

Troubleshooting Guide

- mechanical -



Xperia C5 Ultra
E5506, E5533, E5553, E5563

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Always firstly disconnect the Embedded Battery BtB connector to cut off power supply when the Battery Cover Assy is disassembled.

Always finally connect the Embedded Battery BtB connector before the Battery Cover Assy is reassembled.

Note: Whenever replacing Front Cover Assy or board swap, must do the Calibration for P-sensor, light sensor, accelerometer: 1289-2983 Trouble Shooting Application – mechanical.

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.

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

Check:

Inspect the on/off key.

Action:

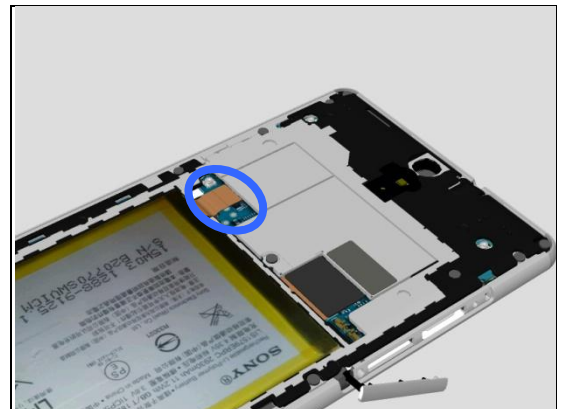
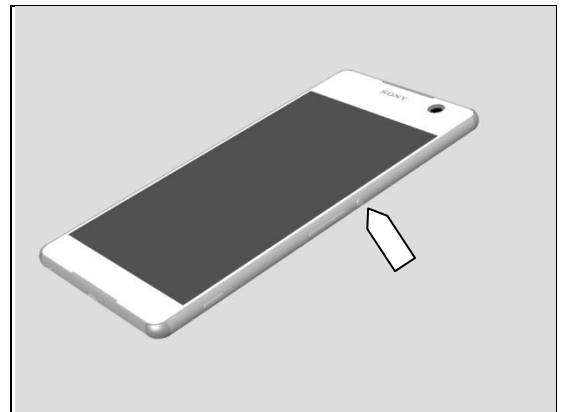
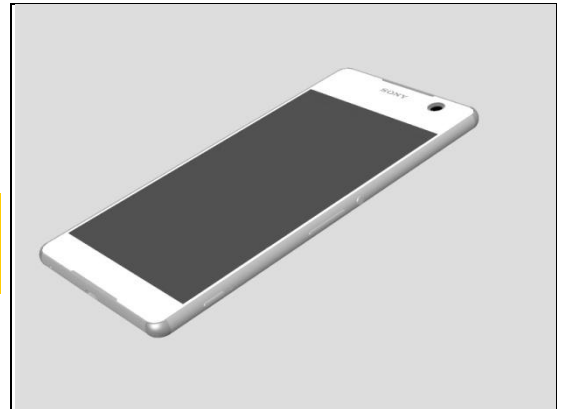
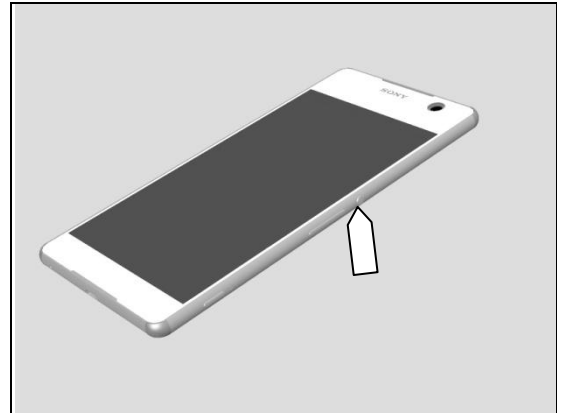
Refer to section 1.2.3 'On/Off Key'.

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, the FPC or the Battery is damaged – replace the Battery.



4. Replace Main PBA.



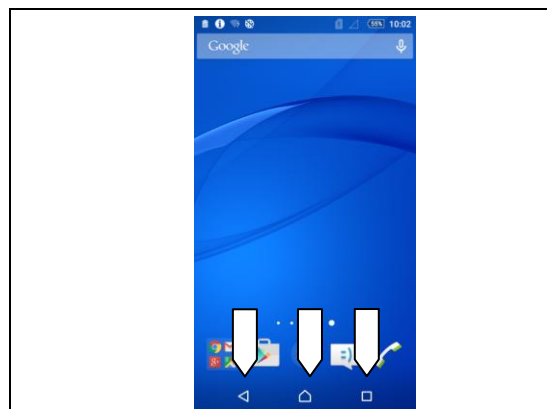
Problem Areas

1.2 Keys

1.2.1 Back, Home and Multitask Keys

Action:

1. Refer to section 1.3 'Touch Screen'.
2. Replace Main PBA.



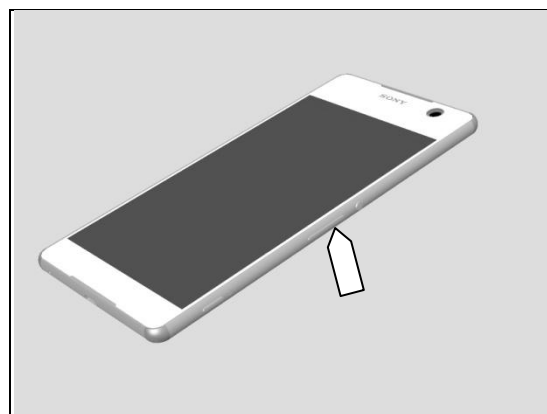
1.2.2 Volume Key

Check:

Inspect the external area of the Key Power Volume.

Action:

If dirty – clean it.

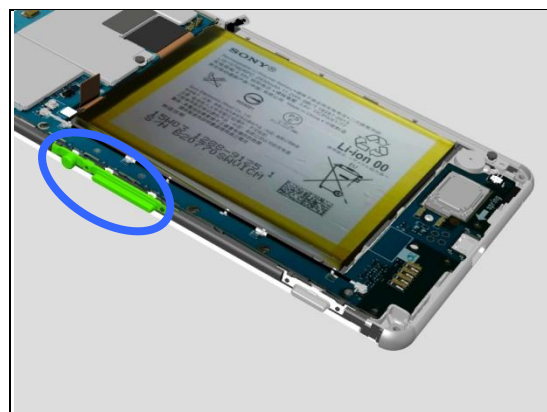


Check:

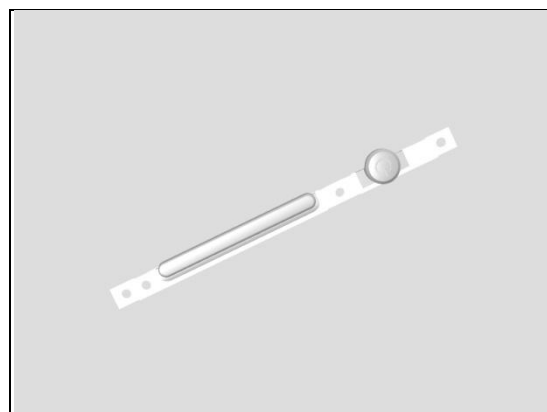
Inspect the Key Power Volume on Front Cover Assy.

Action:

1. If not properly assembled – disconnect and reassemble it.
2. If dirty or oxidized – clean it.



3. If the Key Power Volume is damaged – replace it.
4. Replace Main PBA.



Problem Areas: Keys

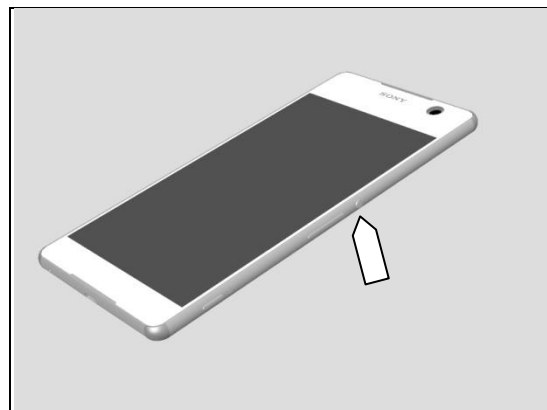
1.2.3 On/Off Key

Check:

Inspect the external area of the Key Power Volume.

Action:

If dirty – clean it.

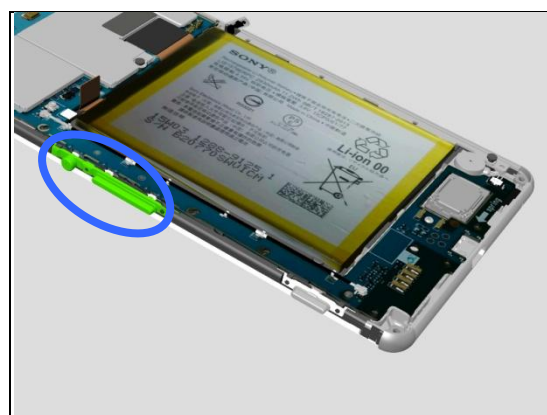


Check:

Inspect the Key Power Volume on Front Cover Assy.

Action:

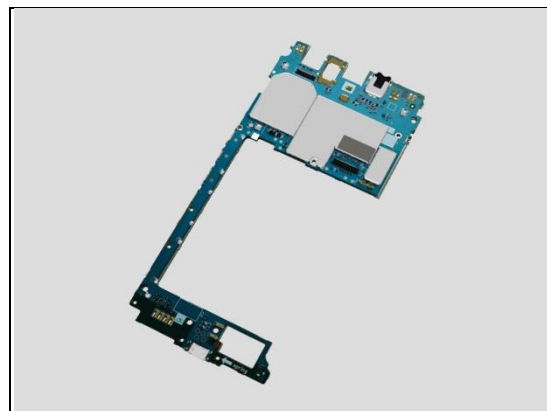
1. If not properly assembled – disconnect and reassemble it.
2. If dirty or oxidized – clean it.



3. If the Key Power Volume is damaged – replace it.



4. Replace Main PBA.



Problem Areas: Keys

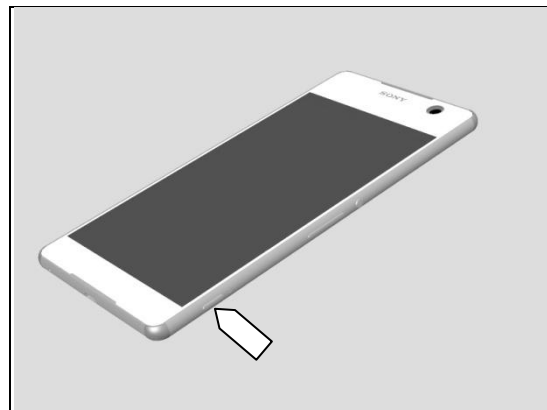
1.2.4 Camera Key

Check:

Inspect the external area of the Key Camera.

Action:

If dirty – clean it.

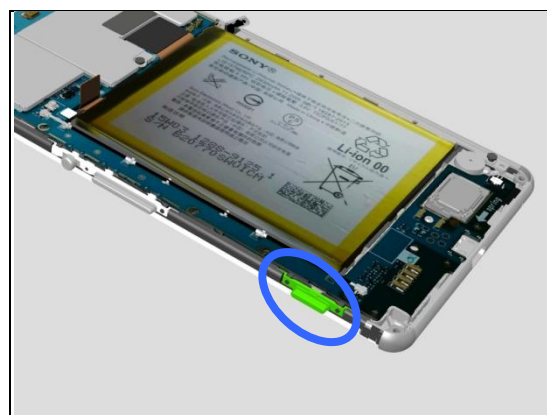


Check:

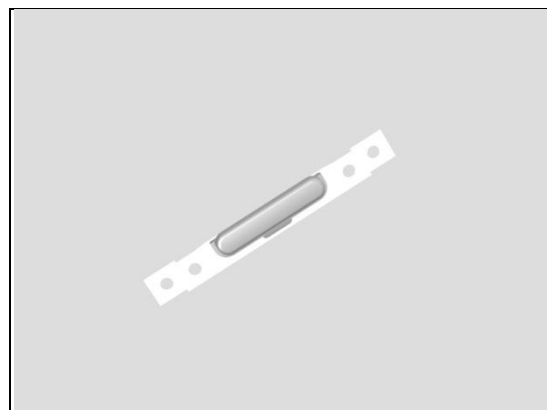
Inspect the Key Camera on Front Cover Assy.

