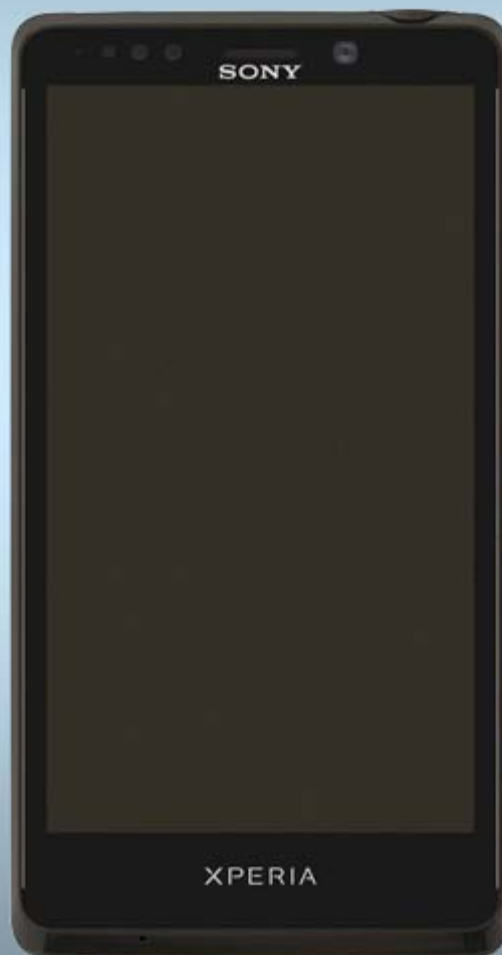


Troubleshooting Guide

- mechanical -



Xperia™ T

LT30p, LT30a & LT30at

CONTENTS

1	Problem Areas	4
1.1	Power	4
1.1.1	Will not power on or will switch off randomly.....	4
1.2	Keys	6
1.2.1	Back, Home, Menu and Multitask Keys	6
1.2.2	Camera, Volume and Camera Key	6
1.3	Touch Screen	8
1.3.1	Touch Screen malfunction.....	8
1.4	Display	10
1.4.1	Graphics & Illumination	10
1.5	LED/Illumination.....	12
1.5.1	LED	12
1.5.2	Illumination	12
1.6	Speaker	13
1.6.1	Loudspeaker	13
1.7	Earphone	15
1.7.1	Earspeaker	15
1.8	Microphone.....	16
1.8.1	Microphone	16
1.8.2	Secondary Microphone.....	18
1.9	Vibrator	19
1.9.1	Vibrator not generating alerts	19
1.10	Camera.....	20
1.10.1	Camera defects.....	20
1.10.2	Secondary Camera	21
1.11	Flash LED	22
1.11.1	Flash LED not flashing.....	22
1.12	Bluetooth.	23
1.12.1	Bluetooth connection failure	23
1.13	WLAN	24
1.13.1	WLAN connection failure	24
1.14	NFC	25
1.14.1	NFC malfunctions.....	25
1.15	GPS	26
1.15.1	GPS malfunctions.....	26
1.16	Compass.....	27
1.16.1	Compass fails	27
1.17	Accelerometer	27
1.17.1	Accelerometer test fails	27
1.18	Gyroscope	27
1.18.1	Gyroscope test fails	27
1.19	Ambient Light Sensor	28

1.19.1	Light Sensor malfunctions	28
1.20	Proximity Switch	29
1.20.1	Proximity switch malfunctions.....	29
1.21	Real Time Clock	30
1.21.1	Real Time Clock test fails	30
1.22	Total call time	30
1.22.1	Total call time fails	30
1.23	Storage.....	31
1.23.1	Storage not detected.....	31
1.24	Security.....	32
1.24.1	Security fails	32
1.25	FM Radio.....	33
1.25.1	No/Poor FM Radio reception	33
1.26	TV-Out Test.....	34
1.26.1	TV-Out test fails	34
1.27	Audio Jack.....	35
1.27.1	Sound or microphone problem with accessory connected to Audio Jack.....	35
1.28	SIM	36
1.28.1	SIM not detected.....	36
1.28.2	Incorrect SIM indicated	36
1.29	Charging	37
1.29.1	Battery will not charge	37
1.30	Data Communication	38
1.30.1	Data transfer via System Connector fails.....	38
1.31	Network & Signal.....	39
1.31.1	No/Poor signal	39
2	Revision History	40

- You shall always after verifying the problem, start the trouble shooting with Software Update Content Refresh in Emma.
- Software release information about improvements are found: www.sonymobile.com/

1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone vibrates by pressing the Power key.

Action:

1. If activation of the Vibrator is detected, refer to section 1.4 'Display'.
2. If NO activation of the Vibrator is detected, check that the battery is charging when connected to a charger.

Follow Test Instruction (Charging via USB), Diagnostic Battery / Charging status.

Connect:

A Dummy Battery to the phone and measure the current while you continue the trouble shooting under Power.

Check:

Measure the current consumption when the phone is in off mode.

Action:

If more than 1 mA – replace Main PBA.



Check:

Inspect the Key Multifunc Assembly

Action:

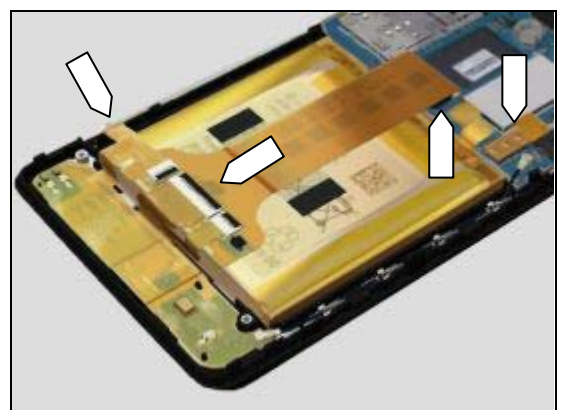
1. If dirty – clean it.
2. If the Key Multifunc Assembly is damaged – replace it.

Check:

Inspect the ZIF connectors, BtB connector and key switches on the PBA SideKey FPC, the BtB connector on the Battery and the two BtB connectors on the Main PBA.

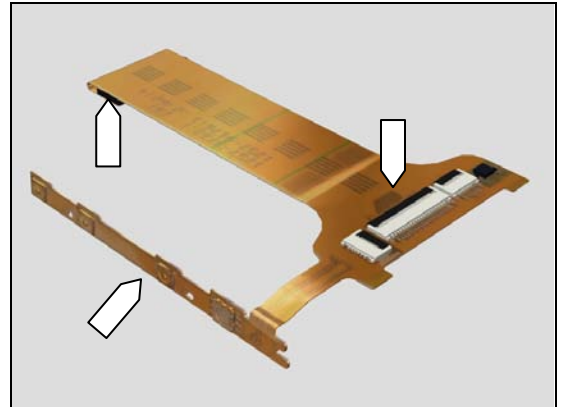
Action:

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

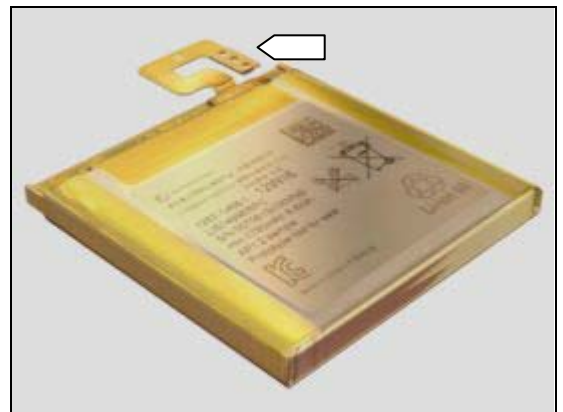


Problem Areas: Power

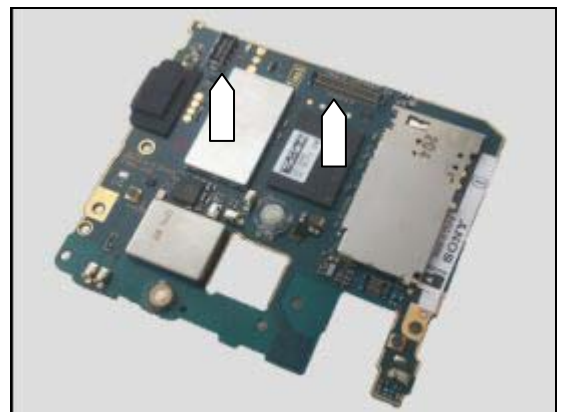
3. If the key switches, the ZIF connectors, BtB connector or the PBA SideKey FPC is damaged – replace the PBA SideKey FPC.



