

Model	BLE006 Buletooth module	Date	July 13, 2021
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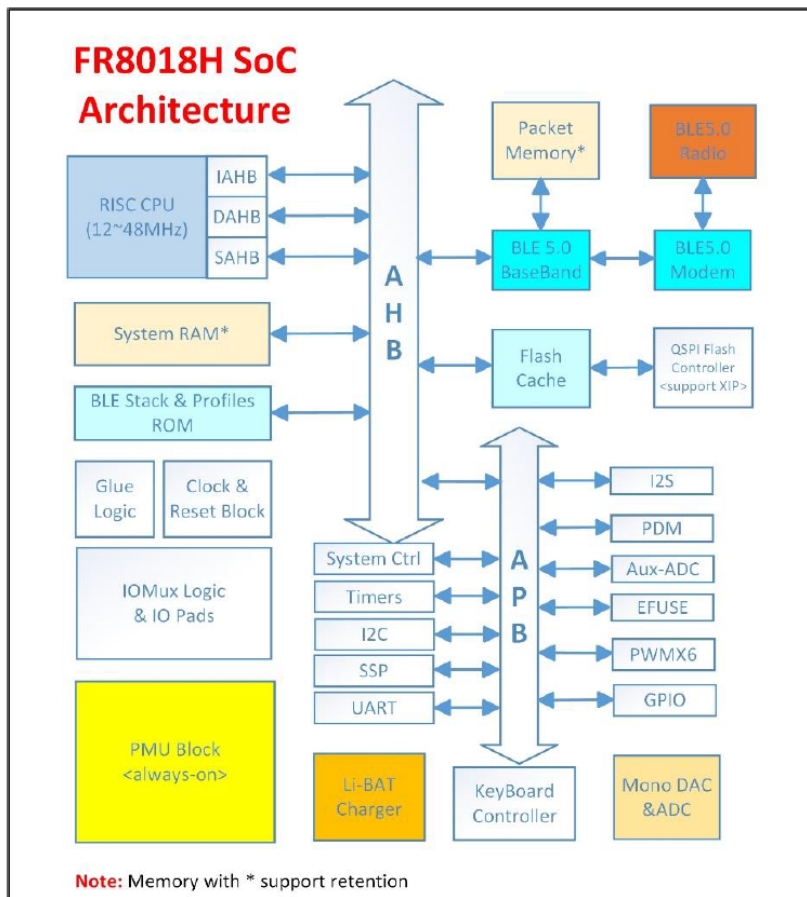
1、Specification：

- 1-1. Bluetooth module：BLE006
 - 1-2. Bluetooth specification：Bluetooth 5.1、Class2
 - 1-3. MCU: FREQCHIP FR8018HA SoC solution
 - 1-3. Operation voltage：DC1.8~3.3V
 - 1-4. Modulation：GFSK
 - 1-5. Operation frequency：2402MHz~2480MHz
 - 1-6. Channel number：40
 - 1-7. Channel separation：2MHz
 - 1-8. Antenna type：PCB Antenna
 - 1-9. Antenna Gain：0 dBi
 - 1-4. Communication type: GPIO,UART, SPI, I2C, PWM, ADC
- The module complies with FCC Part 15C requirements.

