

Bluetooth module specification

一、 Overview

SAT-doBT-01 is a data-only Bluetooth module that supports Bluetooth dual-mode, Bluetooth 2.1 version SPP + BLE 5.1 version. This Bluetooth module mainly uses the doBT-01 chip of Chengdu Duyun Future Technology Co., Ltd. The highlight of this chip is its minimalist design, low price, simple transparent transmission and serial port AT control functions. It greatly reduces the difficulty and cost of developing Bluetooth in other products.

Both SPP and BLE are supported, but only one of them can be used at the same time.

二、 Features

- Bluetooth 2.1 SPP
- Bluetooth 5.1BLE
- AT firmware, data transparent transmission
- Baud rate/Bluetooth name can be modified
- LOGO and firmware can be customized in batches
- Working voltage: 2.2V-3.4V

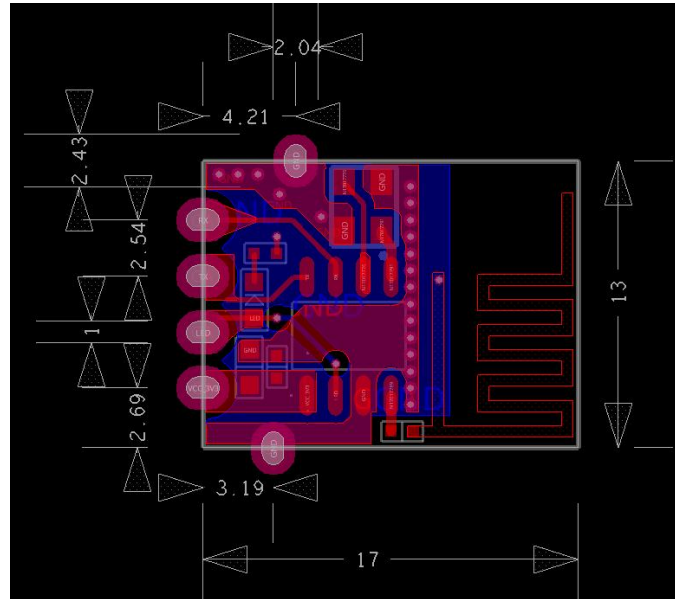
三、 Application Areas

This module is mainly used in the field of short-distance wireless data transmission. It can be easily connected to the Bluetooth device of mobile phone/PC, avoiding cumbersome cable connection, and can directly replace the serial port line.

- Bluetooth wireless data transmission
- Industrial remote control and telemetry
- POS system, wireless keyboard, mouse
- Traffic, underground positioning, alarm
- Automated data acquisition system
- Wireless data transmission
- Wireless Data Collection
- Building automation, security, wireless monitoring of computer room equipment, access control systems
- Smart home, industrial control

