



Sony Ericsson

Troubleshooting Guide

- mechanical -



Spiro

W100i, W100a



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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 Keypad LEDs illuminate after the power key is depressed.

Action:

If activation of the Vibrator and Keypad LEDs illumination is detected, refer to section 1.2 'Display'.



Check:

If the Display does not light on (Black screen) when pressing power key.

Action:

If no activation of the Display when switch-on.

1. Leave the phone in this state for several minutes.
2. Touch on battery cover, then if you feel hot (40-45 degree).
3. Send to higher level of repair.



Check:

Visually inspect the contact pads on the Battery.

Action:

1. If the pads are dirty or oxidized – clean them.
2. If damaged – replace the Battery.



Check:

Visually inspect the battery connector.

Action:

1. If the pins are dirty or oxidized – clean them.
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.

Be careful not to bend or damage the contact pins!





Problem Areas: Power

Check:

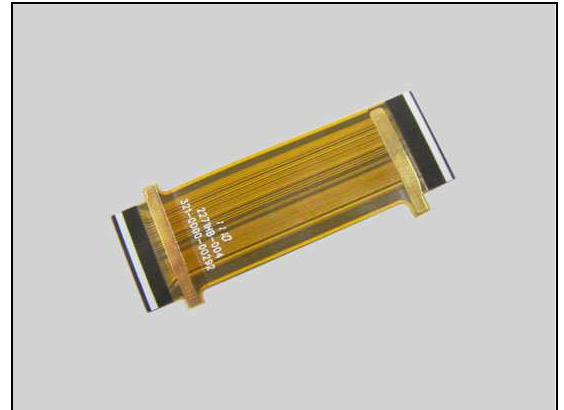
Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – send to higher level of repair.

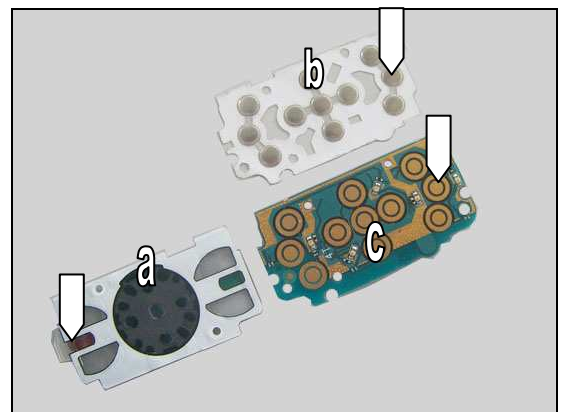


Check:

Check the power key on the Sub Keypad (a), power key domesheet on the Sub Keypad Domesheet (b) and contact pads on the Sub PCBA Assembly(c).

Action:

1. If dirty or oxidized – clean them.
2. If damaged – replace Sub Keypad or Sub Keypad Domesheet or Sub PCBA Assembly.





Problem Areas: Power

Check:

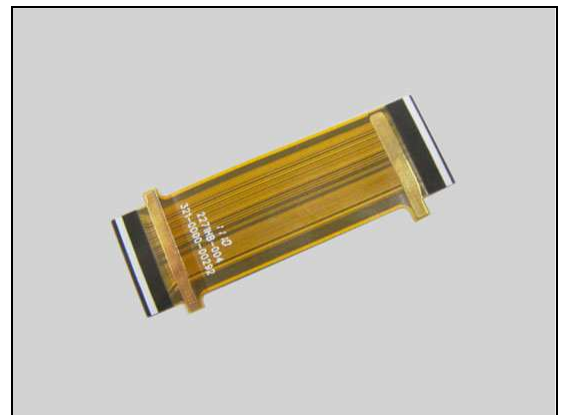
Visually inspect the Hinge FPC and its connector on the Sub PCBA Assembly.

Action:

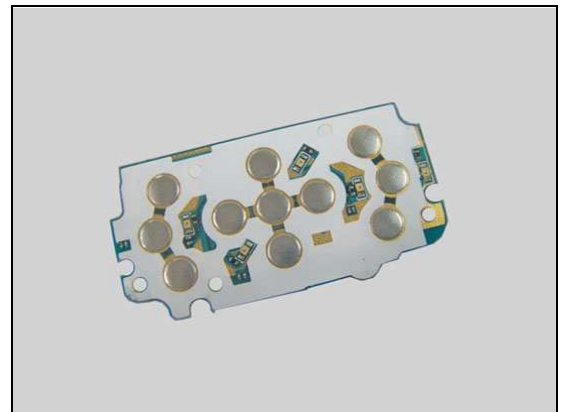
1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – replace the Sub PCBA Assembly.
5. If still not resolved – send to higher level of repair.





Problem Areas

1.2 Display

1.2.1 Graphics & Illumination

Check:

Check whether the phone vibrates and the Keypad LEDs illuminate after the power key has been pressed.

Action:

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



Check:

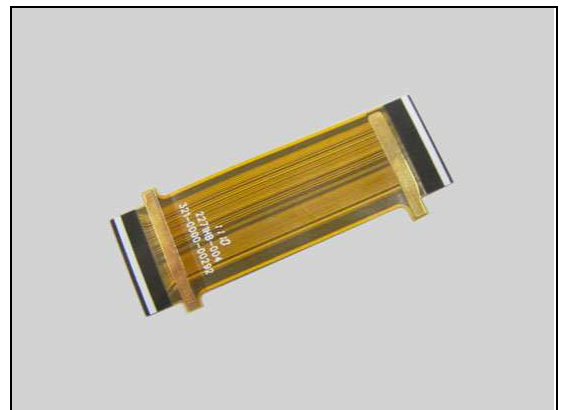
Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – send to higher level of repair.