4. If BtB contact on Battery or Battery is damaged – replace Battery.



5. Replace Main PBA.



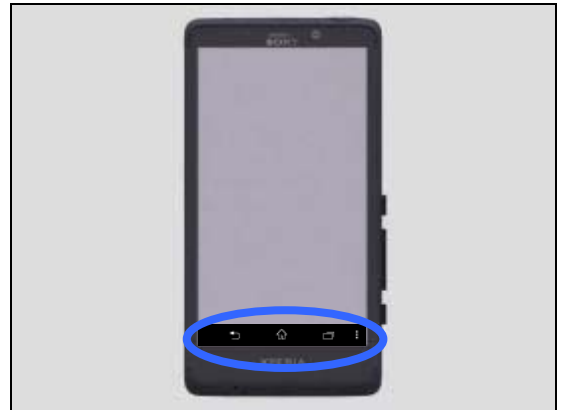
Problem Areas: Keys

1.2 Keys

1.2.1 Back, Home, Menu and Multitask Keys

Action:

1. Refer to the section 1.3 'Touch Screen'.



1.2.2 Camera, Volume and Camera Key

Check:

Inspect the external area of the Keys.

Action:

If dirty – clean it.



Check:

Inspect the Key Multifunc Assembly

Action:

1. If dirty – clean them.
2. If the keys are damaged – replace them.

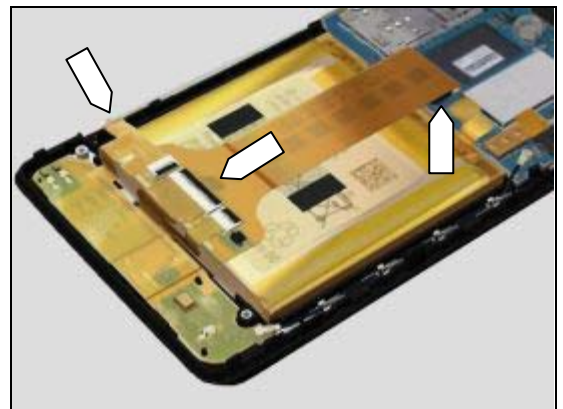


Check:

Inspect the ZIF connectors, BtB connector and key switches on the PBA SideKey FPC and the BtB connectors on the Main PBA.

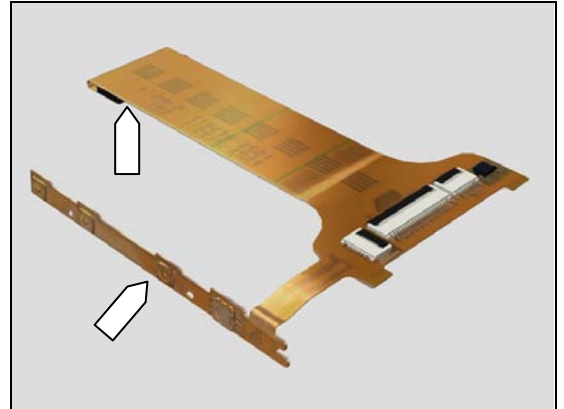
Action:

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

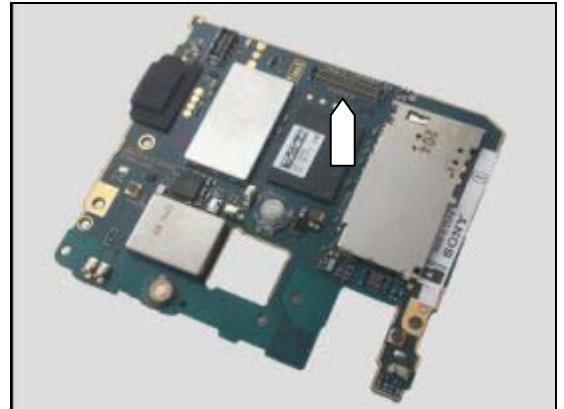


Problem Areas: Keys

3. If the key switches, the BtB connector or the PBA SideKey FPC is damaged – replace the PBA SideKey FPC.



4. Replace Main PBA.



Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen.

Action:

If dirty – clean it.

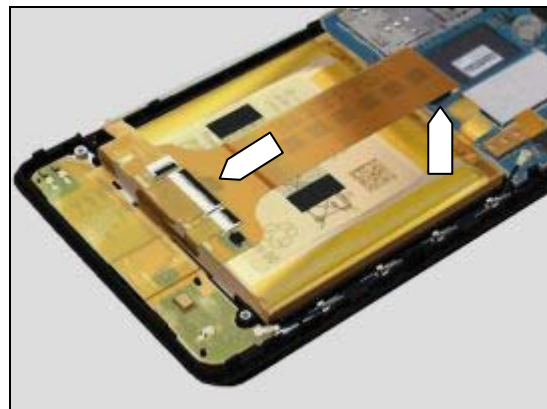


Check:

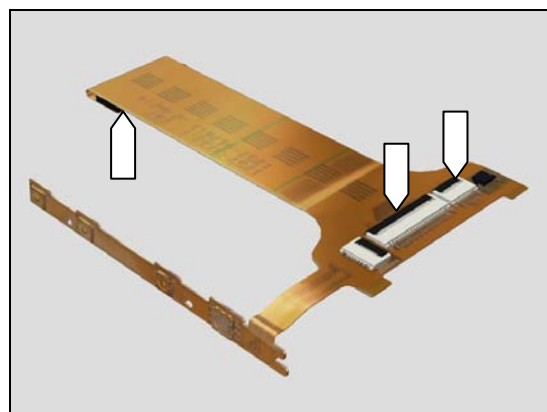
Inspect the ZIF connectors, BtB connector and key switches on the PBA SideKey FPC and the BtB connectors on the Main PBA.

Action:

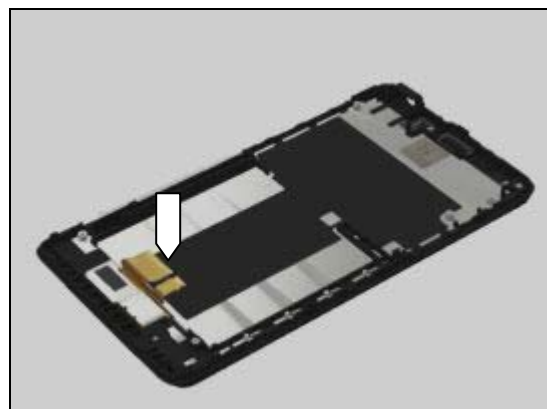
1. If not properly connected – disconnect and reconnect connectors.
2. If dirty or oxidized – clean connectors.



