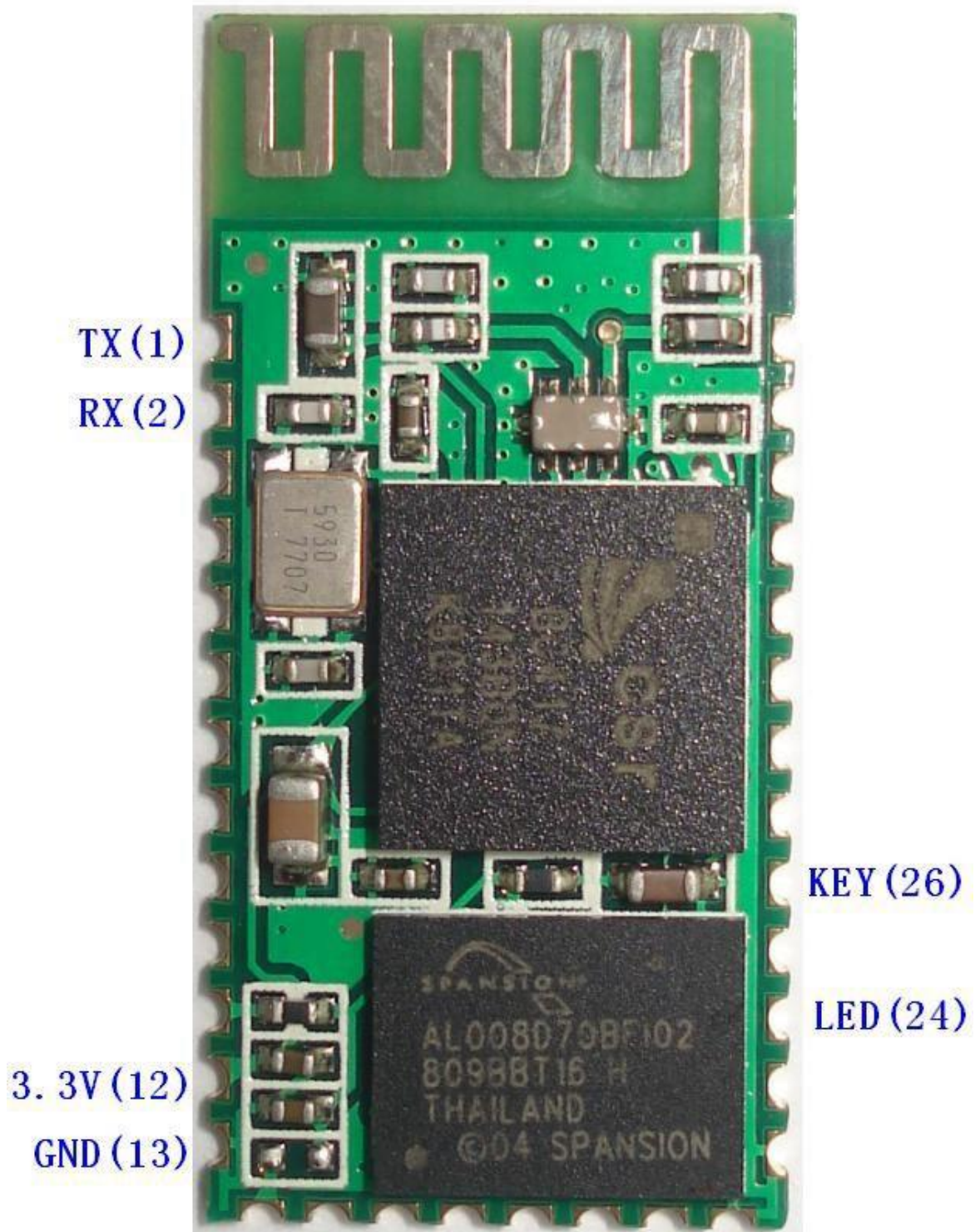


Product specification

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4. Product parameters and specifications
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8. Test plan chart
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1. Product picture