Problem Areas: Display

Check:

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

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.

3. If Hinge FPC is damaged – replace it.

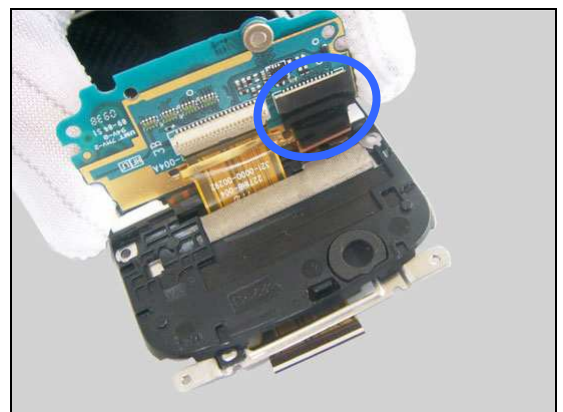
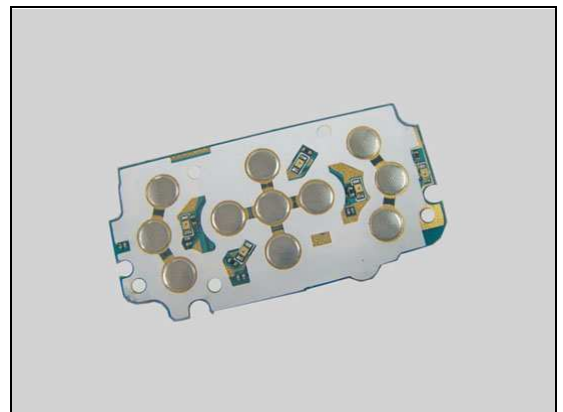
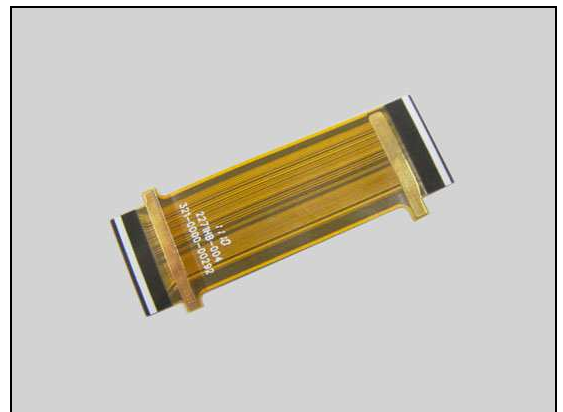
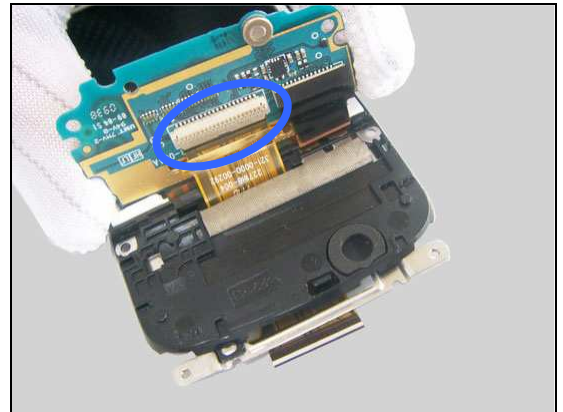
4. If the Hinge connector is damaged – replace the Sub PCBA Assembly.

Check:

Visually inspect the LCM FPC Connector Mylar, LCM FPC and LCM FPC connector.

Action:

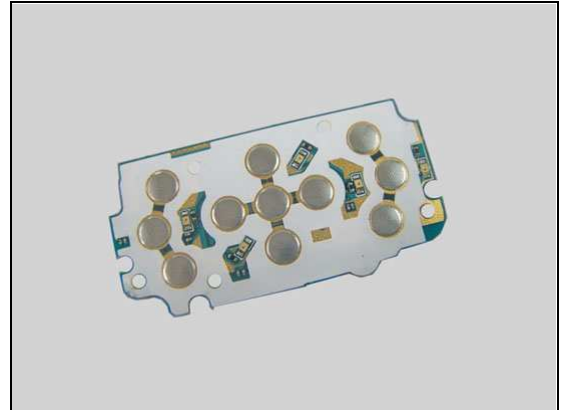
1. If LCM FPC and LCM FPC connector are dirty or oxidized – clean them and replace a new LCM FPC Connector Mylar in its proper position.
2. If improperly connected – re-connect them and replace a new LCM FPC Connector Mylar in its proper position.





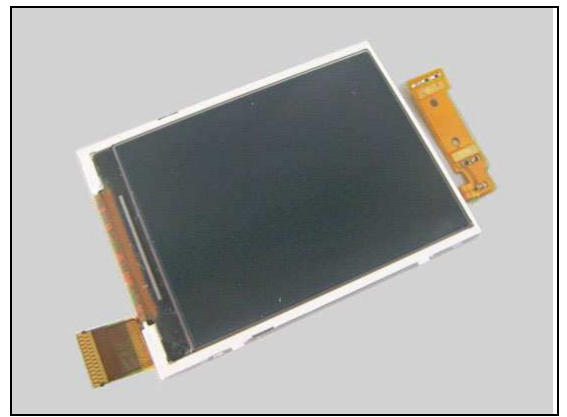
Problem Areas: Display

3. If the LCM FPC connector is damaged – replace the Sub PCBA Assembly and replace a new LCM FPC Connector Mylar in its proper position.



