

Beetle lite edge

ONE TOUCH 4005D



Note: this manual is non-contractual and TCT Mobile Limited can modify it without prior notice on the characteristics of described equipments.

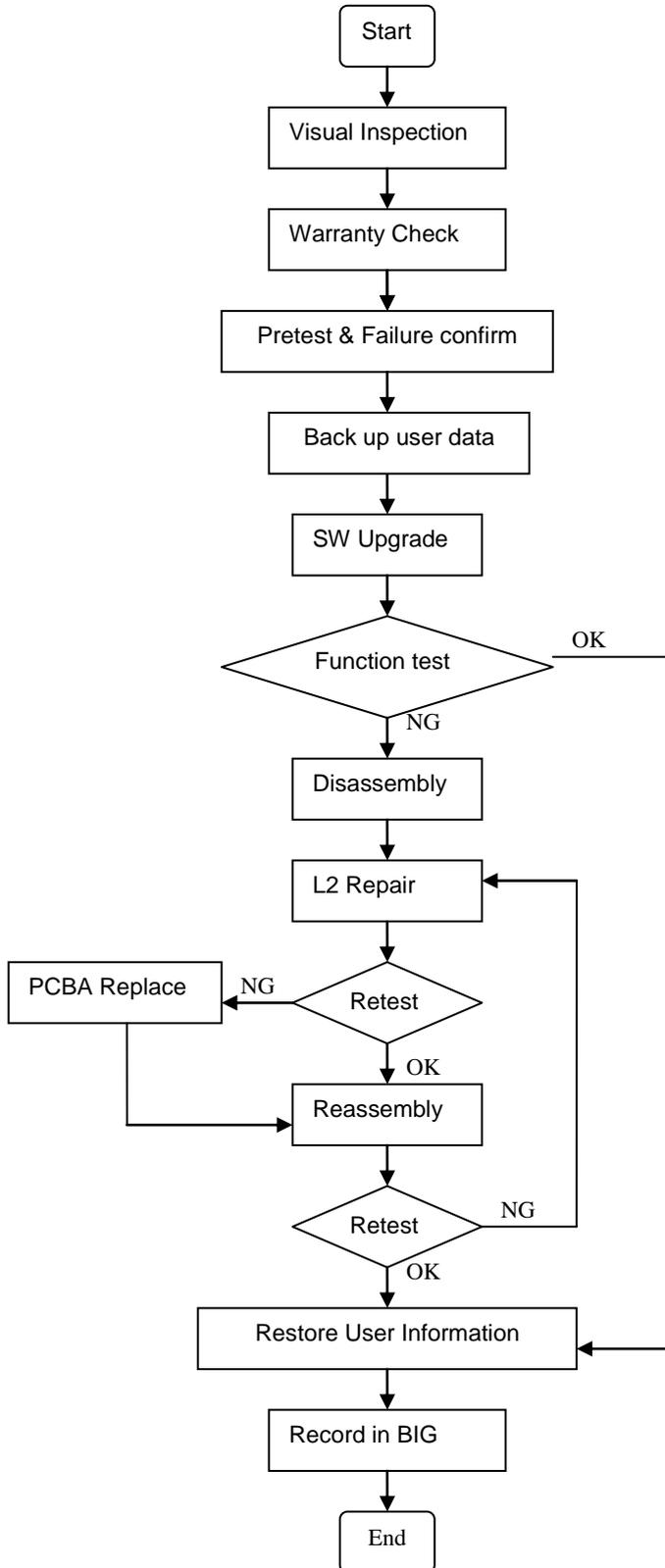
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| | | | | | |
| 1.2 | 2013-8-30 | Added the TP repair part(page 17/18) | Echo Huang | Echo Huang | Zhili. Hu |
| 1.1 | 2013-7-1 | Adding the part of blank label | Echo Huang | Echo Huang | Zhili. Hu |
| 1.0 | 2013-01-21 | Updated according to CPM's comment | Zzhenqing | Echo Huang | Zhili Hu |
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| Rev. | Date | Modification description | Prepared By | Checked By | Approved By |

