

## 8. Level 3 Repair

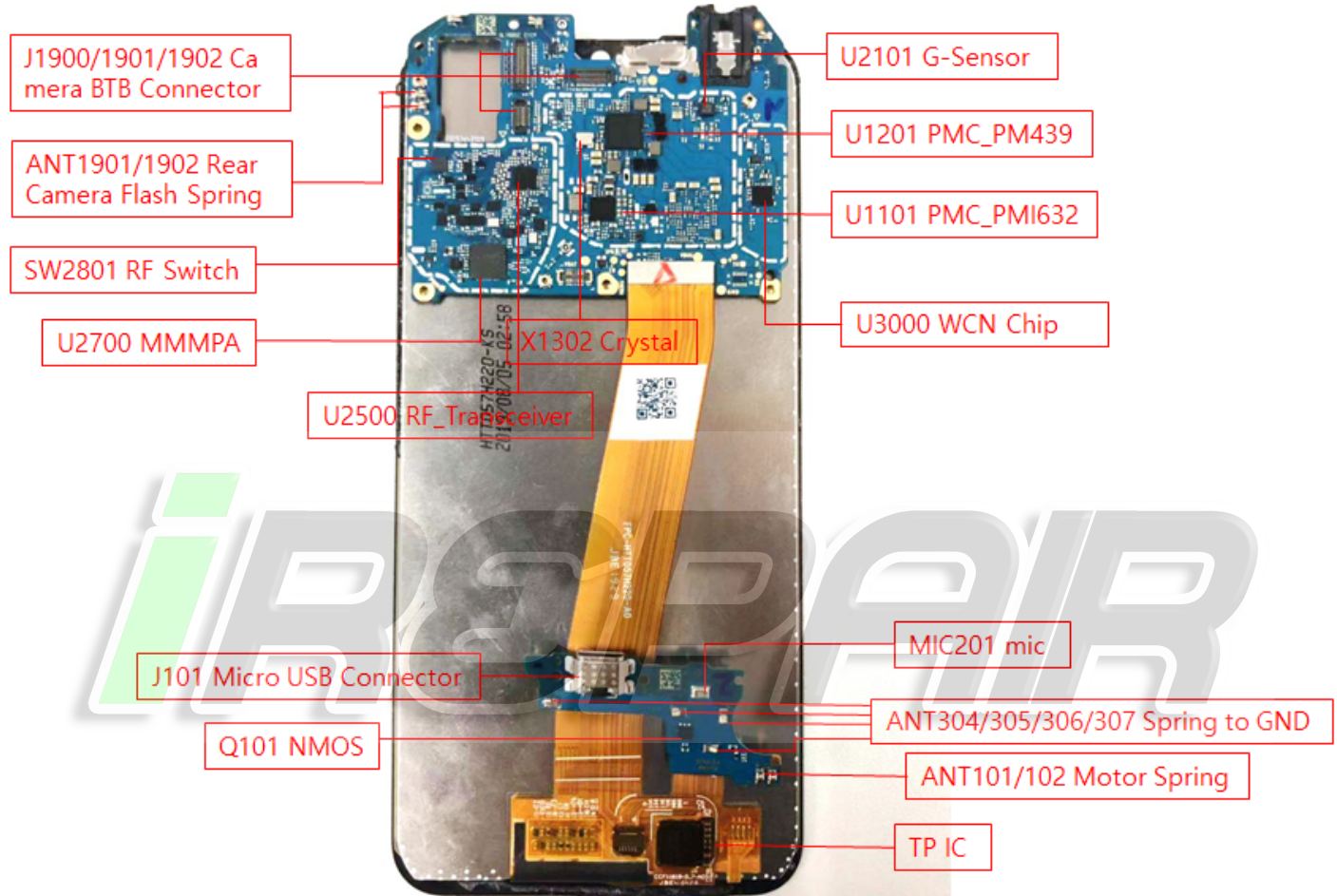
# آموزش شماتیک و نقشه خوانی

### 8-1. Components Layout

# iranbsm.ir

PBA TOP Side

## Mobile schematic training



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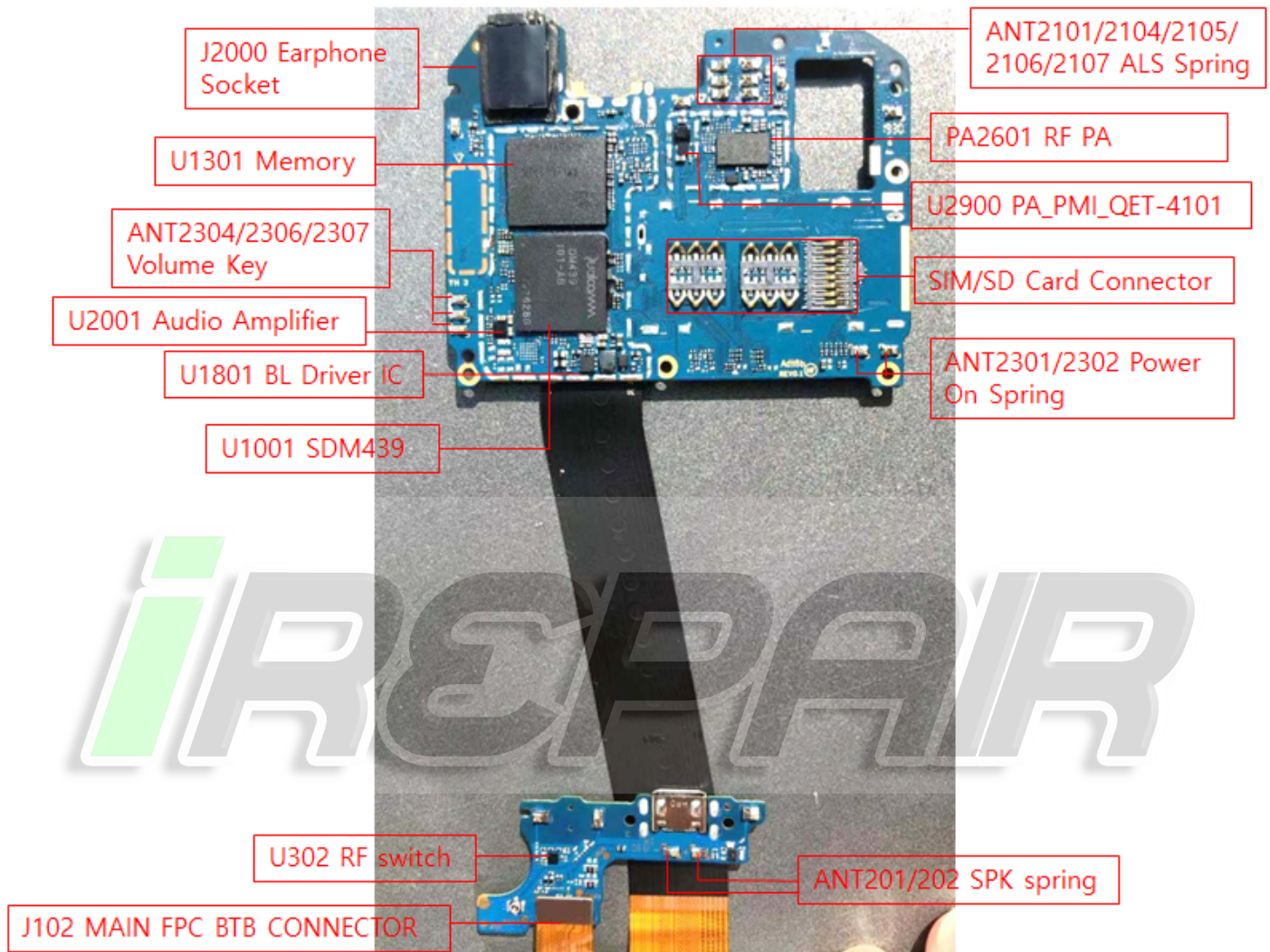
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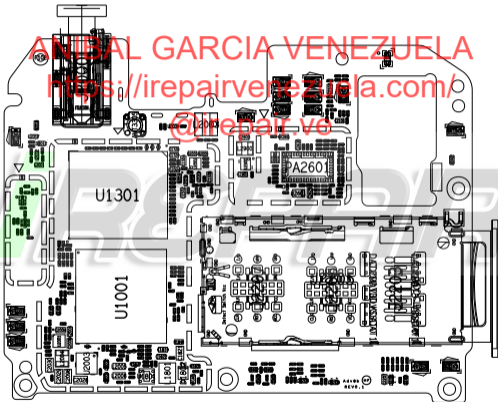
### PBA BOT Side



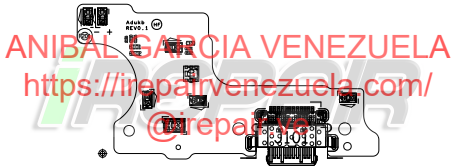
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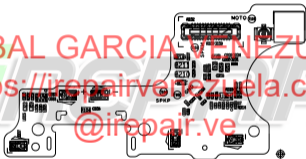
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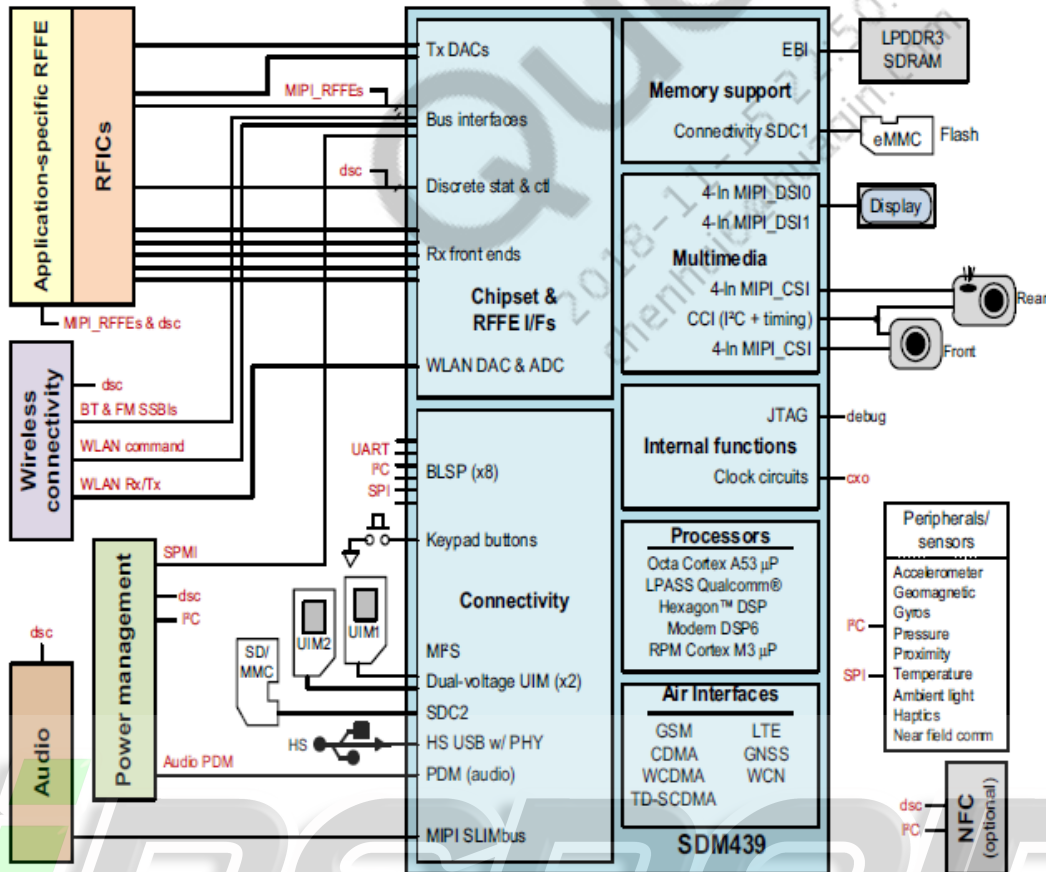