4. 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.

5. If still not resolved – send to higher level of repair.





Problem Areas

1.3 Illumination/LED

1.3.1 Main Keypad Illumination

Check:

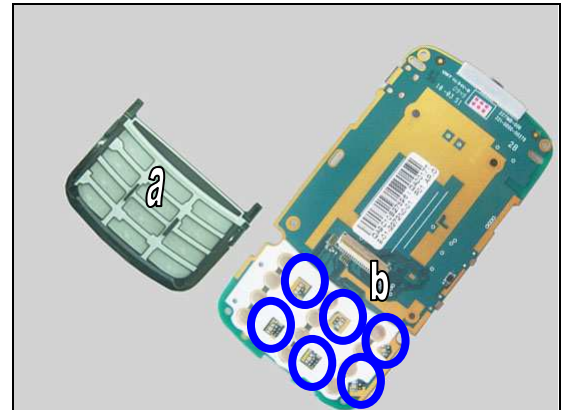
Inspect the Main Keypad (a) and the LEDs (b) on the Main PBA.

Action:

1. If dirty – clean them.

2. If the Main Keypad is damaged – replace it.

3. If the LEDs are damaged– send to higher level of repair.



1.3.2 Sub Keypad Illumination/Pre-Charge LED

Check:

Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

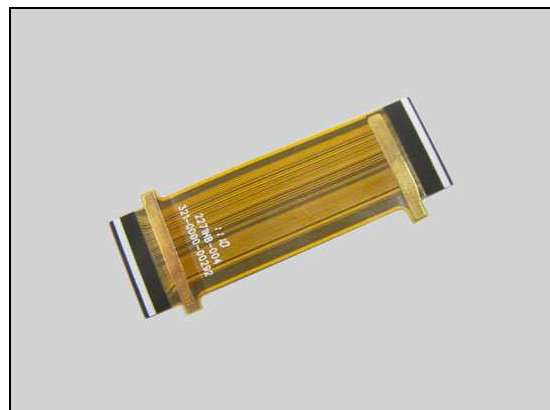
1. If the Hinge FPC and its connector are dirty or oxidized – clean them.

2. If improperly connected – re-connect them.



Problem Areas: Illumination/LED

3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – send to higher level of repair.

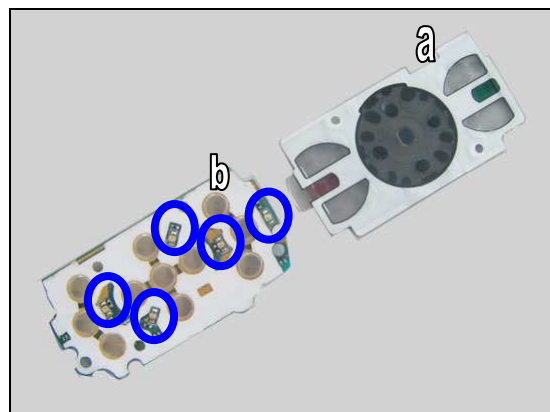


Check:

Visually inspect the Sub Keypad (a) and the LEDs (b) on the Sub PCBA Assembly.

Action:

1. If dirty – clean them.



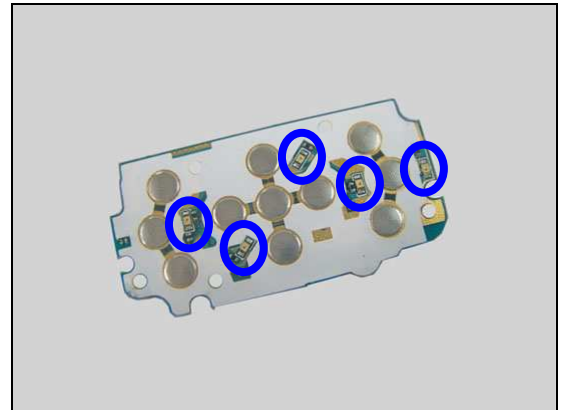
2. If the Sub Keypad is damaged – replace it.





Problem Areas: Illumination/LED

2. If the LEDs are damaged – replace the Sub PCBA Assembly.



Check:

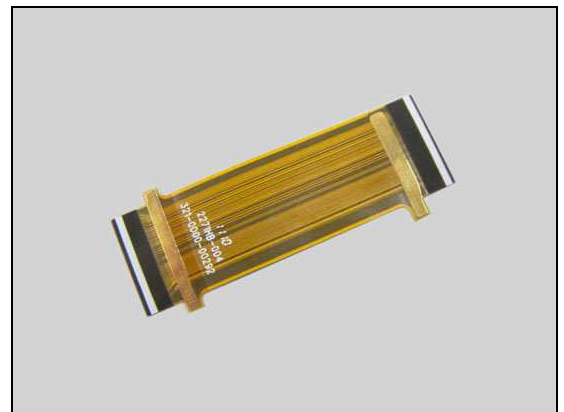
Visually inspect the Hinge FPC and its connector on the Sub PCBA Assembly.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.

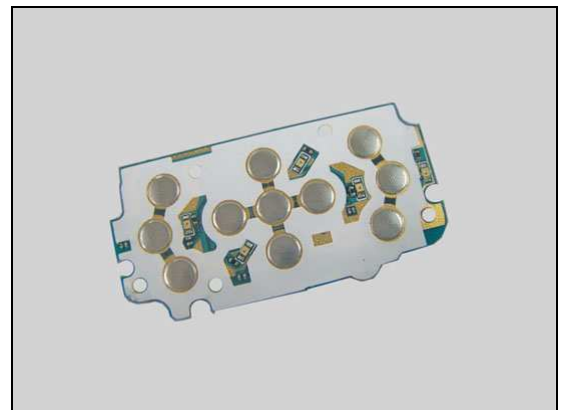


3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – replace the Sub PCBA Assembly.

