

Troubleshooting Guide

- mechanical -



Xperia E4g

E2003, E2006, E2033, E2043, E2053

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Always firstly disconnect the Battery Assy's connector to cut off power supply when the Rear Assy is disassembled.

Always finally connect the Battery Assy's connector before the Rear Assy is reassembled.

Note: Whenever replacing Front 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:

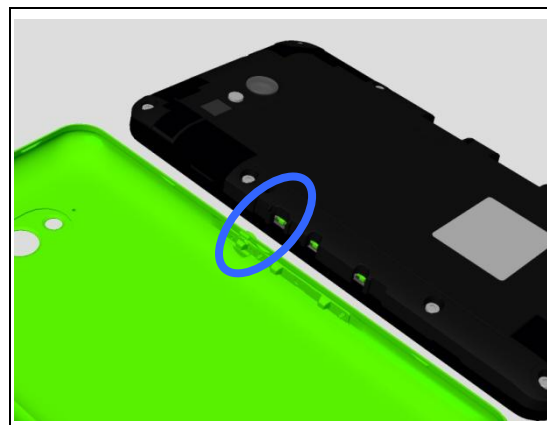
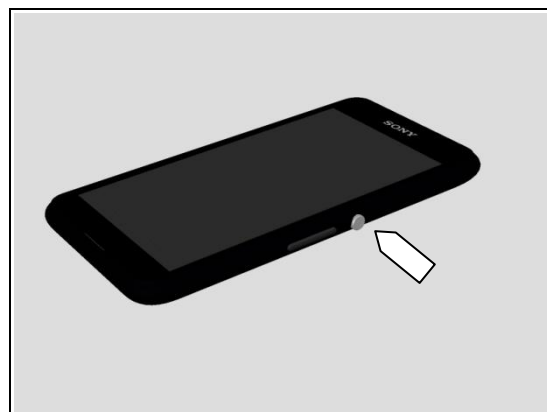
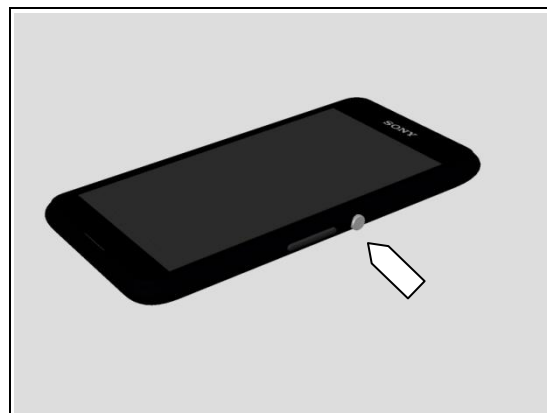
Inspect the on/off key.

Action:

Refer to section 1.2.3 'On/Off Key'.

Check:

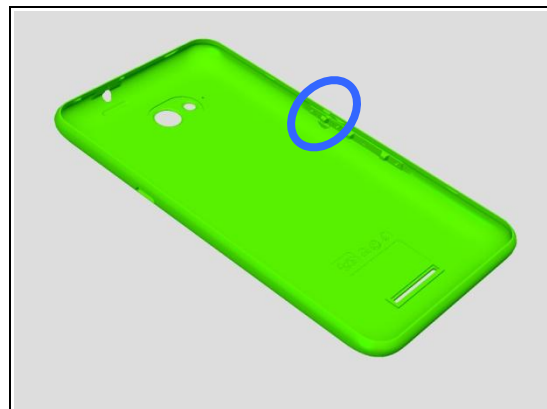
Inspect the On/Off Key on Battery Cover to On/Off Key Switch on Main PBA.



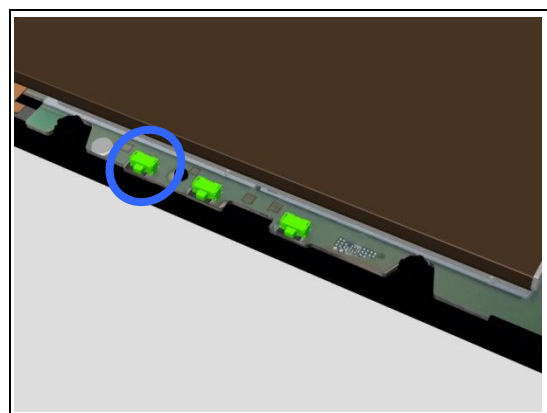
Problem Areas: Power

Action:

1. If not properly connected – disconnect and reconnect it.
2. If On/Off Key on Battery Cover is damaged, replace Battery Cover.



3. If On/Off Key Switch on Main PBA is damaged, Replace Main PBA.

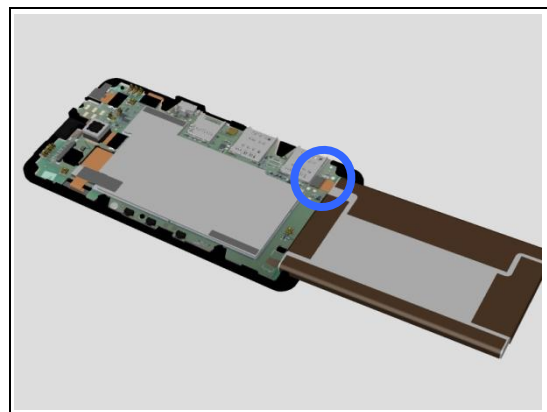


Check:

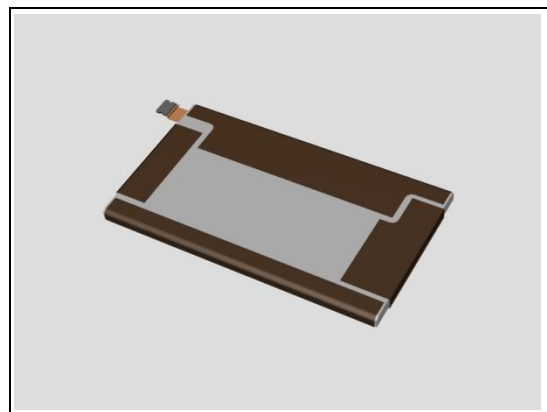
Inspect the BtB connector of Battery Assy to Main PBA.

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 Battery Assy is damaged – replace the Battery Assy.
4. Replace Main PBA.



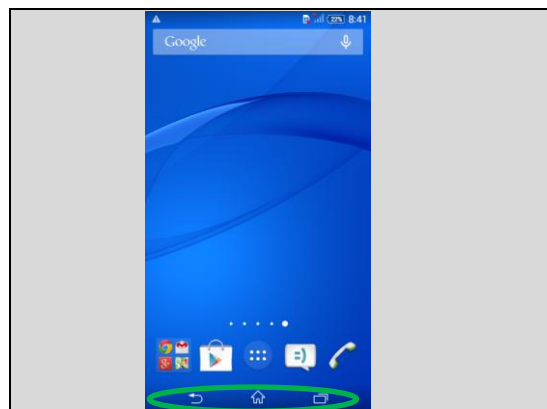
Problem Areas

1.2 Keys

1.2.1 Back, Home and Multitask Keys

Action:

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



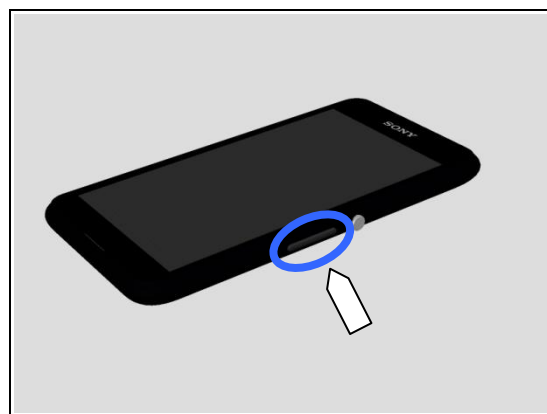
1.2.2 Volume Key

Check:

Inspect the external area of the Key Volume.

Action:

If dirty – clean it.