3. If BtB connector or ZIF connectors on PBA SideKey FPC is damaged – replace the PBA SideKey FPC

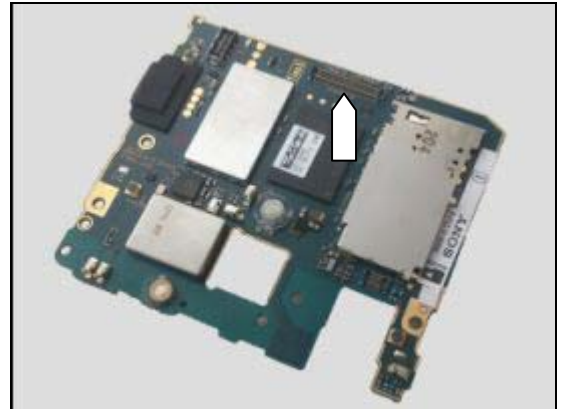


4. If the touch screen or the FPC / ZIF connector on the Front Cover is damaged – replace the Front Cover.



Problem Areas: Touch Screen

5. Replace Main PBA.



Problem Areas

1.4 Display

1.4.1 Graphics & Illumination

Check:

Check whether the phone vibrates after the Power key has been pressed.

Action:

1. If the phone does not vibrate, refer to section 1.1 'Power'.
2. If the phone vibrates, perform force shut down (Press Power key + Volume Up for 10sec) and try start the phone again with Power key.

3. Do a Software Update Content Refresh (Secure that the battery is charged!, see Test Instruction (Charging via USB)) (If flash still fail after charging battery try again with Dummy Battery).

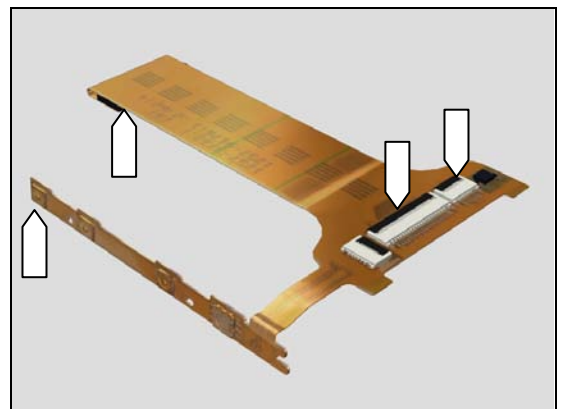
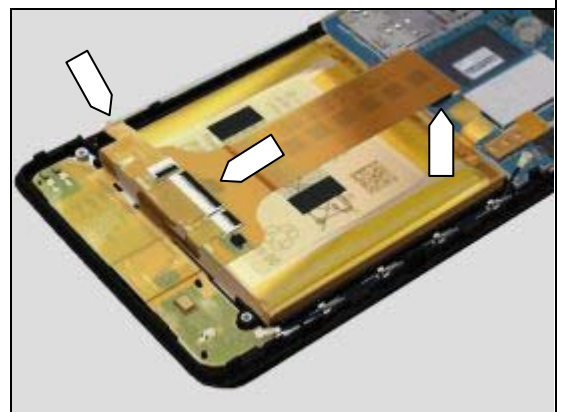
Check:

Inspect the ZIF connectors, BtB connector and key switches on the PBA SideKey FPC and the BtB connectors on the Main PBA.

Action:

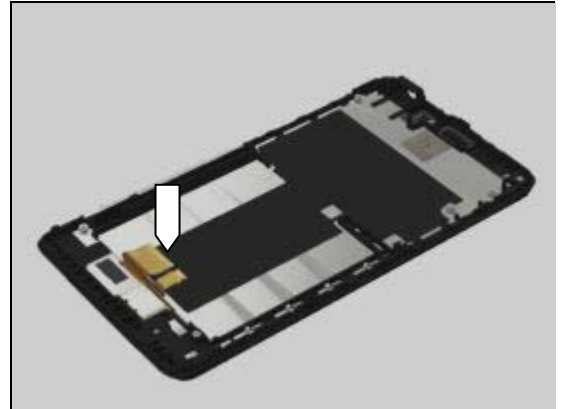
1. If not properly connected – disconnect and reconnect connectors.
2. If dirty or oxidized – clean connectors.

3. If BtB connector or ZIF connectors on PBA SideKey FPC is damaged – replace the PBA SideKey FPC

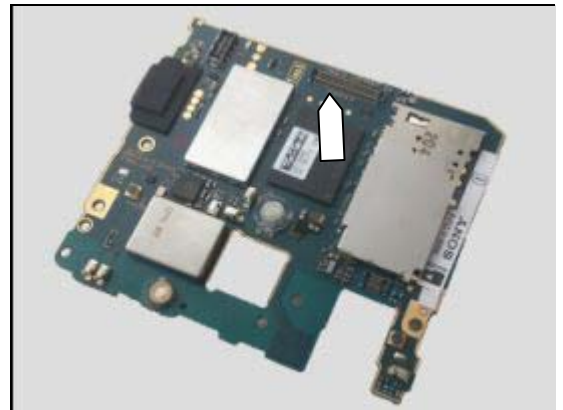


Problem Areas: Display

4. If the Display or the FPC / ZIF connector on the Front Cover is damaged – replace the Front Cover.



5. Replace Main PBA.



Problem Areas:

1.5 LED/Illumination

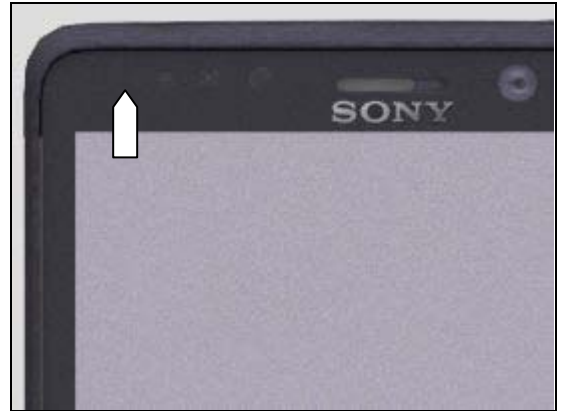
1.5.1 LED

Check:

Inspect the external window area of the RGB LED on the Front Cover.

Action:

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

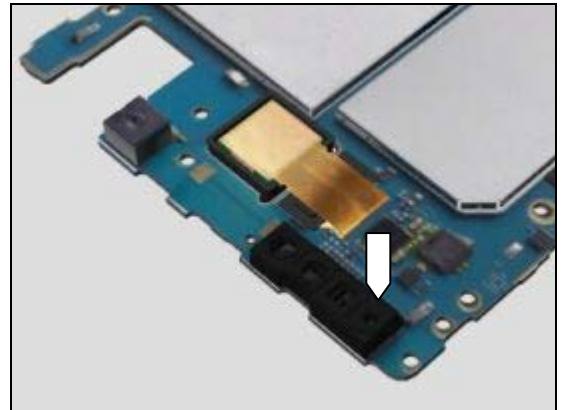


Check:

Inspect the RGB LED in the Gasket Proxy Grommet PBA Assembly on the Main PBA.

Action:

1. If Gasket Proxy Grommet PBA Assembly dirty or clogged – clean it.
2. If Gasket Proxy Grommet PBA Assembly is damaged – replace it
3. Replace Main PBA.



