



# Trouble Shooting Guide, Electrical

Applicable for Z300i, Z300c, Z300a

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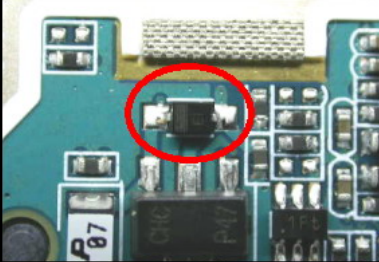
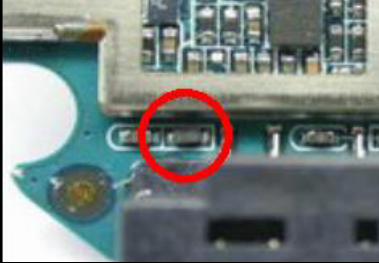
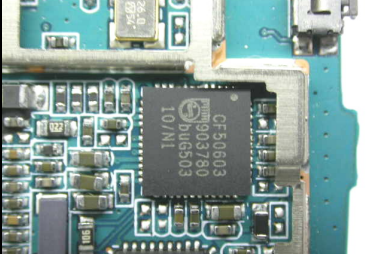
# 1 General

The purpose of this document is to provide a sequence of repair actions associated with different failure modes. The repair actions are listed in order of their probability of creating a successful repair. The first action has the highest probability, and subsequent actions have lower probabilities. The intention is for the repair technician to implement the first repair action and then retest the phone. If the phone continues to fail the same test, then the technician should continue to the second repair action. If the phone continues to fail the same test after all of the repair actions are exhausted, then the phone will be considered not reparable at this level.

This document should be used only after the steps specified in the Mechanical Trouble Shooting Guide have been exhausted for the given problem area.



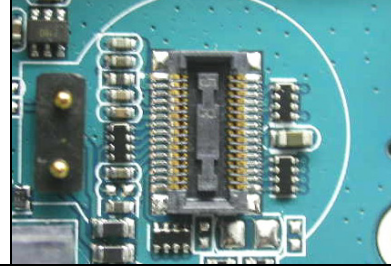
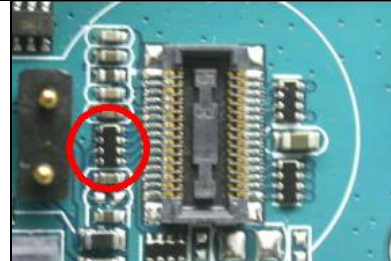
## 2 Power Problems

Problem Area	Items to Check	Repair Action	Reference Image
<b>No Power On</b>	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>J1</b>	<ul style="list-style-type: none"> <li>If can't power on – Replace J1</li> </ul>	
	Investigate into <b>D2</b>	<ul style="list-style-type: none"> <li>If can't power on – Replace D2</li> </ul>	
	Investigate into <b>D3</b>	<ul style="list-style-type: none"> <li>If can't power on – Replace D3</li> </ul>	
	Investigate into <b>U4</b>	<ul style="list-style-type: none"> <li>If can't power on – Replace U4</li> </ul>	



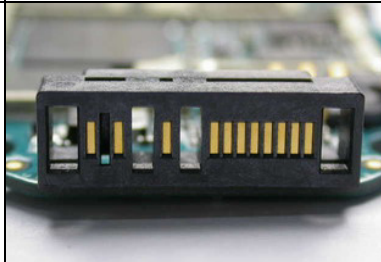
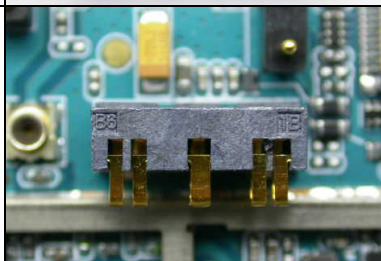
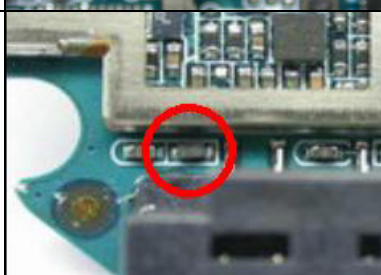
Problem Area	Items to Check	Repair Action	Reference Image
	Investigate into <b>Y1</b>	<ul style="list-style-type: none"><li>If can't power on – Replace Y1</li></ul>	Part list Electrical chapter 1.2 Main board (Secondary Side) Picture N/A