Action:

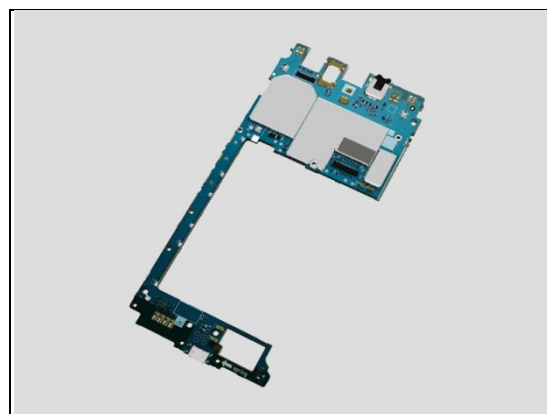
1. If not properly assembled – disconnect and reassemble it.
2. If dirty or oxidized – clean it.



3. If the Key Camera is damaged – replace it.



4. Replace Main PBA.



Problem Areas

1.3 Touch Screen

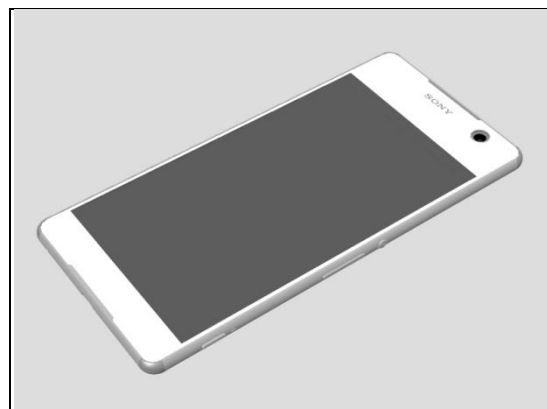
1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Front Cover Assy.

Action:

1. If dirty – clean it.

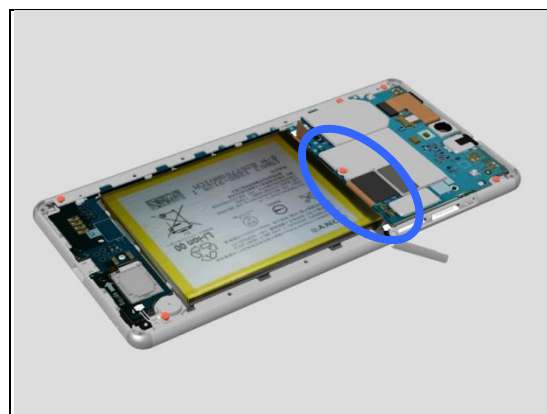


Check:

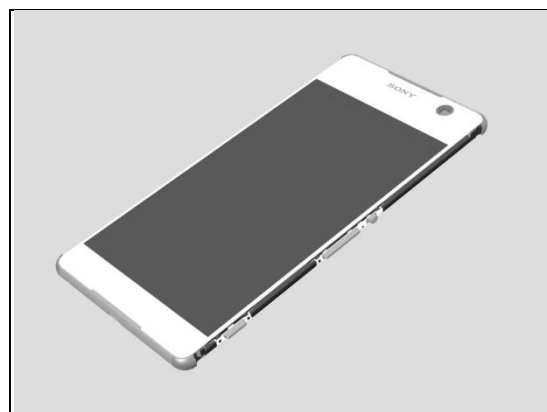
Inspect the BtB connector of Front Cover Assy to Main PBA.

Action:

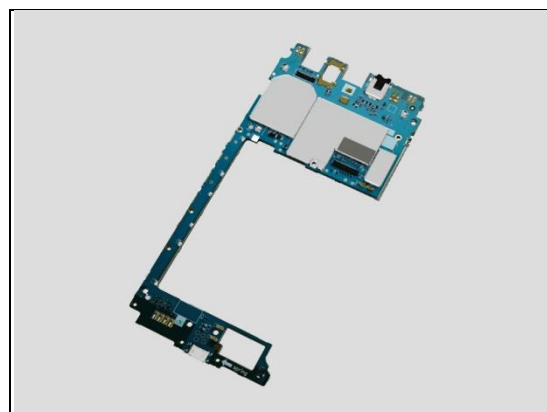
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If Front Cover Assy is scratched or damaged – replace the 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:

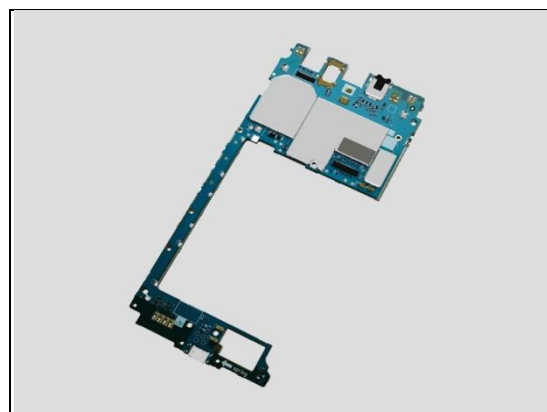
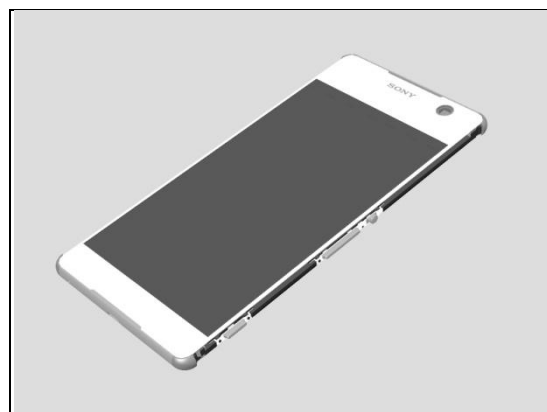
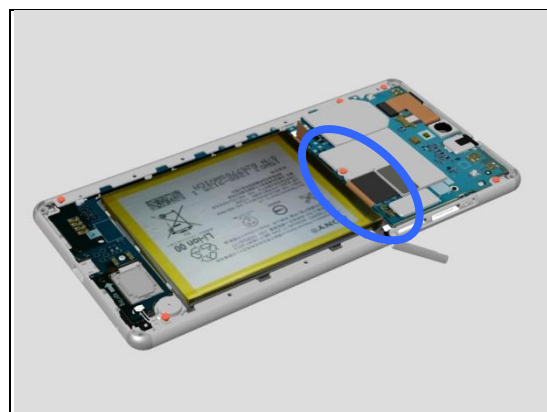
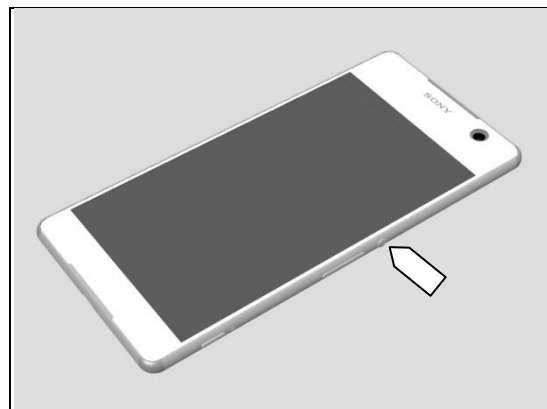
Inspect the BtB connector of Front Cover Assy to Main PBA.

Action:

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

3. If Front Cover Assy is scratched or damaged – replace the Front Cover Assy.

4. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

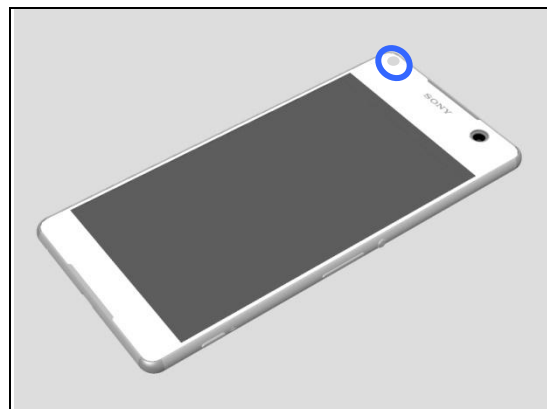
1.5.1 LED/Illumination

Check:

Inspect external port of LED on the Front Cover Assy.

Action:

1. If dirty – clean it.

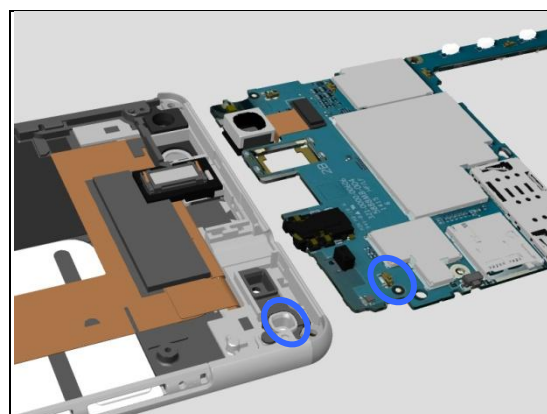


Check:

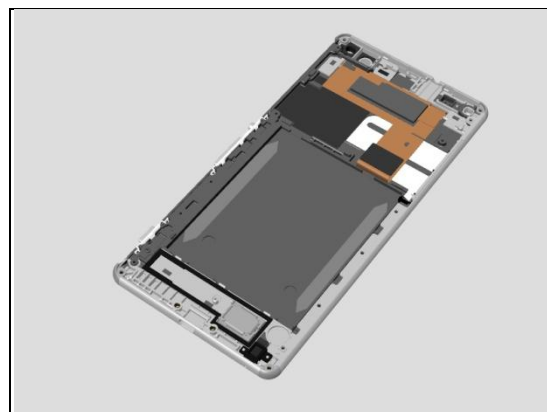
Inspect the Notification LED on Main PBA and its window on Front Cover Assy.

Action:

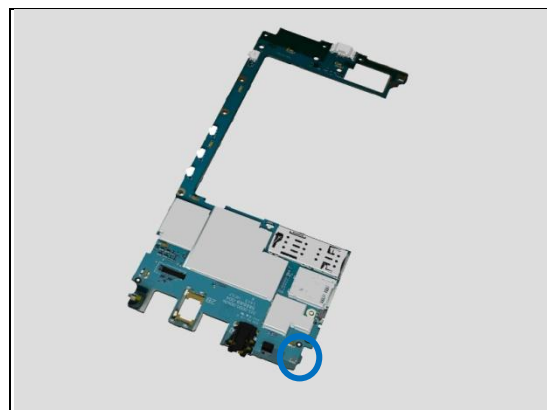
1. If dirty or oxidized – clean it.



