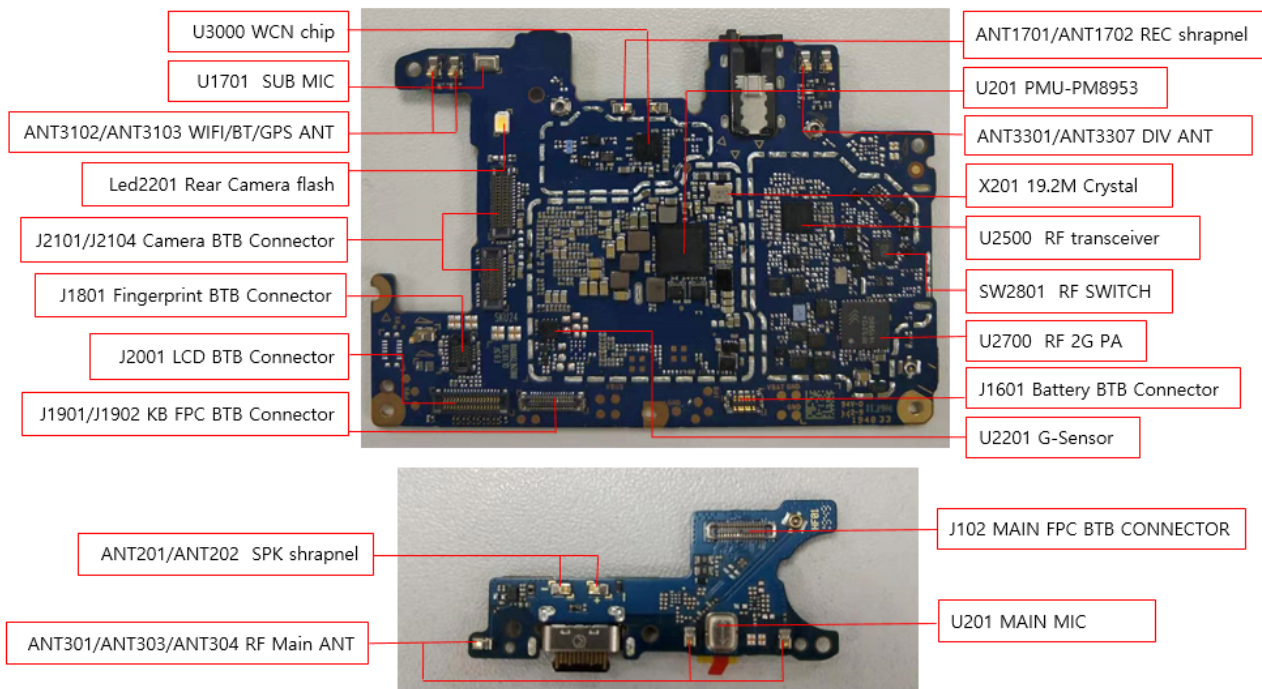


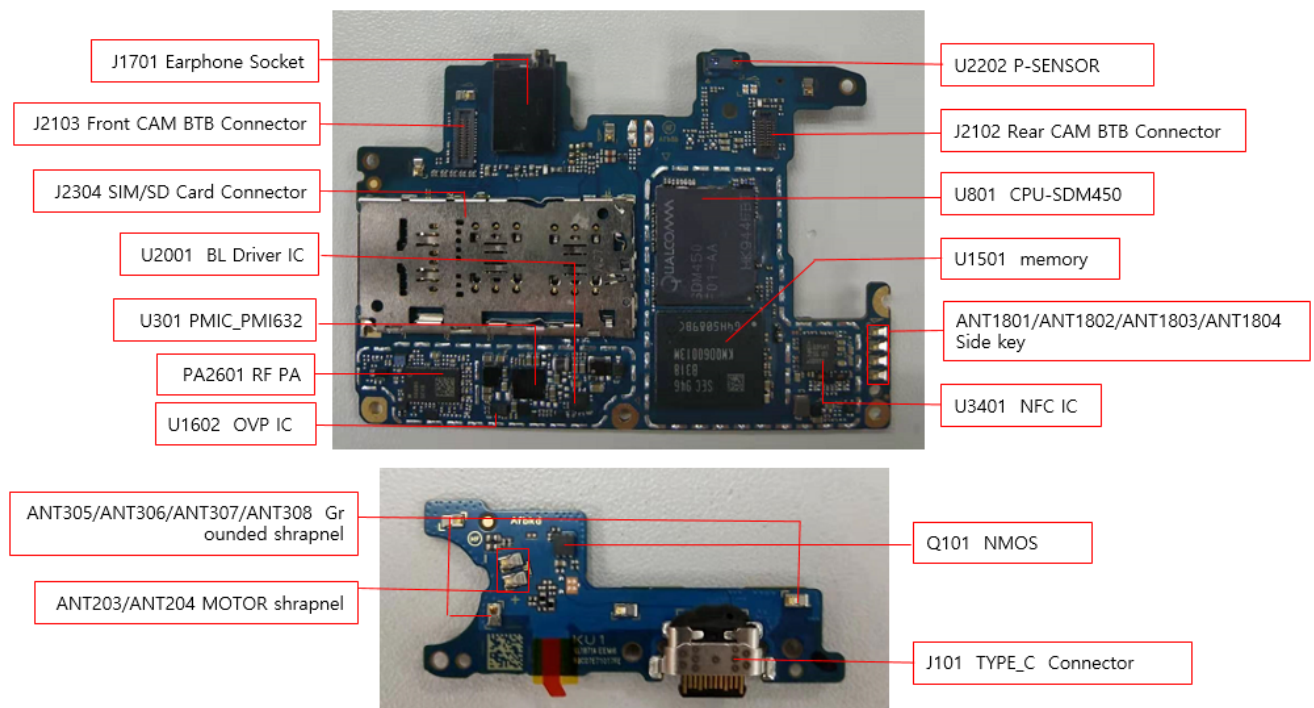
8. Level 3 Repair

8-1. Components Layout

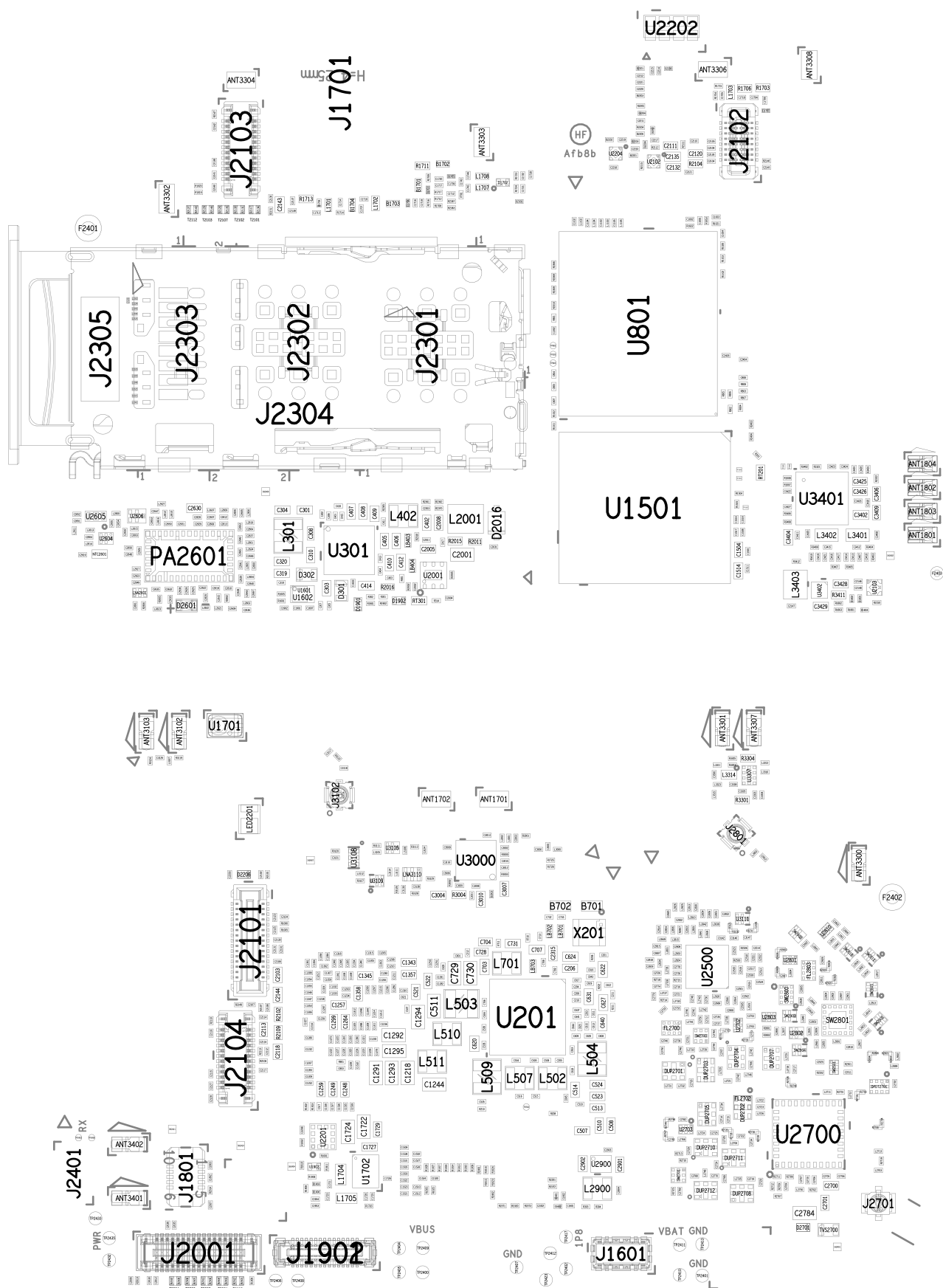
PBA (Bottom)



