RF-BM-ND04

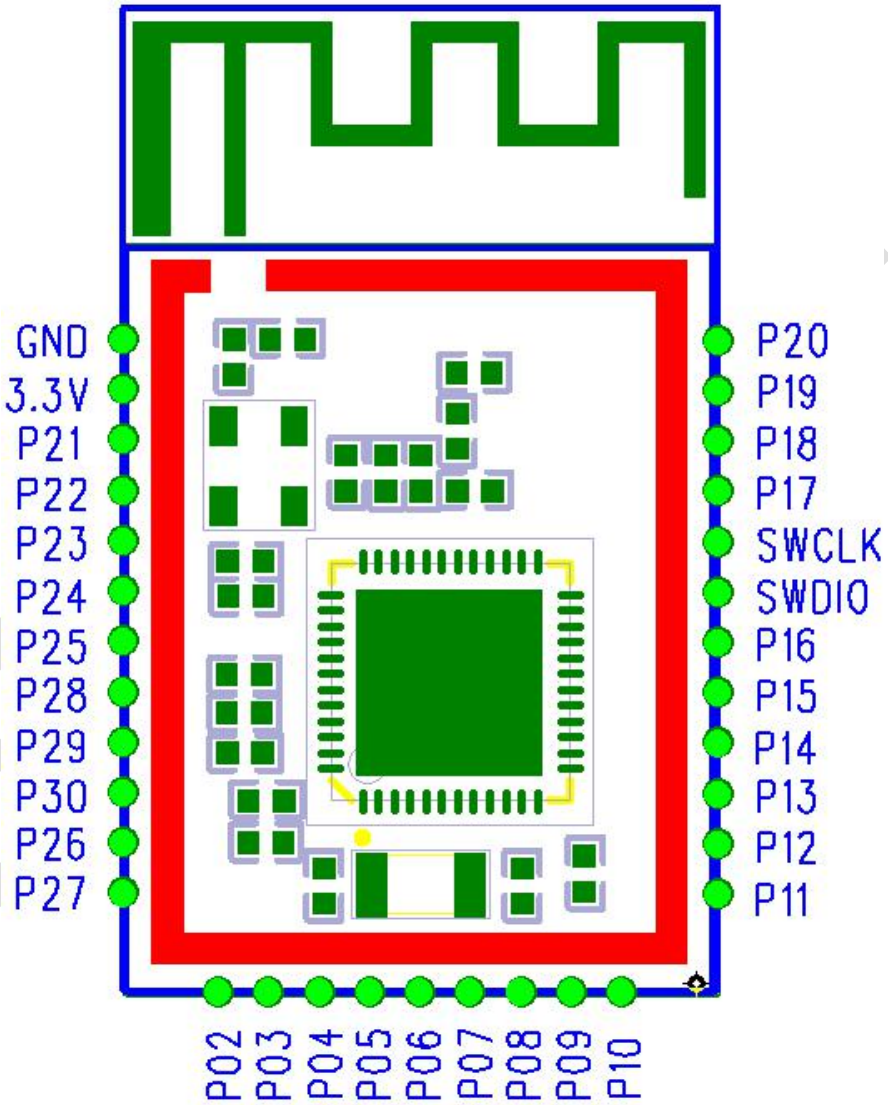
RF-BM-ND04C (BLE) Module

This module is designed to get the electronic products together with intelligent
For the transplantation 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.

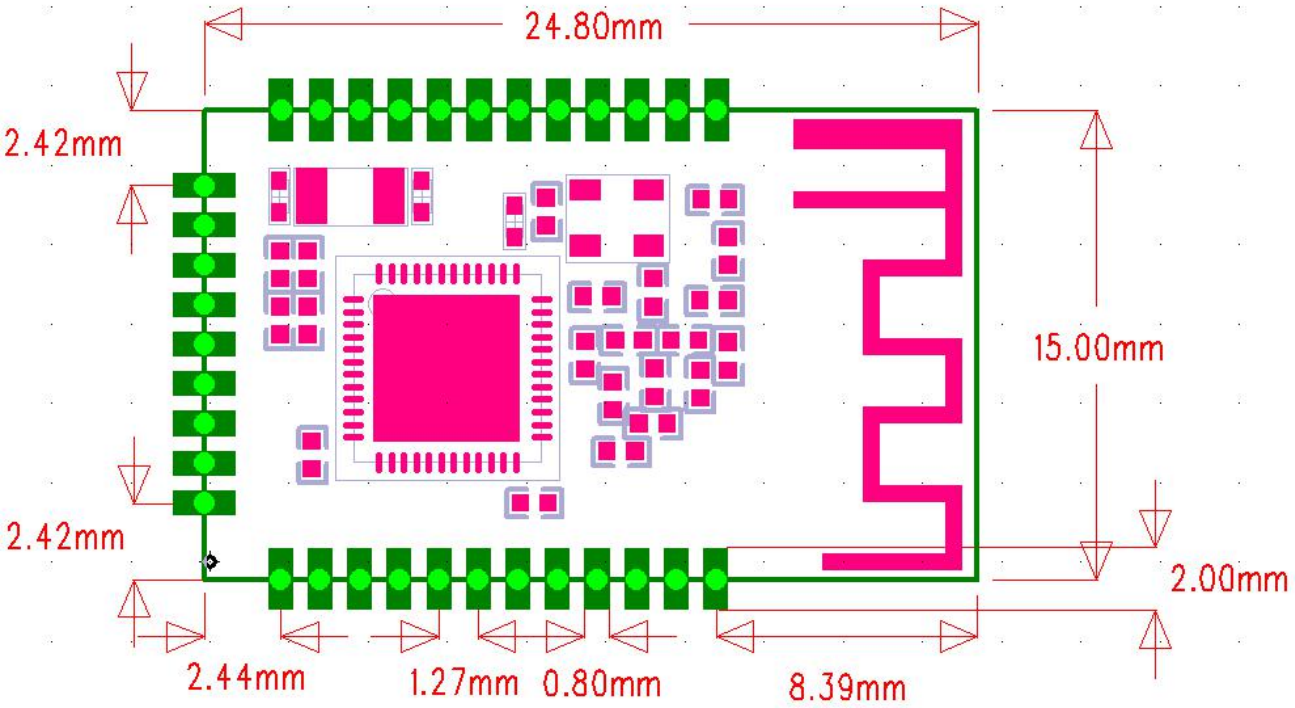
Features:
1.Convenient, do without any Bluetooth protocol stack application experience.
2.Using universal serial to design users' interface with bi-directional reading and simple operation
3.Dimensional channel design, minimize data packet processing, and maximize the communication efficiency .
4.Ultra 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℃ -- +75℃ （support -40℃~+85℃ ）
storage temperature:	-40℃ -- +85℃ （support -40℃~+125℃ ）


GND
3.3V
P21
P22
P23
P24
P25
P28
P29
P30
P26
P27
P20
P19
P18
P17
SWCLK
SWDIO
P16
P15
P14
P13
P12
P11
P02
P03
P04
P05
P06
P07
P08
P09
P10

