

Troubleshooting Guide

- mechanical -



ST25i, ST25a

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1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone vibrates and the transparent belt illuminates after the on/off key is depressed.

Action:

If activation of the Vibrator is detected and transparent belt illuminates, refer to section 1.4 'Display'.



Check:

Inspect the contact pads on the battery.

Action:

1. If dirty or oxidized – clean the pads.
2. If damaged – replace the battery.



Check:

Inspect the battery contact pins on the main PBA.

Action:

1. If dirty or oxidized – clean the contact pins.
2. If adhesive is detected on the contact pins, use an eraser to gently rub off the adhesive.
3. If damaged – Replace board.



Check:

Inspect the on/off key.

Action:

1. Refer to section 1.2.4 'On/Off key'.
2. Replace board.



Problem Areas

1.2 Keys

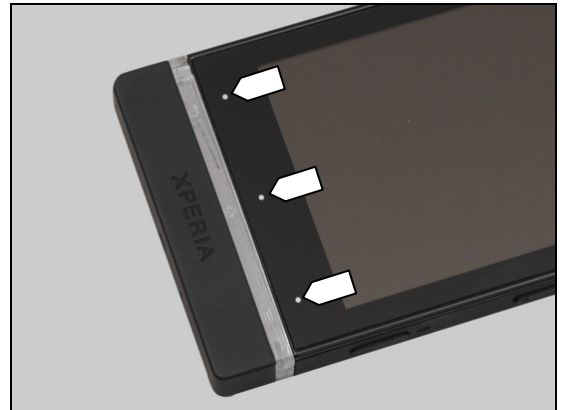
1.2.1 Menu/Home/Back Keys

Check:

Inspect the Menu/Home/Back keys on the Touch Panel.

Action:

1. Refer to the section 1.3 'Touch Screen'.
2. Replace board.



1.2.2 Camera Key

Check:

Inspect the camera key on the Battery Cover Assy.

Action:

1. If dirty or clogged – clean it.
2. If the camera key is damaged – replace the Battery Cover Assy.

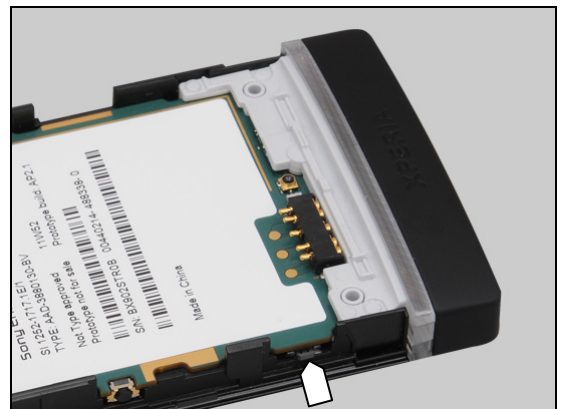


Check:

Inspect the camera input switch on the Main PBA.

Action:

1. If dirty or clogged – clean it.
2. Replace board.



Problem Areas: Keys

1.2.3 Volume Key

Check:

Inspect the volume key on the Battery Cover Assy

Action:

1. If dirty or clogged – clean it.



2. If the volume key is damaged – replace the Battery Cover Assy.



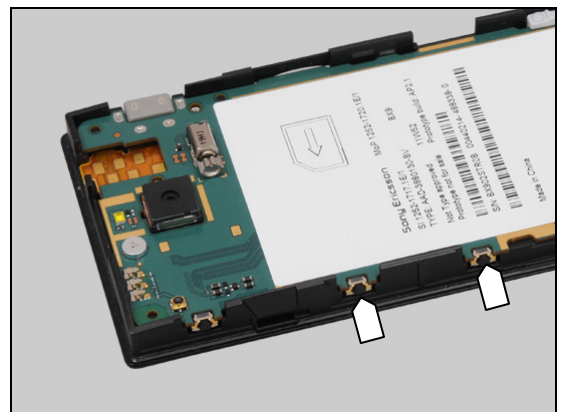
Check:

Inspect the volume input switches on the Main PBA.

Action:

1. If dirty or clogged – clean them.

2. Replace board.



1.2.4 On/Off Key

Check:

Inspect the on/off key on the Battery Cover Assy.

Action:

1. If dirty or clogged – clean it.



Problem Areas: Keys

2. If the on/off key is damaged – replace the Battery Cover Assy.

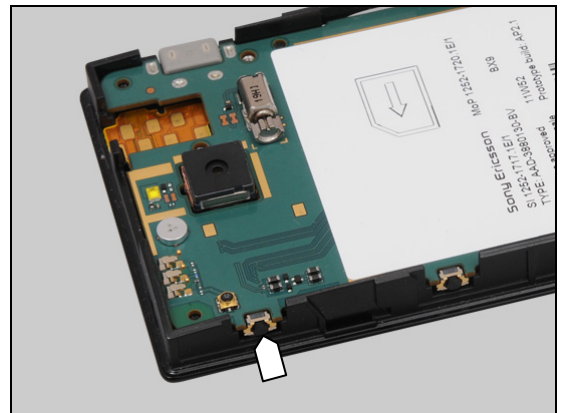


Check:

Inspect the on/off input switch on the Main PBA.

Action:

1. If dirty or clogged – clean it.
2. Replace board.



Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Touch Panel.

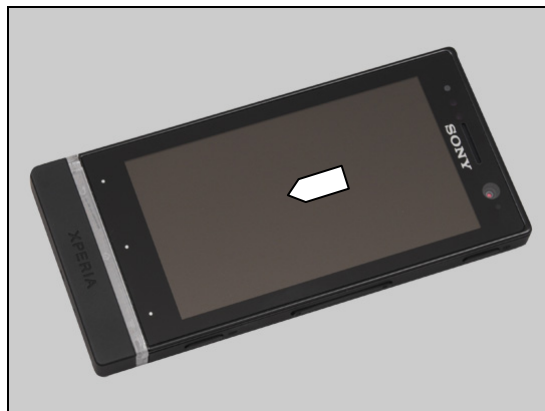
Action: 1. If dirty – clean it.

If:

The end user has complained about unexpected behavior of the touch screen or the touch keys.

Action:

Calibrate the Touch Panel 1257-2706 *Trouble Shooting Application – mechanical.*

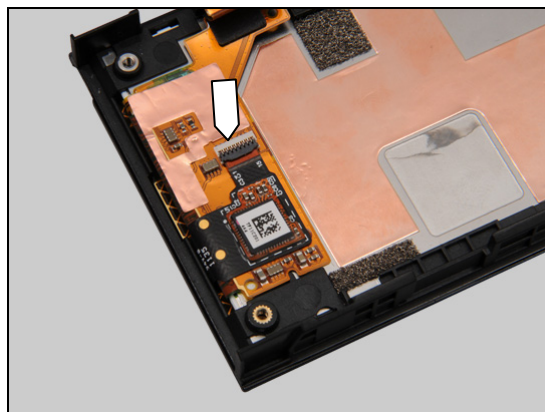


Check:

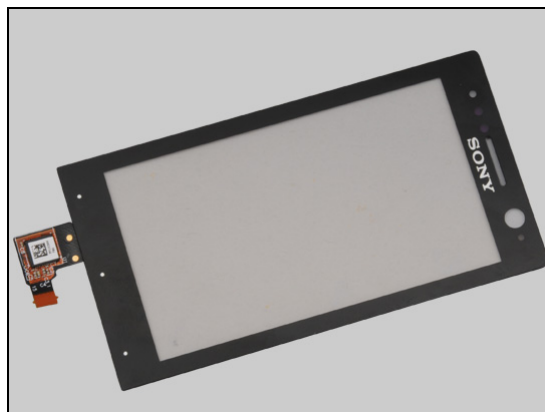
Inspect the both sides of ZIF connector on the Touch Panel FPC and the Display FPC.

Action:

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



3. If the FPC or the touch screen of the Touch Panel is damaged – replace the Touch Panel.

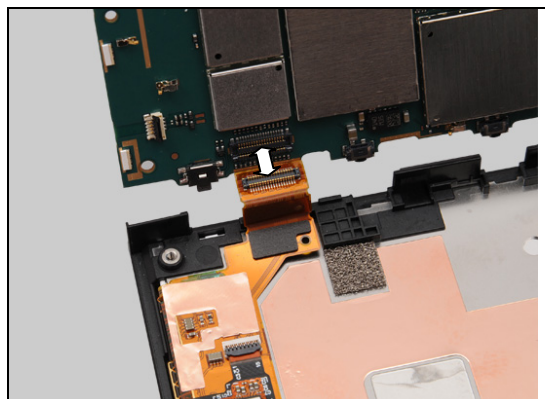


Check:

Inspect the BtB connector of the Display FPC to the PBA.

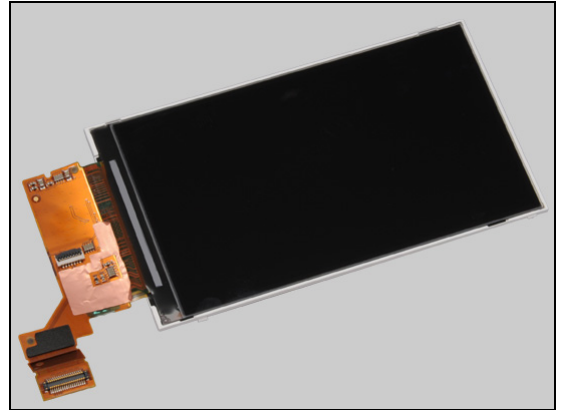
Action:

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



Problem Areas :Touch Screen

3. If the ZIF connector, the BtB connector or FPC of the Display is damaged – replace the Display.
4. Replace board.



Problem Areas

1.4 Display

1.4.1 Graphics & Illumination

Check:

Check whether the phone vibrates after the on/off key has been pressed.

Action:

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

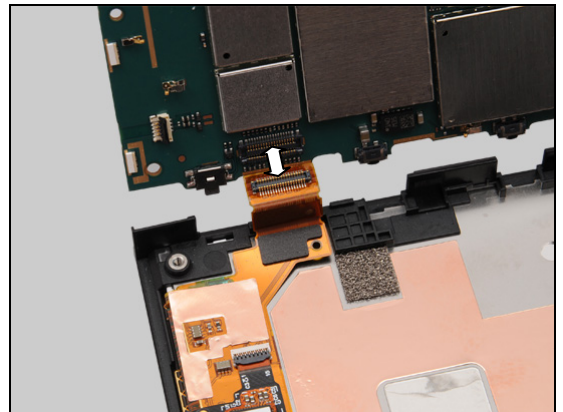


Check:

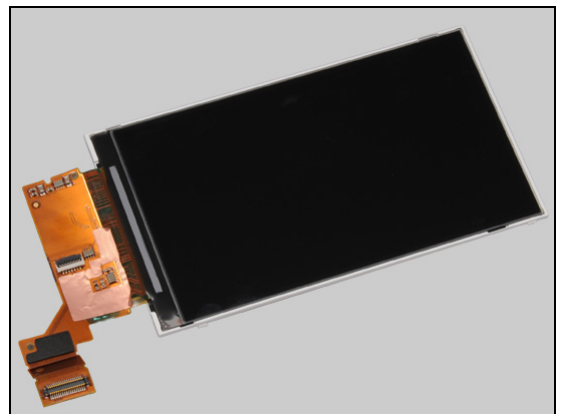
Inspect the BtB connector of the Display FPC to the PBA.

Action:

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



3. If the BtB connector or FPC of the Display is damaged – replace the Display.
4. Replace board.



Problem Areas

1.5 LED/Illumination

1.5.1 Notification LED

Check:

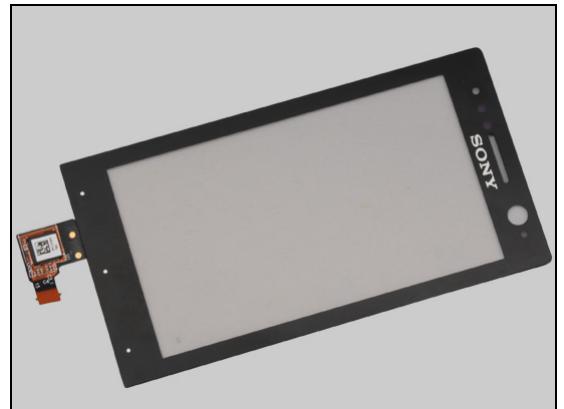
Inspect the window of Notification LED on the Touch Panel.

Action:

1. If dirty – clean it.



2. If the window is damaged – replace the Touch Panel.



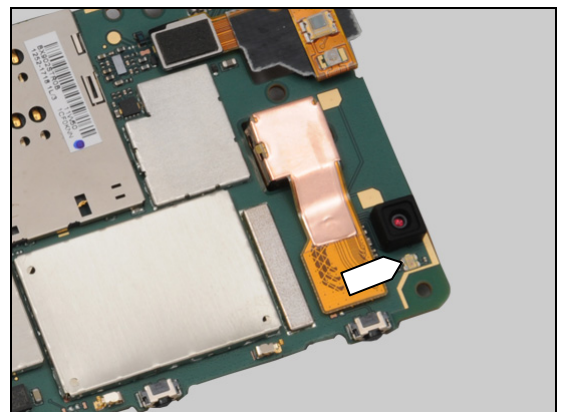
Check:

Inspect the Notification LED on the PBA.

Action:

1. If dirty or clogged – clean it.

2. Replace board.



Problem Areas: Illumination

1.5.2 Transparent Belt Illumination

Check:

Inspect the Illumination window on the Transparent Belt Total assy.

Action:

1. If dirty – clean it.



2. If the illumination window is damaged – replace the Transparent Belt Total assy.

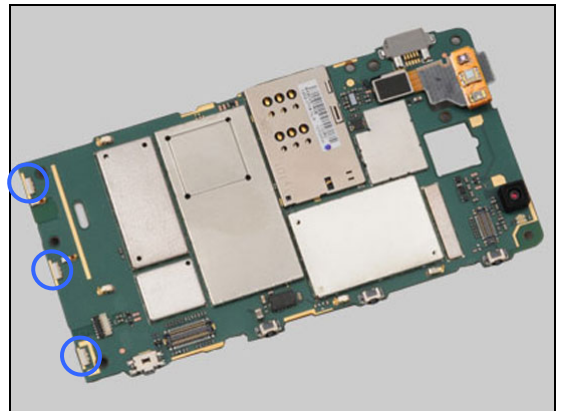


Check:

Inspect the LED on the PBA.

Action:

1. If dirty or clogged – clean it.
2. Replace board.



Problem Areas

1.6 Speaker

1.6.1 Loudspeaker

Check:

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

Action:

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



2. If the Loudspeaker's external port is damaged – replace the Battery Cover Assy.



Check:

Inspect the Loudspeaker's mesh on the Carrier Frame Assy.

