is processed by the A7 DSP, goes to the codec module through the audio interface for gain adjustment and D-A conversion, and then is output through AU_RCV. Then the audio signal goes to the internal or external speaker through the analog switch circuit, amplified by the PA chip, and is finally output. Or the audio signal can also be output to the BT chip (U9504) for processing, and then transmitted to the BT earpiece through RF modulation.

- TX Path

- Internal Audio

The internal audio from two microphones goes to the codec module for A-D conversion, and then to the DSP for noise reduction, and finally transmitted through RF modulation.

- BT/External Audio

The BT/external audio signal goes to the codec module for amplification and A-D conversion, and then to the DSP for processing, and finally transmitted through RF modulation.

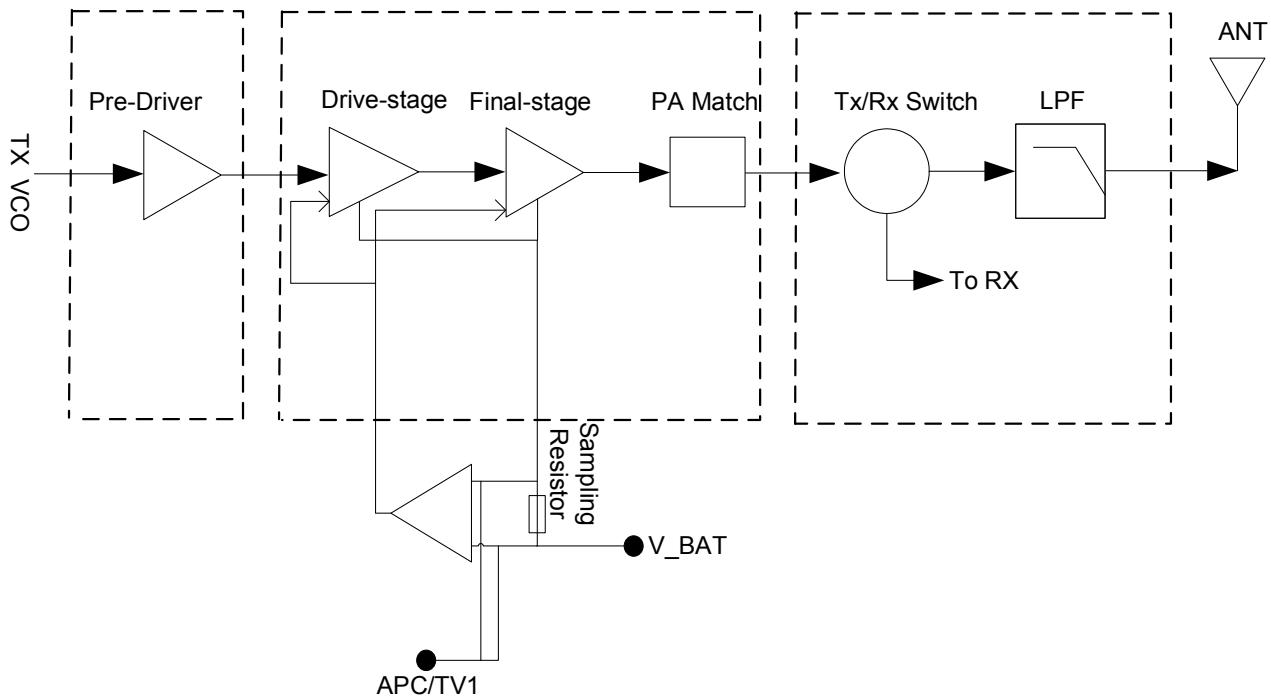
Audio Power Amplifier

The table below lists the main parameters of the audio amplifier.

Parameter	Value
Rated power (P_o)	1 W
Maximum power (P_{max})	3.5 W
Speaker Impedance (R_L)	8 Ω

5.2 RF Section

5.2.1 TX Circuit



The TX circuit consists of the RF PA circuit, low-pass filter (LPF) circuit, automatic power control (APC) circuit, and so on.

RF PA Circuit

The carrier signal generated by the TX VCO goes to the pre-driver PA for initial amplification, the drive-stage PA for further amplification, and then final-stage PA for final amplification. The amplified carrier signal then passes through the microstrip matcher for output impedance matching, so as to reduce output power loss due to impedance mismatch.

LPF Circuit

After the output impedance matching, the signal goes to the TX/RX switch and then to the LPF for suppressing

harmonics and spurious signals. Finally, it goes to the antenna for transmission.

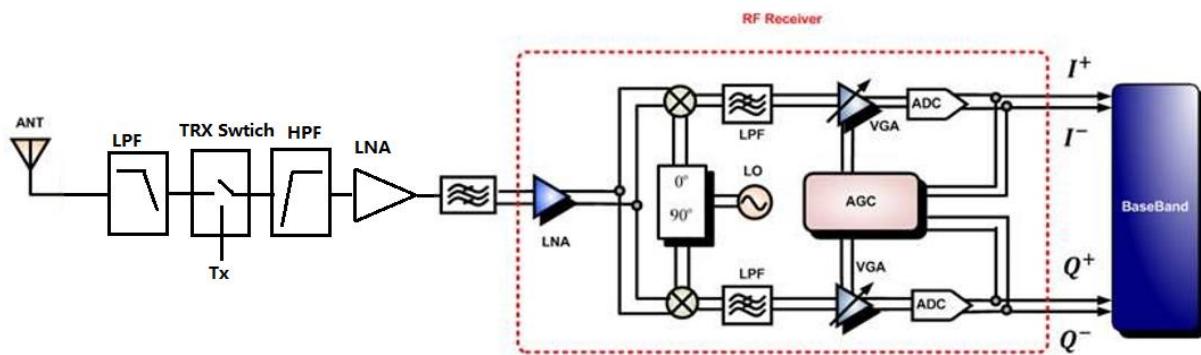
APC Circuit

The APC circuit converts the drain current from the driver-stage PA and final-stage PA into a voltage, and then compares the voltage with the APC control voltage output by the MCU. The error voltage generated from the comparison adjusts the TX power by controlling the gate bias voltage of the driver-stage PA and final-stage PA.

5.2.2 RX Circuit

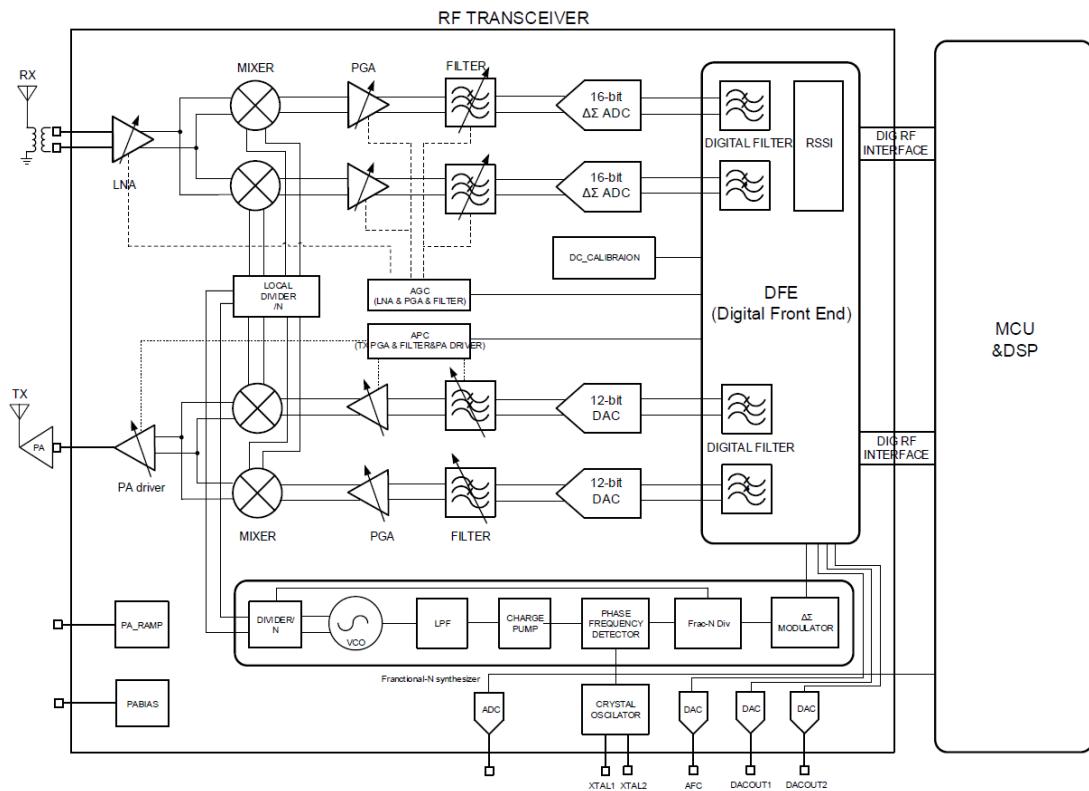
The RX circuit consists of the high-pass filter (HPF), low-noise amplifier (LNA), LPF, signal toggle switch, and so on.

RX Front-End



The signal received from the antenna goes to LPF for filtering out the HF signal, and to HPF through the TX/RX switch for filtering out the LF signal. The filtered signal is amplified by the LNA, and the amplified signal goes to the LPF for filtering out the interference signal. Finally, the signal goes to the signal toggle switch, and to the A7 TRX processor for conversion from RF to zero intermediate frequency (IF).

RX Back-End



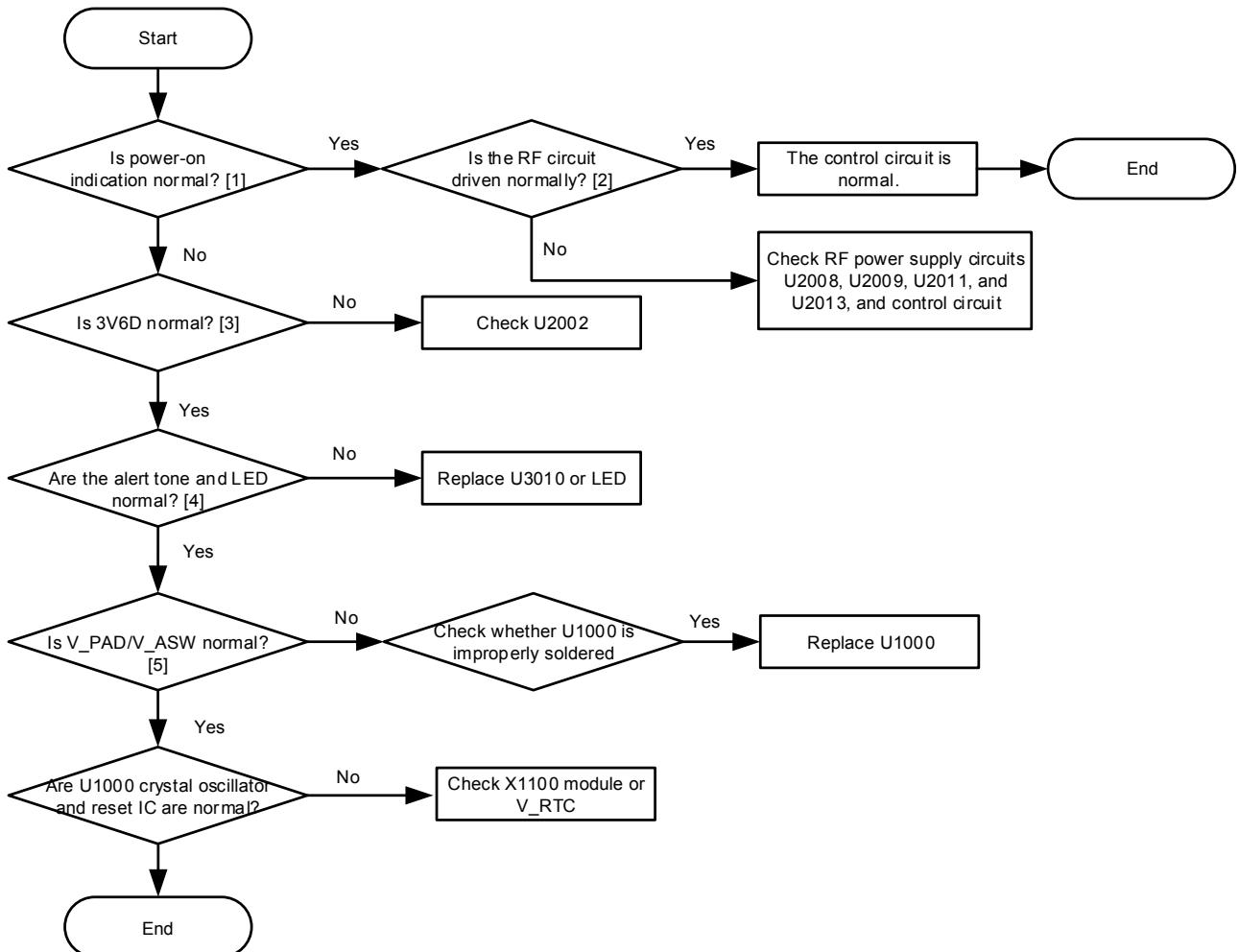
The amplified RF signal goes to the A7, in which it is further amplified by the LNA and mixes with the VCO signal to generate a zero IF signal. The zero IF signal goes to the PGA and filter, and is converted into a digital signal by the ADC. Then The digital signal goes to the MCU and DSP for processing.

5.2.3 FGU Circuit

The A7 platform provides built-in PLL and VCO solutions.

6. Troubleshooting Flowchart

6.1 Control Circuit

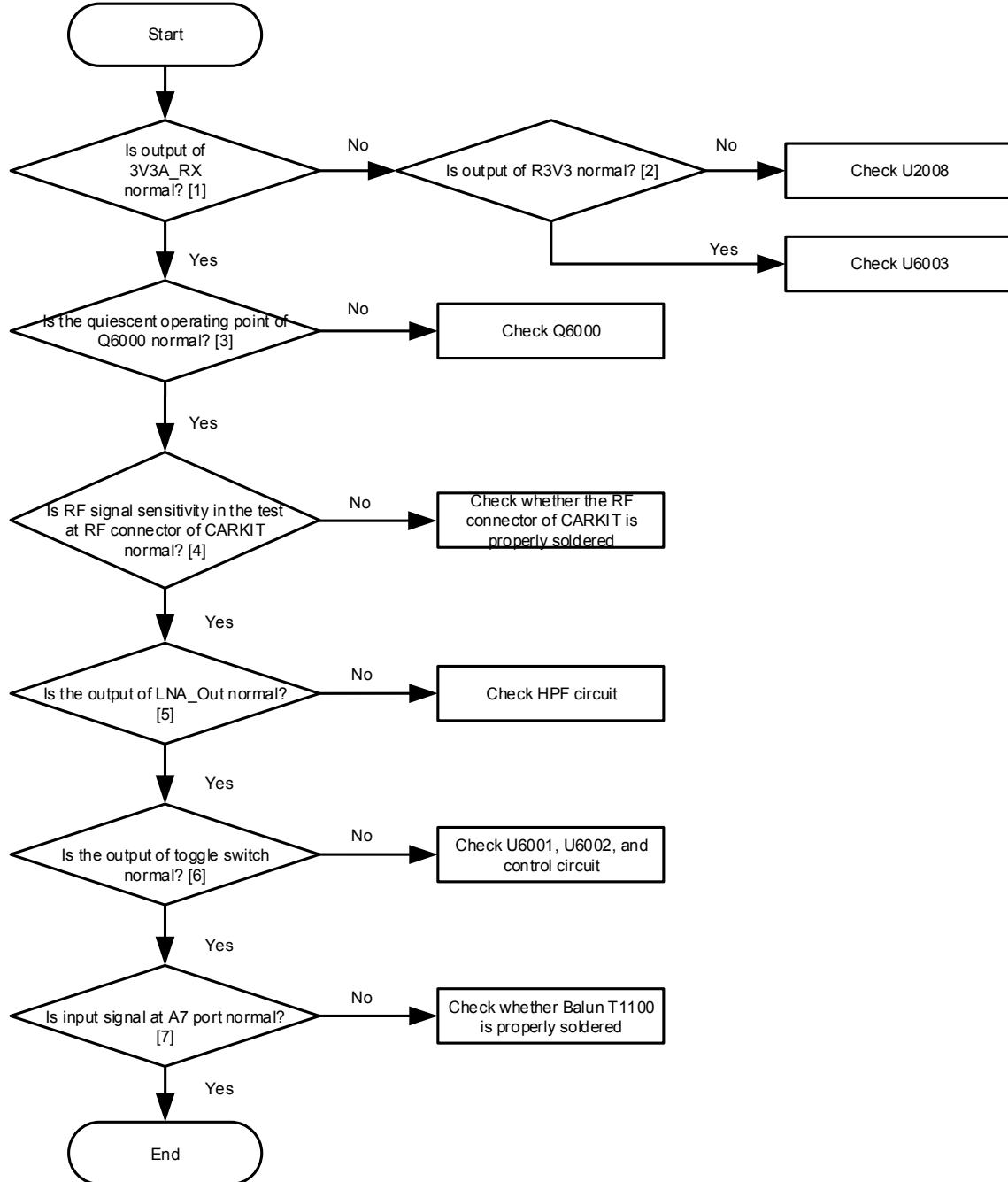


Description of normal situations:

- [1] The radio announces the channel number after being turned on.
- [2] The RF power supply outputs normally, and the power supply for the RX path is switched on.
- [3] The voltage at 3V6D (L2008) is $3.6 \pm 10\%$ V.
- [4] After the radio is turned on, the LED indicator flashes green for one time.
- [5] The voltage at V_PAD (FB2105) is $3.0 \pm 10\%$ V.

The voltage at V_ASW (FB2006) is $2.8 \pm 10\%$ V.

6.2 RX Circuit



Description of normal situations:

- [1] The output voltage at Pin 1 of U2008 is $3.3 \pm 10\%$ V.
- [2] The output voltage at Pin 3 or the input voltage at Pin 4 of U6003 is $3.3 \pm 10\%$ V.
- [3] Check the base voltage and collector voltage of Q6000 when the radio is not receiving signals. In normal case, the base voltage is $0.7 \pm 10\%$ V, and the collector voltage is $2.78 \pm 10\%$ V.
- [4] The RF connector of CARKIT is positively related to the SMT patch processing. Before plugging the RF cable, make sure that the RF connector is in good condition.

- [5] Confirm the RF signal output at Q6000. For example, input a -123 dBm RF signal at the RF connector of CARKIT, the output amplitude of LNA_OUT2 at Q6000 is about -115 dBm.
- [6] U6001 and U6002 are toggle switches. When the radio is receiving signals normally, LNA_H_En will output a control voltage of 3.3 V, and Pin 4 of U6001 and Pin 6 of U6002 are at high level.
- [7] Confirm the RF signal output at T1100. For example, input a -123 dBm RF signal at the RF connector of CARKIT, the output amplitude of T1100 (input amplitude of A7) is about -110 dBm.

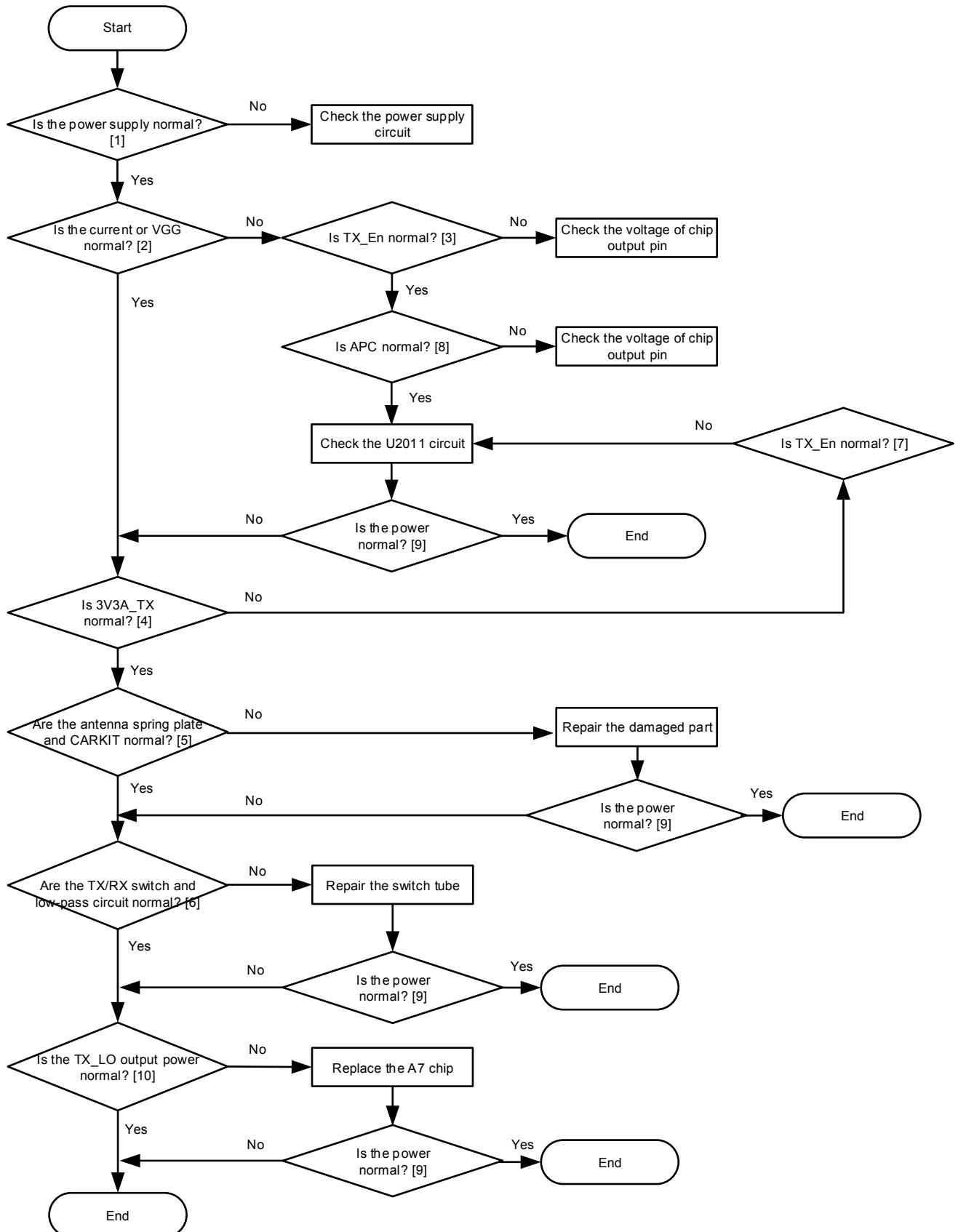
At the antenna port, input a -123 dBm signal with standard debugging information (AF = 1 kHz, FM = 3 kHz).

6.3 TX Circuit



CAUTION

To avoid the impact on TX power, do the following tests under the 7.4 V power supply.



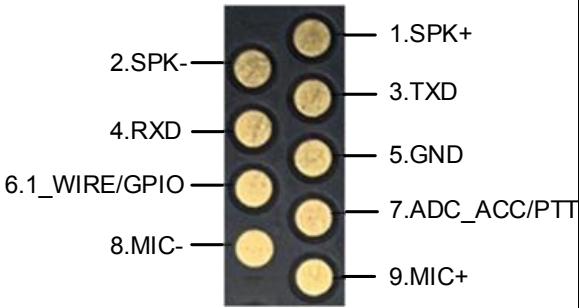
Description of normal situations:

[1] The voltage of the power supply is $7.4 \pm 10\%$ V.

- [2] When the radio operates in low power mode, the current ranges from 0.6 A to 1 A. When the radio operates in high power mode, the current ranges from 1.3 A to 1.8 A.
- [3] The voltage at TX_En is about $3.3 \pm 10\%$ V.
- [4] The voltage at 3V3A_TX is $3.3 \pm 10\%$ V.
- [5] The multimeter is used to measure the antenna spring plate. The impedance to ground is infinite, and no short circuit or circuit break occurs. The CARKIT is soldered properly.
- [6] The start-up voltage of D7000, D7001, D7002, D7003, and D7004 is about 0.7 V. The low-pass circuit coil is soldered properly.
- [7] When the radio operates in low power mode, the voltage at VGG ranges from 2.1 V to 2.4 V. When the radio operates in high power mode, the voltage at VGG ranges from 2.2 V to 2.7 V.
- [8] When the radio operates in low power mode, the voltage at APC ranges from 0.9 V to 1.4 V. When the radio operates in high power mode, the voltage at APC ranges from 1.5 V to 1.9 V.
- [9] Low power: about 1.0 W; high power: about 4.0 W.
- [10] The signal amplitude of TX_LO_1 ranges from -20 dBm to -15 dBm.
The signal amplitude of TX_LO ranges from -6 dBm to 0 dBm.

7. Interface Definition

The table below lists information about the 9-pin accessory connector.

Pin No.	Signal	Description	Illustration
1	SPK+	External speaker +	
2	SPK-	External speaker -	
3	TXD	UART pin	
4	RXD	UART pin	
5	GND	General ground	
6	1_WIRE/GPIO	Accessory identifier 1_wire communication port/GPIO	
7	ADC_ACC/PTT	Port for accessory plug detection and PTT key detection	
8	MIC-	Microphone differential input-	
9	MIC+	Microphone differential input+	

8. Tuning Description

8.1 Tools

- Radio communication test set: Aeroflex 3920 and HP8921
- Power supply: 3 A/10 V
- Multimeter
- A6 Tuner software

8.2 Tuning Procedure

8.2.1 Tuning the Radio

After reassembling the radio, tune it using the A6 Tuner software.

The table below describes the items to be tuned and the corresponding tuning methods. After tuning an item, click **Save File** to save the tuned value.

Item	Method
TX Section	
Reference Frequency	<ol style="list-style-type: none">1. Connect the antenna connector of the radio to the RF port of HP8921, and then set HP8921 to TX test mode.2. Open the A6 Tuner software, and then click PTT OFF under the Freq Calibration tab.3. Adjust the AFC vernier on the A6 Tuner until the frequency deviation between the frequency displayed on HP8921 and the frequency (TX) displayed on A6 Tuner is less than or equal to 40 Hz.4. Click PTT ON.
TX Power	<ol style="list-style-type: none">1. Connect the antenna connector of the radio to the RF port of HP8921, and then set HP8921 to TX test mode.2. Open the A6 Tuner software.3. Under the Freq Calibration tab, set Power to "Low" or "High", and then set the channel frequency.4. Select the required channel, and then click PTT OFF.5. Adjust the AFC vernier under "Low" or "High" to 1.2 ± 0.1 W or 4.2 ± 0.3 W respectively. (If you use the CARCIT test line, pay attention to the loss compensation, which is about 0.3 dB.)

8.2.2 Testing the Radio

After tuning the radio, test the TX and RX performance of the radio as follows:

TX Performance

1. Connect the antenna connector of the radio to the T/R port of Aeroflex 3920.
2. Open the A6 Tuner software, and then set **Channel** under the **Channel Info and Settings** tab.
The value ranges from 9 to 15.
3. Under the **Freq Calibration** tab on the A6 Tuner, set the channel frequency, set **Power** to "High", and then set **Model** to "Digital".
4. Under the **Freq Calibration** tab on the A6 Tuner, select the channel to be tested.
5. Set Aeroflex 3920 as follows:
 - Frq: the same as the frequency of the channel to be tested
 - STD IB 511(.153)
6. Under the **Freq Calibration** tab on the A6 Tuner, click **PTT OFF**.
7. Check whether the tested items on Aeroflex 3920 meet the following requirements:
 - Frequency Error: ≤ 100 Hz
 - Transmit Power: 4.2 ± 0.3 W
 - FSK Error: $\leq 5\%$
 - Magnitude Error: $\leq 3\%$

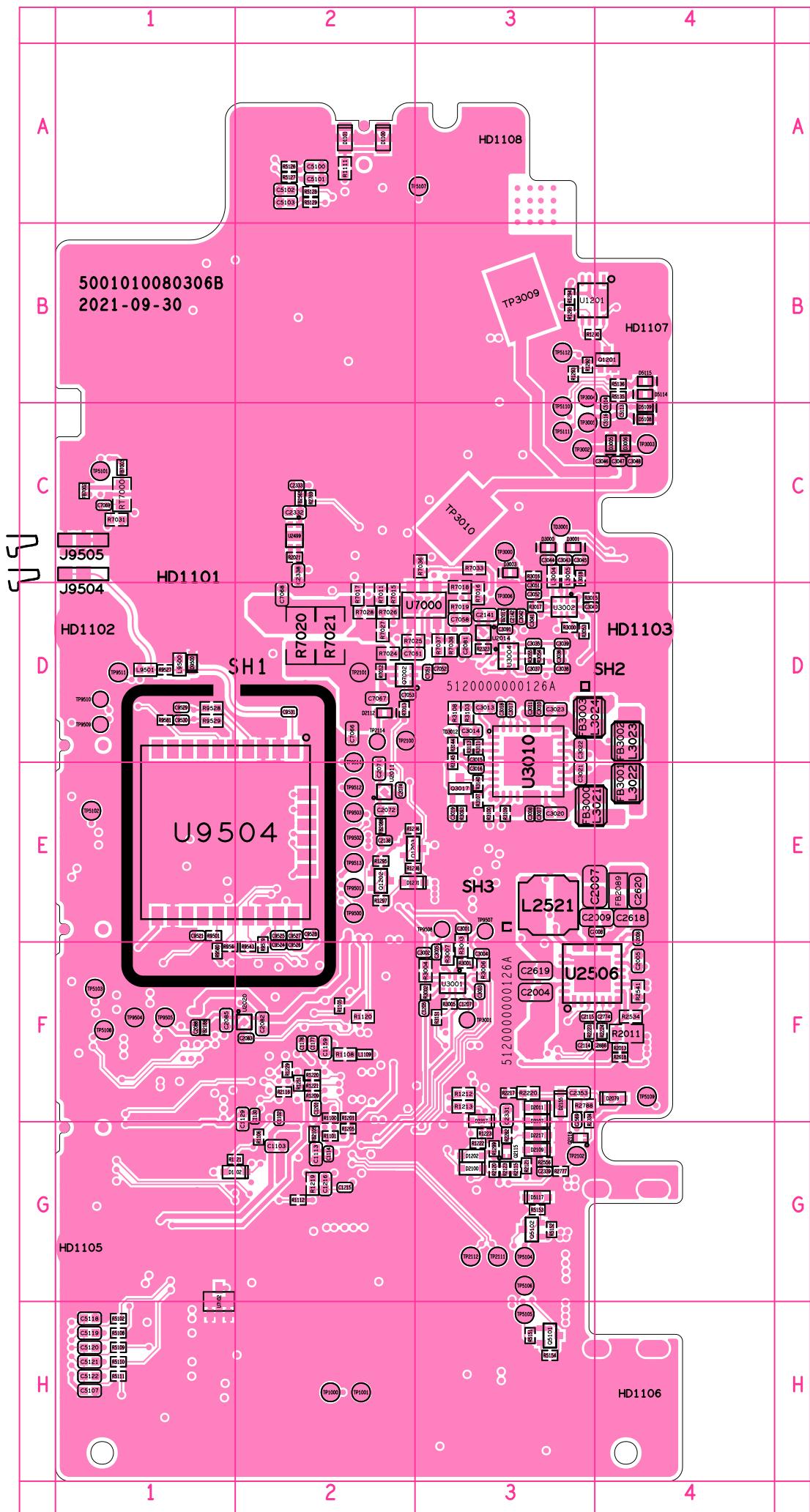
RX Performance

1. Connect the antenna connector of the radio to the T/R port of Aeroflex 3920.
2. Open the A6 Tuner software, and then set **Model** to "Digital" under the **Channel Info and Settings** tab.
3. Close the A6 Tuner software, and then keep the radio powered on.
4. Open the A6 Tuner software again, and then set **Model** to "Digital" under the **Channel Info and Settings** tab.
5. Under the **Freq Calibration** tab on the A6 Tuner, select the channel to be tested.
6. Set Aeroflex 3920 as follows:
 - Frq: the same as the frequency of the channel to be tested
 - STD IB 511(.153)
 - Lvl: -116.0 dBm
7. Under the **BER Test** tab on the A6 Tuner, click **Read Error Rate Switch**.

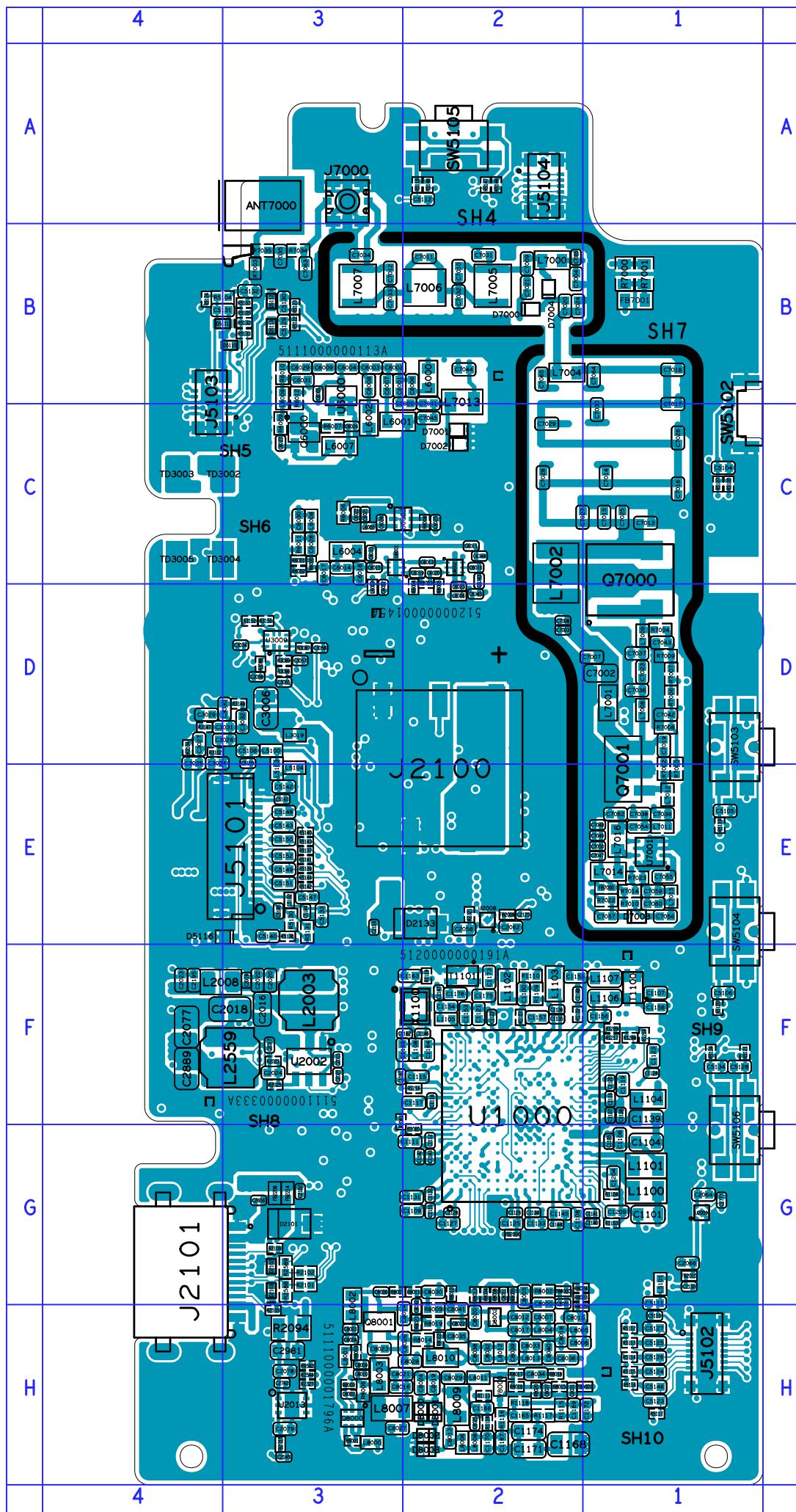
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8. Check whether the value of **Error Rate** displayed on the A6 Tuner is less than or equal to 5%.

