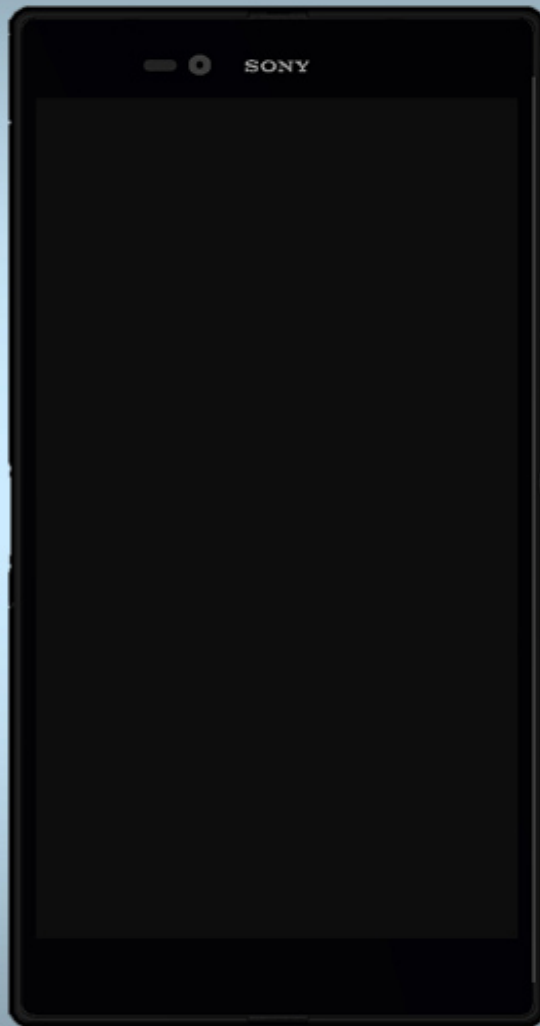


Troubleshooting Guide

- mechanical -



Xperia™ Z Ultra

C6802, C6806, C6833, C6843, XL39h, SGP412

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Always firstly disconnect the Battery FPC BtB connector to cut off power supply when the Antenna NFC Assy is disassembled.

Always finally connect the Battery FPC BtB connector before Antenna NFC Assy is reassembled.

Note: Proximity Sensor Calibration always must be performed for Cover Front Assy replacement, or Board swap; 1262-6643 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 1276-6434 Test Instruction - mechanical chapter 2.3.7 (Charging via USB and Easy Charger), Diagnostic Battery / Charging status.

Check:

Inspect the on/off key.

Action:

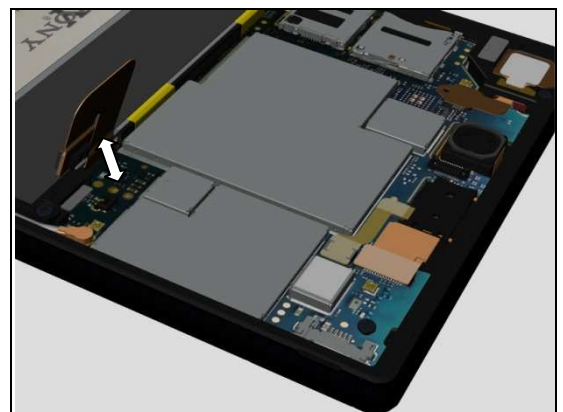
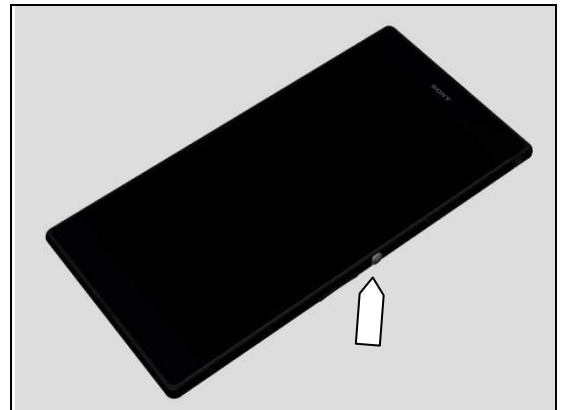
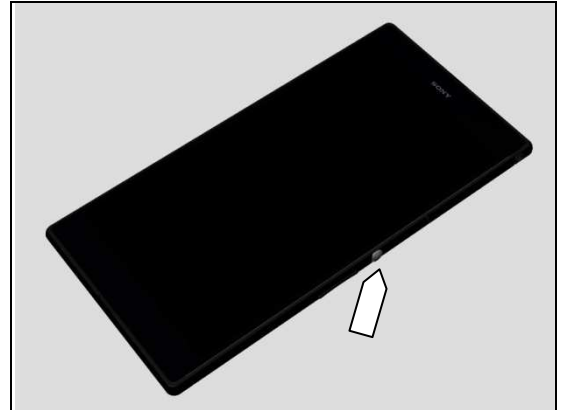
Refer to section 1.2.3 'On/Off Key'.

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 or the FPC of Battery is damaged – replace the Battery 3000.0 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'.
2. Replace Main PBA.



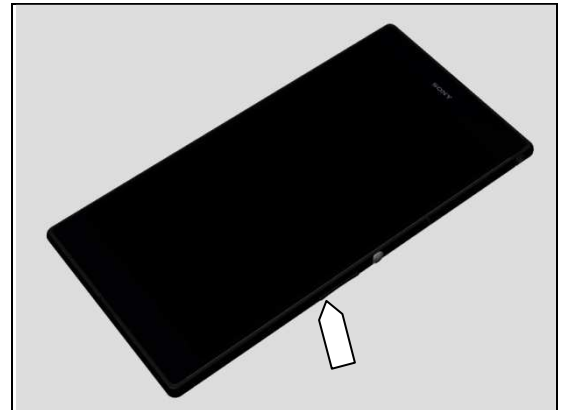
1.2.2 Volume Key

Check:

Inspect the external area of the Key Volume.

Action:

If dirty – clean it.

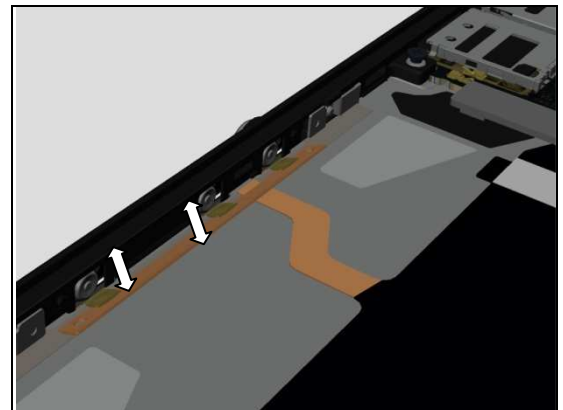


Check:

Inspect the Key pads of Relay FPC.

Action:

If dirty or oxidized – clean it.

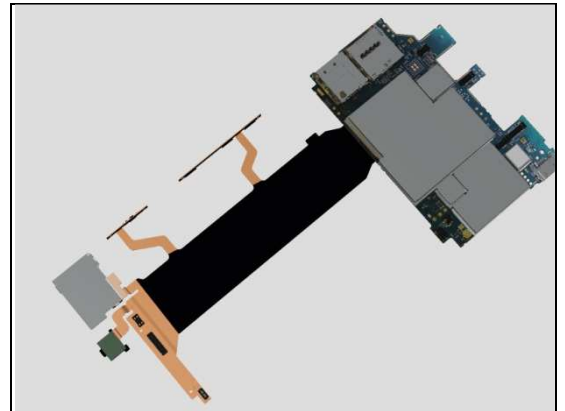


If external area of the Key Volume damaged – Replace the Cover Front Assy.



Problem Areas: Keys

If the Relay FPC damaged – Replace the Main PBA Assy.



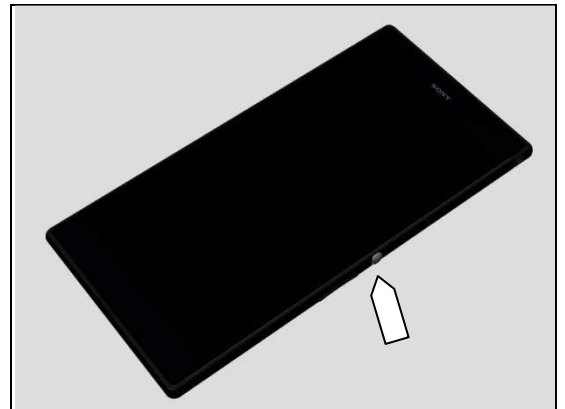
1.2.3 On/Off Key

Check:

Inspect the external area of the on/off key.

Action:

1. If dirty – clean it.

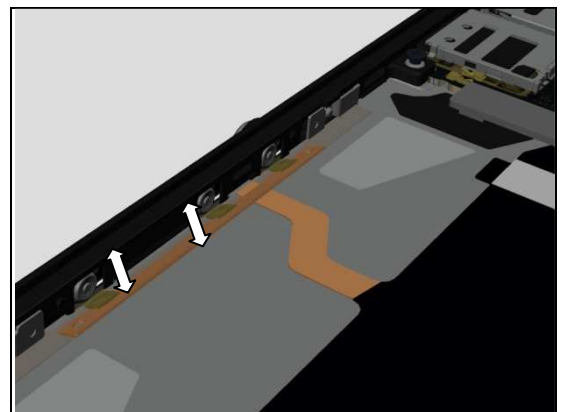


Check:

Inspect the Key pads of Relay FPC.

Action:

- If dirty or oxidized – clean it.

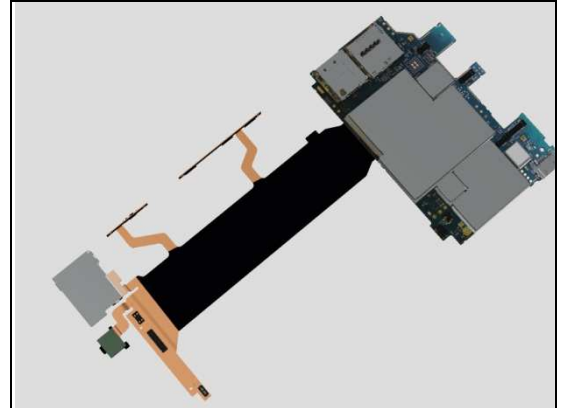


If external area of the on/off key damaged – Replace the Cover Front Assy.



