

RF-BM-ND04



RF-BM-ND04C (BLE) Module

This module is designed to get the electronic products together with intelligent For the transplanted and use of Bluetooth Low Energy(BLE) applications in various industry products .

SHENZHEN RFSTAR TECHNOLOGY CO.,LTD releases BLE transparent transmission module.

The module make the host application development easier as as a bridge of smart phone peripherals. User's existing products or solutions with this module, can communicate with mobile devices, realize intelligent control and management under the bridge (serial port) mode. Users can design their own solutions or products to use the module to extend simple peripherals under the direct driving mode,to release new peripherals in lowest cost and efficiency.

The **RF-BM-ND04C** BLE module use Nordic nRF52810 as the core processor with Nordic official stack, which runs at 2.4 GHz ISM band, GFSK (Gaussian Frequency Shift Keying)modulation mode, with 40 channels in 2 MHz clearances, Module size 24.8*15*2.0mm.

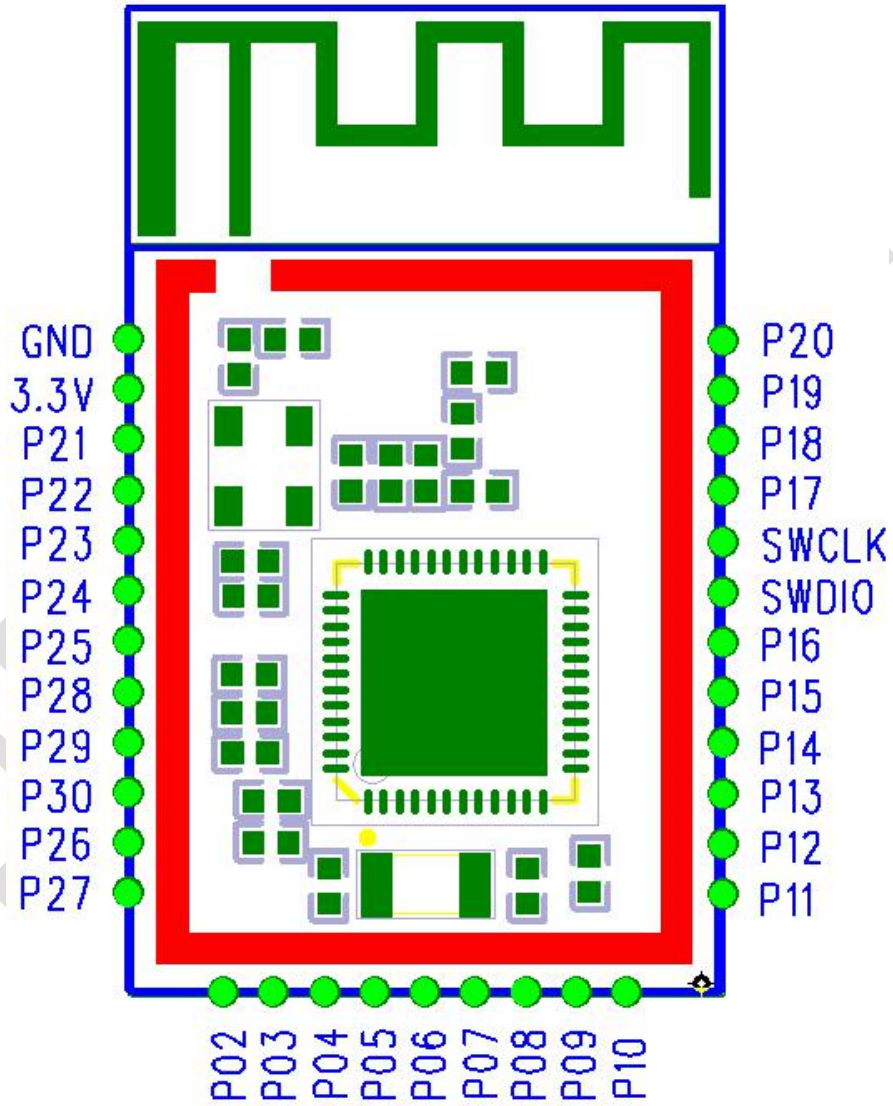
Features:

- 1.Convenient, do without any Bluetooth protocol stack application experience.
- 2.Using universal serial to design users' interface with bi-directional reading and simple operation
- 3.Dimensional channel design, minimize data packet processing, and maximize the communication efficiency .
- 4.Ultra low power consumption in standby mode.