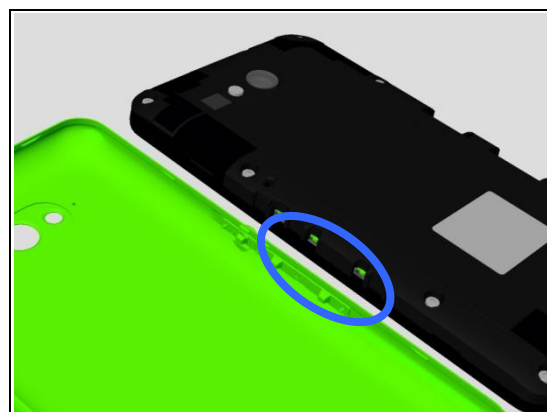


Check:

Inspect the Volume Key on Battery Cover to Volume Key Switch on Main PBA.

Action:

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



3. If Volume Key on Battery Cover is damaged, replace Battery Cover.
4. If Volume Key Switch on Main PBA is damaged, replace Main PBA.



Problem Areas: Keys

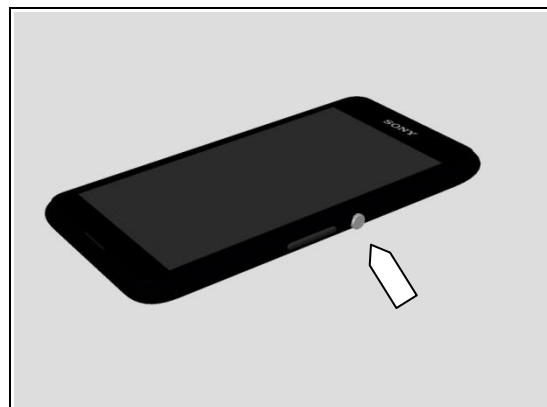
1.2.3 On/Off Key

Check:

Inspect the external area of the Power Key.

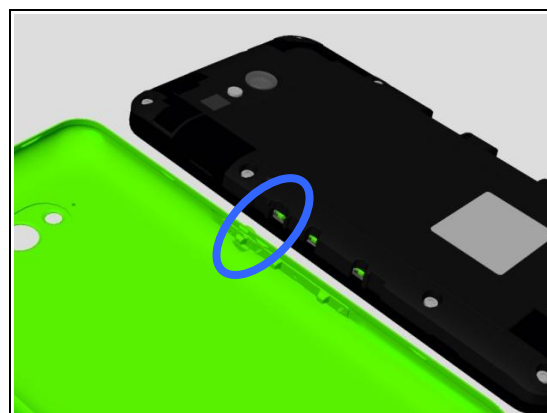
Action:

1. If dirty – clean it.



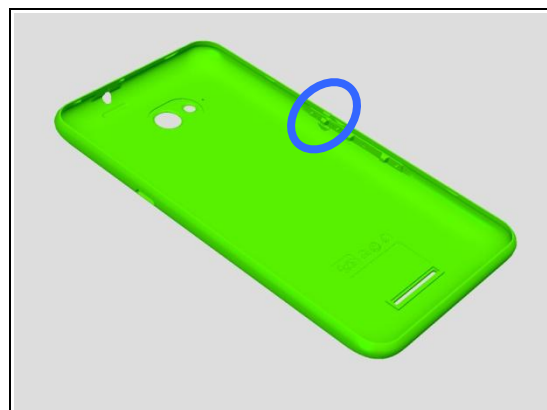
Check:

Inspect the On/Off Key on Battery Cover to On/Off Key Switch on Main PBA.

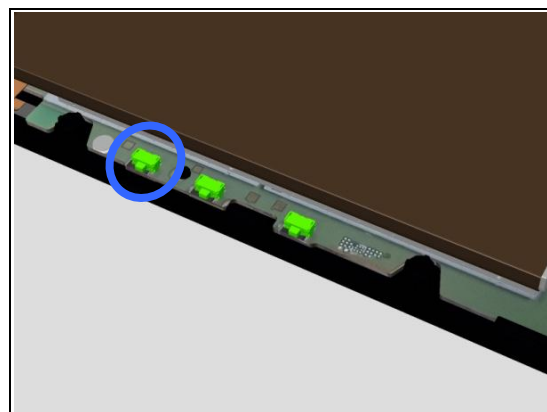


Action:

1. If not properly connected – disconnect and reconnect it.
2. If On/Off Key on Battery Cover is damaged, replace Battery Cover.



3. If On/Off Key Switch on Main PBA is damaged, Replace Main PBA.



Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Front Assy.

Action:

1. If dirty – clean it.

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

Check:

Inspect the BtB connector of Touch Panel FPC to Main PBA.

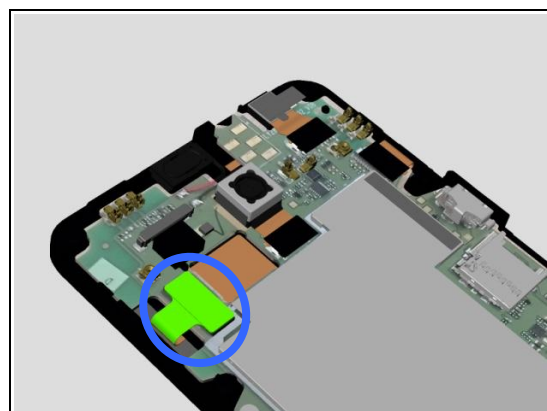
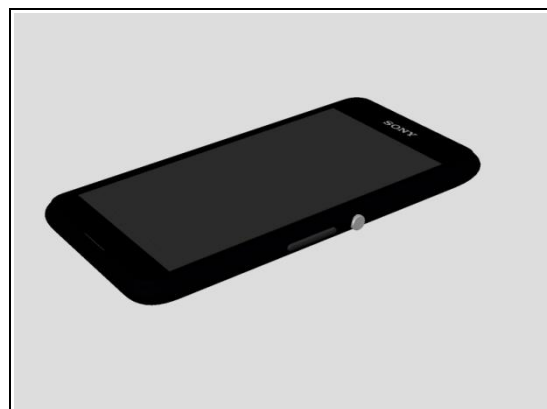
Action:

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

2. If dirty or oxidized – clean it.

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

4. Replace Main PBA.



Problem Areas

1.4 Display

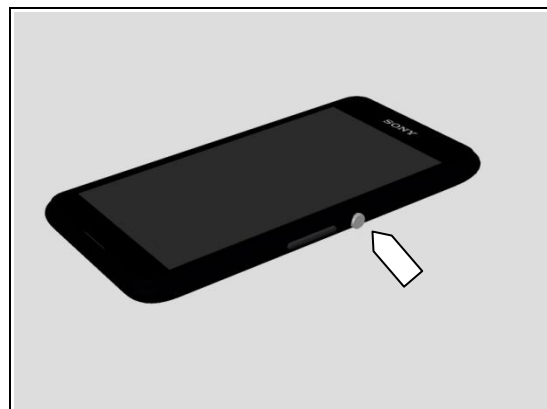
1.4.1 Graphics & Illumination

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'.

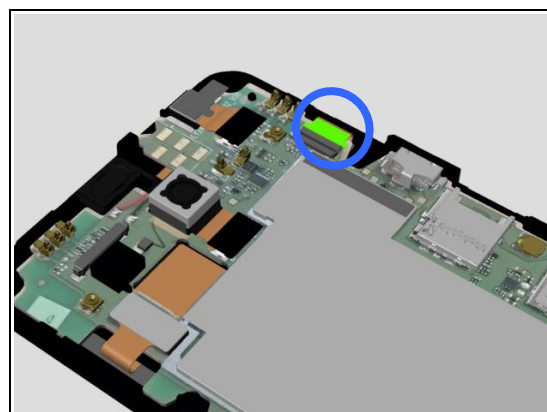


Check:

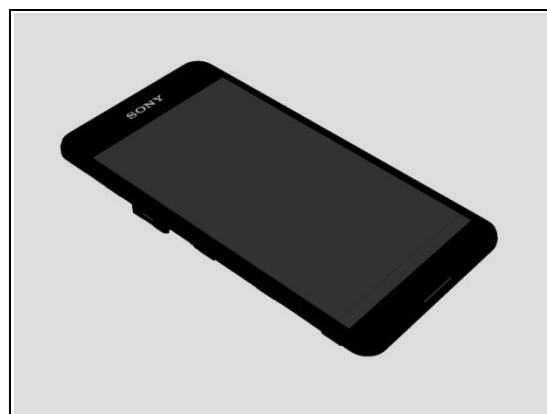
Inspect the ZIF connector of LCM FPC to Main PBA.

