



Sony Ericsson

Troubleshooting Guide

- mechanical -



Txt pro, CK15i, CK15a



CONTENTS

1	Problem Areas	4
1.1	Power	4
1.1.1	Will not power on or will switch off randomly.....	4
1.2	Display	5
1.2.1	Graphics & Illumination	5
1.3	Illumination/LED.....	7
1.3.1	Home Key Illumination	7
1.3.2	Keyboard Illumination	8
1.3.3	Pre-Charge LED	9
1.4	Keys	12
1.4.1	Home key.....	12
1.4.2	Key Power	13
1.4.3	Volume Key	14
1.4.4	Key Camera.....	14
1.4.5	Keyboard Keys	15
1.5	Audio.....	17
1.5.1	Microphone	17
1.5.2	Ear Speaker	18
1.5.3	Loudspeaker	20
1.6	Vibrator	22
1.6.1	Vibrator not generating alerts	22
1.7	Camera 3 Mpixel.....	23
1.7.1	Camera 3 Mpixel defects.....	23
1.8	Touch Screen	24
1.8.1	Touch Screen malfunction.....	24
1.9	Memory Card	26
1.9.1	Memory Card not detected	26
1.10	FM Radio.....	27
1.10.1	No/Poor FM Radio reception	27
1.11	Sensor.....	28
1.11.1	Proximity Sensor malfunctions	28
1.11.2	Slide Sensor.....	29
1.11.3	Accelerometer test fails	30
1.12	Real Time Clock	31
1.12.1	Real Time Clock test fails	31
1.13	SIM	32
1.13.1	SIM not detected.....	32
1.13.2	Incorrect SIM indicated	32
1.14	Charging	33
1.14.1	Battery will not charge	33
1.15	Bluetooth and WLAN	34
1.15.1	Bluetooth or WLAN connection failure.....	34
1.16	Network & Signal.....	35



1.16.1	No/Poor signal	35
1.17	HandsFree by Wire.....	36
1.17.1	Connection to Portable HandsFree fails.....	36
1.18	Hinge Slider	37
1.18.1	Slider stiff or stuck	37
1.19	Data Communication	38
1.19.1	Data transfer via System Connector fails.....	38
2	Revision History	39

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 Home Key LED illuminate (or the Keyboard illuminates) after the Key Power is depressed.

Action:

If activation of the Vibrator and the Home Key LED illuminate (or the Keyboard illuminates) is detected, refer to section 1.2 '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:

Visually inspect the Battery Connector

Action:

1. If dirty or oxidized – clean the connector
2. If adhesive is detected on the contact pins – use an eraser to gently rub off the adhesive.
3. If damaged – send to higher level of repair

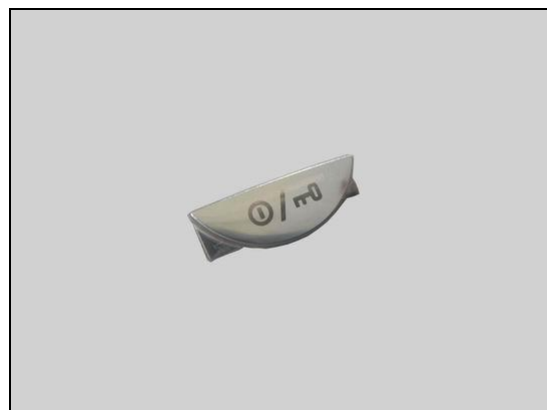


Check:

Inspect the Key Power on the Rear Cover Assembly

Action:

1. If the Key Power is dirty or clogged – clean it.
2. If the Key Power is damaged – replace the Key Power.
3. Send to higher level of repair.





Problem Areas

1.2 Display

1.2.1 Graphics & Illumination

Check:

Check whether the phone vibrates and the Home Key LED illuminate (or the Keyboard illuminates) after the Key Power has been pressed.

Action:

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



Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.

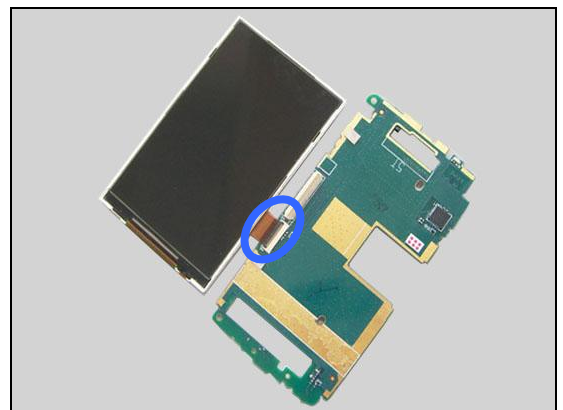


Check:

Visually inspect the LCM FPC and LCM FPC connector on the Sub Board Assy.

Action:

1. If LCM FPC and LCM FPC connector are dirty or oxidized – clean them and replace a new Mylar Hinge FPC Assembly in its proper position.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.

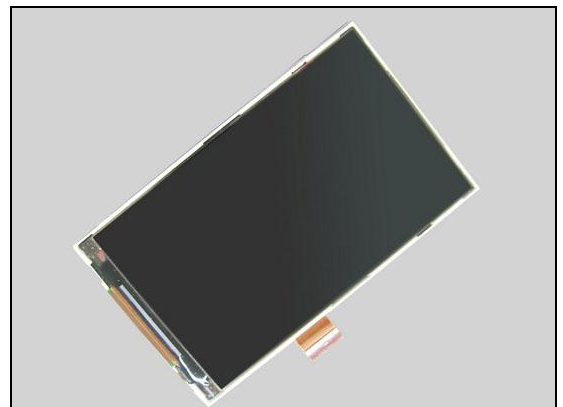


Check:

Visually inspect the LCM FPC and Display.

Action:

If the LCM FPC is damaged or the Display is defective – replace the Display and replace a new LCM FPC Connector Mylar in its proper position.





Problem Areas: Display

Check:

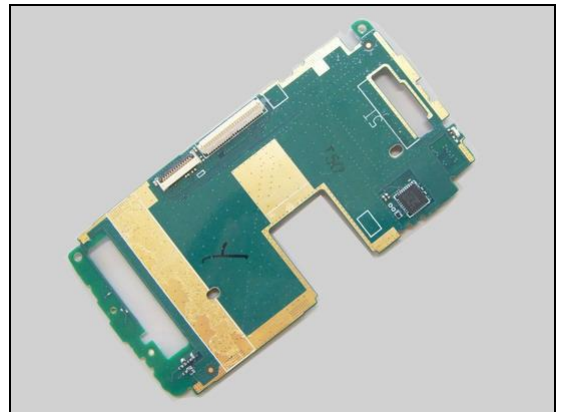
Visually inspect the LCM FPC connector, Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



3. If the LCM FPC connector or Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

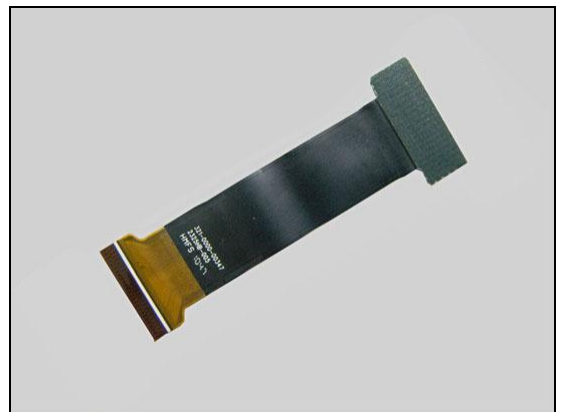


Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



Problem Areas

1.3 Illumination/LED

1.3.1 Home Key Illumination

Check:

Inspect the Home key from outside.

