

## Troubleshooting Guide

- mechanical -



*Xperia™ XA Ultra*

*F3211, F3212, F3213, F3215, F3216*

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

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

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

## 1 Problem Areas

### 1.1 Power

#### 1.1.1 Cannot power on or switch off randomly

**Check:**

Check whether the Notification LED is on by pressing the on/off key.

**Action:**

If NO Notification LED is detected, perform a force shut down by pressing the key combination "On/off key and volume up key" for 10 seconds and then power on the unit again.

**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 Vibrating and the Notification LED is detected by pressing the on/off key, check that the battery is charging when connected to a charger.

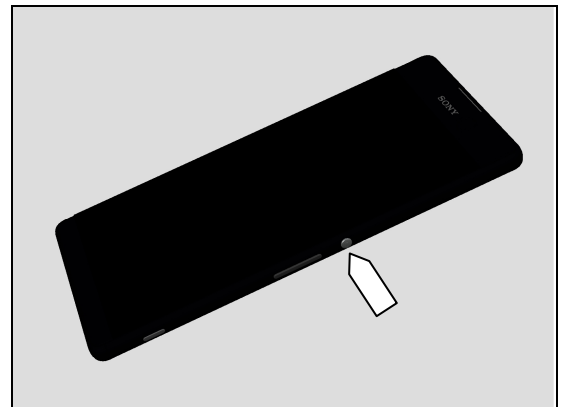
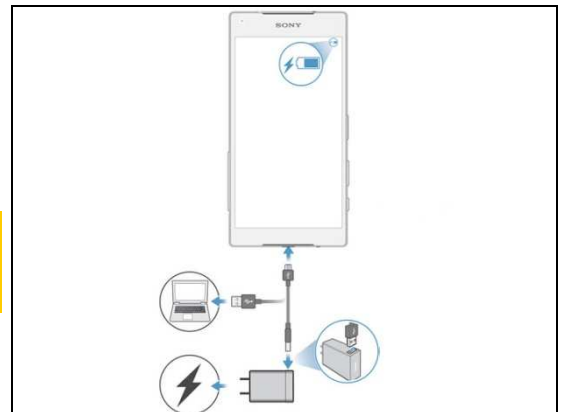
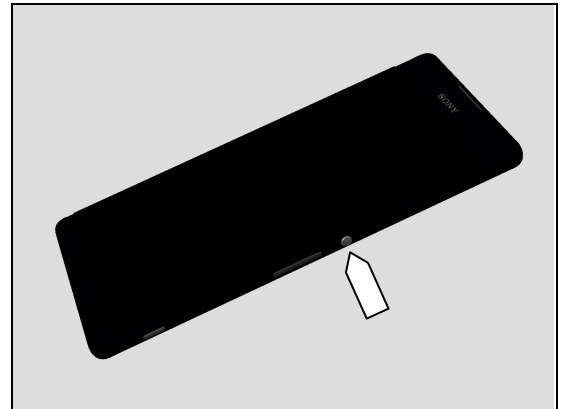
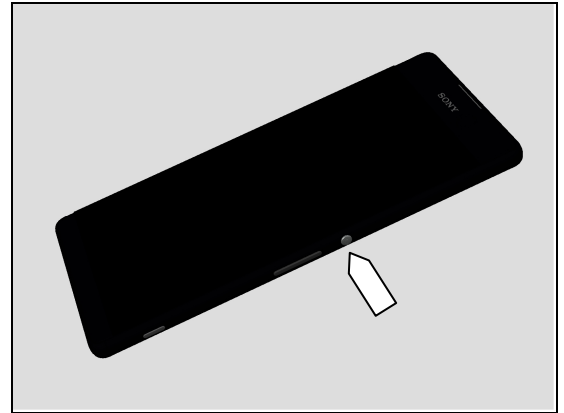
**Follow Test Instruction - mechanical chapter 2.3.3 .1(Charging via Charger or Computer), 2.3.3.2 Diagnostic Battery / Charging status.**

**Check:**

Inspect the on/off key.

**Action:**

Refer to section 1.2.3 'On/Off Key'.



## Problem Areas: Power

### Check:

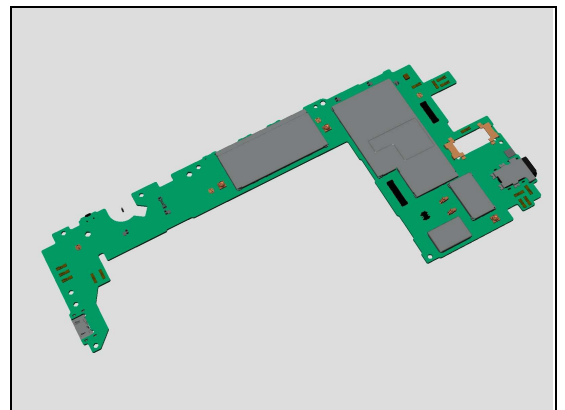
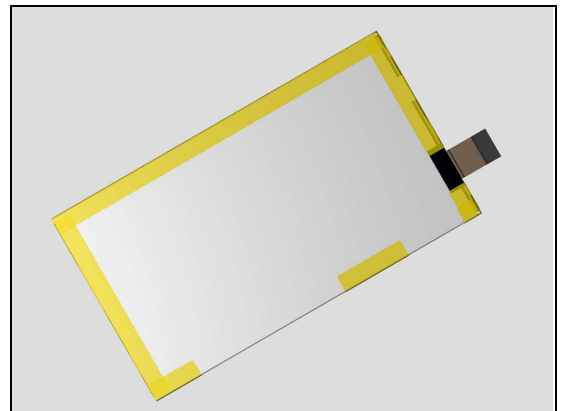
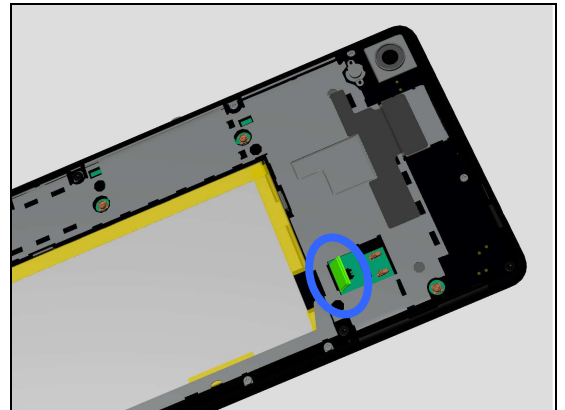
Inspect the BtB connector of the Battery to Main PBA.

### Action:

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

3. If the BtB connector, the FPC or the Battery itself is damaged – replace the Battery.

4. Replace Main PBA.



## Problem Areas

### 1.2 Keys

#### 1.2.1 Back, Home and Multitask Keys

**Action:**

Refer to section 1.3 'Touch Screen'.



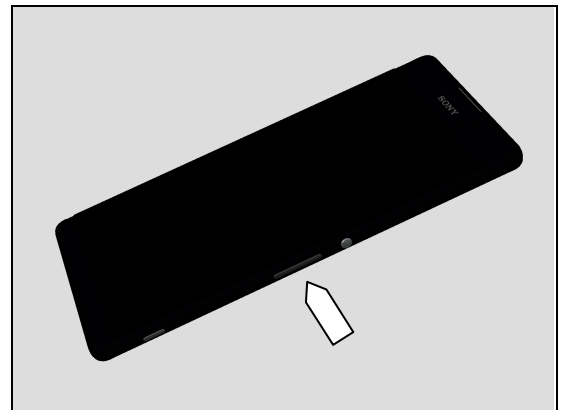
#### 1.2.2 Volume Key

**Check:**

Inspect the external area of the Volume Key.

**Action:**

If dirty – clean it.

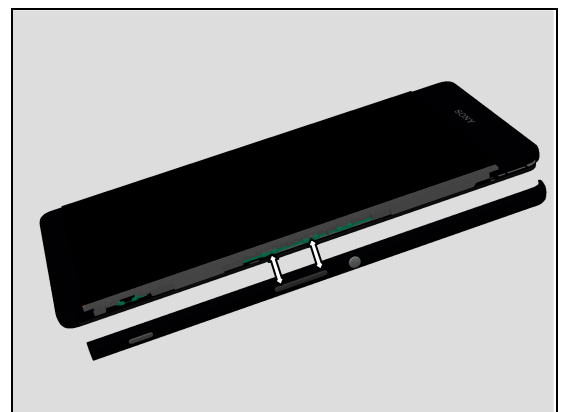


**Check:**

Inspect the Volume Key of the Side Panel Assy Keys.

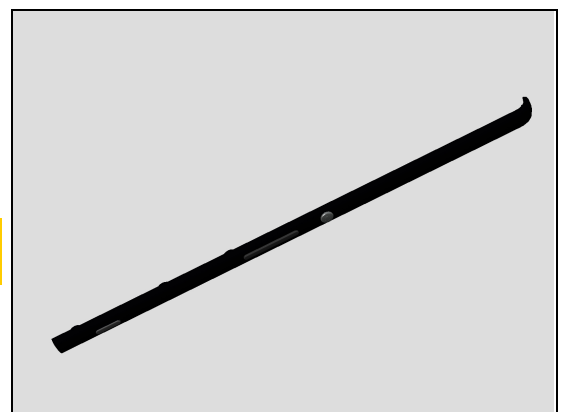
**Action:**

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



3. If the Side Panel Assy Keys is damaged – replace it.
4. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of volume key switches!**



## Problem Areas: Keys

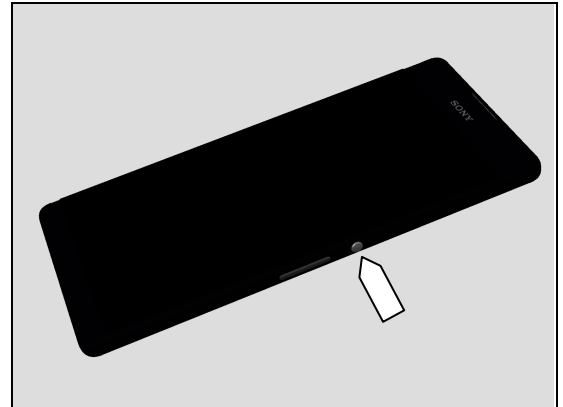
### 1.2.3 On/Off Key

**Check:**

Inspect the external area of the On/off key.

**Action:**

If dirty – clean it.

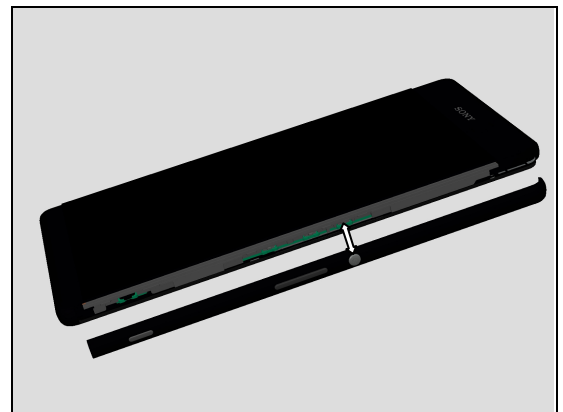


**Check:**

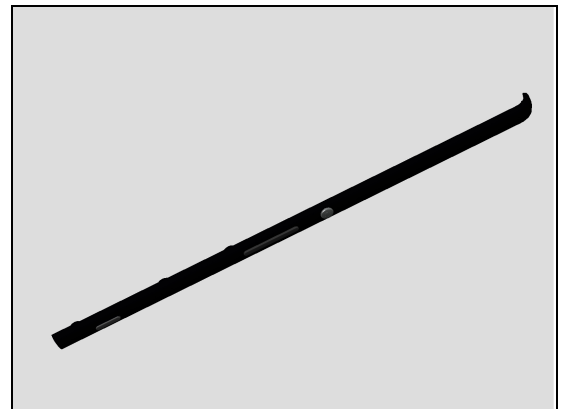
Inspect the On/off key of the Side Panel Assy Keys.