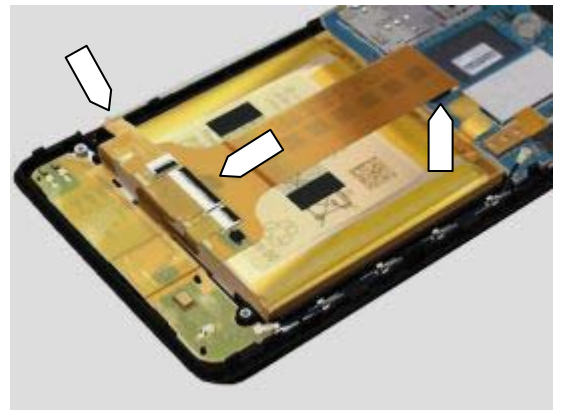
1.5.2 Illumination

Check:

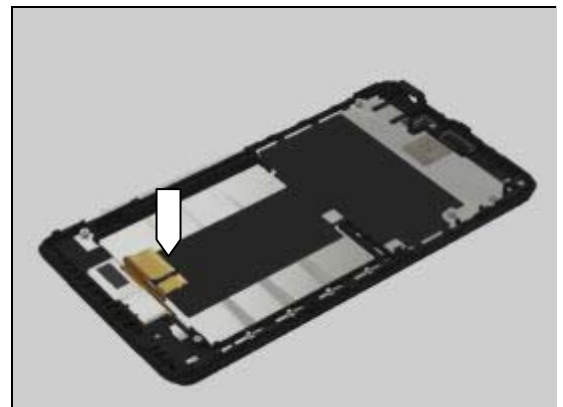
Inspect the ZIF connectors, BtB connector and key switches on the PBA SideKey FPC and the BtB connectors on the Main PBA.

Action:

1. If not properly connected – disconnect and reconnect connectors.
2. If dirty or oxidized – clean connectors.
3. If PBA SideKey FPC is damaged – replace it.



4. If the Display or the FPC / ZIF connector on the Front Cover is damaged – replace the Front Cover.
5. Replace Main PBA



Problem Areas

1.6 Speaker

1.6.1 Loudspeaker

Check:

Inspect the loudspeaker's external port on the Cover Back Assy.

Action:

1. If the loudspeaker's external port is clogged – clean it.
2. If the loudspeaker's external port is damaged – replace the Cover Back Assy (LT30p) / Cap Lower Cap Assembly (LT30a & LT30at).

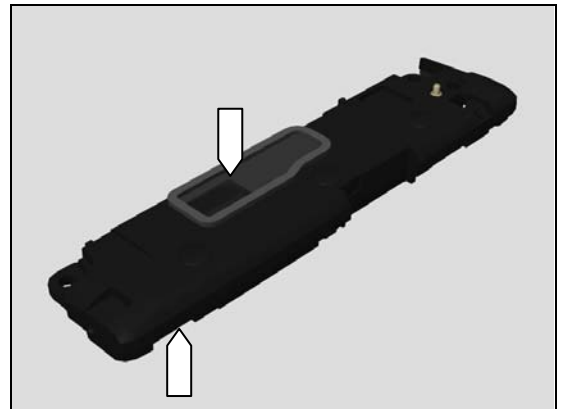


Check:

Inspect the loudspeaker's mesh and the contacts on the Carrier Lower Frame Assy.

Action:

1. If dirty – clean them.
2. If the Carrier Lower Frame Assy is damaged – replace the Carrier Lower Frame Assy.

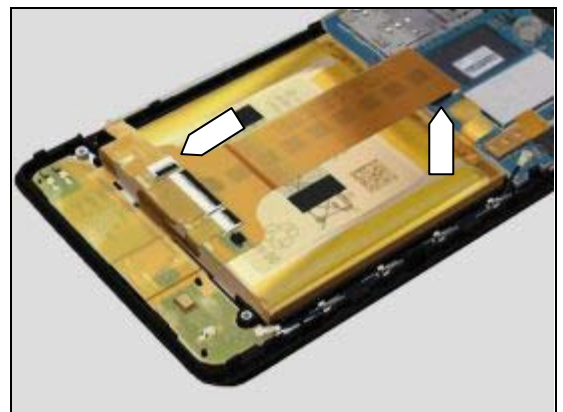


Check:

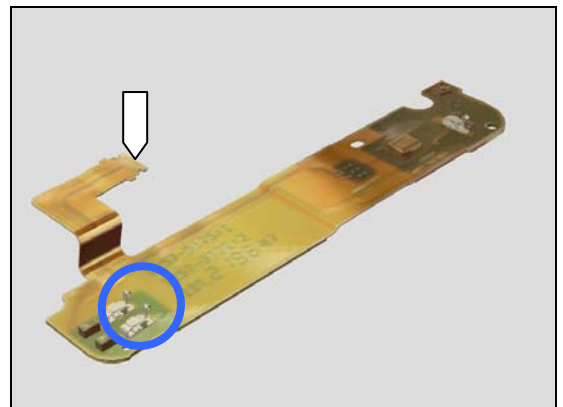
Inspect the ZIF connector, BtB connector on the PBA SideKey FPC and the BtB connector on the Main PBA.

Action:

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

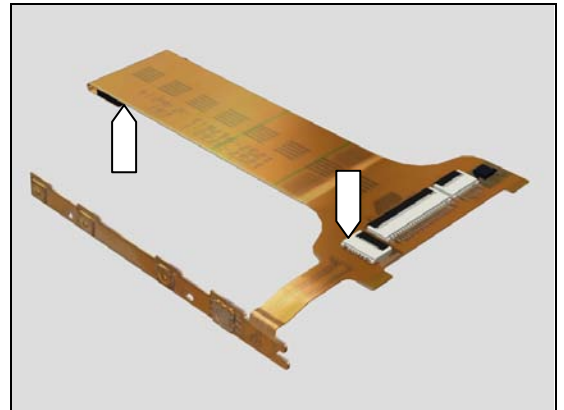


3. If the springs or ZIF connector are damaged – replace the PBA Lower FPC.

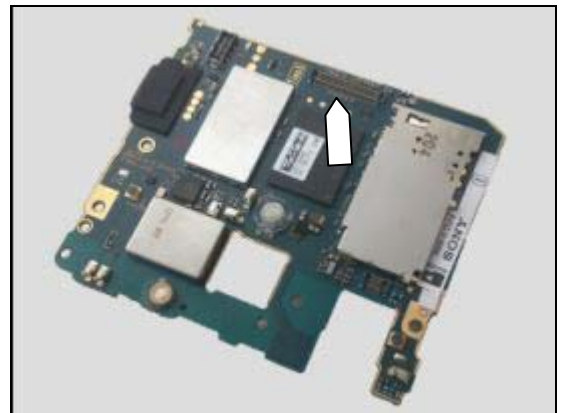


Problem Areas: Speaker

4. If BtB connector or ZIF connector on PBA SideKey FPC is damaged – replace the PBA SideKey FPC



5. Replace Main PBA.



Problem Areas

1.7 Earphone

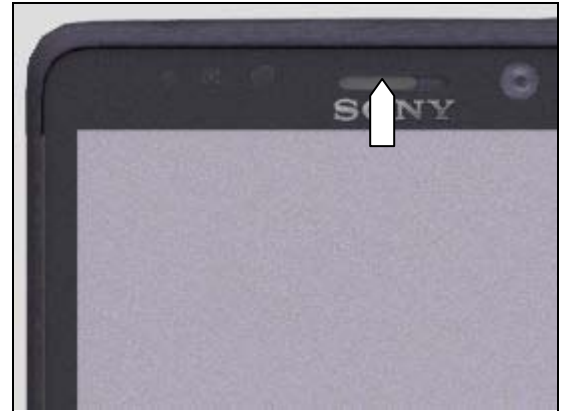
1.7.1 Earspeaker

Check:

Inspect the Earspeaker's external port on the Front Cover.