Action:

1. If dirty – clean it
2. If the Home key is scratched or damaged – replace Front Cover Assy

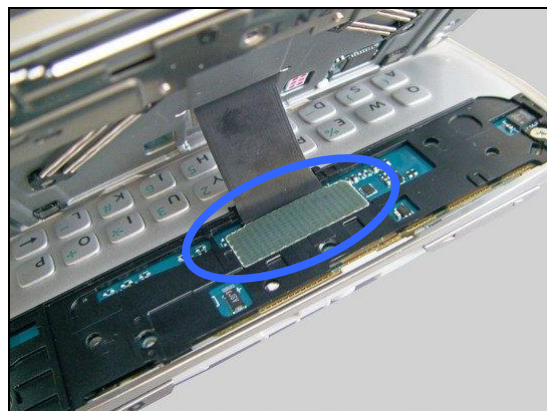


Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the two sides of the BTB connectors.



Check:

Inspect the Home key from inside

Action:

1. If dirty – clean it
2. If the Home key is scratched or damaged – replace the Front Cover Assy.

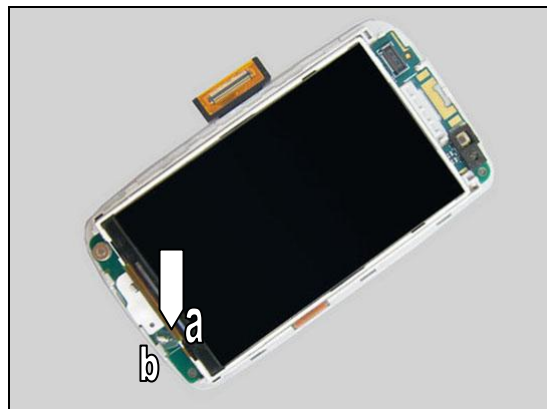


Check:

Inspect the Mylar Home Key LED (a) and the Main Key LED (b) on the Sub Board Assy.

Action:

1. If dirty – clean them.
2. If the Mylar Home Key LED is scratched or damaged – replace it.
3. If the LED is damaged– replace the Sub Board Assy.





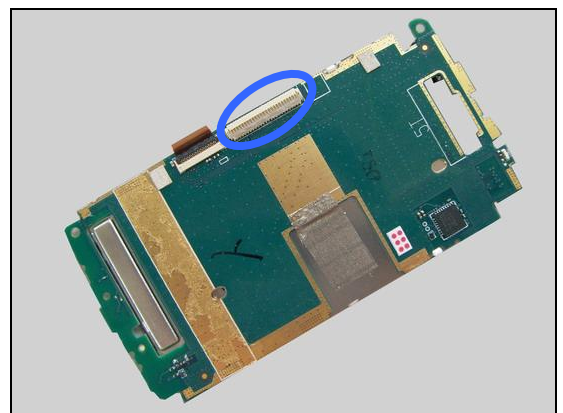
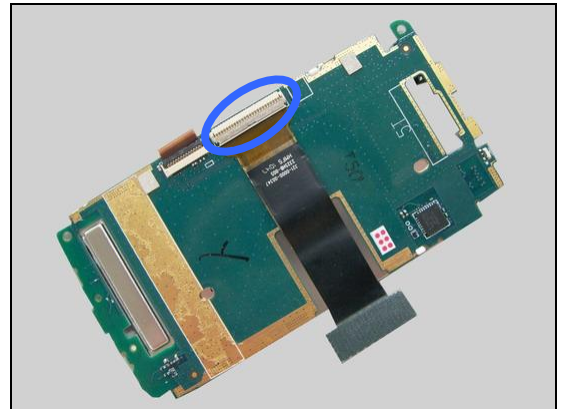
Problem Areas: Illumination/LED

Check:

Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



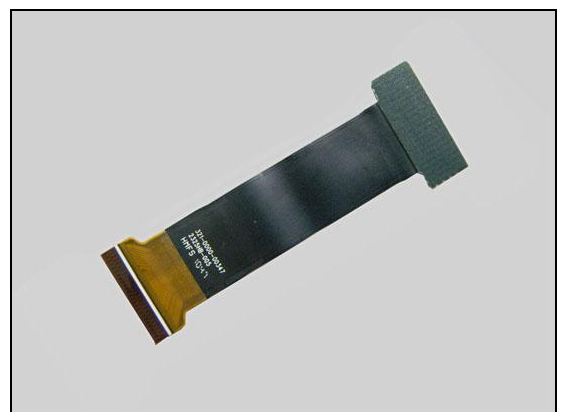
3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



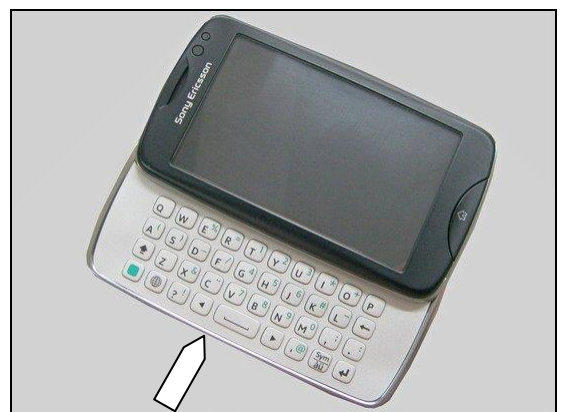
1.3.2 Keyboard Illumination

Check:

Inspect the Keyboard.

Action:

1. If dirty – clean it



Problem Areas: Illumination/LED

2. If damaged – Replace the Keyboard.

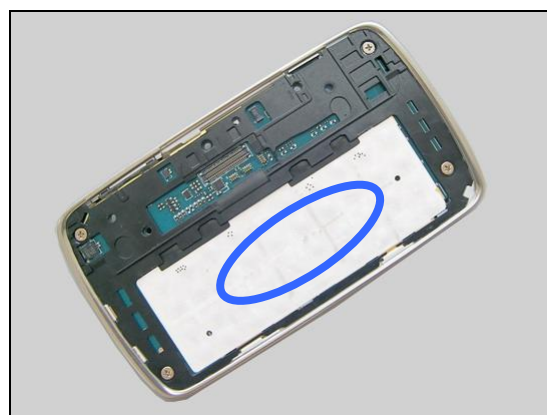


Check:

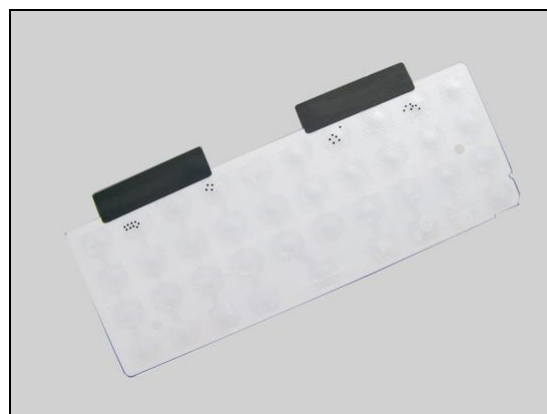
Inspect the Metal Dome keypad.

Action:

1. If dirty – clean it



2. If damaged – Replace Metal Dome keypad.
3. Send to higher level of repair.



1.3.3 Pre-Charge LED

Check:

Inspect the Pre-Charge LED window from outside.