### 3 Display Problems

Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"><li>If dirty – Clean</li><li>If oxidized or defective – Replace</li></ul>	
	Investigate into <b>J6</b>	<ul style="list-style-type: none"><li>If no display – Replace J6</li></ul>	
	Investigate into <b>L22</b>	<ul style="list-style-type: none"><li>If no display – Replace L22</li><li>If blue screen – Replace L22</li></ul>	


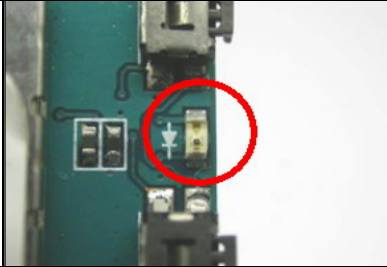
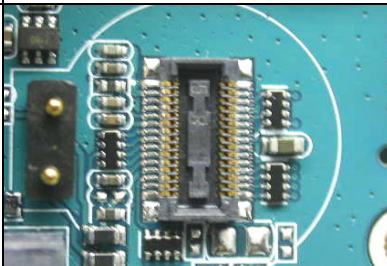


## 4 Charging/Capacity Problems

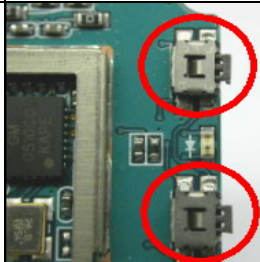
Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"><li>• If dirty – Clean</li><li>• If oxidized or defective – Replace</li></ul>	
	Investigate into <b>J1</b>	<ul style="list-style-type: none"><li>• If can't charge – Replace J1</li></ul>	
	Investigate into <b>J8</b>	<ul style="list-style-type: none"><li>• If can't charge – Replace J8</li></ul>	
	Investigate into <b>D3</b>	<ul style="list-style-type: none"><li>• If can't charge – Replace D3</li></ul>	



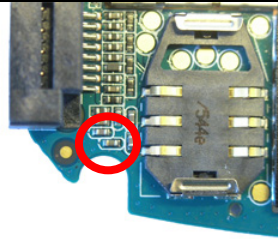
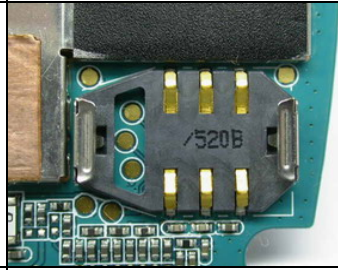
## 5 Illumination Problems

Problem Area	Items to Check	Repair Action	Reference Image
<b>Illumination LED</b>	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>LEDK2, LEDK 3, LEDK 6, LEDK 7, LEDK8, LEDK10, LEDK12, LEDK13, LEDK14, LEDK16, LEDK20, LEDK21</b>	<ul style="list-style-type: none"> <li>If no back light – Replace LEDK2, LEDK 3, LEDK 6, LEDK 7, LEDK8, LEDK10, LEDK12, LEDK13, LEDK14, LEDK16, LEDK20, LEDK21</li> </ul>	
	Investigate into <b>LEDK17</b>	<ul style="list-style-type: none"> <li>If Led no Display – Replace LEDK17</li> </ul>	
<b>Illumination Display</b>	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>J6</b>	<ul style="list-style-type: none"> <li>If no top LED light – Replace J6</li> </ul>	