Action:

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



3. If the ZIF connector of LCM FPC or FPC is damaged – replace the Front Assy.
4. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

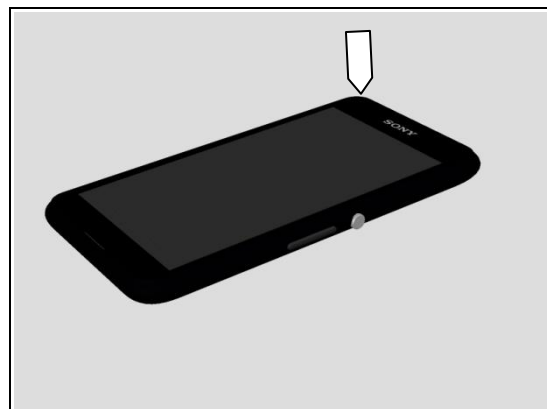
1.5.1 Charger LED

Check:

Inspect external port of LED on the Front Assy.

Action:

1. If dirty – clean it.

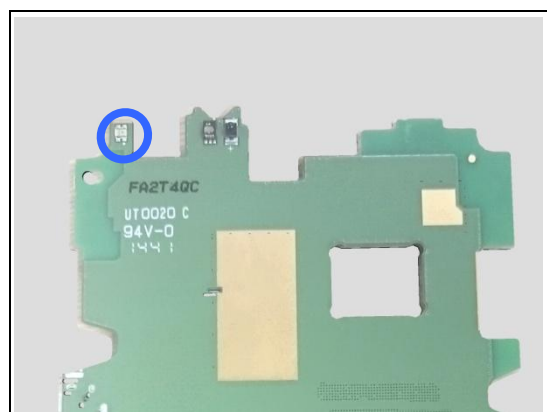


Check:

Inspect the LED on the Main PBA.

Action:

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



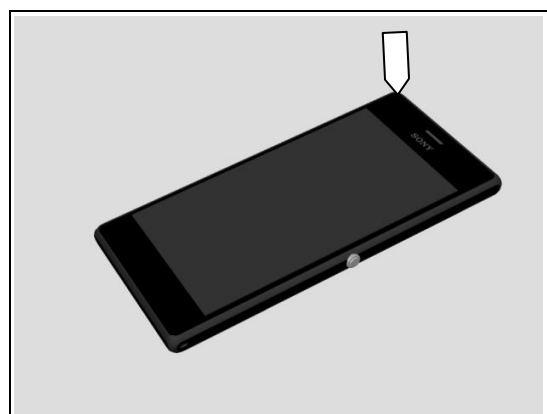
1.5.2 Notification LED

Check:

Inspect external port of LED on the Front Assy.

Action:

1. If dirty – clean it.

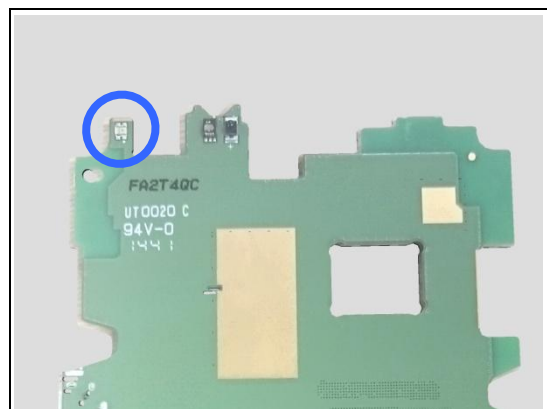


Check:

Inspect the LED on Main PBA.

Action:

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



Problem Areas

1.6 Speaker

1.6.1 Speaker

Check:

Inspect the Speaker's external port on the Battery Cover.

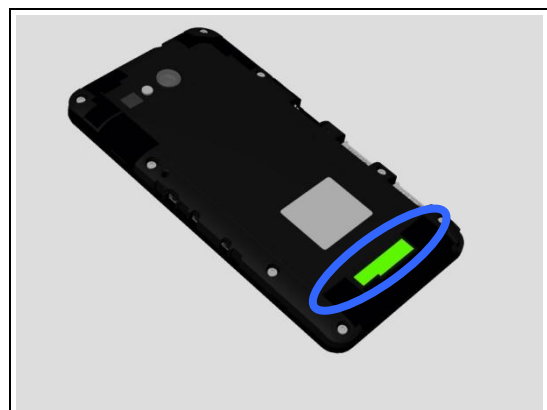


Check:

Inspect the Speaker mesh on the Rear Assy.

Action:

1. If clogged – clean it.
2. If damaged – replace the Rear Assy.

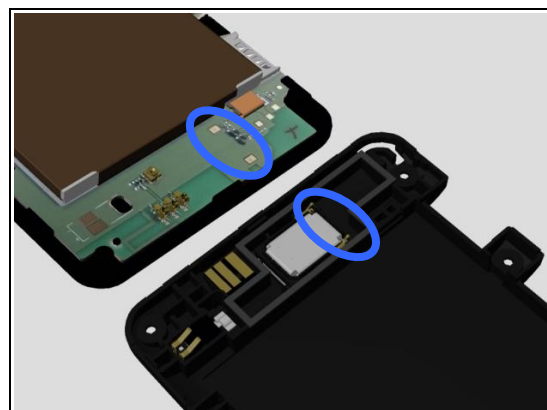


Check:

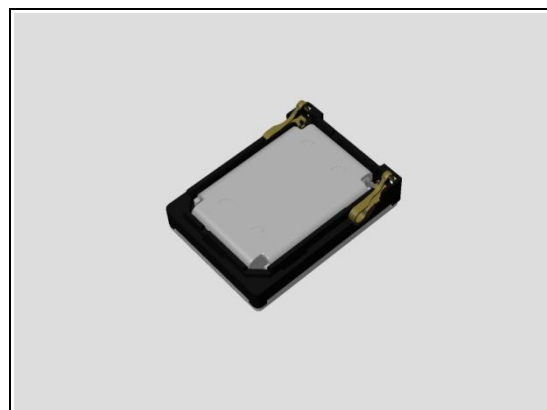
Inspect contact pins of the Speaker and the contact pads on the Main PBA.

Action:

1. If dirty – clean them.



2. If the Speaker contact pins are damaged – replace the Speaker.
3. Replace Main PBA.



Problem Areas

1.7 Earphone

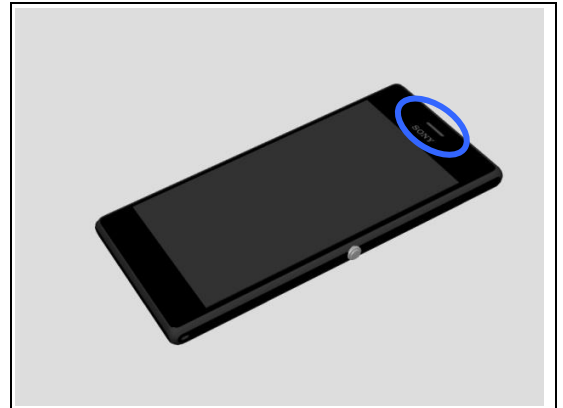
1.7.1 Ear Speaker

Check:

Inspect the external port of Receiver on the Front Assy.