2. Features

1 Wireless transceiver

- Sensitivity (BER) reaches -80dBm
- -4 → 6dBm Adjustable Power Output

1 Performance summary Complete Bluetooth Solution

- Bluetooth 2.0 with EDR, 2Mbps-3Mbps modulation
- Built-in 2.4GHz antenna, users do not need to debug the antenna
- External 8Mbit FLASH
- Low-voltage 3.3V operation (3.1V~4.2V) 30~40mA fluctuation when paired, paired communication SMA
- Optional PIO control
- Standard HCI port (UART or USB)
- USB Protocol: Full Speed USB1.1, Compliant With 2.0
- Module can be used as SMD

chip Ø RoHS Process Ø

Pin half hole process

- Digital 2.4GHz wireless transmit and receive
- CSR BC04 Bluetooth Chip Technology
- Adaptive frequency hopping
- Small size (27mm×13mm×2mm)
- Simple peripheral design circuit
- Bluetooth Class 2 power level
- Storage temperature: -40 to +85 degrees, operating temperature: -25 to +75 degrees
- Co-channel interference: 2.4 MHz, transmit power 3 dBm
- Bit error rate: 0, but it will produce signal decay on the transmission link,

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and then there will be bit errors, such as RS232 and TTL line processing circuits.

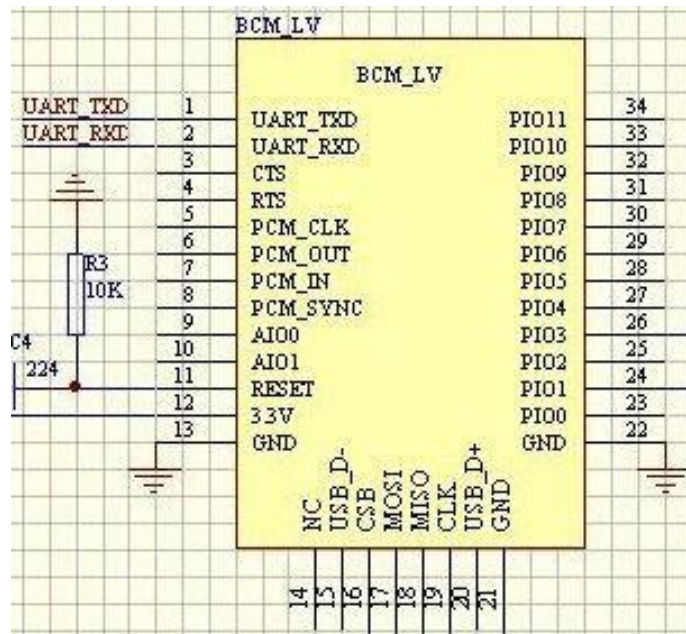
- 1** Low power consumption
- 1** High-performance wireless transceiver system
- 1** low cost
- 1** Field of application

- Bluetooth Car Handsfree
- Bluetooth GPS Ø
- Bluetooth PCMCIA, USB
- Dongle Ø Bluetooth data transmission

1 software

- CSR

3. Pin definition and function



This schematic is consistent with the physical footing order

PIN Name	PIN #	Pad type	Description	Note
GND	13 21 22	VSS	Ground pot	
1V8	14	VDD	Integrated 1.8V (+) supply with On-chip linear regulator output within 1.7-1.9V	
VCC	12	3.3V		

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AIO0	9	Bi-Directional	Programmable input/output line	
AIO1	10	Bi-Directional	Programmable input/output line	
PIO0	23	Bi-Directional RX EN	Programmable input/output line, control output for LNA(if fitted)	

PIO1	24	Bi-Directional TX EN	Programmable input/output line, control output for PA(if fitted)	
PIO2	25	Bi-Directional	Programmable input/output line	
PIO3	26	Bi-Directional	Programmable input/output line	
PIO4	27	Bi-Directional	Programmable input/output line	
PIO5	28	Bi-Directional	Programmable input/output line	
PIO6	29	Bi-Directional	Programmable input/output line	CLK_REQ
PIO7	30	Bi-Directional	Programmable input/output line	CLK_OUT
PIO8	31	Bi-Directional	Programmable input/output line	
PIO9	32	Bi-Directional	Programmable input/output line	
PIO10	33	Bi-Directional	Programmable input/output line	
PIO11	34	Bi-Directional	Programmable input/output line	
RESETB	11	CMOS Input with weak internal pull-down		
UART_RTS	4	CMOS output, tri-stable with weak internal pull-up	UART request to send, active low	
UART_CTS	3	CMOS input with weak internal pull-down	UART clear to send, active low	
UART_RX	2	CMOS input with weak internal pull-down	UART Data input	
UART_TX	1	CMOS output, Tri-stable with weak internal pull-up	UART Data output	

