

Troubleshooting Guide

- mechanical -



*Xperia™ T3, Xperia™ Style
D5102, D5103, D5106, M50w*

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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 1287-6084 Test Instruction - mechanical chapter 2.3.7 (Charging via USB and Easy Charger), Diagnostic Battery / Charging status.

Check:

Inspect the on/off key.

Action:

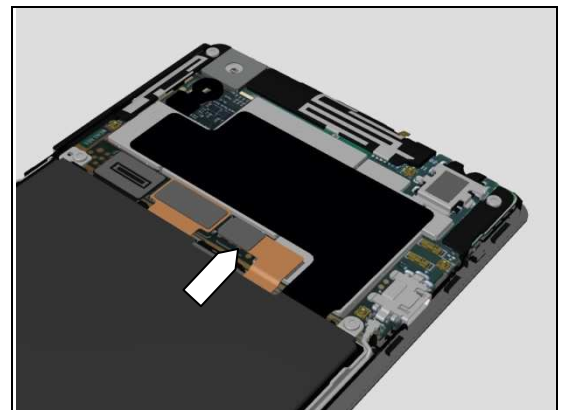
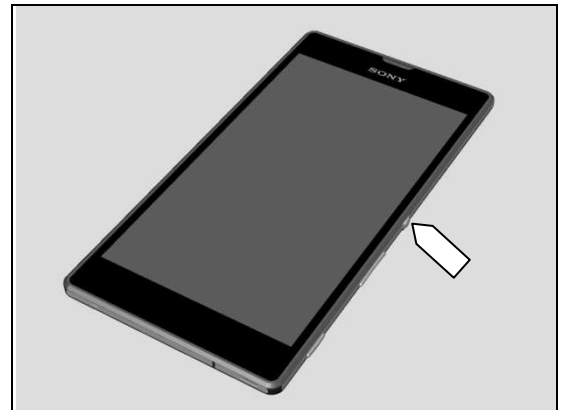
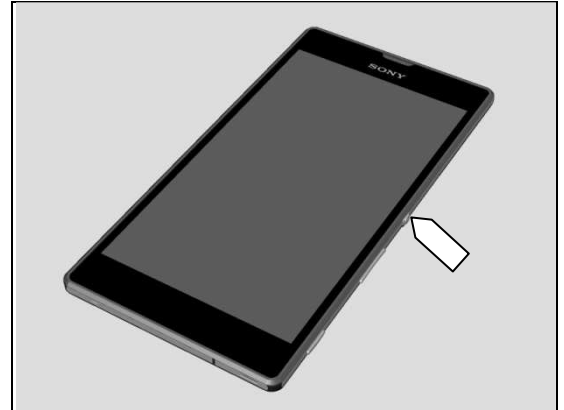
Refer to section 1.2.3 'On/Off Key'.

Check:

Inspect the BtB connector of the Battery to Main PBA.

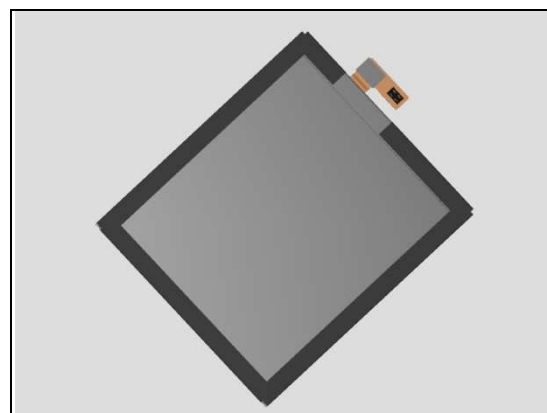
Action:

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 2500 mAh is damaged – replace the Battery 2500 mAh.
4. Replace Main PBA.



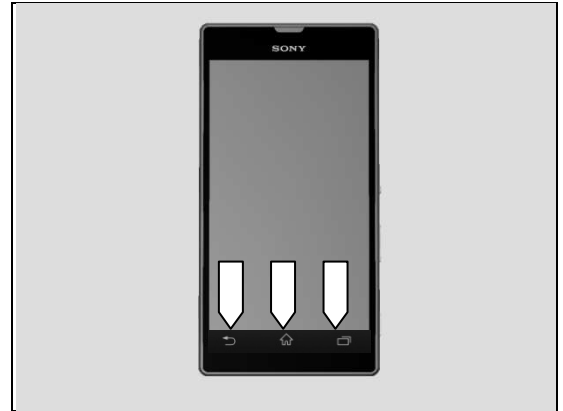
Problem Areas

1.2 Keys

1.2.1 Back, Menu, Home and Multitask Keys

Action:

1. Refer to section 1.3 'Touch Screen'.



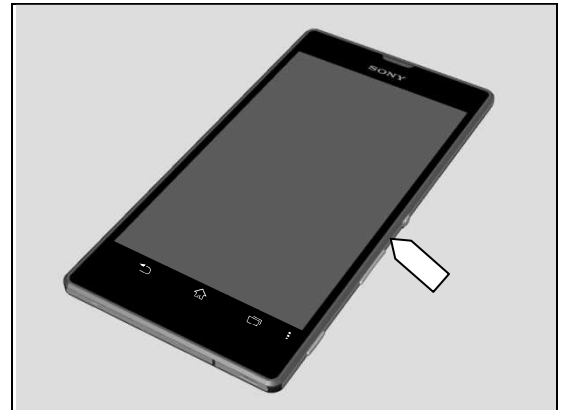
1.2.2 Volume Key

Check:

Inspect the external area of the volume key.

Action:

If dirty – clean it.

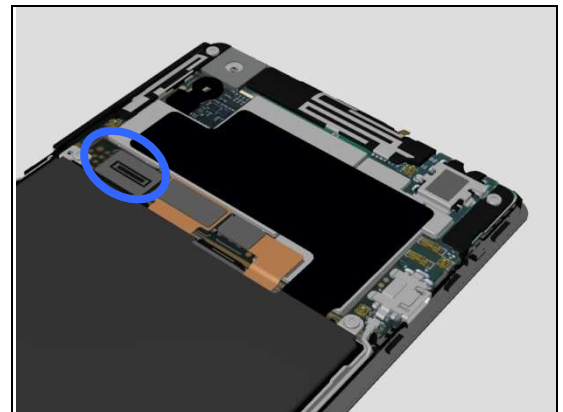


Check:

Inspect the BtB connector of Link FPC to Main PBA.

Action:

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

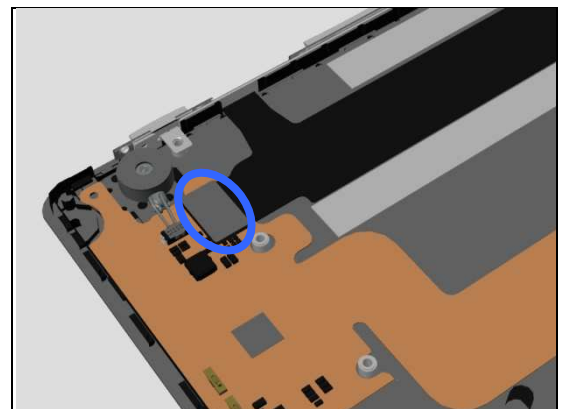


Check:

Inspect the BtB connector Link FPC to Antenna FPC.

Action:

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



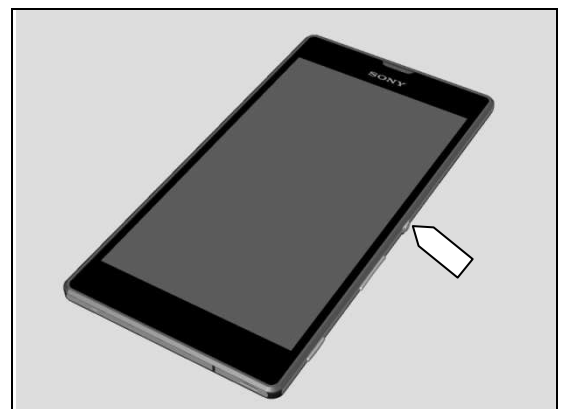
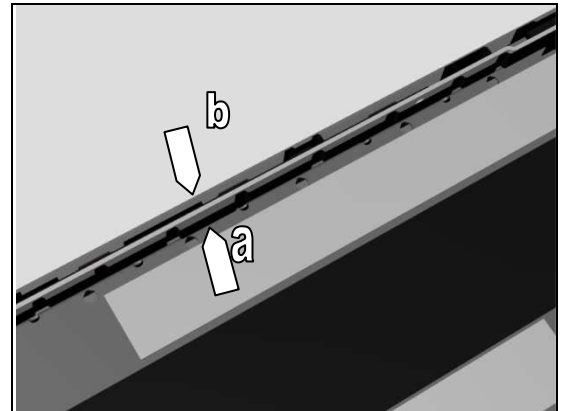
Problem Areas: Keys

Check:

Inspect the area and position of the Link FPC & Bracket Side Key (Volume) (a) and volume key dome (b).

Action:

1. . If dirty – clean them.
2. If damaged replace Bracket Side Key.
3. If the rubber of the volume key is damaged – replace the Battery Cover.
4. If the volume key dome is damaged – replace the Link FPC.
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.