Problem Areas: Keys

If the Relay FPC damaged – Replace the Main PBA Assy.



1.2.4 Camera Key

N/A.

No Camera Key on the phone.

Problem Areas

1.3 Touch Screen

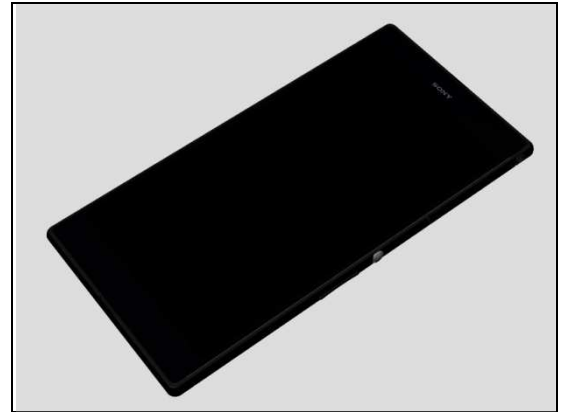
1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Cover Front Assy.

Action:

If dirty – clean it.

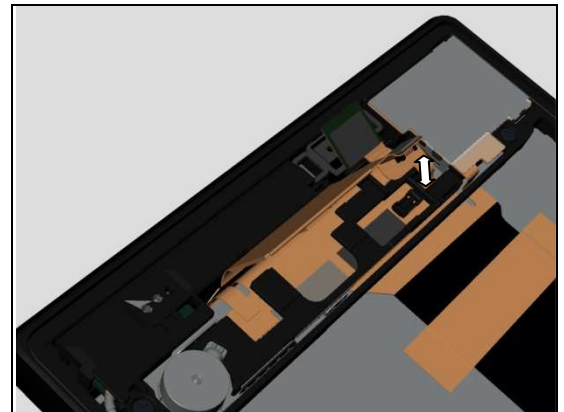


Check:

Inspect the BtB connector of touch panel FPC to Main PBA.

Action:

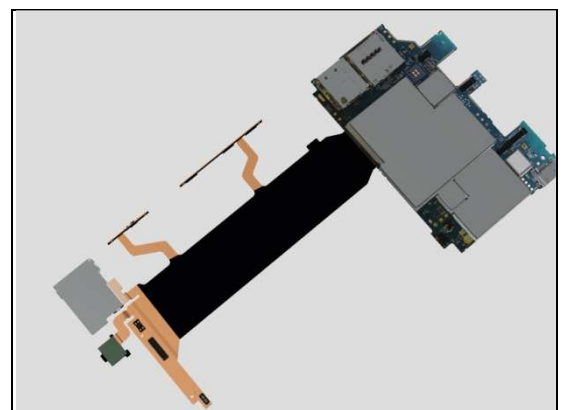
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



3. If the touch panel FPC BtB connector, the touch panel FPC or the touch panel is damaged – replace the Cover Front Assy.



4. Replace Main PBA Assy.



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:

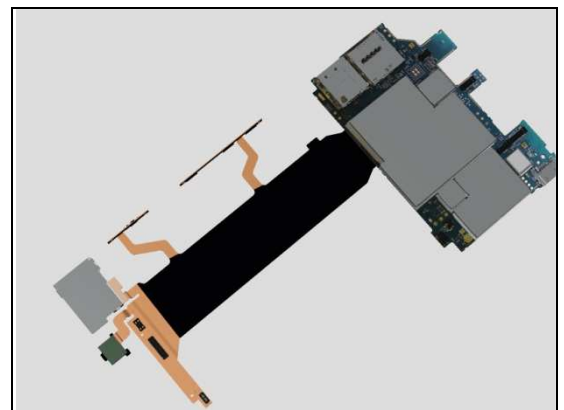
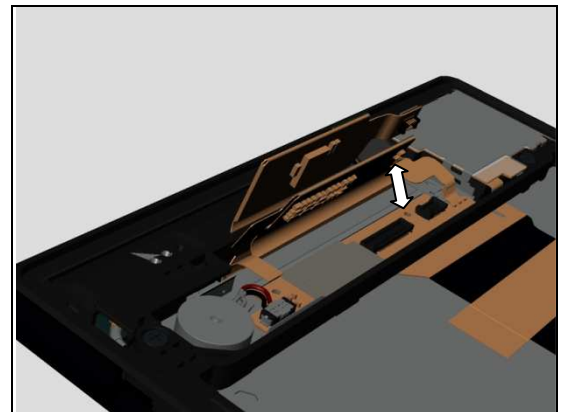
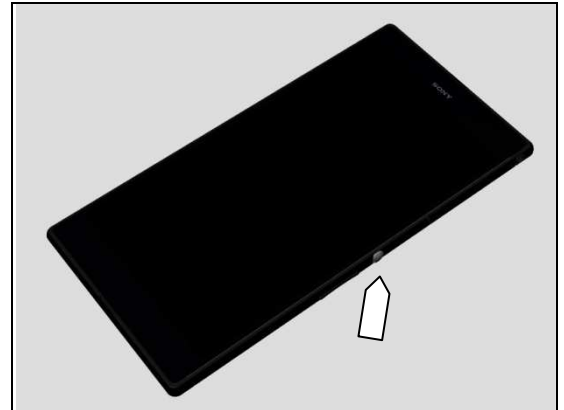
Inspect the BtB connector of display FPC to Main PBA.

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 display FPC BtB connector, the display FPC or the Display is damaged – replace the Display.

4. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

1.5.1 LED/Illumination

Check:

Inspect the external window area of the Notification LED (RGB) on the Front Assembly.

Action:

1. If dirty – clean it.
2. If the external window area is damaged – replace the Front Assembly.

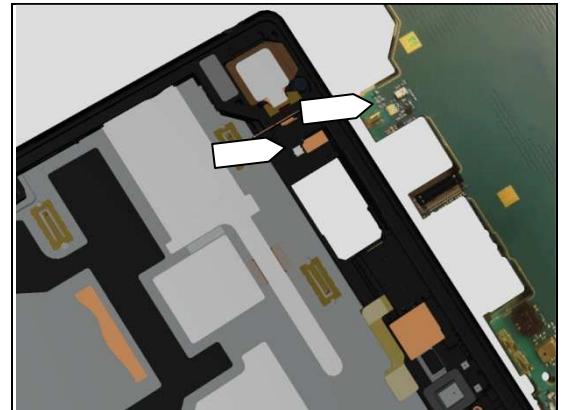


Check:

Inspect the external port on Cover Front Assy and Notification LED on the Main PBA.

Action:

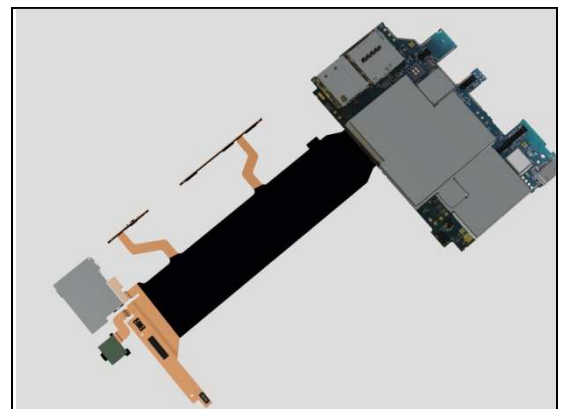
1. If dirty – clean it.



2. If the Cover Front Assy is damaged – replace it.



3. Replace Main PBA Assy



Problem Areas

1.6 Speaker

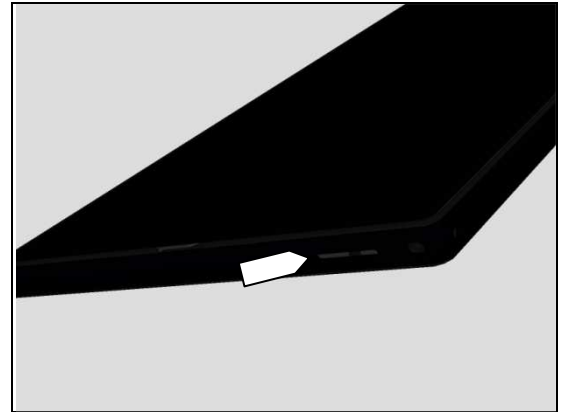
1.6.1 Loudspeaker

Check:

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

Action:

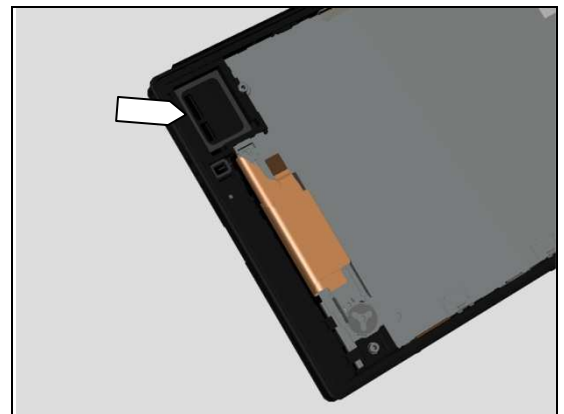
1. If the Loudspeaker external port is clogged – clean it.



Check:

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

If the Loudspeaker internal port is clogged – clean it



3. If the Loudspeaker port is damaged – replace the Cover Front Assy.

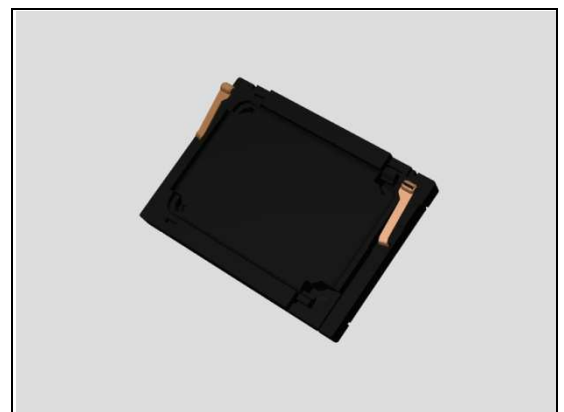


Check:

Inspect the contacts on the Loudspeaker 15.0 Rectangular.

