BLU™

PRODUCTS

BLU Diva X
Service manual

ATTENTION

Boards, which contain Electrostatic Sensitive Device (ESD), art indicated. Following information is ESD handling:

- Service personnel should ground themselves by using a wrist strap when exchange system boards.
- When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.
- Use a suitable, grounded soldering iron.
- Keep sensitive parts in these protective packages until these are used.
- When returning system boards or parts like EEPROM to the factory, use the protective packages as describe

Content

Chapter 1 Product Specification

Diva X Features & Functions

-Dual SIM Dual Standby Single Connection

-Fashion bar phone

-BT 3.0

-FM Radio

-Multi-Media application

-T-Flash（Support 8G SD-Card）

-QVGA240*320

–0.3 Mega-H /1.3 Mega-S

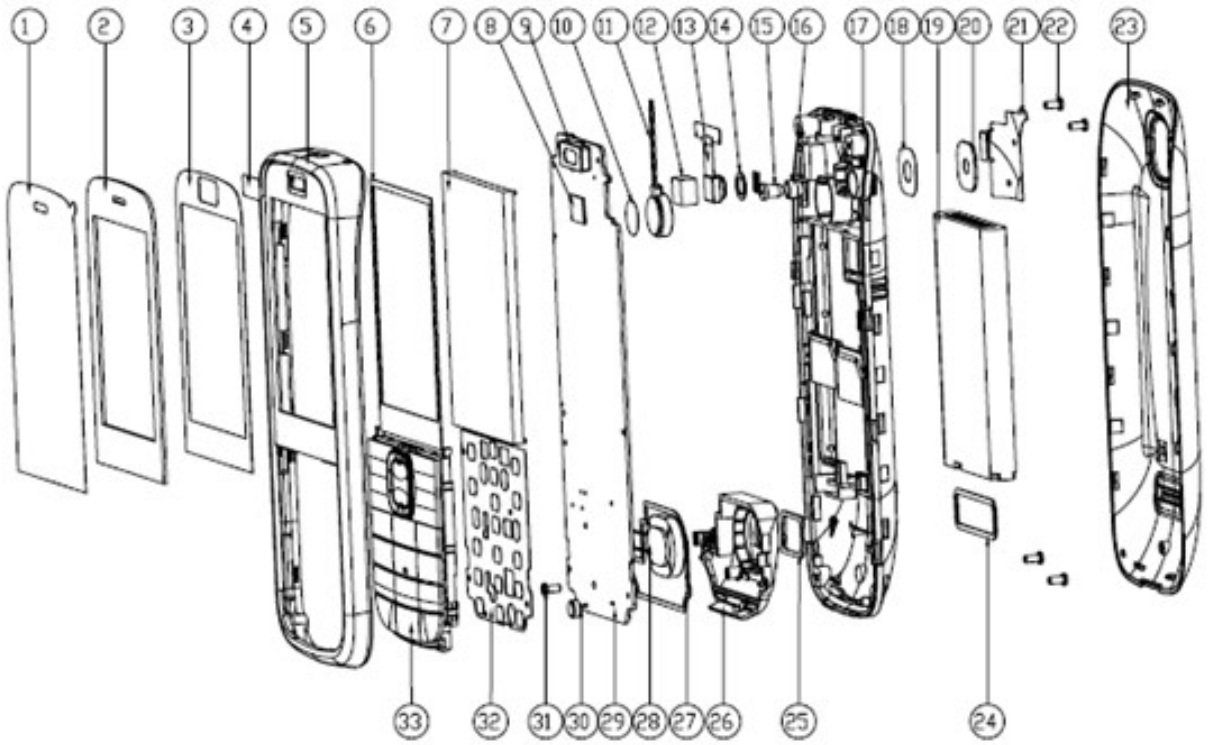
-MP3, Midi, Amr, Wav

-USB2.0 Mini USB

Specifications:

GSM Band: 900MHz/1800MHz
Display: QVGA240*320
Camera: 0.3 Mega-H /1.3 Mega-S
Talk time: 700 min
Stand-by: 270 hour
Lithium Battery: 1400MAH Li-ion Battery
USB Data cable: USB 2.0

Chapter 2 Exploded View



1. Main Lens film
2. Main Lens
3. Main Lens glue
4. Receiver filter
5. Front cover
6. LCD sponge
7. LCD
8.LCD gobo
9. Receiver
10. VIB Glue
11.Vibrator
12. Camera Glue
13. Camera
14. Camera glue
15. LED
16. LED lens hood
17. Back cover
18. Camera glue
19. Battery
20. Camera lens
21. BT antenna
22. Screw
23. Battery cover
24. SPK filter
25. SPK sponge
26.Antenna
27.ANT sponge
28.Speaker
29.PCBA
30.MIC
31.Screw
32.Dome
33.Keypad

Chapter 3 Tools

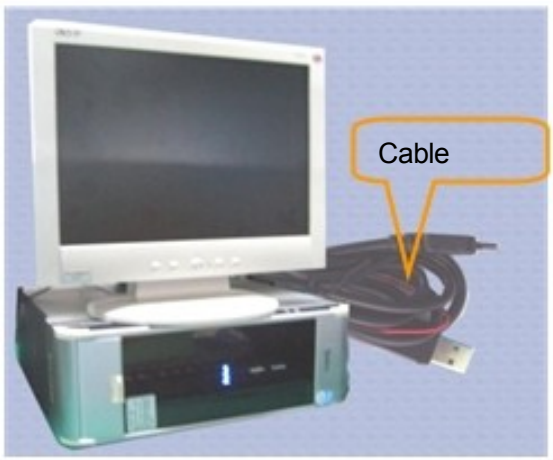
Solder iron

Hot Air Gun

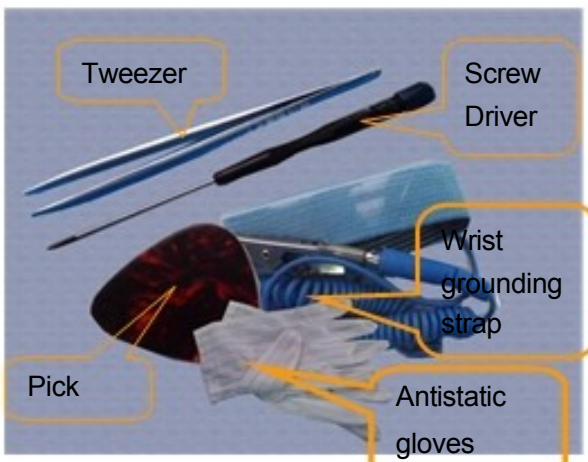
Power Supply

Multimeter

Solder wire, Flux



PC, Download cable



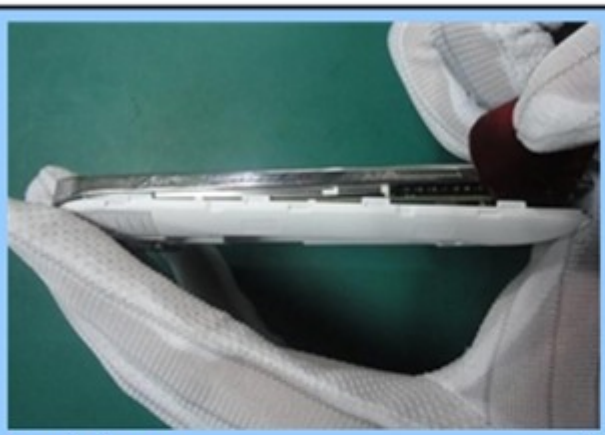
Others

Chapter 4 Disassembly & Assembly

4.1 Disassemble

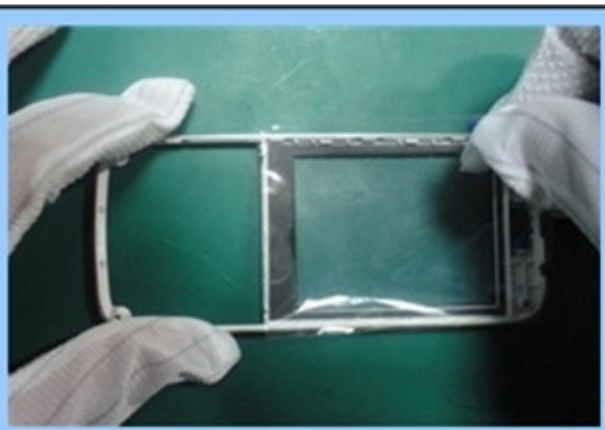
Remove the battery cover 1

Remove 4 screws 2

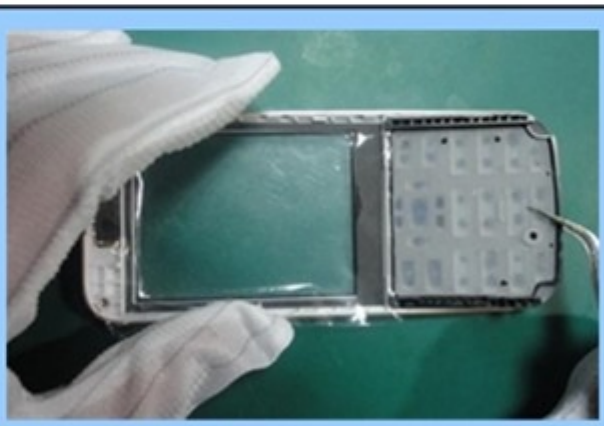


Open back cover 3

Remove the back cover 4

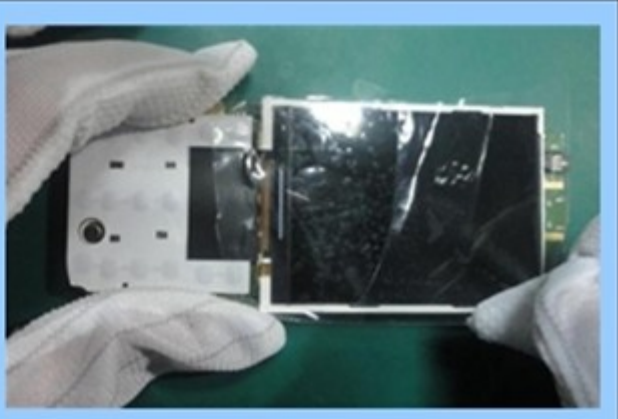


Stick the lens film 7

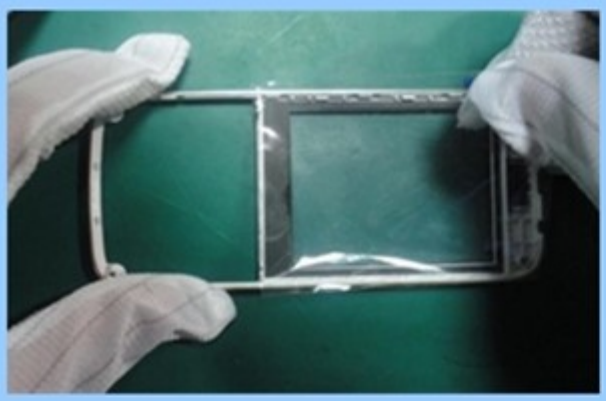


Remove the keypad 8

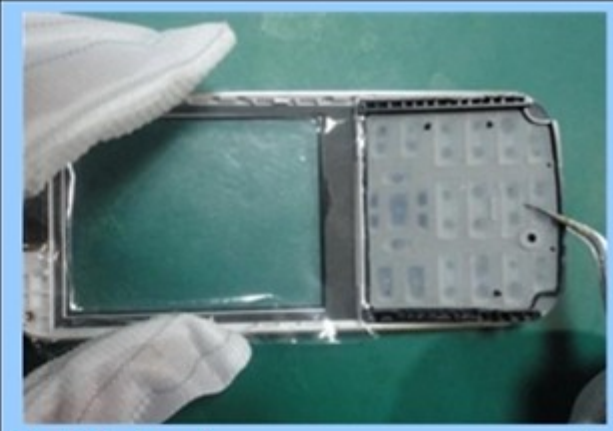
Remove the BCBA. 5



Stick the LCD film 6



Remove the lens film 1



Install the keypad 2

Install the PCBA 3

Install the back cover. 4

Button the cover 5

Fasten the 4 screws. 6

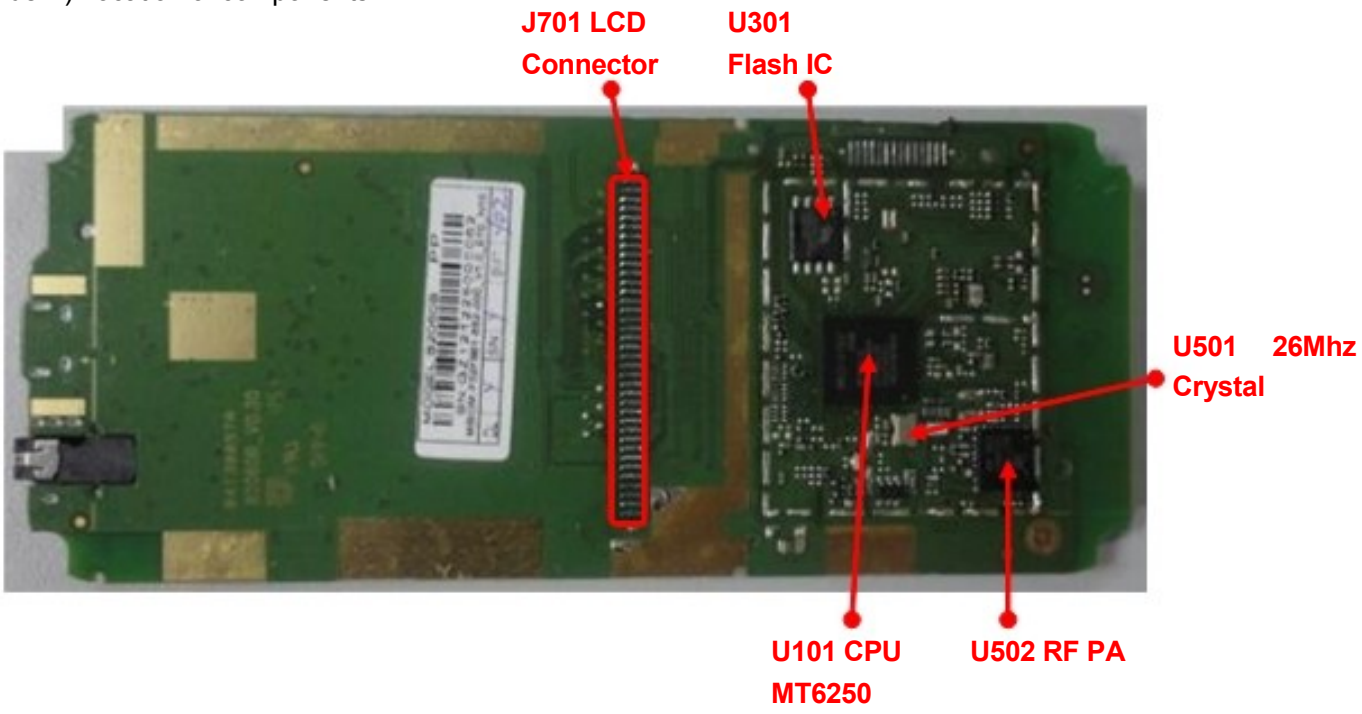
Install the battery cover 7

Finished.