9. PCB View

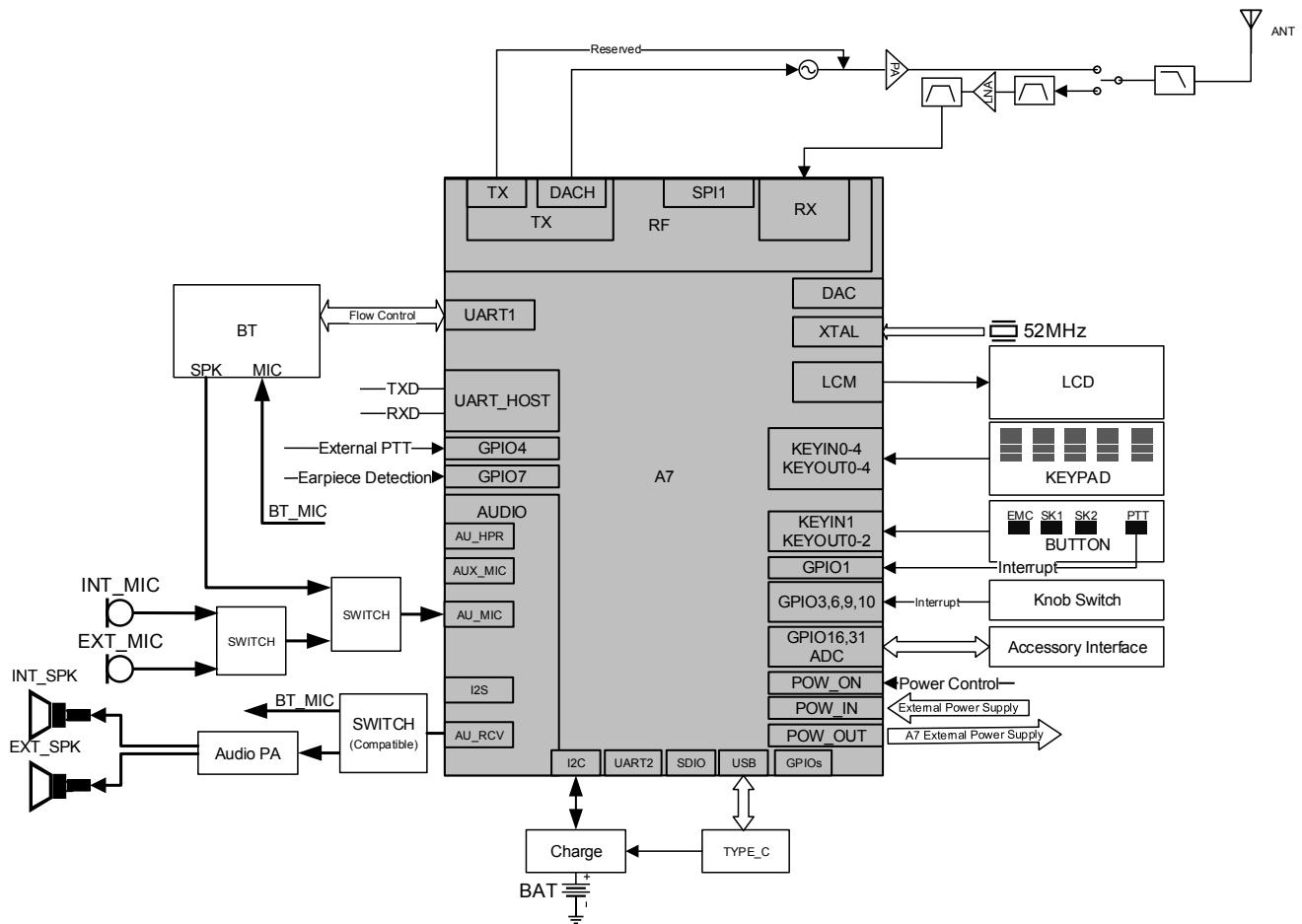
Main Board_Top Layer



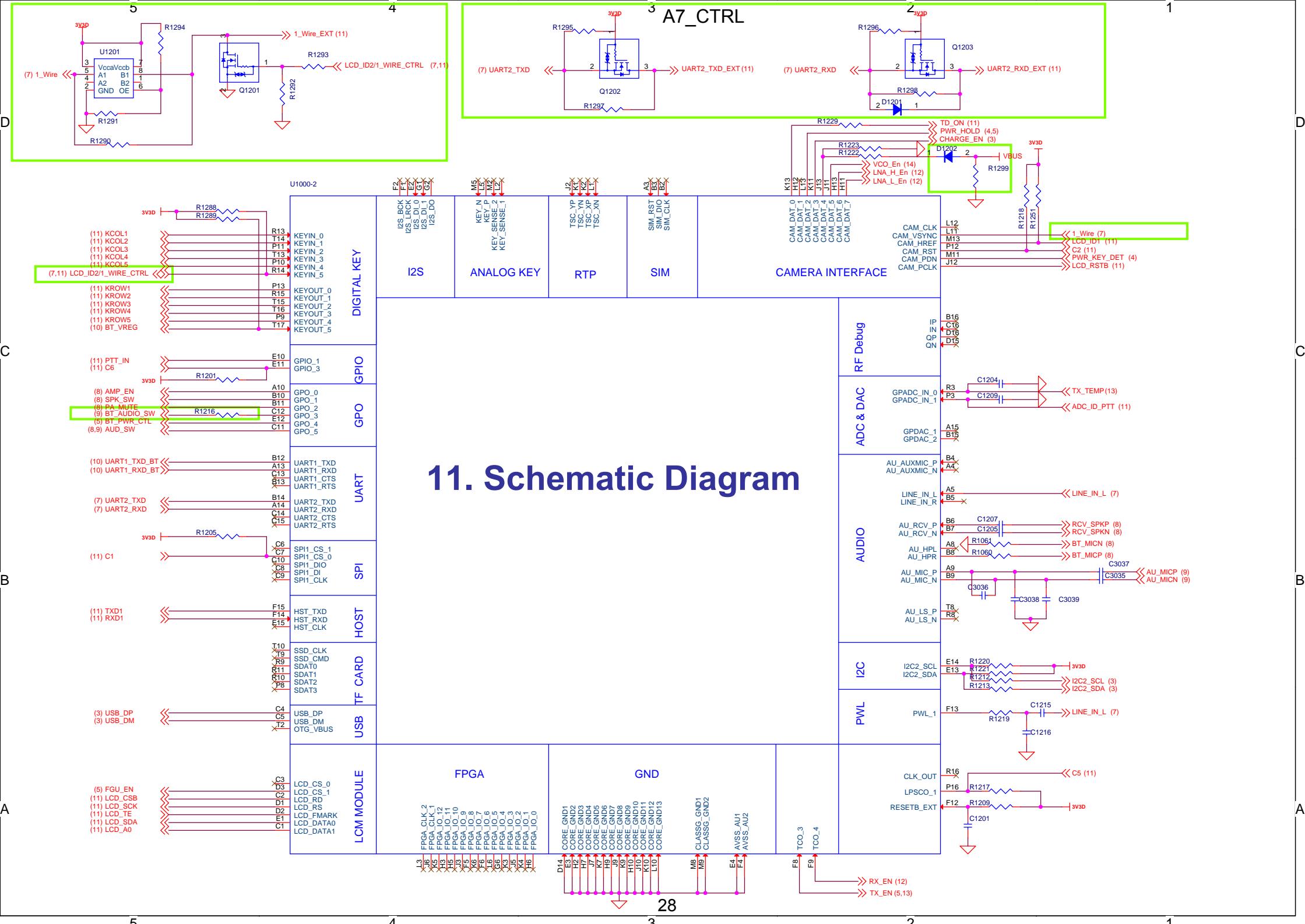
Main Board_Bottom Layer



10. Block Diagram



11. Schematic Diagram

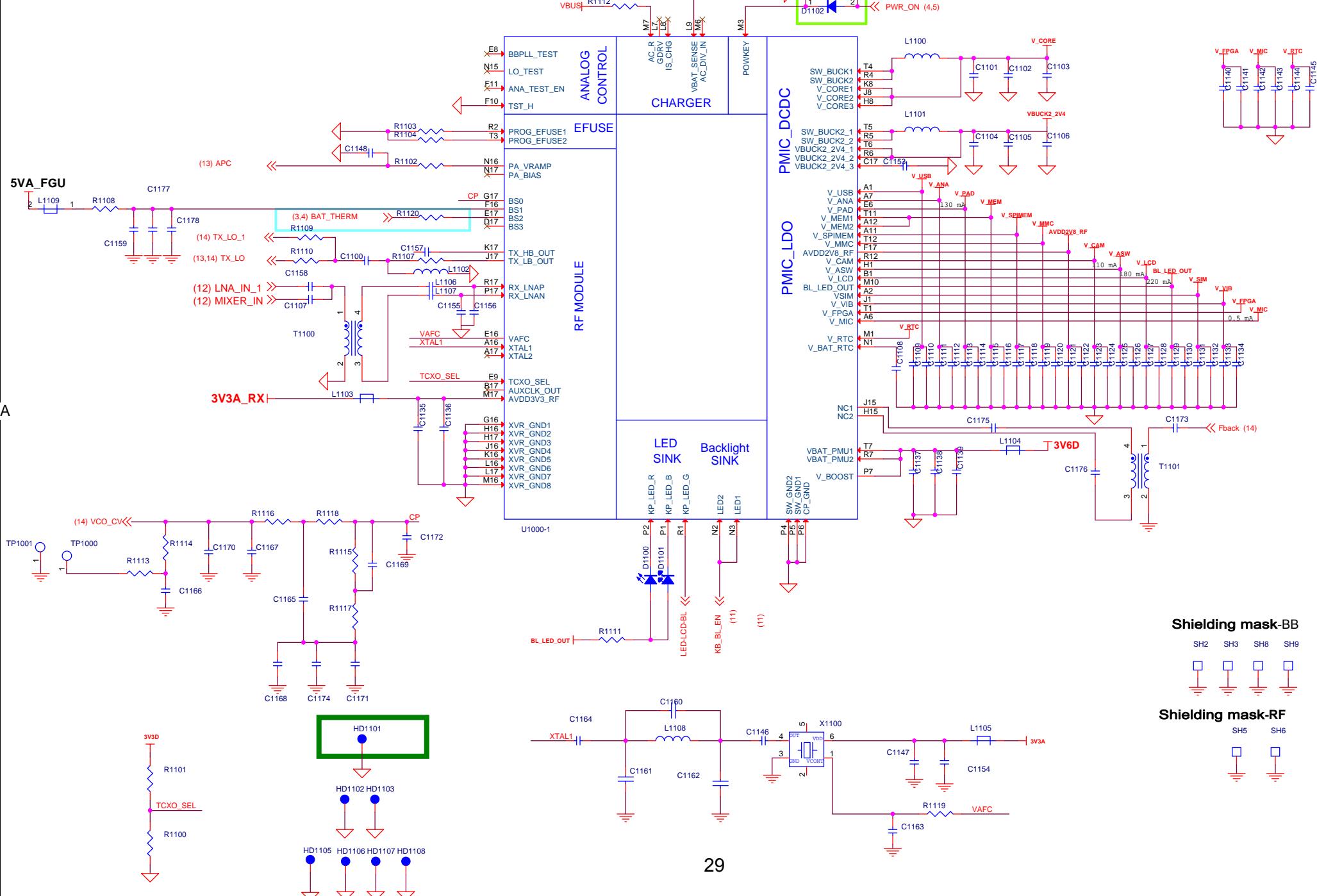


1 A7_POWER

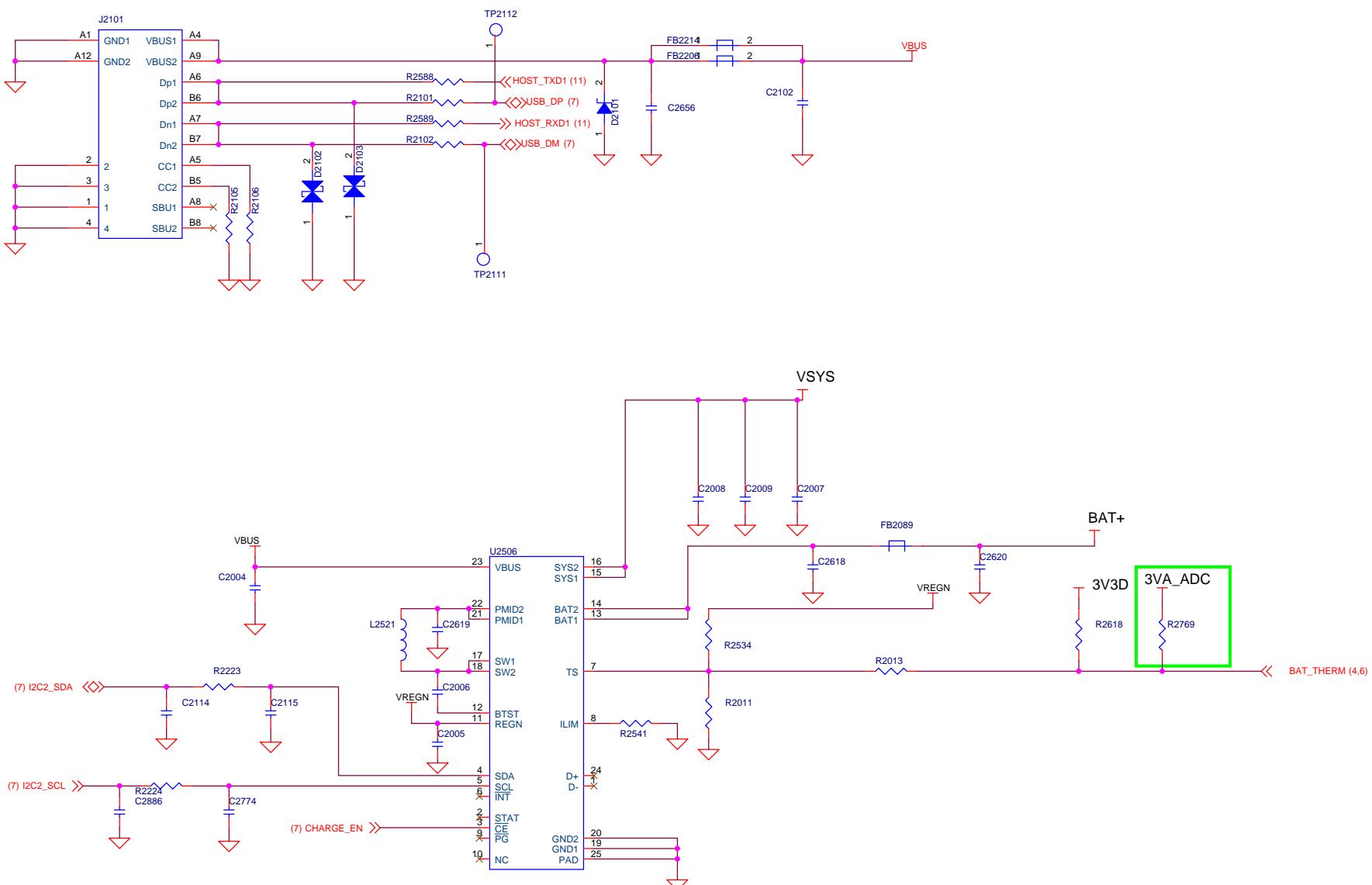
5VA_FGU

A

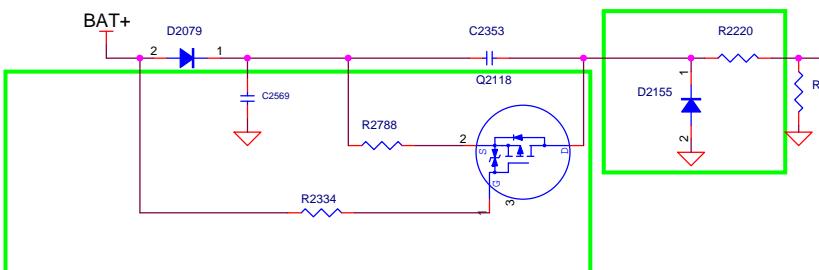
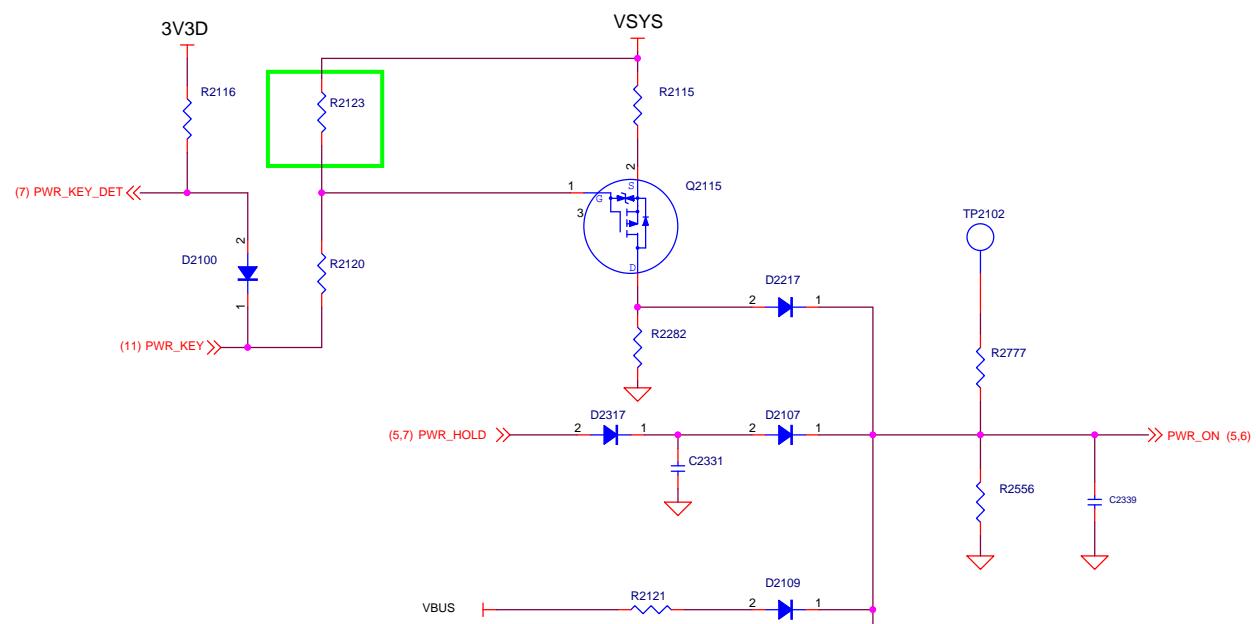
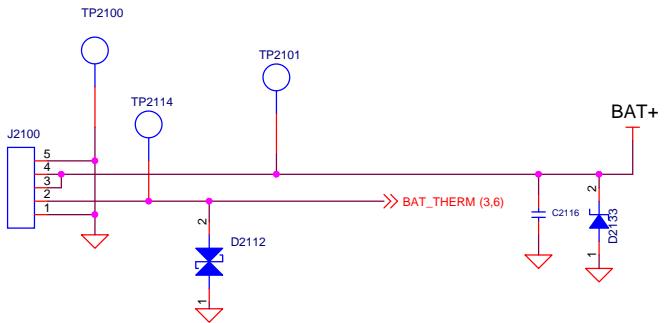
A



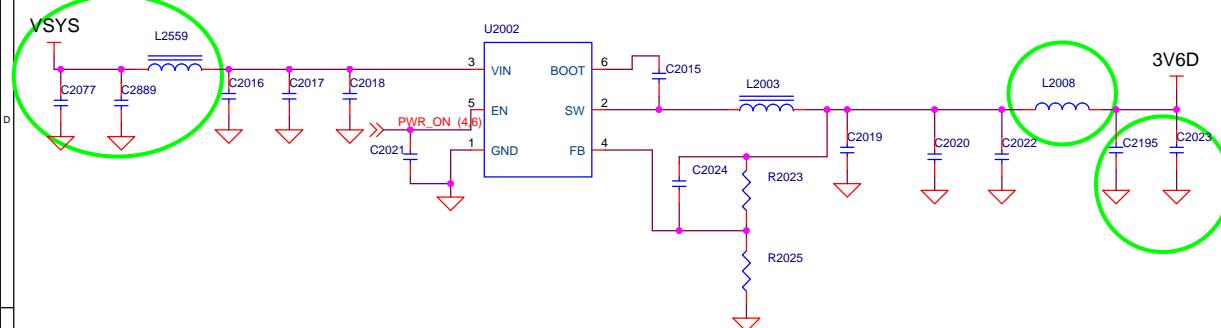
POWER_charge



POWER_CTRL

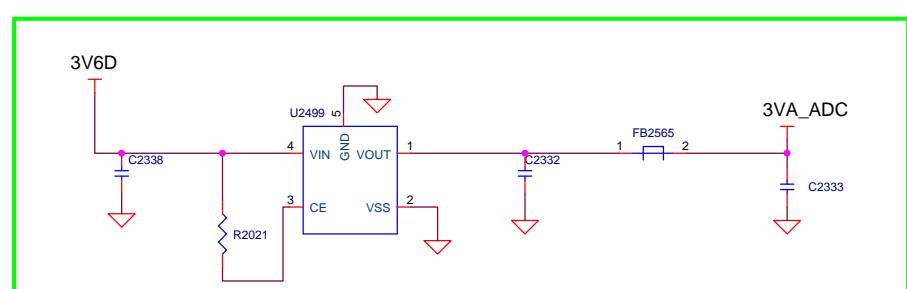
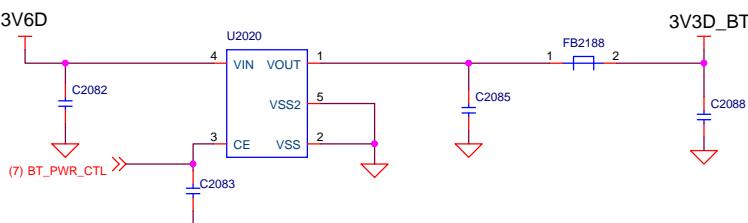


POWER_LDO

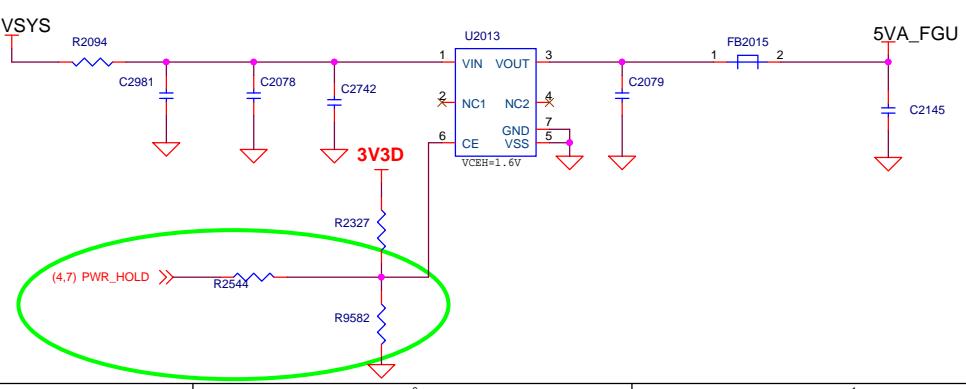
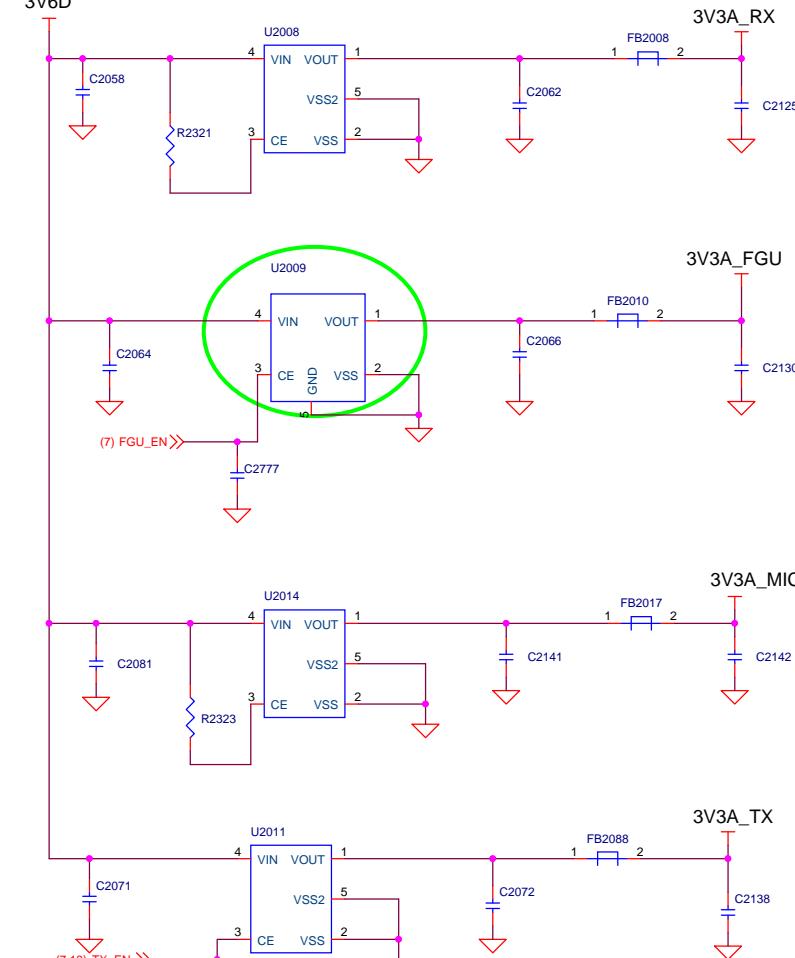