Action:

1. If clogged – clean it.
2. If the port is damaged – replace the Front Cover.

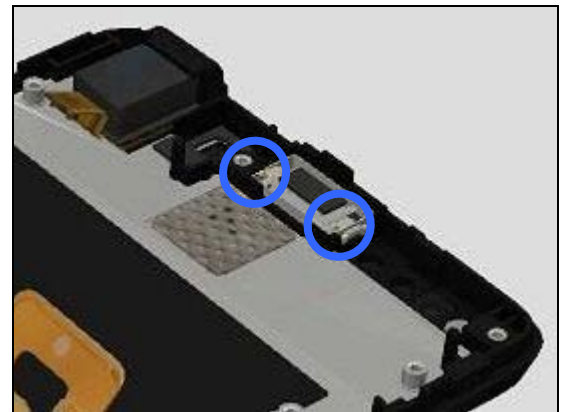


Check:

Inspect the Earspeaker's pins

Action:

1. If dirty – clean them.
2. If the pins are damaged – replace the Earspeaker.

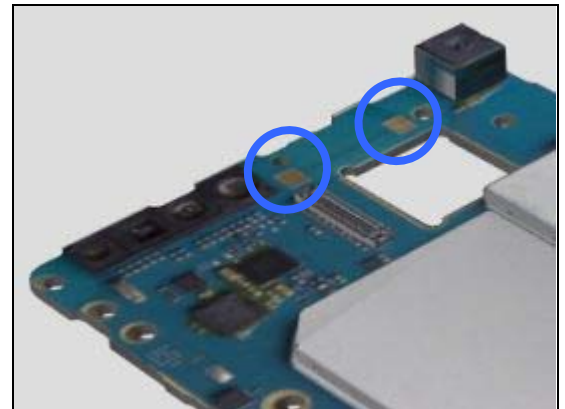


Check:

Inspect the Earspeaker's connector pads on the Main PBA.

Action:

1. If the pads are dirty/oxidized – clean them.
2. Replace Main PBA.



Problem Areas

1.8 Microphone

1.8.1 Microphone

Check:

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

Action:

1. If clogged – clean the port.
2. If the port is damaged – replace the Front Cover.

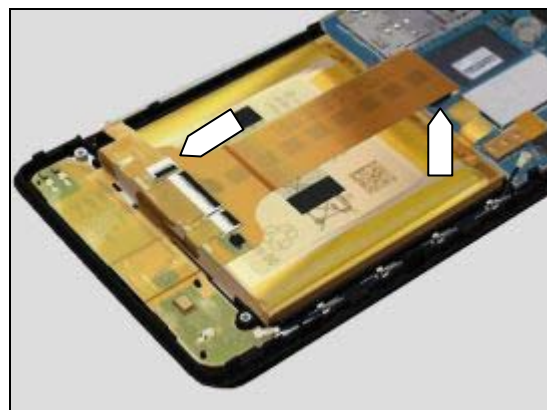


Check:

Inspect the ZIF connector, BtB connector on the PBA SideKey FPC and the BtB connectors on the Main PBA.

Action:

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

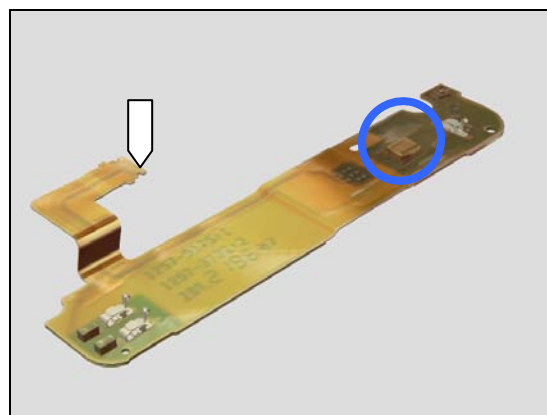


Check:

Inspect the Microphone and ZIF connector on the PBA Lower FPC.

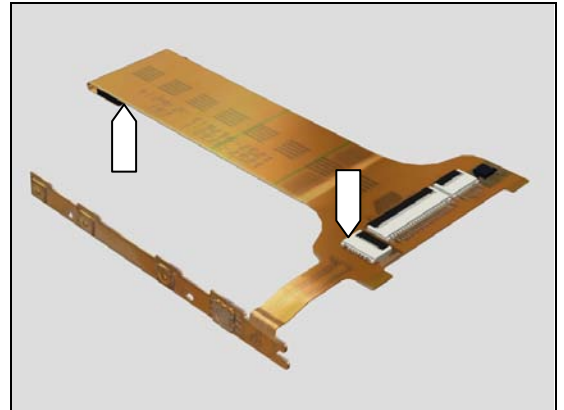
Action:

1. If dirty – clean them.
2. If Microphone or ZIF connector is damaged – replace the PBA Lower FPC.

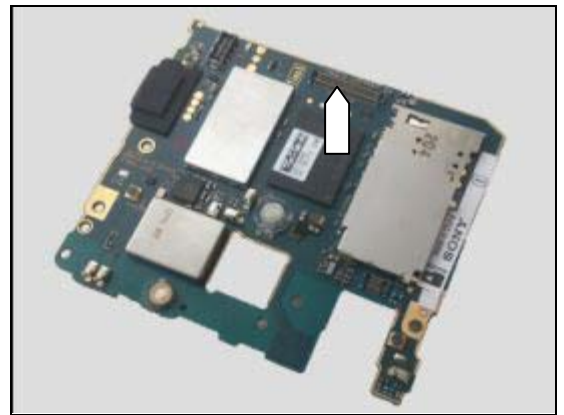


Problem Areas: Microphone

3. If BtB connector or ZIF connector on PBA SideKey FPC is damaged – replace the PBA SideKey FPC



3. Replace the PBA Complete



Problem Areas:

1.8.2 Secondary Microphone

Check:

Inspect the secondary microphone's external port on the Cover Back Assembly.

Action:

1. If clogged – clean the port.
2. If the port is damaged – replace the Cover Back Assembly (LT30p) / Cap Upper Cap Assembly (LT30a & LT30at).

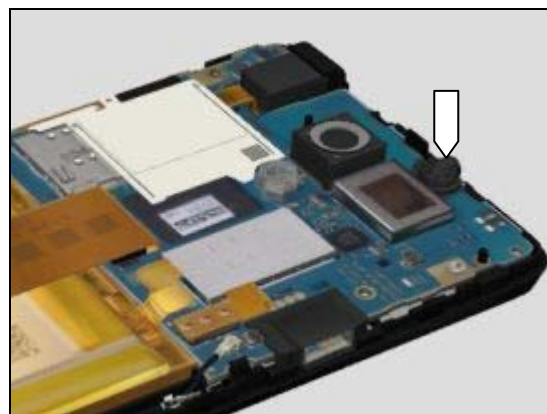


Check:

Inspect the Gasket Mic 2 Grommet Assembly

Action:

1. If Gasket Mic 2 Grommet Assembly is clogged – clean it.
2. If Gasket Mic 2 Grommet Assembly is damaged – replace it.

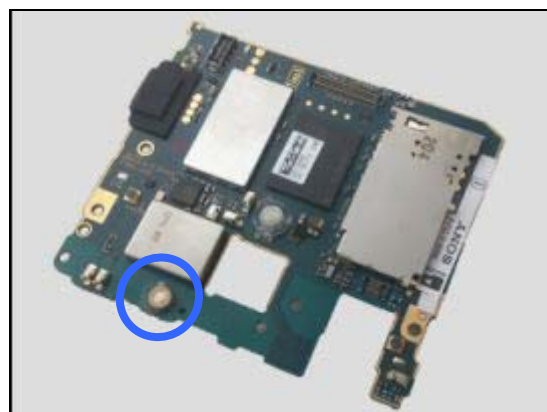


Check:

Inspect the secondary microphone on the PBA.