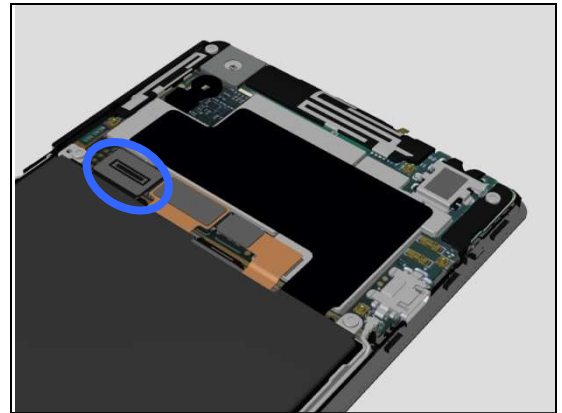
Problem Areas: Keys

Check:

Inspect the BtB connector of Link FPC to Main PBA.

Action:

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

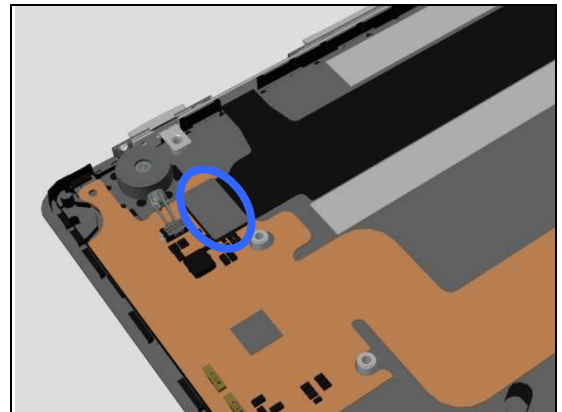


Check:

Inspect the BtB connector of Link FPC to Antenna FPC.

Action:

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

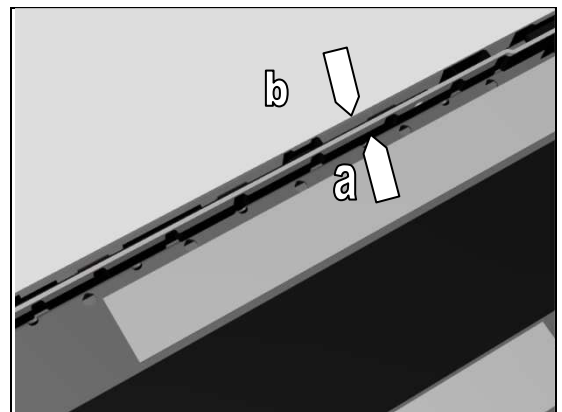


Check:

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

Action:

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

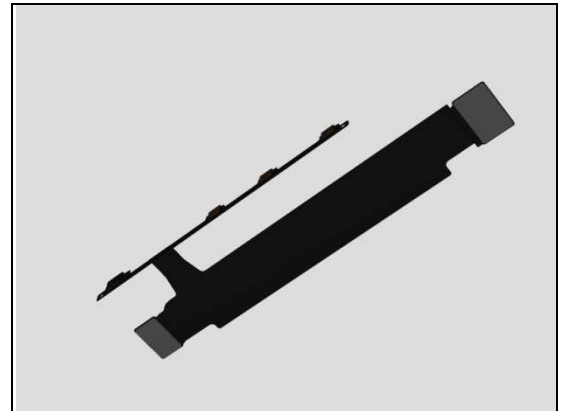


1. If the On/Off Key is damaged – replace the Battery Cover.



Problem Areas: Keys

2. If the Link FPC is damaged – replace the Link FPC.
3. Replace Main PBA.



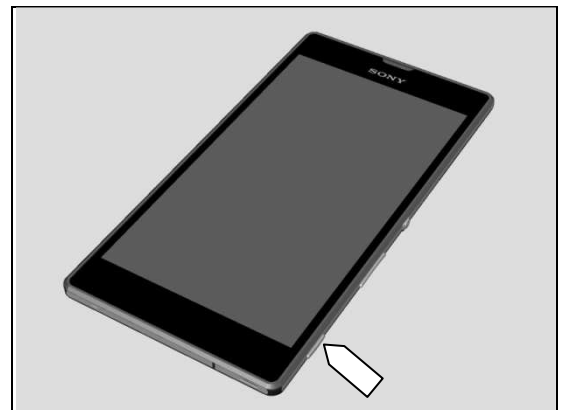
1.2.4 Camera Key

Check:

Inspect the external area of the camera key.

Action:

If dirty – clean it.

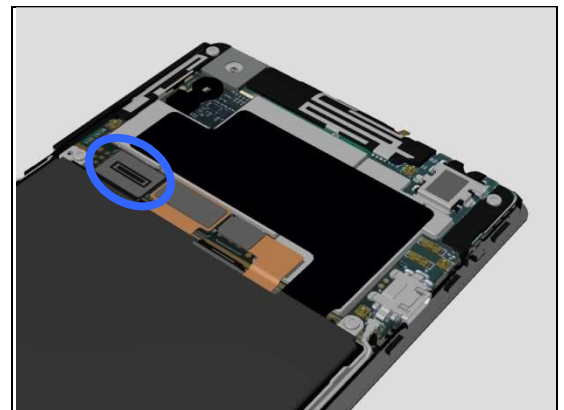


Check:

Inspect the BtB connector of Link FPC to Main PBA.

Action:

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



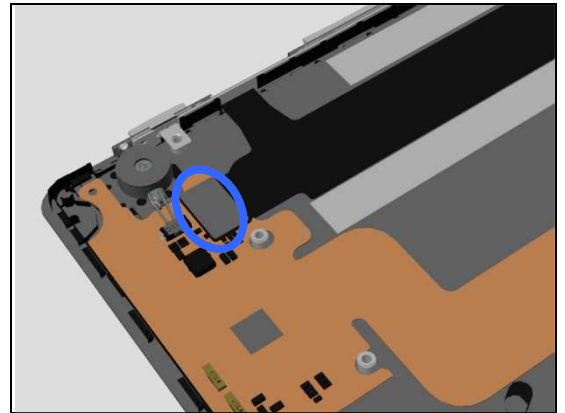
Problem Areas: Keys

Check:

Inspect the BtB connector of Link FPC to Antenna FPC.

Action:

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

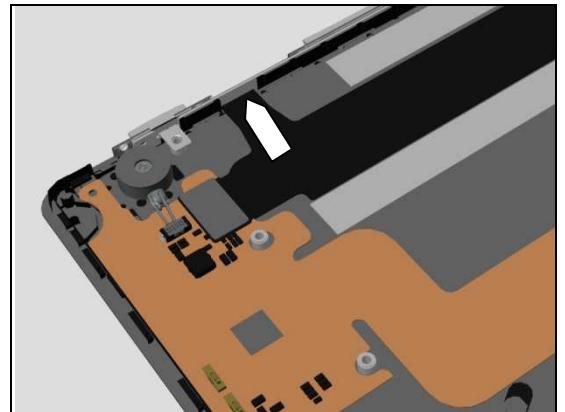


Check:

Inspect the area and position of the Camera Key (Link FPC).

Action:

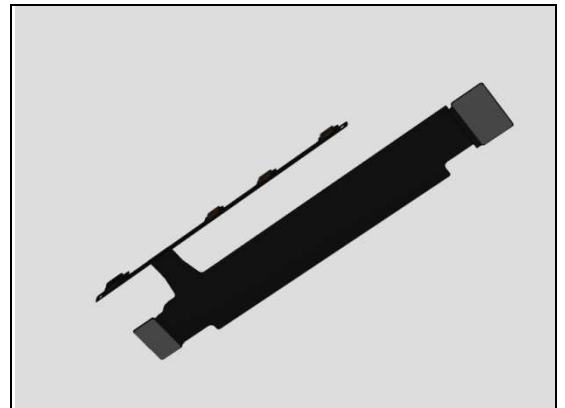
1. If dirty – clean them.



2. If the Camera Key is damaged – replace the Battery Cover.



3. If the camera key done or FPC is damaged – replace the Link FPC.
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.



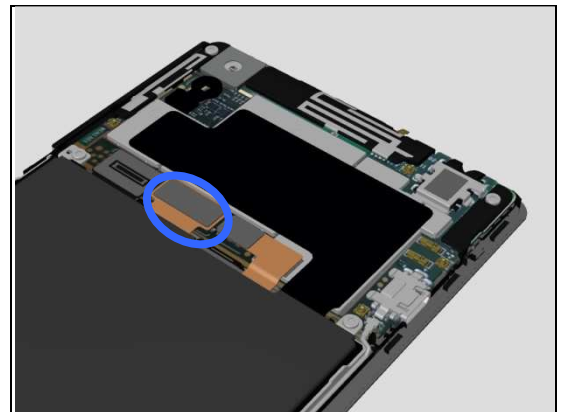
Check:

Inspect the BtB connector of Display 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 Display FPC or FPC is damaged – replace the Front Cover Assy.

