



BLE-V1.1 Datasheet

Version V1.1.1

Copyright © 2022

Document Resume

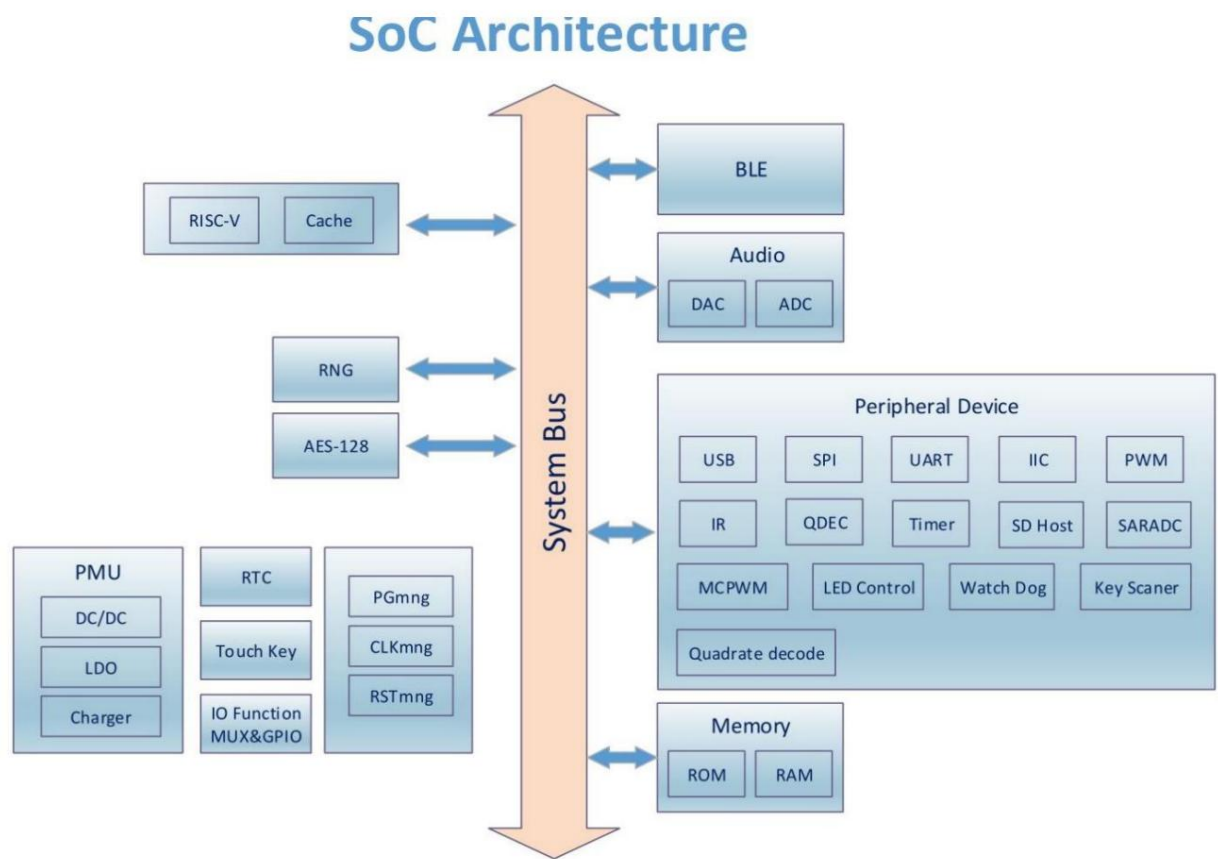
Version Date		Develop/revise content	Formulate and approve	
V1.1.0	2025.3.13	First formulated	Yang Xiaofei	Guan Ning
V1.1.1	2025.5.15	Modify RF indicators and other information	Yang Xiaofei	Guan Ning

1. Product Overview	4
1.1.Features.....	5
2. Main Parameters.....	6
2.1. Electrostatic Requirements.....	6
2.2. Electrical Characteristics.....	7
2.3. BLE RF Performance.....	8
3.Dimensions.....	9
4. Pin Definition.....	10
5. Schematic Diagram.....	12
6. Storage Conditions.....	13
7. Reflow Oven Profile.....	13
8. Product Packaging Information.....	14
9. Contact Us.....	14
Disclaimer and Copyright Notice.....	15
Notes.....	15

1. Product Overview

The BLE-V1.1 is a Bluetooth module designed by ANKER and manufactured by Shenzhen Anxinke Technology Co., Ltd. It uses the Zhongke Bluxun AB2026B3 chip as its core processor and supports the BLE 5.4 protocol. The AB2026B3 chip integrates a 32-bit 120MHz RISC-V processor, 72KB of RAM, internal NOR Flash, and a 2.4GHz RF transceiver, making it suitable for IoT and disposable devices.

Figure 1 Main chip architecture



Features

SMD-19 package

Support BLE5.4 protocol

Bluetooth Low Energy 5.4, Bluetooth Mesh

Support Station + BLE mode, Station + SoftAP + BLE mode

Supports 32-bit RISC CPU, 72KB RAM

Storage capacity is 8Mbit Flash and 64KB + 8Kcache RAM

Maximum transmit power level + 9dBm, optimal channel receiving sensitivity less than - 90dBm, multiple low power modes

Current as low as 15uA

Operating temperature -40~+105°C

2. Main parameters

Table 1 Description of main parameters

Model	BLE-V1.1
Package	SMD-19
Size:	13.9mm*9mm*3.0mm
Antenna type	External antenna (3rd generation I-PEX socket)
Frequency spectrum range	2400 ~ 2483.5MHz
Operating temperature	-40 °C ~ 105 °C
Storage environment	-40 °C ~ 125 °C, < 90%RH
Power supply range	Supply voltage 2.7V ~ 5.5V, supply current ≥ 500mA
Support interfaces	UART/GPIO/ADC/PWM/I2C/SPI
Available IO number	12
	The default serial port rate is 115200 bps
Flash	1Mbyte(8Mbit)

2.1. Electrostatic requirements

The BLE-V1.1 is an electrostatically sensitive device and requires special precautions when handling.



Figure 2 ESD anti-static diagram

Electrical characteristics

Table 2 Electrical characteristics

		Conditional	minimum	Typical values	Maximum value	unit
Parameters Supply voltage		VDD	2.7	3.3	5.5	In
I/O	WILL	-	-	-	0.3*VDDIO V	
	HIV	-	0.7*VDDIO	-	-	In
	VOL	-	-	0.1*VDDIO	-	In
	VOH	-	-	0.9*VDDIO	-	In
	IMAX	-	-	-	15	m.a.

2.3. BLE RF Performance

Table 4 BLE RF performance

describe	Typical values			unit
Spectrum range	2400 ~ 2483.5MHz			MHz
Output power				
Rate Mode	Min.	Typ.	Max.	Unit
1Mbps	.	4*	.	dBm
Receive sensitivity				
Rate mode	Min.	Typ.	Max.	Unit
1Mbps Sensitivity@30.8%PER	.	-90*	.	dBm

* indicates the transmission power and sensitivity standards of the three channels (2402Mhz, 2440Mhz, 2480Mhz) tested.
His faith may weaken;

3. Dimensions

Figure 3 Appearance (rendering is for reference only, the actual product shall prevail)