**Action:**

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

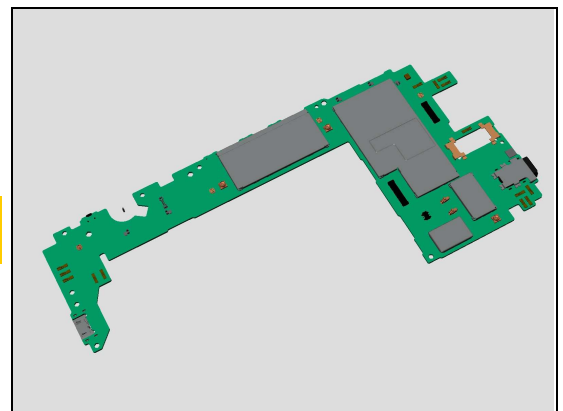


3. If the On/off key or the Side Panel Assy Keys is damaged – replace the Side Panel Assy Keys.



4. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of On/off key switch!**



## Problem Areas: Keys

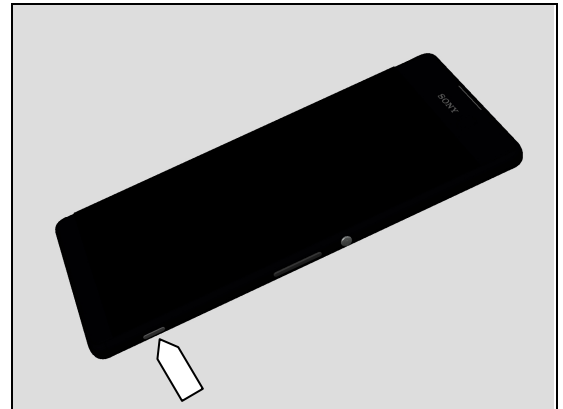
### 1.2.4 Camera Key

**Check:**

Inspect the external area of the Camera Key.

**Action:**

If dirty – clean it.

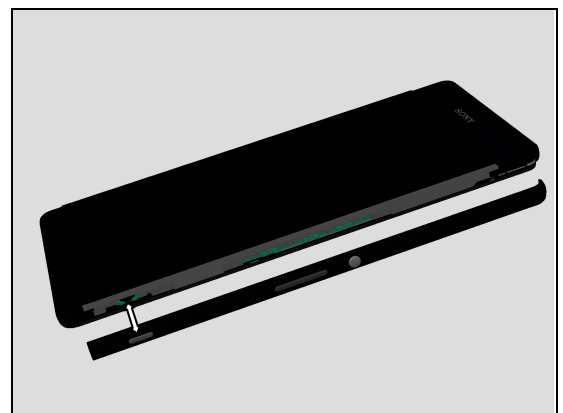


**Check:**

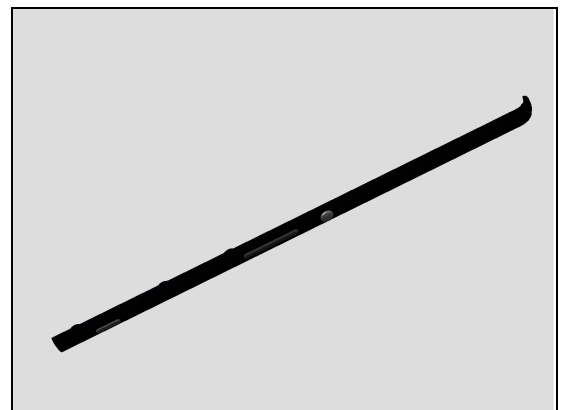
Inspect the Camera Key of the Side Panel Assy Keys.

**Action:**

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

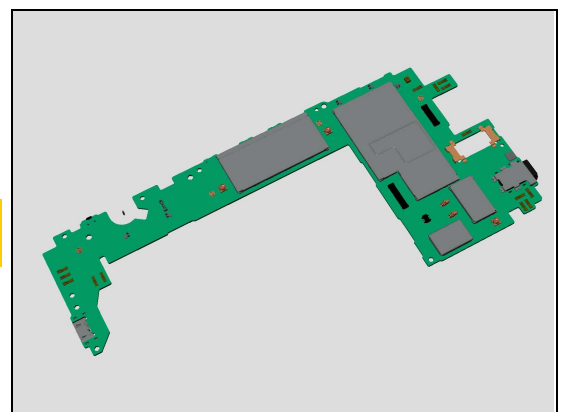


3. If the camera key or the Side Panel Assy Keys is damaged – replace the Side Panel Assy Keys.



4. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of camera key switch!**





## 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.

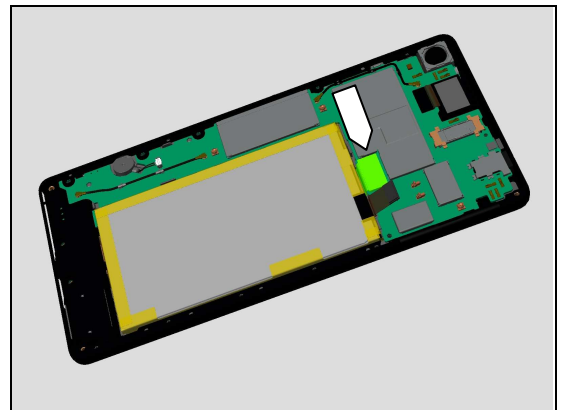


**Check:**

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.

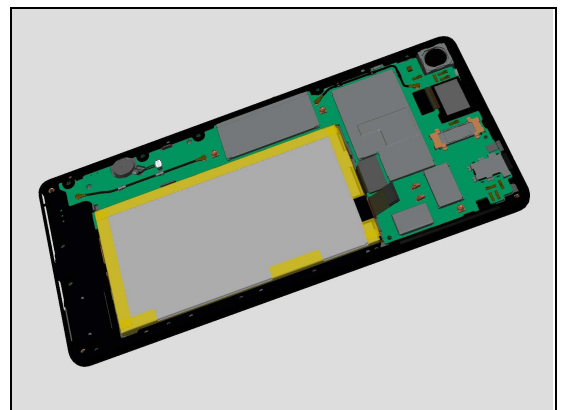


**Check:**

Replace the Front Cover Assy with a known working one and test the phone.

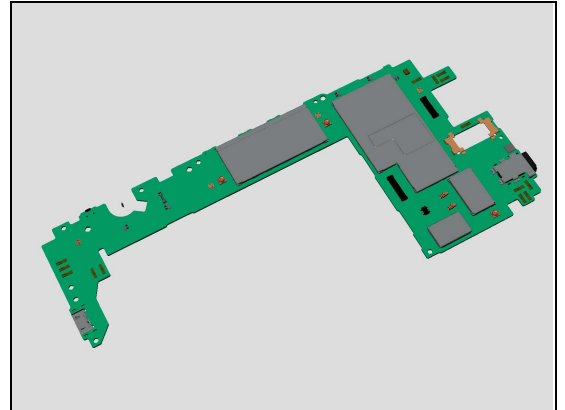
**Action:**

1. If the Touch Panel is working – Replace the Front Cover Assy



## Problem Areas: Touch Panel

2. If Touch Panel is still not working – Replace the Main PBA.



## Problem Areas

### 1.4 Display

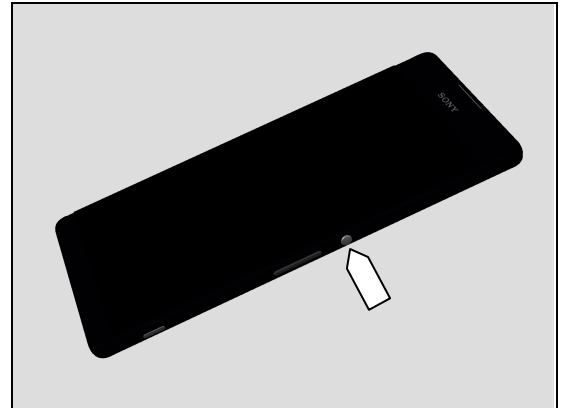
#### 1.4.1 Graphics & Illumination

**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'.

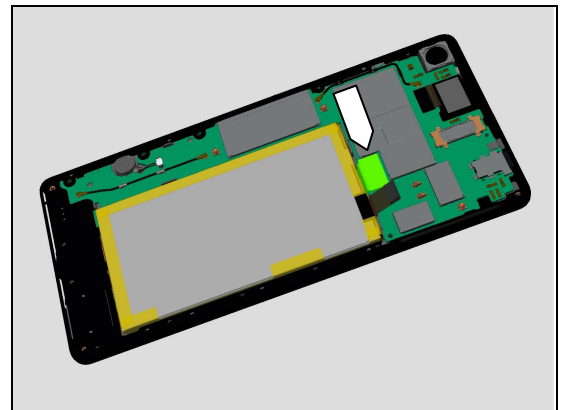


**Check:**

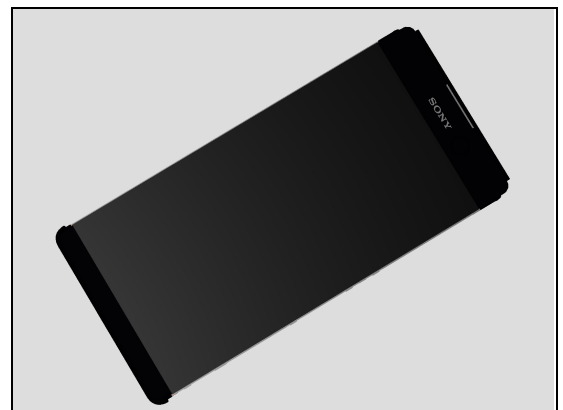
Inspect the BtB connector of Front Cover Assy to Main PBA.

**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.

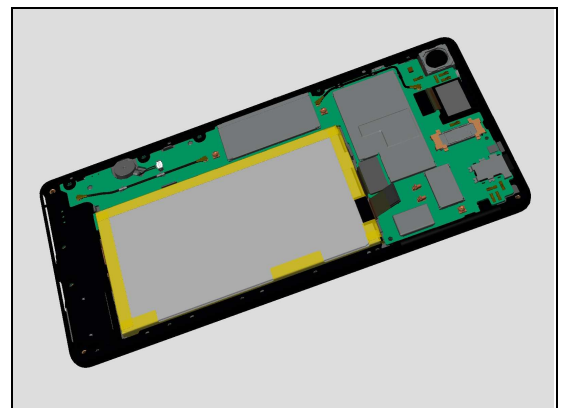


**Check:**

Replace the Front Cover Assy with a known working one and test the phone.

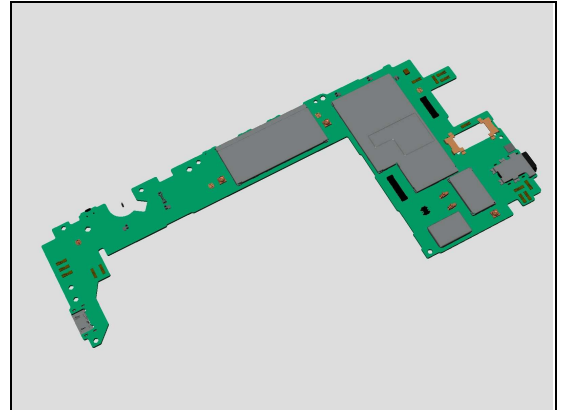
**Action:**

1. If the Display is working well – Replace the Front Cover Assy.



## Problem Areas: Display

2. If Touch Panel is still not working – Replace the 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.



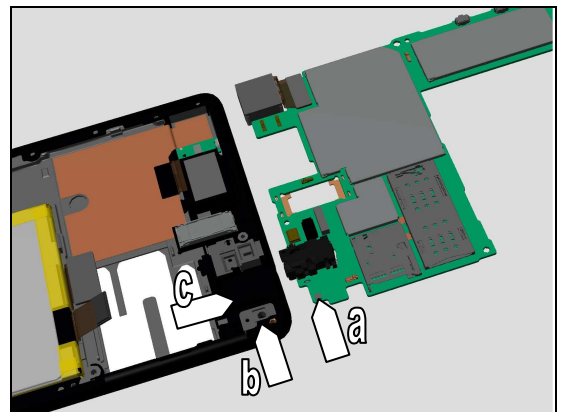
**Check:**

Inspect the

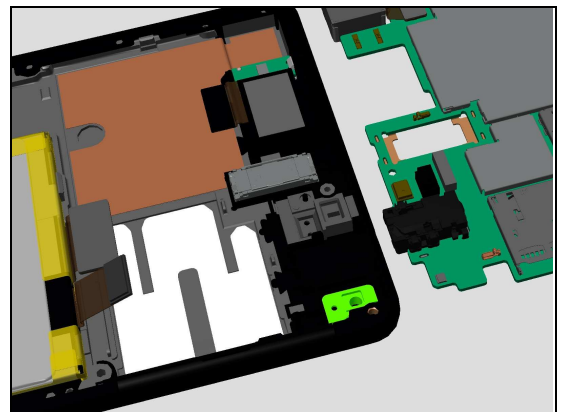
- a. Notification LED on Main PBA
- b. LED rubber of the Front Cover Assy
- c. LED window on Front Cover Assy.