4. Replace Main PBA.



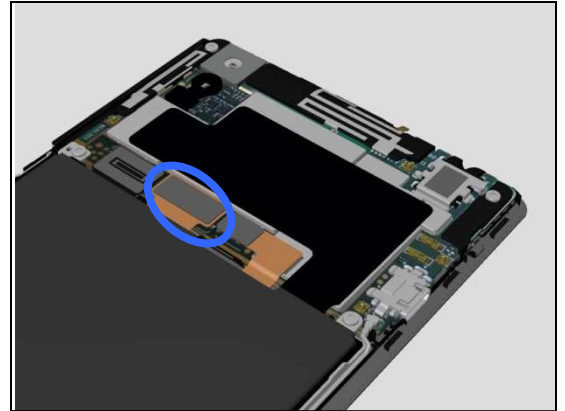
Problem Areas: Touch Screen

Check:

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

Action:

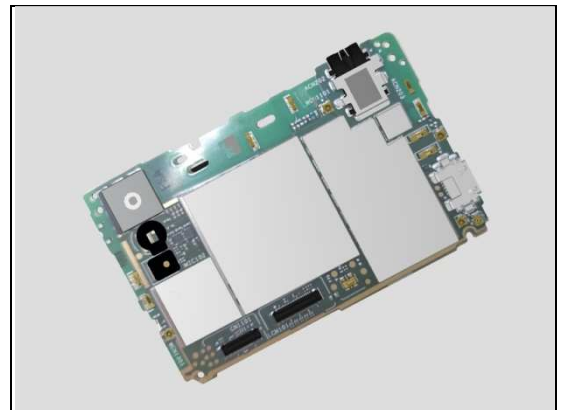
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. Replace Front Cover Assy



4. Replace Main PBA.



Problem Areas

1.4 Display

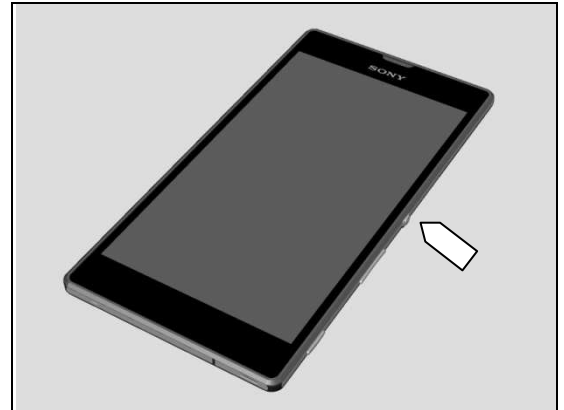
1.4.1 Graphics & Illumination

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'.

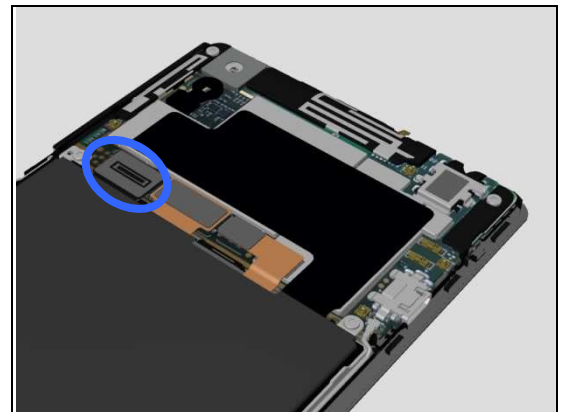


Check:

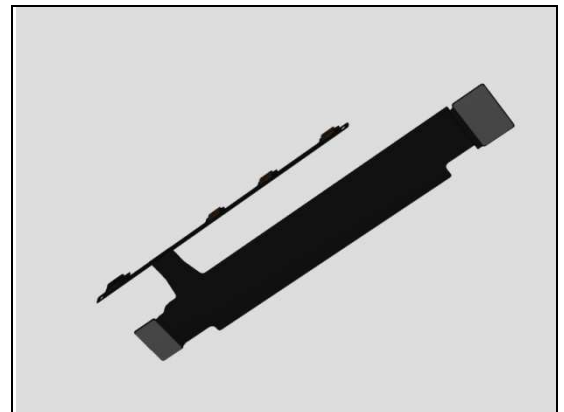
Inspect the BtB connector of Link FPC to Main PBA.

Action:

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



3. If the BtB connector of Link FPC is damaged – replace the Link 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.

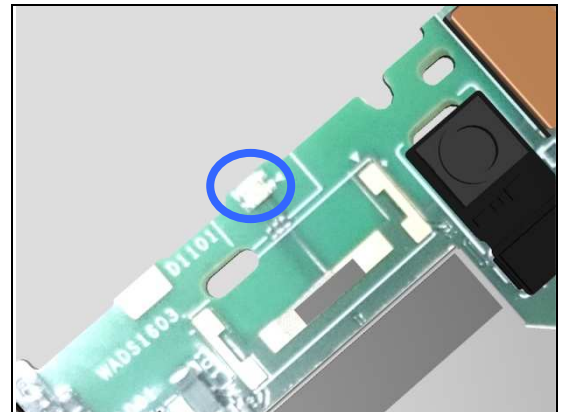


Check:

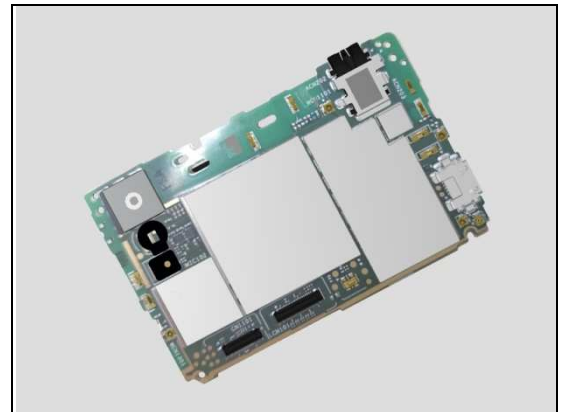
Inspect the LED located on Main PBA.

Action:

1. If dirty or oxidized – clean it.
2. Replace Rubber Indicator.



3. Replace Main PBA.



Problem Areas

1.6 Speaker

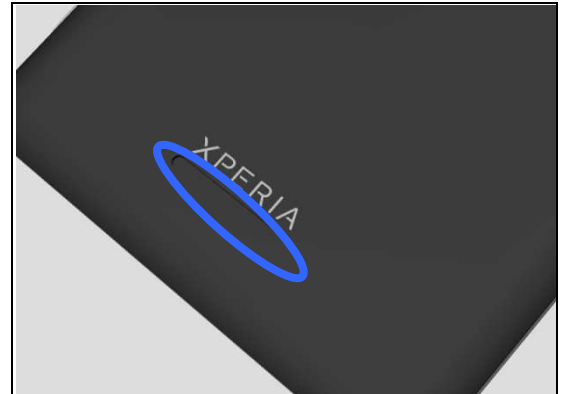
1.6.1 Loudspeaker

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.

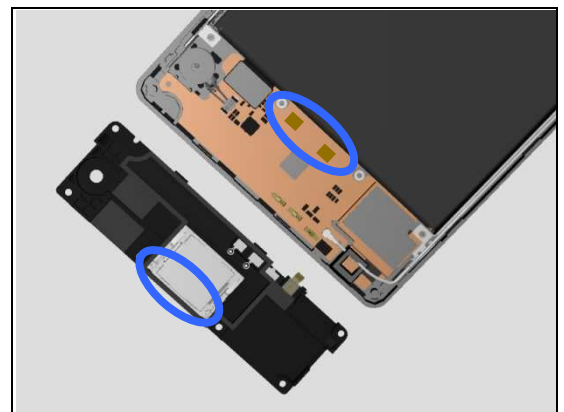


Check:

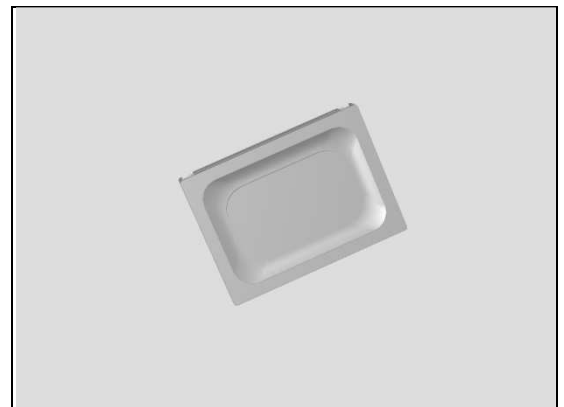
Inspect the contact pins of Loudspeaker and the contact pads on the Antenna FPC.

Action:

1. If dirty – clean them.



2. If the contact pins of Loudspeaker or the Loudspeaker are damaged – replace the Loudspeaker.
3. Replace Antenna FPC.



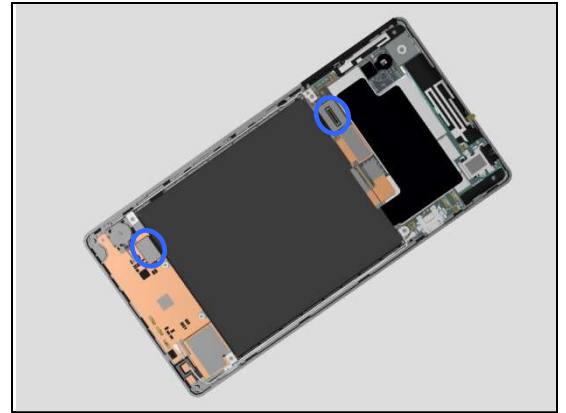
Problem Areas: Speaker

Check:

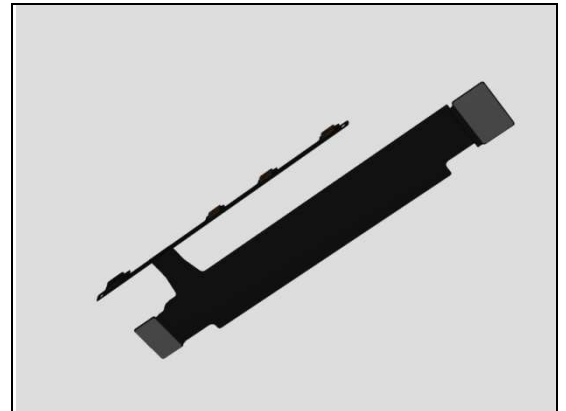
Inspect both BtB Connectors of Link FPC.