V_ASW → 3V3A

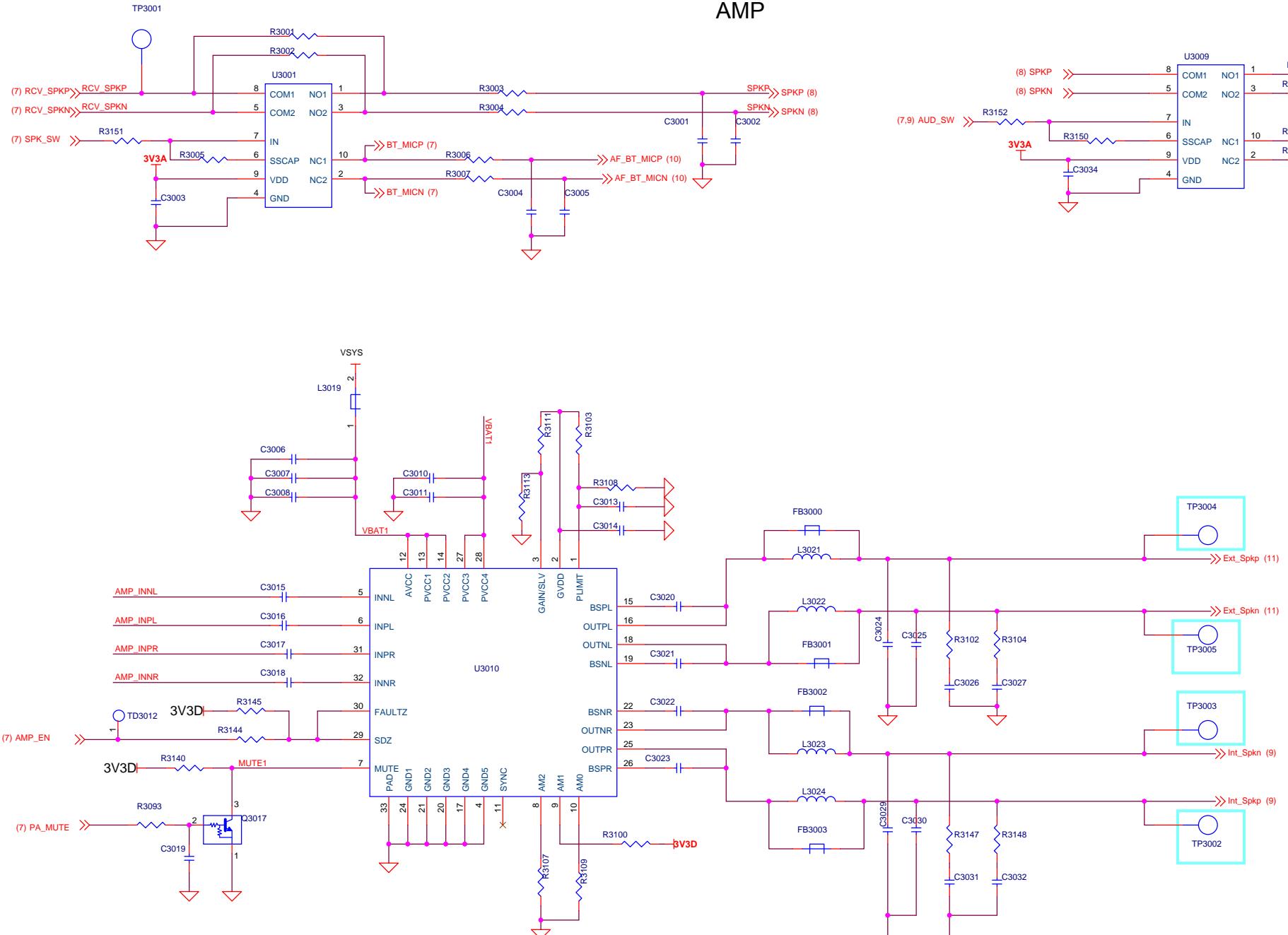
V_PAD → 3V3D



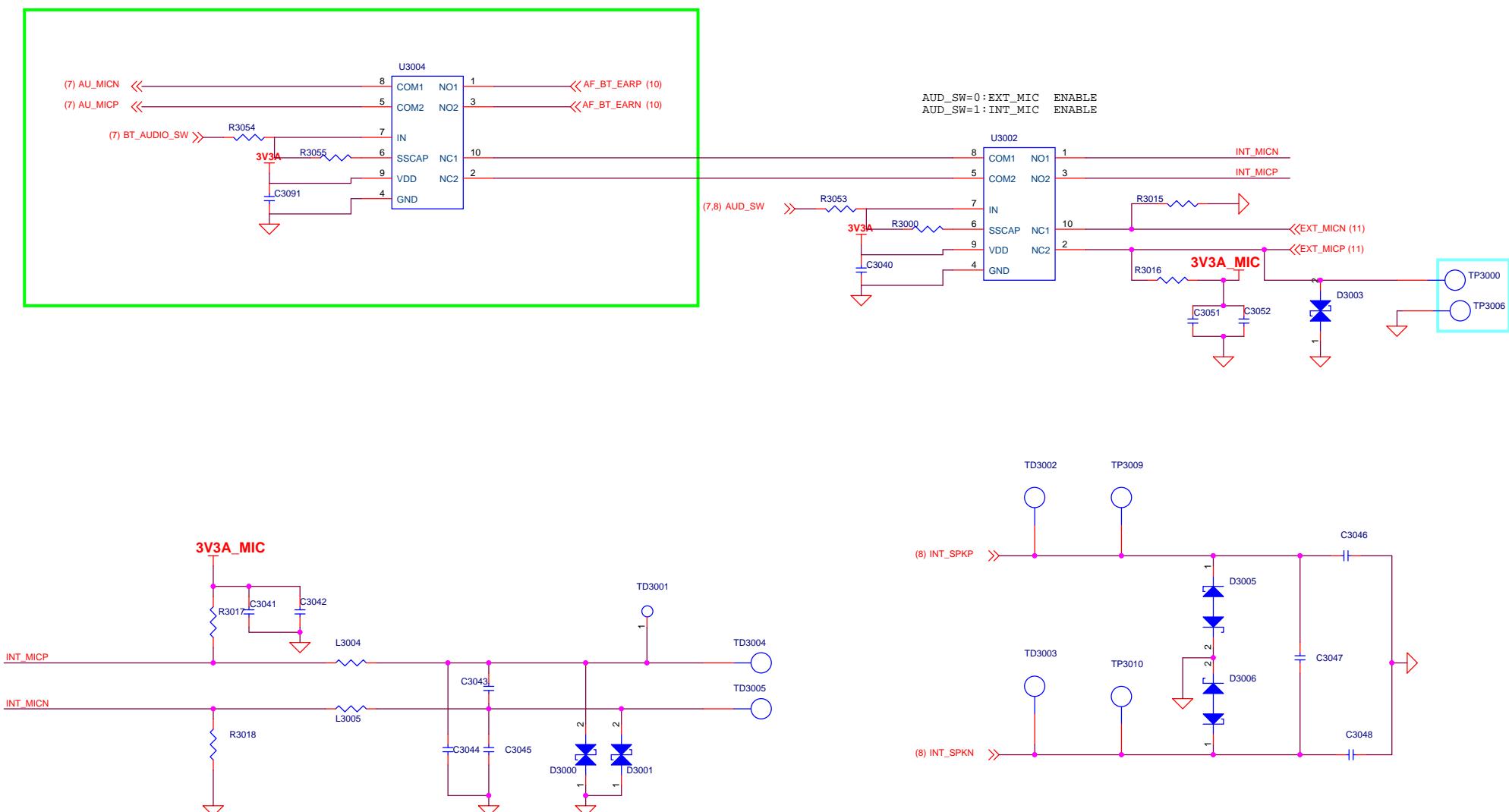
3V6D



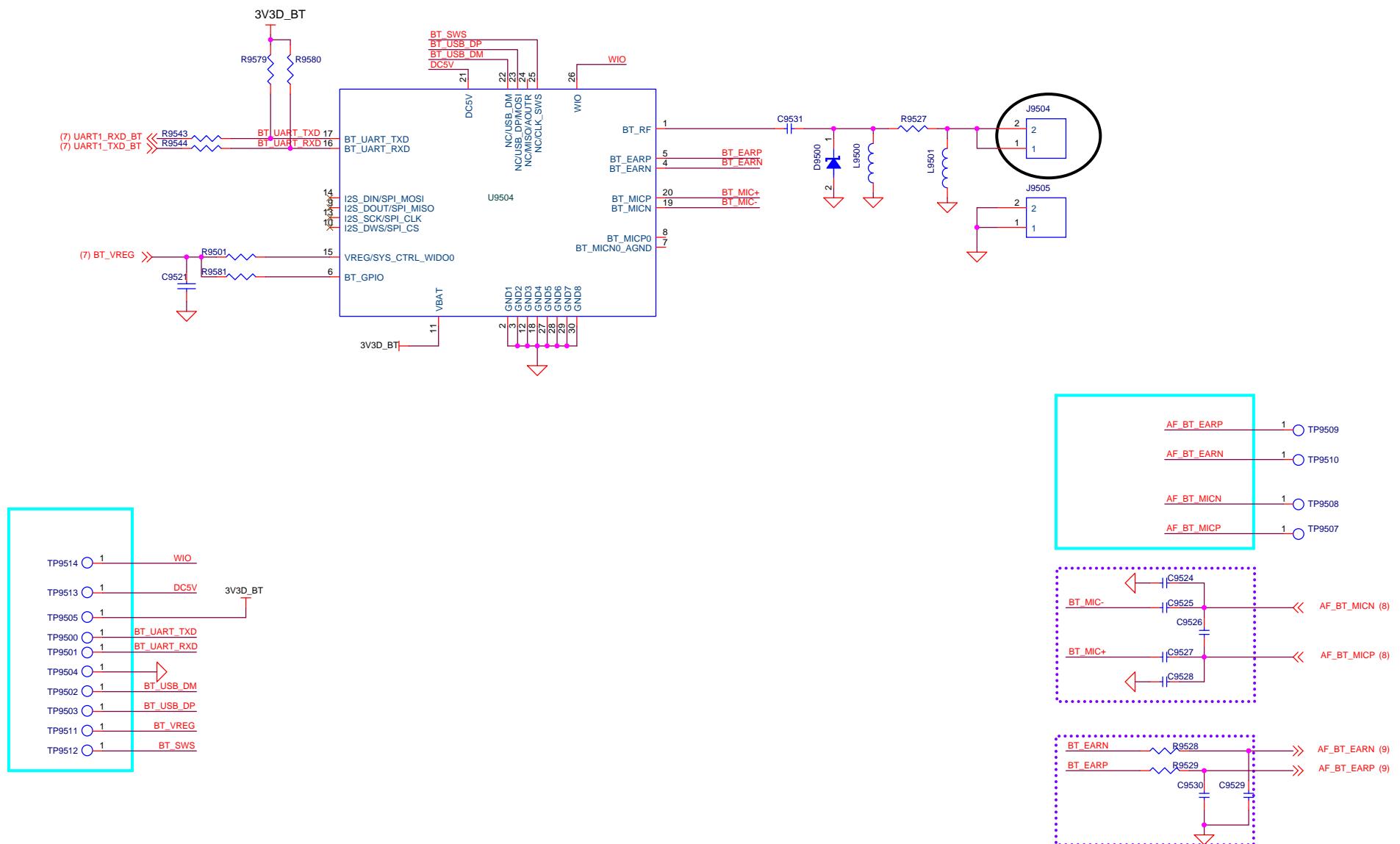
AMP



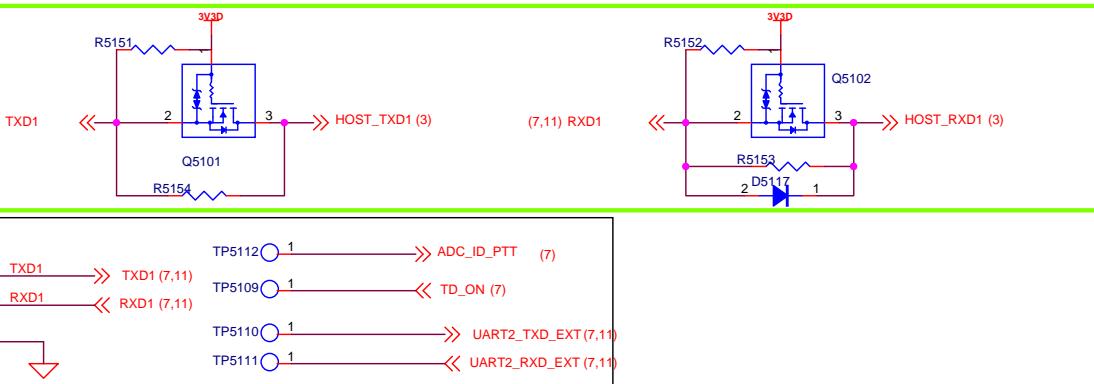
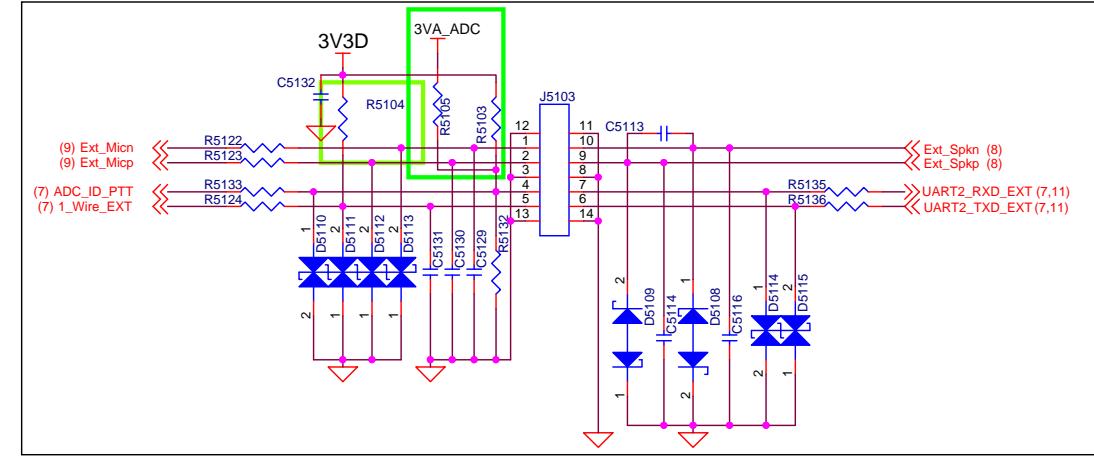
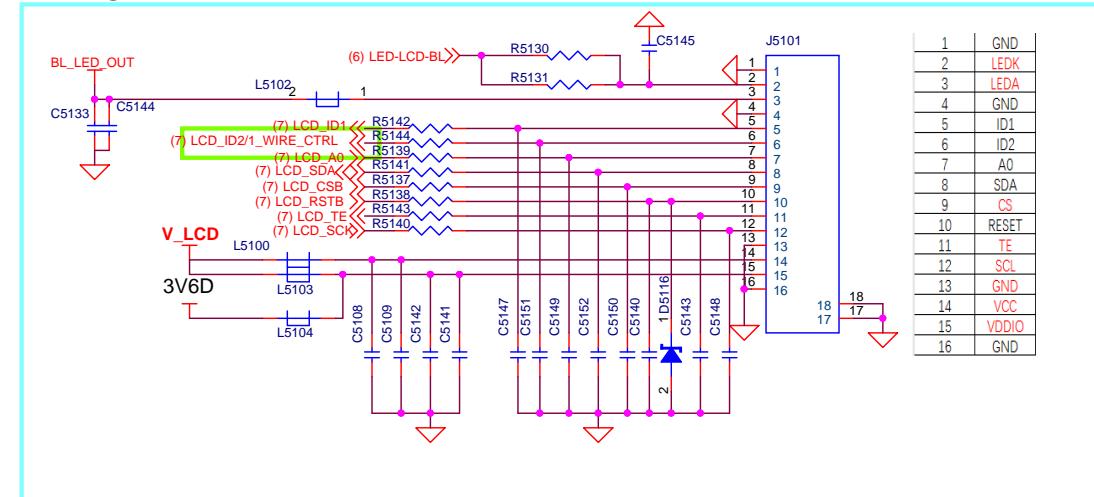
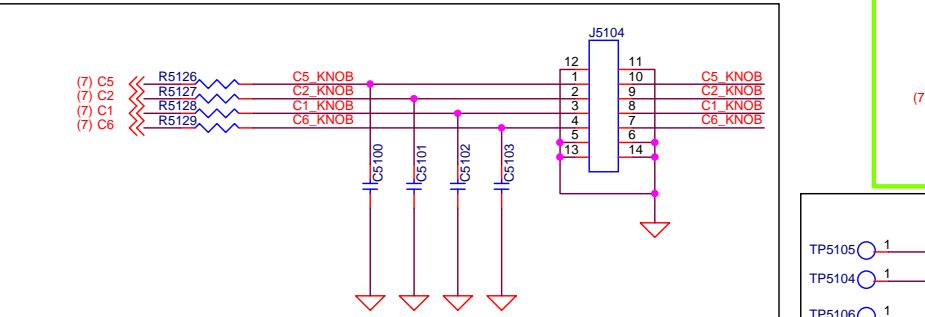
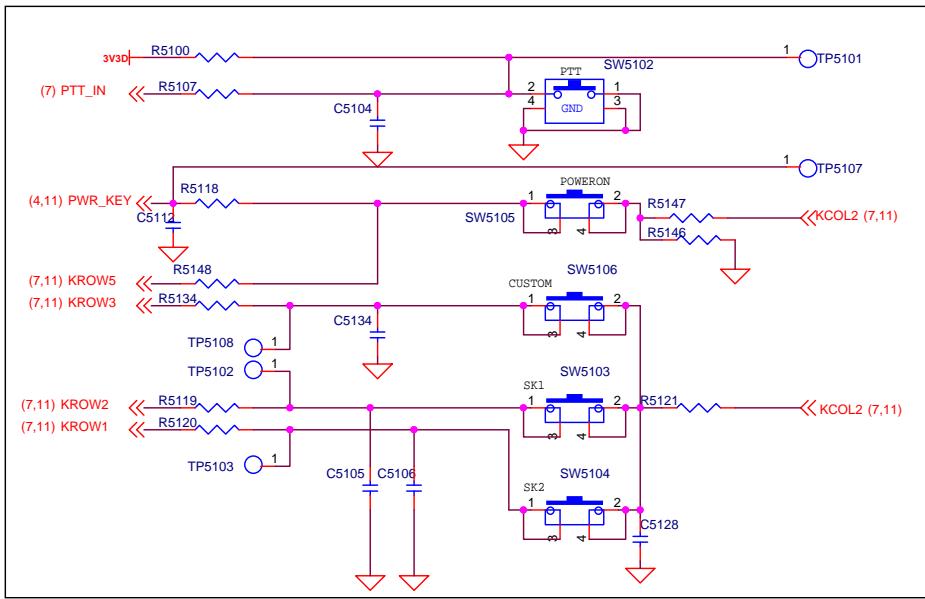
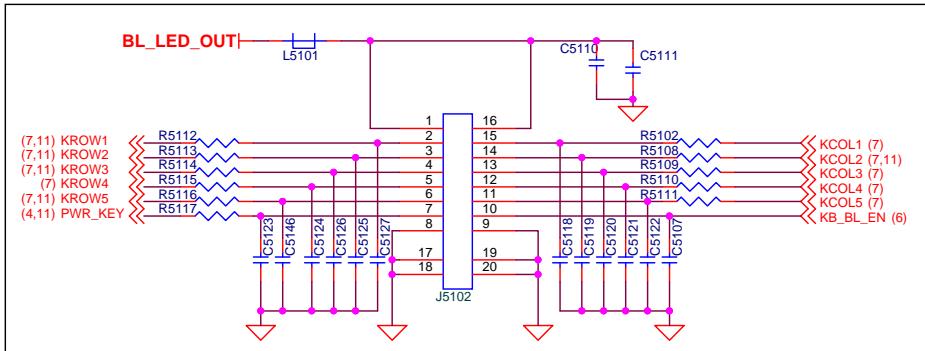
AMP

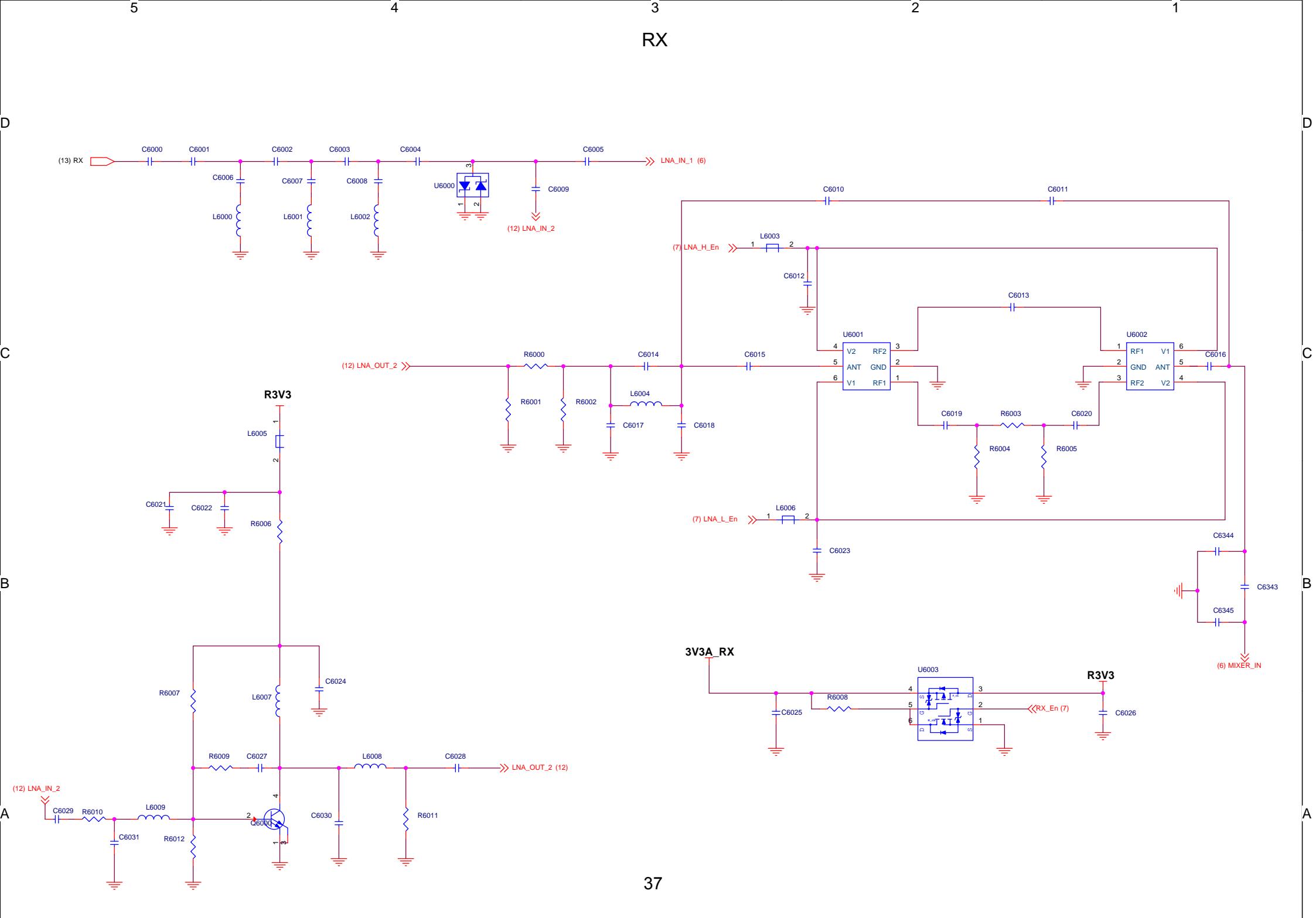


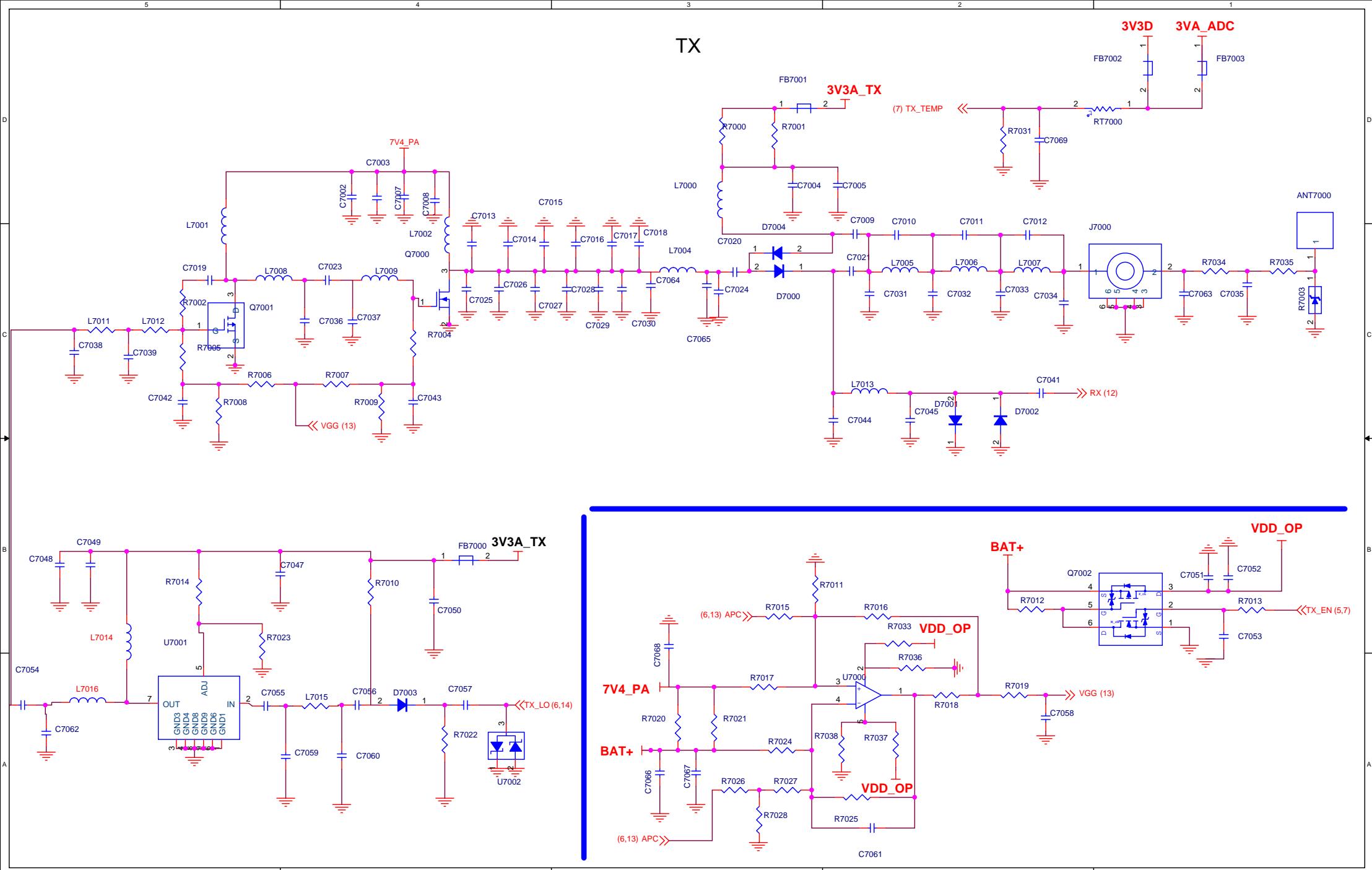
BT

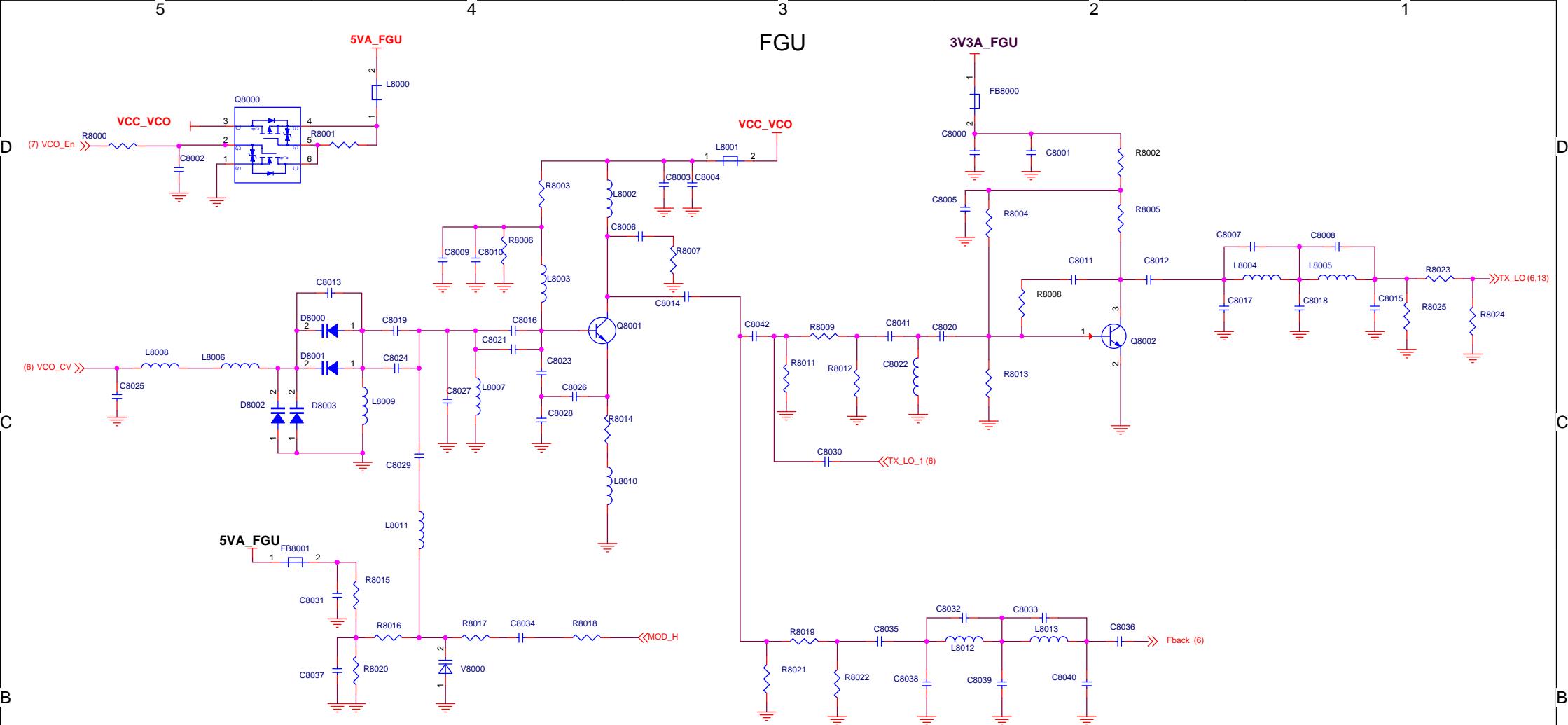


INTERFACE









12. Part List

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
1	ANT7000	B3A	5111000000151A	Grounding spring plate for key board	291	FB2017	T3D	50040200000137	Ferrite bead
2	C1100	B2F	50020100001324	22pF	292	FB2088	T2E	50040200000137	Ferrite bead
3	C1101	B1G	50020100060783	22μF	293	FB2089	T4E	50040200000112	Ferrite bead
4	C1102	T2F	5002010000693	0.1μF	294	FB2105	T2G	50040200000137	Ferrite bead
5	C1103	T2G	50020100061432	2700pF	295	FB2206	B3G	50040200000146	Ferrite bead
6	C1104	B1G	50020100060783	22μF	296	FB2214	B3G	50040200000146	Ferrite bead
7	C1105	B1G	50020100000693	0.1μF	297	FB2565	T2C	50040200000137	Ferrite bead
8	C1106	B1G	50020100061432	2700pF	298	FB3000	T3E	50040200000165	Ferrite bead
9	C1107	B1F	50020100060517	1nF	299	FB3001	T4E	50040200000165	Ferrite bead
10	C1108	B2G	50020100000544	10μF	300	FB3002	T4D	50040200000165	Ferrite bead
11	C1109	B2G	50020100060550	2.2μF	301	FB3003	T3D	50040200000165	Ferrite bead
12	C1111	B2G	50020100060550	2.2μF	302	FB7000	B1E	50040200000143	Ferrite bead
13	C1113	T2G	50020100060550	2.2μF	303	FB7001	B1B	50040200000156	Ferrite bead
14	C1115	B2F	50020100060550	2.2μF	304	FB7003	T1C	50040200000137	Ferrite bead
15	C1117	B2F	50020100060550	2.2μF	305	FB8000	B2G	50040200000137	Ferrite bead
16	C1121	B2F	50020100060550	2.2μF	306	HD1101	T1C	5111000000437A	Heat sink
17	C1123	B1F	50020100060550	2.2μF	307	J2100	B2E	51049900000232	Battery connector
18	C1125	B2G	50020100060550	2.2μF	308	J2101	B4G	51040900081501	USB connector
19	C1127	B2G	50020100060550	2.2μF	309	J5103	B4B	51040100062244	Board-to-board connector
20	C1129	T2F	50020100060550	2.2μF	310	J5104	B2A	51040100062244	Board-to-board connector
21	C1131	B2G	50020100060550	2.2μF	311	J7000	B3A	51019900000061	Micro RF switch
22	C1135	B2F	50020100000693	0.1μF	312	L1100	B1G	50040100000831	4.7uH
23	C1136	B2F	50020100001470	470pF	313	L1101	B1G	50040100000831	4.7uH
24	C1137	B1F	50020100001470	470pF	314	L1103	B2F	50040200000156	Ferrite bead
25	C1138	B1F	50020100000693	0.1μF	315	L1104	B1F	50040200000156	Ferrite bead
26	C1139	B1F	50020100060783	22μF	316	L1105	B2F	50040200000146	Ferrite bead
27	C1142	B2G	50020100000693	0.1μF	317	L1106	B1F	50020100062409	1nF
28	C1143	B2G	50020100001470	470pF	318	L1107	B1F	50020100062409	1nF
29	C1144	B2G	50020100000693	0.1μF	319	L1108	B2F	50030100001005	0Ω
30	C1145	B2G	50020100000544	10μF	320	L2003	B3F	50040100000598	4.7uH

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
31	C1146	B2F	50020100001470	470pF	321	L2008	B4F	50040100000518	3.3uH
32	C1147	B2F	50020100000693	0.1μF	322	L2521	T3E	50040100001380	2.2uH
33	C1148	B2F	50020100000441	100pF	323	L2559	B3F	50040100000598	4.7uH
34	C1153	B2F	50020100060550	2.2μF	324	L3004	T3C	50030100001005	0Ω
35	C1154	B2F	50020100000544	10μF	325	L3005	T3C	50030100001005	0Ω
36	C1157	B2F	50020100060524	100pF	326	L3019	B3D	50040200000146	Ferrite bead
37	C1158	B1F	50020100060517	1nF	327	L6000	B2B	50040100000895	22nH
38	C1159	T2F	50020100062445	4.7μF	328	L6001	B3C	50040100000902	39nH
39	C1163	B2F	50020100061432	2700pF	329	L6002	B3C	50040100064779	33nH
40	C1164	B2F	50020100060517	1nF	330	L6003	B3D	50040200000137	Ferrite bead
41	C1165	B2H	50020100060509	0.012μF	331	L6004	B3C	50040100000892	12nH
42	C1167	B2H	50020100060539	0.22μF	332	L6005	B3C	50040200000137	Ferrite bead
43	C1168	B2H	50020100060329	1μF	333	L6006	B2D	50040200000137	Ferrite bead
44	C1169	B2H	50020100061426	0.027μF	334	L6007	B3C	50040100000908	82nH
45	C1170	B2H	50020100060539	0.22μF	335	L6008	B3C	50040100062038	30nH
46	C1171	B2H	50020100003137	470nF	336	L6009	B3B	50040100062057	8.2nH
47	C1173	B2F	50020100060517	1nF	337	L7000	B2B	50040100064792	470nH
48	C1174	B2H	50020100003137	470nF	338	L7001	B1D	50040100064777	18nH
49	C1175	B2F	50020100061378	0.22nF	339	L7002	B2C	50040300060185	45nH
50	C1176	B2F	50020100061378	0.22nF	340	L7004	B2B	50030100001073	0Ω
51	C1177	T2F	50020100000693	0.1μF	341	L7005	B2B	50040300060566	19.4nH
52	C1178	T2F	50020100001470	470pF	342	L7006	B2B	50040300060566	19.4nH
53	C1201	T2F	50020100000693	0.1μF	343	L7007	B3B	50040300060566	19.4nH
54	C1204	B1G	50020100060524	100pF	344	L7008	B1D	50040100064714	2.2nH
55	C1205	T3F	50020100000693	0.1μF	345	L7009	B1D	50040100064714	2.2nH
56	C1207	T3F	50020100000693	0.1μF	346	L7011	B1E	50030100001536	56Ω
57	C1209	B1G	50020100060524	100pF	347	L7012	B1E	50040100000490	8.2nH
58	C1215	T2G	50020100000693	0.1μF	348	L7013	B2B	50040100064706	20nH
59	C1216	T2G	50020100060517	1nF	349	L7014	B1E	50040100064790	270nH
60	C2004	T3F	50020100061513	4.7μF	350	L7015	B1E	50020100000501	6.8pF
61	C2005	T4F	50020100062445	4.7μF	351	L7016	B1E	50030100001073	0Ω
62	C2006	T4E	50020100002464	47nF	352	L8004	B2H	50040100000475	12nH
63	C2007	T4E	50020100082056	22μF	353	L8005	B2H	50030100001005	0Ω
64	C2008	T4E	50020100000693	0.1μF	354	L8012	B2H	50040100000890	9.1nH
65	C2009	T4E	50020100003390	10μF	355	L8013	B2H	50040100000890	9.1nH
66	C2015	B3F	50020100000693	0.1μF	356	Q1201	T4B	50070300061987	N-MOSFET
67	C2016	B3F	50020100061513	4.7μF	357	Q1202	T2E	50070300061987	N-MOSFET

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
68	C2017	B3F	50020100000693	0.1μF	358	Q1203	T2E	50070300061987	N-MOSFET
69	C2018	B3F	50020100082056	22μF	359	Q2115	T3G	50070400060943	P-MOSFET
70	C2019	B3F	50020100002464	47nF	360	Q2118	T3G	50070400060943	P-MOSFET
71	C2020	B3F	50020100000544	10μF	361	Q3017	T3E	50060300000003	Bias resistor transistor
72	C2022	B3F	50020100000544	10μF	362	Q5101	T3H	50070300061987	N-MOSFET
73	C2023	B4F	50020100000544	10μF	363	Q5102	T3G	50070300061987	N-MOSFET
74	C2024	B3F	50020100060516	56pF	364	Q6000	B3C	50060100000003	NPN transistor
75	C2058	B2E	50020100060550	2.2μF	365	Q7000	B1C	50070500082002	PA MOSFET
76	C2062	B2E	50020100060550	2.2μF	366	Q7001	B1E	50070500082009	PA MOSFET
77	C2064	B1G	50020100060550	2.2μF	367	Q7002	T2D	50060400000002	Compound transistor
78	C2066	B1G	50020100060550	2.2μF	368	Q8002	B2H	50060100000019	NPN transistor
79	C2071	T2E	50020100060550	2.2μF	369	R1100	T2F	50030100000012	47kΩ
80	C2072	T2E	50020100060550	2.2μF	370	R1102	B2F	50030100001493	33Ω
81	C2074	T2E	50020100000693	0.1μF	371	R1103	B1G	50030100001582	10kΩ
82	C2077	B4F	50020100082056	22μF	372	R1104	B1G	50030100001582	10kΩ
83	C2078	B3H	50020100060550	2.2μF	373	R1105	T2F	50030100003859	220kΩ
84	C2079	B3H	50020100060550	2.2μF	374	R1106	T2G	50030100003859	220kΩ
85	C2081	T3D	50020100060550	2.2μF	375	R1107	B2F	50030100000297	0Ω
86	C2102	B3G	50020100000693	0.1μF	376	R1108	T2F	50030100000699	10Ω
87	C2116	B3E	50020100001470	470pF	377	R1109	B2F	50030100001005	0Ω
88	C2125	B2E	50020100000693	0.1μF	378	R1111	T2A	50030100000729	47Ω
89	C2130	B1G	50020100000693	0.1μF	379	R1113	B2H	50030100000220	22kΩ
90	C2138	T2E	50020100000693	0.1μF	380	R1114	B2H	50030100001917	100kΩ
91	C2141	T3D	50020100060550	2.2μF	381	R1115	B2H	50030100001783	33Ω
92	C2142	T3D	50020100000693	0.1μF	382	R1116	B2H	50030100001783	33Ω
93	C2145	B3H	50020100000693	0.1μF	383	R1117	B2H	50030100000699	10Ω
94	C2195	B4F	50020100000544	10μF	384	R1118	B2H	50030100001783	33Ω
95	C2331	T3F	50020100060532	4.7μF	385	R1119	B2F	50030100000297	0Ω
96	C2332	T2C	50020100060550	2.2μF	386	R1121	T1G	50030100000297	0Ω
97	C2333	T2C	50020100000693	0.1μF	387	R1201	T2F	50030100001917	100kΩ
98	C2338	T2C	50020100060550	2.2μF	388	R1205	T2G	50030100001917	100kΩ
99	C2353	T3F	50020100060550	2.2μF	389	R1209	T2F	50030100001917	100kΩ
100	C2569	T3F	50020100000693	0.1μF	390	R1212	T3F	50030100001005	0Ω
101	C2618	T4E	5002010003390	10μF	391	R1213	T3F	50030100001005	0Ω
102	C2619	T3F	5002010003390	10μF	392	R1216	B2F	50030100001961	100Ω
103	C2620	T4E	5002010003390	10μF	393	R1217	B1F	50030100001917	100kΩ

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
104	C2656	B3G	50020100002463	270pF	394	R1218	B1F	50030100001917	100kΩ
105	C2742	B3H	5002010000693	0.1μF	395	R1219	T2G	5003010000270	470kΩ
106	C2777	B1G	5002010000693	0.1μF	396	R1220	T2F	5003010000916	2.2kΩ
107	C2889	B4F	50020100082056	22μF	397	R1221	T2F	5003010000916	2.2kΩ
108	C3001	T3E	5002010003479	3.3nF	398	R1222	T3G	50030100001917	100kΩ
109	C3002	T3F	5002010003479	3.3nF	399	R1223	T3G	50030100003859	220kΩ
110	C3006	B3D	50020100082056	22μF	400	R1229	T2F	50030100001961	100Ω
111	C3007	T3E	50020100004095	0.10μF	401	R1251	T2F	50030100001917	100kΩ
112	C3008	T3E	50020100003398	1000pF	402	R1288	B1F	50030100001917	100kΩ
113	C3010	T3D	50020100004095	0.10μF	403	R1289	B1F	50030100001917	100kΩ
114	C3011	T3D	50020100003398	1000pF	404	R1290	T3B	5003010000297	0Ω
115	C3013	T3D	50020100060550	2.2μF	405	R1293	T3B	50030100000298	10Ω
116	C3014	T3D	50020100060550	2.2μF	406	R1295	T2E	50030100001917	100kΩ
117	C3015	T3D	5002010000693	0.1μF	407	R1296	T2E	50030100001917	100kΩ
118	C3016	T3E	5002010000693	0.1μF	408	R1299	T3G	5003010000012	47kΩ
119	C3017	T3D	5002010000693	0.1μF	409	R2011	T4F	50030100002133	30.1kΩ
120	C3018	T3D	5002010000693	0.1μF	410	R2013	T4F	50030100001493	33Ω
121	C3019	T3E	5002010000845	0.01μF	411	R2021	T2C	50030100001917	100kΩ
122	C3020	T3E	50020100060539	0.22μF	412	R2023	B3F	50030100000788	100kΩ
123	C3021	T3E	50020100060539	0.22μF	413	R2025	B3F	50030100001988	27kΩ
124	C3022	T3D	50020100060539	0.22μF	414	R2094	B3H	50030100001146	0Ω
125	C3023	T3D	50020100060539	0.22μF	415	R2105	B3H	50030100001388	5.1kΩ
126	C3024	B4D	50020100060524	100pF	416	R2106	B3G	50030100001388	5.1kΩ
127	C3025	B4D	50020100060524	100pF	417	R2115	T3G	50030100001917	100kΩ
128	C3026	B3D	50020100061390	330pF	418	R2116	T2F	50030100001582	10kΩ
129	C3027	B4D	50020100061390	330pF	419	R2120	T3G	50030100001917	100kΩ
130	C3029	B4D	50020100060524	100pF	420	R2121	T3G	50030100001582	10kΩ
131	C3030	B3D	50020100060524	100pF	421	R2123	T3G	50030100001280	560kΩ
132	C3031	B3D	50020100061390	330pF	422	R2220	T3F	50030100002097	820kΩ
133	C3032	B3D	50020100061390	330pF	423	R2223	T3F	50030100000867	0Ω
134	C3034	B3D	5002010000693	0.1μF	424	R2224	T4F	50030100000867	0Ω
135	C3035	T3D	5002010000559	1μF	425	R2282	T3G	50030100001917	100kΩ
136	C3037	T3D	5002010000559	1μF	426	R2321	B2E	50030100001917	100kΩ
137	C3040	T3D	5002010000693	0.1μF	427	R2323	T3D	50030100001917	100kΩ
138	C3041	T3D	5002010000693	0.1μF	428	R2327	B3H	50030100001917	100kΩ
139	C3042	T3D	5002010002463	270pF	429	R2334	T3F	50030100000867	0Ω
140	C3043	T3C	5002010000441	100pF	430	R2534	T4F	50030100000273	5.1kΩ

