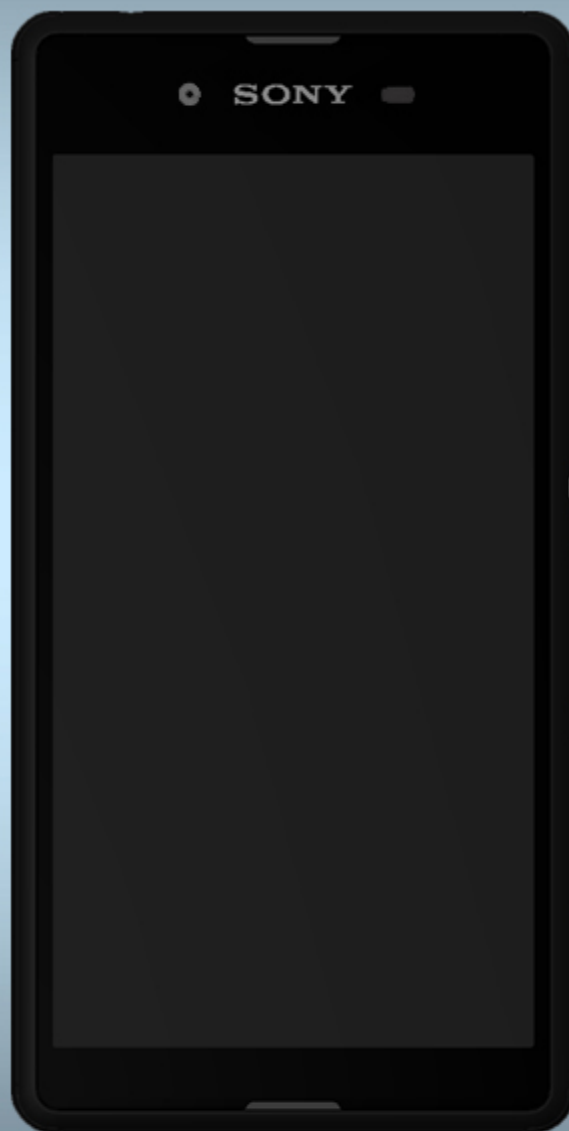


Troubleshooting Guide

- mechanical -



Xperia™ E3 & E3 Dual
D2202, D2203, D2206, D2212, D2243

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***Always firstly disconnect the Battery BtB connector to cut off power supply when diassembled.
Always finally connect the Battery BtB connector last before the Battery Cover is reassembled.***

1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone vibrates by pressing the on/off key.

Action:

1. If activation of the vibrator is detected, refer to section 1.4 'Display'.

2. If NO activation of the Vibrator is detected, check that the battery is charging when connected to a charger and do a HW master reset.

Follow 1291-1033 Test Instruction - mechanical chapter 2.3.7 (Charging via USB and Easy Charger), Diagnostic Battery / Charging status.

Check:

Inspect the on/off key.

Action:

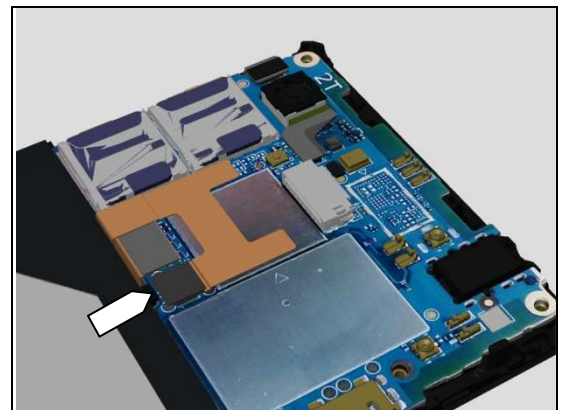
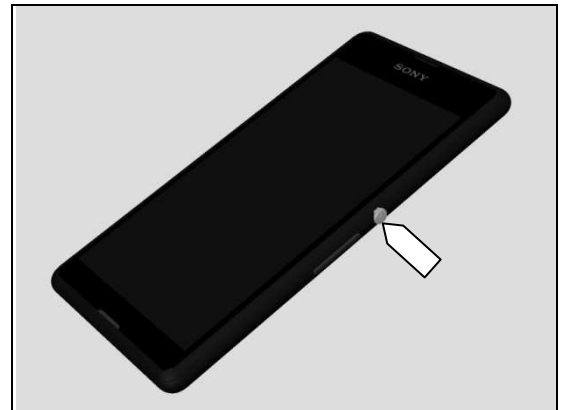
Refer to section 1.2.3 'On/Off Key'.

Check:

Inspect the BtB connector of the Battery to Main PBA.

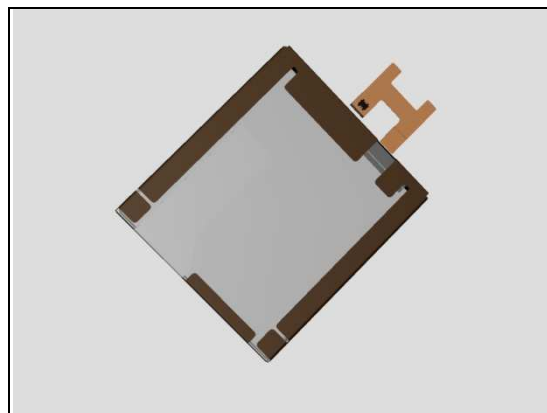
Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



Problem Areas: Power

3. If the BtB connector, Battery FPC or the Battery 2300 mAh is damaged – replace the Battery 2300 mAh.
4. Replace Main PBA.



Problem Areas

1.2 Keys

1.2.1 Back, Menu, Home and Multitask Keys

Action:

1. Refer to section 1.3 'Touch Screen'.



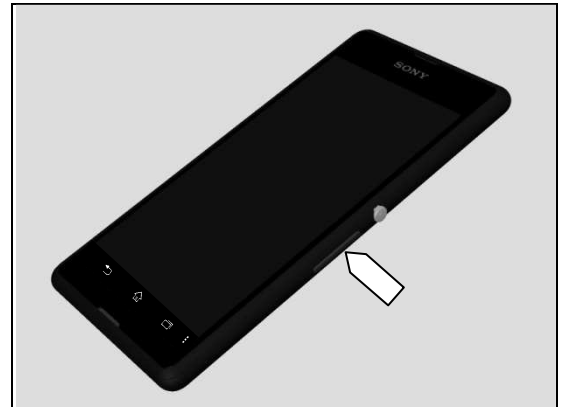
1.2.2 Volume Key

Check:

Inspect the external area of the volume key.

Action:

If dirty – clean it.

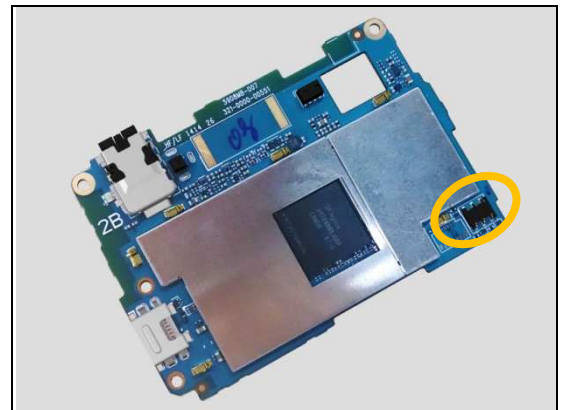


Check:

Inspect the Side Key FPC connector located on Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.
3. If damaged – replace the Main PBA.

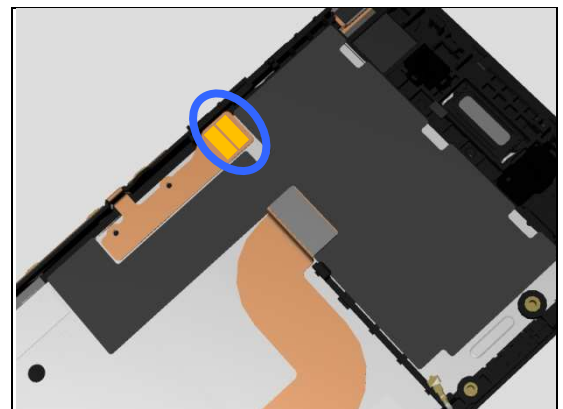


Check:

Inspect the contact pads of Side Key FPC.