Action:

1. If clogged – clean the speaker mesh.



2. If the mesh is damaged – replace the Carrier Frame Assy.



Problem Areas: Speaker

Check:

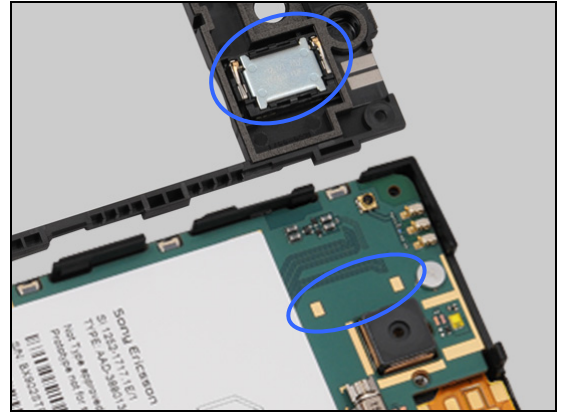
Inspect the Loudspeaker's pins and the pads on the Main PBA.

Action:

1. If dirty – clean them.

2. If the Loudspeaker is damaged – replace the Loudspeaker.

3. Replace board.



Problem Areas

1.7 Earphone

1.7.1 Earphone

Check:

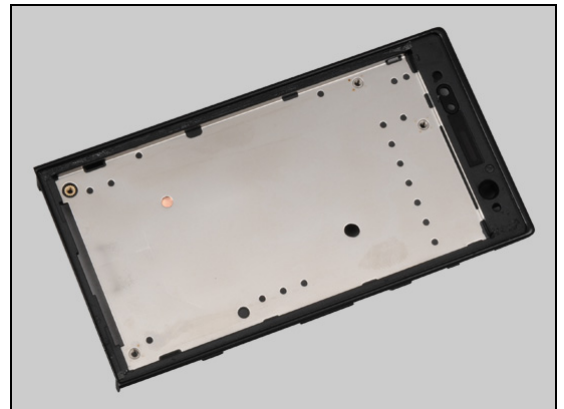
Inspect the Ear Speaker's external port.

Action:

1. If clogged – clean it.



2. If the Net Receiver on the Carrier Window Front Assy is damaged – replace the Carrier Window Front Assy.

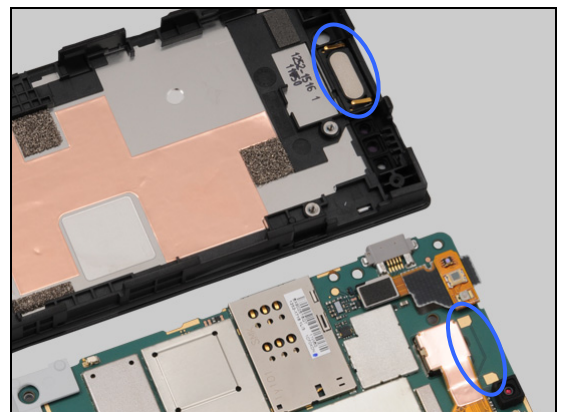


Check:

Inspect the Ear Speaker pins and the pads on the Main PBA.

Action:

1. If dirty – clean them.



2. If the Ear Speaker is damaged – replace the Ear Speaker.
3. Replace board.



Problem Areas

1.8 Microphone

1.8.1 Microphone

Check:

Inspect the Microphone's external port on the Antenna Cap.

Action:

1. If clogged – clean the port.



2. If the Antenna Cap is damaged – replace the Antenna Cap.

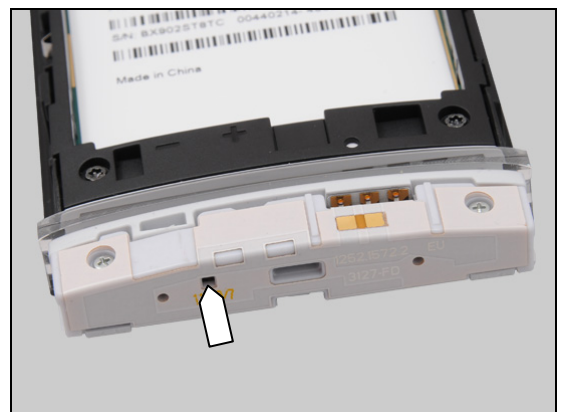


Check:

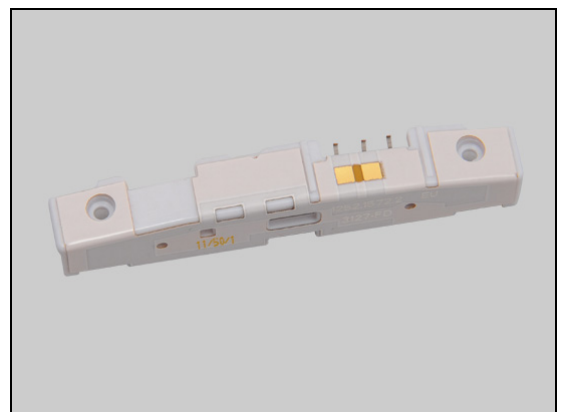
Inspect the Microphone's port on the Antenna Main.

Action:

1. If clogged – clean the port.



2. If the Antenna Main is damaged – replace the Antenna Main.



Problem Areas: Microphone

Check:

Inspect the Microphone's mesh on the Transparent Belt Total Assy.

Action:

1. If clogged – clean the Microphone mesh.

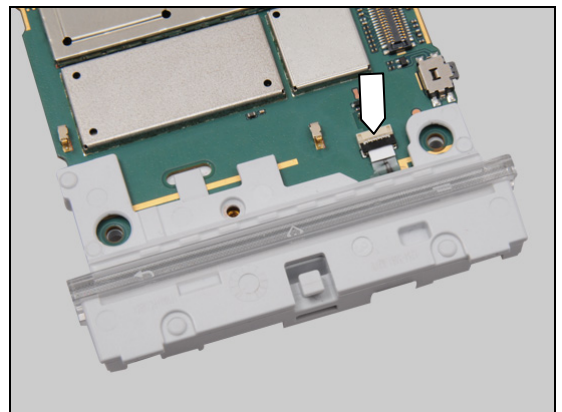


Check:

Inspect the both sides of ZIF connector on the Transparent Belt Total Assy and the Main PBA.

Action:

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

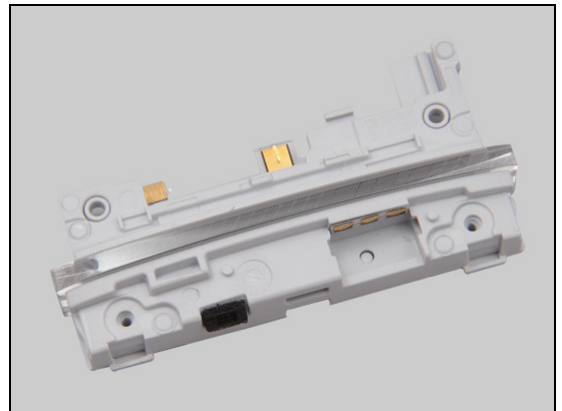


Check:

Inspect the Transparent Belt Total Assy.

Action:

1. If the Microphone mesh or its ZIF connector is damaged – replace the Transparent Belt Total Assy.
2. Replace board.



Problem Areas: Microphone

1.8.2 Secondary Microphone

Check:

Inspect the Microphone's external port on the Battery Cover Assy.

Action:

1. If clogged – clean the port.



2. If the Cover Rear Assy is damaged – replace the Battery Cover Assy.



Check:

Inspect the Microphone's mesh port on the Carrier Frame Assy.