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
141	C3044	T3C	50020100002463	270pF	431	R2541	T4F	50030100000726	390Ω
142	C3045	T3C	50020100002463	270pF	432	R2556	T3G	50030100001907	1MΩ
143	C3051	T3D	50020100000693	0.1μF	433	R2588	B3G	50030100000699	10Ω
144	C3052	T3D	50020100002463	270pF	434	R2589	B3G	50030100000699	10Ω
145	C3055	B3D	50030100001582	10kΩ	435	R2777	T3G	50030100001917	100kΩ
146	C3056	B3D	50030100001582	10kΩ	436	R2788	T3F	50030100000699	10Ω
147	C3057	B3D	50030100001582	10kΩ	437	R3000	T3D	50030100000297	0Ω
148	C3058	B3D	50030100001582	10kΩ	438	R3001	T3F	50030100000297	0Ω
149	C3091	T3D	50020100000693	0.1μF	439	R3002	T3F	50030100000297	0Ω
150	C5104	B1C	50020100003872	33nF	440	R3003	T3F	50030100000845	1.5kΩ
151	C5123	B1H	50020100003872	33nF	441	R3004	T3F	50030100000845	1.5kΩ
152	C5128	B1F	50020100060517	1nF	442	R3015	T3D	50030100001511	1kΩ
153	C5132	B3B	50020100060517	1nF	443	R3016	T3C	50030100001511	1kΩ
154	C6000	B2B	50020100061390	330pF	444	R3017	T3D	50030100001511	1kΩ
155	C6001	B3B	50020100002140	15pF	445	R3018	T3C	50030100001511	1kΩ
156	C6002	B3B	50020100000501	6.8pF	446	R3053	T3D	50030100001493	33Ω
157	C6003	B3B	50020100001323	18pF	447	R3054	T3D	50030100001493	33Ω
158	C6004	B3B	50020100061454	33pF	448	R3055	T3D	50030100000297	0Ω
159	C6006	B2B	50020100001002	39pF	449	R3086	B3D	50020100001629	0.47μF
160	C6007	B3B	50020100000491	10pF	450	R3087	B3D	50020100001629	0.47μF
161	C6008	B3B	50020100000227	12pF	451	R3088	B3D	50020100001629	0.47μF
162	C6009	B3B	50020100061390	330pF	452	R3089	B3D	50020100001629	0.47μF
163	C6012	B3D	50020100001191	330pF	453	R3093	T3E	50030100001511	1kΩ
164	C6013	B2C	50020100001191	330pF	454	R3100	T3E	50030100000012	47kΩ
165	C6014	B3C	50020100000879	4pF	455	R3103	T3D	50030100001721	75kΩ
166	C6015	B3C	50020100001191	330pF	456	R3107	T3E	50030100000012	47kΩ
167	C6016	B2C	50020100001191	330pF	457	R3108	T3D	50030100000932	27kΩ
168	C6017	B3C	50020100001738	8pF	458	R3109	T3E	50030100000012	47kΩ
169	C6018	B3C	50020100001738	8pF	459	R3111	T3D	50030100000788	100kΩ
170	C6019	B2C	50020100001191	330pF	460	R3113	T3D	50030100001210	20kΩ
171	C6020	B2C	50020100001191	330pF	461	R3140	T3E	50030100000788	100kΩ
172	C6021	B3C	50020100000693	0.1μF	462	R3144	T3D	50030100001511	1kΩ
173	C6022	B3C	50020100000441	100pF	463	R3150	B3D	50030100000297	0Ω
174	C6023	B2D	50020100001191	330pF	464	R3152	B3D	50030100000297	0Ω
175	C6024	B3C	50020100003398	1000pF	465	R5100	B1C	50030100000012	47kΩ
176	C6025	B2C	50020100001470	470pF	466	R5104	B3B	50030100000276	680Ω
177	C6026	B3C	50020100001470	470pF	467	R5105	B3B	50030100001582	10kΩ

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
178	C6027	B3C	50020100001469	47pF	468	R5107	B1C	50030100001493	33Ω
179	C6028	B3C	50020100061390	330pF	469	R5117	B1H	50030100001493	33Ω
180	C6029	B3B	50020100061390	330pF	470	R5118	B2A	50030100001493	33Ω
181	C6030	B3C	50020100000878	3.9pF	471	R5119	B1E	50030100001511	1kΩ
182	C6031	B3B	50020100000501	6.8pF	472	R5120	B1F	50030100001511	1kΩ
183	C6343	B2C	50020100003398	1000pF	473	R5121	B1F	50030100001511	1kΩ
184	C6345	B2D	50020100000690	10pF	474	R5122	B3B	50030100001493	33Ω
185	C7002	B1D	50020100003390	10μF	475	R5123	B3B	50030100001493	33Ω
186	C7003	B2D	50020100000693	0.1μF	476	R5124	B4B	50030100001493	33Ω
187	C7004	B2B	50020100060522	470pF	477	R5126	T2A	50030100001582	10kΩ
188	C7005	B2B	50020100000693	0.1μF	478	R5127	T2A	50030100001582	10kΩ
189	C7007	B1D	50020100060522	470pF	479	R5128	T2A	50030100001582	10kΩ
190	C7008	B2D	50020100001823	56pF	480	R5129	T2A	50030100001582	10kΩ
191	C7009	B2B	50020100060513	120pF	481	R5132	B3B	50030100001582	10kΩ
192	C7010	B2B	50020100062249	1.5pF	482	R5133	B3B	50030100001493	33Ω
193	C7011	B2B	50020100001447	1.8pF	483	R5134	B1F	50030100001493	33Ω
194	C7012	B3B	50020100062464	0.5pF	484	R5135	T4B	50030100001493	33Ω
195	C7014	B1C	50020100002140	15pF	485	R5136	T4B	50030100001493	33Ω
196	C7016	B1C	50020100001753	5.6pF	486	R5146	B2A	50030100000297	0Ω
197	C7019	B1D	50020100061370	330pF	487	R5151	T3H	50030100001917	100kΩ
198	C7020	B2B	50020100060524	100pF	488	R5152	T3G	50030100001917	100kΩ
199	C7021	B2B	50020100060522	470pF	489	R6000	B3C	50030100004524	18Ω
200	C7023	B1D	50020100060524	100pF	490	R6001	B3C	50030100000216	300Ω
201	C7024	B2B	50020100000625	2.7pF	491	R6002	B3C	50030100000216	300Ω
202	C7027	B2C	50020100060504	5pF	492	R6003	B2C	50030100001985	120Ω
203	C7028	B2C	50020100001324	22pF	493	R6004	B2D	50030100000921	75Ω
204	C7029	B2C	50020100001447	1.8pF	494	R6005	B2D	50030100000921	75Ω
205	C7031	B2B	50020100000877	3.3pF	495	R6006	B3C	50030100000967	39Ω
206	C7032	B2B	50020100000352	3.6pF	496	R6007	B3C	50030100000896	7.5kΩ
207	C7033	B3B	50020100000626	3.0pF	497	R6008	B2C	50030100000012	47kΩ
208	C7036	B1D	50020100001753	5.6pF	498	R6009	B3C	50030100000726	390Ω
209	C7037	B1D	50020100060511	24pF	499	R6010	B3B	50030100001005	0Ω
210	C7039	B1E	50020100002140	15pF	500	R6011	B3C	50020100000491	10pF
211	C7041	B2B	50020100060517	1nF	501	R6012	B3B	50030100000382	3.3kΩ
212	C7042	B1D	50020100061434	0.1μF	502	R7000	B1B	50030100000362	150Ω
213	C7044	B2B	50020100060551	1pF	503	R7001	B1B	50030100000362	150Ω
214	C7045	B2C	50020100000879	4pF	504	R7002	B1E	50030100001381	150Ω

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
215	C7047	B1E	50020100000693	0.1μF	505	R7004	B1D	50030100000954	150Ω
216	C7048	B1E	50020100003398	1000pF	506	R7005	B1E	50030100000954	150Ω
217	C7049	B1E	50020100001470	470pF	507	R7006	B1D	50030100001784	3.9kΩ
218	C7050	B1E	50020100003398	1000pF	508	R7007	B1D	50030100002036	4.7kΩ
219	C7051	T3D	50020100001470	470pF	509	R7008	B1D	5003010000585	4.3kΩ
220	C7052	T3D	5002010000693	0.1μF	510	R7010	B1E	50030100001781	2.7kΩ
221	C7053	T2D	50020100001470	470pF	511	R7012	T2D	50030100001851	82kΩ
222	C7054	B1E	50020100060522	470pF	512	R7013	T2D	5003010000067	1.2kΩ
223	C7055	B1E	50020100060522	470pF	513	R7015	T2D	50030100001525	220kΩ
224	C7056	B1E	50020100060522	470pF	514	R7016	T3D	50030100000270	470kΩ
225	C7057	B1E	50020100060522	470pF	515	R7017	T2D	50030100001939	150kΩ
226	C7058	T3D	50020100062497	15nF	516	R7018	T3D	50030100000276	680Ω
227	C7059	B1E	50040100000476	15nH	517	R7019	T3D	50030100001005	0Ω
228	C7060	B1E	50040100064755	18nH	518	R7020	T2D	50030100000979	0.1Ω
229	C7065	B2B	50020100000352	3.6pF	519	R7021	T2D	50030100000979	0.1Ω
230	C7066	T2D	50020100060522	470pF	520	R7022	B1E	50030100000570	1kΩ
231	C7067	T2D	50020100060516	56pF	521	R7023	B1E	50030100001636	2kΩ
232	C7068	T2D	50020100060522	470pF	522	R7024	T2D	50030100001939	150kΩ
233	C7069	T1C	50020100000693	0.1μF	523	R7025	T2D	50030100000270	470kΩ
234	C8000	B2G	50020100060522	470pF	524	R7026	T2D	50030100001530	3.3kΩ
235	C8001	B2G	50020100000693	0.1μF	525	R7027	T2D	50030100001525	220kΩ
236	C8005	B2G	50020100060522	470pF	526	R7028	T2D	50030100001778	22kΩ
237	C8007	B2H	50020100001405	4.7pF	527	R7031	T1C	50030100000735	5.1kΩ
238	C8011	B2G	50020100000441	100pF	528	R7033	T3C	50030100001005	0Ω
239	C8012	B2H	50020100060516	56pF	529	R7034	B3B	50030100001005	0Ω
240	C8014	B2H	50020100060527	7pF	530	R7035	B3B	50030100001005	0Ω
241	C8017	B2H	50020100001421	3.9pF	531	R7038	T3D	50030100001005	0Ω
242	C8018	B2H	50020100001421	3.9pF	532	R8002	B2G	50030100001040	4.7Ω
243	C8020	B2H	5002010000501	6.8pF	533	R8004	B2G	50030100001107	12kΩ
244	C8022	B2H	50040100000848	18nH	534	R8005	B2G	50040100000887	270nH
245	C8030	B2G	50020100060524	100pF	535	R8008	B2G	5003010000067	1.2kΩ
246	C8032	B2H	50020100000877	3.3pF	536	R8009	B2H	50030100001109	22Ω
247	C8033	B2H	50020100001445	1.5pF	537	R8011	B2G	50030100000221	240Ω
248	C8035	B2H	50020100060524	100pF	538	R8012	B2G	50030100000221	240Ω
249	C8036	B2H	50020100061378	0.22nF	539	R8013	B2G	50030100000231	68kΩ
250	C8038	B2H	50020100002127	5.0pF	540	R8019	B2H	5003010000153	5.1Ω
251	C8039	B2H	50020100060514	10pF	541	R8021	B2H	50030100001961	100Ω

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
252	C8040	B2H	50020100002127	5.0pF	542	R8022	B2H	50030100001961	100Ω
253	C8041	B2H	50020100060498	12pF	543	R8023	B2G	50030100005367	22Ω
254	D1100	T2A	50050600000064	LED	544	RT7000	T1C	50030300000001	100kΩ
255	D1101	T2A	50050600000081	LED	545	SH10	B2H	5111000001796A	TX-VCO shielding cover
256	D1202	T3G	50050200000018	Switching diode	546	SH2	T3D	5120000000126A	NB_VCO_Buffer shielding mask
257	D2011	T3F	50050200000018	Switching diode	547	SH3	T3F	5120000000126A	NB_VCO_Buffer shielding mask
258	D2079	T4F	50050200000018	Switching diode	548	SH4	B2B	5120000081587A	Low-pass shielding mask
259	D2100	T3G	50050200000018	Switching diode	549	SH5	B3C	5111000000113A	Shielding cover
260	D2101	B3G	50050800062524	ESD protection diode	550	SH6	B3C	5120000000145A	RX shielding mask
261	D2102	B3G	50050800062223	ESD protection diode	551	SH7	B1D	5120000081589A	TX PA shielding mask
262	D2103	B3G	50050800062223	ESD protection diode	552	SH8	B3F	5111000000333A	DAC shielding cover
263	D2107	T3F	50050200000018	Switching diode	553	SH9	B2F	5120000000191A	Shielding mask for SMPS and PMU
264	D2109	T3G	50050200000018	Switching diode	554	SW5102	B1C	51010700000006	Tact switch
265	D2112	T2D	50050800062223	ESD protection diode	555	SW5103	B1D	51010600000009	Tact switch
266	D2133	B2E	50050800062524	ESD protection diode	556	SW5104	B1E	51010600000009	Tact switch
267	D2217	T3G	50050200000018	Switching diode	557	SW5105	B2A	51010600000009	Tact switch
268	D2317	T3F	50050200000018	Switching diode	558	SW5106	B1G	51010600000009	Tact switch
269	D3000	T3C	50050800062223	ESD protection diode	559	T1100	B1F	50040700082005	Balun
270	D3001	T3C	50050800062223	ESD protection diode	560	U1000	B2F	50080800092055	MCU
271	D3003	T3C	50050800062223	ESD protection diode	561	U2002	B3F	50080700082150	Power management IC
272	D3005	T4C	50050800061344	ESD protection diode	562	U2008	B2E	50080700000384	Power management IC

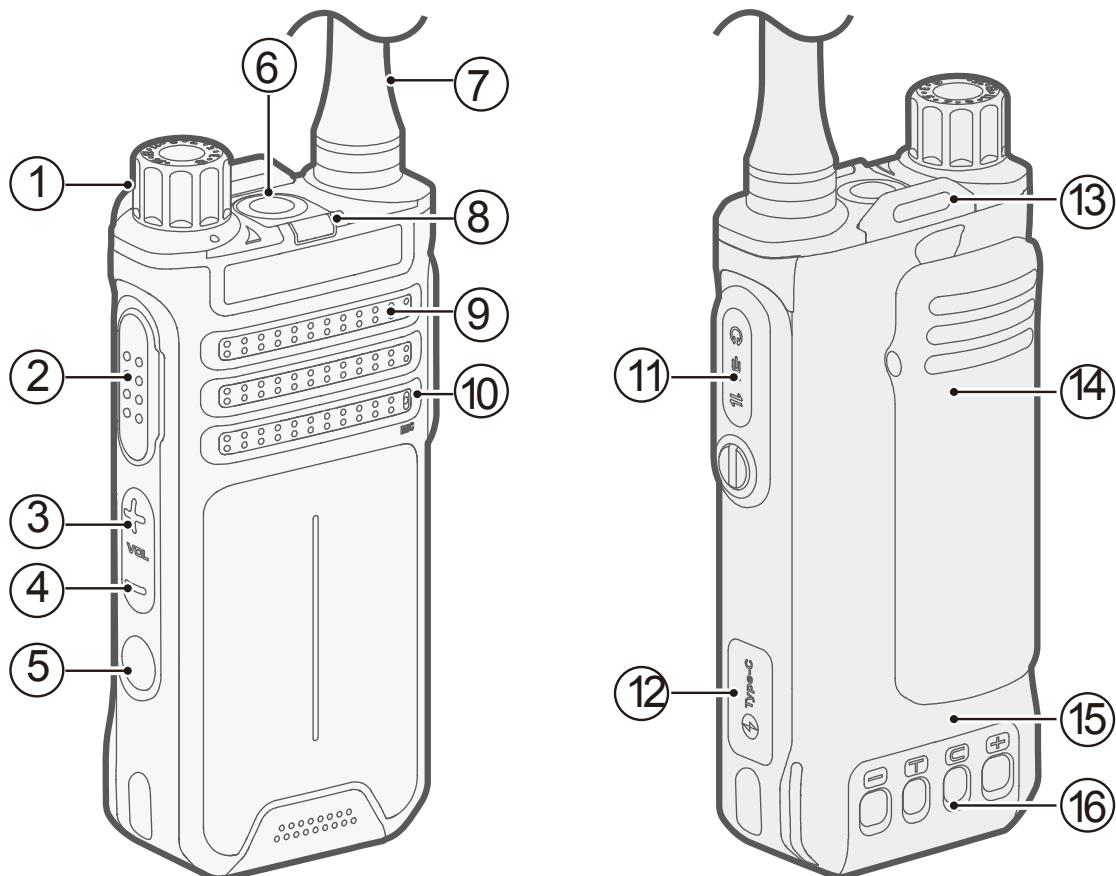
No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
273	D3006	T4C	50050800061344	ESD protection diode	563	U2009	B1G	50080700060312	Power management IC
274	D5108	T4C	50050800061344	ESD protection diode	564	U2011	T2E	50080700000384	Power management IC
275	D5109	T4C	50050800061344	ESD protection diode	565	U2013	B3H	50080700000276	Power management IC
276	D5110	B3B	50050800062223	ESD protection diode	566	U2014	T3D	50080700000384	Power management IC
277	D5111	B4B	50050800062223	ESD protection diode	567	U2499	T2C	50080700000275	Power management IC
278	D5112	B3B	50050800062223	ESD protection diode	568	U2506	T3F	50080700061817	Charger IC
279	D5113	B3B	50050800062223	ESD protection diode	569	U3002	T3D	50081200061801	Analog switch IC
280	D5114	T4B	50050800062223	ESD protection diode	570	U3004	T3D	50081200061801	Analog switch IC
281	D5115	T4B	50050800062223	ESD protection diode	571	U3009	B3D	50081200061801	Analog switch IC
282	D7000	B2B	50050400000008	Varistor	572	U3010	T3D	50080200000014	Audio PA IC
283	D7001	B2C	50050400000008	Varistor	573	U6000	B3B	50050900082014	Schottky diode
284	D7002	B2C	50050400000008	Varistor	574	U6001	B3C	50081200061741	Switch IC
285	D7003	B1E	50050400000008	Varistor	575	U6002	B2C	50081200061741	Switch IC
286	D7004	B2B	50050400000008	Varistor	576	U6003	B2C	50060400000002	Compound transistor
287	FB2006	B2G	50040200000137	Ferrite bead	577	U7000	T3D	50080400000087	Operational amplifier
288	FB2008	B2E	50040200000137	Ferrite bead	578	U7001	B1E	50089900000879	LNA
289	FB2010	B1G	50040200000137	Ferrite bead	579	X1100	B2F	50110400082007	TCXO
290	FB2015	B3H	50040200000137	Ferrite bead	/	/	/	/	/

VHF (136–174 MHz)

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1. Product Layout



No.	Part Name	No.	Part Name	No.	Part Name
1	Channel Selector Knob	7	Antenna	13	Strap Hole
2	Push-to-Talk (PTT) Key	8	LED Indicator	14	Belt Clip
3	Volume Up Key	9	Speaker	15	Battery
4	Volume Down Key	10	Microphone	16	Charging Contacts
5	Side Key 3 (SK3)	11	Accessory Connector	/	/
6	On-Off Key	12	USB Type-C Port	/	/

2. Disassembly and Reassembly

This section introduces how to disassemble the radio. To reassemble the radio, do vice versa.

2.1 Tools

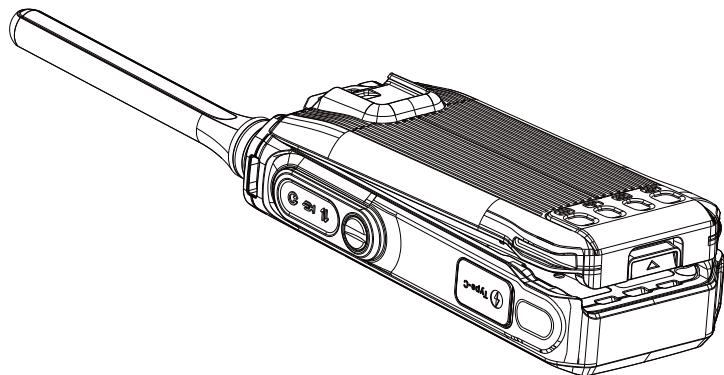
- Socket wrench
- Torx screwdriver
- Tweezers
- Soldering iron

2.2 Procedure

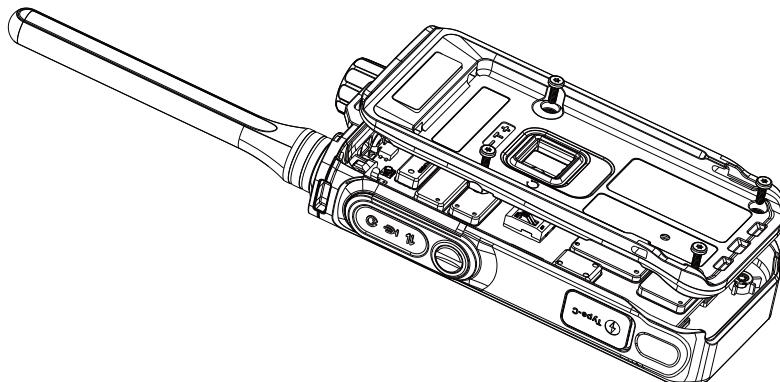
⚠ CAUTION

Make sure the waterproof ring is attached in place during reassembly.

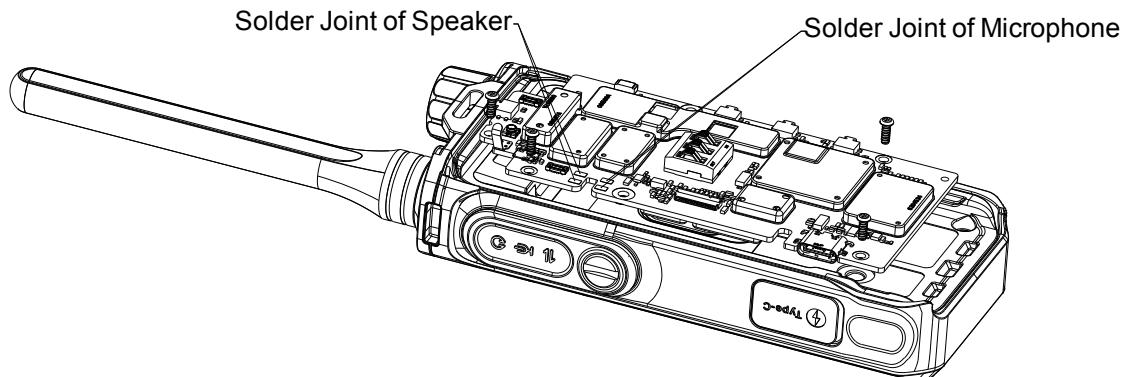
1. Turn off the radio, move the battery latch upwards to release it, and then remove the battery from the radio.



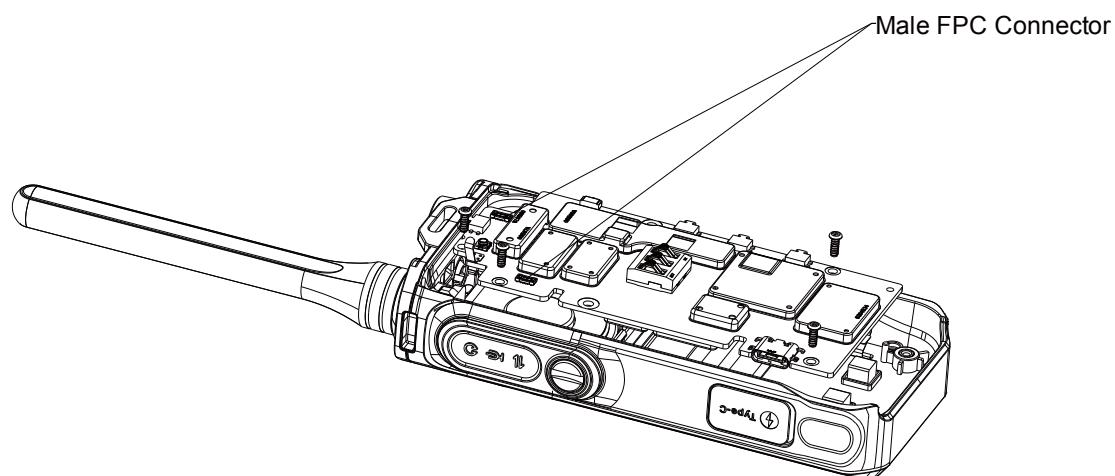
2. Use a Torx screwdriver to remove the four screws on the chassis, and then remove the chassis.



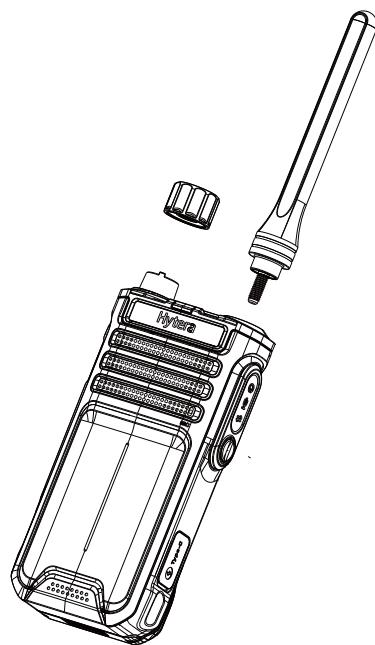
3. Use a Torx screwdriver to remove the four screws on the main board, and then use a soldering iron to unsolder the solder joint of the speaker and microphone.



4. Use tweezers to remove the male FPC connectors, and then remove the main board.

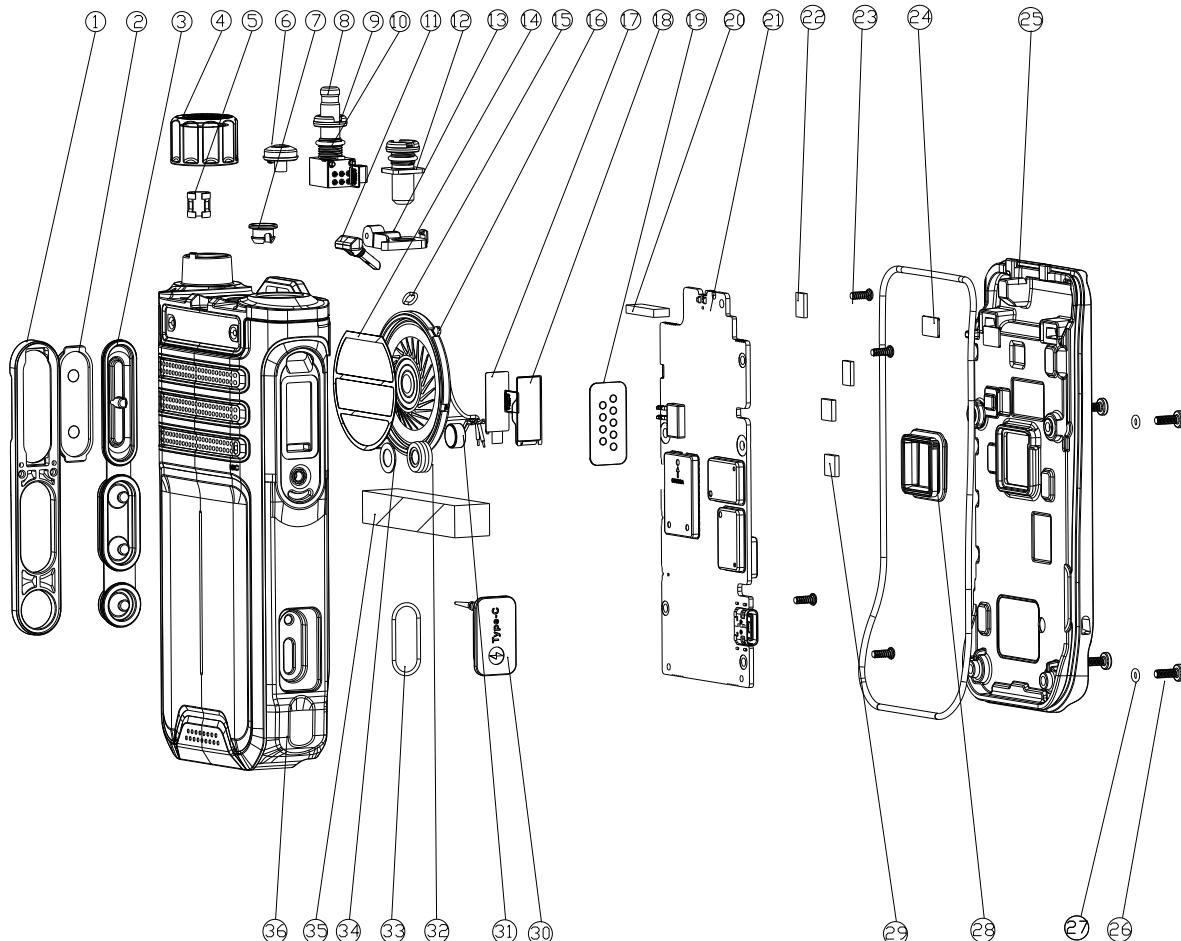


5. Rotate the antenna counter-clockwise to remove it, pull out the **Channel Selector** knob, and then use a socket wrench to remove the nuts from the **Channel Selector** knob.



3. Exploded View and Packaging Guide

3.1 Exploded View



Parts list:

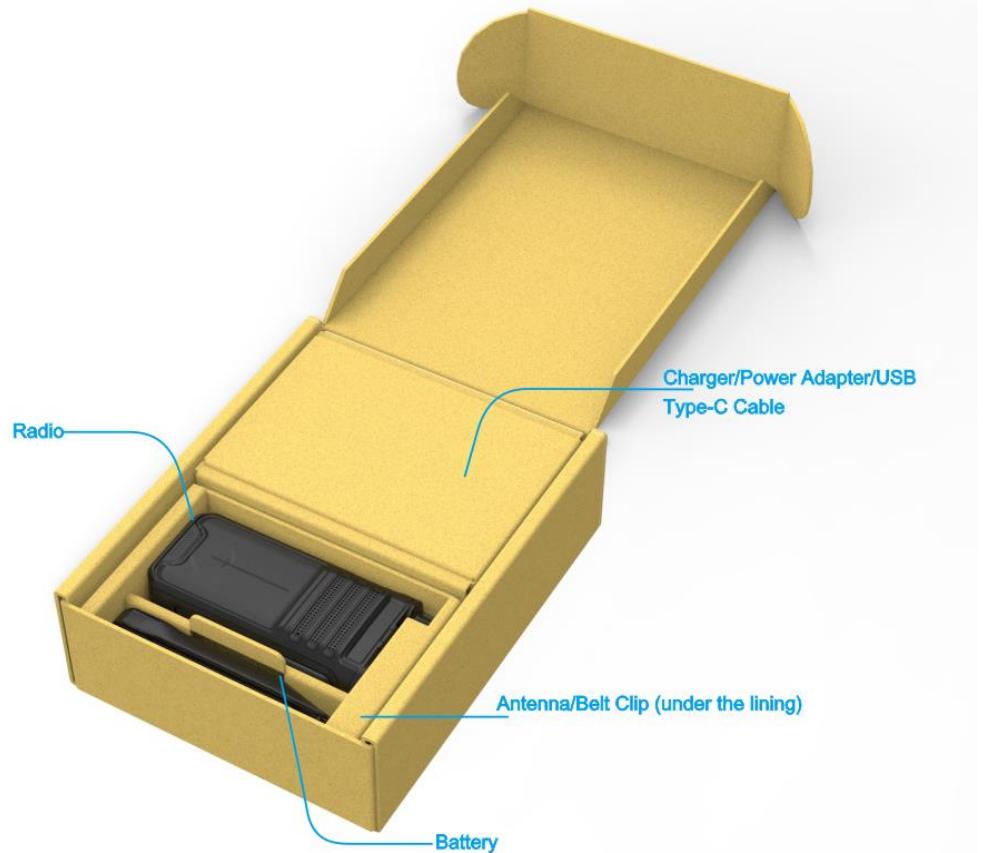
No.	Part No.	Description	Qty.
1	5116000081705A	Side key bracket	1
2	5116000000229A	PTT key cover	1
3	5110020081520A	Silicone rubber PTT key	1
4	5116000081706A	Channel selector knob	1
5	5111000000193A	Inner lining for knob	1
6	5110000000265A	Silicone rubber emergency key	1
No.	Part No.	Description	Qty.
19	5113010081525A	Earpiece PC sheet	1
20	5113050091517A	Blackout foam	1
21	11500000059653	Main board	1
22	5113050000341A	Protective foam for filter	4
23	5107000000625A	Self-tapping screw	4
24	5113010061001A	Waterproof sheet for aluminum chassis	2

No.	Part No.	Description	Qty.	No.	Part No.	Description	Qty.
7	5116000000082A	Emergency key bracket	1	25	5117000081542A	Aluminum chassis	1
8	11500000059470	Knob adapter board	1	26	510700000477B	Metric screw	4
9	5107020060322A	M6 x 2.5 nut	2	27	5110000000402A	Waterproof ring for M2 screw	4
10	5110000000558A	Waterproof ring for adapter	2	28	5110990060065B	Waterproof ring for battery connector	1
11	5116000081717A	Light guide	1	29	5119020060166A	Thermally conductive pad	2
12	5118000081549A	Antenna connector	1	30	5116000081709A	USB cover	1
13	5116000081720A	SMA bracket	1	31	51020200081506	Microphone	1
14	5113040081504A	Dustproof net for speaker	1	32	5110000000033A	Silicone rubber microphone cover	1
15	5110030061384A	Waterproof ring	1	33	5116000001029A	Waterproof ring for USB cover	1
16	51020600000038	Speaker	1	34	5113030000026A	Waterproof and breathable film for microphone	1
17	5113070081517A	Double-sided adhesive tape for earpiece board	1	35	5113050091508A	Acoustic foam	1
18	11500000059471	Audio accessory board	1	36	5116000081718A	Front housing	1



The part number is subject to change without notice due to product upgrade.