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1 Level 2 repair process



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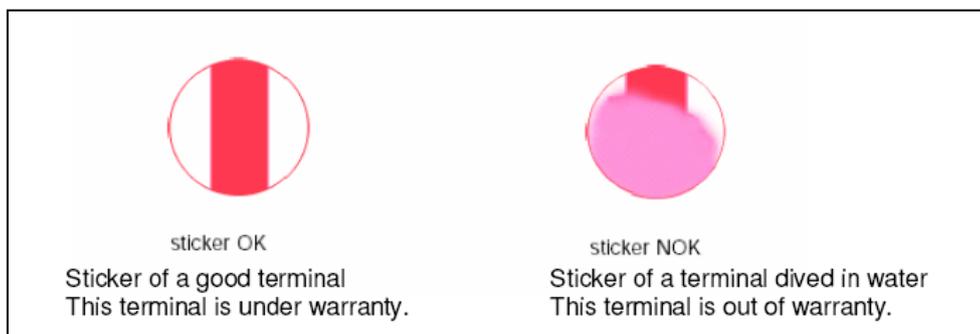
2 Warranty Check and Visual Inspection

2.1 Warranty confirmation of L1

- 1) IMEI sticker check:
 - a) The IMEI number MUST be the same with the one on the IMEI sticker. If not, it's out of warranty policy
 - b) IMEI label should not be
 - Removed
 - Scratched
 - Unreadable
 - Un-approved or un-provided by Alcatel.



- 2) Humidity sticker: Liquid detection on humidity sticker.



2.2 Visual mechanical check

Mechanical warranties check items:

- 1) Corrosion
 - Corrosion on the USB connector, SIM connector, and other metal surfaces.
- 2) Hole (diameter > 1mm)

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- Holes on any surface, including the front casing, furnished frame, battery cover, touch Lens, keypad...
- 3) Bump
 - Bumps (diameter > 1mm) on any surface, including front casing, decorate frame, battery cover, touch Lens, keypad, etc.
 - 4) Scratch
 - Scratches (length > 3mm) on any surface, including the front casing, decorate frame, battery cover, touch Lens, keypad, etc.
 - 5) Distortion
 - Bend, twisted or crushed on the h/s, cover/casing or connectors, etc.
 - 6) Broken
 - Touch broken, casing/cover broken, etc.
 - 7) Dropped
 - Keypad tear off, touch lens, connectors dropped, etc.
 - 8) Gap
 - External physical damage relating to abnormal use, like front case and frame opened
 - 9) Others
 - Damage caused by disassembly ,wrong part assembly, loss of components
 - Use in abnormal environment like high temperature causing plastic melts

2.3 Pretest

- 1) Check that the SIM card is set correctly.
- 2) Insert the battery.
- 3) Power on the cell phone.
- 4) If the cell phone cannot power on, visually check the condition of the battery connector. Replace it if necessary.
- 5) If the cell phone asks to input NCK code, this means it is SIM locked and can only be worked with dedicated SIM card. Use the correct SIM card.
- 6) Enter the phone code if necessary.

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7) After the phone power on, test step by step with the auto test code:

Press *#2886# in dial screen and select "Auto" to start the auto test, then you will see the interface displaying the version. Press "Pass" to continue.

If one of the test failed, it will ask you "Restart?", press "YES" to restart the auto test from the first one and "NO" to exit the auto test, while "NEXT" to continue the auto test.

■ **TRACABILITY Test**

- I. You can get some information such as IMEI, BSN, BT, WIFI, CU, H/S PN...
- II. Press "Pass" to continue.

■ **TP**

- I. "Please draw the yellow data" according to instructions and it will show "TEST RESULT: OK!"
- II. Press "PASS" to continue.

■ **LCD MIRE/BLACK/GREYCHART/WHITE**

- I. You will see the LCD color changes if it functions well
- II. Press "Pass" to continue.

■ **LCD BackLight Level**

- I. The screen backlight will be flashing if it functions well.
- II. Press "Pass" to continue.

■ **KEYPAD.**

- I. Press the key displayed on the screen. The key on the screen will disappear when you press it if it functions well
- II. Press "Pass" to continue ;

■ **Flash LED Light Test.**

- I. The light near the camera will flashing.
- II. Press "Pass" to continue.

■ **CAMERA IMG**

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Press "Pass" to continue if the camera functions well

■ CAMERA IMG FRONT

Press "Pass" to continue if front camera functions well

■ CAMERA LED

- I. Camera LED will be turned on if functions well.
- II. Press "Pass" to continue.