Action:

1. If dirty or oxidized – clean them.
2. If contacts are damaged – replace the Loudspeaker 15.0 Rectangular.



Problem Areas: Speaker

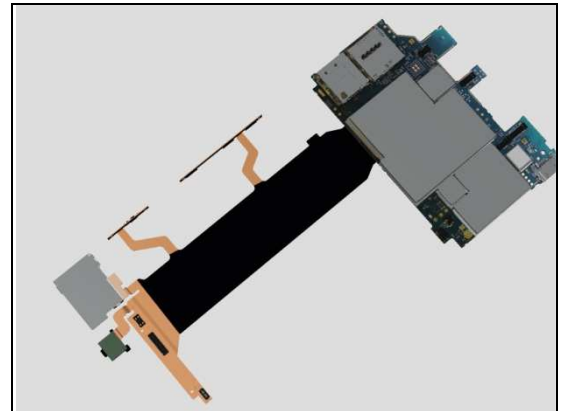
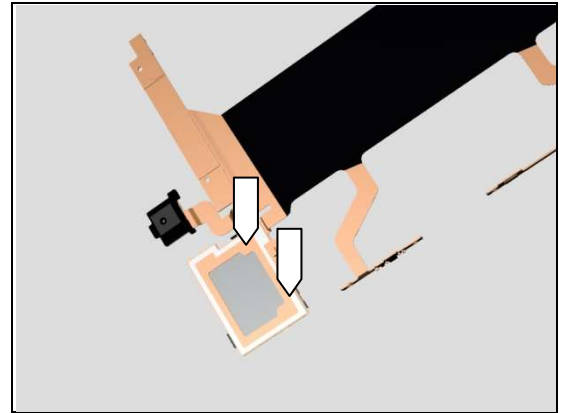
Check:

Inspect the contact pads and BtB connector on the FPC Assembly Relay FPC.

Action:

1. If dirty – clean them.

2. If the FPC Assembly Relay FPC is damaged – replace Main PBA Assy.



Problem Areas

1.7 Earphone

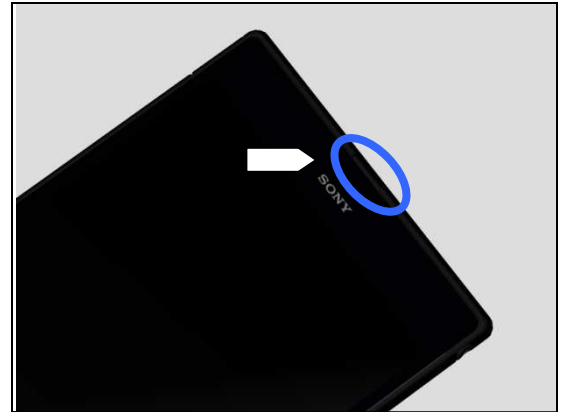
1.7.1 Ear Speaker

Check:

Inspect the Ear Speaker's external port on the Cover Front Assy.

Action:

If clogged – clean it.

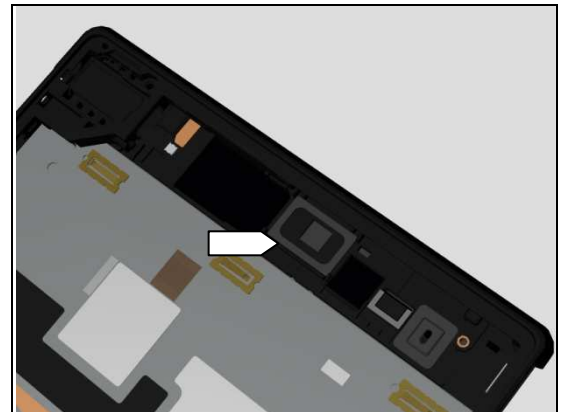


Check:

Inspect the Ear Speaker's internal port on the Cover Front Assy.

Action:

If clogged – clean it.



If the port is damaged – replace the Cover Front Assy.

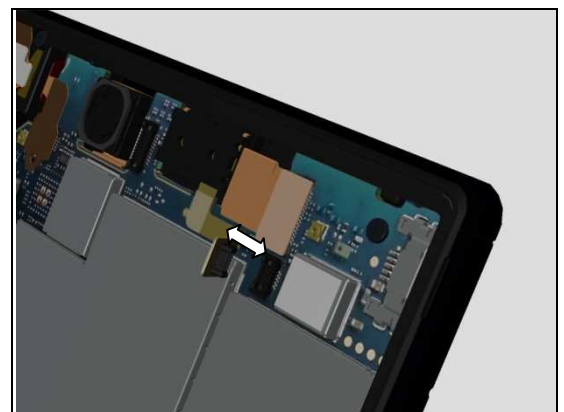


Check:

Inspect the contact pads and BtB connector on the FPC receiver Assy and the BtB connector on the Main PBA.

Action:

1. If dirty or oxidized – clean them.
2. If not properly connected- disconnect and reconnect connector.



Problem Areas: Earphone

Check:

Inspect the contact pins on Ear Speaker and the contact pads connector on FPC receiver Assy.

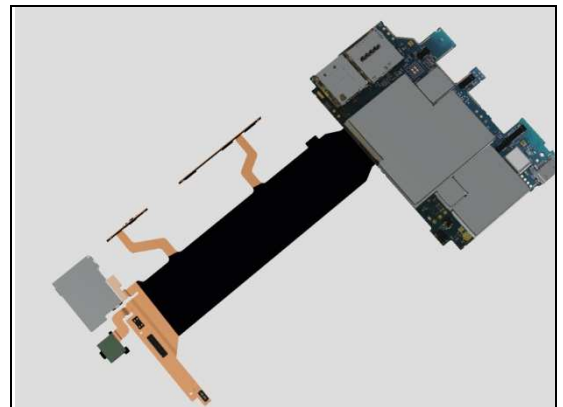
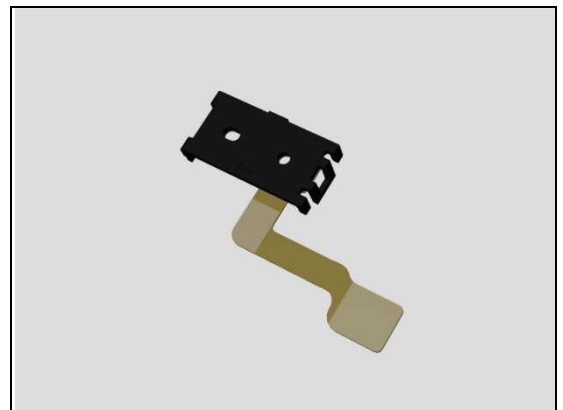
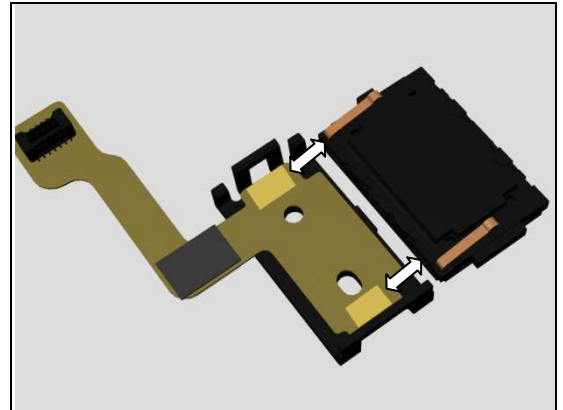
Action:

1. If clogged – clean it.

2. If the contact pins of Ear Speaker are damaged – replace the Ear Speaker.

3. If the contact pads of FPC Receiver Assy are damaged - replace it.

4. Replace Main PBA Assy.



Problem Areas

1.8 Microphone

1.8.1 Microphone

Check:

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

Action:

1. If clogged – clean it.

2. If the port is damaged – replace the Cover Front Assy.

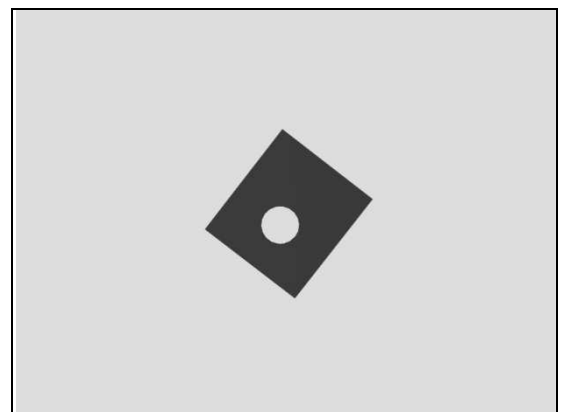
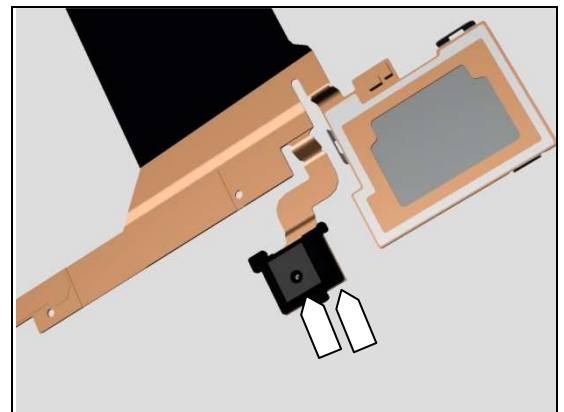
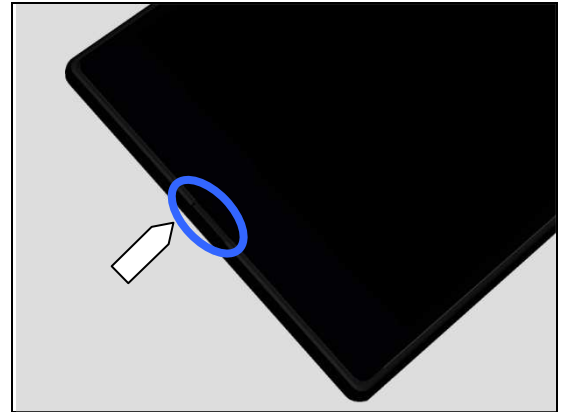
Check:

Inspect the microphone mesh and the microphone frame on the Relay FPC.

