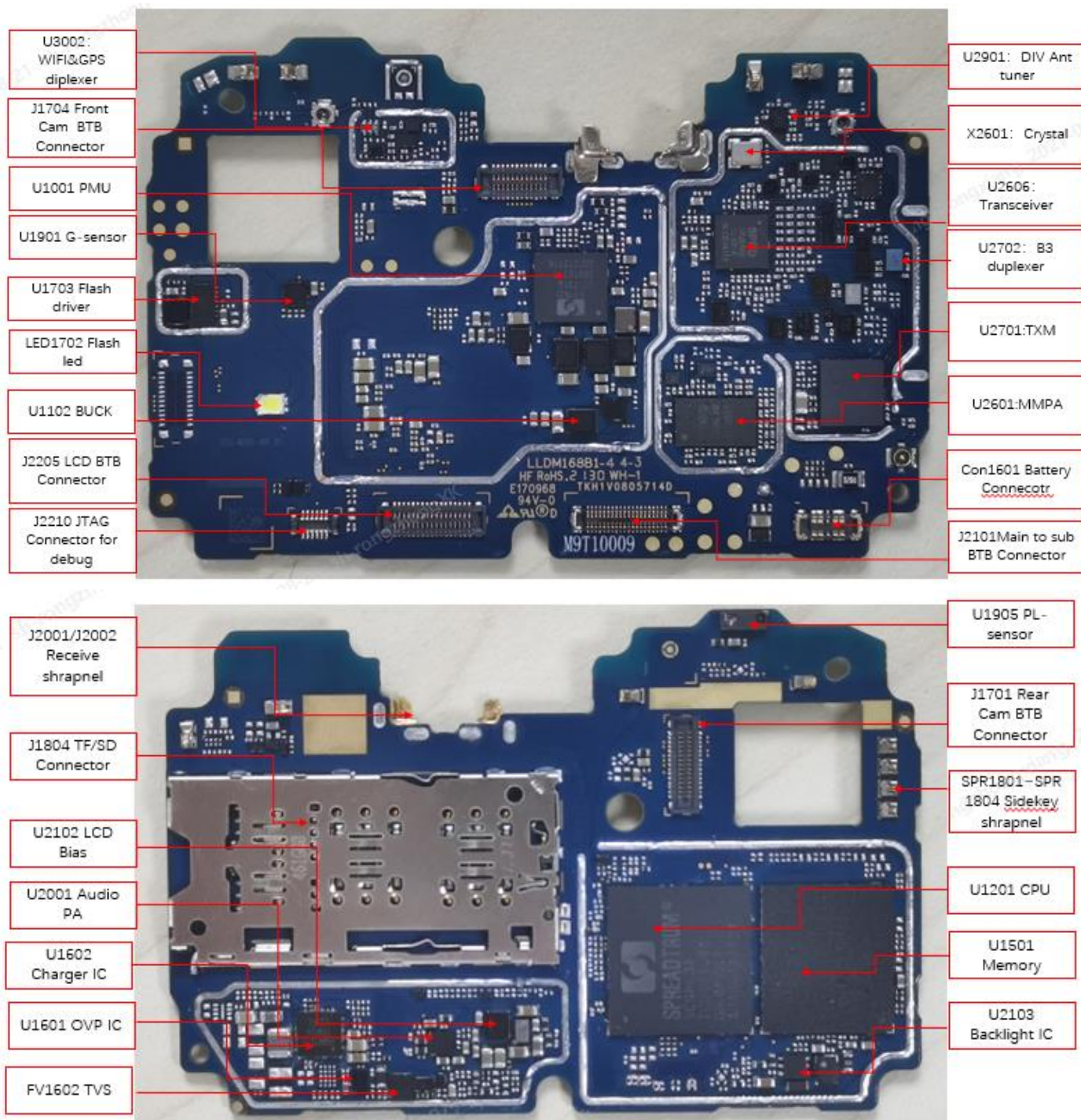
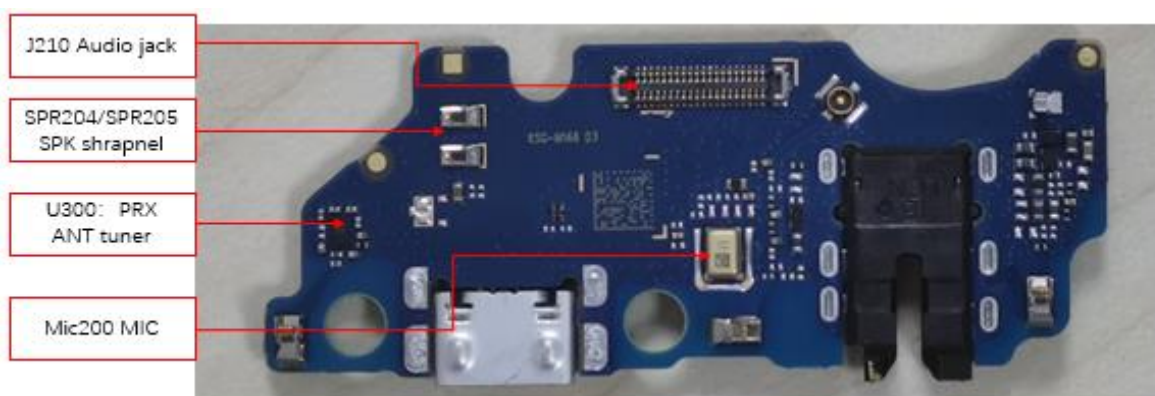
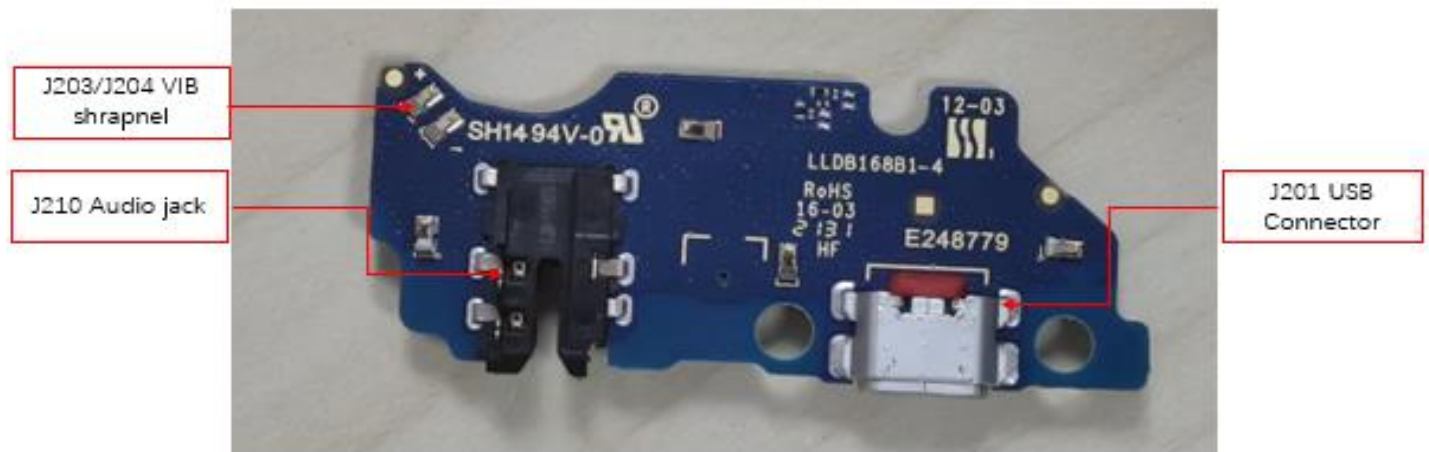