Action:

1. If clogged – clean the port.



2. If the Microphone's mesh port is damaged – replace the Carrier Frame Assy.



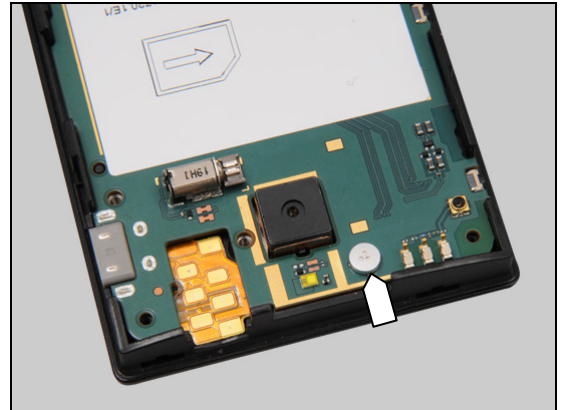
Problem Areas: Microphone

Check:

Inspect the Secondary Microphone on the Main PBA.

Action:

1. If clogged – clean the port.
2. Replace board.



Problem Areas: Vibrator

1.9 Vibrator

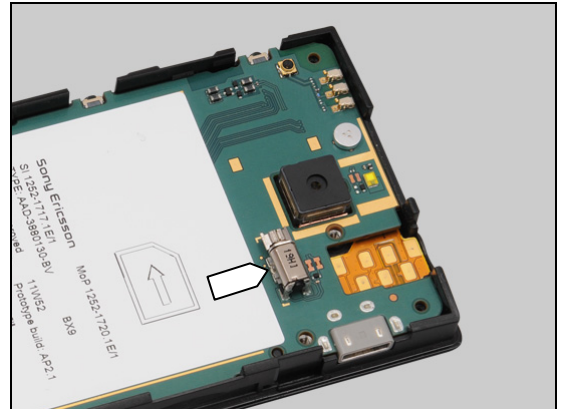
1.9.1 Vibrator not generating alerts

Check:

Inspect the vibrator on the Main PBA.

Action:

Replace board.



Problem Areas

1.10 Camera

1.10.1 Camera defects

Check:

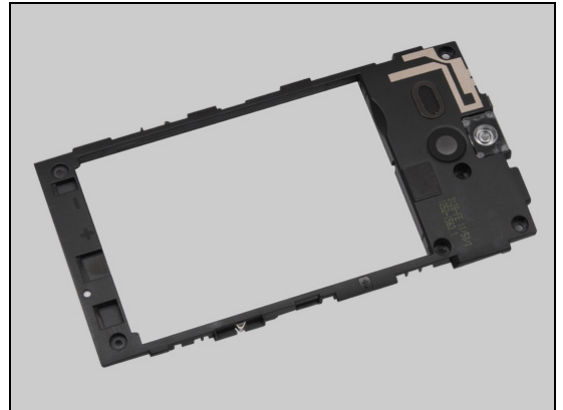
Inspect the Camera Window on the Carrier Frame Assy.

Action:

1. If dirty – clean the window.



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

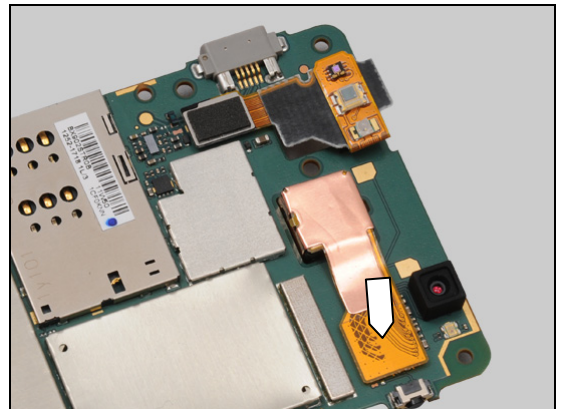


Check:

Inspect the BtB connector of the Main Camera to the Main PBA.

Action:

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



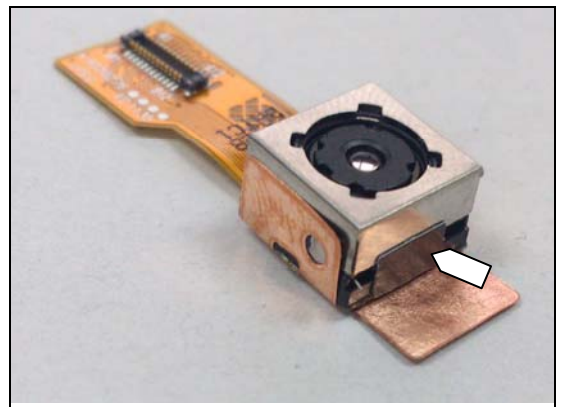
Check:

If the Main Camera Film is assembled as shown or missing.

Action:

1. If missing or damaged – replace the Main Camera Film.

Make sure Main Camera Film is assembled to cover two soldering pads!



Problem Areas

Action:

1. If damaged – replace the Main Camera.
2. Replace board.



Problem Areas

1.10.2 Secondary Camera

Check:

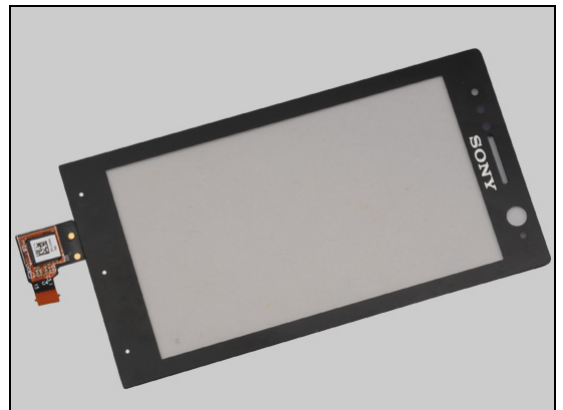
Inspect the external area window of the camera window on the Touch Panel.

Action:

1. If dirty or clogged – clean the window.



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



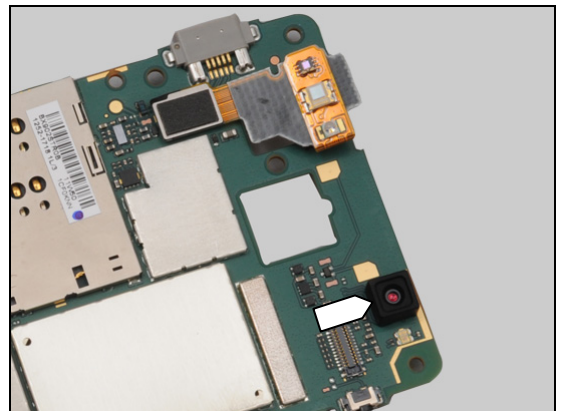
Check:

Inspect the Sub Camera Rubber.

