

Service Manual

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1 6004 Module Features

1.1 6004

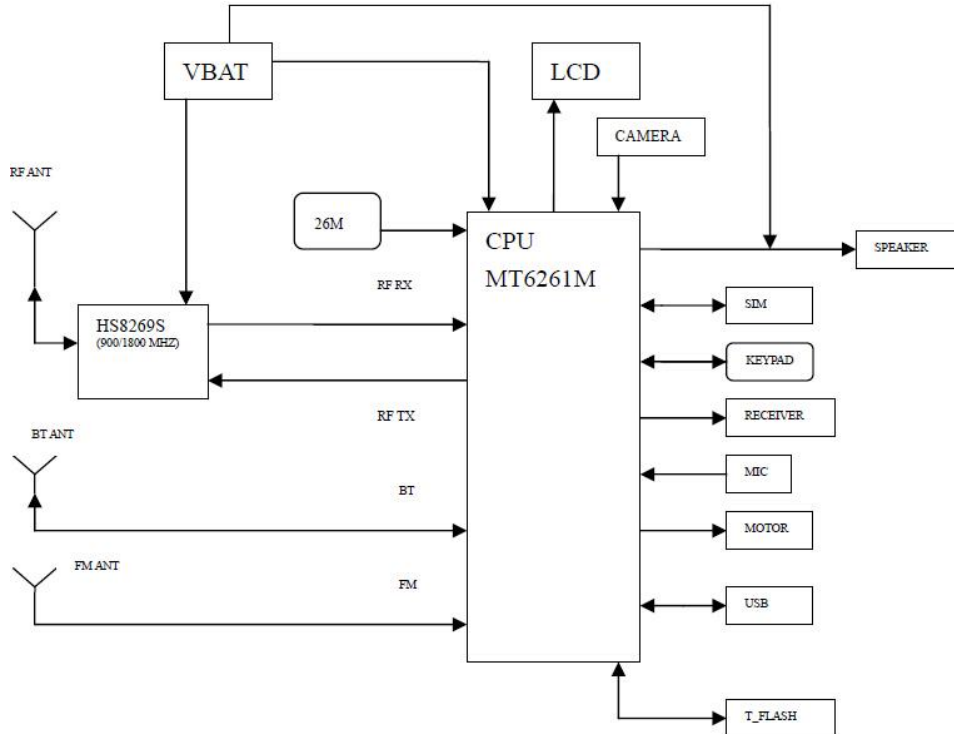


Figure 1.1: 6004 Module

1.2 Basic Feature

Table 1-1: Feature

Platform	MTK6261 (M/D)
Band	GSM850/900, /DCS1800/PCS1900
LCM	
CAMERA	30w
MCP Module	Internal Nor Flash
BT Module	Internal BT Module
FM RX Module	Internal FM Module
Audio PA	Internal Audio (CLASS A\B)
SIM	Dual SIM
I/O	Micro USB 5PIN
Torch	Support
Keypad	23 Key