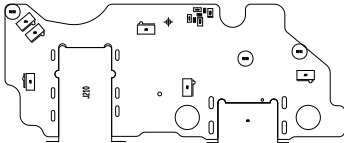
8. Level 3 Repair

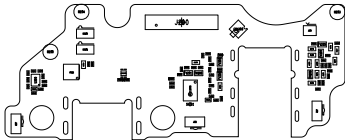
8-1. Components Layout

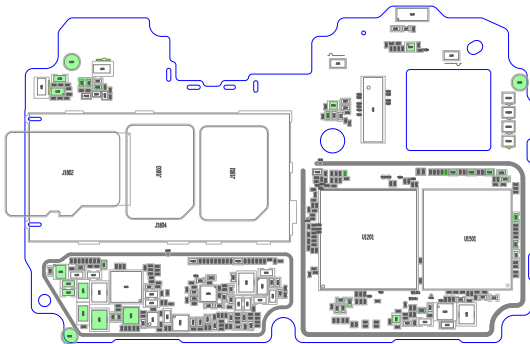


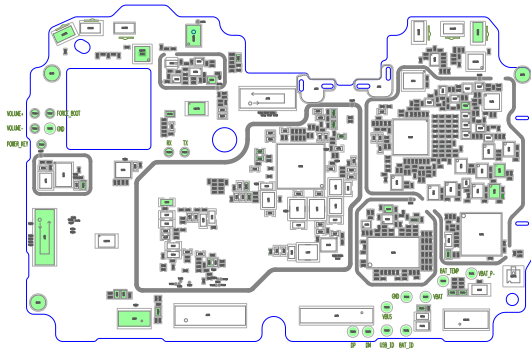
8. Level 3 Repair



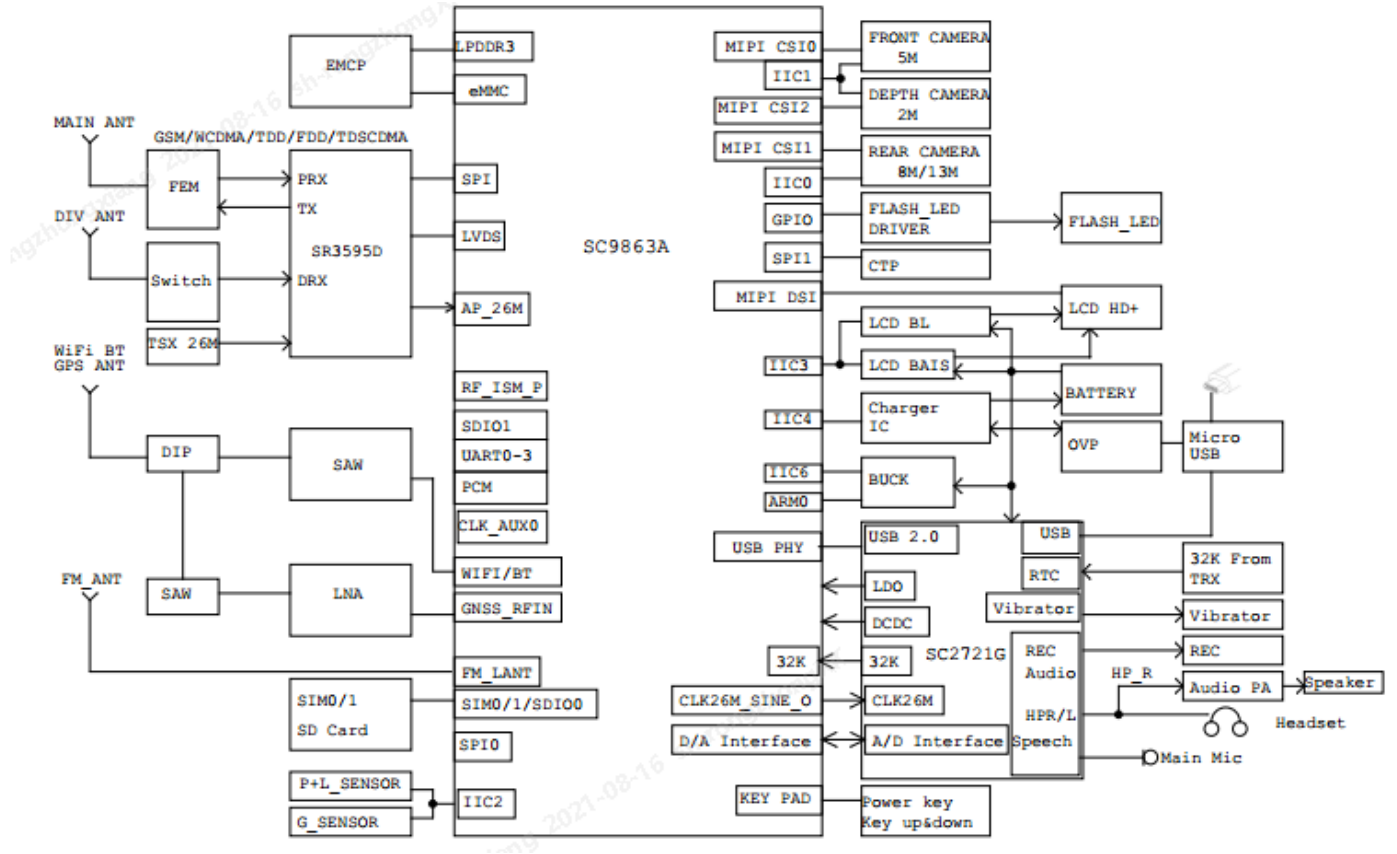






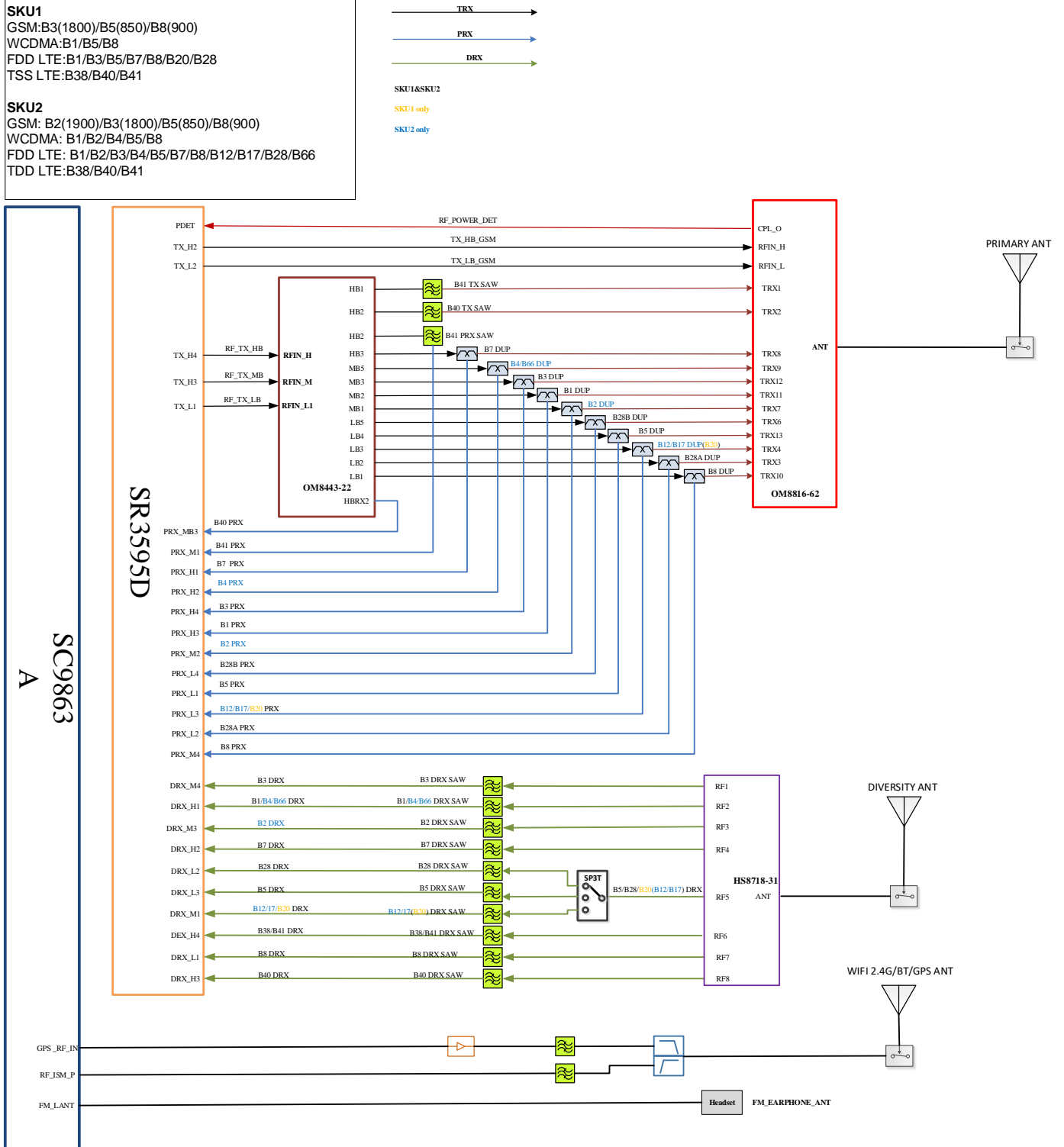


8. Level 3 Repair



8. Level 3 Repair

RF Block Diagram