## 6 Side Key Switch Problems

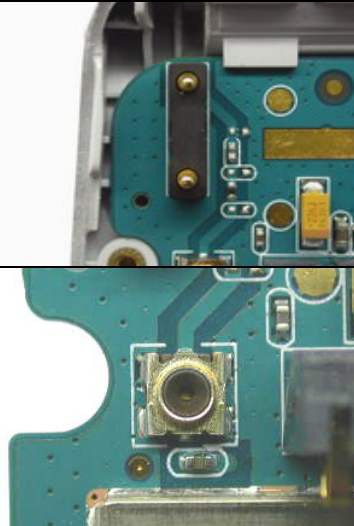
Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If oxidized or defective – Replace</li> </ul>	
	Investigate into SW1, SW2	<ul style="list-style-type: none"> <li>• If the Side Key Switch does not work - Replace SW1, SW2</li> <li>• If can't adjust volume - Replace SW1, SW2</li> </ul>	

## 7 SIM Problems

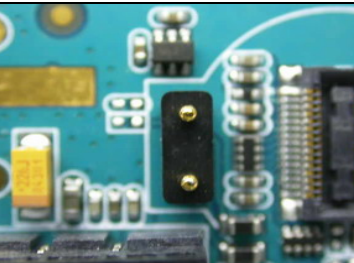
Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>C75</b>	<ul style="list-style-type: none"> <li>• If display “Insert SIM” – Replace C75</li> </ul>	
	Investigate into <b>J2</b>	<ul style="list-style-type: none"> <li>• If display “Insert SIM “–Replace J2</li> </ul>	
Unit indicates the incorrect SIM is inserted	Check whether the phone is locked to a particular carrier and whether the correct carrier’s SIM is being used	<ul style="list-style-type: none"> <li>• Use Correct Carrier SIM or test SIM</li> </ul>	



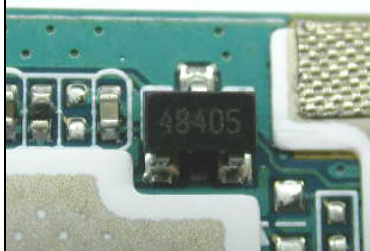
## 8 Network/Signal Problems

Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>J10</b>	<ul style="list-style-type: none"> <li>• If no network or poor network – Replace J10</li> </ul>	
	Investigate into <b>J5</b>	<ul style="list-style-type: none"> <li>• If no network or poor network – Replace J5</li> </ul>	

## 9 Audio Problems

Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>J9</b>	<ul style="list-style-type: none"> <li>• If no sound – Replace J9</li> </ul>	

## 10 Flip Problems

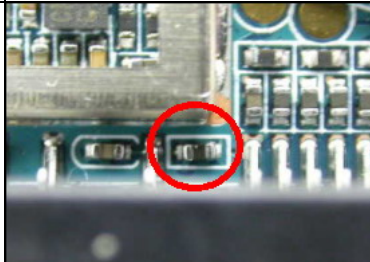
Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>U9</b>	<ul style="list-style-type: none"> <li>If flip problem – Replace U9</li> </ul>	

## 11 Software Problems

- If there are problems with the response of the keypad commands, or spelling errors in the menu, if they are not related to mechanical damage, make a master reset and flash the phone with the latest software from EMMA III.
- Checking the software revision can be done in the Service info, see chapter *Service functions in the software*.  
Choose: Service info / SW information.  
The Software revision and date will be shown in the display.

**Note:** Do a SW upgrade before sending the unit to a higher level. Do **not** scrap a phone that hasn't been upgraded.

If the failure still occurs, handle the unit according to the local directives.

Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the components as follows.	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If oxidized or defective – Replace</li> </ul>	
	Investigate into <b>D4</b>	<ul style="list-style-type: none"> <li>If can't download or upgrade S/W – Replace D4</li> </ul>	

## 12 Revision History

Rev.	Date	Changes / Comments
A	2006-01-19	Initial Release
B	2006-06-20	Crystal Added
C	2006-07-26	Added C75 for SIM problems