



Trouble Shooting Guide Repair Instruction, Electrical

Applicable for F305

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1 General

The purpose of this document is to indicate the electrical level repair actions associated with the different failure symptoms.

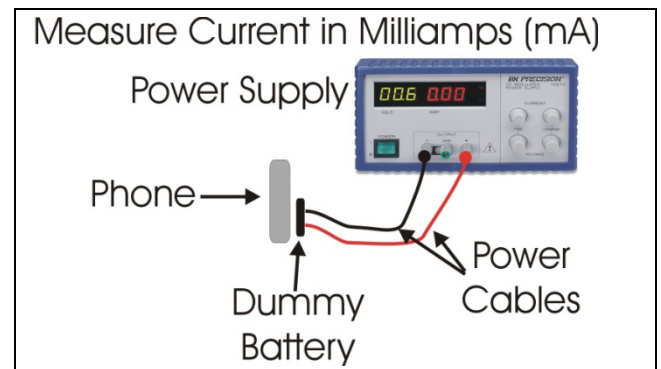
For symptoms that have multiple repair actions, the repair actions are listed in order of their probability of creating a successful repair. The first action has the highest probability, and subsequent actions have lower probabilities. The intention is for the repair technician to implement the first 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 repairable at this level.

This document should be used only after the actions from the Mechanical Trouble Shooting Guide have been exhausted for the specific symptom.

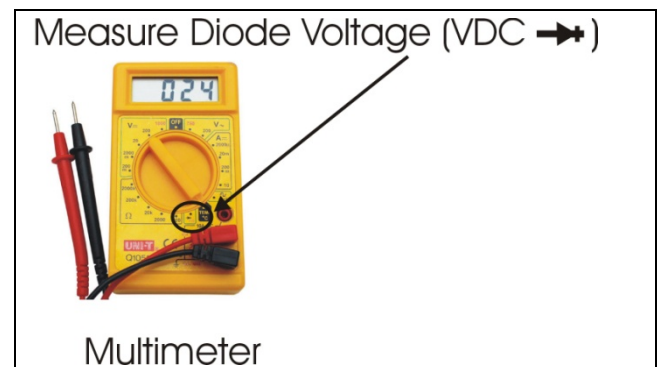
Voltage, current, and resistance information is provided for some symptoms to enable faster repairs. Perform current measurements using a dummy battery and power supply with digital current display. The phone should be fully assembled. Perform voltage and resistance measurements with a multimeter. Purchasing this equipment and performing these measurements is optional but recommended.

Perform current measurements using a dummy battery and power supply with digital current display.

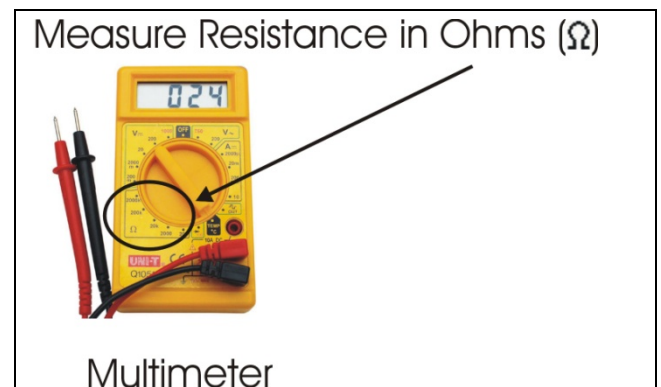
The phone should be fully assembled.



Perform voltage measurements with a multimeter.



Perform resistance measurements with a multimeter.





