Bluetooth Module F-6088 User Manual

Product Overview

F-6088 is an intelligent wireless audio data transmission product which developed by our company independently; it is a wireless stereo transmission scheme with low cost and high efficiency. And the module used the BEKEN chip, which provide the high quality sound and compatibility for the module, and make the overall performance more optimization. BK3231 Bluetooth Module use the drive-free mode, users only need to access to application products, electrify it and connect the button, then they can quick transmit the music wirelessly and enjoy the fun of music.

Application:

It is mainly used for short distance transmission, convenient to connect with notebook, mobile phone, PDA and other digital Bluetooth devices. Then realize the wireless transmission for music.

- Bluetooth Speaker
- Bluetooth Stereo Headset
- Speaker Phones
- Bluetooth Wireless Transmission Audio

. Basic Performance

Bluetooth Profiles

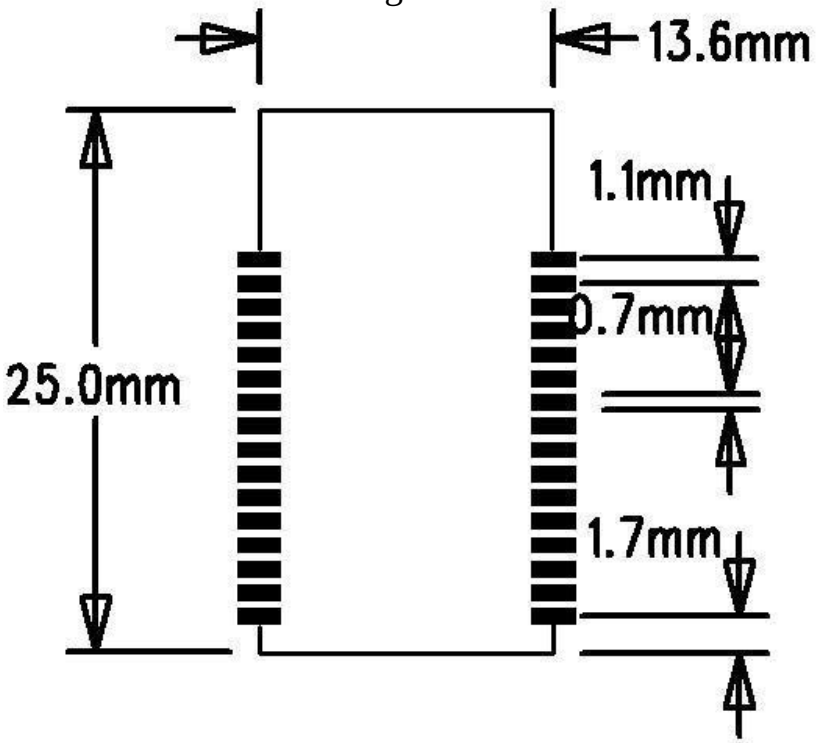
- Bluetooth v2.1 specification support
- A2DPv1.2
- AVRCPv1.0
- HFPv1.5

. Performance parameters:

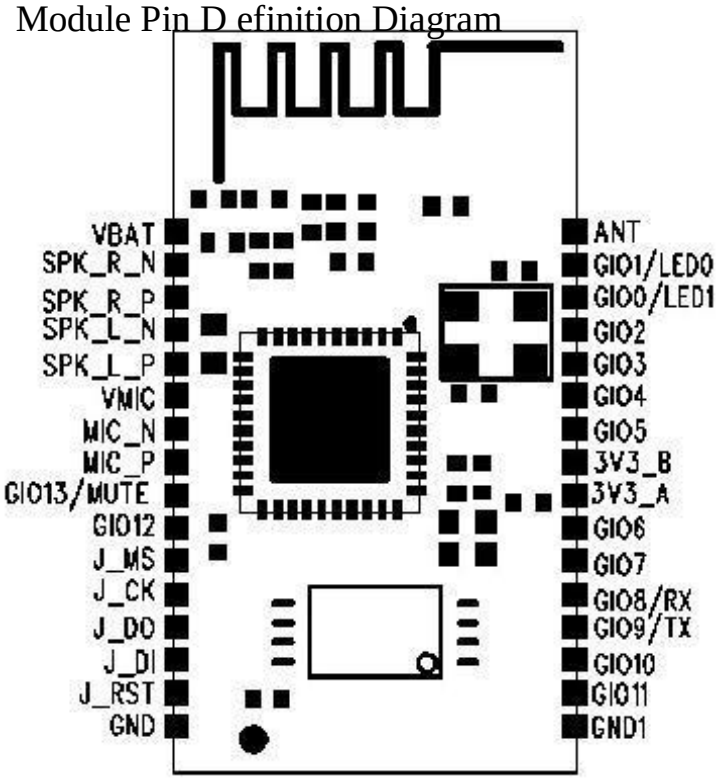
Model	F-6088
Bluetooth standard	Bluetooth V2.1
Working current	2.8-3.6V
Support Bluetooth Profile	HFPV1.5, A2DPV1.2,AVRCPV1.0
Working current	≤40mA
Standby Current	<500uA
Temperature Range	-40℃ to +85℃
Wireless Transmission Range	>10 M
Transmission Power	Support CLASS1 10 dBm
Sensitivity	-88dBm<0.1%BER
Frequency Range	2.4GHz-2.480GHz
External Interface	I2C, SPI and UART interface
Audio performance	Support AAC, MP3, SBC, APTX,STEREO
Audio S/R	≥75dB
Module Size	25X13.5X1.8MM