■ MELODY

- I. You will hear the melody if it functions well.
- II. Press "Pass" to continue.

■ HEADSET

- I. Insert the headset and you will hear FM if functions well
- II. Press "Pass" to continue
- III. Remove headset according the instruction and it will say "Headset tested" if it functions well;
- IV. Press "Pass" to continue

■ USB

- I. Insert USB cable and the phone will detect "Charger: OK" "USB: OK" if it functions well
- II. Remove USB cable according to the instruction and then press "Pass" to continue

■ VIBRATOR

- I. You can feel the phone's vibrating if it functions well.
- II. Press "Pass" to continue.

■ G-SENSOR

- I. Screen will display "put the handset up and towards up", follow this prompt screen will display left arrow, right arrow, up arrow, down arrow and face

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Plastic Flake



Tweezers



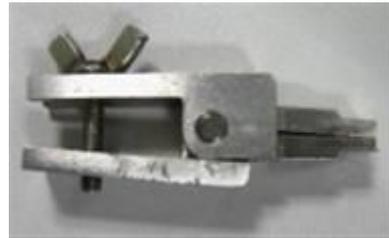
Hot wind gun



Screwdriver



Soldering iron



Camera Jig

4.3 Disassembly process

The steps of disassembly ONE TOUCH 4010 are as below.

This module should only be disassembled from bottom to top.

Step 1: Remove the battery cover and battery.

Step 2: Take off the 4 screws from the furnished frame by screw driver



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Step 3: Pry the furnished frame up by plastic flake. Then separate the furnished frame from furnished front casing.



Step 4: Remove speaker with plastic flake



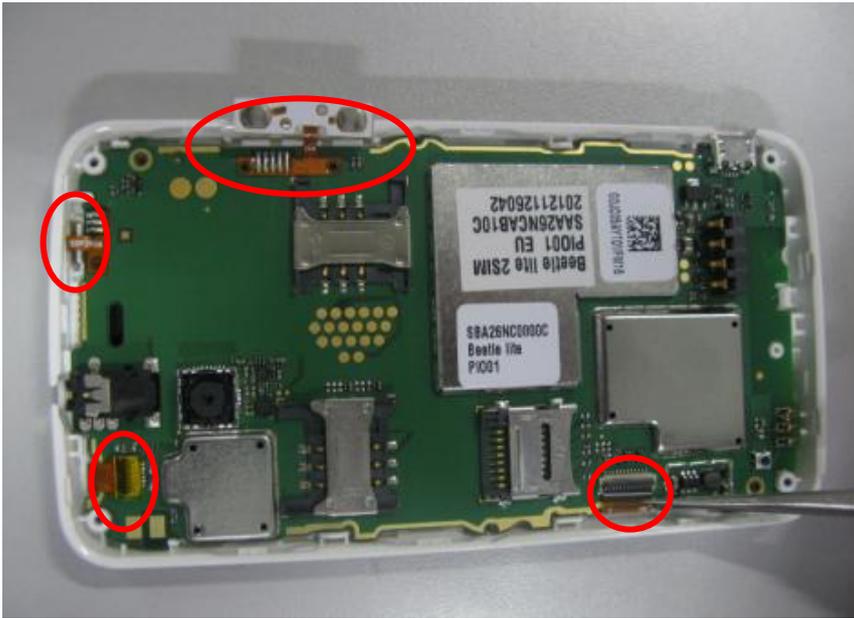
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Step 5: Separate below FPCs with BTB connector socket by using tweezers.



Step 6: Remove PCBA from furnished front casing by using plastic flake.



Step 7: Remove camera from main PCBA by using camera jip.

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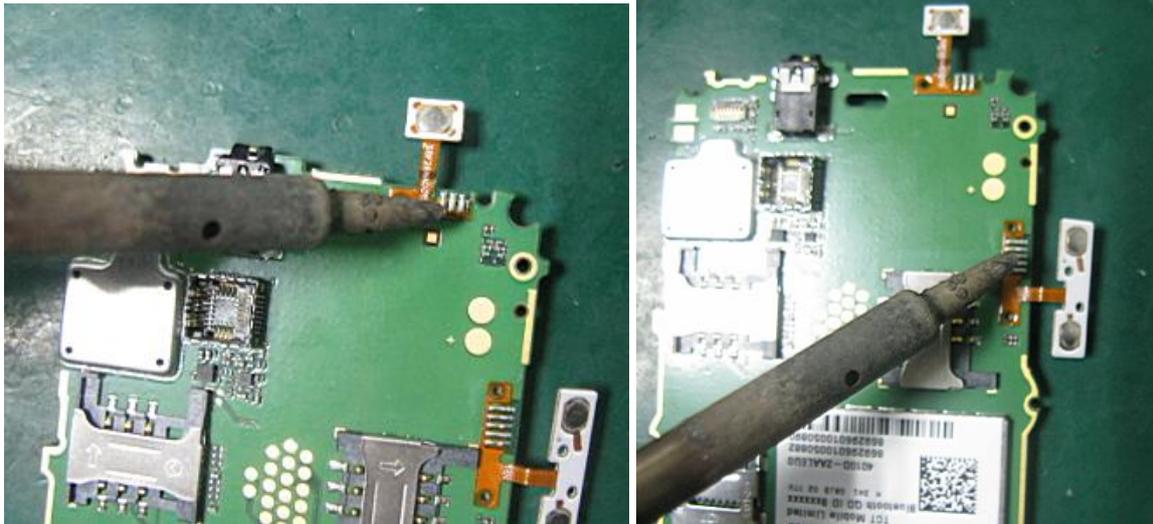


Step 8: Swipe along the four edges of LCD model with plastic flake and separate it from main PCBA slowly and carefully.



Step 9: Remove power key FPC and volume keypad FPC by using soldering iron (Temperature: Lead-free technology $330^{\circ}\text{C} \pm 10^{\circ}\text{C}$, time: 2~3 seconds).

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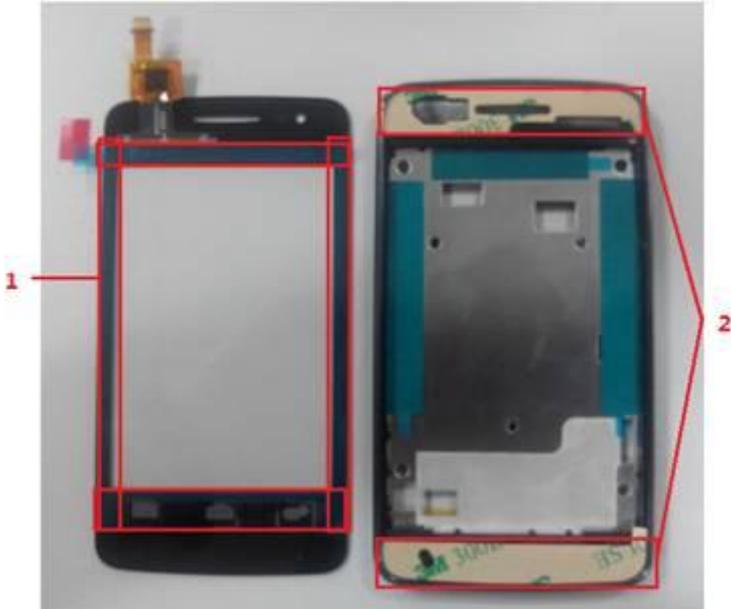


Step 10: Separate touch lens from furnished front casing by using hot wind gun to heat up touch lens around the four edges (Temperature: 100°C, Air Level: 3, Height:5-10mm, Time:<60s) .



Note: if you repair the touch panel, then TP foam adhesive(below picture item1) and top/bottom adhesive for TP (below picture item2) are needed to be changed.

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Step 11: Disassembly complete.

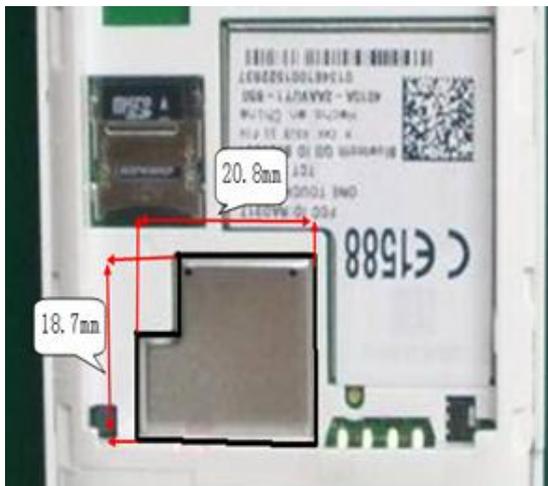


Disassembly Notice:

Put all the spare parts on right position (don't let all spare parts mixed and put on the clean place to avoid vitiated or stained for each spare part) after disassembly. When taking apart of LCD module, take care not to dirty or damage it.

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To avoid rusting the shield of Beetle lite series, a blank label has been suggested to add like below picture. If the blank label is destroyed or the phone do not has it, please repair it by a new one.



4.4 Reassembly Process

Please make reference to the disassembly process for assembly reverse an order of the disassembly steps.

Attention: Insert main FPC and assembly main PCBA with furnished keypad casing, lock the main FPC connector to PCBA connector, and then place the volume key, Assembly the furnished frame. Note the orientations of the main FPC.

4.5 Disassembly process evaluation

We list the ONE TOUCH 4010 parts disassembly time, technique levels and disassembly methods as below, for technique levels, Class 1 signifies easy to disassembly, Class 2 signifies normal to disassembly and Class 3 signifies hard to disassembly.

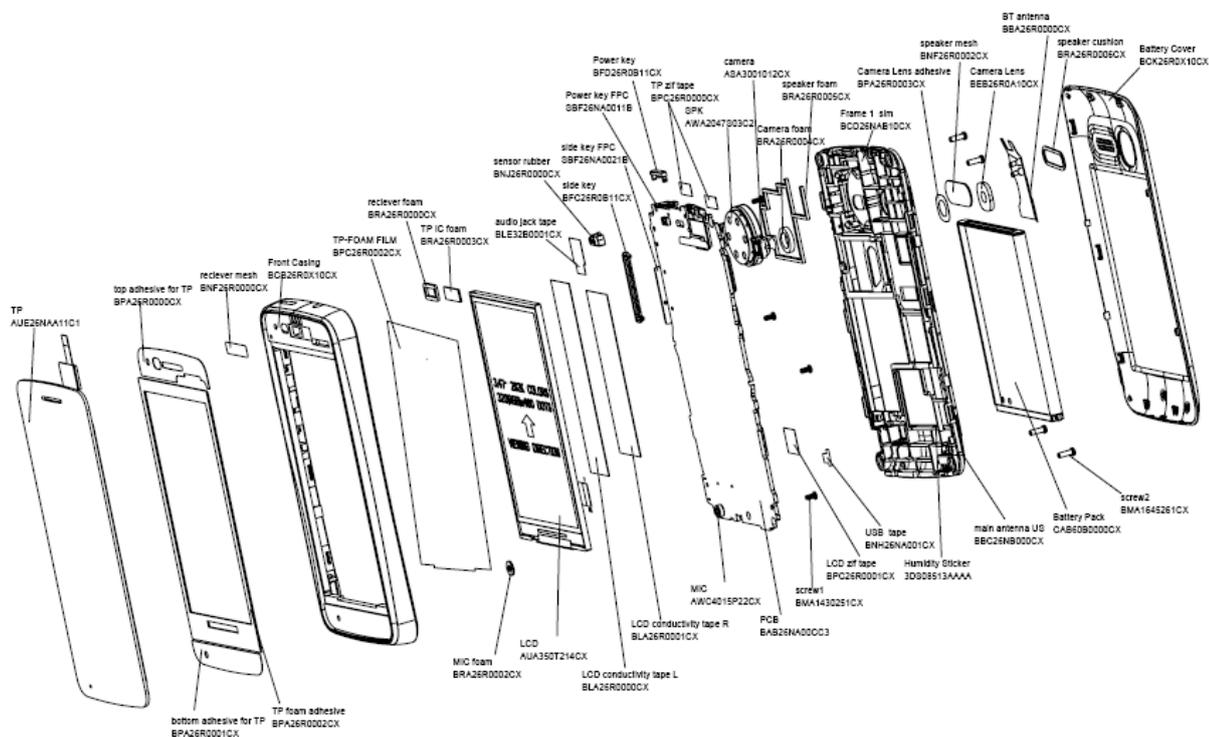
| Spare part | Time for disassembly | Jigs for disassembly | Difficulty Class | Remark |
|------------------------------|----------------------|----------------------|------------------|--------|
| battery cover | 3s | Plastic Flake | Class 1 | |
| Furnished casing with screws | 20s | screwdriver | Class 1 | |
| Main PCBA | 20s | Plastic Flake | Class 1 | |
| Volume key | 3S | Tweezers | Class 1 | |
| Speaker | 3s | Tweezers | Class 1 | |
| Main Camera | 5s | Plastic flake | Class 1 | |
| volume keypad FPC | 15s | Soldering iron | Class 2 | |
| Power key FPC | 15S | Soldering iron | Class 2 | |

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|----------------------|------|-------------------------------|---------|--|
| Receiver | 3s | Tweezers | Class 1 | |
| RF cable | 3s | Tweezers | Class 1 | |
| Sub PCBA | 10s | Plastic flake | Class 1 | |
| Touch lens | 300s | Hot wind gun Plastic Flake | Class 3 | Be careful for touch lens & FPC damage |
| LCD Module | 60s | Hot wind gun Plastic Flake | Class 3 | Be careful for LCD FPC damage |
| BTB connector socket | 60s | Hot wind gun Tweezers | Class3 | The connector is easy to be damaged |
| USB connector | 60s | Hot wind gun Tweezers | Class3 | The connector is easy to be damaged |
| SIM card connector | 120s | Hot wind gun Tweezers | Class 3 | The connector is easy to be damaged |
| T flash connector | 120s | Hot wind gun Tweezers | Class 3 | The connector is easy to be damaged |
| Battery connector | 40s | Hot wind gun Tweezers | Class3 | The connector is easy to be damaged |

5 Disassembly Complete

➤ Explored view



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➤ Below table lists ONE TOUCH 4005D L2 spare parts. You could also refer to: <https://css.tclmobile.cn/>.

| Beetle lite edge(ONE TOUCH 4005D) L2 Spare Part List | | | |
|--|------------------------|--------------|-----|
| Item | EN DESCRIPTION | Reference | Qty |
| 1 | swap handset (EU) | F-A26R0AB102 | 1 |
| | | F-A26R0AE102 | 1 |
| | | F-A26R0AA102 | 1 |
| | swap handset (US) | F-A26R0AB101 | 1 |
| | | F-A26R0AE101 | 1 |
| | | F-A26R0AA101 | 1 |
| 2 | Battery Cover Assy | BCJ26R0B10C0 | 1 |
| | | BCJ26R0E10C0 | 1 |
| | | BCJ26R0A10C0 | 1 |
| 3 | LI-ION Battery | CAB60B0000C1 | 1 |
| 4 | MOU charger | CBA3008AA0C1 | 1 |
| 5 | Stereo headset | CCB3160A15C2 | 1 |
| 6 | Micro USB Cable | CDA3122005C1 | 1 |
| | | CDA3122005C2 | 1 |
| | | CDA3122002C1 | 1 |
| | | CDA3122002C2 | 1 |
| 7 | Micro SD card | CEA002G000C1 | 1 |
| 8 | Furnished front casing | BCA26R0B10C0 | 1 |
| | | BCA26R0E10C0 | 1 |
| | | BCA26R0A10C0 | 1 |
| 9 | power key | BFD26R0B11C0 | 1 |
| | | BFD26R0B11C2 | 1 |
| 10 | Furnished frame | BCC26R0B10C0 | |
| 11 | Screw | BMA1430251C0 | 4 |
| 12 | Screw | BMA1645261C0 | 4 |
| 13 | Side keys | BFC26R0B11C0 | 1 |
| | | BFC26R0B11C2 | 1 |
| 14 | Touch Panel | AUE26NAA10C1 | 1 |
| 14 | | AUE26NAA10C2 | 1 |
| 15 | audio jack tape | BLE32B0001C0 | 1 |
| 16 | Main LCD | AUA350T214C1 | 1 |
| 16 | | AUA347T205C1 | 1 |
| 17 | Microphone | AWC4015P22C1 | 1 |
| 17 | | AWC4015P23C1 | 1 |
| 18 | Camera module | ASA2001079C1 | 1 |
| 18 | | ASA2001086C1 | 1 |

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|----|-------------------------|--------------|---|
| 19 | side key Furnished FPC | SBF26NA0021B | 1 |
| 19 | side key Furnished FPC | SBF26NA0022B | 1 |
| 20 | TP ZIF connector | ARA0130003C1 | 1 |
| 21 | LCD ZIF connector | ARA0250003C1 | 1 |
| 22 | USB connector | ARH0050019C1 | 1 |
| 23 | P sensor rubber | BNJ26R0000C0 | 1 |
| 24 | P sensor | AMY0000349C1 | 1 |
| 25 | SIM card connector | ARD0060100C1 | 2 |
| 26 | Camera socket | ARK0240005C1 | 1 |
| 27 | Audio Jack | ARG0040006C1 | 1 |
| 28 | Battery connector | ARE0040025C1 | 1 |
| 28 | Battery connector | ARE0040030C1 | 1 |
| 29 | TP zif tape | BPC26R0000C0 | 2 |
| 30 | LCD zif tape | BPC26R0001C0 | 1 |
| 31 | Speaker 3in1 | AWA2047S03C2 | 1 |
| 31 | Speaker 3in1 | AWA2051S00C1 | 1 |
| 32 | power key Furnished FPC | SBF26NA0011B | 1 |
| 32 | power key Furnished FPC | SBF26NA0012B | 1 |
| 33 | TFlash Connector | ARJ0080046C1 | 1 |
| 34 | LCD conductivity tape L | BLA26NA001C0 | 1 |
| 35 | LCD conductivity tape R | BLA26NA002C0 | 1 |
| 36 | LED | AKABL00008C1 | 1 |
| 37 | Antenna Spring | ARM0010029C1 | 3 |
| 38 | swap PCBA bom | F-B26R0ALMX1 | 1 |
| | | F-B26R0ALEU1 | 1 |
| 39 | Crystal Protective Film | BNH26NA050C4 | 1 |
| 40 | Blank Label | CPF000067AC0 | 1 |
| 41 | TP foam adhesive | BRA1780000C0 | 1 |
| 42 | top adhesive for TP | BPA2770001C0 | 1 |
| 43 | bottom adhesive for TP | BPA2770002C0 | 1 |

6 Level 2 repair

This chapter describes the Level 2 repair that can be done without any diagnostic equipment.

| | Problem description | Action And Solution |
|----------|------------------------|---|
| Charging | Bad or No Charge | 1.Check voltage of the battery: if 0V, charge some minutes and check the charge indicator; 2.Check the battery contact, change the |

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| | | battery connector if broken; 3.Check the charge plug on B cover, change it if necessary; |
| Switch on with battery power | Can 't Switch on | 1.Check voltage of the battery; 2.Check the battery contact, change the battery connector if broken; 3.Check the power on key; 4.Check BTB connector socket pin |
| Main display | Missing line or column; no display; bad or no LCD backlight | Check Connection flex (FPC cable),change it if necessary; Replace display module if necessary; |
| Vibrator | The vibrator does not work | Check the contact on the PCBA (dirty or oxidized), replace the vibrator if necessary; |
| Network Problem | No emission or No reception | Check the antenna contactor on the B cover; Check the contact on the PCBA (dirty or oxidized); |
| TF card | No communication between the phone and the TF card | Check the TF connector on the PCBA; |
| Camera | Camera doesn't work | Check camera module Check also camera socket broken or not |
| Audio | Bad or no emission (TX audio from mobile); Bad or no reception (RX audio on mobile); Hands-free problem; Key beep and melody problem | Check microphone, replace it if necessary; Check the contact on the PCBA (dirty or oxidized) Check loud speaker, replace it if necessary; Check the contact on the PCBA (dirty or oxidized) |

In case the Level 2 repair can't solve the problem, or the PCBA is damaged, exchange the PCBA.

7 PCBA exchange

If Level 2 repair does not solve the failure, it is mandatory to change the PCBA and follow the process as below.

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- 1) Collect the PCBA (without accessories, LCD and camera), with microphone and vibrator.
- 2) Get a new PCBA from the swap stock. Reuse those accessories to assemble the mobile.
- 3) Fill in the record sticker with IMEI number, fault code, short code, Hardware Technical Level and software version.
- 4) Send the NG PCBA with record sticker back to L3 repair center with the recommended packaging method,

Note: packaging method please refer item “12. Packaging requirement”.

8 Other component exchange

The other components exchange such as

- 1) LCD module
- 2) Touch lens
- 3) USB connector
- 4) FPC connector
- 5) Receiver
- 6) Speaker
- 7) Microphone
- 8) Main Camera
- 9) Sub camera
- 10) Main FPC
- 11) Volume keypad FPC
- 12) Power key FPC
- 13) Other related mechanical components

Please follow the detail steps 4.3 (Disassembly and assembly process).

But need to be very careful to handle the components with related special tool or jig (especially replacing new components)

It is better to handle it with plastic tools (plastic tweezers and wedge etc.).

Besides operator must wear anti-static gloves, fingertips or wear static loop during the whole process of components exchange.

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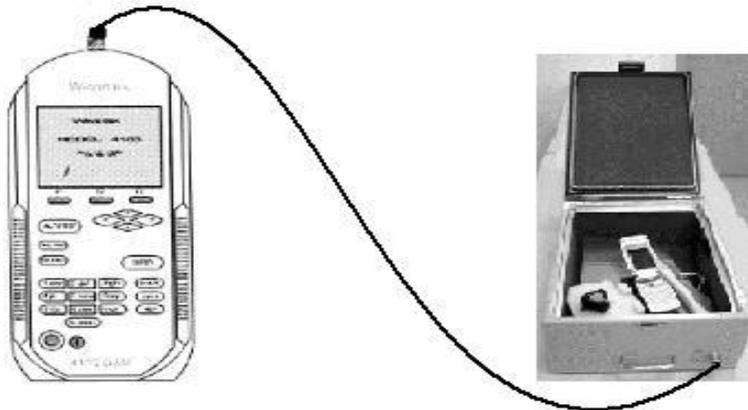
9 Final test

8.1 Function Test

During the function test, the following items must be checked and validated.

- 2) Cosmetic aspect of the handset,
- 3) The Software Technical sticker state on the Board
- 4) Switch on the handset
- 5) Default welcome message
- 6) Press `*#2886#` on the idle screen to start the auto test

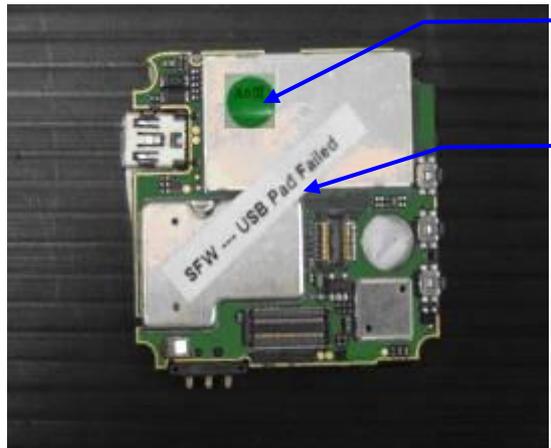
8.2 Measurement



APPENDIX 1 Packaging Requirements

- 1、 Appearance Requirements of PCBA
 - i 、 The failure code label, commercial label, custom label and network code should be stuck onto PCBA
 - ii 、 The repair PCBA and custom label should be matched
(see appendix one for the detailed information)

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| <p>PCBA of Flip Phone</p>  <p>Network code Commercial label</p> <p>put commercial label and network code on one side</p> |  <p>Custom label Failure code label</p> <p>Put failure code label and custom label on other side</p> |
| <p>PCBA of Bar Phone</p>  <p>Put commercial label and custom label on PCBA</p> |  <p>Network code Custom label Commercial code Failure code label</p> <p>At the same time put network code label and failure code label</p> |

2、 PCBA Packing Requirements

- i 、 After packing with anti-vibration bag, the commercial label on PCBA should be easy recognized;

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Inner packing is anti-static bag



Outer packing is anti-vibration bag



Put commercial label on anti-vibration bag

3、 Packing Requirements

- i. Please pay attention to the following points when different models put into one box:
- ii. Stick up the same models with tapes
- iii. Mark the model, quantity and specification of custom label on tape
- iv. The packing box for PCBA should have marking sticker and well sealed by the tape
- v. with TCL logo
- vi. Finally put all the packing boxes into packing cases strong enough and post to HK.

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