2 Repair Actions for Manual Test Failures

| Failure | Failure Symptom | Repair Action |
|--|--|---|
| 2.1 On/Off | Draws no current when On/Off is pressed | <ul style="list-style-type: none"> • X4001 if damaged |
| | Draws current when pushing On/Off key, returns to zero | <ul style="list-style-type: none"> • L2500 if more than 1 Ohm |
| | Will not power off | <ul style="list-style-type: none"> • X4001 if damaged • X2500 if damaged |
| | Other symptoms | <ul style="list-style-type: none"> • X2500 if damaged |
| 2.2 Software Flash/USB | | <ul style="list-style-type: none"> • X2900 if damaged • N2900 if not charging via USB • N2902 |
| 2.3 Charging | Charging from power outlet | <ul style="list-style-type: none"> • X2900 If damaged • V2924 if pin 12 are short circuit to pin 9 at X2405 |
| | Charging from computer via USB | <ul style="list-style-type: none"> • X2900 If damaged • N2900 |
| 2.4 Hands-Free connection (PHF) | Phone stuck in PHF mode when PHF is not attached | <ul style="list-style-type: none"> • V2932 if pin 8 are short circuit to pin 9 at X2405 |
| | Phone not recognize PHF set | <ul style="list-style-type: none"> • X2900 if damaged |
| 2.5 SIM | | <ul style="list-style-type: none"> • X2901 if damage |
| 2.6 Slide Sensor | | <ul style="list-style-type: none"> • B2300 |
| 2.7 Main Display | | <ul style="list-style-type: none"> • X4001 if damaged |
| 2.8 Main LCD LED | | <ul style="list-style-type: none"> • X4001 if damaged • V2501 |
| 2.9 Keypad Numeric LEDs | | <ul style="list-style-type: none"> • V2818 • V2819 |
| 2.10 Keypad Navigation LEDs | | <ul style="list-style-type: none"> • X4001 if damaged |
| 2.11 Volume Up Button | | <ul style="list-style-type: none"> • S2803 |
| 2.12 Volume Down Button | | <ul style="list-style-type: none"> • S2809 |
| 2.13 Camera Play Button | | <ul style="list-style-type: none"> • S2813 |
| 2.14 Keypad Navigation | | <ul style="list-style-type: none"> • X4001 if damaged |
| 2.15 Game A and B Buttons | | <ul style="list-style-type: none"> • X4001 if damaged |
| 2.16 Ear Speaker | | <ul style="list-style-type: none"> • X4001 if damaged |



| Failure | Failure Symptom | Repair Action |
|--|-----------------|--|
| 2.17 Polyphonic Speaker (Loudspeaker, Bas Speaker) | | <ul style="list-style-type: none"> • N3001 |
| 2.18 Hands-Free (PHF) Aux Earphone | | <ul style="list-style-type: none"> • L2903 if more than 1 Ohm • L2904 if more than 1 Ohm • V2925 • V2926 |
| 2.19 Microphone | | <ul style="list-style-type: none"> • B3000 |
| 2.20 Hands-Free (PHF) Aux Microphone | | <ul style="list-style-type: none"> • L2903 if more than 1 Ohm • L2905 if more than 1 Ohm • V2929 • V2930 |
| 2.21 Camera | | <ul style="list-style-type: none"> • X4000 if damaged |
| 2.22 Memory Card | | <ul style="list-style-type: none"> • X2902 if damaged |
| 2.23 Fm Radio | | <ul style="list-style-type: none"> • L2901 • V2928 |

Repair Actions for Go/NoGo Test Failures

| Failure | Repair Action |
|----------------------------|--|
| <i>Fails Go/No Go test</i> | <ul style="list-style-type: none"> • Replace X1201, X1200 if damaged Rerun the Go/No Go testing. • Replace X1202 if damaged and retest |

3 Revision History

| Rev. | Date | Changes / Comments |
|------|------------|--------------------------------|
| 1 | 2008-10-10 | 1 st version |
| 2 | 2008-11-03 | Remove X2500, update section 3 |
| 3 | 2008-11-19 | Add parts |
| 4 | 2008-12-12 | Remove V2904, V2905 |
| 5 | 2009-10-15 | Add V2501 to 2.8 Main LCD LED |