Action:

1. If dirty or oxidized – clean it.
2. If the Side Key FPC is damaged – replace the Side Key FPC.
3. Replace Main PBA.



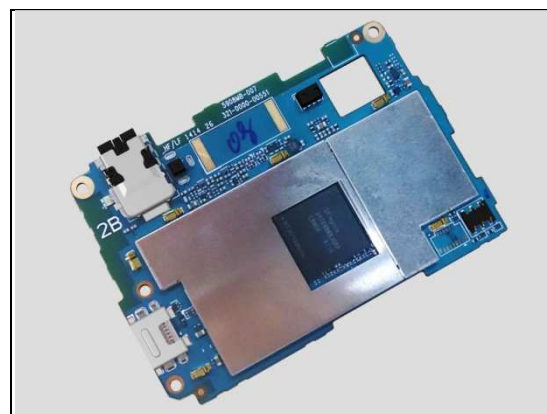
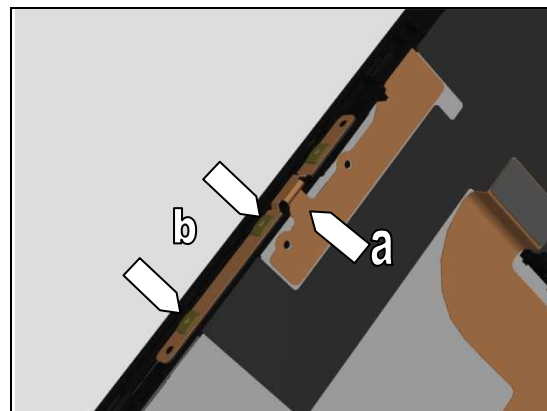
Problem Areas: Keys

Check:

Inspect the area and position of the Side Key FPC (Volume) (a) and volume key domes (b).

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.
3. If the Side Key FPC is damaged – replace the Side Key FPC.
4. If the rubber of the volume key is damaged – replace the Key Power/Vol.
5. Replace Main PBA.



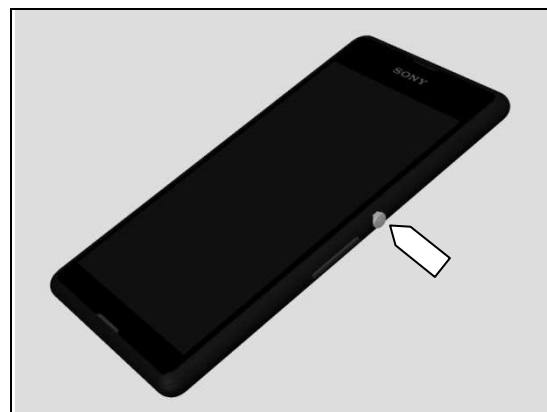
1.2.3 On/Off Key

Check:

Inspect the external area of the On/Off Key.

Action:

If dirty – clean it.



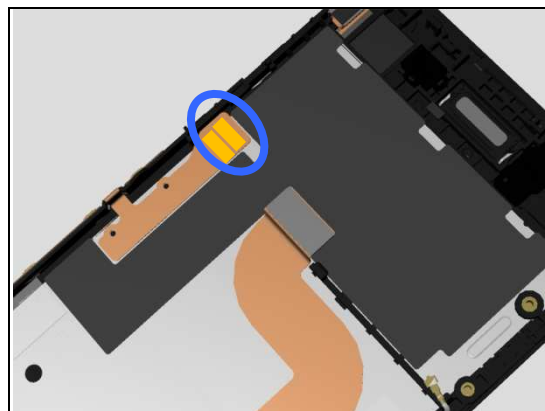
Problem Areas: Keys

Check:

Inspect the contact pads of Side Key FPC to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.
3. If the Side Key FPC is damaged – replace the Side Key FPC.
4. Replace Main PBA.

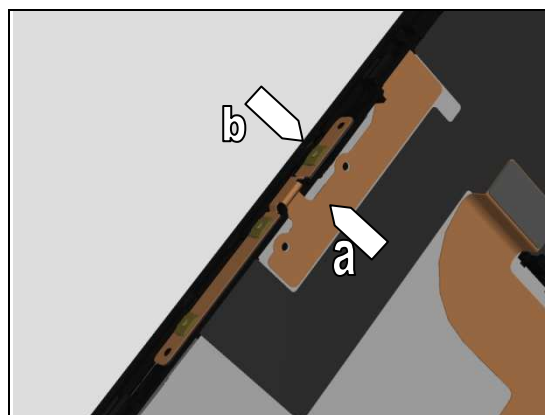


Check:

Inspect the area and position of the Side Key FPC (Power On/Off area) (a) and On/Off Key dome (b).

Action:

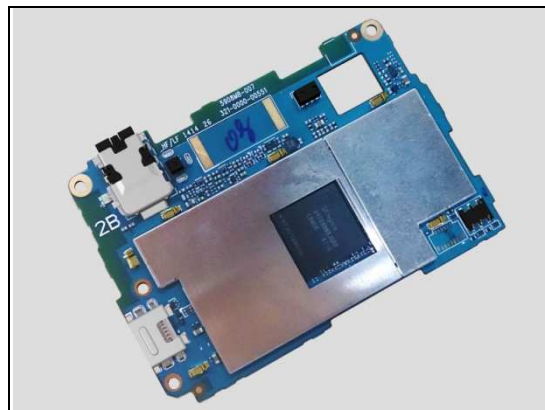
1. If dirty – clean them.
2. If damaged replace Side Key FPC.



3. If the On/Off Key is damaged – replace the Key Power/Vol.



4. Replace Main PBA.



Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Display.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Front Cover Assy.



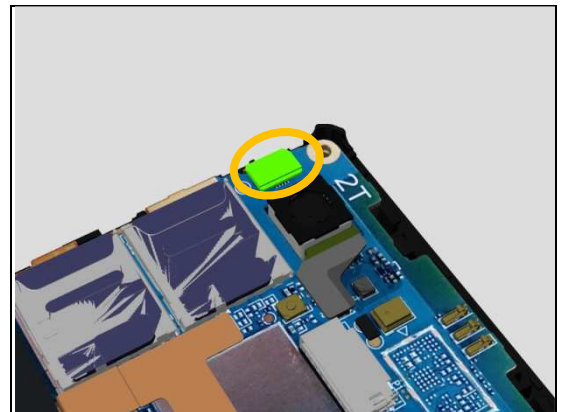
Check:

Inspect the BtB connector of Touch Panel to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean it.



3. If the BtB connector of Touch Panel or FPC is damaged – replace the Front Cover Assy.

4. Replace Main PBA.



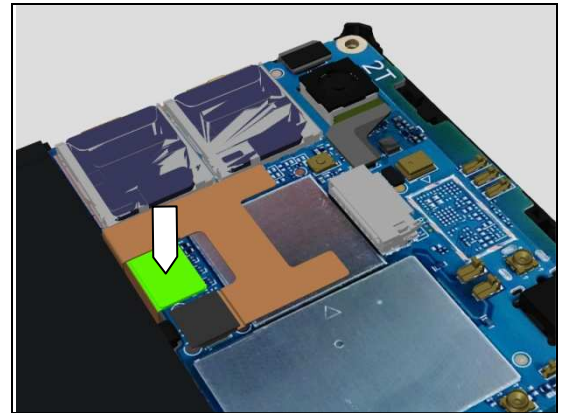
Problem Areas: Touch Screen

Check:

Inspect the BtB connector of LCD FPC to Main PBA and the BtB connector of Main PBA.

Action:

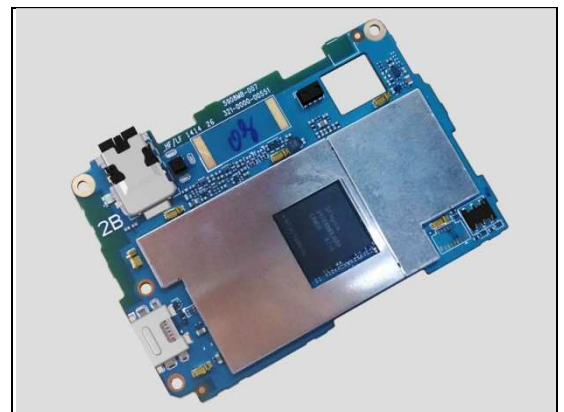
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. Replace Front Cover Assy.



4. Replace Main PBA.



Problem Areas

1.4 Display

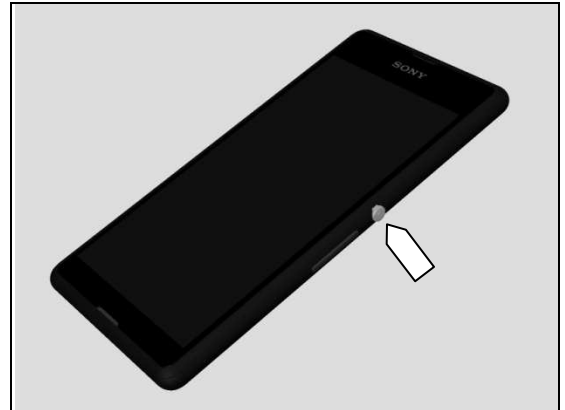
1.4.1 Graphics & Illumination

Check:

Check whether the phone vibrates after the On/Off key has been pressed.

Action:

If the activation described above is not detected, refer to section 1.1 'Power'.

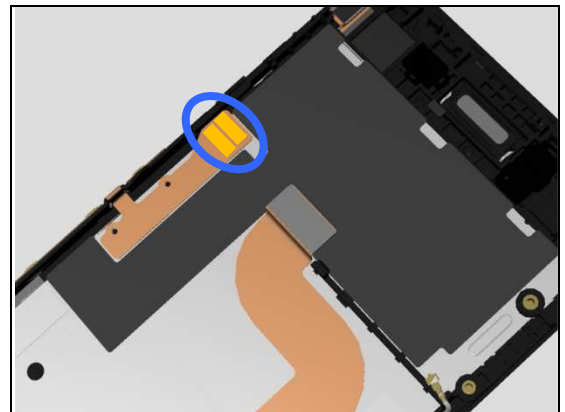


Check:

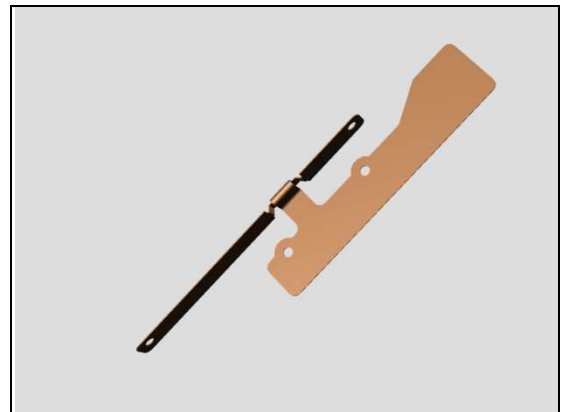
Inspect the contact pads of Side Key FPC to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the Side Key FPC is damaged – replace the Side Key FPC.



Check:

Replace the Main PBA with a known working one and test the Display.

Action:

1. If the display is still not working – Replace the Front Cover Assy.
2. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

1.5.1 LED/Illumination

Check:

Inspect external port of LED on the Front of phone.

Action:

1. If dirty – clean it.

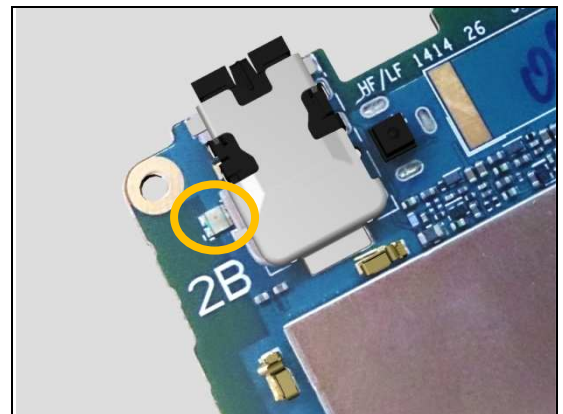


Check:

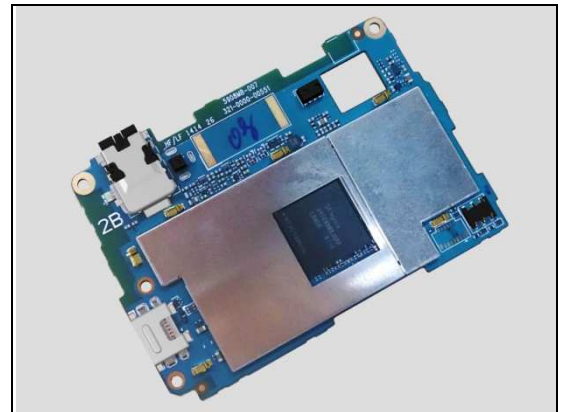
Inspect the LED located on Main PBA.

Action:

1. If dirty or oxidized – clean it.



3. Replace Main PBA.



Problem Areas

1.6 Speaker

1.6.1 Loudspeaker

Check:

Inspect the Speaker Mesh on the Battery Cover.

Action:

1. If the Speaker Mesh is clogged – clean it.
2. If the Speaker Mesh is damaged – replace the Battery Cover.

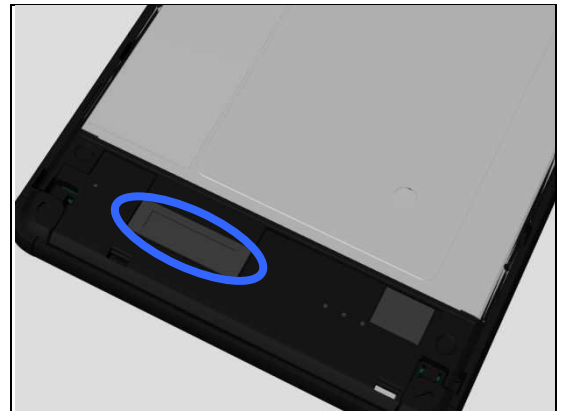


Check:

Inspect the Speaker Mesh on the Rear Cover Assy.

Action:

1. If the Speaker Mesh is clogged – clean it.
2. If the Speaker Mesh is damaged – replace the Rear Cover Assy.

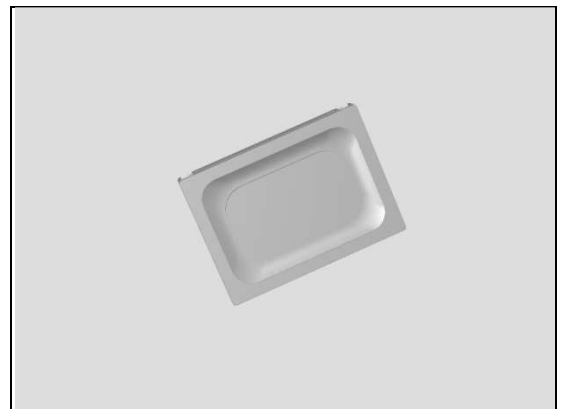
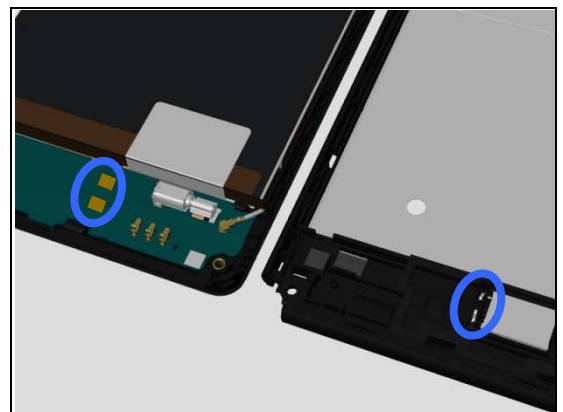


Check:

Inspect the contact pins of Loudspeaker and the contact pads on the Sub PBA.

Action:

1. If dirty – clean them.
2. If the contact pins of Loudspeaker or the Loudspeaker are damaged – replace the Loudspeaker.
3. Replace Sub PBA.



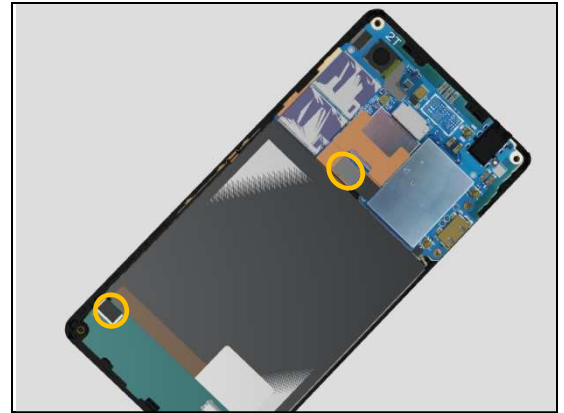
Problem Areas: Speaker

Check:

Inspect both BtB Connectors of LCD FPC.

Action:

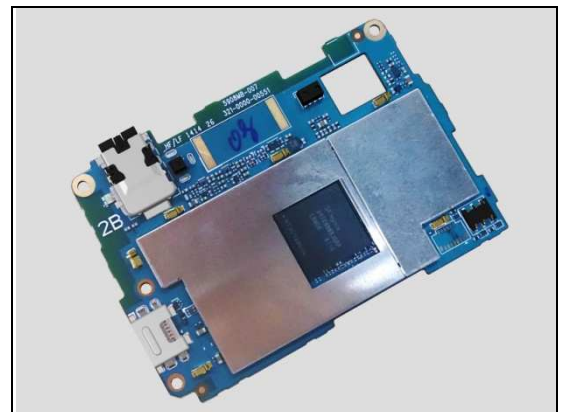
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



2. If the BtB connector of LCD FPC is damaged – replace the Front Cover Assy.



3. Replace the Main PBA.



Problem Areas

1.7 Earphone

1.7.1 Ear Speaker

Check:

Inspect the external port of Ear Speaker located on the front of phone.

Action:

1. If clogged – clean it.

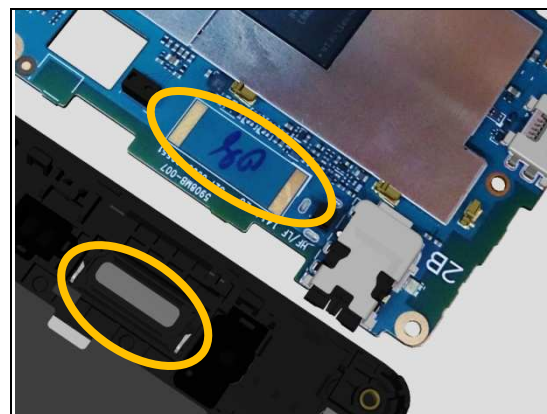


Check:

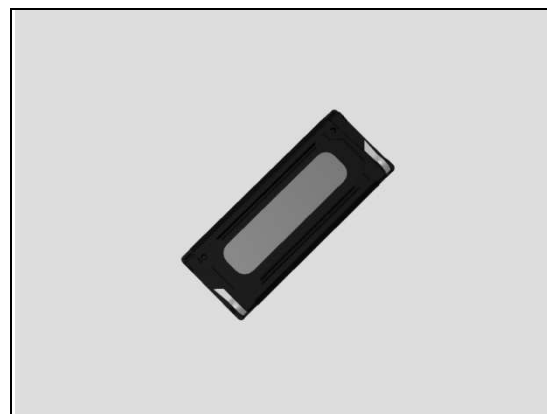
Inspect the contact pins of Receiver and the contact pads on the Main PBA.

Action:

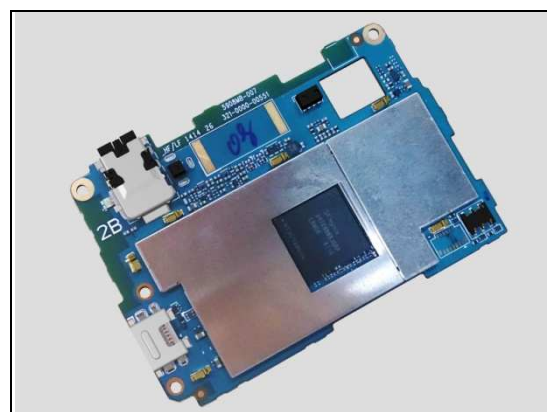
1. If dirty – clean them.



2. If the contact pins of the Receiver or if Receiver is damaged – replace the Receiver.



3. Replace Main PBA.



Problem Areas

1.8 Microphone

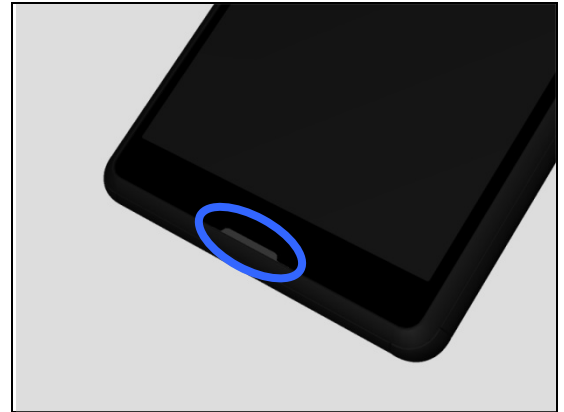
1.8.1 Primary Microphone

Check:

Inspect the Mic Port on the bottom of phone.

Action:

1. If clogged – clean it.



2. If the Mic Port is damaged – replace the Front Cover Assy.

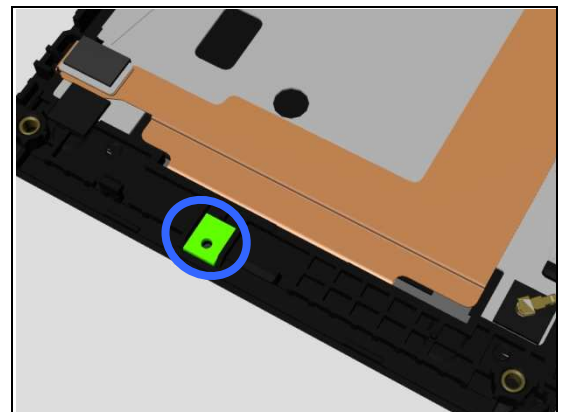


Check:

Inspect the Mic Gasket on Front Cover Assy.

Action:

1. If dirty – clean.



2. If the Rubber Gasket Mic Main is damaged – replace Front Cover Assy.



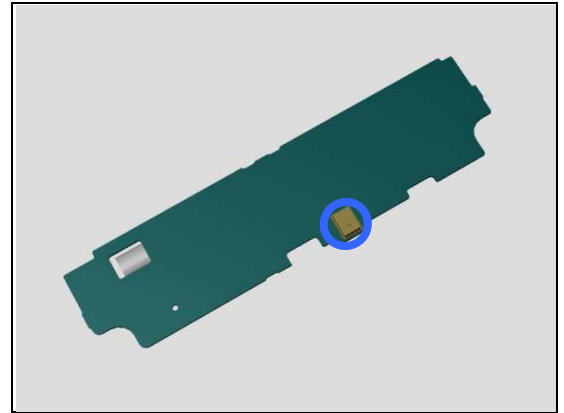
Problem Areas: Microphone

Check:

Inspect the Microphone located on the Sub PBA.

Action:

1. If clogged – clean it.
2. If the Microphone is damaged – replace the Sub PBA.

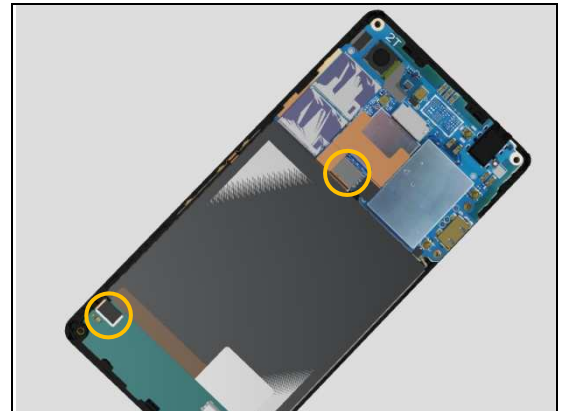


Check:

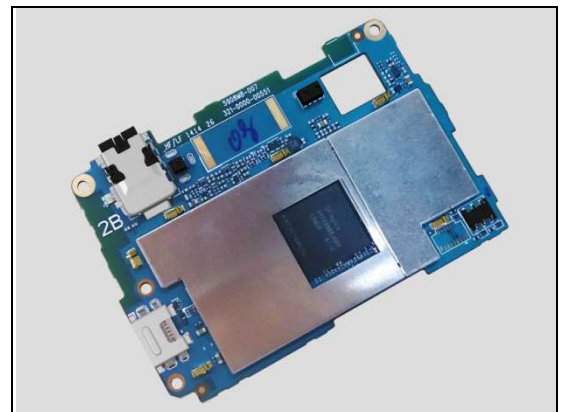
Inspect both BtB Connectors of LCD FPC.

Action:

3. If not properly connected – disconnect and reconnect it.
4. If dirty or oxidized – clean it.
5. If the LCD FPC is damaged – replace the Front Cover Assy.



3. Replace Main PBA.



1.8.2 Secondary Microphone

Check:

Inspect the external port of secondary microphone on the Battery Cover.

Action:

1. If clogged – clean it.



Problem Areas: Microphone

2. If Battery Cover damaged – Replace Battery Cover.

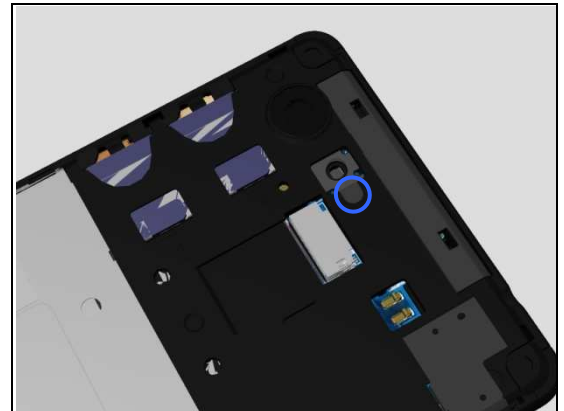


Check:

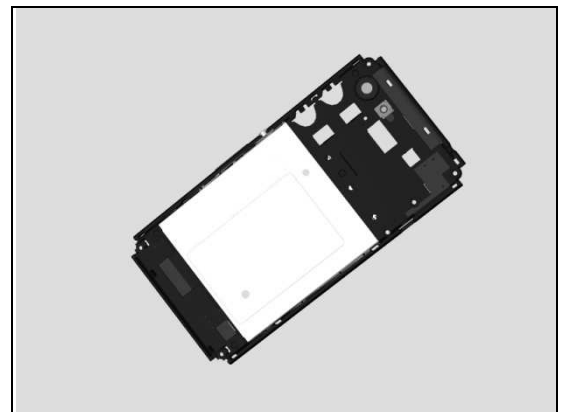
Inspect the external port of secondary microphone on the Rear Cover Assy.

Action:

1. If clogged – clean it.



2. If Rear Cover Assy is damaged – Replace Rear Cover Assy.

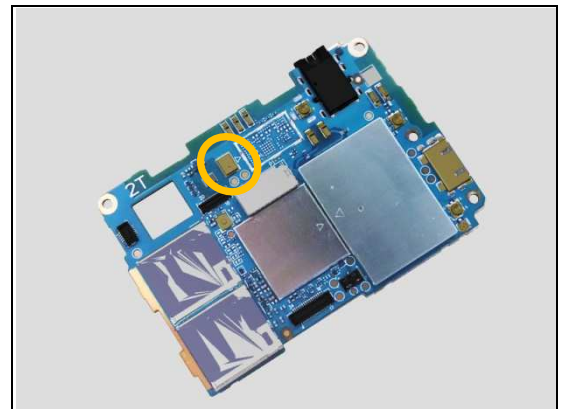


Check:

Inspect the Microphone on Main PBA.

Action:

1. If dirty or oxidized – clean it.
2. Replace Main PBA.



Problem Areas

1.9 Vibrator

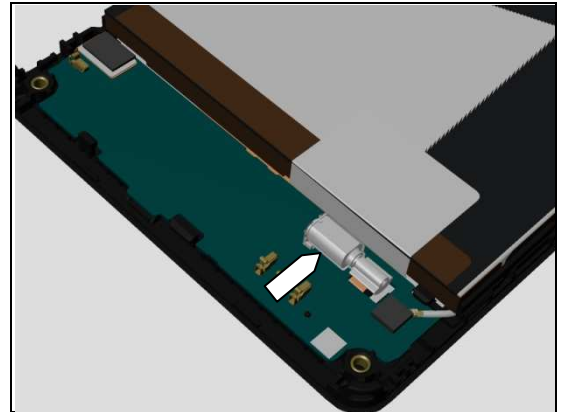
1.9.1 Vibrator not generating alerts

Check:

Inspect the Vibrator on Sub PBA.

Action:

1. If dirty or oxidized – clean it.
2. If Vibrator is damaged – Replace Sub PBA.

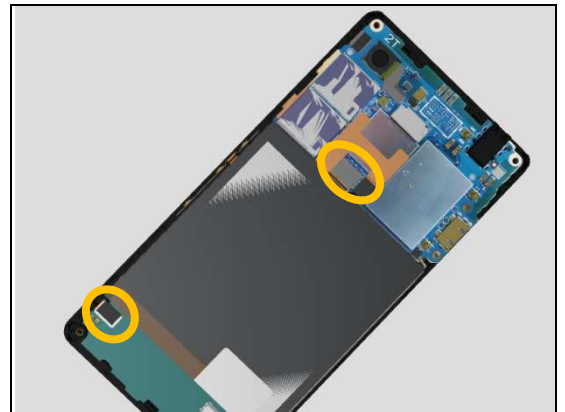


Check:

Inspect both BtB Connectors of LCD FPC.

Action:

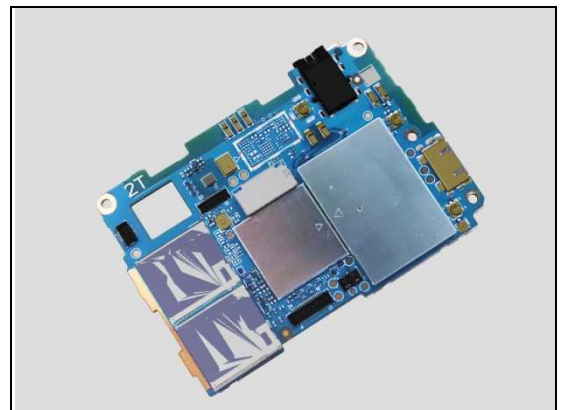
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the LCD FPC is damaged –replace the Front Cover Assy.



4. Replace Main PBA.



Problem Areas

1.10 Camera

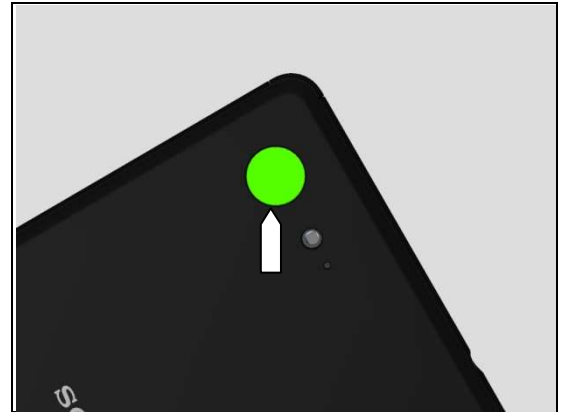
1.10.1 Main Camera

Check:

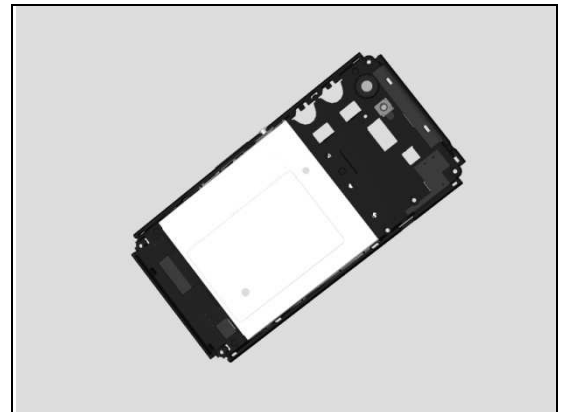
Inspect the external area of camera window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Rear Cover Assy.

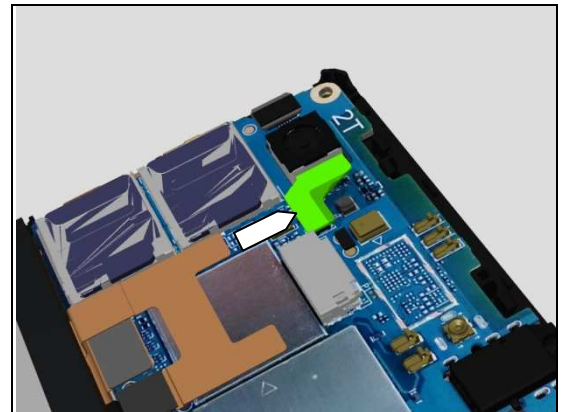


Check:

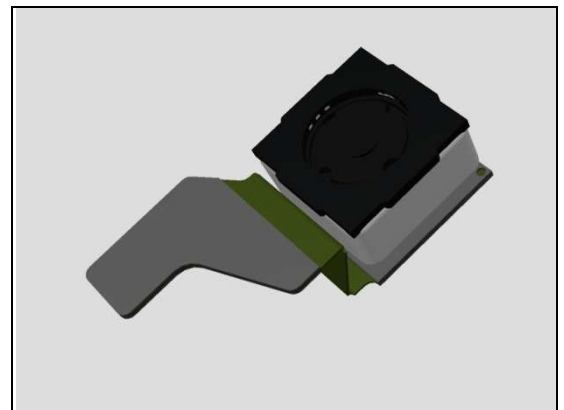
Inspect the BtB connector of Camera Main to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the BtB connector or the Camera Main is damaged – replace the Camera Main.
4. Replace Main PBA.



Problem Areas: Camera

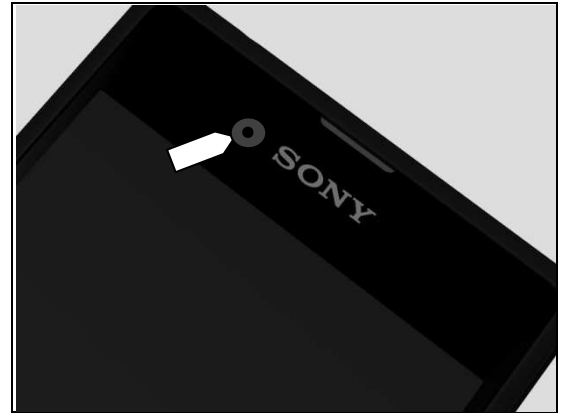
1.10.2 Video Call Camera defects

Check:

Inspect the external area of the Camera Chat window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Front Cover Assy.

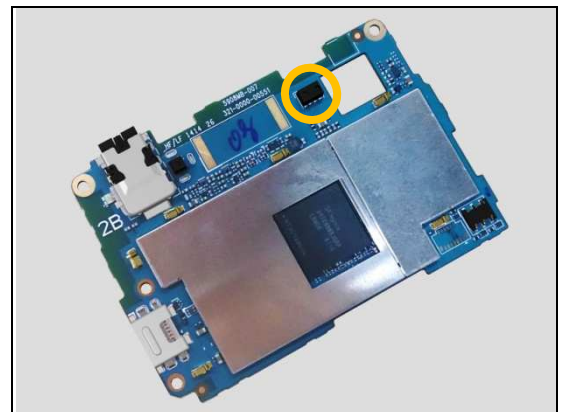


Check:

Inspect the BtB connector of Camera Chat on the Main PBA.

Action:

1. If dirty or oxidized – clean Main PBA.
2. Replace Main PBA.



Problem Areas

1.11 Flash LED

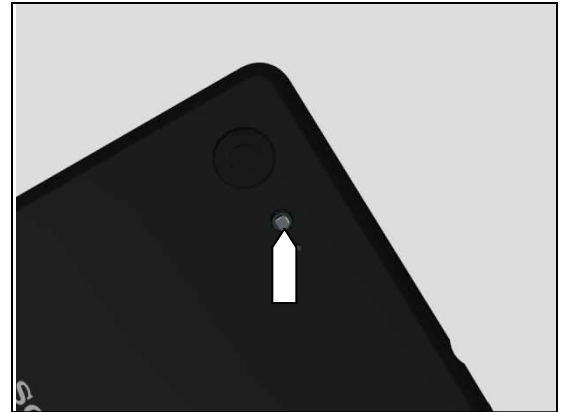
1.11.1 Flash LED not flashing

Check:

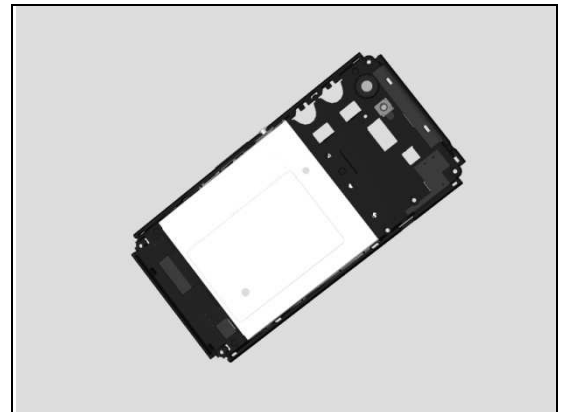
Inspect the external area of the flash LED window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Rear Cover Assy.

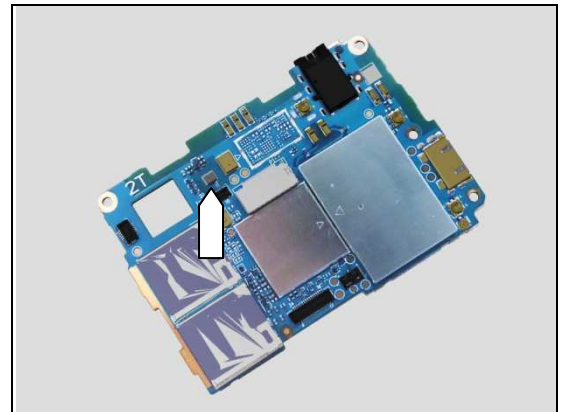


Check:

Inspect the flash LED on the Main PBA.

Action:

1. If dirty – clean it.
2. Replace Main PBA.



Problem Areas

1.12 Bluetooth and WLAN

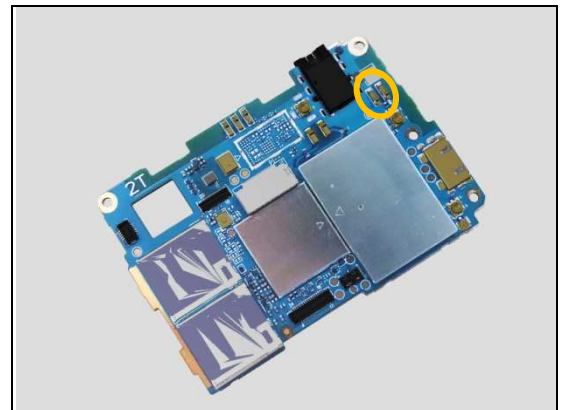
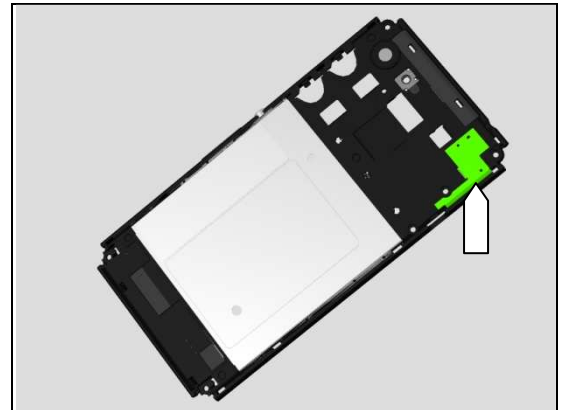
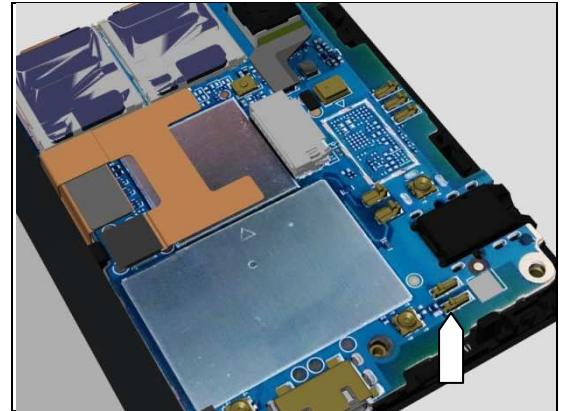
1.12.1 Bluetooth or WLAN connection failure

Check:

Inspect the Antenna BT + WLAN contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. Antenna BT + WLAN contact pads Rear Cover Assy.
3. If the antenna is damaged – replace the Rear Cover Assy.
3. If the contact pin on Main PBA is damaged – replace Main PBA.



Problem Areas

1.13 NFC

1.13.1 NFC malfunctions

Check:

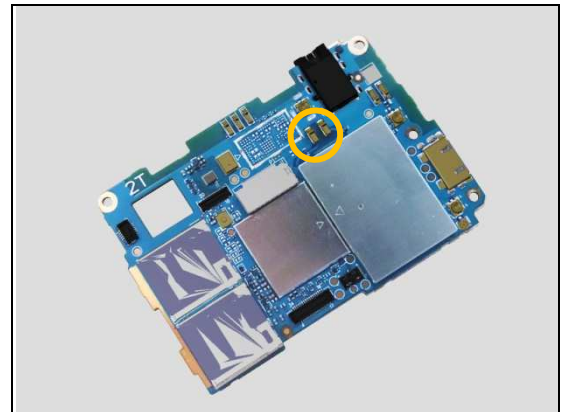
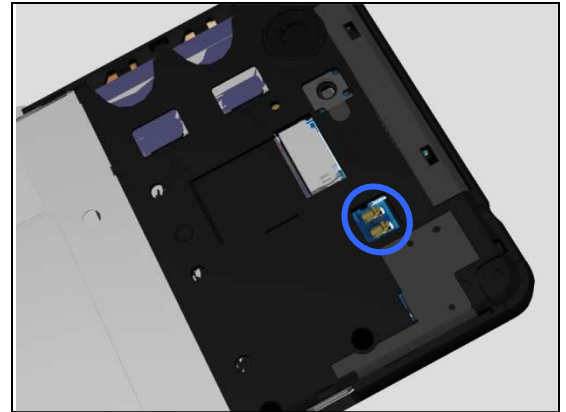
Inspect the Antenna NFC contact pads on Battery Cover and the contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.

2. If the Antenna NFC contact pads are damaged – replace the Battery Cover

3. If the Main PBA contact pins are damaged - Replace the Main PBA.



Problem Areas

1.14 GPS

1.14.1 GPS malfunctions

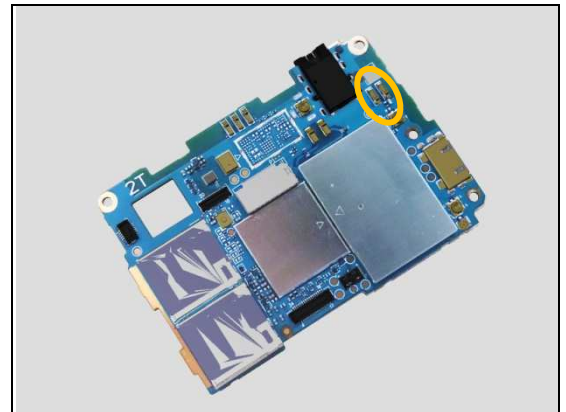
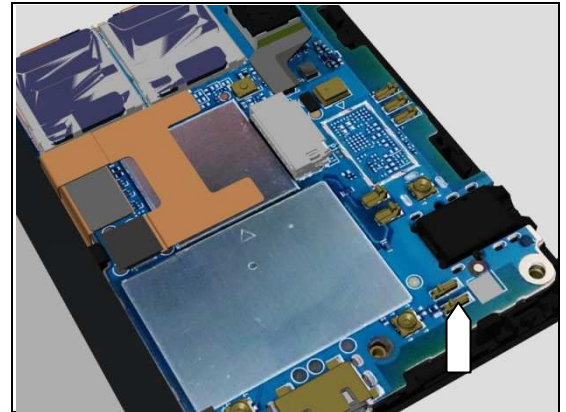
Check:

Inspect the Antenna GPS contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. Antenna GPS contact pads Rear Cover Assy.
3. If the antenna is damaged – replace the Rear Cover Assy.

2. Replace the Main PBA.



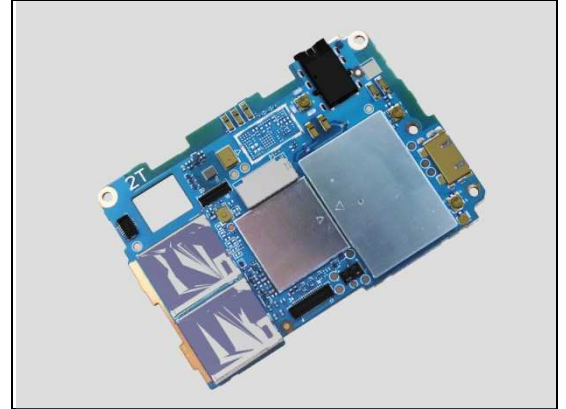
Problem Areas

1.15 Compass

1.15.1 Compass fails

Action:

Replace Main PBA.