Action:

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



Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Replace the Main PBA.



Problem Areas

1.10 Camera

1.10.1 Camera defects

Check:

Inspect the external area of camera window.

Action:

1. If dirty – clean it.

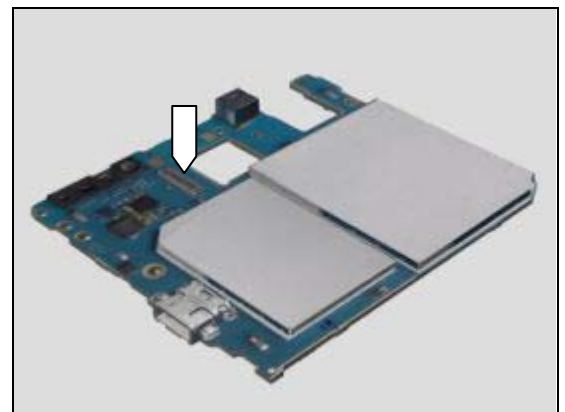
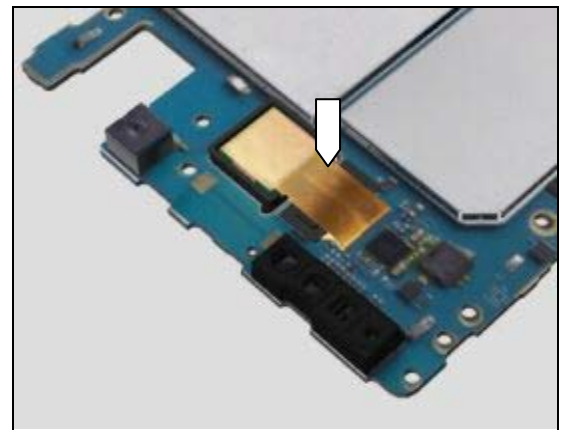
Check:

Inspect the Camera 13.1 MPixel CMOS's BtB connector and the camera's BtB connector on the Main PBA.

Action:

1. If BtB connector not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean both of the BtB connectors.
3. If Gasket Camera Grommet Assembly is damaged – replace it.
4. If the BtB connector damaged or camera window scratched or damaged – replace the Camera.

4. Replace Main PBA.



Problem Areas

1.10.2 Secondary Camera

Check:

Inspect the external area of the Secondary camera window.

Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Front Cover

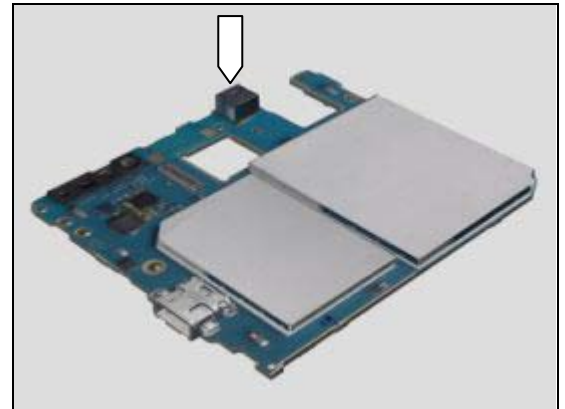


Check:

Inspect the Secondary camera on the PBA.

Action:

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



Problem Areas

1.11 Flash LED

1.11.1 Flash LED not flashing

Check:

Inspect the external area of the flash LED window.

Action:

1. If the flash LED window is dirty – clean it.
2. If the flash LED window scratched or damaged – replace the Cover Back Assembly.

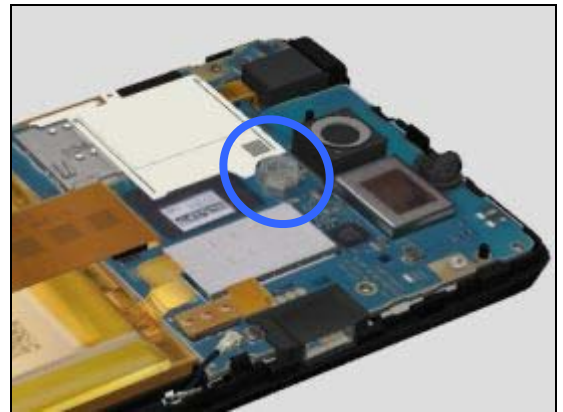


Check:

Inspect the flash LED on the Main PBA.

Action:

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



Problem Areas

1.12 Bluetooth.

1.12.1 Bluetooth connection failure

Check:

Inspect the WLAN, Bluetooth and GPS antenna and it's connection on the Cover Back Assembly.

Action:

1. If dirty – clean it.
2. If the antenna is damaged – replace the Cover Back Assembly (LT30p) / Cap Upper Cap Assembly (LT30a & LT30at).



Check:

Inspect the WLAN, Bluetooth and GPS antenna contact pins on the Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. Replace Main PBA.



Problem Areas

1.13 WLAN

1.13.1 WLAN connection failure

Check:

Inspect the WLAN, Bluetooth and GPS antenna and it's connection on the Cover Back Assembly.

Action:

1. If dirty – clean it.
2. If the antenna is damaged – replace the Cover Back Assembly (LT30p) / Cap Upper Cap Assembly (LT30a & LT30at).



Check:

Inspect the WLAN, Bluetooth and GPS antenna contact pins on the Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. Replace Main PBA.



Problem Areas

1.14 NFC

1.14.1 NFC malfunctions

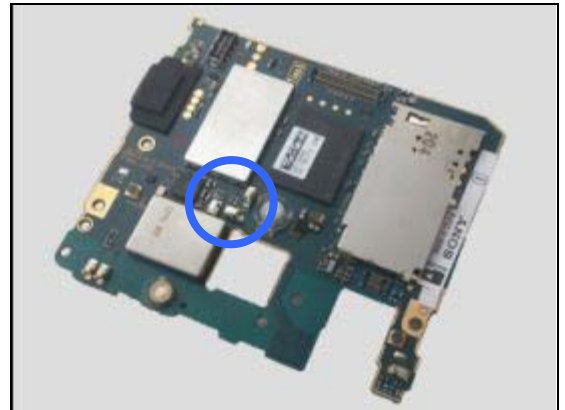
Check:

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

Action:

1. If dirty or oxidized – clean the pads and pins.
2. If the Antenna FPC or its pads are damaged – replace the Ant NFC.

3. Replace Main PBA.



Problem Areas

1.15 GPS

1.15.1 GPS malfunctions

Check:

Inspect the WLAN, Bluetooth and GPS antenna and it's connection on the Cover Back Assembly.

Action:

1. If dirty – clean it.
2. If the antenna is damaged – replace the Cover Back Assembly (LT30p) / Cap Upper Cap Assembly (LT30a & LT30at).



Check:

Inspect the WLAN, Bluetooth and GPS antenna contact pins on the Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. Replace Main PBA.