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SPI_MOSI	17	CMOS input with weak internal pull-down	Serial peripheral interface data input	
SPI_CSB	16	CMOS input with weak internal pull-up	Chip select for serial peripheral interface, active low	
SPI_CLK	19	CMOS input with weak internal	Serial peripheral interface clock	

		pull-down		
SPI_MISO	18	CMOS input with weak internal pull-down	Serial peripheral interface data Output	
USB_-	15	Bi-Directional		
USB_+	20	Bi-Directional		
1.8V	14		Externally powered 1.8V	The default is internal power supply 1.8V
PCM_CLK	5	Bi-Directional		
PCM_OUT	6	CMOS output		
PCM_IN	7	CMOS Input		
PCM_SYNC	8	Bi-Directional		

4. Product Parameters and Specifications

LINVOR BLUE T

www.linvor.com

Bluetooth Module
 Bluetooth

CSR,BC417143B

V 2.0

2006/09/6

蓝牙 **RF** 模块

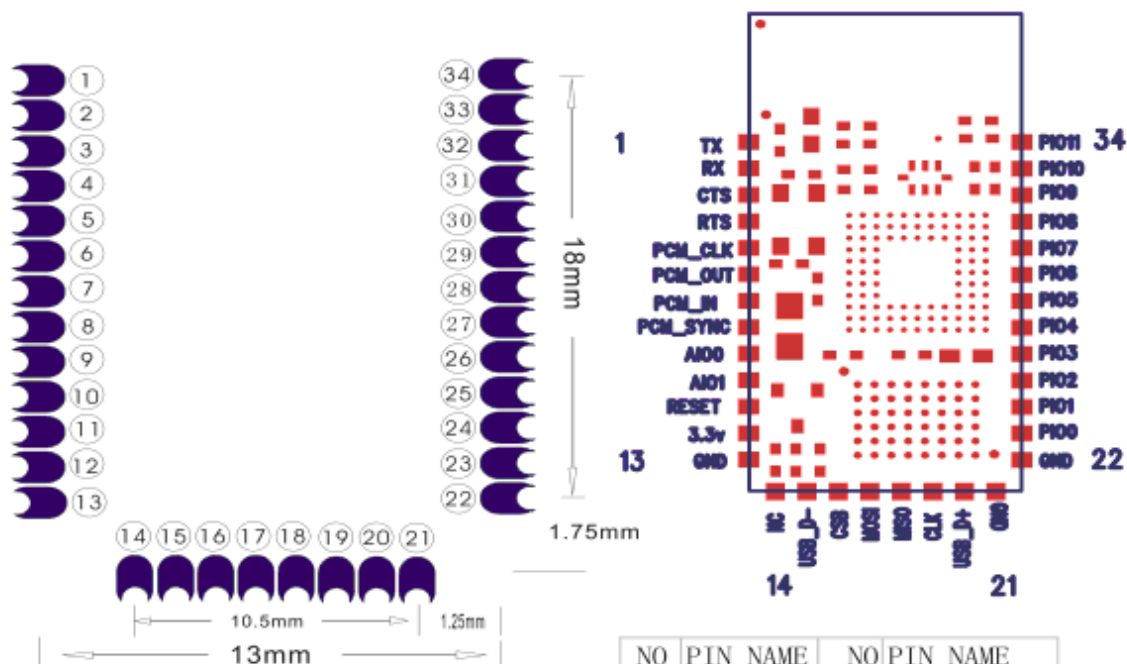
1. 采用 CSR BC4 +8M FLASH 方案
2. 具有 PIO0-PIO11、AIO0、AIO1、
USB、PCM、UART 及 SPI 接口，
模块内置 8MFLASH，功能强大，
用户可定制软件,适用于各种蓝牙
设备，内置 RF 天线,便于调试。

蓝牙协议版本	Bluetooth Specification V2.0 With EDR
USB 协议 USB Protocol	Full Speed USB V1.1 Compliant With USB V2.0
频率	2.4Ghz ISM band
调制方式	GFSK(Gaussian Frequency Shift Keying)
发射功率	-4 ->4 dBm, Class 2
灵敏度	≦ -80dBm at 0.1% BER
通讯速率	Asynchronous:2Mbps(Max)
供电电源	3.3V
工作温度	-20~+55 Centigrade
封装尺寸	27mmX13mmX2mm

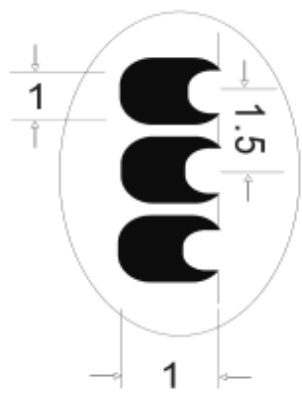
LINVOR BLUE T
www.linvor.com

LV-BC-2.0

单位: mm

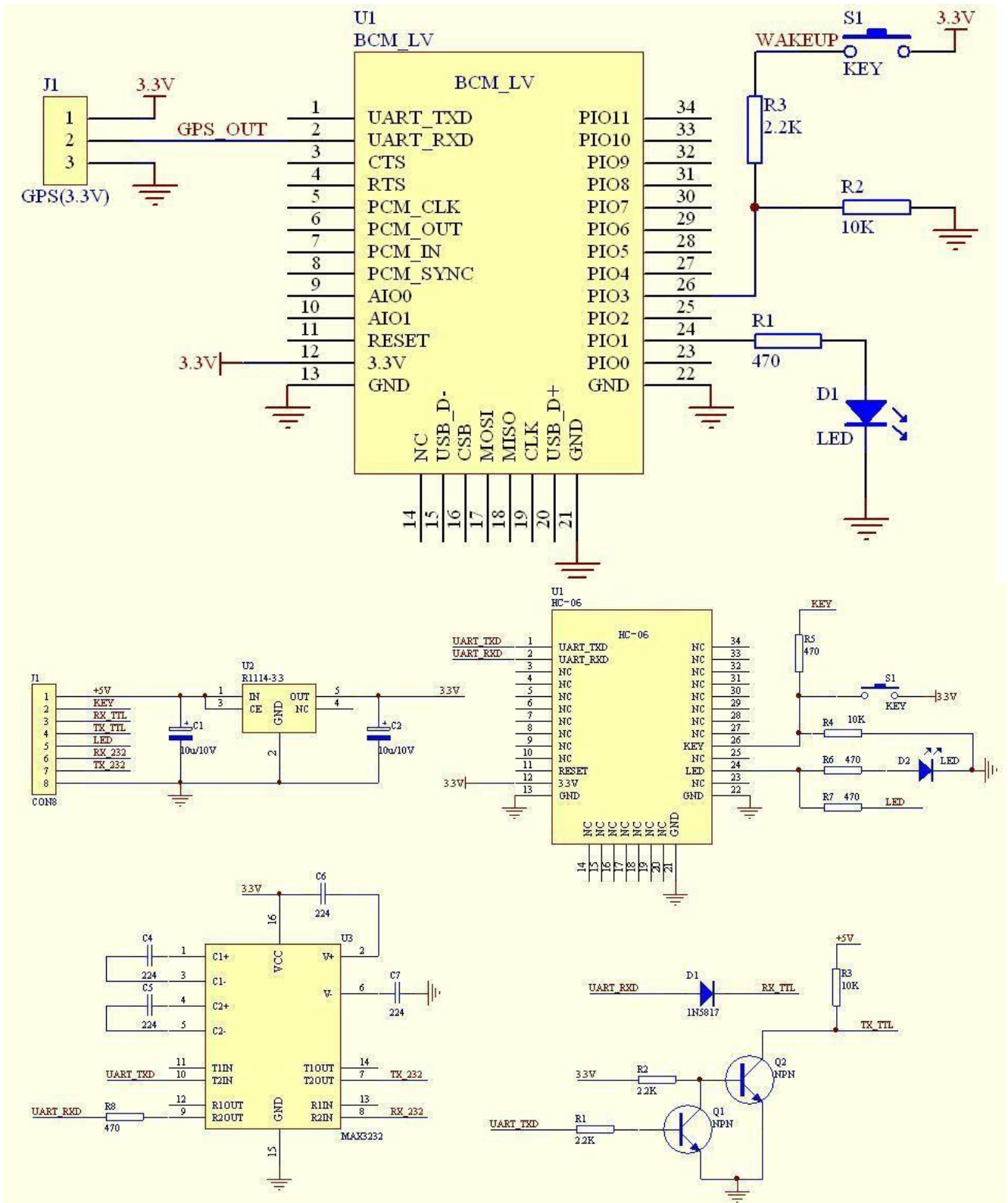


NO	PIN NAME	NO	PIN NAME
1	TX	20	USB D+
2	RX	21	GND
3	CTS	22	GND
4	RTS	23	PI00
5	PCM CLK	24	PI01
6	PCM OUT	25	PI02
7	PCM IN	26	PI03
8	PCM SYNC	27	PI04
9	AI00	28	PI05
10	AI01	29	PI06
11	RESET	30	PI07
12	3.3V	31	PI08
13	GND	32	PI09
14	NC	33	PI010
15	USB D-	34	PI011
16	CSB		
17	MOSI		
18	MISO		
19	CLK		



PCB Layout 请参考实物

5. Reference schematic



For HC-04, HC-06 host, WAKEUP will give up memory after pressing and search for new slaves again. If you do not give up memory, the host will always search for the last paired slave until it is found and paired successfully. So far, the HC-04/06's host has a feature that remembers the last paired slave. WAKEUP does not make sense for the slave.

6. Commissioning equipment

6.1 equipment

Computer, hardware, 3G frequency meter (SP3386), 3.15V DC power supply, shielded room, MT8850A (or MT8852B), Bluetooth test box.

6.2 software

7. Test data specificatio n

Test Condition 25°C RH 65%

	Min	Typ	Max	Unit
1. Carrier Freq. (<i>ISM Band</i>)	2.4		2.4835	MHz
2. RF O/P Power	-6	2	4	dBm
3. Step size of Power control	2		8	dB
4. Freq. Offset (<i>Typical Carrier freq.</i>)	-75		75	KHz
5. Carrier Freq. drift (<i>Hopping on, drift rate/50uS</i>)	-20		20	KHz
1 slot packet	-25		25	KHz
3 slot packet	-40		-40	KHz
6. Average Freq. Deviations (<i>Hopping off, modulation</i>)	140		175	KHz
Freq. Deviation	115			KHz
<u>Ratio of Freq. Deviation</u>	<u>0.8</u>			
7. Receive Sensitivity @< 0.1% BER(<i>Bit error rate</i>)	-83			dBm