Action:

1. If dirty – clean it





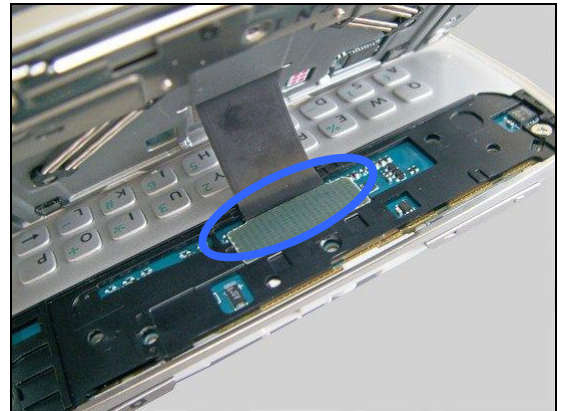
Problem Areas: Illumination/LED

Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

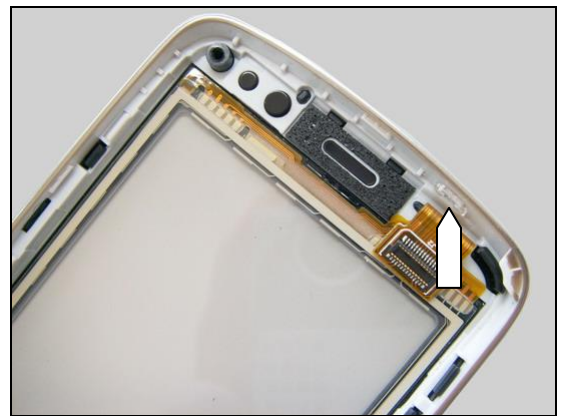
- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.

**Check:**

Inspect the Pre-Charge LED window from inside

Action:

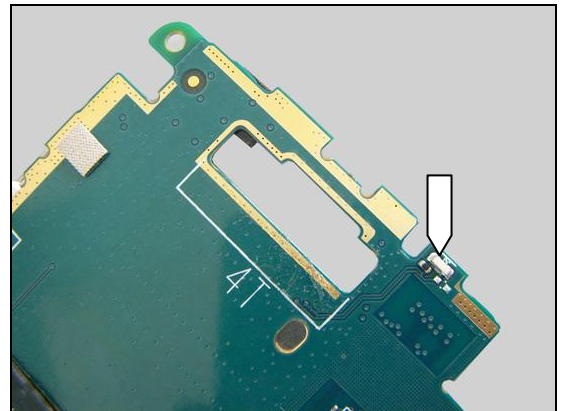
1. If dirty – clean it

**Check:**

Visually inspect the LED on the Sub Board Assy.

Action:

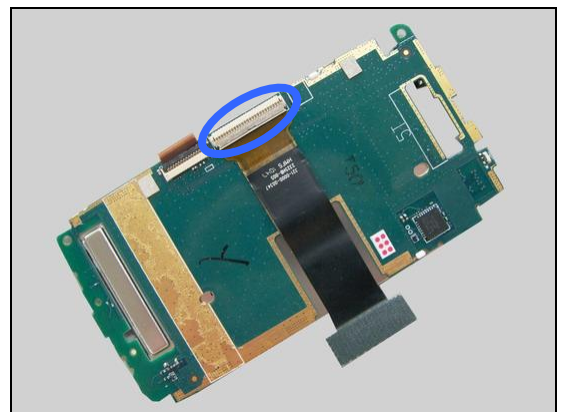
1. If dirty – clean it.
2. If still not resolved – replace the Sub Board Assy.

**Check:**

Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.





Problem Areas: Illumination/LED

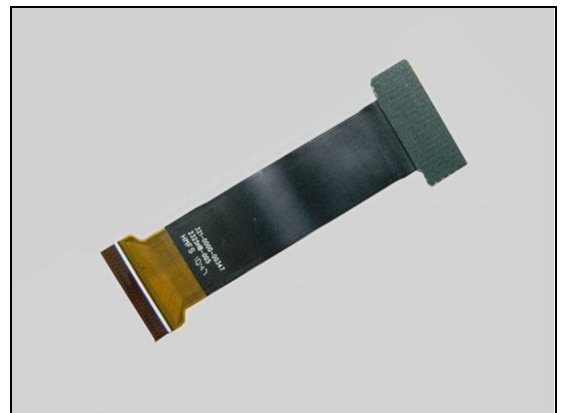
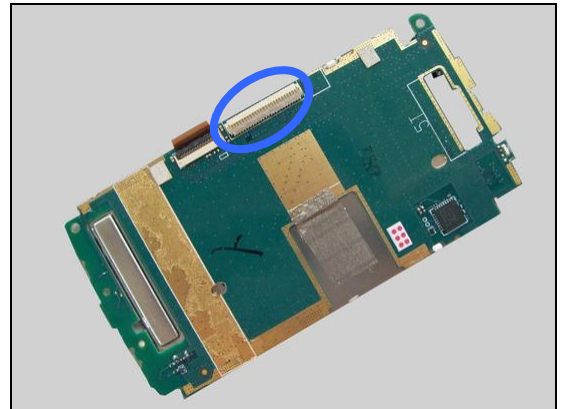
3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



Problem Areas

1.4 Keys

1.4.1 Home key

Check:

Inspect the Home key from outside.

Action:

1. If dirty – clean it
2. If the Home key is scratched or damaged – replace the Front Cover Assembly.

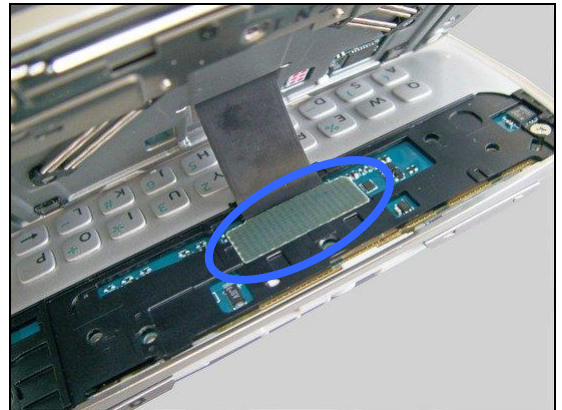


Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the two sides of the BTB connectors.

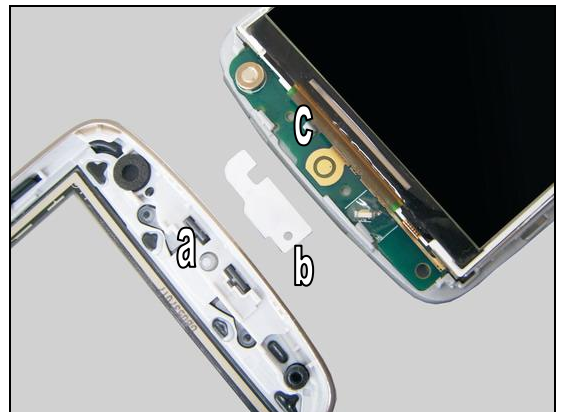


Check:

Inspect the Home key (a), the Metal Dome Home Key (b) and contact pads on the Sub Board Assy (c)

Action:

1. If dirty or oxidized – clean them.
2. If the Home key is damaged – replace the Front Cover Assembly.
3. If the Metal Dome Home Key is damaged – replace it.
4. If still not resolved – replace the Sub Board Assy.