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



3. Replace Main PBA



Problem Areas

1.6 Speaker

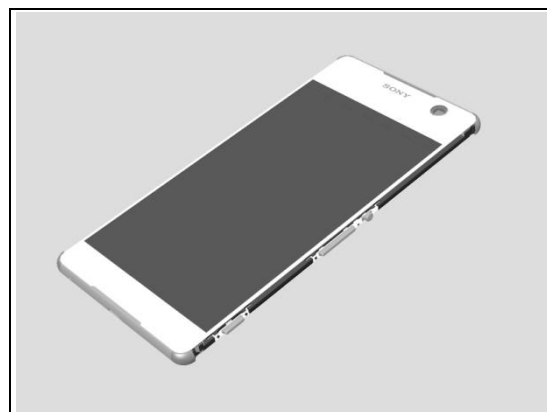
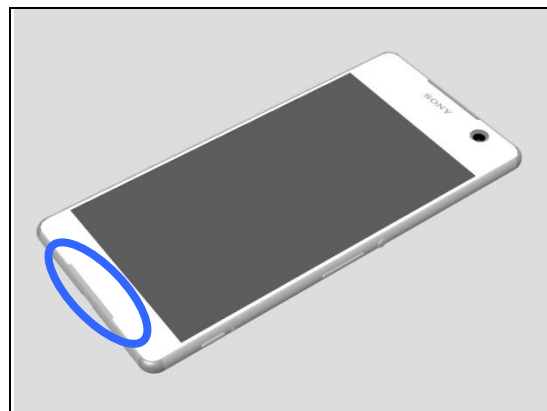
1.6.1 Loudspeaker

Check:

Inspect the Loudspeaker's external port on the Front Cover Assy.

Action:

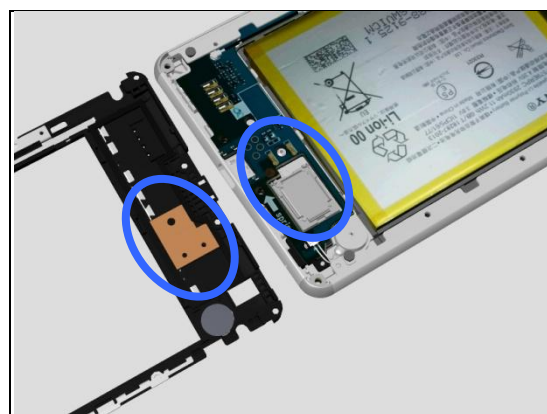
1. If clogged – clean it.



2. If damaged – replace the Front Cover Assy.

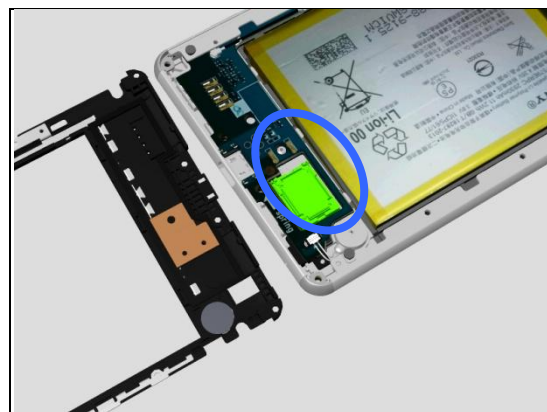
Check:

Inspect the Speaker on Front Cover Assy and Speaker FPC on Rear Cover Assy.



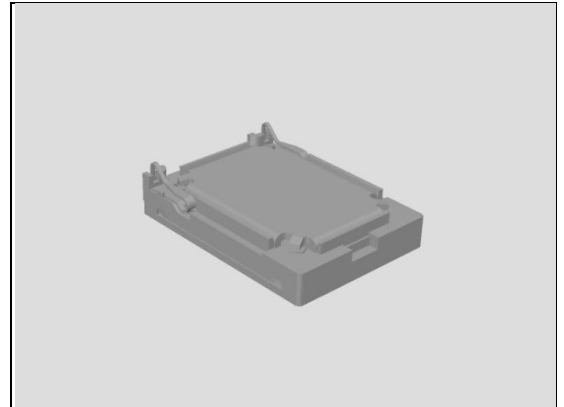
Action:

1. If contact pins are dirty or oxidized – clean it.



Problem Areas: Speaker

2. If Speaker is damaged, replace the Loud Speaker.



Check:

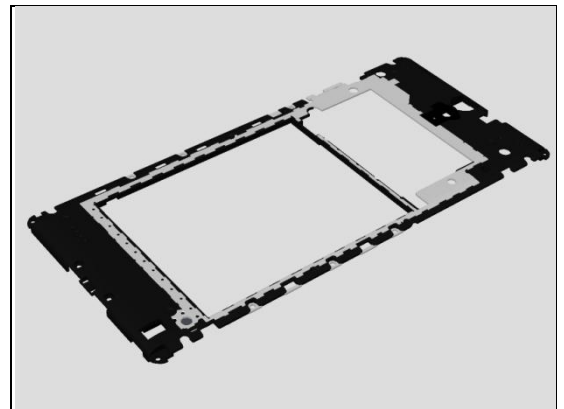
Inspect the Speaker FPC on Rear Cover Assy.

Action:

1. If dirty or oxidized – clean it.



2. If damaged, replace the Rear Cover Assy.



3. Replace Main PBA.



Problem Areas

1.7 Earphone

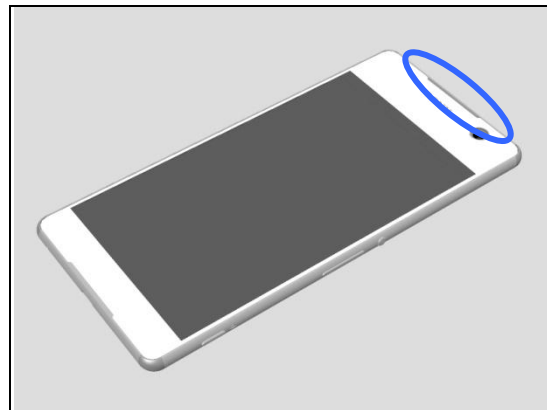
1.7.1 Ear Speaker

Check:

Inspect the external port of loudspeaker on the Front Cover Assy.

Action:

1. If clogged – clean it.

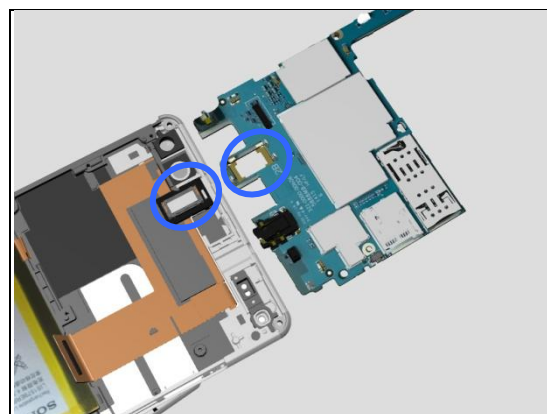


Check:

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

Action:

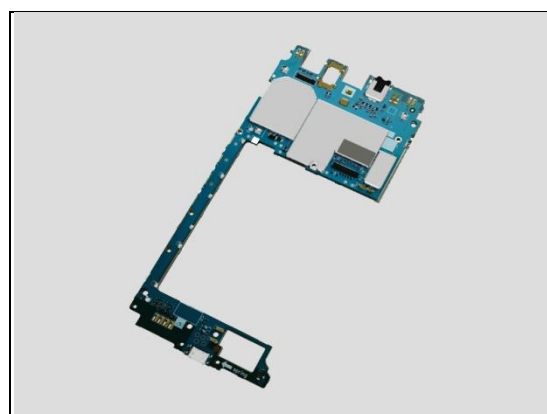
1. If dirty – clean them.



2. If the contact pins of the Receiver or the Receiver are damaged – replace it.



3. Replace Main PBA.



Problem Areas

1.8 Microphone

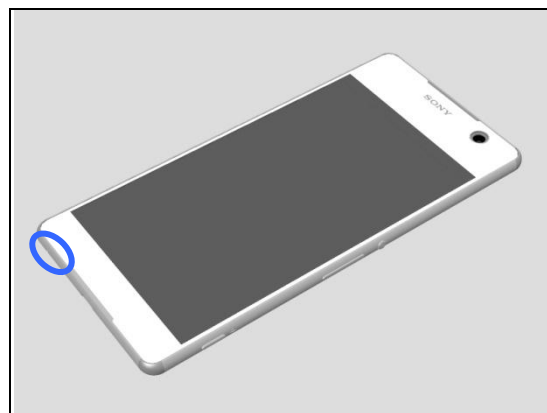
1.8.1 Primary Microphone

Check:

Inspect the Primary Microphone's external port on the Front Cover Assy.

Action:

1. If clogged – clean it.



Check:

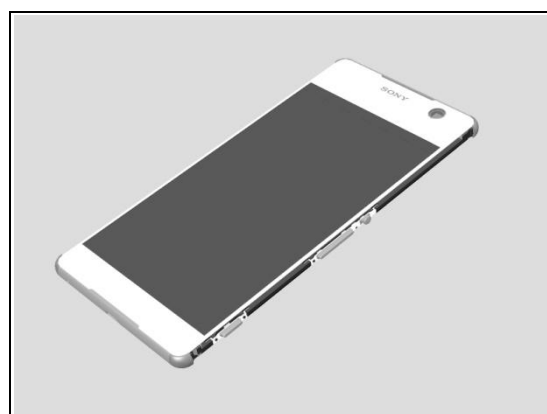
Inspect the Primary Microphone window on Front Cover Assy and Primary Microphone soldered on Main PBA.

Action:

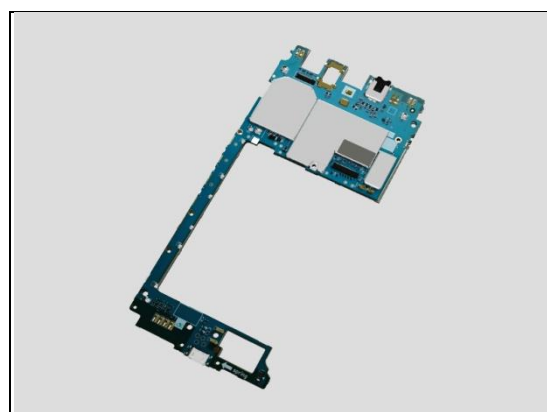
1. If dirty or oxidized – clean it.



2. If the Primary Microphone window is damaged – replace the Front Cover Assy.



3. Replace Main PBA.



Problem Areas: Microphone

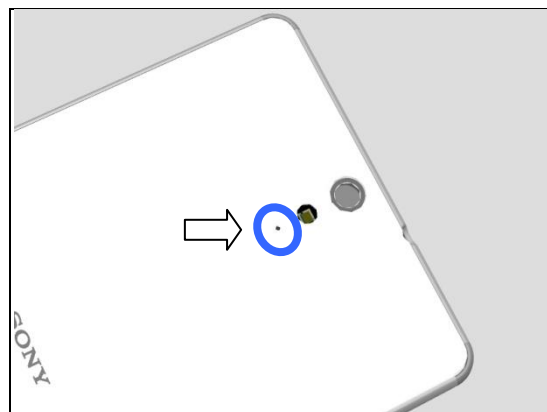
1.8.2 Secondary Microphone

Check:

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

Action:

1. If clogged – clean it.



Check:

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

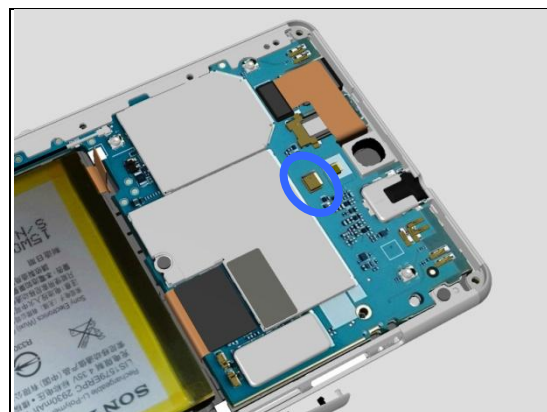
Action:

1. If clogged – clean it.



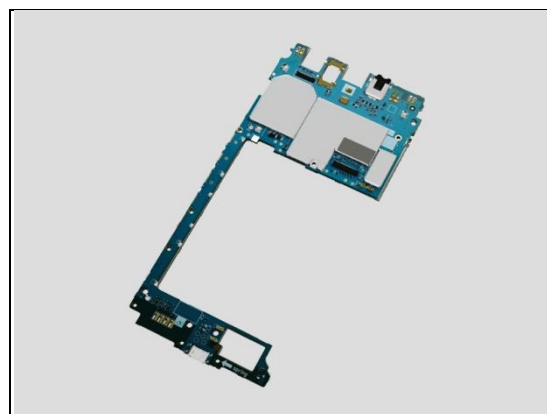
Check:

Inspect the secondary microphone soldered on Main PBA.