8. Test plan chart

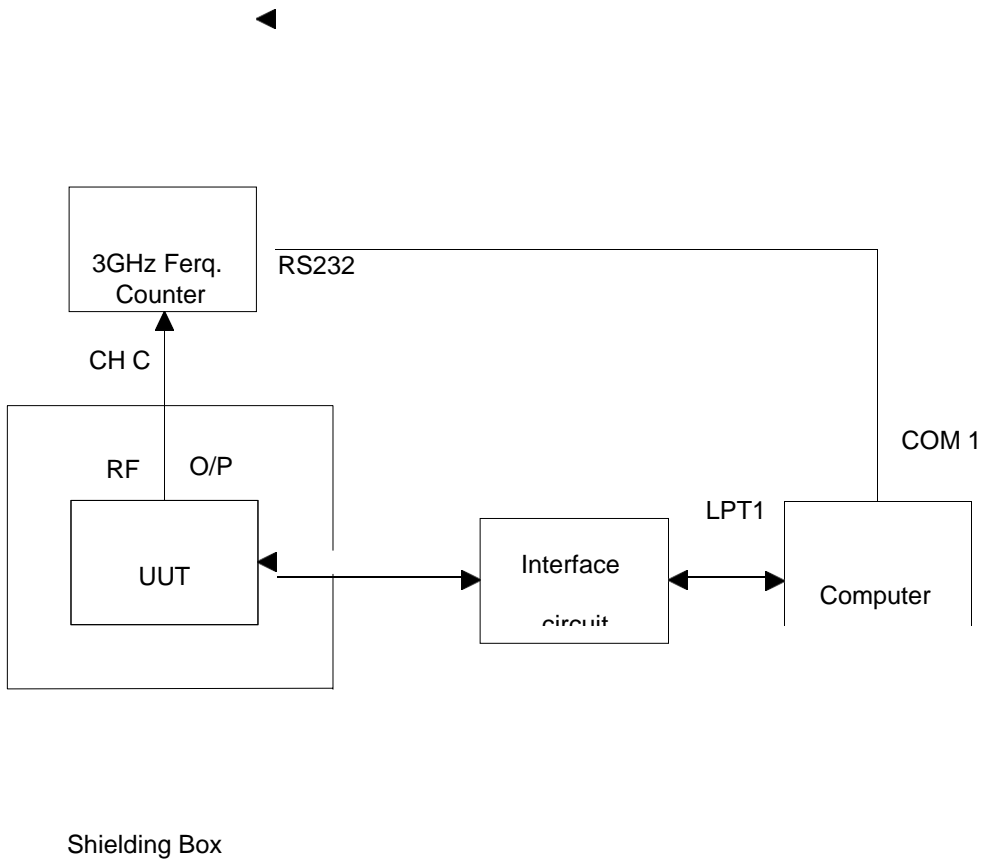
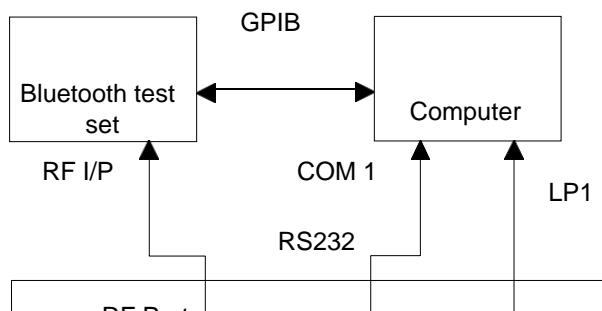


Fig 1. Programming and Freq. Alignment



Shielding Box

Fig 2 RF parameter Test Procedure

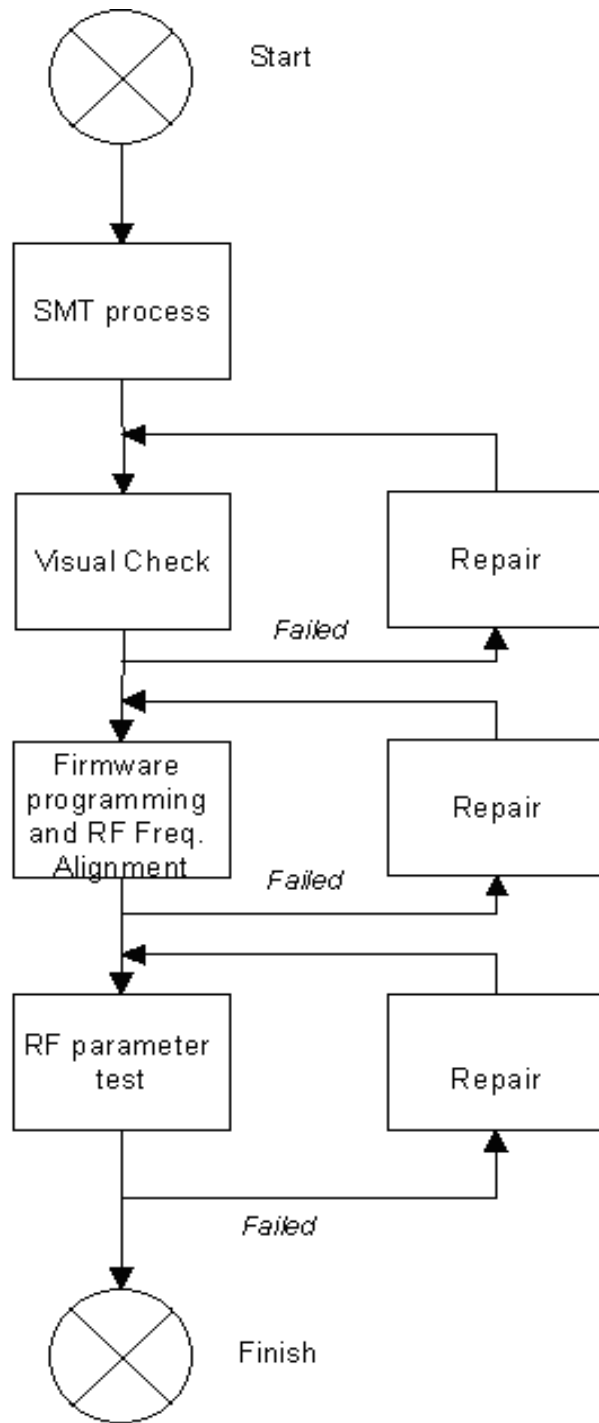


Fig 3 Assemble/Alignment/Testing Flow Chart

9. AT instruction set

To enter the AT command: Power on the module. In the case of no pairing, it is the AT mode. The command interval is about 1S. Factory parameter: baud rate 9600N81, name linvor, password 1234

1, test communication

Send: AT (return OK, send once every second) Return: OK

2. Change the Bluetooth serial communication

baud rate to send:

AT+BAUD1

Returns: OK1200

Send: AT+BAUD2

Returns: OK2400

.....

1-----1200

2-----2400

3-----4800

4-----9600 (default is this setting)

5-----19200

6-----38400

7-----57600

8-----115200

9-----230400

A-----460800

B-----921600

C-----1382400

> Cannot be used after the setting exceeds 115200. Use the microcontroller to

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program above 115200 to use this baud rate and retry AT command to set low baud rate

- After the baud rate is set with the AT command, it is not necessary to set the baud rate for the next power-up. You can save the baud rate after power-off.

3, change the name of the Bluetooth

Send: AT+NAMEname

Back: OKname

Parameter name: The current name to be set, that is, the name to which Bluetooth is searched. Within 20 characters. Example: Send AT+NAMEbill_gates

Back to OKname

At this time, the Bluetooth name is changed to bill_gates

The parameters can be saved in power-off and only need to be modified once. The PDA refresh service can see the changed Bluetooth name. The name cannot exceed 20 characters.

4, change the Bluetooth pairing password sending:

AT + PINxxxx

Back: OKsetpin

Parameter xxxx: The pairing password to be set, 4 digits. This command can be used for slave or host. When the slave is the adapter or the phone pops up asking for the pairing password window, manually input this parameter to connect the slave. After the main Bluetooth module searches for the slave, if the password is correct, it will be automatically paired. In addition to the master module can be connected to the pairing slave module, other products can also be connected when the slave module is included, such as a digital camera with Bluetooth, Bluetooth GPS, Bluetooth Serial printers, etc., in particular, Bluetooth GPS is a typical example

Example: Send:

AT+PIN8888 Back:

OKsetpin

At this time, the Bluetooth pairing password is changed to 8888, and the default pairing password of the module when shipped from the factory is 1234.

The parameters can be saved in power-off and only need to be modified once.

5, no calibration setup instructions: (supported after V1.5 version)

AT+PN (default is this setting)

6. Even parity setting instruction: (Supported after V1.5 version)

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AT+PE

7. Odd parity setting instruction: (supported after V1.5 version)

AT+PO

8, get the AT command version

command: AT+VERSION returns

LinvorV1.n is a genuine