Chapter 5 Picture of PCBA

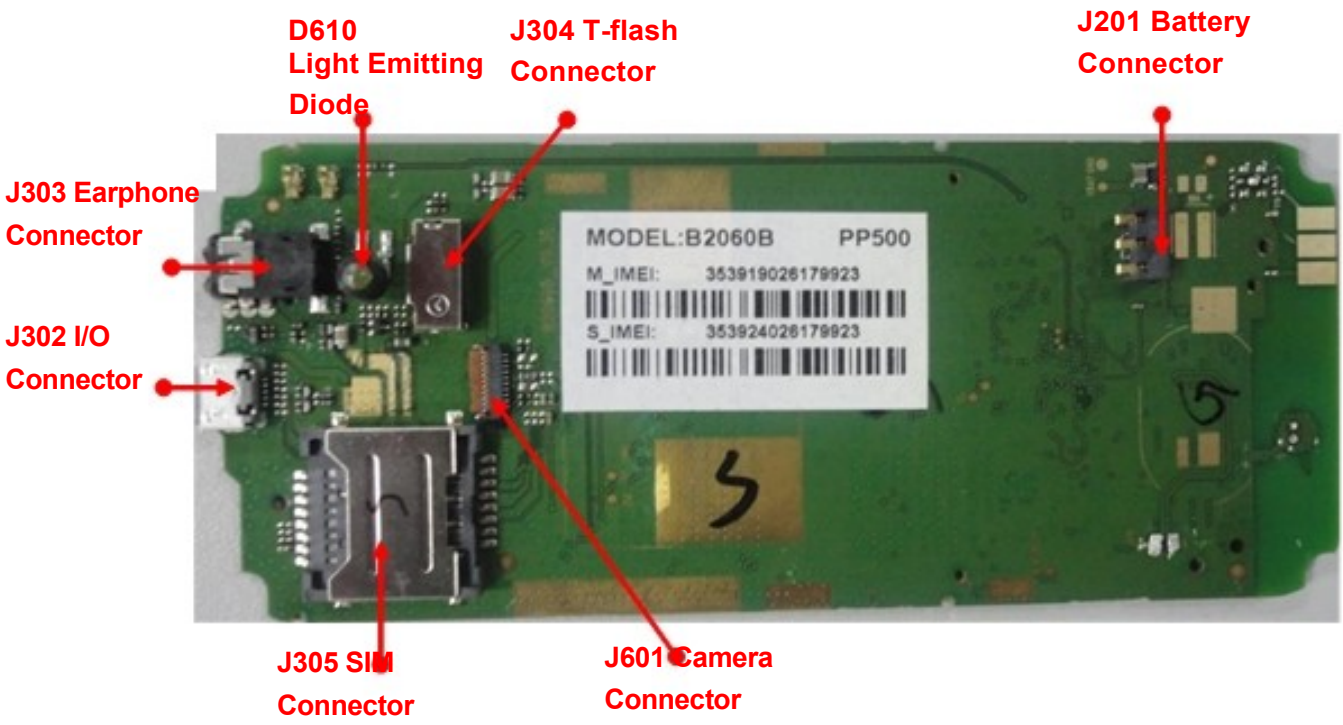
5.1 Side A

PCBA (Side A) Location of components

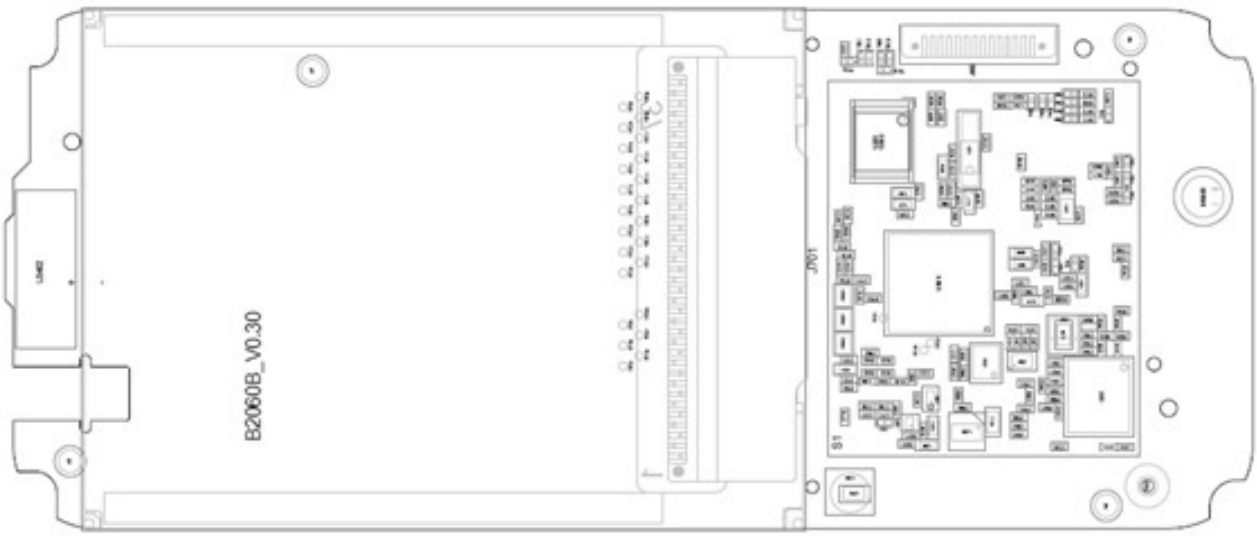


5.2 Side B

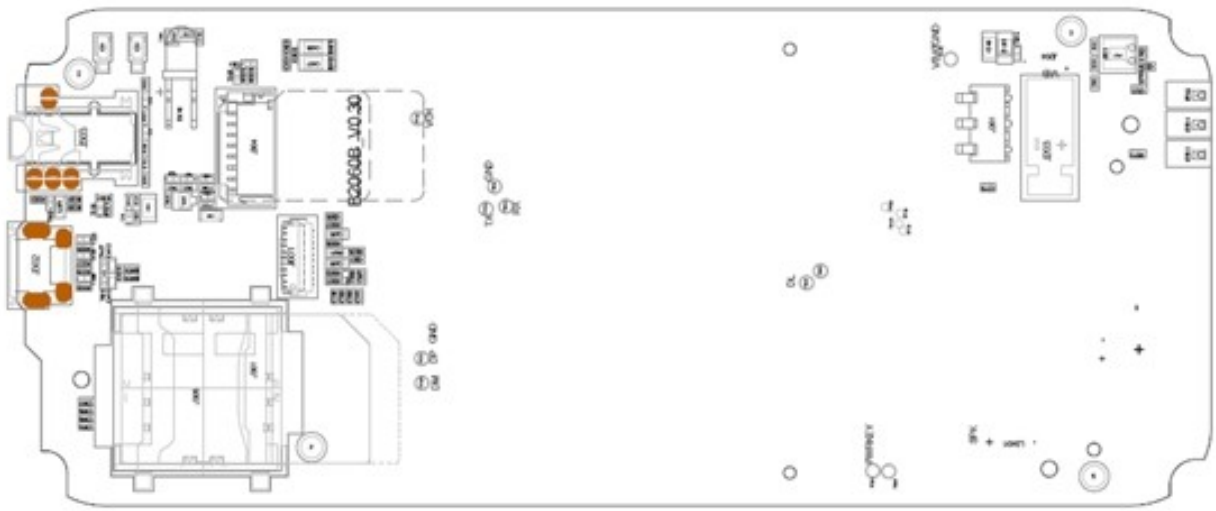
PCBA (Side B) Location of Components



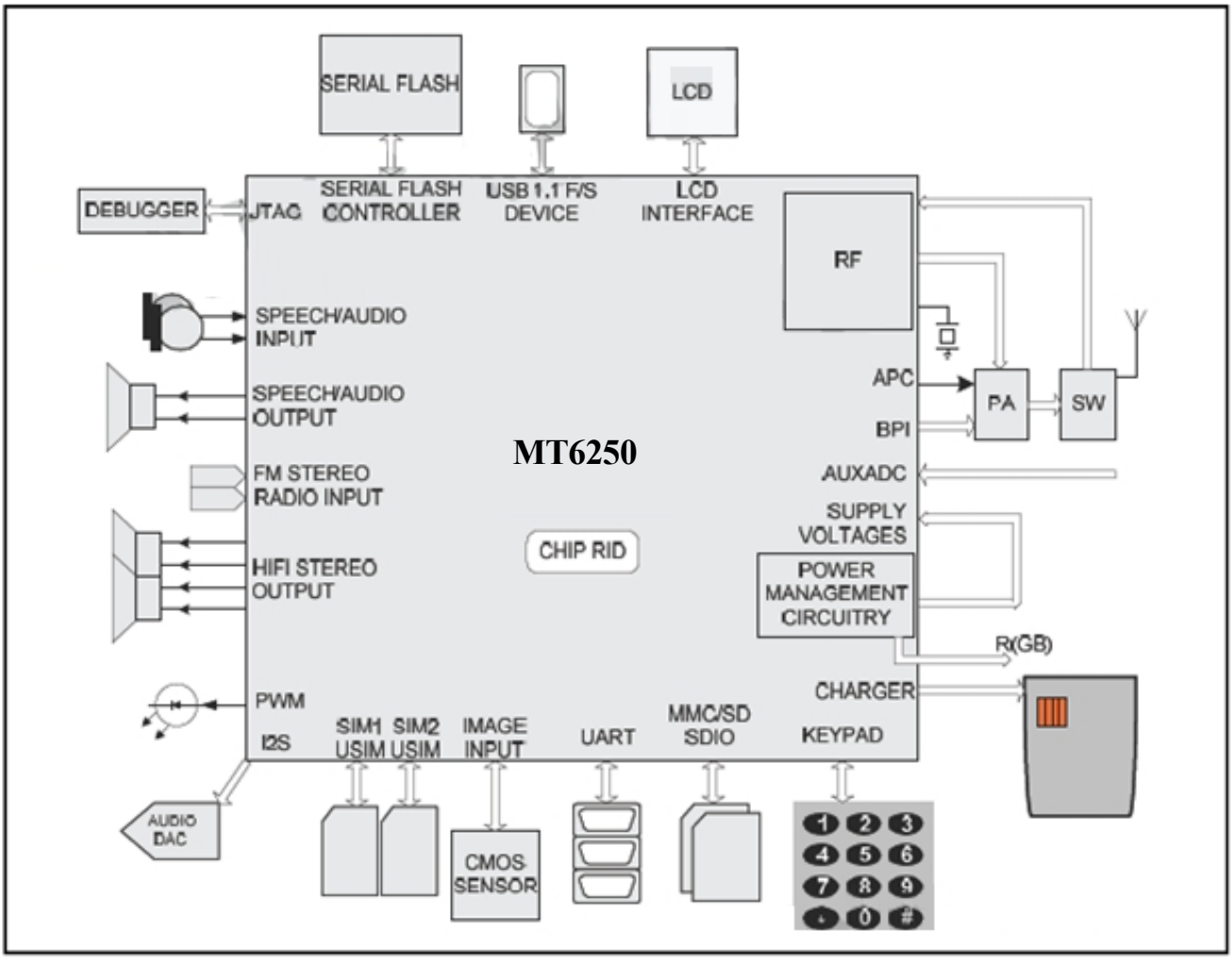
5.3 PCBA Layout side A



5.4 PCB Layout Side B



Chapter 6 System Block Chart



Chapter 7 Unit Circuit

7.1.1 System Overview

MT6250 is a GSM/GPRS handset chip solution which integrates RF, analog baseband, digital baseband as well as Power Management Unit(PMU) and can greatly reduce the component count and make a smaller PCB size MT6250 including Bluetooth and FM. Besides, MT6250 is capable of Single Antenna Interference Cancellation (SAIC) and AMR speech Based on a 32-bit ARM7EJ-S RISC
Processor, MT6250 provides an unprecedented platform with high quality modem performance. The typical application diagram is shown as Figure 1.

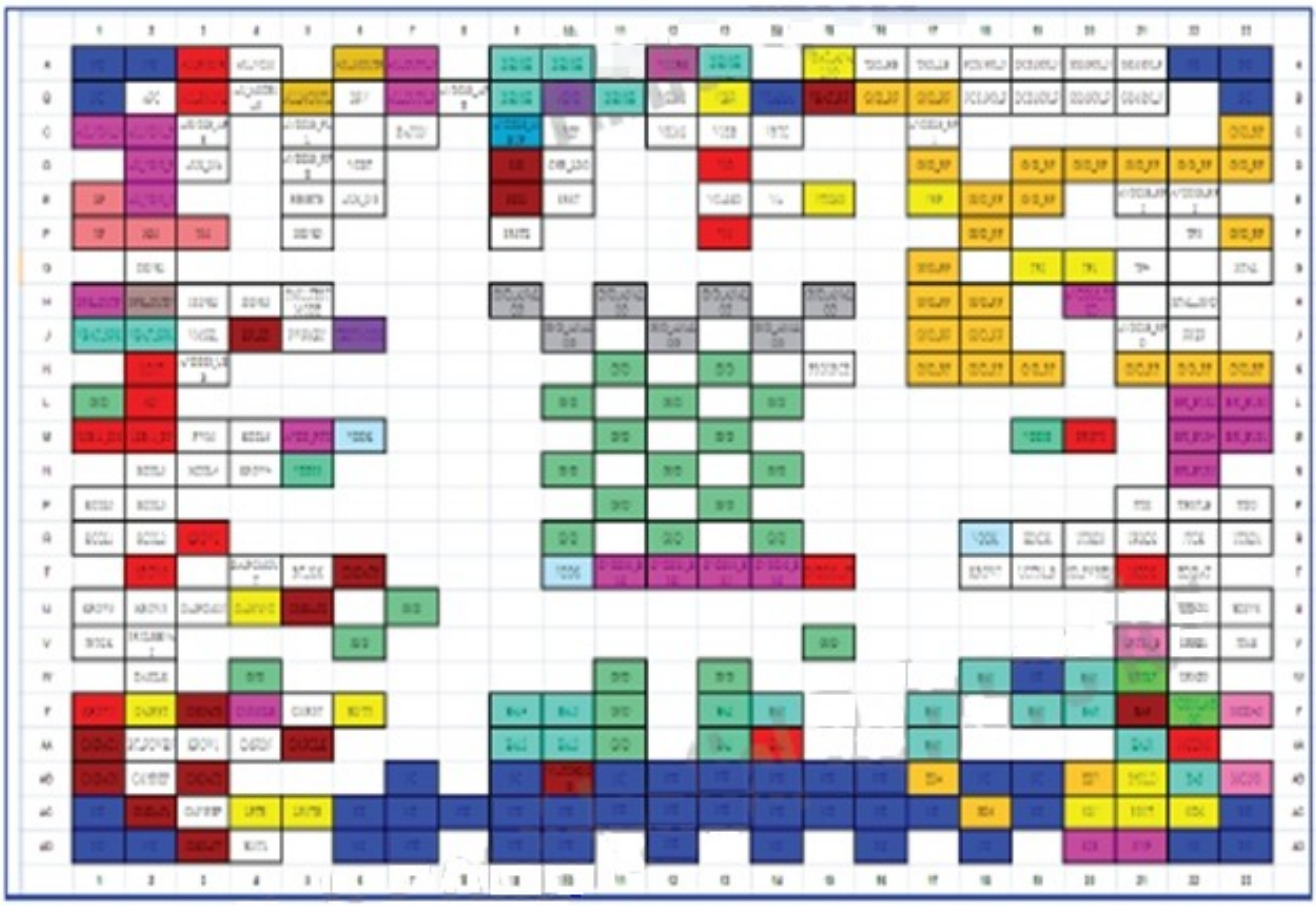
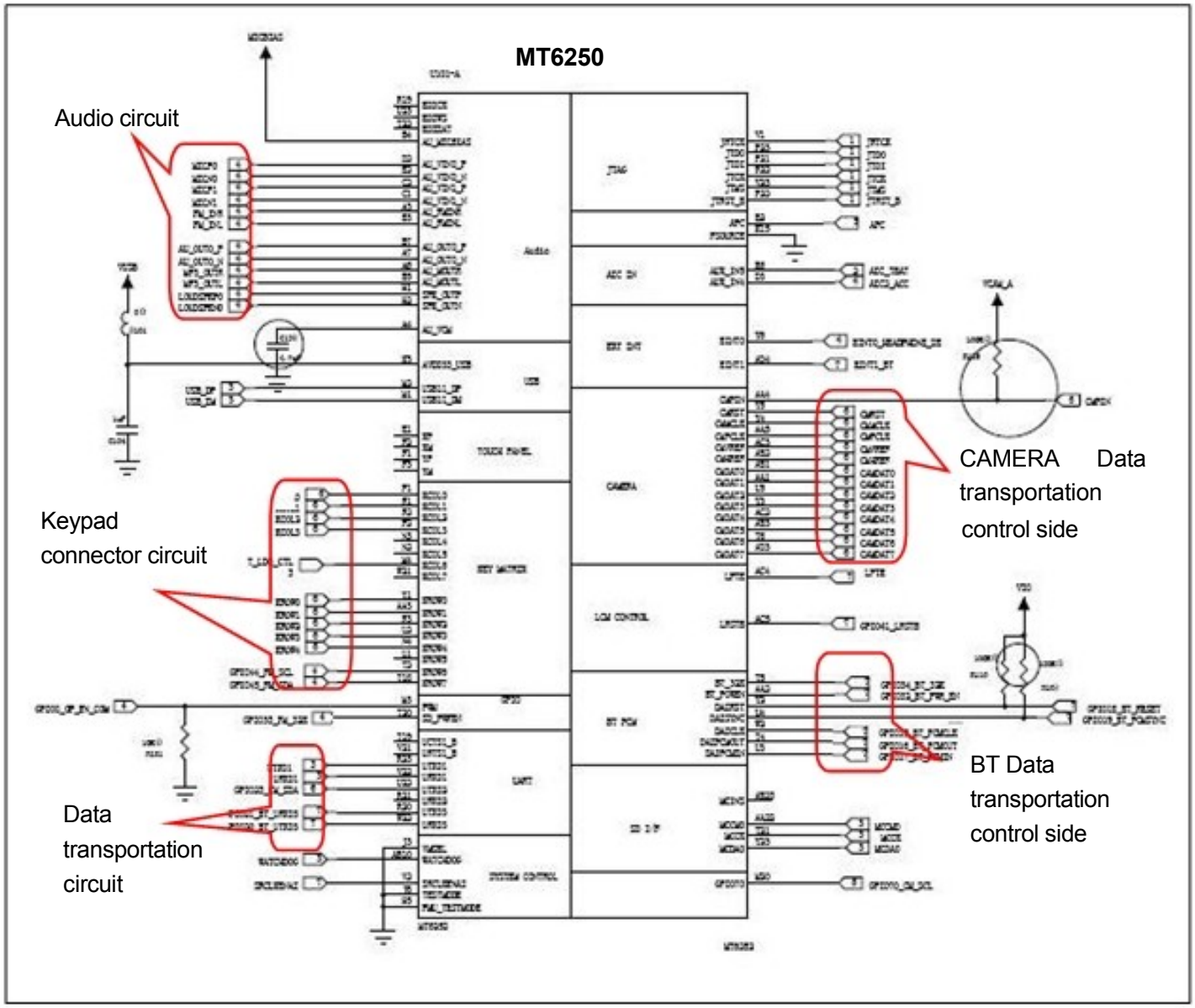
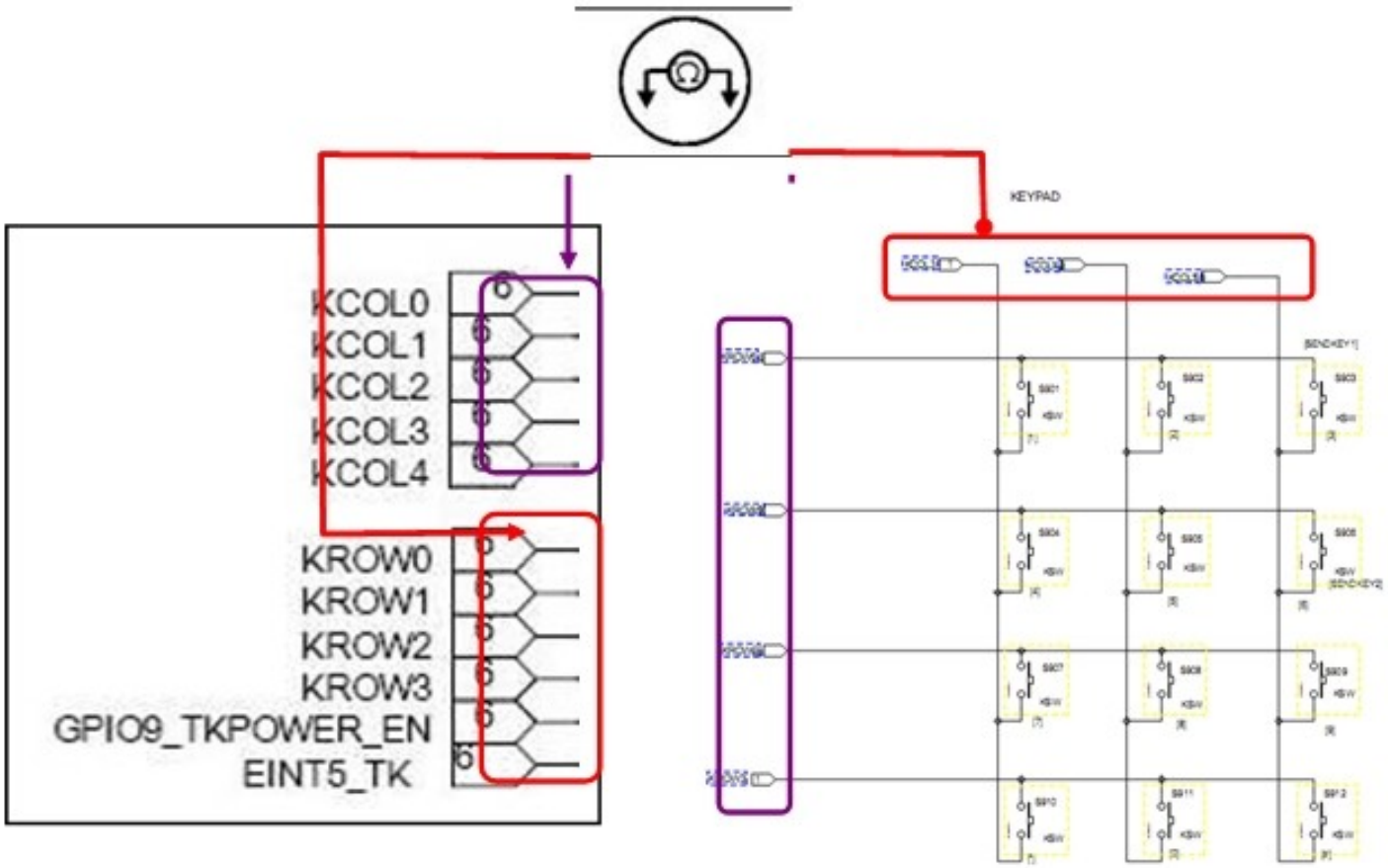