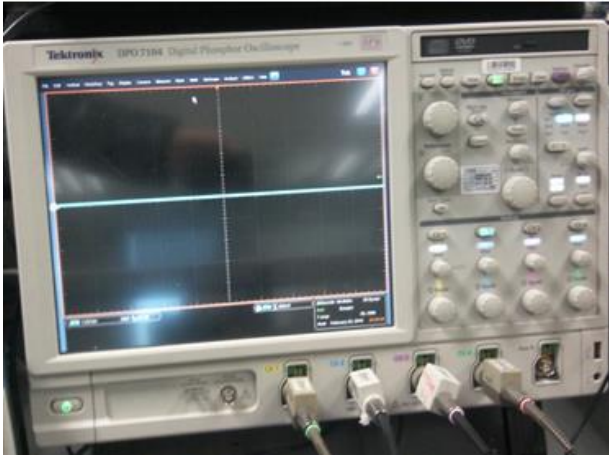


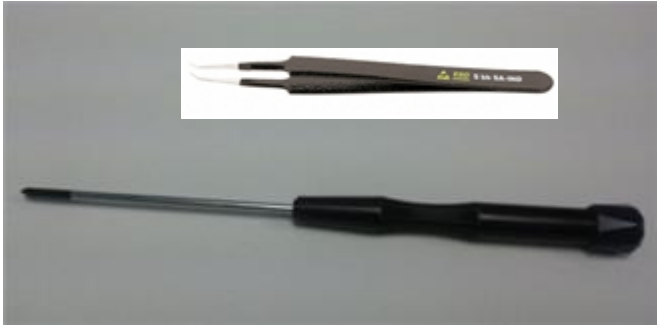
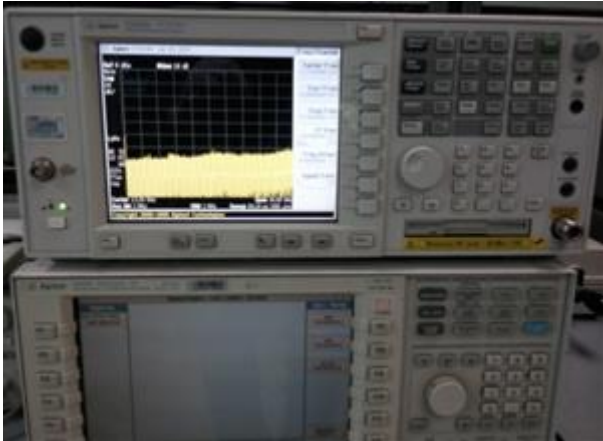



Confidential and proprietary-the contents in this service guide subject to change without prior notice

Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8. Level 3 Repair

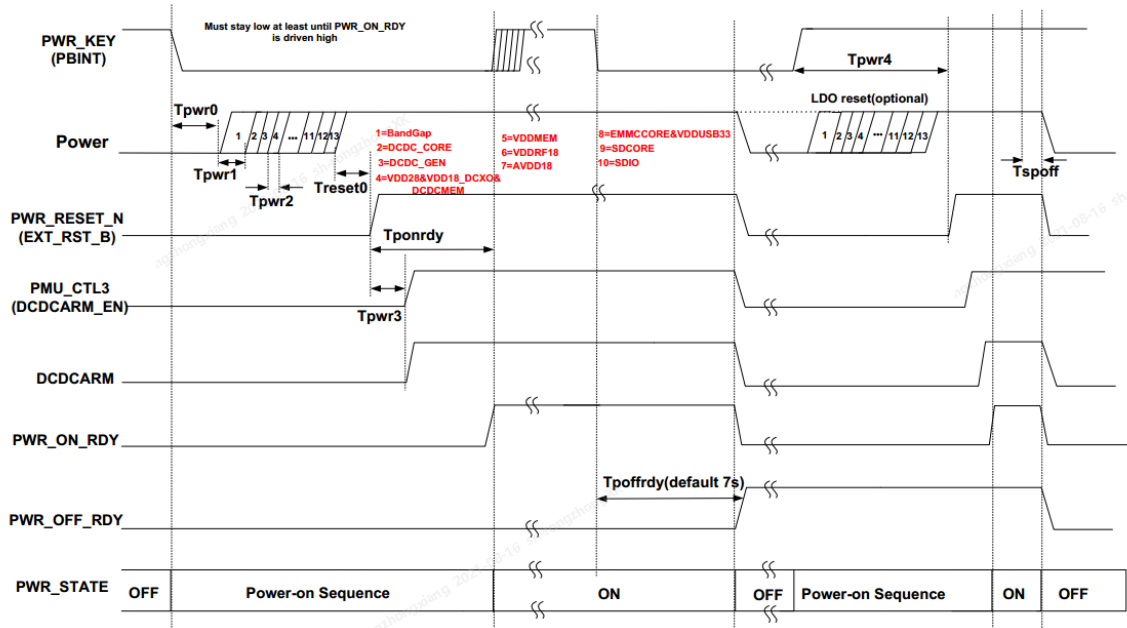
8-3. Flow chart of Troubleshooting.