Action:

1. If clogged – clean it.

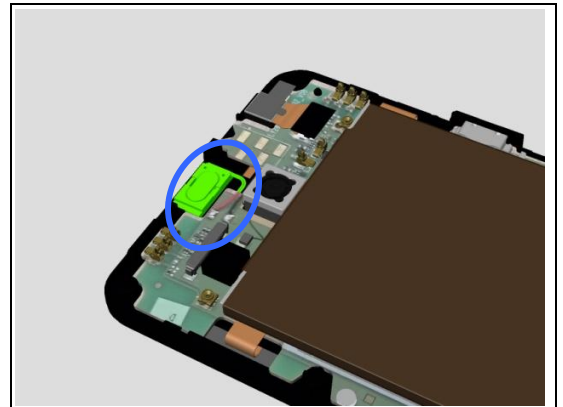


Check:

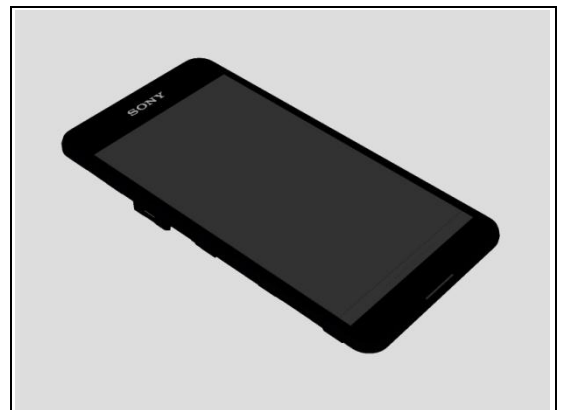
Inspect the Receiver which cable is soldered on the Main PBA.

Action:

1. If damaged, replace Main PBA.



2. If the Receiver mesh is damaged, replace Front Assy.



Problem Areas

1.8 Microphone

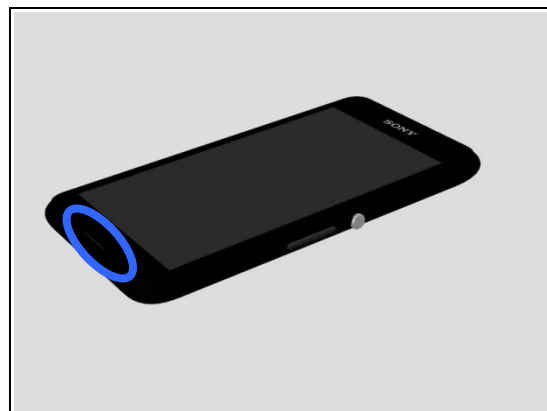
1.8.1 Primary Microphone

Check:

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

Action:

1. If clogged – clean it.

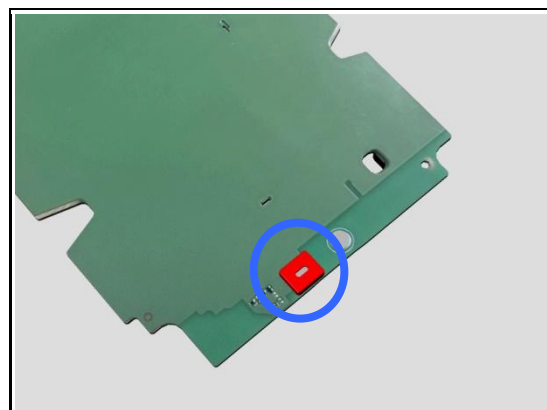


Check:

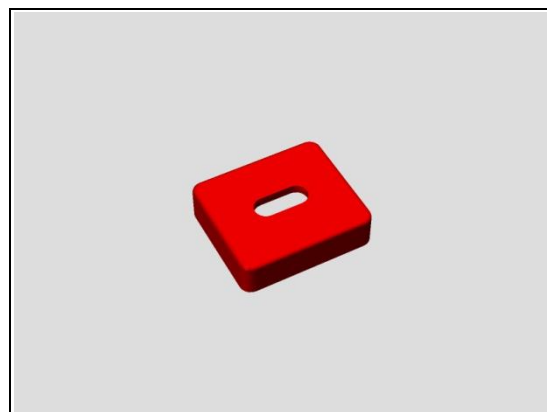
Inspect the Rubber 1st MIC and the primary microphone on Main PBA.

Action:

1. If dirty or clogged – clean them.



2. If the Rubber 1st MIC is damaged– replace it.



3. If the primary microphone mesh is damaged– replace Front Assy.
4. Replace Main PBA.



Problem Areas: Microphone

1.8.1 Secondary Microphone

Check:

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

Action:

1. If clogged – clean it.



2. If the Secondary Microphone mesh is damaged – replace the Rear Assy.



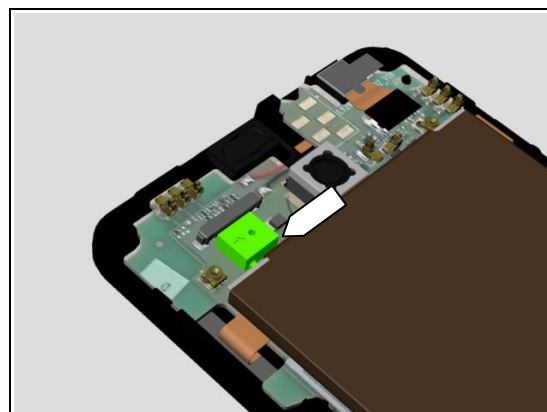
Check:

Inspect the Rubber 2nd MIC and the Secondary Microphone.

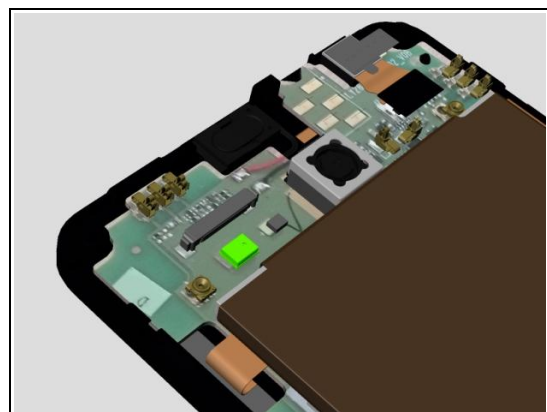
Action:

1. If dirty or clogged – clean them.

2. If Rubber 2nd MIC is damaged – replace it.



3. If 2nd MIC is damaged, replace Main PBA.



Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Check:

Inspect the Vibrator on Rear Assy.

Action:

1. If damaged – replace Vibrator.

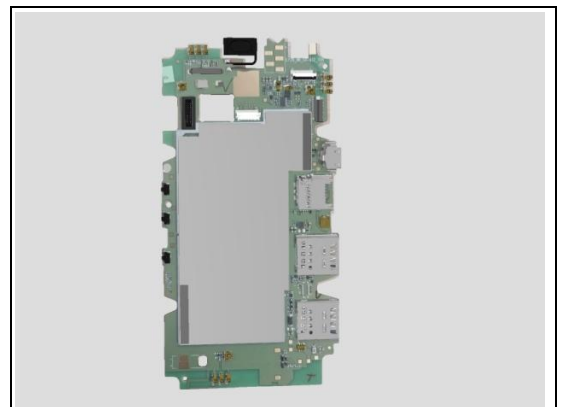
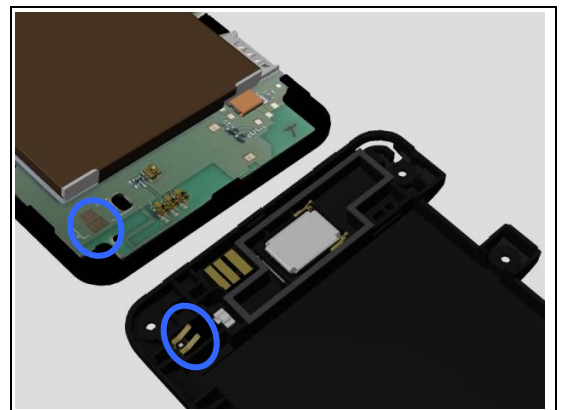
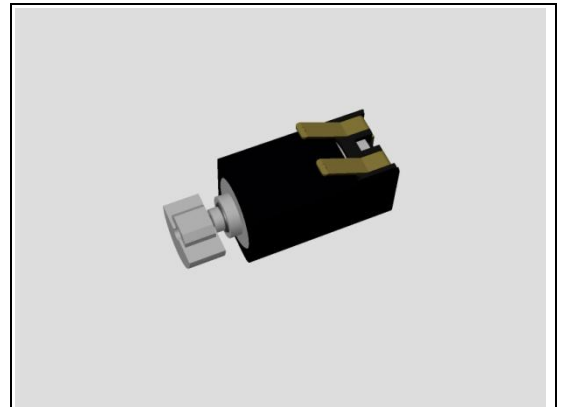
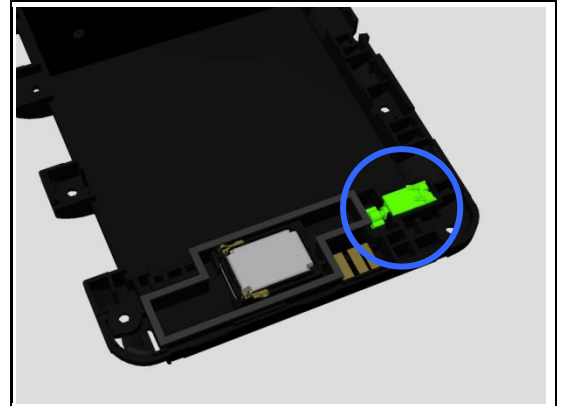
Check:

Inspect the Vibrator's Pins to the pads on Main PBA.