Figure 2 Top view of MT6252 11.6 x 12.1 mm 0.5 mm pitch TFBGA package

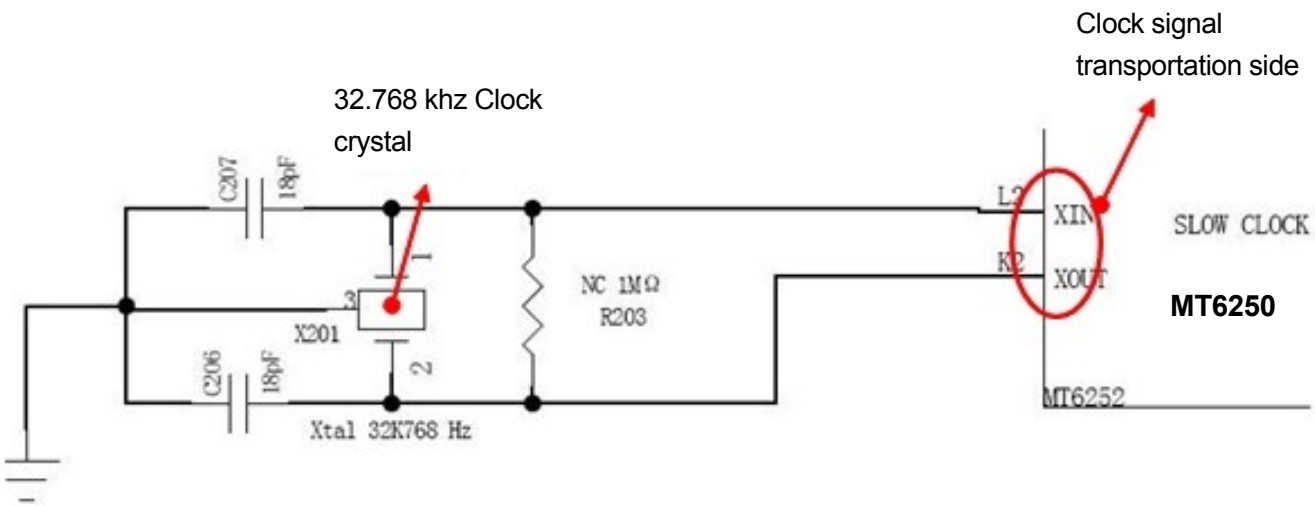
7.1.2 Baseband & CPU



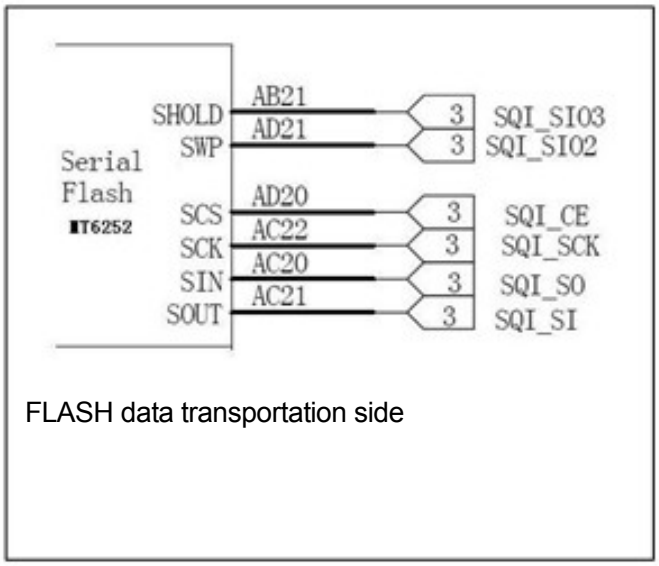
7.1.3 Baseband - Keypad



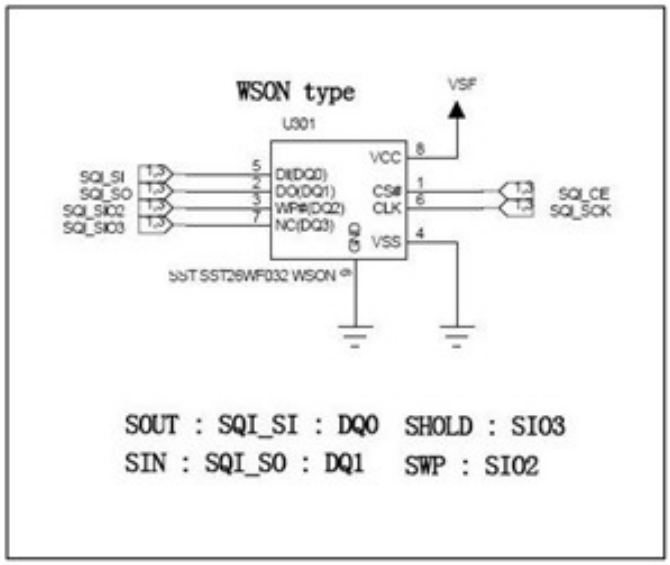
7.1.4 Clock 32.768KHZ Circuit



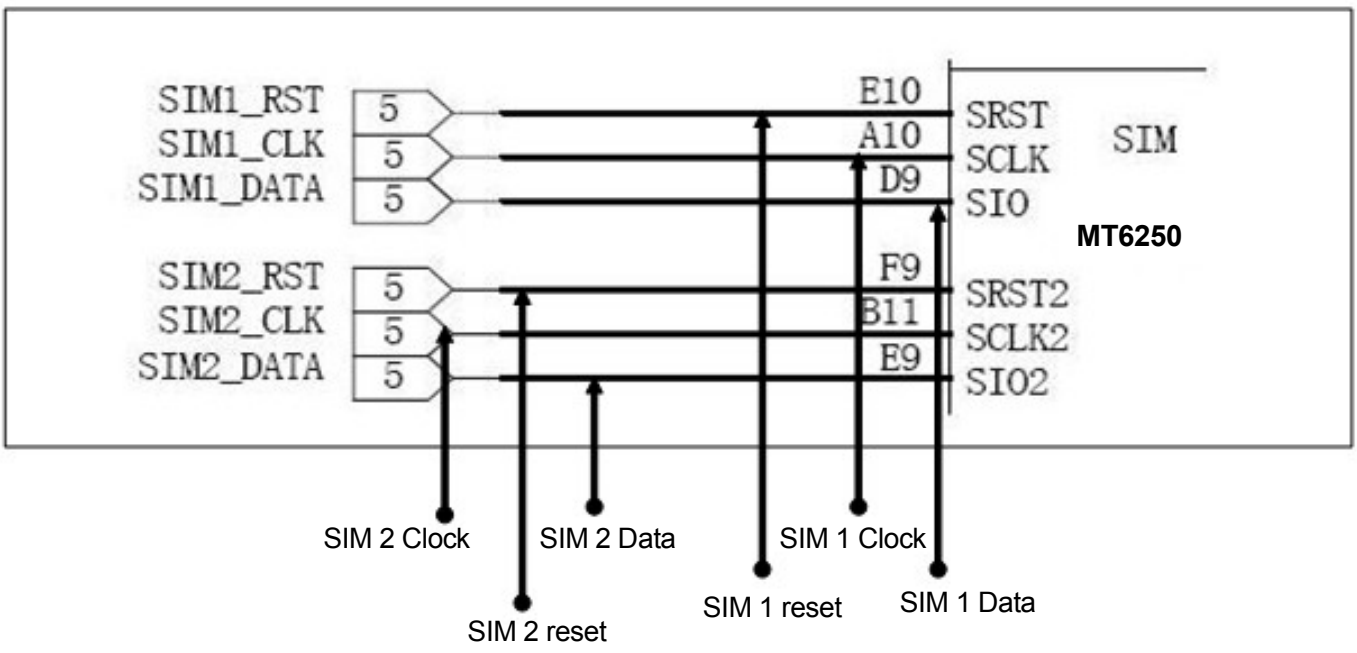
7.1.5 CPU to Flash



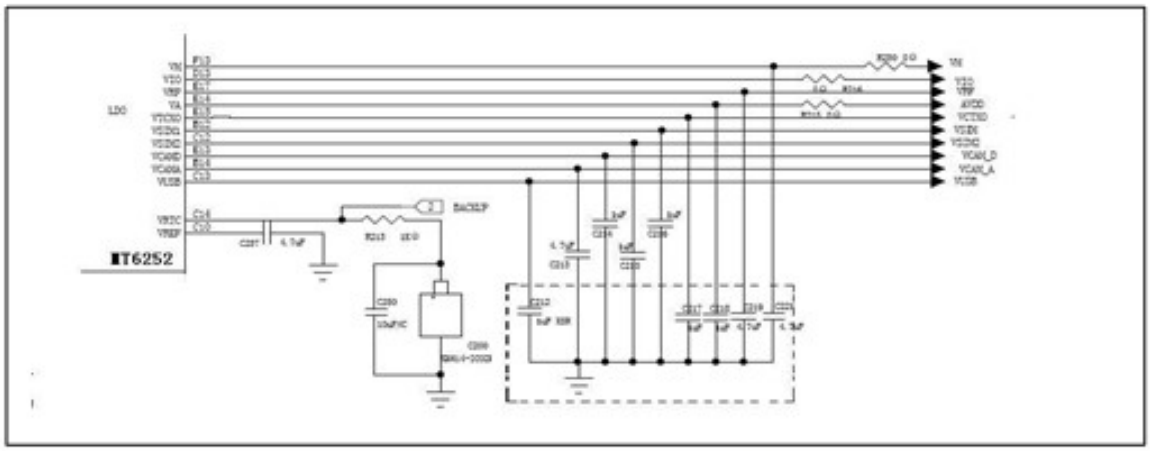
FLASH data transportation side



7.1.6 SIM data output

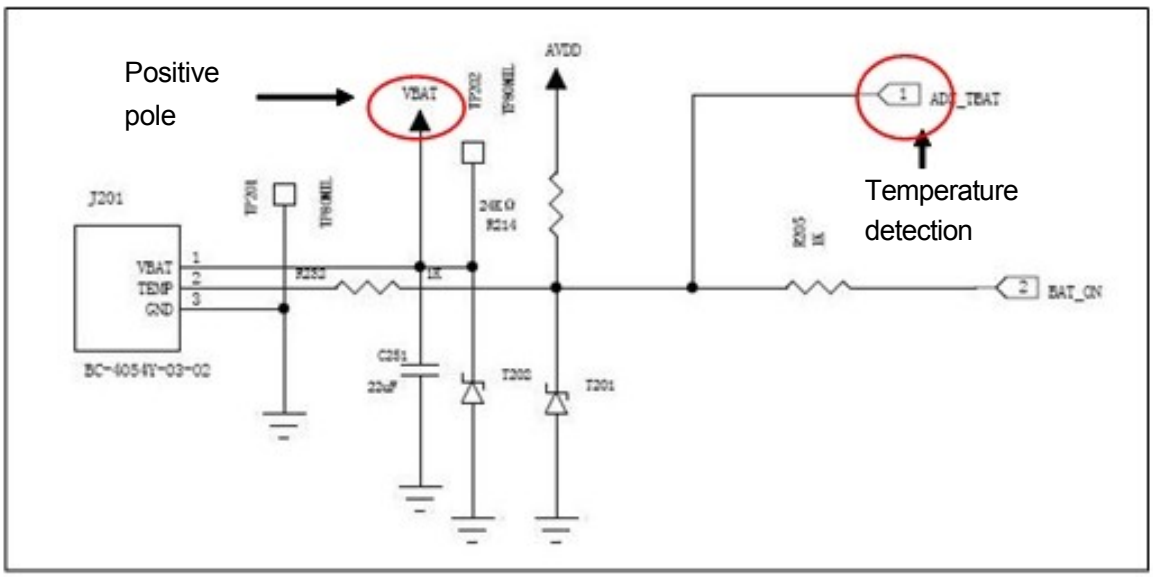


7.2 MT6250 CPU Power output

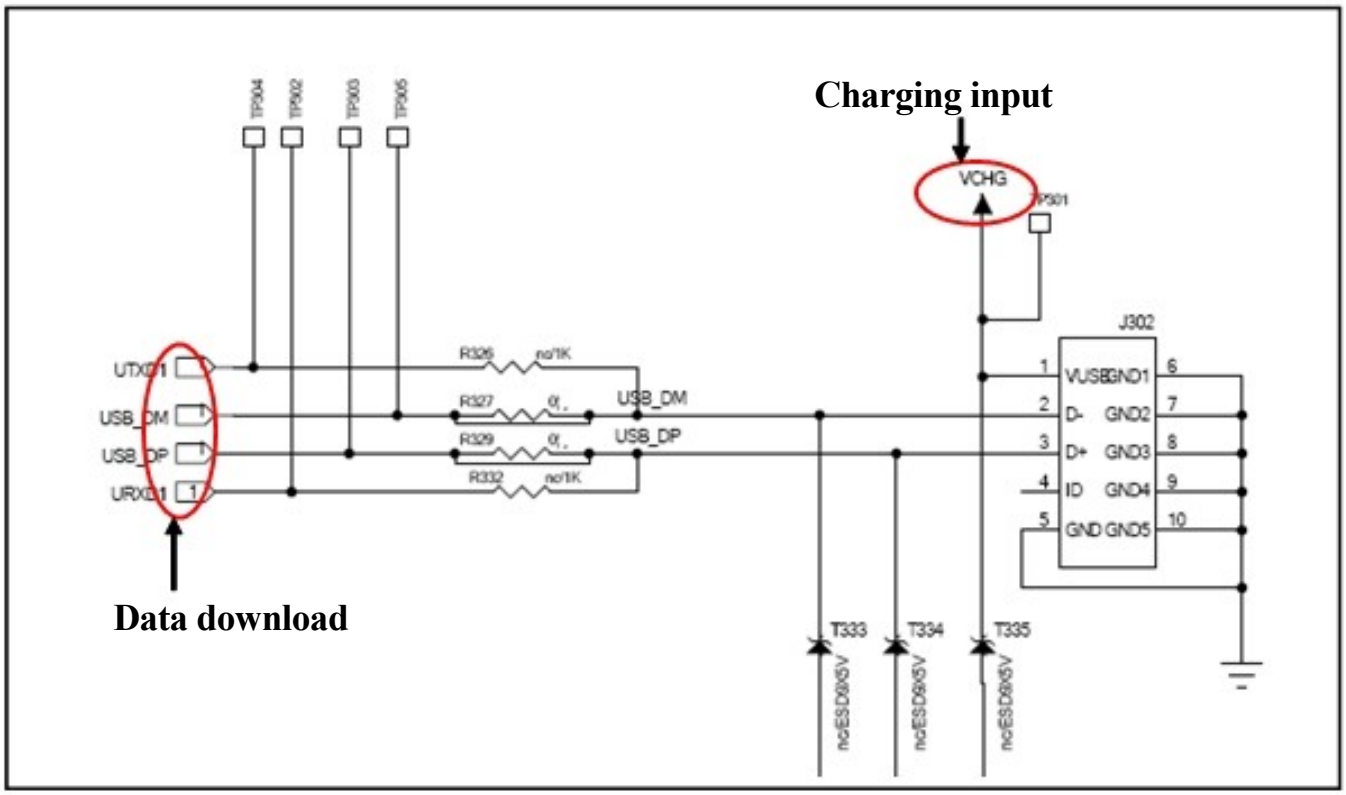


item	voltage	current
Vcore	1.2v	200ma
Vio	2.8v	100ma
Vadd	2.8v	150ma
Vtcxo	2.8v	20ma
Vrtc	1.2v	200ma
Vmem	2.8v	150ma
Vsim	2.8v	20ma
Vcs	2.8v	200ma
vcs	1.8v	150ma

7.3 Battery connector

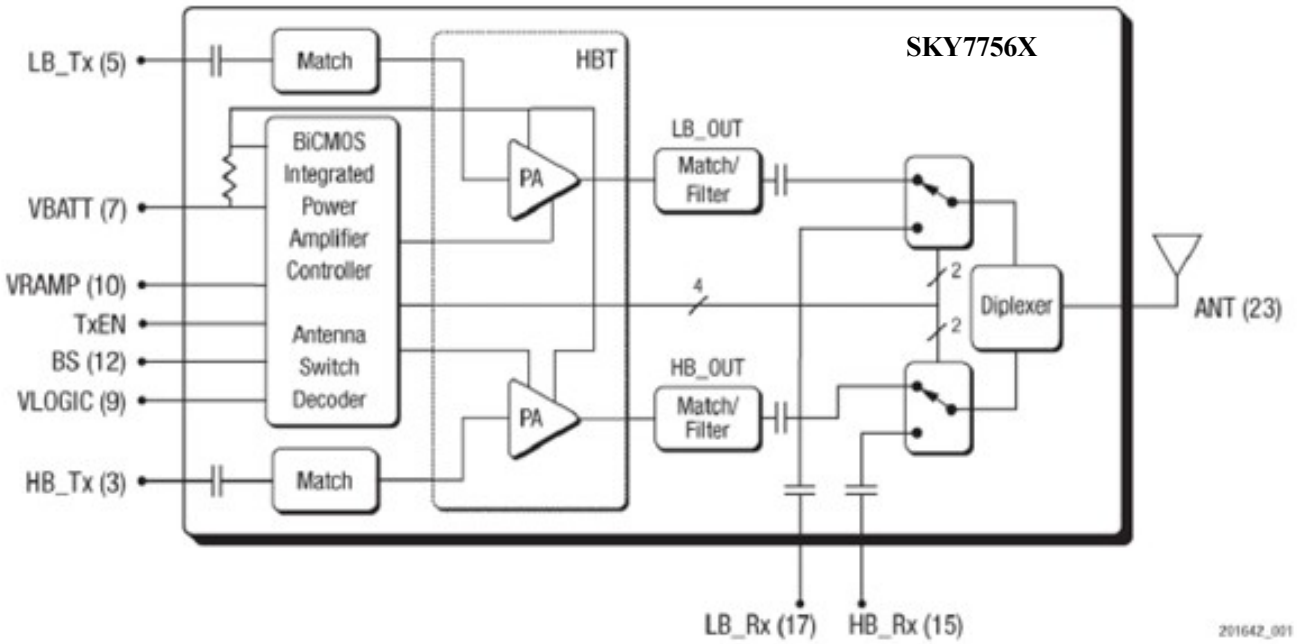


7.4 I/O Interface (5 PIN)

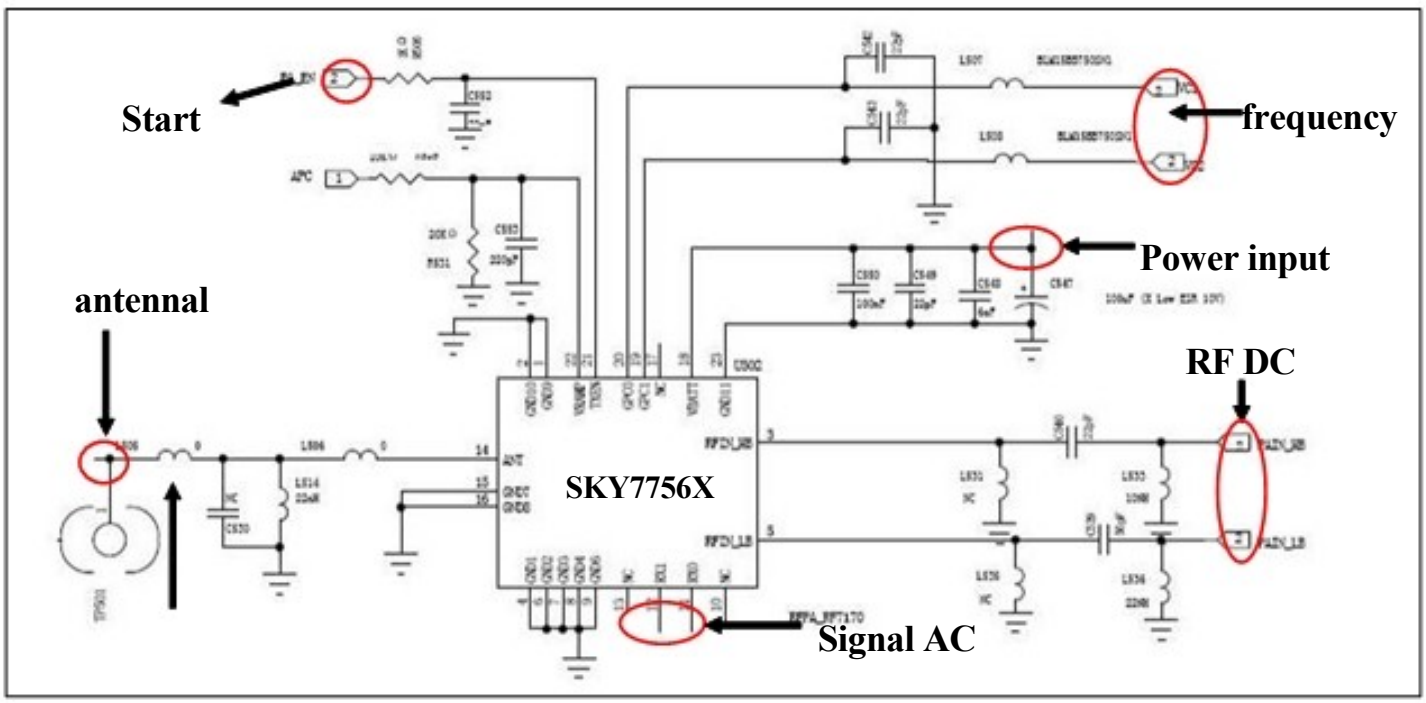


7.5.1 System

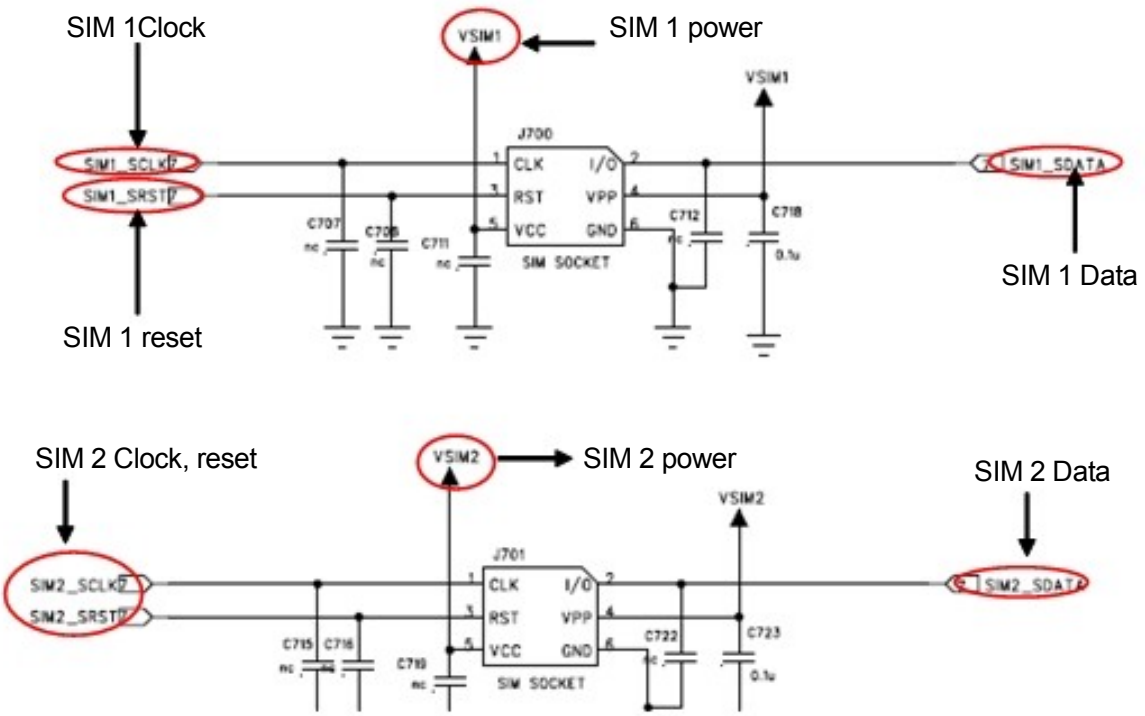
The SKY7756X is a dual-band transmit and receive front-end module(FEM) with integrated power Amplifier control (iPAC) for cellular handsets comprising GSM900 and DCS1800 operation. The FEM has capability in applications of U S and euro dual-band platforms. Designed in a low profile, compact form factor, the SKY77569 offers a complete Transmit VCO-to-Antenna and Antenna-to-receive SAW filter solution. The FEM also supports Class 12 General Packet Radio Service (GPRS) multi-slot operation.



