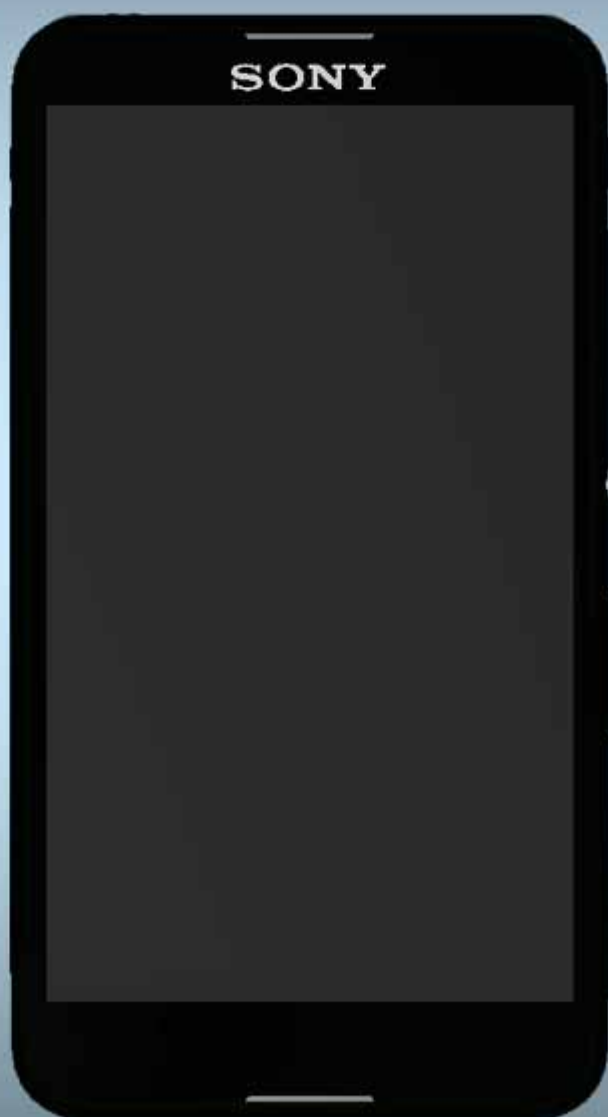


Troubleshooting Guide

- mechanical -



Xperia™ E4 & E4 Dual
E2104, E2105, E2115, E2124

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

1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

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

Action:

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

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

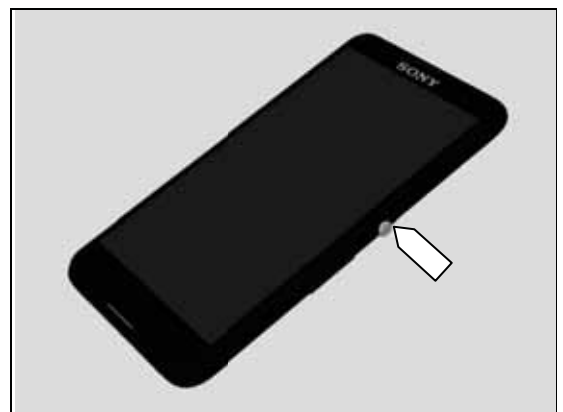
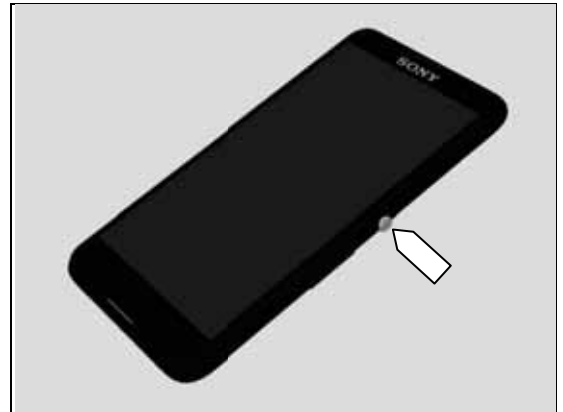
Follow 1294-4528 Test Instruction - mechanical chapter 2.3.7 (Charging via USB and Easy Charger), Diagnostic Battery / Charging status.

Check:

Inspect the on/off key.

Action:

Refer to section 1.2.3 'On/Off Key'.



Telegram Channel: @JahanIC

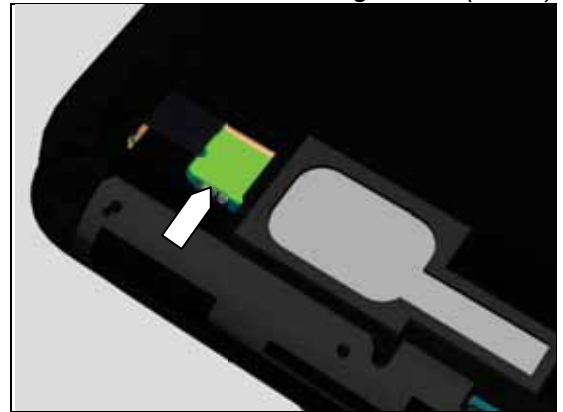
Troubleshooting Guide (mech)

Check:

Inspect the BtB connector of the Battery 2300mAh to Main PBA.

Action:

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



Problem Areas: Power

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



Telegram Channel: @JahanIC

Problem Areas

1.2 Keys

1.2.1 Back, Menu, Home and Multitask Keys

Action:

1. Refer to section 1.3 'Touch Screen'.



Telegram Channel: @JahanIC

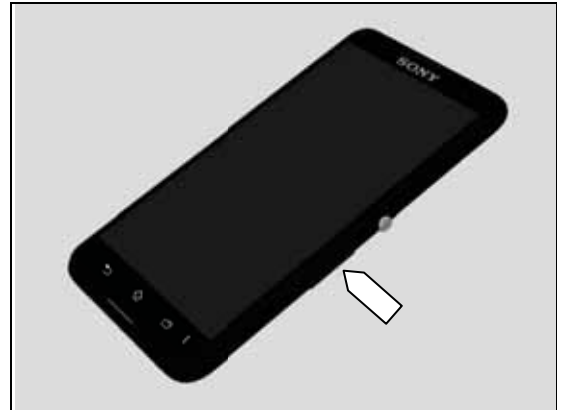
1.2.2 Volume Key

Check:

Inspect the external area of the volume key.

Action:

If dirty – clean it.

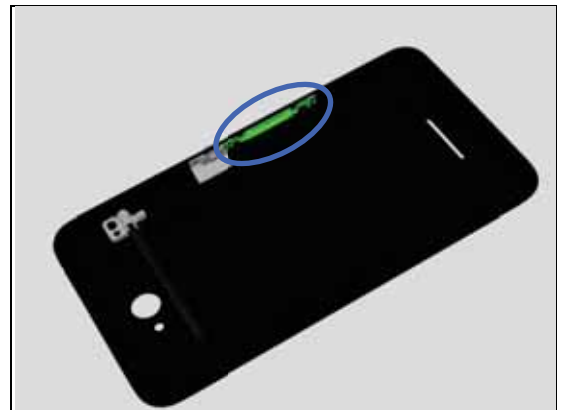


Check:

Inspect the Volume Keys of Battery Cover.

Action:

1. If dirty or oxidized – clean it.
2. If damaged – replace the Battery Cover.

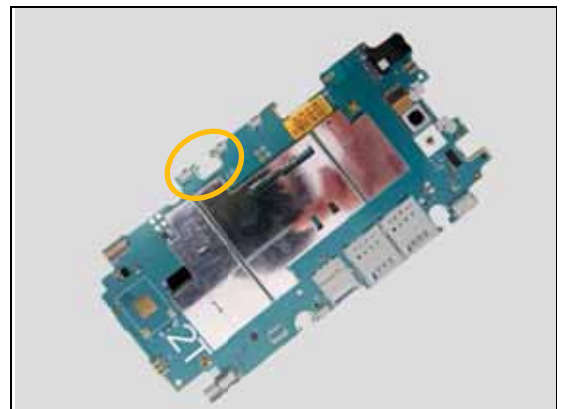


Check:

Inspect the Volume Switches on Main PBA.

Action:

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



Problem Areas: Keys

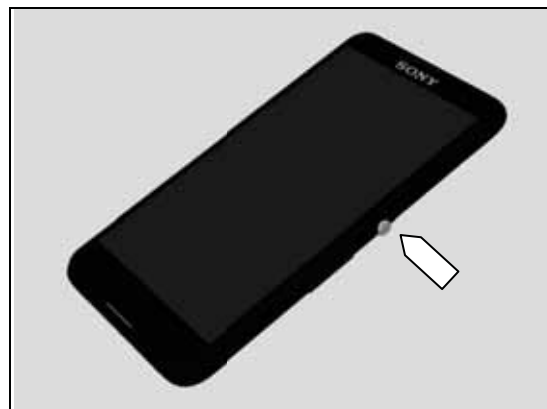
1.2.3 On/Off Key

Check:

Inspect the external area of the On/Off Key.

Action:

If dirty – clean it.



Check:

Inspect the Power Key of Battery Cover.

Action:

1. If dirty or oxidized – clean it.
2. If damaged – replace the Battery Cover.

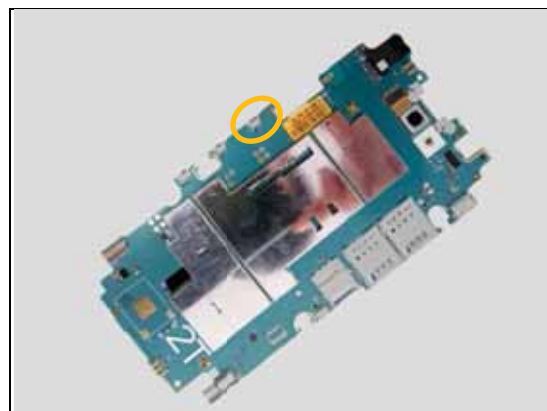


Check:

Inspect the Power Switch on Main PBA.

Action:

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



Telegram Channel: @JahanIC

Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Display.

Action:

1. If dirty – clean it.

Telegram Channel: @JahanIC

2. If scratched or damaged – replace the Touch Panel.

Check:

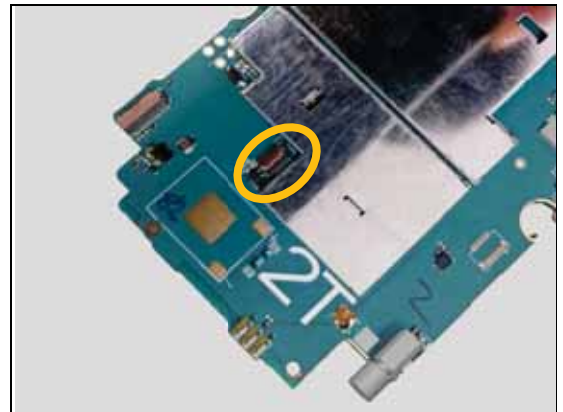
Inspect the Touch Panel FPC to Main PBA Zif connector.

Action:

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

3. If the Main PBA Zif connector or Touch Panel FPC is damaged – replace the Touch Panel.
4. Replace Main PBA.

Telegram Channel: @JahanIC



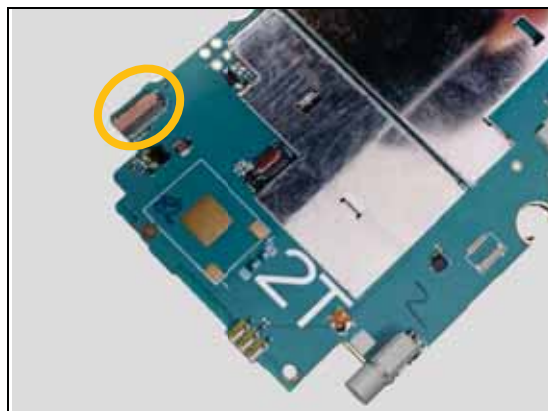
Problem Areas: Touch Screen

Check:

Inspect the LCD FPC to Main PBA Zif connector.

Action:

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

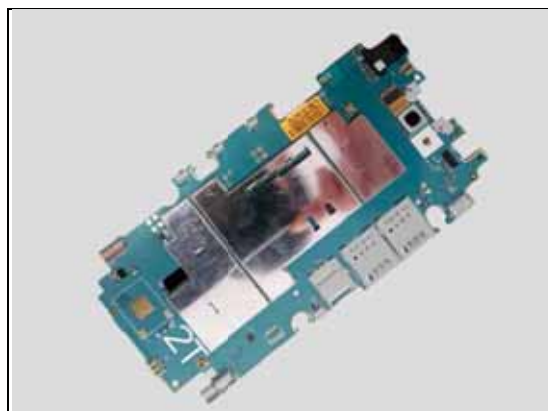


Telegram Channel: @JahanIC

3. Replace LCD TFT.



4. Replace Main PBA.



Telegram Channel: @JahanIC

Problem Areas

1.4 Display

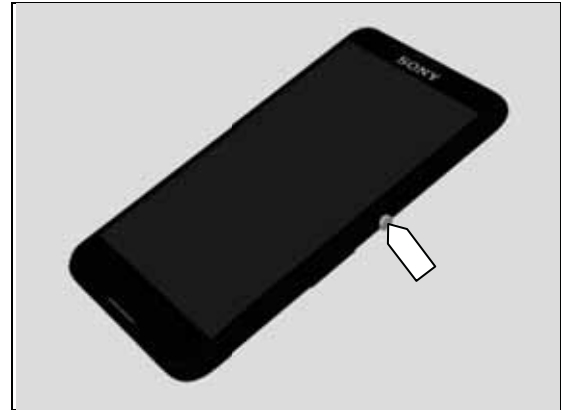
1.4.1 Graphics & Illumination

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 Power Key of Battery Cover.