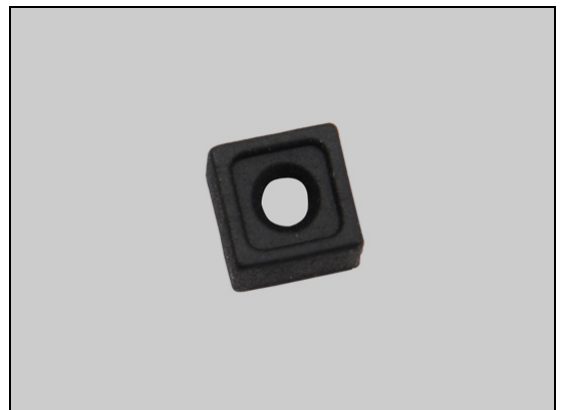
Action:

1. If dirty or clogged – clean it.

2. If not properly mounted – remount it.



3. If damaged – replace it.



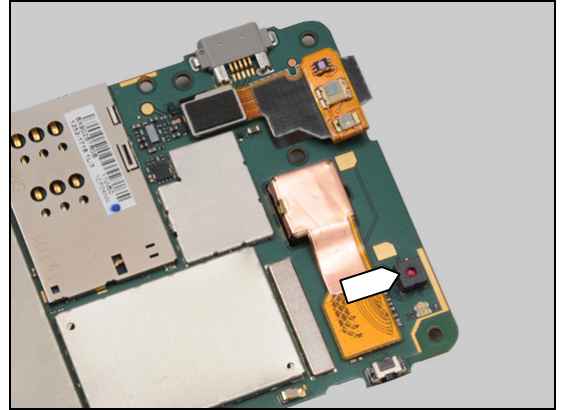
Problem Areas

Check:

Inspect the Secondary Camera on the Main PBA.

Action:

1. If dirty or clogged – clean it.
2. Replace board.



Problem Areas

1.11 Flash LED

1.11.1 Flash LED not flashing

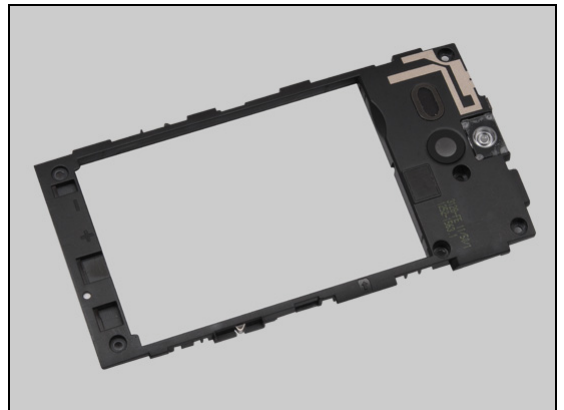
Check:

Inspect the flash lens window on the Carrier Frame Assy.

Action:

1. If dirty – clean the window.

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



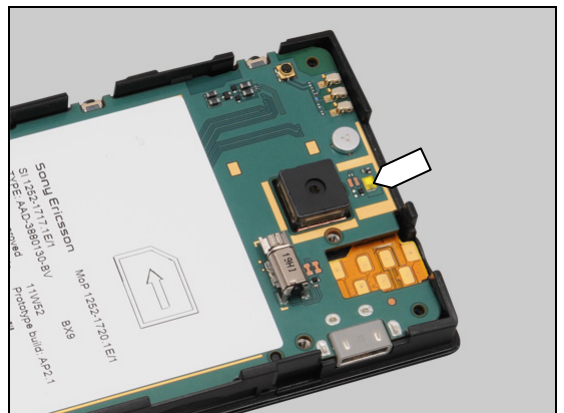
Check:

Inspect the flash LED on the Main PBA.

Action:

1. If dirty – clean it.

2. Replace board.



Problem Areas

1.12 Bluetooth and W-LAN malfunctions

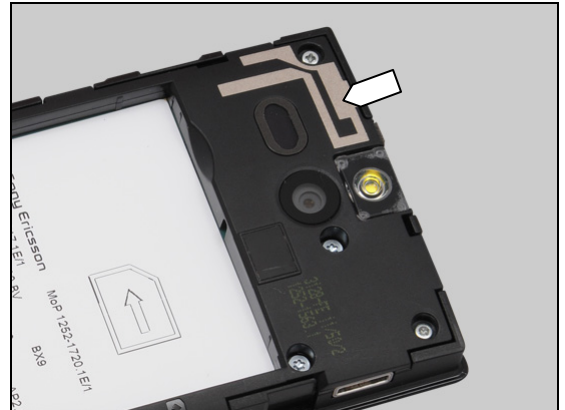
1.12.1 Bluetooth and W-LAN malfunctions

Check:

Inspect the WLAN and Bluetooth antenna on the Carrier Frame Assy.

Action:

If dirty – clean it.

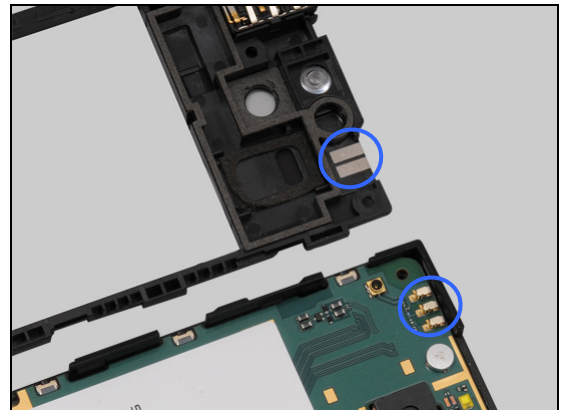


Check:

Inspect the WLAN and Bluetooth antenna contact pads on the Carrier Frame Assy and the contact pins on the PBA.

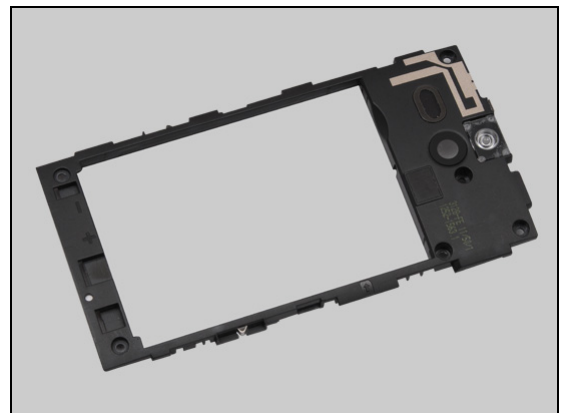
Action:

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



2. If the antenna or pads are damaged – replace the Carrier Frame Assy.

3. Replace board.



Problem Areas

1.13 GPS

1.13.1 GPS malfunctions

Check:

Inspect the GPS antenna on the Carrier Frame Assy.

Action:

If dirty – clean it.

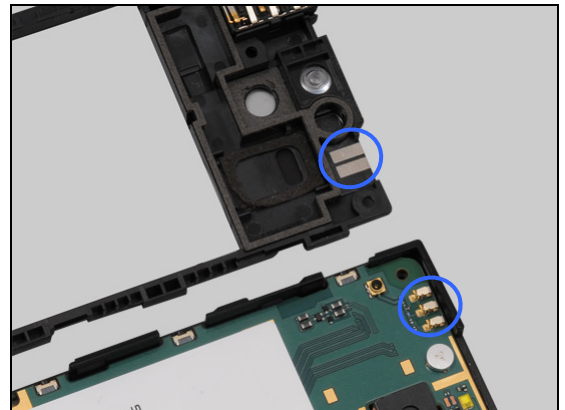


Check:

Inspect the GPS antenna contact pads on the Carrier Frame Assy and the contact pins on the PBA.

Action:

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



2. If the antenna or pads are damaged – replace the Carrier Frame Assy.

3. Replace board.



Problem Areas

1.14 Compass

1.14.1 Compass fails

Replace board.

Problem Areas

1.15 Accelerometer

1.15.1 Accelerometer test fails

Replace board.

Problem Areas

1.16 Ambient Light Sensor

1.16.1 Light Sensor malfunctions

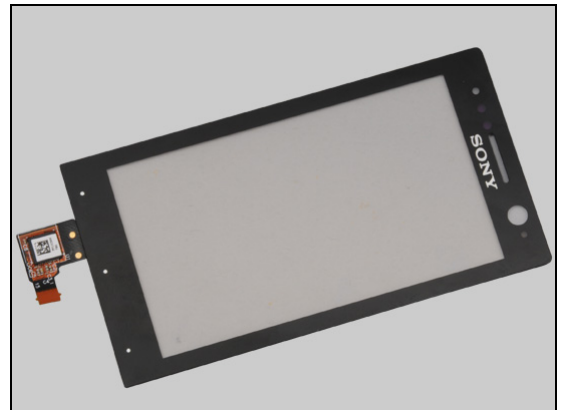
Check:

Inspect the Light Sensor window on the Touch Panel.

Action:

1. If clogged – clean it.

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



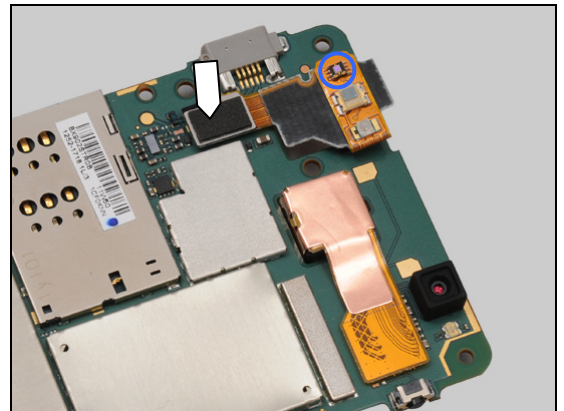
Check:

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

Action:

1. If not properly connected – disconnect and reconnect.

2. If dirty or oxidized – clean both side of the BtB connector.



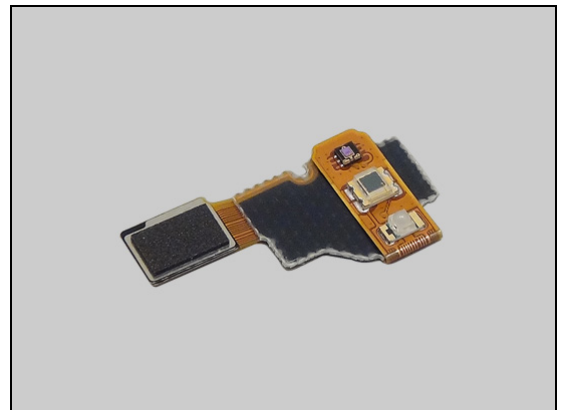
Check:

Inspect the Audio Jack Sensor FPC Assy.

Action:

1. If the Audio Jack Sensor FPC Assy or its BtB connector is damaged – replace the Audio Jack Sensor FPC Assy.

2. Replace board.



Problem Areas

1.17 Proximity switch

1.17.1 Proximity switch malfunctions

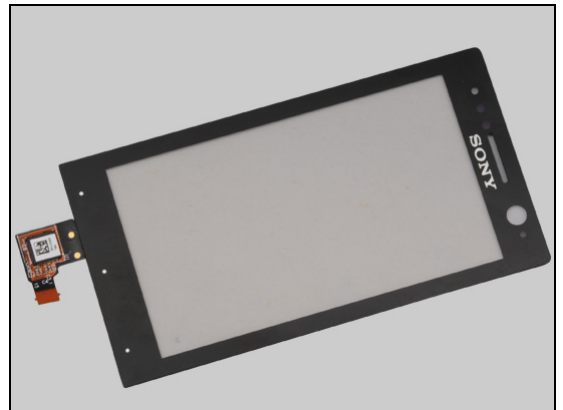
Check:

Inspect the Proximity switch window on the Touch Panel.

Action:

1. If clogged – clean it.

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



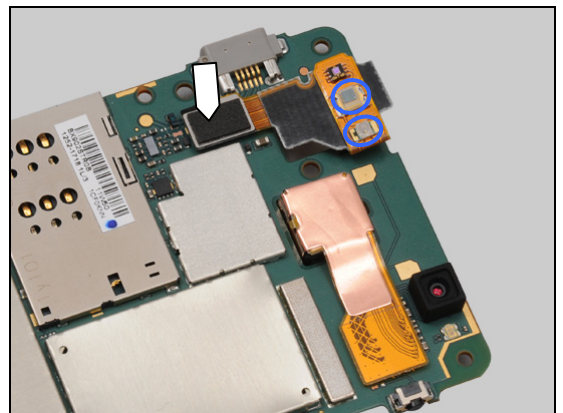
Check:

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

Action:

1. If not properly connected – disconnect and reconnect.

2. If dirty or oxidized – clean both side of the BtB connector.



Check:

Inspect the Audio Jack Sensor FPC Assy

Action:

1. If the Audio Jack Sensor FPC Assy or its BtB connector is damaged – replace the Audio Jack Sensor FPC Assy.

2. Replace board.



Problem Areas

1.18 Real time clock

1.18.1 Real time clock test failed

Action:

Replace board.

Problem Areas

1.19 Total call time

1.19.1 Total call time failed

Action:

Replace board.

Problem Areas

1.20 Storage

1.20.1 Internal Storage failed

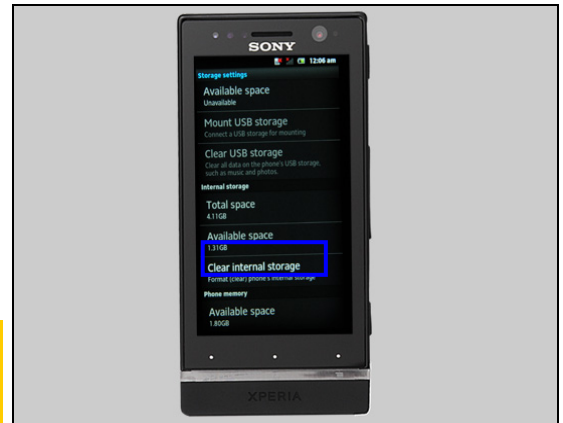
Check:

Check whether the phone is formatted.

Action:

1. Start the phone and press the Menu key, press Settings, then press Storage and choose Clear internal storage to format the phone.
2. Replace board.

Be careful that all the user data on internal storage will be erased completely after selecting "clear internal Storage".



1.20.2 USB otg Storage failed

Refer to section 1.28 'Data Communication'.

Problem Areas

1.21 Security

1.21.1 Security failed

Action:

Replace board.

Problem Areas

1.22 FM Radio

1.22.1 No/Poor FM Radio reception

Check:

Inspect the audio jack.

Action:

If dirty or oxidized – clean it.



Check:

Inspect the audio jack.

Action:

If dirty or oxidized – clean it.