Action:

1. If dirty or oxidized – clean it.

2. 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 Assy.

Check:

Inspect the ZIF connector of Camera to Main PBA.

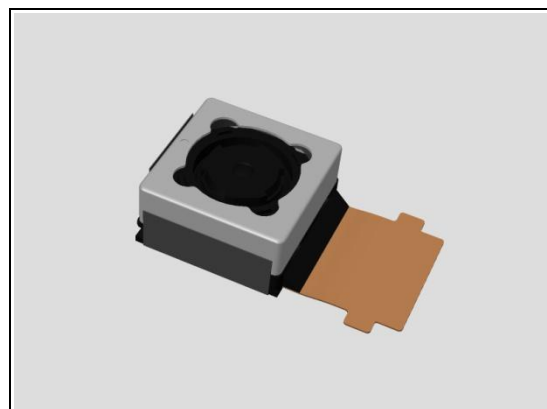
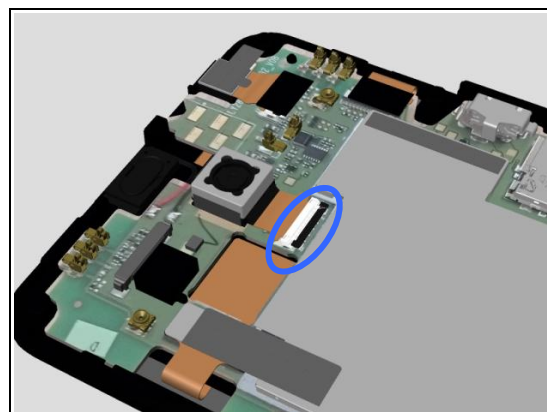
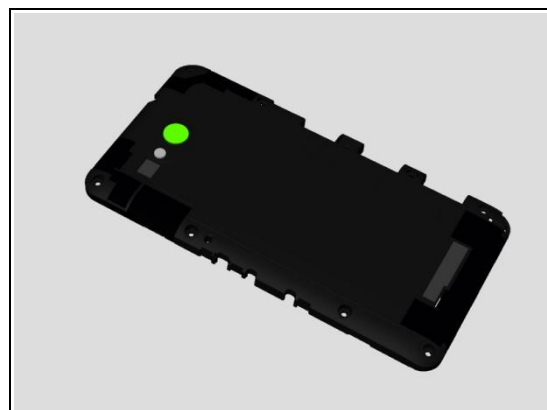
Action:

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

2. If dirty or oxidized – clean it.

3. If Main Camera Assy is damaged – replace the Main Camera Assy.

4. Replace Main PBA.



Problem Areas: Camera

1.10.2 Video Call Camera defects

Check:

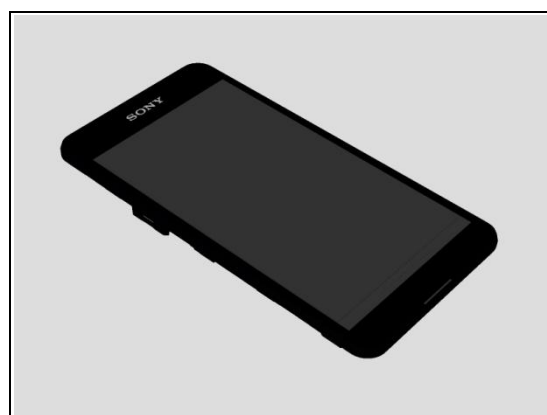
Inspect the external area of the video camera window.

Action:

1. If dirty – clean it.



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



Check:

Inspect the ZIF connector of Front Camera to the Main PBA.

Action:

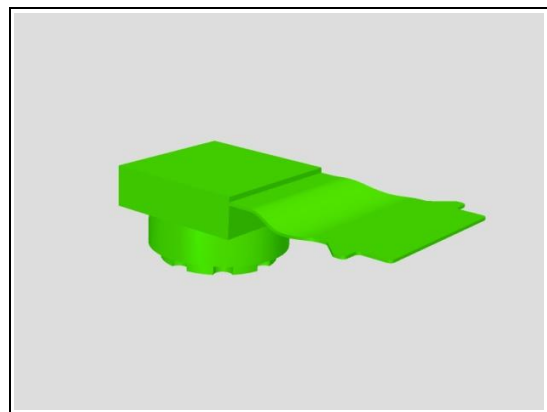
1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean the both sides of the ZIF connector.



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

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 Guide.

Action:

1. If dirty – clean it.



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

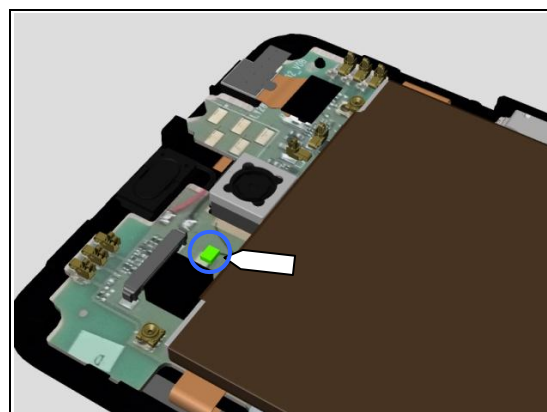


Check:

Inspect the Flash LED on the Main PBA.

Action:

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



Problem Areas

1.12 Bluetooth WLAN and GPS

1.12.1 Bluetooth, WLAN or GPS connection failure

Check:

Inspect the WLAN/BT/GPS Antenna Film attached on Rear Assy.

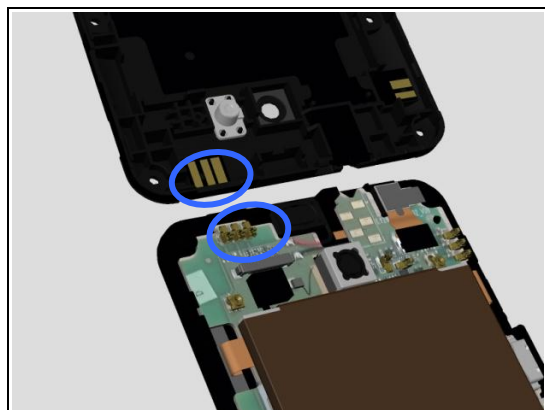


Check:

Inspect the WLAN/BT/GPS Antenna contact pads on Rear Assy and the contact pins on main PBA.

Action:

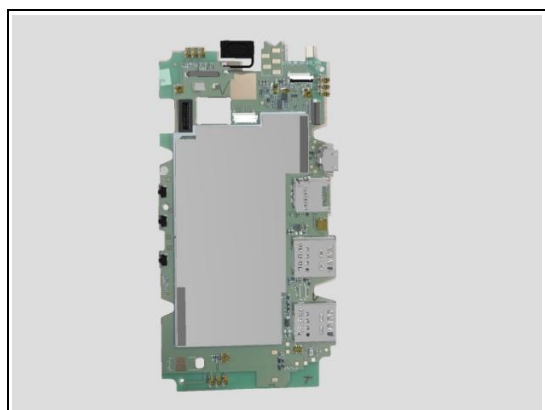
1. If dirty or oxidized – clean the pads and pins.