7.5.2 power amplifier

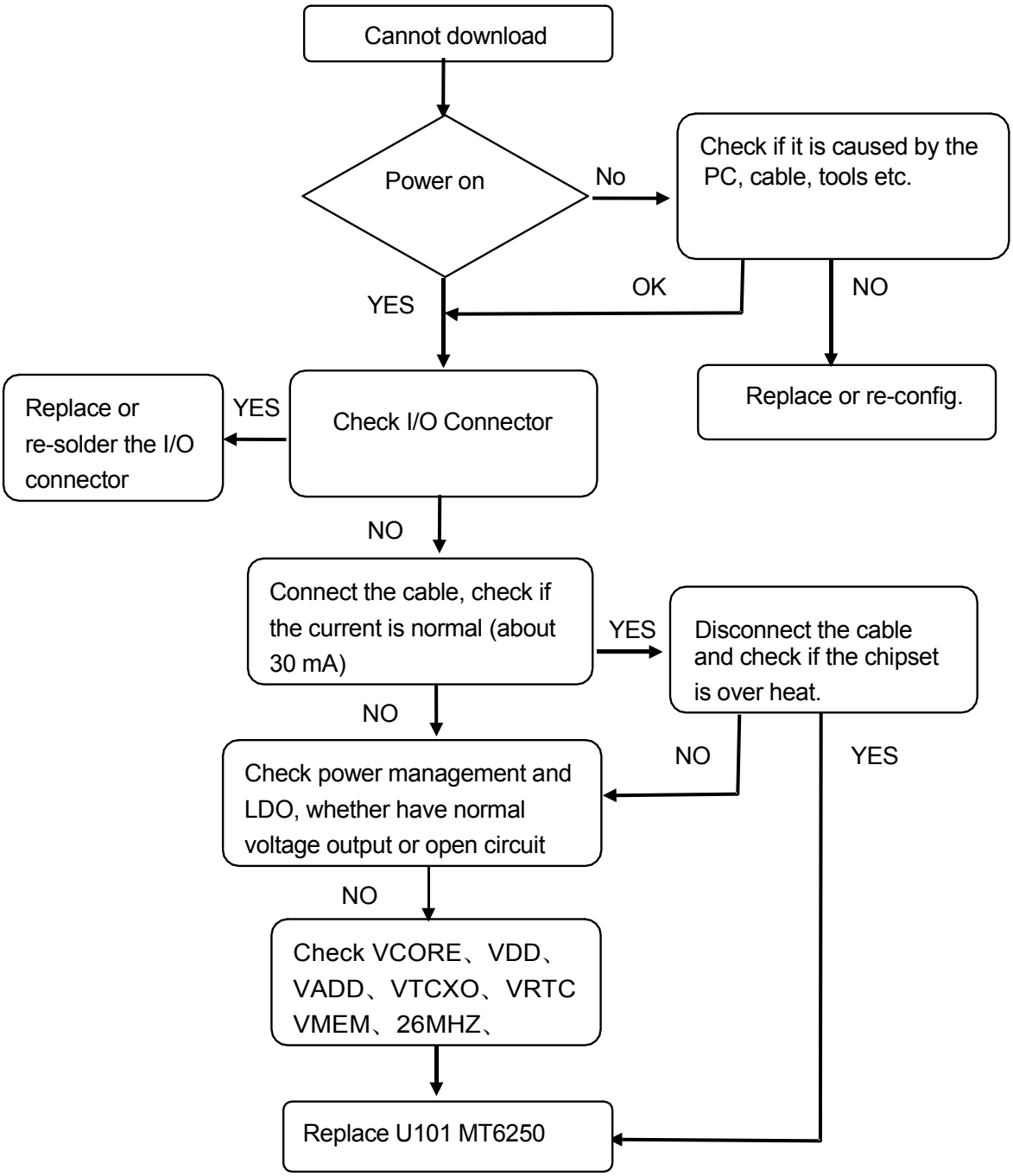


7.6 SIM circuit

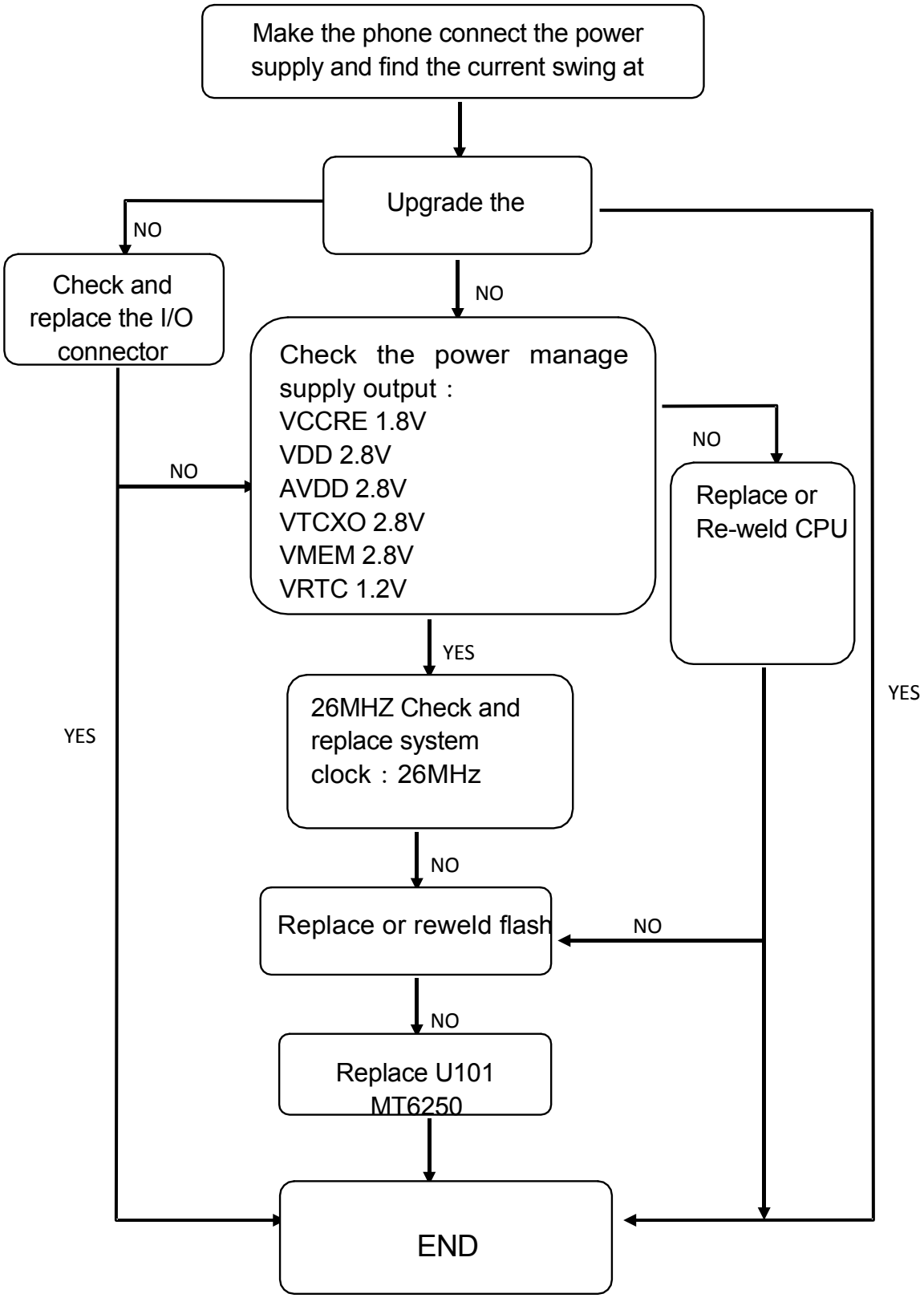


Chapter 8 Trouble shooting guide

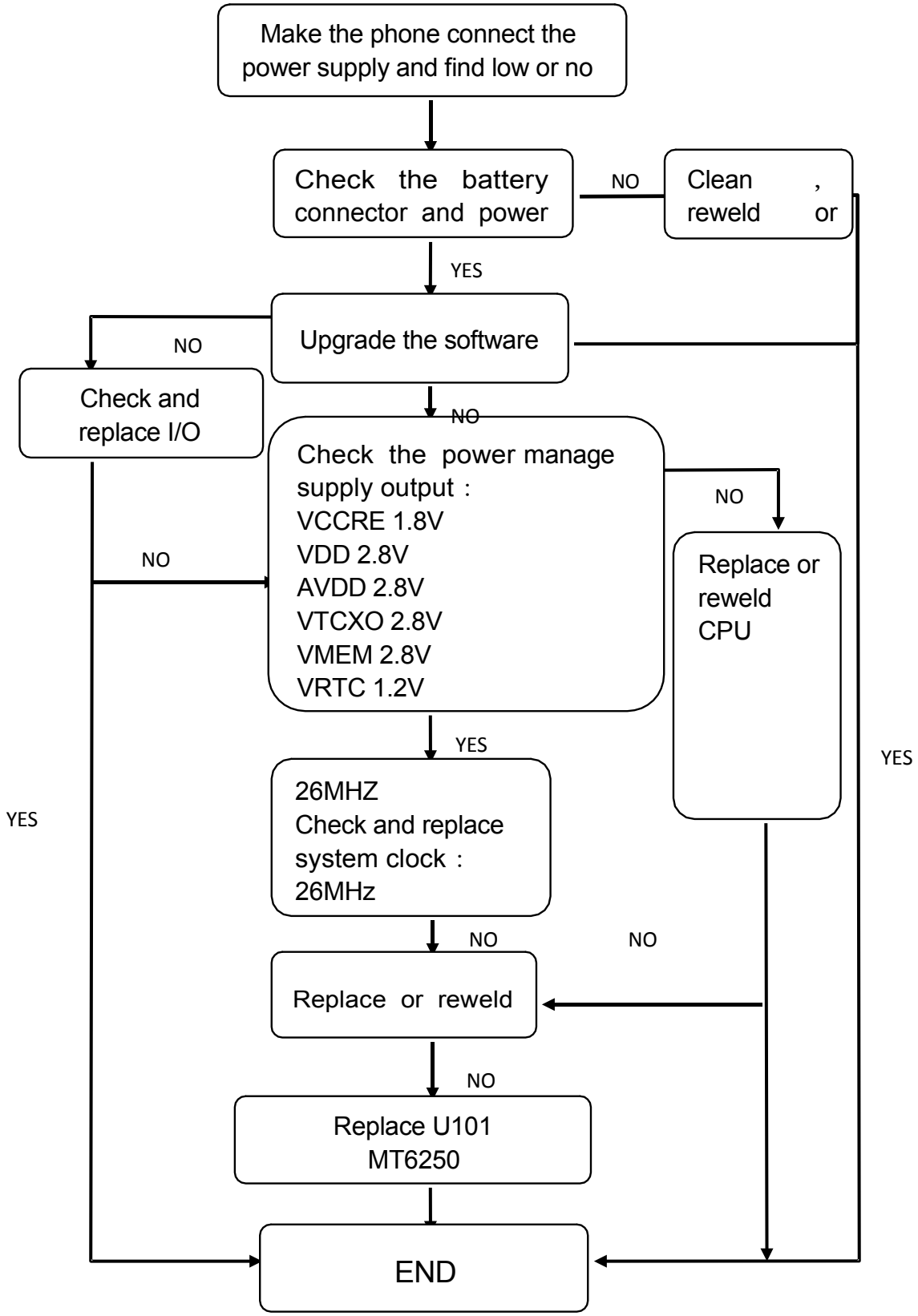
Can't Download



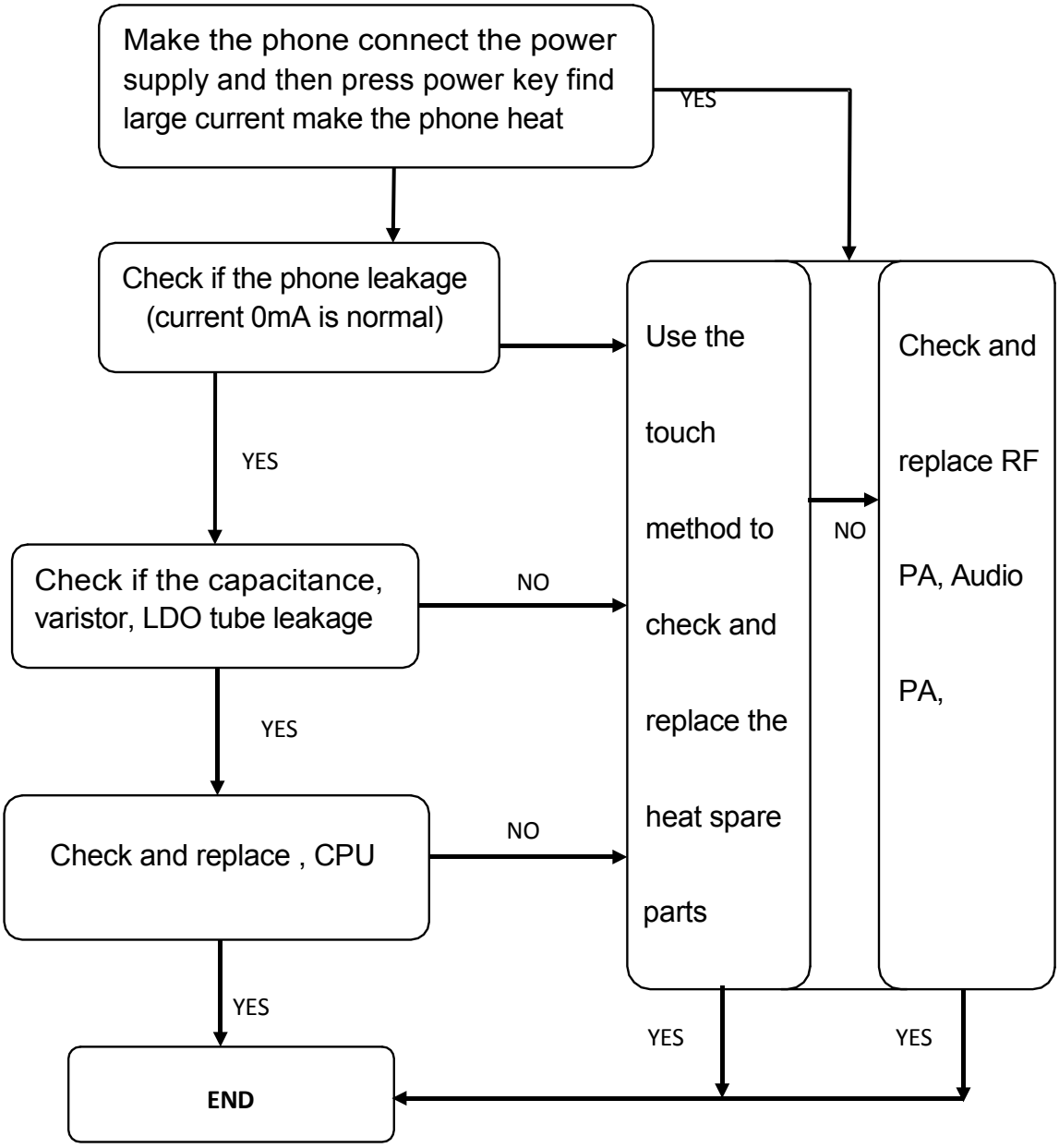
Cannot power on-current swing instability