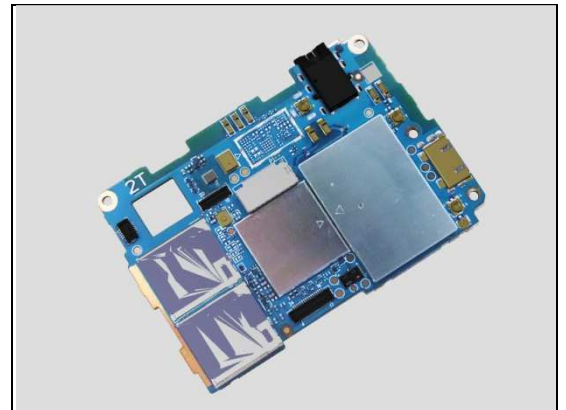


1.16 Accelerometer

1.16.1 Accelerometer test fails

Action:

Replace Main PBA.



Problem Areas

1.17 Ambient Light Sensor

1.17.1 Light Sensor malfunctions

Check:

Inspect the external window area of light sensor located on the front of phone.

Action:

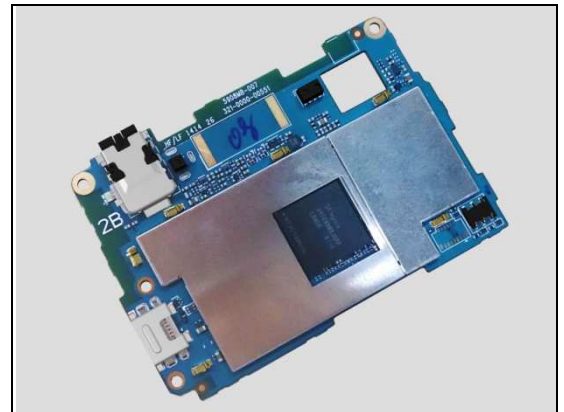
1. If dirty – clean it.



2. If scratched or damaged – replace the Front Cover Assy.



3. Replace Main PBA.



Problem Areas

1.18 Proximity Switch

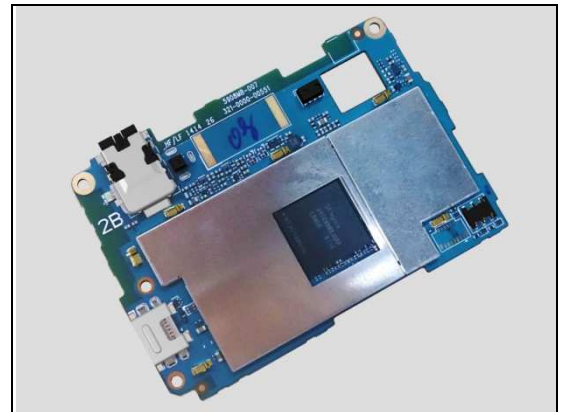
1.18.1 Proximity switch malfunctions

Check:

Inspect the external window area of light sensor located on the front of the phone.

Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Cover Front Assy.
3. Replace Main PBA



Problem Areas

1.19 Pressure Sensor

1.19.1 Pressure Sensor test fails

N/A. No Pressure sensor in the phone.

1.20 Water Resistance

1.20.1 Water Resistance fails

N/A. Not Water Resistant phone.

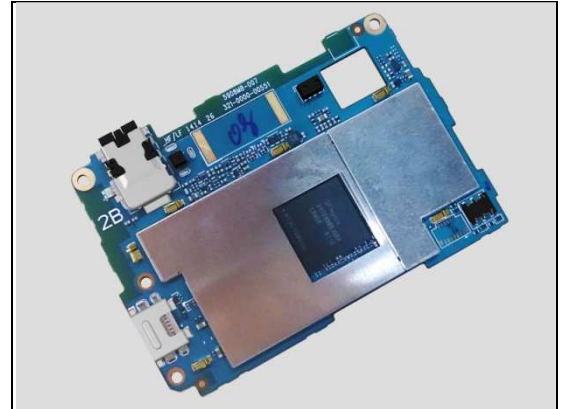
Problem Areas

1.21 Real Time Clock

1.21.1 Real time clock test fails

Action:

Replace Main PBA.

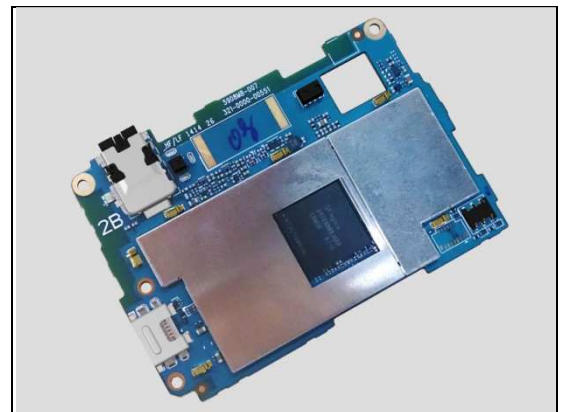


1.22 Total call time

1.22.1 Total call time fails

Action:

Replace Main PBA.



Problem Areas

1.23 External

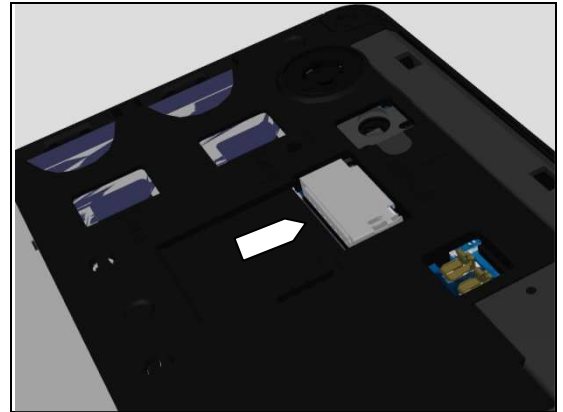
1.23.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

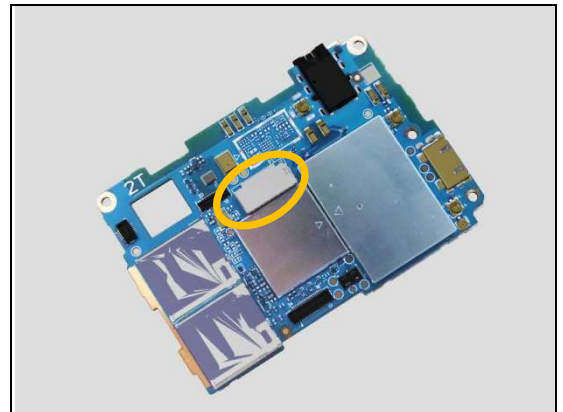


Check:

Inspect the memory card holder on Main PBA.

Action:

1. If dirty or clogged – clean the holder.
2. Replace Main PBA.

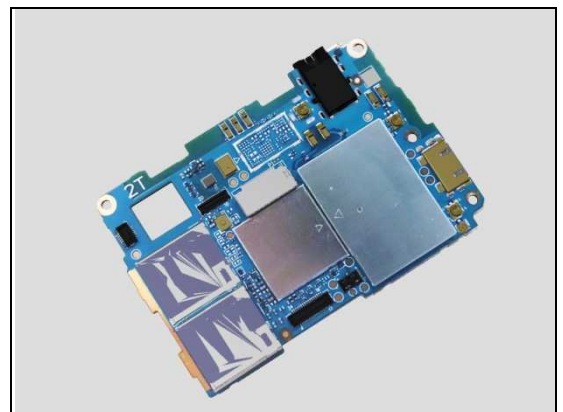


1.24 Security

1.24.1 Security fails

Action:

Replace Main PBA.



Problem Areas

1.25 FM Radio

1.25.1 No/Poor FM Radio reception

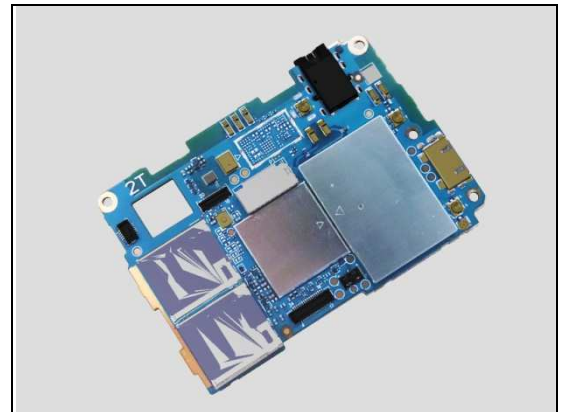
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Problem Areas

1.26 Battery Health test

1.26.1 Battery Health test fails

N/A.

1.27 Flip Slider Counter

1.27.1 Flip Slider Counter fails

N/A. Not slider phone.

1.28 Verify Certificates

1.28.1 Verify Certificates fails

Action:

N/A.

1.29 IrDA Test

1.29.1 IrDA test fails

N/A. No IrDA functionality in the phone.