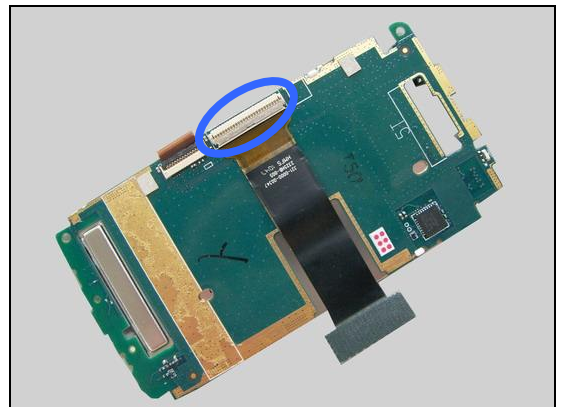


Check:

Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



Problem Areas: Keys

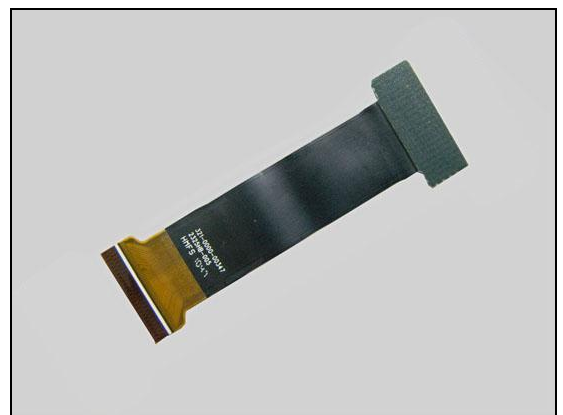
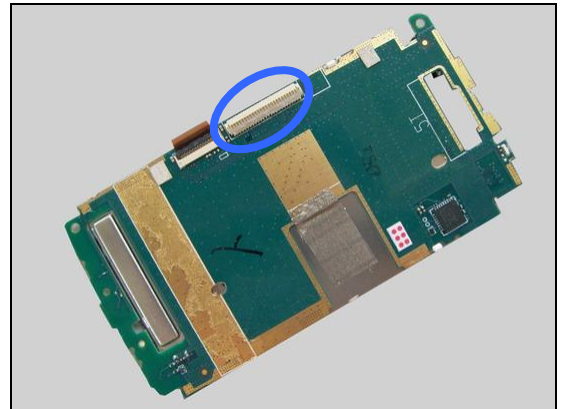
3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



1.4.2 Key Power

Check:

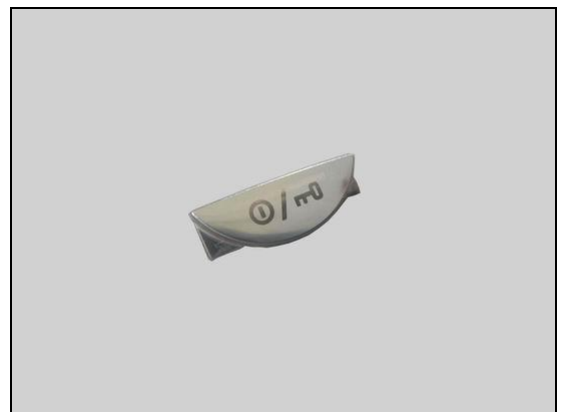
Inspect the Key Power on the Rear Cover Assy

Action:

1. If the Key Power is dirty or clogged – clean it.



2. If the Key Power is damaged – replace the Key Power.
3. Send to higher level of repair.





Problem Areas: Keys

1.4.3 Volume Key

Check:

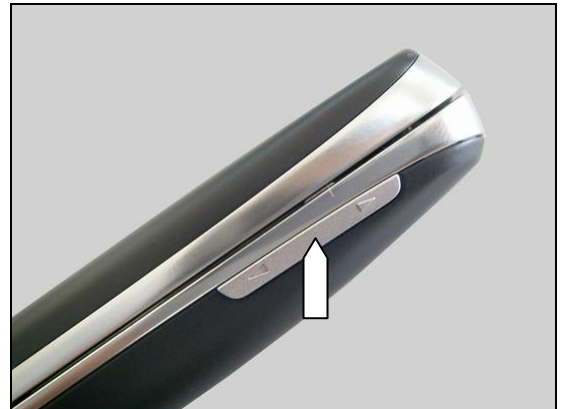
Inspect the Volume key.

Action:

1. If the Key Volume is dirty or clogged – clean it.

2. If Key Volume is damaged – replace the key

3. Send to higher level of repair



1.4.4 Key Camera

Check:

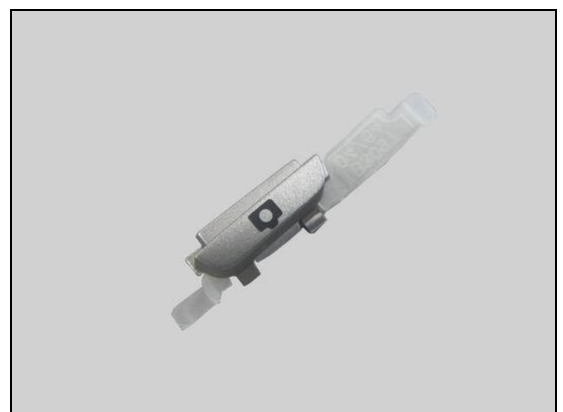
Inspect the Key Camera.

Action:

1. If the Key Camera is dirty or clogged – clean it.

2. If Key Camera is damaged – replace the key

3. Send to higher level of repair





Problem Areas: Keys

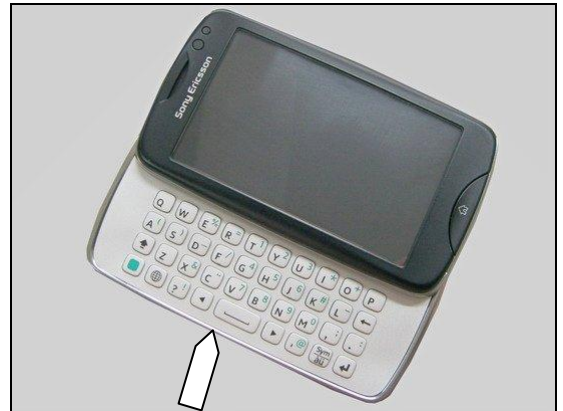
1.4.5 Keyboard Keys

Check:

Inspect the Keyboard.

Action:

1. If dirty – clean it.



2. If damaged – replace the Keyboard.

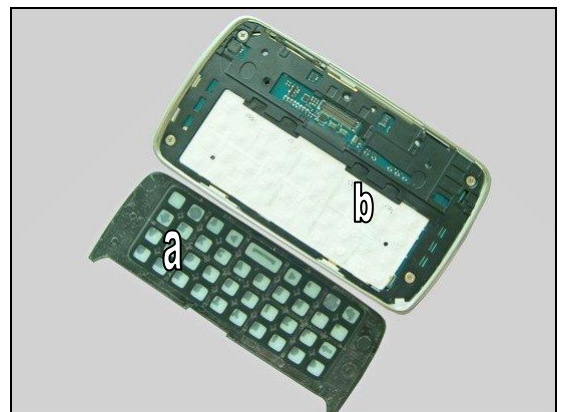


Check:

Inspect the keypad (a) and Metal Dome keypad (b)

Action:

1. If dirty or oxidized – clean them.
2. If damaged – replace them.

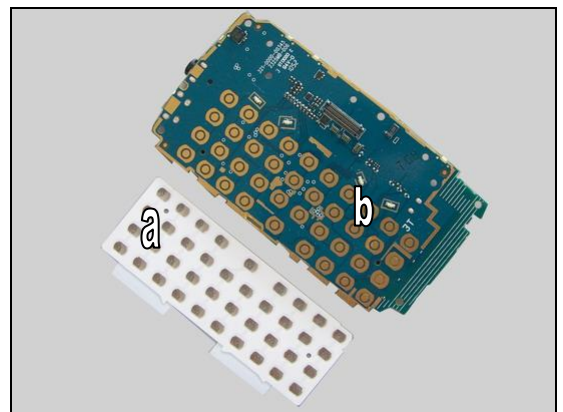


Check:

Inspect the Metal Dome keypad (a) and contact pads on the Main PBA (b)