3.2 Packaging Guide



4. Specifications

General		
Frequency Range	136–174 MHz	
Dimensions (H x W x D) (with battery and without antenna)	115 mm x 55 mm x 29.5 mm	
Weight (with battery and antenna)	210 g ($\pm 5\%$)	
Zone Capacity	4	
Channel Capacity	64	
Channel Spacing	12.5 KHz/20 KHz/25 KHz	
Operating Voltage	7.4 V (rated)	
Battery	1500 mAh Li-ion battery	
Battery Life (5/5/90 duty cycle, high TX power)	<ul style="list-style-type: none"> ● Analog: 12 hours (1500 mAh)/16 hours (2000 mAh) ● Digital: 16 hours (1500 mAh)/21 hours (2000 mAh) 	
Antenna Impedance	50 Ω	
RX Section		
Sensitivity (Analog)	<ul style="list-style-type: none"> ● Analog: 0.18 μV (12 dB SINAD) ● Digital: 0.18 μV 	
Adjacent Channel Selectivity	TIA-603	60 dB@12.5 kHz/70 dB@20/25 kHz
	ETSI	60 dB@12.5 kHz/70 dB@20/25 kHz
Spurious Response Rejection	TIA-603	70 dB@12.5/20/25 kHz
	ETSI	70 dB@12.5/20/25 kHz
Intermodulation	TIA-603	70 dB@12.5/20/25 kHz
	ETSI	65 dB@12.5/20/25 kHz
Conducted Emission	< -57 dBm	
Blocking	TIA-603	80 dB
	ETSI	84 dB
Rated Audio Distortion	$\leq 3\%$	

Rated Audio Power Output	1 W	
Audio Response	+1 dB to -3 dB	
TX Section		
Frequency Stability	±0.5 ppm	
Power Output	Low	1 W
	High	5 W
FM Modulation	11K0F3E@12.5 kHz	
	14K0F3E@20 kHz	
	16K0F3E@25 kHz	
4FSK Modulation	12.5 kHz (data only): 7K60FXD	
	12.5 kHz (data and voice): 7K60FXW	
Spurious Emission	-36 dBm < 1 GHz	
	-30 dBm > 1 GHz	
Modulation Deviation	± 2.5 kHz@12.5 kHz	
	± 4.0 kHz@20 kHz	
	± 5.0 kHz@25 kHz	
Adjacent Channel Power	60 dB@12.5 kHz	
	70 dB@20/25 kHz	
Audio Response	+1 dB to -3 dB	
Audio Distortion	≤ 3%	
Environment		
Operating Temperature	-20 °C to +60 °C	
Storage Temperature	-40 °C to +85 °C	
Electrostatic Discharge (ESD)	IEC 61000-4-2 (level 4)	±15 kV (air) ±8 kV (contact)
Water & Dust Protection	IP54	

Humidity, Shock & Vibration	GJB150A-2009: MIL-STD-810 G
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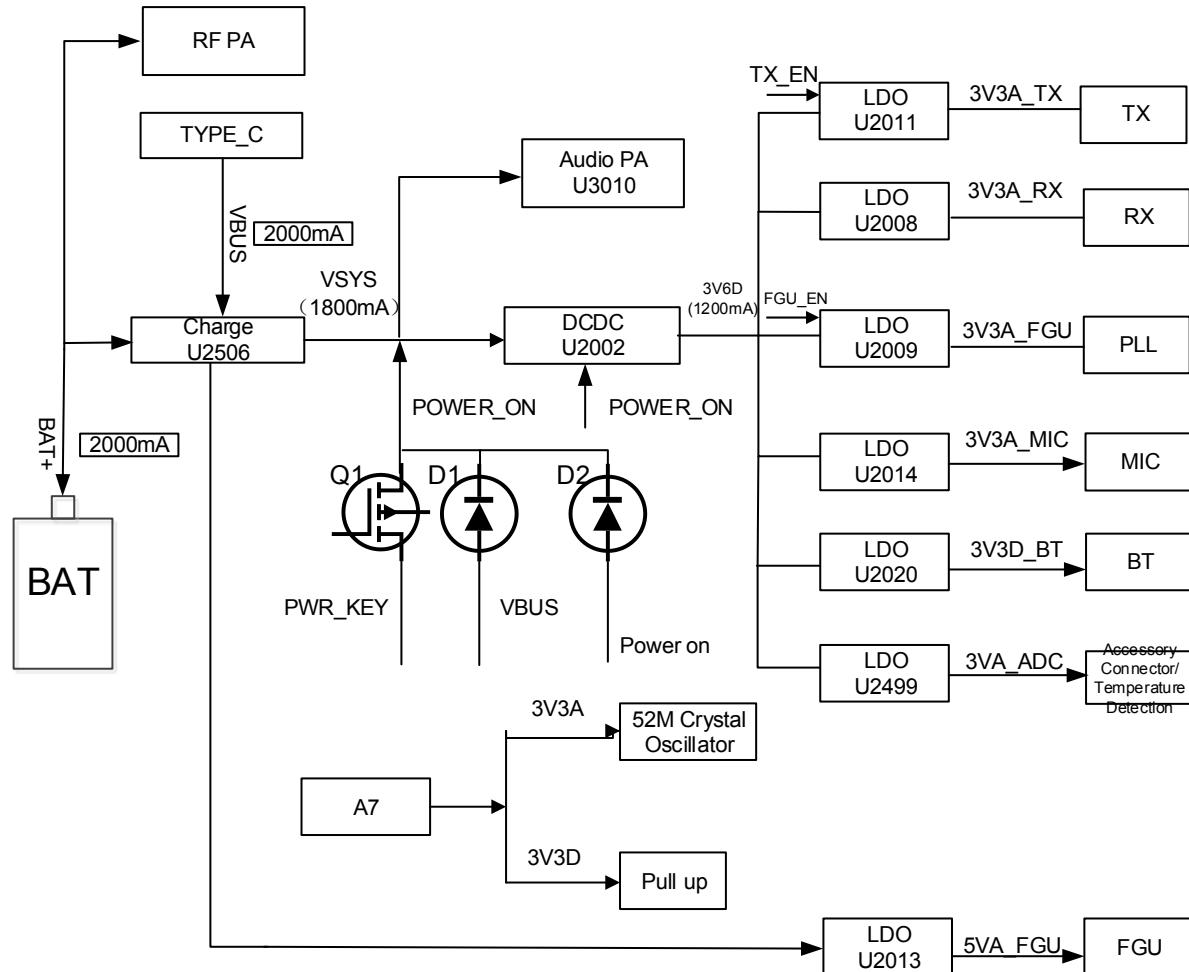
 **NOTE**

All specifications are tested according to applicable standards, and subject to change without notice due to continuous technological development.

5. Circuit Description

5.1 Baseband Section

5.1.1 Power Supply Module



The power supply module employs two 7.4 V Li-ion batteries. The 7.4 V voltage powers the RF board and baseband board in the following ways:

RF Board

- The LDO converts the 7.4 V voltage into a 5.0 V voltage, which powers the VCO circuit.
- The DC/DC (U2002) converts the 7.4 V voltage into a 3.6 V voltage. Then the LDOs (U2011, U2008, and U2009) regulate the 3.6 V voltage into 3.3 V voltages, which power the PLL circuit, RX circuit, and TX circuit.

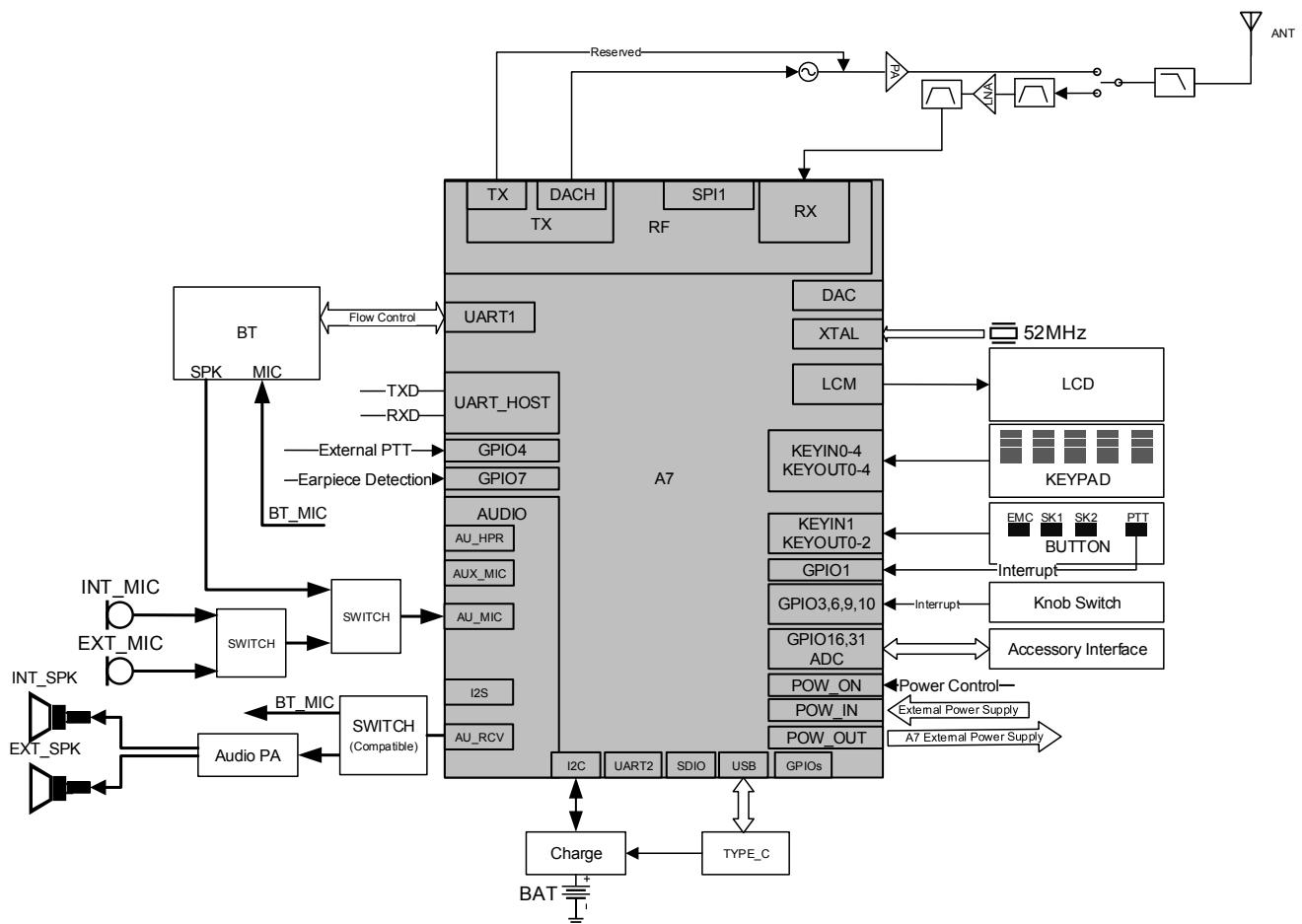
Baseband Board

- The DC/DC (U2002) converts the 7.4 V voltage into a 3.6 V voltage.
- The LDOs (U2014, U2020, and U2499) convert the 3.6 V voltage into 3.3 V voltages, which power the MIC, BT, and accessory connector/temperature detection modules.

The test points and voltage range of each power supply are shown in the table below.

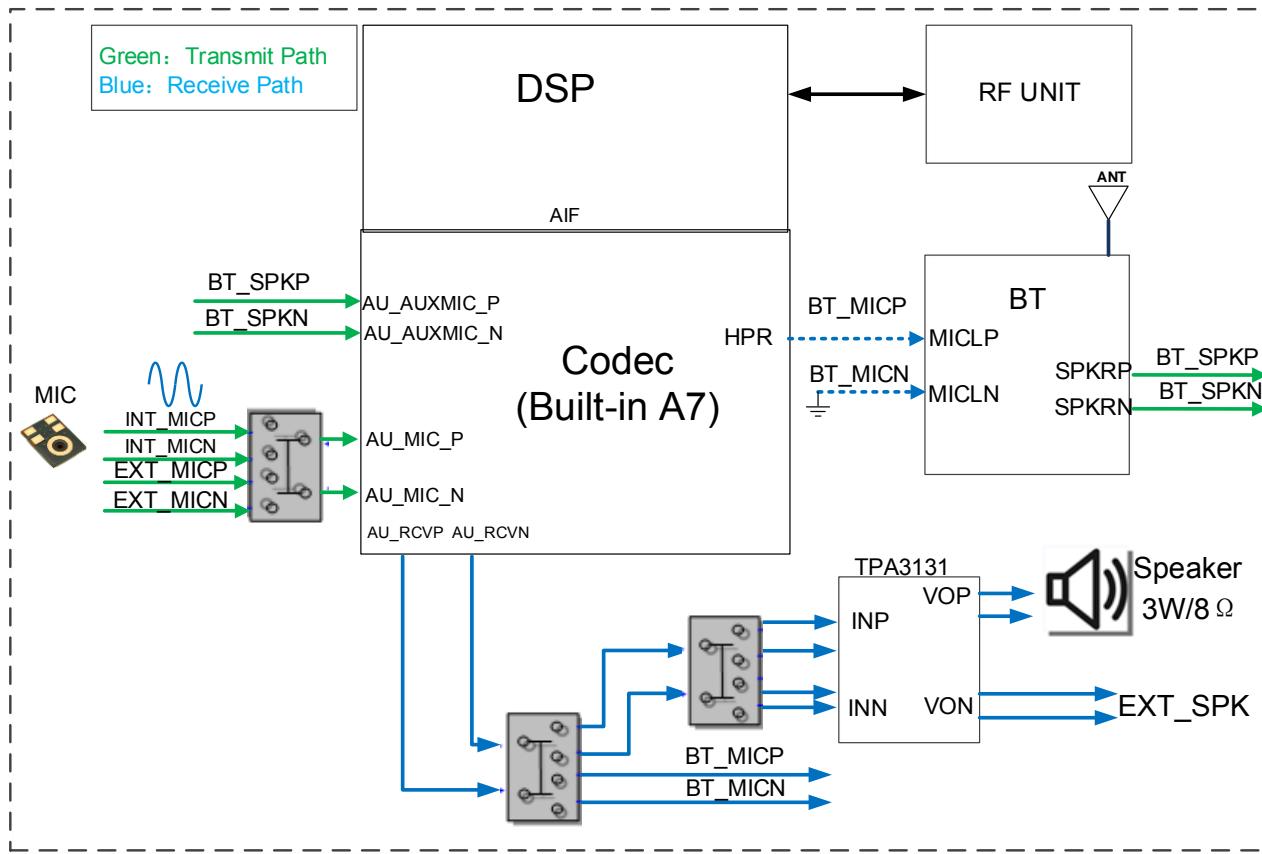
No.	Network	Test Point	Voltage Range (V)
1	3V3D_BT	TP9505	$3.3 \pm 10\% \text{ V}$
2	3V6D	L2008	$3.6 \pm 10\% \text{ V}$
3	5VA_FGU	FB2015	$5 \pm 10\% \text{ V}$
4	3V3A_TX	FB2088	$3.3 \pm 10\% \text{ V}$
5	3V3A_MIC	FB2017	$3.3 \pm 10\% \text{ V}$
6	3V3A_FGU	FB2010	$3.3 \pm 10\% \text{ V}$
7	3V3A_RX	FB2008	$3.3 \pm 10\% \text{ V}$

5.1.2 Control Module



The control module (A7) consists of the baseband, CPU, power management IC, RF transceiver, Codec, and storage, and uses 52 MHz crystal oscillator as the clock signal.

5.1.3 Audio Module



The audio module consists of the Codec (built-in A7), class D audio power amplifier (PA) (U3010), BT module (U9504), microphone, analog switch circuit, and internal and external speakers.

Audio Path

- RX Path

The audio signal received from the RF section is processed by the A7 DSP, goes to the codec module through the audio interface for gain adjustment and D-A conversion, and then is output through AU_RCV. Then the audio signal goes to the internal or external speaker through the analog switch circuit, amplified by the PA chip, and is finally output. Or the audio signal can also be output to the BT chip (U9504) for processing, and then transmitted to the BT earpiece through RF modulation.

- TX Path

- Internal Audio

The internal audio from two microphones goes to the codec module for A-D conversion, and then to the DSP for noise reduction, and finally transmitted through RF modulation.

- BT/External Audio

The BT/external audio signal goes to the codec module for amplification and A-D conversion, and then to the DSP for processing, and finally transmitted through RF modulation.

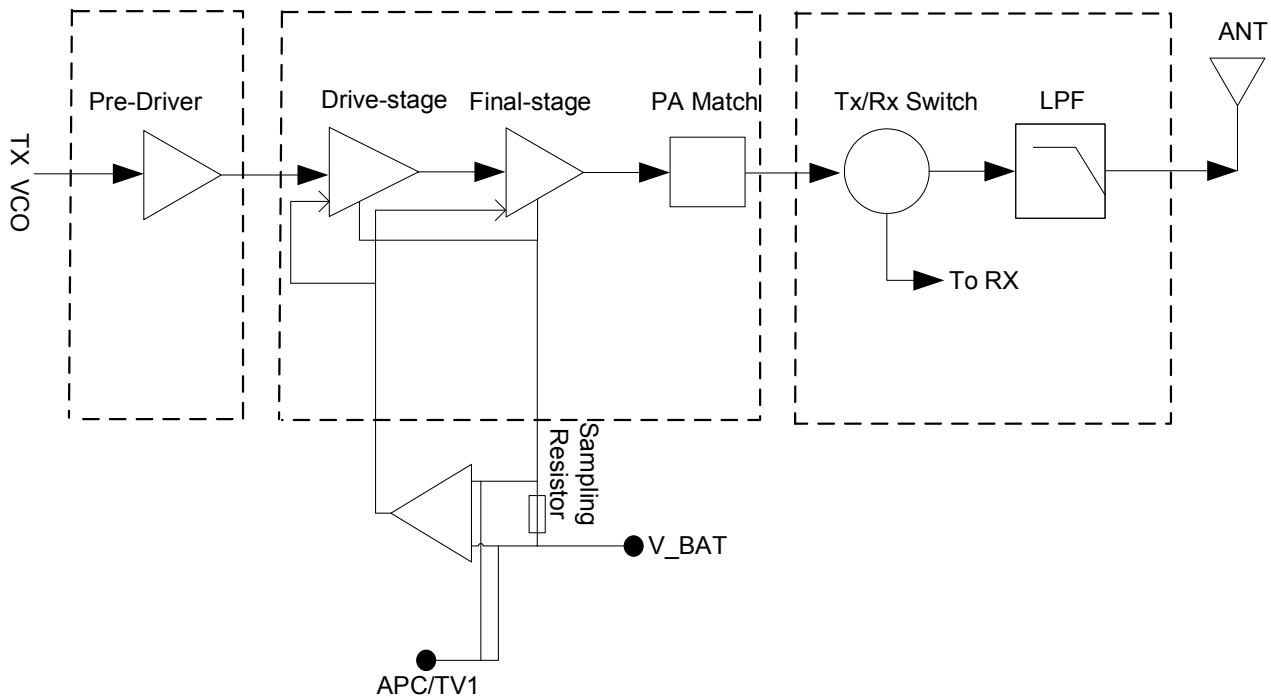
Audio Power Amplifier

The table below lists the main parameters of the audio amplifier.

Parameter	Value
Rated power (P_o)	1 W
Maximum power (P_{max})	3.5 W
Speaker Impedance (R_L)	8 Ω

5.2 RF Section

5.2.1 TX Circuit



The TX circuit consists of the RF PA circuit, low-pass filter (LPF) circuit, automatic power control (APC) circuit, and so on.

RF PA Circuit

The carrier signal generated by the TX VCO goes to the pre-driver PA for initial amplification, the drive-stage PA for further amplification, and then final-stage PA for final amplification. The amplified carrier signal then passes through the microstrip matcher for output impedance matching, so as to reduce output power loss due to impedance mismatch.

LPF Circuit

After the output impedance matching, the signal goes to the TX/RX switch and then to the LPF for suppressing

harmonics and spurious signals. Finally, it goes to the antenna for transmission.

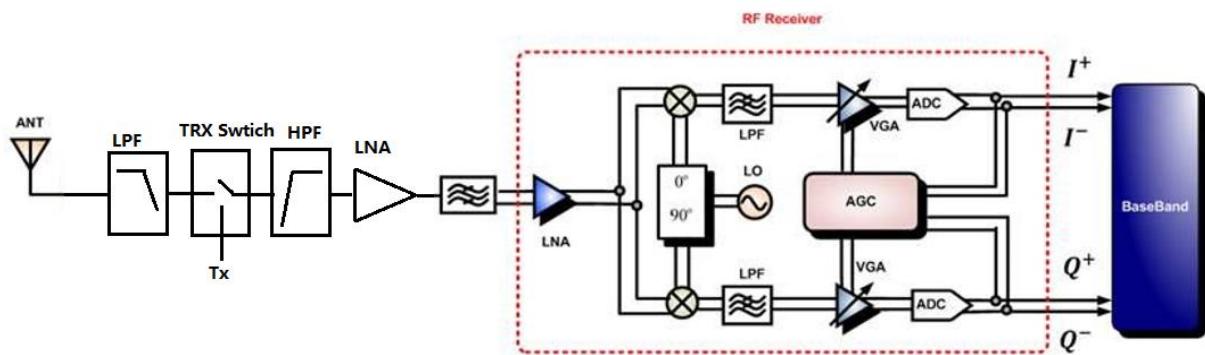
APC Circuit

The APC circuit converts the drain current from the driver-stage PA and final-stage PA into a voltage, and then compares the voltage with the APC control voltage output by the MCU. The error voltage generated from the comparison adjusts the TX power by controlling the gate bias voltage of the driver-stage PA and final-stage PA.

5.2.2 RX Circuit

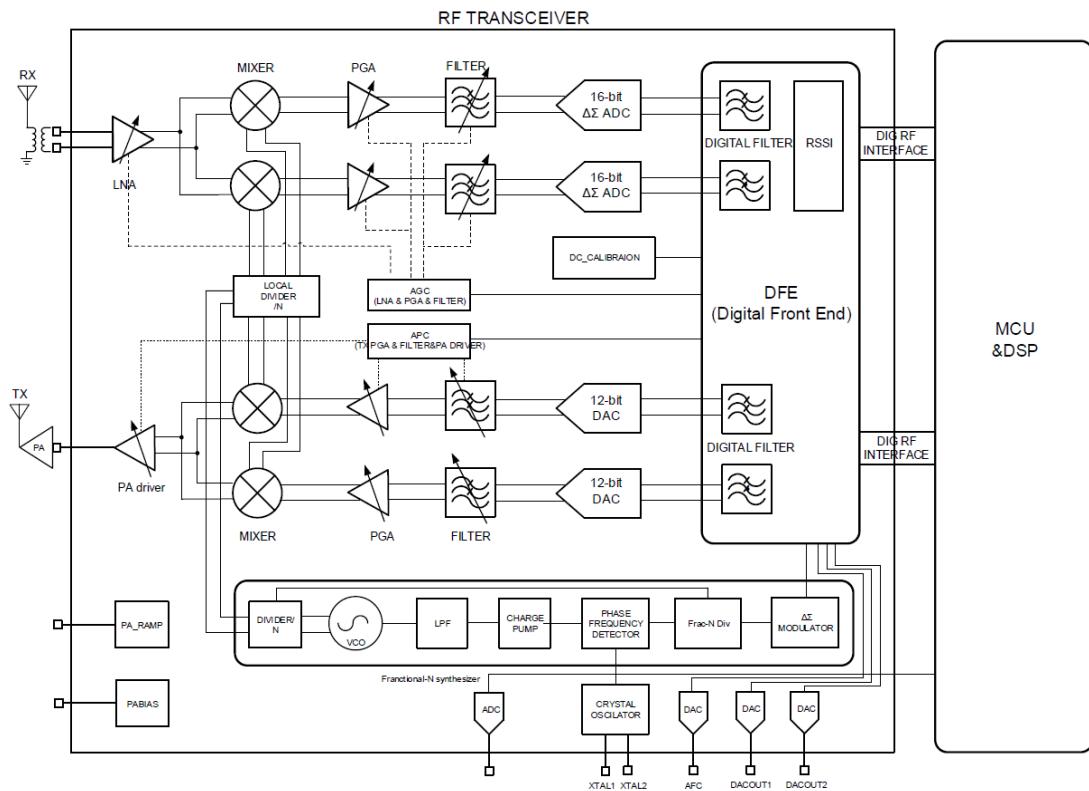
The RX circuit consists of the high-pass filter (HPF), low-noise amplifier (LNA), LPF, signal toggle switch, and so on.

RX Front-End



The signal received from the antenna goes to LPF for filtering out the HF signal, and to HPF through the TX/RX switch for filtering out the LF signal. The filtered signal is amplified by the LNA, and the amplified signal goes to the LPF for filtering out the interference signal. Finally, the signal goes to the signal toggle switch, and to the A7 TRX processor for conversion from RF to zero intermediate frequency (IF).

RX Back-End



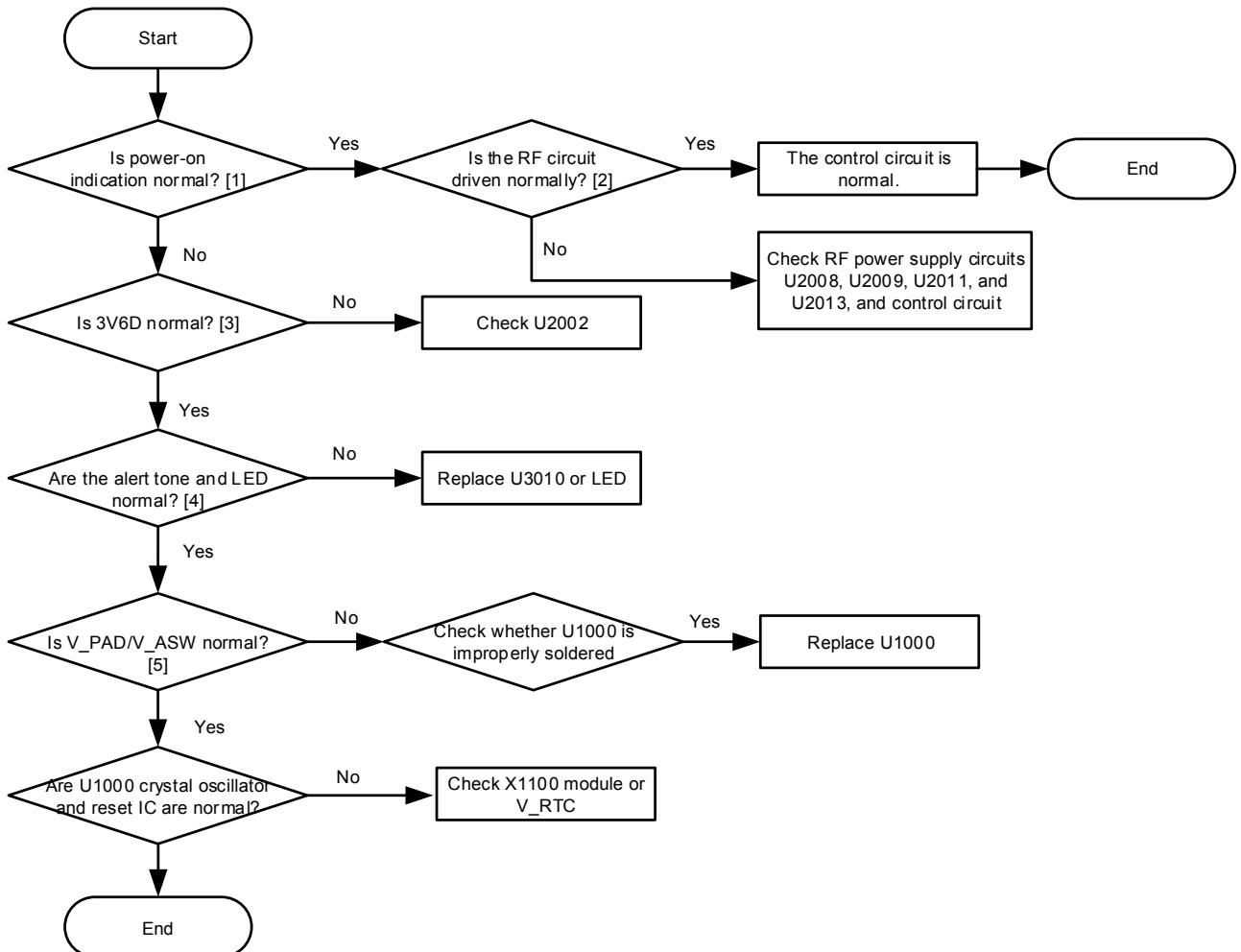
The amplified RF signal goes to the A7, in which it is further amplified by the LNA and mixes with the VCO signal to generate a zero IF signal. The zero IF signal goes to the PGA and filter, and is converted into a digital signal by the ADC. Then The digital signal goes to the MCU and DSP for processing.

5.2.3 FGU Circuit

The A7 platform provides built-in PLL and VCO solutions.

6. Troubleshooting Flowchart

6.1 Control Circuit

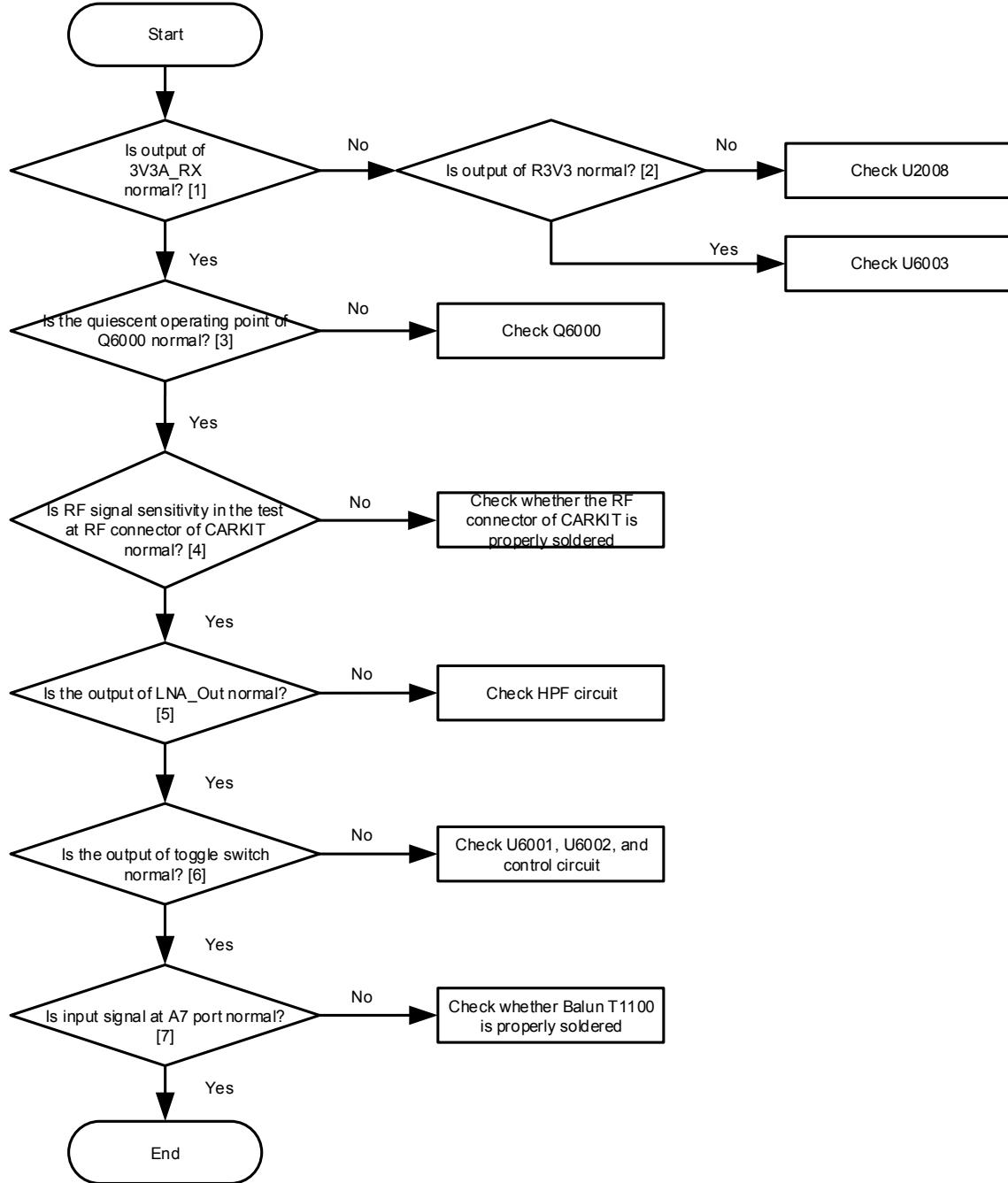


Description of normal situations:

- [1] The radio announces the channel number after being turned on.
- [2] The RF power supply outputs normally, and the power supply for the RX path is switched on.
- [3] The voltage at 3V6D (L2008) is $3.6 \pm 10\%$ V.
- [4] After the radio is turned on, the LED indicator flashes green for one time.
- [5] The voltage at V_PAD (FB2105) is $3.0 \pm 10\%$ V.

The voltage at V_ASW (FB2006) is $2.8 \pm 10\%$ V.

6.2 RX Circuit



Description of normal situations:

- [1] The output voltage at Pin 1 of U2008 is $3.3 \pm 10\%$ V.
- [2] The output voltage at Pin 3 or the input voltage at Pin 4 of U6003 is $3.3 \pm 10\%$ V.
- [3] Check the base voltage and collector voltage of Q6000 when the radio is not receiving signals. In normal case, the base voltage is $0.7 \pm 10\%$ V, and the collector voltage is $2.78 \pm 10\%$ V.
- [4] The RF connector of CARKIT is positively related to the SMT patch processing. Before plugging the RF cable, make sure that the RF connector is in good condition.

- [5] Confirm the RF signal output at Q6000. For example, input a -123 dBm RF signal at the RF connector of CARKIT, the output amplitude of LNA_OUT2 at Q6000 is about -115 dBm.
- [6] U6001 and U6002 are toggle switches. When the radio is receiving signals normally, LNA_H_En will output a control voltage of 3.3 V, and Pin 4 of U6001 and Pin 6 of U6002 are at high level.
- [7] Confirm the RF signal output at T1100. For example, input a -123 dBm RF signal at the RF connector of CARKIT, the output amplitude of T1100 (input amplitude of A7) is about -110 dBm.

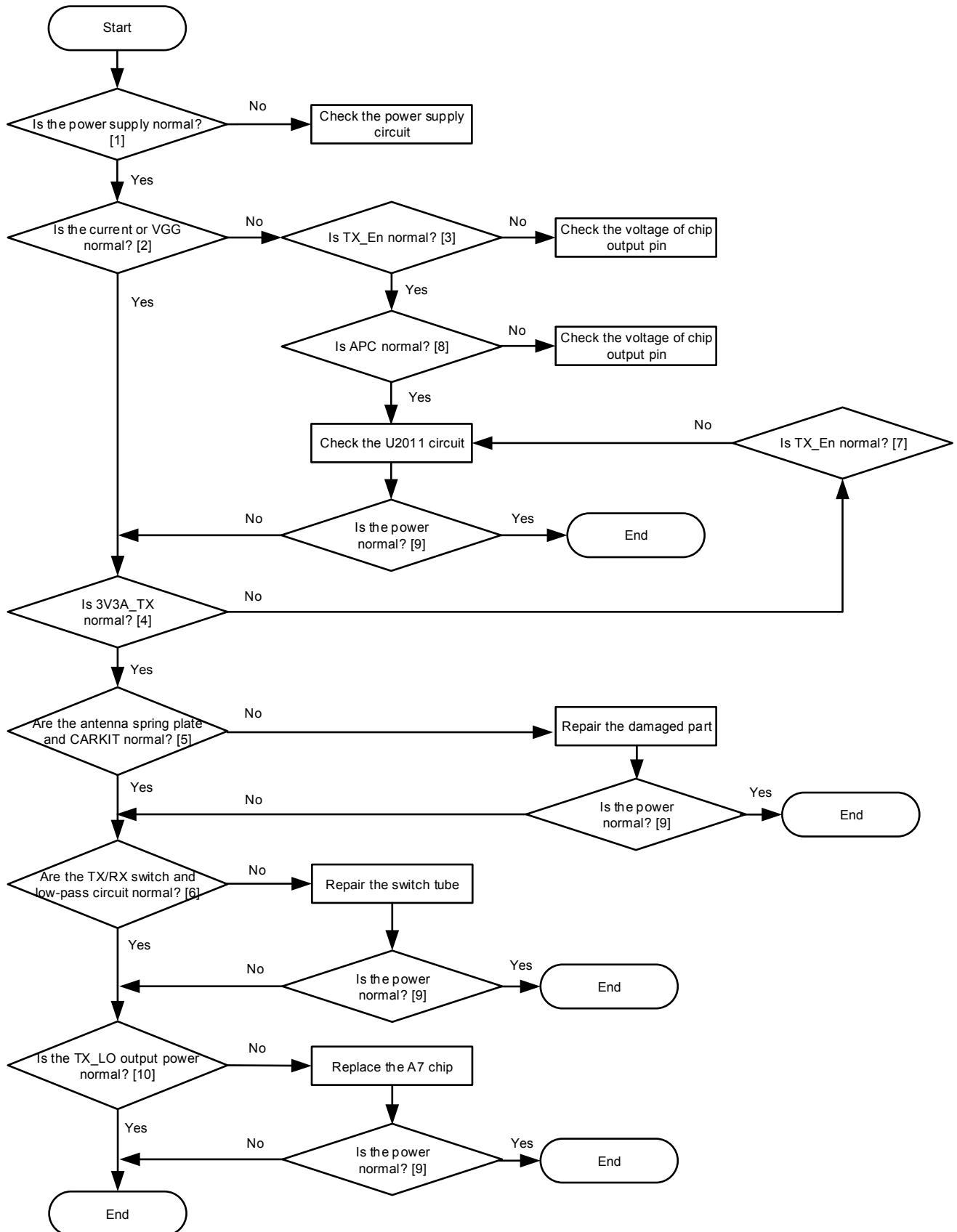
At the antenna port, input a -123 dBm signal with standard debugging information (AF = 1 kHz, FM = 3 kHz).