PRA (TOP)



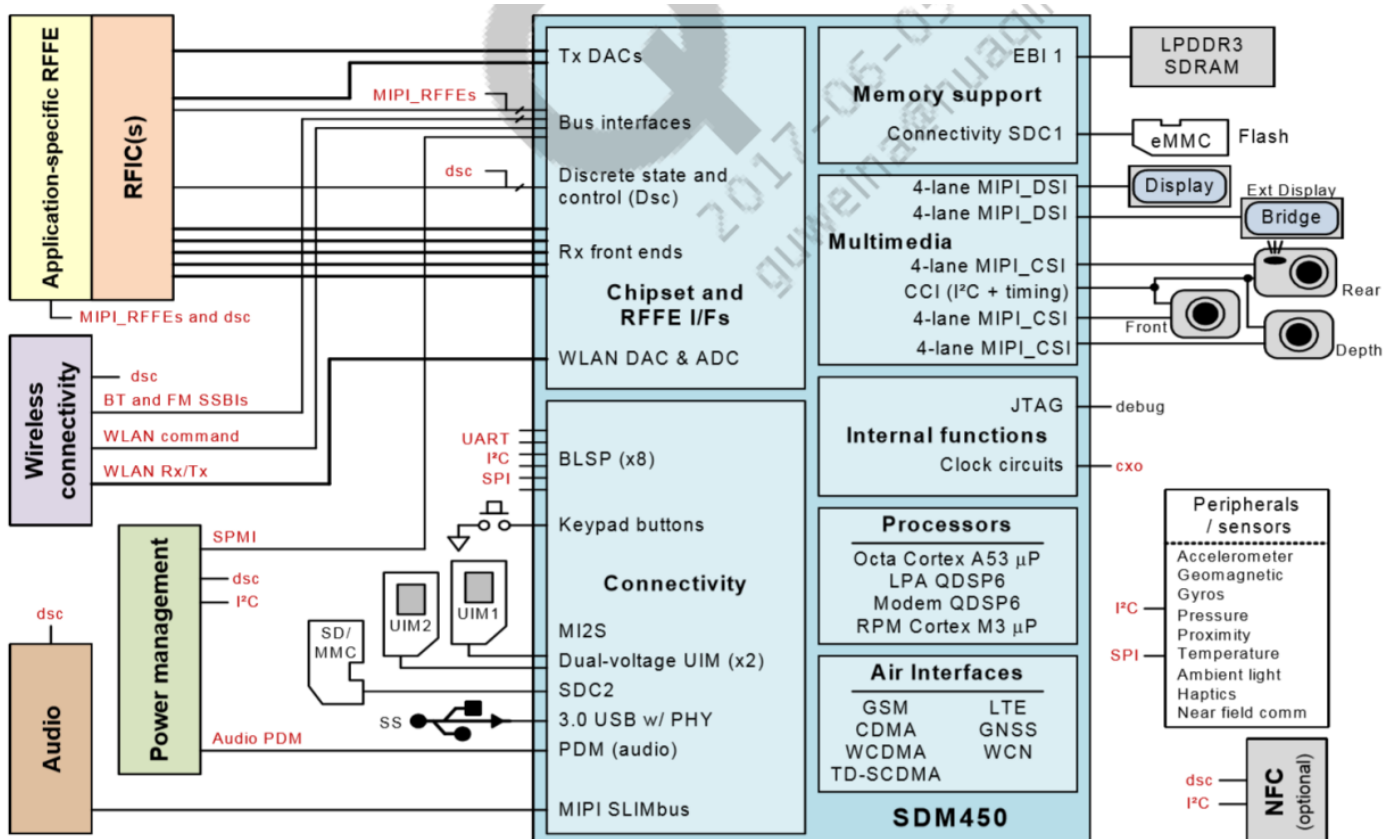
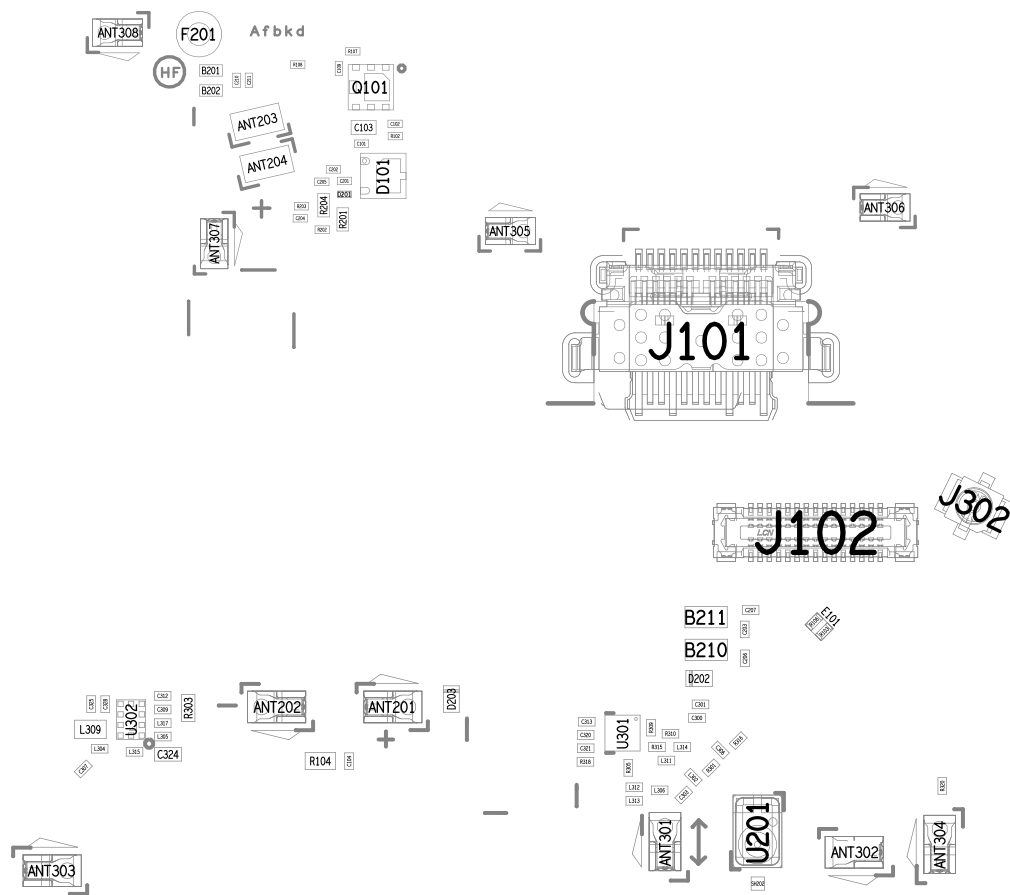
8. Level 3 Repair