	
Oscilloscope	Digital Multimeter
	
Power Supply	+ driver, ESD Safe Tweezer
	
8960 & Spectrum Analyzer	Soldering iron

8. Level 3 Repair

8-3-1. Power On

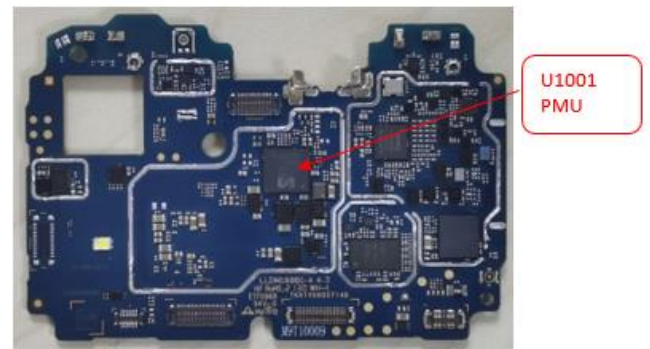
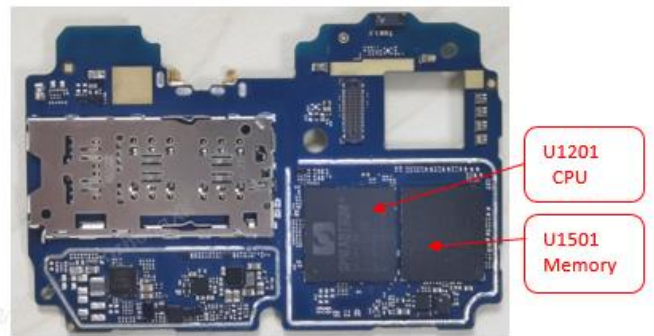
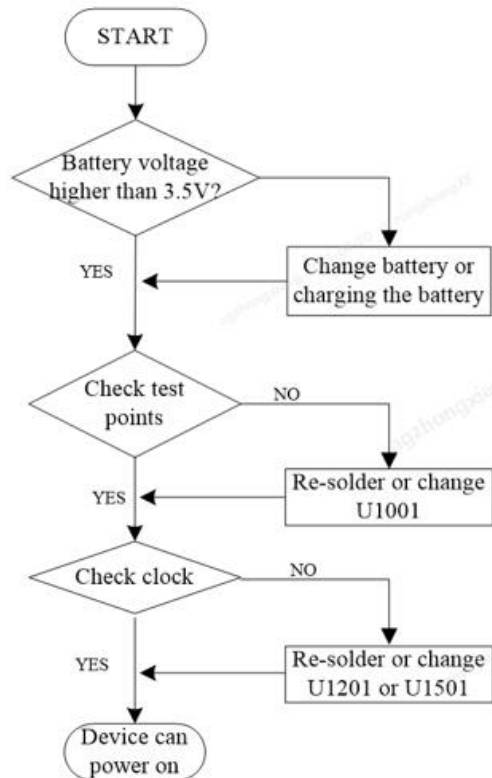
■ Checking Power signal (Battery connector, PMU, Clock)



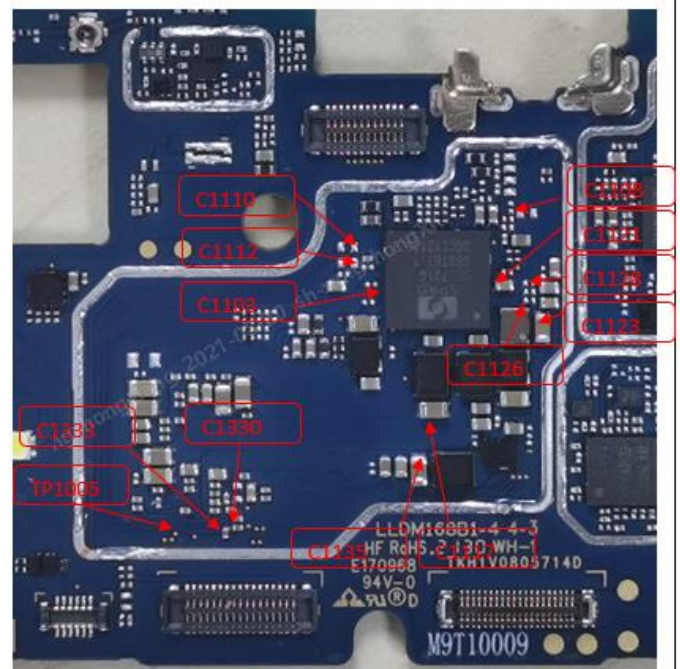
NO	Event	Volt(V)	TP
0	Tpwr0	/	NO TP
1	Tpwr1	/	NO TP
2	DCDC_CORE	0.9	C1117
3	DCDC_GEN	1.4	C1123
4	VDD2V8	2.8	C1103
5	VDD1V8_DCXO	1.85	C1108
6	VDDMEM	1.8	C1121
7	VDDRF1V8	1.85	C1128
8	AVDD1V8	1.8	C1126
9	EMMCORE	3	C1110
10	VDDUSB33	3.3	C1330
11	SDCORE	3	C1112
12	SDIO	3	C1333
13	EXT_RST_B	1.8	TP1005
14	VDDARM_EN	1.8	TP1101
15	VDDARM0	0.9	C1135

