



Bluetooth Module F-33088 User Manual

一. Specification:

F-3088, independently developed by our company, is an intelligent wireless audio data transmission product. It is a wireless transmission scheme with low cost and high efficiency. Used the CSR BLUECORE5 chip, the module has high quality sound and compatibility, and the overall performance is more optimization. F-3088 bluetooth module uses the drive-free mode, users only need to put it access application products, electricity, connect the button, then can quickly wirelessly transmit the music and enjoy the fun of it.

二. Application:

It is mainly used for short distance transmission, convenient to connect with notebook, mobilphone, PDA and other bluetooth devices. Then realize the wireless transmission for music. ※ 蓝牙音响

- ※ Bluetooth Stereo headset
- ※ Hands-free mobilphone
- ※ Bluetooth wireless transmission audio

三. Performance parameters:

Type	F-3088
Bluetooth standard	Bluetooth V2.1+EDR
Modulation Mode	GFSK, 1Mbps, 0.5BT Gaussian
Voltage Supply	Battery voltage VDD:3.3 supply
Support Bluetooth Association	OPP,OBEX,SPP,A2DP, AVRCP,FTP,HS/HF,DUN Profiles
Working current	$\leq 30\text{mA}$
Standby Current	$< 0.4\text{mA}$
Temperature range	-40°C to $+80^{\circ}\text{C}$
Wireless transmission range	10 米
Transmission power	CLASS2 4dBm
Sensitivity	-80dBm@0.1%BER
Frequency range	2.4GHz-2.480GHz
Foreign interface	PIO, SPI, Speaker, Microphone
Audio performance	High acoustic fidelity sound
Audio S/R	$\geq 75\text{dB}$
Distortion degree	$\leq 0.01\%$
Size	25.01X21.02X1.8MM

Company: SHENZHEN SHIXINZHONGXIN TECHNOLOGY CO., LTD.

