

Product System (PS)

Subject: TROUBLE SHOOTING GUIDE	Part No.:	Rev.: 0
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Model Name: 56F05	Effective Date:	Revision Status
Description: TROUBLE SHOOTING GUIDE	Page	Rev.
	1	0
	/	/
Reason For Release: FIRST RELEASE		0

Item	Contents	Qty	Unit		
1	TROUBLE SHOOTING GUIDE FOR RF		PAGE		
2	TROUBLE SHOOTING GUIDE FOR BB	5	PAGE		

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Troubleshooting

Symptom	Probable Cause	Verification and Remedy
1. Unit doesn't turn on	a) Battery either discharged or defective.	<ol style="list-style-type: none"> 1. Measure battery voltage. If the battery voltage is <3.2V, recharge the battery using the appropriate battery charger. 2. If the battery can't be recharge, replace the battery. 3. If the battery is not at fault, proceed to b.
	b) Battery connector open or misaligned.	<ol style="list-style-type: none"> 1. Visually inspect the battery connectors on both the battery pack and the unit. 2. Disassembly to check the battery connectors if it misaligned or short with the RF or Base-band shielding cases. If necessary, replace either the battery or battery connector. 3. If the battery connectors are not at fault, proceed to c.
	c) Shield case short with components	<ol style="list-style-type: none"> 1. Visually inspect the RF/BB shielding case. If they become deformed, replace the shielding case. 2. If the shielding case are not at fault, proceed to d.
	d) X3, R4, C1 or C2	<ol style="list-style-type: none"> 1. Use the power supply to supply the VBAT voltage. Then, press the power-on key. Visually inspect the current of the handset used. 2. Measure the waveform of the R4. 3. If the waveform isn't the 32KHz clock, replace the X3, R4, C1 or C2. 4. If they are not at fault, proceed to e.
	e) C59 or R19 is at fault.	<ol style="list-style-type: none"> 1. Measure the waveform of the R19. 2. If the waveform isn't the 13MHz clock, replace the C59 and R19. 3. If they are not at fault, proceed to f.
	f) U3 is at fault.	<ol style="list-style-type: none"> 1. If the current is under 100mA when power on, check the VR1 (1.8V), VR19 (2.9V), VR19B (2.9V), and VR3 (2.9V) voltage. 2. If they are not correct, maybe the U3 is at fault. Replace the U3.
2. LCD no display.	a) LCD module is at fault	<ol style="list-style-type: none"> 1. Disassembly to visually inspect the LCD module. If the glass is break on the LCD, replace the LCD module. 2. Change LCM to a new LCM, and power on again. IF can work properly, LCM is fail. If not go 3. 3. If the LCD module is not break, proceed to b
	b) LCD module has no power.	<ol style="list-style-type: none"> 1. check connection of U5, U8, U21, R112, C63, CN10, CN12. If connect not good, re-flow or re-place the component 2. If the component is connect well, proceed to c
	c) U3 is at fault	<ol style="list-style-type: none"> 1. Power on the handset. Then measure the waveforms of the C63.1, U21.1 pins. 2. If the C63.1 is always low or the U21.1 pins with no data, the U3 is at fault. Replace the U3.
3. Keypad no function.	Keypad bottom short	Disassembly to replace the keypad metal dome.
4. LED no display	a) Components shift	<ol style="list-style-type: none"> 1. Disassembly to visually inspect the LED1~LED8, R109, R110. If any component is shifted, replace the components. 2. If they are not shifted, proceed to b
	b) U3 is at fault	Measure the waveform of the U20.2. If the U20.2 doesn't output any signal when LED function is executed, U3 is at fault.

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5.Loud speaker no function	a) Components shift	<ol style="list-style-type: none"> Disassembly to visually inspect the U16. If the component outward is damaged, replace the U16. Visually inspect the R44, R48, C51, JP3.1, C47, R47, U15, C85, C90 , JP3.2. If any component is shifted, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol style="list-style-type: none"> Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault. If it is not at fault, proceed to c.
	c) Other components are at fault.	<ol style="list-style-type: none"> Measure the waveform of the U15.1, U15.6 when Loud speaker function is executed. If any pin is no signal, replace the component relative to that pin.
6.Vibrator no function	a) Components shift	<ol style="list-style-type: none"> LCM: change a new LCM , to check vibrator function . If it works, change LCM. Visually inspect the R62, R63. If component is shifted, replace the components. If they are not shifted, proceed to b
	b) U6 is at fault	<ol style="list-style-type: none"> Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.
7.Receiver no function	a) Components shift	<ol style="list-style-type: none"> LCM: change a new LCM . If it works , change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol style="list-style-type: none"> Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.
8.Micphone no function	a) Components shift	<ol style="list-style-type: none"> Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol style="list-style-type: none"> Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault. If it is not at fault, proceed to c.
9.Handfree no function	a) Components shift	<ol style="list-style-type: none"> Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol style="list-style-type: none"> Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3 is at fault. If it is not at fault, proceed to c.