Problem Areas

1.30 TV-Out Test

1.30.1 TV-Out test fails

N/A. No TV Out functionality in this phone.

Problem Areas

1.31 Network & Signal

1.31.1 No/Poor signal

Check:

Inspect the Antenna Main RF on Rear Cover Assy is assembled correctly.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the pads and pins.
3. If the Antenna Main RF is damaged – replace the Rear Cover Assy

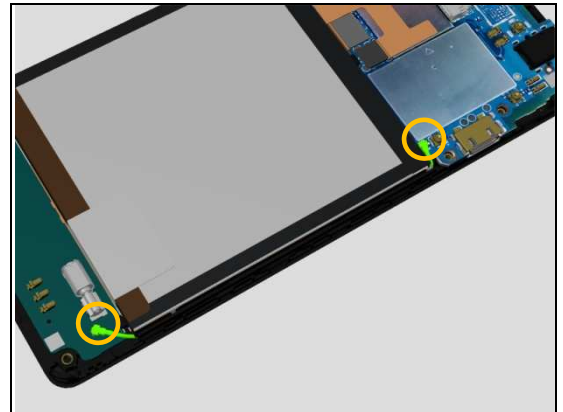


Check:

Inspect the RF Cable assembly.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the RF Cable connectors
3. If the RF Cable is damaged – replace the RF cable.

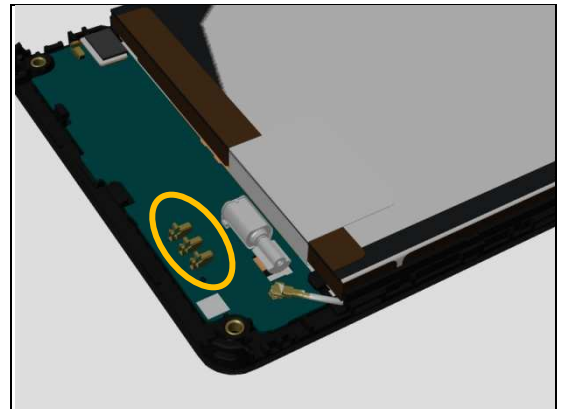


Check:

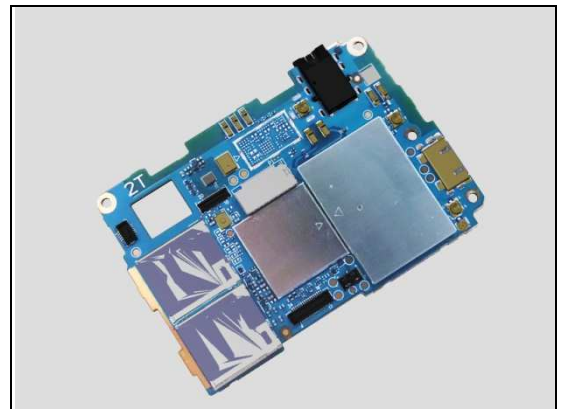
Inspect the Sub PBA assembly.

Action:

1. If dirty or oxidized – clean the contact pins.
If the Sub PBA is damaged – replace the Sub PBA.



2. Replace Main PBA.



Problem Areas

1.32 SIM

1.32.1 SIM not detected

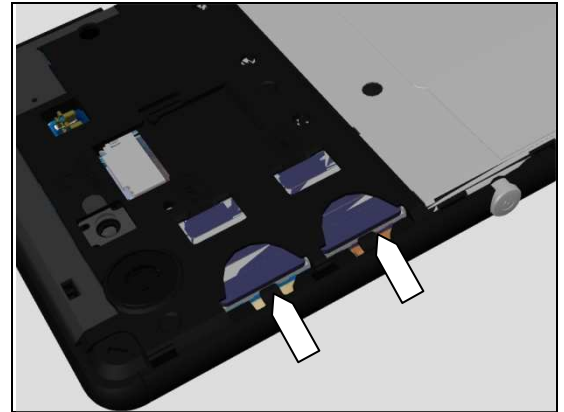
Check:

Inspect the external port of the SIM card holder and check if a SIM card can be properly inserted.

(Picture illustration shown dual SIM variant)

Action:

If dirty or clogged – clean the external port.

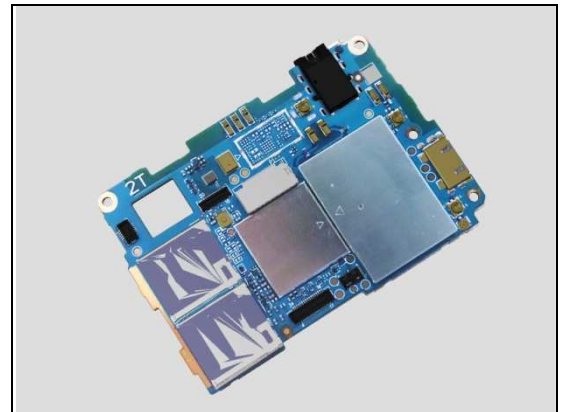


Check:

Inspect the SIM card holder on Main PBA.

Action:

1. If dirty or clogged – clean the holder.
2. Replace Main PBA



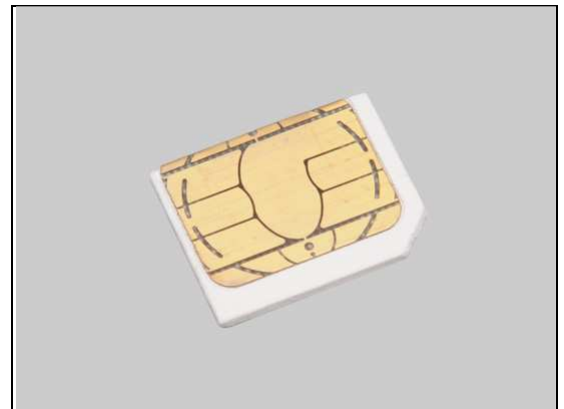
1.32.2 Incorrect UIM or SIM indicated

Check:

Check whether the phone is locked to a particular operator and whether the correct operator UIM or SIM is being used.

Action:

1. Use a proper operator UIM/SIM or test UIM/SIM.
2. Customize in Emma to the correct SI according label.
3. Replace Main PBA.



Problem Areas

1.33 Charging

1.33.1 Battery will not charge by USB connector

Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.
2. Replace Main PBA.

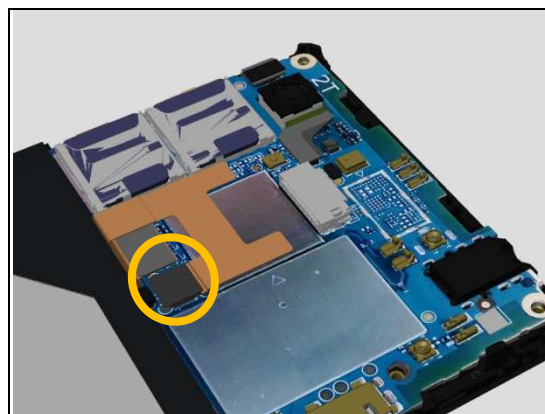


Check:

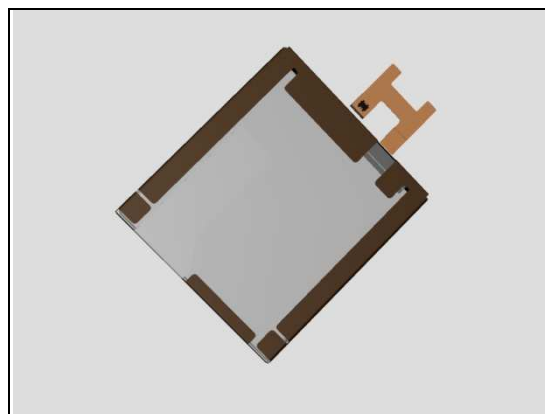
Inspect the BtB Connector of the Battery to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



3. If the BtB connector on Battery 2300 mAh is damaged – replace the Battery 2300 mAh.
4. Replace Main PBA.



Problem Areas

1.34 Hands-Free by Wire

1.34.1 Connection to portable Hands-free fails

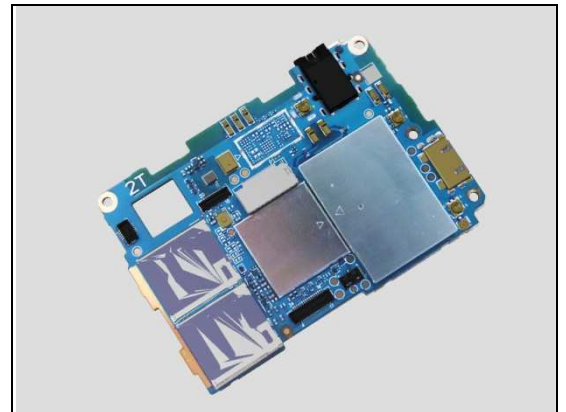
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Problem Areas

1.35 Data Communication

1.35.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.
2. Replace Main PBA.



2 Revision History

Rev.	Date	Changes / Comments
1	2014-Sep-09	Released
2	2014-Oct-04	D2243 Released