Action:

1. If defective – Replace Main PBA.



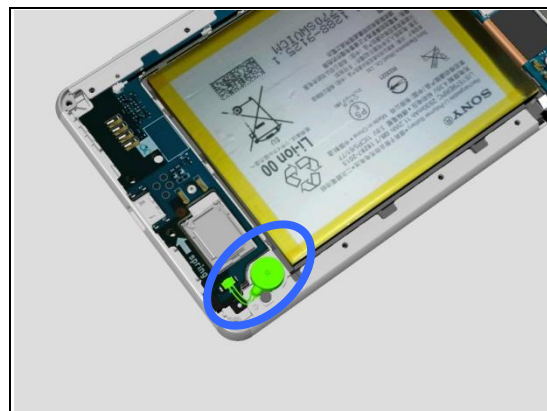
Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Check:

Inspect the Vibrator assembled on Front Cover Assy.

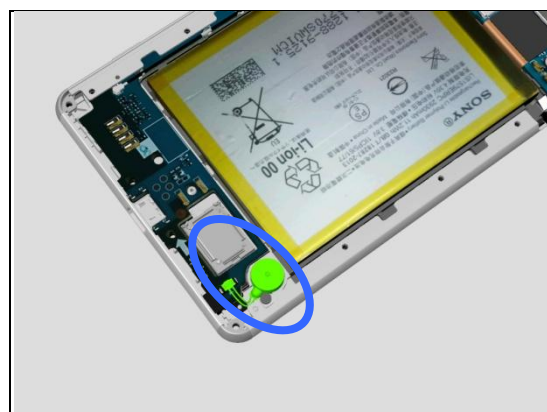


Check:

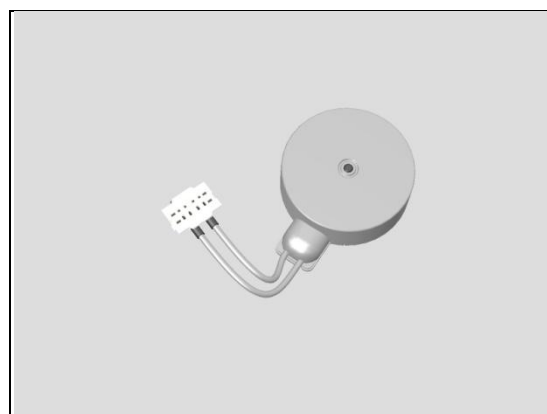
Inspect the connector of Vibrator.

Action:

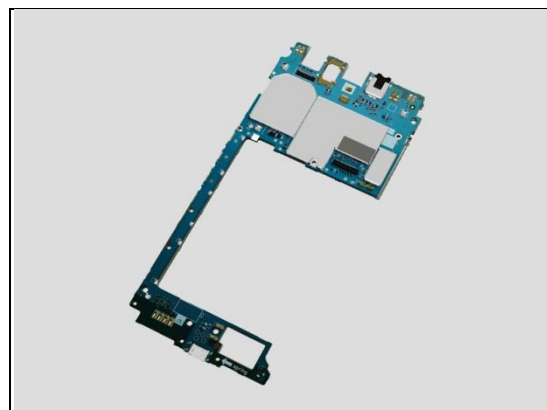
1. If not properly connected – disconnect and reconnect it



2. If damaged – replace Vibrator.



3. Replace Main PBA.



Problem Areas

1.10 Camera

1.10.1 Main Camera

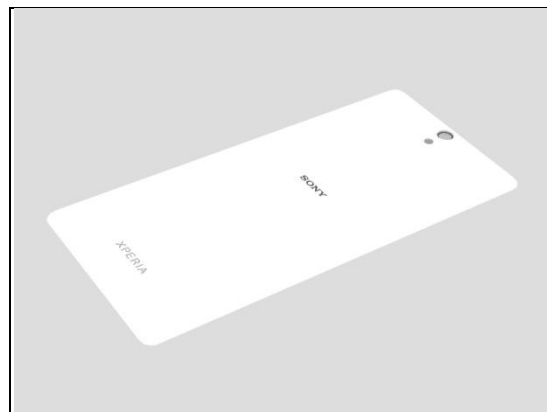
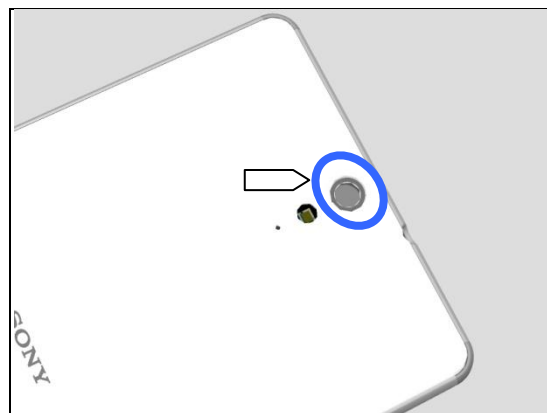
Check:

Inspect the external area of camera window.

Action:

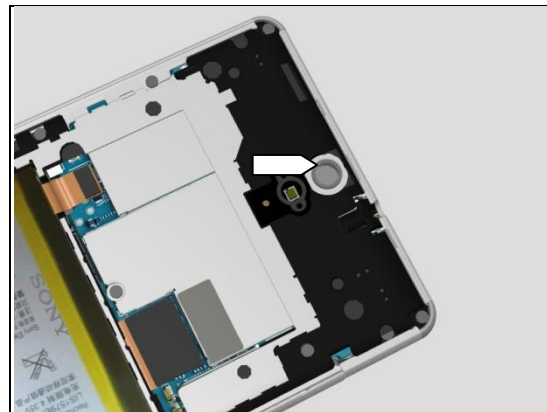
1. If dirty – clean it.

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



Check:

Inspect the external area of camera on Rear Cover Assy.



Check:

Inspect the BtB connector of Main Camera to Main PBA.

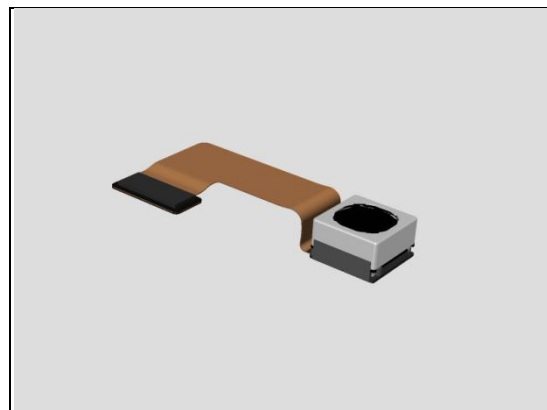
Action:

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

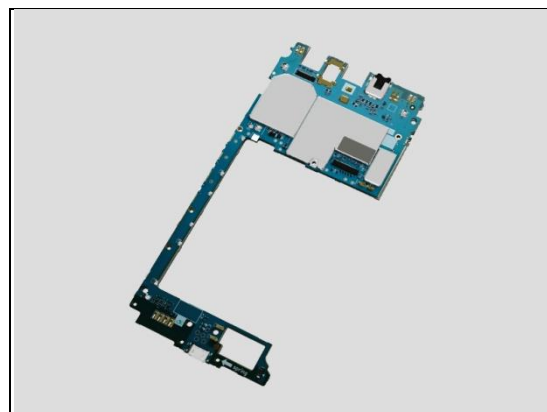


Problem Areas: Camera

2. If the BtB connector or the Main Camera is damaged – replace the Main Camera.



4. Replace Main PBA.



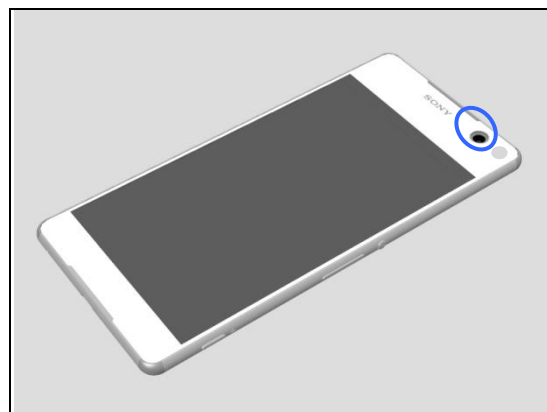
1.10.2 Video Call Camera defects

Check:

Inspect the external area of the video camera window.

Action:

1. If dirty – clean it.



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



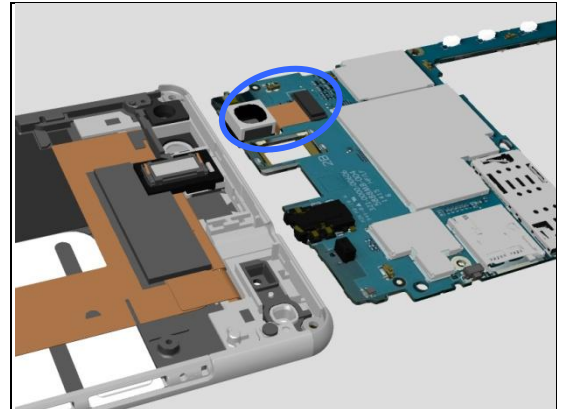
Problem Areas: Camera

Check:

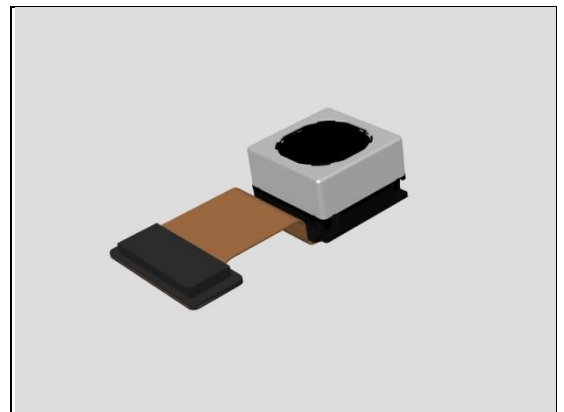
Inspect the connector of Front Camera to Main PBA.

Action:

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



2. If the Front Camera is damaged – replace the Front Camera.



4. Replace Main PBA.



Problem Areas

1.11 Flash LED

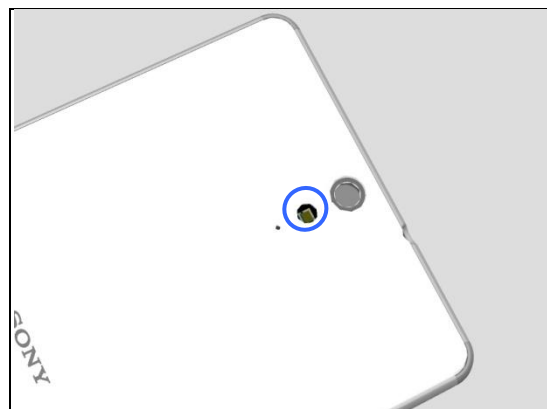
1.11.1 Flash LED not flashing

Check:

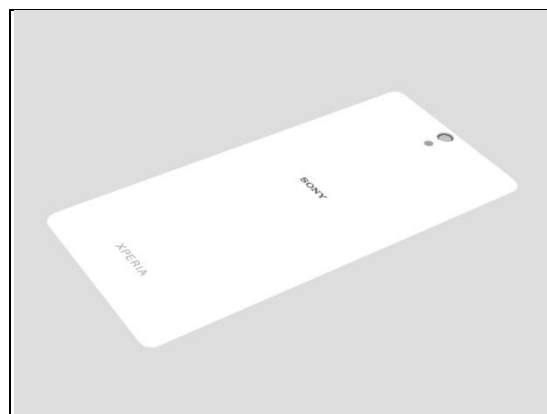
Inspect the external area of the flash LED Light.