**Action:**

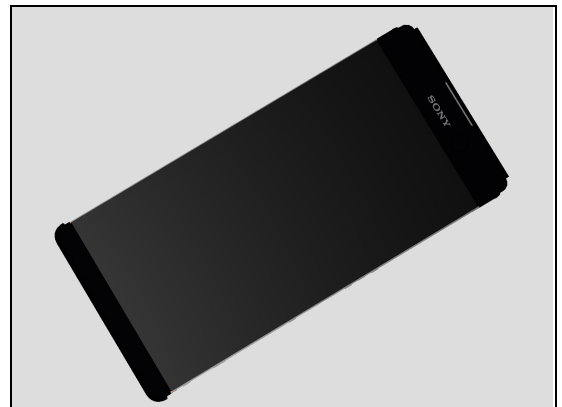
1. If dirty or oxidized – clean it.



2. If LED Rubber is not properly placed – disassemble and reassemble it.



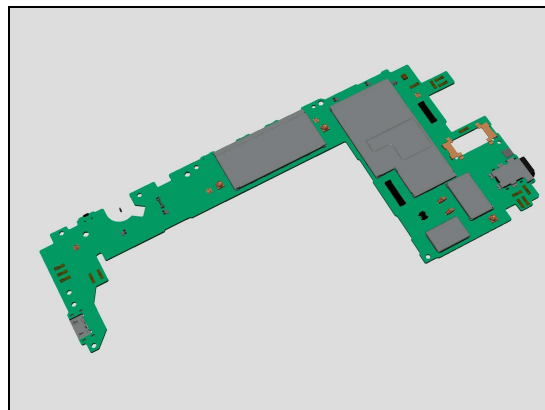
3. If the LED Window is damaged – Replace the Front Cover Assy.



## Problem Areas: LED

4. Replace the Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of LED!**



## Problem Areas

### 1.6 Proximity Switch

#### 1.6.1 Proximity Switch malfunctions

**Check:**

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

**Action:**

1. If dirty – clean it.



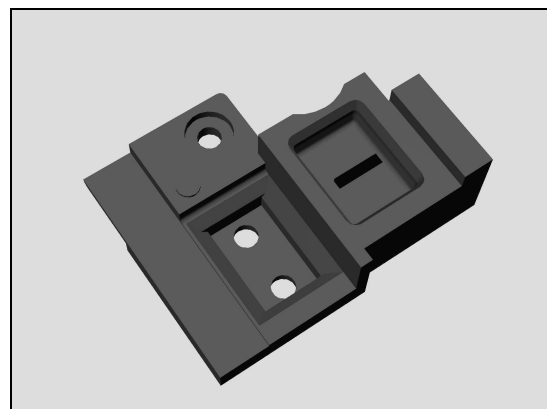
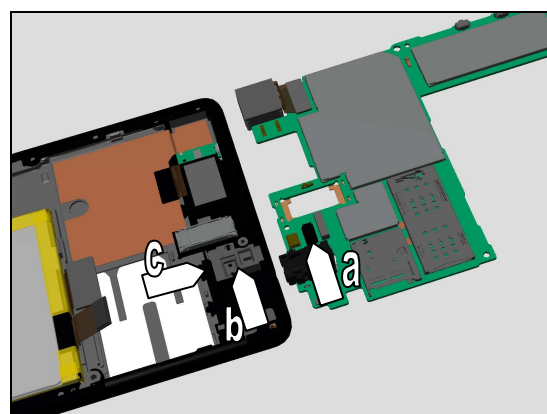
**Follow 1289-2983 Sony Mobile Repair Application – mechanical to run P-sensor Calibration first!**

**Check:**

- a. Proximity Switch on Main PBA
- b. P-Sensor rubber of the Front Cover Assy
- c. Proximity Switch window on Front Cover Assy.

**Action:**

1. If dirty or oxidized – clean it.
2. If the P-Sensor rubber is not properly placed - disassemble and reassemble it.
3. If the P-Sensor rubber is damaged – replace it

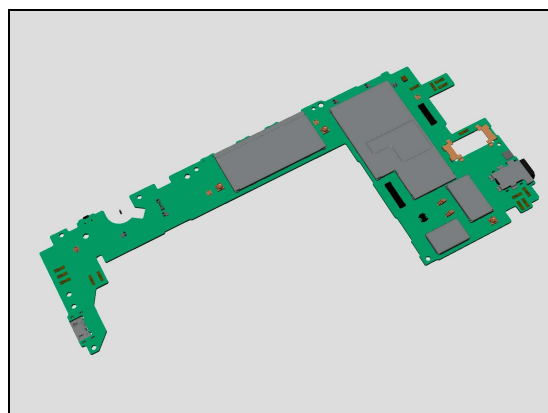


## Problem Areas: Proximity Switch

4 If the Proximity Switch window on Front Cover Assy is scratched or damaged – Replace the Front Cover Assy.



5. Replace the Main PBA.



**Follow 1289-2983 Sony Mobile Repair Application – mechanical to run P-sensor Calibration!**





## Problem Areas

### 1.7 Speaker

#### 1.7.1 Loudspeaker

**Check:**

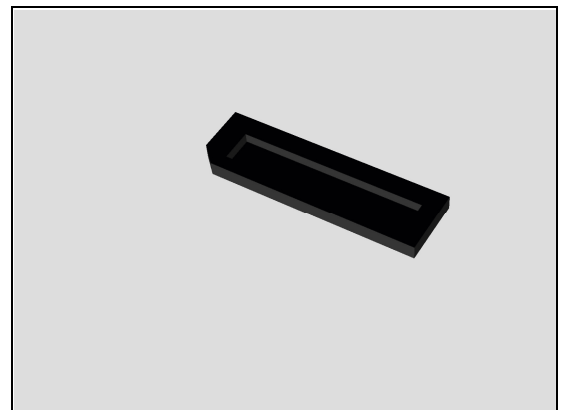
Inspect the Loudspeaker's external port on the Front Cover Assy.

**Action:**

1. If clogged – clean it.



2. If damaged – replace the Speaker Mesh Deco.

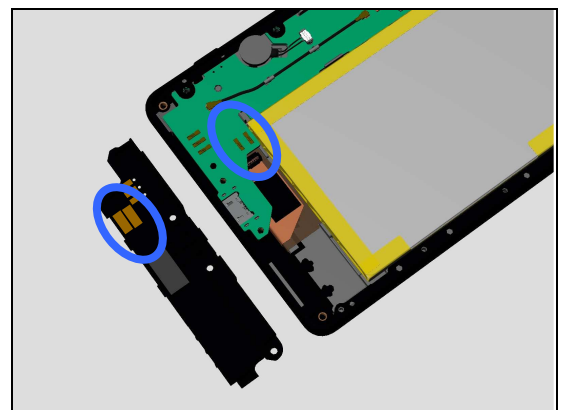


**Check:**

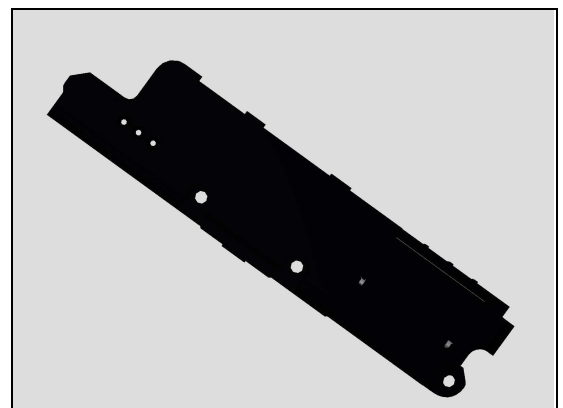
Inspect the pins on the Main PBA and contact pads on Antenna Module.

**Action:**

1. If contact pins on the Main PBA or pads on the Antenna Module are dirty or oxidized – clean them.



2. If Speaker is damaged, replace the Antenna Module.



## Problem Areas: Speaker

### Check:

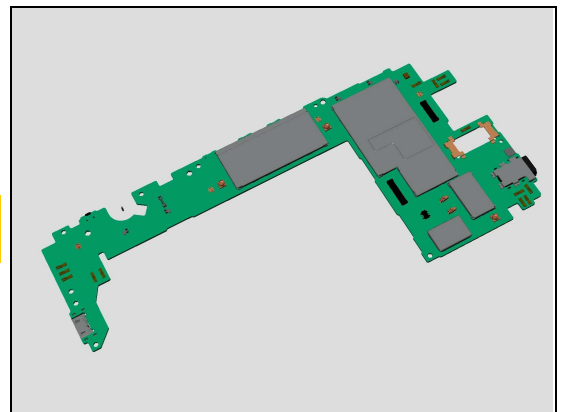
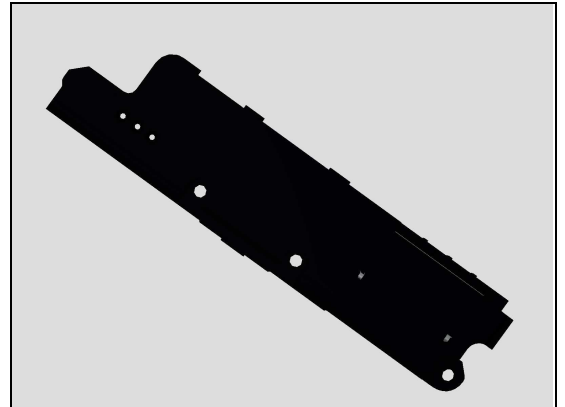
Replace the Antenna Module with a known working one and test the phone.

### Action:

1. If the speaker is working – Replace the Antenna Module.

2. If its still not working - Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins for Speaker!**



## Problem Areas

### 1.8 Earphone

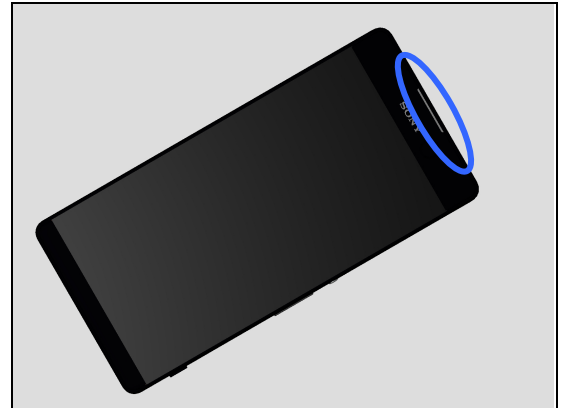
#### 1.8.1 Ear Speaker

**Check:**

Inspect the external port of Ear speaker on the Front Cover Assy.

**Action:**

1. If clogged – clean it.

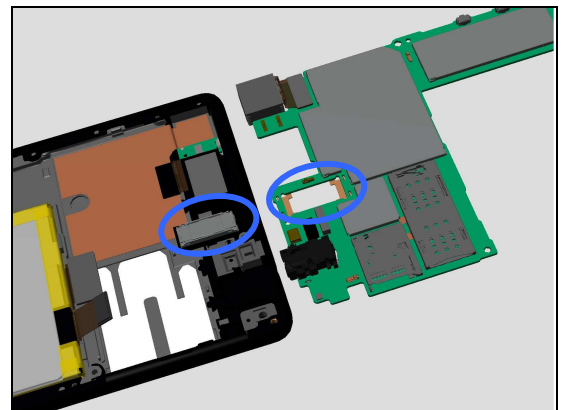


**Check:**

Inspect the contact pads on the Main PBA and the contact pins on the Ear speaker.