5. If still not resolved – send to higher level of repair.



Problem Areas

1.4 Keys

1.4.1 Numeric keys

Check:

Inspect the Main Keypad.

Action:

1. If dirty or oxidized – clean it.

2. If damaged – replace the Main Keypad.

Check:

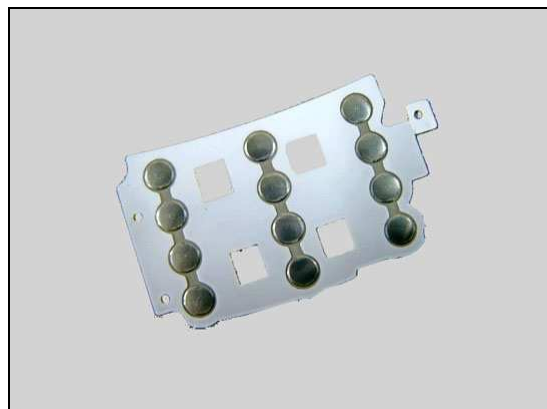
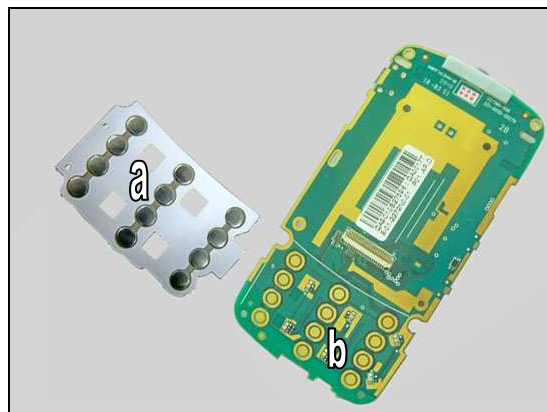
Inspect the Main Keypad Domesheet (a) and contact pads on the Main PBA (b)

Action:

1. If dirty or oxidized – clean them.

2. If the Main Keypad Domesheet is damaged – replace it.

3. If still not resolved – send to higher level of repair.





Problem Areas : Keys

1.4.2 Navigation keys

Check:

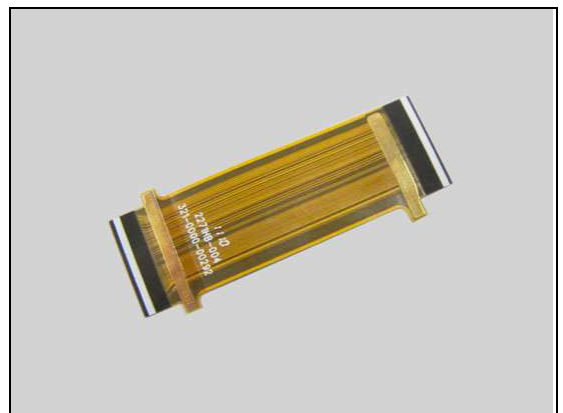
Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – send to higher level of repair.

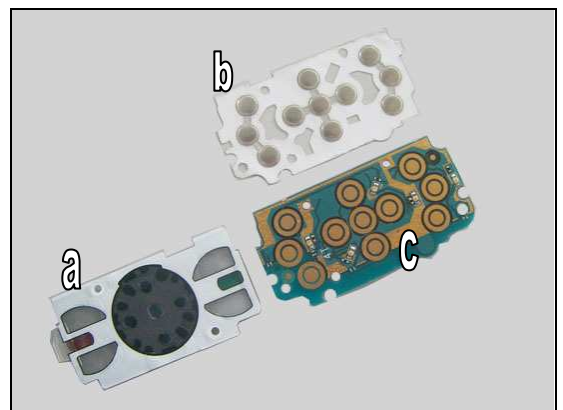


Check:

Check the Sub Keypad (a), Sub Keypad Domesheet (b) and the contact pads on the Sub PCBA Assembly(c).

Action:

1. If dirty or oxidized – clean them.

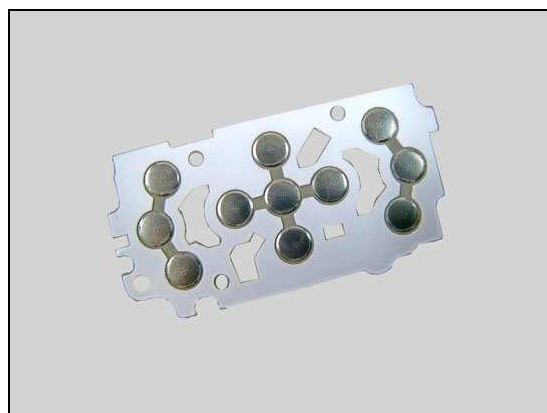


Problem Areas : Keys

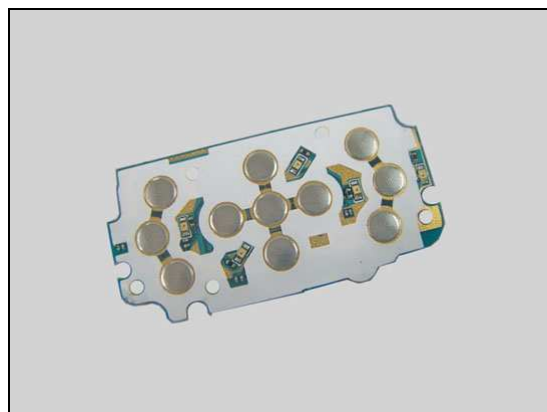
2. If the Sub Keypad is damaged – replace it.



3. If Sub Keypad Domesheet is damaged – replace it.



4. If the Sub PCBA Assembly is damaged – replace it.

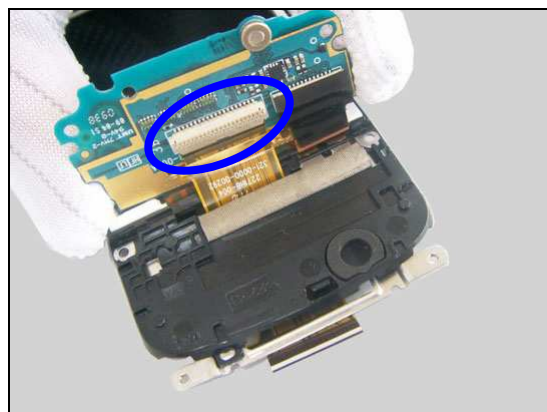


Check:

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

Action:

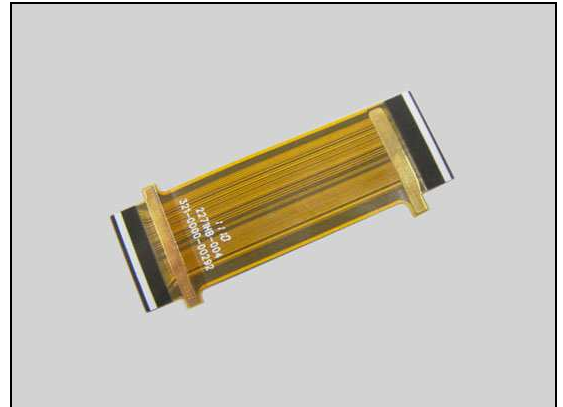
1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.





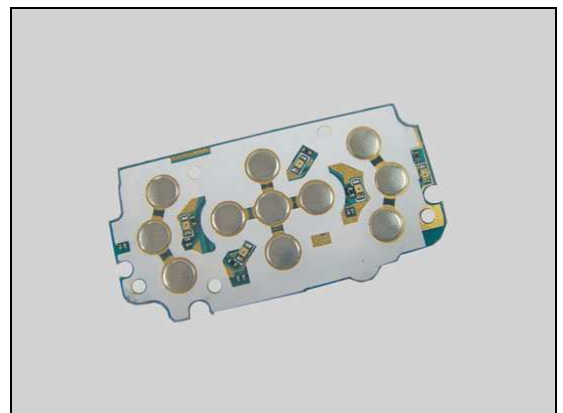
Problem Areas : Keys

3. If Hinge FPC is damaged – replace it.



4. If Hinge FPC connector on the Sub PCBA Assembly is damaged – replace the Sub PCBA Assembly.

5. If still not resolved – send to higher level of repair.



1.4.3 Volume keys

Check:

Visually inspect the Volume key from outside.

Action:

If damaged – replace the Volume key.



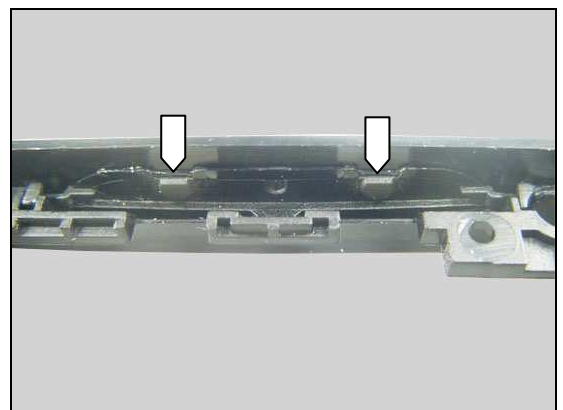
Check:

Remove the Main PBA and inspect the Volume key from inside.

Action:

1. If damaged – replace the Volume key.

2. If still not resolved – 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 Upper Front Cover Assy.



Check:

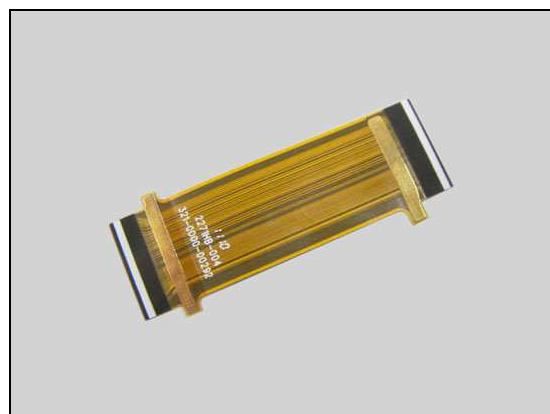
Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.



4. If the Hinge connector is damaged – send to higher level of repair.





Problem Areas: Audio

Check:

Inspect the MIC Sponge.

Action:

If dirty or clogged – clean or replace the MIC Sponge.



Check:

Inspect the Microphone.

Action:

If damaged or defective – replace the Sub PCBA Assembly.



