

## BT17 Bluetooth module

Bluetooth module type: PCB module

Dimension: 26mm\*16mm

### 1. Bluetooth module photo



### 2. Technical Parameter

1. Maximum working frequency: 192 M
2. Version: V5.0+BR+EDR+BLE
3. Voltage: VBAT 2.2V to 5.5V, VDDIO 2.2V to 5.5V, RTCVDD 2.2V to 3.6V
4. Operating temperature -20 ~70°C, storage temperature: -65°C~150°C
5. Power source value nominal: 5V
6. Maximum Peak/RMS Conducted Power: 4.33 dBm
7. Maximum RX/TX packet length support to 37 BYTES
8. Steady modulation coefficient transmit receive: YES
9. Channel Spacing: 1 MHz/2MHz
10. Channel Number: 79/40
11. Antenna gain: -0.58 dBi
12. Supported Bluetooth protocols: A2DP1.0 AVRCP1.5 AVDTP1.0 AVCTP 1.4 HFP 1.5 GAVDP 1.0

### 3. Details of Transmitter

1. Frequency range: 2402-2480MHz
2. No. of preset switchable channels: 79/40
3. No. of voice /Data/ TV Channels: 7 (In case of multi- channel equipment)
4. Tx-Rx channel separation time division multiplex frequency hopping  
(In case of Duplex/multi-channel equipment)
5. Frequency stability: 25ppm
6. Spurious/ Harmonic radiation:
  - i. Carrier suppression: < -35dB (In case of carrier suppressed systems)
  - ii. Unwanted side band suppression:< -35dB (low side band)( In case of SSB systems)
  - iii. 2nd Harmonic radations:< -40dB
  - iv. 3rd Harmonic radiations:< -40dB
7. Max. Frequency Deviation:  $\pm 75\text{KHz}$
8. Mode of emission: TX Mode
9. Bandwidth of emission: 1MHz
10. Test Tone deviation: 25ppm
11. Base band frequency:1MHz (In case of multi channel equipment)
12. Type of modulation to be required : GFSK 、  $\pi/4$  DQPSK
13. Pre-emphasis: No

### 4. Details of Receivers

1. Frequency range: 2402-2480MHz
2. Mode of reception Receive: RX
3. Spurious response of receiver: C/I -40 dB
4. Sensitivity: < -85dBm
5. Frequency stability: 25ppm
6. (a) Effective noise temperature :-40°C~+85°C  
(b) Threshold input level: 0dBm - -85dBm
7. Intermediate frequency : 1.5MHz
8. De-emphasis: No
9. Selectivity: 1MHz

## **FCC regulatory compliance statement**

### **§15.19 Statement**

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.
- (2). this device must accept any interference received, including interference that may cause undesired operation.

### **§15.21 Information to user**

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **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. Country Code selection feature to be disabled for products marketed to the US/Canada.

This device is intended only for OEM integrators under the following conditions:

- (1). The antenna must be installed such that 20 cm is maintained between the antenna and users.
- (2). The transmitter module may not be co-located with any other transmitter or antenna.

As long as the two conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

## **Operational use conditions**

Module has professional users use condition limitations, this module is limited to be used in control box which is produced by MotoMotion China Corporation, it should be installed and operated with a minimum distance of 20cm between the radiator and your body. Host product manufacturer please ensure giving such warning like "Product is limited to professional users use" in your product's instruction.

## **Antenna used**

Antenna Type	Brand/ manufacturer	Model No.	Max. Antenna Gain
PCB	JIELI	2.4G ANT	MAX. Gain: -0.58dBi

## **Labelling Instruction for Host Product Integrator.**

Please notice that if the FCC 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: 2BA76BT17MNT009". In accordance with FCC KDB guidance 784748 Labeling Guidelines.

## **§ 15.19 Labelling requirements shall be complied on end user device.**

Labelling rules for special device, please refer to §2.925, § 15.19 (a)(5) and relevant KDB publications. For E-label, please refer to §2.935.

### **Installation Notice to Host Product Manufacturer**

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

### **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 (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

### **Limited module procedure**

The module doesn't have its own RF shielding, The host should provide the RF shielding to the modular, which belong to Limited module.

Standard requires: Clear and specific instructions describing the conditions, limitations and procedures for thirdparties to use and/or integrate the module into a host device (see Comprehensive integration instructions below).

Supply example as follows: Installation Notes:

- (1). Power supply for the limited module with FCC ID: 2BA76BT17MNT009 is DC 5V, when you use product with this module design, the power supply cannot exceed this value.
- (2). When connect the module to the host device, the host device must be powered off.
- (3). Make sure the module pins correctly installed.
- (4). Make sure that the module does not allow users to replace or demolish.

### **Information on test modes and additional testing requirements**

Host manufacturer which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C:15.247 and 15.209 requirement, only if the test result comply with FCC part 15.247 requirement, then the host can be sold legally.

### **Additional testing, Part 15 Subpart B disclaimer**

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.

### **Additional Testing and Grantee Evaluation for Host Product.**

The module is limited module and complies with the requirement of FCC Part 15.247. According to FCC Part Subpart C section 15.212, the radio elements must have the radio frequency circuitry shielded. However, Due to there is no shield for this module, this module is granted as a Limited Modular Approval. A C2PC is required for new host application. Only Grantees are permitted to make permissive changes. Please contact us for further process with MotoMotion China Corporation.

The OEM integrators should follow the following C2PC test plan, Base on Module RF report "KSCR231200229001" "KSCR231200229002" under FCC ID: 2BA76BT17MNT009.

For the host product installed this module exactly according to this guide, and did not make any hardware or software modifications to this module or modified the software but does not affect the radio characteristics,

The host product will need to evaluate according to FCC Part 15 Subpart C 15.247 for Bluetooth:

- (1). Maximum conducted power of channel 2441MHz of DSS and 2480MHz of DTS.
- (2). Conducted band edge on channel 2402 and 2480MHz.
- (3). Radiated spurious emissions and band edge on channel 2402 and 2480MHz with the other co-located transmitters.

### **RF Exposure evaluation for the simultaneous transmission of the co-located transmitters.**

The host product shall be evaluation for ensuring the continuous compliance for the FCC rules that apply to the host product. Additional guidance for testing host products is provided in KDB Publication 996369 D02 and D04. This module was tested as a subsystem and it's certification does not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to final host. The host will still need to be reassessed for compliance to this portion of rule requirements. For the host product is not installed according to tis guide, the module certification will be invalid and a new grant certification will be required for the host product.