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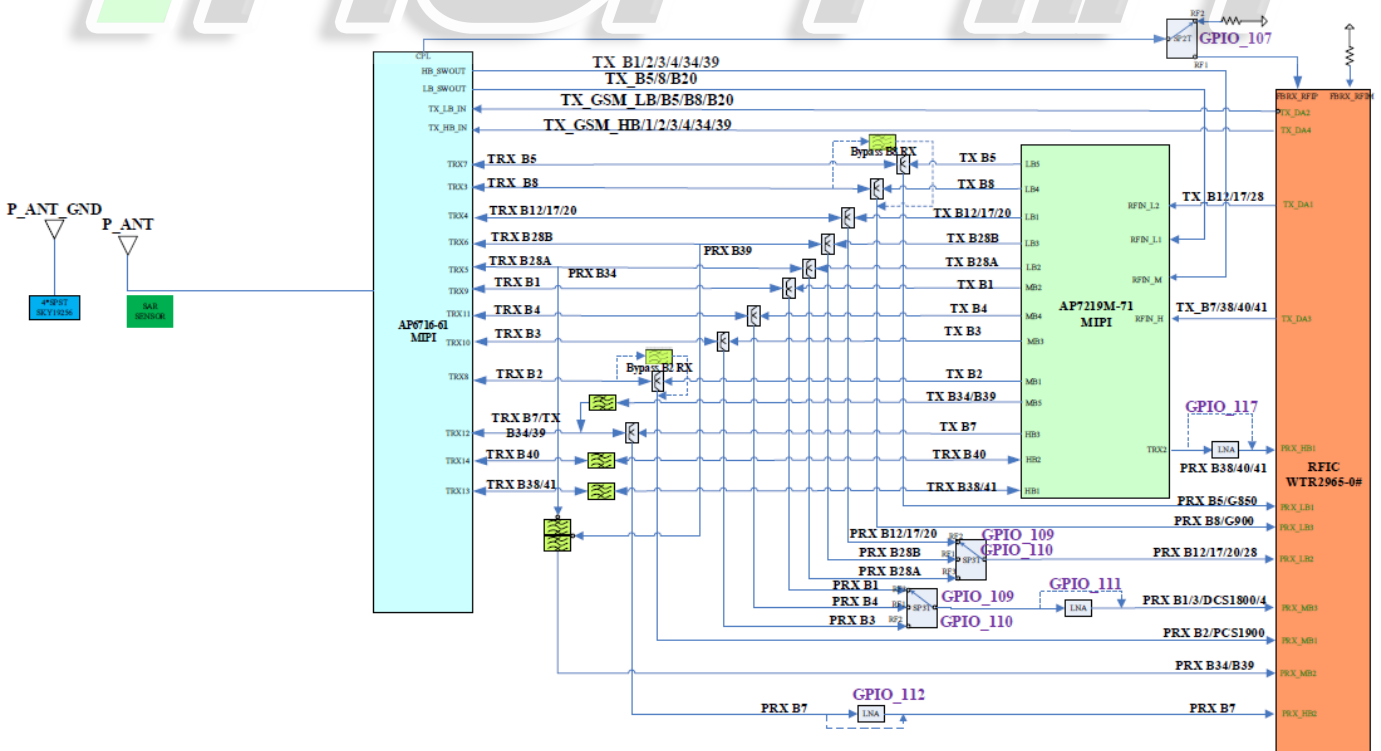
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ZQL1695 RF Block Diagram



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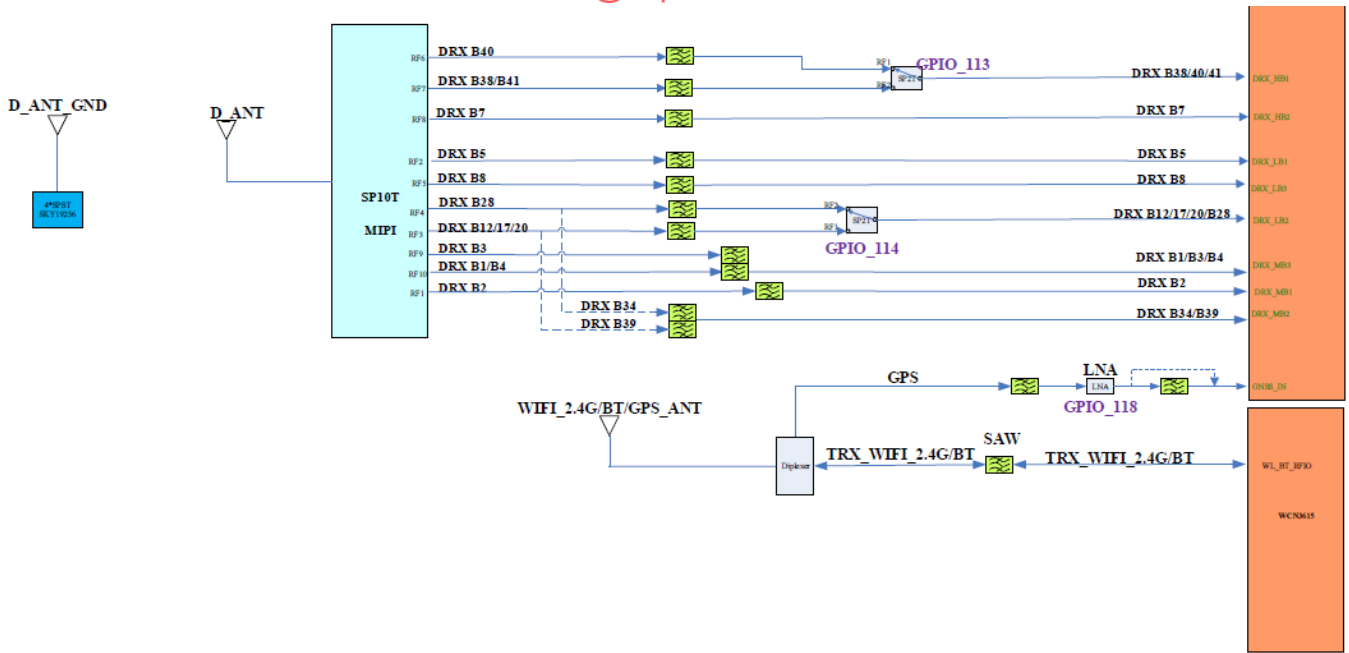
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# iREPAIR

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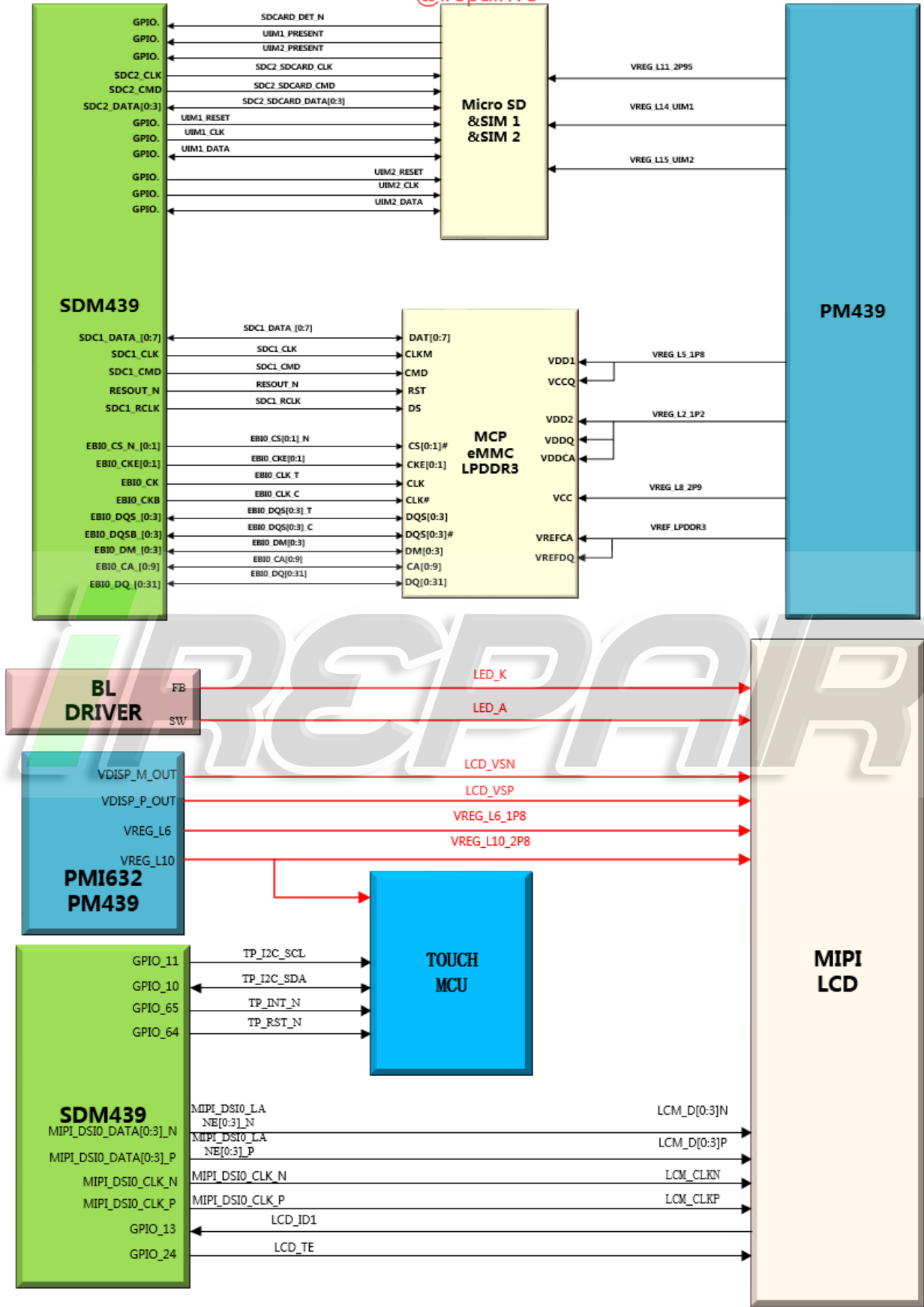


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### 8-3. Flow chart of Troubleshooting.