Company SHENZHENSHIXINZHONGXIN TECHNOLOGY CO., LTD.
TEL 0755-29179480/1/2. FAX: 0755-84736169
Address: Block 3, Dong Huan Industrial Park, Sha Jing Town, Bao'an District, Shenzhen City, Guangdong, Province, China
Web: www.c-chip.com.cn

Module Size Diagram



Module Pin D efinition Diagram



Pin Function

Pin	Symb	I/O	Description
1	VBAT	Analogue in	Check battery
2	SPK_R_N	Analogue out	Right channel audio output negative
3	SPK_R_P	Analogue out	Right channel audio output positive
4	SPK_L_N	Analogue out	Left channel audio output negative
5	SPK_L_P	Analogue out	Left channel audio output positive
6	VMIC	Analogue out	Bias for reference for audio(MIC)input
7	MIC_N	Analogue in	MIC input negative
8	MIC_P	Analogue in	MIC input positive
9	GIO13	Digital I/O	GPIO13/MUTE
10	GIO12	Digital I/O	GPIO12
11	J_MS	Digital I/O	JTAG pin
12	J_CK	Digital I/O	JTAG pin
13	J_DO	Digital I/O	JTAG pin
14	J_DI	Digital I/O	JTAG pin
15	J_RST	Digital I/O	JTAG pin
16	GND	Ground	Ground connect battery negative
17	GND1	Ground	Ground connect battery negative
18	GIO11	Digital I/O	GPIO11
19	PIO10	Digital I/O	GPIO10
20	GIO9	Digital I/O	GPIO9/TX
21	GIO8	Digital I/O	GPIO8/RX
22	GIO7	Digital I/O	GPIO7
23	GIO6	Digital I/O	GPIO6
24	3V3_A	FLASH power supply	FLASH chip power supply
25	3V3_B	Power supply pin	Whole chip power supply
26	GIO5	Digital I/O	GPIO5/NEXT
27	GIO4	Digital I/O	GPIO4/PRE
28	LED1	Digital I/O	GPIO3/VOL+
29	LED2	Digital I/O	GPIO2/VOL-
30	GIO0	Digital I/O	GPIO0/LED1
31	GIO1	Digital I/O	GPIO1/LED0
32	ANT	Bi-directional with weak	Programmable input/output

Shen Zhen Shi Xin Zhong Xin Technology Co., Ltd.

Attention for connect the circuit F-6088

When BK3231 connect external amplifiers, it must connect differential input amplifier. If not, the module must connect an op-amp to balance two difference levels; otherwise, it will appear the "snapped" impact sound.

Statement:

A Wireless Bluetooth use environment: the wireless signal is widely influenced by the surrounding environment. Such as the trees and metal can absorb certain wireless signal. Therefore, the transmission distance has been influenced in the application.

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 to equip-ed it in a metal shell.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
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 interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

Le pr ésent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'exploitation est autoris ée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radio électrique subi, m ême si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil num érique de la classe B est conforme à la norme NMB-003 du Canada.

This equipment is portable device. The output power of this device is less than 20mW.The SAR test is not required.

A certified modular has the option to use a permanently affixed label, or an electronic label. For a permanently affixed label, the module must be labelled with an FCC ID: KKI-F-6088. The OEM manual must provide clear instructions explaining to the OEM the labelling requirements, options and OEM user manual instructions that are required

For a host using a this FCC certified modular with a standard fixed label, if (1) the module's FCC ID is notvisible when installed in the host, or (2) if the host is marketed so that end users do not have straightforward commonly used methods for access to remove the module so that the FCC ID of the module is visible; then an additional permanent label referring to the enclosed module:
"Contains Transmitter Module FCC ID: KKI-F-6088" or "Contains FCC ID: KKI-F-6088" must be used. The host OEM user manual must also contain clear instructions on how end users can find and/or access the module and the FCC ID.