Action:

1. If dirty – clean them.

2. If the microphone mesh is damaged – replace Adhesive Mic.



Problem Areas: Microphone

3. Replace Main PBA Assy.

1.8.2 Secondary Microphone

Check:

Inspect the secondary microphone's external port on the Cover Front Assy.

Action:

If clogged – clean it.

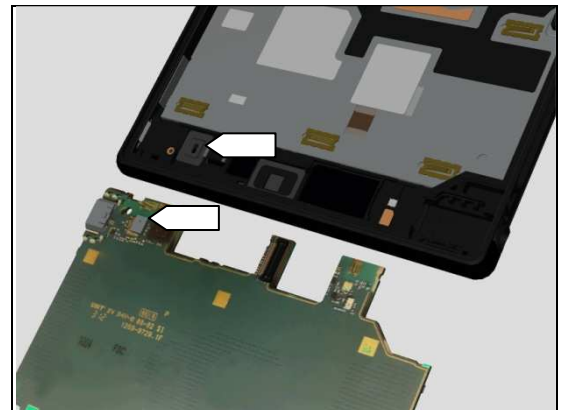
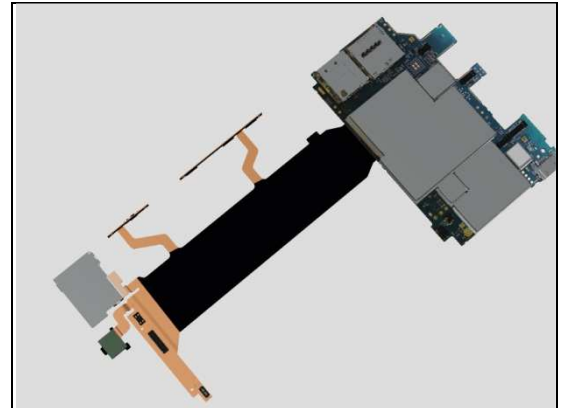
Check:

Inspect the secondary microphone's mesh on the Cover Front Assy and secondary microphone on the Main PBA Assy.

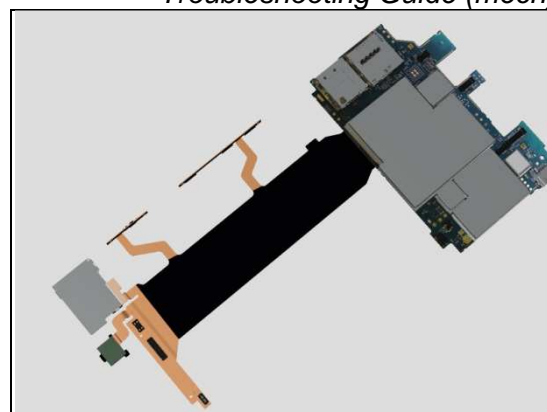
Action:

1. If dirty – clean it.

2. If the port is damaged – replace the Cover Front Assy



3. Replace the Main PBA Assy



Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Check:

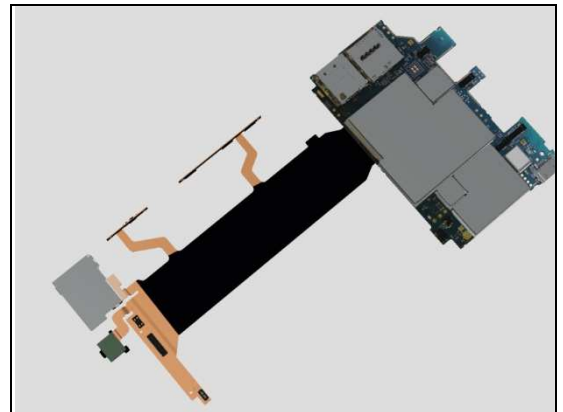
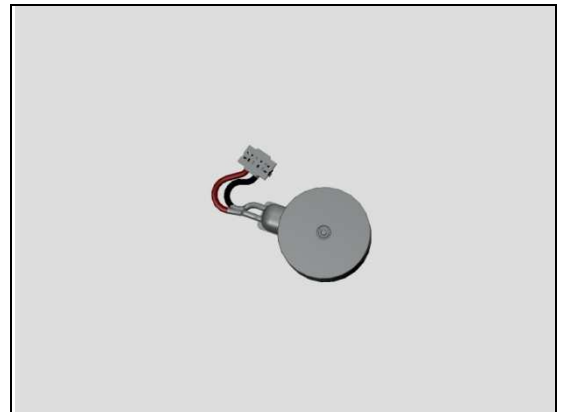
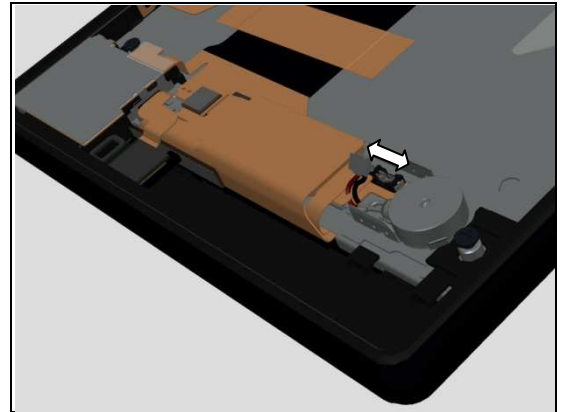
Inspect the BtB connectors of Vibrator and Relay FPC.

Action:

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

3. If the vibrator is damaged – replace the Vibrator.

4. If the BtB connector on the Relay FPC is damaged – replace the Main PBA Assy



Problem Areas

1.10 Camera

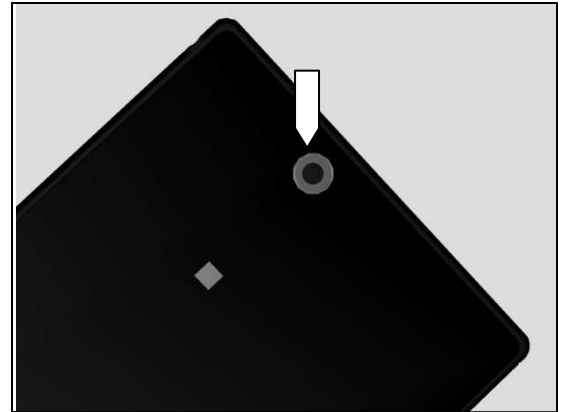
1.10.1 Camera defects

Check:

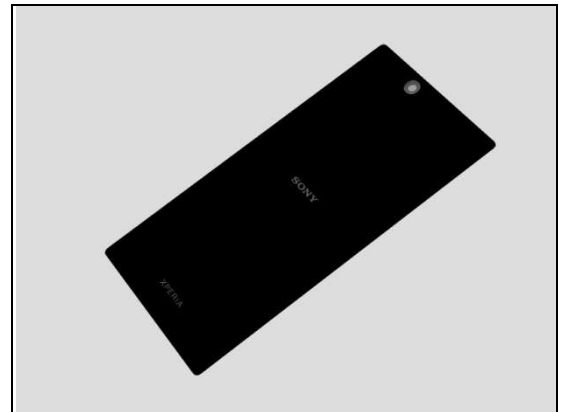
Inspect the external area of camera window.

Action:

1. If dirty – clean it.



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

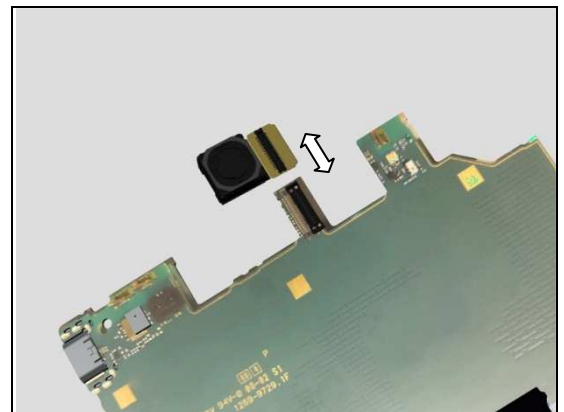


Check:

Inspect the BtB connectors of Camera 8 MPixel CMOS and Main PBA.

Action:

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

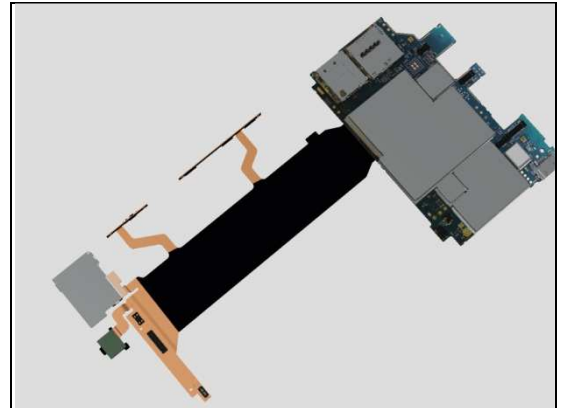


2. If Camera 8 MPixel CMOS is damaged – replace it.



Problem Areas: Camera

4. If the BtB connector on the Main PBA is damaged – replace the Main PBA Assy



1.10.2 Video Call Camera defects

Check:

Inspect the external area of the video camera window.

Action:

If dirty – clean it.