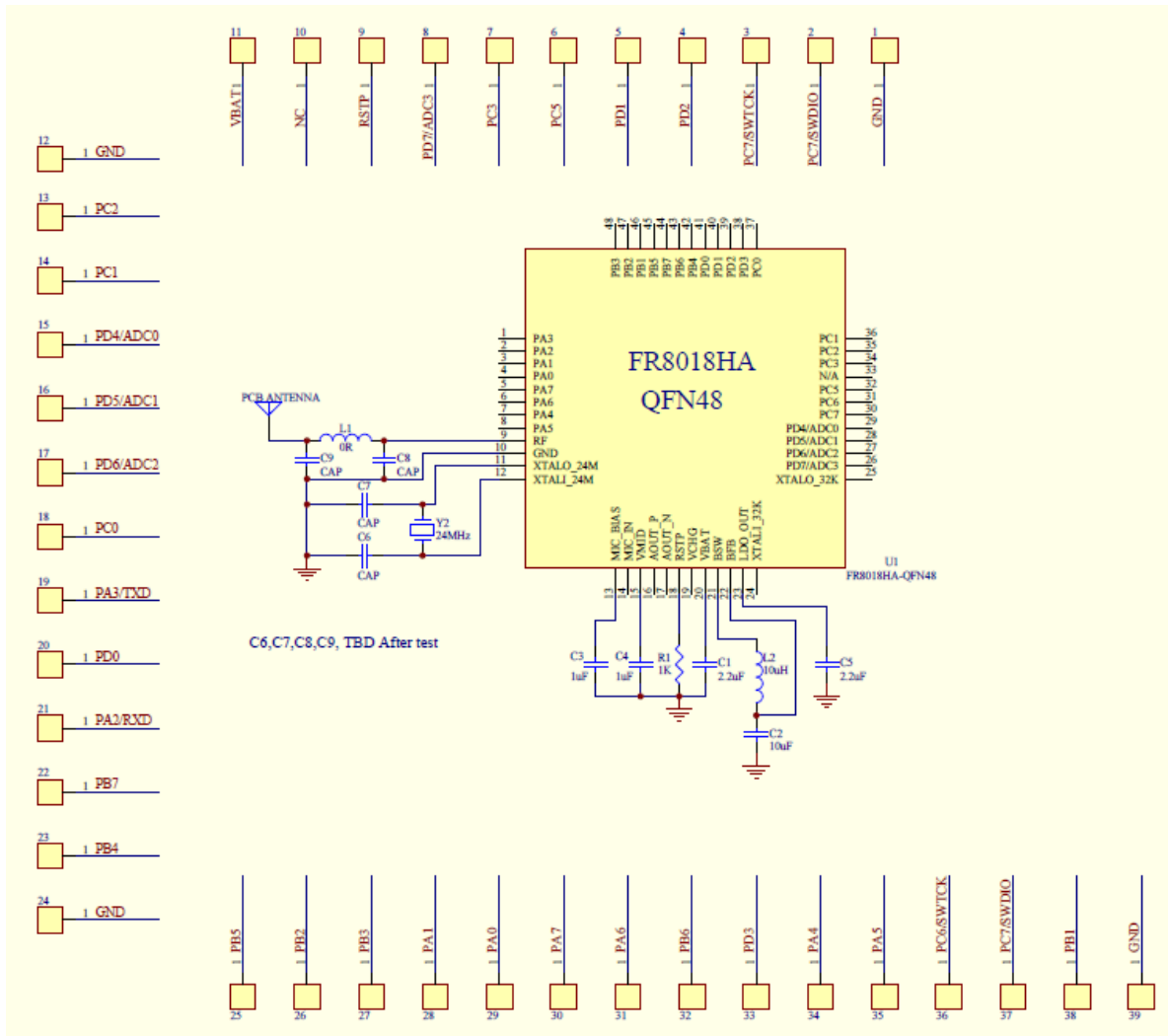
2、Circuit Description：

BLE006 is a Bluetooth 5.1 module based on FREQCHIP FR8018HA SoC, the main function is linking other Bluetooth device via GATT profile or customize protocol to exchange data or control electronic device.