Action:

1. If dirty – clean it.

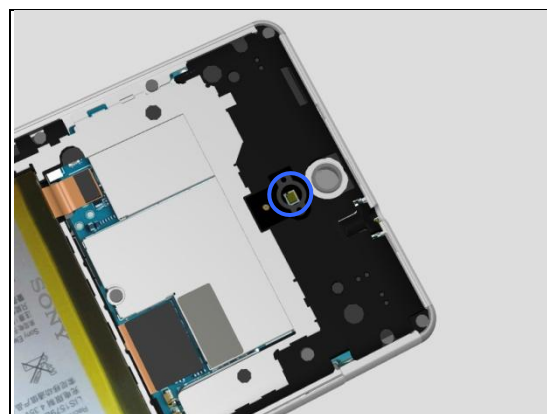


2. If scratched or damaged – replace the Battery Cover Assy.



Check:

Inspect the external area of the flash LED Light on Rear Cover Assy.

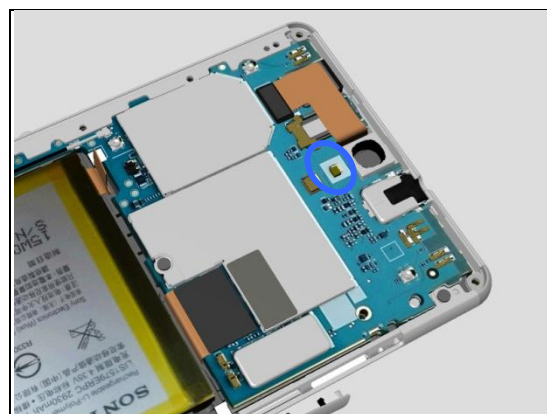


Check:

Inspect the Flash LED on Main PBA.

Action:

1. If damaged, replace Main PBA.



Problem Areas

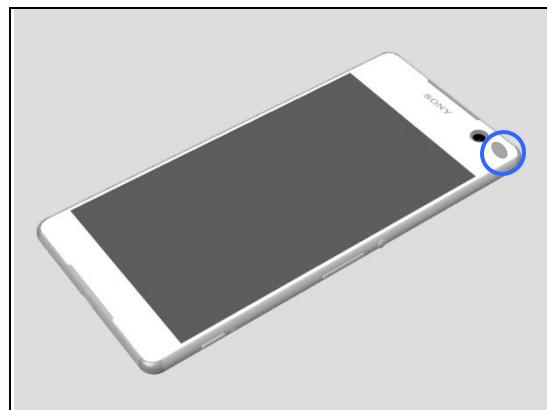
1.11.2 Front Flash LED not flashing

Check:

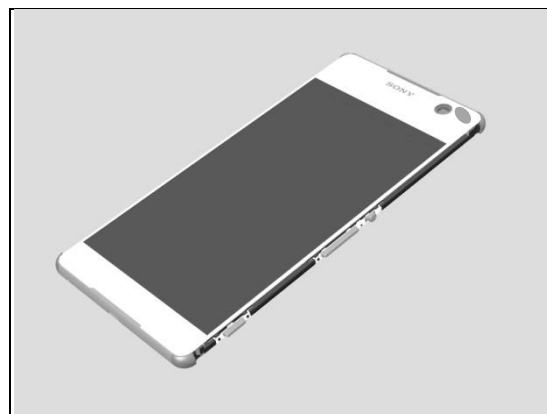
Inspect the external area of Front flash LED Light.

Action:

1. If dirty – clean it.

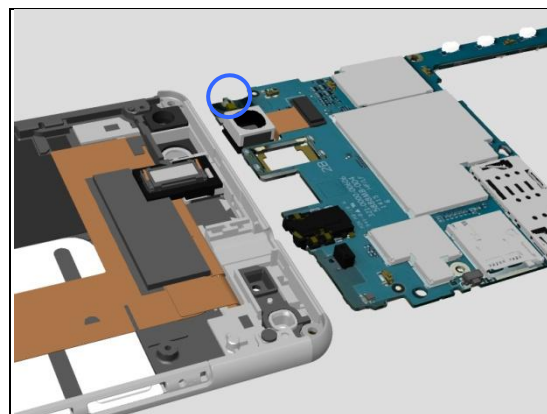


2. If scratched or damaged – replace the Front Cover Assy.



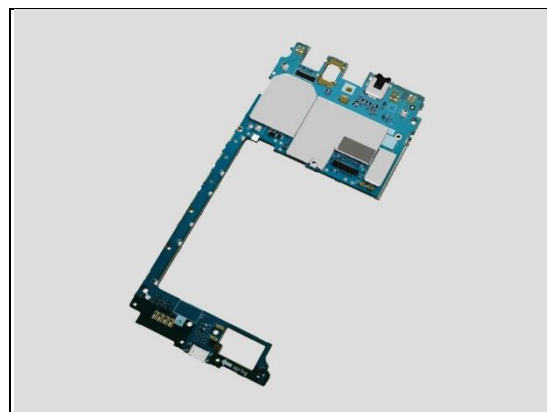
Check:

Inspect the Front flash LED soldered on Main PBA.



Action:

1. If damaged, Replace Main PBA.



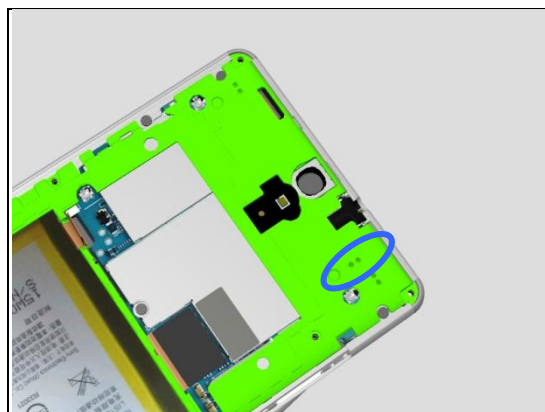
Problem Areas

1.12 Bluetooth and WLAN

1.12.1 Bluetooth or WLAN connection failure

Check:

Inspect the Antenna Bluetooth and WLAN attached on Rear Cover Assy.

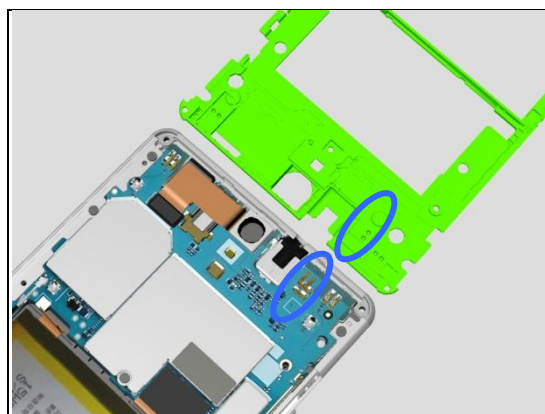


Check:

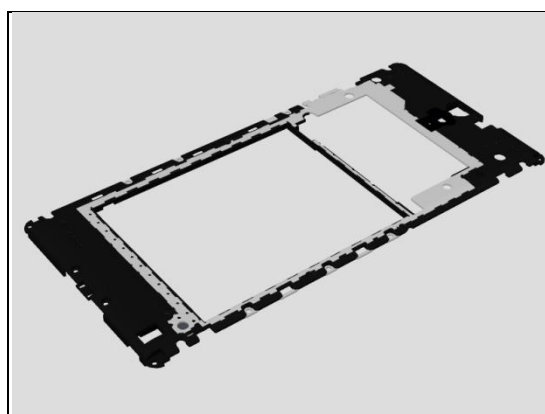
Inspect the Antenna Bluetooth and WLAN contact pad and the contact pins on main PBA.

Action:

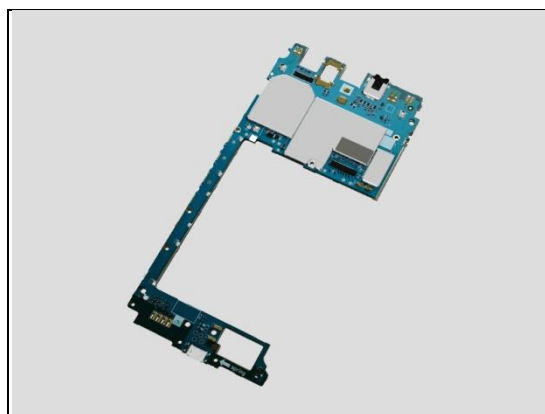
1. If dirty or oxidized – clean the pads and pins.



2. If the contact pad on Rear Cover Assy or Antenna Bluetooth and WLAN is damaged – replace Rear Cover Assy.



3. If the contact pins on Main PBA is damaged – replace Main PBA.



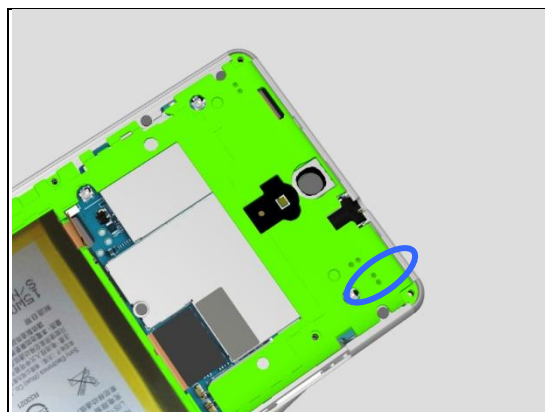
Problem Areas

1.13 GPS

1.13.1 GPS connection failure

Check:

Inspect the Antenna GPS attached on Rear Cover Assy.

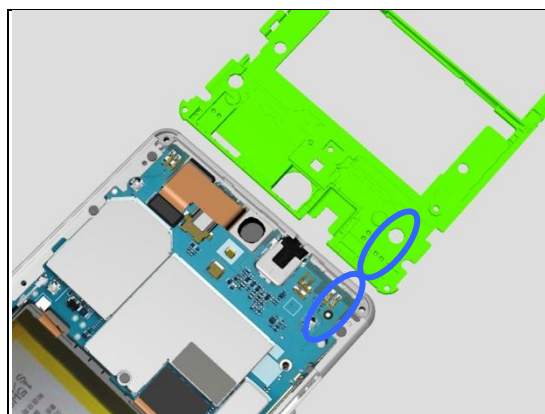


Check:

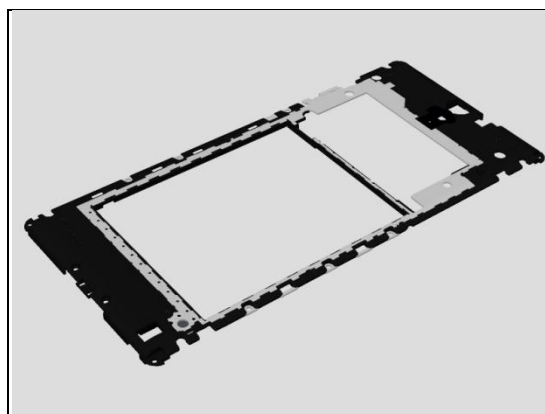
Inspect the Antenna GPS contact pad and the contact pins on main PBA.