**Action:**

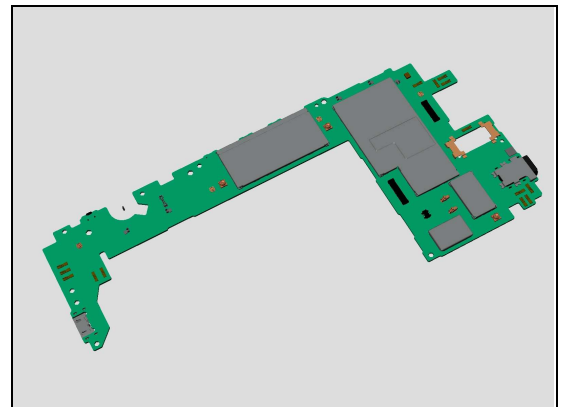
1. If contact pins on the Main PBA or pads on the Antenna Module are dirty or oxidized – clean them.



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



3. Replace Main PBA.



## Problem Areas

### 1.9 Microphone

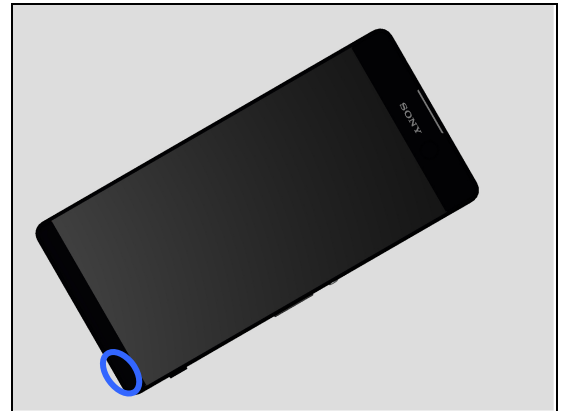
#### 1.9.1 Microphone

**Check:**

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

**Action:**

1. If clogged – clean it.



**Check:**

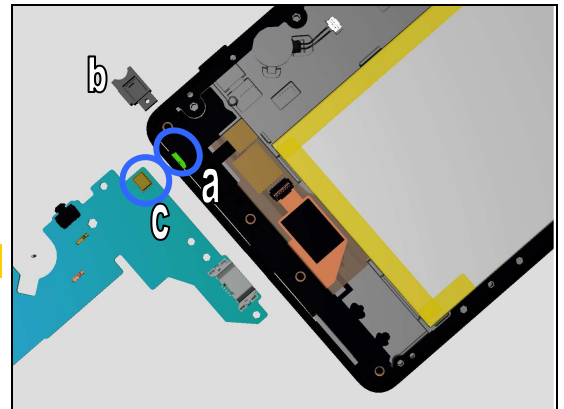
Inspect the Main Mic Mesh on Front Cover Assy (a), Microphone rubber (b) and Microphone on Main PBA (c).

**Action:**

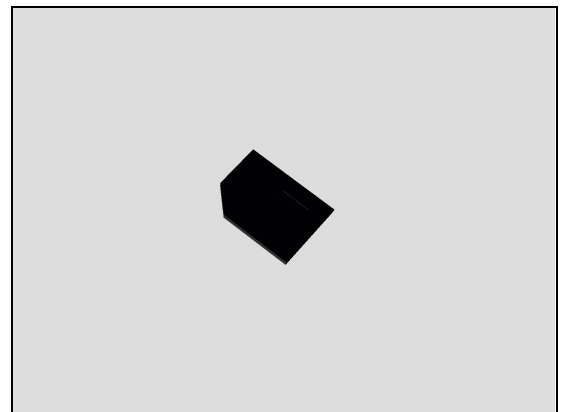
1. If dirty or oxidized – clean them.

**No liquid allowed cleaning the Microphone (c)!**

2. If the Microphone rubber (b) is not properly placed – disassemble and reassemble it.

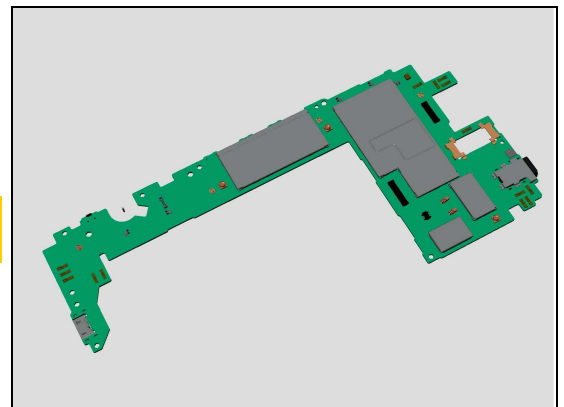


3. If the Main Mic Mesh (a) is damaged – replace the Main Mic Mesh.



4. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Microphone!**



## Problem Areas: Microphone

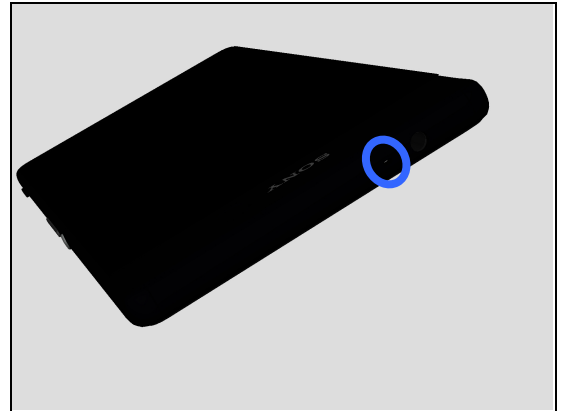
### 1.9.2 Secondary Microphone

**Check:**

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

**Action:**

1. If clogged – clean it.



**Check:**

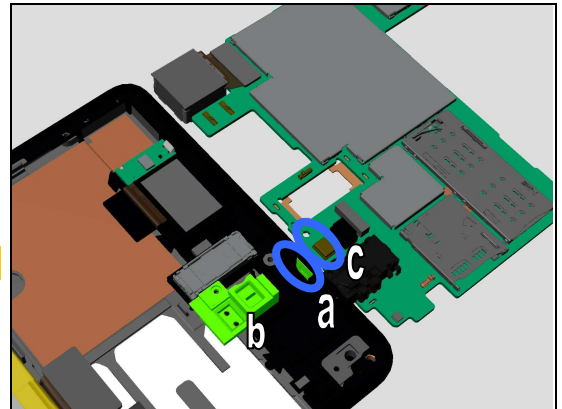
Inspect the 2nd Mic Mesh on Front Cover Assy (a), P-Sensor Rubber (b) and 2<sup>nd</sup> Microphone on Main PBA (c).

**Action:**

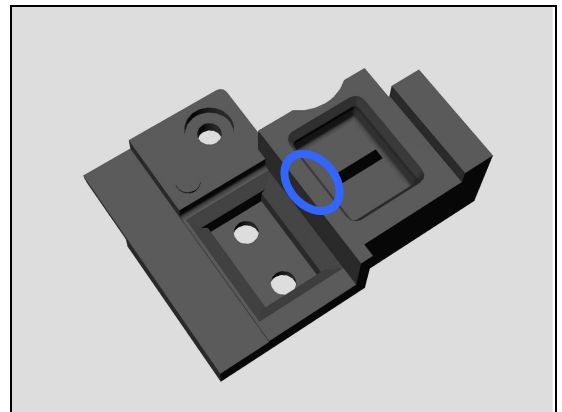
1. If dirty or oxidized – clean it.

**No liquid allowed cleaning the 2<sup>nd</sup> Microphone (c)!**

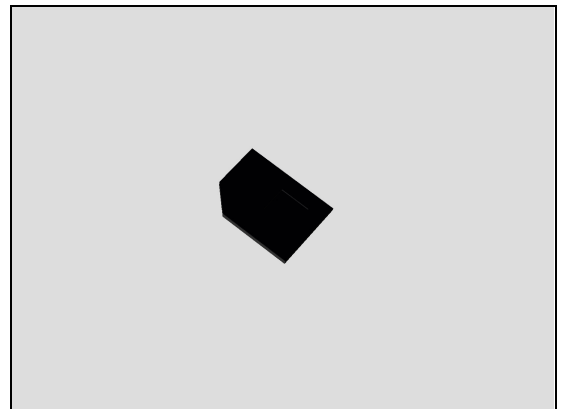
2. If the P-Sensor Rubber (b) is not properly placed – disassemble and reassemble it.



3. If the P-Sensor Rubber (b) is damaged – Replace it.



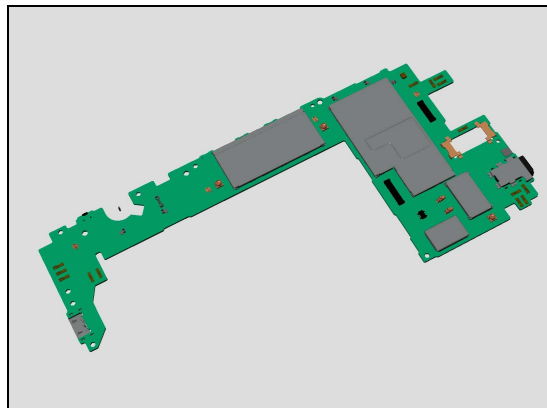
4. If the 2nd Mic Mesh (a) is damaged – Replace it.



## Problem Areas: Microphone

5. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Microphone!**



## Problem Areas

### 1.10 Vibrator

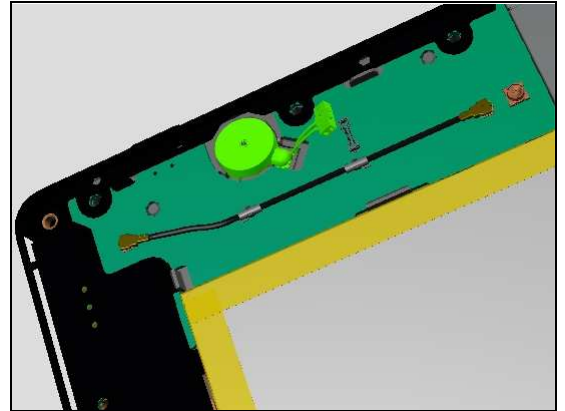
#### 1.10.1 Vibrator not generating alerts

**Check:**

Inspect the Vibrator on Front Cover Assy

**Action:**

If clogged – clean it.

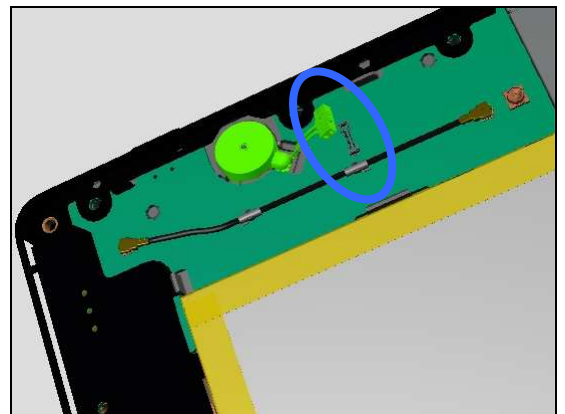


**Check:**

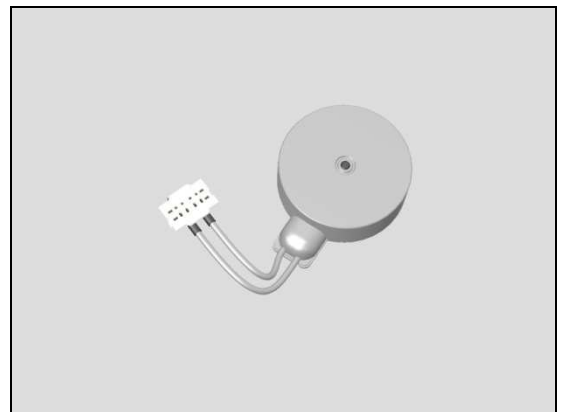
Inspect the connector of Vibrator.

**Action:**

1. If not properly connected – disconnect and reconnect it

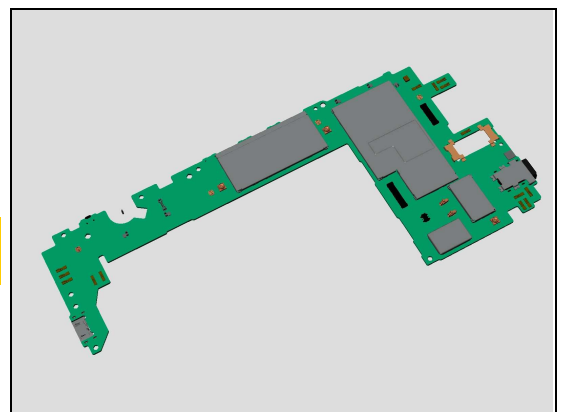


2. If damaged – replace Vibrator.



3. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Vibrator’s connector!**



## Problem Areas

### 1.11 Camera

#### 1.11.1 Main Camera

**Check:**

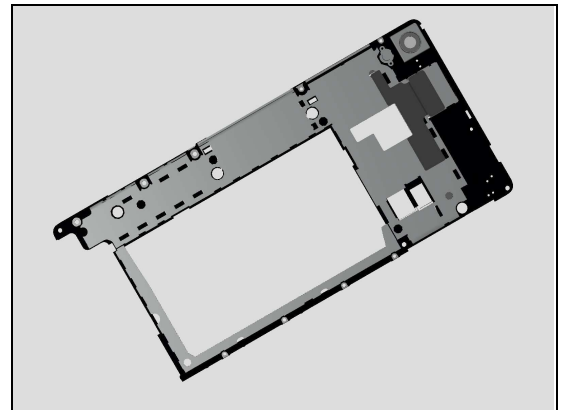
Inspect the external area of camera window.

**Action:**

1. If dirty – clean it.



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

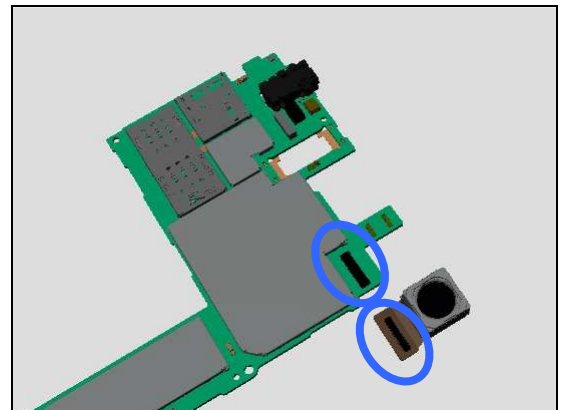


**Check:**

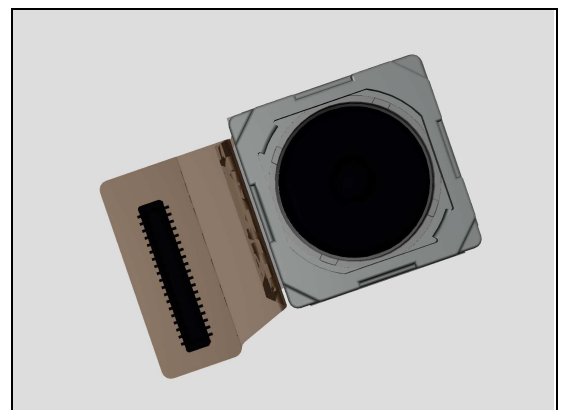
Inspect the BtB connector of Main Camera to Main PBA.

**Action:**

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



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

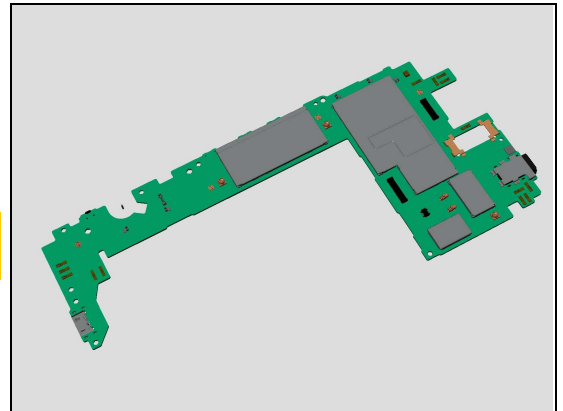




## Problem Areas: Camera

3. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Main Camera’s connector!**



### 1.11.2 Front Camera defects

**Check:**

Inspect the external area of the front camera window.

**Action:**

1. If dirty – clean it.



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



**Check:**

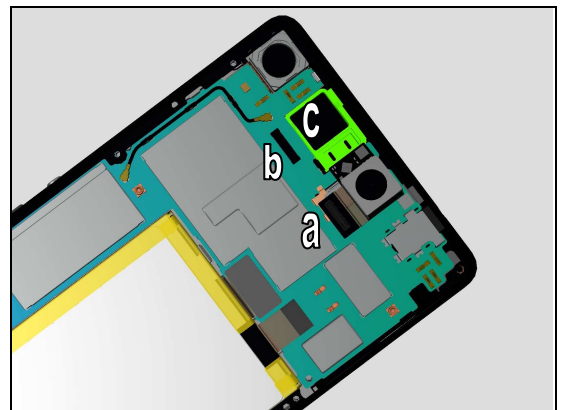
Inspect the BtB connector on the Front Camera (a), BtB connector on Main PBA (b) and Front Camera Rubber (c).

**Action:**

1. If dirty or oxidized – clean them.

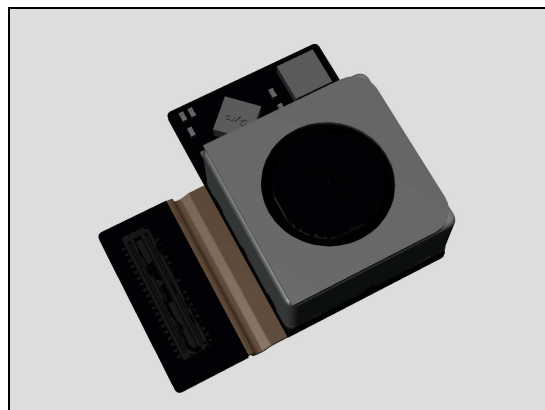
2. If the BtB connectors (a & b) is not properly connected – disconnect and reconnect it.

3. If the Front Camera Rubber (c).is not properly placed – disassemble and reassemble it.



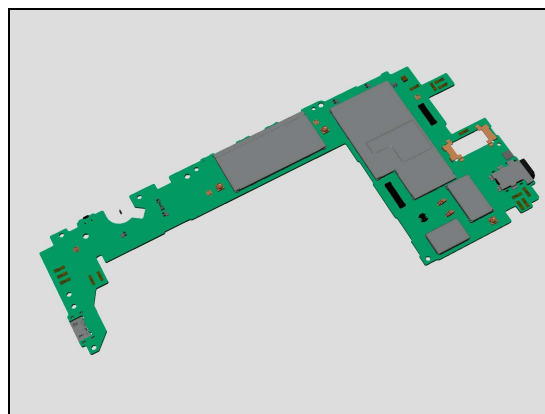
## Problem Areas: Camera

4. If the Front Camera is damaged - Replace the Front Camera



5. Replace the Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Front Camera’s connector!**



## Problem Areas

### 1.12 Flash LED

#### 1.12.1 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 Rear Cover.

**Check:**

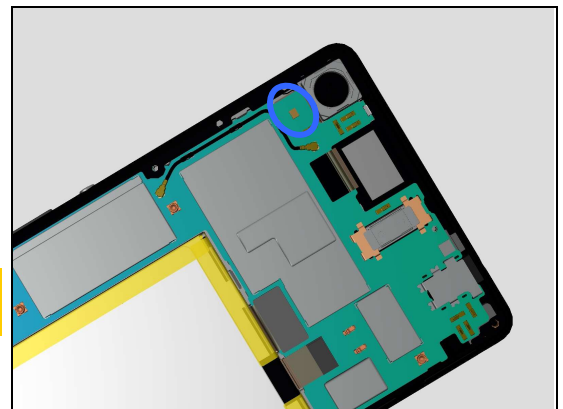
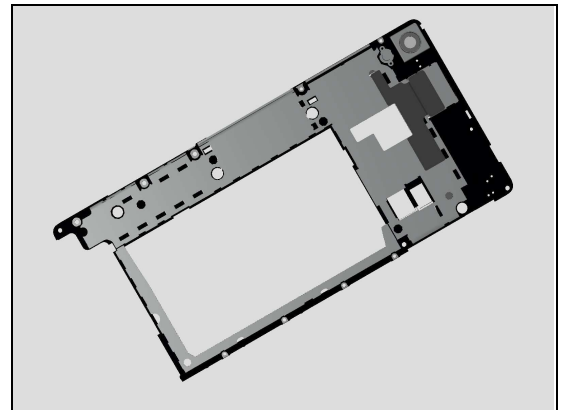
Inspect the Flash LED on Main PBA.

**Action:**

1. If dirty or oxidized – clean it.

2. If damaged, replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of Flash LED!**



## Problem Areas

### 1.12.2 Front Flash LED not flashing

**Check:**

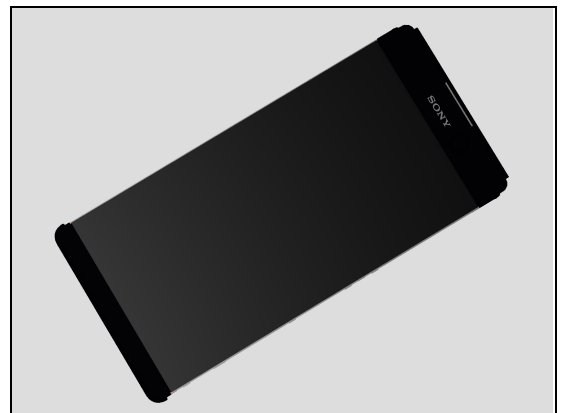
Inspect the external area of the front flash LED Light.

**Action:**

1. If dirty – clean it.



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

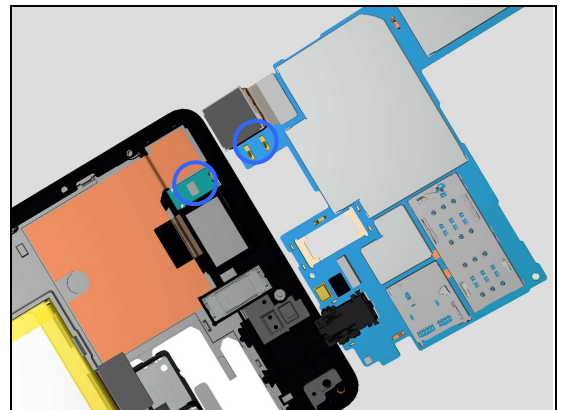


**Check:**

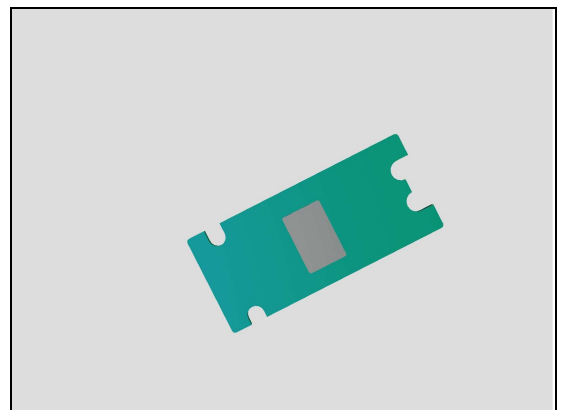
Inspect the contact pads on the PBA Flash LED and the contact pins on the Main PBA.

**Action:**

1. If contact pins on the Main PBA or pads on the PBA Flash LED are dirty or oxidized – clean them.



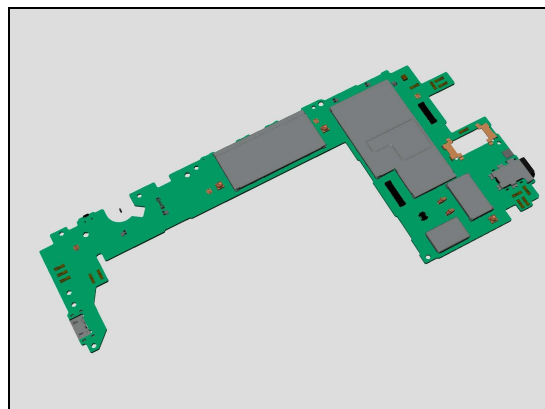
2. If the PBA Flash LED is damaged – replace the PBA Flash LED.



## Problem Areas: Flash LED

3. Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins!**



## Problem Areas

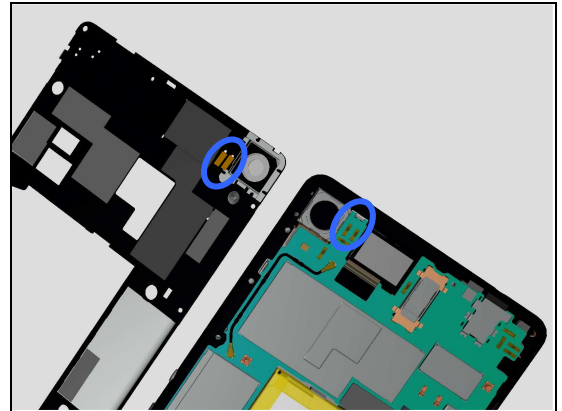
### 1.13 RX Diversity

#### 1.13.1 RX Diversity connection failure

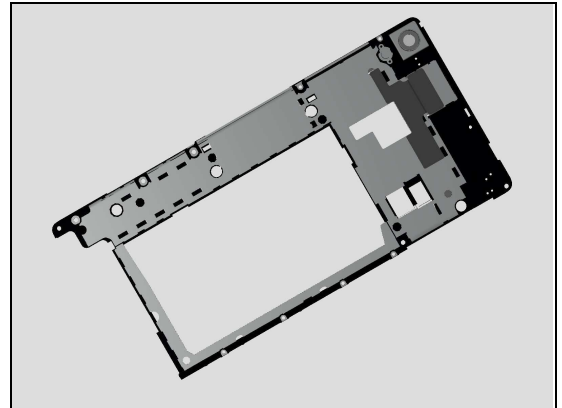
**Check:**

Inspect the Antenna RX Diversity on Rear Cover.

1. If contact pins on the Main PBA or pads on the Rear Cover are dirty or oxidized – clean them.



2. If the contact pads on Rear Cover or the Antenna part of the Rear Cover are damaged – replace the Rear Cover.

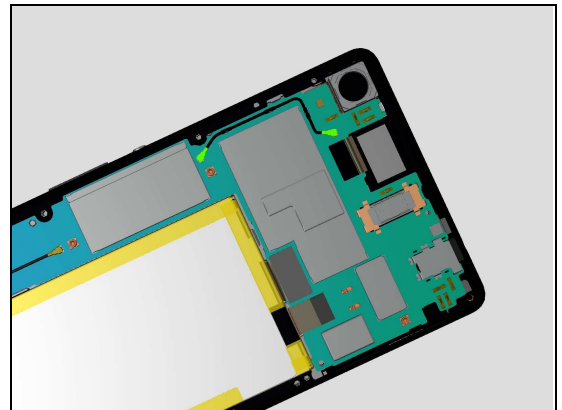


**Check:**

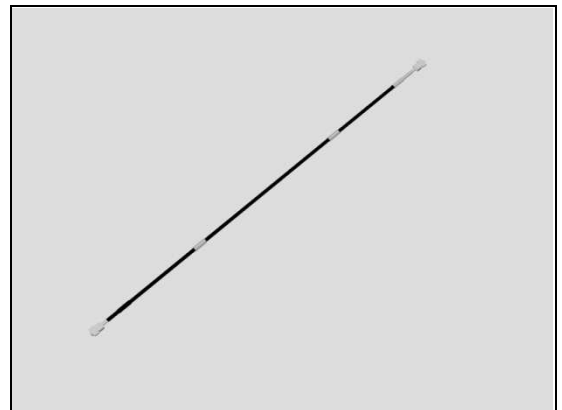
Inspect the two RF connectors of Coaxial Cable Black.

**Action:**

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

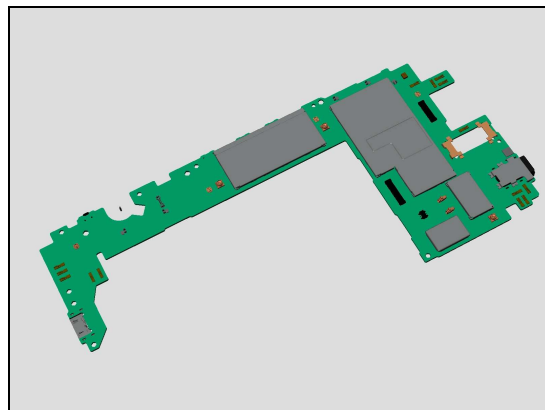


2. If Coaxial Cable Black is damaged, replace the Coaxial Cable Black.



## Problem Areas: RX Diversity

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



## Problem Areas

### 1.14 Bluetooth and WLAN

#### 1.14.1 Bluetooth or WLAN connection failure

**Check:**

Inspect the Antenna Bluetooth and WLAN contact pad on the Rear Cover and the contact pins on Main PBA.

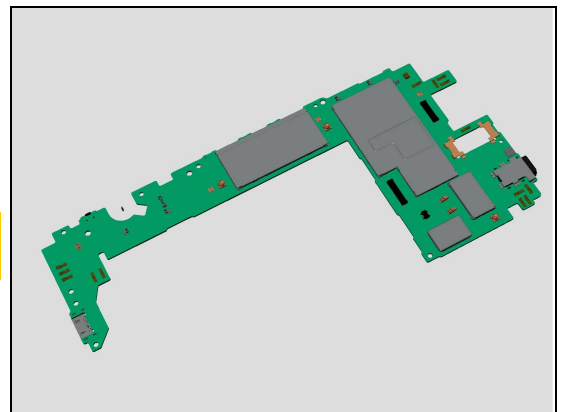
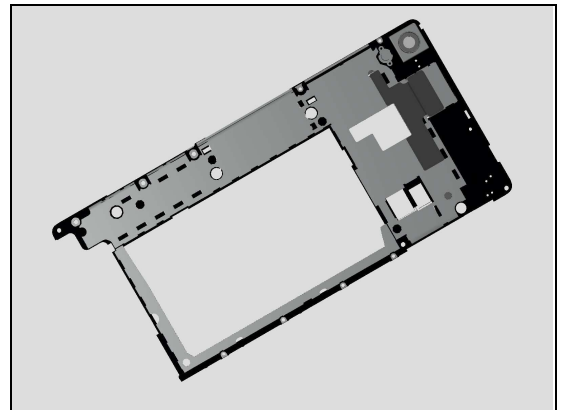
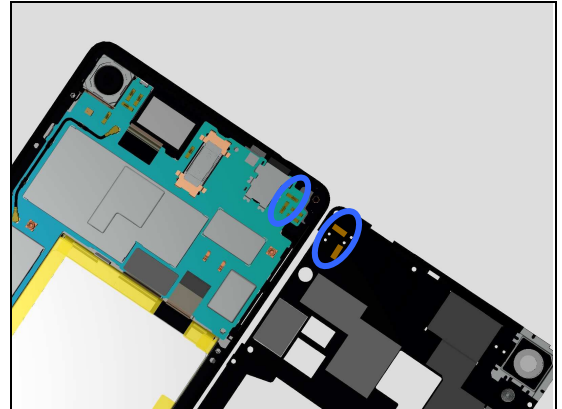
**Action:**

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

2. If the contact pads on Rear Cover or the Antenna part of the Rear Cover are damaged – replace the Rear Cover.

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

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins!**





## Problem Areas

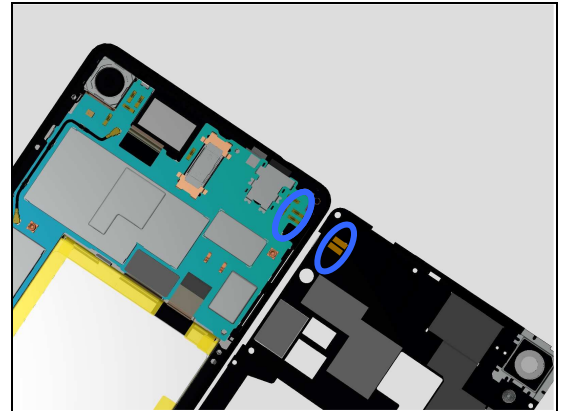
### 1.15 GPS

#### 1.15.1 GPS connection failure

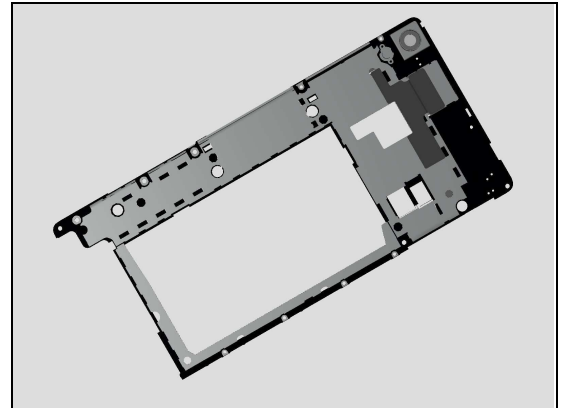
**Check:**

Inspect the Antenna GPS attached on Rear Cover.

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

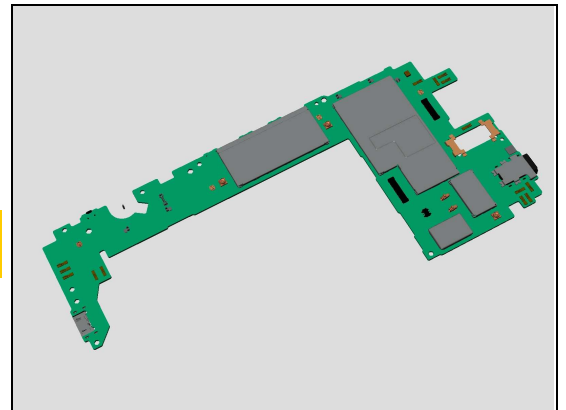


2. If the contact pads on Rear Cover or the Antenna part of the Rear Cover are damaged – replace the Rear Cover.



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

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins!**



## Problem Areas

### 1.16 NFC

#### 1.16.1 NFC malfunctions

**Check:**

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

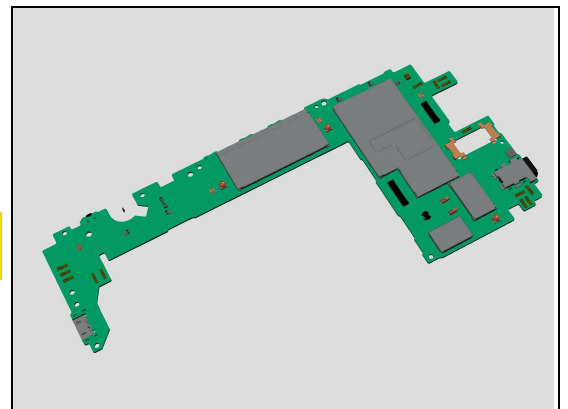
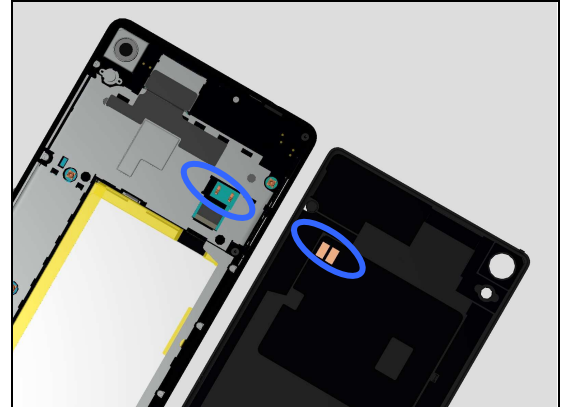
**Action:**

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

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

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

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins!**



## Problem Areas

### 1.17 Compass

#### 1.17.1 Compass fails

**Action:**

Replace Main PBA.

## Problem Areas

### 1.18 Accelerometer

#### 1.18.1 Accelerometer test fails

**Action:**

Replace Main PBA.