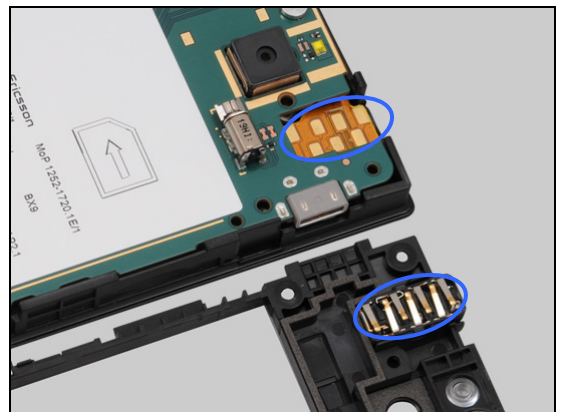


Check:

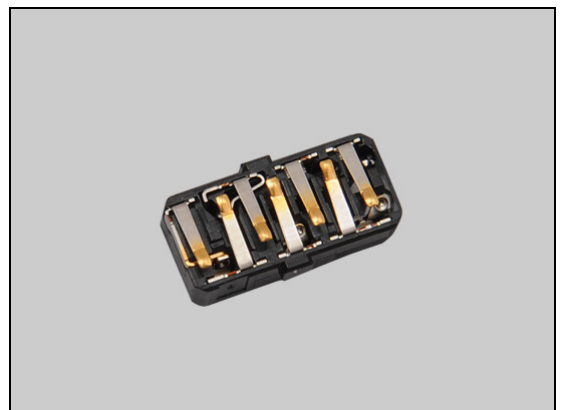
Inspect the contact pins on the Audio Jack and the contact pads on the Audio Jack Sensor FPC Assy.

Action:

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



2. If the pins are damaged – replace the Audio Jack.



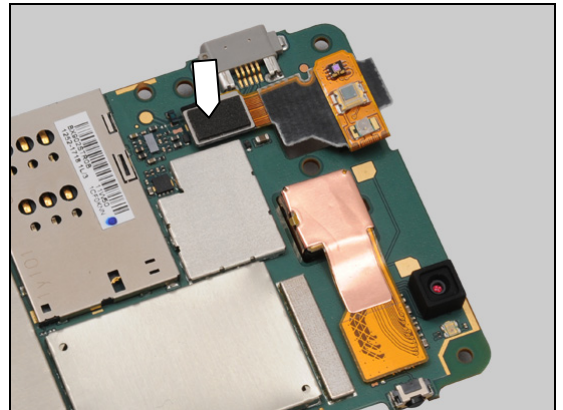
Problem Areas: FM Radio

Check:

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

Action:

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

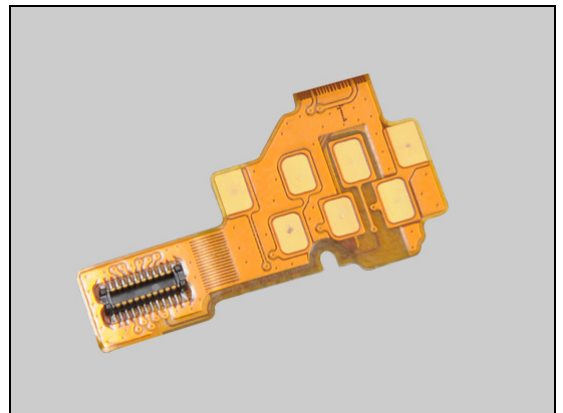


Check:

Inspect the Audio Jack Sensor FPC Assy.

Action:

1. If the pads or the connector of the Audio Jack Sensor FPC Assy is damaged – replace the Audio Jack Sensor FPC Assy.
2. Replace board.



Problem Areas

1.23 Network & Signal

1.23.1 No/Poor signal

Check:

Inspect the Antenna Main.

Action:

If dirty – clean it.

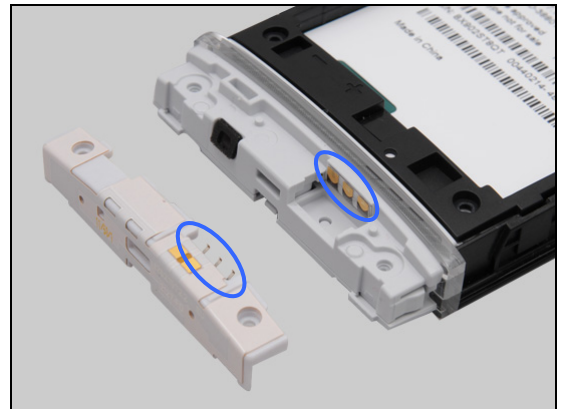


Check:

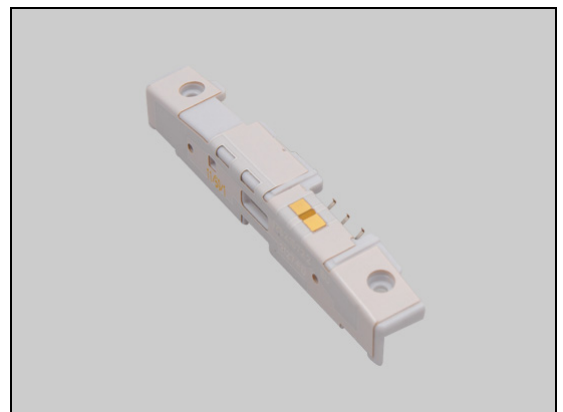
Inspect the Antenna Main contact pins and contact pads on the Transparent Belt Total Assy.

Action:

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



2. If the pins on Antenna Main are damaged – replace the Antenna Main.

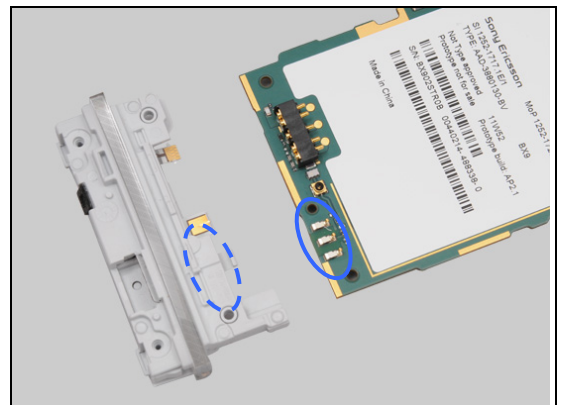


Check:

Inspect the contact pads on the Transparent Belt Total Assy and the contact pins on the Main PBA.

Action:

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



Problem Areas

2. If the pins on the Transparent Belt Total Assy are damaged – replace the Transparent Belt Total Assy.
3. Replace board.



Problem Areas

1.24 SIM

1.24.1 SIM not detected

Check:

Inspect the SIM holder.

Action:

If dirty or oxidized – clean the holder.

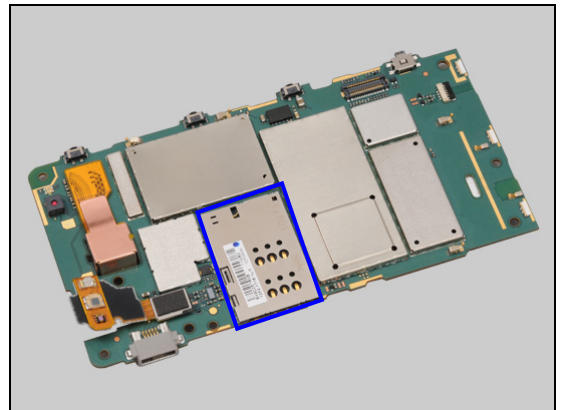


Check:

Inspect the SIM holder on the Main PBA.

Action:

1. If dirty or oxidized – clean the holder.
2. Replace board.



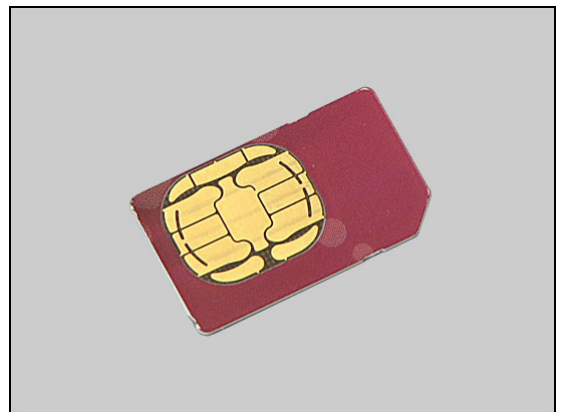
1.24.2 Incorrect SIM indicated

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. Replace board.