	
<p><b>Oscilloscope</b></p>	<p><b>Digital Multimeter</b></p>
	
<p><b>Power Supply</b></p>	<p><b>+ driver, ESD Safe Tweezer</b></p>
	
<p><b>8960 &amp; Spectrum Analyzer</b></p>	<p><b>Soldering iron</b></p>

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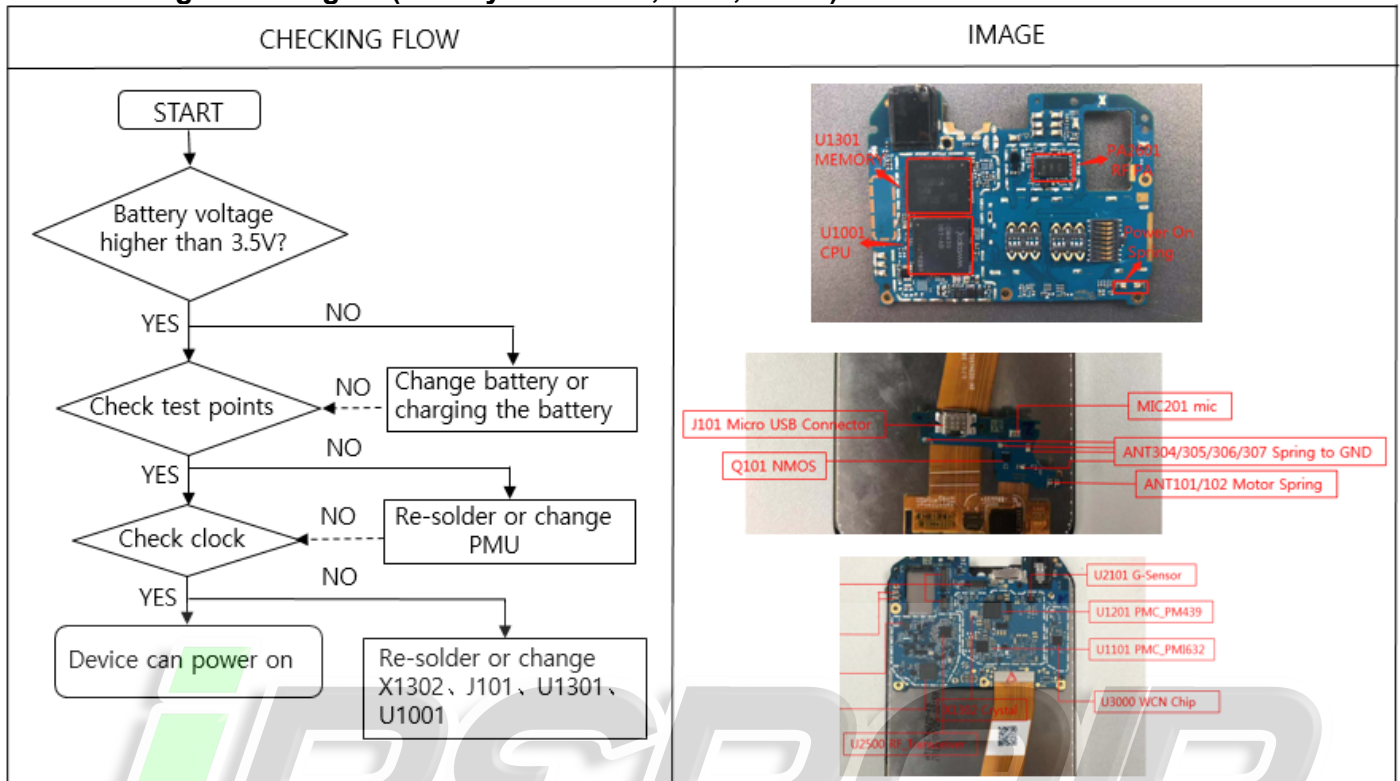
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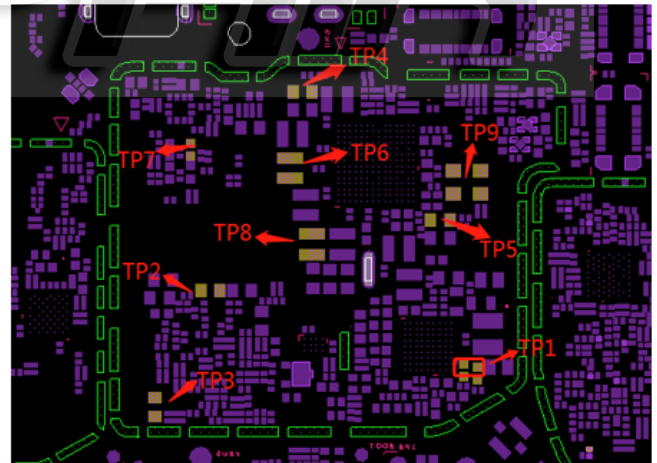
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### 8-4-1. Power On

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



Power on voltage check				
Power Domain	Configurable Voltage	Signal Name	Measurement Location	TP
VPH_PWR	3.0-5.25V	VPH_PWR	C1106/C1107	TP1
VDD_MEM	0.915V	VREG_S7_OP915	C937	TP2
VDD_CORE	0.8625V	VREG_S1_OP8625	C938	TP3
PM439_LDO	2.05V	VREG_S4_2P05	C1411	TP4
PM439_LDO	1.225V	VREG_S3_1P225	C1408	TP5
PM439_LDO	0.8625V	VREG_S2_OP8625	L1402	TP6
LP-DDR3	1.2V	VREG_L2_1P2	C1720	TP7
APC	0.862V	VREG_S5_S6_OP8625	L1405	TP8



#### > Oscillate frequency measurement

Signal Name	Frequency MHz	Measurement Location	TP
XTAL_19M_IN	19.2M	X1302	TP9

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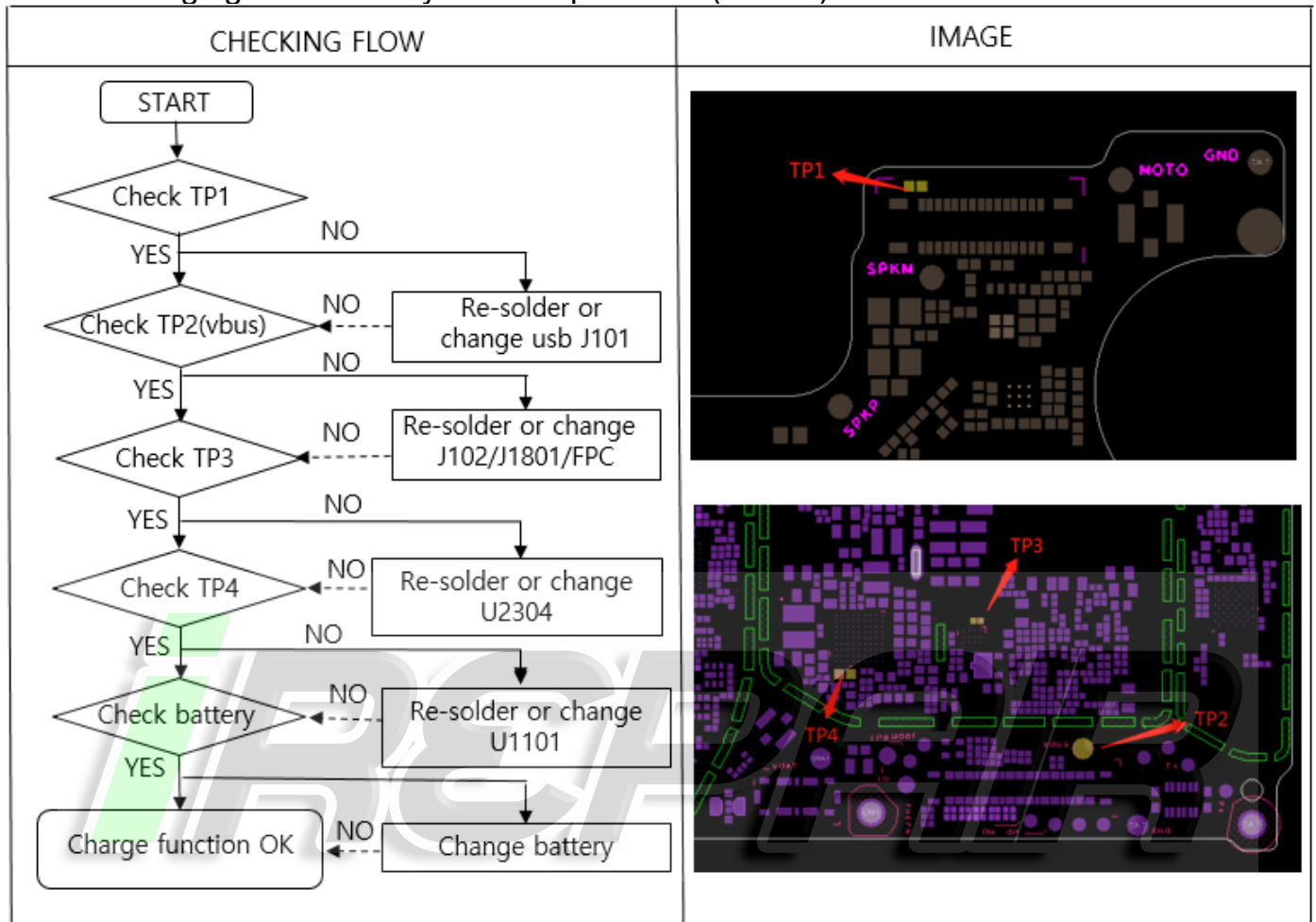
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### 8-4-2. Charging

- The charging controlled by PMU chip PM660 (U1501)



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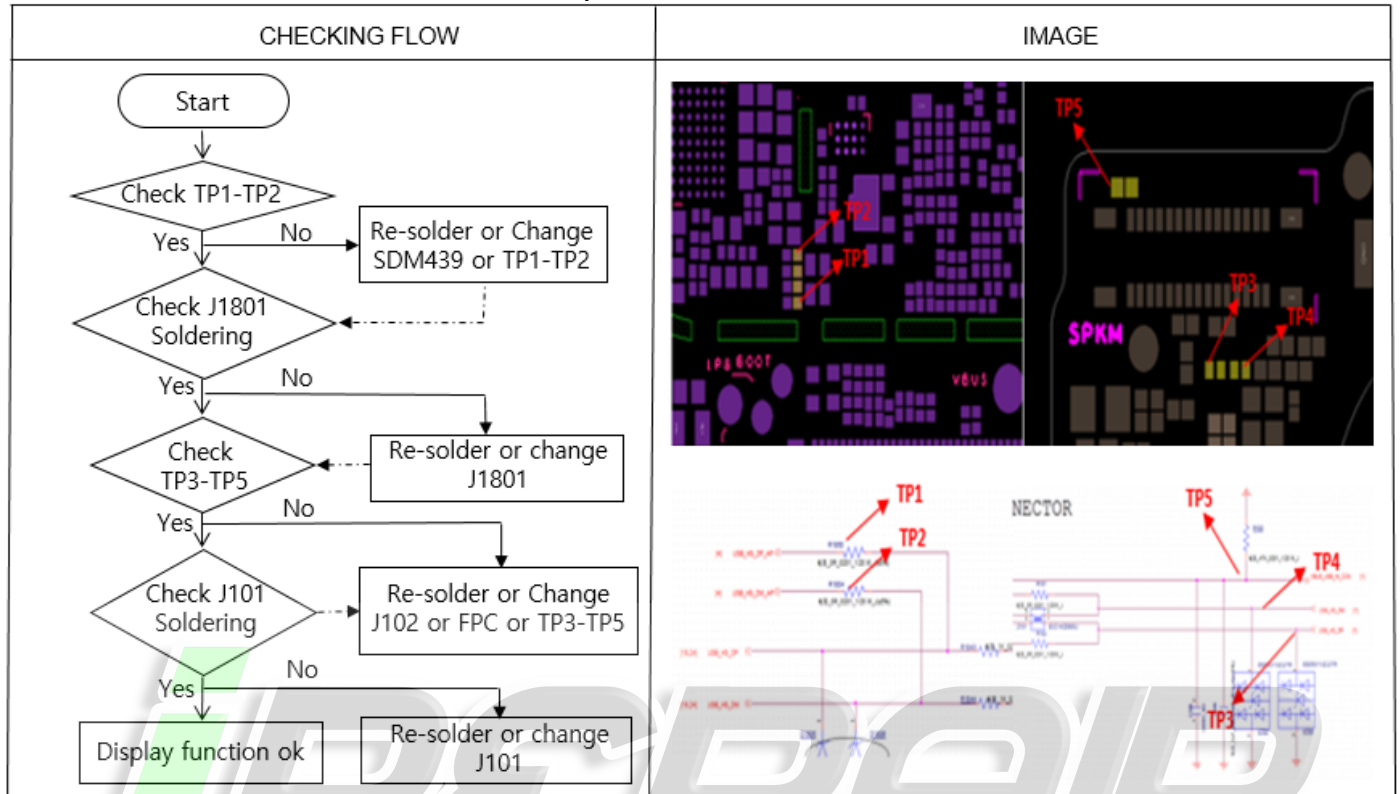
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### 8-4-3. USB

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



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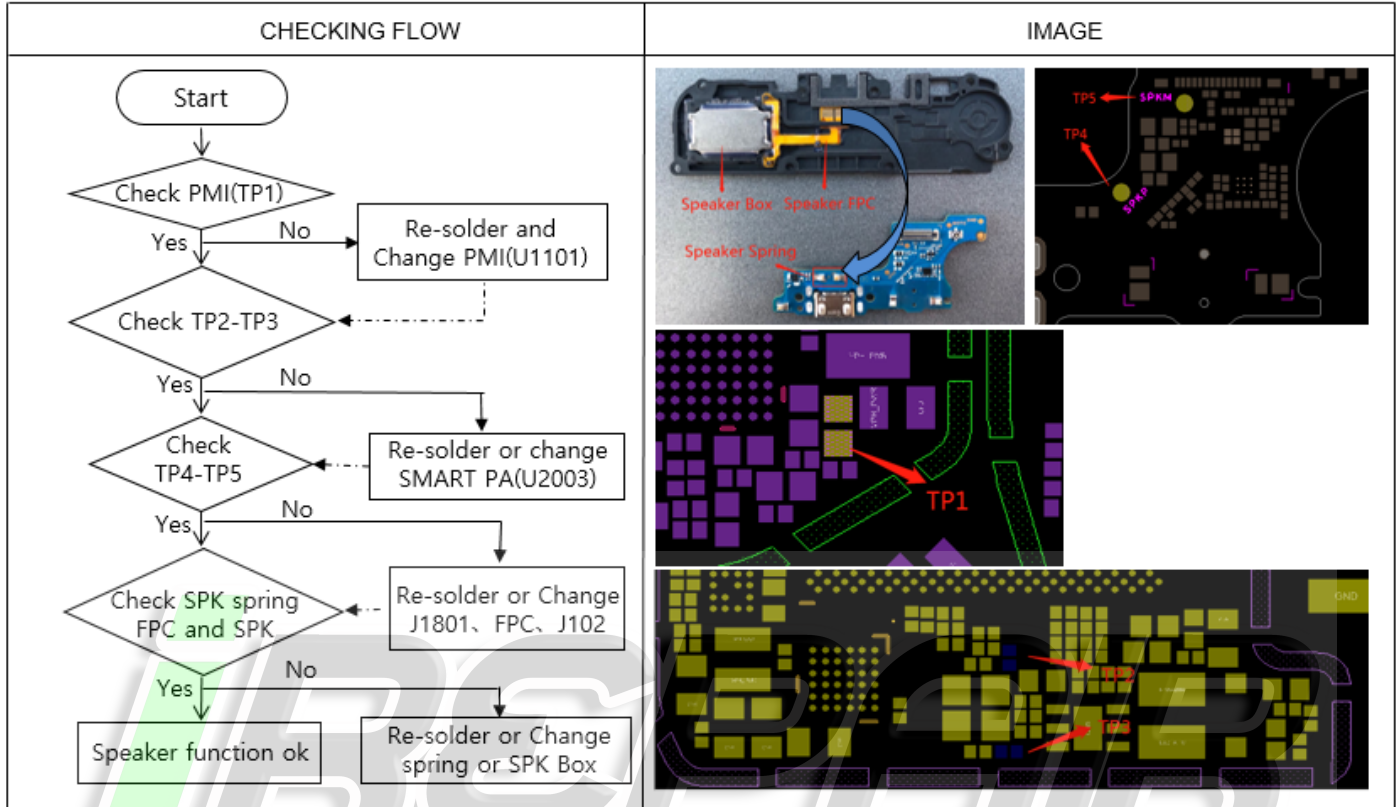
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### 8-4-4. Audio speaker

- The Speaker control signals are generated by BB chip SDM439(U1001) and SMART PA, the chip, PA and the speaker are to be checked out.



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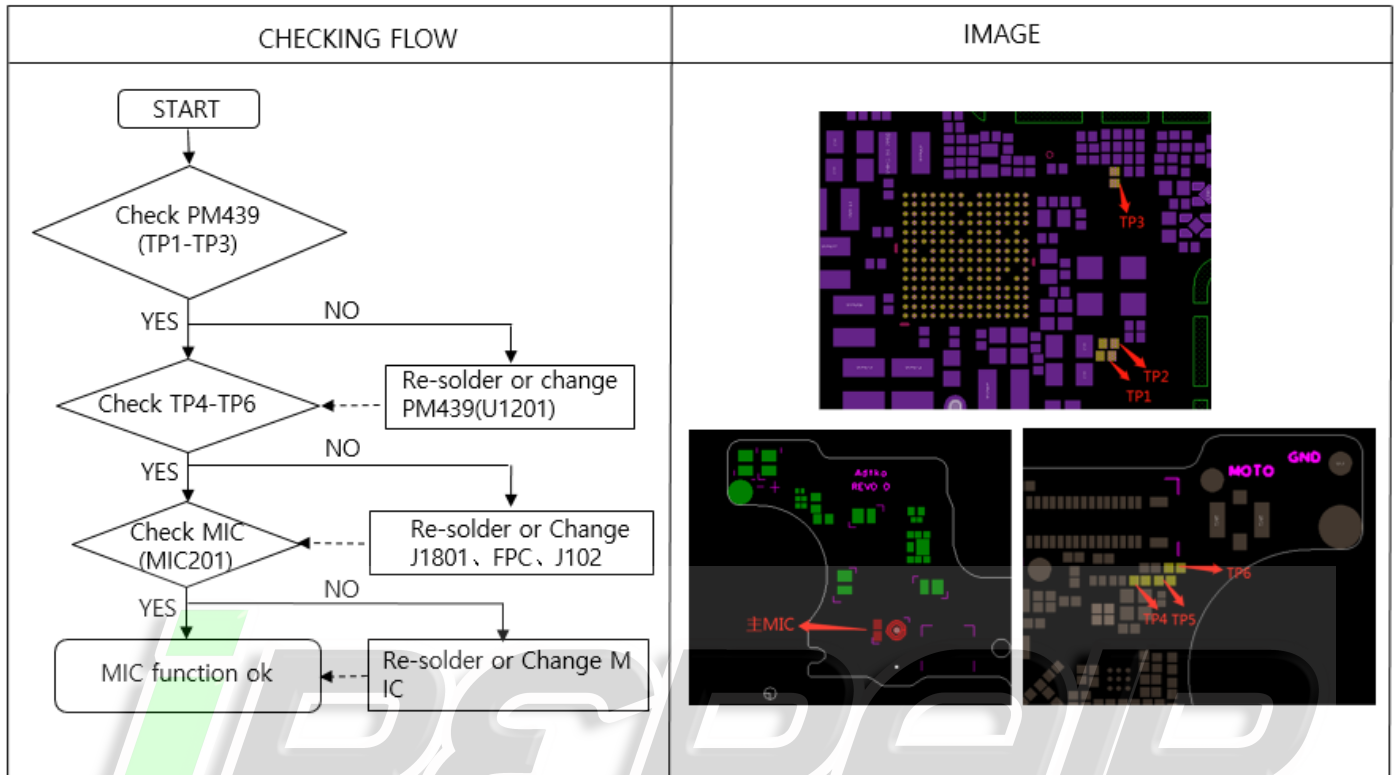
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### 8-4-5. Audio\_Main MIC

- The MIC control signals are generated by PMU chip PM439(U1201), the PMU chip and the MIC are to be checked out.