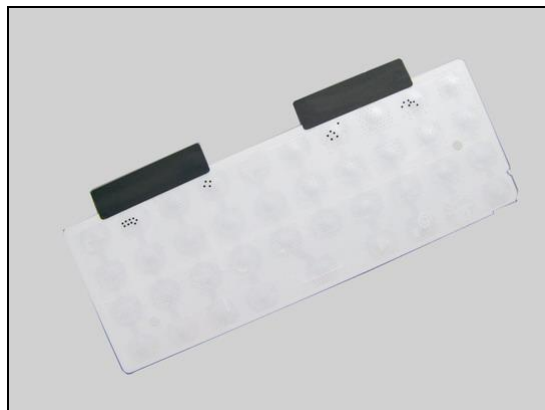
Action:

1. If dirty or oxidized – clean them.



Problem Areas: Keys

2. If the Metal Dome keypad is damaged – replace it.
3. Send to higher level of repair.





Problem Areas

1.5 Audio

1.5.1 Microphone

Check:

Inspect the Microphone's external port

Action:

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

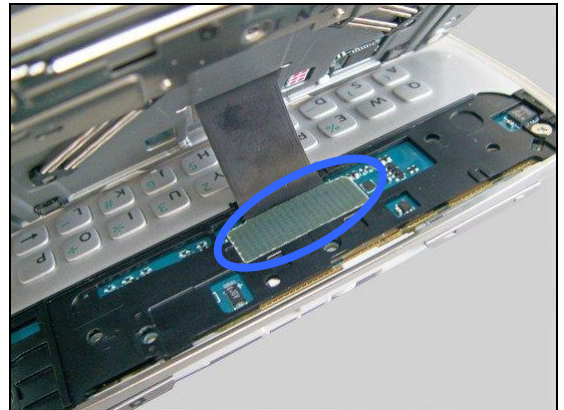


Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.



Check:

Inspect the MIC sponge with mesh from inside

Action:

1. If dirty – clean it
2. If the MIC sponge with mesh is scratched or damaged – replace the Front Cover Assy.

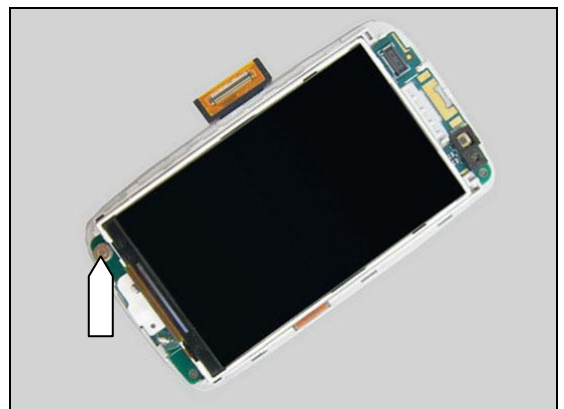


Check:

Inspect the Mic on the Sub Board Assy.

Action:

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





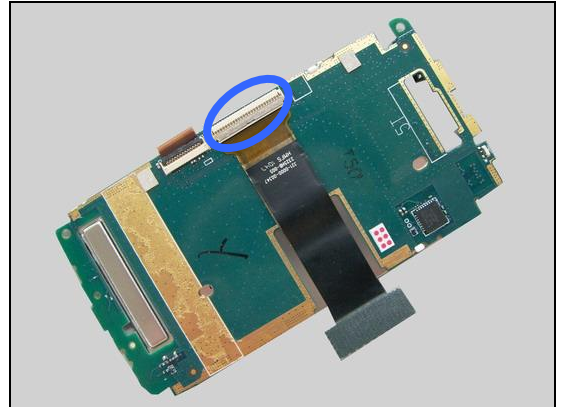
Problem Areas: Audio

Check:

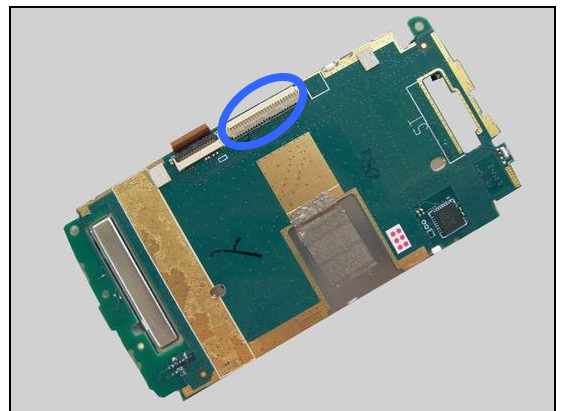
Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

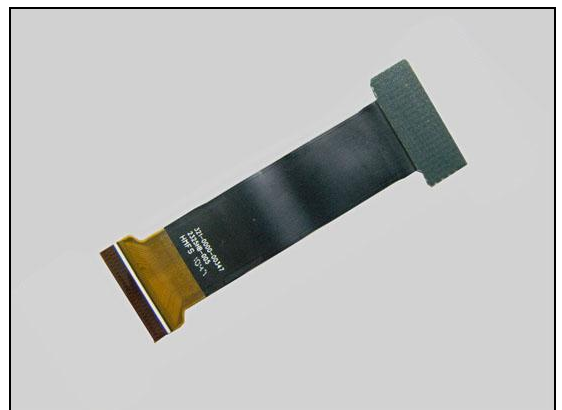


Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



1.5.2 Ear Speaker

Check:

Inspect the Ear Speaker's external port

Action:

- 1.If clogged – clean it or replace the Front Cover
- 2.If damaged – replace the Touch Front Cover Assy.





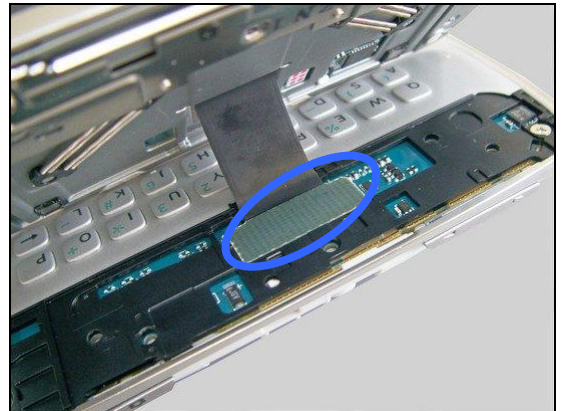
Problem Areas: Audio

Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.



Check:

Inspect the Ear Speaker sponge from inside

Action:

1. If dirty – clean it
2. If the the Ear Speaker sponge is scratched or damaged – replace the Front Cover Assy.

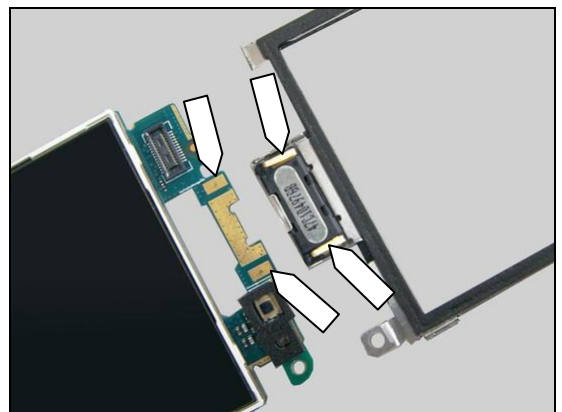


Check:

Inspect the Ear Speaker pins and pads

Action:

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



2. If damaged – Replace the Ear Speaker





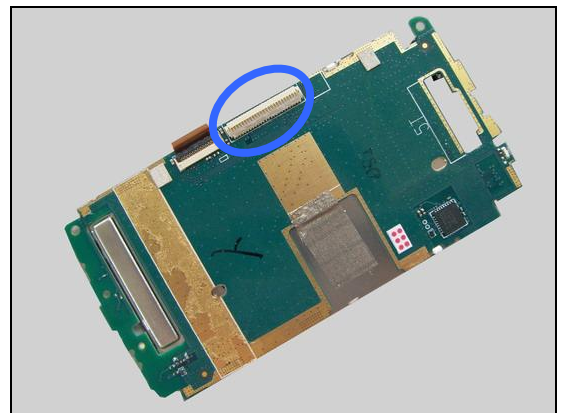
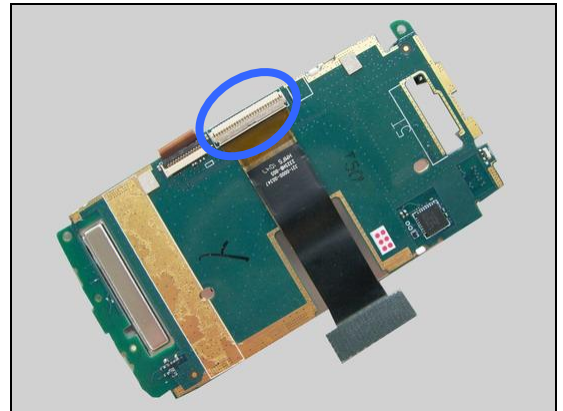
Problem Areas: Audio

Check:

Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



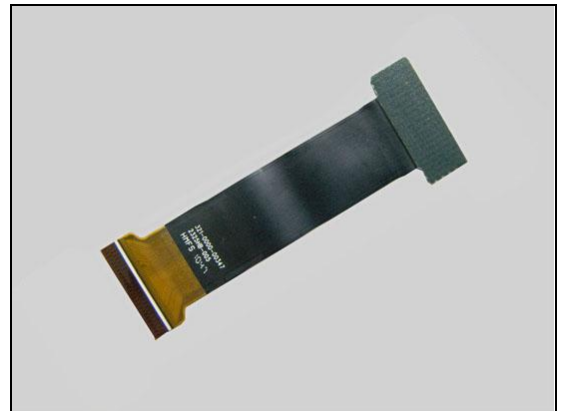
3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



1.5.3 Loudspeaker

Check:

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

Action:

If clogged – clean the speaker port or replace the Battery Cover.





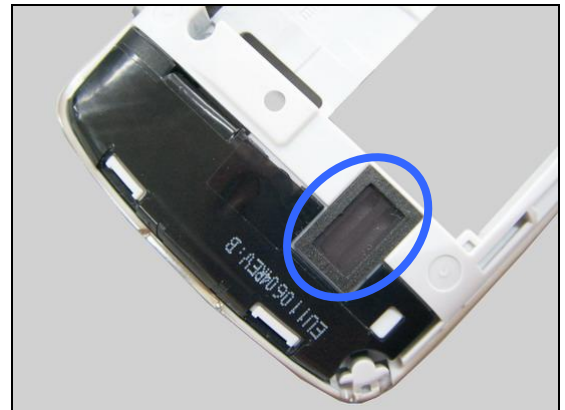
Problem Areas: Audio

Check:

Inspect the Loudspeaker's mesh on the Rear Cover Assy

Action:

1. If clogged –clean the speaker mesh.
2. If damaged – Replace the Rear Cover Assy

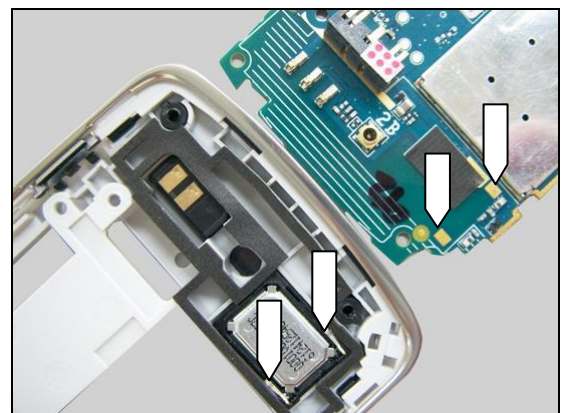


Check:

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

Action:

1. If dirty or oxidized – clean the pads and pins
2. If Loudspeaker damaged – Replace the Loudspeaker
3. Send to higher level of repair



Problem Areas

1.6 Vibrator

1.6.1 Vibrator not generating alerts

Action:

Send to higher level of repair

Problem Areas

1.7 Camera 3 Mpixel

1.7.1 Camera 3 Mpixel defects

Check:

Inspect the Camera Lens

Action:

1. If dirty – clean the Camera Lens

2. If scratched or damaged – replace the Camera Lens

Check:

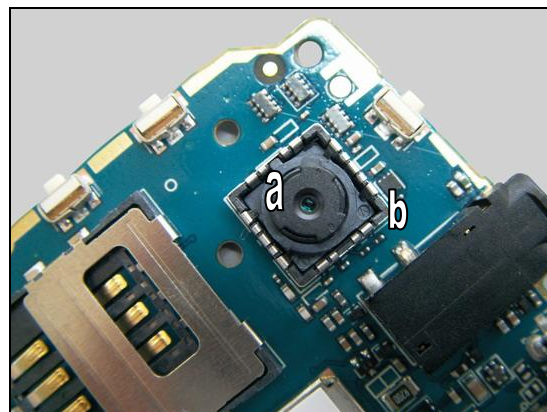
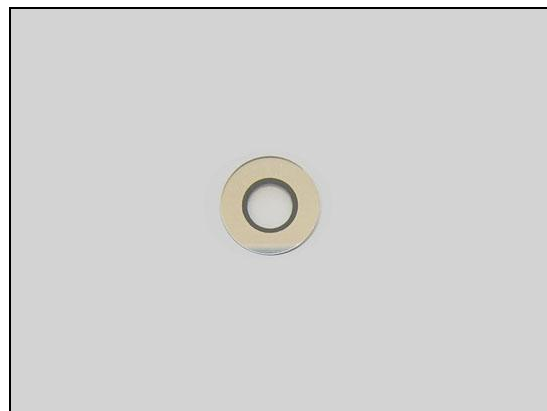
Inspect whether the Camera 3 Mpixel (a) is properly installed in its socket (b).

Action:

1. If improperly connected – re-install the Camera 3 Mpixel

2. If damaged – Replace the Camera 3 Mpixel

3. Send to higher level of repair





Problem Areas

1.8 Touch Screen

1.8.1 Touch Screen malfunction

Check:

Inspect the touch screen of the Touch Front Cover Assy.

Action:

1. If dirty – clean it.



Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.

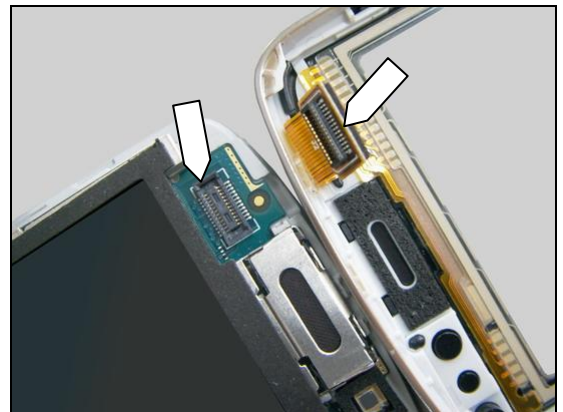


Check:

Check whether the Touch Panel FPC is properly connected to its connector on Sub PBA.

Action:

- 1.If not properly connected – disconnect and reconnect
- 2.If dirty or oxidized – clean the two sides of the BTB connectors.