Check:

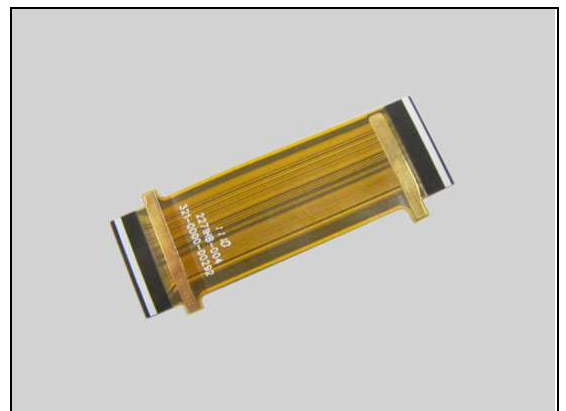
Visually inspect the Hinge FPC and its connector on the Sub PCBA Assembly.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.

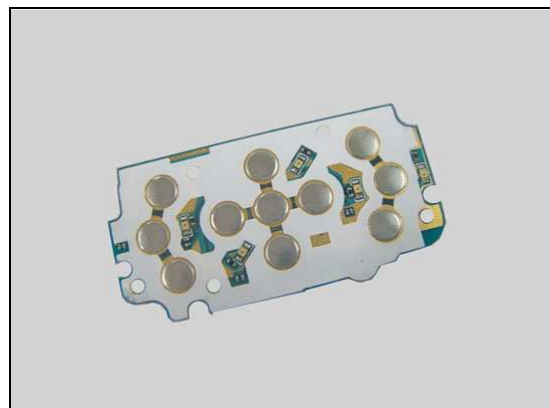


3. If Hinge FPC is damaged – replace it.



Problem Areas: Audio

4. If Hinge FPC connector is damaged – replace the Sub PCBA Assembly.
5. If still not resolved – send to higher level of repair.



1.5.2 Ear Speaker

Check:

Inspect the Ear Speaker's external port.

Action:

1. If clogged – clean the port.
2. If damaged – replace the Receiver Sponge or replace the Upper Front Cover Assy.



Check:

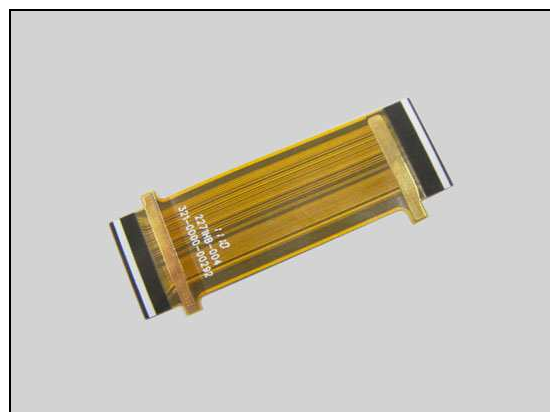
Visually inspect the Hinge FPC and its connector on the Main PBA.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.





Problem Areas: Audio

4. If the Hinge connector is damaged – send to higher level of repair.



Check:

Inspect the Ear Speaker and its contact spring pins.

Action:

1. If dirty or oxidized – clean them.
2. If pins are damaged or the Ear Speaker is defective – replace the Ear Speaker.



Check:

Inspect the Ear Speaker contact pads on the Main Display FPC.

Action:

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



Check:

Visually inspect the LCM FPC Connector Mylar, LCM FPC and LCM FPC connector.

Action:

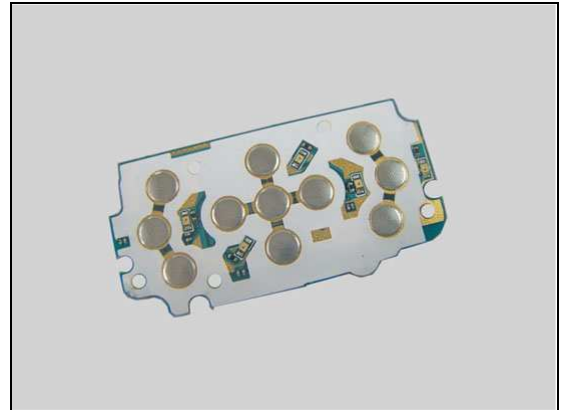
1. If LCM FPC and LCM FPC connector are dirty or oxidized – clean them and replace a new LCM FPC Connector Mylar in its proper position.
2. If improperly connected – re-connect them and replace a new LCM FPC Connector Mylar in its proper position.



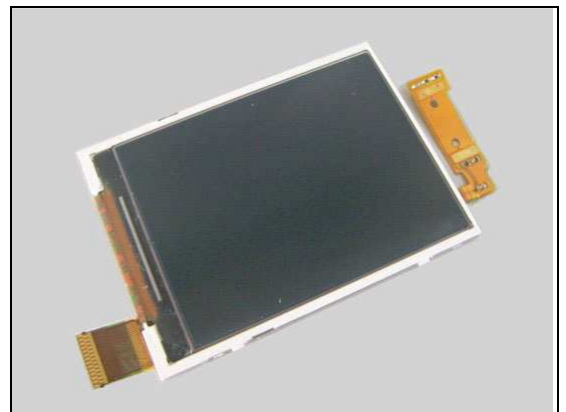


Problem Areas: Audio

3. If the LCM FPC connector is damaged – replace the Sub PCBA Assembly and replace a new LCM FPC Connector Mylar in its proper position.