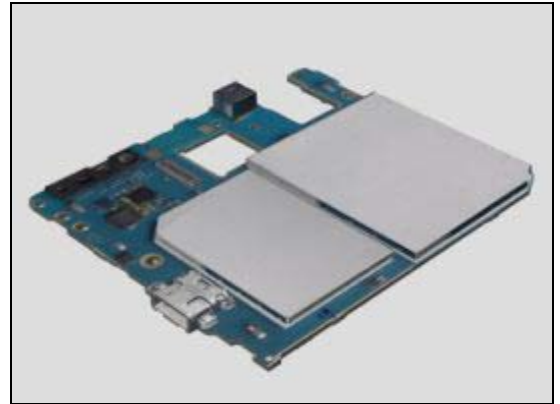
Problem Areas

1.16 Compass

1.16.1 Compass fails

Action:

Replace Main PBA.



Problem Areas

1.17 Accelerometer

1.17.1 Accelerometer test fails

Action:

Replace Main PBA.



Problem Areas

1.18 Gyroscope

1.18.1 Gyroscope test fails

Action:

Replace Main PBA.



Problem Areas

1.19 Ambient Light Sensor

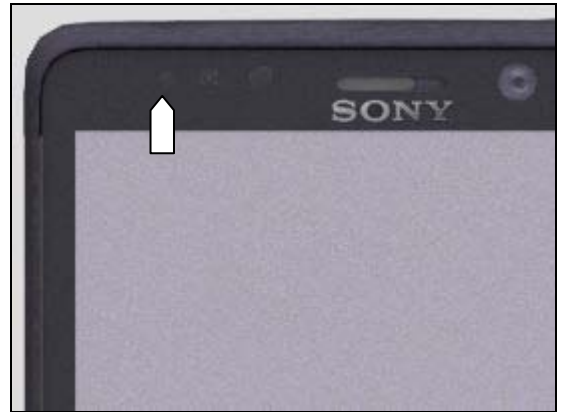
1.19.1 Light Sensor malfunctions

Check:

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

Action:

1. If clogged – clean it.
2. If scratched or damaged – replace the Front Cover.

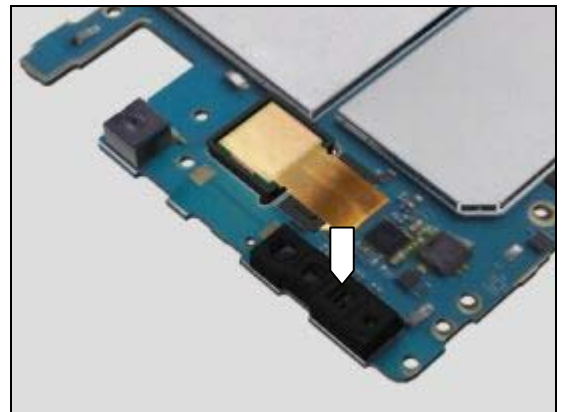


Check:

Inspect the Gasket Proxy Grommet PBA Assembly.

Action:

1. If damaged – replace it.
2. If dirty – clean it.
3. Replace Main PBA



Problem Areas

1.20 Proximity Switch

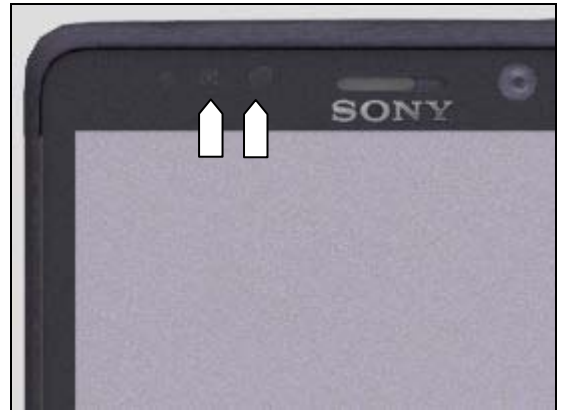
1.20.1 Proximity switch malfunctions

Check:

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

Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Front Cover.

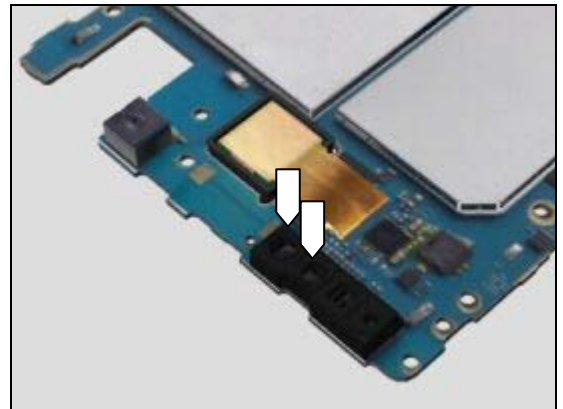


Check:

Inspect the Gasket Proxy Grommet PBA Assembly.

Action:

1. If damaged – replace it.
2. If dirty – clean it.
3. Replace Main PBA



Problem Areas

1.21 Real Time Clock

1.21.1 Real Time Clock test fails

Action:

Replace Main PBA.



Problem Areas

1.22 Total call time

1.22.1 Total call time fails

Not a test, consumer usage information for the unit.

Problem Areas

1.23 Storage

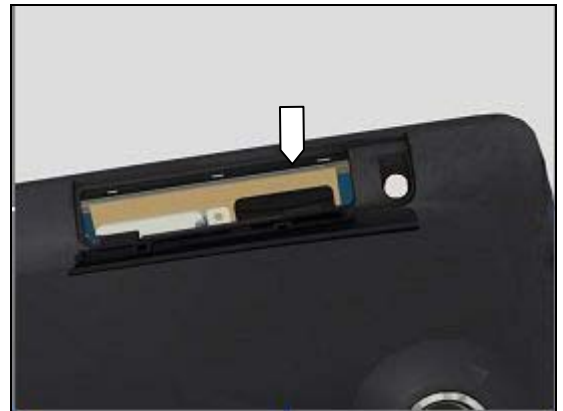
1.23.1 Storage not detected

Check:

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

Action:

If dirty or clogged – clean the external port.

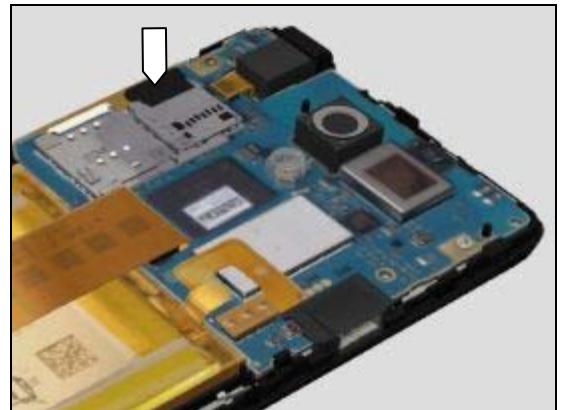


Check:

Inspect the memory card holder on the Main PBA.

Action:

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



Problem Areas

1.24 Security

1.24.1 Security fails

Action:

Replace Main PBA.



Problem Areas

1.25 FM Radio

1.25.1 No/Poor FM Radio reception

Check:

Inspect the external port of the Audio Jack.

Action:

If dirty, clogged or oxidized – clean it.