6.3 TX Circuit



CAUTION

To avoid the impact on TX power, do the following tests under the 7.4 V power supply.



Description of normal situations:

[1] The voltage of the power supply is $7.4 \pm 10\%$ V.

- [2] When the radio operates in low power mode, the current ranges from 0.6 A to 0.9 A. When the radio operates in high power mode, the current ranges from 1.4 A to 1.9 A.
- [3] The voltage at TX_En is about $3.3 \pm 10\%$ V.
- [4] The voltage at 3V3A_TX is $3.3 \pm 10\%$ V.
- [5] The multimeter is used to measure the antenna spring plate. The impedance to ground is infinite, and no short circuit or circuit break occurs. The CARKIT is soldered properly.
- [6] The start-up voltage of D7000, D7001, D7002, D7003, and D7004 is about 0.7 V. The low-pass circuit coil is soldered properly.
- [7] When the radio operates in low power mode, the voltage at VGG ranges from 2.1 V to 2.4 V. When the radio operates in high power mode, the voltage at VGG ranges from 2.2 V to 2.6 V.
- [8] When the radio operates in low power mode, the voltage at APC ranges from 0.9 V to 1.4 V. When the radio operates in high power mode, the voltage at APC ranges from 1.5 V to 1.9 V.
- [9] Low power: about 1.0 W; high power: about 5.0 W.
- [10] The signal amplitude of TX_LO ranges from -12 dBm to -8 dBm.

7. Interface Definition

The table below lists information about the 9-pin accessory connector.

Pin No.	Signal	Description	Illustration
1	SPK+	External speaker +	
2	SPK-	External speaker -	
3	TXD	UART pin	
4	RXD	UART pin	
5	GND	General ground	
6	1_WIRE/GPIO	Accessory identifier 1_wire communication port/GPIO	
7	ADC_ACC/PTT	Port for accessory plug detection and PTT key detection	
8	MIC-	Microphone differential input-	
9	MIC+	Microphone differential input+	

8. Tuning Description

8.1 Tools

- Radio communication test set: Aeroflex 3920 and HP8921
- Power supply: 3 A/10 V
- Multimeter
- A6 Tuner software

8.2 Tuning Procedure

8.2.1 Tuning the Radio

After reassembling the radio, tune it using the A6 Tuner software.

The table below describes the items to be tuned and the corresponding tuning methods. After tuning an item, click **Save File** to save the tuned value.

Item	Method
TX Section	
Reference Frequency	<ol style="list-style-type: none"> 1. Connect the antenna connector of the radio to the RF port of HP8921, and then set HP8921 to TX test mode. 2. Open the A6 Tuner software, and then click PTT OFF under the Freq Calibration tab. 3. Adjust the AFC vernier on the A6 Tuner until the frequency deviation between the frequency displayed on HP8921 and the frequency (TX) displayed on A6 Tuner is less than or equal to 40 Hz. 4. Click PTT ON.
TX Power	<ol style="list-style-type: none"> 1. Connect the antenna connector of the radio to the RF port of HP8921, and then set HP8921 to TX test mode. 2. Open the A6 Tuner software. 3. Under the Freq Calibration tab, set Power to "Low" or "High", and then set the channel frequency. 4. Select the required channel, and then click PTT OFF. 5. Adjust the AFC vernier under "Low" or "High" to 1.2 ± 0.1 W or 5.0 ± 0.3 W respectively. (If you use the CARCIT test line, pay attention to the loss compensation, which is about 0.3 dB.)

8.2.2 Testing the Radio

After tuning the radio, test the TX and RX performance of the radio as follows:

TX Performance

1. Connect the antenna connector of the radio to the T/R port of Aeroflex 3920.
2. Open the A6 Tuner software, and then set **Channel** under the **Channel Info and Settings** tab.
The value ranges from 9 to 15.
3. Under the **Freq Calibration** tab on the A6 Tuner, set the channel frequency, set **Power** to "High", and then set **Model** to "Digital".
4. Under the **Freq Calibration** tab on the A6 Tuner, select the channel to be tested.
5. Set Aeroflex 3920 as follows:
 - Frq: the same as the frequency of the channel to be tested
 - STD IB 511(.153)
6. Under the **Freq Calibration** tab on the A6 Tuner, click **PTT OFF**.
7. Check whether the tested items on Aeroflex 3920 meet the following requirements:
 - Frequency Error: ≤ 100 Hz
 - Transmit Power: 5.0 ± 0.3 W
 - FSK Error: $\leq 5\%$
 - Magnitude Error: $\leq 3\%$

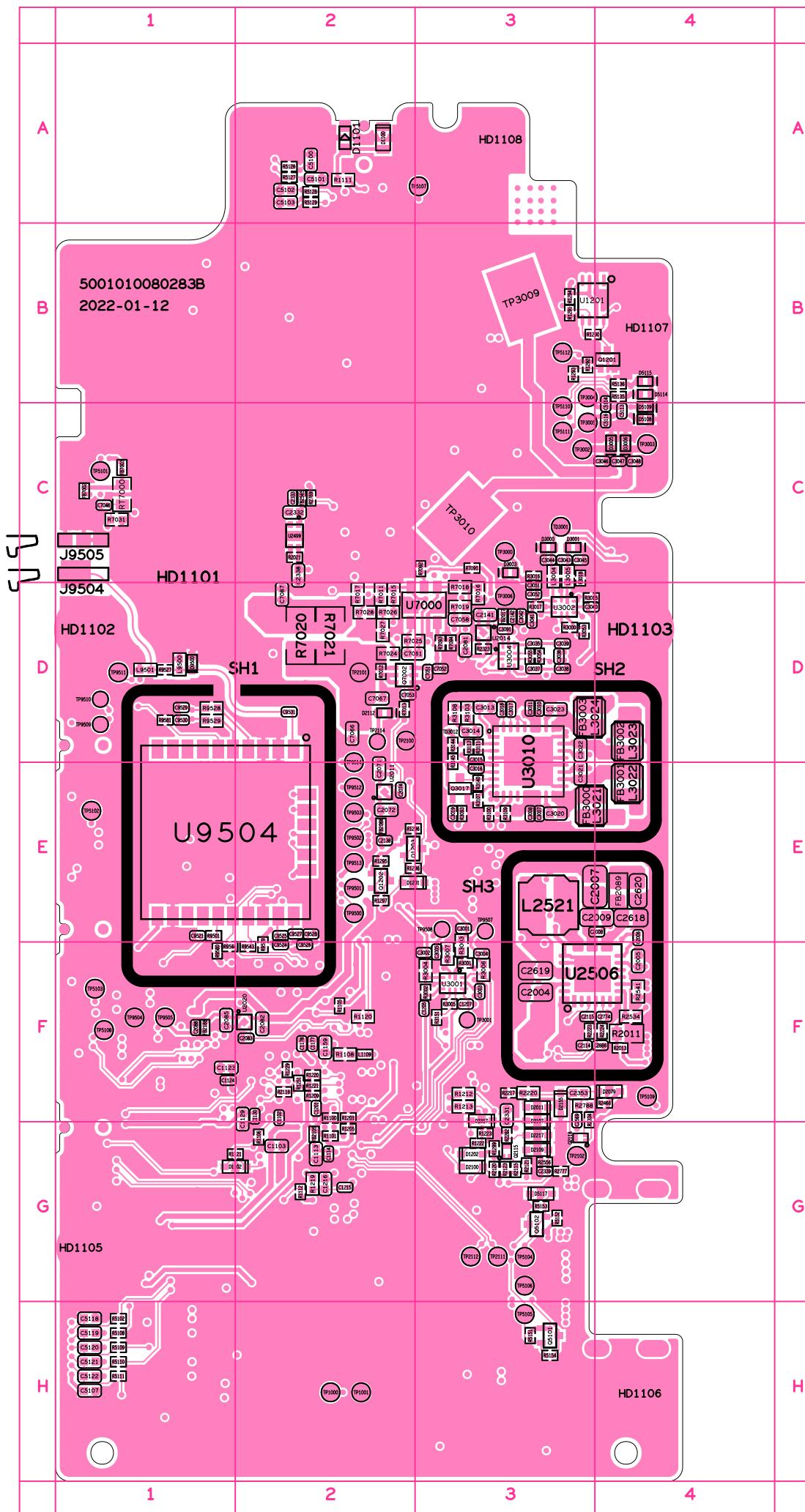
RX Performance

1. Connect the antenna connector of the radio to the T/R port of Aeroflex 3920.
2. Open the A6 Tuner software, and then set **Model** to "Digital" under the **Channel Info and Settings** tab.
3. Close the A6 Tuner software, and then keep the radio powered on.
4. Open the A6 Tuner software again, and then set **Model** to "Digital" under the **Channel Info and Settings** tab.
5. Under the **Freq Calibration** tab on the A6 Tuner, select the channel to be tested.
6. Set Aeroflex 3920 as follows:
 - Frq: the same as the frequency of the channel to be tested
 - STD IB 511(.153)
 - Lvl: -116.0 dBm
7. Under the **BER Test** tab on the A6 Tuner, click **Read Error Rate Switch**.

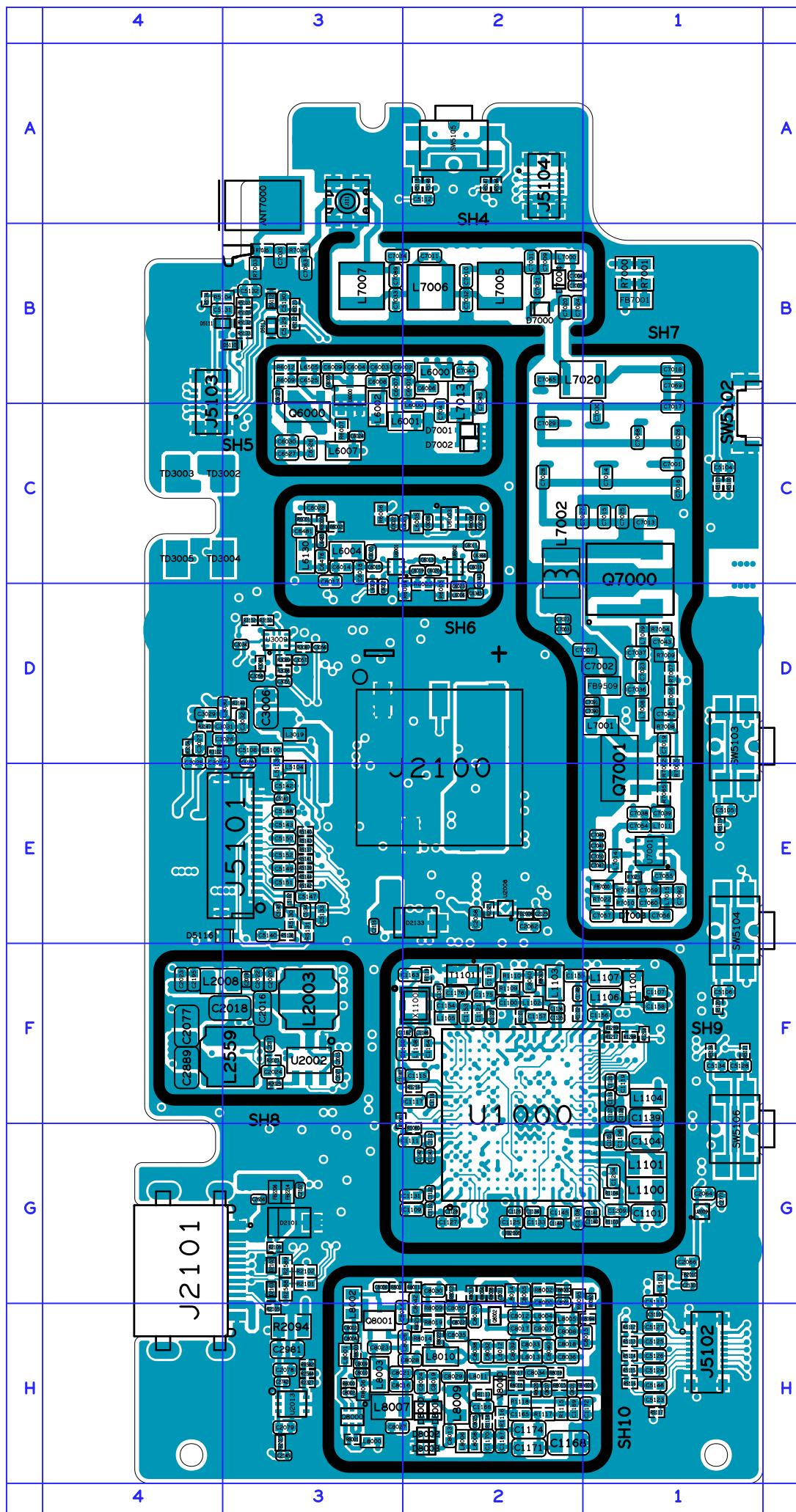
-
8. Check whether the value of **Error Rate** displayed on the A6 Tuner is less than or equal to 5%.

9. PCB View

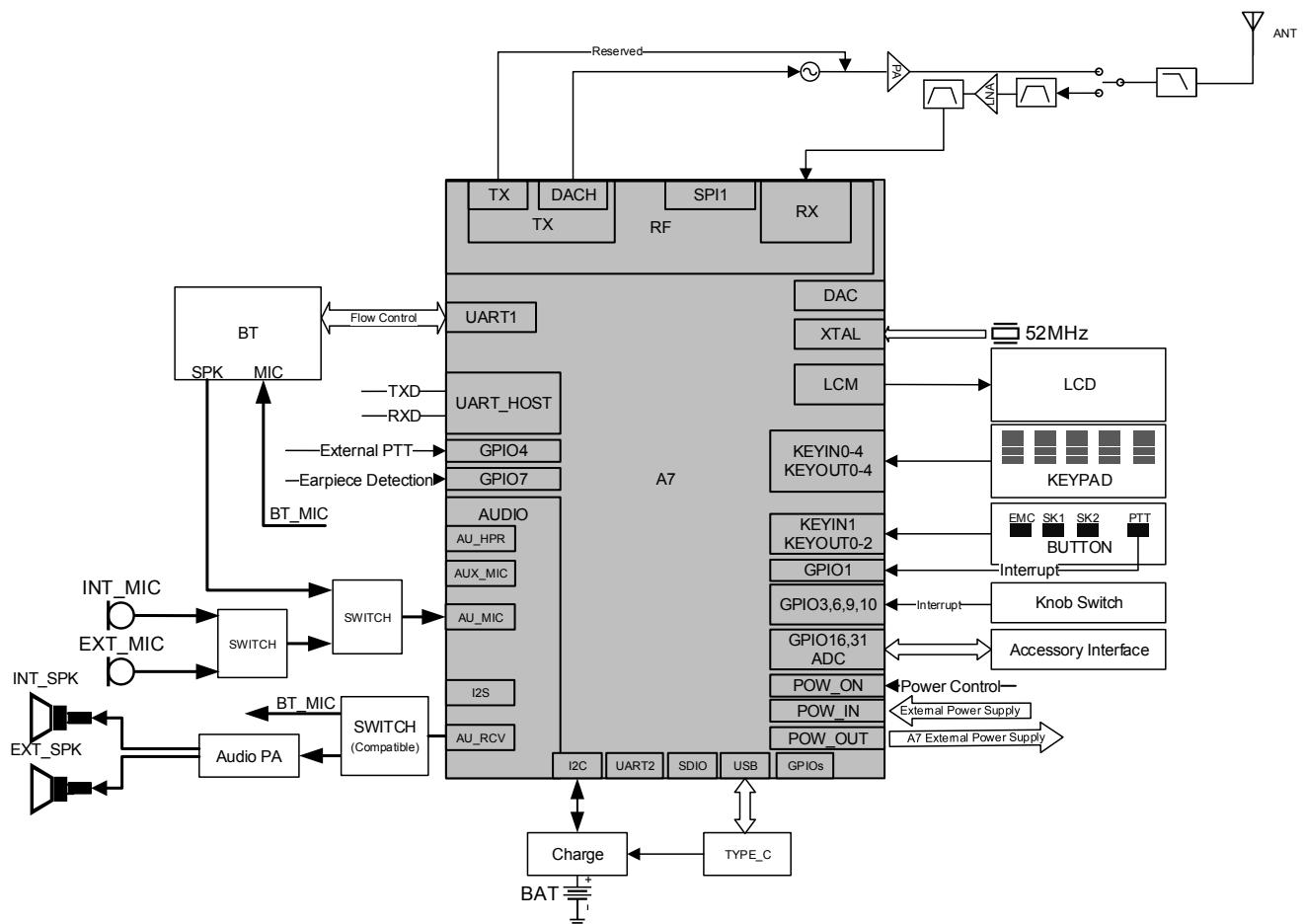
Main Board_Top Layer



Main Board_Bottom Layer

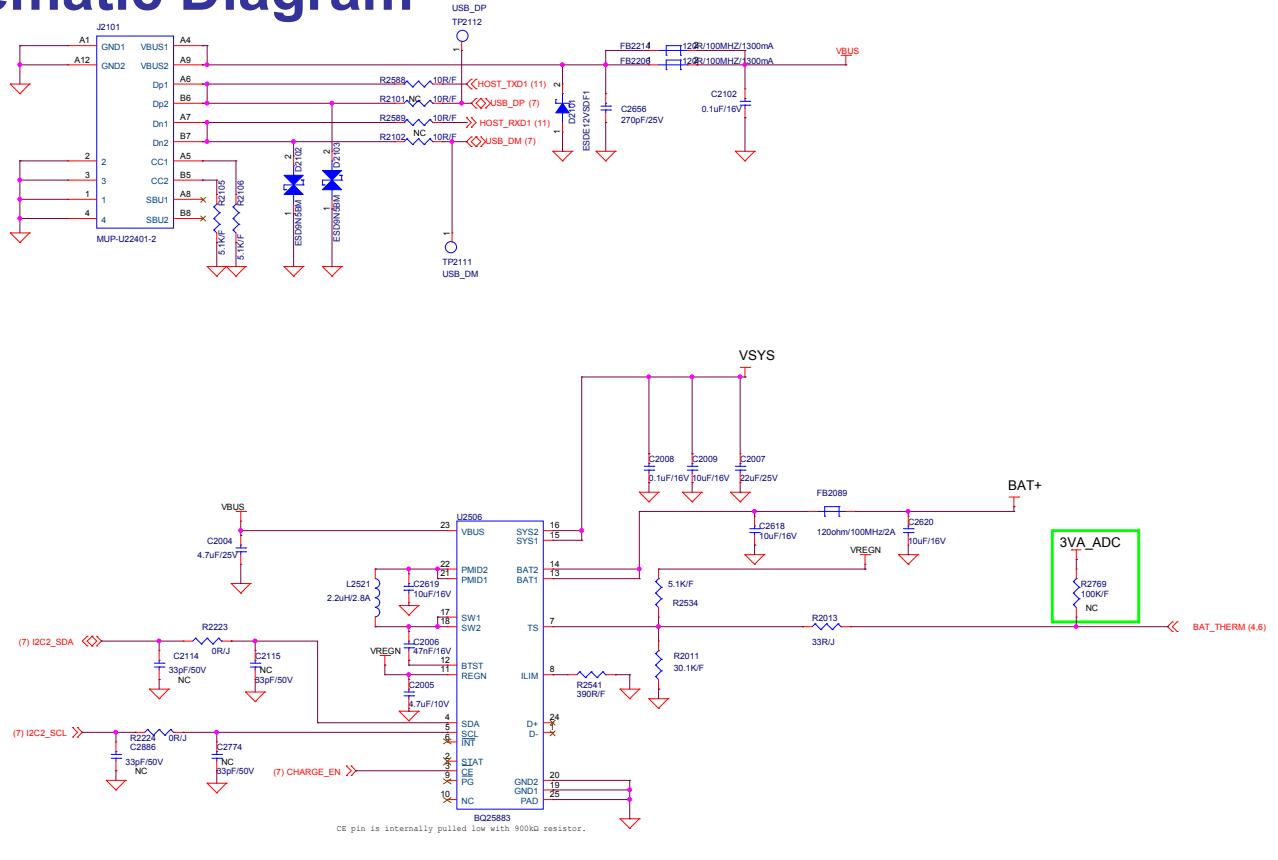


10. Block Diagram

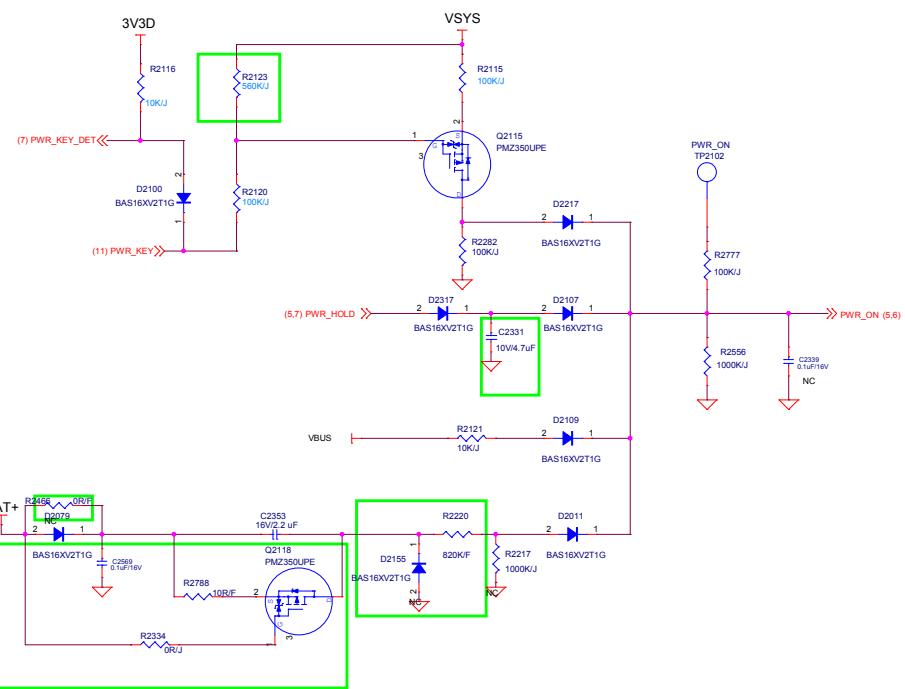
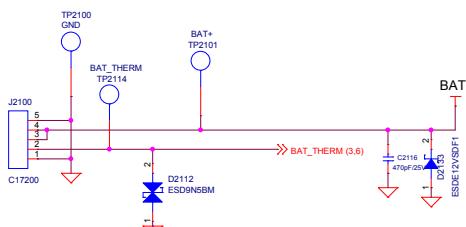