Action:

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

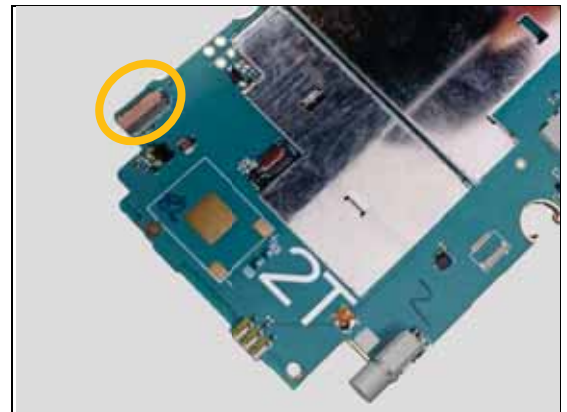


Check:

Inspect the LCD FPC to Main PBA Zif connector.

Action:

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



Telegram Channel: @JahanIC

Check:

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

Action:

1. If the display is still not working – Replace the LCD TFT.
2. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

1.5.1 LED/Illumination

Check:

Inspect external port of LED on the Front of phone.

Action:

1. If dirty – clean it.

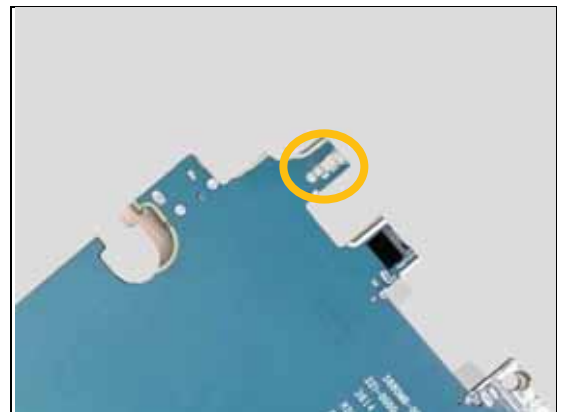


Check:

Inspect the LED located on Main PBA.

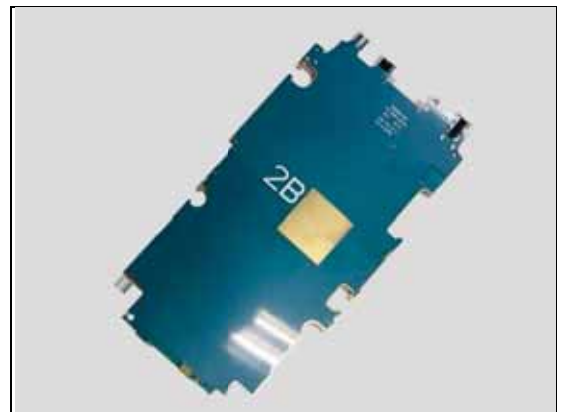
Action:

1. If dirty or oxidized – clean it.



Telegram Channel: @JahanIC

3. Replace Main PBA.



Problem Areas

1.6 Speaker

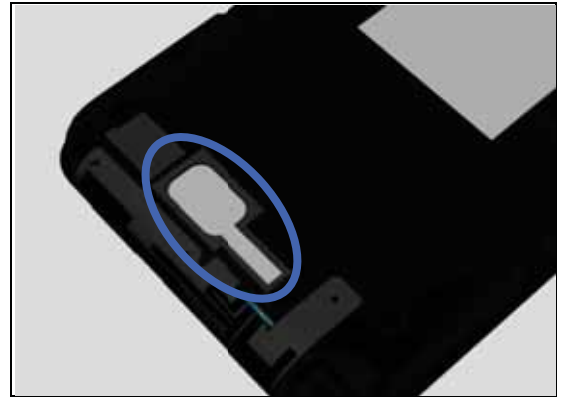
1.6.1 Loudspeaker

Check:

Inspect the Speaker Mesh on the Battery Cover.

Action:

1. If the Speaker Mesh is clogged – clean it.
2. If the Speaker Mesh is damaged – replace the SPK Sponge Black Mesh.

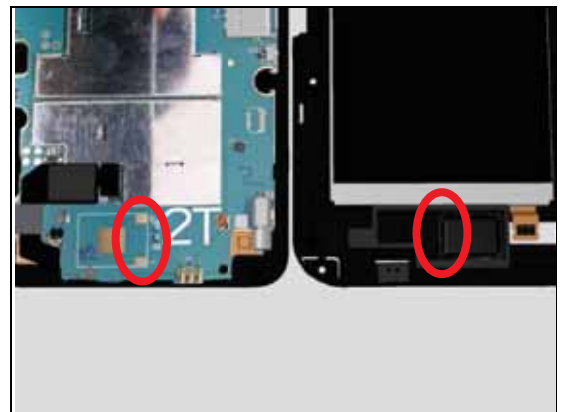


Check:

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

Action:

1. If dirty – clean them.

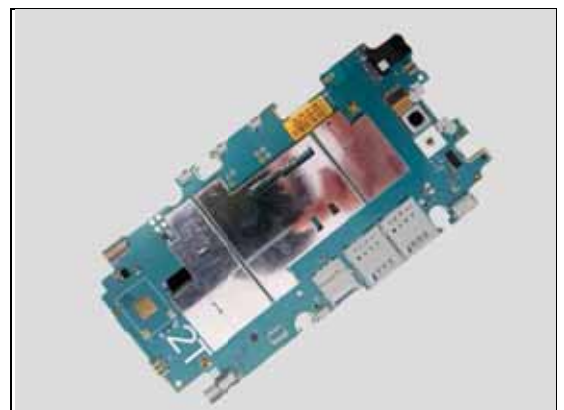


Telegram Channel: @JahanIC

2. If the contact pins of Loudspeaker or the Loudspeaker are damaged – replace the Loud Spkeaker



3. Replace Main PBA.



Problem Areas

1.7 Earphone

1.7.1 Ear Speaker

Check:

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

Action:

1. If clogged – clean it.

Telegram Channel: @JahanIC

Check:

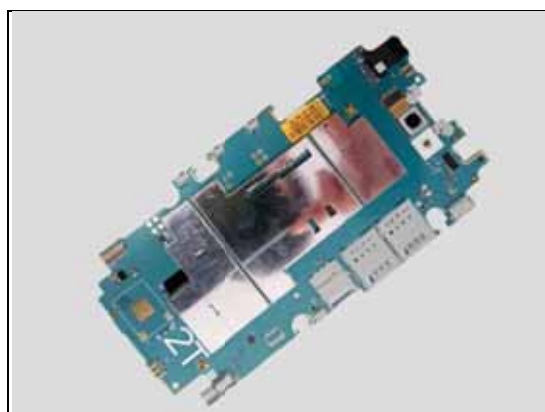
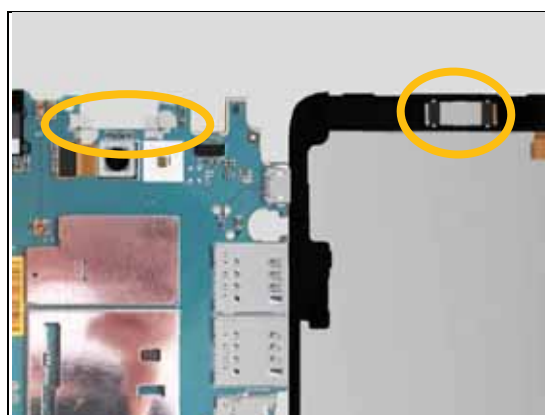
Inspect the contact pins of Receiver and the contact pads on the Main PBA.

Action:

1. If dirty – clean them.

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

3. Replace Main PBA.



Problem Areas

1.8 Microphone

1.8.1 Primary Microphone

Check:

Inspect the Mic Port located at the bottom of phone.

Action:

1. If clogged – clean it.



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



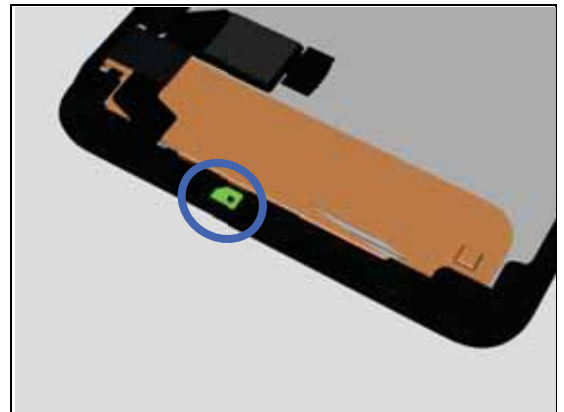
Telegram Channel: @JahanIC

Check:

Inspect the Mic Gasket on Front Cover Assy.

Action:

1. If dirty – clean.



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



Problem Areas: Microphone

Check:

Inspect the Microphone located on the Main PBA.

Action:

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



Telegram Channel: @JahanIC

1.9 Vibrator

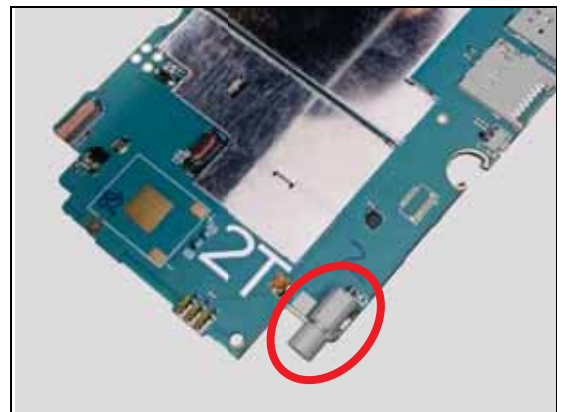
1.9.1 Vibrator not generating alerts

Check:

Inspect the Vibrator on Main PBA.

Action:

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



Telegram Channel: @JahanIC

Problem Areas

1.10 Camera

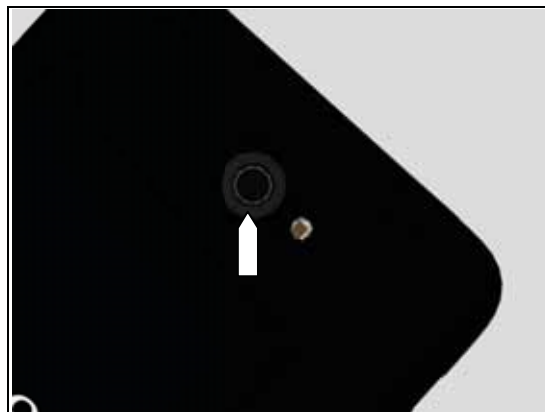
1.10.1 Main Camera

Check:

Inspect the external area of camera window.

Action:

1. If dirty – clean it.



Telegram Channel: @JahanIC

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

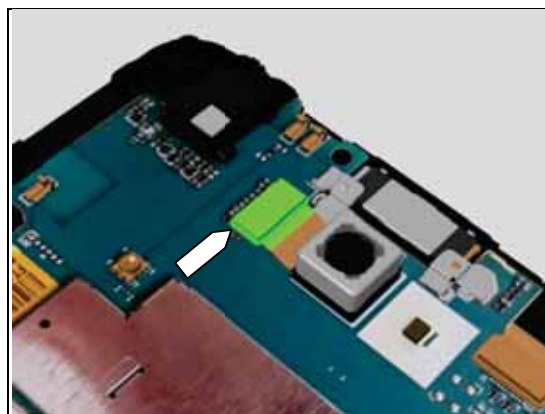


Check:

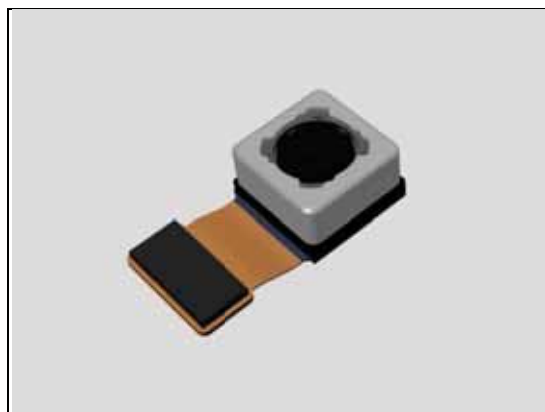
Inspect the BtB connector of Camera Main to Main PBA.