Action:

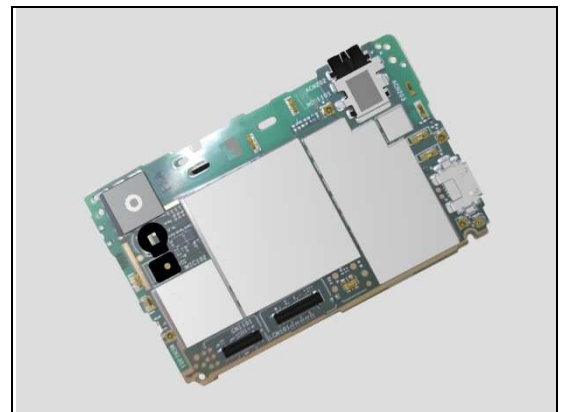
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



2. If the BtB connector of Link FPC is damaged – replace the Link FPC.



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.

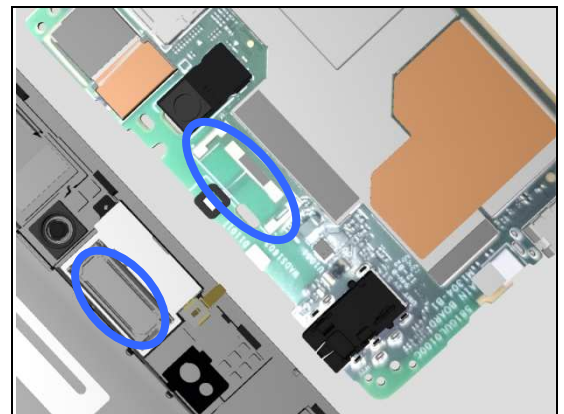


Check:

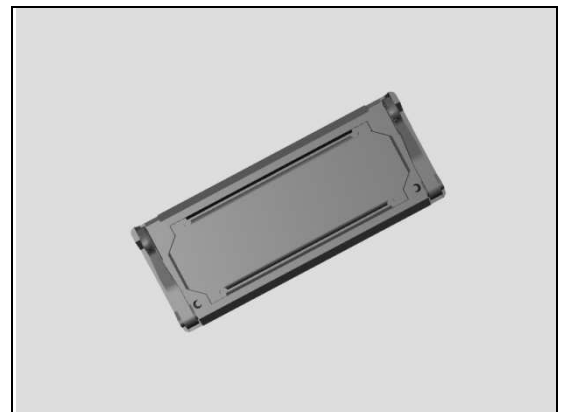
Inspect the contact pins of Ear Speaker and the contact pads on the Main PBA.

Action:

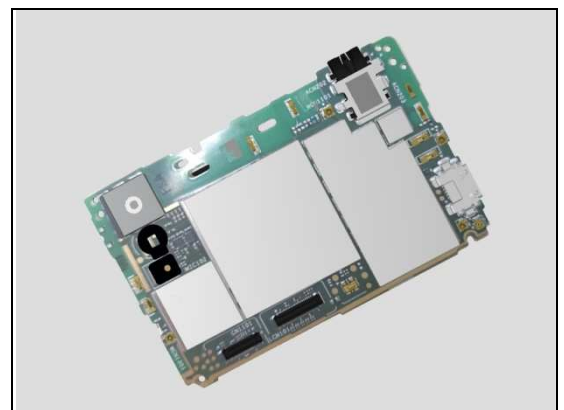
1. If dirty – clean them.



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



3. Replace Main PBA.



Problem Areas

1.8 Microphone

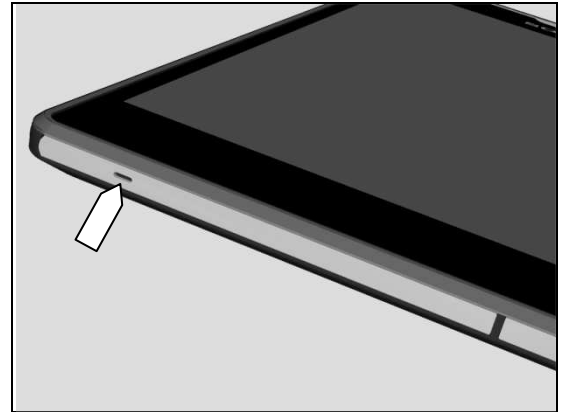
1.8.1 Primary Microphone

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 Battery Cover.

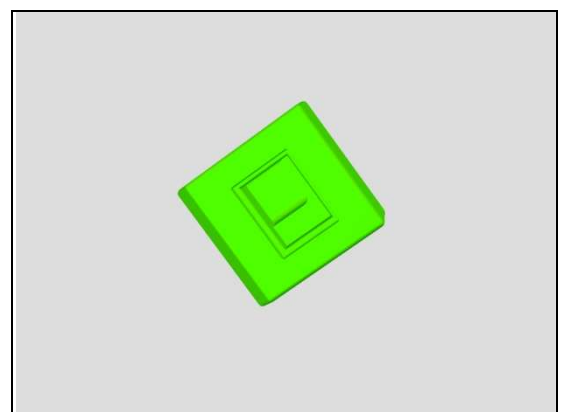
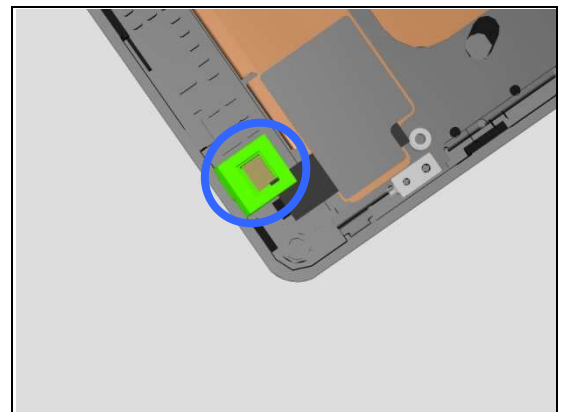


Check:

Inspect the Rubber Gasket Mic Main on Front Cover Assy.

Action:

1. If dirty – clean.
2. If the Rubber Gasket Mic Main is damaged – replace Rubber Gasket Mic Main.



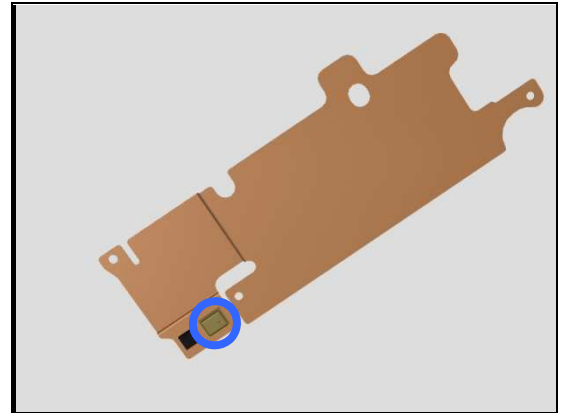
Problem Areas: Microphone

Check:

Inspect the Microphone located on the Antenna FPC.

Action:

1. If clogged – clean it.
2. If the Microphone is damaged – replace the Antenna FPC.

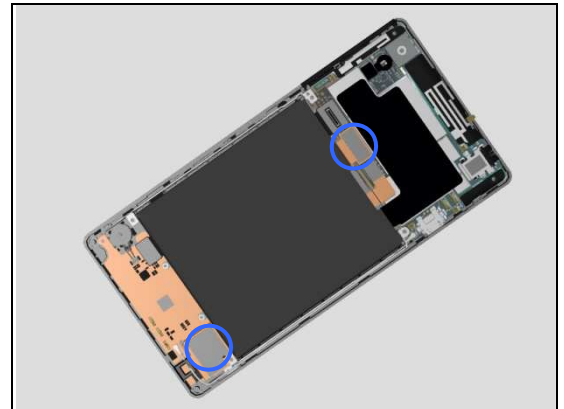


Check:

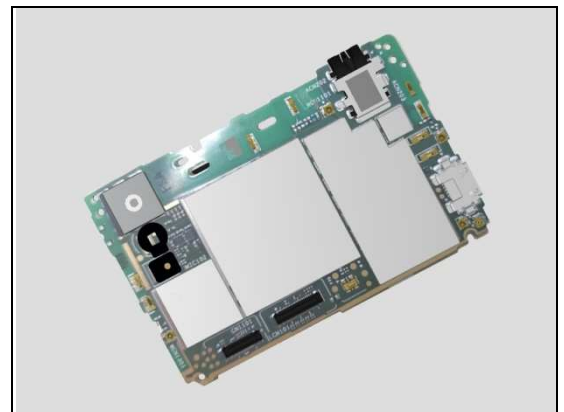
Inspect both BtB Connectors of Display FPC.