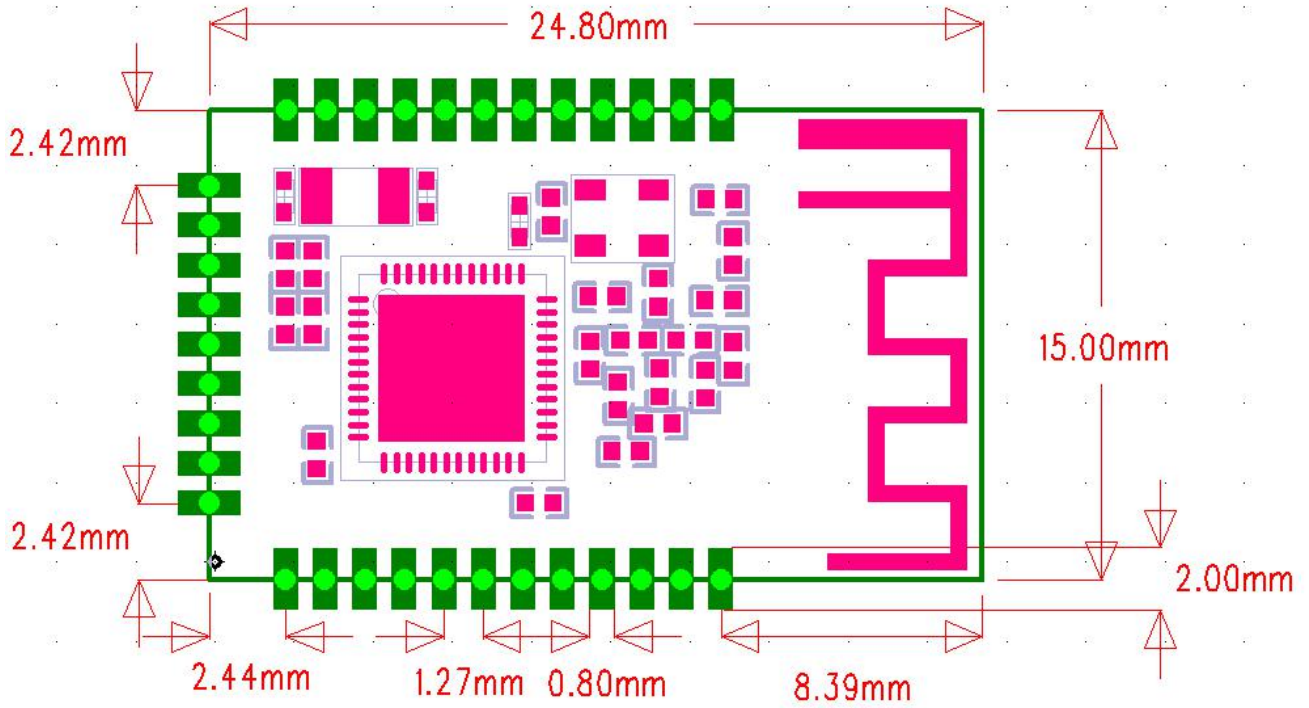
Applications:

- 2.4-GHz Bluetooth low energy Systems
- Mobile Phone Accessories
- Sports and Leisure Equipment
- Health Care and Medical u Home and Building Automation
- Consumer Electronics

| | |
|----------------------------|---|
| nRF52832QFAA | |
| 1.7V to 3.6V, typical 3.3V | |
| 2402 MHz ~ 2480MHz | |
| +4 dBm | |
| -96dBm | |
| GPIO:29 pcs | |
| 64KB | |
| 512KB | |
| ±20KHz | |
| working temperature: | -20°C -- +75°C (support -40°C~+85°C) |
| storage temperature: | -40°C -- +85°C (support -40°C~+125°C) |



| | | | |
|-------|-------|-----|----------------|
| Pin1 | GND | | |
| Pin2 | VCC | | 1.8~3.6V, 3.3V |
| Pin3 | P21 | I/O | |
| Pin4 | P22 | I/O | |
| Pin5 | P23 | I/O | |
| Pin6 | P24 | I/O | |
| Pin7 | P25 | I/O | |
| Pin8 | P28 | I/O | |
| Pin9 | P29 | I/O | |
| Pin10 | P30 | I/O | |
| Pin11 | P26 | I/O | |
| Pin12 | P27 | I/O | |
| Pin13 | P02 | I/O | |
| Pin14 | P03 | I/O | |
| Pin15 | P04 | I/O | |
| Pin16 | P05 | I/O | |
| Pin17 | P06 | I/O | |
| Pin18 | P07 | I/O | |
| Pin19 | P08 | I/O | |
| Pin20 | P09 | I/O | |
| Pin21 | P10 | I/O | |
| Pin22 | P11 | I/O | |
| Pin23 | P12 | I/O | |
| Pin24 | P13 | I/O | |
| Pin25 | P14 | I/O | |
| Pin26 | P15 | I/O | |
| Pin27 | P16 | I/O | |
| Pin28 | SWDIO | — | |
| Pin29 | SWCLK | — | |
| Pin30 | P17 | I/O | |
| Pin31 | P18 | I/O | |
| Pin32 | P19 | I/O | |
| Pin33 | P20 | I/O | |