四、 Module size diagram

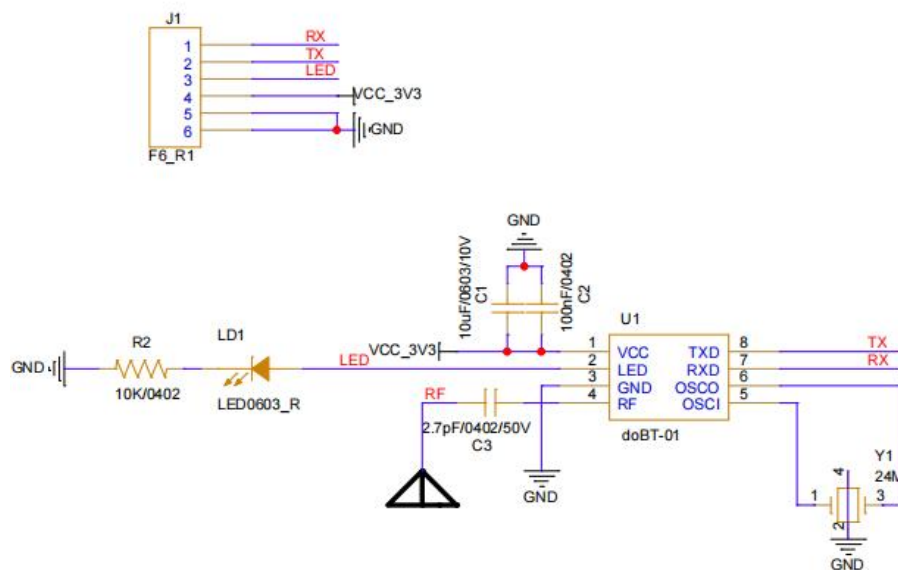
Units:mm



五、Pin Description

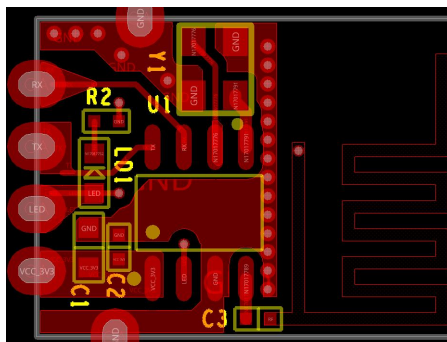
Pin Number	definition	describe
1	RxD	TTL (3.3V level) serial port receiving
2	TXD	TTL (3.3V level) serial port transmission
3	led	If not connected, the output is low level; if connected, the output is high level
4	VCC	2.2-3.4V, 3.3V recommended
5	GND	land
6	GND	land

六、Schematic

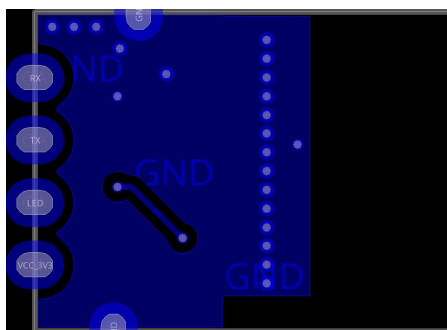


七、PCB

- TOP:



- BOM:



IC Warning:

CAN ICES-3 (B)/NMB-3(B)

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux CNR exempts de licence d'Innovation, Sciences et Développement économique Canada. L'exploitation est soumise aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage,

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC Warning:

This device complies with part 15 of the FCC Rules. 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.

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Antenna used :

Antenna Type	Brand/ manufacturer	Model No.	Max. Antenna Gain
PCB Layout Antenna	Seauto/Shenzhen Seauto Technology Co., Ltd.	2.4G ANT	-0.58 dBi

Notice to Host Product Manufacturer :

Any deviation(s) from the defined parameters of the antenna trace, as described by this instruction, host product manufacturer must notify us that you wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by us, or you (host manufacturer) can take responsibility through the change in FCC ID and IC ID (new application) procedure followed by a Class II permissive change application.

Safe distance warning :

Use the SAT-doBT-4BT1-01Bluetooth Module in the environment with the temperature between -40°C and 85°C, The device complies with RF specifications when the device used at 20cm from your body.

RF Exposure compliance statement

This Module complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Labelling Instruction for Host Product Integrator

Please notice that if the FCC and IC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. For FCC, this exterior label should follow “ Contains FCC ID: 2BFZF-4BT1 ” . In accordance with FCC KDB guidance 784748 Labeling Guidelines. For IC, this exterior label can use wording “ Contains IC: 32347-4BT1 ” .

Installation Notice to Host Product Manufacturer

The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install module. The module is limited to installation in mobile application, a separate approval is required for all other operating configurations, including portable configurations with respect to § 2.1091 and difference antenna configurations.

Antenna Change Notice to Host manufacturer

If you desire to increase antenna gain and either change antenna type or use same antenna type certified, a Class II permissive change application is required to be filed by us, or you (host manufacturer) can take responsibility through the change in FCC ID&IC ID (new application) procedure followed by a Class II permissive change application.

FCC other Parts, Part 15B Compliance Requirements for Host product manufacturer

This modular transmitter is only FCC authorized for the specific rule parts listed on our grant, host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

Host manufacturer in any case shall ensure host product which is installed and operating with the module is in compliant with Part 15B requirements. Please note that For a Class B or Class A digital device or peripheral, the instructions furnished the user manual of the end-user product shall include statement set out in § 15.105 Information to the user or such similar statement and place it in a prominent location in the text of host product manual. Original texts as following:

For Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.