Action:

3. If not properly connected – disconnect and reconnect it.
4. If dirty or oxidized – clean it.
5. If the Display 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.

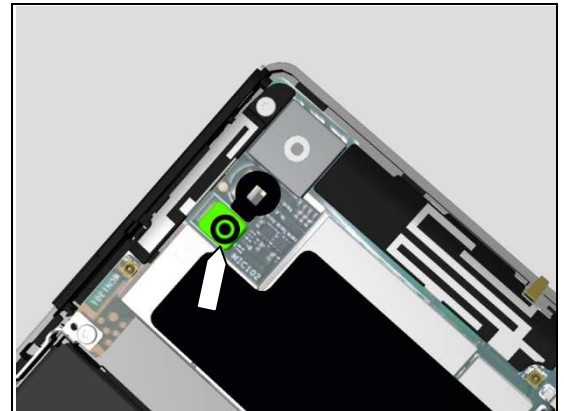


Check:

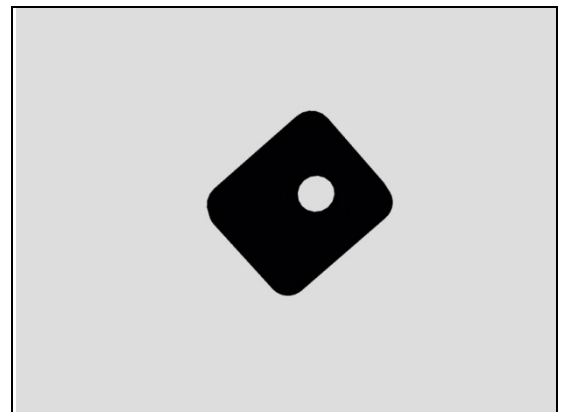
Inspect the Rubber Gasket Mic 2nd on the Main PBA.

Action:

1. If dirty – clean them.



3. If the Rubber Gasket Mic 2nd is damaged – replace it.

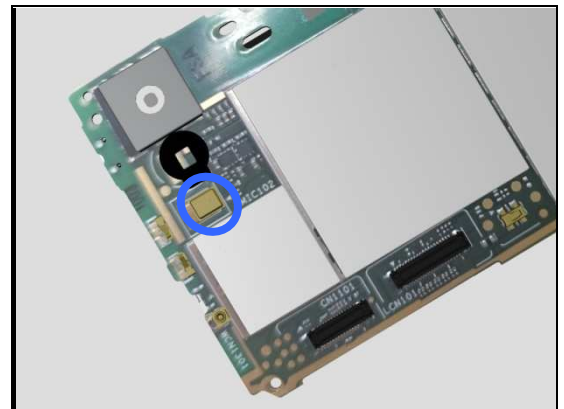


Check:

Inspect the Microphone on Main PBA.

Action:

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



Problem Areas

1.9 Vibrator

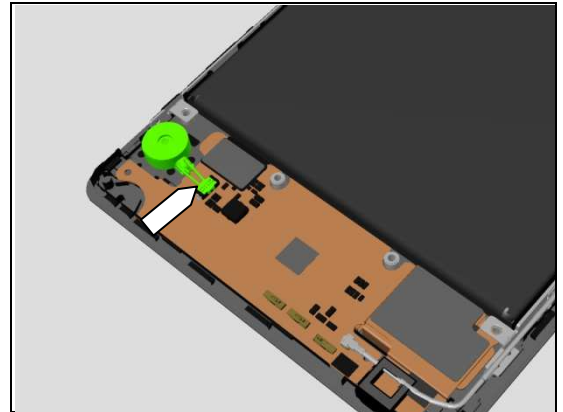
1.9.1 Vibrator not generating alerts

Check:

Inspect the BtB connector of Vibrator to Antenna FPC

Action:

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

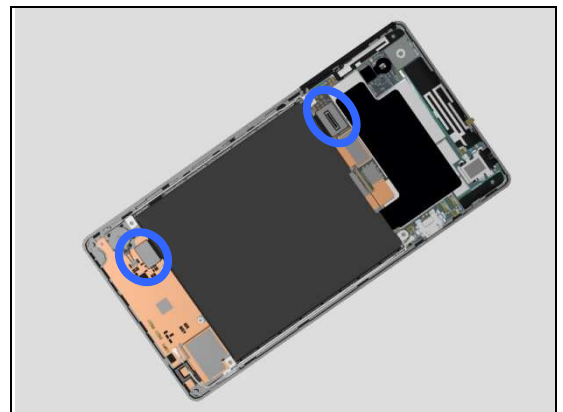


Check:

Inspect both BtB Connectors of Link FPC.

Action:

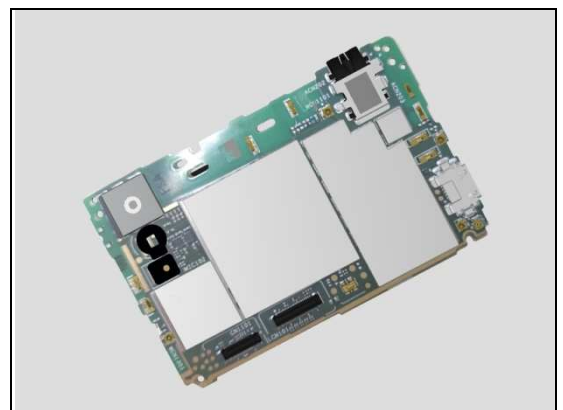
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the vibrator is damaged – replace the Vibrator.
4. If the Antenna FPC is damaged –replace the Antenna FPC.



5. If the Link FPC is damaged –replace the Link FPC.
6. Replace Main PBA.



Problem Areas

1.10 Camera

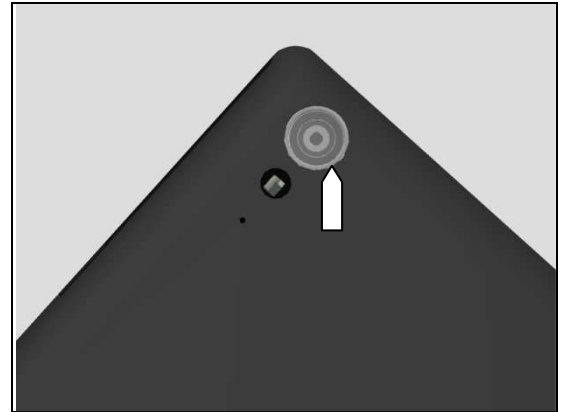
1.10.1 Main Camera

Check:

Inspect the external area of camera window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Battery Cover.



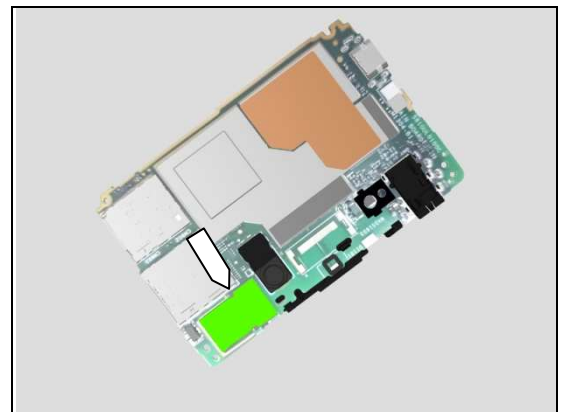
Check:

Inspect the BtB connector of Camera 8MP to Main PBA.

Action:

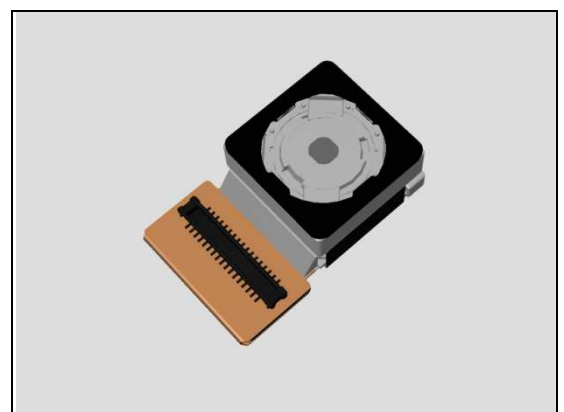
1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean it.



3. If the BtB connector or the Camera 8MP is damaged – replace the Camera 8MP.

4. Replace Main PBA.



Problem Areas: Camera

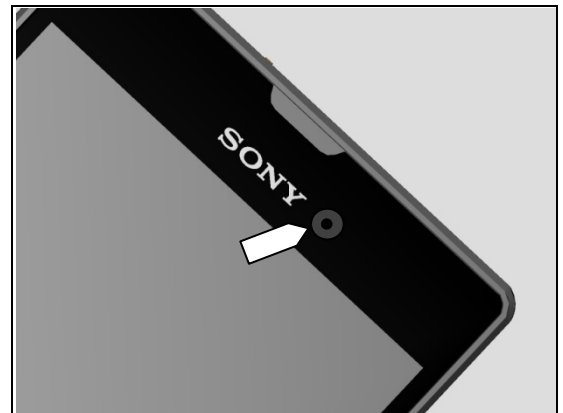
1.10.2 Video Call Camera defects

Check:

Inspect the external area of the Camera Chat window.