Action:

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



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



Problem Areas: Camera

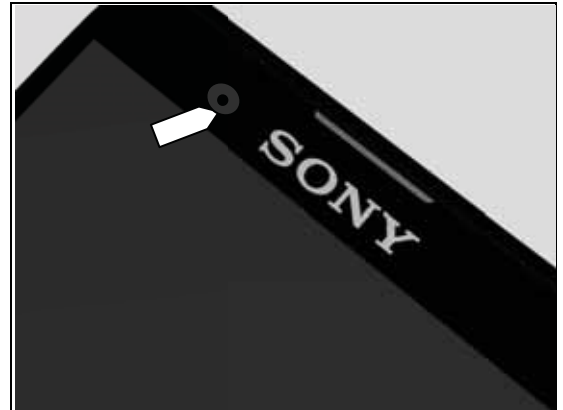
1.10.2 Video Call Camera defects

Check:

Inspect the external area of the Camera Chat window.

Action:

1. If dirty – clean it.



Telegram Channel: @JahanIC

2. If scratched or damaged – replace the Touch Panel.



Check:

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

Action:

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



Telegram Channel: @JahanIC

Problem Areas

1.11 Flash LED

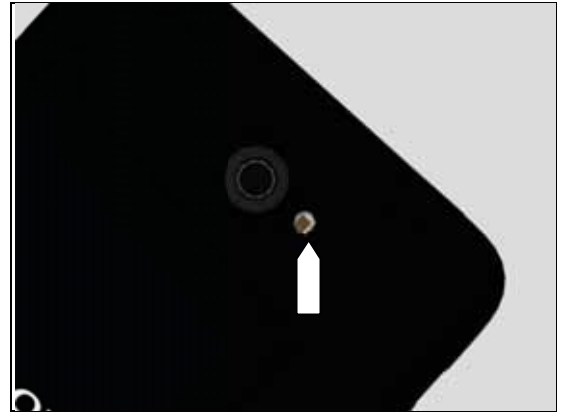
1.11.1 Flash LED not flashing

Check:

Inspect the external area of the flash LED window.

Action:

1. If dirty – clean it.



Telegram Channel: @JahanIC

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

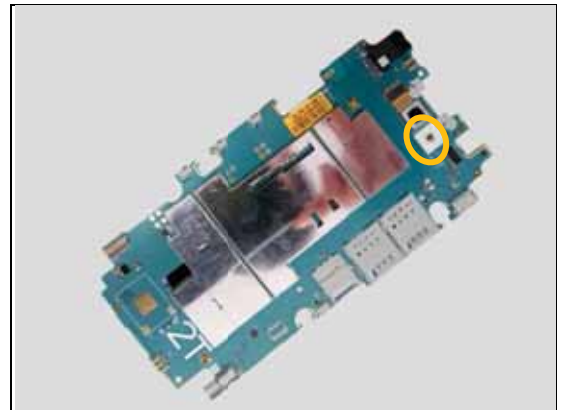


Check:

Inspect the flash LED on the Main PBA.

Action:

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



Problem Areas

1.12 Bluetooth and WLAN

1.12.1 Bluetooth or WLAN connection failure

Check:

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

Action:

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

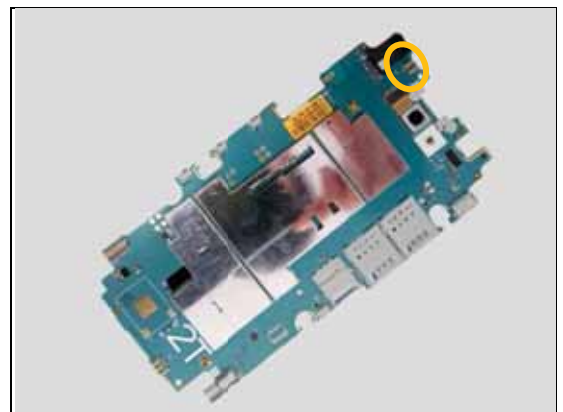
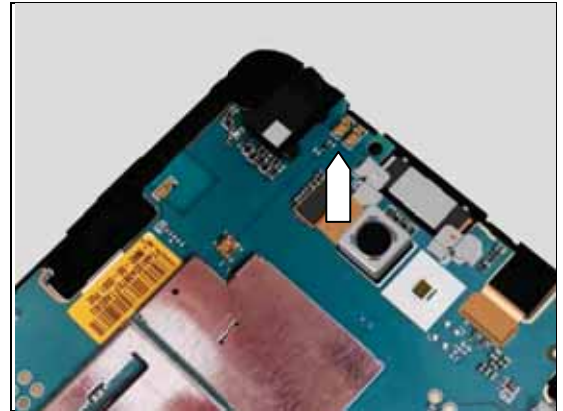
Telegram Channel: @JahanIC

2. If dirty or oxidized clean Antenna BT + WLAN contact pads on Rear Cover Assy.

3. If the antenna is damaged – replace the Rear Cover Assy.

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

Telegram Channel: @JahanIC



Problem Areas

1.13 GPS

1.13.1 GPS malfunctions

Check:

Inspect the Antenna GPS contact pins on Main PBA.

Action:

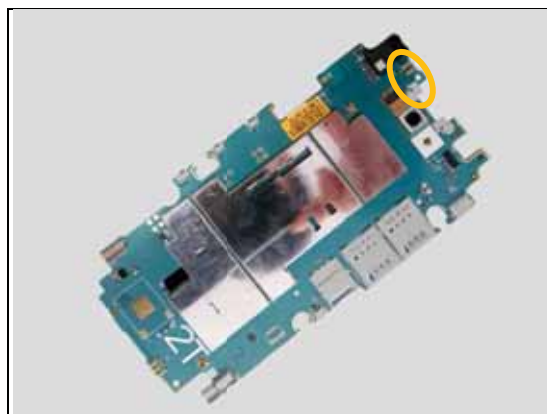
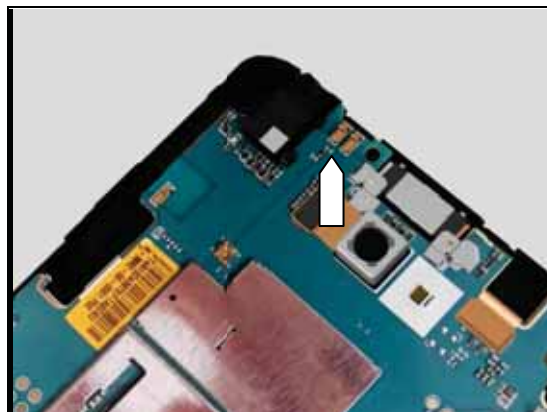
1. If dirty or oxidized – clean the pads and pins.