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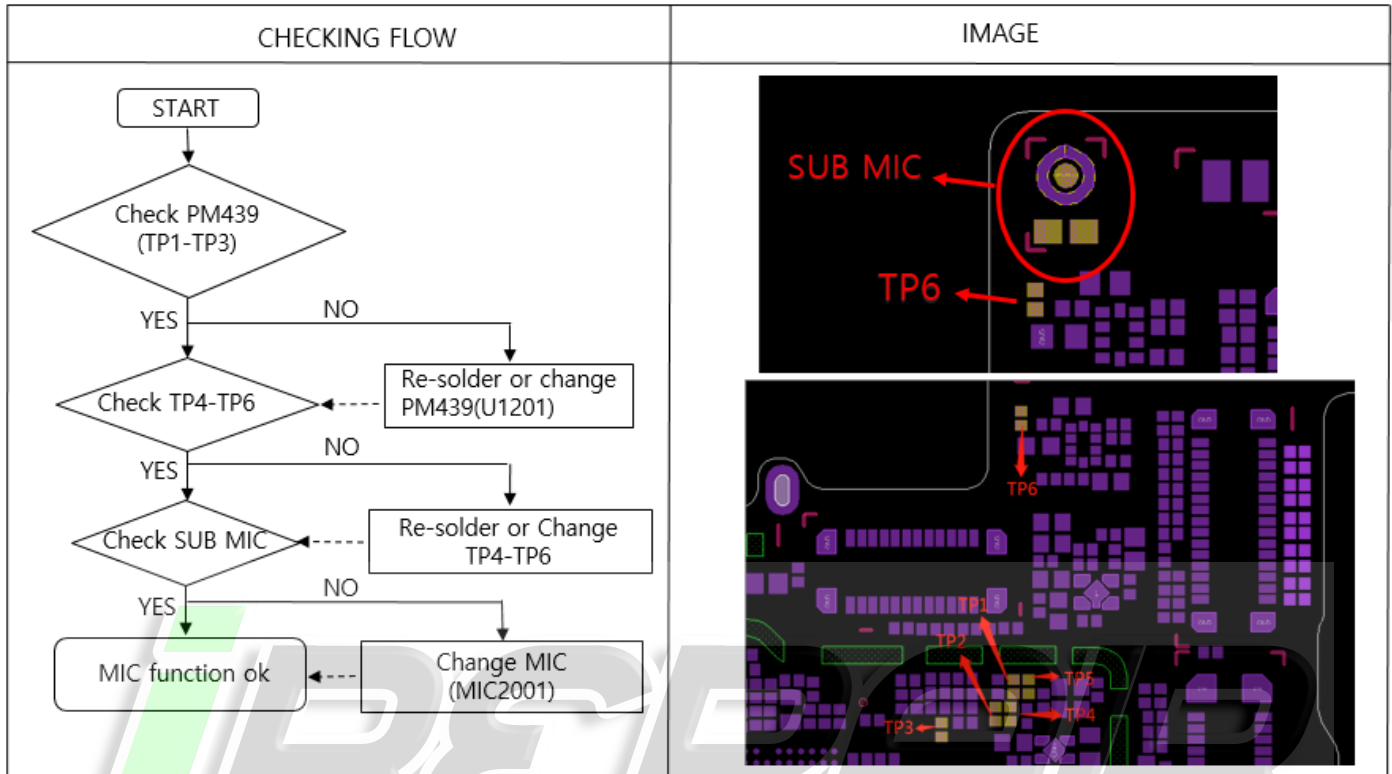
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### 8-4-6. Audio\_Headset MIC

- The MIC control signals are generated by PM439 (U1201), the PMU chip and the MIC are to be checked out.





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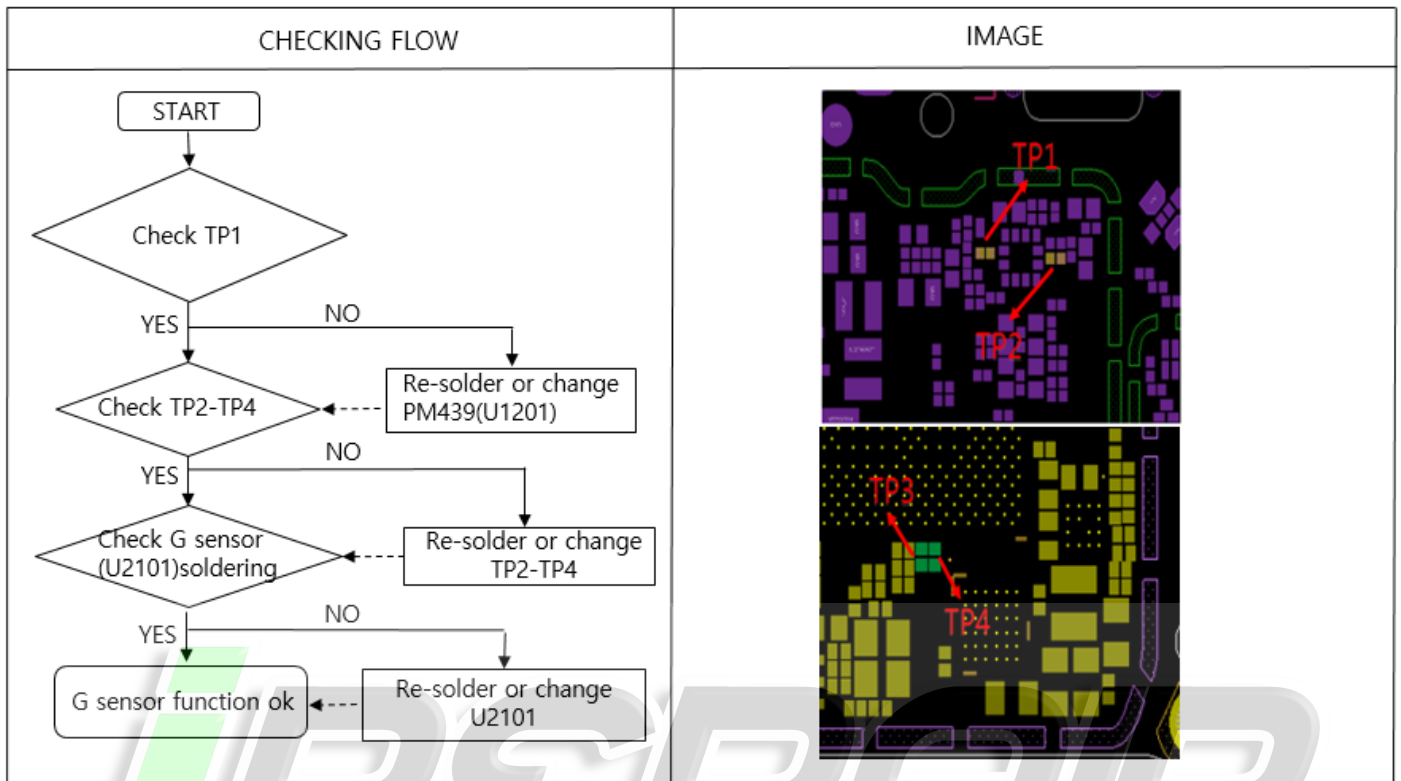
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### 8-4-7. G sensor

- The G sensor is calibrated by using SW algorithm.