Host product is required to comply with all applicable FCC equipment authorizations regulations, requirements and equipment functions not associated with the transmitter module portion. compliance must be demonstrated to regulations for other transmitter components within the host product; to requirements for unintentional radiators (Part 15B). To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. If a host was previously authorized as an unintentional radiator under the Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that the after the module is installed and operational the host continues

to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, we suggest the host device to recertify part 15B to ensure complete compliance with FCC requirement: Part 2 Subpart J Equipment Authorization Procedures , KDB784748 D01 v07, and KDB 997198 about importation of radio frequency devices into the United States.

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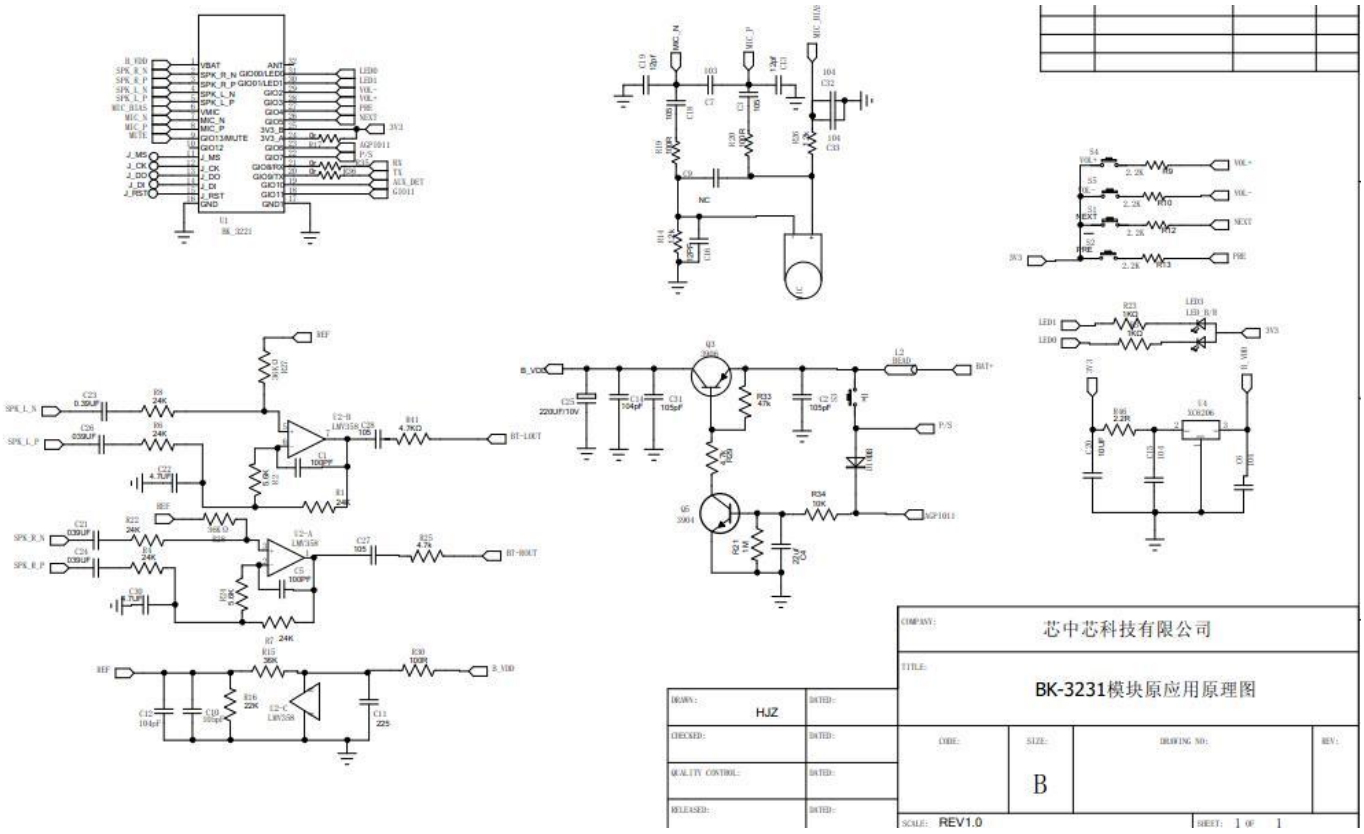
Circuit Application: