

## Troubleshooting Guide

- mechanical -



*Xperia™ XZ Premium*  
*G8141, G8142 (Dual SIM)*

## CONTENTS

<b>1</b>	<b>Problem Areas .....</b>	<b>5</b>
1.1	Power .....	5
1.1.1	Will not power on or will switch off randomly.....	5
1.2	Keys .....	7
1.2.1	Back, Menu, and Home Keys.....	7
1.2.2	Volume Key .....	7
1.2.3	On/Off Key .....	8
1.2.4	Camera Key.....	11
1.3	Touch Screen .....	13
1.3.1	Touch Screen malfunction.....	13
1.4	Display .....	14
1.4.1	Graphics & Illumination .....	14
1.5	LED/Illumination.....	15
1.5.1	LED/Illumination .....	15
1.6	Bottom Speaker.....	16
1.6.1	Bottom Speaker .....	16
1.7	Earphone .....	18
1.7.1	Top Speaker .....	18
1.8	Microphone.....	19
1.8.1	Primary Microphone .....	19
1.8.2	Secondary Microphone .....	19
1.9	Vibrator .....	20
1.9.1	Vibrator not generating alerts .....	20
1.10	Camera.....	21
1.10.1	Main Camera .....	21
1.10.1	Front Camera defects.....	22
1.11	Flash LED .....	24
1.11.1	Flash LED not flashing.....	24
1.12	Bluetooth, GPS, or/and WLAN Main .....	25
1.12.1	Bluetooth, GPS, or/and WLAN Main connection failure.....	25
1.13	WLAN Sub .....	26
1.13.1	WLAN Sub connection failure .....	26
1.14	NFC .....	27
1.14.1	NFC malfunctions.....	27
1.15	Compass.....	28
1.15.1	Compass fails .....	28
1.16	Accelerometer .....	29
1.16.1	Accelerometer test fails .....	29
1.17	Gyroscope .....	30
1.17.1	Gyroscope test fails .....	30
1.18	Ambient Light Sensor .....	31
1.18.1	Light Sensor malfunctions .....	31

<b>1.19 Proximity Switch .....</b>	<b>32</b>
1.19.1 Proximity switch malfunctions.....	32
<b>1.20 Hall Element.....</b>	<b>33</b>
1.20.1 Hall Element test fails.....	33
<b>1.21 Pressure Sensor.....</b>	<b>34</b>
1.21.1 Pressure Sensor test fails.....	34
<b>1.22 Water Resistance .....</b>	<b>35</b>
1.22.1 Water Resistance fails.....	35
<b>1.23 Real Time Clock .....</b>	<b>41</b>
1.23.1 Real time clock test fails .....	41
<b>1.24 Total call time .....</b>	<b>42</b>
1.24.1 Total call time fails .....	42
<b>1.25 External Memory, SIM .....</b>	<b>43</b>
1.25.1 Memory Card/ SIM not detected .....	43
1.25.2 Incorrect Nano SIM indicated .....	44
<b>1.26 Security.....</b>	<b>45</b>
1.26.1 Security fails .....	45
<b>1.27 Network &amp; Signal.....</b>	<b>46</b>
1.27.1 No/Poor signal .....	46
<b>1.28 Charging .....</b>	<b>52</b>
1.28.1 Battery will not charge by USB Connector.....	52
<b>1.29 Audio Jack test.....</b>	<b>54</b>
1.29.1 Connection to headset fails.....	54
<b>1.30 Fingerprint Sensor test/Fingerprint Sensor function test .....</b>	<b>55</b>
1.30.1 Fingerprint Sensor test fails / Fingerprint Sensor function test fails....	55
<b>1.31 Data Communication .....</b>	<b>57</b>
1.31.1 Data transfer via System Connector fails.....	57
<b>1.32 RGBC-IR Sensor.....</b>	<b>58</b>
1.32.1 RGBC-IR Sensor Test Fail.....	58
<b>1.33 ToF Sensor .....</b>	<b>59</b>
1.33.1 ToF Sensor Test Fail .....	59
<b>1.34 Unbalance Sound Level of Speaker L/R channel.....</b>	<b>60</b>
1.34.1 Unbalance Sound Level of Speaker L/R channel.....	60
<b>2 Revision History .....</b>	<b>61</b>

## General Notes

**Always firstly disconnect the Battery FPC BtB connector to cut off power supply when the Panel Rear Sub Assy is disassembled.**

**Always finally connect the Battery FPC BtB connector before the Panel Rear Sub Assy is reassembled.**

**After repairing/reassembling the unit, calibration by CS-Everest and flashing software Customize by Emma is required.**

**Calibration tool "CS-Everest 1309-7255" is available at Repair Information.**

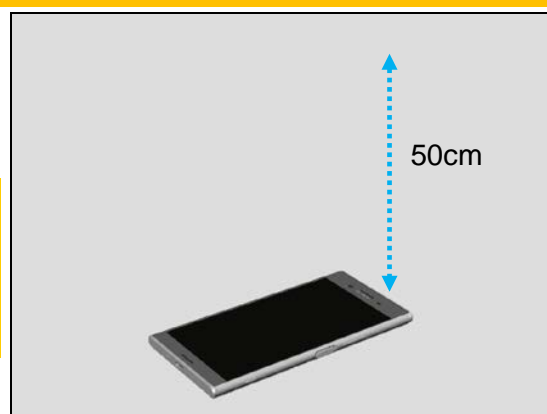
**It is posted under the RE4251: Repair Mechanical – Tools and Equipment (including Repair Software).**

When perform calibration, put the unit on a stable place, facing up, and no any objects within 50cm.

**Note!**

**Remove the protection film if sensor window is covered by it.**

**The sensor window shouldn't be covered by any materials for proximity sensor calibration.**



**Flashing Customize or Refurbish in Emma must be performed when replace Top Speaker and/or Bottom Speaker.**

**Aged Battery Reset in EMMA must be performed when Battery is replaced (installed brand new Battery) in order to delete battery log data.**

## 1 Problem Areas

### 1.1 Power

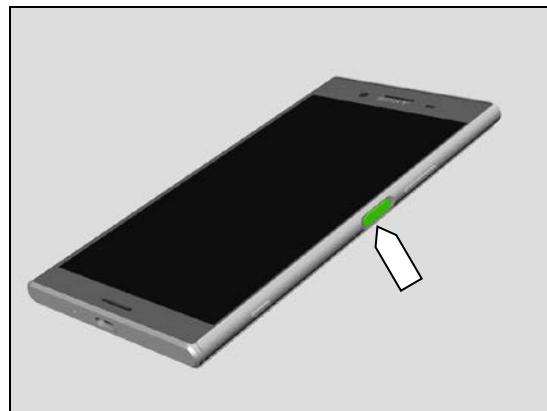
#### 1.1.1 Will not power on or will switch off randomly

**Check:**

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

**Action:**

If NO Notification LED blink is detected, perform a force shut down, press power key and volume up key for 10 seconds and then power on the unit again.

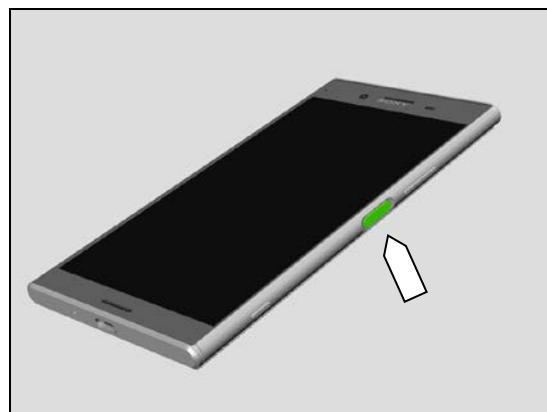


**Check:**

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

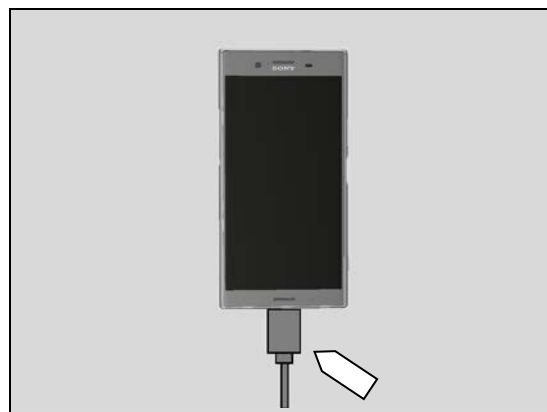
**Action:**

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



2. If NO activation of the Vibrator is detected and the Notification LED blinks by pressing the on/off key, check that the battery is charging when connected to a charger.

**Follow Test Instruction - mechanical chapter 2.4.5 (Charging via Charger or Computer), Diagnostic Battery / Charging status.**

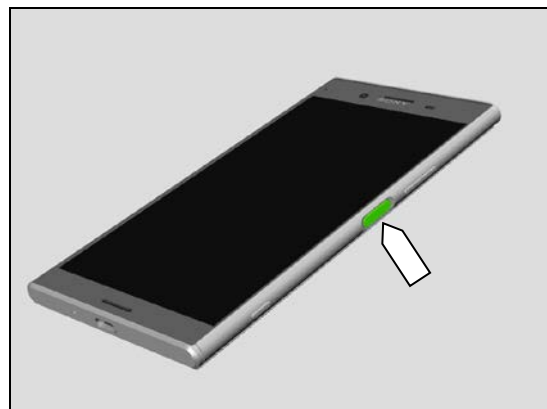


**Check:**

Inspect the on/off key.

**Action:**

Refer to section 1.2.3 'On/Off Key'.



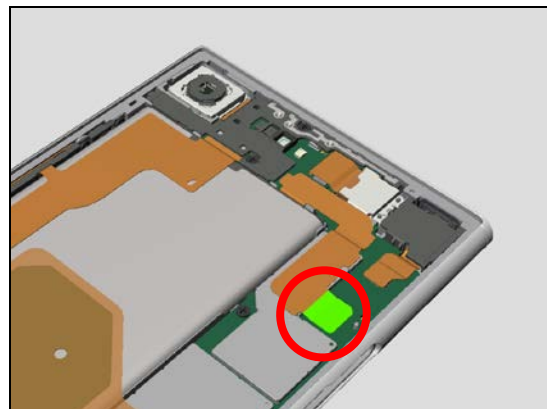
## Problem Areas: Power

### Check:

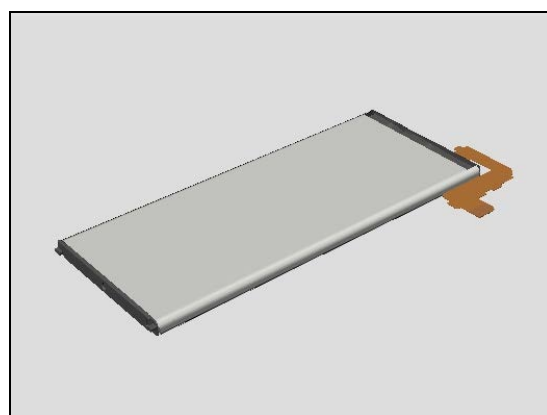
Inspect the BtB connector of the Battery to PBA Main.

### Action:

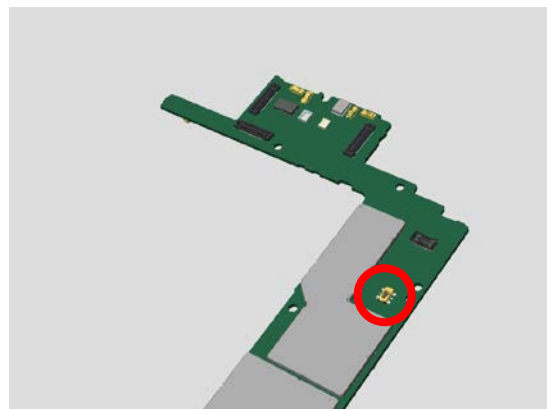
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



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



4. If the B to B connector on the PBA Main is damaged – replace B to B connector (CN1300), or replace PBA Main.



**Note! SL3 and above can replace the CN1300.**

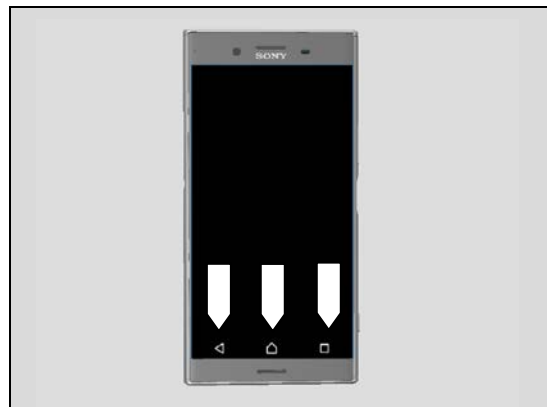
## Problem Areas

### 1.2 Keys

#### 1.2.1 Back, Menu, and Home Keys

**Action:**

1. Refer to section 1.3 'Touch Screen'.



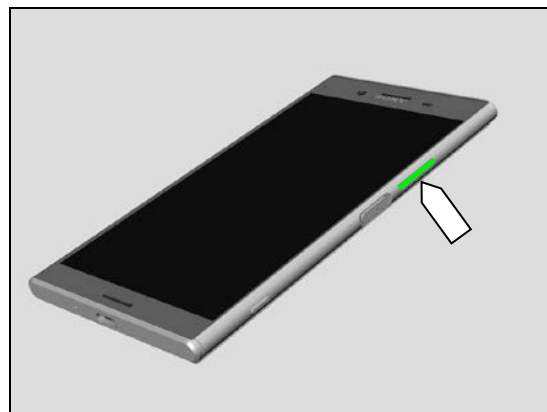
#### 1.2.2 Volume Key

**Check:**

Inspect the external area of the Volume Key.

**Action:**

1. If dirty – clean it.
2. If damaged – replace the Front Assy.

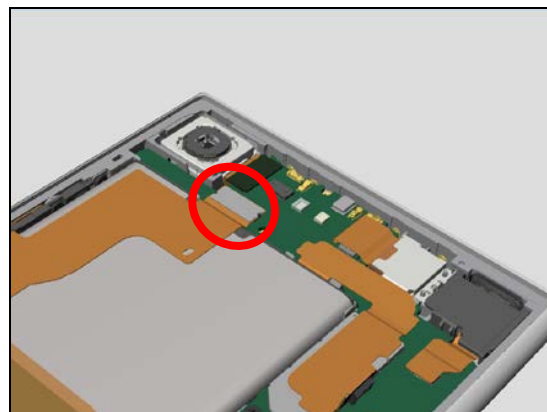


**Check:**

Inspect the BtB connector of Key FPC to PBA Main.

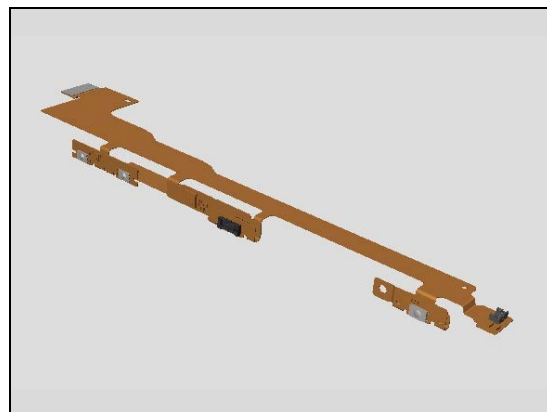
**Action:**

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



3. If the Key FPC is damaged – replace it.
4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN9500), or replace PBA Main.

**Note! SL3 and above can replace the CN9500.**



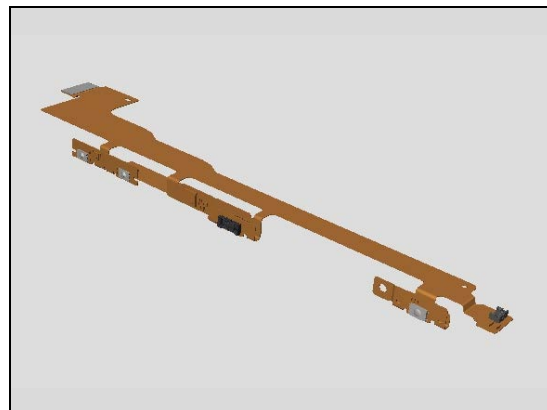
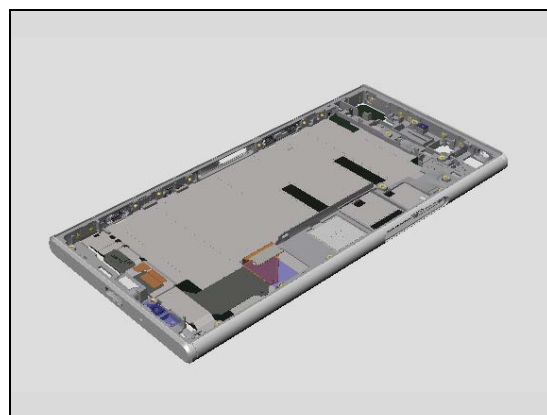
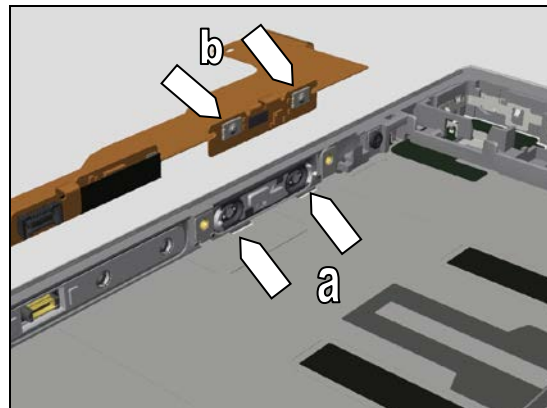
## Problem Areas: Keys

### Check:

Inspect the condition of Volume Key Gasket (a) and Volume Key switch on the Key FPC (b).

### Action:

1. If dirty – clean them.
2. If the gasket of volume key is damaged – replace the Front Assy.
3. If the volume key switch is damaged – replace the Key FPC.



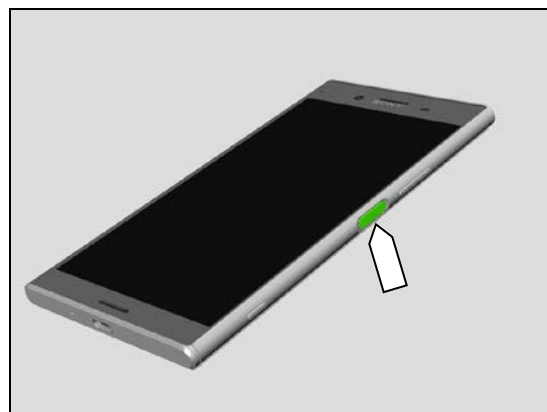
### 1.2.3 On/Off Key

### Check:

Inspect the external area of the On/Off Key.

### Action:

1. If dirty – clean it.
2. If damaged – replace the FP Sensor Assy.





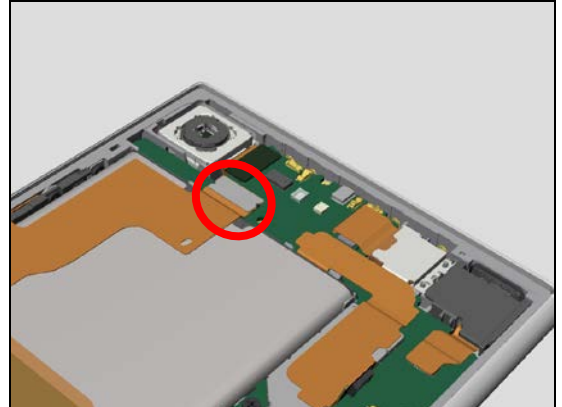
## Problem Areas: Keys

### Check:

Inspect the BtB connector of Key FPC to PBA Main.

### Action:

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



3. If the Key FPC is damaged – replace it.
4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN9500), or replace PBA Main.

**Note! SL3 and above can replace the CN9500.**

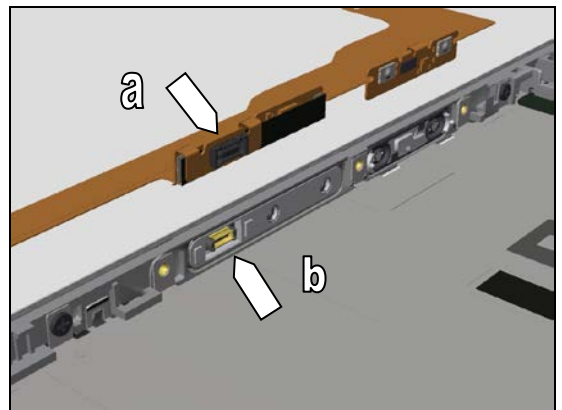


### Check:

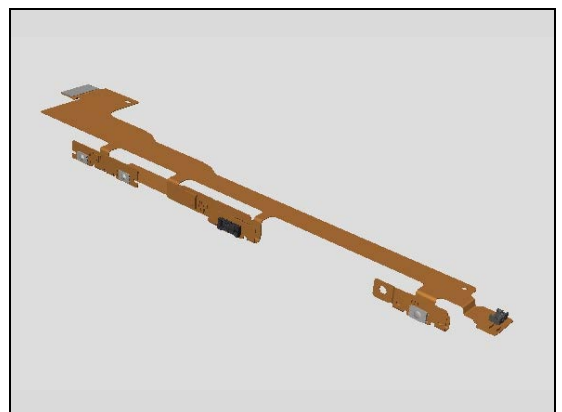
Inspect the condition of the B to B connector of Key FPC (a) and B to B connector of FP Sensor Assy (b).

### Action:

1. If dirty – clean them.



2. If the Key FPC Key is damaged – replace it.



## **Problem Areas: Keys**

3. If the B to B connector of FP Sensor Assy is damaged – replace the FP Sensor Assy.



## Problem Areas: Keys

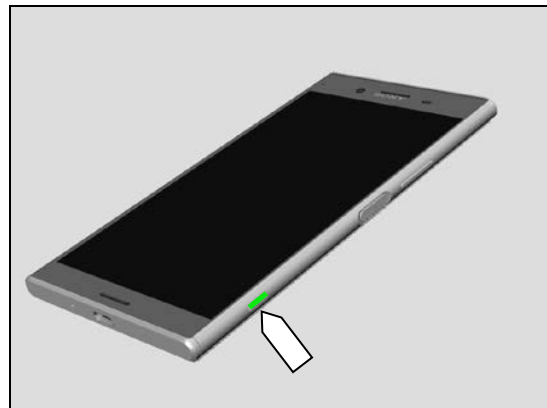
### 1.2.4 Camera Key

**Check:**

Inspect the external area of the Camera Key.

**Action:**

1. If dirty – clean it.
2. If damaged – replace the Front Assy.

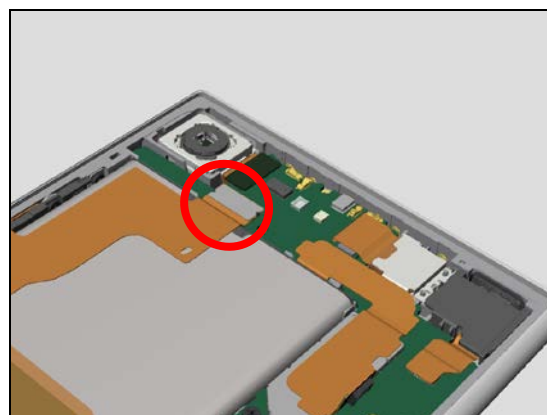


**Check:**

Inspect the BtB connector of FPC Key Module Assy to PBA Main.

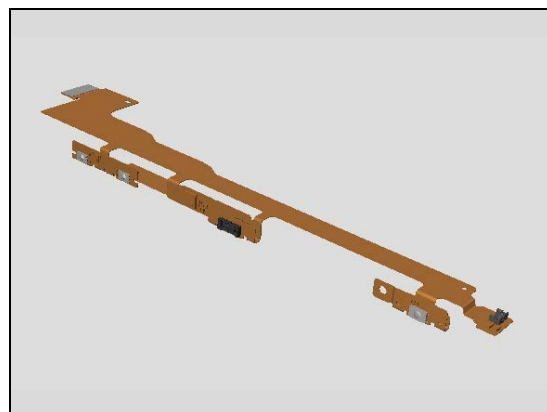
**Action:**

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



3. If the FPC Key Module Assy is damaged – replace it.
4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN9500), or replace PBA Main.

**Note! SL3 and above can replace the CN9500.**

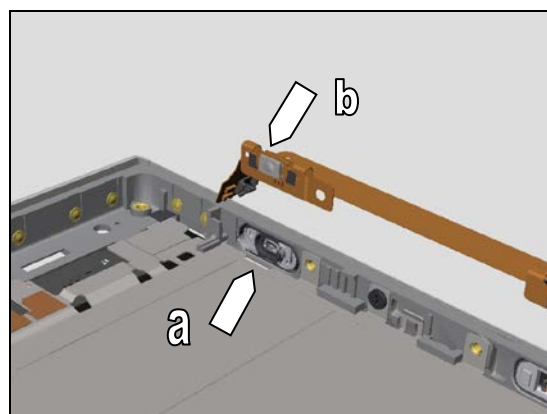


**Check:**

Inspect the condition of the Camera Key gasket (a) and Camera Key switch on the Key FPC (b).

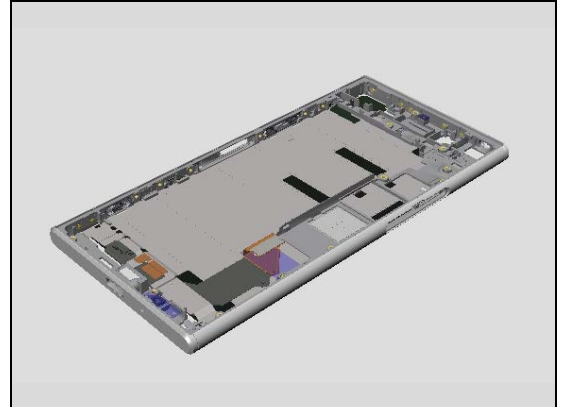
**Action:**

1. If dirty – clean them.

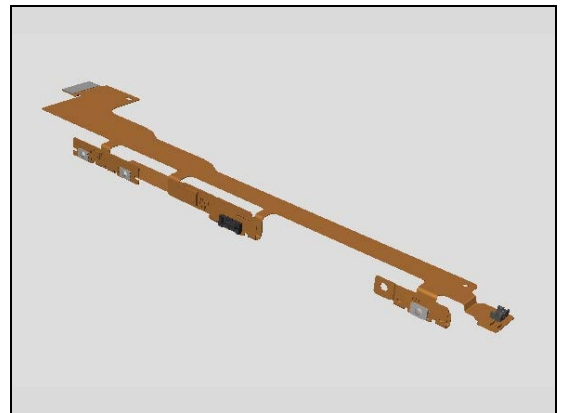


## Problem Areas: Keys

2. If the Camera Key Gasket is damaged – replace the Front Assy.



3. If the Camera key switch is damaged – replace the Key FPC.



## Problem Areas

### 1.3 Touch Screen

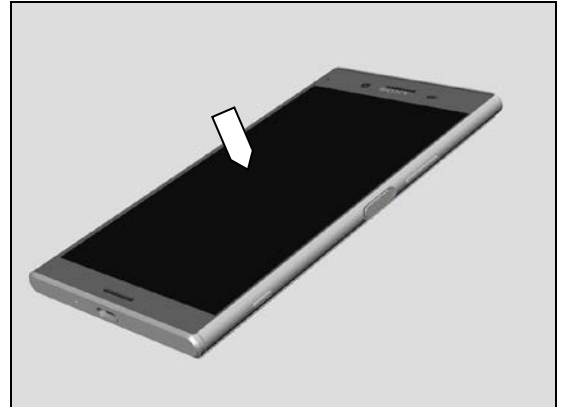
#### 1.3.1 Touch Screen malfunction

**Check:**

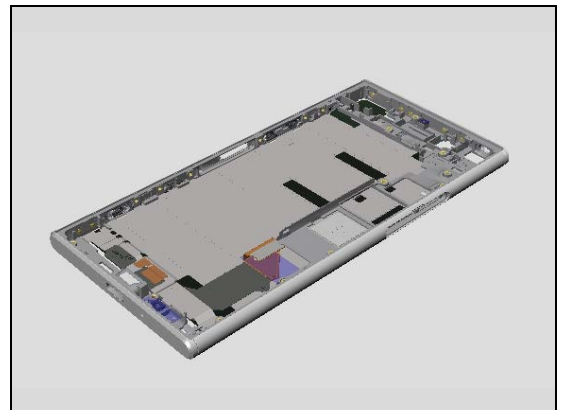
Inspect the touch screen of the Front Assy.

**Action:**

1. If dirty – clean it.



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

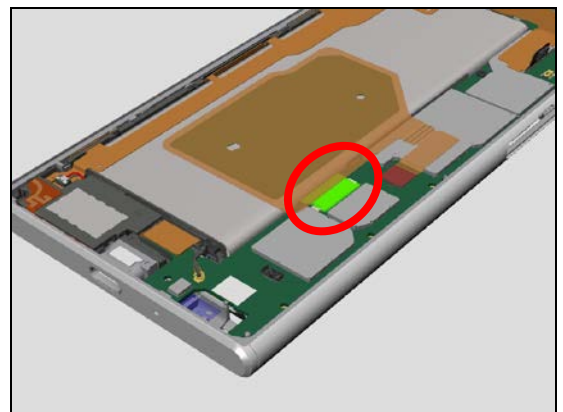


**Check:**

Inspect the BtB connector of LCD FPC to PBA Main.

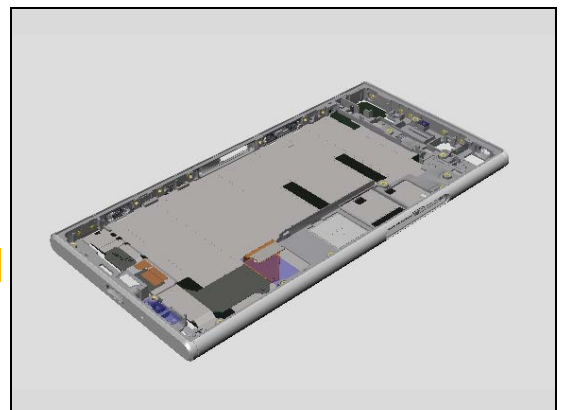
**Action:**

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



3. If the LCD FPC is damaged – replace Front Assy.
4. If the B to B connector on the PBA Main is damaged - Replace B to B connector (CN7101), or replace PBA Main.

**Note! SL3 and above can replace the CN7101.**



## 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:**

1. If the activation described above is not detected, refer to section 1.1 'Power'.

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

**Check:**

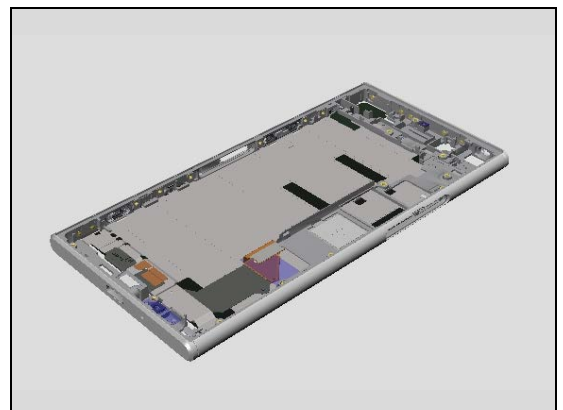
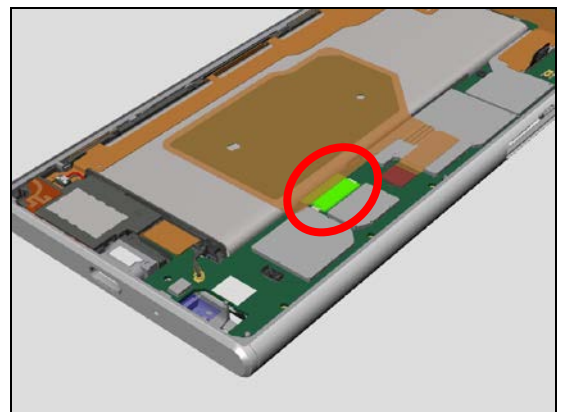
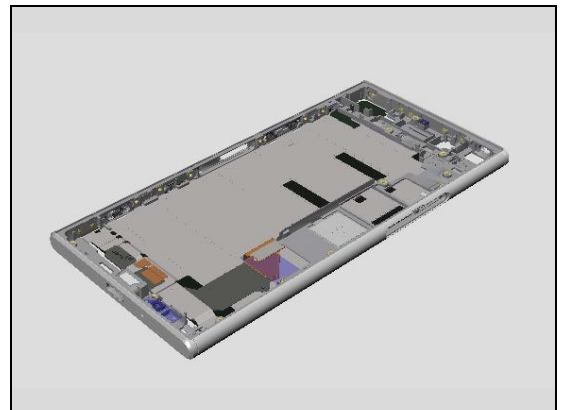
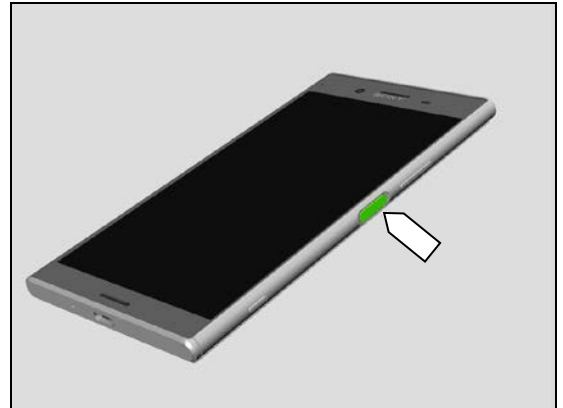
Inspect the BtB connector of LCD FPC to PBA Main.

**Action:**

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

3. If the LCD FPC is damaged – replace Front Assy.
4. If the B to B connector on the PBA Main is damaged - Replace B to B connector (CN7101), or replace PBA Main.

**Note! SL3 and above can replace the CN7101.**



## Problem Areas

### 1.5 LED/Illumination

#### 1.5.1 LED/Illumination

**Check:**

Inspect external window area of Notification LED on the Front Assy.

**Action:**

1. If dirty – clean it.

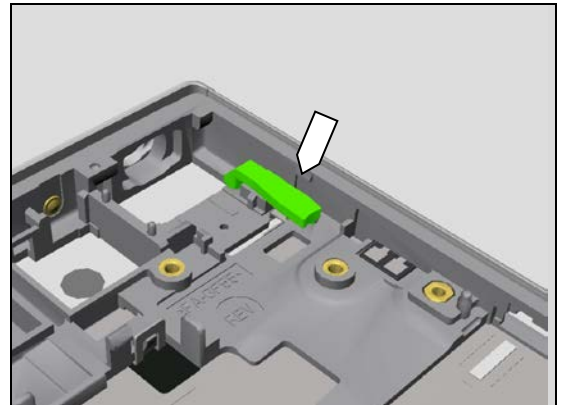


**Check:**

Inspect the LED Guide.

**Action:**

1. If dirty – clean it.



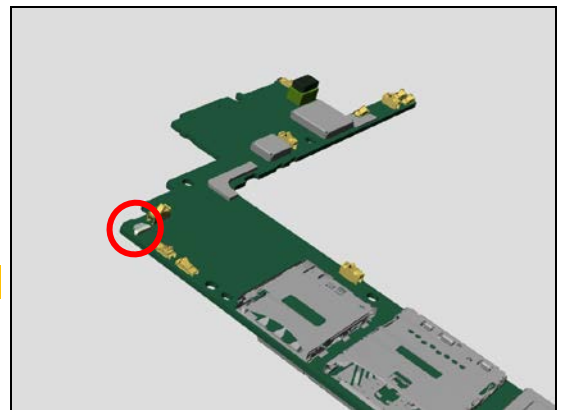
**Check:**

Inspect the LED on PBA Main.

**Action:**

1. If dirty or oxidized – clean it.
2. If damaged - replace the LED (D7601), or PBA Main.

**Note! SL3 and above can replace the CN7601.**





## Problem Areas

### 1.6 Bottom Speaker

#### 1.6.1 Bottom Speaker

**Check:**

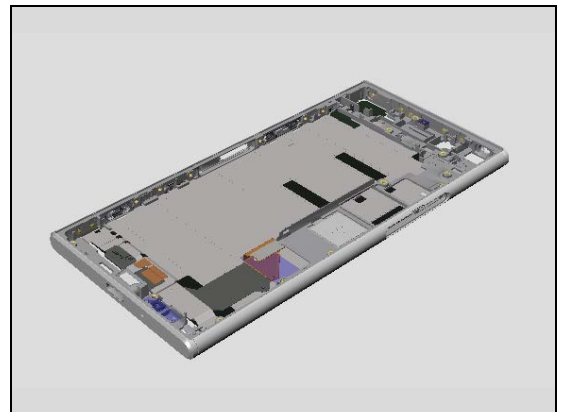
Inspect the external port of Bottom Speaker on the Front Assy.

**Action:**

1. If clogged – clean it.



2. If damaged – replace the Front Assy.

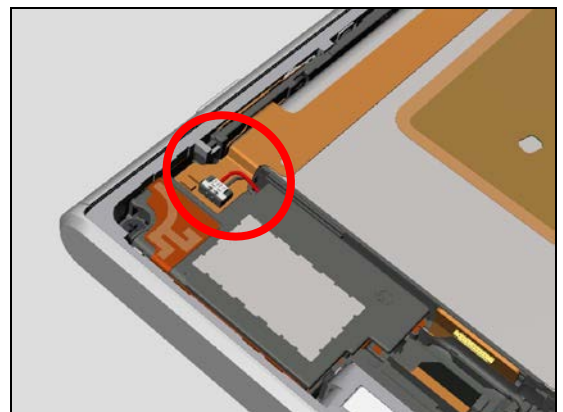


**Check:**

Inspect the connector of speaker cable.

**Action:**

1. If not connect properly – reconnect it.
2. If speaker cable is damaged – replace the Bottom Speaker
3. If the connector on the Key FPC is damaged – replace the Key FPC.

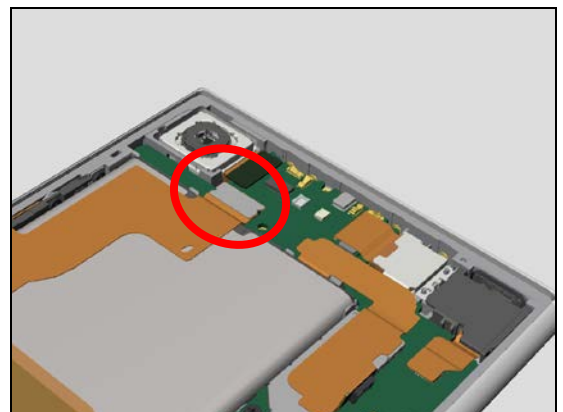


**Check:**

Inspect the B to B connector of Key FPC to PBA Main.

**Action:**

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

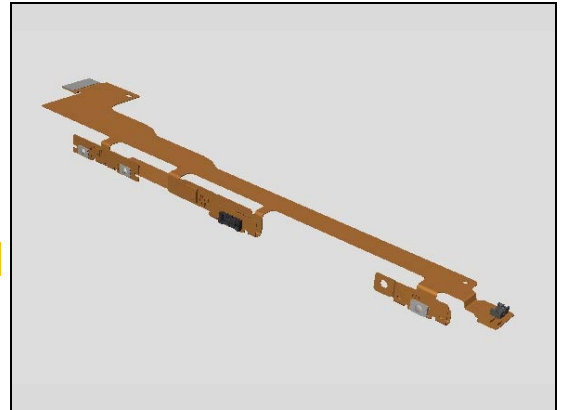




## Problem Areas: Speaker

3. If the FPC Key is damaged – replace it.
4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN9500), or replace PBA Main.

**Note! SL3 and above can replace the CN9500.**



## Problem Areas

### 1.7 Earphone

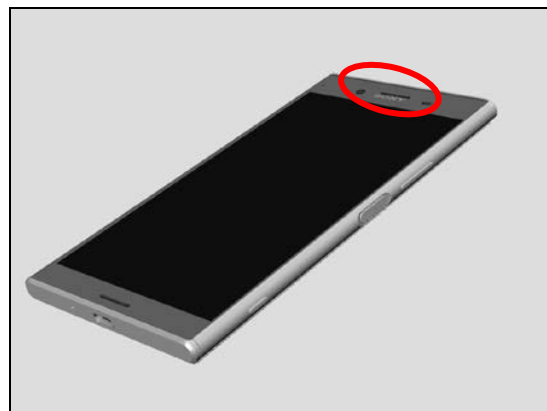
#### 1.7.1 Top Speaker

**Check:**

Inspect the external port of Top Speaker on the Front Assy.

**Action:**

1. If clogged – clean it.

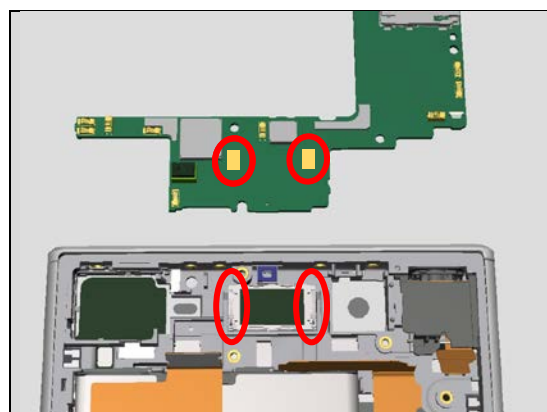


**Check:**

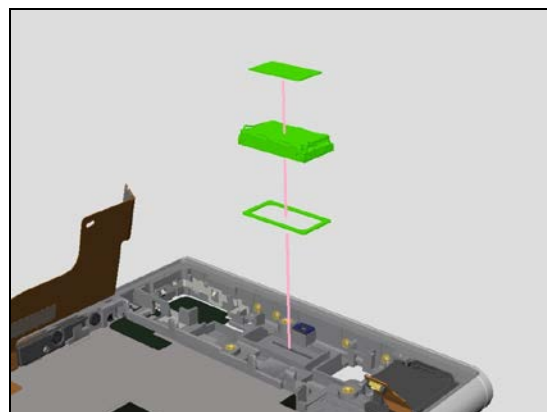
Inspect the contact pads on the PBA Main and the contact pins on the Top Speaker.

**Action:**

1. If dirty – clean them.



2. If the contact pins of the Top Speaker or the Top Speaker is damaged – replace Top Speaker, Adhesive WR Receiver, and Cushion Aco.



## Problem Areas

### 1.8 Microphone

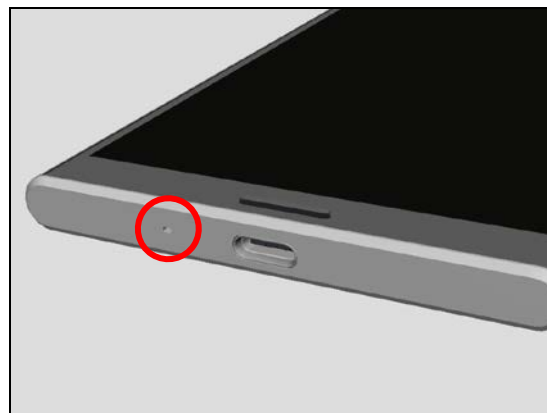
#### 1.8.1 Primary Microphone

**Check:**

Inspect the hole of Primary Microphone port on the Front Assy.

**Action:**

1. If clogged – clean it.



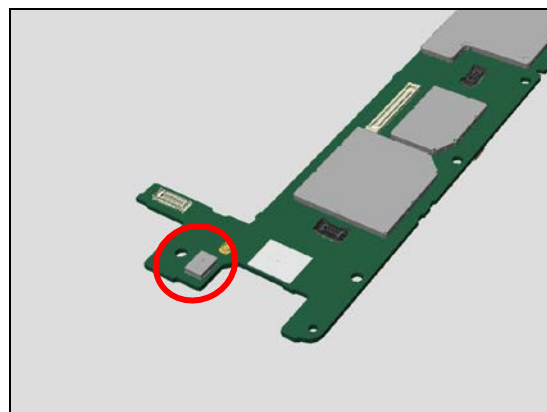
**Check:**

Inspect the primary microphone on the PBA Main.

**Action:**

1. If damaged – replace the Mic (M3001) or PBA Main.

**Note! SL3 and above can replace the M3001.**



#### 1.8.2 Secondary Microphone

**Check:**

Inspect the hole of secondary microphone on the Front Assy.

**Action:**

1. If clogged – clean it.



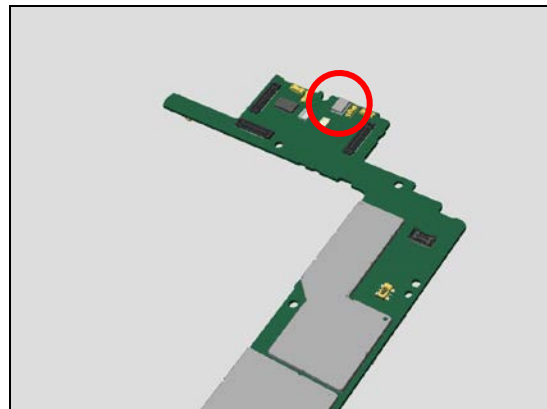
**Check:**

Inspect the secondary microphone on the PBA Main.

**Action:**

1. If damaged – replace the Mic (M3002) or PBA Main.

**Note! SL3 and above can replace the M3002.**



## Problem Areas

### 1.9 Vibrator

#### 1.9.1 Vibrator not generating alerts

**Check:**

Inspect the B to B connector of Vibrator to PBA Main.

**Action:**

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.
3. If the B to B connector of Vibrator is damaged – replace the Vibrator.

4. If B to B connector on the PBA Main is damaged – replace B to B connector (CN5103), or replace PBA Main.

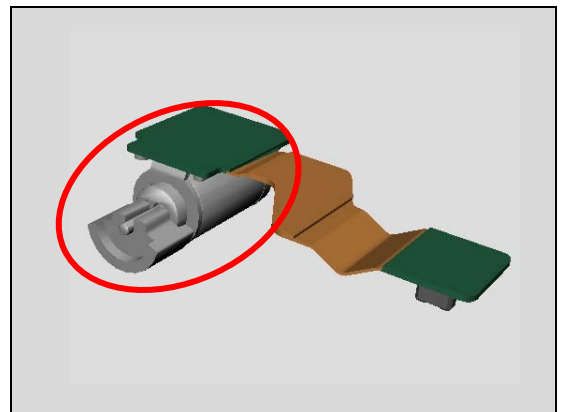
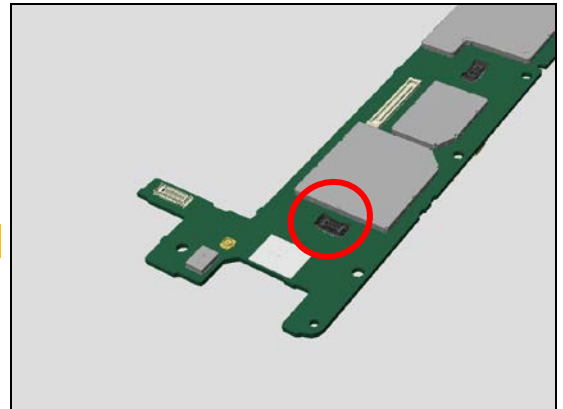
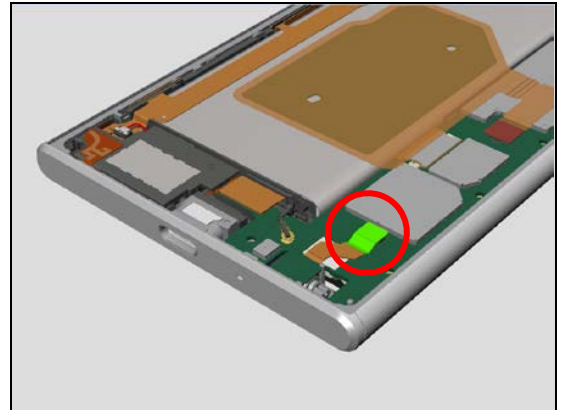
**Note! SL3 and above can replace the CN5103.**

**Check:**

Inspect the Vibrator.

**Action:**

1. If Vibrator is damaged – Replace it.



## Problem Areas

### 1.10 Camera

#### 1.10.1 Main Camera

**Check:**

Inspect the external area of camera window.

**Action:**

1. If dirty – clean it.

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

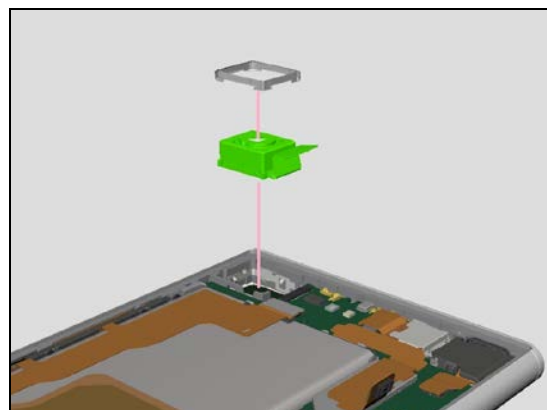
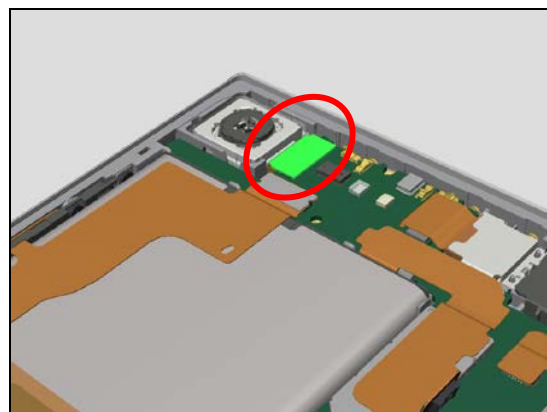
**Check:**

Inspect the BtB connector of Main Camera to PBA Main.

**Action:**

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

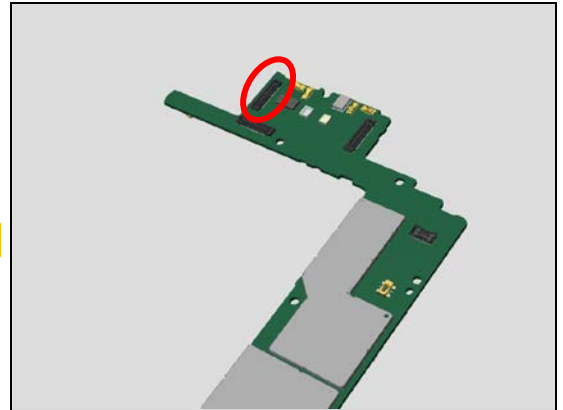
3. If the BtB connector or the Main Camera is damaged – replace the Main Camera.



## Problem Areas: Camera

4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN7300), or replace PBA Main.

**Note! SL3 and above can replace the CN7300.**



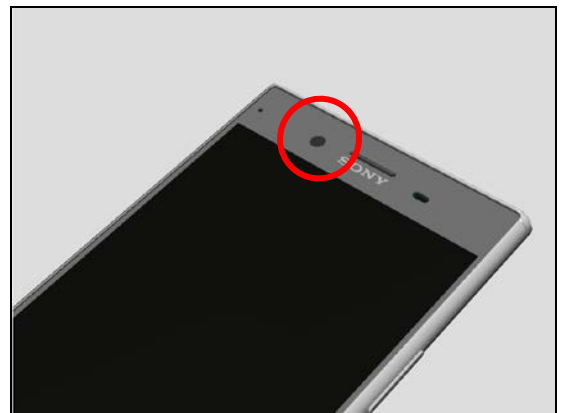
### 1.10.1 Front Camera defects

**Check:**

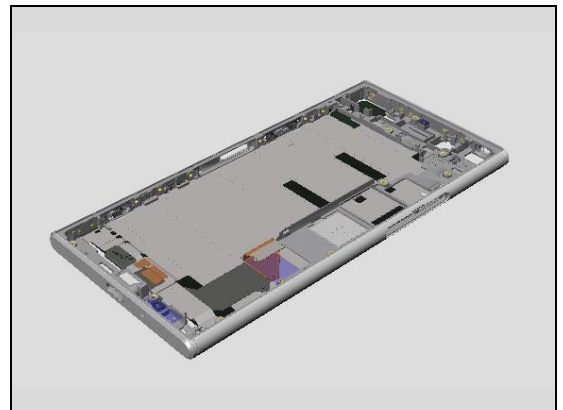
Inspect the external area of the front camera window.

**Action:**

1. If dirty – clean it.



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

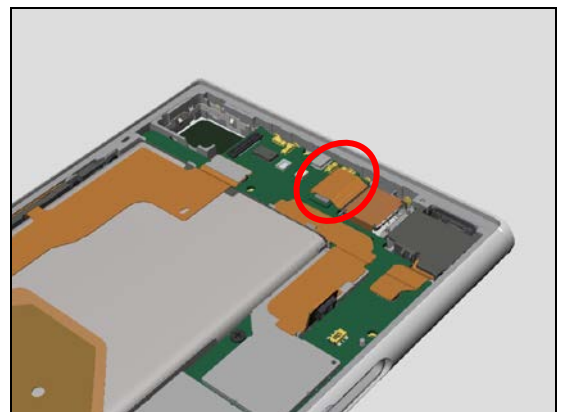


**Check:**

Inspect the BtB connector of Front Camera to PBA Main.

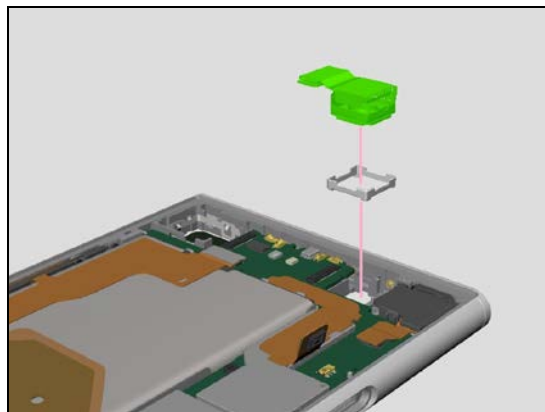
**Action:**

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



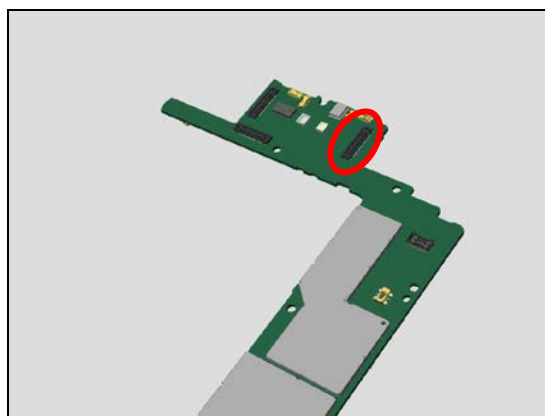
## Problem Areas: Camera

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



4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN7301), or replace PBA Main.

**Note! SL3 and above can replace the CN7301.**



## Problem Areas

### 1.11 Flash LED

#### 1.11.1 Flash LED not flashing

**Check:**

Inspect the external area of the flash LED.

**Action:**

1. If dirty – clean it.



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



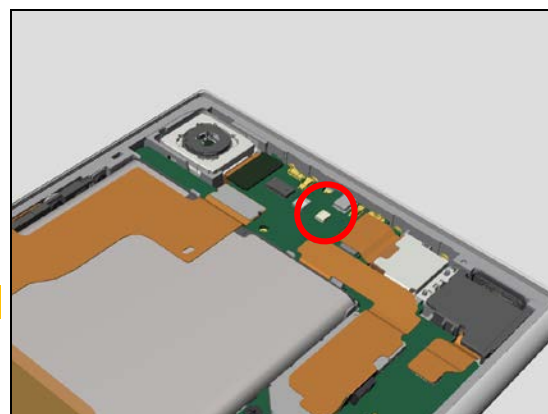
**Check:**

Inspect the Flash LED on PBA Main.

**Action:**

1. If dirty – clean it.
2. If Flash LED is damaged – replace LED White (D7800) or PBA Main.

**Note! SL3 and above can replace the D7800.**





## Problem Areas

### 1.12 Bluetooth, GPS, or/and WLAN Main

#### 1.12.1 Bluetooth, GPS, or/and WLAN Main connection failure

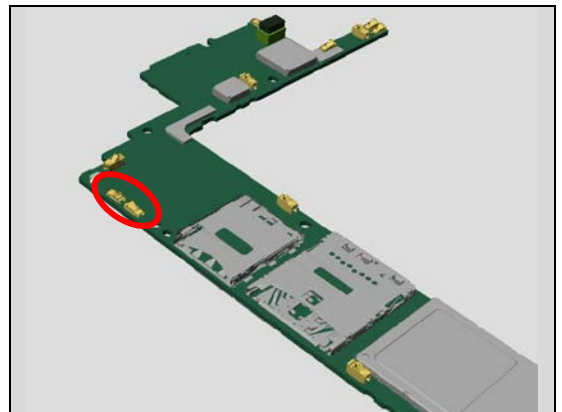
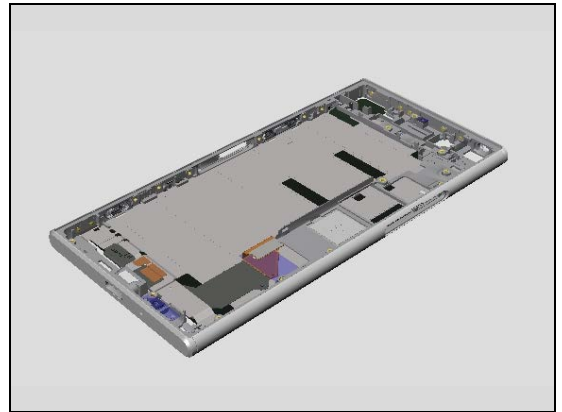
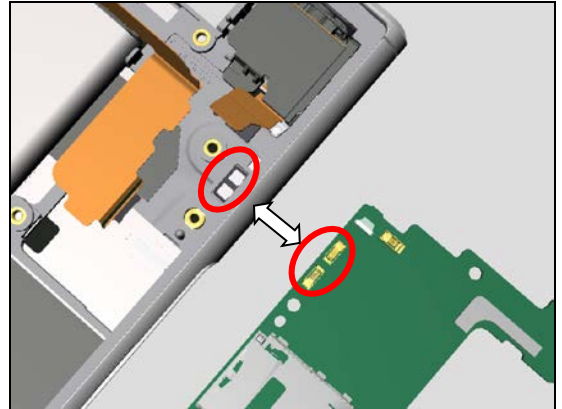
**Check:**

Inspect the WLAN Main contact pads on Front Assy and the contact pins on PBA Main.

**Action:**

1. If dirty or oxidized – clean the pads and pins.
2. If the contact pads on Front Assy are damaged – replace the Front Assy.
3. If the contact pins on PBA Main is damaged – replace contact Pins (CN8001, 8002), or replace PBA Main.

**Note! SL3 and above can replace the CN8001, 8002.**



## Problem Areas

### 1.13 WLAN Sub

#### 1.13.1 WLAN Sub connection failure

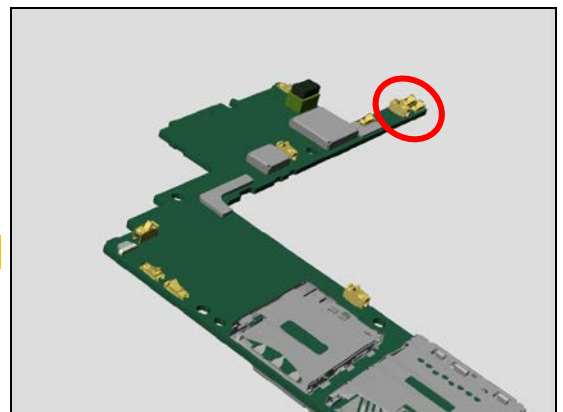
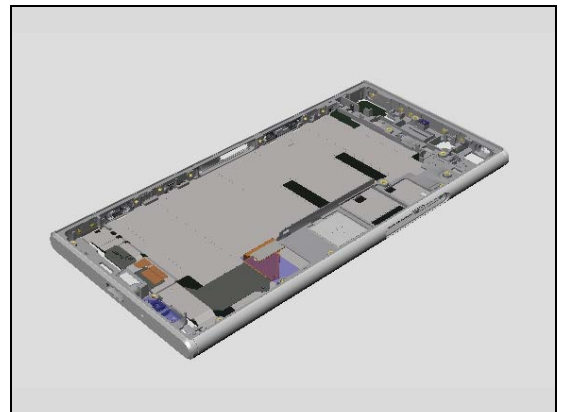
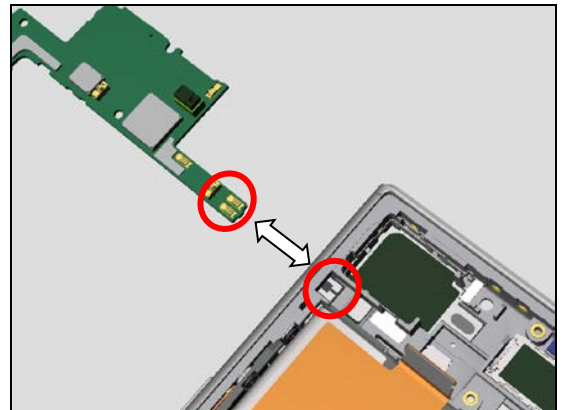
**Check:**

Inspect the WLAN Sub contact pads on Front Assy and the contact pins on PBA Main.

**Action:**

1. If dirty or oxidized – clean the pads and pins.
2. If the contact pads on Front Assy are damaged – replace the Front Assy.
3. If the contact pins on PBA Main is damaged – replace contact Pins (CN4641, 4642), or replace PBA Main.

**Note! SL3 and above can replace the CN4641, 4642.**



## Problem Areas

### 1.14 NFC

#### 1.14.1 NFC malfunctions

**Check:**

Inspect the Ant NFC Flex properly connected on the PBA Main, and condition of B to B connectors.

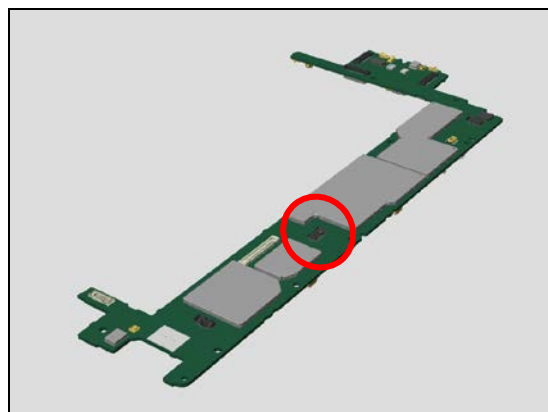
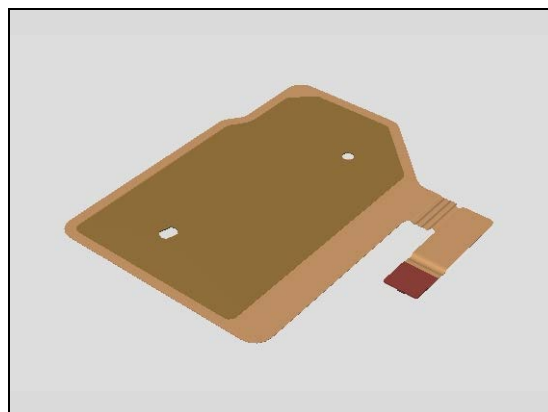
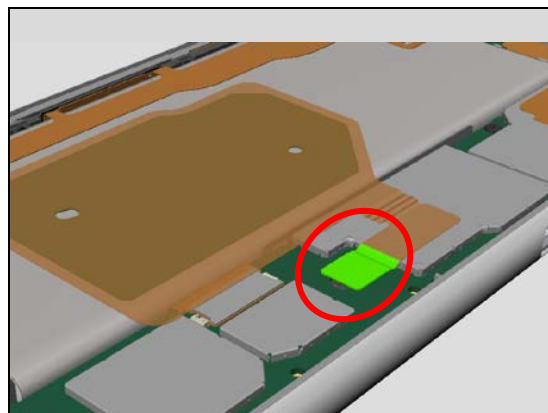
**Action:**

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

2. If the Ant NFC Flex is damaged – replace it.

3. If the B to B connector on PBA Main is damaged – replace B to B connector (CN8650), or replace PBA Main.

**Note! SL3 and above can replace the CN8650.**



## Problem Areas

### 1.15 Compass

#### 1.15.1 Compass fails

**Check:**

Inspect the BtB connector of Key FPC to PBA Main.

**Action:**

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

3. If the Key FPC is damaged – replace it.
4. If the B to B connector on the PBA Main is damaged, replace B to B connector (CN9500), or replace PBA Main.

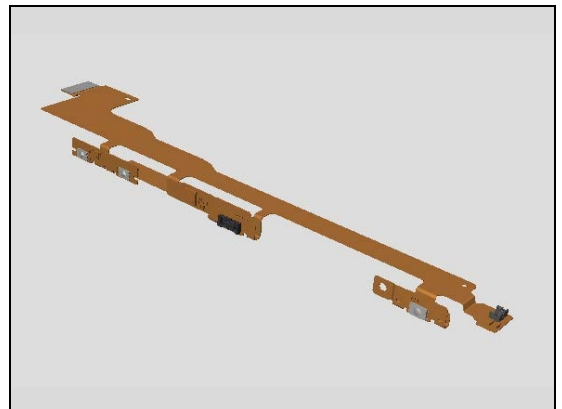
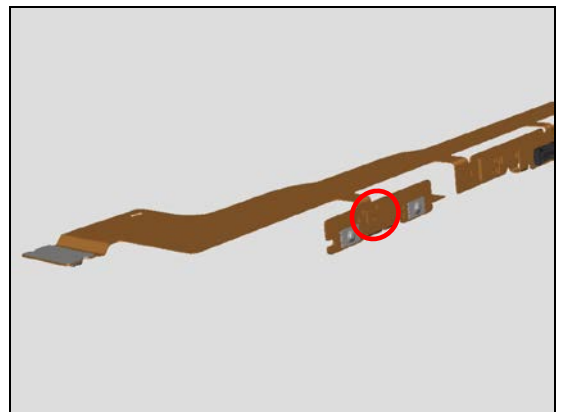
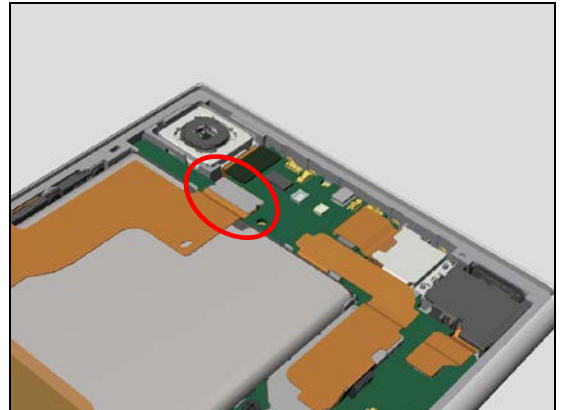
**Note! SL3 and above can replace the CN9500.**

**Check:**

Inspect the compass chipset on the Key FPC.

**Action:**

1. If the compass chipset is damaged – replace the Key FPC.



## Problem Areas

### 1.16 Accelerometer

#### 1.16.1 Accelerometer test fails

**Action:**

1. Calibrate Accelerometer by “CS-Everest 1309-7255” that is posted on the Repair Information under the RE4251: Repair Mechanical – Tools and Equipment (including Repair Software).

## Problem Areas

### 1.17 Gyroscope

#### 1.17.1 Gyroscope test fails

**Action:**

1. Calibrate Gyroscope by “CS-Everest 1309-7255” that is posted on the Repair Information under the RE4251: Repair Mechanical – Tools and Equipment (including Repair Software).

## Problem Areas

### 1.18 Ambient Light Sensor

#### 1.18.1 Light Sensor malfunctions

**Check:**

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

**Action:**

1. If dirty – clean it.

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

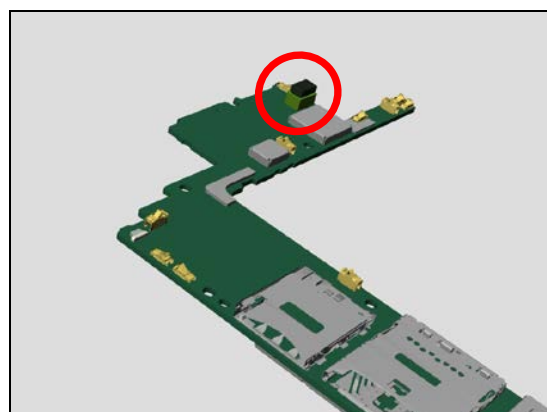
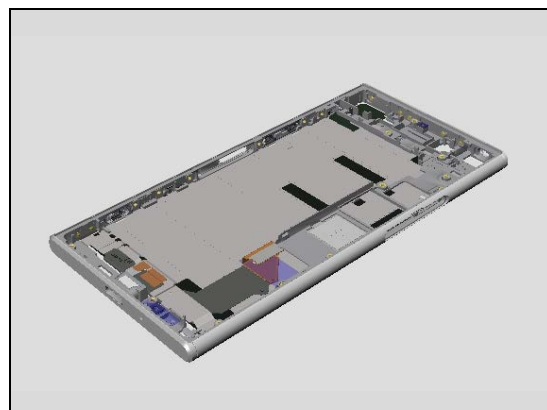
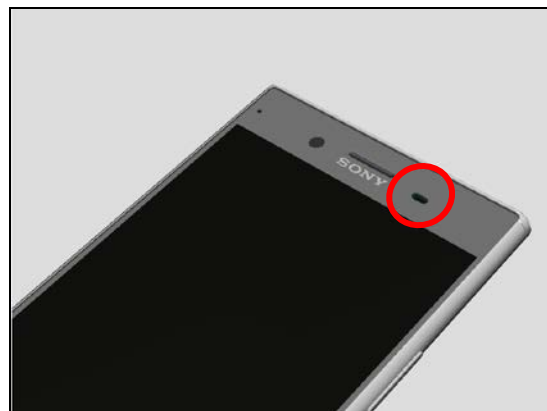
**Check:**

Inspect the light sensor on the PBA Main.

**Action:**

1. If dirty or oxidized – clean it.

2. If damaged - replace PBA Main.



## Problem Areas

### 1.19 Proximity Switch

#### 1.19.1 Proximity switch malfunctions

**Action:**

1. Calibrate Proximity by “CS-Everest 1309-7255” that is posted on the Repair Information under the RE4251: Repair Mechanical – Tools and Equipment (including Repair Software).

**Check:**

Inspect the external window area of proximity switch.

**Action:**

1. If dirty – clean it.

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

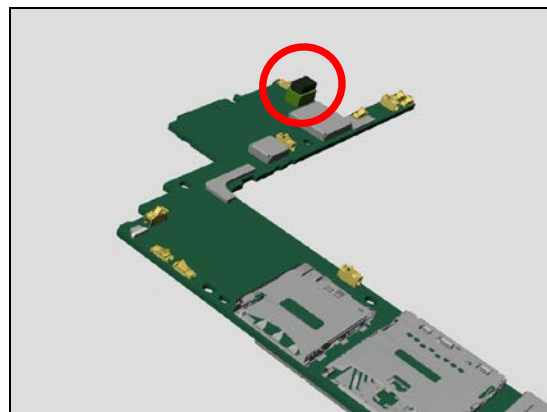
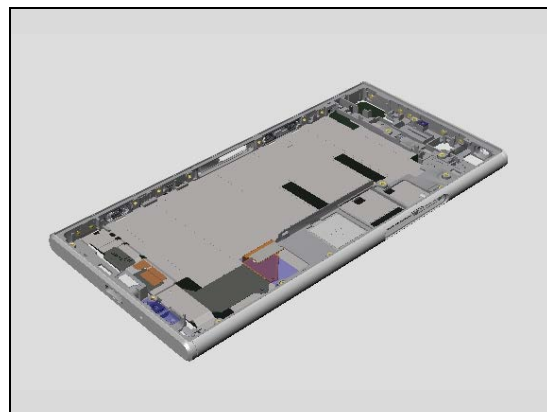
**Check:**

Inspect the proximity switch on the PBA Main.

**Action:**

1. If dirty or oxidized – clean it.

2. If damaged – replace PBA Main.





## Problem Areas

### 1.20 Hall Element

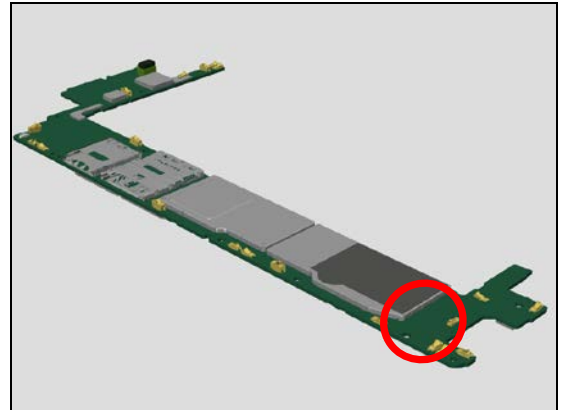
#### 1.20.1 Hall Element test fails

**Check:**

Inspect the Hall Sensor on the PBA Main.

**Action:**

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



## **Problem Areas**

### **1.21 Pressure Sensor**

#### **1.21.1 Pressure Sensor test fails**

Replace PBA Main.

## Problem Areas

### 1.22 Water Resistance

#### 1.22.1 Water Resistance fails

**Check:**

Inspect the Cap Tray Assy, and slot of the Cap Tray Assy of the Front Assy.

**Action:**

1. If dirty – clean it.
2. If Cap Tray Assy is not properly inserted – remove and reinsert.

3. If the Cap Tray Assy is damaged – replace it.

**Perform the Water Resistance Test again!**

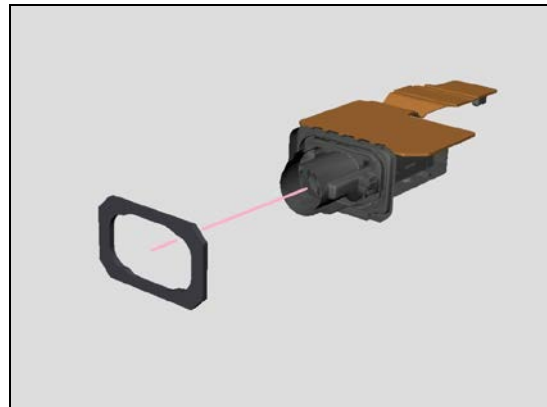
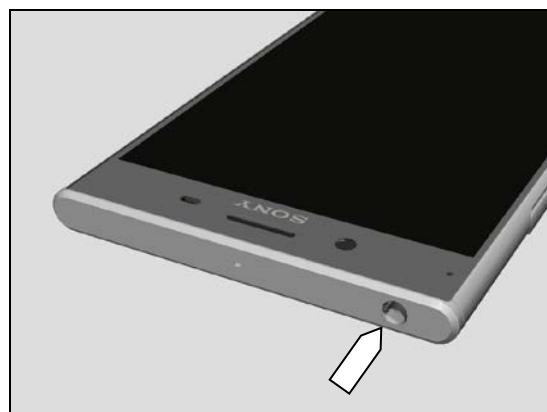
**Check:**

Inspect the Audio Jack hole.

**Action:**

1. If Audio Jack is not assembled properly – replace the Adhesive WP Audio Jack to reassemble Audio Jack.
2. If damaged – replace the Adhesive WP Audio Jack, and Audio Jack.

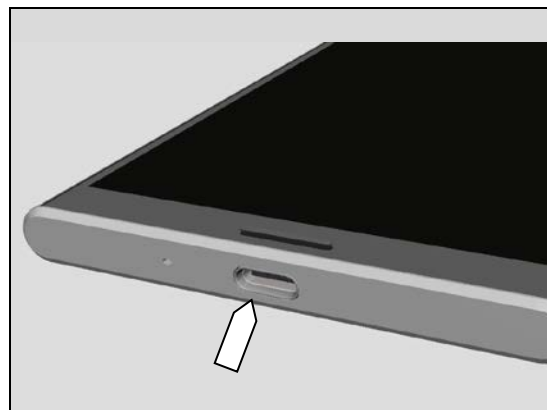
**Perform the Water Resistance Test again!**



## Problem Areas: Water Resistance

### Check:

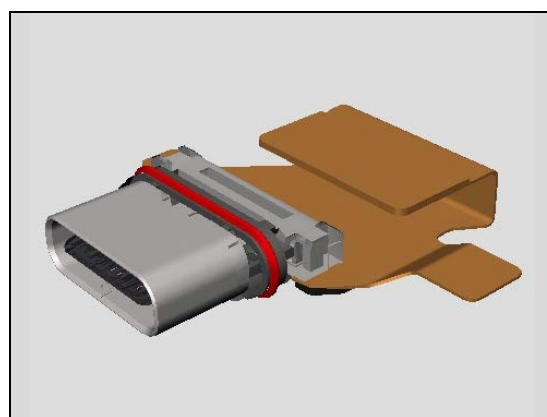
Inspect the USB connector.



### Action:

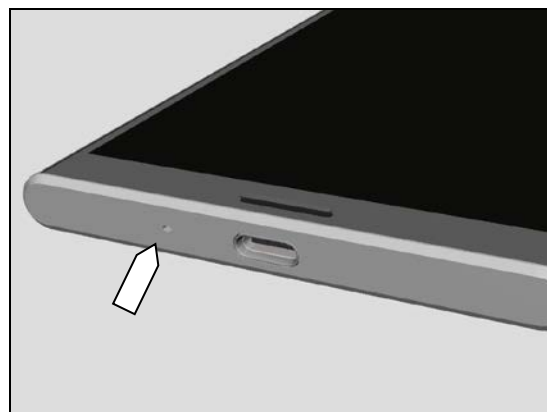
1. If USB Connector is not properly assembled – reassemble it
2. If USB Connector is damaged – replace it.

**Perform the Water Resistance Test again!**



### Check:

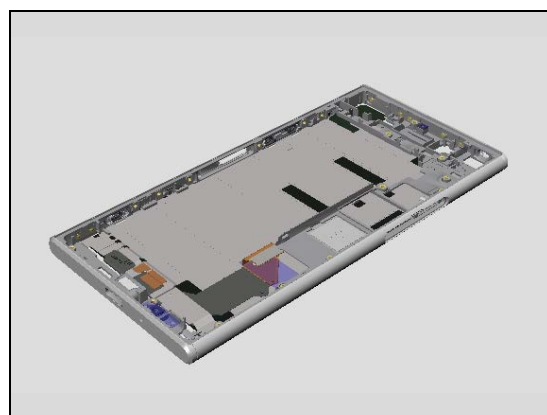
Inspect the main microphone port.



### Action:

If damaged – replace the Front Assy.

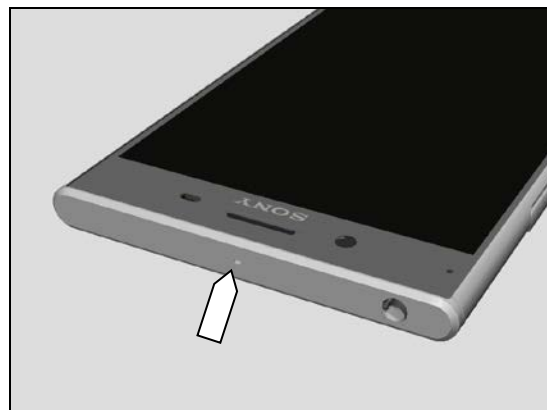
**Perform the Water Resistance Test again!**



## Problem Areas: Water Resistance

### Check:

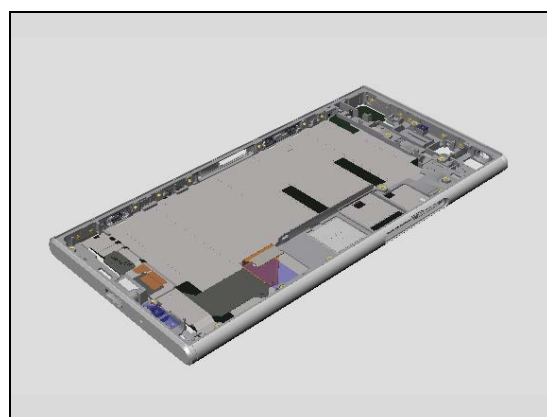
Inspect the second microphone port.



### Action:

If damaged – replace the Frame Assy.

**Run the Water Resistance Test again!**



### Check:

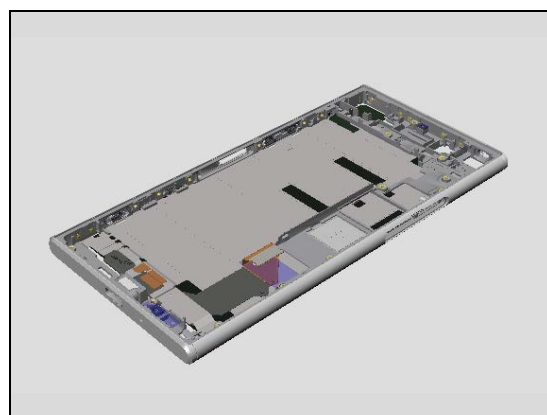
Inspect the edge of LCD if there is damage and/or gap.



### Action:

1. If the Front Assy has gap – replace Front Assy.
2. If the Front Assy is damaged – replace Front Assy.

**Run the Water Resistance Test again!**

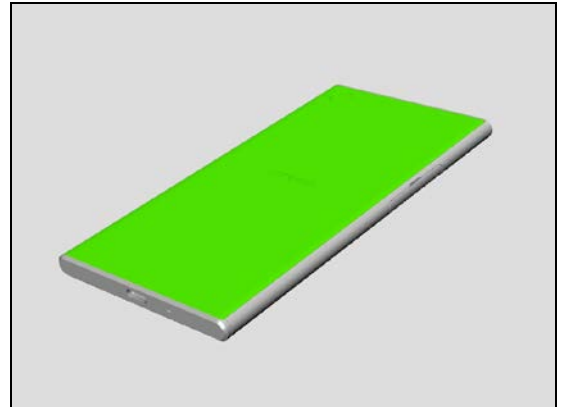


## Problem Areas: Water Resistance

### Check:

Inspect the Panel Rear, if it is damaged, and/or any gap between Panel Rear and Front Assy.

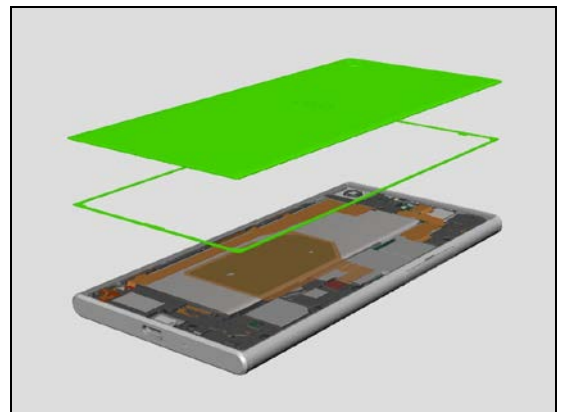
Inspect the main camera window, and LED window, if any damage, and/or gap



### Action:

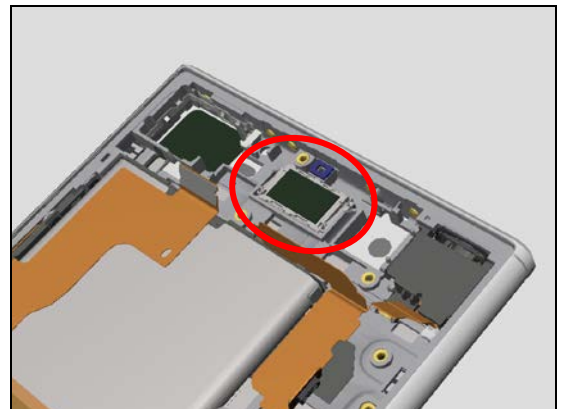
1. If the edge of Panel Rear has gap – reassemble the Panel Rear.
2. If Panel Rear has damage or gap at camera window/LED window – replace the Panel Rear.

**Run the Water Resistance Test again!**



### Check:

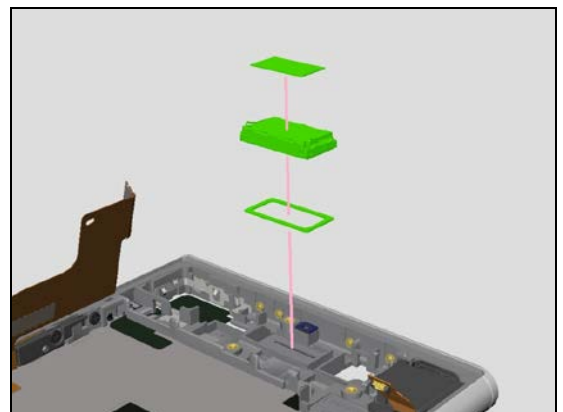
Inspect the Top Speaker.



### Action:

If not assembled properly or damaged – replace the Cushion ACO, Top Speaker and Adhesive WR Receiver.

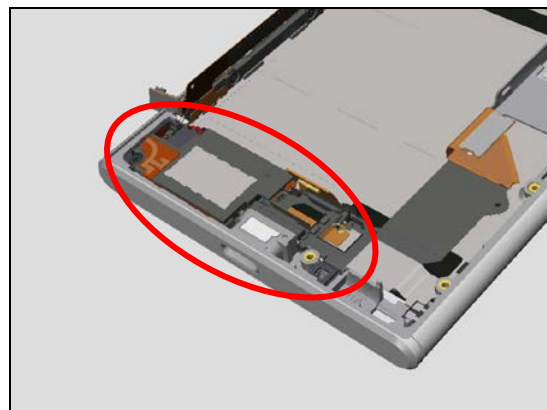
**Perform the Water Resistance Test again!**



## Problem Areas: Water Resistance

### Check:

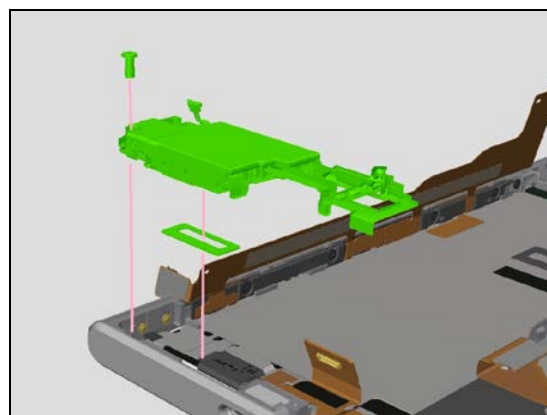
Inspect assembly condition of Bottom Speaker.



### Action:

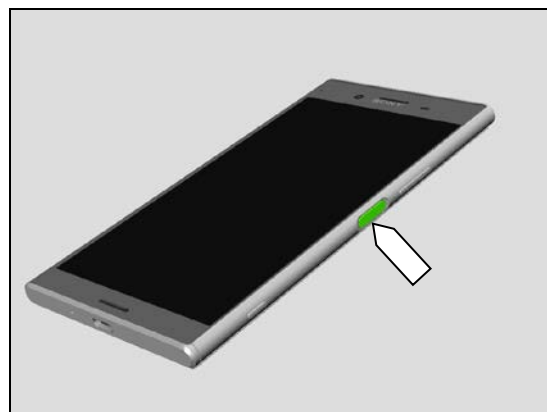
If not assembled properly or damaged – replace the Bottom Speaker, and Adhesive WR Speaker Box.

**Run the Water Resistance Test again!**



### Check:

Inspect assembly condition of FP Sensor Assy.



### Action:

1. If FP Sensor Assy is not properly assembled – reassemble it
2. If FP Sensor Assy is damaged – replace it.

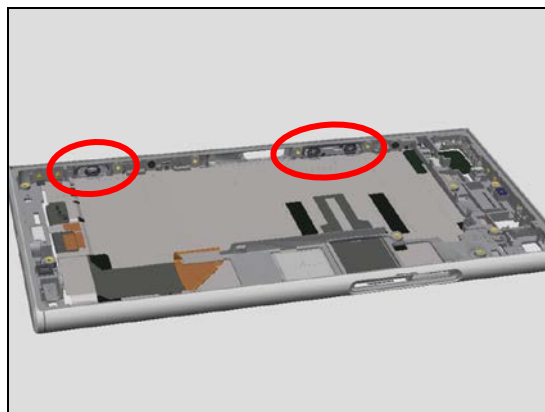
**Run the Water Resistance Test again!**



## Problem Areas: Water Resistance

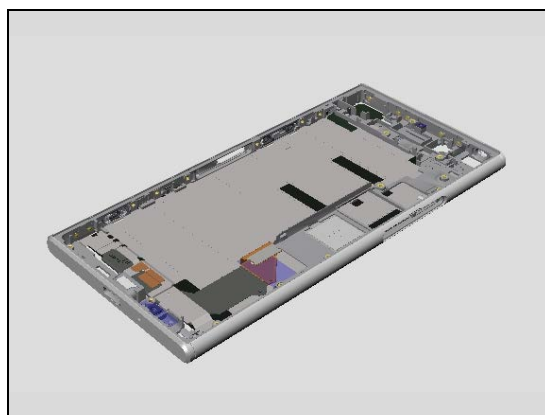
### Check:

Inspect assembly condition of the Key Gasket (Camera Key, Volume Key).



### Action:

1. If it is not properly assembled – reinstall, or push it into its hole of the Front Assy.
2. If can't be fully pushed into its hole or it is damaged – replace the Front assy.





## **Problem Areas**

### **1.23 Real Time Clock**

#### **1.23.1 Real time clock test fails**

**Action:**

Replace PBA Main.

## **Problem Areas**

### **1.24 Total call time**

#### **1.24.1 Total call time fails**

**Action:**

Replace PBA Mai.

## Problem Areas

### 1.25 External Memory, SIM

#### 1.25.1 Memory Card/ SIM not detected

**Check:**

Inspect if Cap Tray Assy is properly inserted.

**Action:**

If not properly inserted – insert the Cap Tray Assy correctly.



**Check:**

Inspect if Tray Nano SIM is properly inserted.

**Action:**

If not properly inserted – insert the Tray Nano SIM correctly



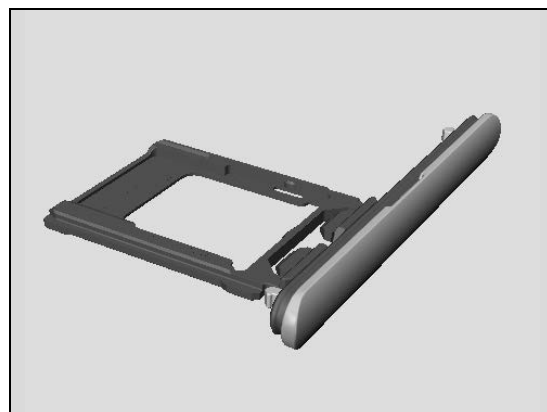
**Check:**

Inspect the Cap Tray Assy.

Inspect if Nano SIM and/or Memory Card is properly mounted on the Cap Tray Assy.

**Action:**

1. If dirty or clogged – clean the Cap Tray Assy.
2. If not properly mounted – remount the Memory Card/Nano SIM.
3. If damaged - replace Cap Tray Assy.



**Check:**

Inspect the Tray Nano SIM.

Inspect if Nano SIM is properly mounted on the Tray Nano SIM.

**Action:**

1. If dirty or clogged – clean the Tray Nano SIM.
2. If not properly mounted the Nano SIM – remount it.
3. If damaged - Replace Tray Nano SIM.



## Problem Areas : External Memory, SIM

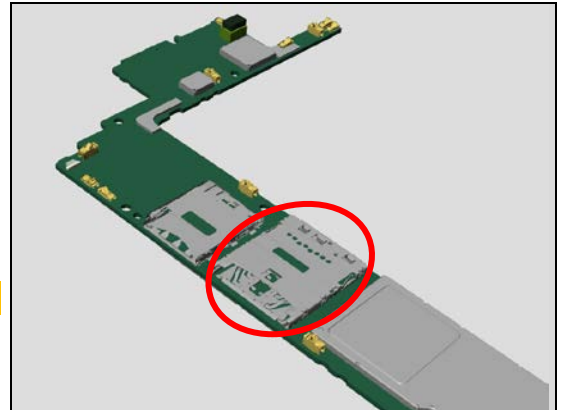
### Check:

Inspect the Card Conn SIM 2 in 1 on the PBA Main.

### Action:

1. If dirty or clogged – clean the Card Conn SIM 2 in 1.
2. If damaged – replace Card Conn SIM 2 in 1 (CN4000), or replace PBA Main.

**Note! SL3 and above can replace the CN4000.**



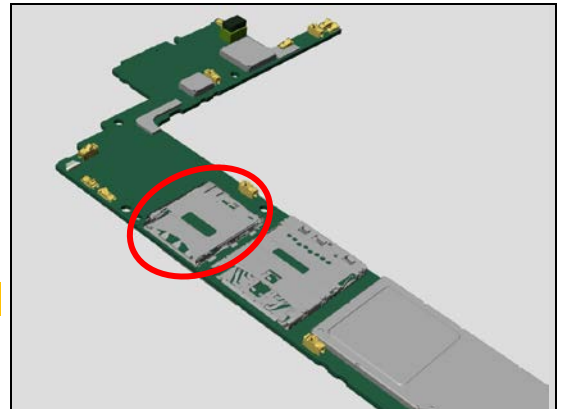
### Check:

Inspect the Card Conn SIM on the PBA Main.

### Action:

1. If dirty or clogged – clean the Card Conn SIM.
2. If damaged – replace Card Conn SIM (CN4001), or replace PBA Main.

**Note! SL3 and above can replace the CN4001.**



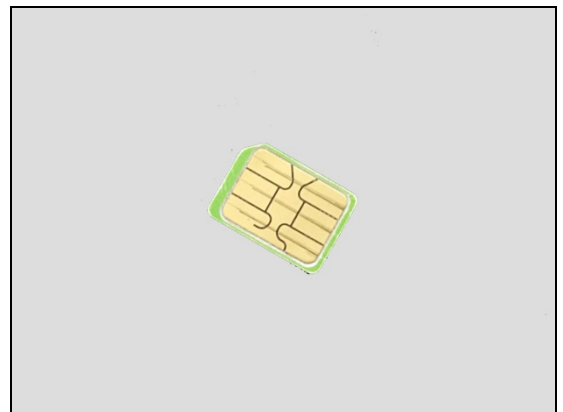
## 1.25.2 Incorrect Nano SIM indicated

### Check:

Check if the phone is locked to a particular operator and if the correct operator Nano SIM is being used.

### Action:

1. Use a proper operator Nano SIM or test Nano SIM.



## **Problem Areas**

### **1.26 Security**

#### **1.26.1 Security fails**

**Action:**

Replace PBA Main.

## Problem Areas

### 1.27 Network & Signal

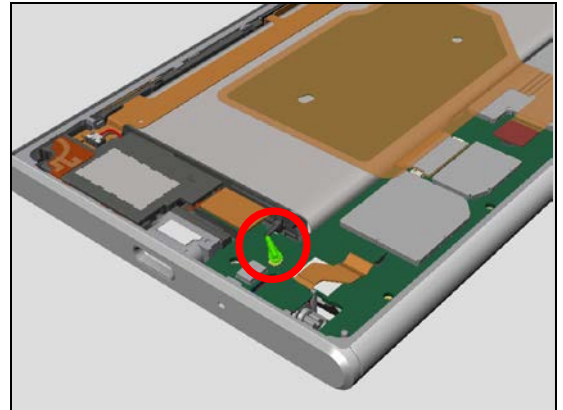
#### 1.27.1 No/Poor signal

**Check:**

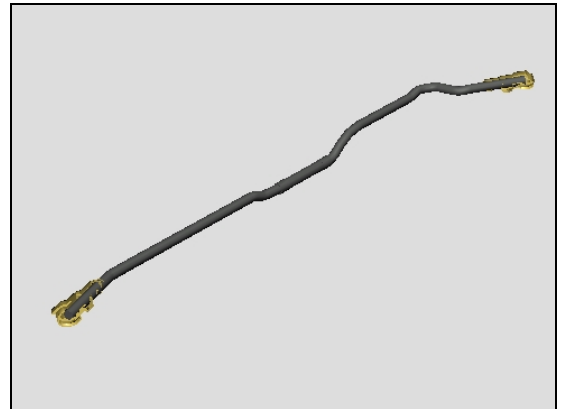
Inspect the RF connector of RF Cable to the PBA Main.

**Action:**

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

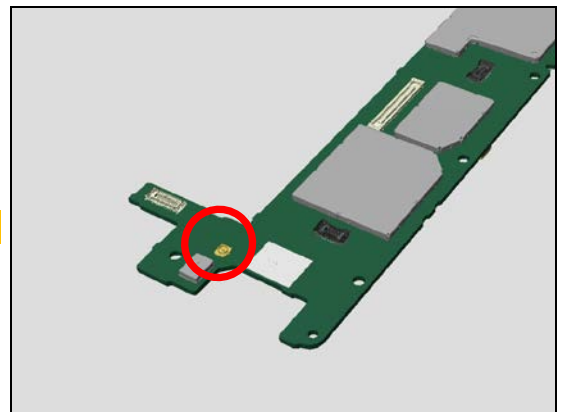


3. If the RF cable is damaged – replace the RF Cable.



4. If the connector on the PBA Main is damaged – replace connector (CN4402), or PBA Main.

**Note! SL3 and above can replace the CN4402.**

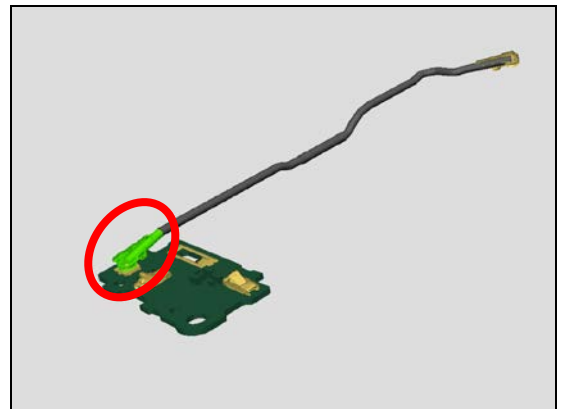


**Check:**

Inspect the RF connector of RF Cable to the PBA ANT.

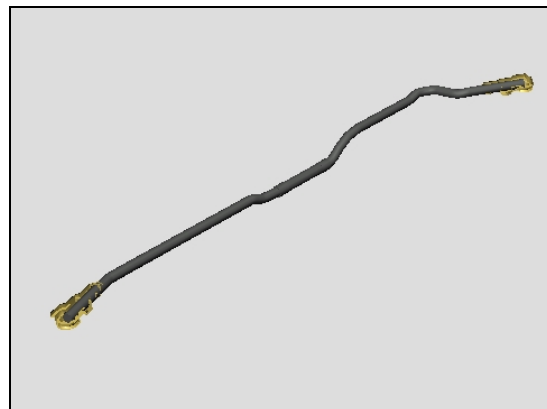
**Action:**

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

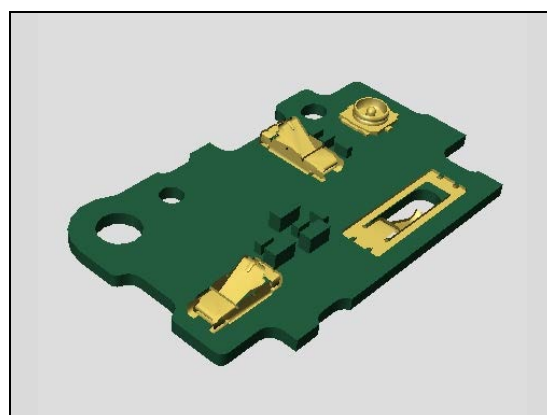


## Problem Areas: Network & Signal

3. If the RF cable is damaged – replace the RF Cable.



4. If the connector on the PBA ANT is damaged – replace PBA ANT.

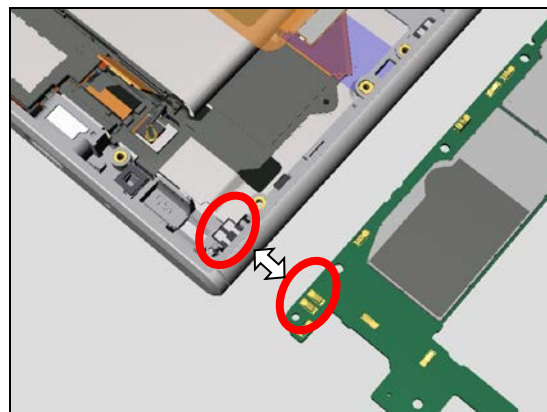


### Check:

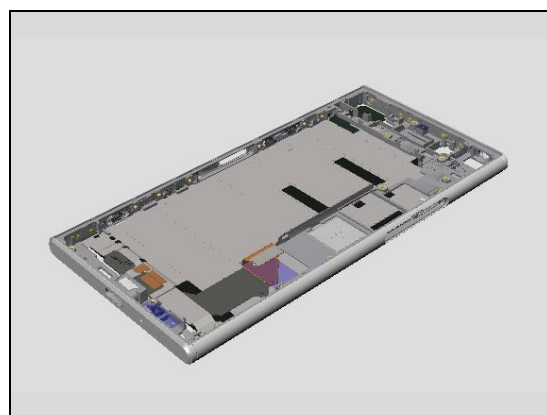
Inspect the Ant Cellular contact pads on the Front Assy, and the contact pins on PBA Main.

### Action:

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



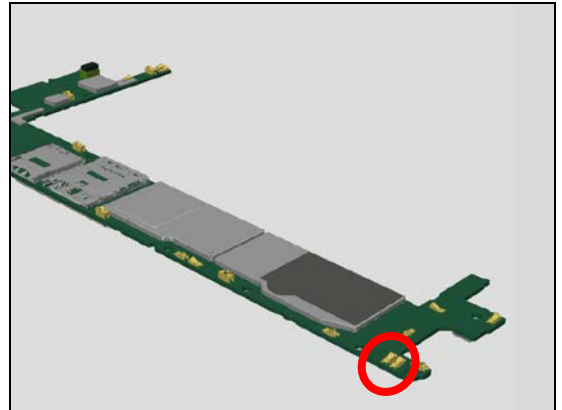
2. If the Ant Cellular contact pads on the Frame Assy are damaged – replace the Front Assy.



## Problem Areas: Network & Signal

3. If the contact pins on PBA Main are damaged – replace contact pins (CN4453, CN4454), or replace PBA Main.

**Note! SL3 and above can replace the CN4453, CN4454.**

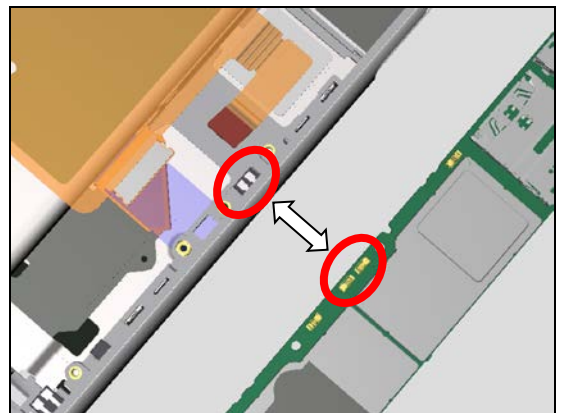


### Check:

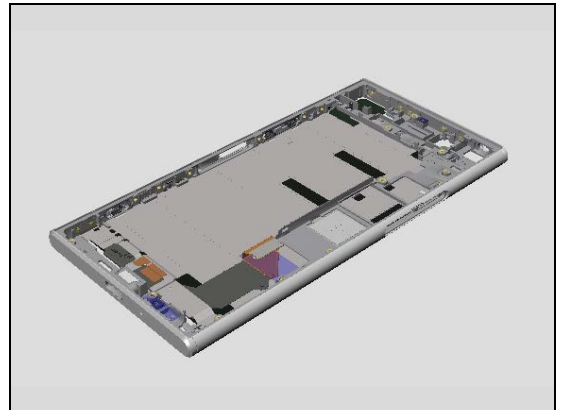
Inspect the Ant Cellular contact pads on the Front Assy, and the contact pins on PBA Main.

### Action:

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

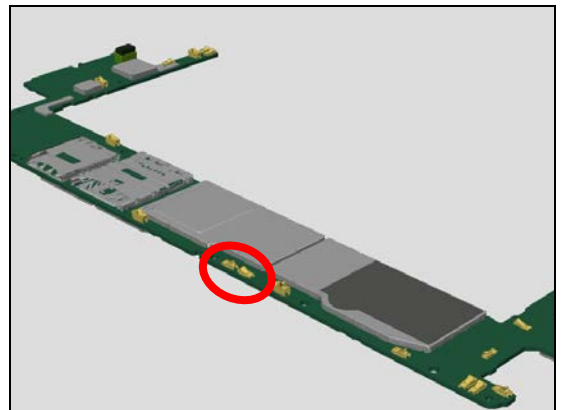


2. If the Ant Cellular contact pads on the Frame Assy are damaged – replace the Front Assy.



3. If the contact pins on PBA Main are damaged – replace contact pins (CN4431, CN4432), or replace PBA Main.

**Note! SL3 and above can replace the CN4431, CN4432.**





## Problem Areas: Network & Signal

### Check:

Inspect the Ant Cellular contact spring pin on the Front Assy, and the contact pads on Bottom Speaker.

### Action:

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

2. If the Ant Cellular contact spring pin on the Front Assy are damaged – replace the Front Assy.

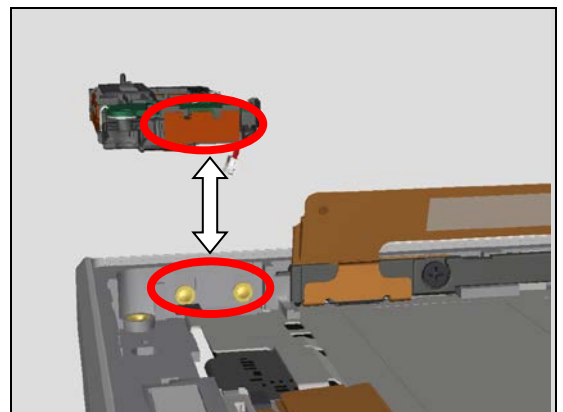
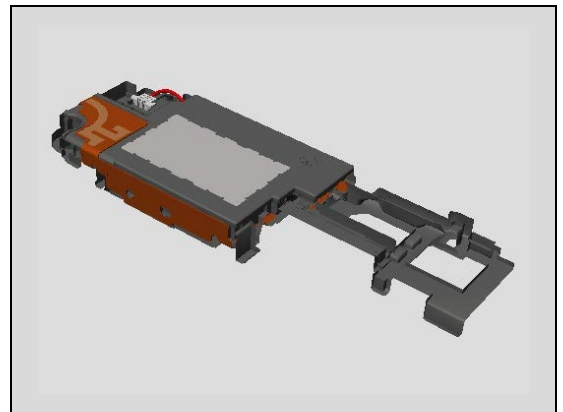
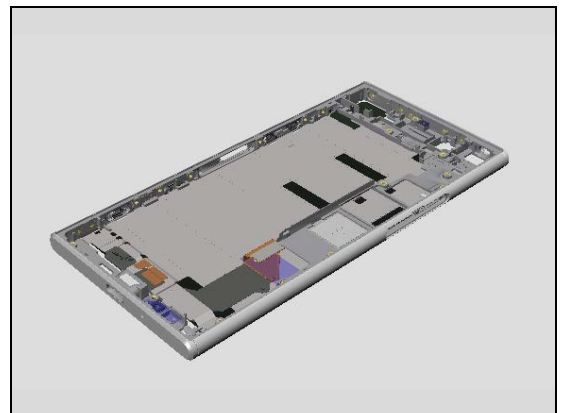
3. If the contact t pads on Bottom Speaker are damaged – replace the Bottom Speaker.

### Check:

Inspect the Ant Cellular contact spring pin on the Front Assy, and the contact pads on Bottom Speaker.

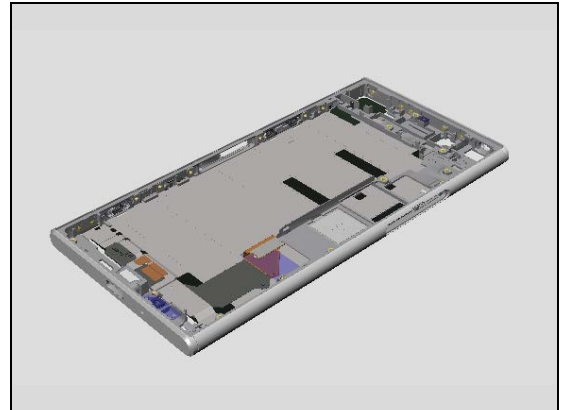
### Action:

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

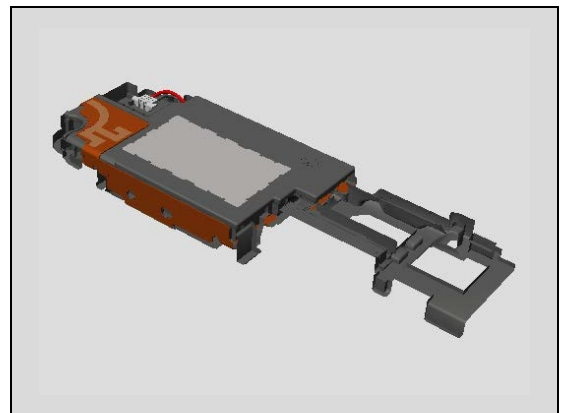


## Problem Areas: Network & Signal

3. If the Ant Cellular contact spring pin on the Front Assy are damaged – replace the Front Assy.



4. If the contact pads on Bottom Speaker are damaged – replace the Bottom Speaker.

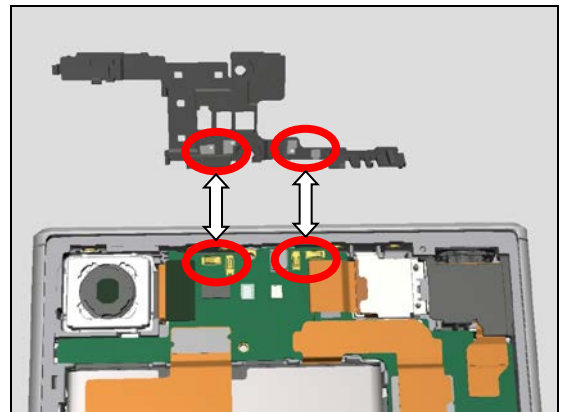


### Check:

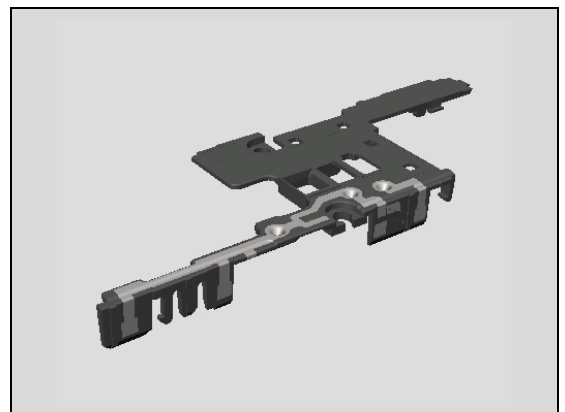
Inspect the Ant Cellular contact pads on the Ant Diversity LDS, and the contact pins on PBA Main.

### Action:

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



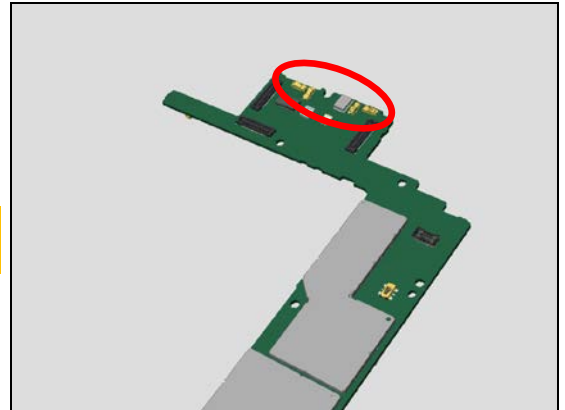
2. If the Ant Cellular contact pads on the Ant Diversity LDS are damaged – replace the Ant Diversity LDS.



## Problem Areas: Network & Signal

3. If the contact pins on PBA Main are damaged – replace contact pins (CN4651, CN4652, CN4653, CN4654), or replace PBA Main.

**Note! SL3 and above can replace the CN4651, C4652, CN4653, CN4654.**

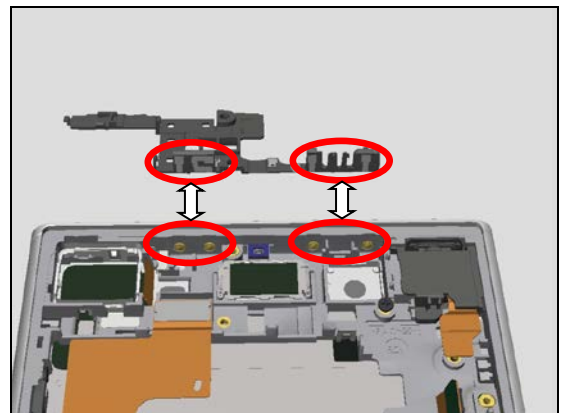


### Check:

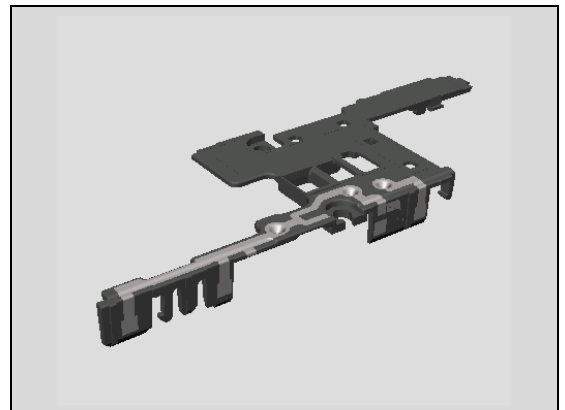
Inspect the Ant Cellular contact pads on the Ant Diversity LDS, and the contact pins on Front Assy.

### Action:

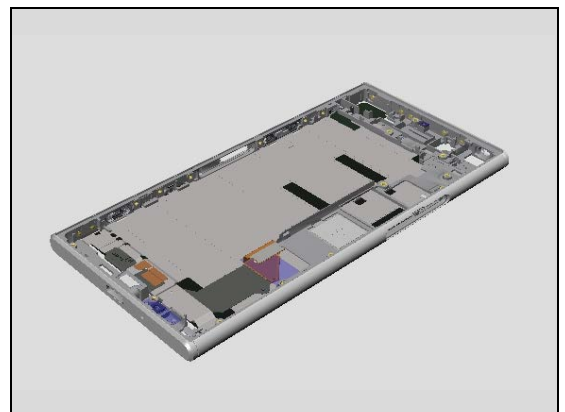
1. If dirty or oxidized – clean the pads and pins.



2. If the Ant Cellular contact pads on the Ant Diversity LDS are damaged – replace the Ant Diversity LDS.



3. If the Ant Cellular contact spring pin on the Front Assy are damaged – replace the Front Assy.



## Problem Areas

### 1.28 Charging

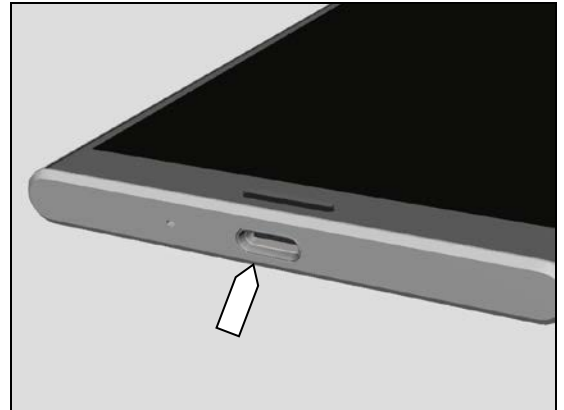
#### 1.28.1 Battery will not charge by USB Connector

**Check:**

Inspect the USB Connector.

**Action:**

1. If dirty or oxidized – clean the connector.
2. If USB Connector damaged – replace USB Connector.

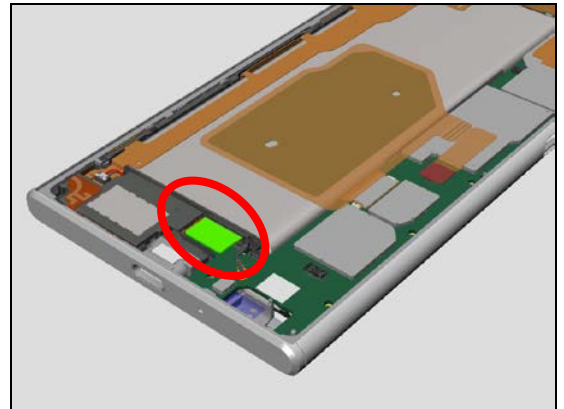


**Check:**

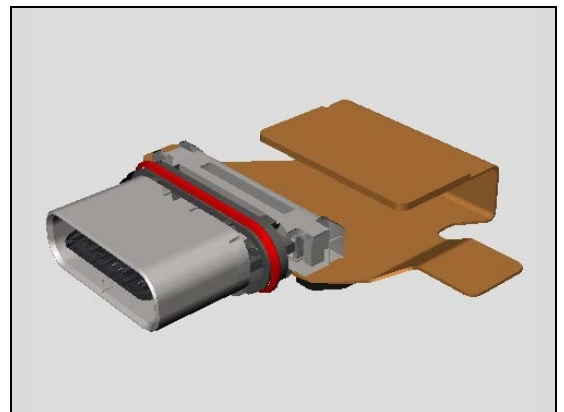
Inspect the BtB connector of USB FPC to PBA Main.

**Action:**

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

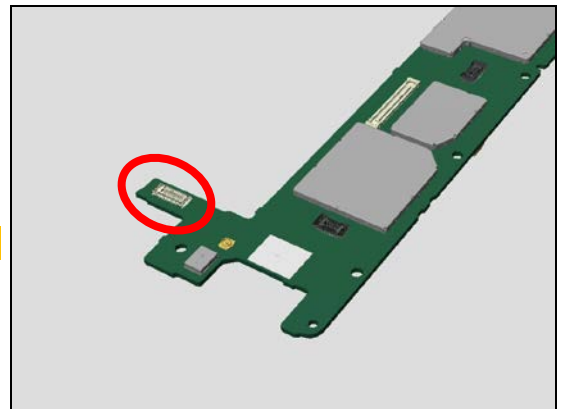


3. If USB Connector damaged – replace it.



4. If the B to B connector on the PBA Main is damaged – replace B to B connector (CN2201), or replace PBA Main.

**Note! SL3 and above can replace the CN2201.**



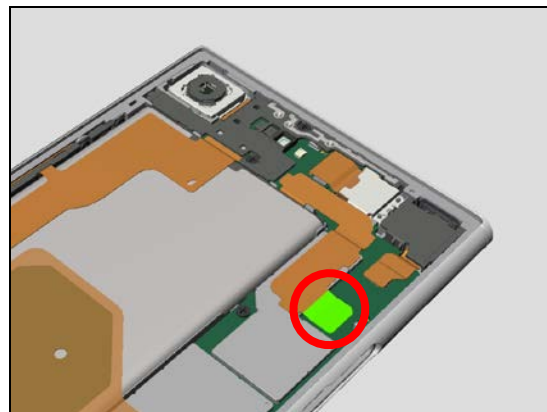
## Problem Areas: Charging

### Check:

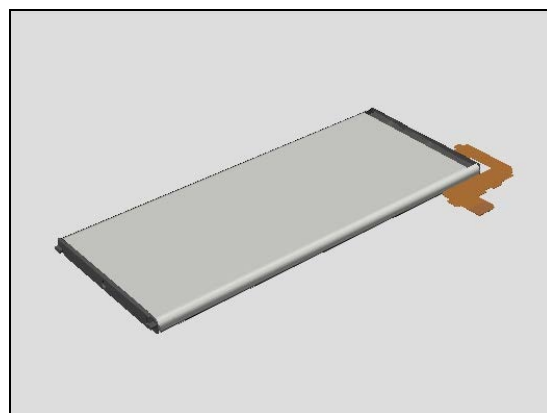
Inspect the B to B Connector of the Battery to PBA Main.

### Action:

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

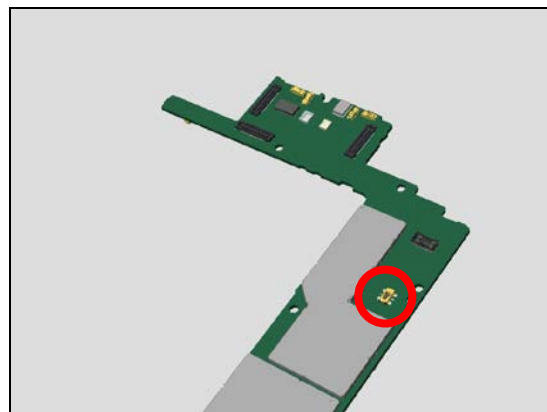


3. If the B to B connector on the FPC of the Battery is damaged – replace the Battery.



4. If the B to B connector on the PBA Main is damaged – replace B to B connector (CN1300), or replace PBA Main.

**Note! SL3 and above can replace the CN1300.**



## Problem Areas

### 1.29 Audio Jack test

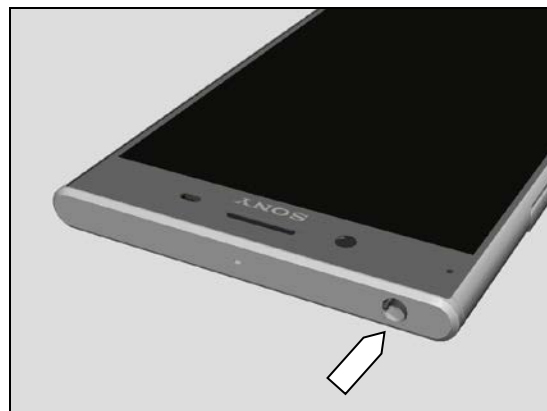
#### 1.29.1 Connection to headset fails

**Check:**

Inspect the external port of the Audio Jack.

**Action:**

1. If dirty or oxidized – clean it.

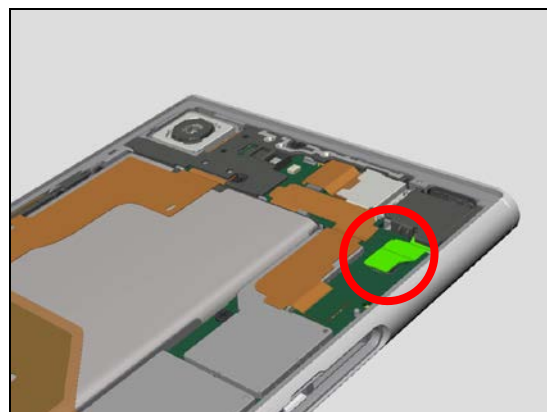


**Check:**

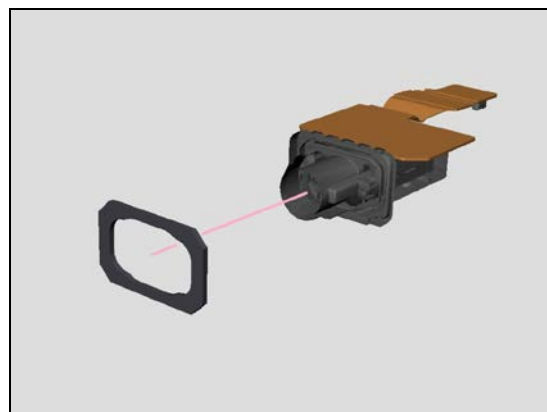
Inspect the B to B connector of Audio Jack to PBA Main.

**Action:**

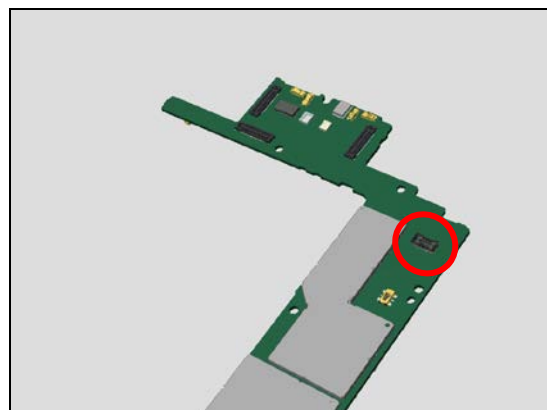
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the B to B connector of Audio Jack is damaged – replace the Audio Jack and Adhesive WP Audio Jack.



4. If the B to B connector on the PBA Main is damaged – replace B to B connector (CN9503), or replace PBA Main.



**Note! SL3 and above can replace the CN9503.**

## Problem Areas

### 1.30 Fingerprint Sensor test/Fingerprint Sensor function test

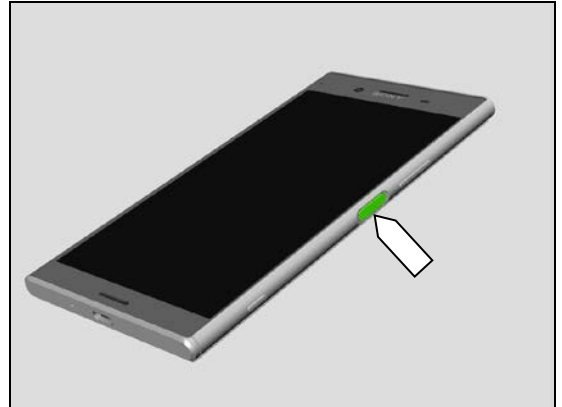
#### 1.30.1 Fingerprint Sensor test fails / Fingerprint Sensor function test fails

**Check:**

Inspect the FP Sensor Assy.

**Action:**

1. If dirty or oxidized – clean it.
2. If the FP Sensor Assy is damaged – replace the FP Sensor Assy.

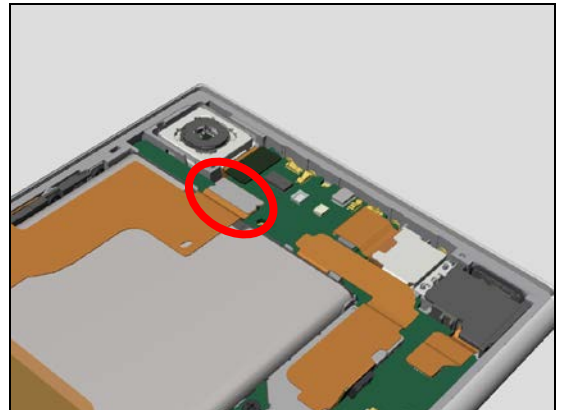


**Check:**

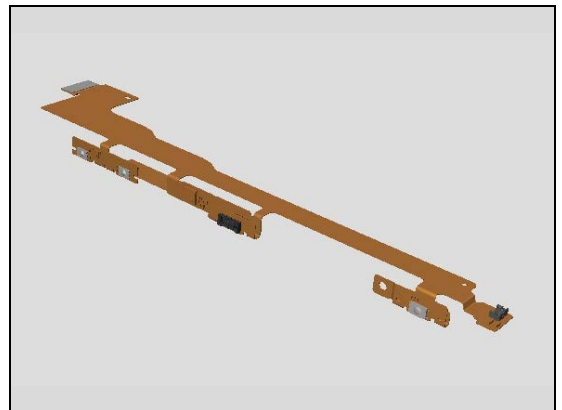
Inspect the B to B connector of Key FPC to PBA Main.

**Action:**

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

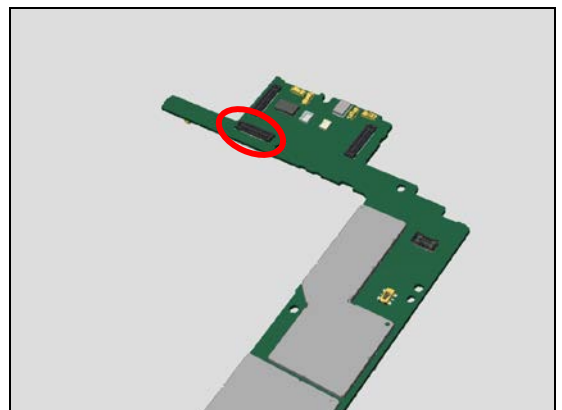


3. If the B to B connector or Key FPC is damaged – replace the Key FPC.



4. If the B to B connector on the PBA Main – replace B to B connector (CN9500), or replace PBA Main.

**Note! SL3 and above can replace the CN9500.**





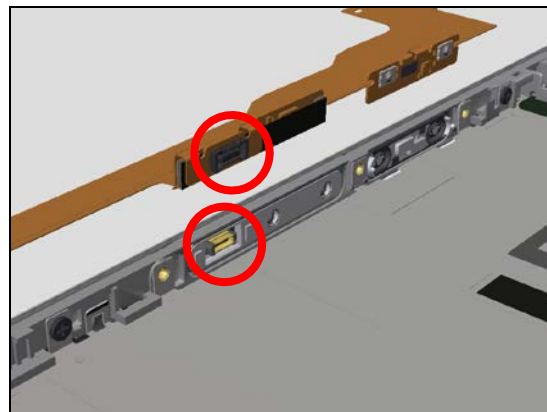
## Problem Areas: Finger Print Sensor test

### Check:

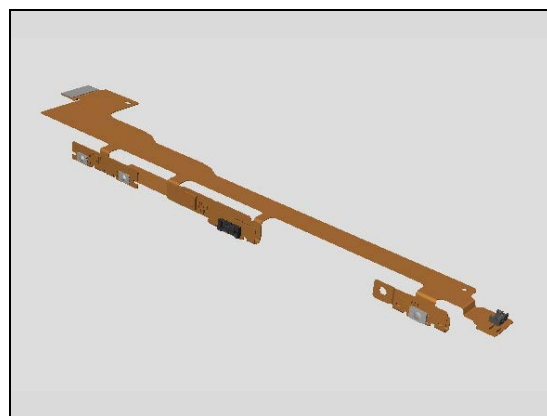
Inspect the B to B connector of FP Sensor Assy to Key FPC.

### Action:

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



3. If the B to B connector or Key FPC Key is damaged – replace the Key FPC.



4. If the B to B connector of FP Sensor Assy is damaged – replace the FP Sensor Assy.





## Problem Areas

### 1.31 Data Communication

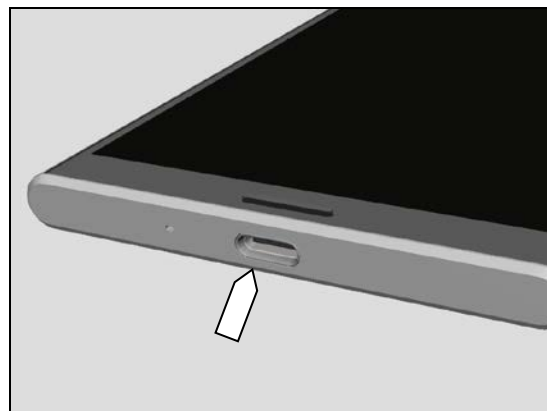
#### 1.31.1 Data transfer via System Connector fails

**Check:**

Inspect the USB Connector.

**Action:**

1. If dirty or oxidized – clean the connector.
2. If USB Connector damaged – replace USB Connector.

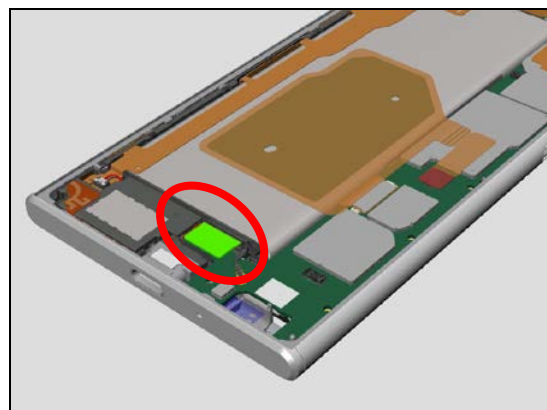


**Check:**

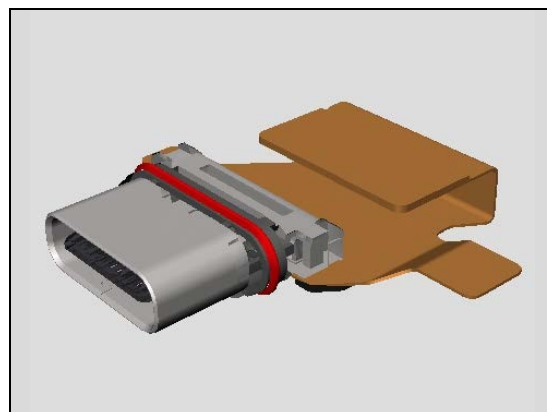
Inspect the BtB connector of USB FPC to PBA Main.

**Action:**

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

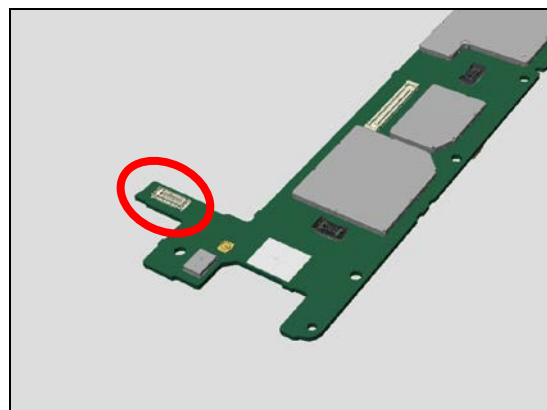


3. If USB Connector damaged – replace it.



4. If the B to B connector on the PBA Main is damaged – replace B to B connector (CN2201), or replace PBA Main.

**Note! SL3 and above can replace the CN2201.**



## Problem Areas

### 1.32 RGBC-IR Sensor

#### 1.32.1 RGBC-IR Sensor Test Fail

**Check:**

Inspect external window area of RGBC-IR Sensor on the Panel Rear.

**Action:**

1. If dirty – clean it.

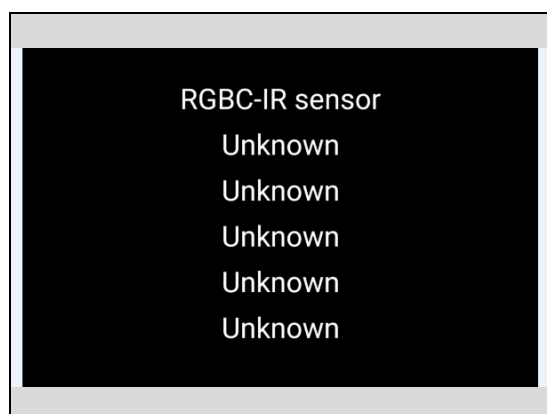
2. If Panel Rear is damaged – replace it.

**Check:**

Check if f Unknown is indicated by RGBC-IR Sensor Test.

**Action:**

Reboot the phone and retry the test



## Problem Areas

### 1.33 ToF Sensor

#### 1.33.1 ToF Sensor Test Fail

**Check:**

Inspect external window area of ToF Sensor on the Panel Rear.

**Action:**

1. If dirty – clean it.

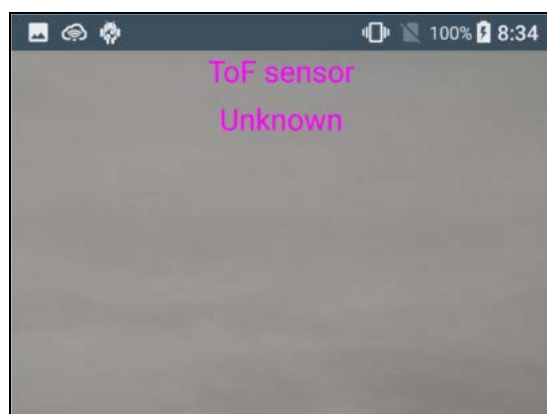
2. If Panel Rear is damaged – replace it.

**Check:**

Check if f Unknown is indicated by ToF Sensor Test.

**Action:**

Reboot the phone and retry the test



## Problem Areas

### 1.34 Unbalance Sound Level of Speaker L/R channel

#### 1.34.1 Unbalance Sound Level of Speaker L/R channel

**Check:**

Check if Speaker Calibration is completed to refer to the Speaker Calibration Status of the Service Tests.

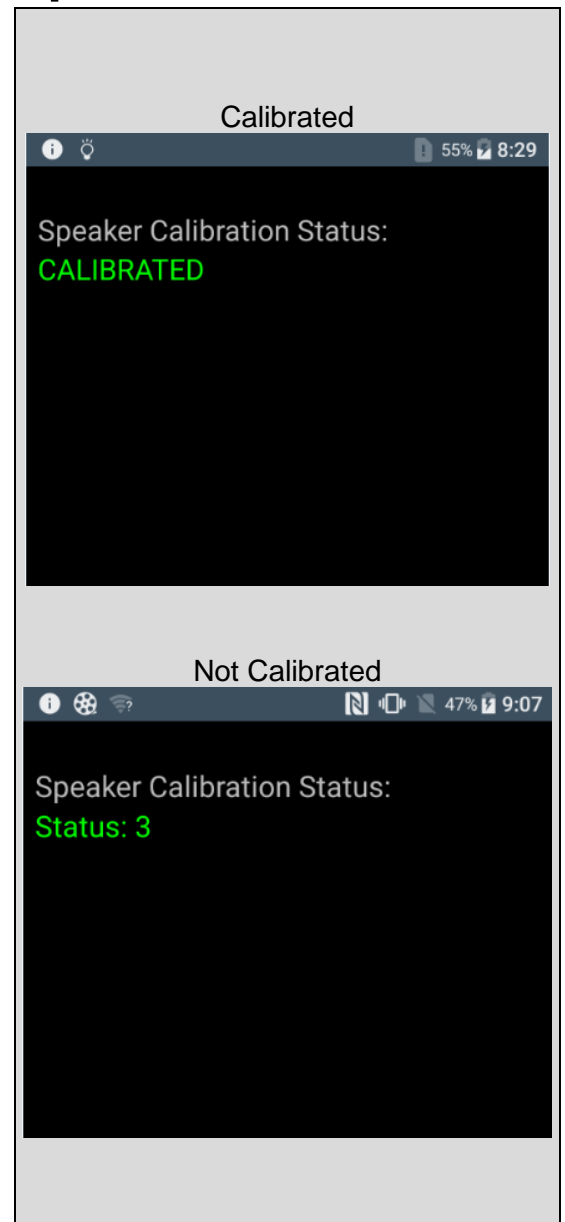
**Action:**

If not calibrated, implement speaker calibration.

**== Speaker Calibration Procedure ==**

Re-start the phone and leave the phone (connect the charger to the USB connector) more than 30 minutes without any access to the phone, and then calibration will be done as automatically.

If the phone is accessed during the period, calibration process is reset, and another 30 minutes will be taken.



## 2 Revision History

Rev.	Date	Changes / Comments
1	2017-May-12	Initial release
2	2017-Jun-05	Updated page 44