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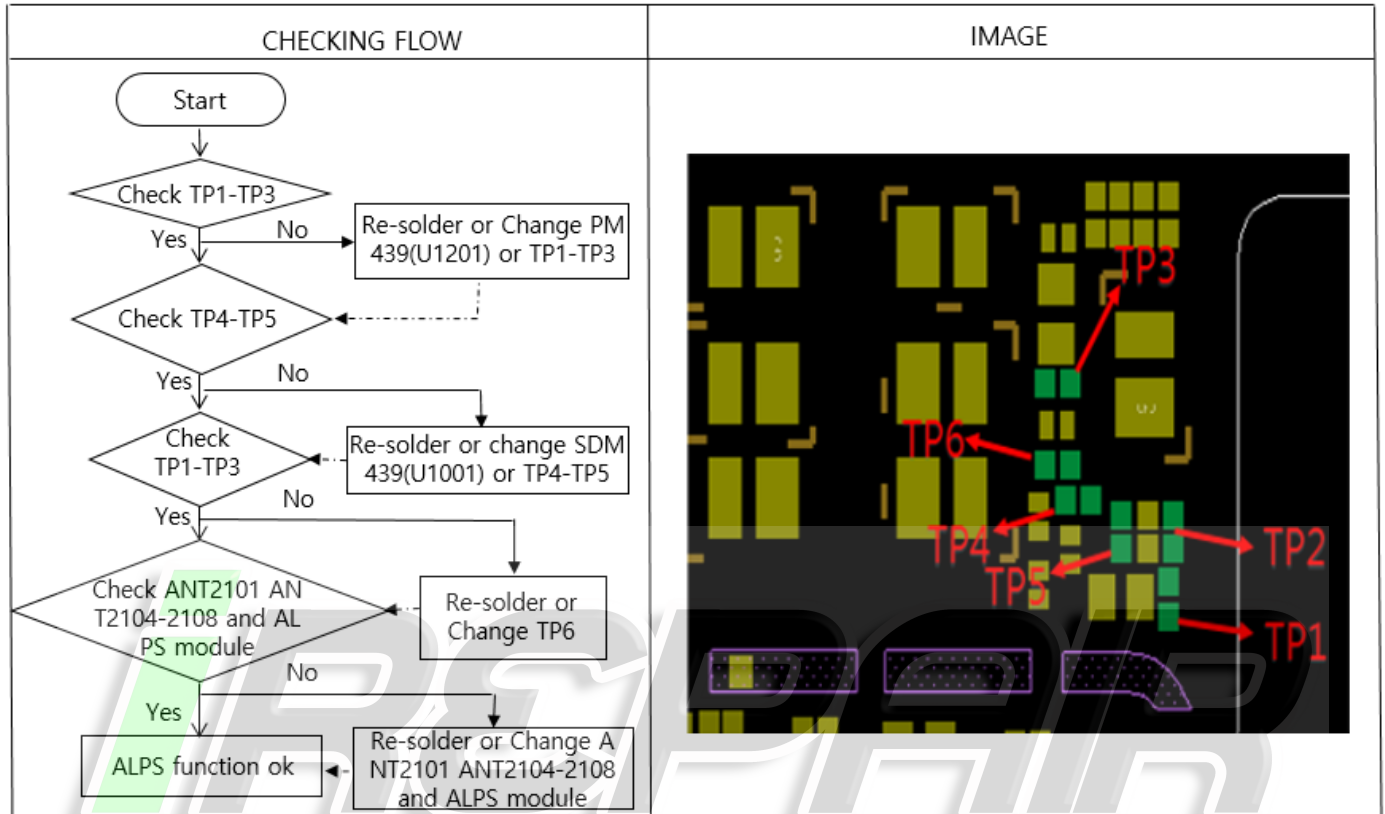
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### 8-4-8. Proximity and light sensor

- 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.



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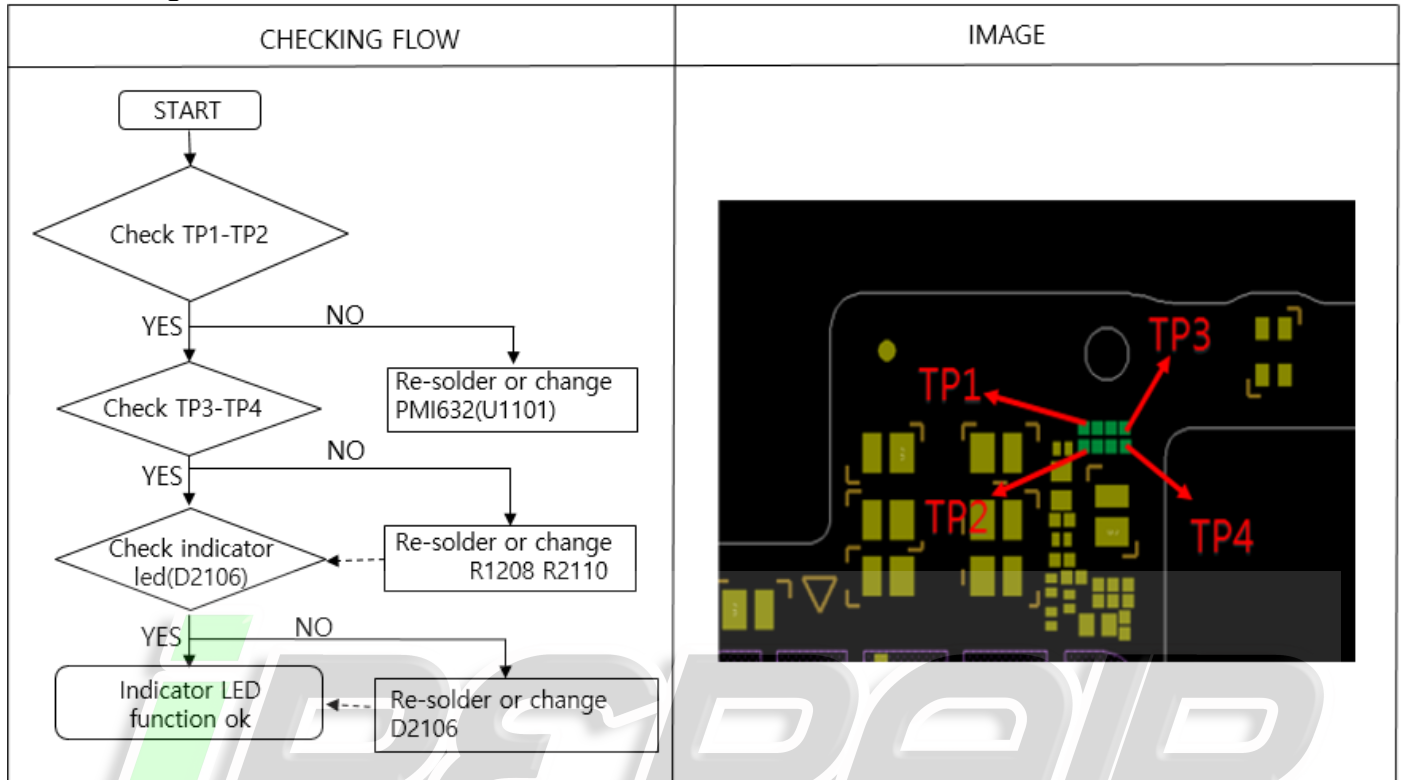
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### 8-4-9. INDICATOR LED

- INDICATOR LED is worked as below: Information cue for charging, phone call and message



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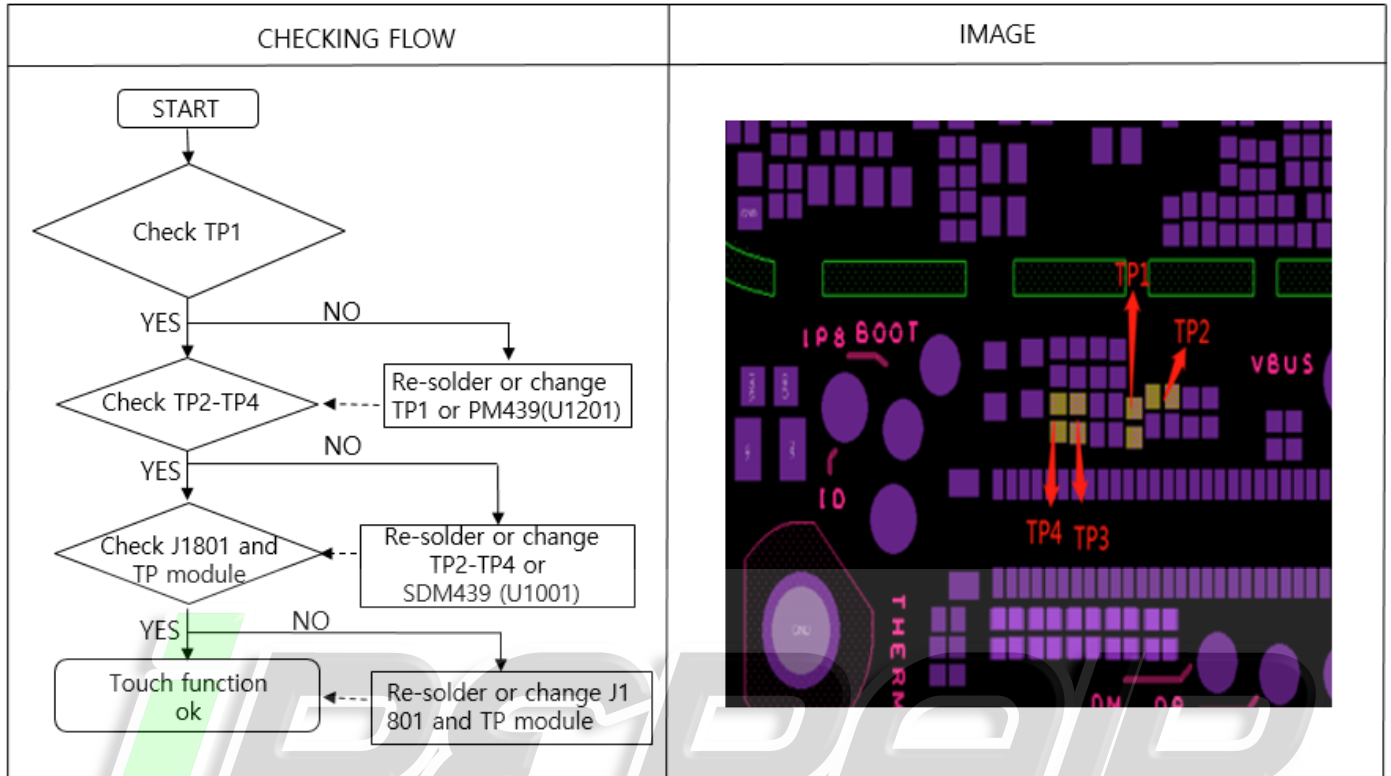
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### 8-4-10. TOUCH SCREEN

- The Touch control signals are generated by SDM439 and SDM439. It is assembled with LCD.