11. Schematic Diagram

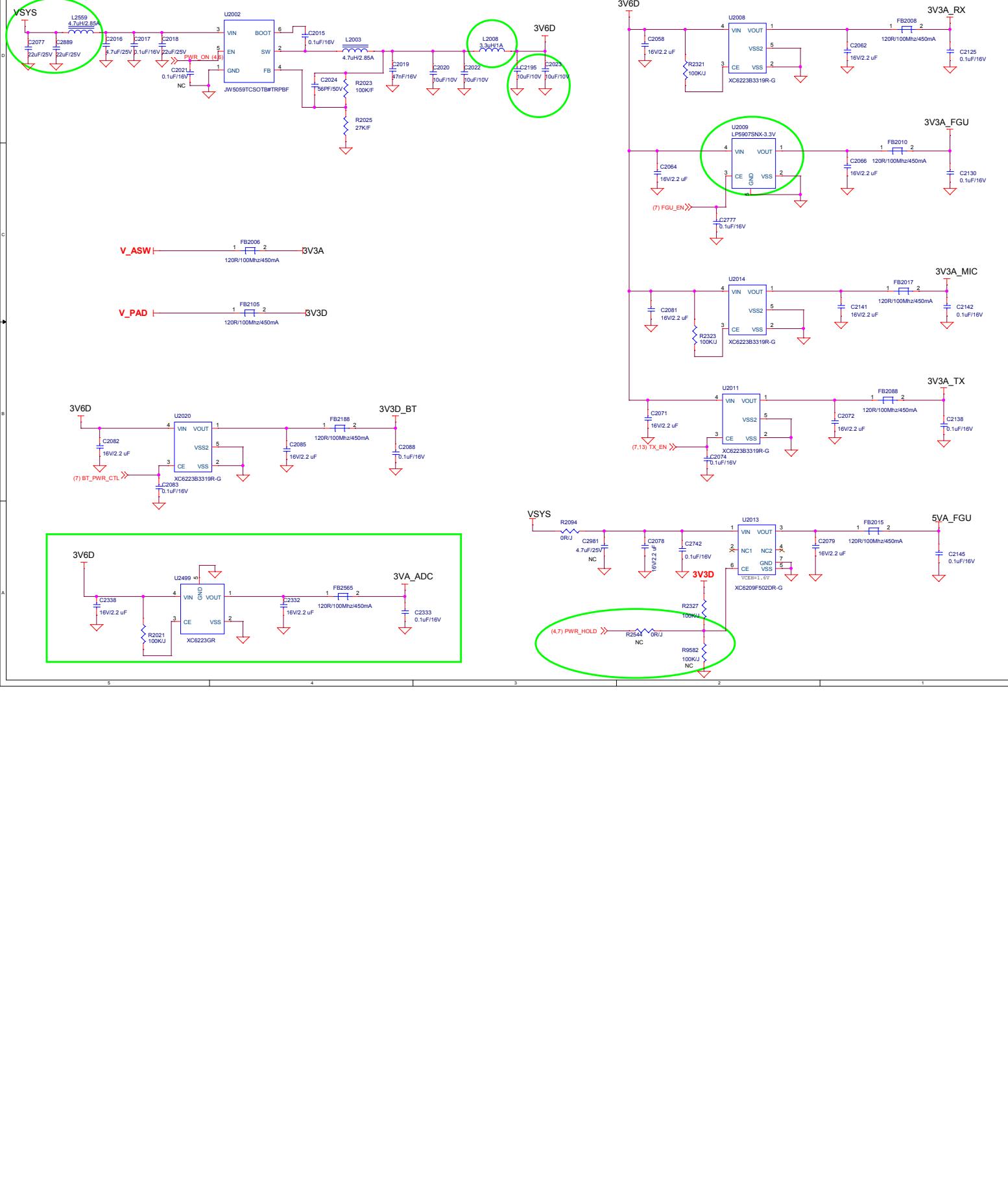
POWER_charge



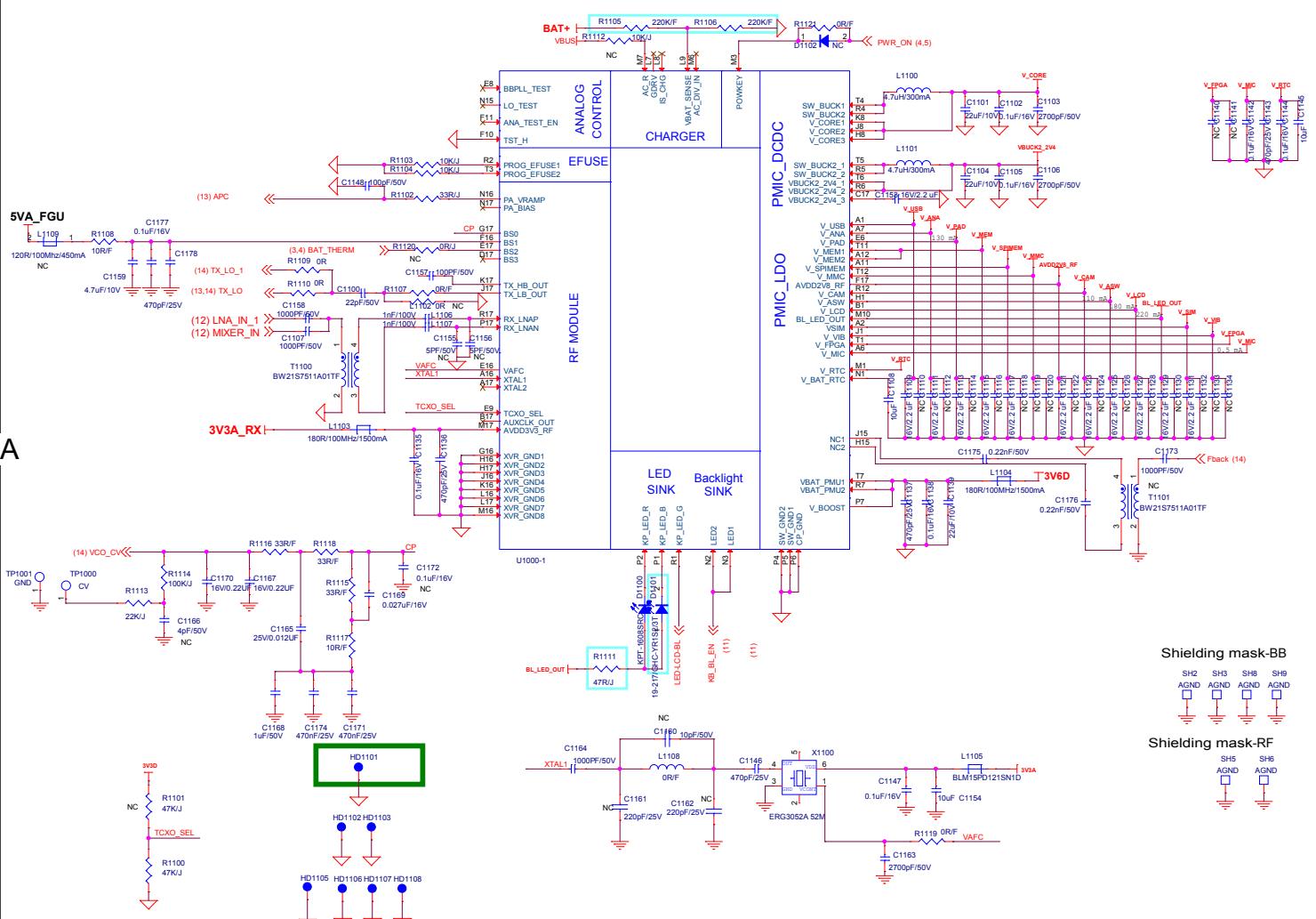
POWER_CTRL



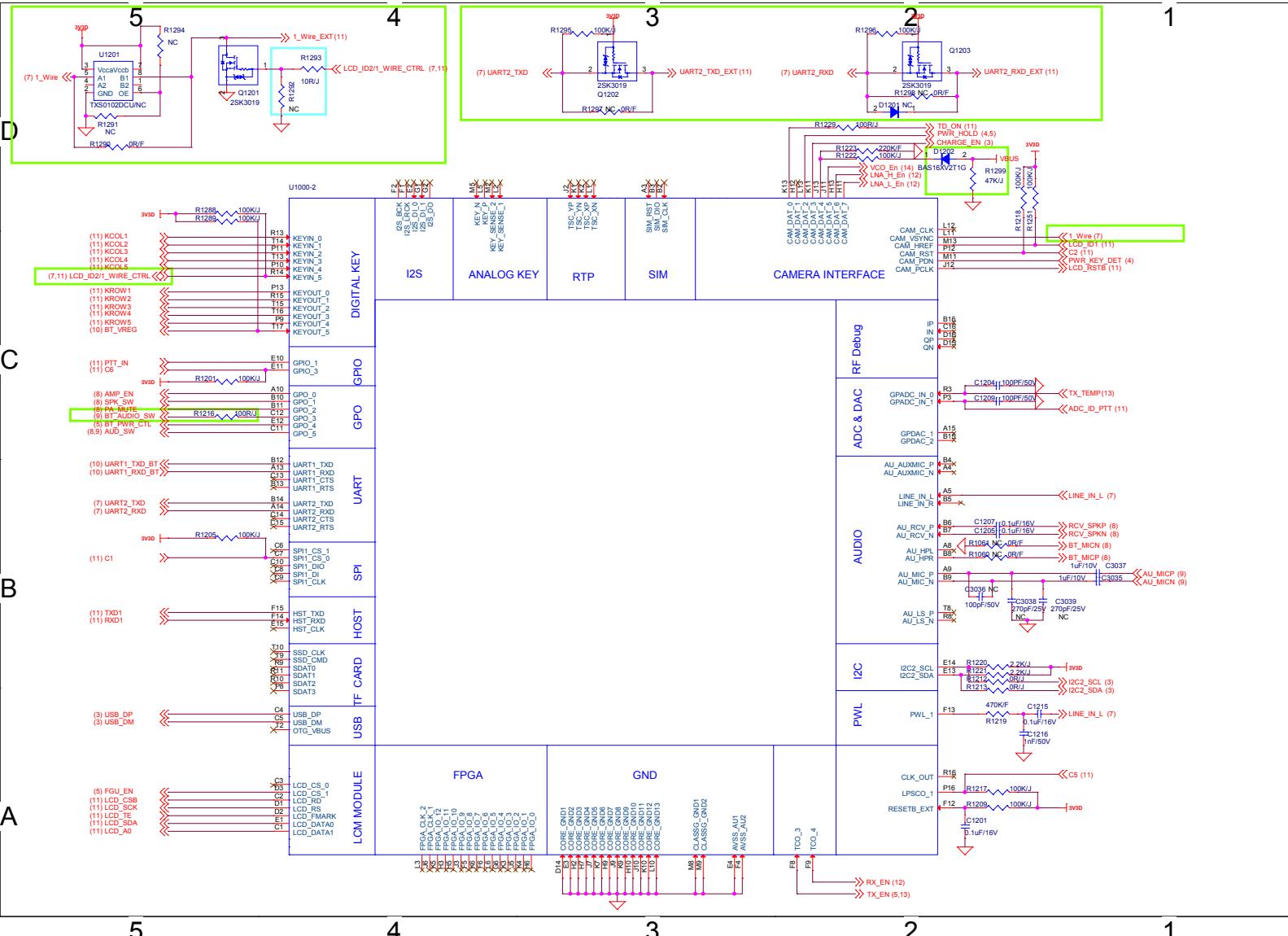
POWER_LDO



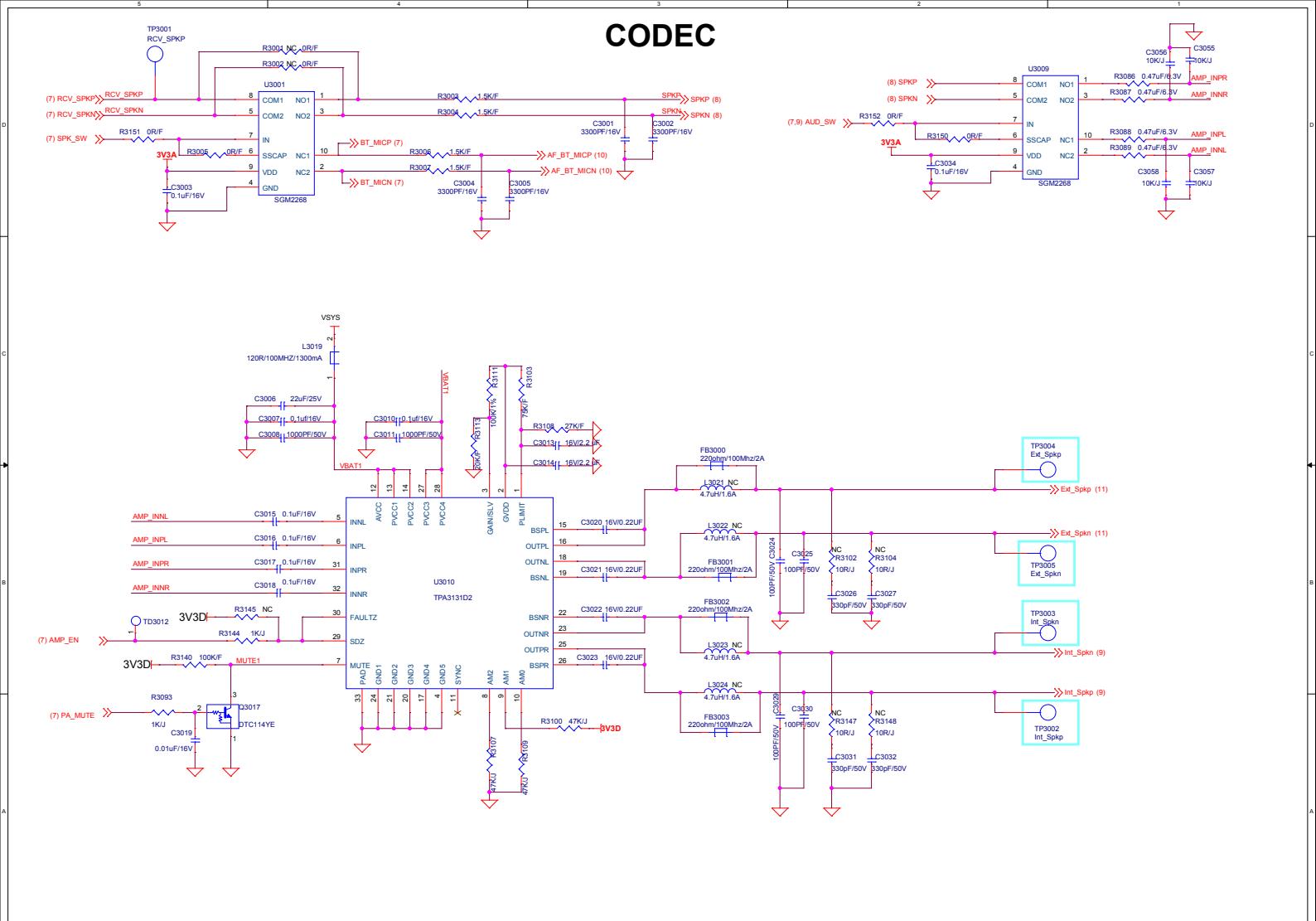
A7-POWER



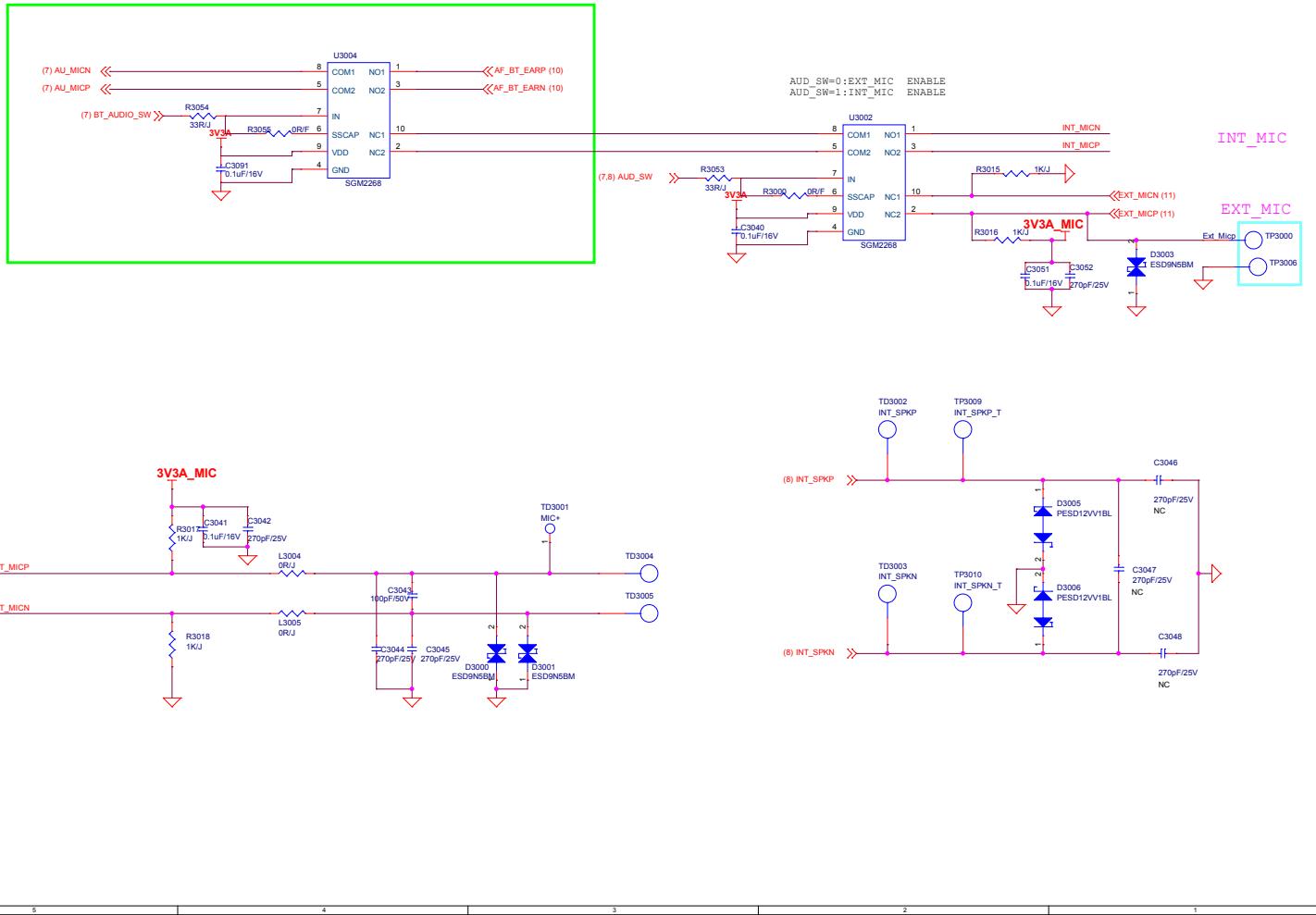
A7 CTRL

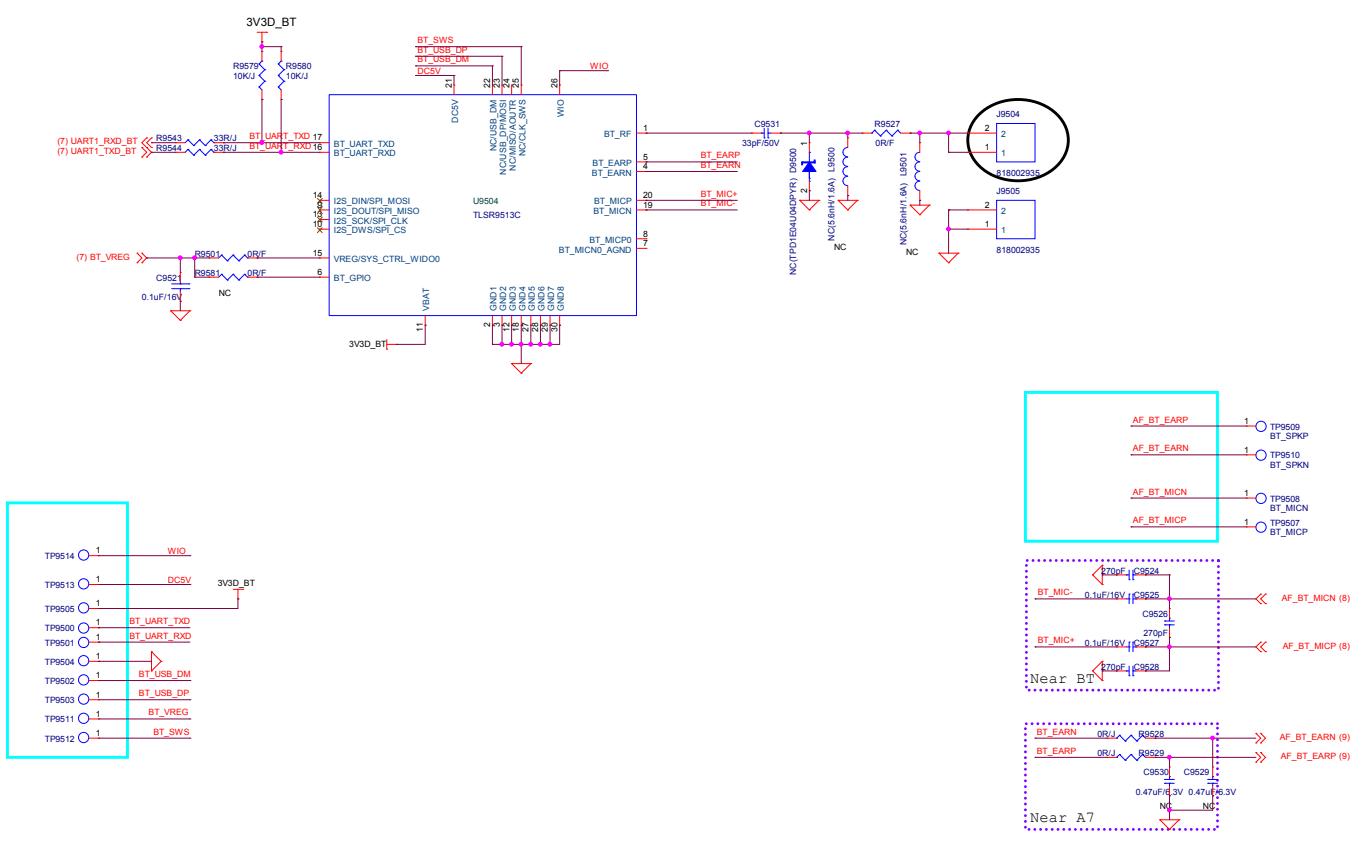


CODEC

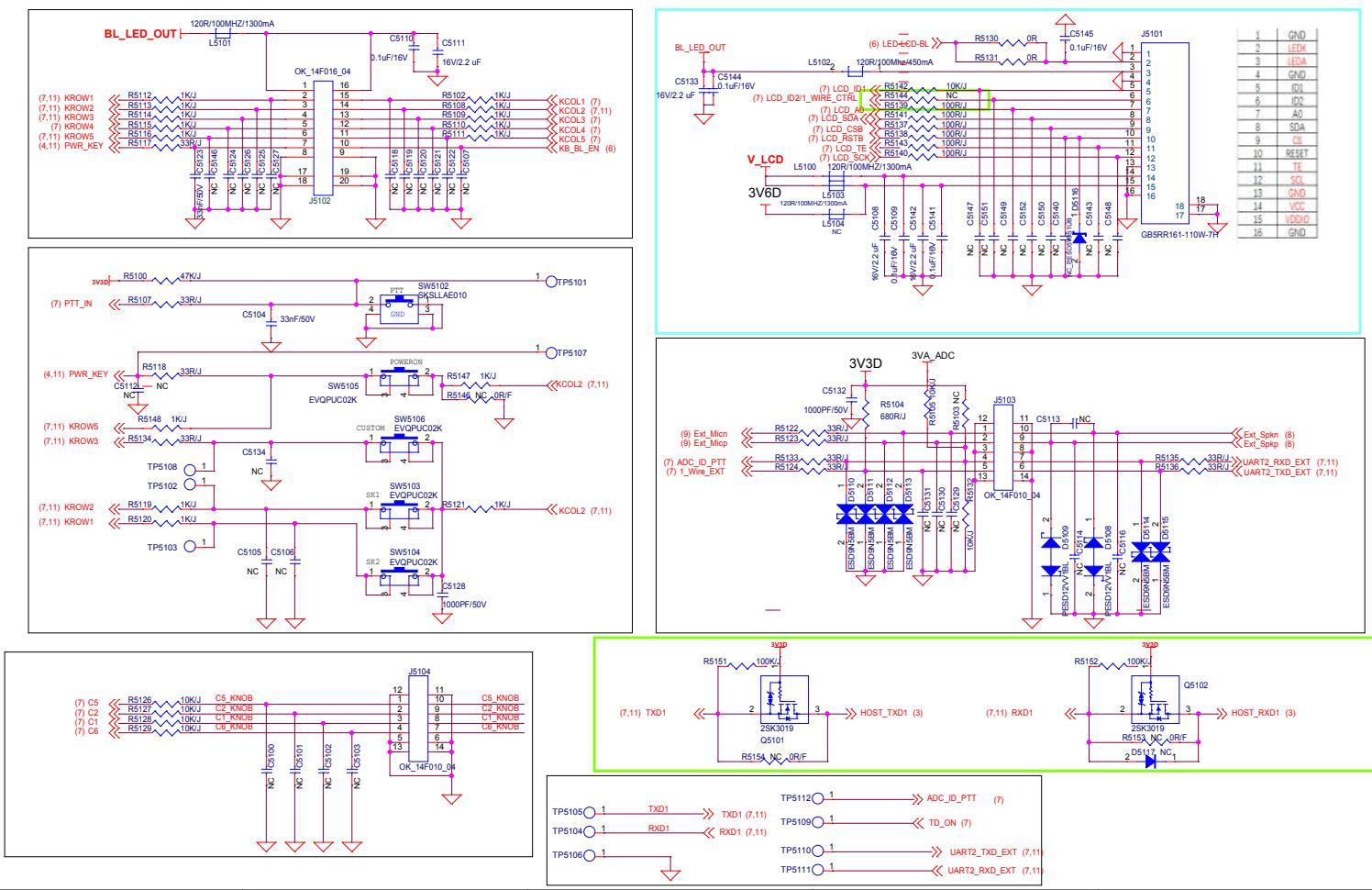


AMP

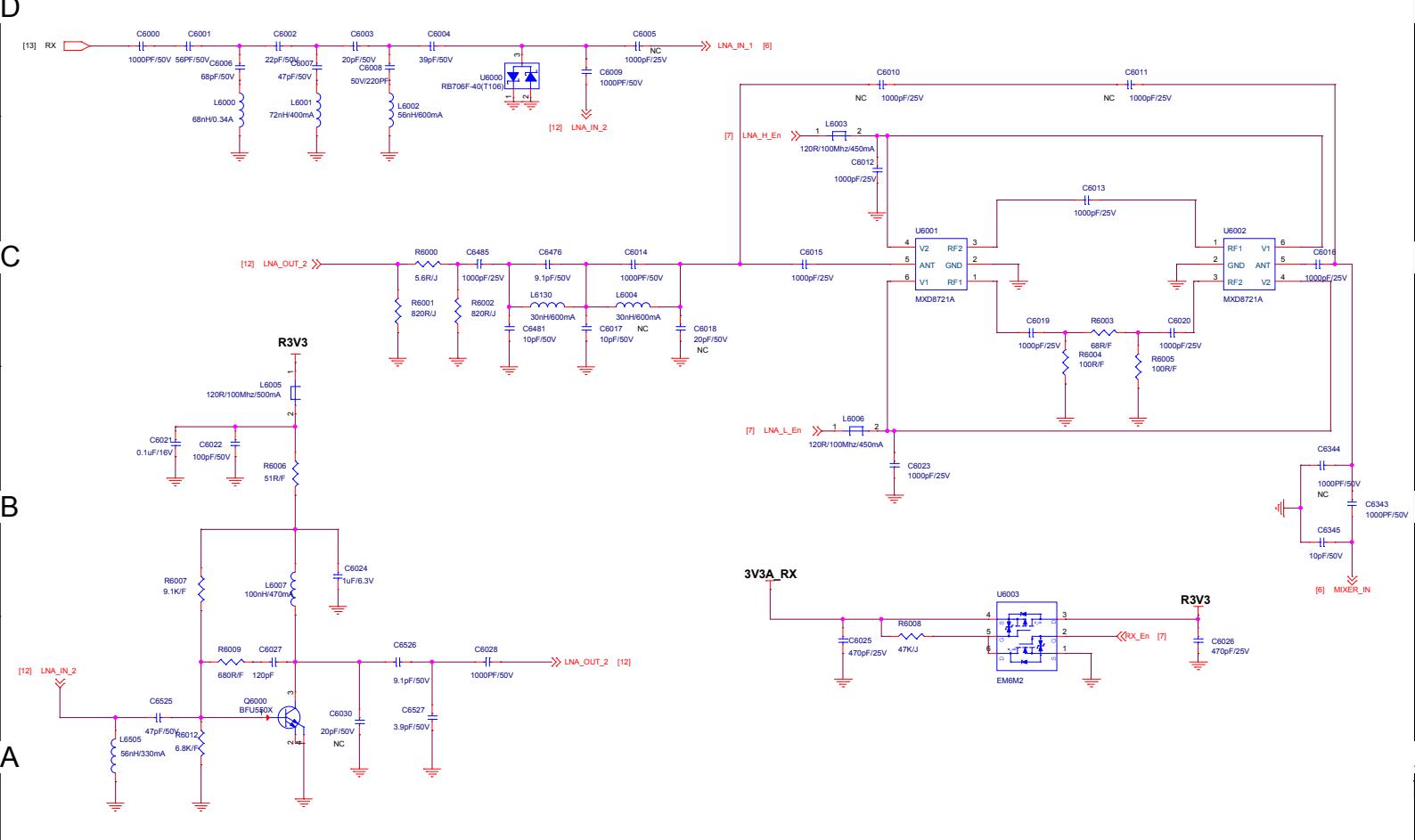




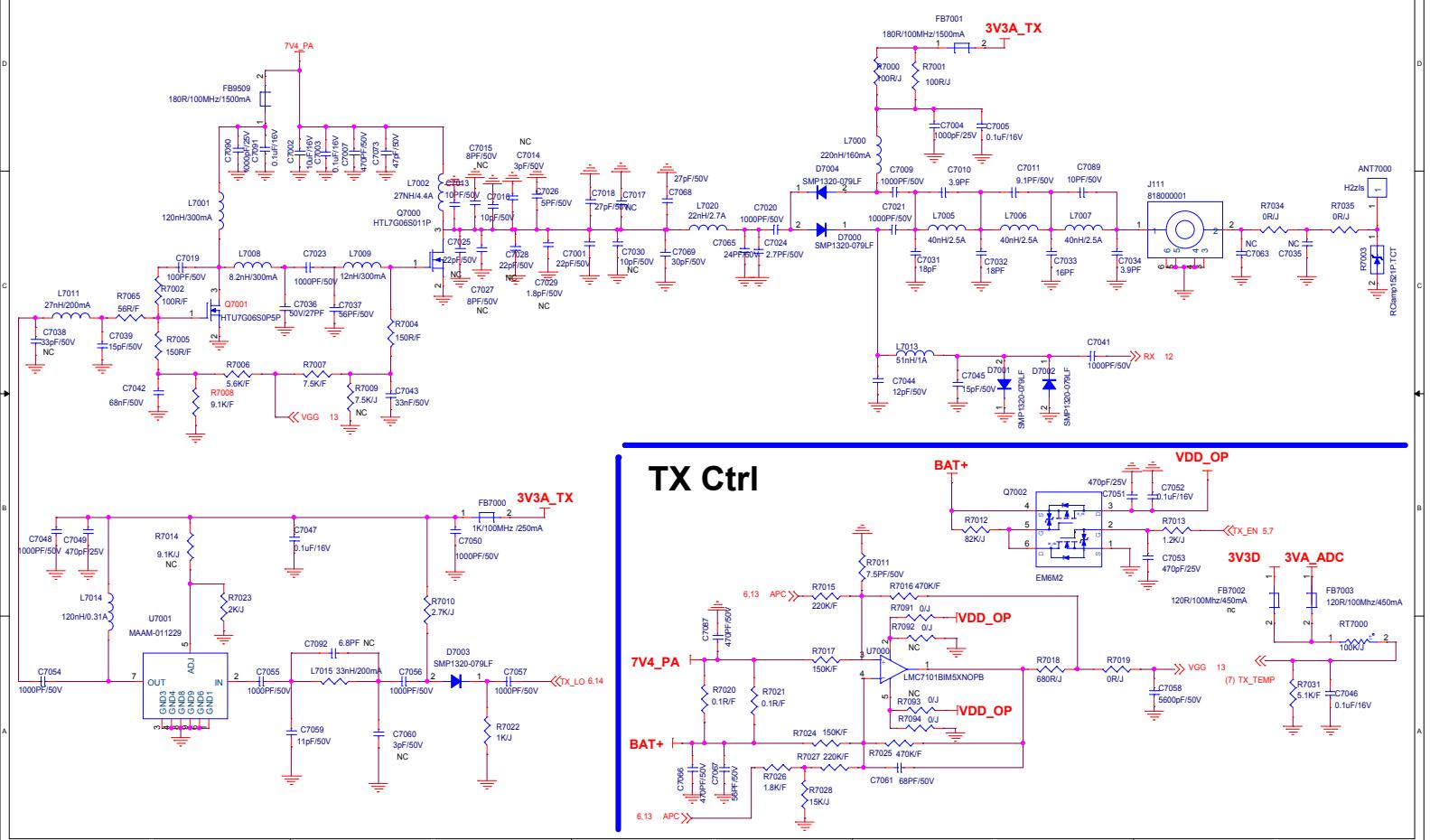
INTERFACE



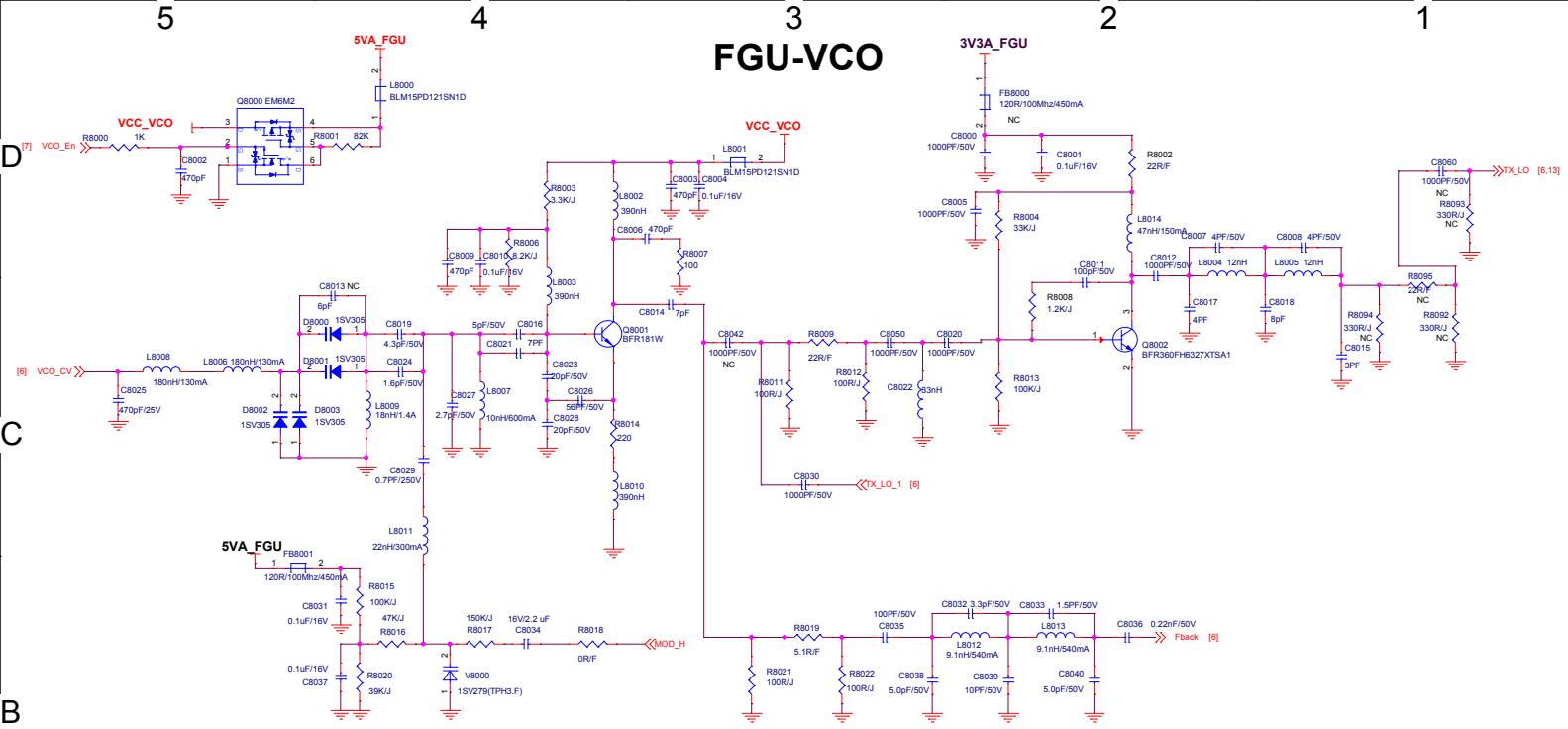
RX-FRONT-END



TX PATH



FGU-VCO



5 4 3 2 1

12. Part List

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
1	/	/	5001010080283B	Main board	428	D5112	B3B	50050800062223	ESD protection diode
2	ANT7000	B3A	5111000000151A	Grounding spring plate for key board	429	D5113	B3B	50050800062223	ESD protection diode
3	C1100	B2F	50020100001324	22pF	430	D5114	T4B	50050800062223	ESD protection diode
4	C1101	B1G	50020100060783	22μF	431	D5115	T4B	50050800062223	ESD protection diode
5	C1102	T2F	5002010000693	0.1μF	432	D5116	B3E	50050800000051	ESD protection diode
6	C1103	T2G	50020100061432	2700pF	433	D5117	T3G	50050200000018	Switching diode
7	C1104	B1G	50020100060783	22μF	434	D7000	B2B	50050400000008	Varistor
8	C1105	B1G	5002010000693	0.1μF	435	D7001	B2C	50050400000008	Varistor
9	C1106	B1G	50020100061432	2700pF	436	D7002	B2C	50050400000008	Varistor
10	C1107	B1F	50020100060517	1nF	437	D7003	B1E	50050400000008	Varistor
11	C1108	B2G	50020100000544	10μF	438	D7004	B2B	50050400000008	Varistor
12	C1109	B2G	50020100060550	2.2μF	439	D8000	B2H	50050300000009	Varactor diode
13	C1110	B2G	50020100001470	470pF	440	D8001	B2H	50050300000009	Varactor diode
14	C1111	B2G	50020100060550	2.2μF	441	D8002	B2H	50050300000009	Varactor diode
15	C1112	B2G	50020100001470	470pF	442	D8003	B2H	50050300000009	Varactor diode
16	C1113	T2G	50020100060550	2.2μF	443	D9500	T1D	50050800000071	ESD protection diode
17	C1114	T2G	50020100001470	470pF	444	FB2006	B2G	50040200000137	Ferrite bead
18	C1115	B2F	50020100060550	2.2μF	445	FB2008	B2E	50040200000137	Ferrite bead
19	C1116	B1F	50020100001470	470pF	446	FB2010	B1G	50040200000137	Ferrite bead
20	C1117	B2F	50020100060550	2.2μF	447	FB2015	B3H	50040200000137	Ferrite bead
21	C1118	B2F	50020100001470	470pF	448	FB2017	T3D	50040200000137	Ferrite bead
22	C1119	B1F	50020100060550	2.2μF	449	FB2088	T2E	50040200000137	Ferrite bead
23	C1120	B1F	50020100001470	470pF	450	FB2089	T4E	50040200000112	Ferrite bead
24	C1121	B2F	50020100060550	2.2μF	451	FB2105	T2G	50040200000137	Ferrite bead
25	C1122	B2F	50020100001470	470pF	452	FB2188	T1F	50040200000137	Ferrite bead
26	C1123	T1F	50020100060550	2.2μF	453	FB2206	B3G	50040200000146	Ferrite bead
27	C1124	T1F	50020100001470	470pF	454	FB2214	B3G	50040200000146	Ferrite bead
28	C1125	B2G	50020100060550	2.2μF	455	FB2565	T2C	50040200000137	Ferrite bead
29	C1126	B2G	50020100001470	470pF	456	FB3000	T3E	50040200000165	Ferrite bead
30	C1127	B2G	50020100060550	2.2μF	457	FB3001	T4E	50040200000165	Ferrite bead
31	C1128	B2G	50020100001470	470pF	458	FB3002	T4D	50040200000165	Ferrite bead

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
32	C1129	T2F	50020100060550	2.2μF	459	FB3003	T3D	50040200000165	Ferrite bead
33	C1130	T2F	50020100001470	470pF	460	FB7000	B1E	50040200000143	Ferrite bead
34	C1131	B2G	50020100060550	2.2μF	461	FB7001	B1B	50040200000156	180Ω
35	C1132	B2G	50020100001470	470pF	462	FB7002	T1C	50040200000137	Ferrite bead
36	C1133	B2G	50020100060550	2.2μF	463	FB7003	T1C	50040200000137	Ferrite bead
37	C1134	B2G	50020100001470	470pF	464	FB8000	B2G	50040200000137	Ferrite bead
38	C1135	B2F	50020100000693	0.1μF	465	FB8001	B1H	50040200000137	Ferrite bead
39	C1136	B2F	50020100001470	470pF	466	FB9509	B1D	50040200000156	180Ω
40	C1137	B1F	50020100001470	470pF	467	HD1101	T1C	5111000000437A	Heat sink
41	C1138	B1F	50020100000693	0.1μF	468	J111	B3A	51019900000061	Micro RF switch
42	C1139	B1F	50020100060783	22μF	469	J2100	B2E	51049900000232	Battery connector
43	C1140	B1G	50020100000693	0.1μF	470	J2101	B4G	51040900081501	USB connector
44	C1141	B1G	50020100001470	470pF	471	J5101	B3E	51040700081503	FPC connector
45	C1142	B2G	50020100000693	0.1μF	472	J5102	B1H	51040100081561	Board-to-board connector
46	C1143	B2G	50020100001470	470pF	473	J5103	B4B	51040100062244	Board-to-board connector
47	C1144	B2G	50020100000693	0.1μF	474	J5104	B2A	51040100062244	Board-to-board connector
48	C1145	B2G	50020100000544	10μF	475	J9504	T1C	5111000061430A	Antenna spring plate
49	C1146	B2F	50020100001470	470pF	476	J9505	T1C	5111000061430A	Antenna spring plate
50	C1147	B2F	50020100000693	0.1μF	477	L1100	B1G	50040100000831	4.7μH
51	C1148	B2F	50020100000441	100pF	478	L1101	B1G	50040100000831	4.7μH
52	C1153	B2F	50020100060550	2.2μF	479	L1102	B2F	50020100001324	22pF
53	C1154	B2F	50020100000544	10μF	480	L1103	B2F	50040200000156	180Ω
54	C1155	B2F	50020100062421	5pF	481	L1104	B1F	50040200000156	180Ω
55	C1156	B1F	50020100062421	5pF	482	L1105	B2F	50040200000146	Ferrite bead
56	C1157	B2F	50020100060524	100pF	483	L1106	B1F	50020100062409	1nF
57	C1158	B1F	50020100060517	1nF	484	L1107	B1F	50020100062409	1nF
58	C1159	T2F	50020100062445	4.7μF	485	L1108	B2F	50030100001005	0Ω
59	C1160	B3F	50020100000491	10pF	486	L1109	T2F	50040200000137	Ferrite bead
60	C1161	B3F	50020100000549	220pF	487	L2003	B3F	50040100000598	4.7μH
61	C1162	B2F	50020100000549	220pF	488	L2008	B4F	50040100000518	3.3μH
62	C1163	B2F	50020100061432	2700pF	489	L2521	T3E	50040100001380	2.2μH
63	C1164	B2F	50020100060517	1nF	490	L2559	B3F	50040100000598	4.7μH
64	C1165	B2H	50020100060509	0.012μF	491	L3004	T3C	50030100001005	0Ω
65	C1166	B2H	50020100000879	4pF	492	L3005	T3C	50030100001005	0Ω

No.	Ref No.	Location	Part No.	Description
66	C1167	B2H	50020100060539	0.22μF
67	C1168	B2H	50020100060329	1μF
68	C1169	B2H	50020100061426	0.027μF
69	C1170	B2H	50020100060539	0.22μF
70	C1171	B2H	50020100003137	470nF
71	C1172	B1H	50020100001935	0.1μF
72	C1173	B2F	50020100060517	1nF
73	C1174	B2H	50020100003137	470nF
74	C1175	B2F	50020100061378	0.22nF
75	C1176	B2F	50020100061378	0.22nF
76	C1177	T2F	50020100000693	0.1μF
77	C1178	T2F	50020100001470	470pF
78	C1201	T2F	50020100000693	0.1μF
79	C1204	B1G	50020100060524	100pF
80	C1205	T3F	50020100000693	0.1μF
81	C1207	T3F	50020100000693	0.1μF
82	C1209	B1G	50020100060524	100pF
83	C1215	T2G	50020100000693	0.1μF
84	C1216	T2G	50020100060517	1nF
85	C2004	T3F	50020100061513	4.7μF
86	C2005	T4F	50020100062445	4.7μF
87	C2006	T4E	50020100002464	47nF
88	C2007	T4E	50020100000635	22μF
89	C2008	T4E	50020100000693	0.1μF
90	C2009	T4E	50020100003390	10μF
91	C2015	B3F	50020100000693	0.1μF
92	C2016	B3F	50020100061513	4.7μF
93	C2017	B3F	50020100000693	0.1μF
94	C2018	B3F	50020100000635	22μF
95	C2019	B3F	50020100002464	47nF
96	C2020	B3F	50020100000544	10μF
97	C2021	B3F	50020100000693	0.1μF
98	C2022	B3F	50020100000544	10μF
99	C2023	B4F	50020100000544	10μF
100	C2024	B3F	50020100060516	56pF
101	C2058	B2E	50020100060550	2.2μF
102	C2062	B2E	50020100060550	2.2μF