3. If the Touch Panel FPC is damaged – replace the Touch Front Cover Assy.





Problem Areas: Touch Screen

4. If the Touch Panel FPC connector on Sub PBA is damaged – replace the Sub Board Assy.

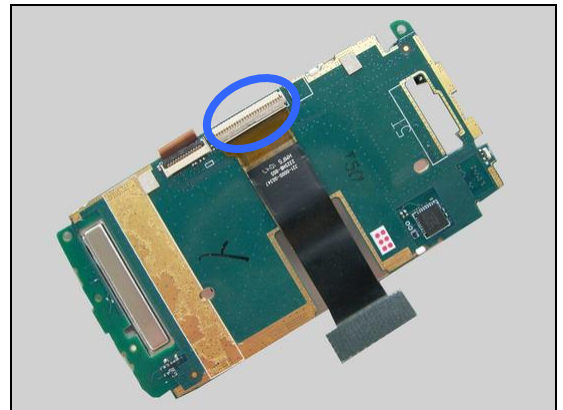


Check:

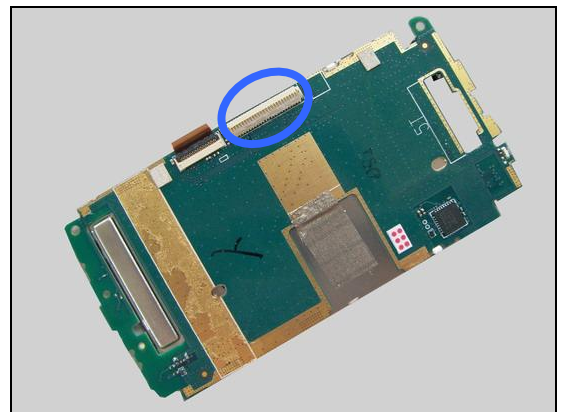
Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.

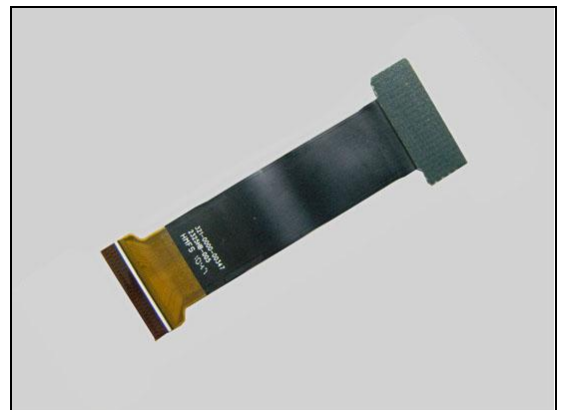


Check:

Visually inspect the Hinge FPC Assembly

Action:

1. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.
2. Send to higher level of repair.



Problem Areas

1.9 Memory Card

1.9.1 Memory Card not detected

Check:

Inspect the Memory Card holder

Action:

1. If dirty or oxidized – clean the holder
2. Send to higher level of repair



Problem Areas

1.10 FM Radio

1.10.1 No/Poor FM Radio reception

Check:

Inspect the System Connector

Action:

1. If dirty or oxidized – clean the connector
2. Send to higher level of repair





Problem Areas

1.11 Sensor

1.11.1 Proximity Sensor malfunctions

Check:

Inspect the sensor window on the Front Cover Assembly

Action:

1. If dirty – clean it
2. If the sensor window is scratched or damaged – replace the Front Cover Assembly.

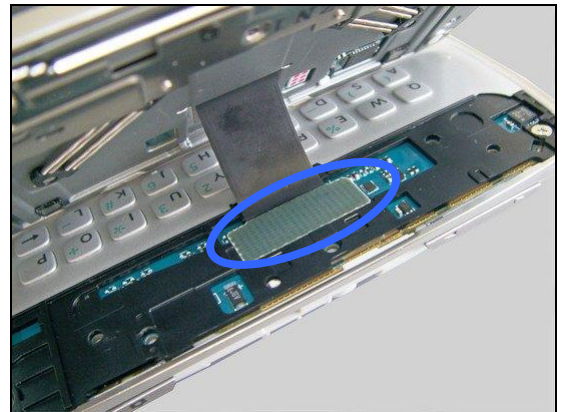


Check:

Check whether the Hinge FPC Assembly is properly connected to its connector on Main PBA.

Action:

1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the two sides of the BTB connectors.

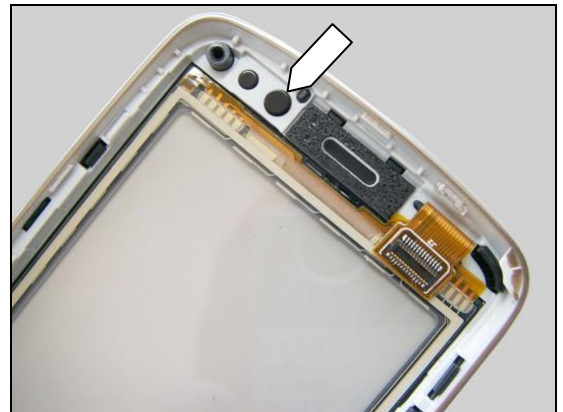


Check:

Inspect the sensor window on the Front Cover Assembly

Action:

1. If dirty – clean it
2. If the sensor window is scratched or damaged – replace the Front Cover Assembly.



Check:

Inspect the Sponge Proximity Sensor and lighter sensor on the Sub Board Assy.

Action:

1. If dirty – clean them.
2. If the Sponge Proximity Sensor is scratched or damaged –replace it.
3. If the lighter sensor is damaged– replace the Sub Board Assy.





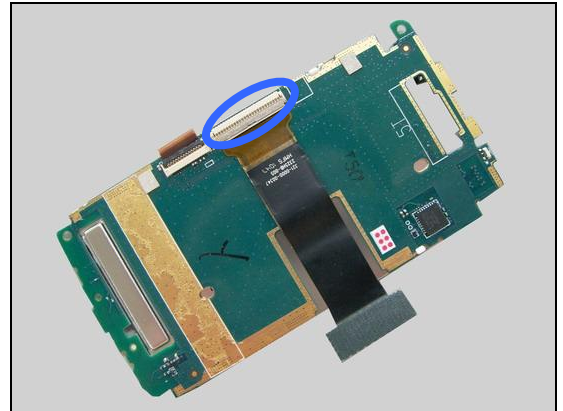
Problem Areas: Sensor

Check:

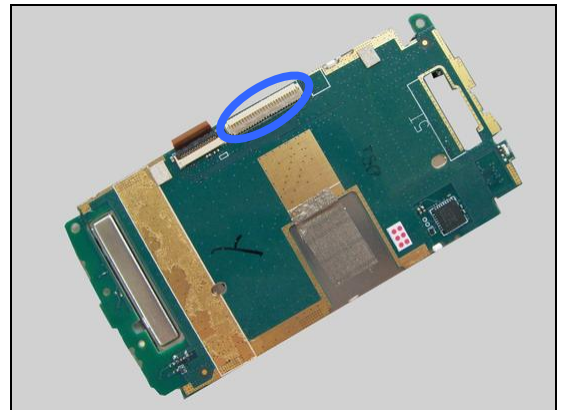
Visually inspect the Hinge FPC Assembly and its connector on the Sub Board Assy.

Action:

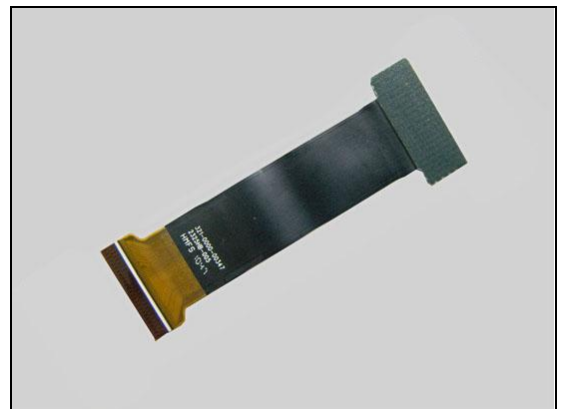
1. If the Hinge FPC Assembly and its connector are dirty or oxidized –clean them.
2. If improperly connected – re-connect them and replace a new Mylar for Hinge FPC Assembly in its proper position.