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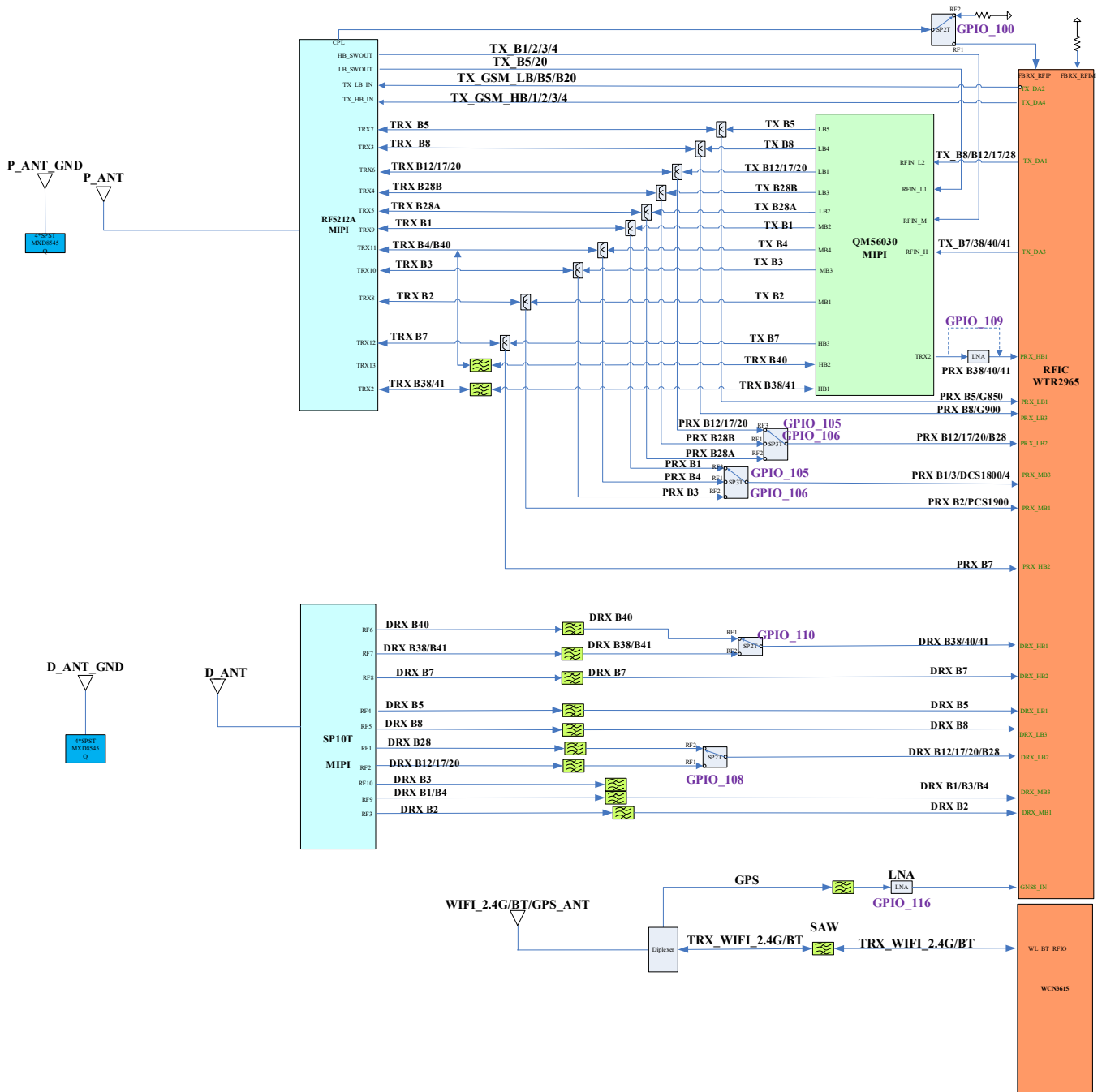
8. Level 3 Repair



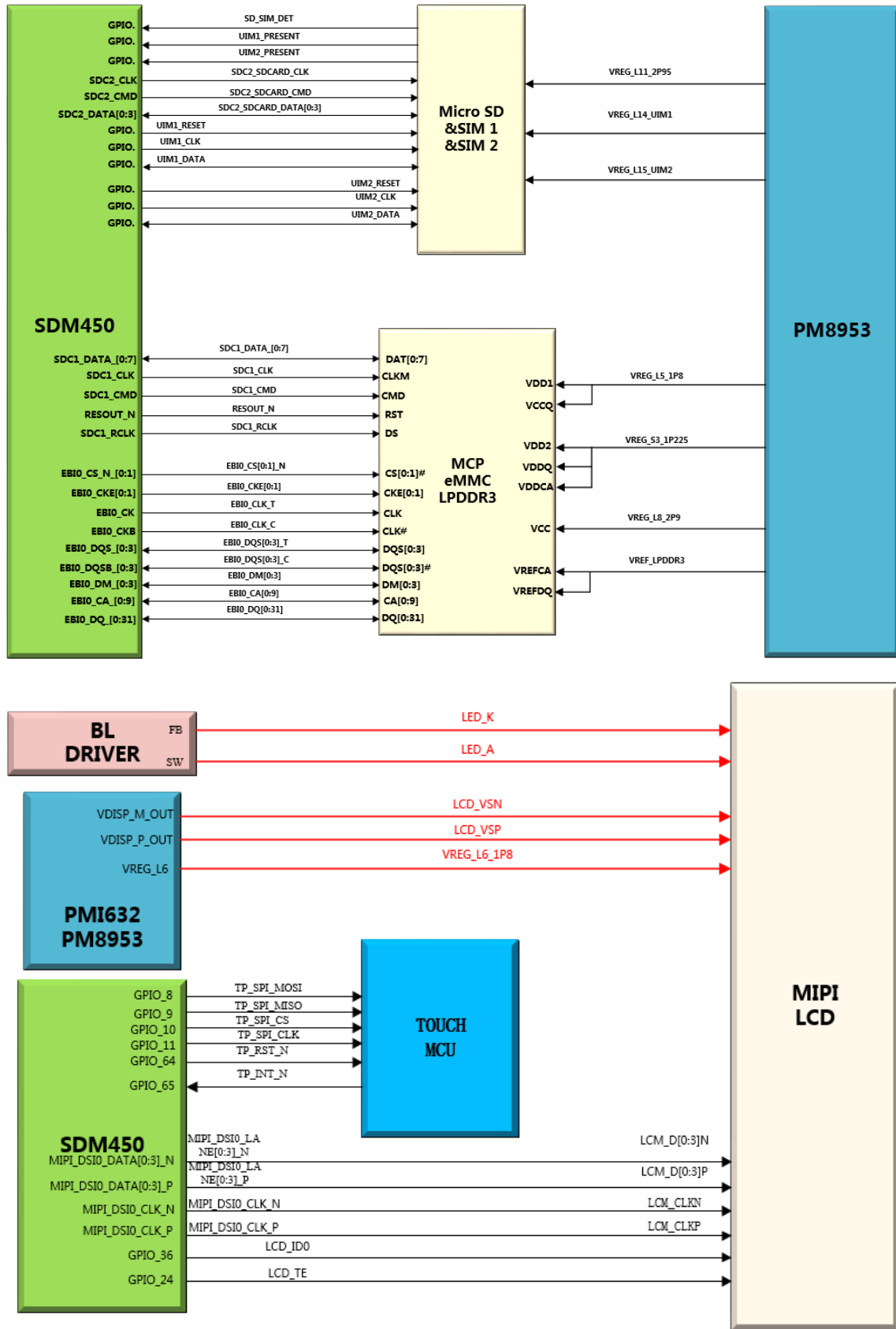
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8. Level 3 Repair



8. Level 3 Repair

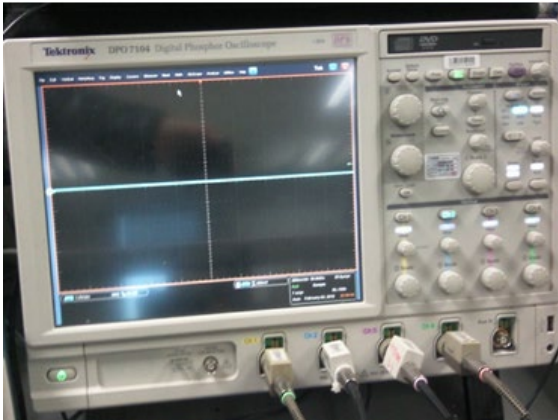


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8. Level 3 Repair

8-3. Flow chart of Troubleshooting.