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



Check:

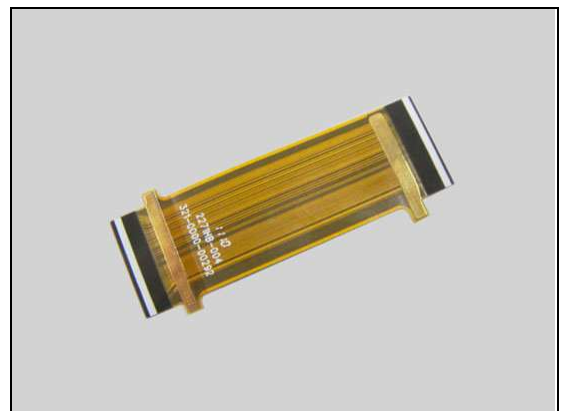
Visually inspect the Hinge FPC and its connector on the Sub PCBA Assembly.

Action:

1. If the Hinge FPC and its connector are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.



3. If Hinge FPC is damaged – replace it.





Problem Areas: Audio

4. If Hinge FPC connector is damaged – replace the Sub PCBA Assembly.
5. If still not resolved – send to higher level of repair.

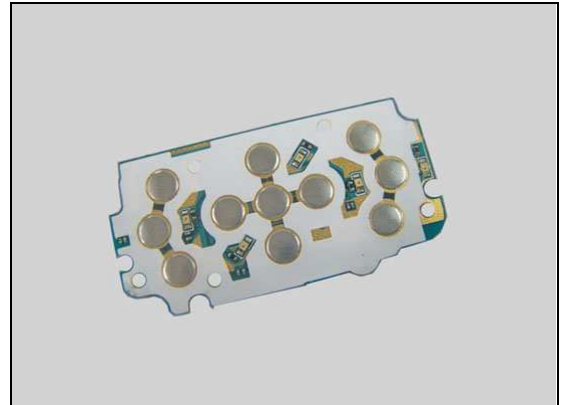
1.5.3 Speaker

Check:

Inspect the speaker mesh.

Action:

1. If clogged –clean or replace it.



Check:

Inspect contact pads of the speaker connectors on the Main PBA and the speaker contact spring pins.

Action:

1. If dirty or oxidized – clean them.
2. If speaker contact spring pins are damaged or speaker is defective – replace the speaker.
3. If the speaker connectors are damaged – send to higher level of repair.

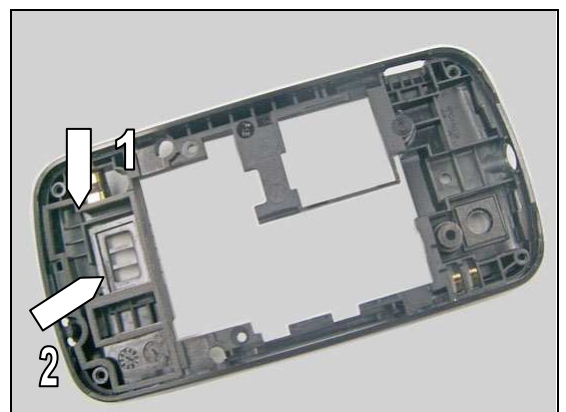


Check:

Inspect the speaker's chamber sponge (1) and speaker sponge (2).

Action:

1. If speaker's chamber sponge is damaged – replace the Lower Rear Cover Assy.
2. If the speaker sponge is damaged – replace it.
3. If still not resolved – 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

1.7.1 Camera defects

Check:

Inspect the camera window.

Action:

1. If dirty – clean the window.

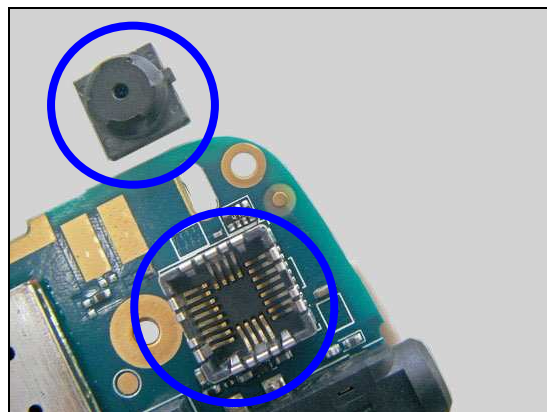
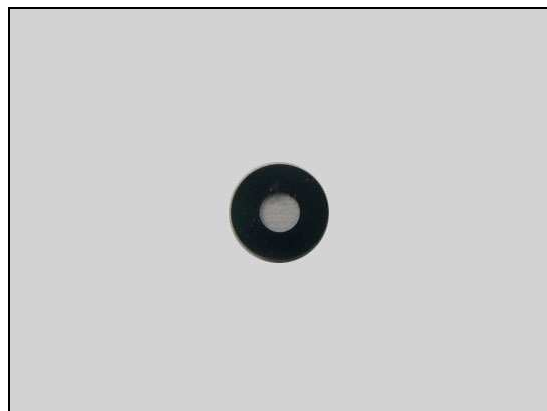
2. If scratched or damaged – replace the camera window.

Check:

Inspect the camera and its socket on the Main PBA.

Action:

1. If the camera and its socket are dirty or oxidized – clean them.
2. If improperly connected – re-connect them.
3. If camera is damaged or defective – replace it.
4. If the camera socket is damaged – send to higher level of repair.
4. If still not resolved – send to higher level of repair.



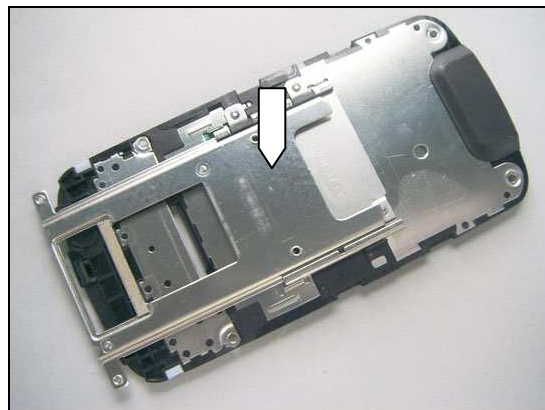
Problem Areas

1.8 Hinge assy

1.8.1 Slider stiff or stuck

Action:

Replace the Hinge assy.