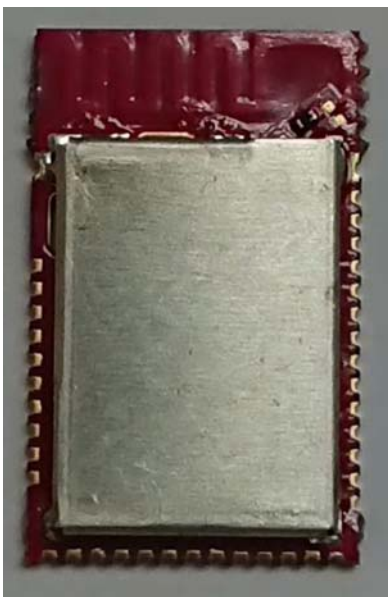
3、Block Diagram：



4、Schematic：

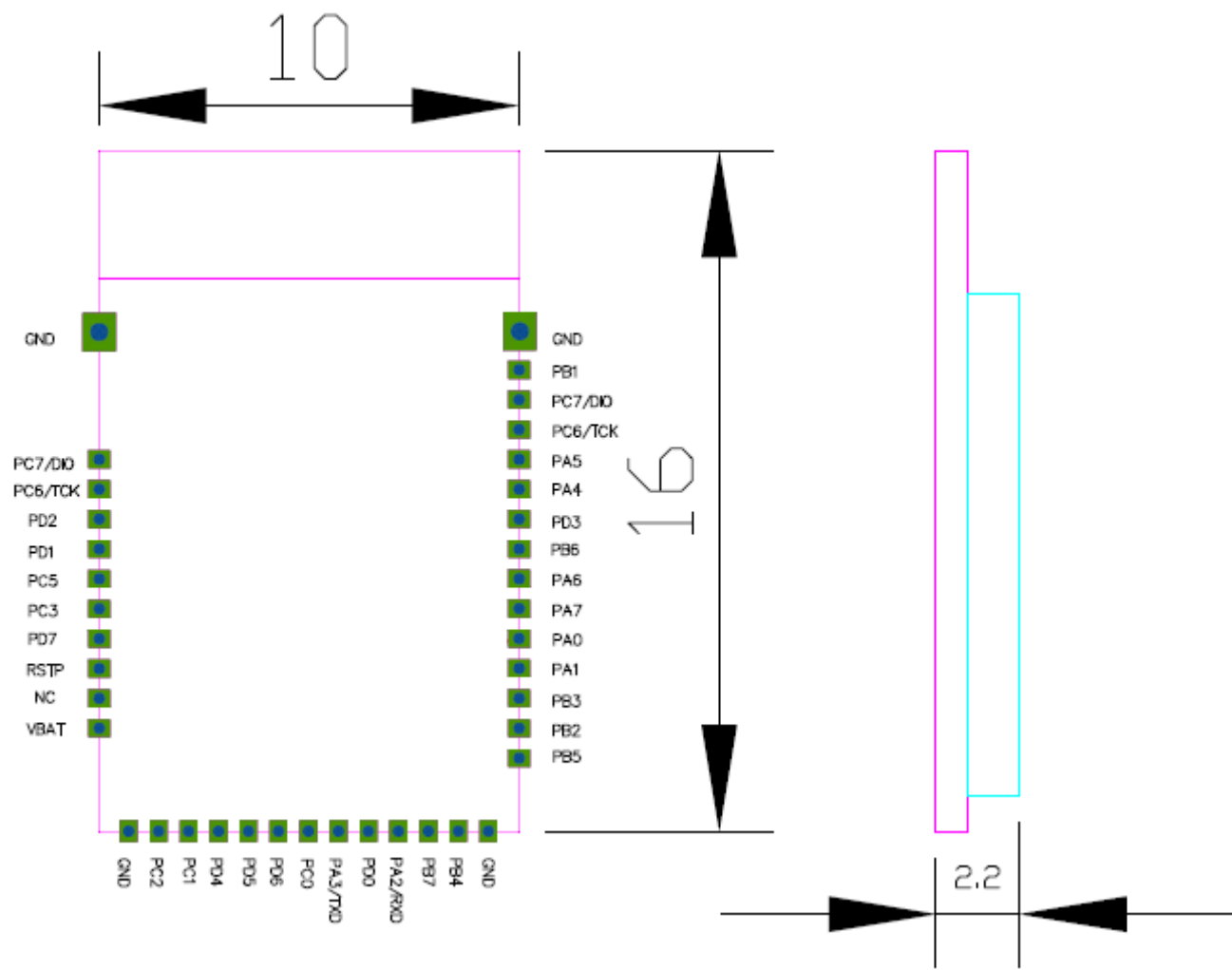


5、BLE006 Module photo：

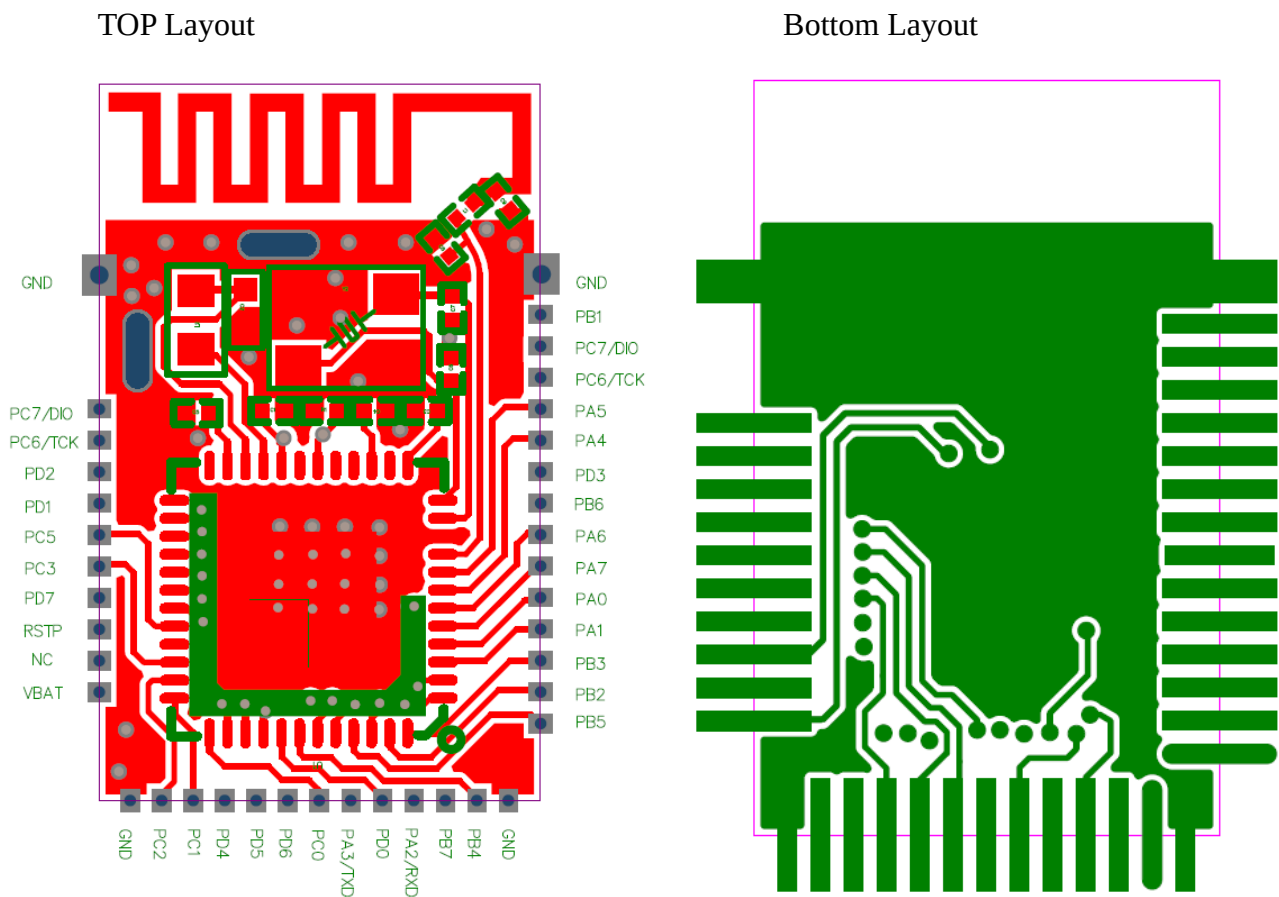


6. Module Dimension

(L)16mm / (W)10mm / (H)2.2mm



7. PCB Layout



8. BOM :

Item	Description	Specification	Qty	Position
1	PCB	FR4, 4 Layers, 10*16mm*1.6mm	1	
2	Resistor	0201, 1K	1	R1
3	Resistor	0201, 0R	1	L1
4	Capacitor	0201, 1uF	2	C3,C4
5	Capacitor	0201, 2.2uF	2	C1,C5
6	Capacitor	0402, 10uF	1	C2
7	Capacitor	0201, 12PF	2	C6,C7
8	Inductor	0603, 10uH	1	L2
9	Shield casing	11.7*2.1*8.3mm	1	
10	Crystal	24MHz	1	Y1

9. Label

Chang Yow Technologies

Model No: BLE006

FCC ID: 2AMDBBLE006

IC: 22882-BLE006

BQB:DXXXXXXX



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

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

RF warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Transmitter Module Approval Conditions

- Antennas must be installed to provide 20 cm separation distance from the transmitting antenna to the body of the user during normal operating condition. This device must not be co-located or operating in conjunction with any other antenna or transmitter.
- Only those antennas filed under FCC ID: 2AMDBBLE006 can be used with this device.
- When the module is installed in the final system where the antenna location is less than 20 cm separation distance to the body of user, additional equipment authorization must be applied.
- FCC ID label on the final system must be labeled with "Contains FCC ID: 2AMDBBLE006 " or "Contains transmitter module FCC ID: 2AMDBBLE006 ".
- In the user guide, final system integrator must ensure that there is no instruction provided in the user guide to install or remove the transmitter module.
- The transmitter module must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. This device complies with the following radio frequency and safety standards.

The 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. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed. The end user manual shall include all required regulatory information/warning as shown in this manual, include:

This product must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

IC Statement

-English: This device complies with Industry Canada licence-exempt RSS standard(s). 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 of the device.

This device complies with exemption from the current assessment limits in section 2.5 of CNR - 102 and RSS 102 rf exposure compliance, users can obtain canadian data on rf field exposure and rf field exposure. This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

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

-French: Cet appareil est conforme aux normes RSS exemptes de licence d'Industrie Canada. L'exploitation est soumise aux deux conditions suivantes:

- (1) Cet appareil ne doit pas causer d'interférences nuisibles, et
- (2) Cet appareil doit accepter toute interférence reçue, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

Cet appareil est conforme à l'exemption des limites d'évaluation courante dans la section 2.5 du cnr - 102 et conformité avec rss 102 de l'exposition aux rf, les utilisateurs peuvent obtenir des données canadiennes sur l'exposition aux champs rf et la conformité. This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition aux rayonnements de la IC établies pour un environnement non contrôlé. Cet équipement doit être installé et fonctionner à au moins 20cm de distance d'un radiateur ou de votre corps. Cet émetteur ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

If the IC 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. This exterior label can use wording such as the following: "Contains IC: 22882-BLE006".

When the module is installed inside another device, the user manual of this device must contain below warning statements;

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

2. Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada.

L'exploitation est soumise aux deux conditions suivantes:

(1) Ce dispositif ne peut causer d'interférences; et

(2) Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.