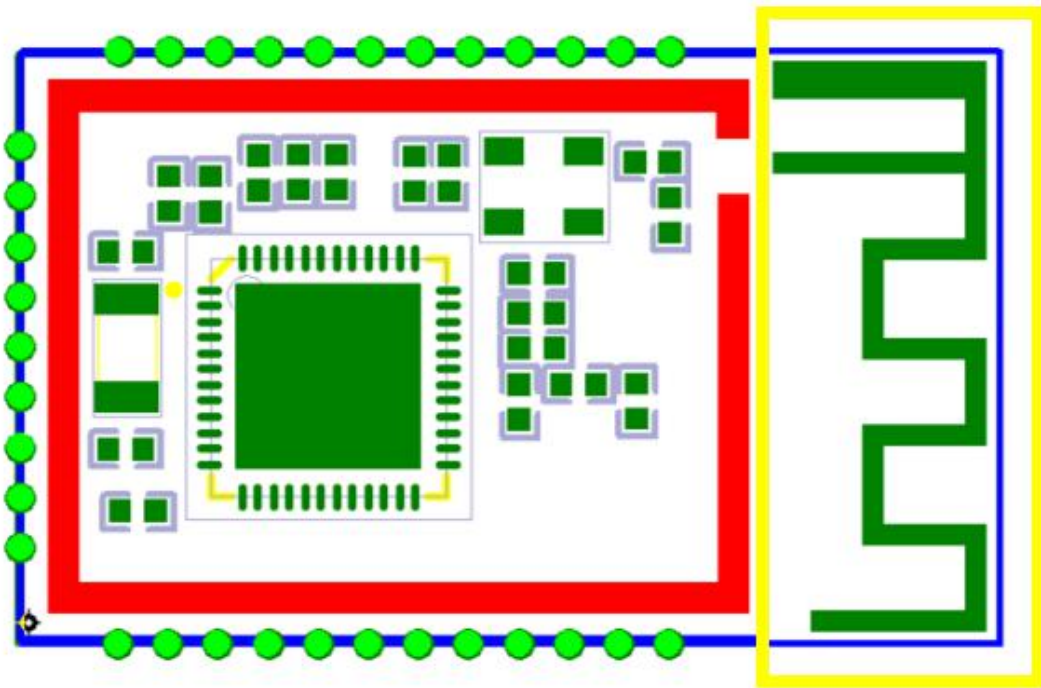
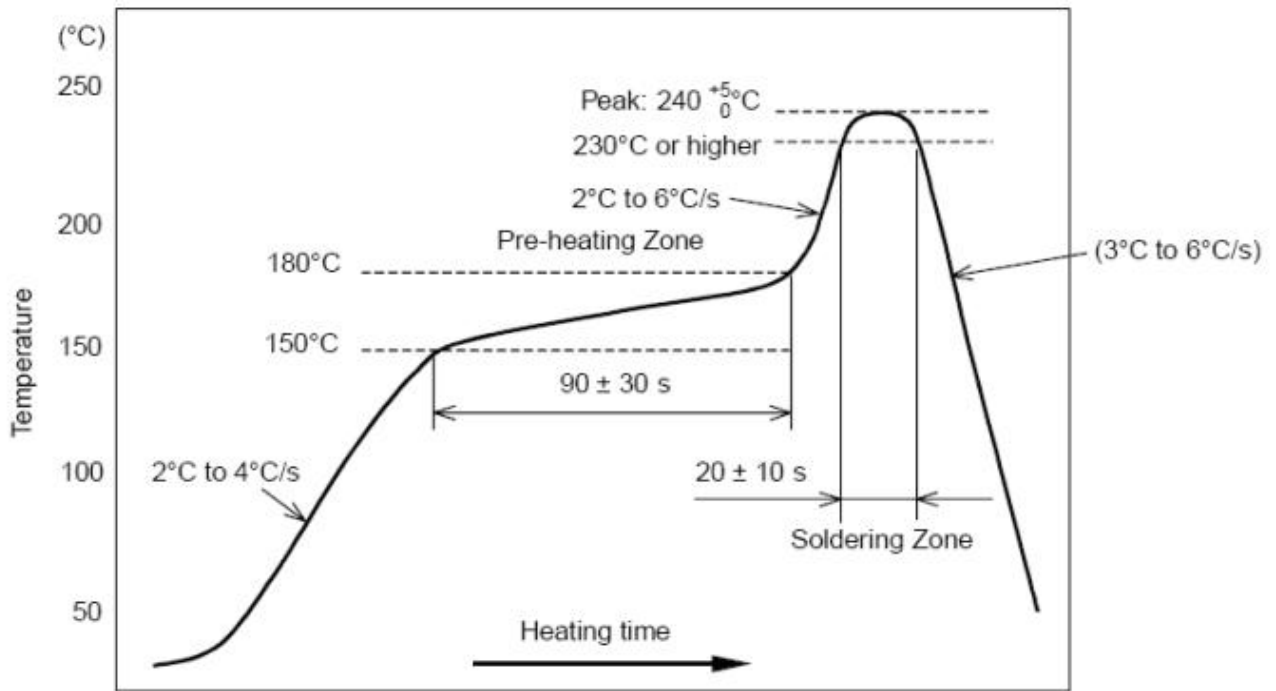


图 3

| | mode | min | typical | max | |
|-------------------------|--------------|-----|---------|-----|------------|
| power | battery mode | 1.7 | 3.3 | 3.6 | V |
| operation temperature | / | -20 | 25 | 75 | °C |
| environment temperature | | -20 | | 20 | °C/minutes |



FCC Statement

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Integral antenna with antenna gain 0dBi

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.

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.

FCC Radiation Exposure Statement

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

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. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2ABN2-ND04C Or Contains FCC ID: 2ABN2-ND04C"

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

1. 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.

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.

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

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.

Any company of the host device which install this modular with modular approval should perform the test of radiated & conducted emission and spurious emission, etc. according to FCC part 15C : 15.247 and 15.209 & 15.207 ,15B Class B requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 & 15.207 ,15B Class B requirement, then the host can be sold legally.