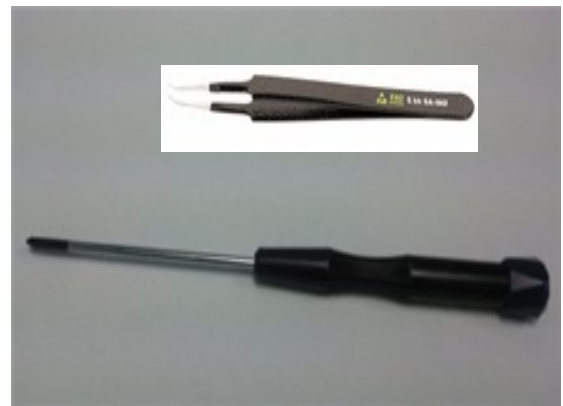
Oscilloscope



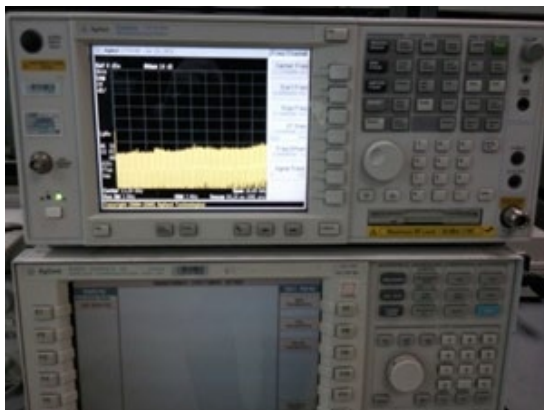
Digital Multimeter



Power Supply



+ driver, ESD Safe Tweezer



8960 & Spectrum Analyzer

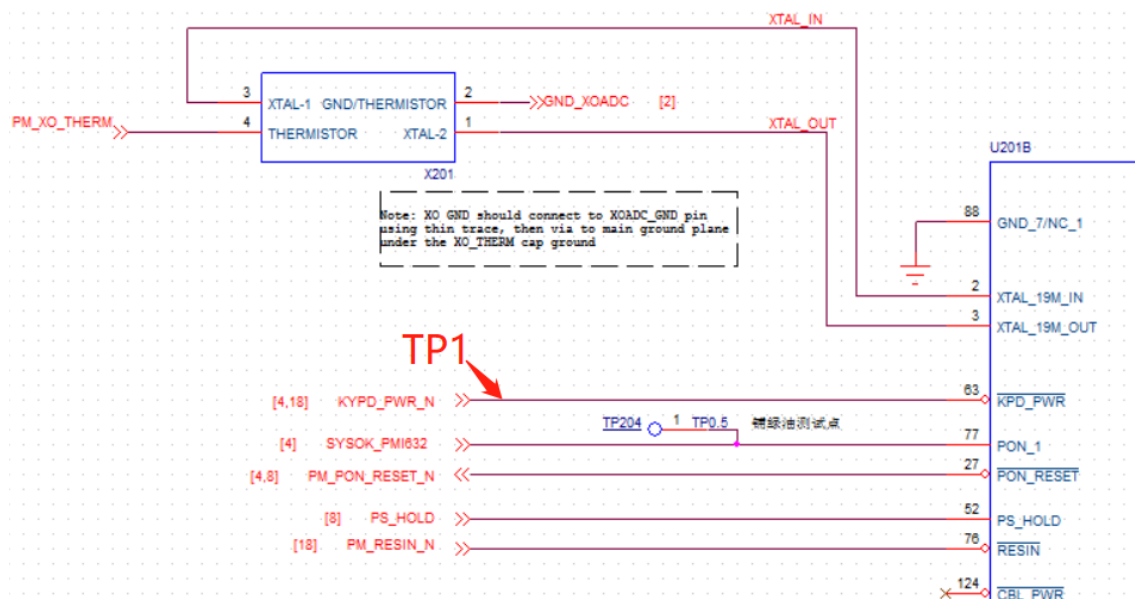
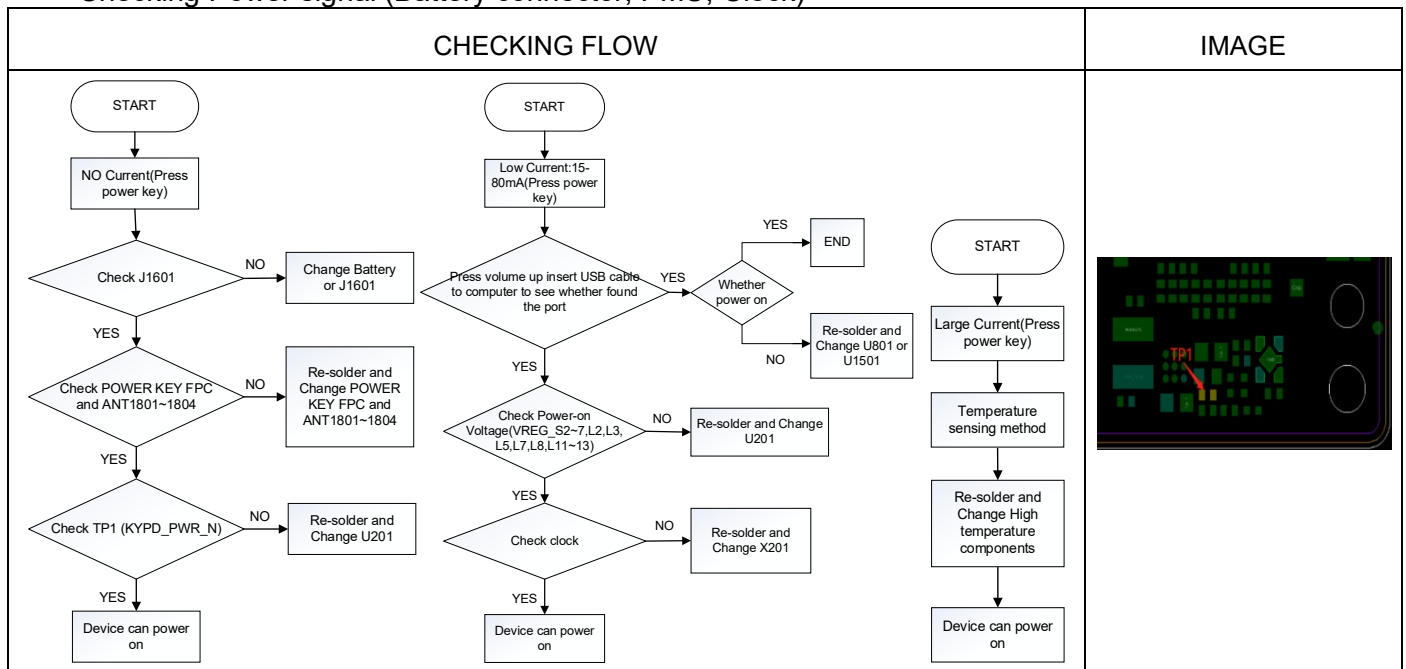


Soldering iron

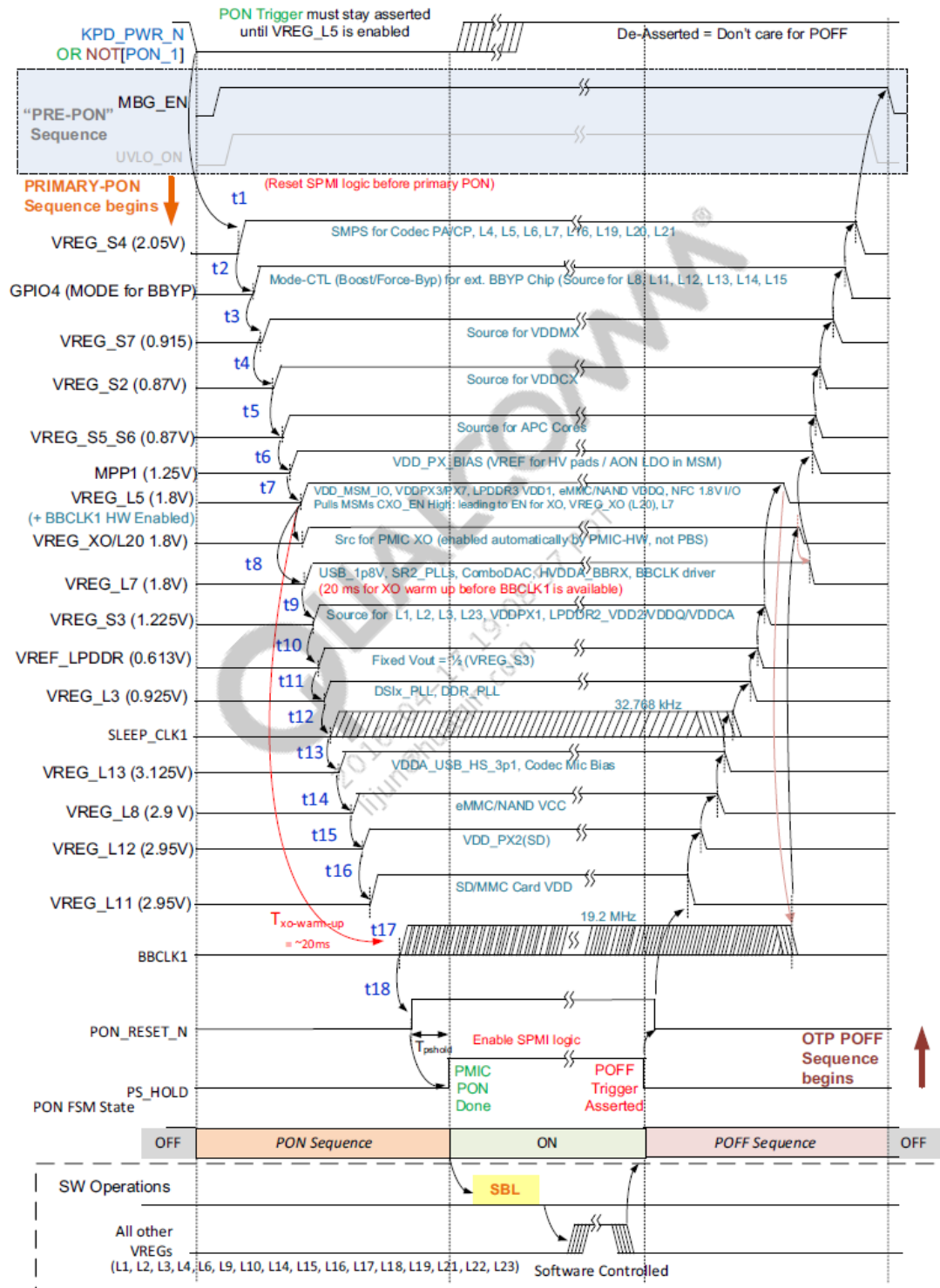
8. Level 3 Repair

8-4-1. Power On

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

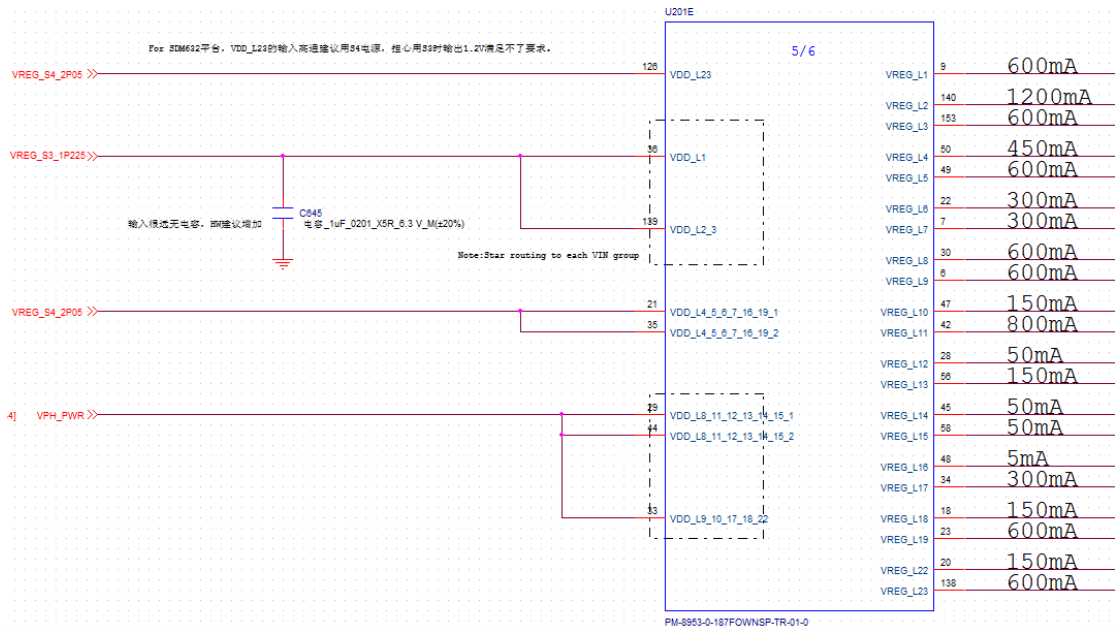


8. Level 3 Repair



Power-on Voltage (VREG_S2~7, L2, L3, L5, L7, L8, L11~13)

8. Level 3 Repair

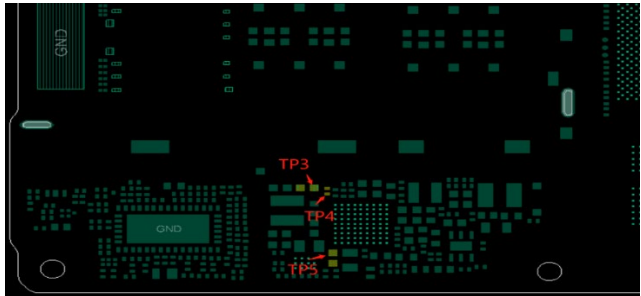
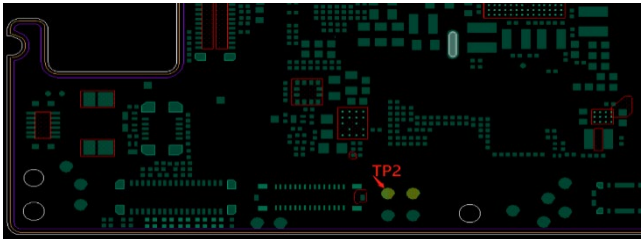
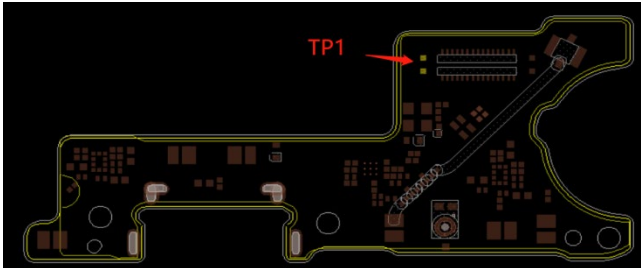


VREG_S2~7, L2, L3, L5, L7, L8, L11~13 schematic diagram

8. Level 3 Repair

8-4-2. Charging

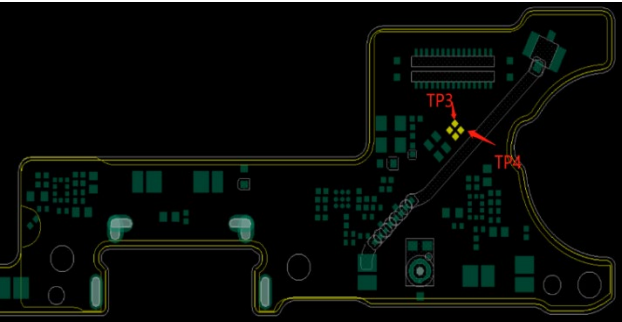
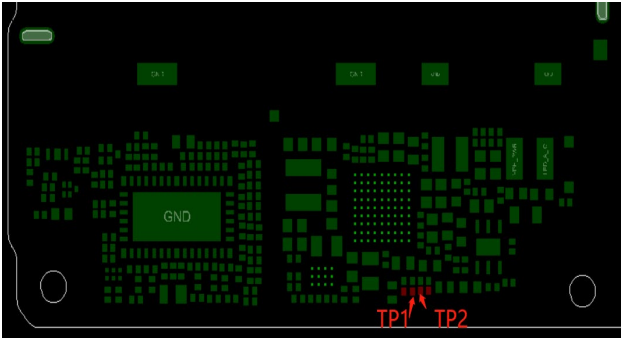
- The charging controlled by PMU chip PMI632 (U301) and OVP chip U1602

CHECKING FLOW	IMAGE
<div><p>START</p><p>Check TP1</p><p>NO</p><p>Re-solder and Change J102 or J101</p><p>YES</p><p>Check VBUS(TP2)</p><p>NO</p><p>Re-solder and Change J1901 or FPC</p><p>YES</p><p>Check TP3 or TP4</p><p>NO</p><p>Re-solder and Change U1602</p><p>YES</p><p>Check Vbat(TP5)</p><p>NO</p><p>Re-solder and Change U301</p><p>YES</p><p>Check battery</p><p>YES</p><p>Charge function OK</p></div>	<div></div>

8. Level 3 Repair

8-4-3. USB

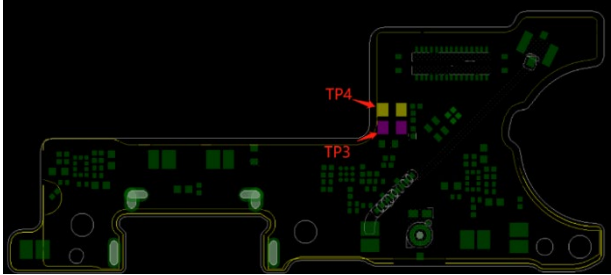
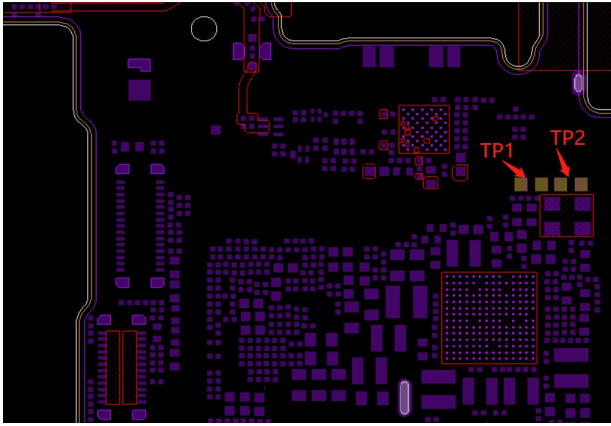
- I/O connector is used as the USB port.