1.24.3 Incorrect SIM-Card adapter

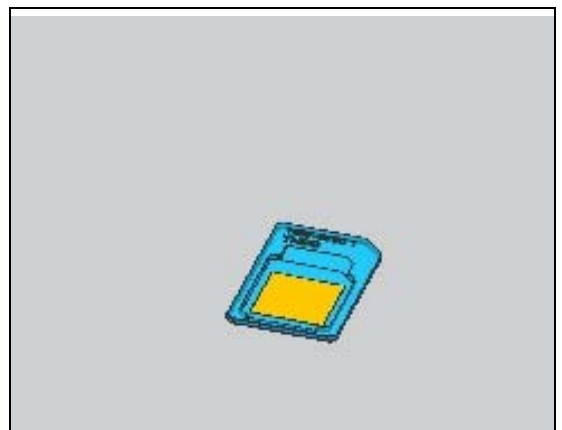
Check:

Check the SIM-Card adapter is from ST25 or not if the Micro SIM card is used.

Note: Only ST25 SIM-Card adapter (1257-9796) can be used in ST25 Phone. Other supplier's SIM-Card adapter or incompatible SIM card adapter will damage the SIM card connector!

Action:

1. Use a proper ST25 SIM-Card adapter (1257-9796).
2. If SIM Card connector is damaged, deal with it according to local directive.



Problem Areas

1.25 Charging

1.25.1 Battery will not charge

Check:

Inspect the contact pads of the battery.

Action:

1. If dirty or oxidized – clean the pads.
2. If damaged – replace the battery.



Check:

Inspect the battery contact pins on the main PBA.

Action:

1. If dirty or oxidized – clean the contact pins.
2. If adhesive is detected on the contact pins – use an eraser to gently rub off the adhesive.



Check:

Inspect the USB connector.

Action:

If dirty or oxidized – clean it.



Check:

Inspect the USB connector.

Action:

1. If dirty or oxidized – clean it.
2. Replace board.



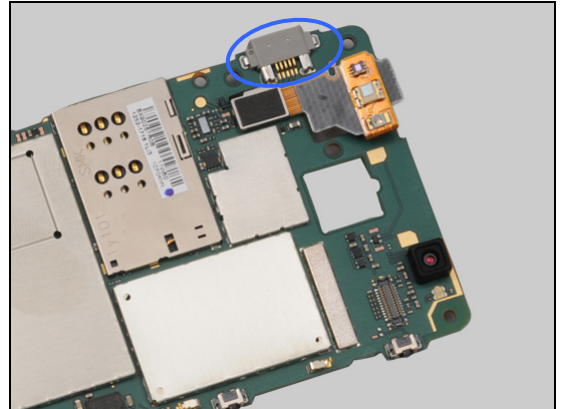
Problem Areas: Charging

Check:

Inspect the USB connector on the Main PBA.

Action:

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



Problem Areas

1.26 HandsFree by Wire

1.26.1 Connection to Portable HandsFree fails

Check:

Inspect the audio jack.

Action:

If dirty or oxidized – clean the connector.



Check:

Inspect the audio jack.

Action:

If dirty or oxidized – clean it.

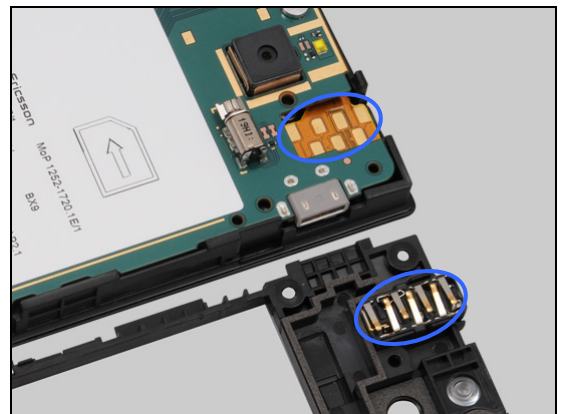


Check:

Inspect the contact pins on the Audio Jack and the contact pads on the Audio Jack Sensor FPC Assy.

Action:

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



2. If the pins are damaged – replace the Audio Jack.



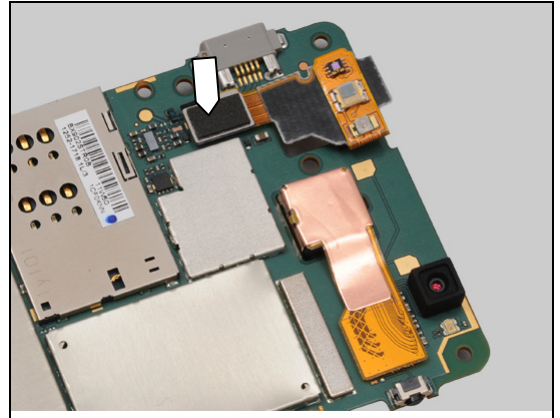
Problem Areas: HandsFree By Wire

Check:

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

Action:

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

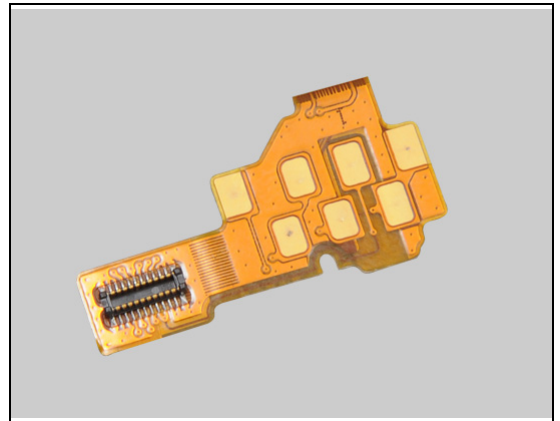


Check:

Inspect the Audio Jack Sensor FPC Assy.

Action:

1. If the pads or the connector of the Audio Jack Sensor FPC Assy is damaged – replace the Audio Jack Sensor FPC Assy.
2. Replace board.



Problem Areas

1.27 Data Communication

1.27.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

If dirty or oxidized – clean the connector.



Check:

Inspect the USB connector.

Action:

If dirty or oxidized – clean the connector.

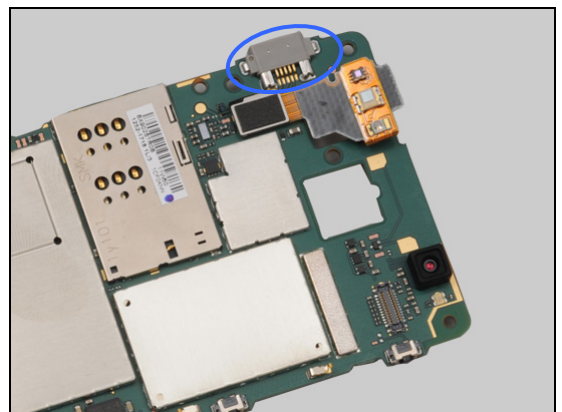


Check:

Inspect the USB connector on the Main PBA.

Action:

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



2 Revision History

Rev.	Date	Changes / Comments
1	2012-Apr-16	Initial release
2	2012-Apr-18	Update main camera trouble shooting.
3	2012-Apr-20	Update main camera trouble shooting to check Main Camera Film.
4	2012-06-05	Chapter of Incorrect SIM-Card adapter is added at page 40.