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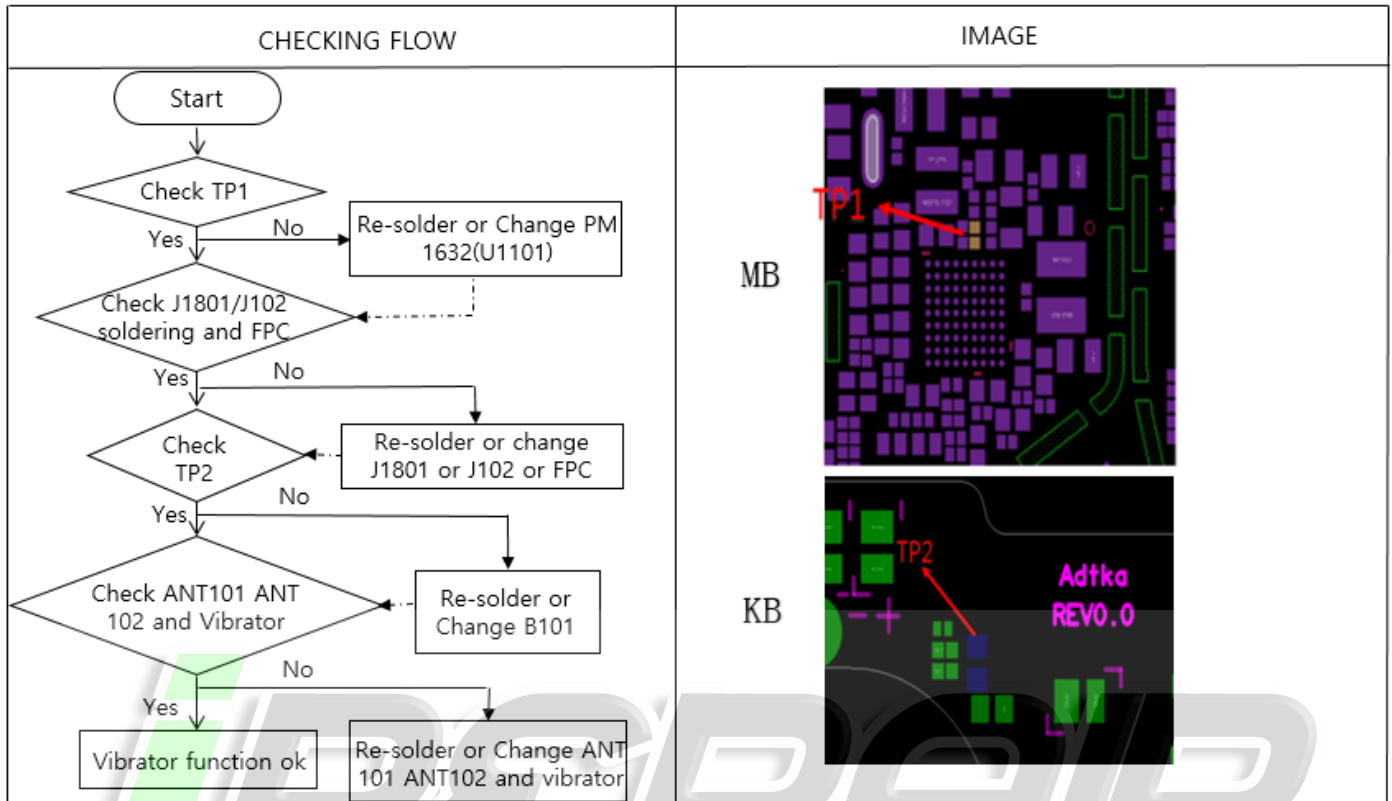
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### 8-4-11. Vibrator

- The Vibrator control signals are generated by PMI632.



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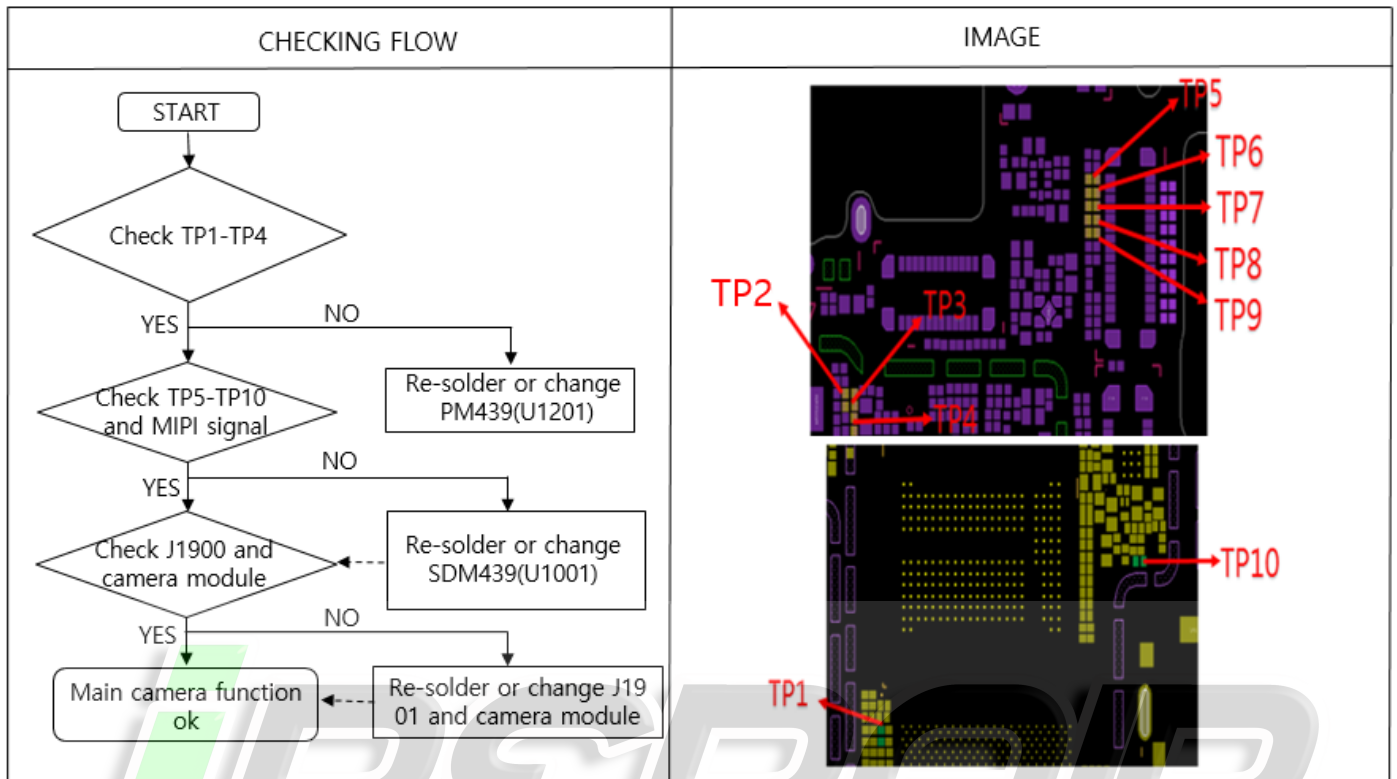
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### 8-4-12. Main Camera

- The Camera control signals are generated by PM439 and SDM439.



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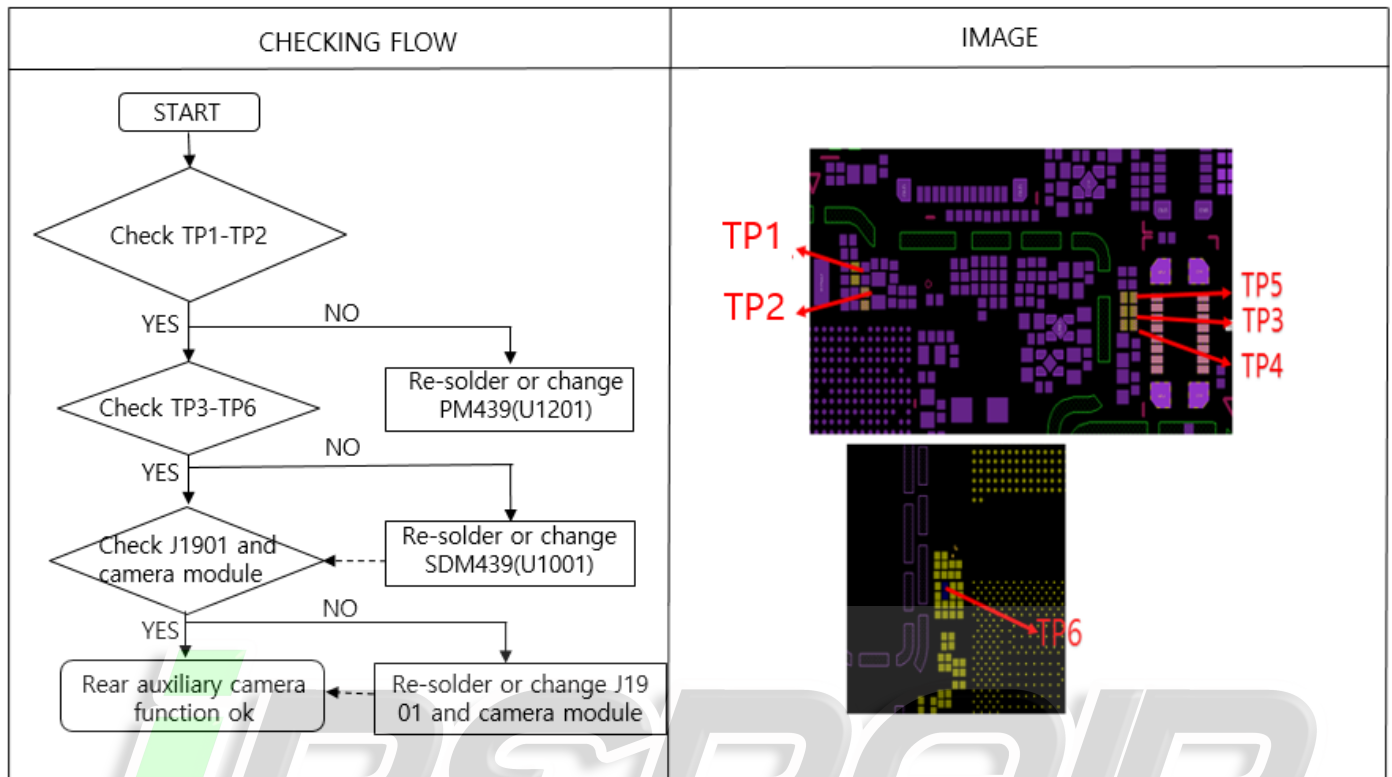
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### 8-4-13. Rear auxiliary Camera

- The Camera control signals are generated by SDM439 and PM439.