Action:

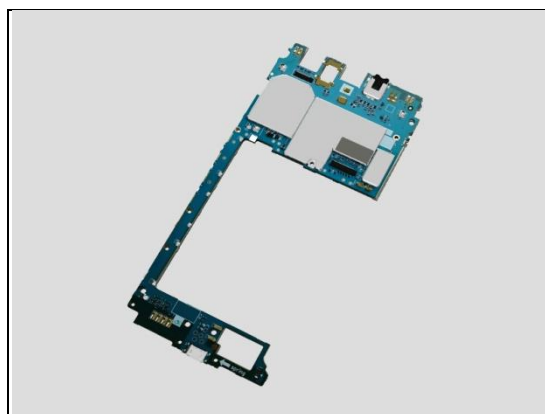
1. If dirty or oxidized – clean the pads and pins.



2. If the contact pad on Rear Cover Assy or Antenna GPS is damaged – replace Rear Cover Assy.



3. If the contact pins on Main PBA is damaged – replace Main PBA.



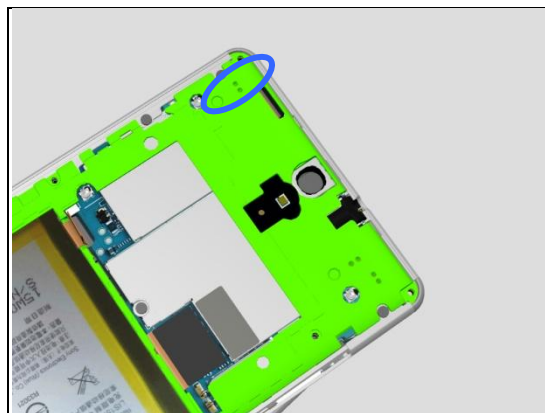
Problem Areas

1.14 RX Diversity

1.14.1 RX Diversity connection failure

Check:

Inspect the Antenna RX Diversity attached on Rear Cover Assy.

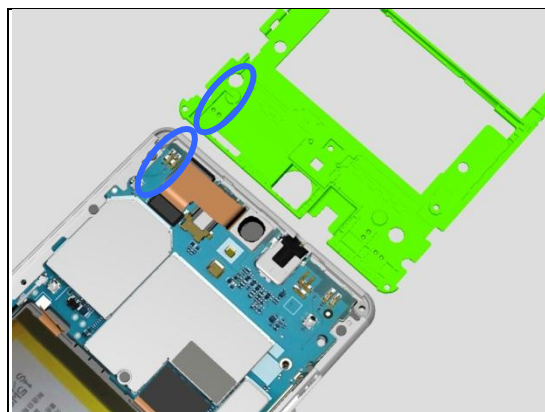


Check:

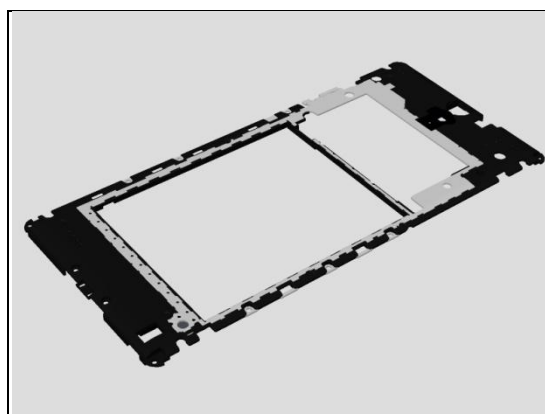
Inspect the Antenna RX Diversity contact pad and the contact pins on main PBA.

Action:

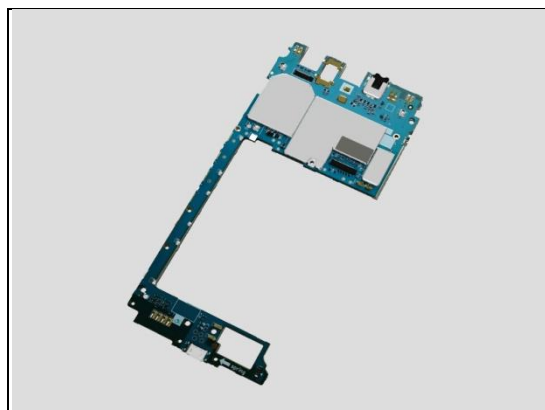
1. If dirty or oxidized – clean the pads and pins.



2. If the contact pad on Rear Cover Assy or Antenna RX Diversity is damaged – replace Rear Cover Assy.



3. If the contact pins on Main PBA is damaged – replace Main PBA.



Problem Areas

1.15 NFC

1.15.1 NFC malfunctions

Check:

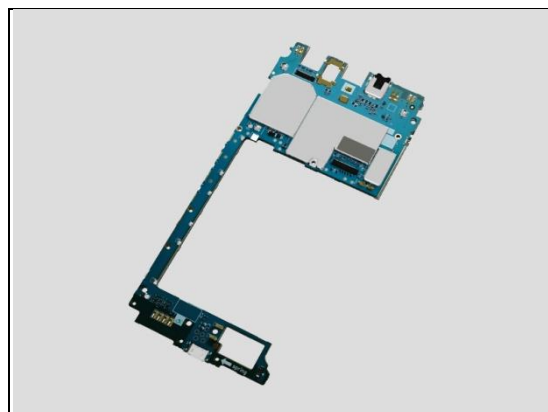
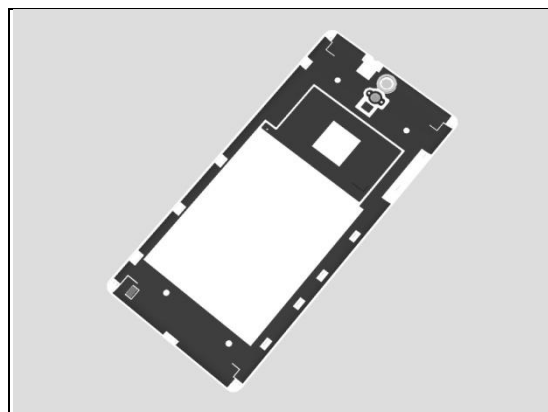
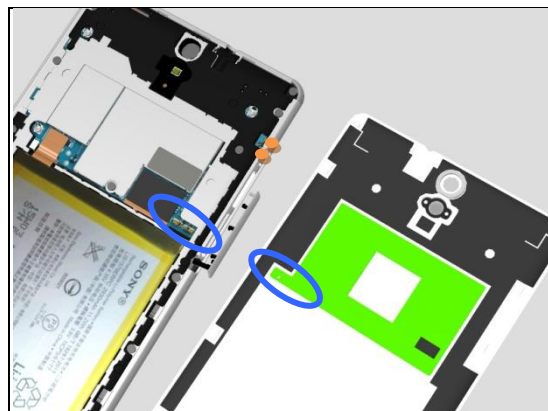
Inspect the Antenna NFC contact pads and the contact pins on Main PBA.

Action:

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

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

3. If the contact pins on main PBA are damaged – replace Main PBA.



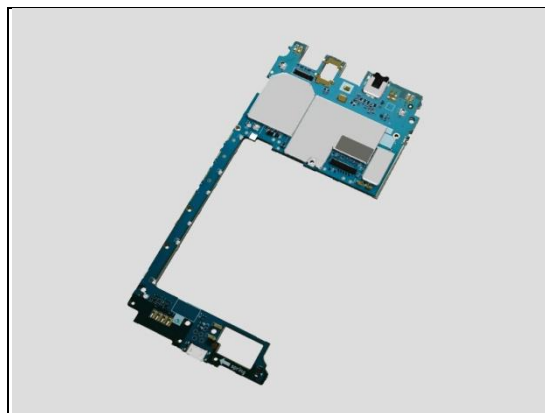
Problem Areas

1.16 Compass

1.16.1 Compass fails

Action:

Replace Main PBA.



Problem Areas

1.17 Accelerometer

1.17.1 Accelerometer test fails

Action:

Replace Main PBA.



Problem Areas

1.18 Ambient Light Sensor

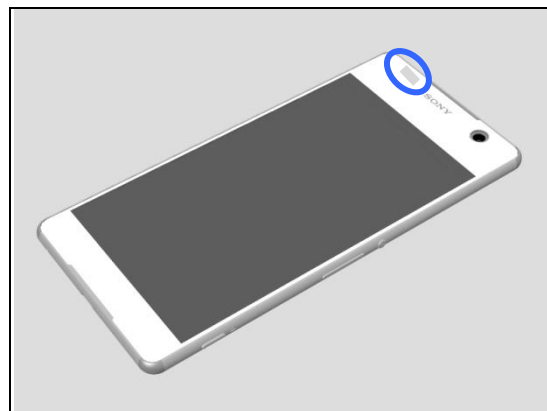
1.18.1 Light Sensor malfunctions

Check:

Inspect the external window area of light sensor on the Front Cover Assy.

Action:

1. If dirty – clean it.



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

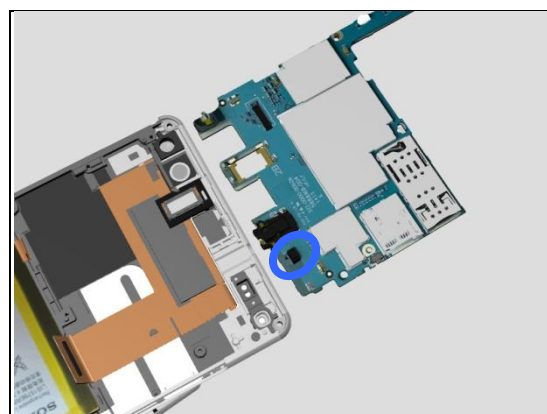


Check:

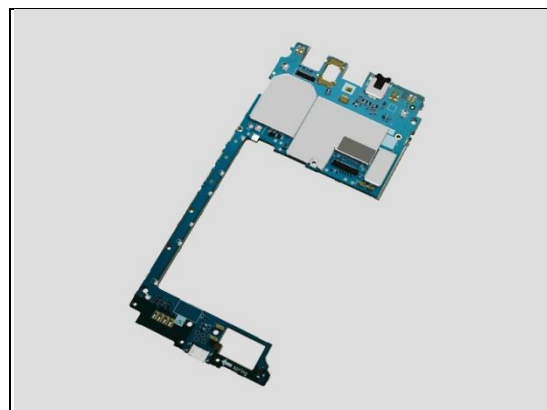
Inspect the light sensor soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



2. Replace Main PBA.



Problem Areas

1.19 Proximity Switch

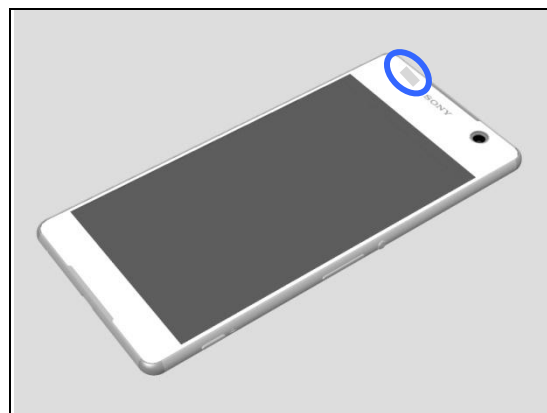
1.19.1 Proximity Switch malfunctions

Check:

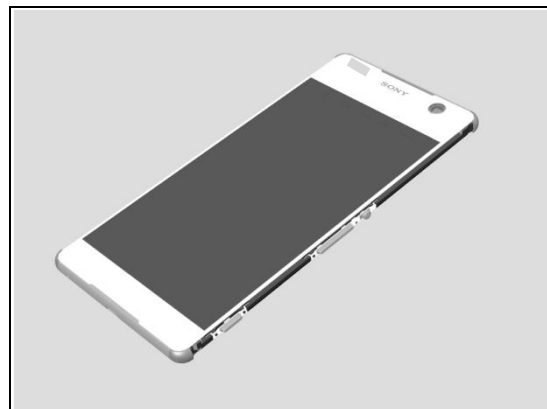
Inspect the external window area of Proximity Switch on the Front Cover Assy.