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	


24.80mm
2.42mm
15.00mm
2.42mm
2.00mm
2.44mm
1.27mm
0.80mm
8.39mm

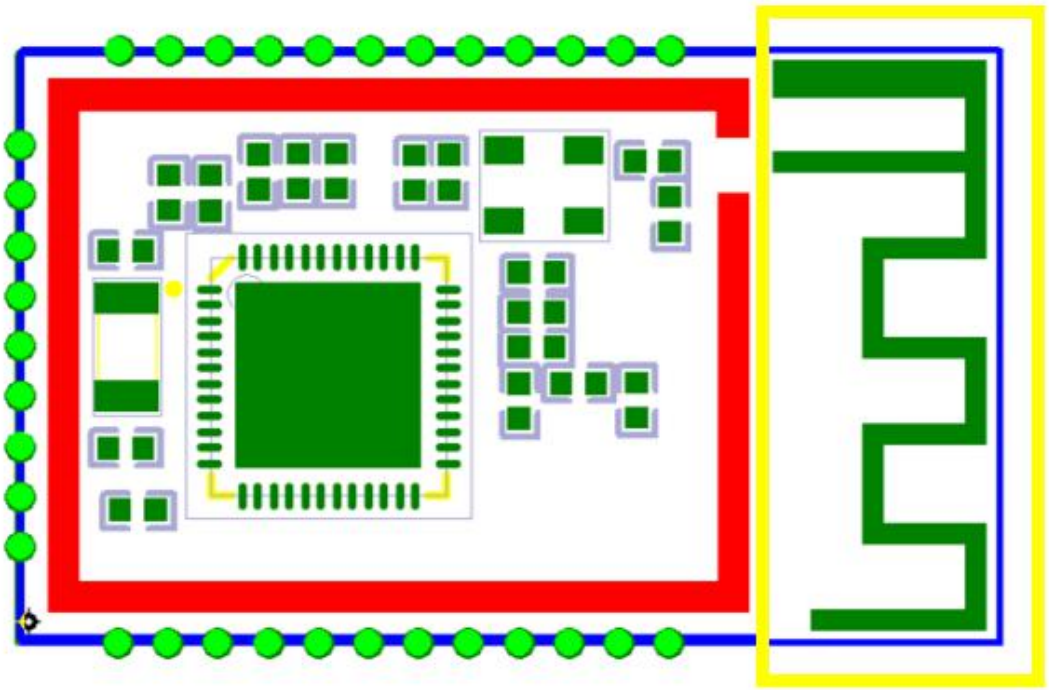
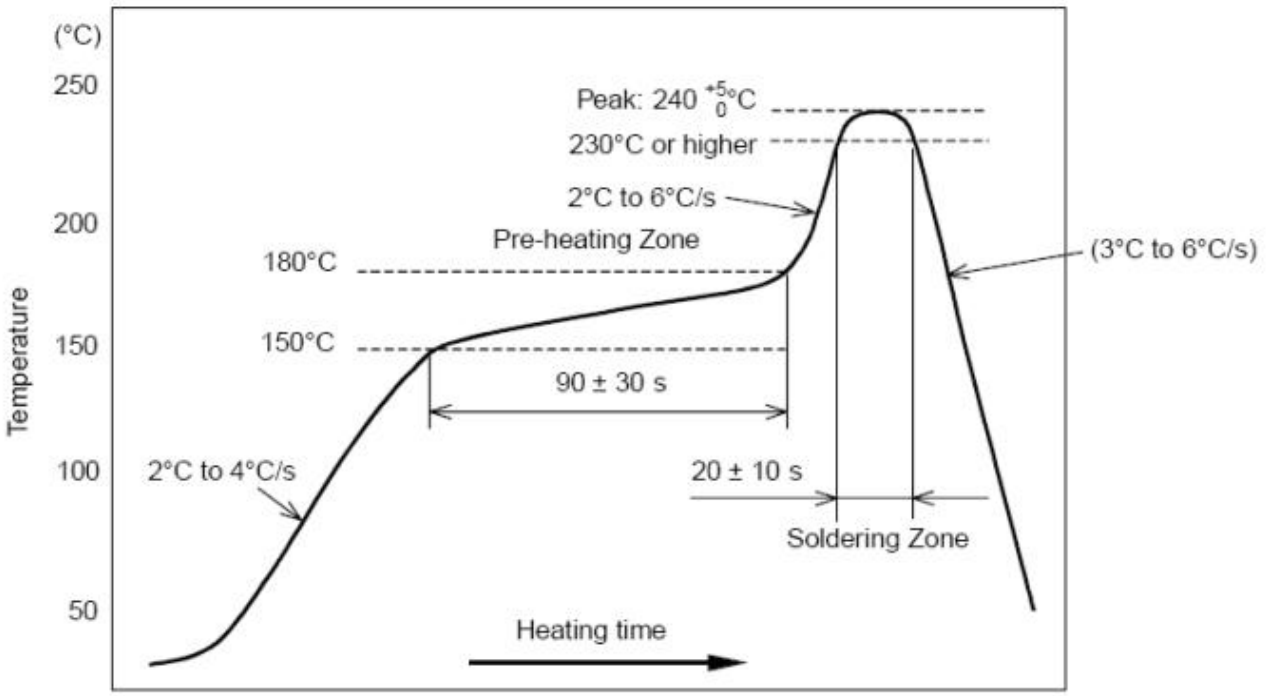


图 3

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


(°C)
250
200
150
100
50
Temperature
Peak: 240 +5 0 °C
230°C or higher
2°C to 6°C/s
Pre-heating Zone
180°C
150°C
90 ± 30 s
(3°C to 6°C/s)
2°C to 4°C/s
20 ± 10 s
Soldering Zone
Heating time

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.