3. If the Hinge FPC Assembly connector is damaged – replace the Sub Board Assy and replace a new Mylar for Hinge FPC Assembly in its proper position.



4. If Hinge FPC Assembly is damaged – replace it and replace a new Mylar for Hinge FPC Assembly in its proper position.



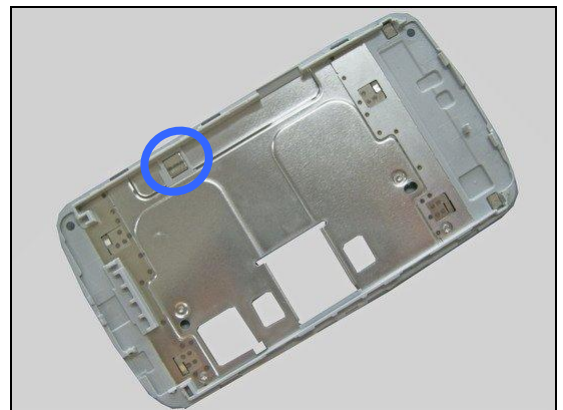
1.11.2 Slide Sensor

Check:

Inspect the magnet on the Hinge assembly.

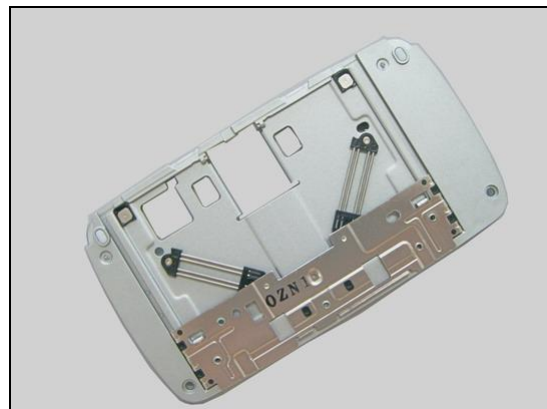
Action:

1. If dirty – clean it.
2. If not properly positioned – reinstall it.



Problem Areas: Sensor

3. If the magnet is missing or damaged – replace the Hinge assembly.
4. Send to higher level of repair.



1.11.3 Accelerometer test fails

Action:

Send to higher level of repair



Problem Areas

1.12 Real Time Clock

1.12.1 Real Time Clock test fails

Action:

Send to higher level of repair

Problem Areas

1.13 SIM

1.13.1 SIM not detected

Check:

Inspect the SIM holder

Action:

If dirty or oxidized – clean the holder



1.13.2 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. Send to higher level of repair



Problem Areas

1.14 Charging

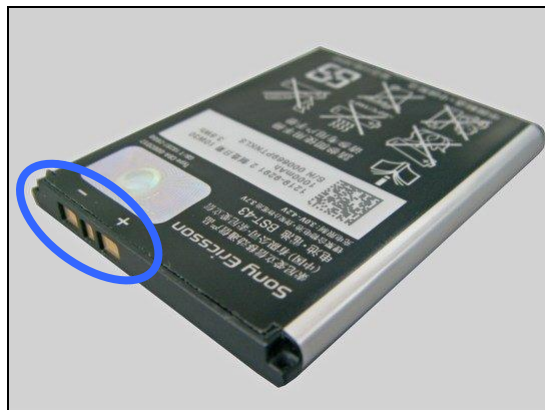
1.14.1 Battery will not charge

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 Connector

Action:

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



Check:

Inspect the Micro USB Connector

Action:

1. If dirty or oxidized – clean the connector
2. Send to higher level of repair



Problem Areas

1.15 Bluetooth and WLAN

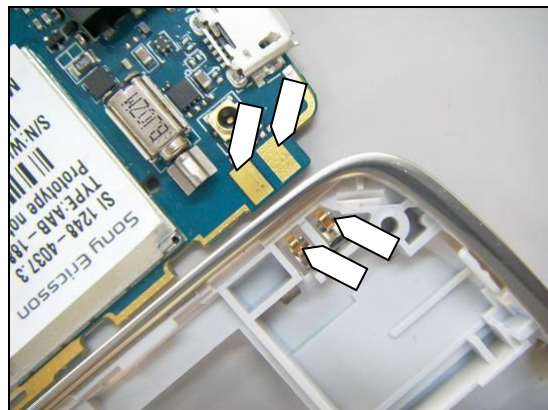
1.15.1 Bluetooth or WLAN connection failure

Check:

Inspect the antenna contact pad/pin on the Main PBA and the Rear Cover Assy.

Action:

1. If dirty or oxidized – clean the pads and pins
2. If the contact spring pin is damaged – replace the Rear Cover Assy
3. Send to higher level of repair.





Problem Areas

1.16 Network & Signal

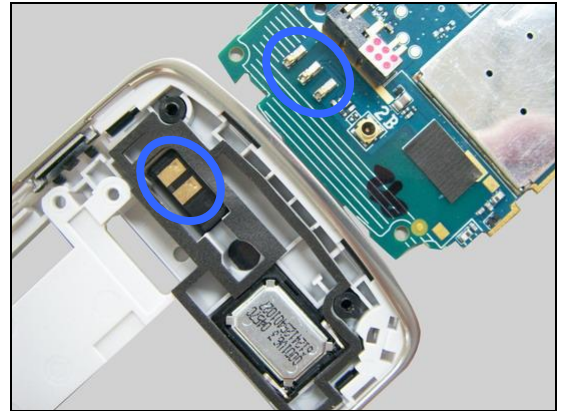
1.16.1 No/Poor signal

Check:

Inspect the antenna contact pads/pins on the Rear Cover Assy and Main PCBA

Action:

1. If dirty or oxidized – clean the pads and pins
2. If the contact pads is damaged – replace the Ant Main Flex Module
3. Send to higher level of repair



Problem Areas

1.17 HandsFree by Wire

1.17.1 Connection to Portable HandsFree fails

Check:

Inspect the Audio Jack

Action:

1. If dirty or oxidized – clean the Audio Jack
2. Send to higher level of repair



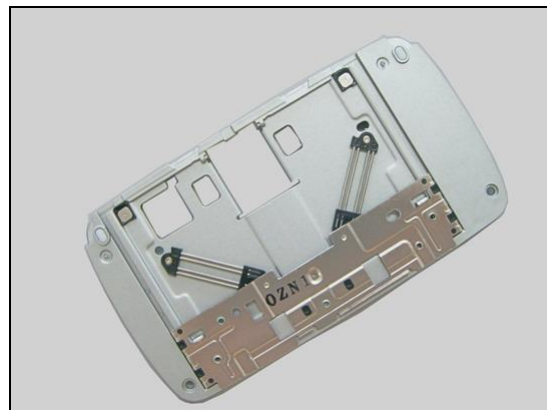
Problem Areas

1.18 Hinge Slider

1.18.1 Slider stiff or stuck

Action:

Replace the Hinge Slider.



Problem Areas

1.19 Data Communication

1.19.1 Data transfer via System Connector fails

Check:

Inspect the Micro USB Connector

Action:

1. If dirty or oxidized – clean the connector
2. Send to higher level of repair





2 Revision History

Rev.	Date	Changes / Comments
1	2011-Jun-24	Initial release
2	2011-Sep-19	Change the descriptions different with spare parts list.