Action:

1. If dirty – clean it.



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

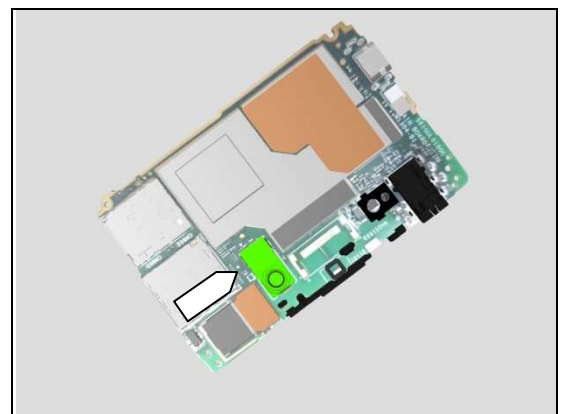


Check:

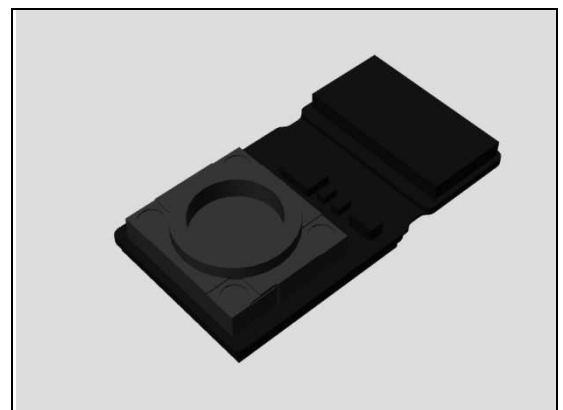
Inspect the BtB connector of Camera Chat 2 to the Main PBA.

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 or the Camera Chat is damaged – replace the Camera Chat.
4. 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.

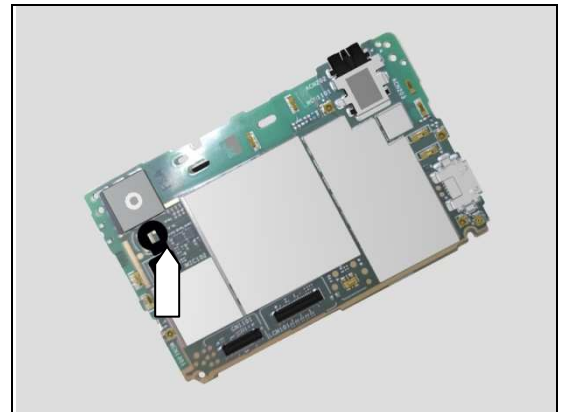
2. If scratched or damaged – replace the Battery Cover.

Check:

Inspect the flash LED on the Main PBA.

Action:

1. If dirty – clean it.
2. Replace Rubber Gasket Flash.
3. Replace Main PBA.



Problem Areas

1.12 Bluetooth and WLAN

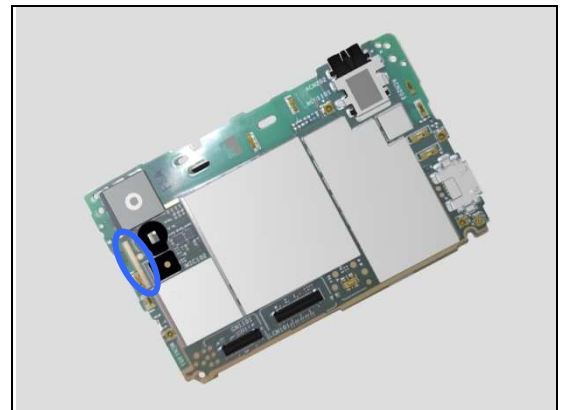
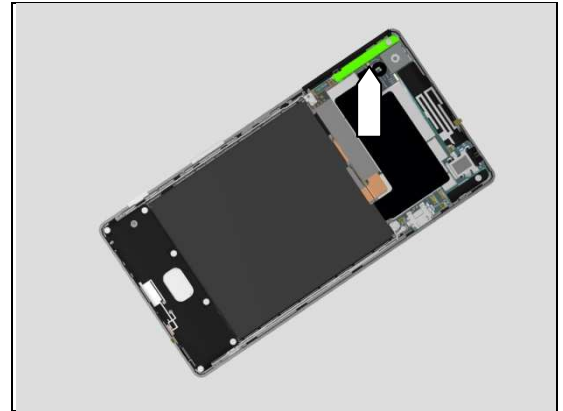
1.12.1 Bluetooth or WLAN connection failure

Check:

Inspect the Antenna BT + WLAN contact pads and the contact pin on Main PBA.

Action:

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



Problem Areas

1.13 NFC

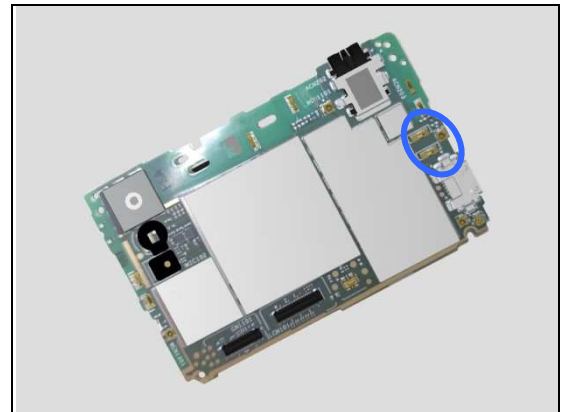
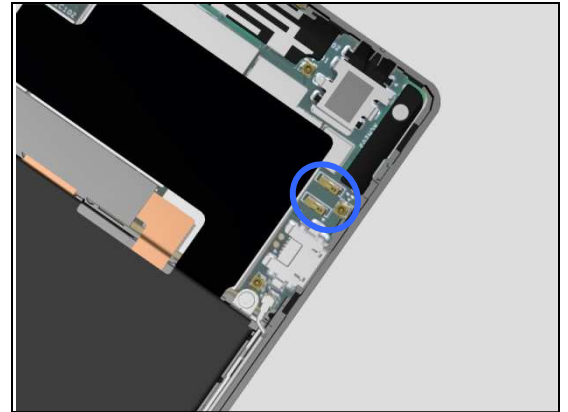
1.13.1 NFC malfunctions

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:

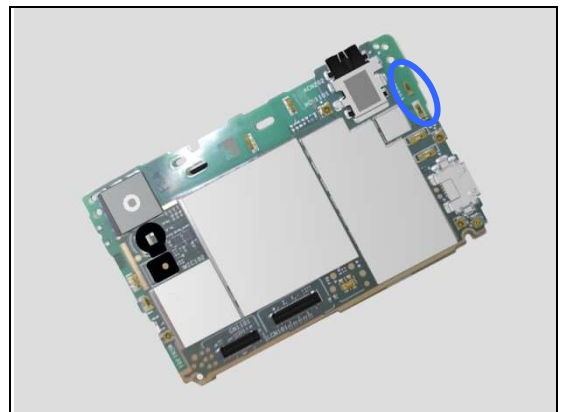
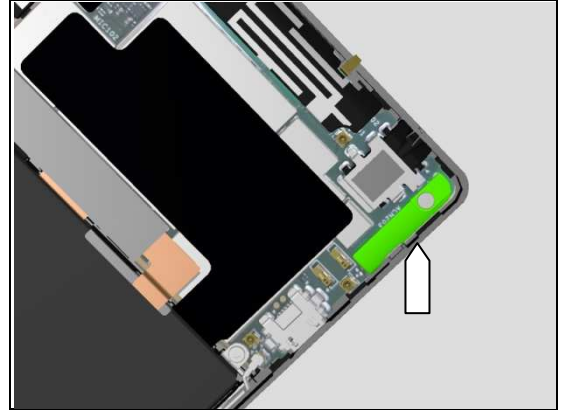
Inspect the Antenna GPS contact pads and contact pins on Main PBA.

Action:

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

2. If the Antenna GPS contact pads are damaged – replace the Antenna GPS.

2. Replace the Main PBA.



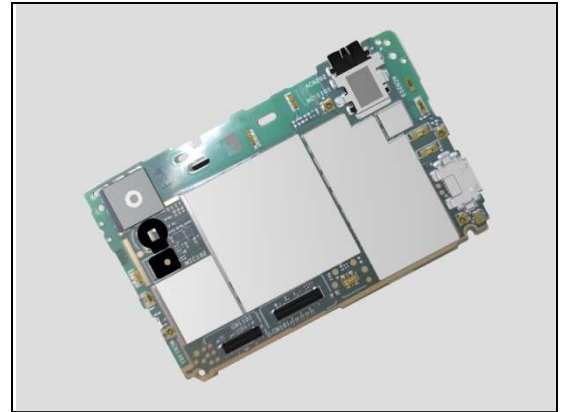
Problem Areas

1.15 Compass

1.15.1 Compass fails

Action:

Replace Main PBA.

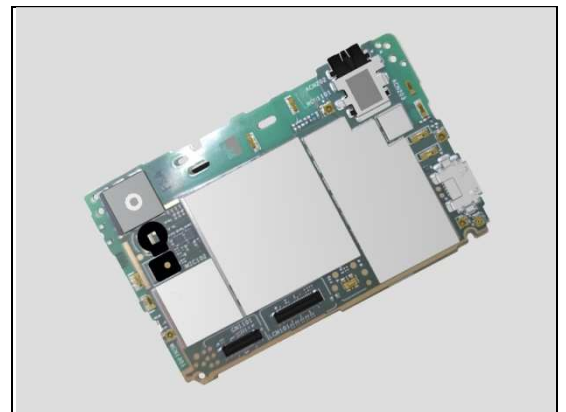


1.16 Accelerometer

1.16.1 Accelerometer test fails

Action:

Replace Main PBA.