Action:

1. If dirty – clean it.



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

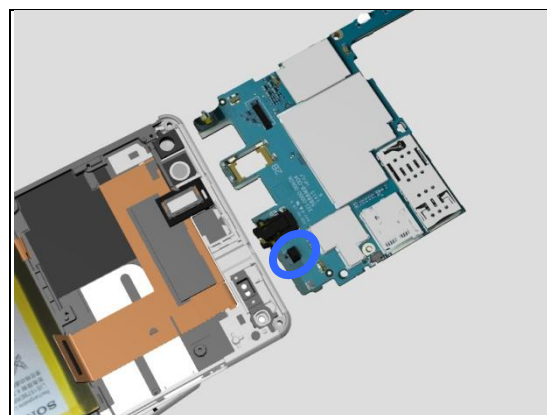


Check:

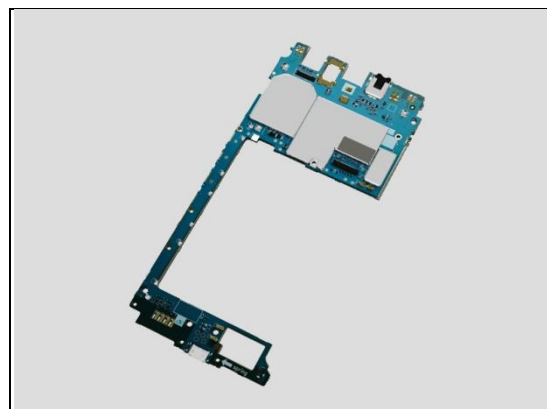
Inspect the light sensor soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



2. Replace Main PBA.



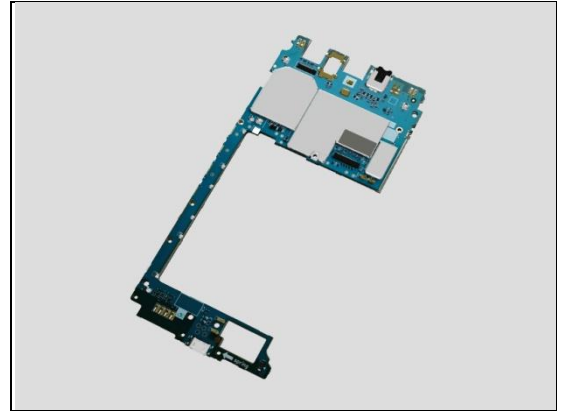
Problem Areas

1.20 Real Time Clock

1.20.1 Real time clock test fails

Action:

Replace Main PBA.



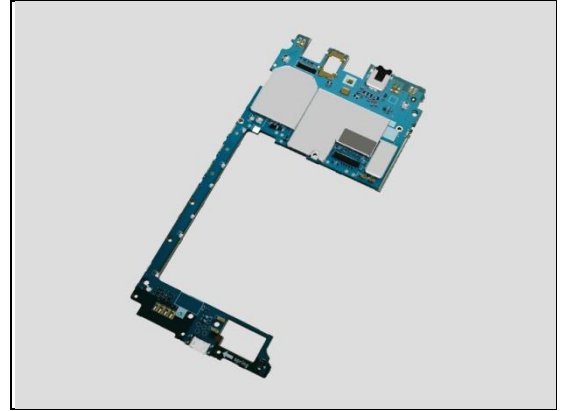
Problem Areas

1.21 Total call time

1.21.1 Total call time fails

Action:

Replace Main PBA.



Problem Areas

1.22 External Memory

1.22.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

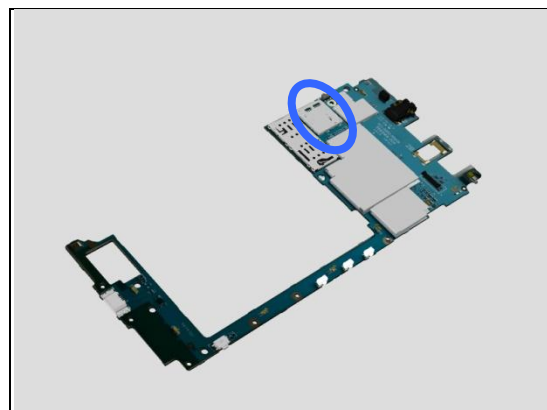


Check:

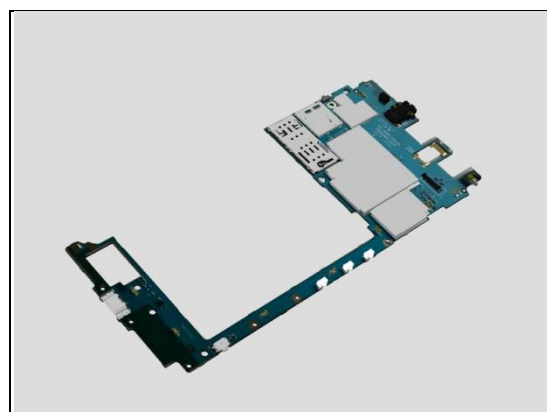
Inspect the memory card holder on Main PBA.

Action:

1. If dirty or clogged – clean the holder.



2. If damaged, Replace Main PBA.



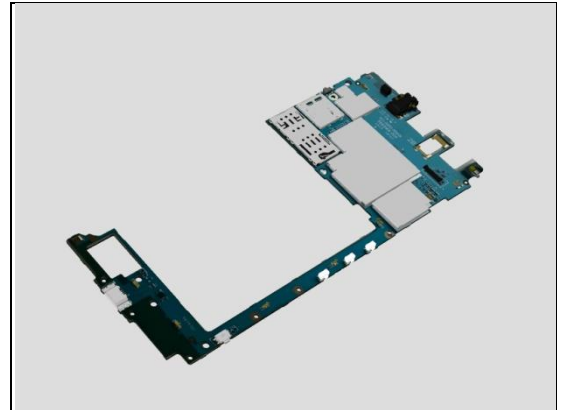
Problem Areas

1.23 Security

1.23.1 Security fails

Action:

Replace Main PBA.



Problem Areas

1.24 FM Radio

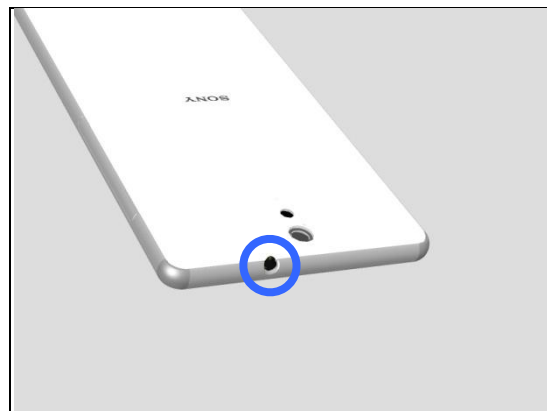
1.24.1 No/Poor FM Radio reception

Check:

Inspect the external port of the Front Cover Assy.

Action:

1. If dirty or oxidized – clean it.

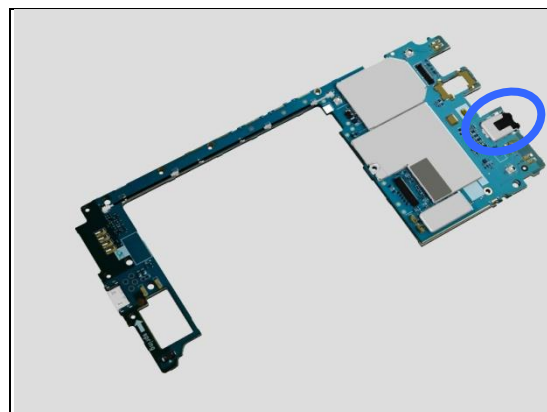


Check:

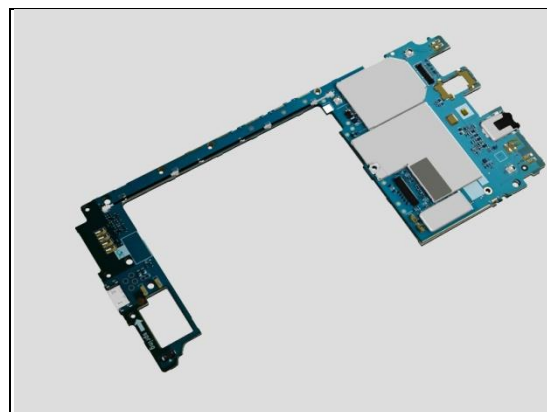
Inspect the Audio Jack soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



2. If damaged, Replace Main PBA.



Problem Areas

1.25 Battery Health test

1.25.1 Battery Health test fails

N/A.

Problem Areas

1.26 Verify Certificates

1.26.1 Verify Certificates fails

Action:

N/A.

Problem Areas

1.27 Network & Signal

1.27.1 No/Poor signal

Check:

Inspect the Antenna Main attached on Rear Cover Assy.

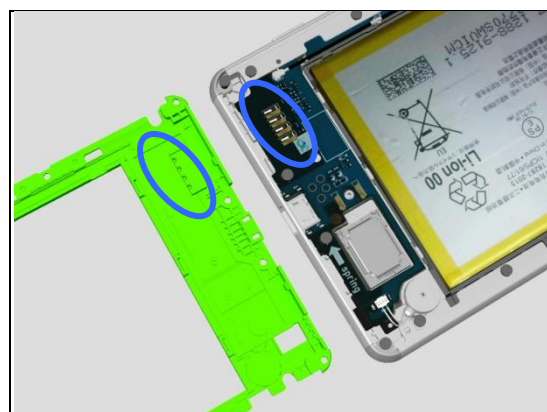


Check:

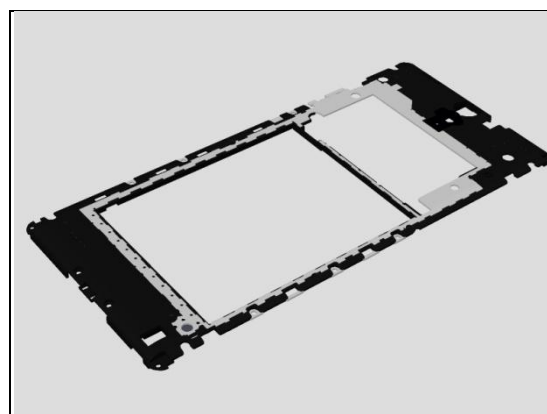
Inspect the Antenna Main contact pad and the contact pins on main PBA.

Action:

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



2. If the contact pad on Rear Cover Assy or Antenna Main is damaged – replace Rear Cover Assy.

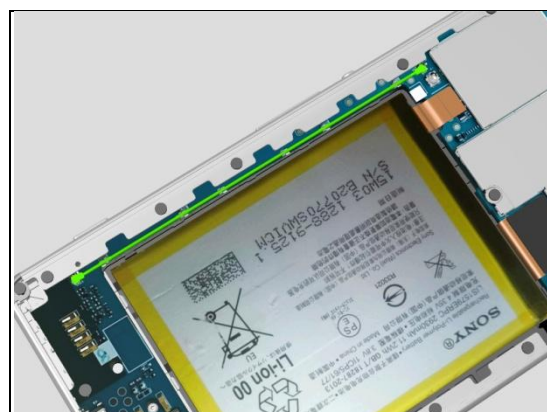


Check:

Inspect the two RF connectors of Coaxial Cable.