2. If the contact pads or Antenna BT WIFI GPS is damaged – replace Rear Assy.



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



Problem Areas

1.13 NFC (Only for E2003)

1.13.1 NFC malfunctions

Check:

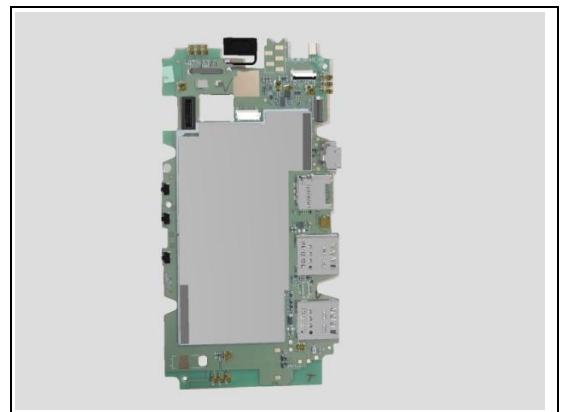
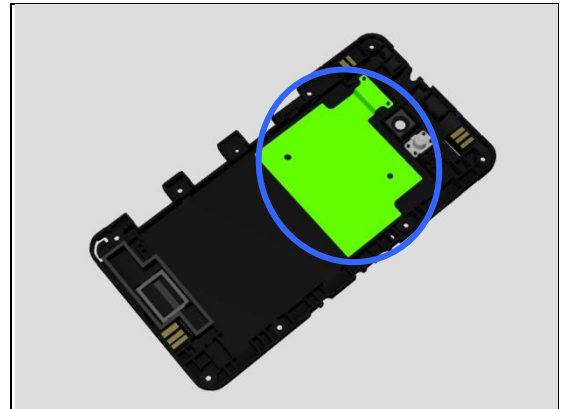
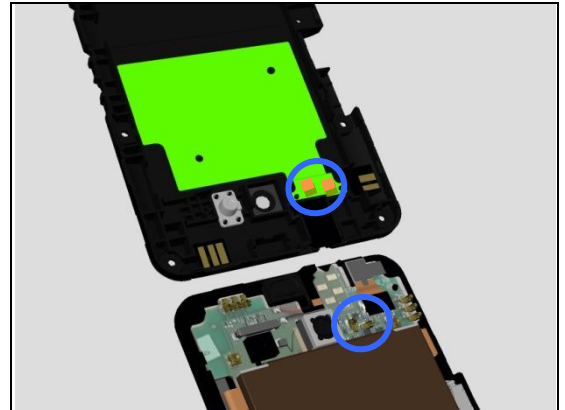
Inspect the NFC antenna contact pads on Rear Assy and the contact pins on Main PBA.

Action:

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

2. If the NFC antenna contact pads is damaged – replace the Rear Assy.

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



Problem Areas

1.14 Accelerometer

1.14.1 Accelerometer test fails

Action:

1. Calibrate the Accelerometer.
2. Replace Main PBA.

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Problem Areas

1.15 Ambient Light Sensor

1.15.1 Light Sensor malfunctions

Check:

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

Action:

1. If dirty – clean it.

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

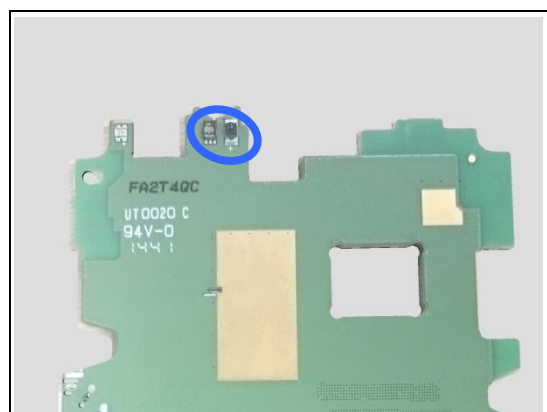
Check:

Inspect the Ambient Light Sensor soldered on Main PBA.

Action:

1. Calibrate the Ambient Light Sensor.
2. If damaged, replace Main PBA.

1289-2983 Trouble Shooting Application – mechanical.



Problem Areas

1.16 Proximity Switch

1.16.1 Proximity Switch malfunctions

Check:

Inspect the external window area of proximity switch and the proximity sensor on the Front Assy.

Action:

1. If dirty – clean it.

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

Check:

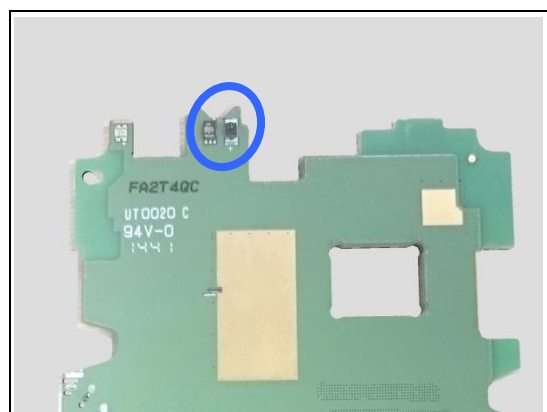
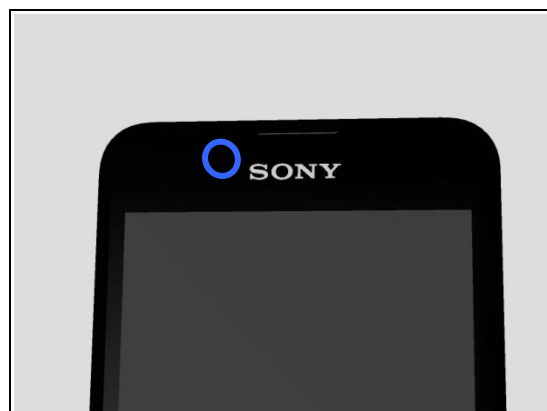
Inspect the Proximity Sensor soldered on Main PBA.

Action:

1. Calibrate the Proximity Sensor.

2. If damaged, replace Main PBA.

1289-2983 Trouble Shooting Application – mechanical.



Problem Areas

1.17 Real Time Clock

1.17.1 Real time clock test fails

Action:

Replace Main PBA.

Problem Areas

1.18 Total call time

1.18.1 Total call time fails

Action:

Replace Main PBA.

Problem Areas

1.19 External Memory

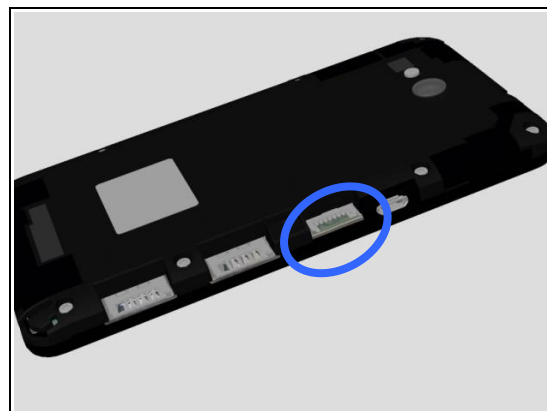
1.19.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

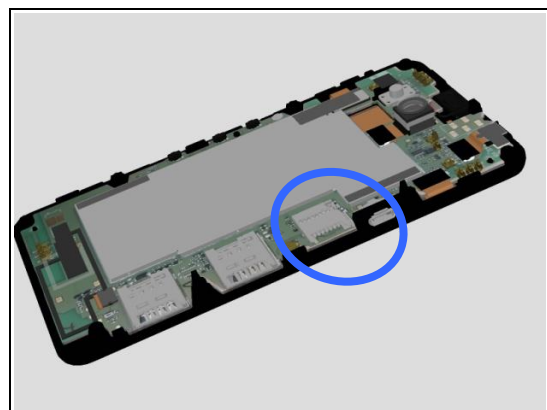


Check:

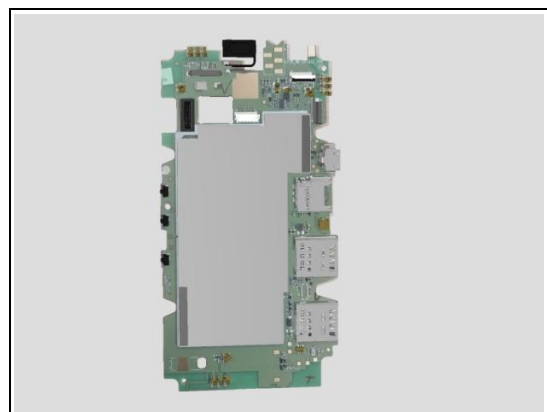
Inspect the connector soldered on Main PBA.