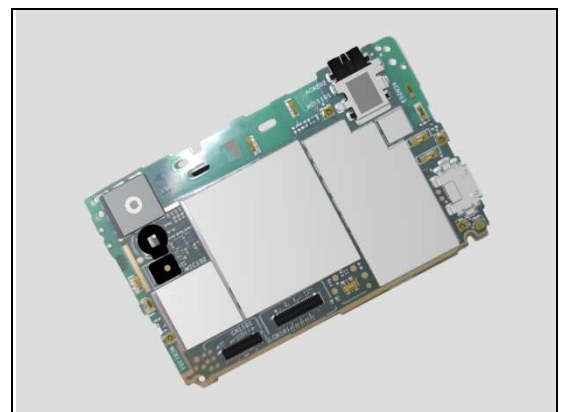


1.17 Gyroscope

1.17.1 Gyroscope test fails

Action:

Replace Main PBA.



Problem Areas

1.18 Ambient Light Sensor

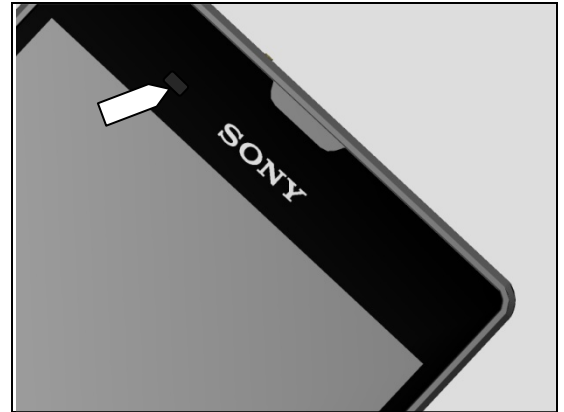
1.18.1 Light Sensor malfunctions

Check:

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

Action:

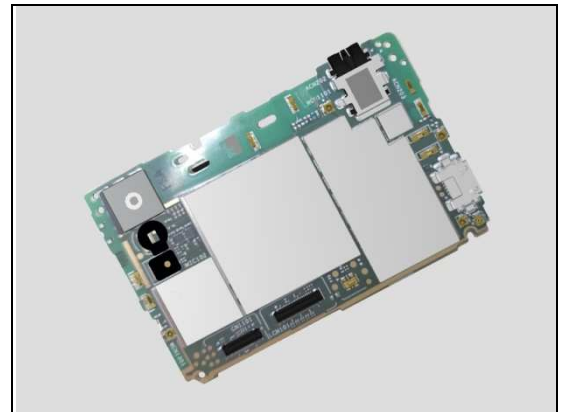
1. If dirty – clean it.



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



3. Replace Main PBA.



Problem Areas

1.19 Proximity Switch

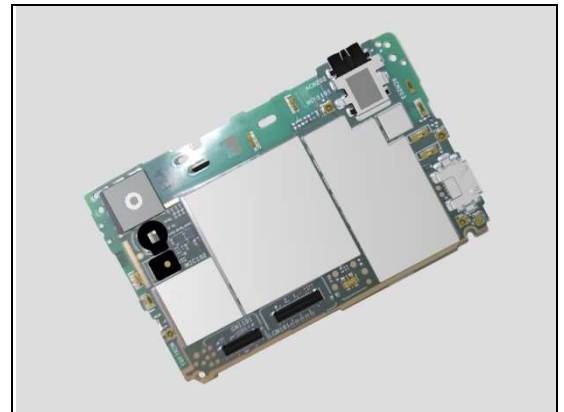
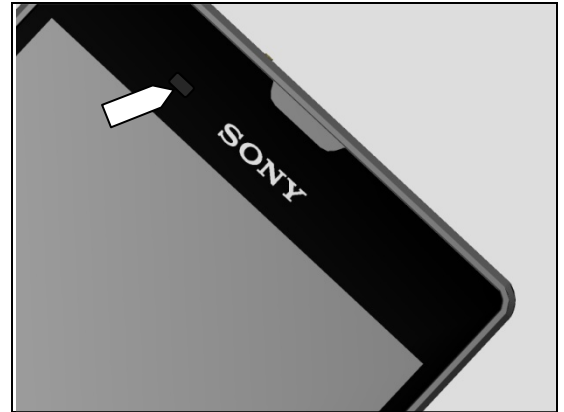
1.19.1 Proximity switch malfunctions

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

1.20 Pressure Sensor

1.20.1 Pressure Sensor test fails

N/A. No Pressure sensor in the phone.

1.21 Water Resistance

1.21.1 Water Resistance fails

N/A. Not Water Resistant phone.

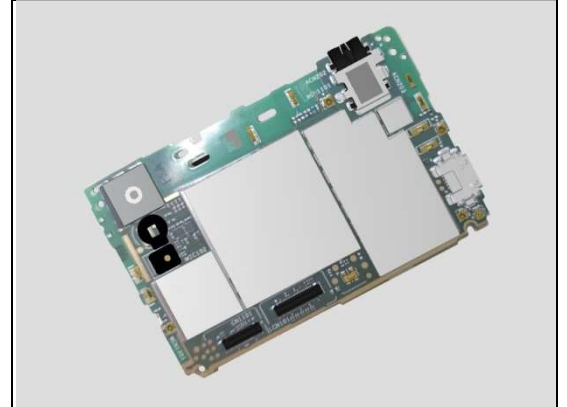
Problem Areas

1.22 Real Time Clock

1.22.1 Real time clock test fails

Action:

Replace Main PBA.

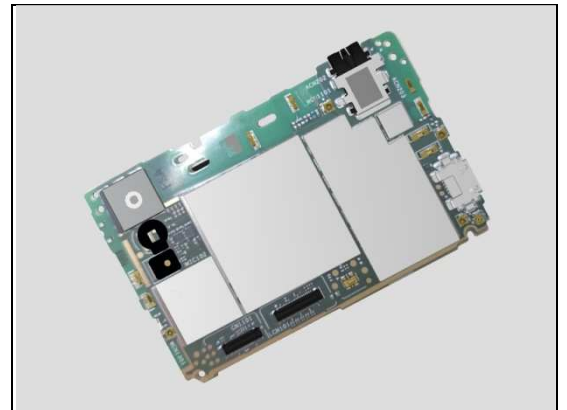


1.23 Total call time

1.23.1 Total call time fails

Action:

Replace Main PBA.



Problem Areas

1.24 External

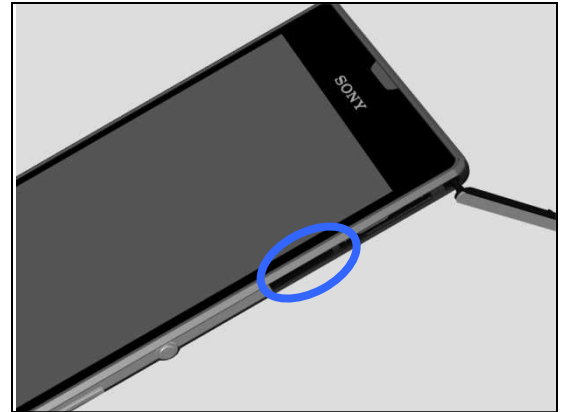
1.24.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

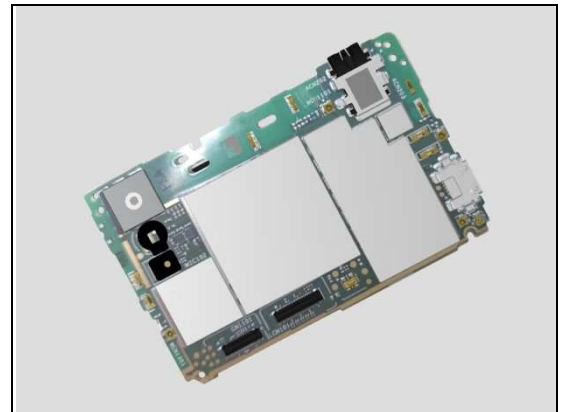


Check:

Inspect the memory card holder on Main PBA.

Action:

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

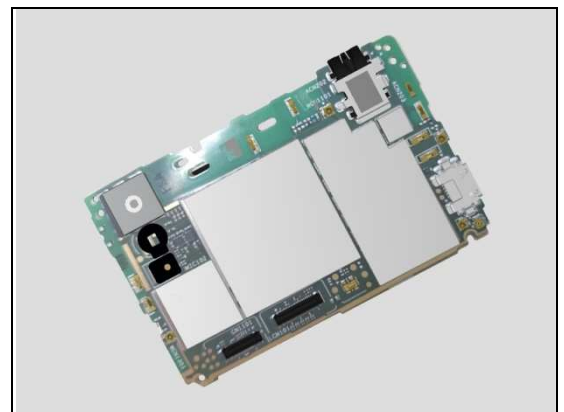


1.25 Security

1.25.1 Security fails

Action:

Replace Main PBA.