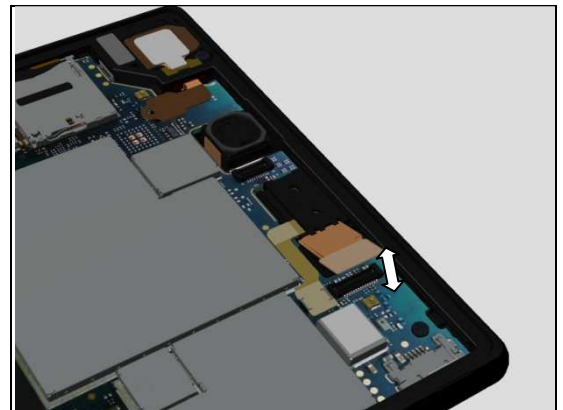


Check:

Inspect the BtB connectors of Camera 2 MPixel CMOS and Main PBA.

Action:

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

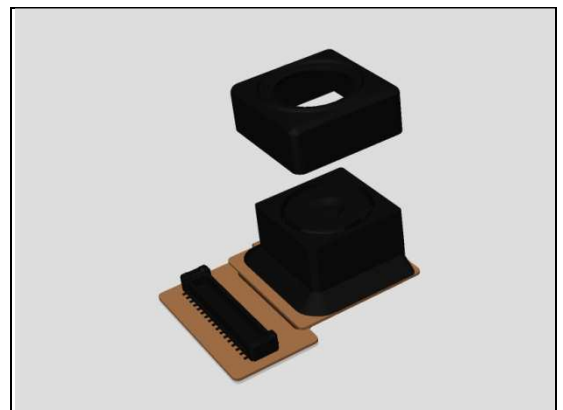


Check:

Inspect the Grommet Camera on the Camera 2 MPixel CMOS.

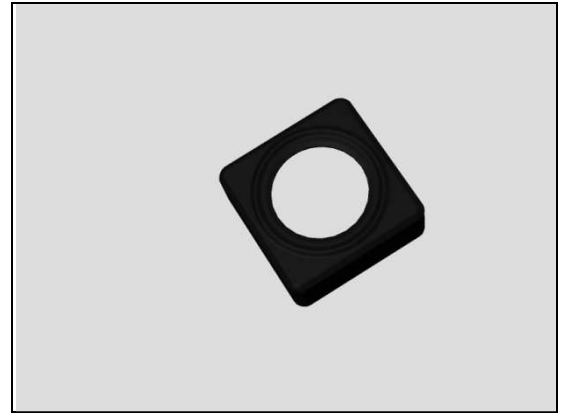
Action:

1. If dirty – clean them.

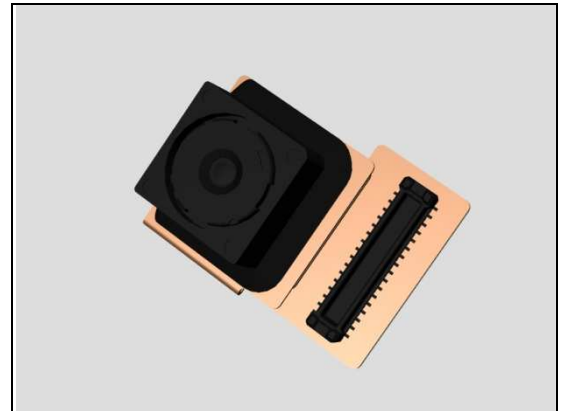


Problem Areas: Camera

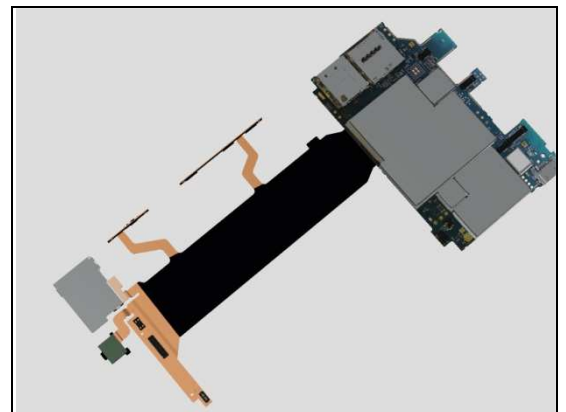
2. If the Grommet Camera is damaged – replace it.



3. If the Camera 2 MPixel CMOS scratched or damaged – replace it.



4. If the BtB connector on the Main PBA is damaged – replace the Main PBA Assy



Problem Areas

1.11 Flash LED

1.11.1 Flash LED not flashing

N/A.

No Flash LED on the phone.

Problem Areas

1.12 Bluetooth and WLAN

1.12.1 Bluetooth or WLAN connection failure

Check:

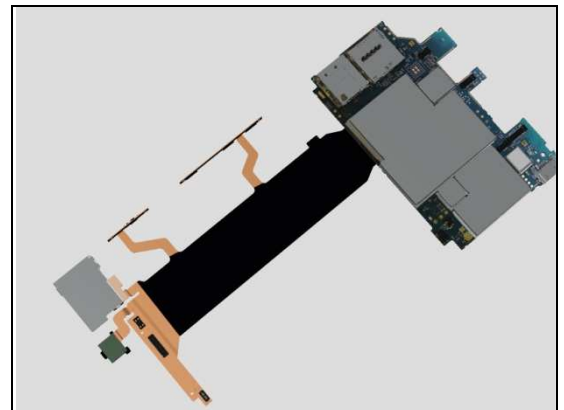
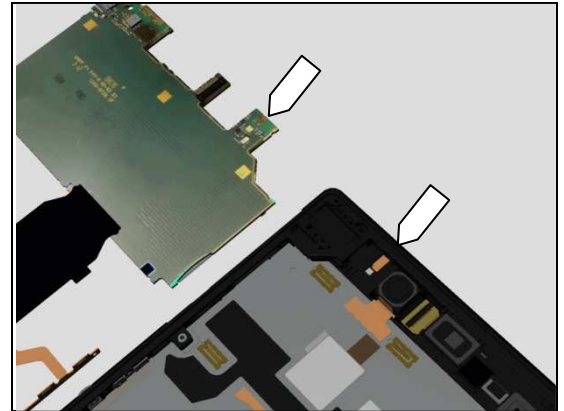
Inspect the WLAN and Bluetooth antenna contact pads on Ant Rear Cover Assy and the contact pins on Main PBA.

Action:

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

2. If the contact pads are damaged – replace the Cover Front Assy.

3. Replace Main PBA.



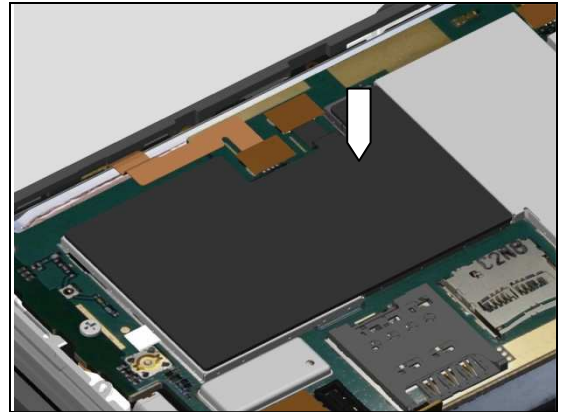
Problem Areas

1.13 NFC

1.13.1 NFC malfunctions

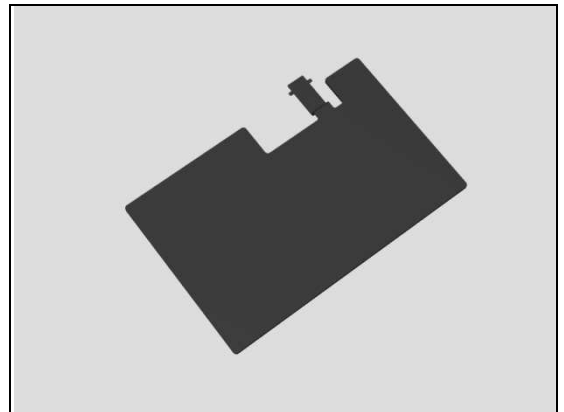
Check:

Inspect the NFC antenna on the shielding can lids.



Action:

If the antenna is damaged – replace the Antenna NFC Flex.

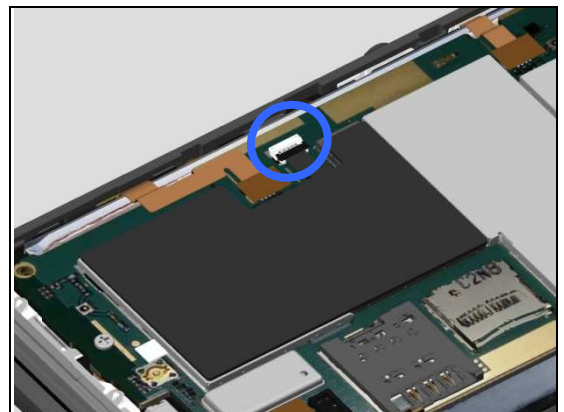


Check:

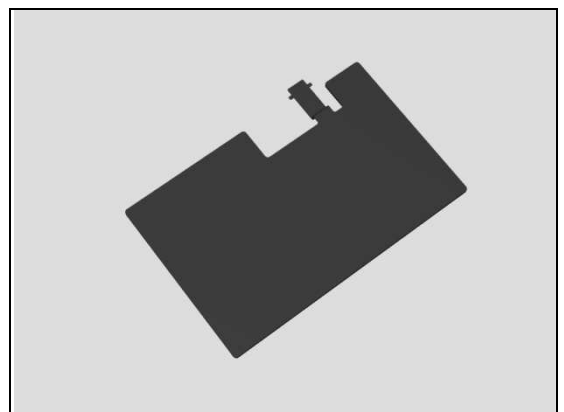
Inspect the ZIF connector of Antenna NFC Flex to Main PBA.