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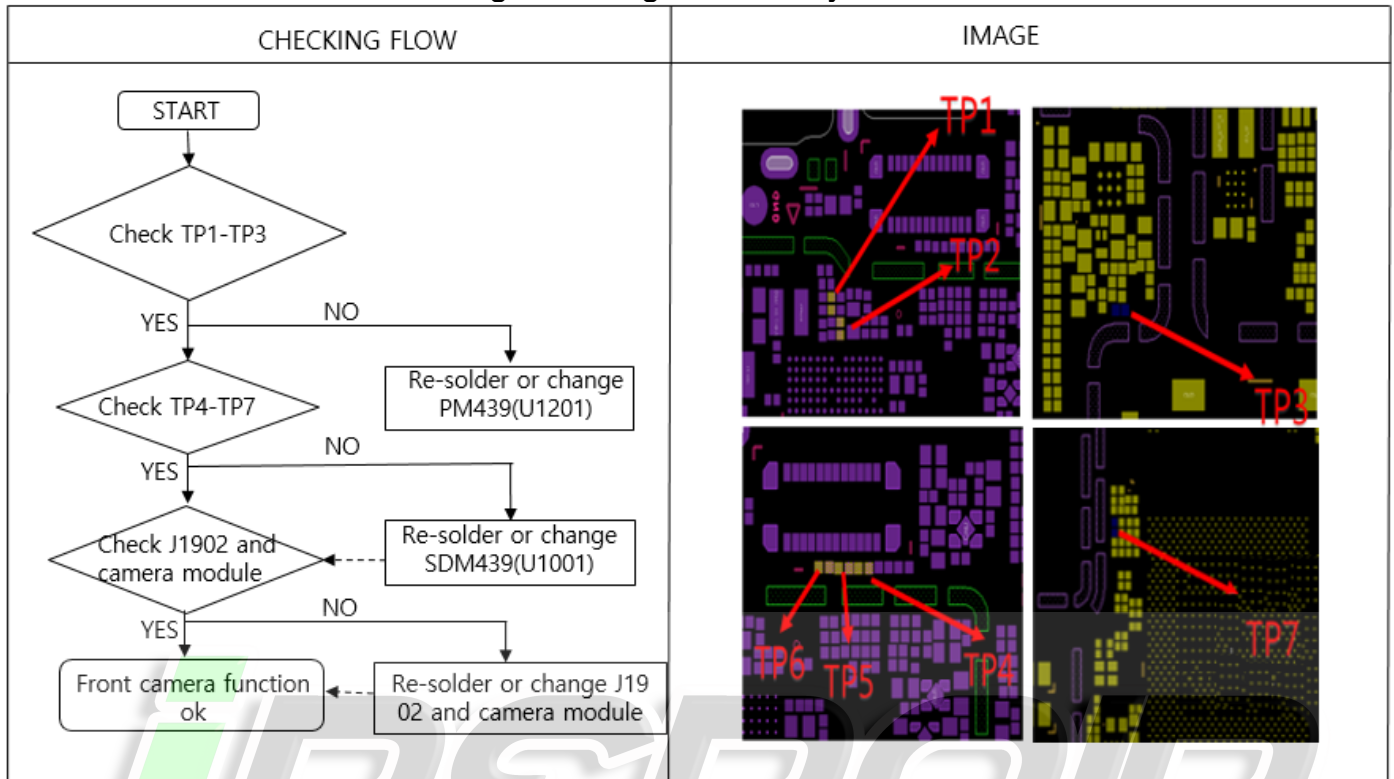
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### 8-4-14. Front Camera

- The Front Camera control signals are generated by PM439.





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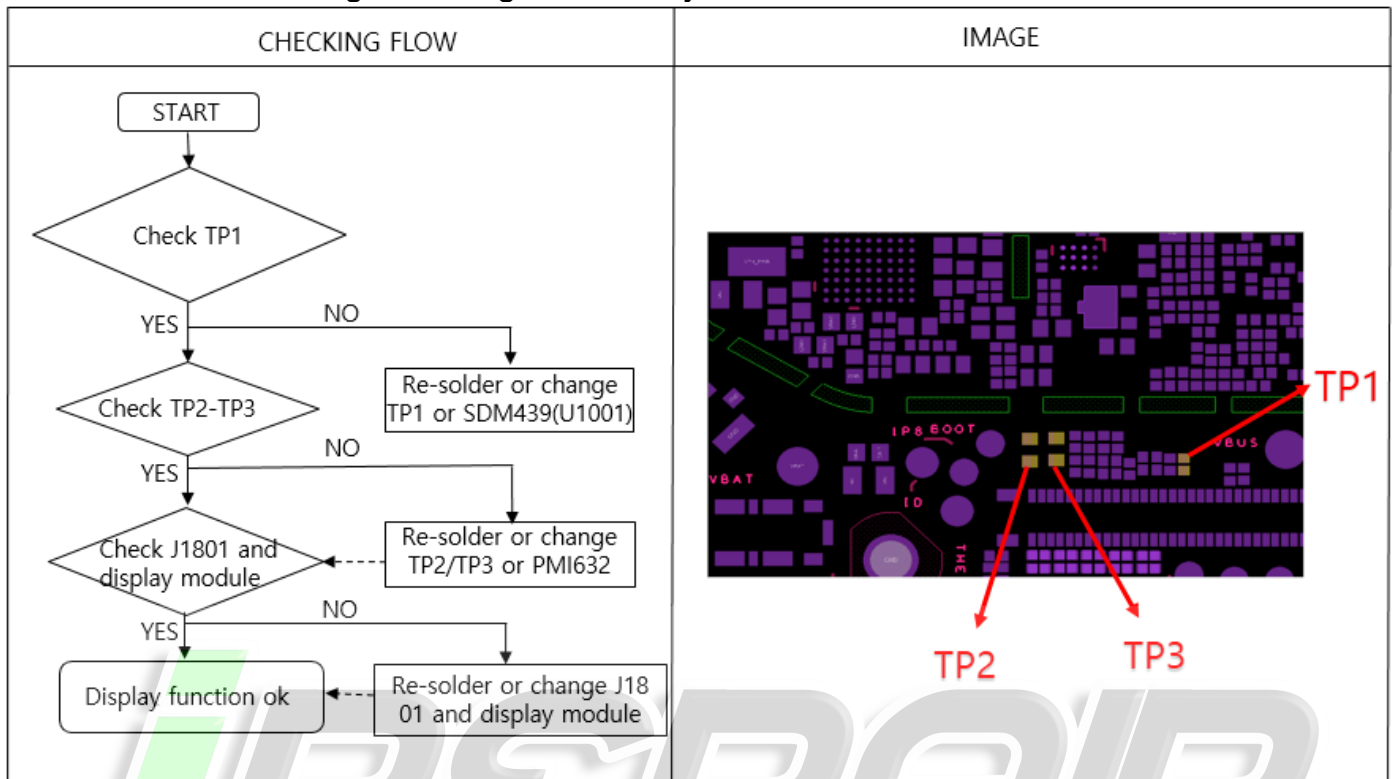
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### 8-4-15. LCD

- The LCD control signals are generated by SDM439.



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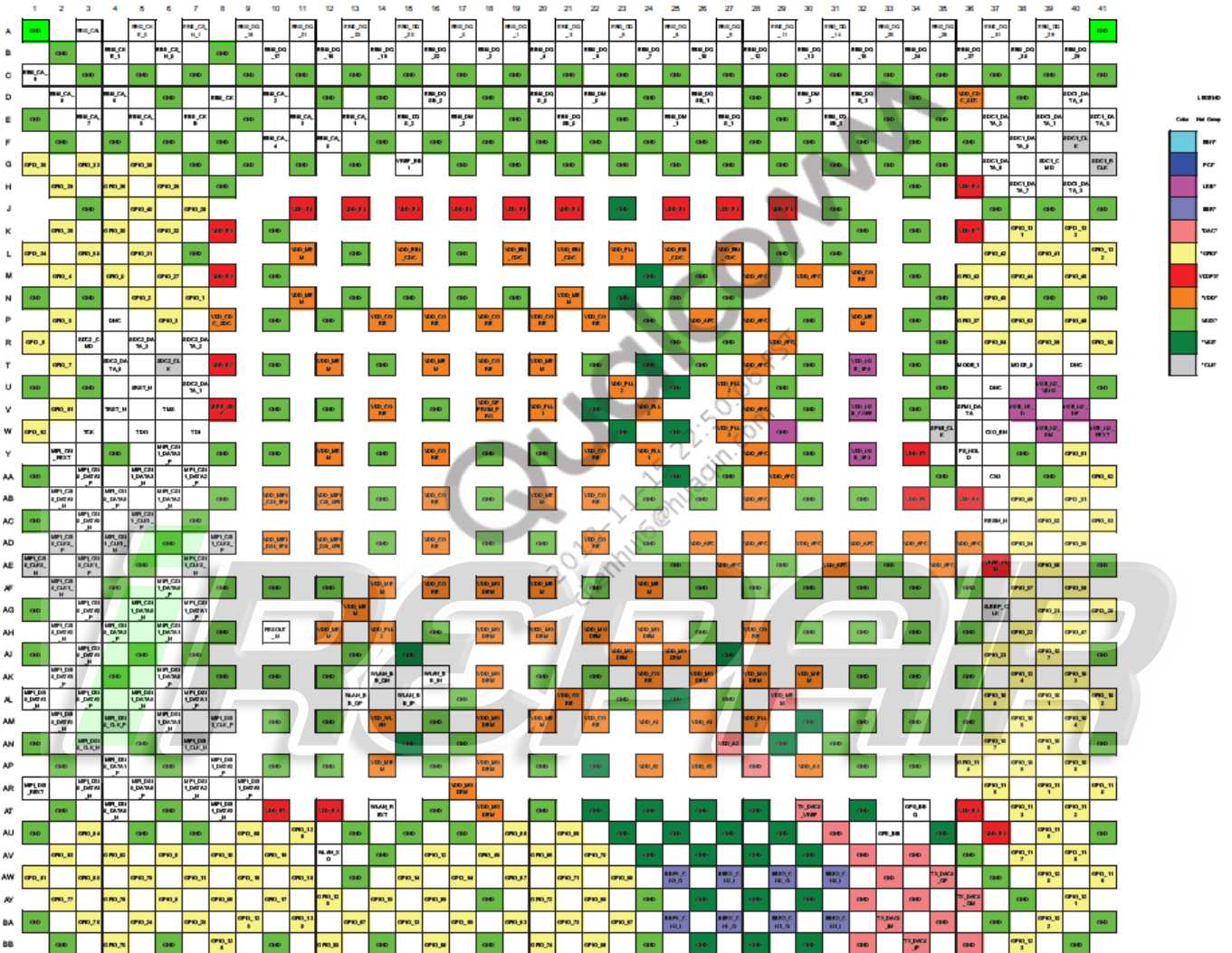
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## 8-5. Service Schematics

### ■ U1001\_SDM439\_BB chip IC , Digital Baseband Processor(Top)



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