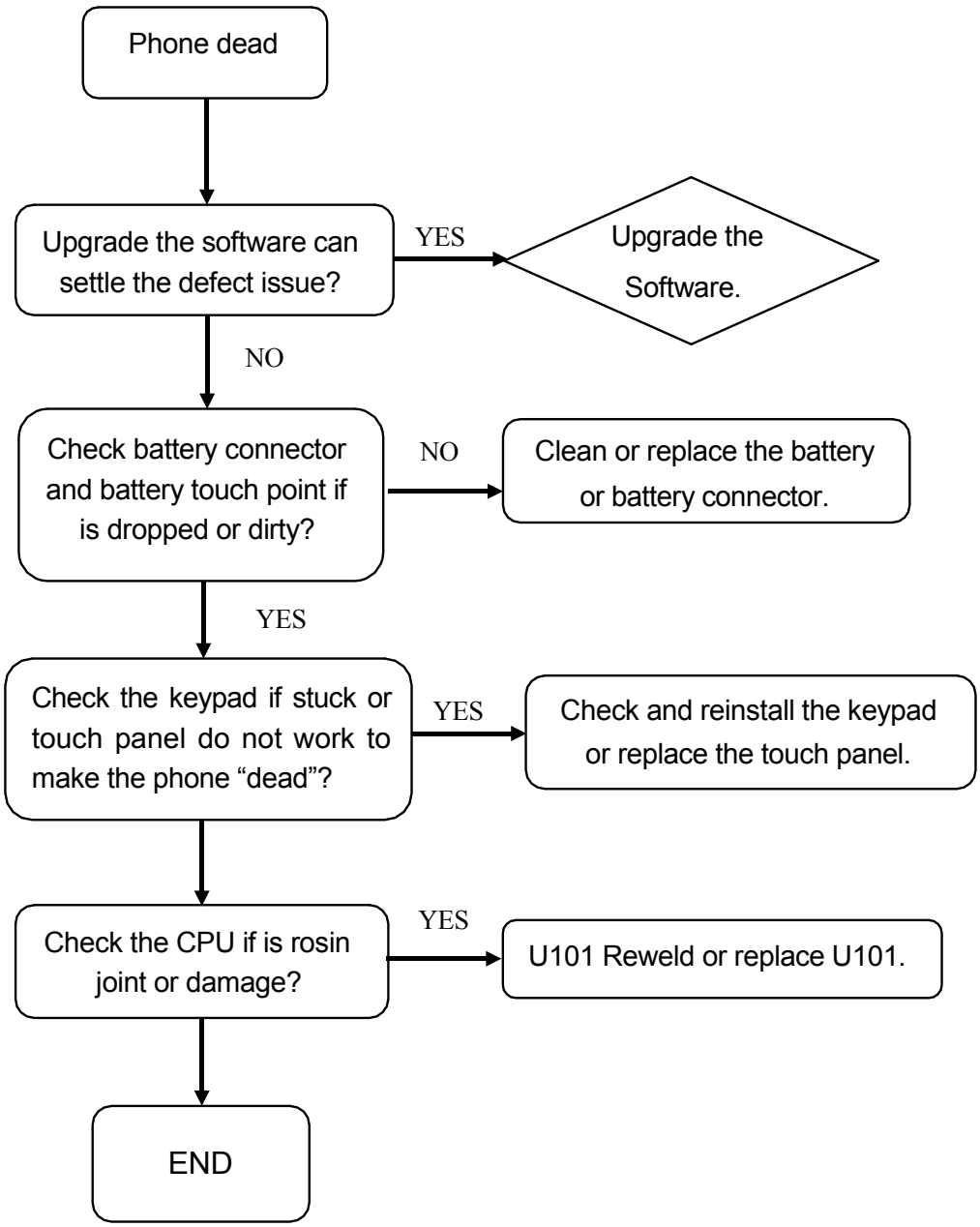
Cannot power on-low or no current



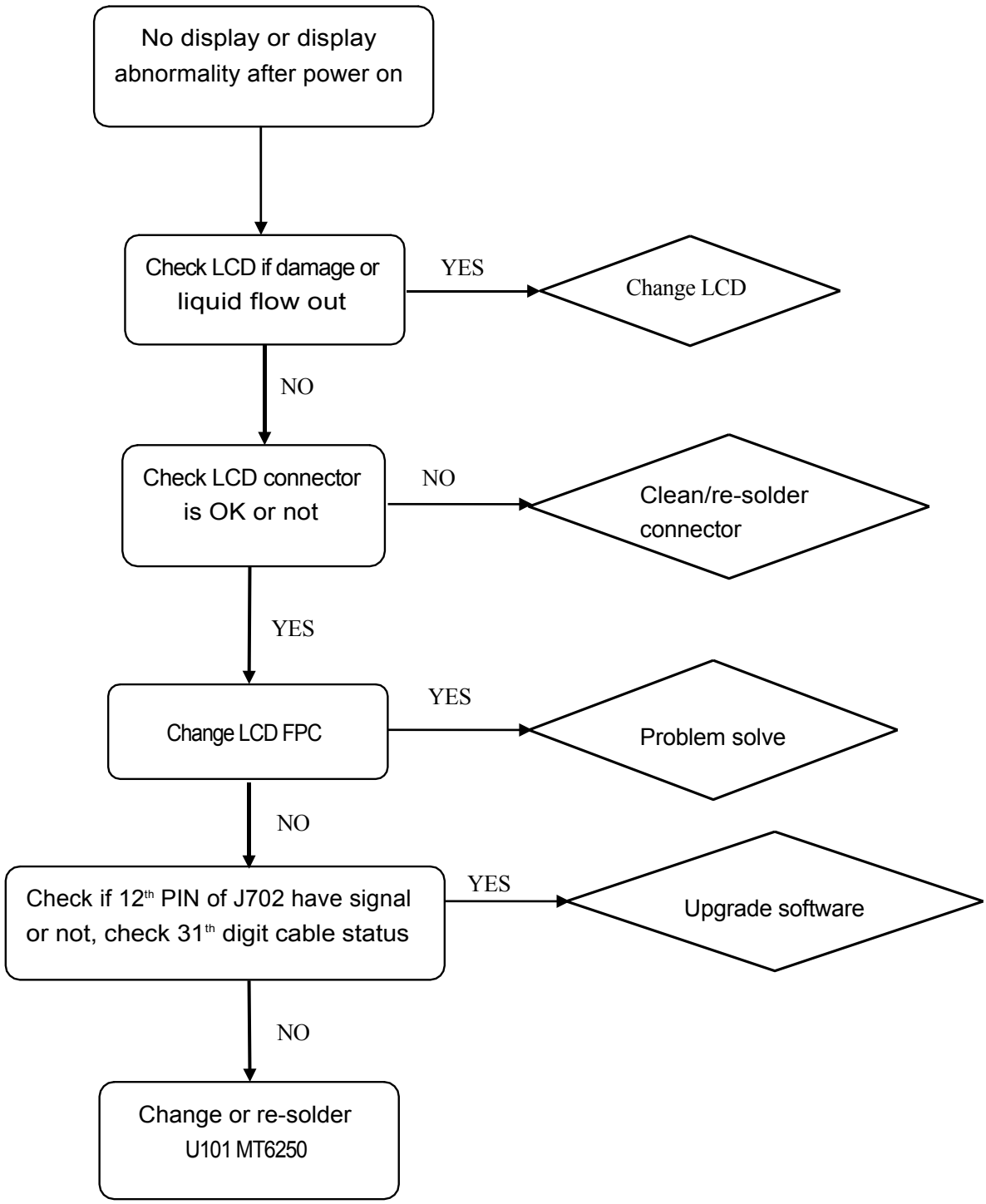
Cannot Power on-large current



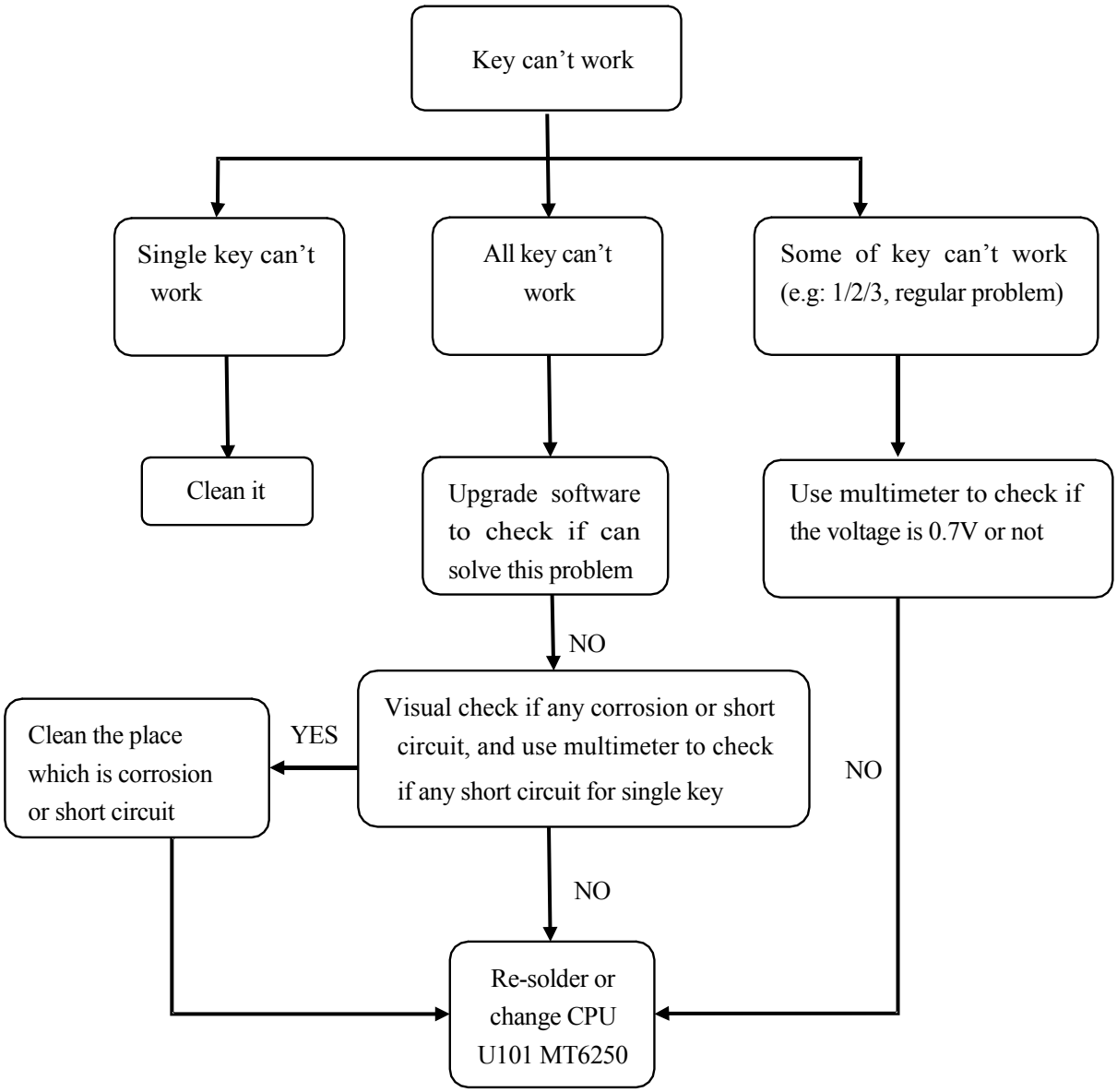
Repair flow for phone dead



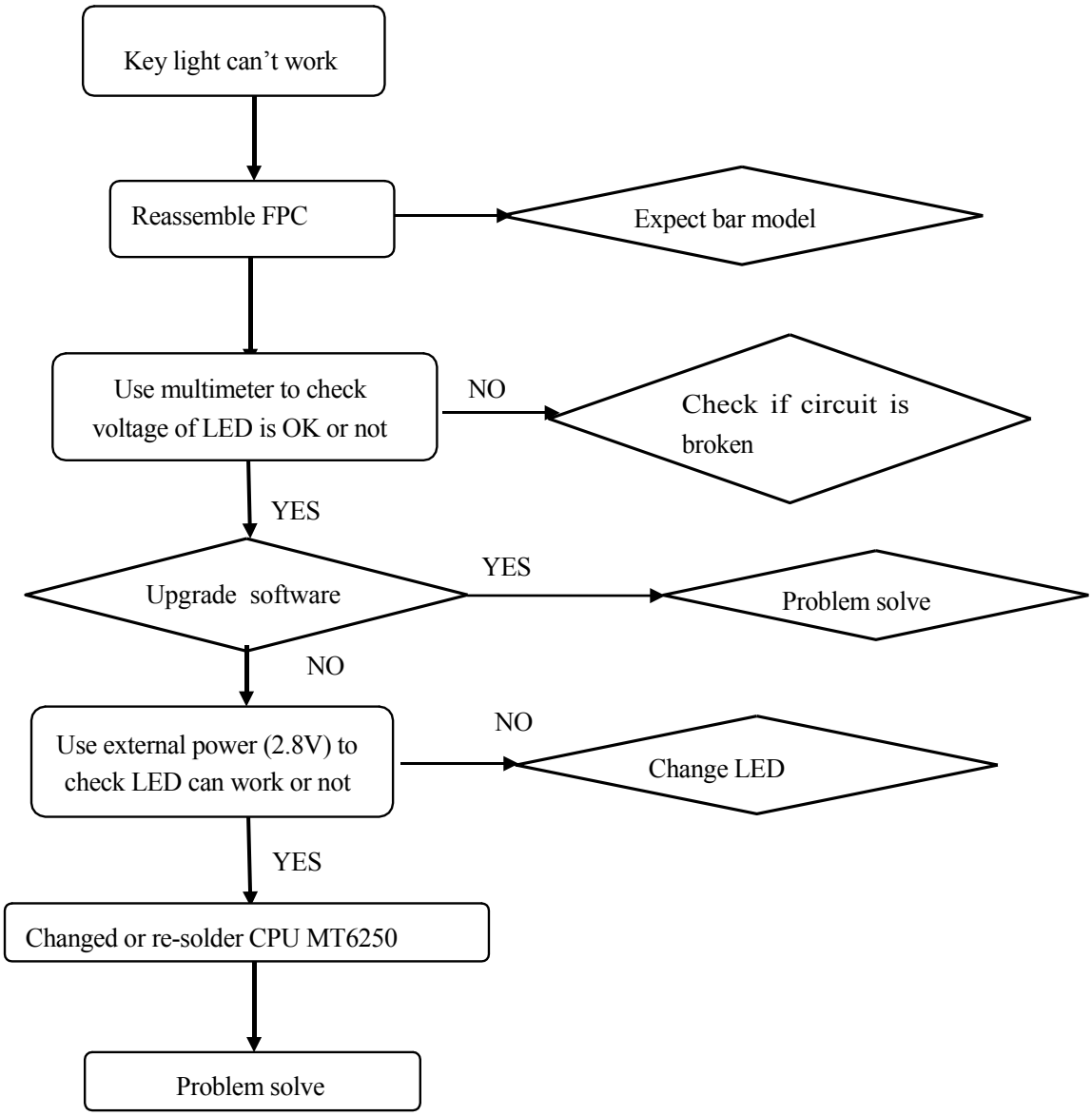
No display or display abnormality



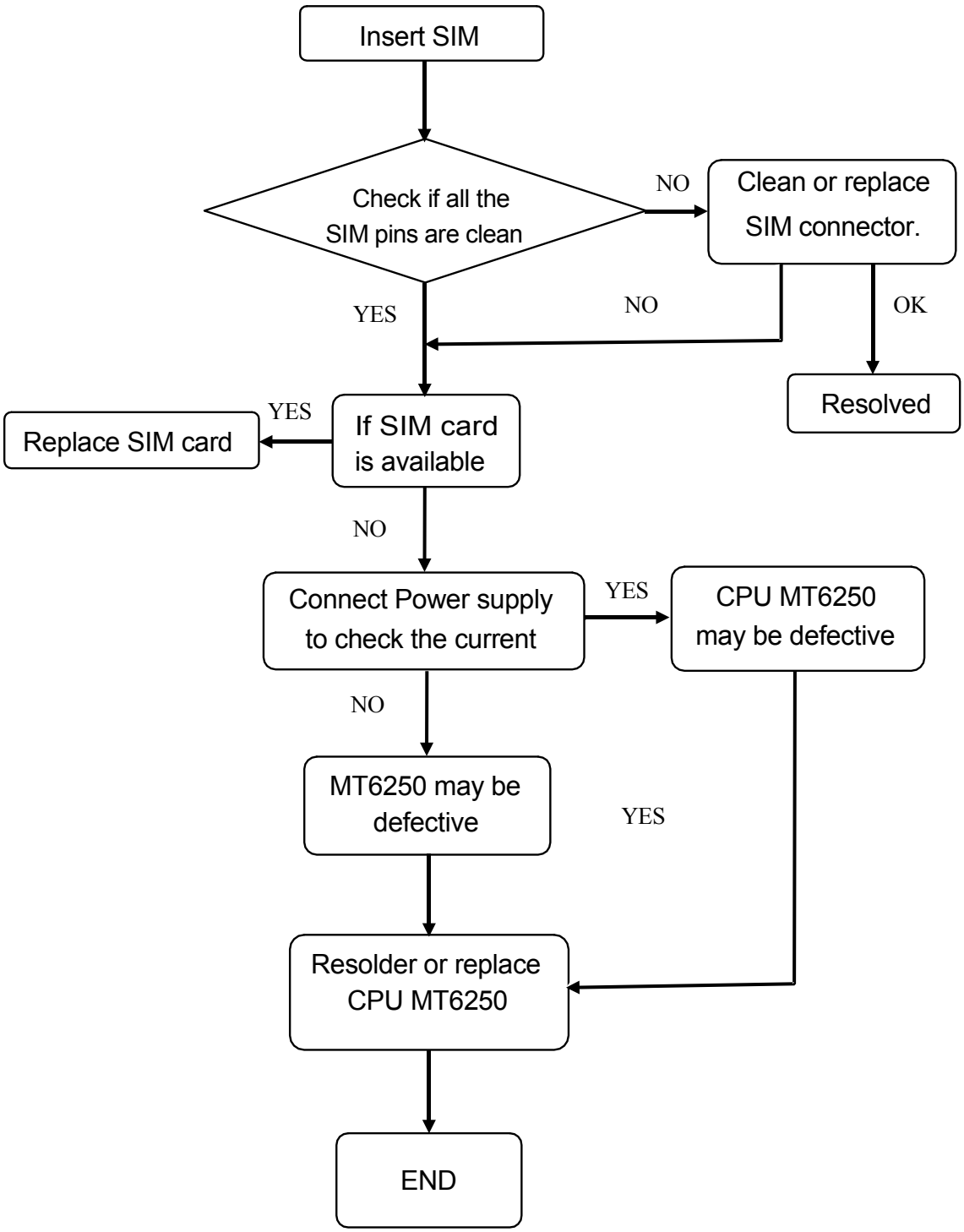
Test process for Key can't work



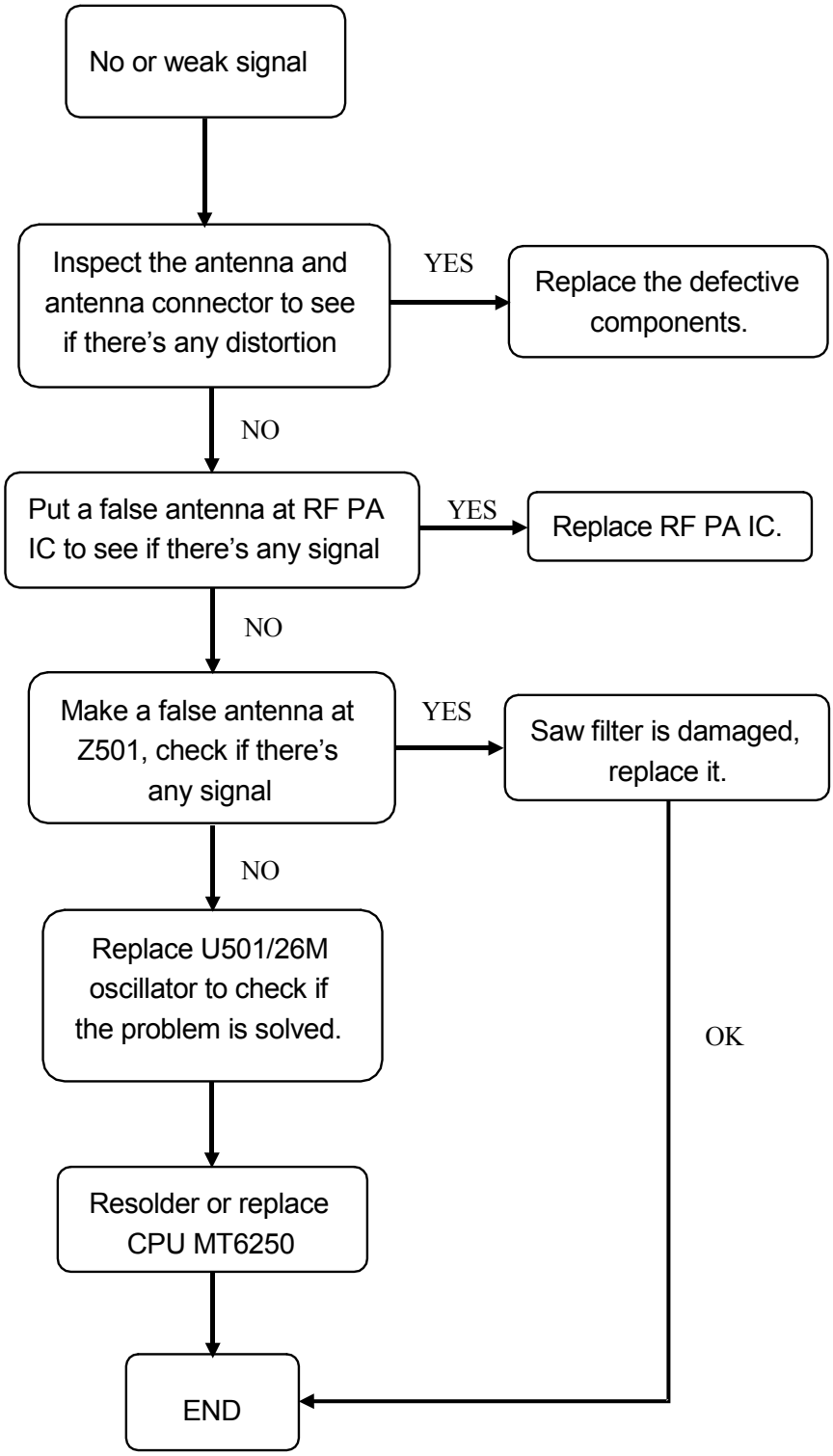
Key light can't work



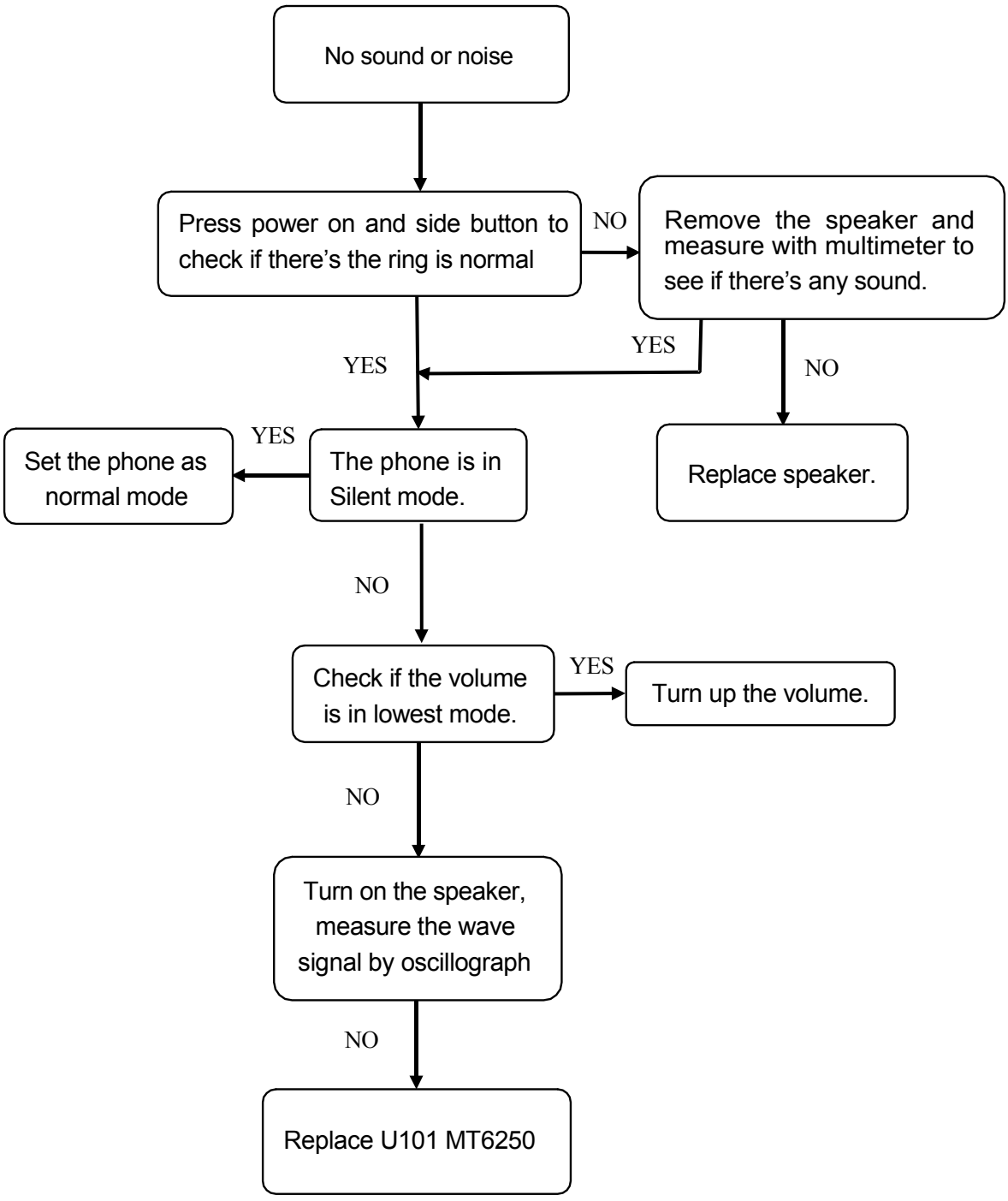
Insert SIM Repair Process



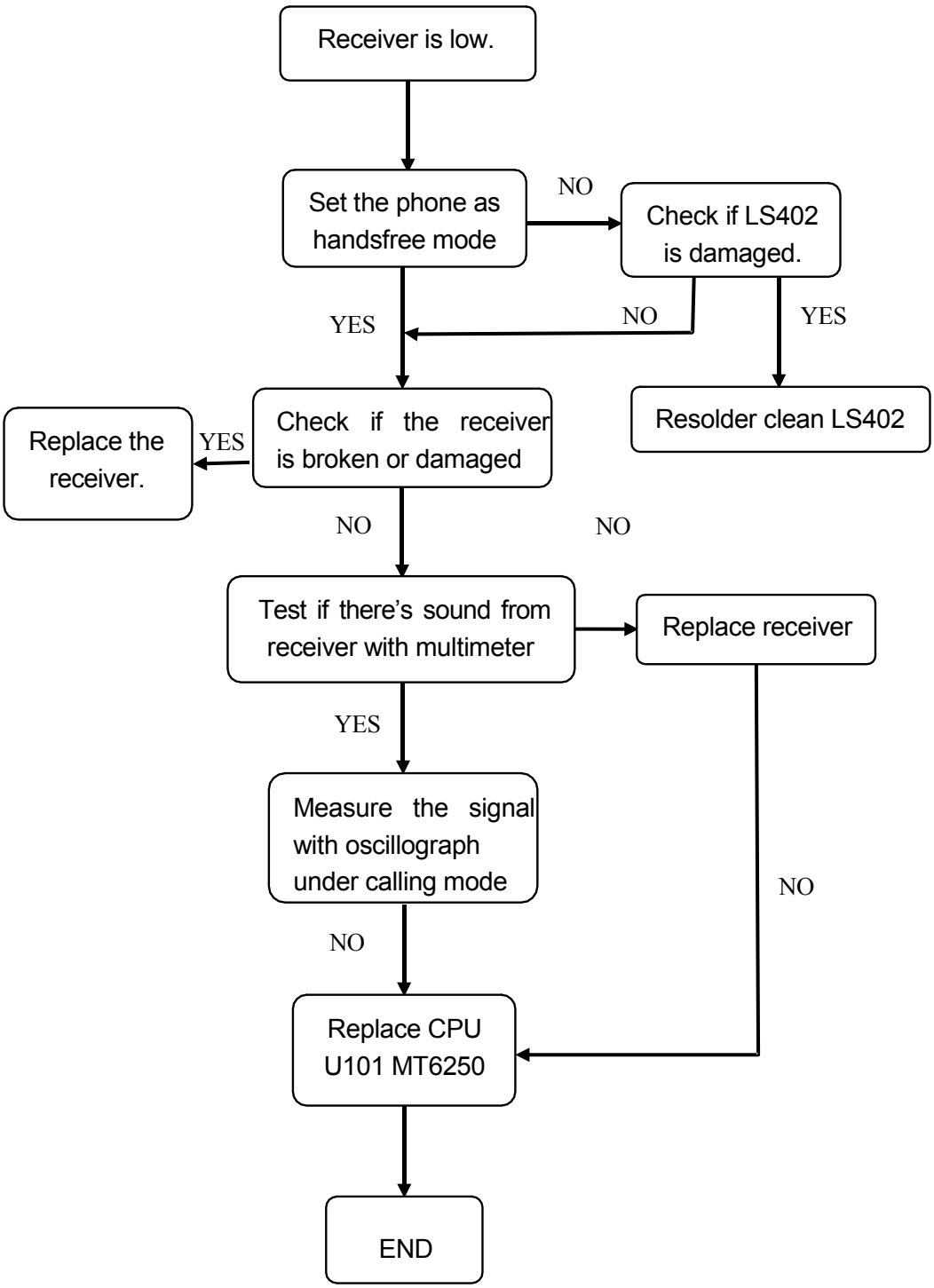
N0/weak signal trouble shooing



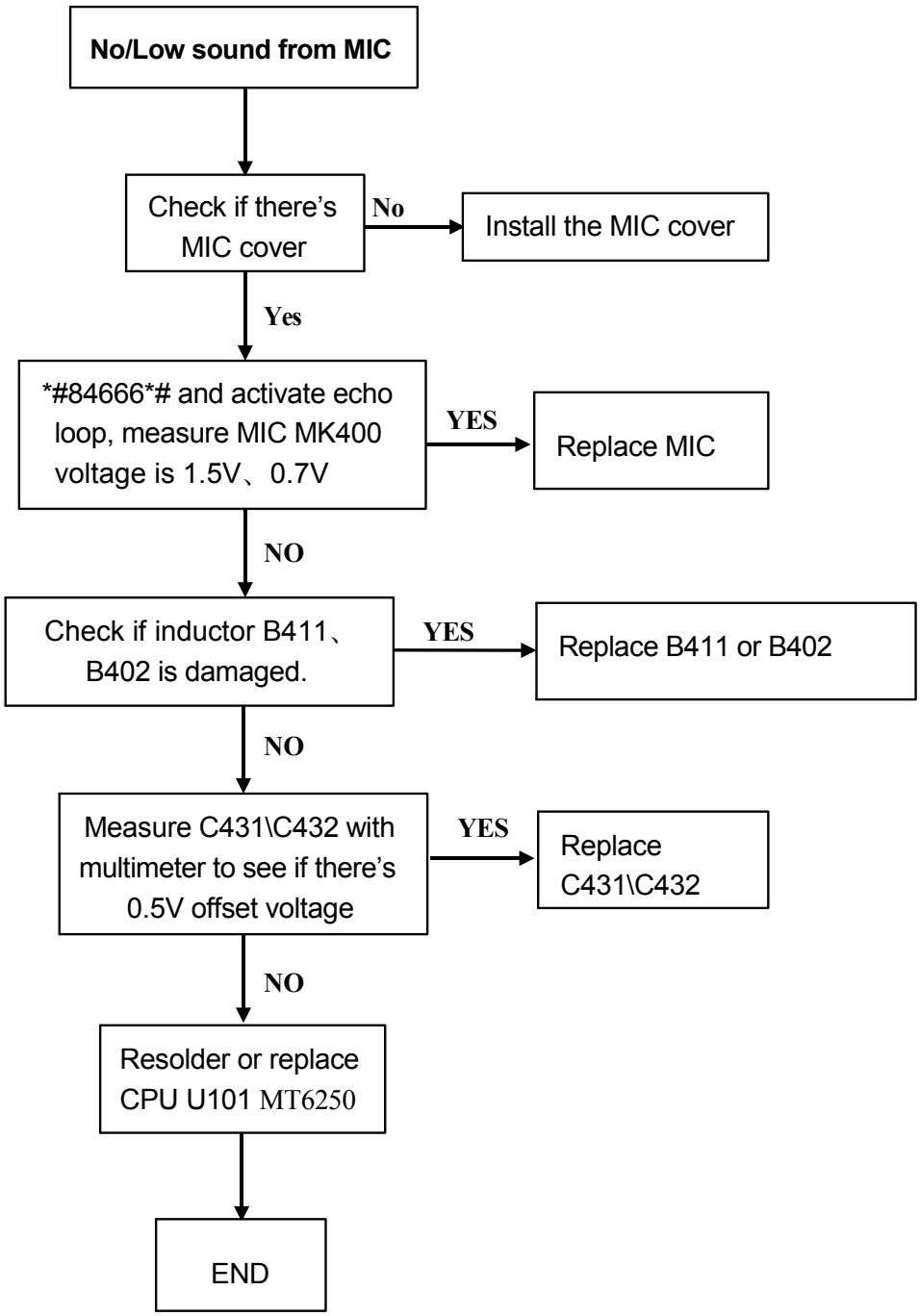
No/Low sound from Speaker



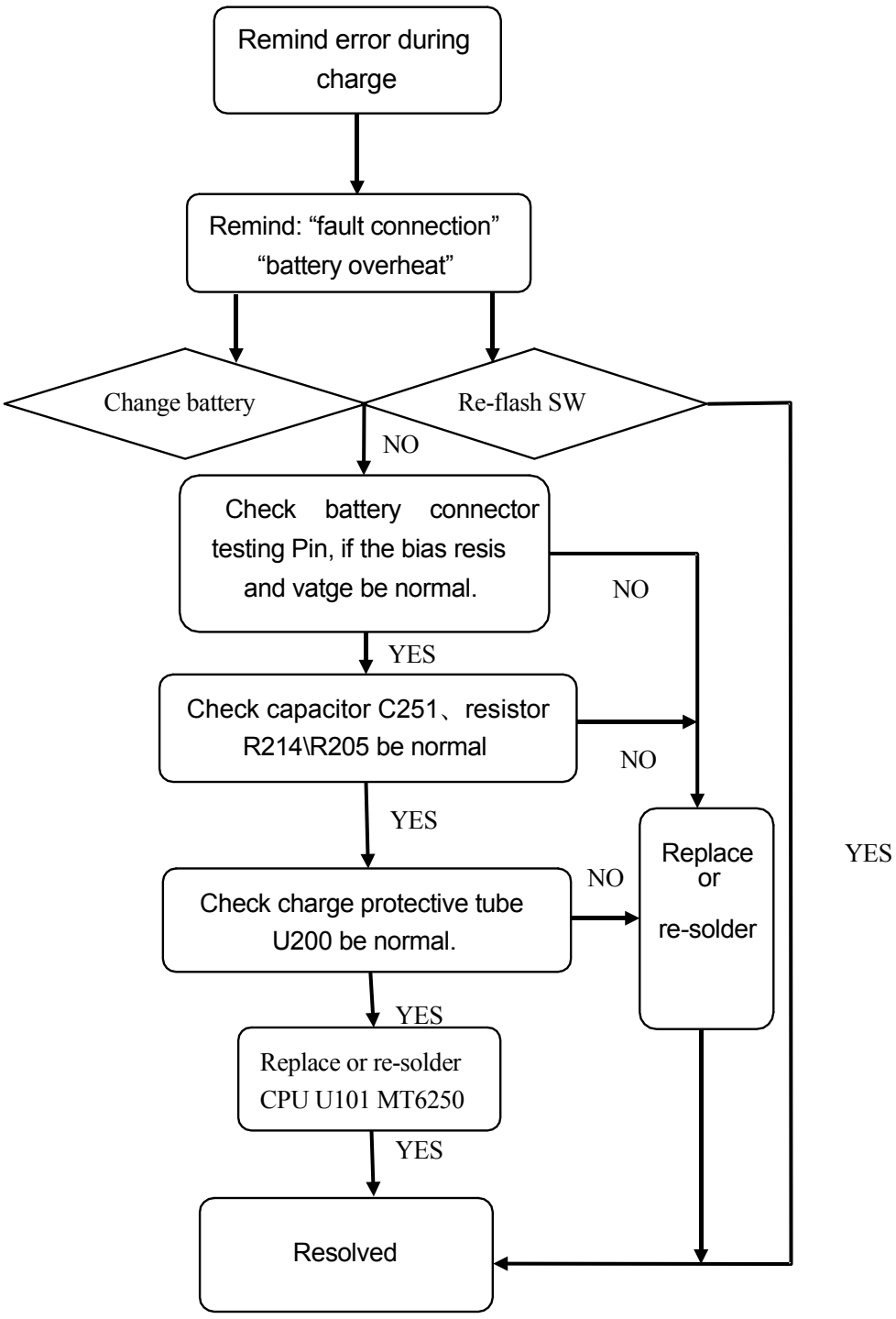