Power on sequence

8. Level 3 Repair



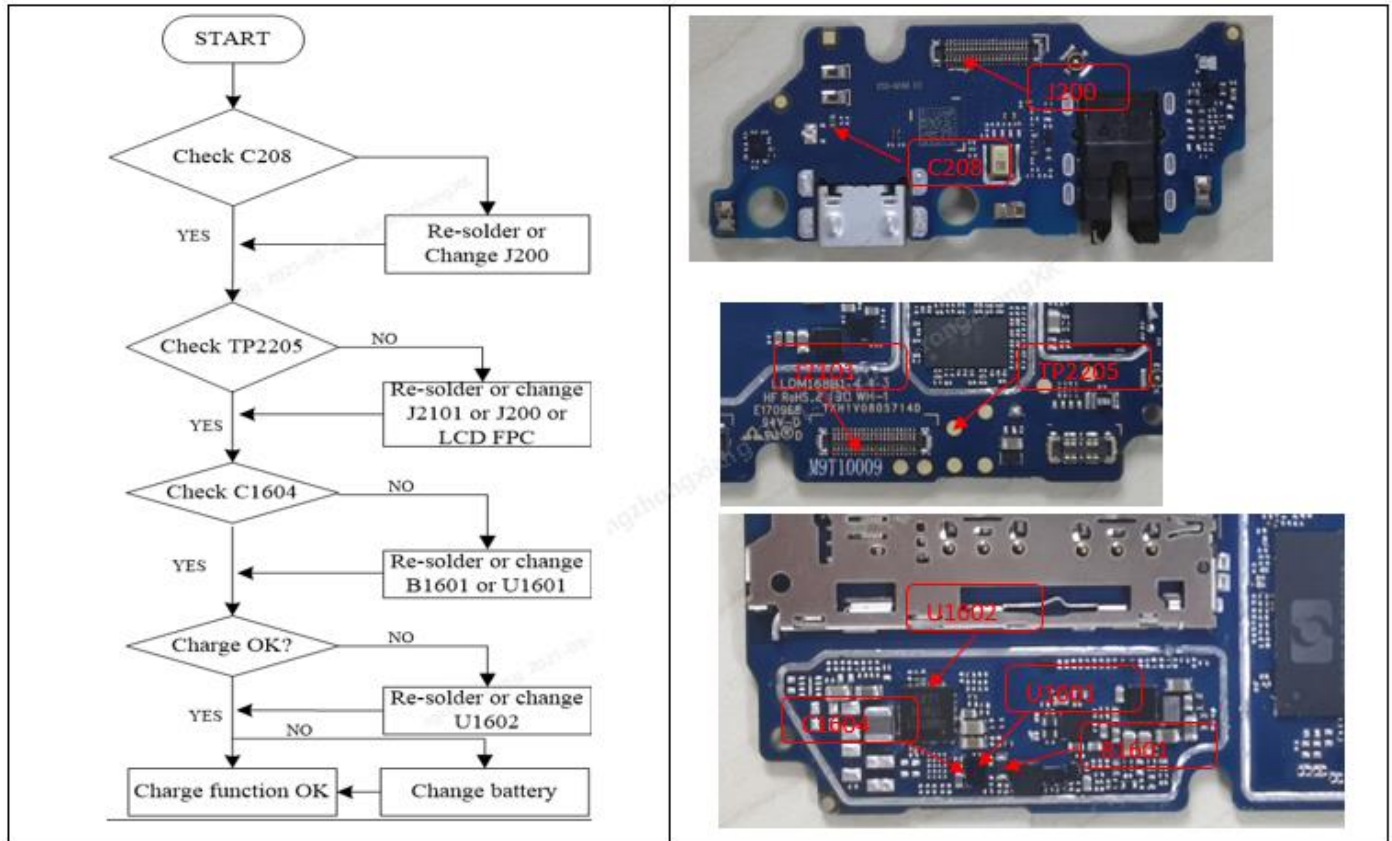
NO	Event	Volt(V)	TP
1	DCDC_CORE	0.9	C1117
2	DCDC_GEN	1.4	C1123
3	VDD2V8	2.8	C1103
4	VDD1V8_DCXO	1.85	C1108
5	VDDMEM	1.8	C1121
6	VDDRF1V8	1.85	C1128
7	AVDD1V8	1.8	C1126
8	EMMCORE	3	C1110
9	VDDUSB33	3.3	C1330
10	SDCORE	3	C1112
11	SDIO	3	C1333
12	EXT_RST_B	1.8	TP1005
13	VDDARM_EN	1.8	TP1101
14	VDDARM0	0.9	C1135



8. Level 3 Repair

8-3-2. Charging

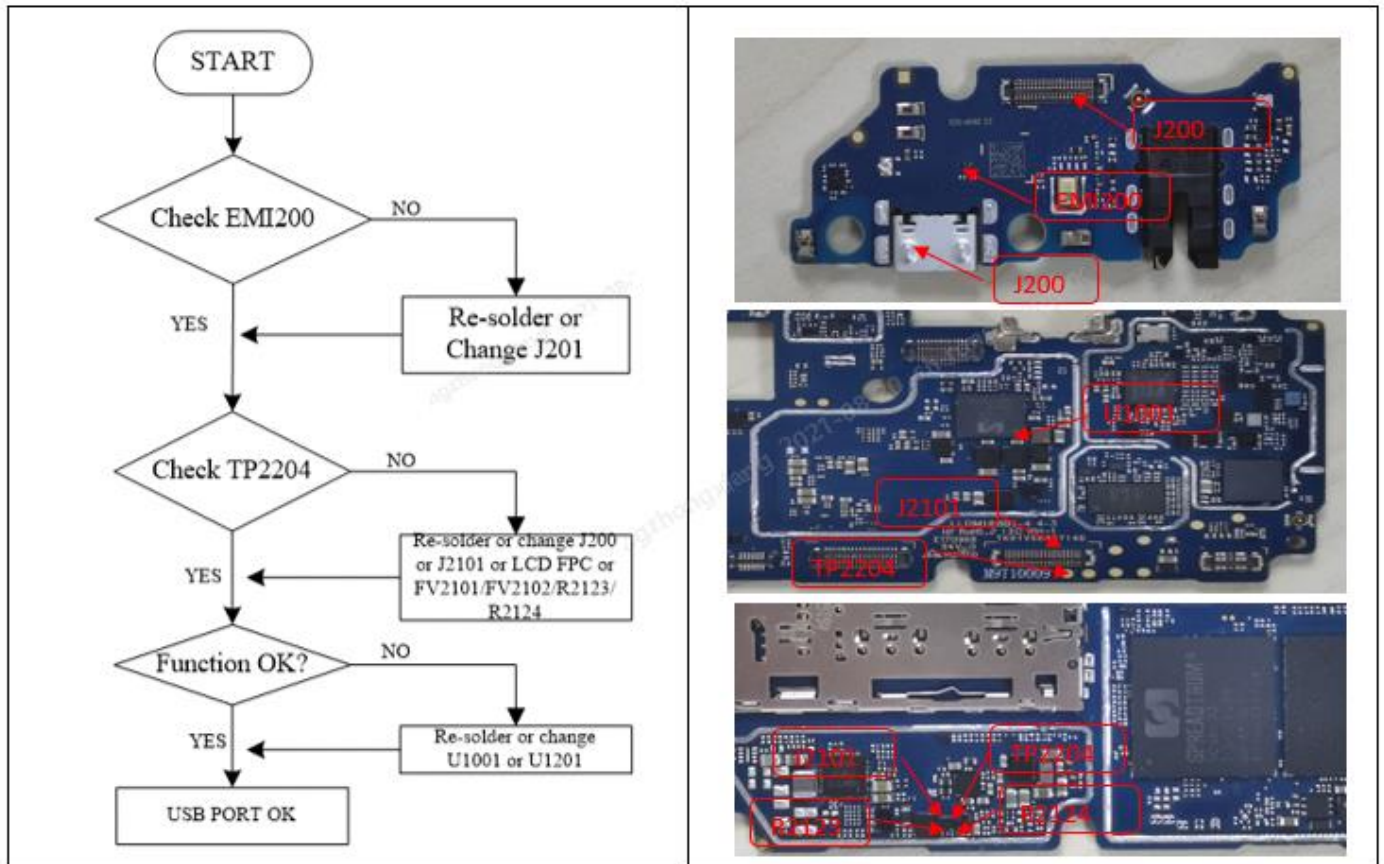
The charging controlled by PMU chip SD155 or BQ25601 (U1602).



8. Level 3 Repair

8-3-3. USB

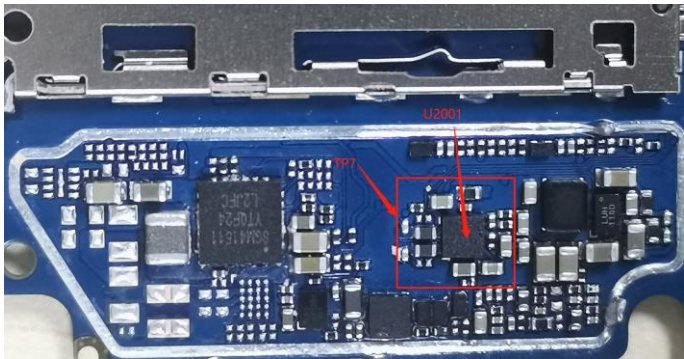
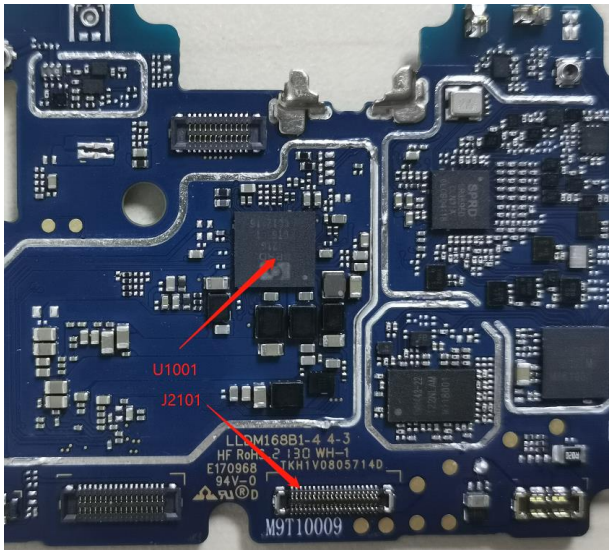
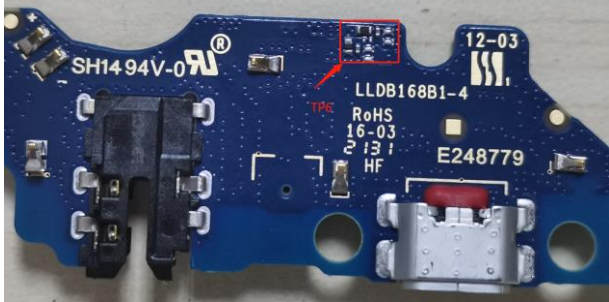
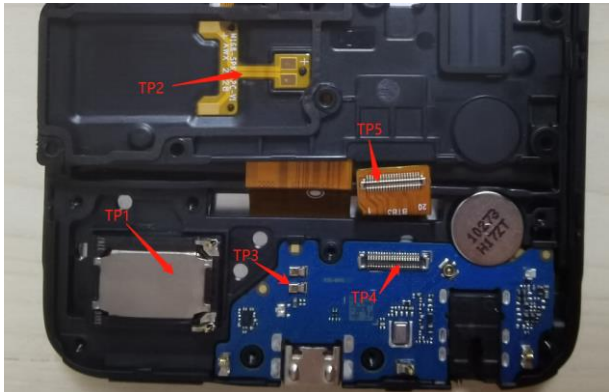
I/O connector is used as the USB port.



8. Level 3 Repair

8-3-4. Audio speaker

The Speaker control signals are generated by SC2721G (U1001) , There is an audio PA(U2001) in the middle, the chips and the speaker are to be checked out.

Checking Flow	Image
<div><p>Start</p><p>Check J2101 , TP1-7</p><p>No</p><p>Re-solder or change J2101,TP1-8</p><p>Yes</p><p>Check U1001,L CM FPC</p><p>No</p><p>Re-solder or change U1001,LCM FPC</p><p>Yes</p><p>Speaker function ok</p></div> <div></div>	<div></div>

8. Level 3 Repair

8-3-5. Audio receiver

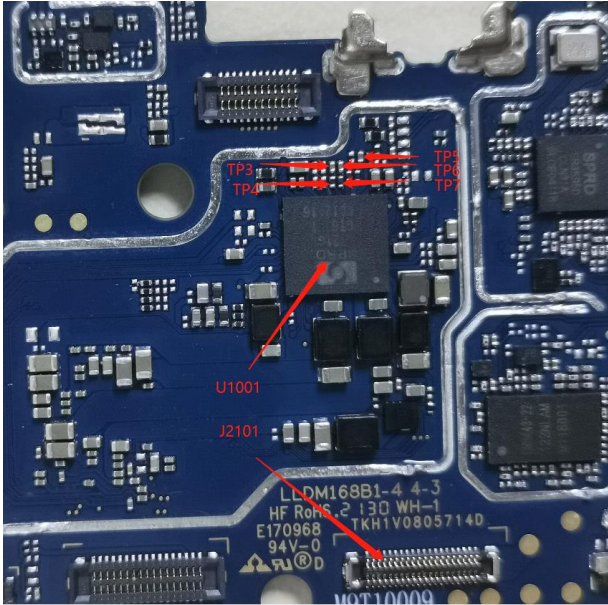
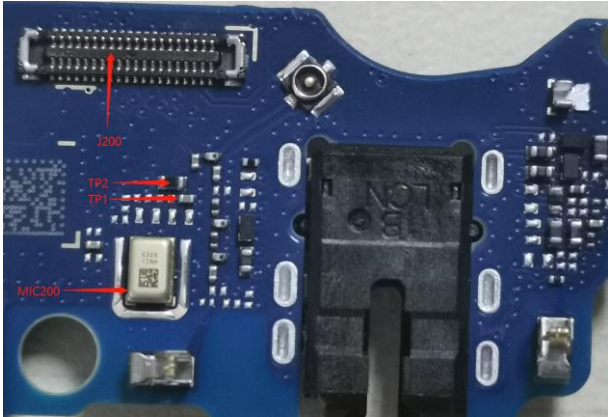
The receiver control signals are generated by SC2721G (U1001), the PMU chip and the receiver are to be checked out.

Checking Flow	Image
<div><div><div>Start</div><div>Check J2001 , J2002,TP 1-2</div><div>No</div><div>Re-solder or change Check J2001 , J2002,TP1-2</div><div>Yes</div><div>Check U1001</div><div>No</div><div>Re-solder or change U1001</div><div>Yes</div><div>Receiver function ok</div></div></div>	<div></div>

8. Level 3 Repair

8-3-6. Audio_MIC

The MIC control signals are generated by SC2721G (U1001), the PMU chip and the MIC are to be checked out.

Checking Flow Main Mic	Image
<div><p>Start</p><p>Check MIC200 , TP1-7, J200,J2101</p><p>No</p><p>Re-solder or change MIC200 , TP1-7, J200,J2101</p><p>Yes</p><p>Check U1001,L CM FPC</p><p>No</p><p>Re-solder or change U1001,LCM FPC</p><p>Yes</p><p>Main MIC function ok</p></div>	<div></div>

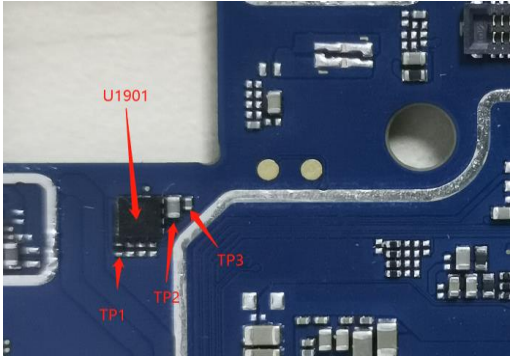
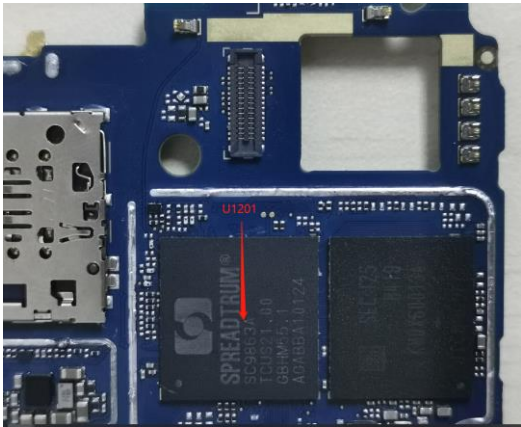
8. Level 3 Repair

Checking Flow Headset mic	Image
<pre>graph TD; Start([Start]) --> Check1{Check J210 , J200,J2101,TP1-8}; Check1 -- No --> ReSolder1[Re-solder or change J210 , J200,J2101,TP1-8]; ReSolder1 --> Check1; Check1 -- Yes --> Check2{Check U1001,L CM FPC}; Check2 -- No --> ReSolder2[Re-solder or change U1001,L CM FPC]; ReSolder2 --> Check2; Check2 -- Yes --> OK[Headset MIC function ok];</pre>	

8. Level 3 Repair

8-3-7. Accelerometer sensor

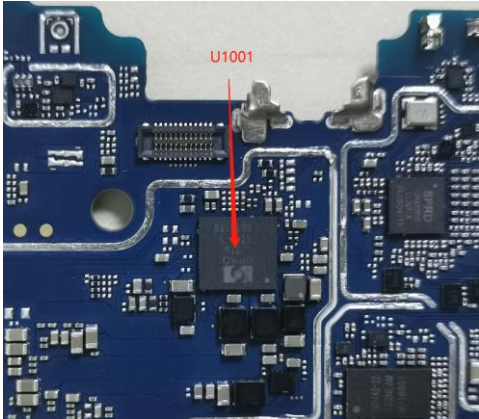
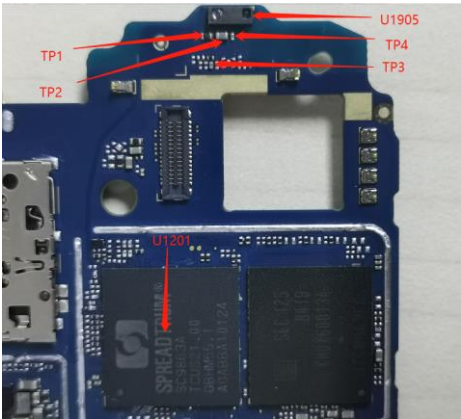
The Accelerometer sensor is calibrated by using SW algorithm.

Checking Flow	Image
<div><p>Start</p><p>Check U1901 , TP1-3</p><p>No</p><p>Re-solder or change U1901 , TP1-3</p><p>Yes</p><p>Check U1201</p><p>No</p><p>Re-solder or change U1201</p><p>Yes</p><p>Accelerometer sensor function ok</p></div>	<div></div> <div></div>

8. Level 3 Repair

8-3-8. Proximity and light sensor

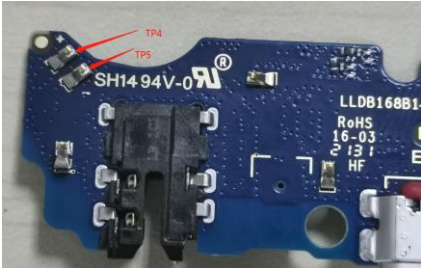
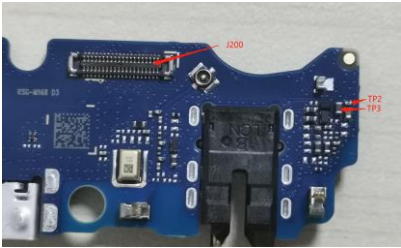
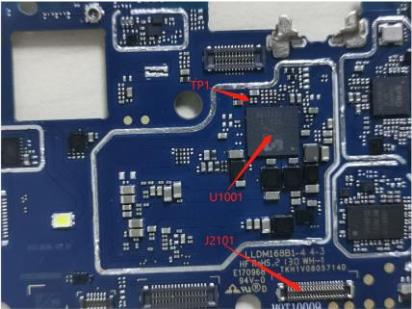
Proximity and Light Sensor is worked as below: Control the screen's on/off operation automatically while making phone calls, and adjust the screen brightness according to ambient light.

Checking Flow	Image
<div><p>Start</p><p>Check U1905 , TP1-4</p><p>No</p><p>Re-solder or change U1905 , TP1-4</p><p>Yes</p><p>Check U1201,U 1001</p><p>No</p><p>Re-solder or change U1201,U1001</p><p>Yes</p><p>PL-sensor function ok</p></div>	<div></div>

8. Level 3 Repair

8-3-9. Vibrator

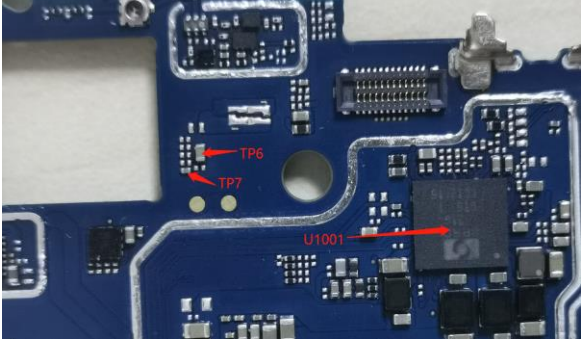
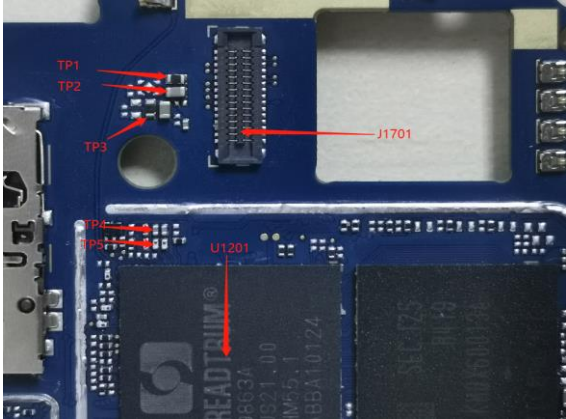
The Vibrator control signals are generated by SC2721G (U1001).

Checking Flow	Image
<div><p>Start</p><p>Check vibrator module , LCM FPC,J2101,J200</p><p>No</p><p>Re-solder or change vibrator module , LCM FPC,J2101,J200</p><p>Yes</p><p>Check TP1-TP6,U1001</p><p>No</p><p>Re-solder or change TP1-TP6,U1001</p><p>Yes</p><p>Vibrator function ok</p></div>	<div></div>

8. Level 3 Repair

8-3-10.Main Camera

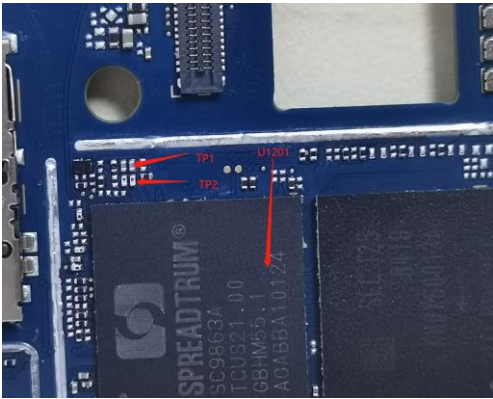
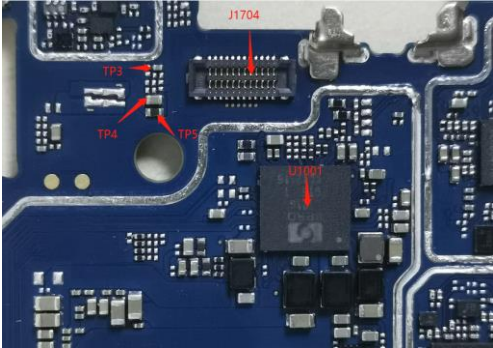
The Camera control signals are generated by SC2721G (U1001) and SC9863A (U1201).