Check:

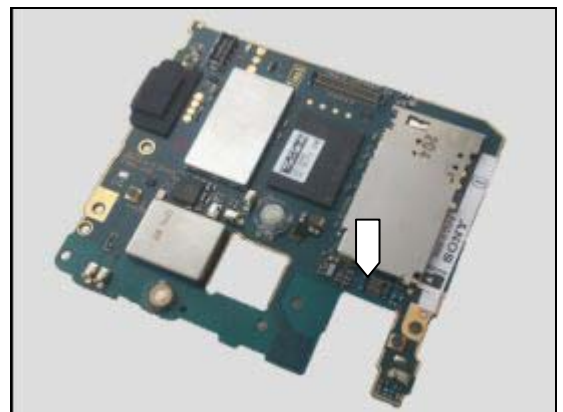
Inspect the BtB on the PBA AVP FPC and on the Main PBA Complete.

Action:

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean the BtB.
3. If the BtB are damaged on PBA AVP FPC – replace it.



4. Replace Main PBA



Problem Areas

1.26 TV-Out Test

1.26.1 TV-Out test fails

Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.27 Audio Jack

1.27.1 Sound or microphone problem with accessory connected to Audio Jack

Check:

Inspect the external port of the Audio Jack.

Action:

If dirty, clogged or oxidized – clean the connector.

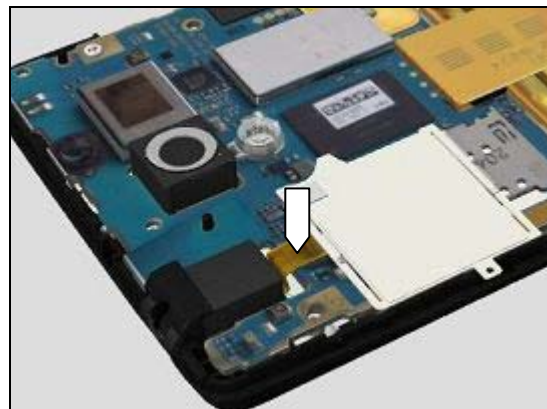


Check:

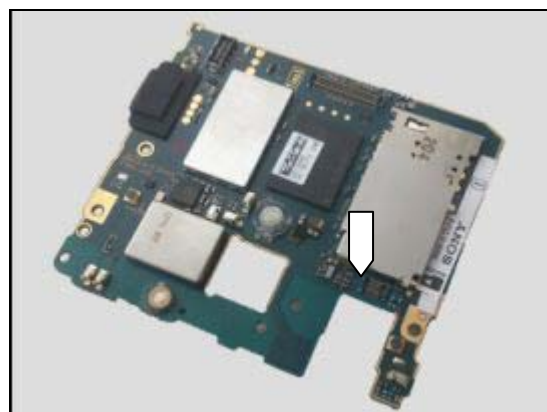
Inspect the BtB on the PBA AVP FPC and on the Main PBA Complete.

Action:

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean the BtB.
3. If the PBA AVP FPC or its BtB is damaged – replace it.



4. Replace Main PBA.



Problem Areas

1.28 SIM

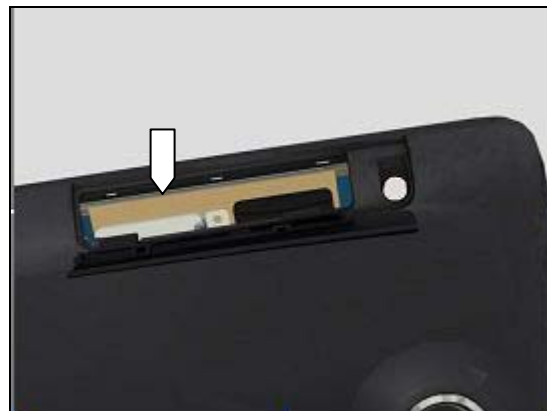
1.28.1 SIM not detected

Check:

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

Action:

If dirty or clogged – clean the external port.

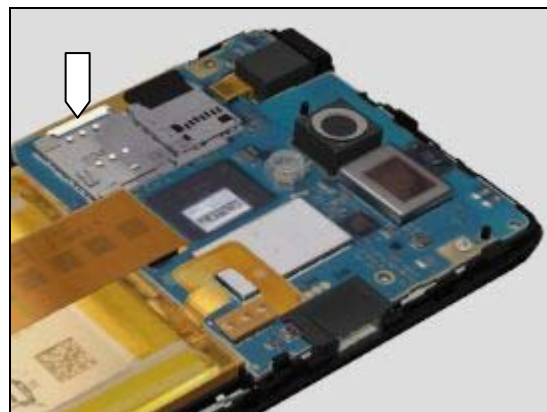


Check:

Inspect the SIM card holder on the Main PBA.

Action:

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



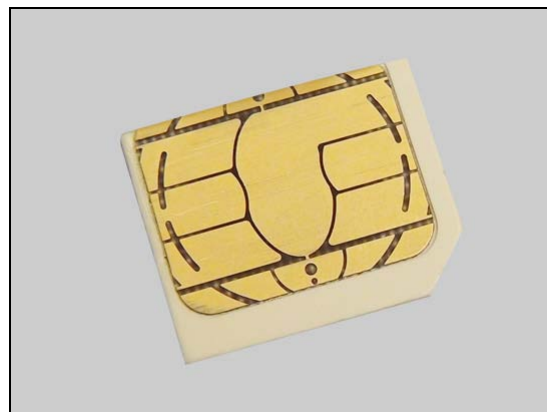
1.28.2 Incorrect SIM indicated

Check:

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

Action:

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



Problem Areas

1.29 Charging

1.29.1 Battery will not charge

Check:

Inspect the USB connector.

Action:

1. If dirty, clogged or oxidized – clean the connector.



Check:

Inspect the Battery's BtB connector and Main PBA's battery BtB connector.

Action:

1. If not properly connected – disconnect and reconnect connectors.
2. If dirty or oxidized – clean connectors
3. If the Battery BtB contact on Battery is damaged – replace Battery.
4. Replace the Main PBA.



Problem Areas

1.30 Data Communication

1.30.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.31 Network & Signal

1.31.1 No/Poor signal

Check:

Inspect the pogopin connector on the Carrier Lower Frame Assembly.

Action:

1. If dirty – clean it.
2. If the pogopin connector is damaged – replace the Carrier Lower Frame Assembly.



Check:

Inspect the 2 antennas and their connectors on the Cover Back Assembly and the corresponding antenna connectors on the Main PBA.

Action:

1. If dirty – clean connectors.
2. If the pad is damaged – replace Cover Back Assembly(LT30p) / Cap Upper Cap Assembly & Cap Lower Cap Assembly (LT30a & LT30at).

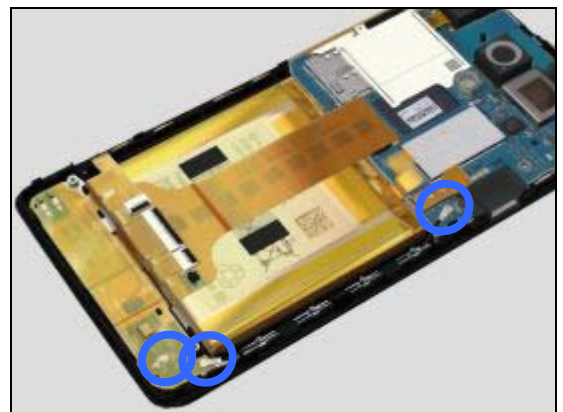


Check:

Inspect the coax connectors on Cable Coax, the Main PBA and the PBA Lower FPC.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If Cable Coax damaged - Replace Cable Coax
3. If the connector or the pins of the PBA Lower FPC is damaged – replace the PBA Lower FPC.
4. Replace Main PBA.



2 Revision History

Rev.	Date	Changes / Comments
1	2012-Sep-14	Initial release
2	2012-Oct-31	LT30a & LT30at added