Receiver low voice or no voice



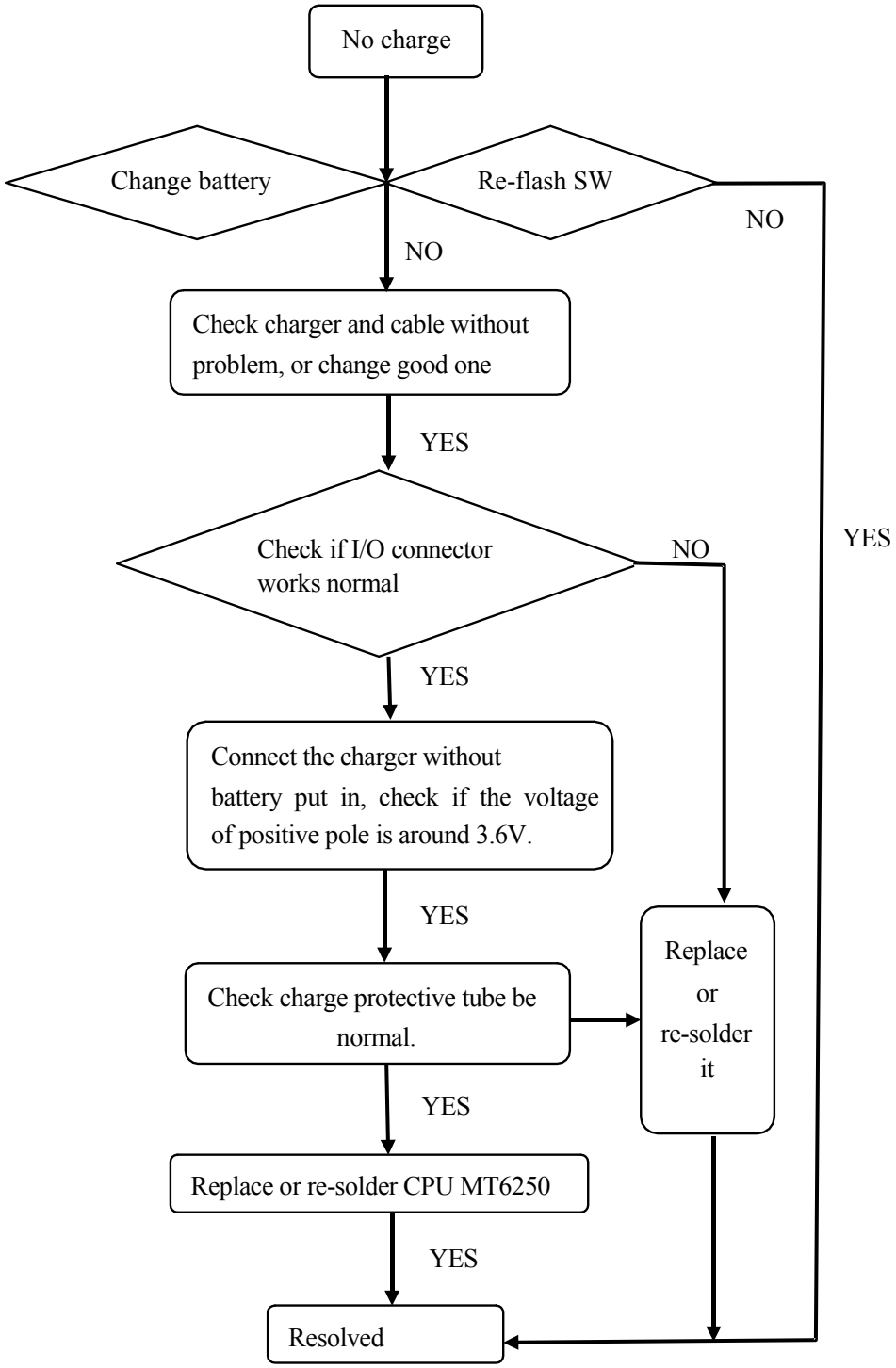
No/Low sound from MIC



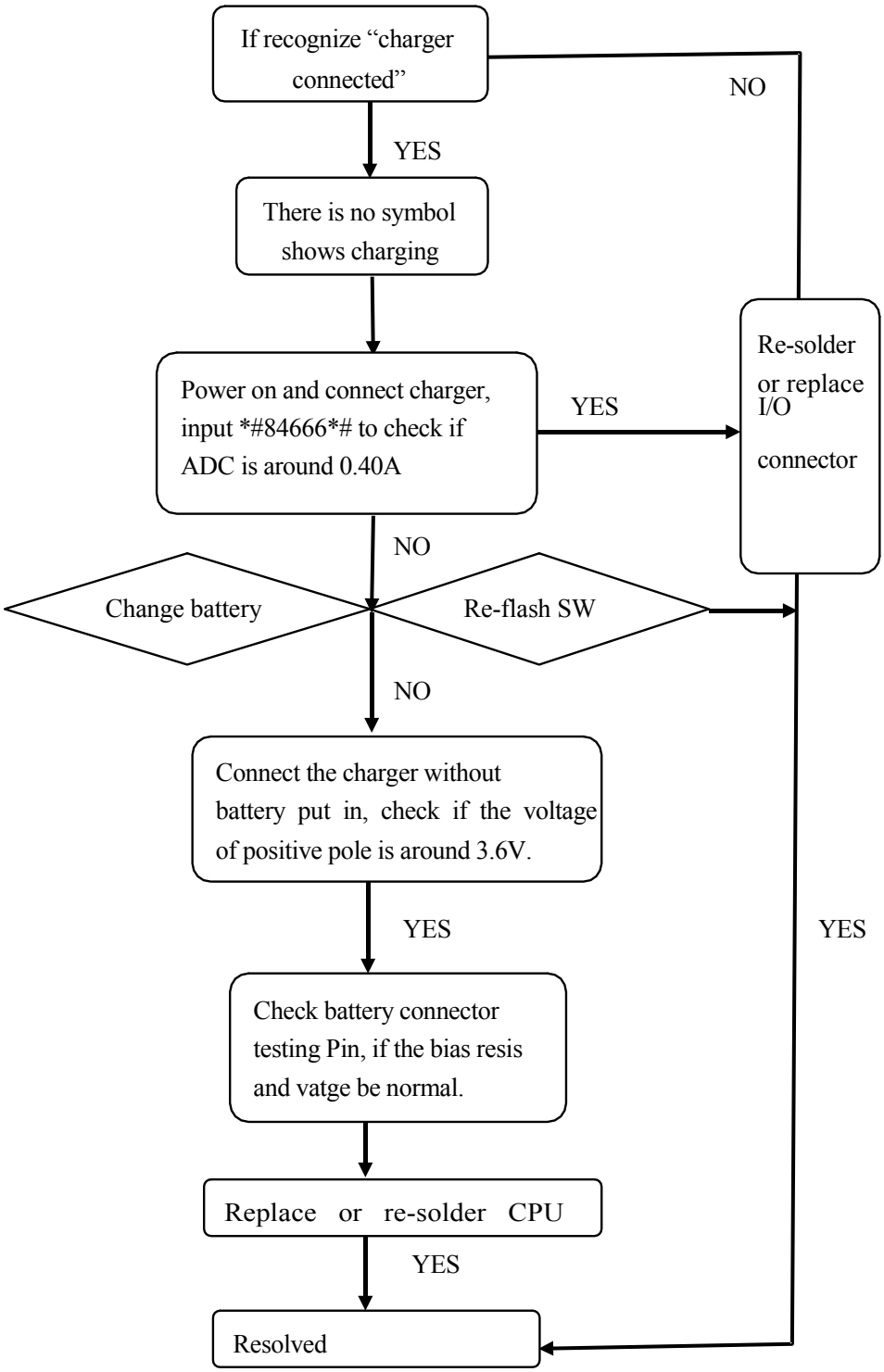
Does not charge - remind error charge



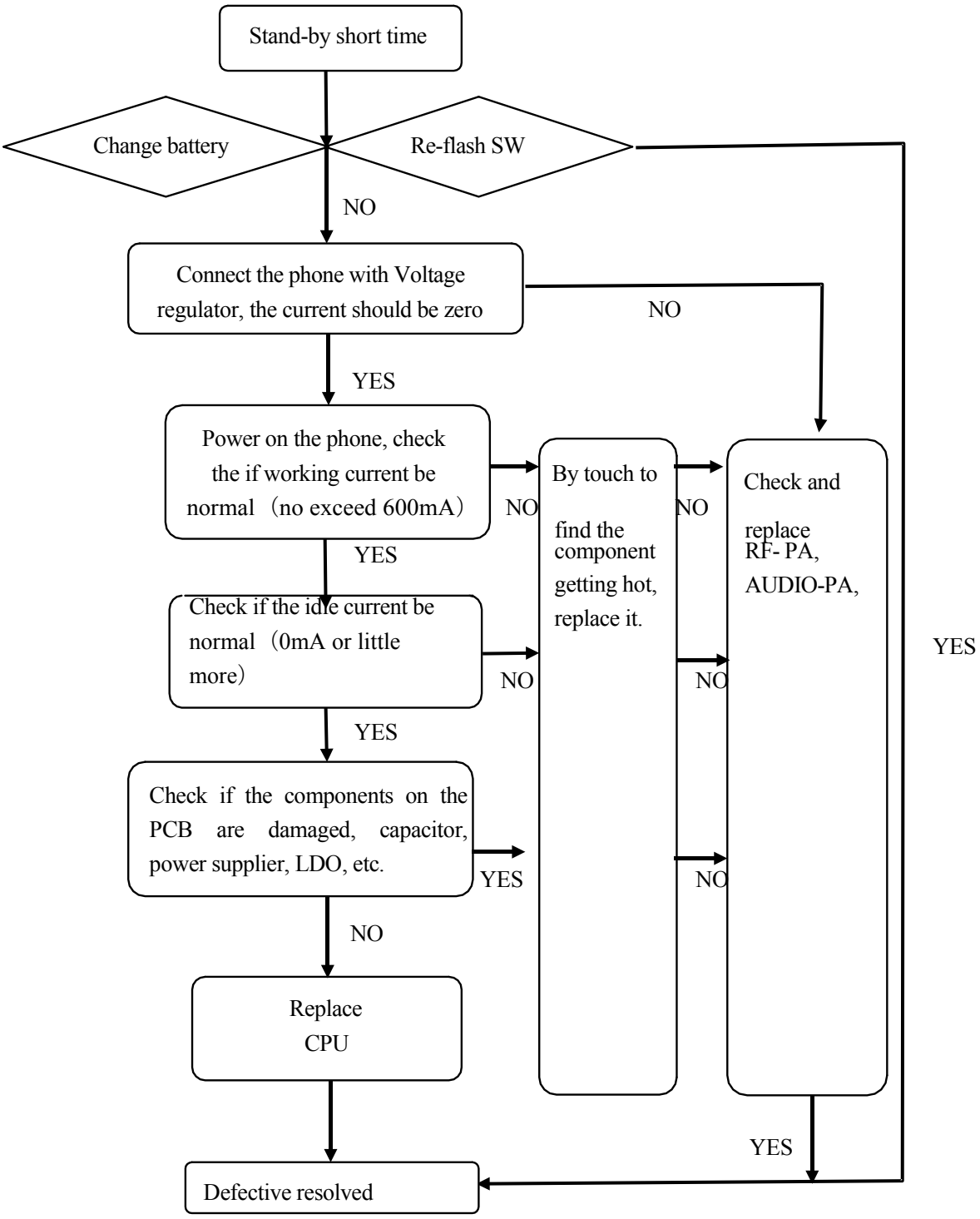
Does not charge - no charge



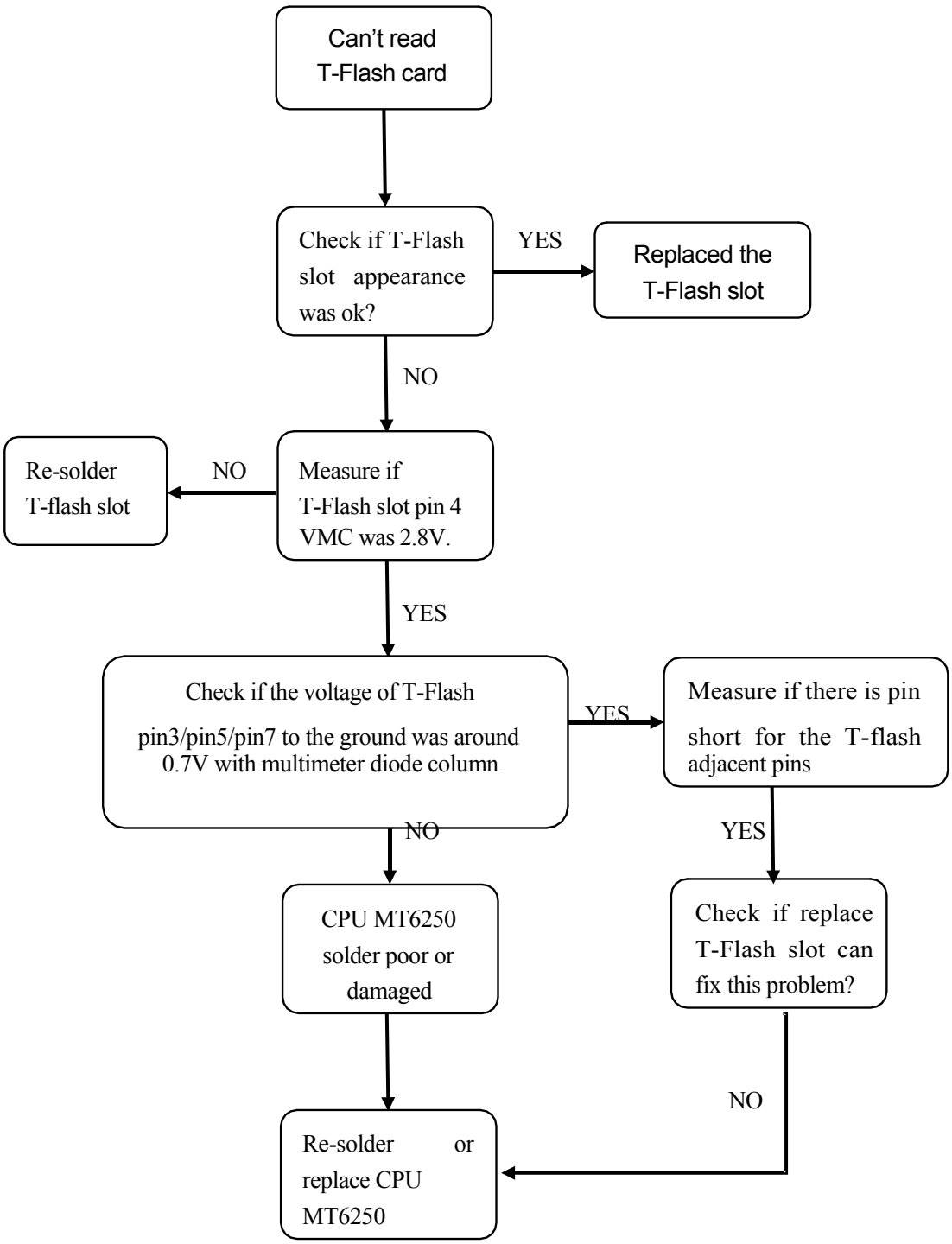
Does not charge - does not recognize charging



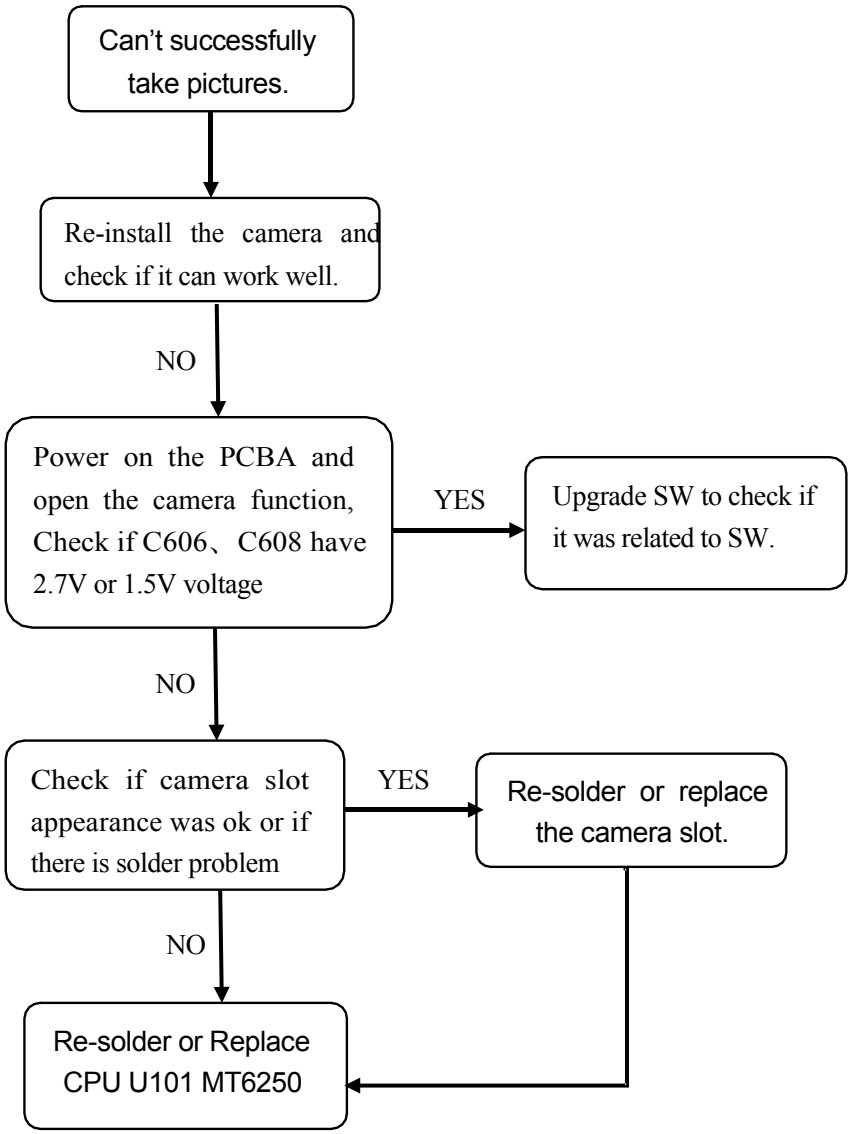
Stand-by short time



Can’t read T-Flash card



Can’t successfully take picture



Chapter 9 Firmware Upgrading Guide

9.1 Firmware Upgrading

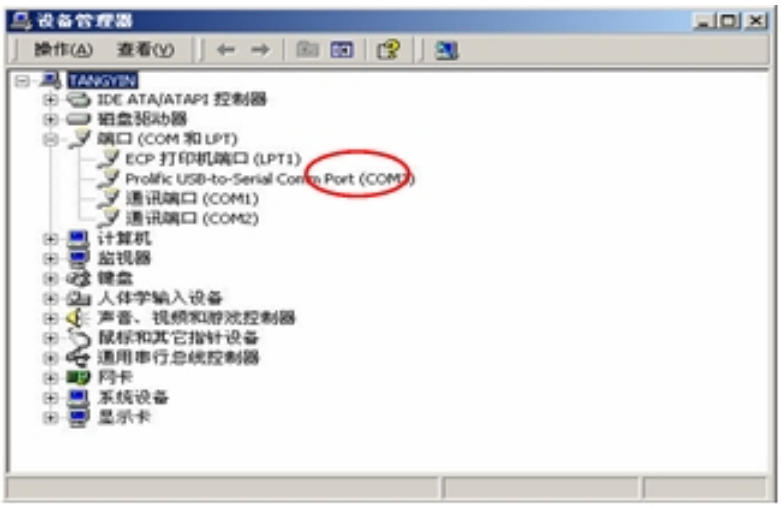
9.1.1 Install USB driver

The maximum downloading speed can be up to 921600bit/s when using USB-Serial cable.