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	c) Other components are at fault.	<ol style="list-style-type: none"> When handfree is plugged in, IO6 detect 0V. Then, IO11 outputs high level, U17.4 pin connects to U17.1 pin and U19.4 pin connects to U19.1 pin. If not, maybe the U17 and U19 are at fault. Replace the U17 or U19. After IO6=0, IO11=1, measure the waveform of the U18.3 pin. If its voltage level doesn't drop to 1 ~ 2.6V and the voltage of the U3.C6 pin isn't equal to 0.5 ~ 1.3V, test it again by another handfree. If handfree is still no function, D2, R55, R56 is at fault. Visually inspect the components. If any component isn't contacted well or wrong, replace the components. Measure the waveforms of U18.5, U18.1, U18.4 and U18.3 when handfree function is executed. If any pin is no signal, replace the U18
10. Data cable no function	a) Components shift	<ol style="list-style-type: none"> Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol style="list-style-type: none"> Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when data service function is executed, U3 is at fault. If it is not at fault, proceed to c.
	b) Components are at fault.	<ol style="list-style-type: none"> When data cable is plugged in, IO6 detect 0V. Then, IO11 outputs high level, U17.4 pin connects to U17.1 pin and U19.4 pin connects to U19.1 pin. If not, maybe the U17 and U19 are at fault. Replace the U17 or U19. After IO6=0, IO11=1, measure the waveform of the U18.3 pin. If its voltage level doesn't drop to 2.6 ~ 2.8V and the voltage of the U3.C6 pin isn't equal to 1.3 ~ 1.5V, test it again by another handfree. If handfree is still no function, D2, R55, R56 is at fault. Visually inspect the components. If any component isn't contacted well or wrong, replace the components. Measure the waveforms of U18.5, U18.1, U18.4 and U18.3 when handfree function is executed. If any pin is no signal, replace the U18
12. Can't find SIM	a) Components shift	<ol style="list-style-type: none"> Visually inspect the U4. If the pins of the SIM socket is at fault, Disassembly to replace the U4. Disassembly to visually inspect the R12, R16, R15, R14, C11, C70, C84, C9, C10. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b

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	b) Components are at fault.	<ol style="list-style-type: none"> 1. Plug in the SIM card to power on the handset and measure the voltage of the U4.4 or U4.5. If it isn't equal to 3V or 5V, check the R15, R16 and replace it. 2. If R15, R16 is ok but U4.4 is still no voltage, proceed to c. 3. Measure the voltage of the U4.2 if it goes to high about 3V or 5V. If not, check the R14 and replace it. 4. If R14 is ok but U4.2 is still no voltage, proceed to c. 5. Measure the voltage of the U4.1 if it output a clock about 3V or 5V. If not, check the R12 and replace it. 6. If R12 is ok but U4.1 is still no voltage, proceed to c. 7. Measure the voltage of the U4.3 if it goes to high about 3V or 5V. If not, proceed to c.
	c) U3 or U6 is at fault	<ol style="list-style-type: none"> 1. If check the b steps and the U4.1, U4.2, U4.3 or U4.4 is still no signal, maybe the U3 or U6 is at fault. 2. Replace the U6 then re-check the step b. 3. If it is still no signal, replace the U3
13. Can't charge	a) Battery or charger is at fault	<ol style="list-style-type: none"> 1. Use the correct battery and charger to check the charge function. 2. If charging function is ok, the battery or charger is illegal. 3. If it still can't charge, proceed to b
	b) Components shift	<ol style="list-style-type: none"> 4. Disassembly to visually inspect the J1. If the pins of the power jack (J4) aren't contacted well with the pads of the PCB, re-solder the pins. 5. Visually inspect the ,F1,BQ3, R91, DZ1, U28, U33, BQ4, R102. If any component isn't contacted well, replace the components. 6. Visually inspect the polarity of the BQ3, R91, DZ1, R92, R111, U28. If any component is wrong, replace the component. 7. Check the F1. If it is open, replace the F1. 8. If they are not wrong, proceed to c
	c) Peripheral components for charging are at fault.	<ol style="list-style-type: none"> 1. Use dummy battery to check the charging function. JP4.1 connected to V+ (3.6V) of the power supply. JP4.3 connected to V- (GND) of the power supply. JP4.2 connected to a resistor (10K ohm) to ground. 2. Plugged in the charger then check the voltage of the CHARGERIN pin and U28.5 pin. If their voltage isn't the same about 4~6V, F1 is at fault. Replace the F1. 3. Check the voltages of the U28.2 and U28.4 if their voltages are above 4V. If not, maybe U28 is at fault. Replace the U28. 4. Measure the current flowing across the R102. If not, maybe R102 is at fault. Replace the R102. 5. If they are not wrong, proceed to d
	d) U6 is at fault	<ol style="list-style-type: none"> 1. When the charger is plugged in, the voltage of the VCHG pin is 4~6V. And when charging, the ICTL pin will high/low to control charging pulse. 2. If not, maybe U6 is at fault. Replace the U6.