Telegram Channel: @JahanIC

2. If dirty or oxidized clean Antenna GPS contact pads on Rear Cover Assy

3. If the antenna is damaged – replace the Rear Cover Assy.

2. Replace the Main PBA.



Telegram Channel: @JahanIC

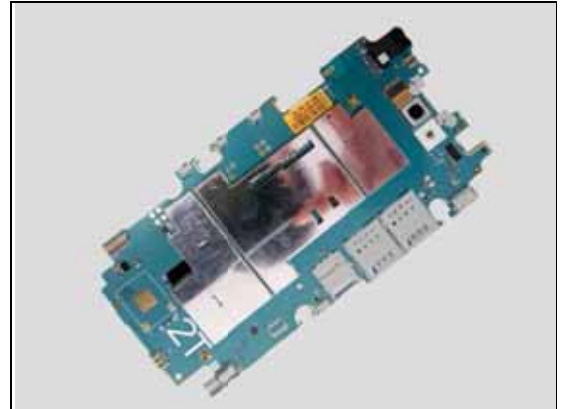
Problem Areas

1.14 Accelerometer

1.14.1 Accelerometer test fails

Action:

Replace Main PBA.



Telegram Channel: @JahanIC

Problem Areas

1.15 Ambient Light Sensor

1.15.1 Light Sensor malfunctions

Check:

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

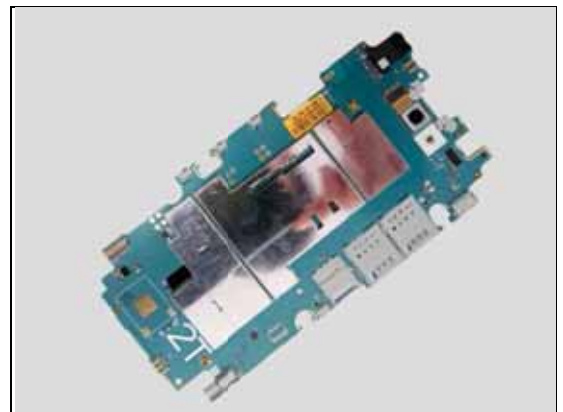
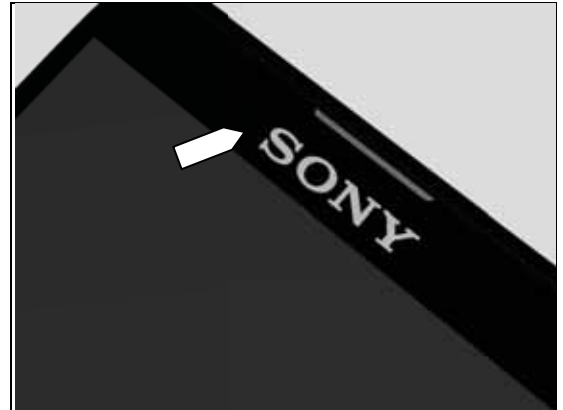
Action:

1. If dirty – clean it.

2. If scratched or damaged – replace the Touch Panel.

Telegram Channel: @JahanIC

3. Replace Main PBA.



Problem Areas

1.16 Proximity Switch

1.16.1 Proximity switch malfunctions

Check:

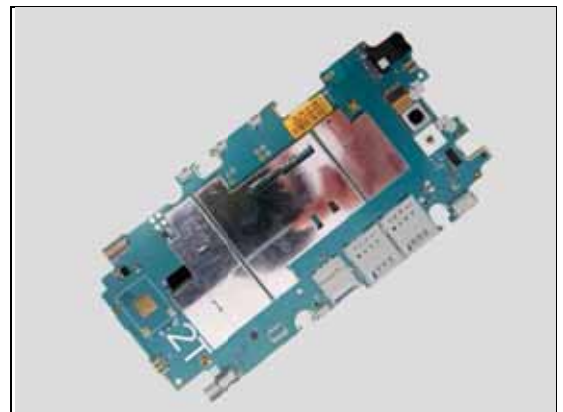
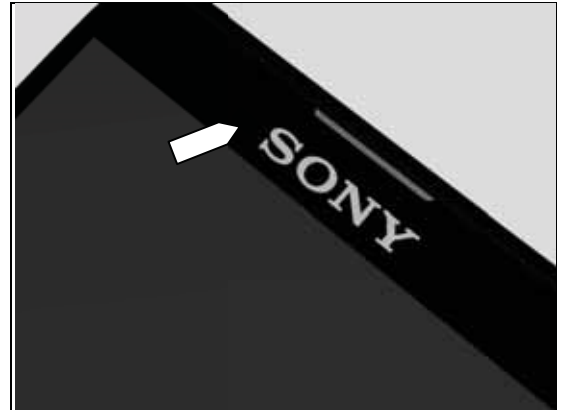
Inspect the external window area of Proximity sensor located on the front of the phone.

Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Touch Panel.

Telegram Channel: [@JahanIC](#)

3. Replace Main PBA



Problem Areas

1.17 Pressure Sensor

1.17.1 Pressure Sensor test fails

N/A. No Pressure sensor in the phone.

Telegram Channel: @JahanIC

1.18 Water Resistance

1.18.1 Water Resistance fails

N/A. Not Water Resistant phone.

Problem Areas

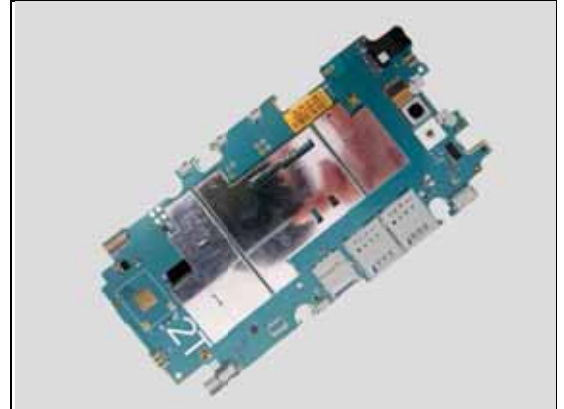
1.19 Real Time Clock

1.19.1 Real time clock test fails

Action:

Replace Main PBA.