CHECKING FLOW	IMAGE
<div><p>START</p><p>Check TP1 and TP2</p><p>NO</p><p>Re-solder and Change U801 or R1901 or R1902</p><p>YES</p><p>Check TP3 and TP4</p><p>NO</p><p>Re-solder and Change J1901 or FPC or J102 or R103 or R106</p><p>YES</p><p>Check J101 soldering</p><p>NO</p><p>Re-solder and Change J101</p><p>YES</p><p>USB function OK</p></div>	<div></div>

8. Level 3 Repair

8-4-4. Audio speaker

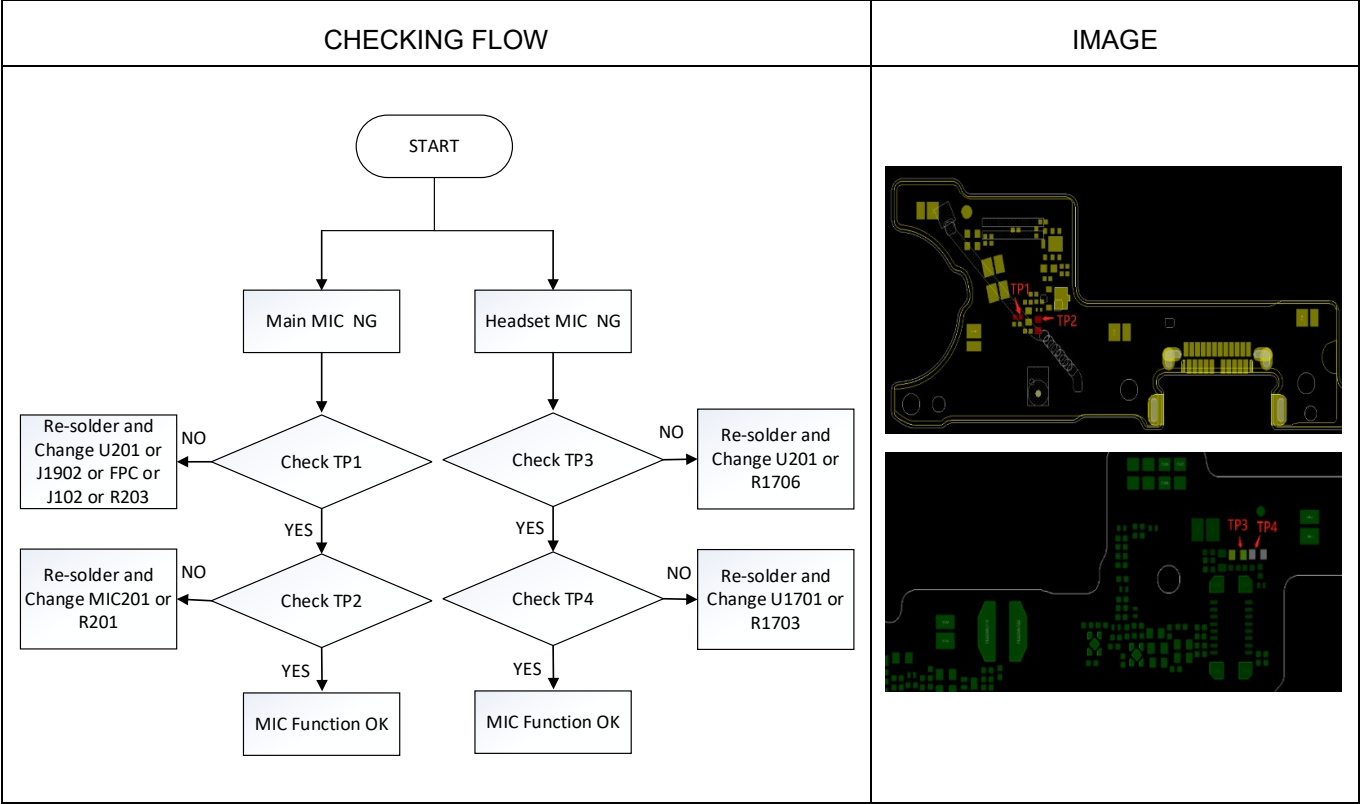
- The Speaker control signals are generated by chip PM8953 (U201), the chip and the speaker are to be checked out.

CHECKING FLOW	IMAGE
<div><div>START</div><div>Check TP1-TP2</div><div>NO</div><div>Re-solder and Change U201 or TP1-TP2</div><div>YES</div><div>Check TP3-TP4</div><div>NO</div><div>Re-solder and Change J1902 or J102 or B701/702 or change FPC</div><div>YES</div><div>Check ANT201 and ANT202</div><div>NO</div><div>Re-solder and Change ANT201/202 or B210/211</div><div>NO</div><div>Change SPK spring FPC and SPK</div><div>Speaker function OK</div></div>	<div></div>

8. Level 3 Repair

8-4-5. Audio_ MIC

- The MIC control signals are generated by chip PM8953 (U201), the chip and the MIC (main micU201 and headset micU1701) are to be checked out.



8. Level 3 Repair

8-4-6. G sensor

■ The G sensor is calibrated by using SW algorithm.

CHECKING FLOW	IMAGE
<div><p>START</p><p>Check VREG_L6_1P8(TP 1)</p><p>NO</p><p>Re-solder and Change U201</p><p>YES</p><p>Check TP2-TP3</p><p>NO</p><p>Re-solder and Change R1001 or R1002</p><p>YES</p><p>Re-solder and Change U2201</p><p>G sensor function OK</p></div>	

8. Level 3 Repair

8-4-7. 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 VREG_L6_1P8(T P1&TP2)</p><p>NO → Re-solder and Change R2204 or R2205 or U201</p><p>YES → Check VDD_ALPS_3V0(TP3)</p><p>NO → Re-solder and Change B2203 or B2202 or U201</p><p>YES → Check TP4&TP5&TP6</p><p>NO → Re-solder and Change B2204 or B2201 or B2206 or U801</p><p>YES → Re-solder and Change U2202</p><p>ALPS function OK</p></div>	

8. Level 3 Repair

8-4-11. TOUCH SCREEN

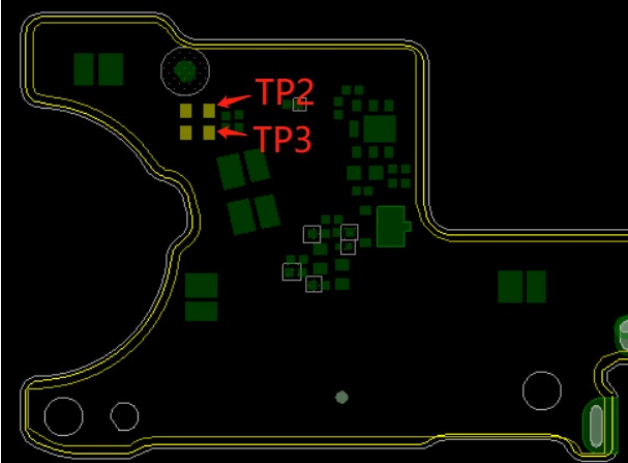
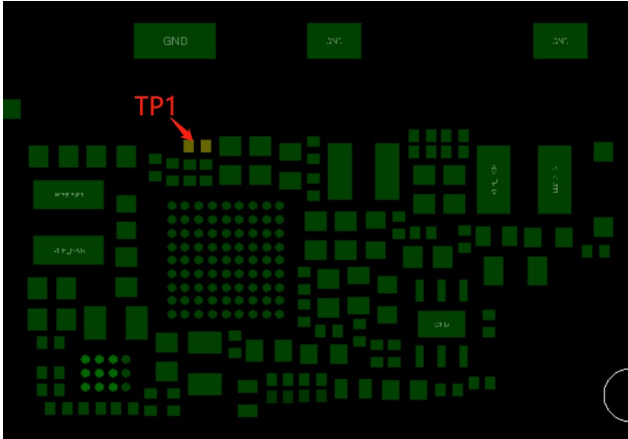
■ The Touch control signals are generated by SDM450 (U801). It is assembled with LCD.

CHECKING FLOW	IMAGE
<div><div><div>START</div><div>Check TP1~TP6</div><div>NO</div><div>Re-solder and Change U801</div><div>YES</div><div>Check J2001</div><div>NO</div><div>Re-solder and Change J2001</div><div>YES</div><div>Check TP Module</div><div>NO</div><div>Change TP Module</div><div>YES</div><div>Touch function OK</div></div></div>	<div></div>

8. Level 3 Repair

8-4-12. Vibrator

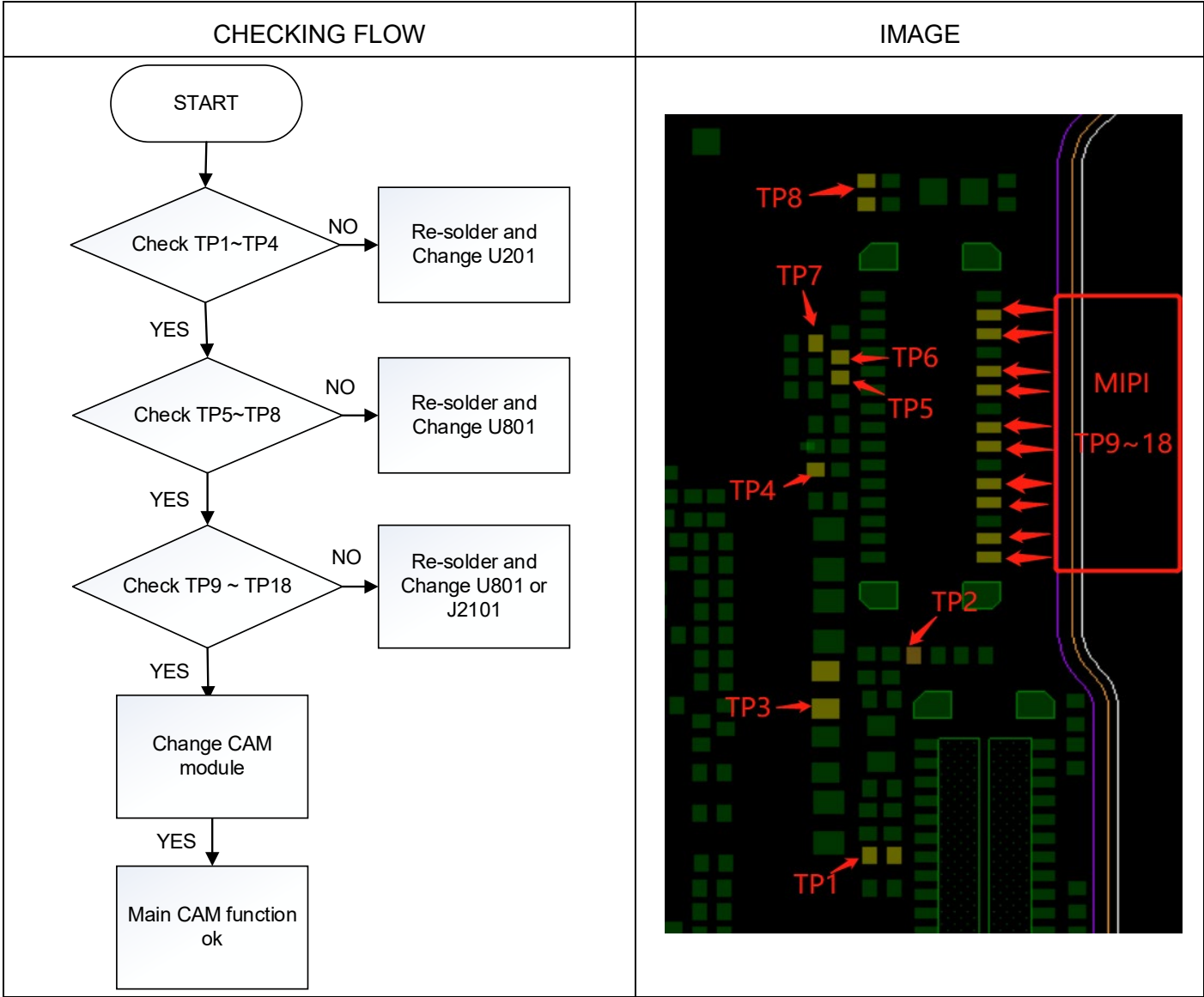
- The Vibrator control signals are generated by PMI632 (U301).

CHECKING FLOW	IMAGE
<div><p>START</p><p>Check TP1</p><p>NO</p><p>Re-solder and Change U301</p><p>YES</p><p>Check J102/ J1901/FPC</p><p>NO</p><p>Re-solder and Change J102/ J1901/FPC</p><p>YES</p><p>Check TP2,TP3</p><p>NO</p><p>Re-solder and Change B201 or B202</p><p>YES</p><p>Check ANT203 ANT204 and vibrator</p><p>NO</p><p>Re-solder and Change ANT203 ANT204 or vibrator</p><p>YES</p><p>Vibrator function ok</p></div>	<div></div>

8. Level 3 Repair

8-4-13.Main Camera

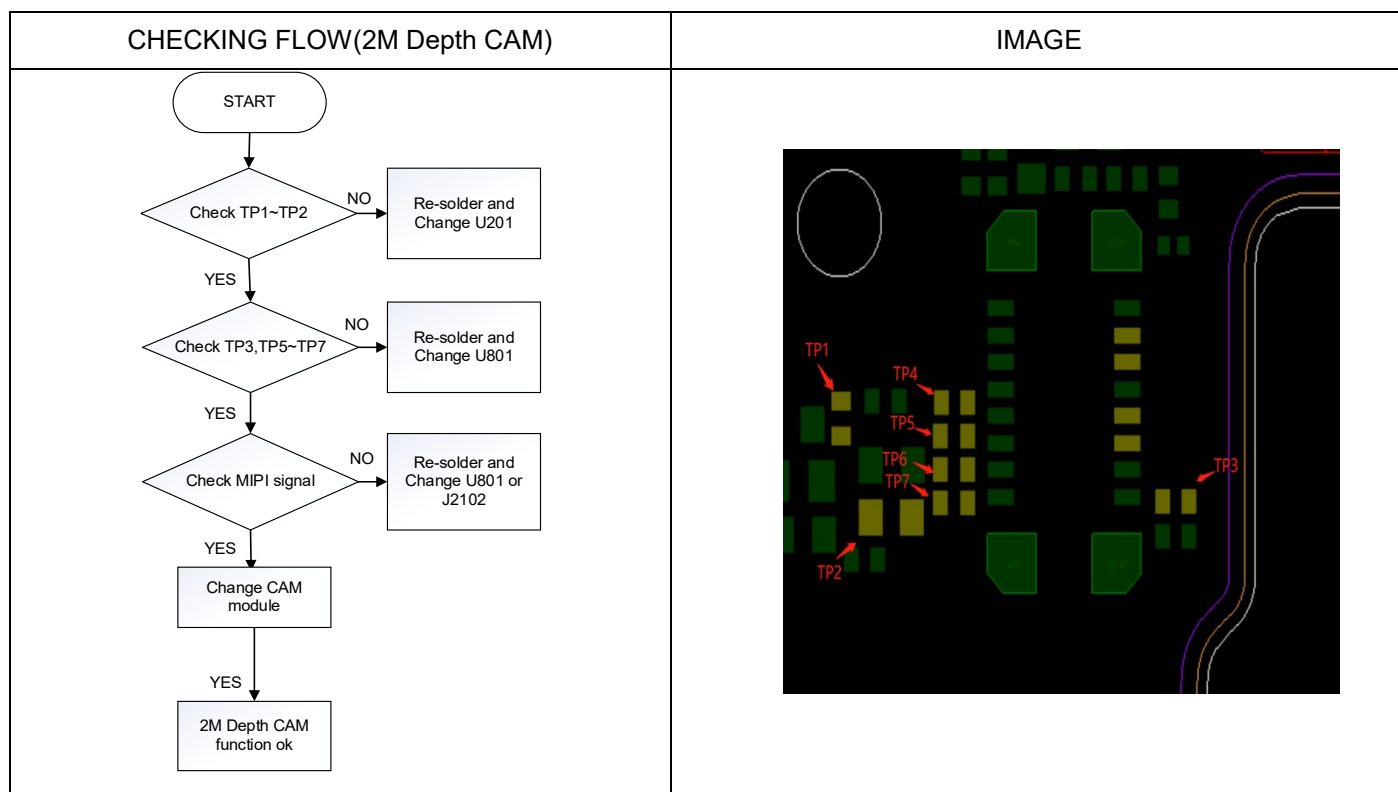
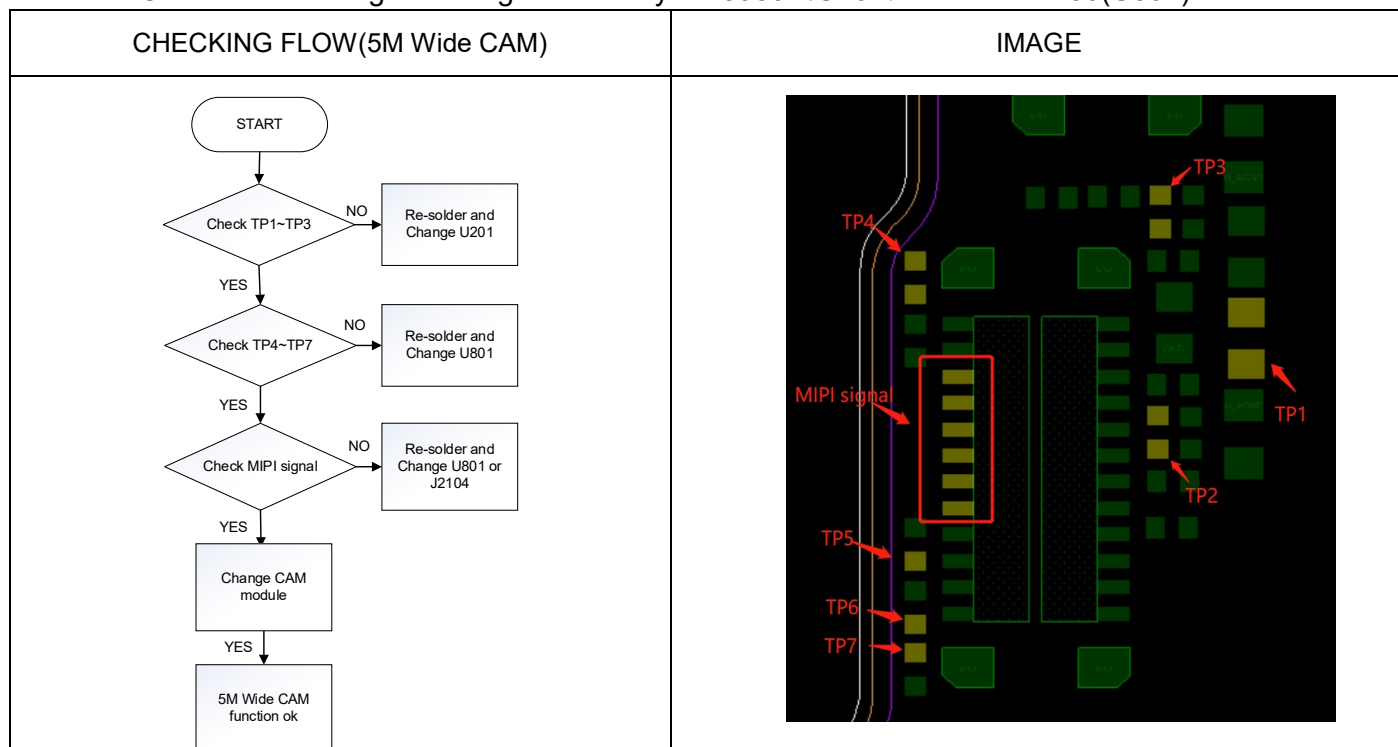
■ The Camera control signals are generated by PM8953 (U201) and SDM450(U801).