No.	Ref No.	Location	Part No.	Description
493	L3019	B3D	50040200000146	Ferrite bead
494	L3021	T3E	50040100060194	4.7μH
495	L3022	T4E	50040100060194	4.7μH
496	L3023	T4D	50040100060194	4.7μH
497	L3024	T3D	50040100060194	4.7μH
498	L5100	B3D	50040200000146	Ferrite bead
499	L5101	B1G	50040200000146	Ferrite bead
500	L5102	B3E	50040200000137	Ferrite bead
501	L5103	B3E	50040200000146	Ferrite bead
502	L5104	B3E	50040200000146	Ferrite bead
503	L6000	B2B	50040100064784	68nH
504	L6001	B2C	50040100092091	72nH
505	L6002	B3C	50040100064783	56nH
506	L6003	B3D	50040200000137	Ferrite bead
507	L6004	B3C	50040100064778	30nH
508	L6005	B2C	50040200000139	120Ω
509	L6006	B2D	50040200000137	Ferrite bead
510	L6007	B3C	50040100064785	100nH
511	L6130	B3C	50040100064778	30nH
512	L6505	B3B	50040100064763	56nH
513	L7000	B2B	50040100082020	220nH
514	L7001	B1D	50040100064786	120nH
515	L7002	B2C	50040300060282	27nH
516	L7005	B2B	50040300060542	40nH
517	L7006	B2B	50040300060542	40nH
518	L7007	B3B	50040300060542	40nH
519	L7008	B1D	50040100000490	8.2nH
520	L7009	B1D	50040100000475	12nH
521	L7011	B1E	50040100000479	27nH
522	L7013	B2B	50040100092021	51nH
523	L7014	B1E	50040100064767	120nH
524	L7015	B1E	50040100000481	33nH
525	L7020	B1B	50040300060563	22nH
526	L8000	B3H	50040200000146	Ferrite bead
527	L8001	B3H	50040200000146	Ferrite bead
528	L8002	B3H	50040100000916	390nH
529	L8003	B3H	50040100000916	390nH

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
103	C2064	B1G	50020100060550	2.2µF	530	L8004	B2H	50040100000475	12nH
104	C2066	B1G	50020100060550	2.2µF	531	L8005	B2H	50040100000475	12nH
105	C2071	T2E	50020100060550	2.2µF	532	L8006	B2H	50040100000491	180nH
106	C2072	T2E	50020100060550	2.2µF	533	L8007	B3H	50040100061677	10nH
107	C2074	T2E	50020100000693	0.1µF	534	L8008	B2H	50040100000491	180nH
108	C2077	B4F	50020100000635	22µF	535	L8009	B2H	50040100000727	18nH
109	C2078	B3H	50020100060550	2.2µF	536	L8010	B2H	50040100000916	390nH
110	C2079	B3H	50020100060550	2.2µF	537	L8011	B2H	50040100000421	22nH
111	C2081	T3D	50020100060550	2.2µF	538	L8012	B2H	50040100000890	9.1nH
112	C2082	T2F	50020100060550	2.2µF	539	L8013	B2H	50040100000890	9.1nH
113	C2083	T2F	50020100000693	0.1µF	540	L8014	B2G	50040100064762	47nH
114	C2085	T1F	50020100060550	2.2µF	541	L9500	T1D	50040100000646	5.6nH
115	C2088	T1F	50020100000693	0.1µF	542	L9501	T1D	50040100000646	5.6nH
116	C2102	B3G	50020100000693	0.1µF	543	Q1201	T4B	50070300061987	N-MOSFET
117	C2114	T3F	50020100001190	33pF	544	Q1202	T2E	50070300061987	N-MOSFET
118	C2115	T3F	50020100001190	33pF	545	Q1203	T2E	50070300061987	N-MOSFET
119	C2116	B3E	50020100001470	470pF	546	Q2115	T3G	50070400060943	P-MOSFET
120	C2125	B2E	50020100000693	0.1µF	547	Q2118	T3G	50070400060943	P-MOSFET
121	C2130	B1G	50020100000693	0.1µF	548	Q3017	T3E	50060300000003	Bias resistor transistor
122	C2138	T2E	50020100000693	0.1µF	549	Q5101	T3H	50070300061987	N-MOSFET
123	C2141	T3D	50020100060550	2.2µF	550	Q5102	T3G	50070300061987	N-MOSFET
124	C2142	T3D	50020100000693	0.1µF	551	Q6000	B3C	50060100000015	NPN transistor
125	C2145	B3H	50020100000693	0.1µF	552	Q7000	B1C	50070500082002	PA MOSFET
126	C2195	B4F	50020100000544	10µF	553	Q7001	B1E	50070500082009	PA MOSFET
127	C2331	T3F	50020100060532	4.7µF	554	Q7002	T2D	50060400000002	Compound transistor
128	C2332	T2C	50020100060550	2.2µF	555	Q8000	B3H	50060400000002	Compound transistor
129	C2333	T2C	50020100000693	0.1µF	556	Q8001	B3H	50060100000174	NPN transistor
130	C2338	T2C	50020100060550	2.2µF	557	Q8002	B2H	50060100000019	NPN transistor
131	C2339	T3G	50020100000693	0.1µF	558	R1060	B2G	50030100000297	0Ω
132	C2353	T3F	50020100060550	2.2µF	559	R1061	B3F	50030100000297	0Ω
133	C2569	T3F	50020100000693	0.1µF	560	R1100	T2F	50030100000012	47kΩ
134	C2618	T4E	50020100003390	10µF	561	R1101	T2G	50030100000012	47kΩ
135	C2619	T3F	50020100003390	10µF	562	R1102	B2F	50030100001493	33Ω
136	C2620	T4E	50020100003390	10µF	563	R1103	B1G	50030100001582	10kΩ
137	C2656	B3G	50020100002463	270pF	564	R1104	B1G	50030100001582	10kΩ

No.	Ref No.	Location	Part No.	Description
138	C2742	B3H	50020100000693	0.1µF
139	C2774	T4F	50020100001190	33pF
140	C2777	B1G	50020100000693	0.1µF
141	C2886	T4F	50020100001190	33pF
142	C2889	B4F	50020100000635	22µF
143	C2981	B3H	50020100061513	4.7µF
144	C3001	T3E	50020100003479	3.3nF
145	C3002	T3F	50020100003479	3.3nF
146	C3003	T3F	50020100000693	0.1µF
147	C3004	T3F	50020100003479	3.3nF
148	C3005	T3F	50020100003479	3.3nF
149	C3006	B3D	50020100000635	22µF
150	C3007	T3E	50020100004095	0.10µF
151	C3008	T3E	50020100003398	1000pF
152	C3010	T3D	50020100004095	0.10µF
153	C3011	T3D	50020100003398	1000pF
154	C3013	T3D	50020100060550	2.2µF
155	C3014	T3D	50020100060550	2.2µF
156	C3015	T3D	50020100000693	0.1µF
157	C3016	T3E	50020100000693	0.1µF
158	C3017	T3D	50020100000693	0.1µF
159	C3018	T3D	50020100000693	0.1µF
160	C3019	T3E	50020100000845	0.01µF
161	C3020	T3E	50020100060539	0.22µF
162	C3021	T3E	50020100060539	0.22µF
163	C3022	T3D	50020100060539	0.22µF
164	C3023	T3D	50020100060539	0.22µF
165	C3024	B4D	50020100060524	100pF
166	C3025	B4D	50020100060524	100pF
167	C3026	B3D	50020100061390	330pF
168	C3027	B4D	50020100061390	330pF
169	C3029	B4D	50020100060524	100pF
170	C3030	B3D	50020100060524	100pF
171	C3031	B3D	50020100061390	330pF
172	C3032	B3D	50020100061390	330pF
173	C3034	B3D	50020100000693	0.1µF
174	C3035	T3D	50020100000559	1µF

No.	Ref No.	Location	Part No.	Description
565	R1105	T2F	50030100003859	220kΩ
566	R1106	T2G	50030100003859	220kΩ
567	R1107	B2F	50030100000297	0Ω
568	R1108	T2F	50030100000699	10Ω
569	R1109	B2F	50030100001005	0Ω
570	R1110	B2F	50030100001005	0Ω
571	R1111	T2A	50030100000729	47Ω
572	R1112	T2G	50030100001582	10kΩ
573	R1113	B2H	5003010000220	22kΩ
574	R1114	B2H	50030100001917	100kΩ
575	R1115	B2H	50030100001783	33Ω
576	R1116	B2H	50030100001783	33Ω
577	R1117	B2H	5003010000699	10Ω
578	R1118	B2H	50030100001783	33Ω
579	R1119	B2F	50030100000297	0Ω
580	R1120	T2F	50030100001005	0Ω
581	R1121	T1G	50030100000297	0Ω
582	R1201	T2F	50030100001917	100kΩ
583	R1205	T2G	50030100001917	100kΩ
584	R1209	T2F	50030100001917	100kΩ
585	R1212	T3F	50030100001005	0Ω
586	R1213	T3F	50030100001005	0Ω
587	R1216	B2F	50030100001961	100Ω
588	R1217	B1F	50030100001917	100kΩ
589	R1218	B1F	50030100001917	100kΩ
590	R1219	T2G	50030100000270	470kΩ
591	R1220	T2F	50030100000916	2.2kΩ
592	R1221	T2F	50030100000916	2.2kΩ
593	R1222	T3G	50030100001917	100kΩ
594	R1223	T3G	50030100003859	220kΩ
595	R1229	T2F	50030100001961	100Ω
596	R1251	T2F	50030100001917	100kΩ
597	R1288	B1F	50030100001917	100kΩ
598	R1289	B1F	50030100001917	100kΩ
599	R1290	T3B	50030100000297	0Ω
600	R1291	T3B	5003010000012	47kΩ
601	R1292	T3B	50030100001917	100kΩ

No.	Ref No.	Location	Part No.	Description
175	C3036	T3D	50020100000441	100pF
176	C3037	T3D	50020100000559	1μF
177	C3038	T3D	50020100002463	270pF
178	C3039	T3D	50020100002463	270pF
179	C3040	T3D	5002010000693	0.1μF
180	C3041	T3D	5002010000693	0.1μF
181	C3042	T3D	50020100002463	270pF
182	C3043	T3C	5002010000441	100pF
183	C3044	T3C	50020100002463	270pF
184	C3045	T3C	50020100002463	270pF
185	C3046	T4C	50020100002463	270pF
186	C3047	T4C	50020100002463	270pF
187	C3048	T4C	50020100002463	270pF
188	C3051	T3D	5002010000693	0.1μF
189	C3052	T3D	50020100002463	270pF
190	C3055	B3D	50030100001582	10kΩ
191	C3056	B3D	50030100001582	10kΩ
192	C3057	B3D	50030100001582	10kΩ
193	C3058	B3D	50030100001582	10kΩ
194	C3091	T3D	5002010000693	0.1μF
195	C5100	T2A	50020100060517	1nF
196	C5101	T2A	50020100060517	1nF
197	C5102	T2A	50020100060517	1nF
198	C5103	T2A	50020100060517	1nF
199	C5104	B1C	5002010003872	33nF
200	C5105	B1E	50020100060517	1nF
201	C5106	B1F	50020100060517	1nF
202	C5107	T1H	50020100060517	1nF
203	C5108	B3D	50020100060550	2.2μF
204	C5109	B3D	5002010000693	0.1μF
205	C5110	B1H	5002010000693	0.1μF
206	C5111	B1G	50020100060550	2.2μF
207	C5112	B2A	50020100060517	1nF
208	C5113	T4C	50020100002463	270pF
209	C5114	T4C	50020100002463	270pF
210	C5116	T4C	50020100002463	270pF
211	C5118	T1H	50020100060517	1nF

No.	Ref No.	Location	Part No.	Description
602	R1293	T3B	50030100000298	10Ω
603	R1294	T3B	5003010000012	47kΩ
604	R1295	T2E	50030100001917	100kΩ
605	R1296	T2E	50030100001917	100kΩ
606	R1297	T2E	50030100000297	0Ω
607	R1298	T2E	50030100000297	0Ω
608	R1299	T3G	5003010000012	47kΩ
609	R2011	T4F	50030100002133	30.1kΩ
610	R2013	T4F	50030100001493	33Ω
611	R2021	T2C	50030100001917	100kΩ
612	R2023	B3F	50030100000788	100kΩ
613	R2025	B3F	50030100001988	27kΩ
614	R2094	B3H	50030100001146	0Ω
615	R2101	B3G	50030100000699	10Ω
616	R2102	B3G	50030100000699	10Ω
617	R2105	B3H	50030100001388	5.1kΩ
618	R2106	B3G	50030100001388	5.1kΩ
619	R2115	T3G	50030100001917	100kΩ
620	R2116	T2F	50030100001582	10kΩ
621	R2120	T3G	50030100001917	100kΩ
622	R2121	T3G	50030100001582	10kΩ
623	R2123	T3G	50030100001280	560kΩ
624	R2217	T3F	50030100001907	1MΩ
625	R2220	T3F	50030100002097	820kΩ
626	R2223	T3F	50030100000867	0Ω
627	R2224	T4F	50030100000867	0Ω
628	R2282	T3G	50030100001917	100kΩ
629	R2321	B2E	50030100001917	100kΩ
630	R2323	T3D	50030100001917	100kΩ
631	R2327	B3H	50030100001917	100kΩ
632	R2334	T3F	50030100000867	0Ω
633	R2466	T4F	50030100000297	0Ω
634	R2534	T4F	50030100000273	5.1kΩ
635	R2541	T4F	50030100000726	390Ω
636	R2544	B3H	50030100000867	0Ω
637	R2556	T3G	50030100001907	1MΩ
638	R2588	B3G	50030100000699	10Ω

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
212	C5119	T1H	50020100060517	1nF	639	R2589	B3G	50030100000699	10Ω
213	C5120	T1H	50020100060517	1nF	640	R2769	T2C	50030100000788	100kΩ
214	C5121	T1H	50020100060517	1nF	641	R2777	T3G	50030100001917	100kΩ
215	C5122	T1H	50020100060517	1nF	642	R2788	T3F	50030100000699	10Ω
216	C5123	B1H	50020100003872	33nF	643	R3000	T3D	50030100000297	0Ω
217	C5124	B1H	50020100060517	1nF	644	R3001	T3F	50030100000297	0Ω
218	C5125	B1H	50020100060517	1nF	645	R3002	T3F	50030100000297	0Ω
219	C5126	B1H	50020100060517	1nF	646	R3003	T3F	50030100000845	1.5kΩ
220	C5127	B1H	50020100060517	1nF	647	R3004	T3F	50030100000845	1.5kΩ
221	C5128	B1F	50020100060517	1nF	648	R3005	T3F	50030100000297	0Ω
222	C5129	B3B	50020100060517	1nF	649	R3006	T3F	50030100000845	1.5kΩ
223	C5130	B3B	50020100060517	1nF	650	R3007	T3F	50030100000845	1.5kΩ
224	C5131	B3B	50020100060517	1nF	651	R3015	T3D	50030100000217	3.3kΩ
225	C5132	B3B	50020100060517	1nF	652	R3016	T3C	50030100000217	3.3kΩ
226	C5133	B3E	50020100060550	2.2μF	653	R3017	T3D	50030100000217	3.3kΩ
227	C5134	B1F	50020100060517	1nF	654	R3018	T3C	50030100000217	3.3kΩ
228	C5140	B3E	50020100060524	100pF	655	R3053	T3D	50030100001493	33Ω
229	C5141	B3E	50020100000693	0.1μF	656	R3054	T3D	50030100001493	33Ω
230	C5142	B3E	50020100060550	2.2μF	657	R3055	T3D	50030100000297	0Ω
231	C5143	B3E	50020100060524	100pF	658	R3086	B3D	50020100001629	0.47μF
232	C5144	B3E	50020100000693	0.1μF	659	R3087	B3D	50020100001629	0.47μF
233	C5145	B3E	50020100000693	0.1μF	660	R3088	B3D	50020100001629	0.47μF
234	C5146	B1H	50020100060517	1nF	661	R3089	B3D	50020100001629	0.47μF
235	C5147	B3E	50020100060524	100pF	662	R3093	T3E	50030100001511	1kΩ
236	C5148	B3E	50020100060524	100pF	663	R3100	T3E	50030100000012	47kΩ
237	C5149	B3E	50020100060524	100pF	664	R3102	B4D	50030100000298	10Ω
238	C5150	B3E	50020100060524	100pF	665	R3103	T3D	50030100001721	75kΩ
239	C5151	B3E	50020100060524	100pF	666	R3104	B4D	50030100000298	10Ω
240	C5152	B3E	50020100060524	100pF	667	R3107	T3E	50030100000012	47kΩ
241	C6000	B2C	50020100060517	1nF	668	R3108	T3D	50030100000932	27kΩ
242	C6001	B2B	50020100060516	56pF	669	R3109	T3E	50030100000012	47kΩ
243	C6002	B2B	50020100001310	27pF	670	R3111	T3D	50030100000788	100kΩ
244	C6003	B3B	50020100001310	27pF	671	R3113	T3D	50030100001210	20kΩ
245	C6004	B3B	50020100060517	1nF	672	R3140	T3E	50030100000788	100kΩ
246	C6005	B3B	50020100000834	1000pF	673	R3144	T3D	50030100001511	1kΩ
247	C6006	B2B	50020100061369	68pF	674	R3145	T3D	50030100001582	10kΩ
248	C6007	B3B	50020100000731	47pF	675	R3147	B4D	50030100000298	10Ω

No.	Ref No.	Location	Part No.	Description
249	C6008	B3B	50020100060529	220pF
250	C6009	B3B	50020100060517	1nF
251	C6010	B3C	50020100000834	1000pF
252	C6011	B2C	50020100000834	1000pF
253	C6012	B3D	50020100000834	1000pF
254	C6013	B2C	50020100000834	1000pF
255	C6014	B3C	50020100060517	1nF
256	C6015	B3C	50020100000834	1000pF
257	C6016	B2C	50020100000834	1000pF
258	C6017	B3C	5002010000491	10pF
259	C6018	B3C	50020100001667	20pF
260	C6019	B2C	50020100000834	1000pF
261	C6020	B2C	50020100000834	1000pF
262	C6021	B2C	5002010000693	0.1μF
263	C6022	B3C	50020100000441	100pF
264	C6023	B2D	50020100000834	1000pF
265	C6024	B3C	50020100001279	1μF
266	C6025	B2C	50020100001470	470pF
267	C6026	B2C	50020100001470	470pF
268	C6027	B3B	50020100001469	47pF
269	C6028	B3C	50020100060517	1nF
270	C6030	B3C	50020100001667	20pF
271	C6343	B2C	50020100003398	1000pF
272	C6344	B2C	50020100003398	1000pF
273	C6345	B2D	50020100002028	12pF
274	C6476	B3C	50020100001104	9.1pF
275	C6481	B3C	50020100000491	10pF
276	C6485	B3C	50020100000834	1000pF
277	C6525	B3B	50020100000731	47pF
278	C6526	B3C	50020100001104	9.1pF
279	C6527	B3C	50020100001719	33pF
280	C7001	B1C	50020100001324	22pF
281	C7002	B1D	50020100003390	10μF
282	C7003	B2D	50020100000693	0.1μF
283	C7004	B2B	50020100000834	1000pF
284	C7005	B2B	50020100000693	0.1μF
285	C7007	B1D	50020100060522	470pF

No.	Ref No.	Location	Part No.	Description
676	R3148	B3D	50030100000298	10Ω
677	R3150	B3D	50030100000297	0Ω
678	R3151	T3F	50030100000297	0Ω
679	R3152	B3D	50030100000297	0Ω
680	R5100	B1C	50030100000012	47kΩ
681	R5102	T1H	50030100001511	1kΩ
682	R5103	B3B	50030100001582	10kΩ
683	R5104	B3B	50030100000276	680Ω
684	R5105	B3B	50030100001582	10kΩ
685	R5107	B1C	50030100001493	33Ω
686	R5108	T1H	50030100001511	1kΩ
687	R5109	T1H	50030100001511	1kΩ
688	R5110	T1H	50030100001511	1kΩ
689	R5111	T1H	50030100001511	1kΩ
690	R5112	B1H	50030100001511	1kΩ
691	R5113	B1H	50030100001511	1kΩ
692	R5114	B1H	50030100001511	1kΩ
693	R5115	B1H	50030100001511	1kΩ
694	R5116	B1H	50030100001511	1kΩ
695	R5117	B1H	50030100001493	33Ω
696	R5118	B2A	50030100001493	33Ω
697	R5119	B1E	50030100001511	1kΩ
698	R5120	B1F	50030100001511	1kΩ
699	R5121	B1F	50030100001511	1kΩ
700	R5122	B3B	50030100001493	33Ω
701	R5123	B3B	50030100001493	33Ω
702	R5124	B4B	50030100001493	33Ω
703	R5126	T2A	50030100001582	10kΩ
704	R5127	T2A	50030100001582	10kΩ
705	R5128	T2A	50030100001582	10kΩ
706	R5129	T2A	50030100001582	10kΩ
707	R5130	B3E	50030100001005	0Ω
708	R5131	B3E	50030100001005	0Ω
709	R5132	B3B	50030100001582	10kΩ
710	R5133	B3B	50030100001493	33Ω
711	R5134	B1F	50030100001493	33Ω
712	R5135	T4B	50030100001493	33Ω

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
286	C7009	B2B	50020100060517	1nF	713	R5136	T4B	50030100001493	33Ω
287	C7010	B2B	50020100000730	3.9pF	714	R5137	B3E	50030100001961	100Ω
288	C7011	B2B	50020100001104	9.1pF	715	R5138	B3E	50030100001961	100Ω
289	C7013	B1C	50020100001719	33pF	716	R5139	B3E	50030100001961	100Ω
290	C7014	B1C	50020100062311	3pF	717	R5140	B3E	50030100001961	100Ω
291	C7015	B1C	50020100062462	8pF	718	R5141	B3E	50030100001961	100Ω
292	C7016	B1C	50020100000491	10pF	719	R5142	B3E	50030100001582	10kΩ
293	C7017	B1C	50020100062311	3pF	720	R5143	B3E	50030100001961	100Ω
294	C7018	B1B	50020100001310	27pF	721	R5144	B3E	50030100001582	10kΩ
295	C7019	B1D	50020100060524	100pF	722	R5146	B2A	50030100000297	0Ω
296	C7020	B2B	50020100060517	1nF	723	R5147	B2A	50030100001511	1kΩ
297	C7021	B2B	50020100060517	1nF	724	R5148	B2A	50030100001511	1kΩ
298	C7023	B1D	50020100060524	100pF	725	R5151	T3H	50030100001917	100kΩ
299	C7024	B2B	50020100000625	2.7pF	726	R5152	T3G	50030100001917	100kΩ
300	C7025	B1C	50020100001324	22pF	727	R5153	T3G	50030100000297	0Ω
301	C7026	B1C	50020100062421	5pF	728	R5154	T3H	50030100000297	0Ω
302	C7027	B2C	50020100062462	8pF	729	R6000	B3C	50030100001592	5.6Ω
303	C7028	B2C	50020100001324	22pF	730	R6001	B3C	50030100001294	820Ω
304	C7029	B2C	50020100001447	1.8pF	731	R6002	B3C	50030100001294	820Ω
305	C7030	B1C	50020100000491	10pF	732	R6003	B2D	50030100001788	68Ω
306	C7031	B2B	50020100001323	18pF	733	R6004	B2D	50030100000469	100Ω
307	C7032	B2B	50020100001323	18pF	734	R6005	B2D	50030100000469	100Ω
308	C7033	B3B	50020100060519	16pF	735	R6006	B3C	50030100000604	51Ω
309	C7034	B3B	50020100000730	3.9pF	736	R6007	B3C	50030100001541	9.1kΩ
310	C7035	B3B	50020100000625	2.7pF	737	R6008	B2C	50030100000012	47kΩ
311	C7036	B1D	50020100001310	27pF	738	R6009	B3B	50030100000269	430Ω
312	C7037	B1D	50020100001002	39pF	739	R6012	B3B	50030100000170	6.8kΩ
313	C7038	B1E	50020100061454	33pF	740	R7000	B1B	50030100001958	100Ω
314	C7039	B1E	50020100000004	15pF	741	R7001	B1B	50030100001958	100Ω
315	C7041	B2C	50020100060517	1nF	742	R7002	B1E	50030100000702	100Ω
316	C7042	B1D	50020100062398	68nF	743	R7003	B3B	50050800000057	ESD protection diode
317	C7043	B1D	50020100003872	33nF	744	R7004	B1D	50030100000954	150Ω
318	C7044	B2B	50020100000227	12pF	745	R7005	B1E	50030100000954	150Ω
319	C7045	B2B	50020100000004	15pF	746	R7006	B1D	50030100001537	5.6kΩ
320	C7046	T1C	50020100000693	0.1μF	747	R7007	B1D	50030100000896	7.5kΩ
321	C7047	B1E	50020100000693	0.1μF	748	R7008	B1D	50030100001425	9.1kΩ

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
322	C7048	B1E	50020100003398	1000pF	749	R7009	B1D	50030100000896	7.5kΩ
323	C7049	B1E	50020100001470	470pF	750	R7010	B1E	50030100001781	2.7kΩ
324	C7050	B1E	50020100003398	1000pF	751	R7011	T2D	50020100000886	7.5pF
325	C7051	T3D	50020100001470	470pF	752	R7012	T2D	50030100001851	82kΩ
326	C7052	T3D	50020100000693	0.1μF	753	R7013	T2D	50030100000067	1.2kΩ
327	C7053	T2D	50020100001470	470pF	754	R7014	B1E	50030100001425	9.1kΩ
328	C7054	B1E	50020100060517	1nF	755	R7015	T2D	50030100001525	220kΩ
329	C7055	B1E	50020100060517	1nF	756	R7016	T3D	50030100000270	470kΩ
330	C7056	B1E	50020100060517	1nF	757	R7017	T2D	50030100001939	150kΩ
331	C7057	B1E	50020100060517	1nF	758	R7018	T3D	50030100000276	680Ω
332	C7058	T3D	50020100061393	5600pF	759	R7019	T3D	50030100001005	0Ω
333	C7059	B1E	50020100001104	9.1pF	760	R7020	T2D	50030100000979	0.1Ω
334	C7060	B1E	50020100001104	9.1pF	761	R7021	T2D	50030100000979	0.1Ω
335	C7061	T2D	50020100061369	68pF	762	R7022	B1E	50030100000570	1kΩ
336	C7063	B3B	50020100000625	2.7pF	763	R7023	B1E	50030100000498	2kΩ
337	C7065	B2B	50020100060511	24pF	764	R7024	T2D	50030100001939	150kΩ
338	C7066	T2D	50020100060522	470pF	765	R7025	T2D	50030100000270	470kΩ
339	C7067	T2D	50020100060516	56pF	766	R7026	T2D	50030100001032	1.8kΩ
340	C7068	B1C	50020100001310	27pF	767	R7027	T2D	50030100001525	220kΩ
341	C7069	B1B	50020100060506	30pF	768	R7028	T2D	50030100000179	15kΩ
342	C7073	B2D	50020100001469	47pF	769	R7031	T1C	50030100001530	3.3kΩ
343	C7087	T2D	50020100060522	470pF	770	R7034	B3B	50030100001005	0Ω
344	C7089	B3B	50020100000491	10pF	771	R7035	B3B	50030100001005	0Ω
345	C7090	B1D	50020100000834	1000pF	772	R7065	B1E	50030100001018	56Ω
346	C7091	B1D	5002010000693	0.1μF	773	R7091	T3C	50030100000867	0Ω
347	C7092	B1E	50020100000625	2.7pF	774	R7092	T3C	50030100000867	0Ω
348	C8000	B2G	50020100060517	1nF	775	R7093	T3D	50030100000867	0Ω
349	C8001	B2G	50020100000693	0.1μF	776	R7094	T3D	50030100000867	0Ω
350	C8002	B3H	50020100001470	470pF	777	R8000	B3H	50030100001511	1kΩ
351	C8003	B3H	50020100001470	470pF	778	R8001	B3H	50030100001851	82kΩ
352	C8004	B3H	50020100000693	0.1μF	779	R8002	B2G	50030100000857	330Ω
353	C8005	B2G	50020100060517	1nF	780	R8003	B3H	50030100000217	3.3kΩ
354	C8006	B3G	50020100001470	470pF	781	R8004	B2G	50030100000522	33kΩ
355	C8007	B2H	50020100000313	4pF	782	R8006	B3H	50030100000614	8.2kΩ
356	C8008	B2H	50020100000313	4pF	783	R8007	B3G	50030100001961	100Ω
357	C8009	B3H	50020100001470	470pF	784	R8008	B2G	50030100000067	1.2kΩ
358	C8010	B3H	5002010000693	0.1μF	785	R8009	B2H	50030100000857	330Ω

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
359	C8011	B2G	50020100000441	100pF	786	R8011	B2G	50030100001961	100Ω
360	C8012	B2H	50020100060517	1nF	787	R8012	B2G	50030100001961	100Ω
361	C8013	B2H	50020100000315	6pF	788	R8013	B2G	50030100001917	100kΩ
362	C8014	B3H	5002010000096	7pF	789	R8014	B2H	50030100001940	220Ω
363	C8015	B1H	50020100002050	3pF	790	R8015	B2H	50030100001917	100kΩ
364	C8016	B3H	50020100002182	5pF	791	R8016	B2H	50030100000012	47kΩ
365	C8017	B2H	50020100000313	4pF	792	R8017	B2H	50030100001467	150kΩ
366	C8018	B2H	50020100001633	8pF	793	R8018	B2H	50030100000297	0Ω
367	C8019	B2H	50020100001003	4.3pF	794	R8019	B2H	5003010000153	5.1Ω
368	C8020	B2H	50020100060517	1nF	795	R8020	B2H	50030100000773	39kΩ
369	C8021	B3H	50020100002077	7pF	796	R8021	B2H	50030100001961	100Ω
370	C8022	B2H	50040100000481	33nH	797	R8022	B2H	50030100001961	100Ω
371	C8023	B3H	50020100061574	20pF	798	R8092	B1G	50030100005367	22Ω
372	C8024	B2H	5002010000232	1.6pF	799	R8093	B2F	50030100005367	22Ω
373	C8025	B2H	50020100001470	470pF	800	R8094	B1H	50030100005367	22Ω
374	C8026	B2H	50020100060516	56pF	801	R8095	B2G	50030100000857	330Ω
375	C8027	B3H	50020100000625	2.7pF	802	R9501	T1E	50030100000297	0Ω
376	C8028	B2H	50020100061574	20pF	803	R9527	T1D	50030100000297	0Ω
377	C8029	B2H	50020100061234	0.7pF	804	R9528	T1D	50030100001005	0Ω
378	C8030	B2G	50020100060517	1nF	805	R9529	T1D	50030100001005	0Ω
379	C8031	B2H	50020100000693	0.1μF	806	R9543	T2F	50030100001493	33Ω
380	C8032	B2H	50020100000877	3.3pF	807	R9544	T1F	50030100001493	33Ω
381	C8033	B2H	50020100001445	1.5pF	808	R9579	T2F	50030100001582	10kΩ
382	C8034	B2H	50020100060550	2.2μF	809	R9580	T1F	50030100001582	10kΩ
383	C8035	B2H	50020100060524	100pF	810	R9581	T1D	50030100000297	0Ω
384	C8036	B2H	50020100061378	0.22nF	811	R9582	B3H	50030100001917	100kΩ
385	C8037	B2H	50020100000693	0.1μF	812	RT7000	T1C	50030300000001	100kΩ
386	C8038	B2H	50020100002127	5.0pF	813	SH1	T1E	5120000081590A	BT shielding mask
387	C8039	B2H	50020100060514	10pF	814	SH10	B2H	5111000001796A	TX-VCO shielding cover
388	C8040	B2H	50020100002127	5.0pF	815	SH2	T3D	5120000000126A	Shielding mask
389	C8042	B2H	50020100060517	1nF	816	SH3	T3F	5120000000126A	Shielding mask
390	C8050	B2H	50020100060517	1nF	817	SH4	B2B	5120000081587A	Low-pass shielding mask
391	C8060	B2F	50020100060517	1nF	818	SH5	B3C	5111000000113A	Shielding cover
392	C9521	T1E	50020100000693	0.1μF	819	SH6	B3C	5120000000145A	RX shielding mask

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
393	C9524	T2F	50020100002463	270pF	820	SH7	B1D	5120000081589A	TX PA shielding mask
394	C9525	T2E	50020100000693	0.1μF	821	SH8	B3F	5111000000333A	DAC shielding cover
395	C9526	T2F	50020100002463	270pF	822	SH9	B2F	5120000000191A	Shielding mask for SMPS and PMU
396	C9527	T2E	50020100000693	0.1μF	823	SW5102	B1C	51010700000006	Tact switch
397	C9528	T2E	50020100002463	270pF	824	SW5103	B1D	51010600000009	Tact switch
398	C9529	T1D	50020100001629	0.47μF	825	SW5104	B1E	51010600000009	Tact switch
399	C9530	T1D	50020100001629	0.47μF	826	SW5105	B2A	51010600000009	Tact switch
400	C9531	T2D	50020100001190	33pF	827	SW5106	B1G	51010600000009	Tact switch
401	D1100	T2A	50050600000064	LED	828	T1100	B1F	50040700082005	Balun
402	D1101	T2A	50050600000081	LED	829	T1101	B2F	50040700082005	Balun
403	D1102	T1G	50050200000018	Switching diode	830	U1000	B2F	50080800092055	MCU
404	D1201	T2E	50050200000018	Switching diode	831	U1201	T3B	50082500000045	Level converter chip
405	D1202	T3G	50050200000018	Switching diode	832	U2002	B3F	50080700082150	Power management IC
406	D2011	T3F	50050200000018	Switching diode	833	U2008	B2E	50080700000384	Power management IC
407	D2079	T4F	50050200000018	Switching diode	834	U2009	B1G	50080700060312	Power management IC
408	D2100	T3G	50050200000018	Switching diode	835	U2011	T2E	50080700000384	Power management IC
409	D2101	B3G	50050800062524	ESD protection diode	836	U2013	B3H	50080700000276	Power management IC
410	D2102	B3G	50050800062223	ESD protection diode	837	U2014	T3D	50080700000677	Power management IC
411	D2103	B3G	50050800062223	ESD protection diode	838	U2020	T2F	50080700000384	Power management IC
412	D2107	T3F	50050200000018	Switching diode	839	U2499	T2C	50080700000275	Power management IC
413	D2109	T3G	50050200000018	Switching diode	840	U2506	T3F	50080700061817	Charger IC
414	D2112	T2D	50050800062223	ESD protection diode	841	U3001	T3F	50081200061801	Analog switch IC
415	D2133	B2E	50050800062524	ESD protection diode	842	U3002	T3D	50081200061801	Analog switch IC
416	D2155	T3F	50050200000018	Switching diode	843	U3004	T3D	50081200061801	Analog switch IC
417	D2217	T3G	50050200000018	Switching diode	844	U3009	B3D	50081200061801	Analog switch IC
418	D2317	T3F	50050200000018	Switching diode	845	U3010	T3D	50080200000014	Audio PA IC
419	D3000	T3C	50050800062223	ESD protection	846	U6000	B3B	50050900000143	Schottky diode

No.	Ref No.	Location	Part No.	Description	No.	Ref No.	Location	Part No.	Description
				diode					
420	D3001	T3C	50050800062223	ESD protection diode	847	U6001	B3C	50081200061741	Switch IC
421	D3003	T3C	50050800062223	ESD protection diode	848	U6002	B2C	50081200061741	Switch IC
422	D3005	T4C	50050800061344	ESD protection diode	849	U6003	B2C	50060400000002	Compound transistor
423	D3006	T4C	50050800061344	ESD protection diode	850	U7000	T3D	50080400000087	Operational amplifier
424	D5108	T4C	50050800061344	ESD protection diode	851	U7001	B1E	50089900000879	LNA
425	D5109	T4C	50050800061344	ESD protection diode	852	U9504	T1E	50081900092004	BT module
426	D5110	B3B	50050800062223	ESD protection diode	853	V8000	B2H	50050300000013	Varactor diode
427	D5111	B4B	50050800062223	ESD protection diode	854	X1100	B2F	50110400082007	TCXO



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