Problem Areas

1.9 Memory Card

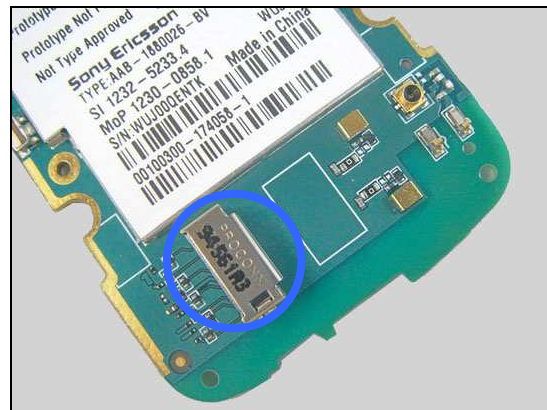
1.9.1 Memory Card not detected

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 Audio Jack.

Action:

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



Problem Areas

1.11 Real Time Clock

1.11.1 Real Time Clock test fails

Action:

Send to higher level of repair

Problem Areas

1.12 SIM

1.12.1 SIM not detected

Check:

Inspect the SIM holder.

Action:

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



1.12.2 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

1.13 Charging

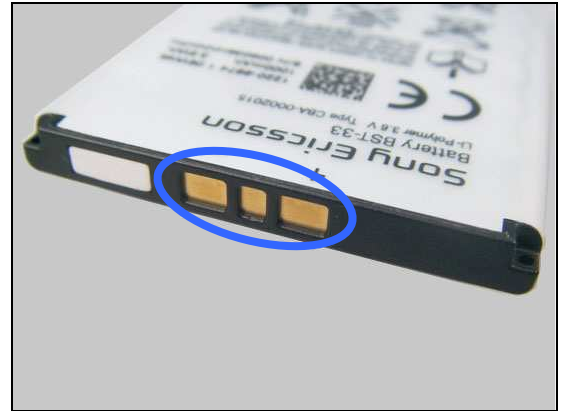
1.13.1 Battery will not charge

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.
3. If damaged – Send to higher level of repair.

Be careful not to bend or damage the contact pins!



Check:

Inspect the Micro USB Connector.

Action:

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



Problem Areas

1.14 Bluetooth

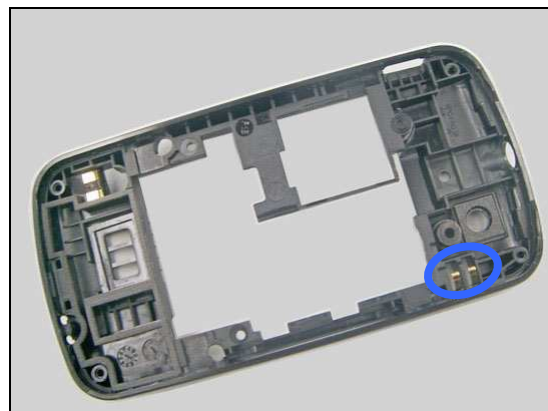
1.14.1 Bluetooth connection failure

Check:

Inspect the Bluetooth antenna contact pads on the Main PBA and contact spring pins on the Lower Rear Cover Assy.

Action:

1. If dirty or oxidized – clean them.
2. If the contact spring pins are damaged – replace the Lower Rear Cover Assy.
3. Send to higher level of repair.





Problem Areas

1.15 Network & Signal

1.15.1 No/Poor signal

Check:

Ensure that a correct SIM is installed.

Inspect the main antenna contact pads on the Lower Rear Cover Assy and contact spring pins on the Main PBA.

Action:

1. If dirty or oxidized – clean them.

2. If the main antenna contact pads or main antenna are damaged – replace the Lower Rear Cover Assy.

3. If contact spring pins on the Main PBA is damaged – send to higher level of repair.

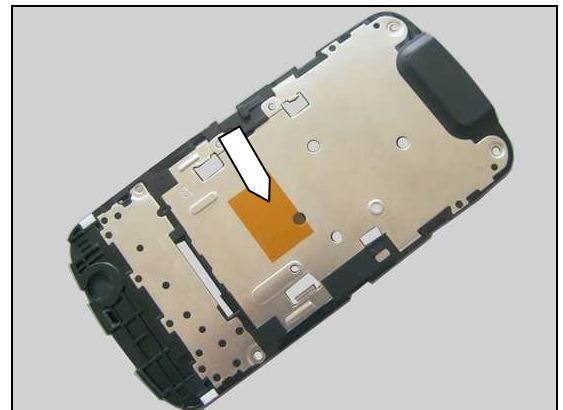
Check:

Inspect the Kapton Film.

Action:

1. If damaged – replace the Kapton Film.

2. If still not resolved – send to higher level of repair.



Problem Areas

1.16 HandsFree by Wire

1.16.1 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

1.17 Data Communication

1.17.1 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	2010-Jul-26	Initial release
2	2010-Aug-24	Replace 'receiver' with 'ear speaker'. Modify chapter 1.15.
3	2010-Aug-25	Replace 'Ear Speaker Sponge' with 'Receiver Sponge'. Modify some mistakes of title in problem areas.
4	2011-Jan-07	Delete blank box in chapter of 1.1 and 1.2.