8. Level 3 Repair

8-4-14. Rear auxiliary Camera

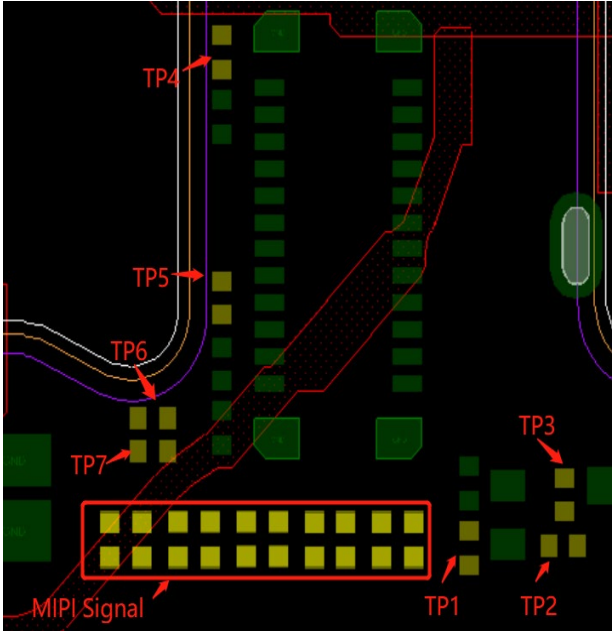
- The Camera control signals are generated by PM8953 (U201) and SDM450(U801).



8. Level 3 Repair

8-4-15. Front Camera

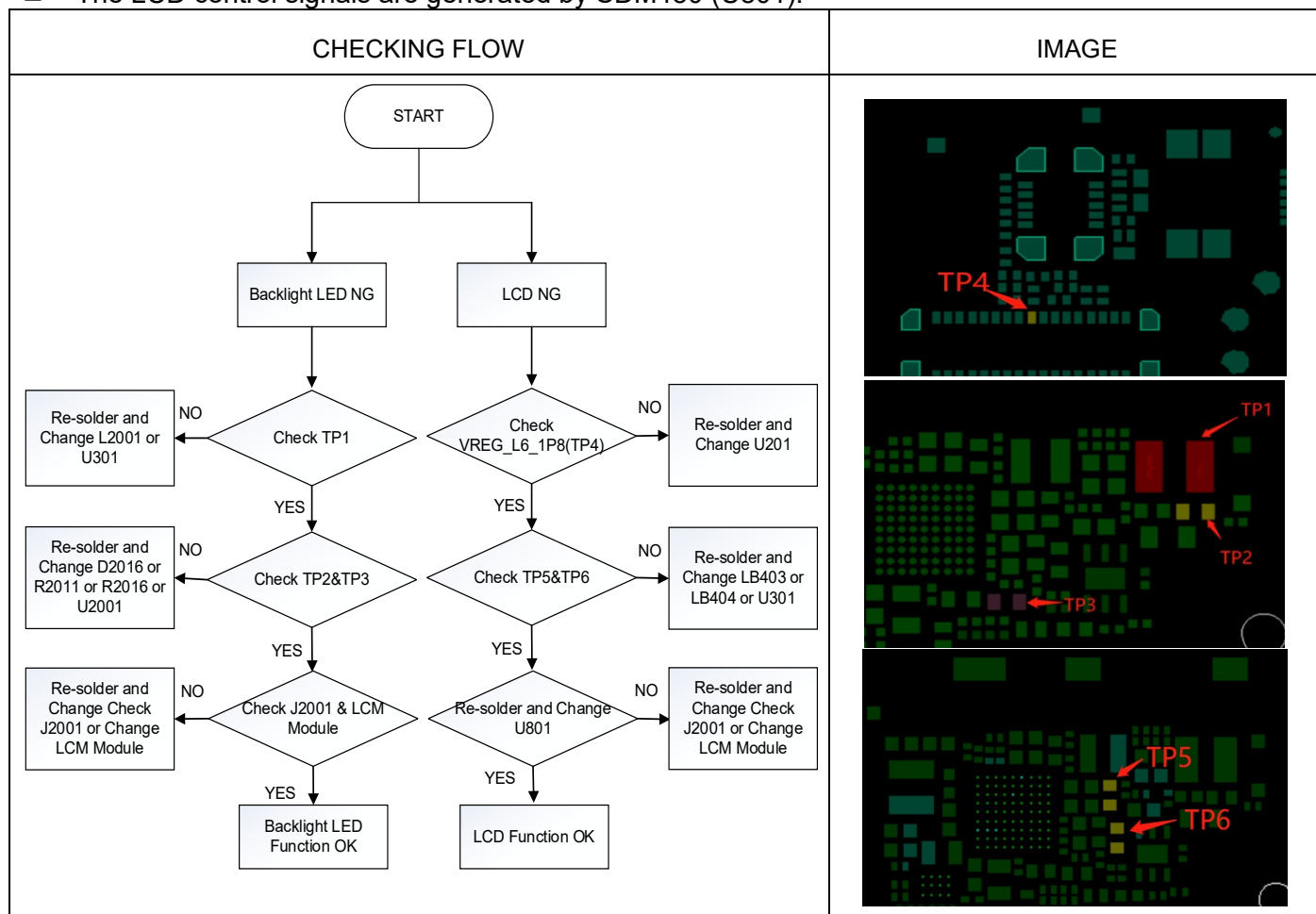
- The Camera control signals are generated by PM8953 (U201) and SDM450(U801).

CHECKING FLOW(Front CAM)	IMAGE
<div><p>START</p><p>Check TP1~TP3</p><p>NO → Re-solder and Change U201</p><p>YES → Check TP4~TP7</p><p>NO → Re-solder and Change U801</p><p>YES → Check MIPI signal</p><p>NO → Re-solder and Change U801 or J2103</p><p>YES → Change CAM module</p><p>YES → Front CAM function ok</p></div>	 <p>The image shows a microscopic view of the front camera module. A red rectangle highlights the MIPI signal line, labeled 'MIPI Signal'. Several test points are marked with red arrows and labels: TP1, TP2, TP3, TP4, TP5, TP6, and TP7. The background is dark, and the components are metallic and green.</p>

8. Level 3 Repair

8-4-16. LCD

- The LCD control signals are generated by SDM450 (U801).



8-5. Service Schematics

[illegible]