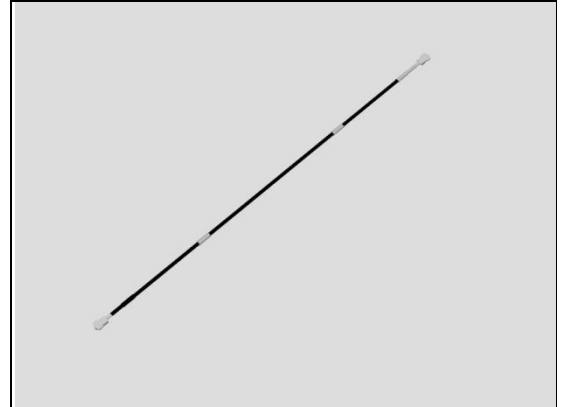
Action:

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



Problem Areas: Network & Signal

3. If Coaxial Cable is damaged, replace the Coaxial Cable.



4. If the contact pins on Main PBA is damaged – replace Main PBA.



Problem Areas

1.28 SIM

1.28.1 SIM not detected

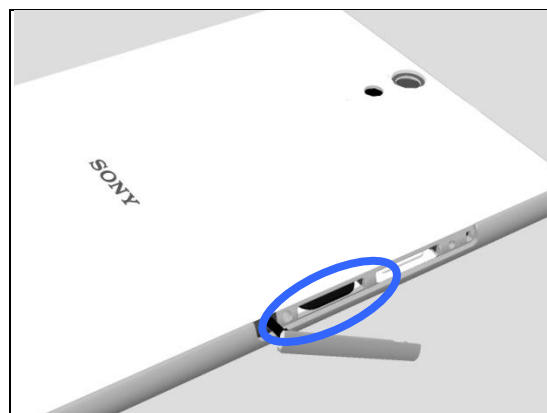
Check:

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.

Note! The product supports only Nano SIM!

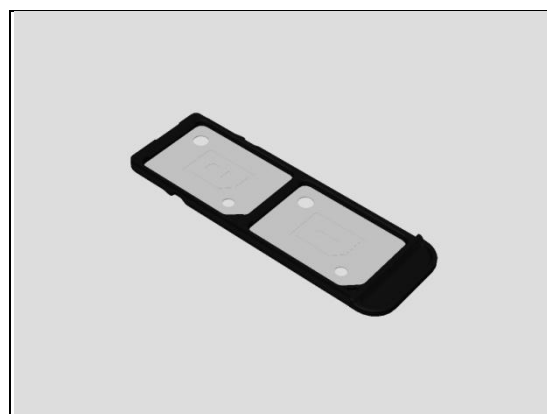


Check:

Inspect the Tray Nano SIM.

Action:

1. If the Tray Nano SIM is damaged – Replace it.

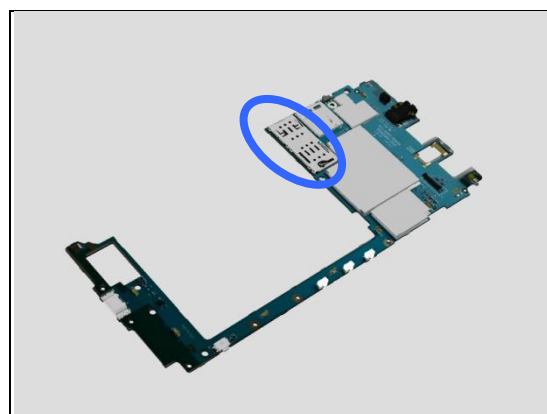


Check:

Inspect the SIM card holder soldered on Main PBA.

Action:

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



1.28.2 Incorrect UIM or SIM indicated

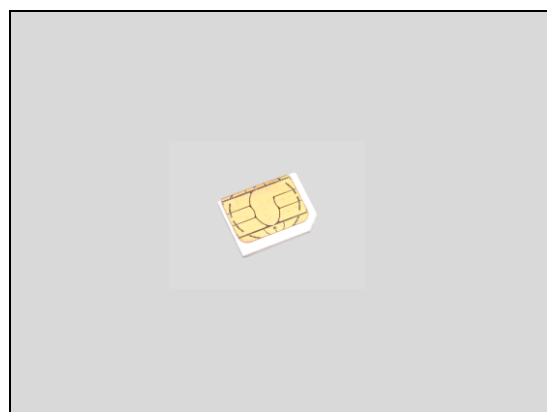
Check:

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. Replace Main PBA.

Note! The product supports only Nano SIM!



Problem Areas

1.29 Charging

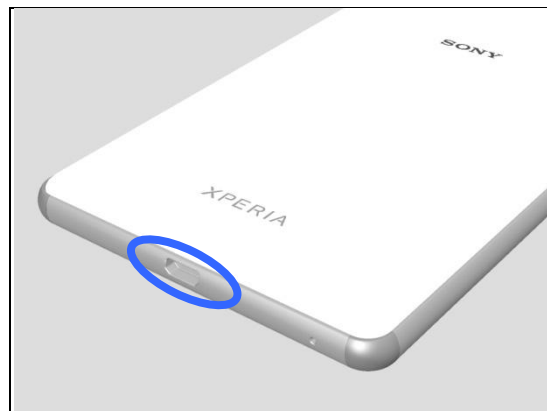
1.29.1 Battery will not charge by USB connector

Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.



Check:

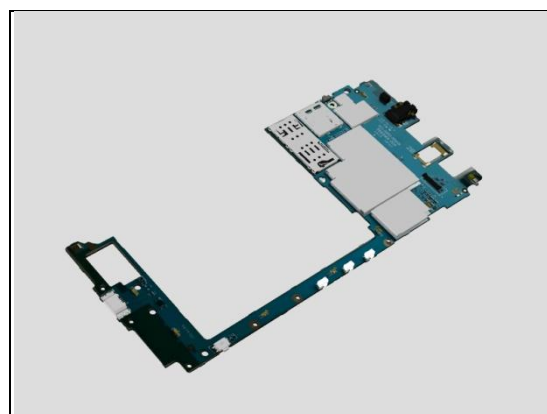
Inspect the USB connector soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



3. If damaged, replace Main PBA.



Problem Areas

1.30 Audio Jack test

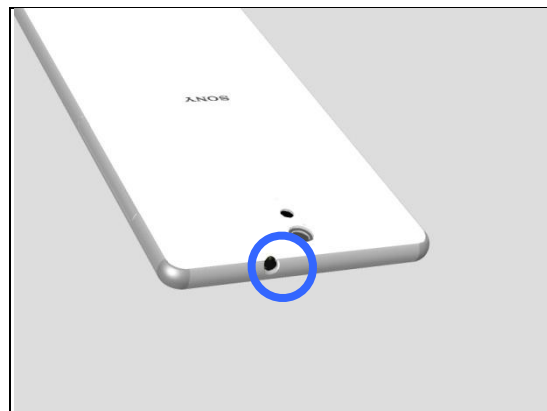
1.30.1 Connection to headset fails

Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

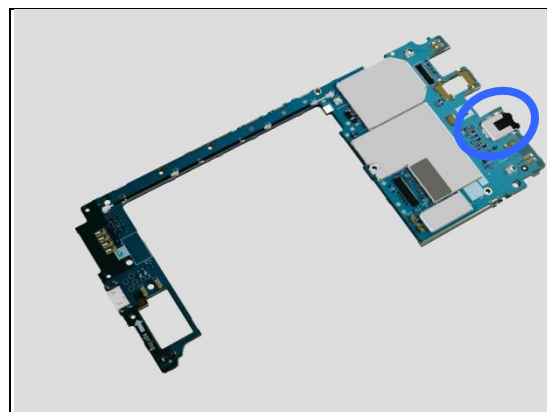


Check:

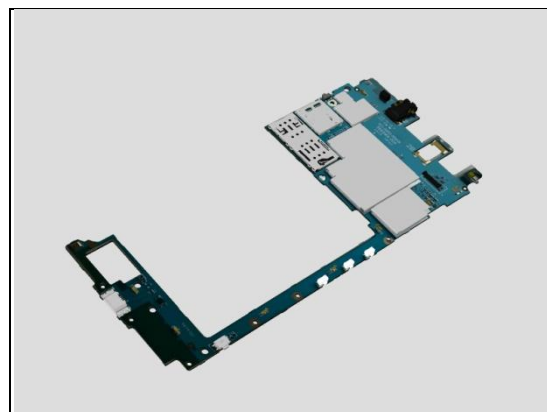
Inspect the Audio Jack soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



3. If damaged, replace Main PBA.



Problem Areas

1.31 Data Communication

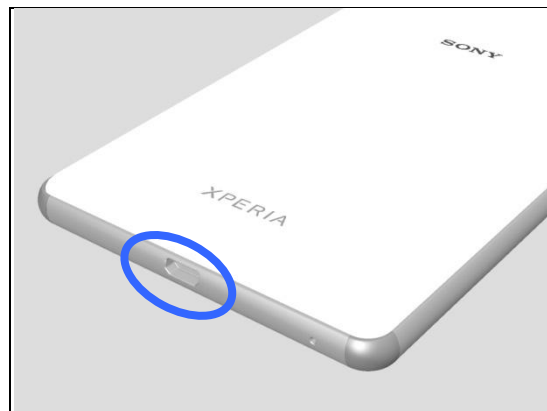
1.31.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.



Check:

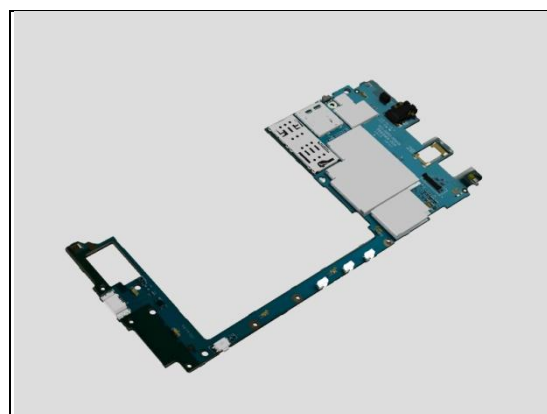
Inspect the USB connector soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.



3. If damaged, replace Main PBA.



Problem Areas

1.32 Hall Sensor

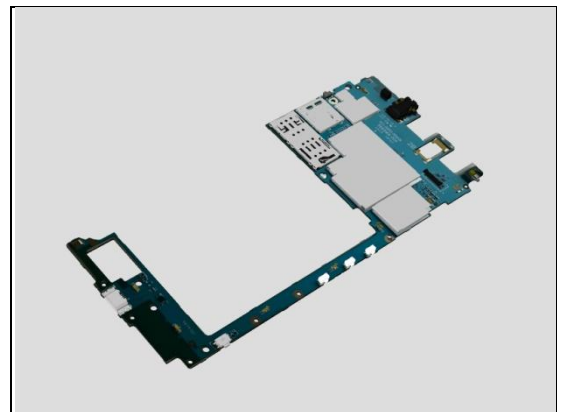
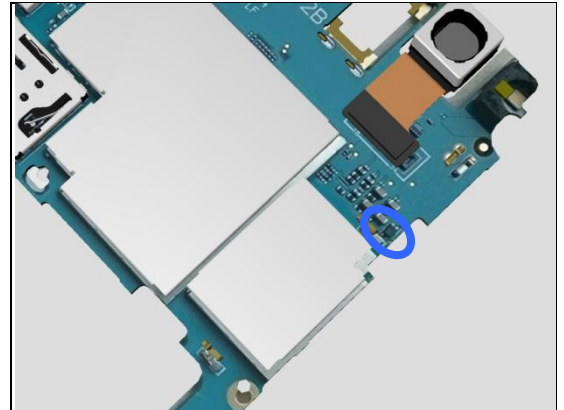
1.32.1 Hall Sensor fails

Check:

Inspect the Hall Sensor soldered on Main PBA.

Action:

1. If defective – Replace Main PBA.



2 Revision History

Rev.	Date	Changes / Comments
1	2015-07-22	Initial release