Action:

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



3. If the FPC of Antenna NFC Flex is damaged – replace the Antenna NFC Flex.
4. Replace Main PBA.



Problem Areas

1.14 GPS

1.14.1 GPS malfunctions

Check:

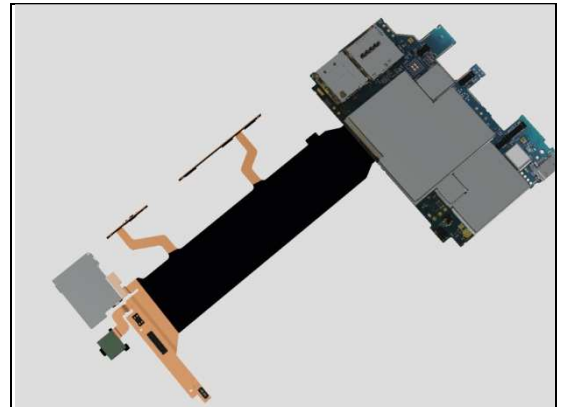
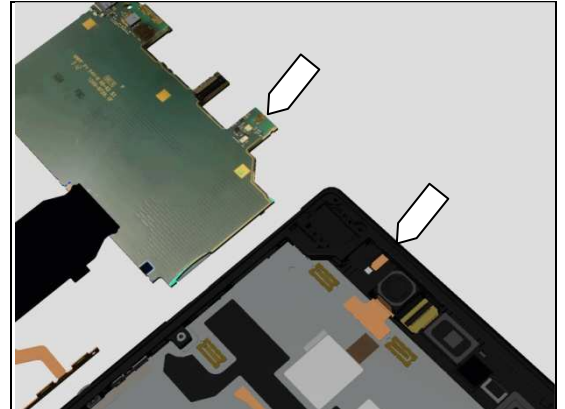
Inspect the GPS antenna contact pads on Ant Rear Cover Assy and the contact pins on Main PBA.

Action:

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

2. If the contact pads are damaged – replace the Cover Front Assy.

3. Replace Main PBA.



Problem Areas

1.15 Compass

1.15.1 Compass fails

Action:

Replace Main PBA Assy.

Problem Areas

1.16 Accelerometer

1.16.1 Accelerometer test fails

Action:

Replace Main PBA Assy.

Problem Areas

1.17 Gyroscope

1.17.1 Gyroscope test fails

Action:

Replace Main PBA Assy.

Problem Areas

1.18 Ambient Light Sensor

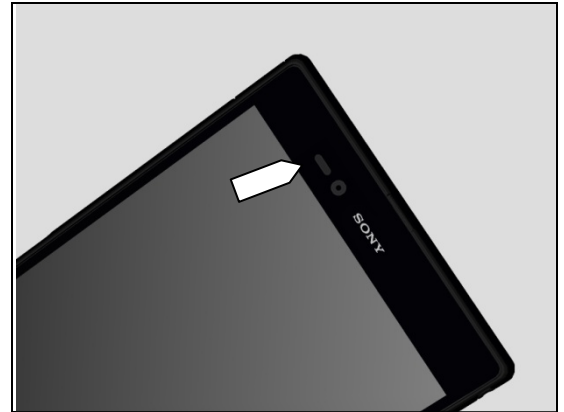
1.18.1 Light Sensor malfunctions

Check:

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

Action:

1. If dirty – clean it.



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

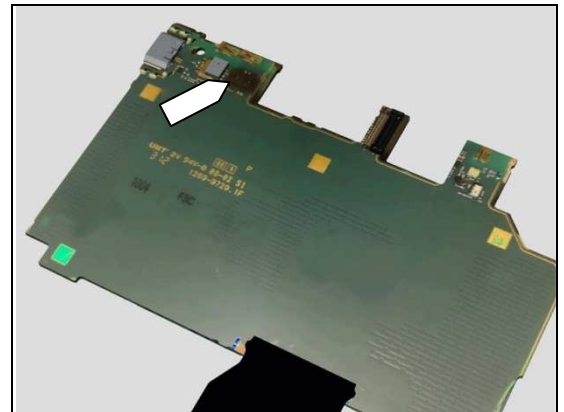


Check:

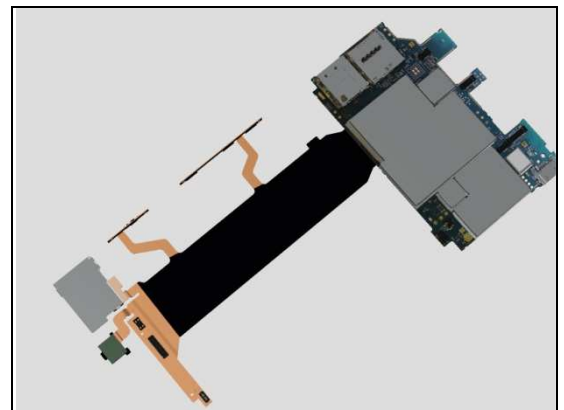
Inspect the light sensor on the Main PBA Assy.

Action:

1. If dirty or clogged – clean it.



2. If damaged – replace the Main PBA Assy.



Problem Areas

1.19 Proximity Switch

1.19.1 Proximity switch malfunctions

Check:

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

Action:

1. If dirty – clean it.

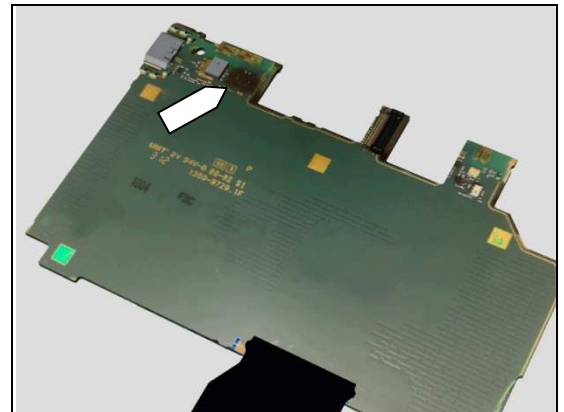


2. If scratched or damaged – replace the Cover Front Assy.



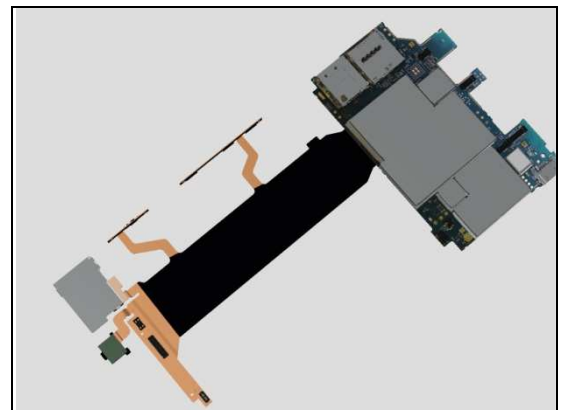
Check:

Inspect the proximity sensor and proximity switch rubber on the Touch Front Cover Assy.



Action:

If damaged or deformed – replace the Main PBA Assy.



Problem Areas

1.20 Pressure Sensor

1.20.1 Pressure Sensor test fails

N/A. No pressure sensor on Main PBA Assy.

Problem Areas

1.21 Real Time Clock

1.21.1 Real time clock test fails

Action:

Replace Main PBA Assy.

Problem Areas

1.22 Total call time (Not valid for SGP412)

1.22.1 Total call time fails

Action:

Replace Main PBA Assy.

Problem Areas

1.23 External Memory

1.23.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

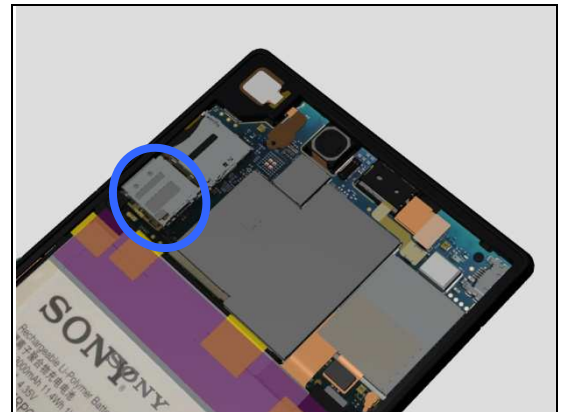


Check:

Inspect the memory card holder on Main PBA Assy.

Action:

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



Problem Areas

1.24 Security

1.24.1 Security fails

Action:

Replace Main PBA Assy.

Problem Areas

1.25 FM Radio

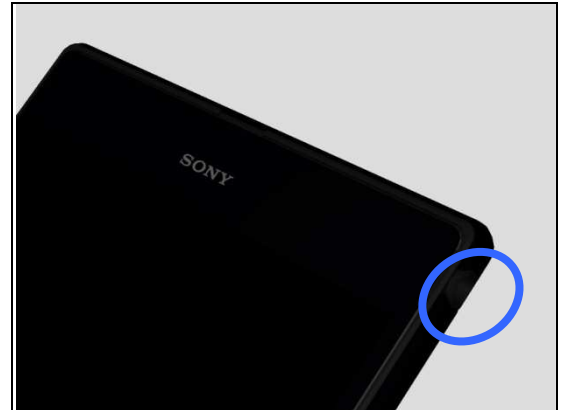
1.25.1 No/Poor FM Radio reception

Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

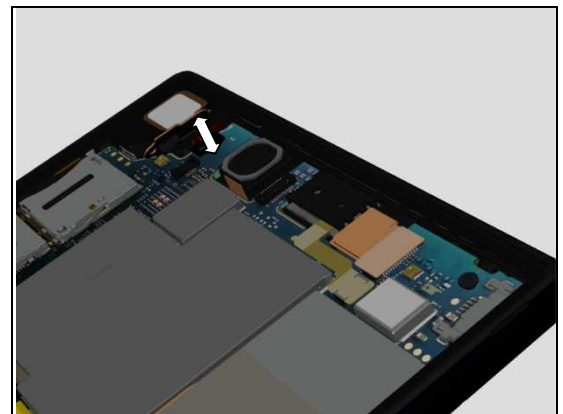


Check:

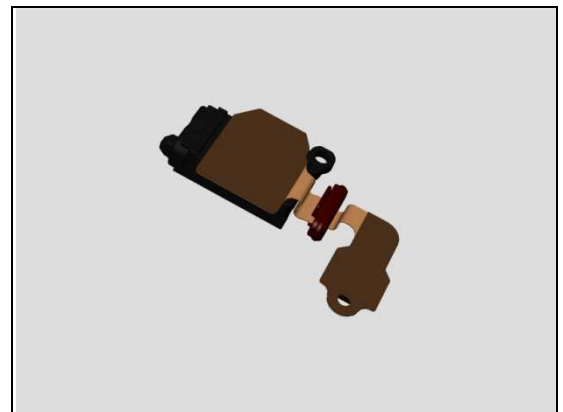
Inspect the BtB connector of FPC Audio Jack to Main PBA Assy.