1.3 Typical Application

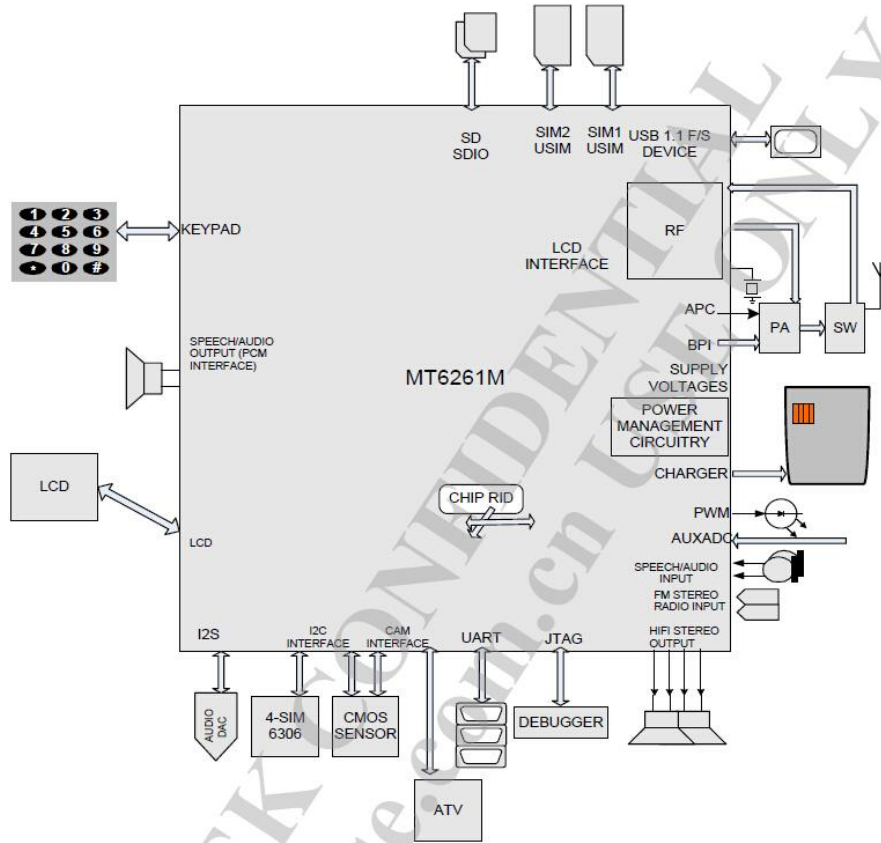


Figure 1.2: Typical Application with MTK6261 Based platform

2 Main board explored overview

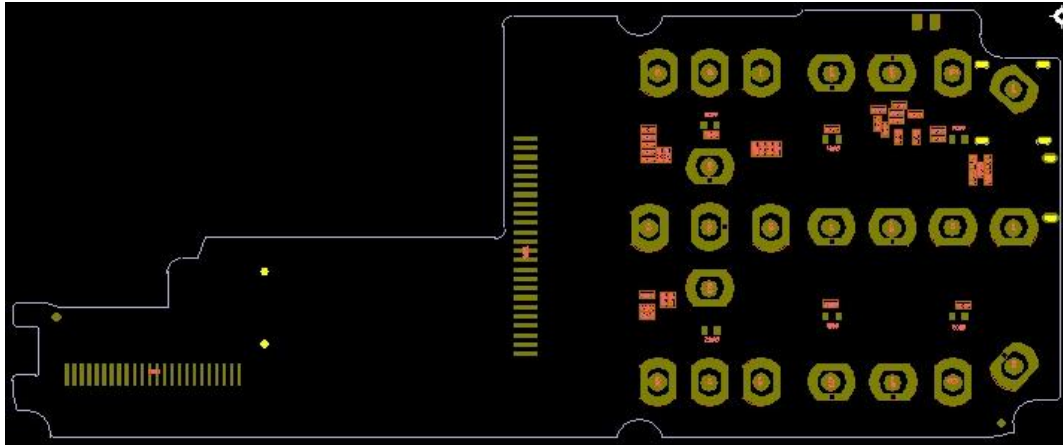


Figure 2.1: top

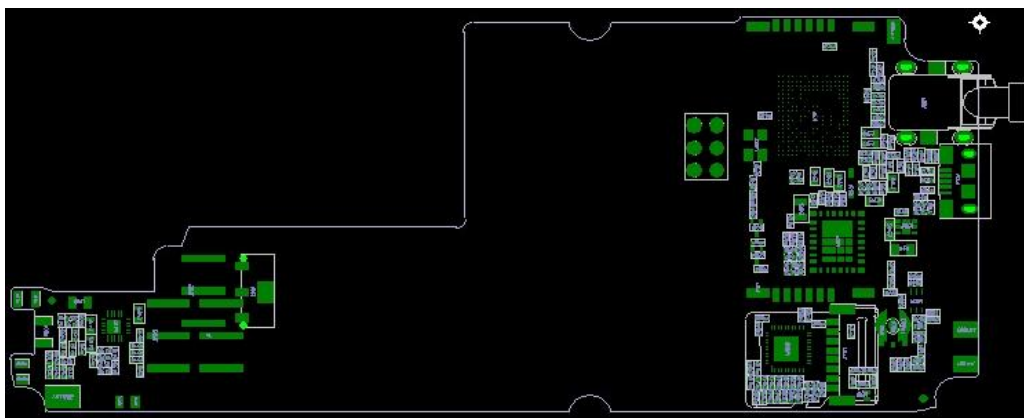


Figure 2.2: bottom

3. Detailed Function Circuit

3.1 Download Module

Download through USB port, program select download mode, when connect UTXD1(pin D15 U0RTS) to GND.



Figure 3.1: TP107 D/L Interface

3.2 Audio Module

3.2.1 Micphone Circuit

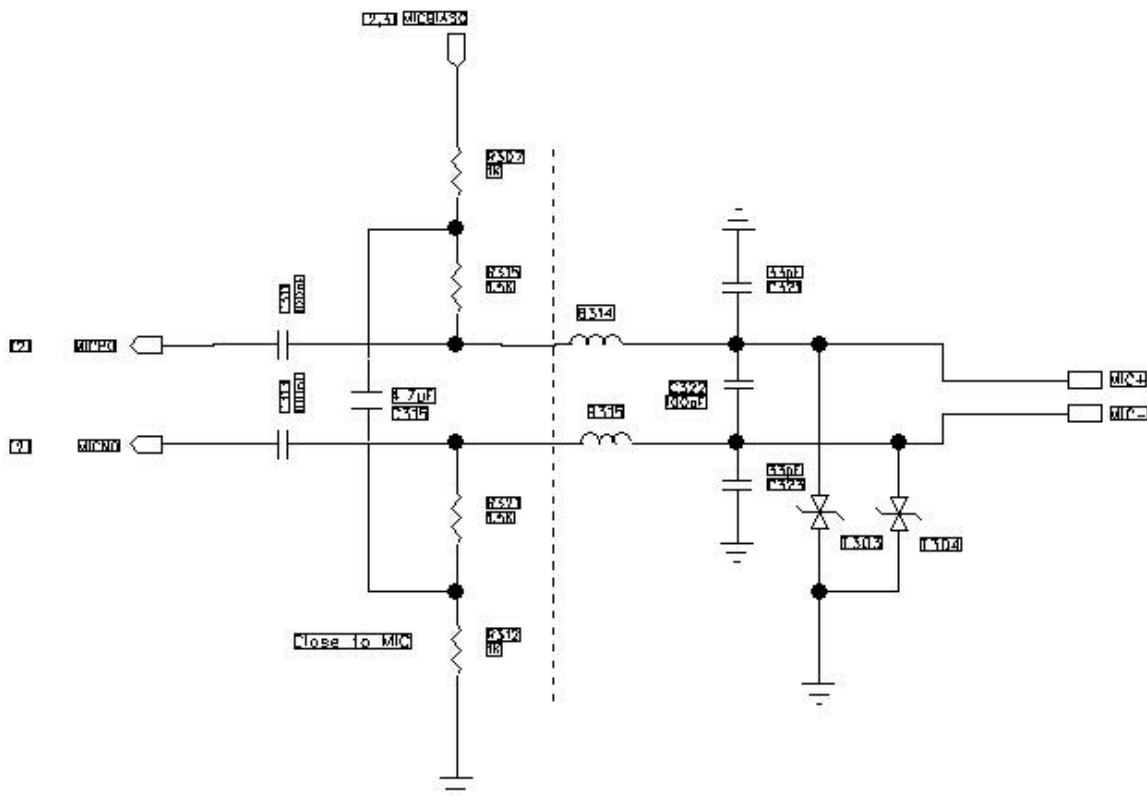


Figure 3.2: Micphone

If MICPHONE useless ,first you should check R307/R315/R321/R312 ok or not,use multimeter measure connect or not ,if not connect that not good.

3.2.2 Receiver Circuit

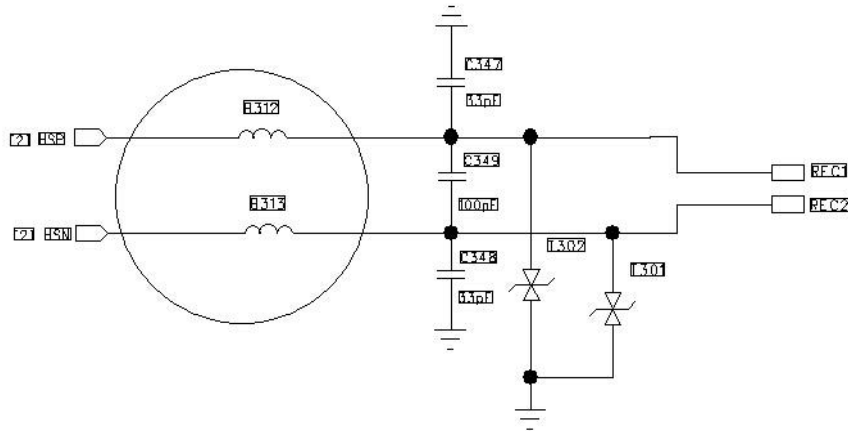


Figure 3.3: Receiver

The receiver is part with audio output, if receiver defect, it caused by B312/B313. should measure these two parts ok or not

3.2.3 Speaker Circuit

extraposition Audio PA(Class K), this module built-in AW8733 IC chipset.

If speaker volume issue. first check speaker and R403,R404, then check AW8733 IC

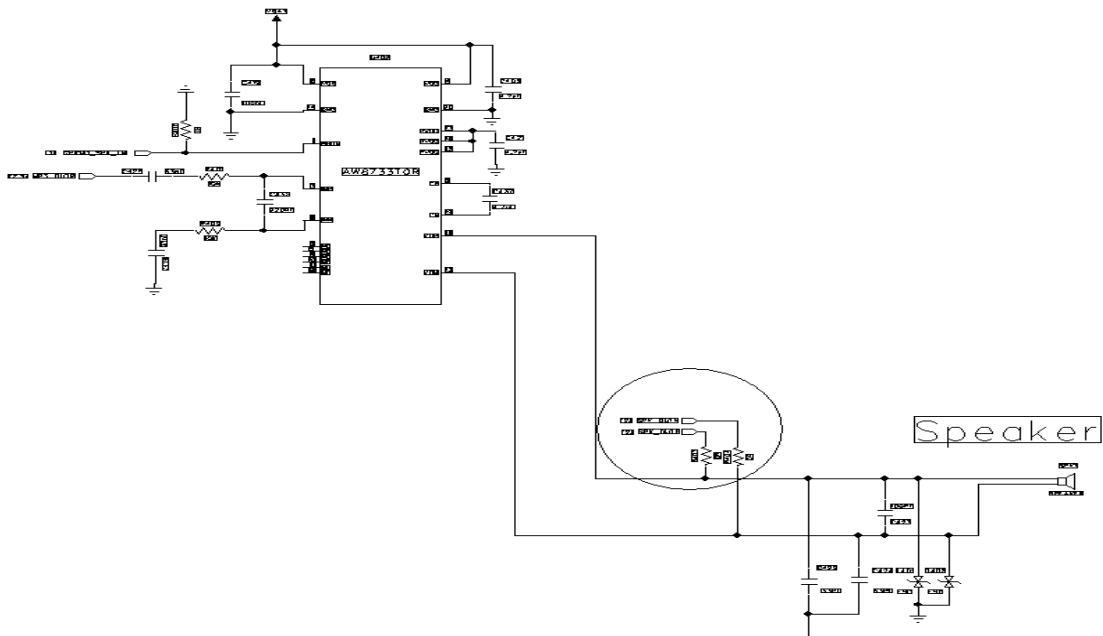


Figure 3.4: Speaker

3.3 FM Module

Internal FM module ,this module built-in MTK6261-baseband chipset..

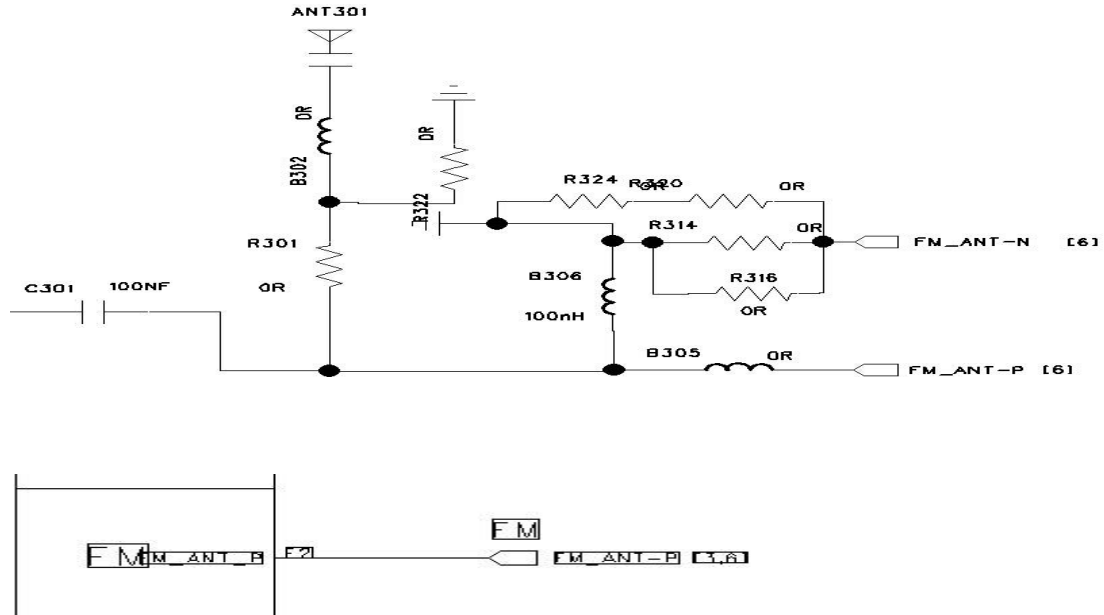


Figure 3.5

FM poor performance of the function, not active , next to match the circuit in normal circumstances, poor FM antenna can lead to poor.

3.4 BT Module

Internal BT module ,this module built-in MTK6261-baseband chipset.

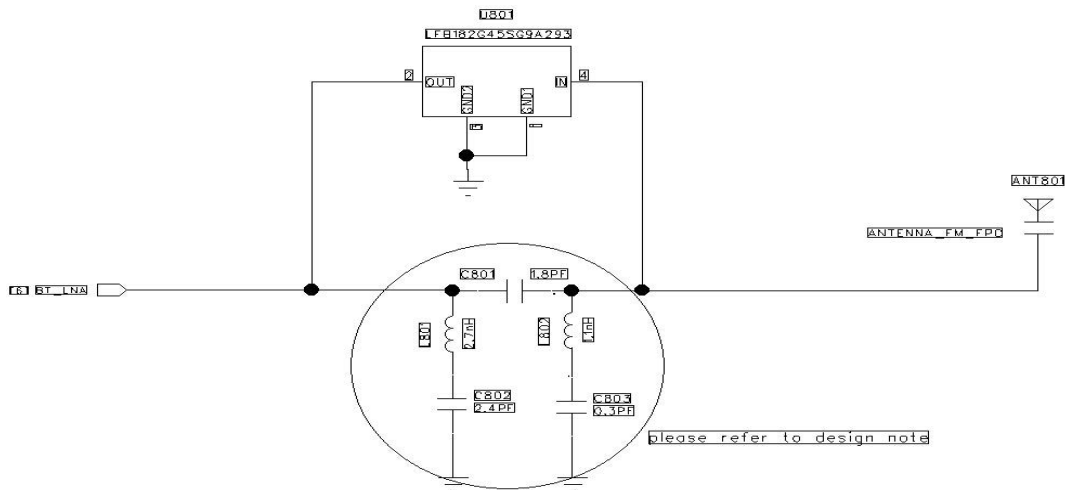


Figure 3.6

Bluetooth poor performance of the function, not active ,not find Bluetooth, next to match the circuit in normal circumstances, poor bluetooth antenna can lead to poor.

3.5 RF Module

RF Front-end Module, type HS8269S, item U601.

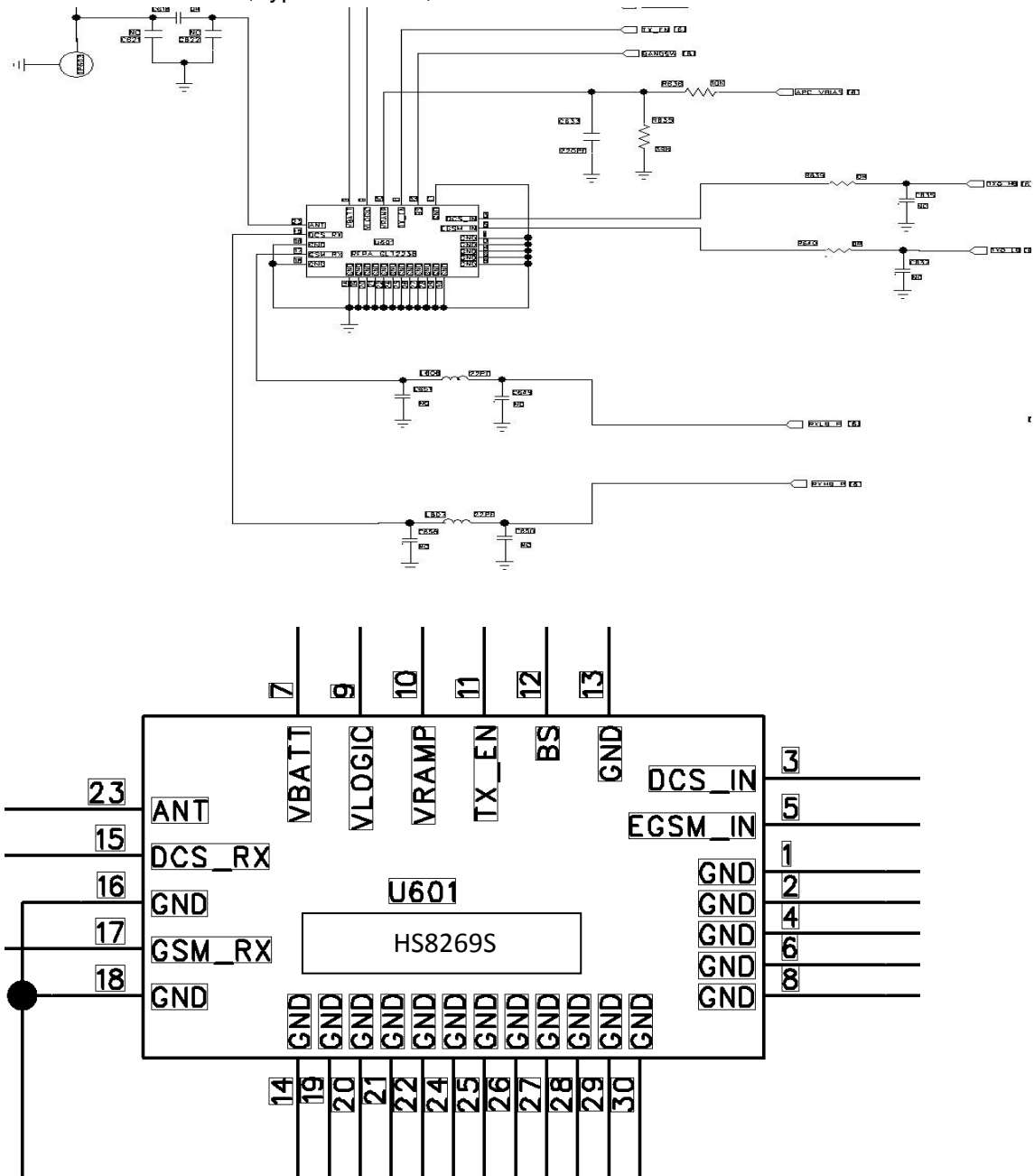


Figure 3.7: RF Front-end Module

RF PA is the probability of the most original failure, common faults are: no network, no signal, the signal is weak, can dial emergency calls, etc., first replace the PA amplifier, verify failure existence or not , PA front-end RF signal head can lead to bad signal

3.6 LCM Module

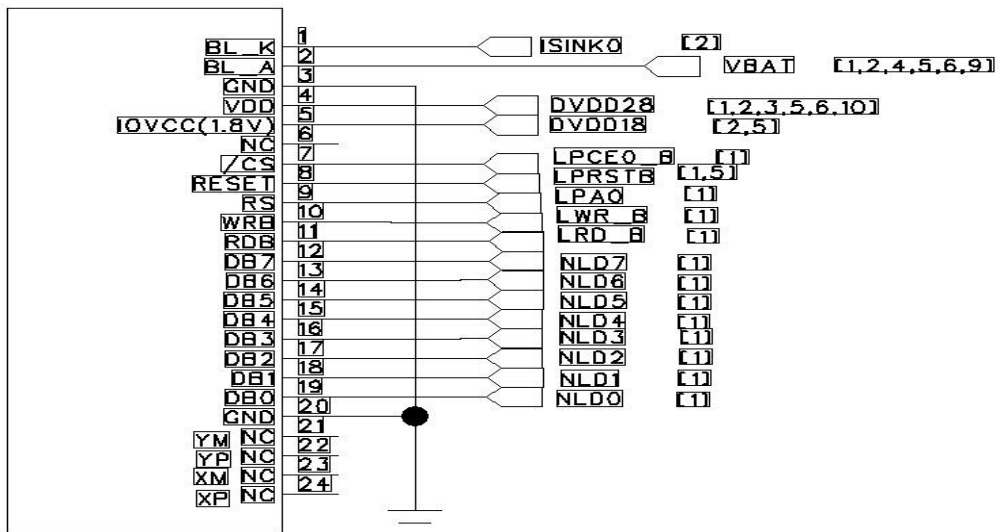


Figure 3.8 LCM

LCM interface is a channel connecting the motherboard and the screen, generally will not be bad, only when improper welding operation. Note that control iron welding temperature.

3.7 CAMERA MODULE

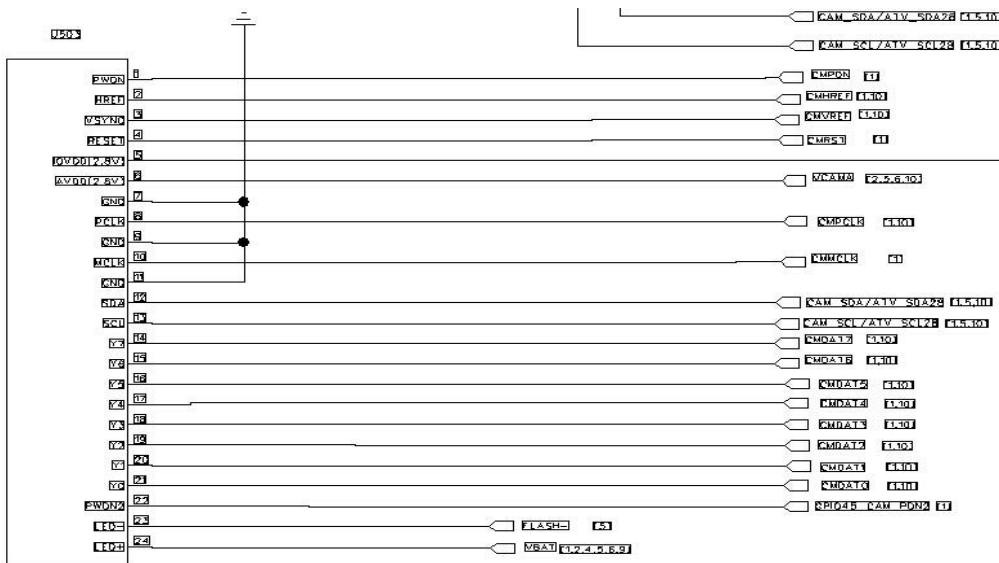


Figure 3.9 CAMERA

CAMERA interface is connected to the motherboard and the camera position when welding OK, then, will not cause camera failure. Note that the temperature control soldering iron.

3.8 KEYPAD interface

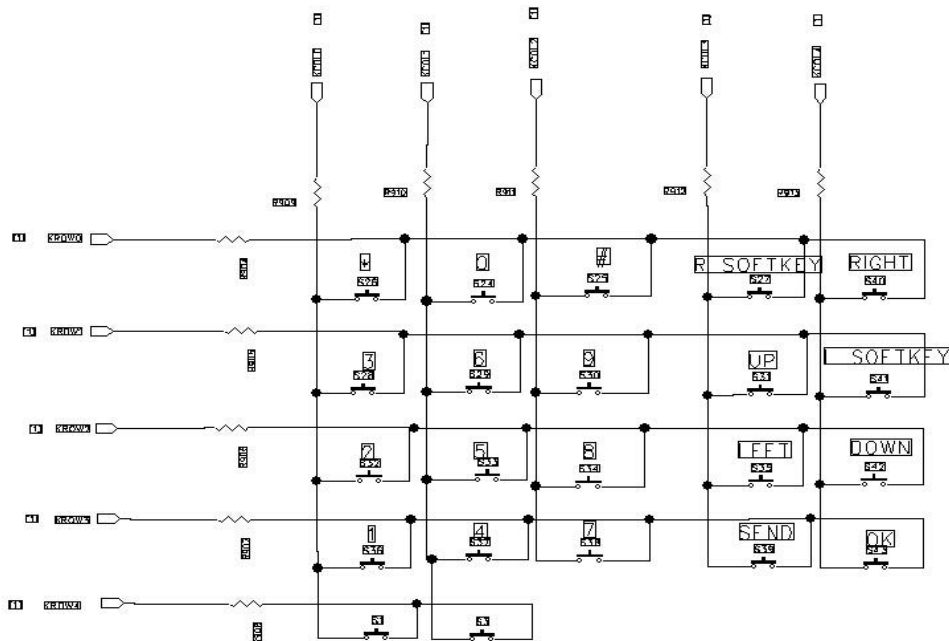


Figure 3.10 KEYPAD4 Fault Maintenance

4.1 RF Part

Refer to function circuit Part 3.6

4.2 BB Part

Refer to function circuit.

Operating Frequency Band (RF):

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

Bluetooth: 2402-2480 MHz

Modulation mode:

GSM / GPRS: GMSK

Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK

Maximum of Antenna's Gain:

GSM850: 0.3 dBi

PCS1900: 0.35 dBi

Bluetooth: 0.1 dBi