Problem Areas

1.26 FM Radio

1.26.1 No/Poor FM Radio reception

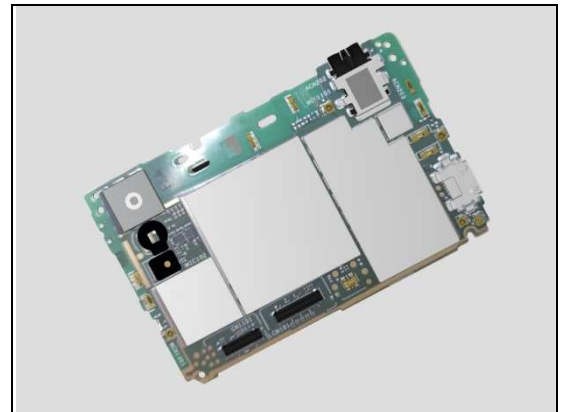
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Problem Areas

1.27 Battery Health test

1.27.1 Battery Health test fails

N/A.

1.28 Flip Slider Counter

1.28.1 Flip Slider Counter fails

N/A. Not slider phone.

1.29 Verify Certificates

1.29.1 Verify Certificates fails

Action:

N/A.

1.30 IrDA Test

1.30.1 IrDA test fails

N/A. No IrDA functionality in the phone.

Problem Areas

1.31 TV-Out Test

1.31.1 TV-Out test fails

Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.32 Network & Signal

1.32.1 No/Poor signal

Check:

Inspect the Antenna Main RF assembly to the Antenna FPC and Front 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 Antenna Main RF.

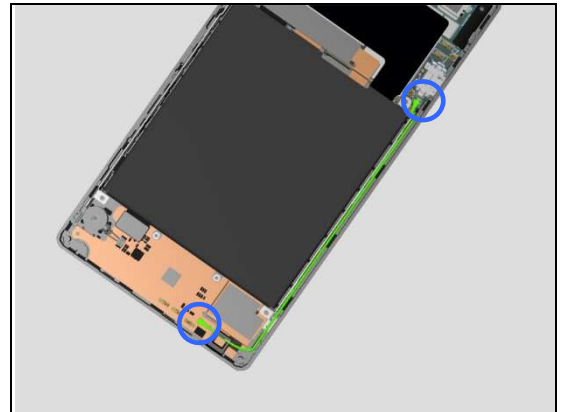


Check:

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.

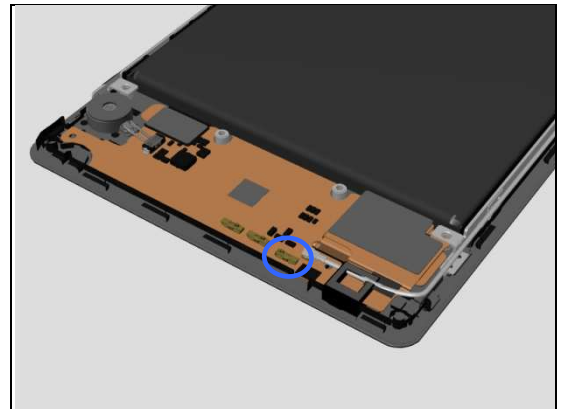


Check:

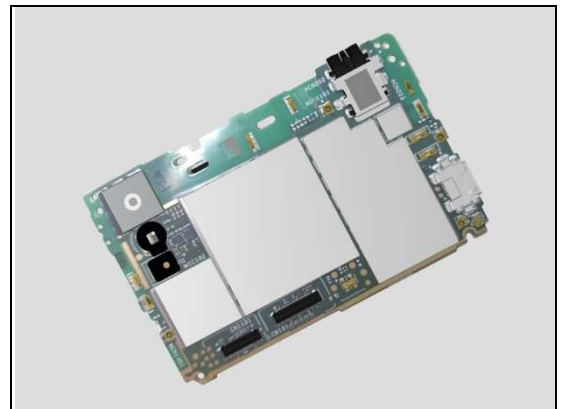
Inspect the Antenna FPC assembly.

Action:

1. If dirty or oxidized – clean the contact pins.
If the Antenna FPC is damaged – replace the Antenna FPC.



2. Replace Main PBA.



Problem Areas

1.33 SIM

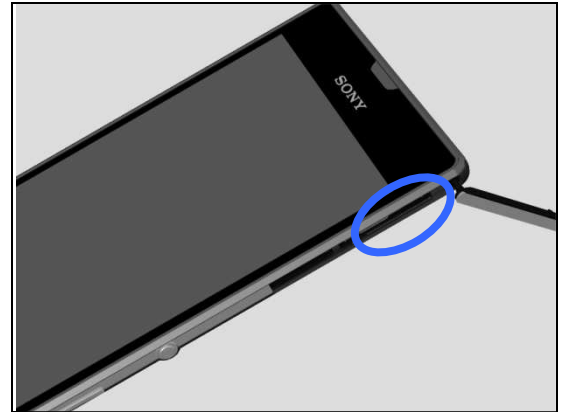
1.33.1 SIM not detected

Check:

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

Action:

If dirty or clogged – clean the external port.

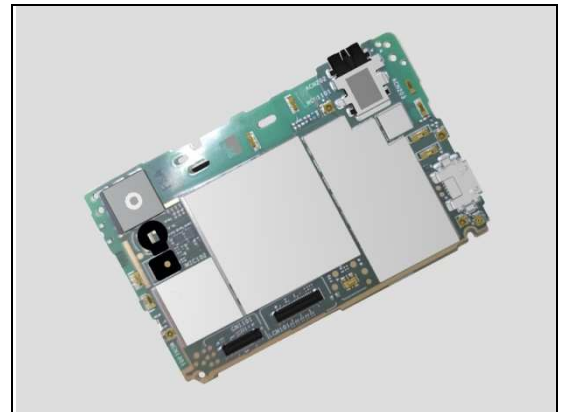


Check:

Inspect the SIM card holder on Main PBA.

Action:

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



1.33.2 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

1.34 Charging

1.34.1 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.

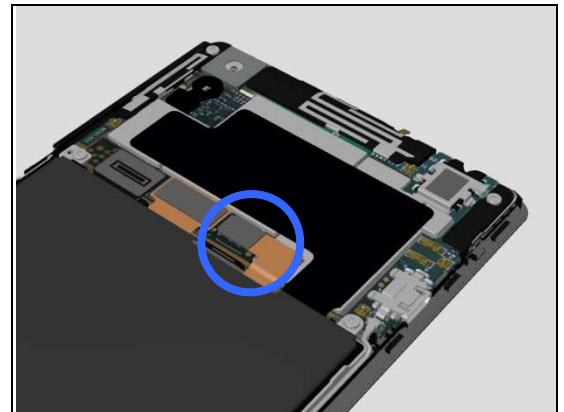


Check:

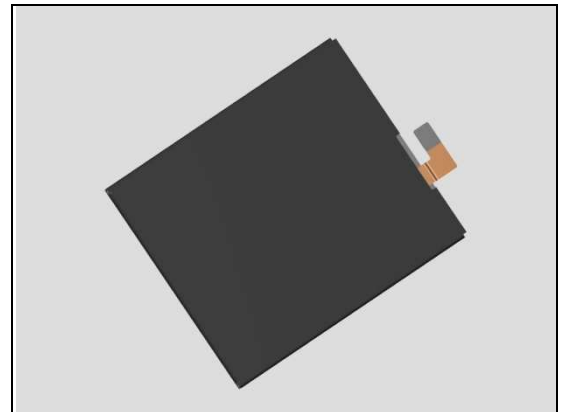
Inspect the BtB Connector of the Battery to Main PBA.

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 2500 mAh is damaged – replace the Battery 2500 mAh.
4. Replace Main PBA.



Problem Areas

1.35 HandsFree by Wire

1.35.1 Connection to portable Handsfree fails

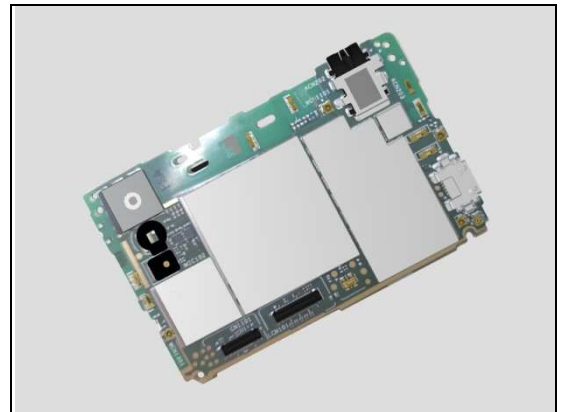
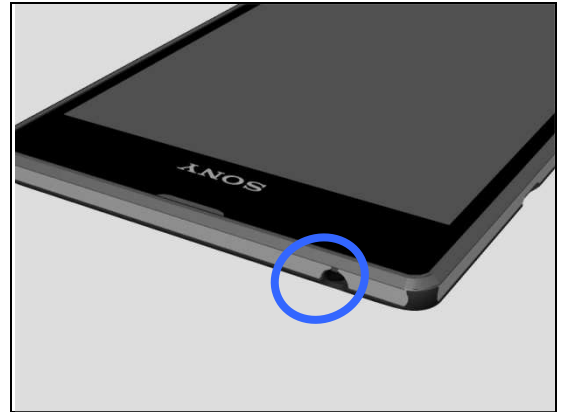
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Problem Areas

1.36 Data Communication

1.36.1 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-June-26	Released
2	2014-Sep-19	Battery part description updated