## Problem Areas

### 1.19 Ambient Light Sensor

#### 1.19.1 Light Sensor malfunctions

**Check:**

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

**Action:**

1. If dirty – clean it.



**Follow 1289-2983 Sony Mobile Repair Application – mechanical to run Light sensor Calibration first!**

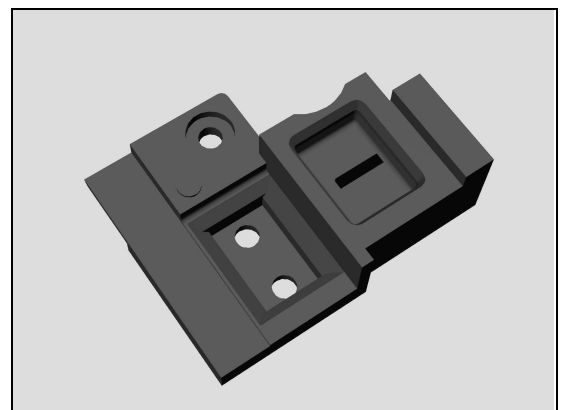
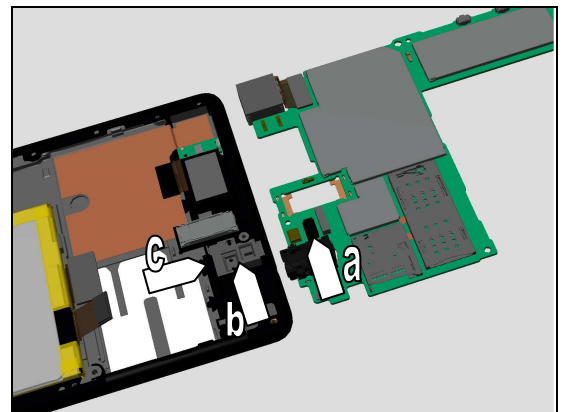
**Check:**

Inspect the

- a. Light Sensor on Main PBA
- b. P-Sensor rubber of the Front Cover Assy
- c. Light Sensor window on Front Cover Assy.

**Action:**

1. If dirty or oxidized – clean it.
2. If the P-Sensor rubber is not properly placed - disassemble and reassemble it.
3. If the P-Sensor rubber is damaged – replace it

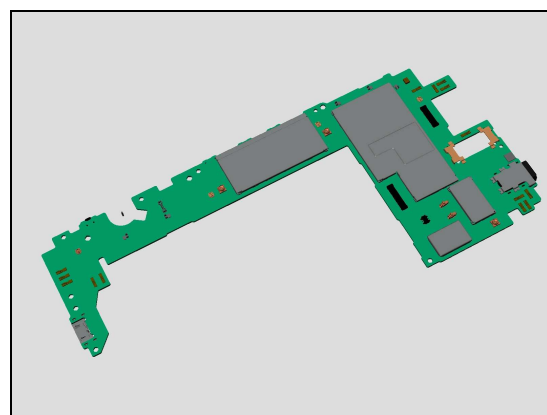


## Problem Areas: Light Sensor

4 If the light sensor window on Front Cover Assy is scratched or damaged – Replace the Front Cover Assy.



5. Replace the Main PBA.



**Follow 1289-2983 Sony Mobile Repair Application – mechanical to run Light sensor Calibration first!**



## 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

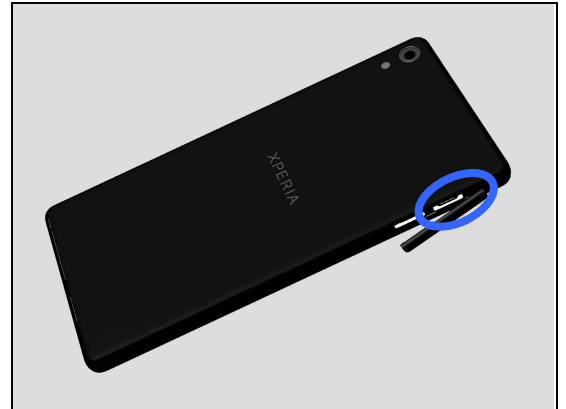
#### 1.22.1 Memory Card not detected

**Check:**

Inspect that if a memory card is properly inserted.

**Action:**

If not properly inserted – insert the memory card correctly.



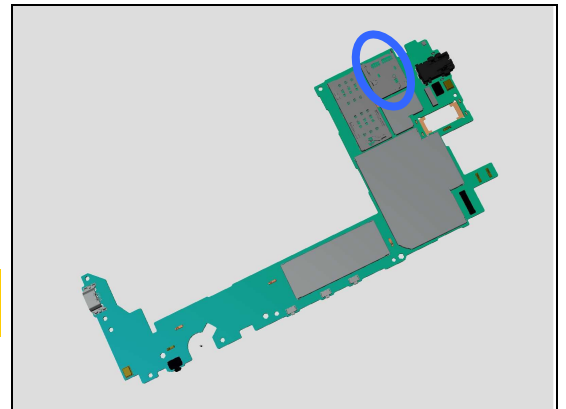
**Check:**

Inspect the micro SD card holder on Main PBA.

**Action:**

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

**Refer to “1304-4330 Component Replacement” for electrical replace of microSD holder!**



## Problem Areas

### 1.23 Security

#### 1.23.1 Security fails

**Action:**

Replace Main PBA.

## Problem Areas

### 1.24FM Radio

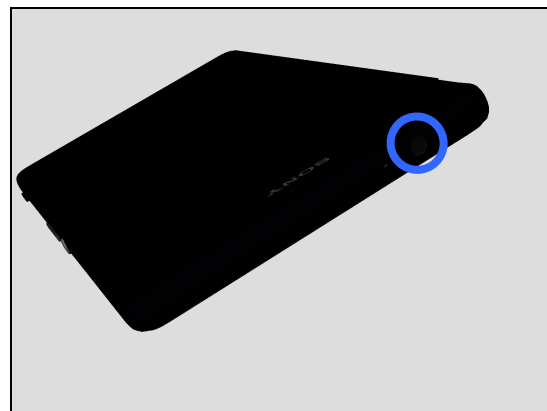
#### 1.24.1 No/Poor FM Radio reception

**Check:**

Inspect the external port of the Front Cover Assy.

**Action:**

1. If oxidized or clogged – clean it.

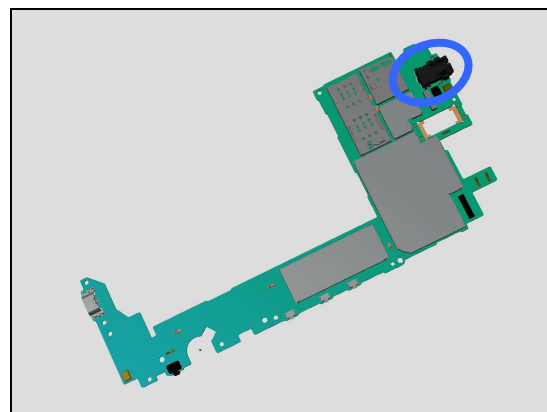


**Check:**

Inspect the Audio Jack on Main PBA.

**Action:**

1. If dirty or oxidized – clean it.
2. 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 SIM

#### 1.27.1 SIM not detected

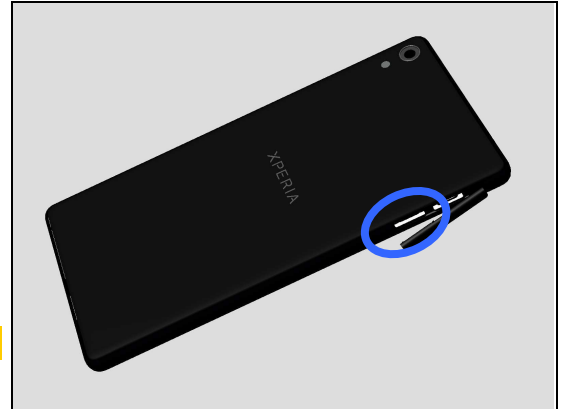
**Check:**

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!**

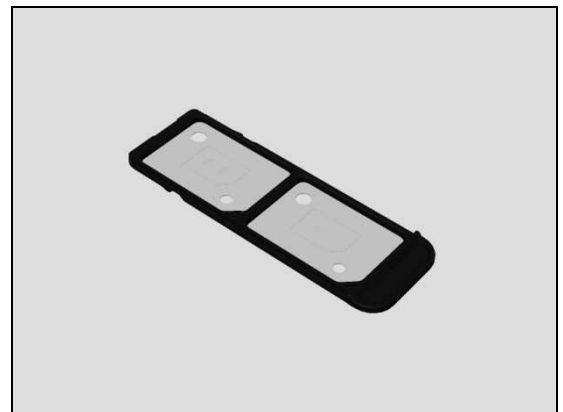


**Check:**

Inspect the SIM Tray.

**Action:**

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



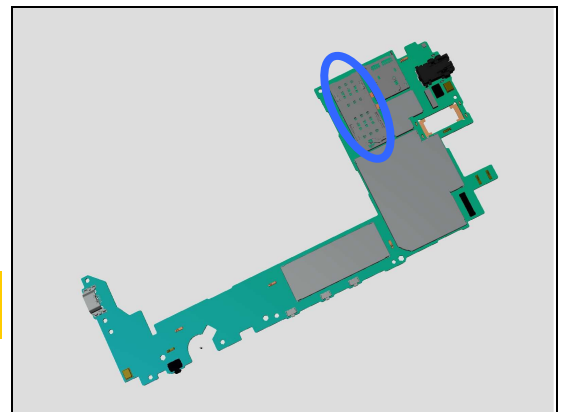
**Check:**

Inspect the SIM card holder on Main PBA.

**Action:**

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

**Refer to “1304-4330 Component Replacement” for electrical replace of SIM holder!**



#### 1.27.2 Incorrect UIM or SIM indicated

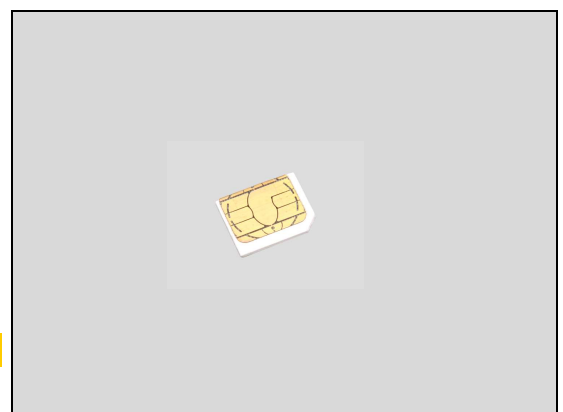
**Check:**

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

### 1.28 Charging

#### 1.28.1 Battery will not charge by USB connector

**Check:**

Inspect the USB connector.

**Action:**

1. If dirty or oxidized – clean the connector.

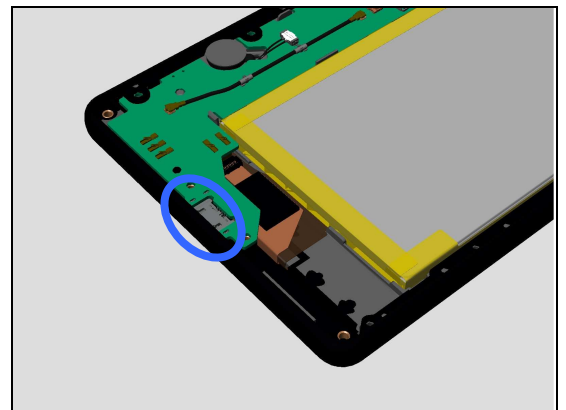


**Check:**

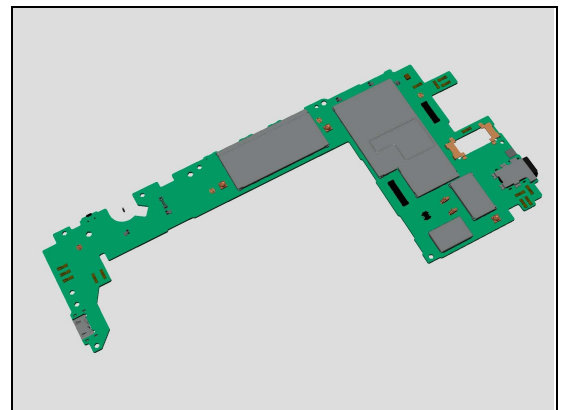
Inspect the USB connector on Main PBA.