Checking Flow	Image
<div><p>Start</p><p>Check camera module & J1701</p><p>No</p><p>Re-solder or change camera module and J1701</p><p>Yes</p><p>Check TP1-TP7,U1201,U1001</p><p>No</p><p>Re-solder or change TP1-TP7,U1201,U1001</p><p>Yes</p><p>Camera function ok</p></div>	<div></div>

8. Level 3 Repair

8-3-13. Front Camera

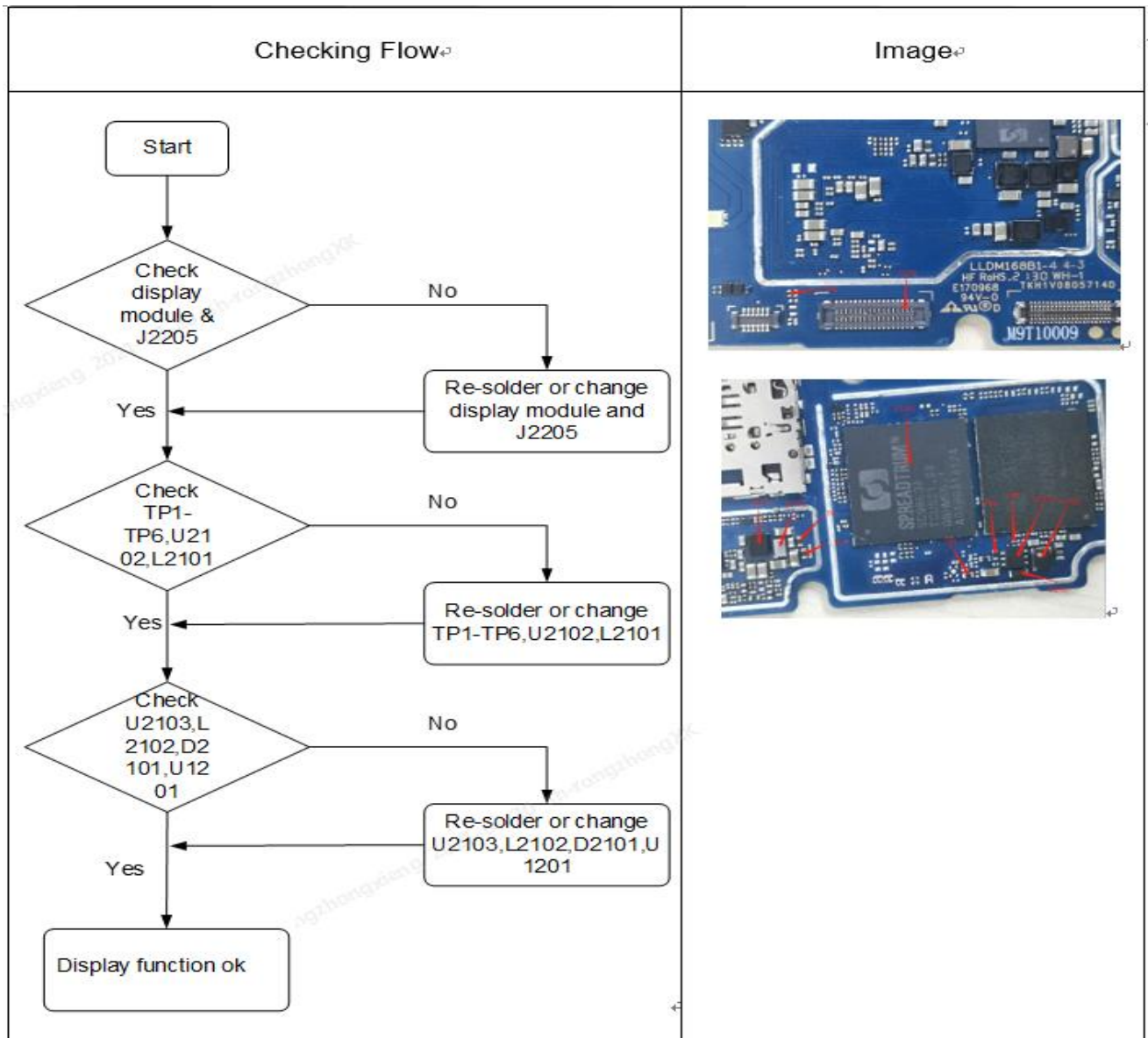
The Camera control signals are generated by SC2721G (U1001) and SC9863A(U1201).

Checking Flow	Image
<div><p>Start</p><p>Check camera module & J1704</p><p>No</p><p>Re-solder or change camera module and J1704</p><p>Yes</p><p>Check TP1-TP5,U1201,U1001</p><p>No</p><p>Re-solder or change TP1-TP5,U1201,U1001</p><p>Yes</p><p>Camera function ok</p></div>	<div></div>

8. Level 3 Repair

8-3-14 LCD

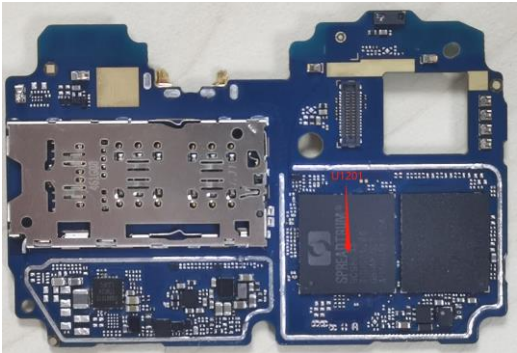
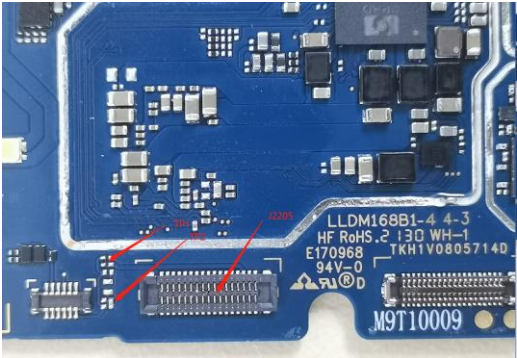
The LCD control signals are generated by SM7225(U201).



8. Level 3 Repair

8-3-15 Touch

The touch control signals are generated by SC9863A(U1201). It is assembled with LCD.

Checking Flow	Image
<div><p>Start</p><p>Check TP module & J2205</p><p>No</p><p>Re-solder or change TP module and J2205</p><p>Yes</p><p>Check TP1-TP2 & U1201</p><p>No</p><p>Re-solder or change TP1-TP2 & U1201</p><p>Yes</p><p>Touch function ok</p></div>	<div></div>