Action:

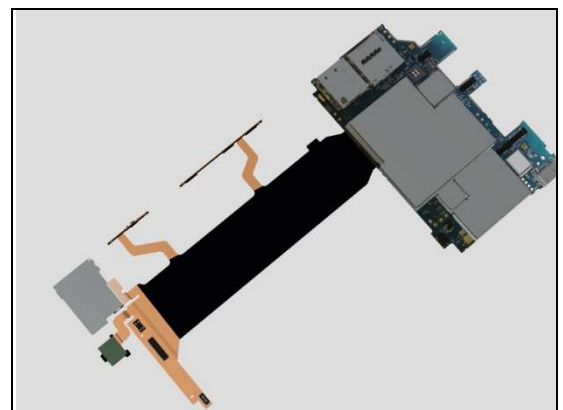
1. If not properly connected – disconnect and reconnect it.



2. If the FPC Audio Jack and its BtB connector damaged– replace the FPC Audio Jack.



3. Replace the Main PBA Assy.



Problem Areas

1.26 Battery Health test

1.26.1 Battery Health test fails

N/A.

Problem Areas

1.27 Flip Slider Counter

1.27.1 Flip Slider Counter fails

N/A. Not slider phone.

Problem Areas

1.28 Verify Certificates

1.28.1 Verify Certificates fails

Action:

Replace Main PBA Assy.

Problem Areas

1.29 IrDA Test

1.29.1 IrDA test fails

N/A. No IrDA functionality in the phone.

Problem Areas

1.30 TV-Out Test (Not valid for SGP412)

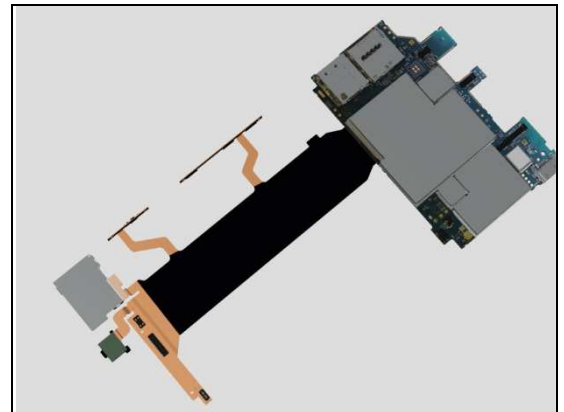
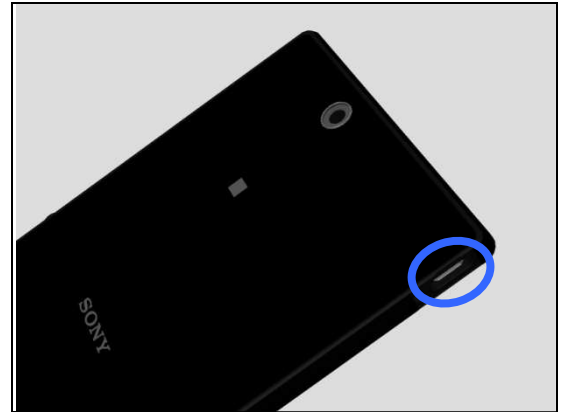
1.30.1 TV-Out test fails

Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.



2. Replace the Main PBA Assy.

Problem Areas

1.31 Network & Signal (Not valid for SGP412)

1.31.1 No/Poor signal

Check:

Inspect the main antenna as shown in the pictures.

Action:

If the main antenna is damaged – replace the Cover Front Assy.

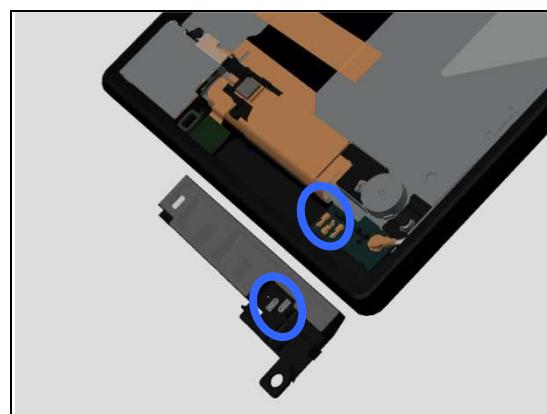
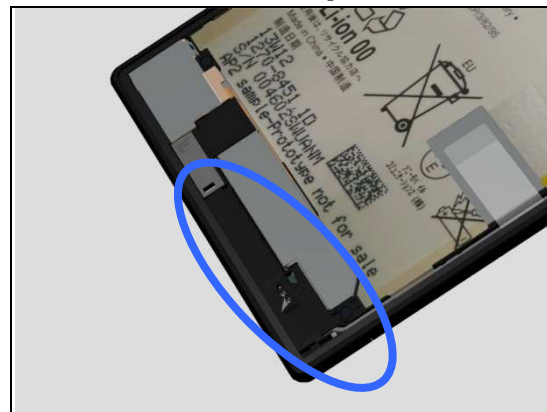
Check:

Inspect the main antenna contact pads on the Antenna Main Assy and contact pins on the Sub PBA Assy.

Action:

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

2. If the contact pads are damaged – replace the Antenna Main Assy.



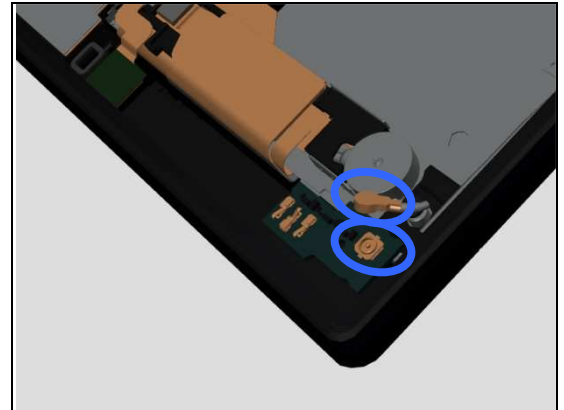
Problem Areas: Network & Signal

Check:

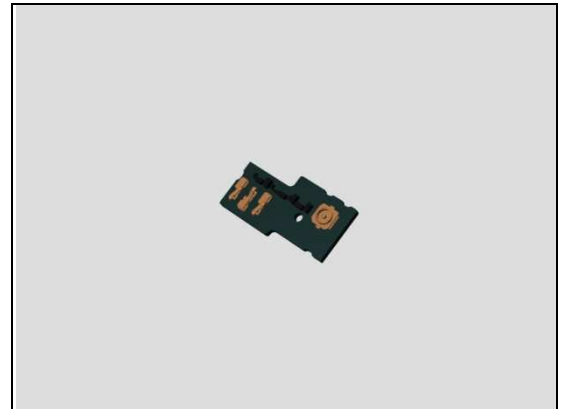
Inspect the BtB connectors both sides on the Sub PBA Assy and Cable Assy.

Action:

1. If dirty or oxidized – clean it.



2. If the Sub PBA Assy is damaged – replace the Sub PBA Assy.

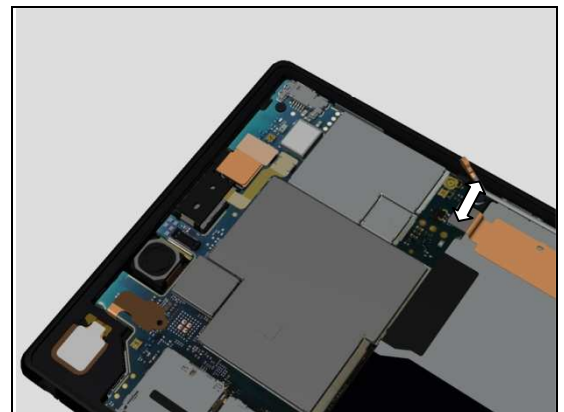


Check:

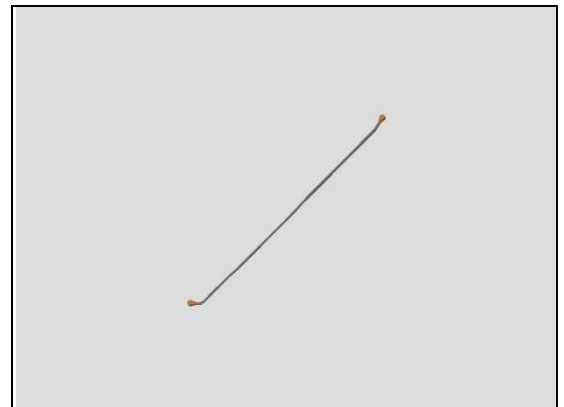
Inspect the BtB connectors both sides on the Main PBA Assy and Cable Assy.

Action:

1. If dirty or oxidized – clean it.

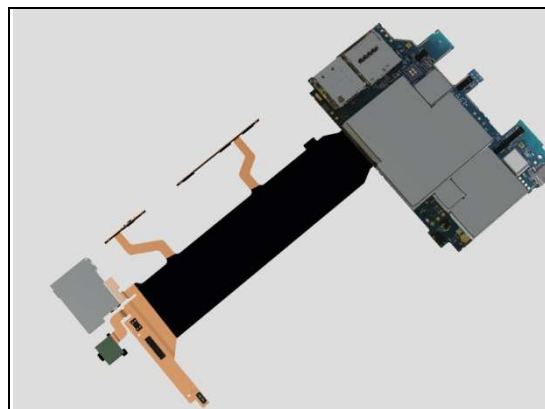


2. If the Cable Assy is damaged – replace it.



Problem Areas: Network & Signal

3. Replace Main PBA Assy.



Problem Areas

1.32 SIM (Not valid for SGP412)

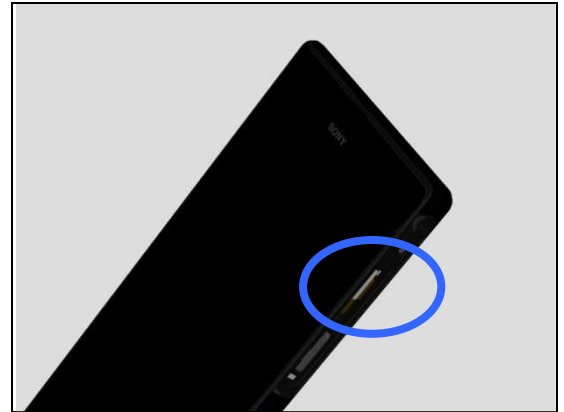
1.32.1 SIM not detected

Check:

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

Action:

If dirty or clogged – clean the external port.