The driver need to be installed before using the USB cable.

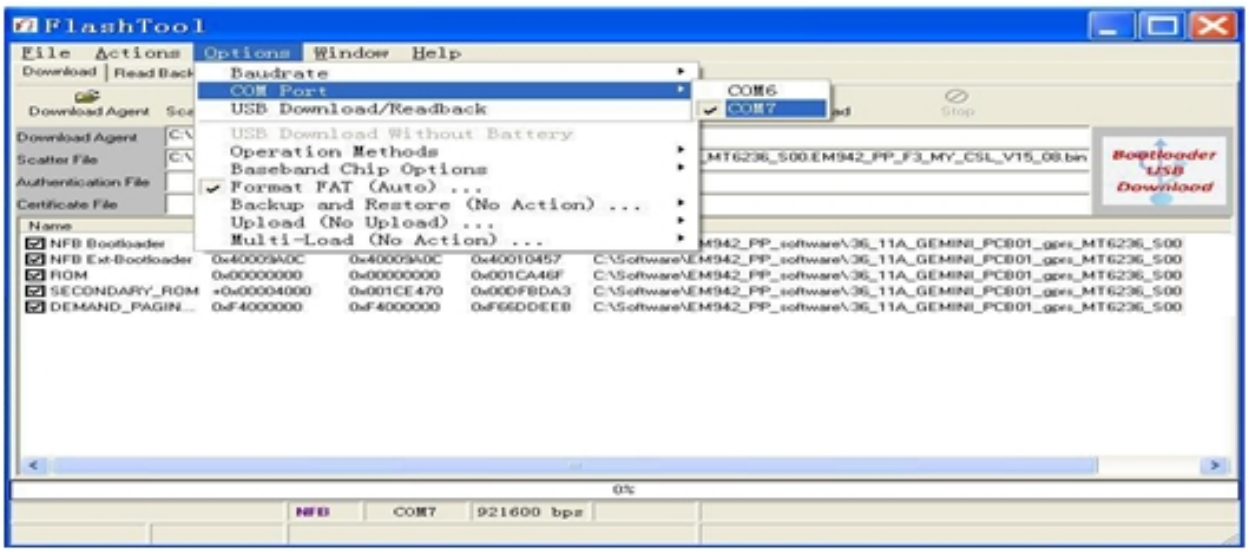
Please keep the USB cable unplugged when installing the driver.

Plug the USB cable when installing is completed. And check device manager of the PC.

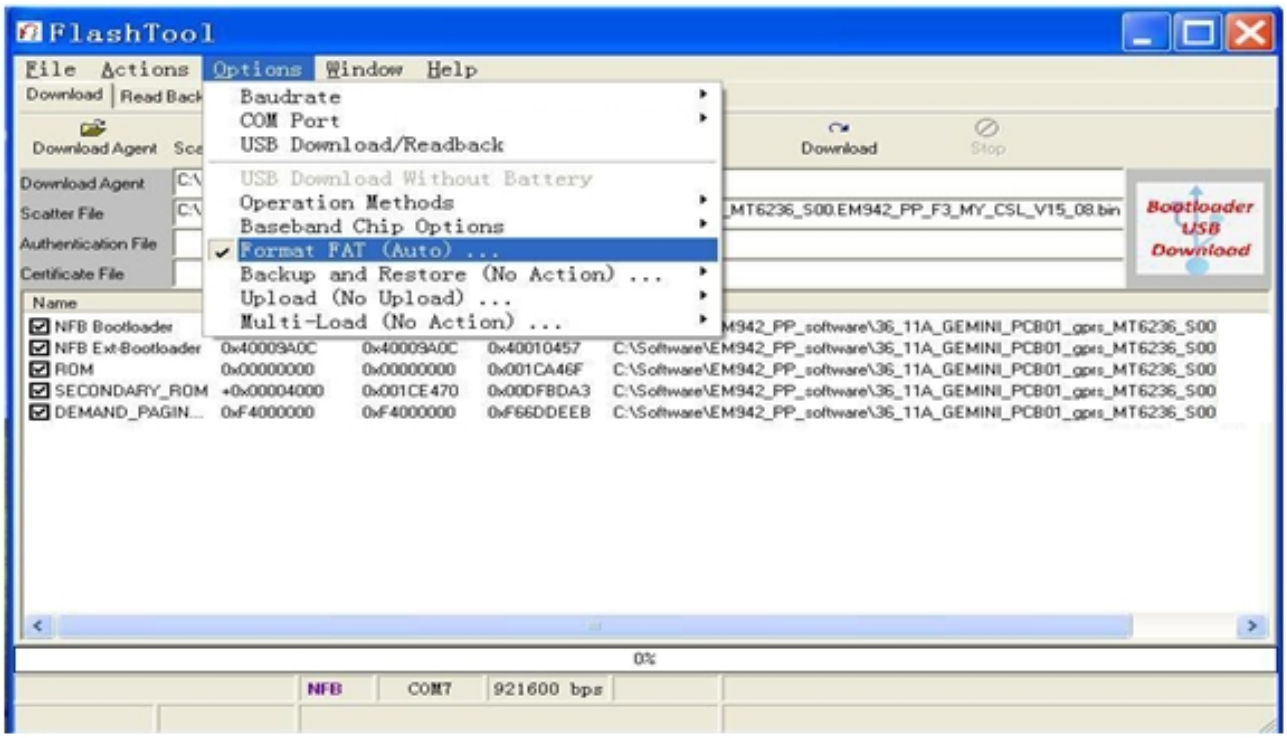


9.1.2 Run the “Flash_tool.exe” of FlashTool_v5.1112.00

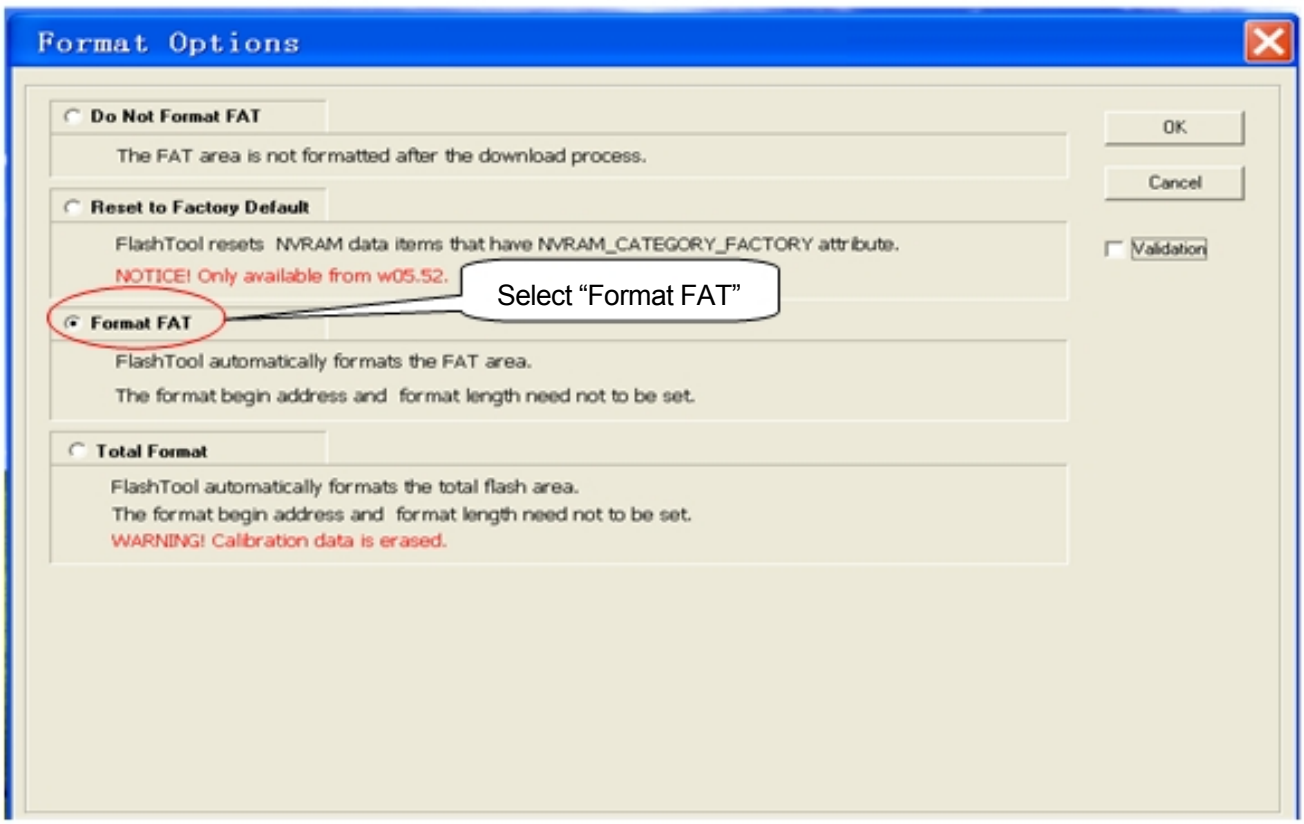
9.1.3 Please select “Options”-“COM port”-Choose the port which is same as the one in “Device Manager”.



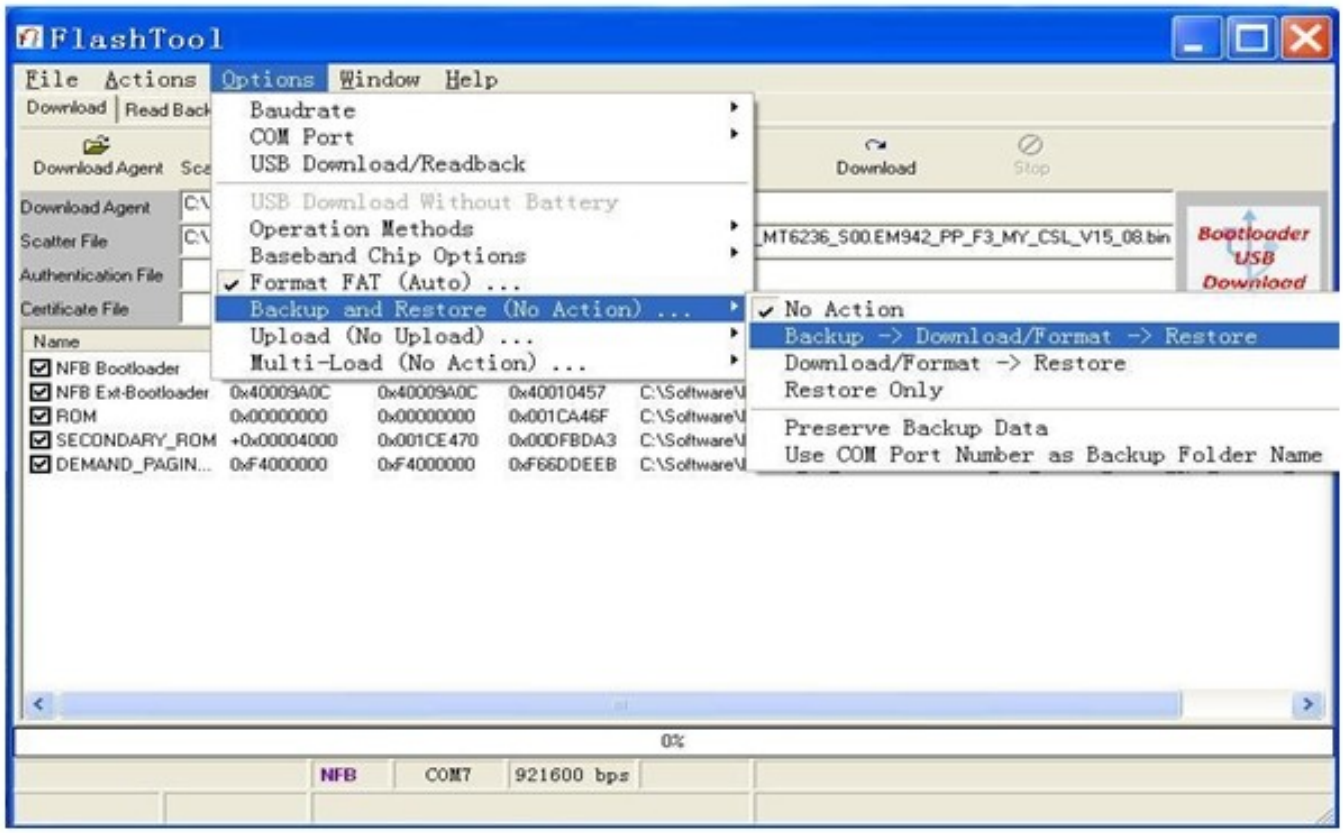
9.1.4 Select “Options”-“Format FAT (DISABLED)…” and please do NOT select “validation”.



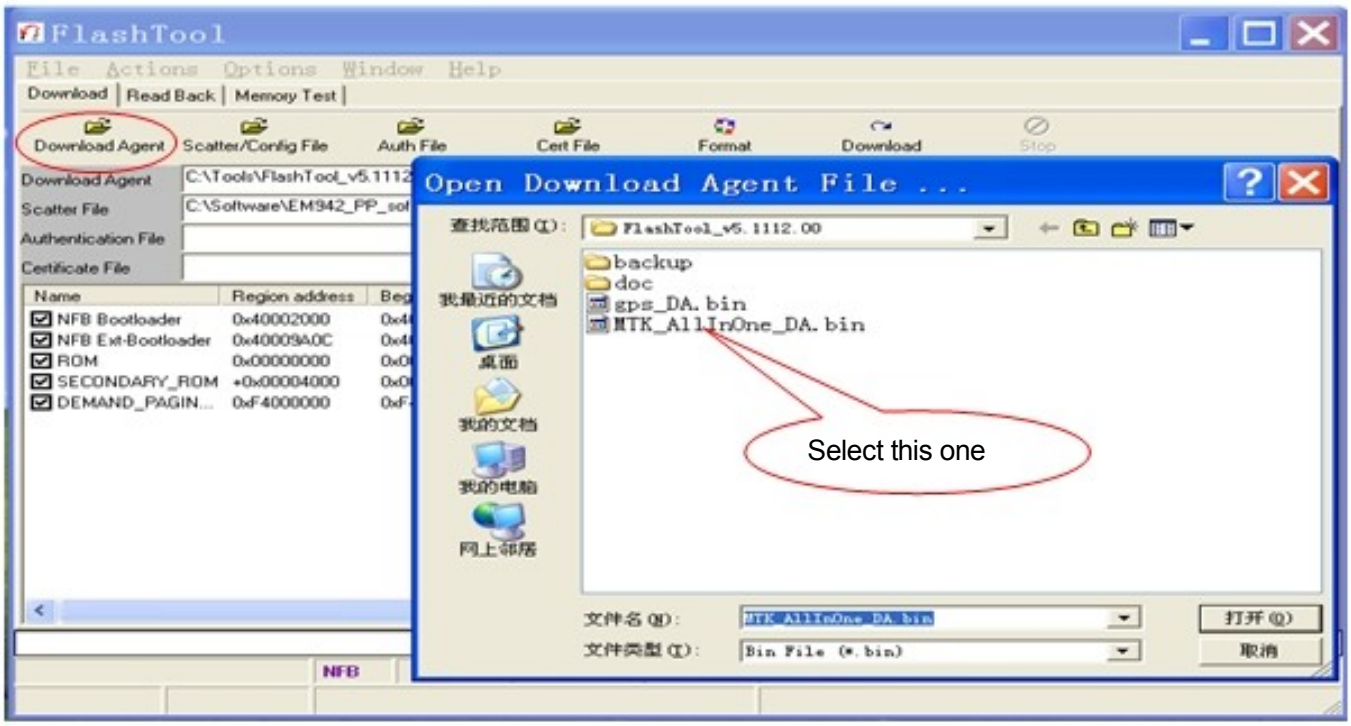
9.1.5 Please select “Format FAT”.



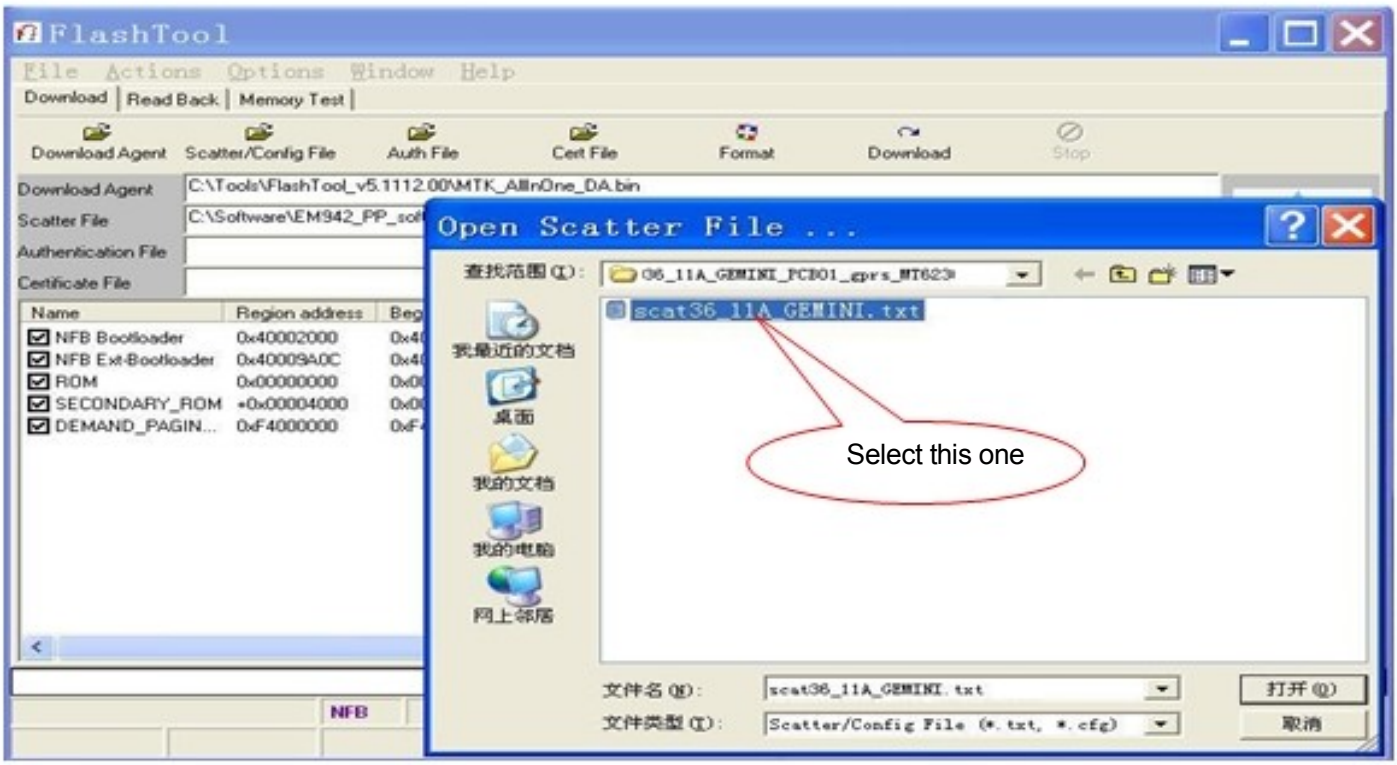
9.1.6 Select “Options”- “Backup and Restore”, then select the “Backup -> Download/format -> Restore”.



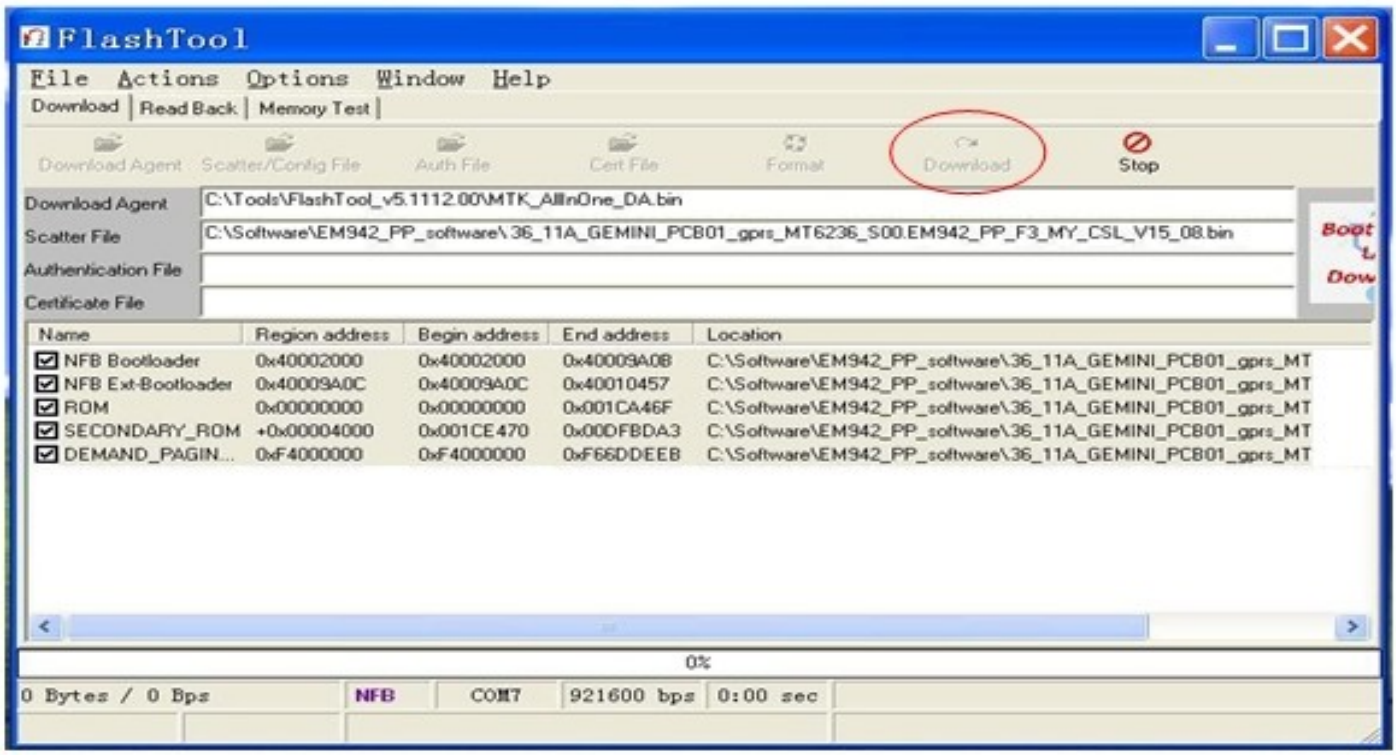
9.1.7 Click the ”Download Agent” and select the file “MTK-ALLInOne-DA.bin”.



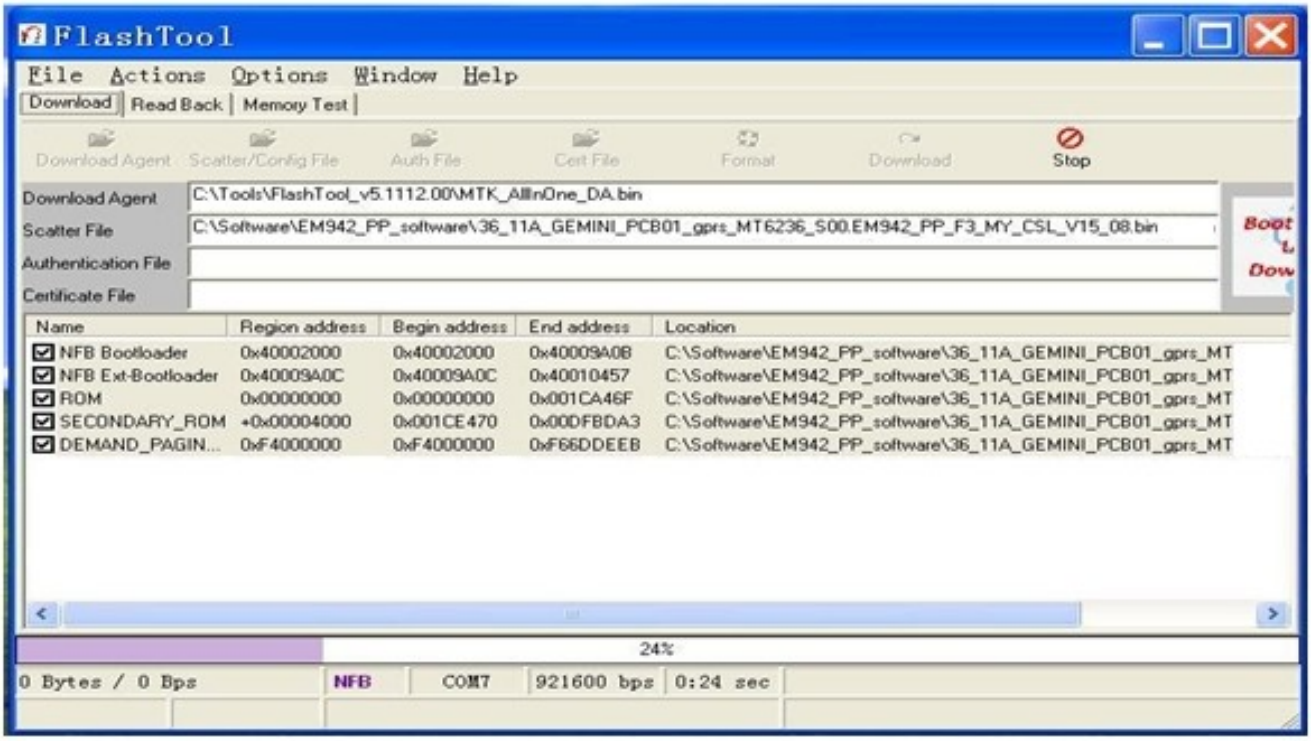
9.1.8 Click the “Scatter/config file” and select the “scat36_11A_GEMINI.txt”.



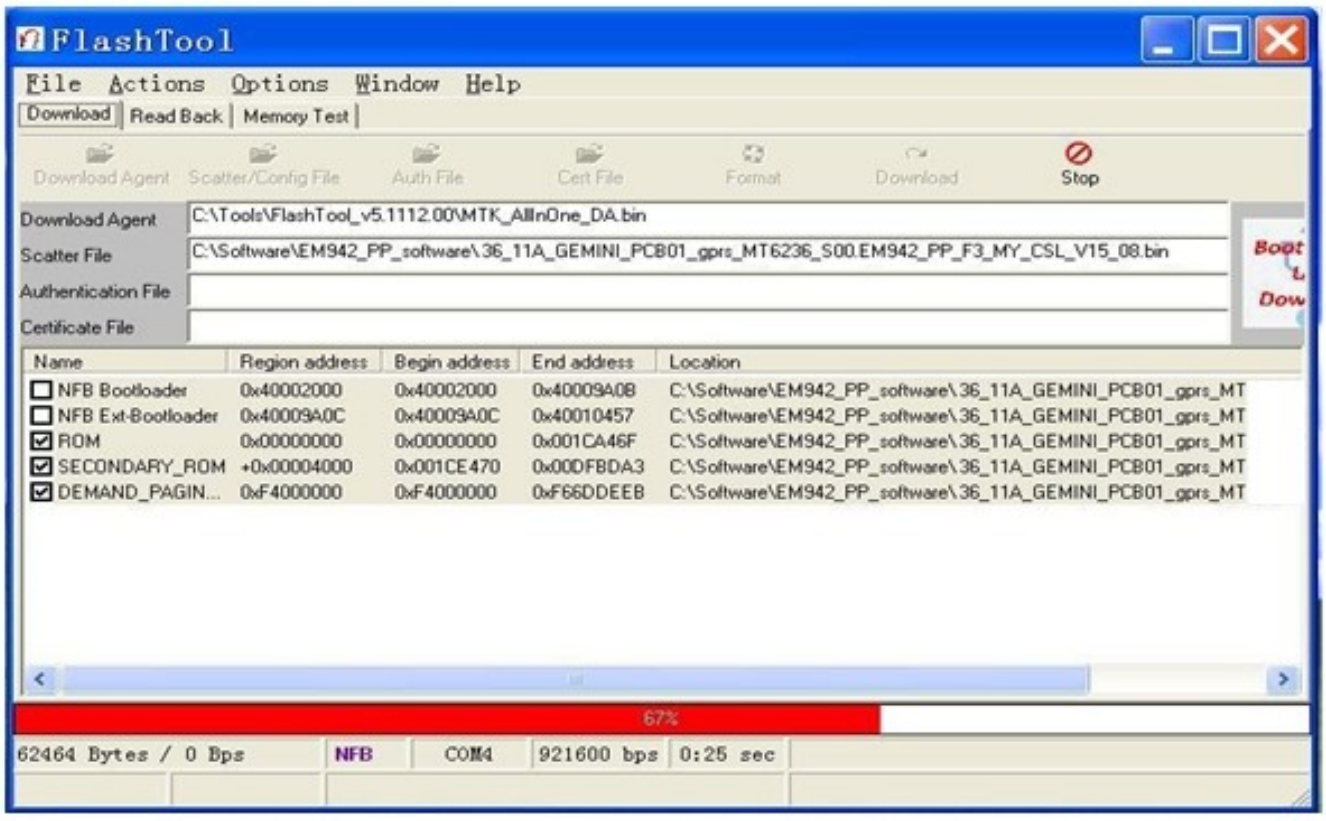
9.1.9 Power off the handset, remove the battery, click “Download”, and connect the cable with handset, then insert the battery, press the power on button, the gray, red, blue, green and gray progress bar shall appear. Then upgrade would be completed when appear “OK”.



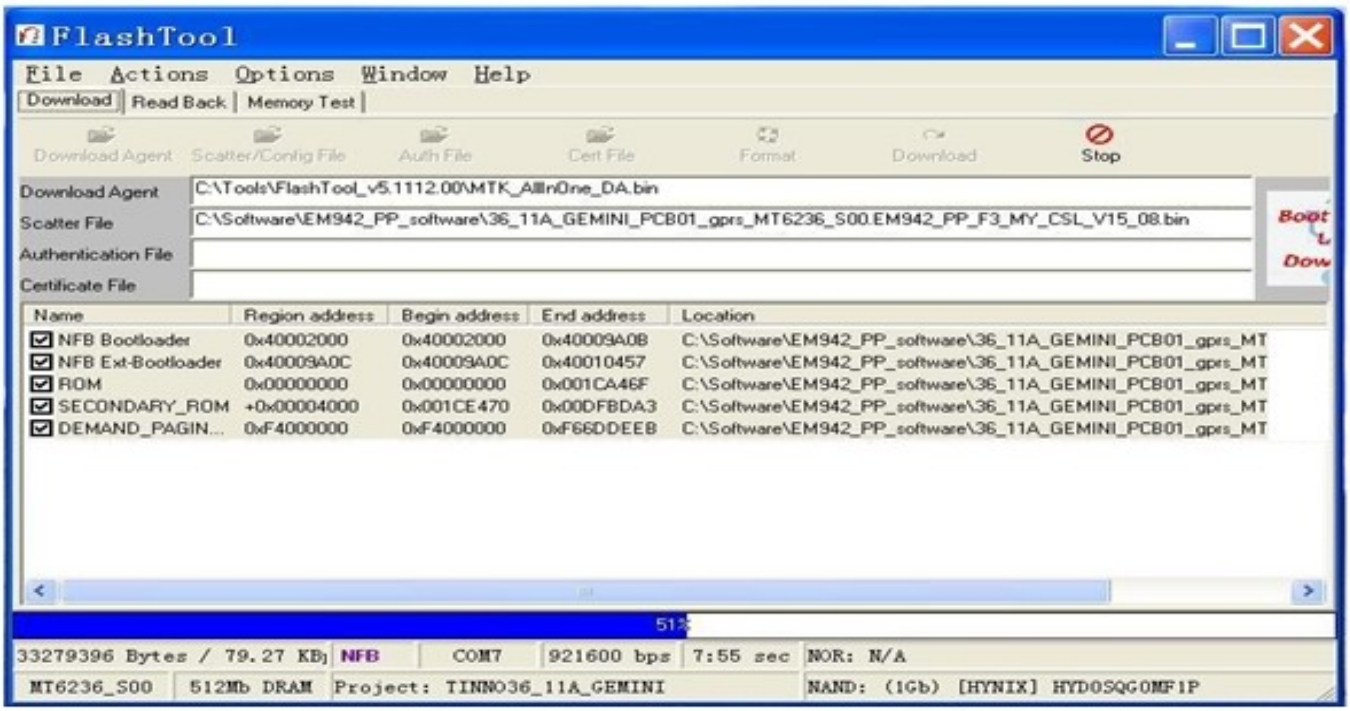
9.1.10 Backup the data. (gray progress bar)



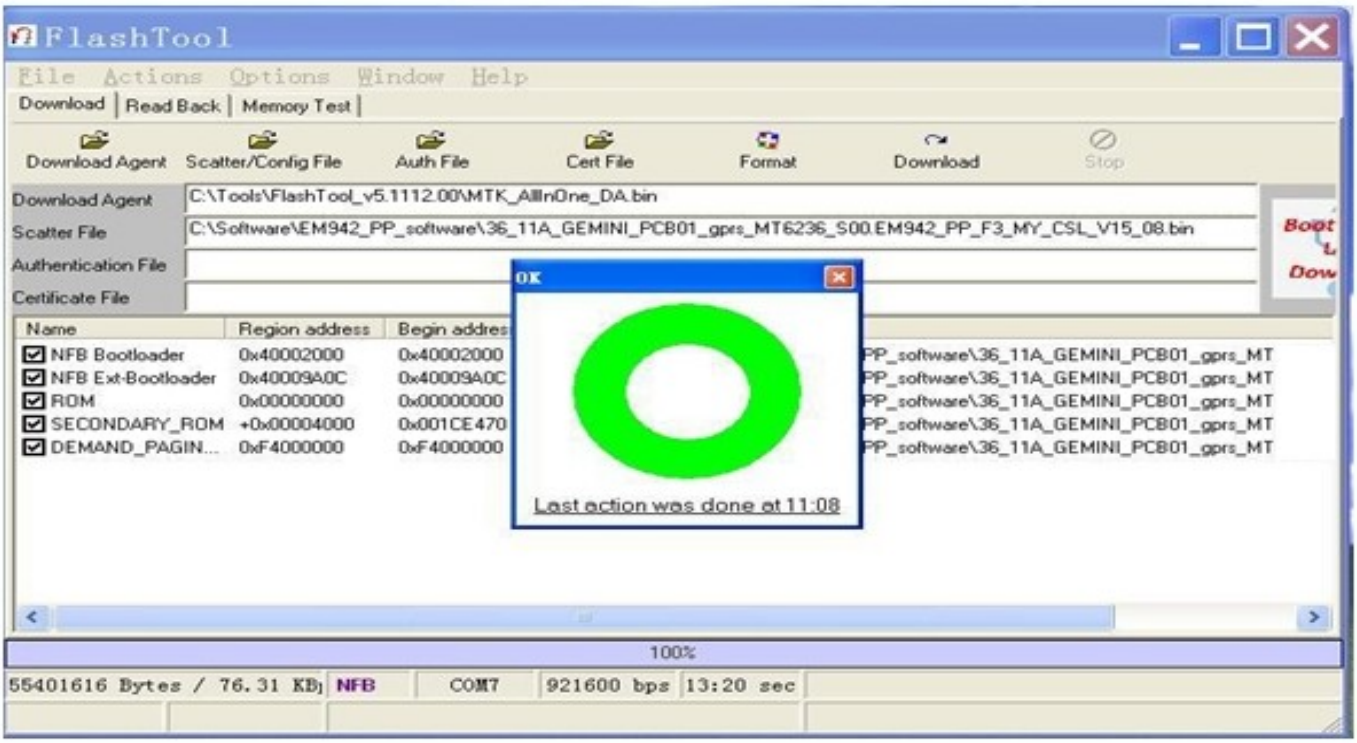
9.1.11 Connect to phone. (red progress bar)



9.1.12 Downloading is in process. (blue progress bar)



9.1.13 Downloading is completed.



9.1.14 Power on phone and input “*#84666*#”, select “one key Restore”, phone will be reboot, then the user’s setting could be eliminated entirely.

Description: can't power on(also upgrade software fail)

Root cause: red scroll 100% run completely when upgrade software, the detail as figure 1, also it prove power supply, clock is normal and defective typical issue is focus on CPU or FLASH poor soldering or damage, and maybe software do not fit for hardware.

Corrective action: check software fit for hardware whether or not, resolding CPU and FLASH or exchange new CPU and FLASH.

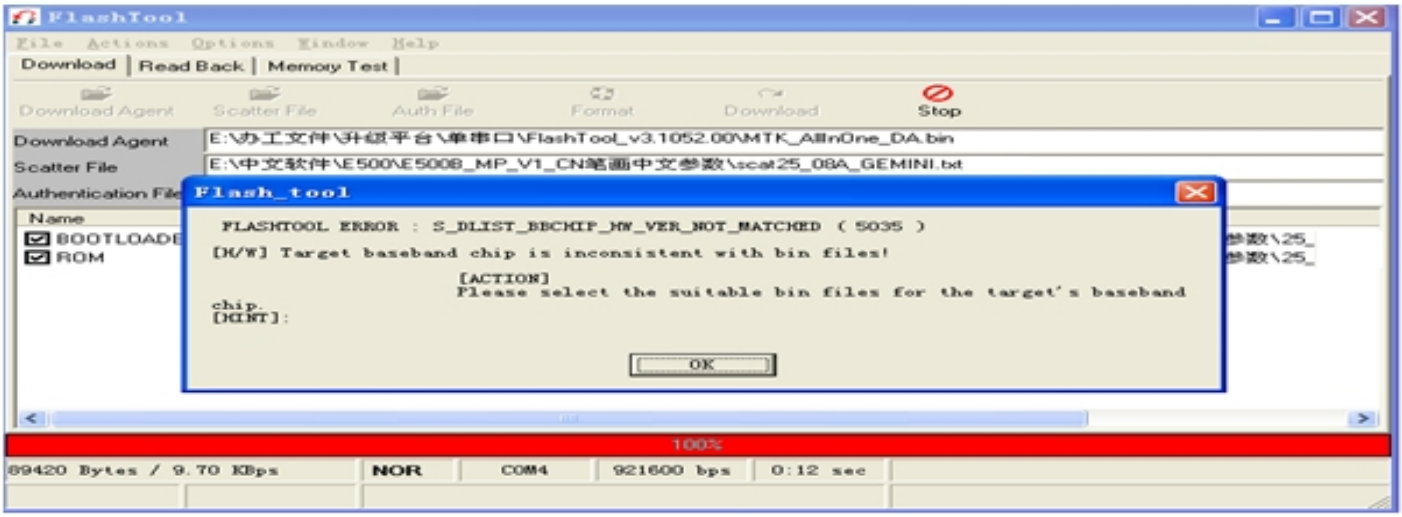


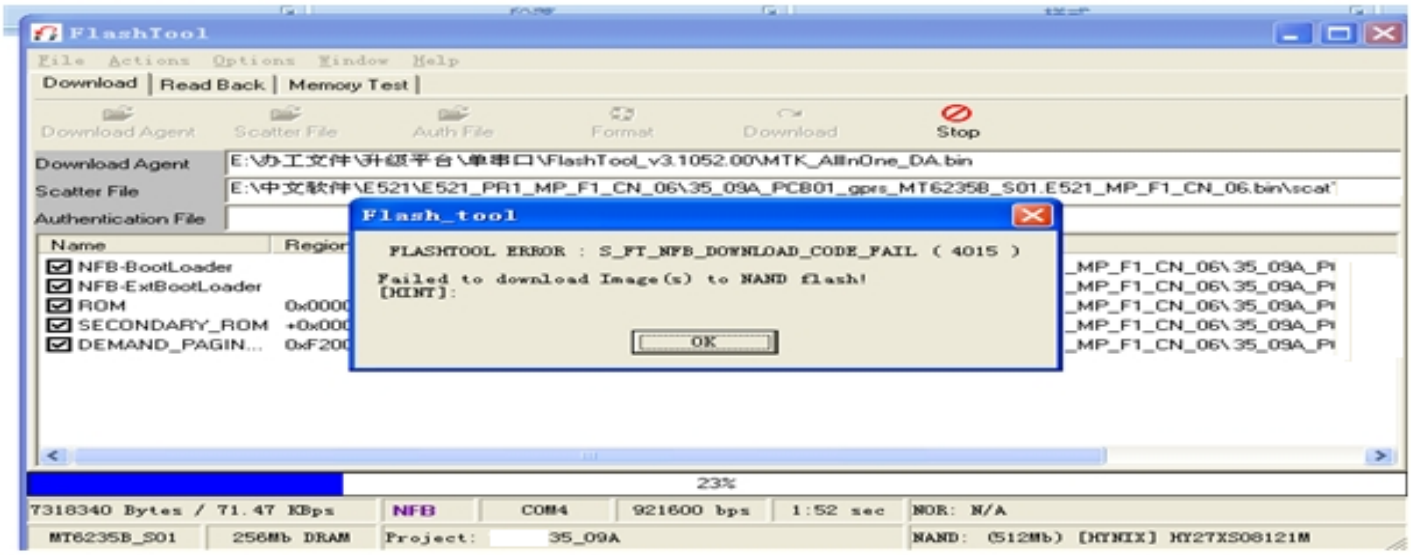
图 1(figure 1)

Description: E930 can't power on (handset is dead when upgrade software.)details as figure 2.

Root cause: the power supply and clock both work on as common during upgrade software.

The typical defective issue as poor soldering or go to fall, other way as exchange CPU or Flash.

Corrective action: re-solder CPU and Flash, or replace them.



Chapter 10 CIT Testing

Input “*#84666*#” in the standby mode.

1. Version: Confirm the firmware version.

2. Echo Loop: Receiver shall produce sound when blowing over the mic.

3. Keypad: Press every button on the handset until the screen is clear.

4. Vibrator：Press “start” then the vibration shall start.

5. Lond SPK: Press “start” the speaker shall work.

6. Ringtone: Press “start” the ringtone shall be played.

7. LED：Press “OK” to test the LED.

8. LCD: Select “Auto Display” LCD shall perform the self-testing.

9. Receiver：Press ”start” the receiver shall produce sound.

10. Camera: Menu- Camera, test the capture and shooting, no need to save.