Action:

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



3. Replace Main PBA.



Problem Areas

1.20 FM Radio

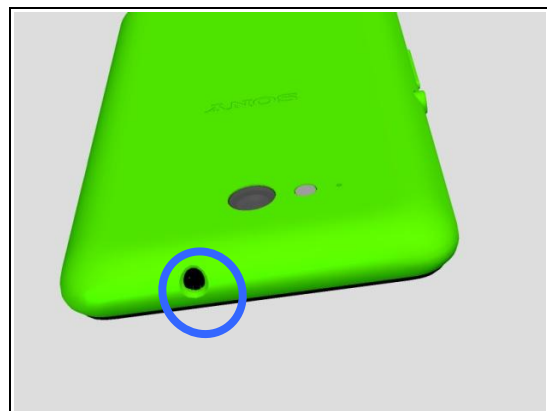
1.20.1 No/Poor FM Radio reception

Check:

Inspect the external port of Audio Jack.

Action:

1. If dirty or oxidized – clean it.

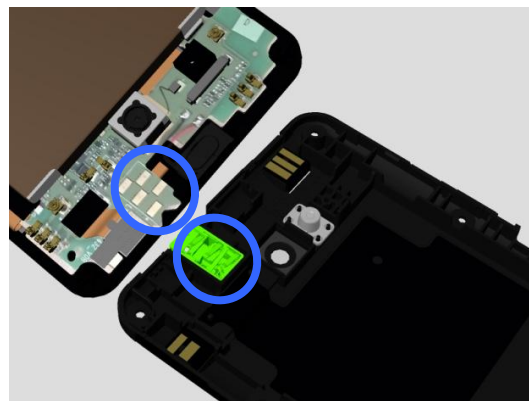


Check:

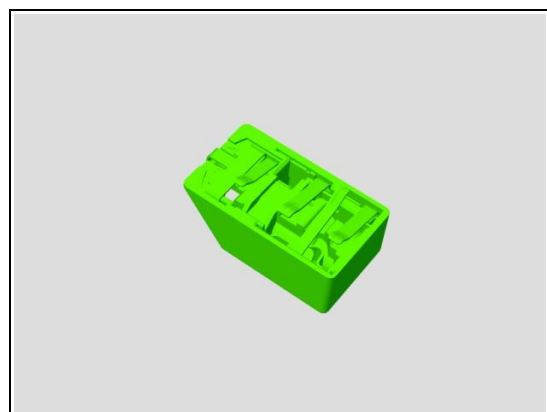
Inspect the contact pins of Audio Jack and contact pads on Main PBA.

Action:

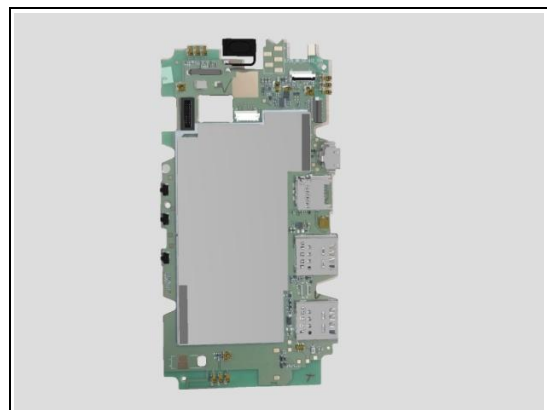
1. If dirty or oxidized – clean it.



2. If Audio Jack is damaged, replace Audio Jack.



3. Replace Main PBA.



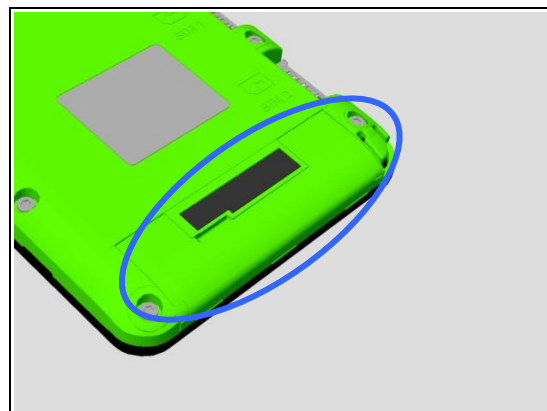
Problem Areas

1.21 Network & Signal

1.21.1 No/Poor signal

Check:

Inspect Main antenna film attached on Rear Assy.

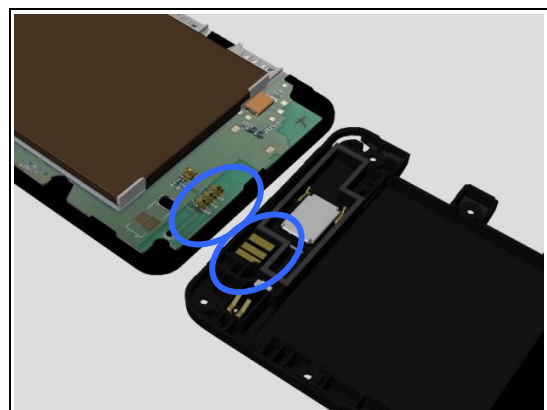


Check:

Inspect the contact pads of the Main antenna film and contact pins on Main PBA.

Action:

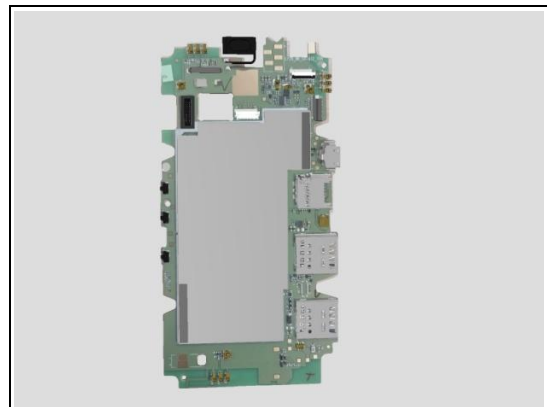
1. If dirty or oxidized – clean the pads and pins.



2. If the contact pads are damaged – replace Rear Assy.



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



Problem Areas

1.22 SIM

1.22.1 SIM not detected

Check:

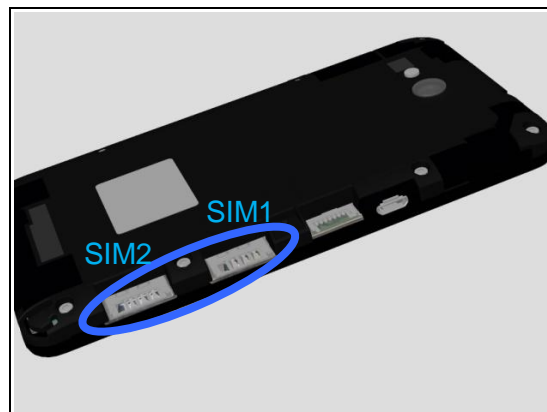
Inspect the external ports of the SIM card holder and check if SIM card can be properly inserted.

Action:

If dirty or clogged – clean the external ports.

Note: E2003, E2006, E2053 has only SIM1 connector.

E2033, E2043 has both SIM1 and SIM2 Connectors.



Check:

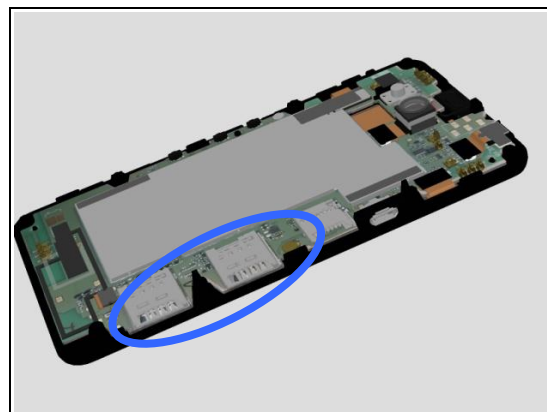
Inspect SIM connectors soldered on Main PBA.