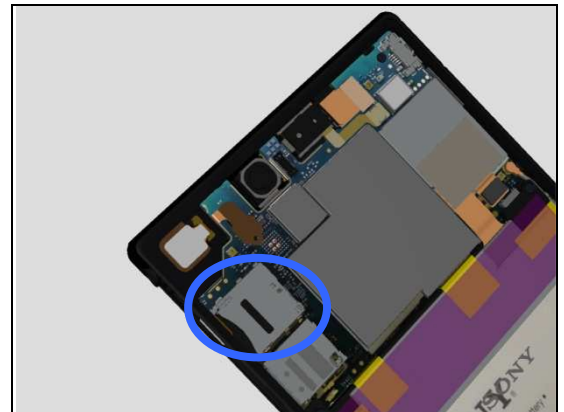


Check:

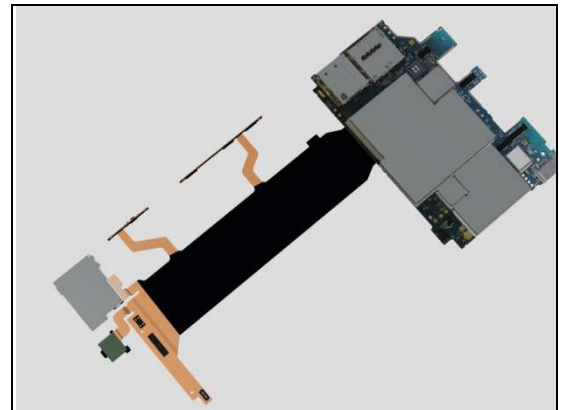
Inspect the SIM card holder on Main PBA.

Action:

2013- If dirty or clogged – clean the holder.



2. Replace the Main PBA Assy.



Problem Areas

1.33 Charging

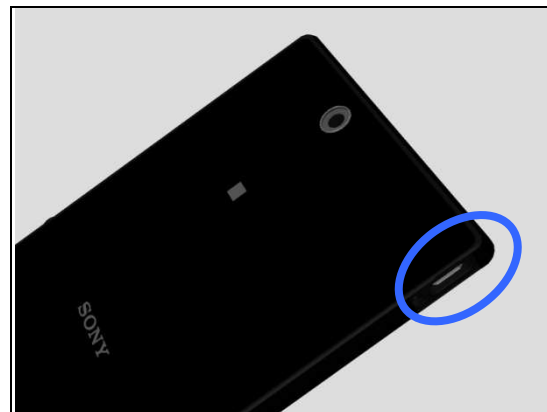
1.33.1 Battery will not charge by USB connector

Check:

Inspect the USB connector.

Action:

2013- If dirty or oxidized – clean the connector.

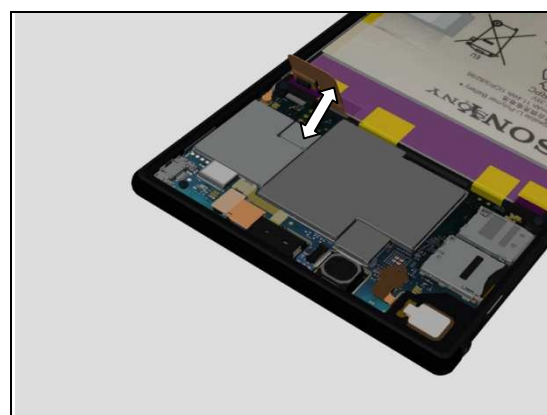


Check:

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

Action:

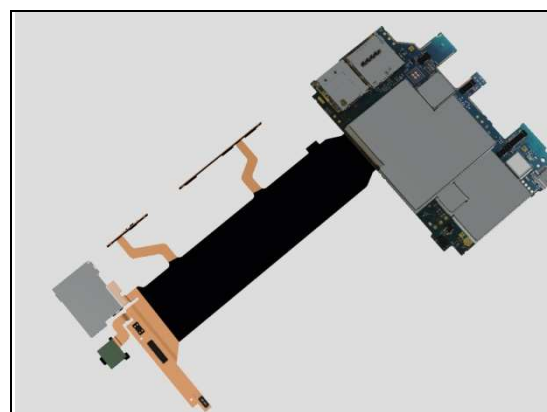
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



3. If the BtB connector or the FPC of Battery is damaged – replace the Battery 3000.0 mAh.



4. Replace Main PBA Assy



Problem Areas

1.34 HandsFree by Wire

1.34.1 Connection to portable Handsfree fails

Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

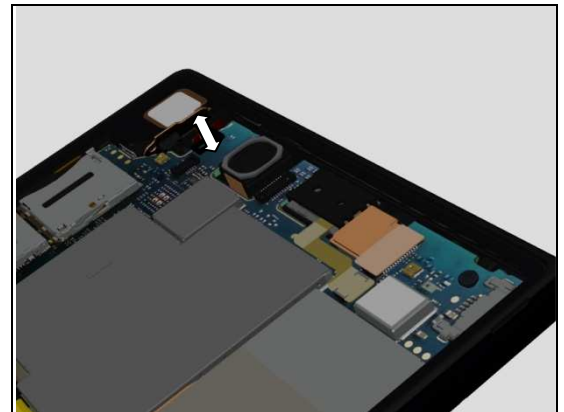


Check:

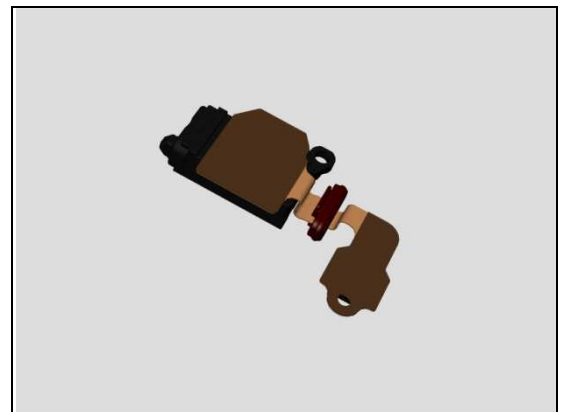
Inspect the BtB connectors of FPC Audio Jack to Main PBA Assy.

Action:

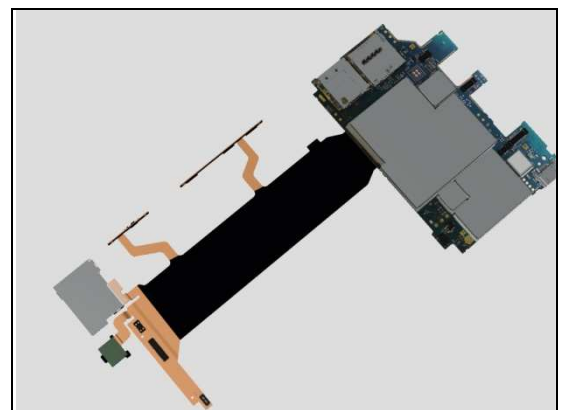
1. If not properly connected – disconnect and reconnect it.



2. If the FPC Audio Jack is damaged – Replace the FPC Audio Jack.



3. Replace the Main PBA Assy



Problem Areas

1.35 Data Communication

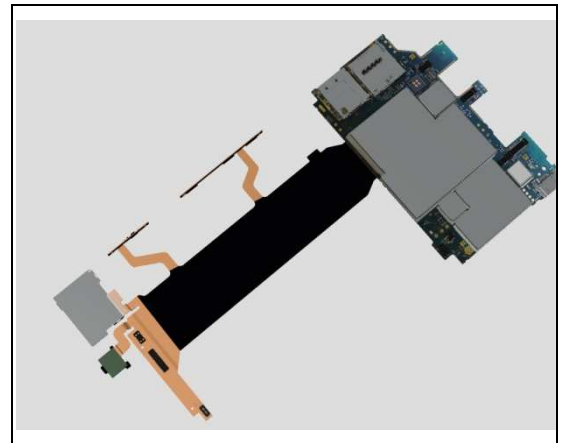
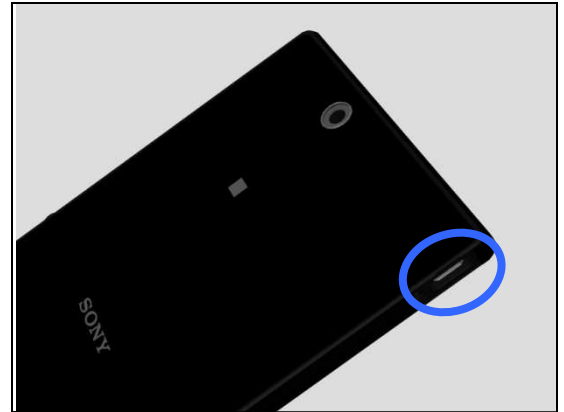
1.35.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

2013- If dirty or oxidized – clean the connector.



2. Replace Main PBA Assy.

2 Revision History

Rev.	Date	Changes / Comments
1	2013-July-26	Initial release
2	2013-Aug-05	Update the footer
3	2013-Aug-30	Update the cover page
4	2013-Sep-12	Update the cover page
5	2013-Oct-17	Update the cover page
6	2014-Jan-16	Add SGP412 information