Telegram Channel: @JahanIC

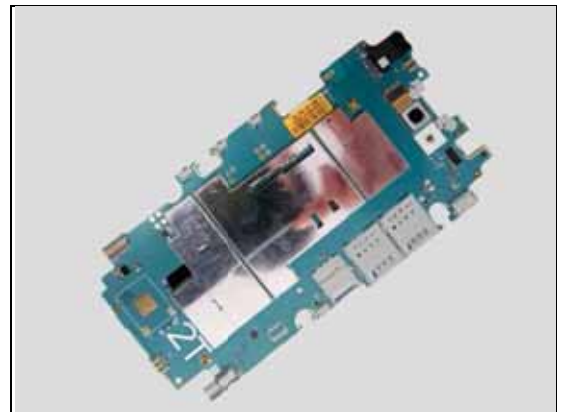


1.20 Total call time

1.20.1 Total call time fails

Action:

Replace Main PBA.



Problem Areas

1.21 External

1.21.1 Memory Card not detected

Check:

Inspect that if a memory card is properly inserted.

Action:

If not properly inserted – insert the memory card correctly.

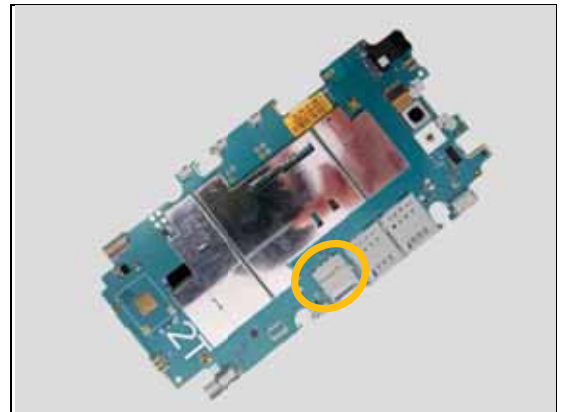


Check:

Inspect the memory card holder on Main PBA.

Action:

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

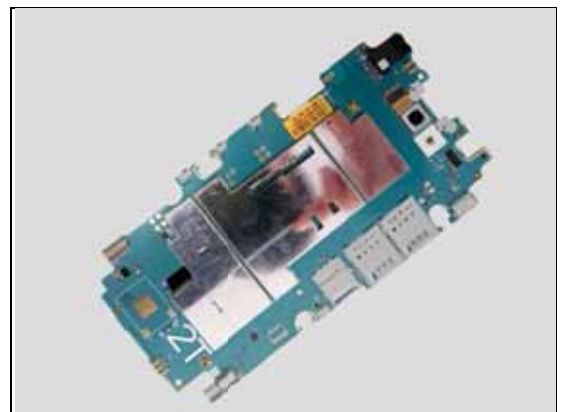


1.22 Security

1.22.1 Security fails

Action:

Replace Main PBA.



Telegram Channel: @JahanIC

Problem Areas

1.23 FM Radio

1.23.1 No/Poor FM Radio reception

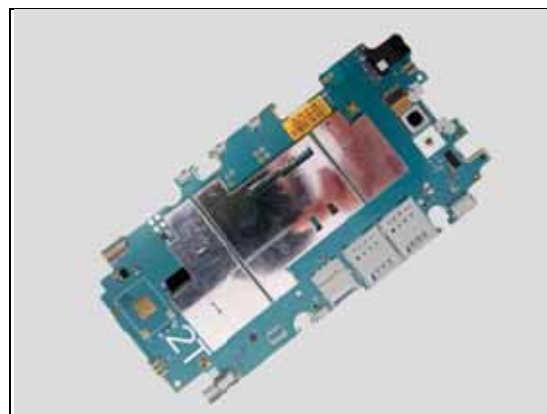
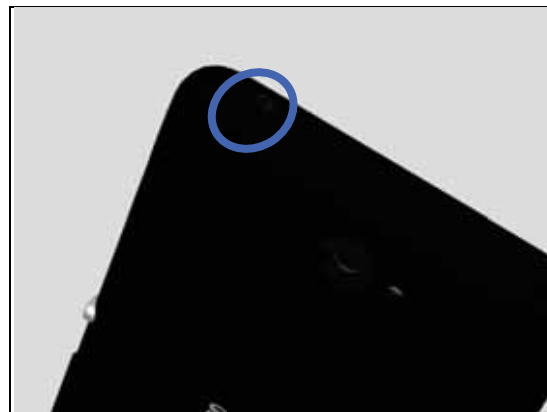
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Telegram Channel: @JahanIC

Problem Areas

1.24 Battery Health test

1.24.1 Battery Health test fails

N/A.

1.25 Flip Slider Counter

1.25.1 Flip Slider Counter fails

N/A. Not slider phone.

1.26 Verify Certificates

1.26.1 Verify Certificates fails

Action:

N/A.

1.27 IrDA Test

1.27.1 IrDA test fails

N/A. No IrDA functionality in the phone.

Problem Areas

1.28 TV-Out Test

1.28.1 TV-Out test fails

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

Problem Areas

1.29 Network & Signal

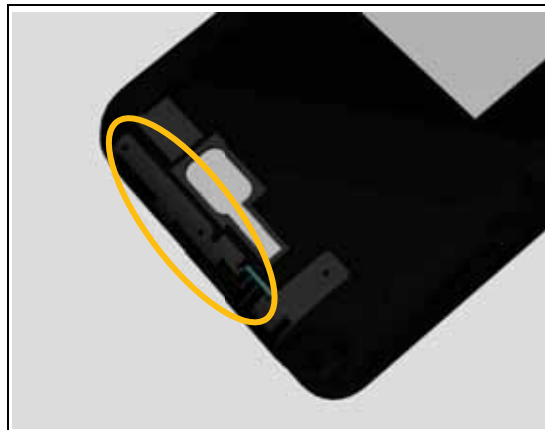
1.29.1 No/Poor signal

Check:

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

Action:

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

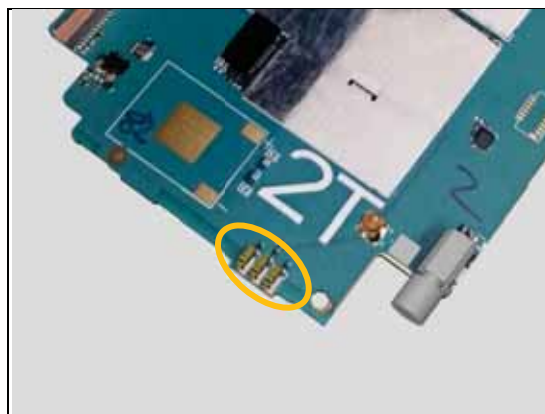


Check:

Inspect the Main PBA assembly.

Action:

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



Problem Areas

1.30 SIM

1.30.1 SIM not detected

Check:

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

(Picture illustration shown dual SIM variant)

Action:

If dirty or clogged – clean the external port.