**Action:**

1. If dirty or oxidized – clean it.



2. If damaged, replace Main PBA.

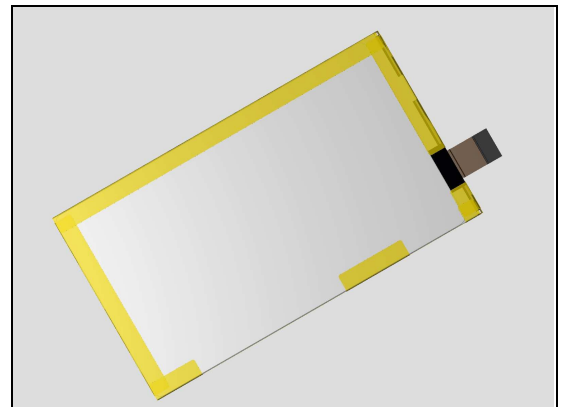


**Check:**

Connect the Main PBA with a known working battery and test the phone.

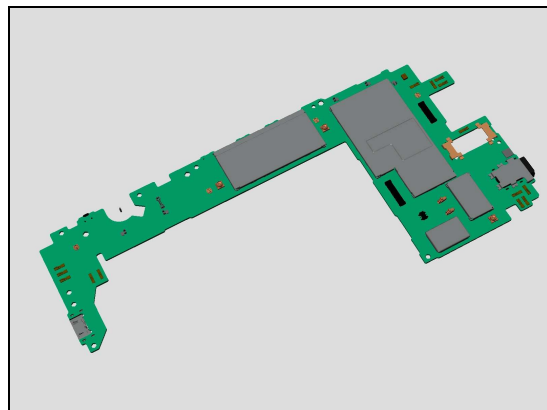
**Action:**

1. If the unit is charging again – Replace the Battery.



## Problem Areas: Charging

2. If the unit is still not charging – Replace the Main PBA.





## Problem Areas

### 1.29 Hall Sensor

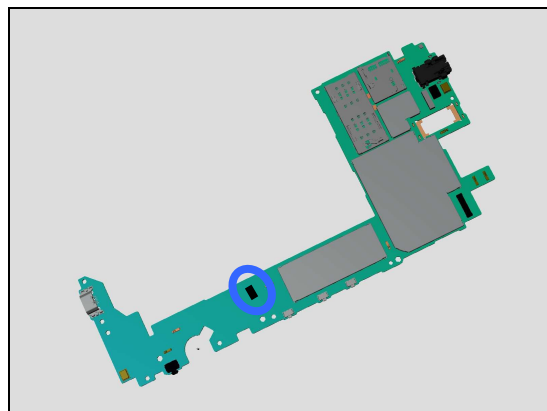
#### 1.29.1 Hall Sensor fails

**Check:**

Inspect the Hall Sensor soldered on Main PBA.

**Action:**

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



## Problem Areas

### 1.30 Network & Signal

#### 1.30.1 No/Poor signal

**Check:**

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

**Action:**

1. If contact pins on the Main PBA or pads on the Antenna Module are dirty or oxidized – clean it.

2. If contact pads or the Antenna Module is damaged - Replace the Antenna Module.

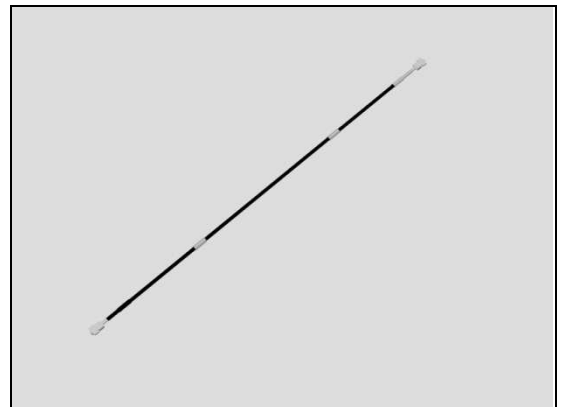
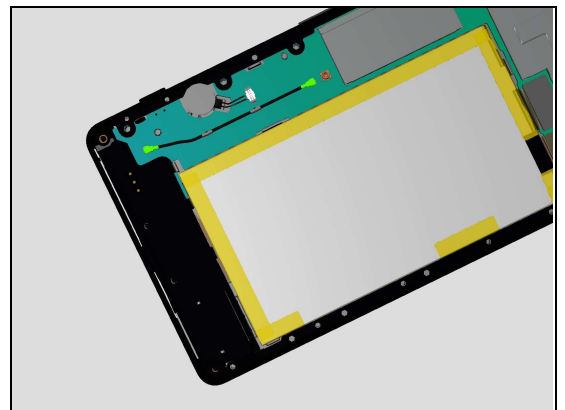
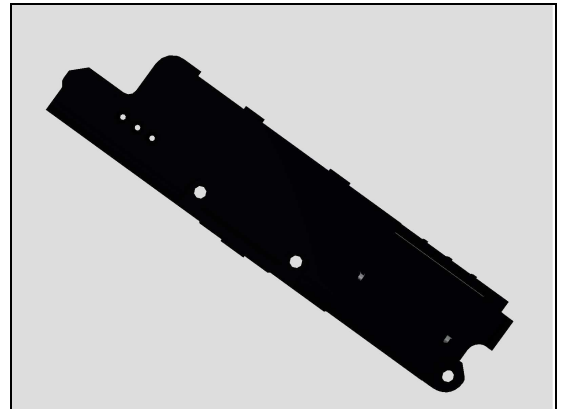
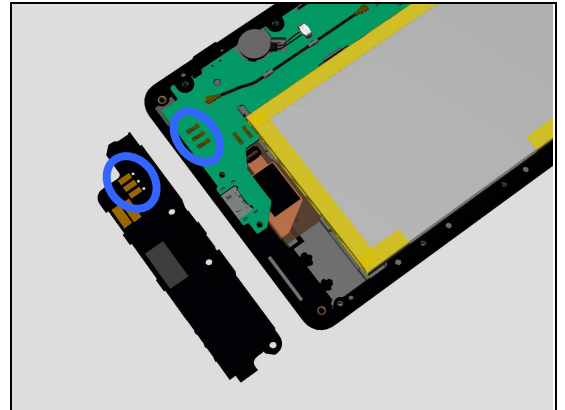
**Check:**

Inspect the two RF connectors of Coaxial Cable White.

**Action:**

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

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



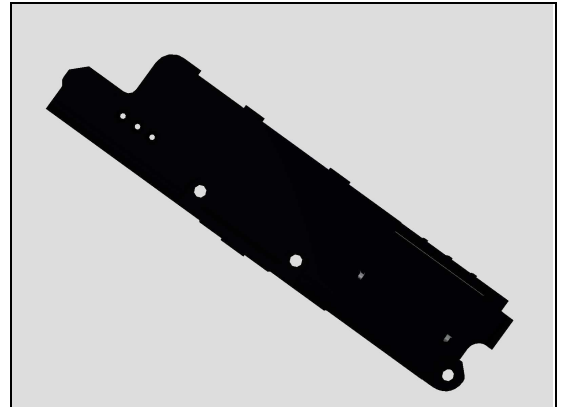
## Problem Areas: Network & Signal

**Check:**

Replace the Antenna Module with a known working one and test the phone.

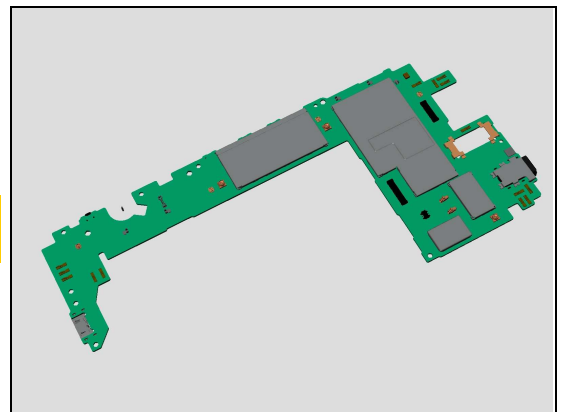
**Action:**

1. If the unit is working – Replace the Antenna Module.



2. If its still not working - Replace Main PBA.

**Refer to “1304-4330 Component Replacement” for electrical repair of spring pins!**



## Problem Areas

### 1.31 Audio Jack test

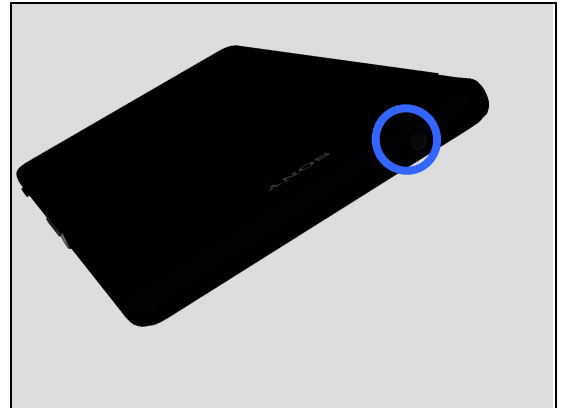
#### 1.31.1 Connection to headset fails

**Check:**

Inspect the external port of the Audio Jack.

**Action:**

1. If dirty or oxidized – clean it.

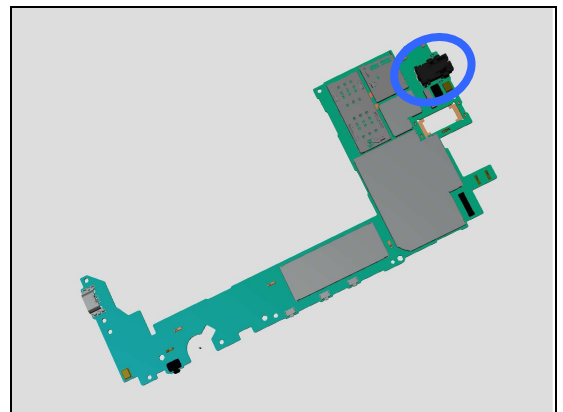


**Check:**

Inspect the Audio Jack on Main PBA.

**Action:**

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



## Problem Areas

### 1.32 Data Communication

#### 1.32.1 Data transfer via System Connector fails

**Check:**

Inspect the USB connector.

**Action:**

1. If dirty or oxidized – clean the connector.

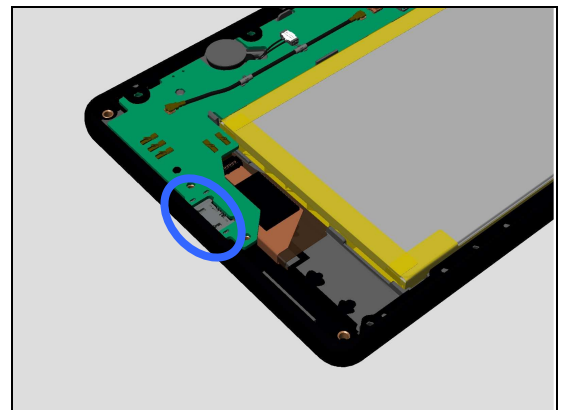


**Check:**

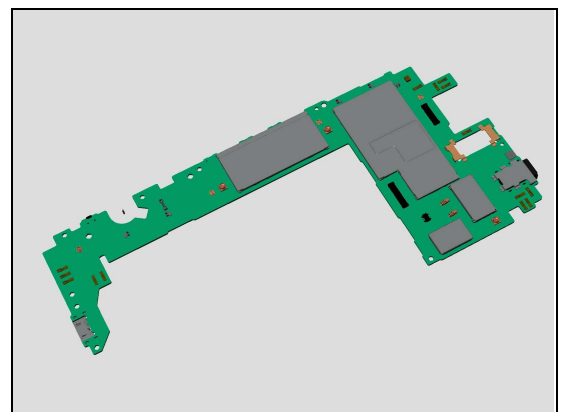
Inspect the USB connector on Main PBA.

**Action:**

1. If dirty or oxidized – clean it.



2. If damaged, replace Main PBA.



## 2 Revision History

Rev.	Date	Changes / Comments
1	2016-06-10	Release