Action:

1. If dirty or oxidized – clean it.

Note: E2003, E2006, E2053 has only one SIM Card connector.

E2033, E2043 has two SIM Card Connectors.



Problem Areas: SIM

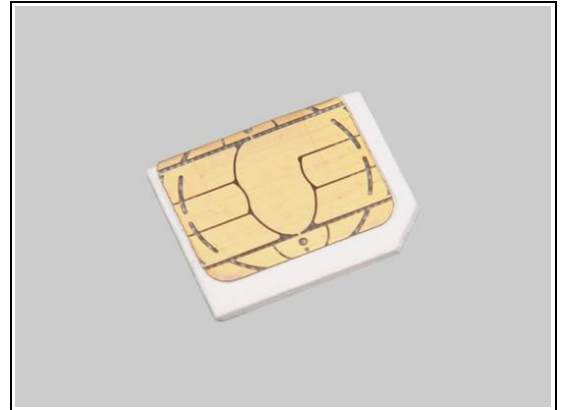
1.22.2 Incorrect UIM or SIM indicated

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.



Problem Areas

1.23 Charging

1.23.1 Battery will not charge by USB connector

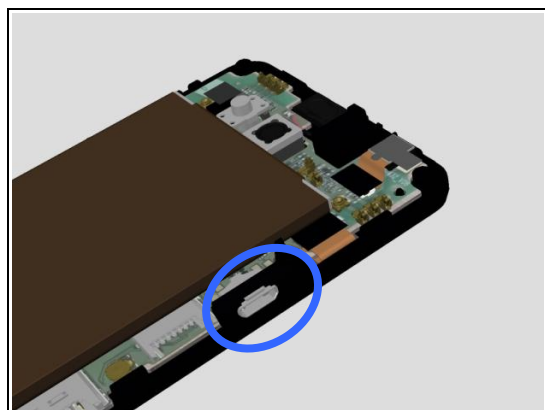
Check:

Inspect the USB connector.



Action:

1. If dirty or oxidized – clean the connector.

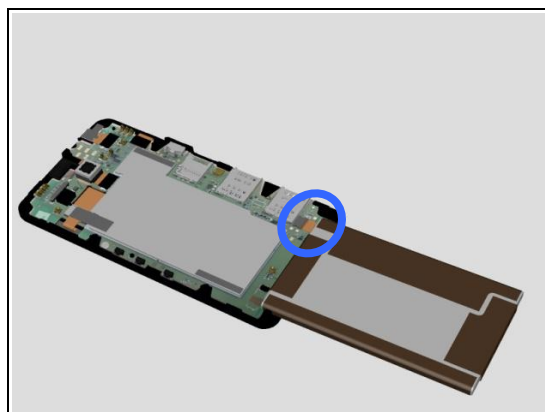


Check:

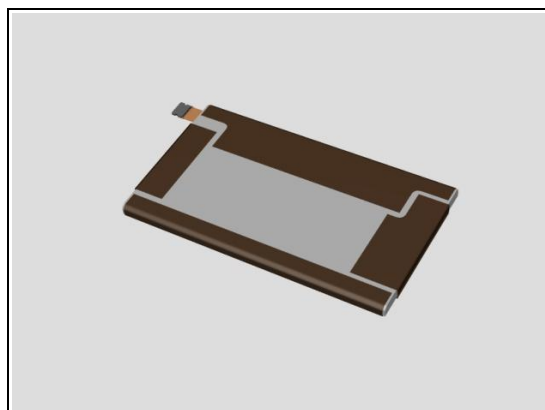
Inspect the BtB Connector of the Battery Assy to Main PBA.

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 Battery Assy is damaged – replace the Battery Assy.
 4. Replace Main PBA.



Problem Areas

1.24 HandsFree by Wire

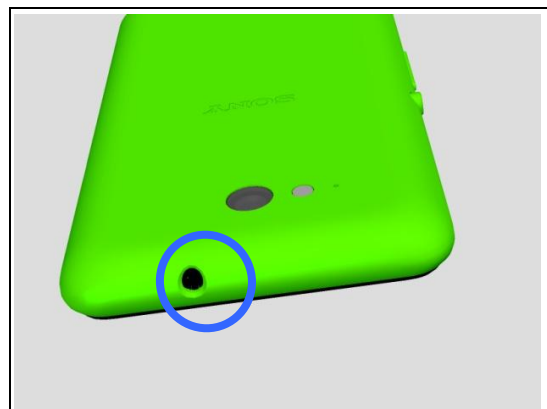
1.24.1 Connection to portable Handsfree fails

Check:

Inspect the external port of Audio Jack.

Action:

1. If dirty or oxidized – clean it.

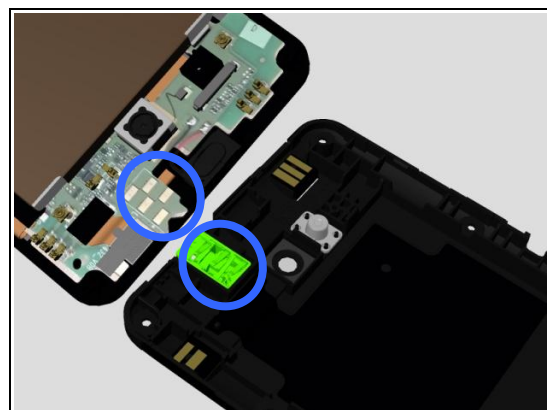


Check:

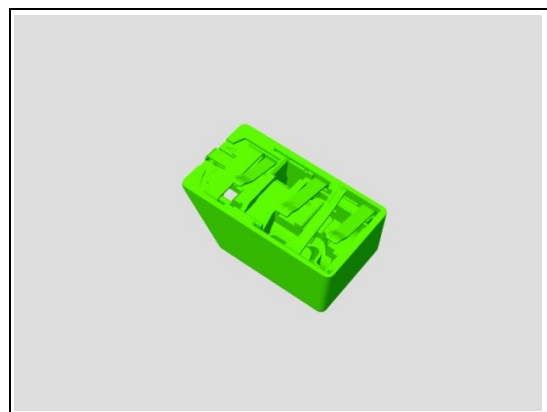
Inspect the contact pins of Audio Jack and contact pads on Main PBA.

Action:

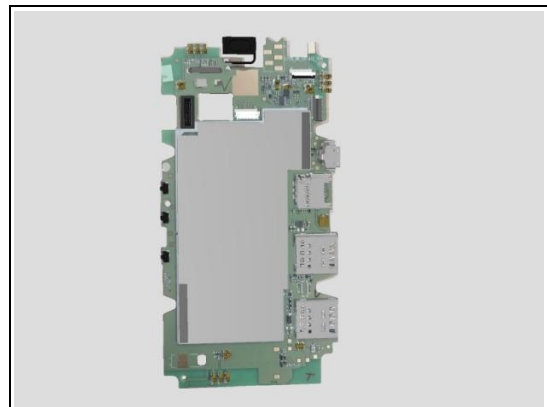
1. If dirty or oxidized – clean it.



2. If Audio Jack is damaged, replace Audio Jack.



3. Replace Main PBA.



Problem Areas

1.25 Data Communication

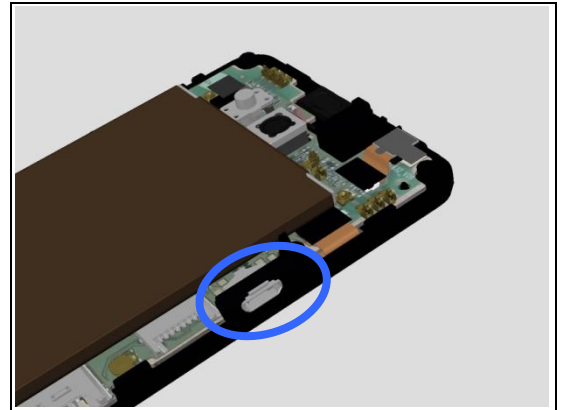
1.25.1 Data transfer via System Connector fails

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	2015-03-06	Initial release
2	2015-03-10	No changes