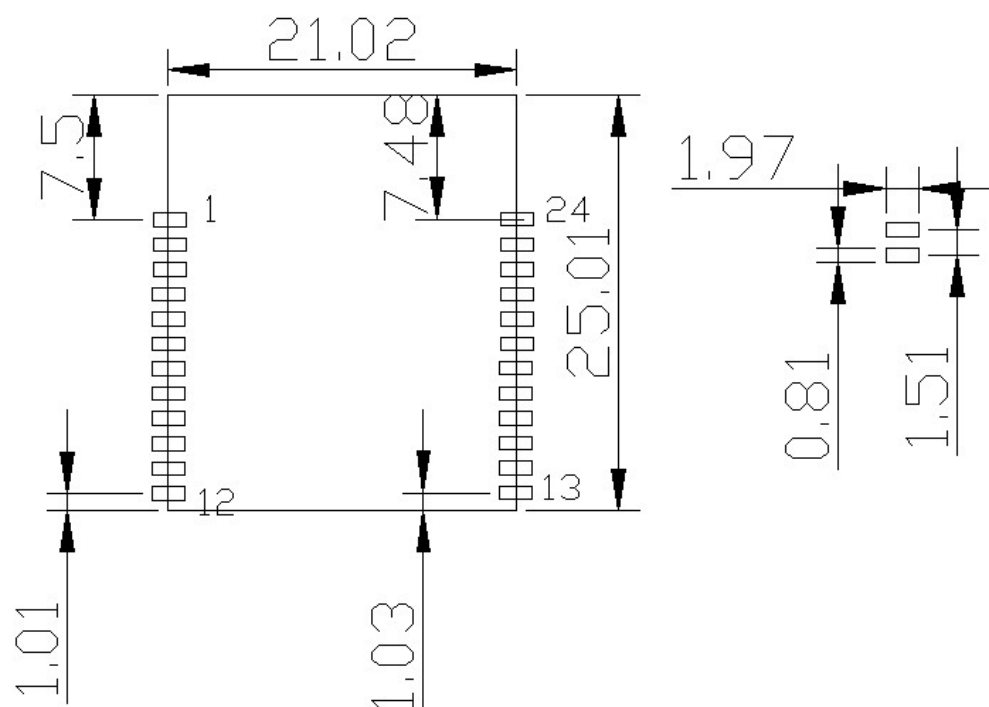
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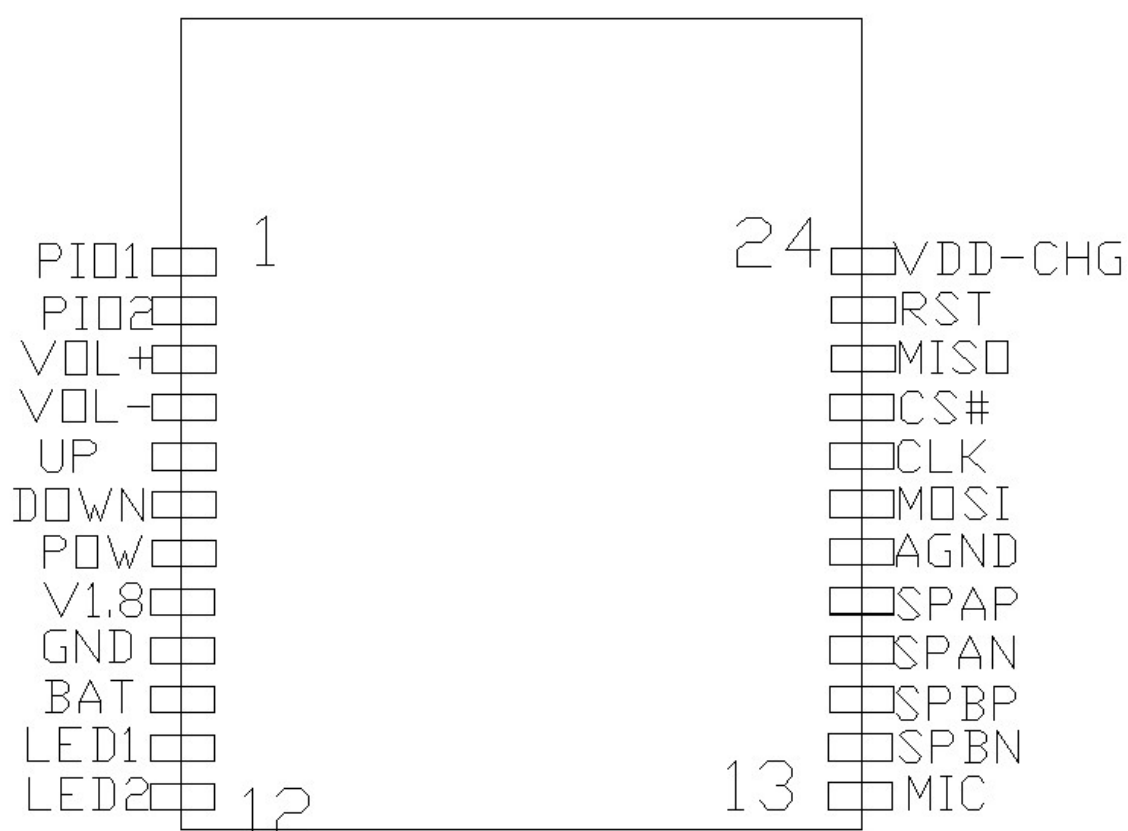
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四、Module Size:



五、Pin



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六、Pin function

Pin	Symb	I/O	Description
1	PIO1	Bi-Directional TX EN	
2	PIO2	Bi-Directional	Speaker output positive (left side)
3	VOL+	Bi-Directional	Speaker output negative (right side)
4	VOL-	Bi-Directional	Speaker output positive (right side)
5	UP	Bi-Directional	Ground
6	DOWN	Bi-directional	Programmable input/output line
7	POWER	Bi-directional	Programmable input/output line
8	+1.8V	POWER	+1.8V Supply
9	GND	Bi-directional	Programmable input/output line
10	BAT	Battery terminal+ve	3.3-4.2V
11	LED1	CMOS Input	Synchronous Data Input
12	LED2	pen drain output	Synchronous Data Sync
13	MIC	pen drain output	Synchronous Data Clock
14	SPBN	Analogue output	Speaker output L negative
15	SPBP	Analogue output	Speaker output L positive
16	SPAN	Analogue output	Speaker output R Nositive
17	SPAP	Analogue output	Speaker output R Positive
18	GND	GND	Ground
19	MOSI	CMOS input with weak internal pull-down	Serial peripheral interface data input
20	CLK	CMOS input with weak internal pull-down	Serial peripheral interface clock
21	CS#	CMOS input with weak internal pull-down	Chip select for serial peripheral interface, active low
22	MISO	CMOS input with weak internal pull-down	Serial peripheral interface data Output
23	RTS	CMOSOutput,tri-state,with week pull-up	UART request to send active low
24	VDD-CHG	Charger input	Lithium iion/polymer battery

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七. Working mode:

- 1 Electricity (3.0v-----4.5v)
- 2 Long press "POWER" to be on, the LED1 flashing once, then to put out . And LED2 kept flashing. Flashing frequency is 5s once ;that means the module can work if connecting the bluetooth device. But no 2s once.
- 3 The module will automaticly search the previous bluetooth device when power on. It will exit the connection without searching the previous device in 10s. Otherwise, it will connect automaticly.
- 4 At boot state, long press "POWER" button, the LED1 will flash once then put out to power off . At this moment , two lights don't bright .
- 5 At boot state, no finding the previous connection, you must connect again. Long press "POWER" button without let your hands go until the LED fast alternate flashing. Then it go into the match mode. At the match mode, you can connect with your mobile phone, computer and other bluetooth device . The bluetooth name is F-3088 and password is 8888(The name and password can change according to your requirements) .
- 6 It can transmit music if the module have connected with the bluetooth device. You can control by the button: Previous, Next, Volume +, Volume - , pause and play.
- 7 If connected with the phone, short press"POWER" button to hang on and hang off when someone calls you .
- 8 Through the MIC port to connect your microphone, you can call for hand-free.

八. Circuit connection note:

F-3088 external amplifier, must meet difference of the input amplifier. If not , must take an op-amp balance two difference level, or you will have the impact of sound.

九. Attension:

A. Use environment: the wireless signal is widely influenced by the surrounding environment. Obstacles such as trees and metal can absorpt certain wireless signal. Therefore, in the appliction , the transmission distance has a certain influnce.

B. The bluetooth modules are supporting the existing system, placed in the shell. However, the metal shell can shield the wireless frequency signal.We suggest not equip it in a metal shell.

C. PCB board: The antenna of the bluetooth module is PCB antenna, but the metal will weaken the function of the antenna , the module is strictly prohibited to go line and pave tile when clothing the PCB. It is better to hollow out.

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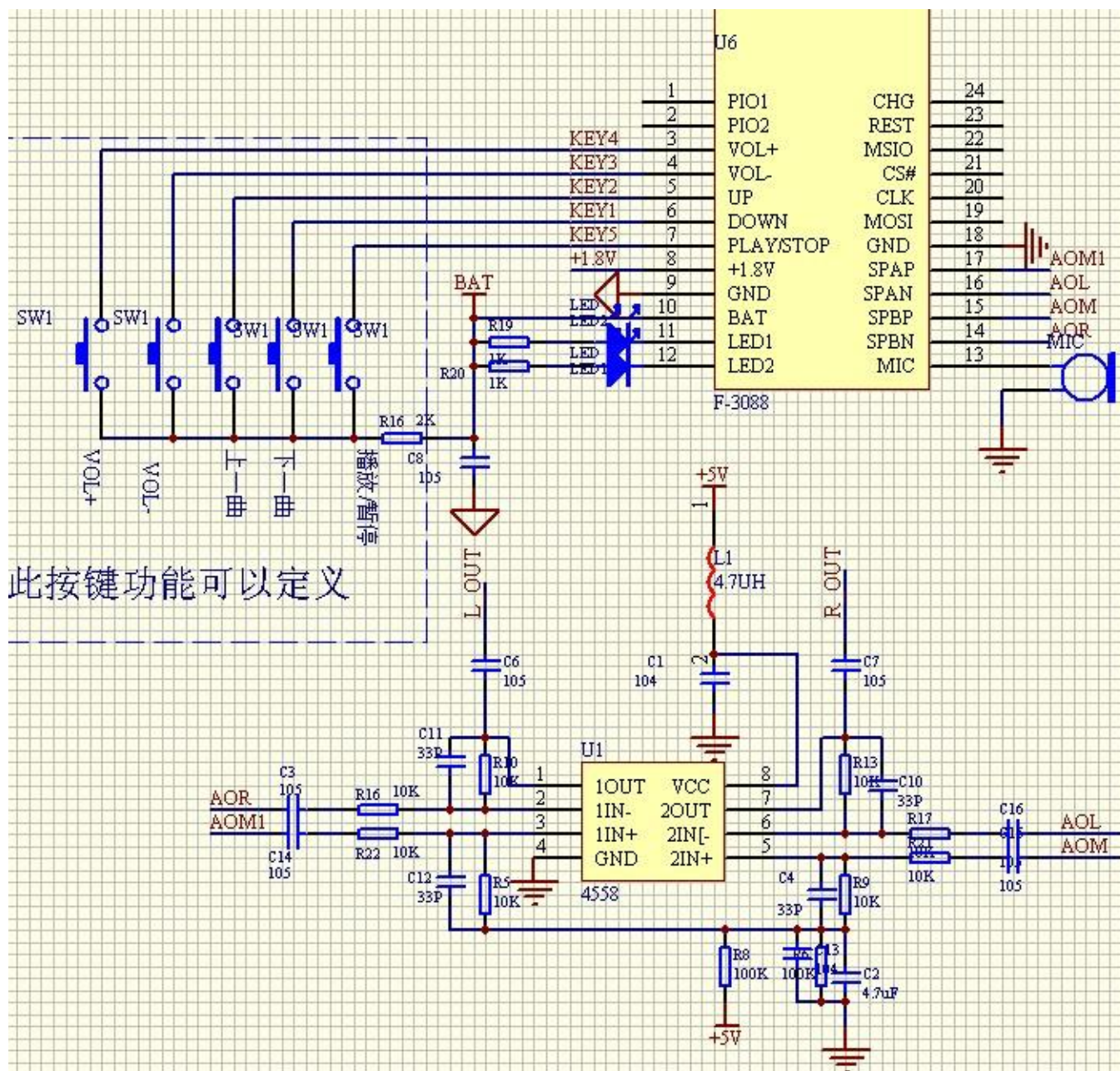
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十. Circuit Application:



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Important compliance information for North American users

The F-3088 Module has been granted modular approval for portable applications. Integrators may use the F-3088 Module in their final products without additional FCC certification if they meet the following conditions. Otherwise, additional FCC approvals must be obtained.

1. To comply with FCC regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed 0dBi in the 2.4G band.
2. The F-3088 Module and its antenna must not be co-located or operating in conjunction with any other transmitter or antenna within a host device.
3. A label must be affixed to the outside of the end product into which the F-3088 Module is incorporated, with a statement similar to the following: For F-3088: This device contains FCC ID: KKI-F-3088.
4. A user manual with the end product must clearly indicate the operating requirements and conditions that must be observed to ensure compliance with current FCC RF exposure guidelines.

The end product with an embedded -F-3088 Module may also need to pass the FCC Part 15 unintentional emission testing requirements and be properly authorized per FCC Part 15.

FCC NOTICE:

This device complies with Part 15 of the FCC Rules [and with RSS-210 of Industry Canada].

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications made to this equipment not expressly approved by ShenZhen XinZhongXin Technology Co., Ltd. may void the FCC authorization to operate this equipment.