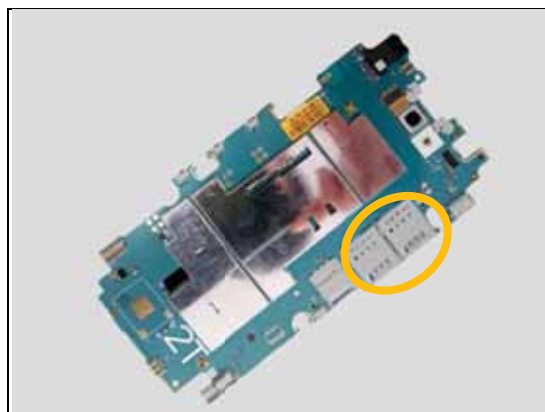


Check:

Inspect the SIM card holder on Main PBA.

Action:

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



1.30.2 Incorrect UIM or SIM indicated

Check:

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

Action:

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



Problem Areas

1.31 Charging

1.31.1 Battery will not charge by USB connector

Check:

Inspect the USB connector.

Action:

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

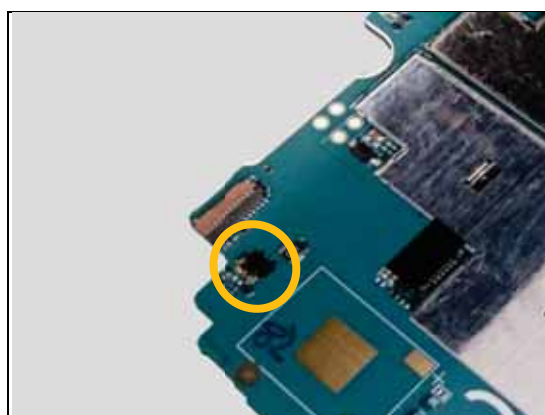


Check:

Inspect the BtB Connector of the Battery to Main PBA.

Action:

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



3. If the BtB connector on Battery 2300 mAh is damaged – replace the Battery 2300 mAh.

4. Replace Main PBA.



Problem Areas

1.32 Hands-Free by Wire

1.32.1 Connection to portable Hands-free fails

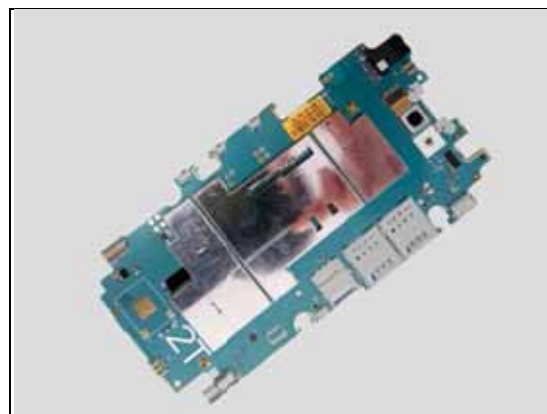
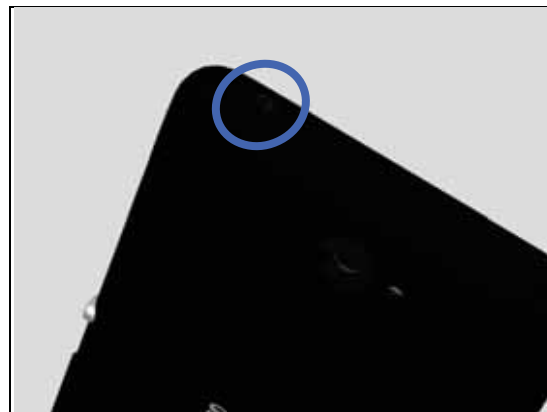
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. Replace Main PBA.



Problem Areas

1.33 Data Communication

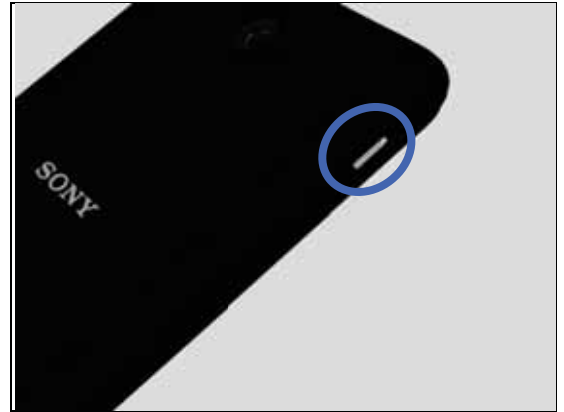
1.33.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.34 Mobile TV (only for E2124)

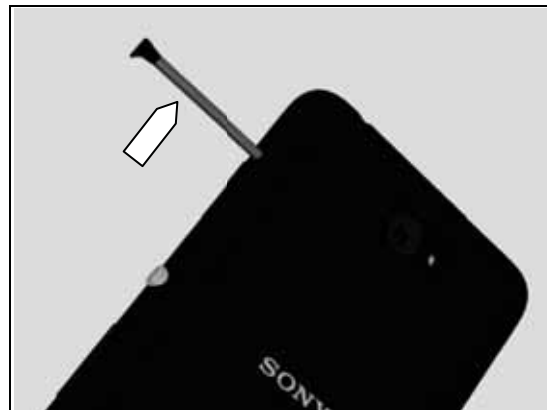
1.34.1 Mobile TV fails

Check:

Inspect the external DTV Antenna

Action:

If dirty or clogged – clean the DTV Antenna.



Check:

Inspect the Battery Cover.

Action:

1. If not properly connected – disconnect and reconnect it.
2. Replace Battery Cover (E2124 variant only)

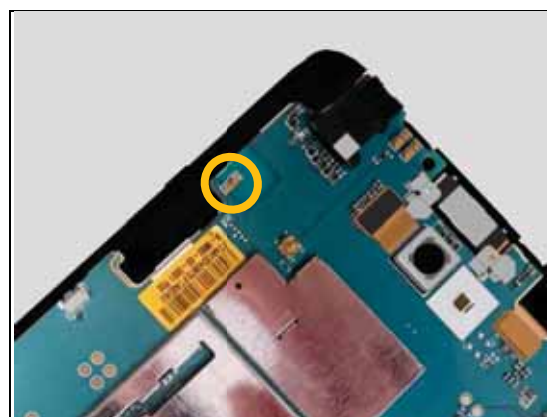


Check:

Inspect the contact pin on the Main PBA.

Action:

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



2 Revision History

Rev.	Date	Changes / Comments
1	2015-Feb-11	Released
2	2015-Feb-27	Front Page Error Fixed.
3	2015-Mar-02	