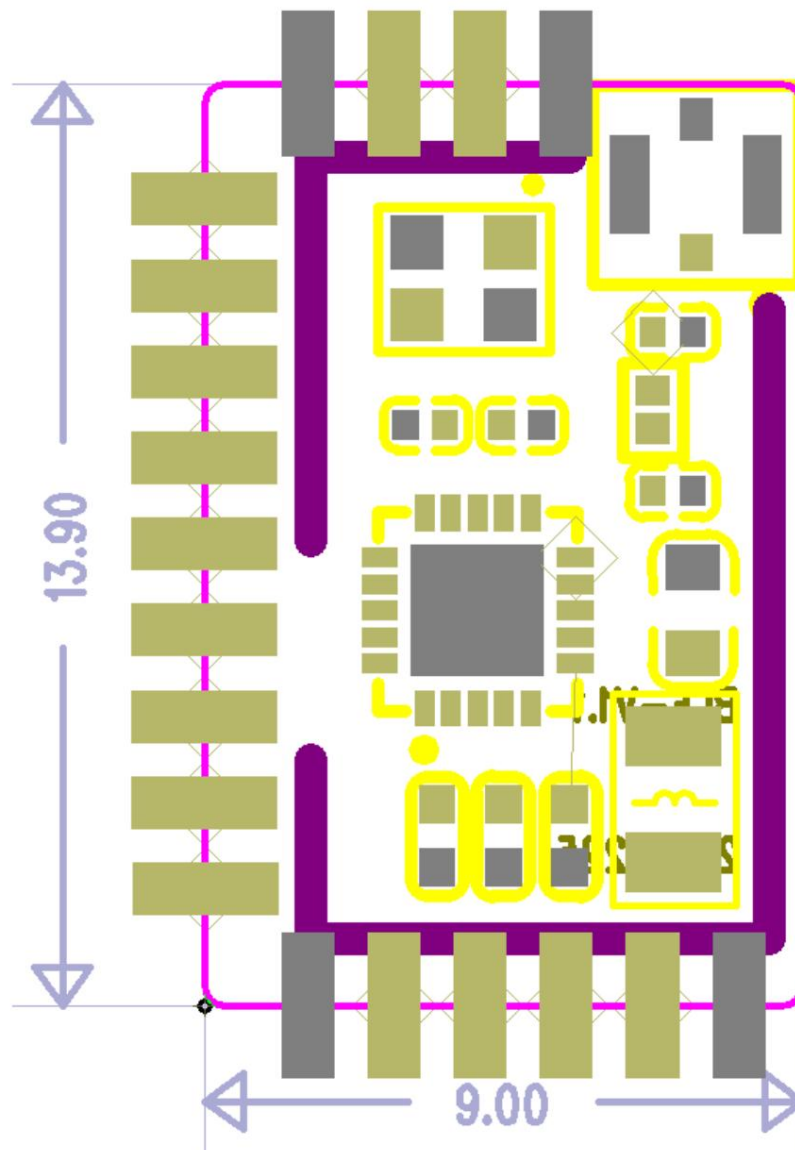


Figure 4 Dimensional drawing

Figure 5 Shielding cover silk screen information

4. Pin Definition

The BLE-V1.1 module has a total of 19 pins, as shown in the pin diagram. The pin function definition table is the interface definition.

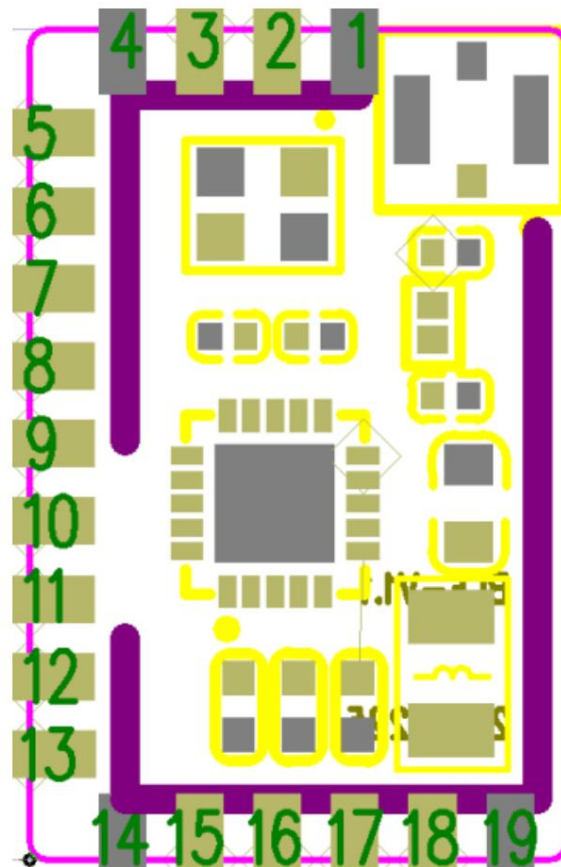
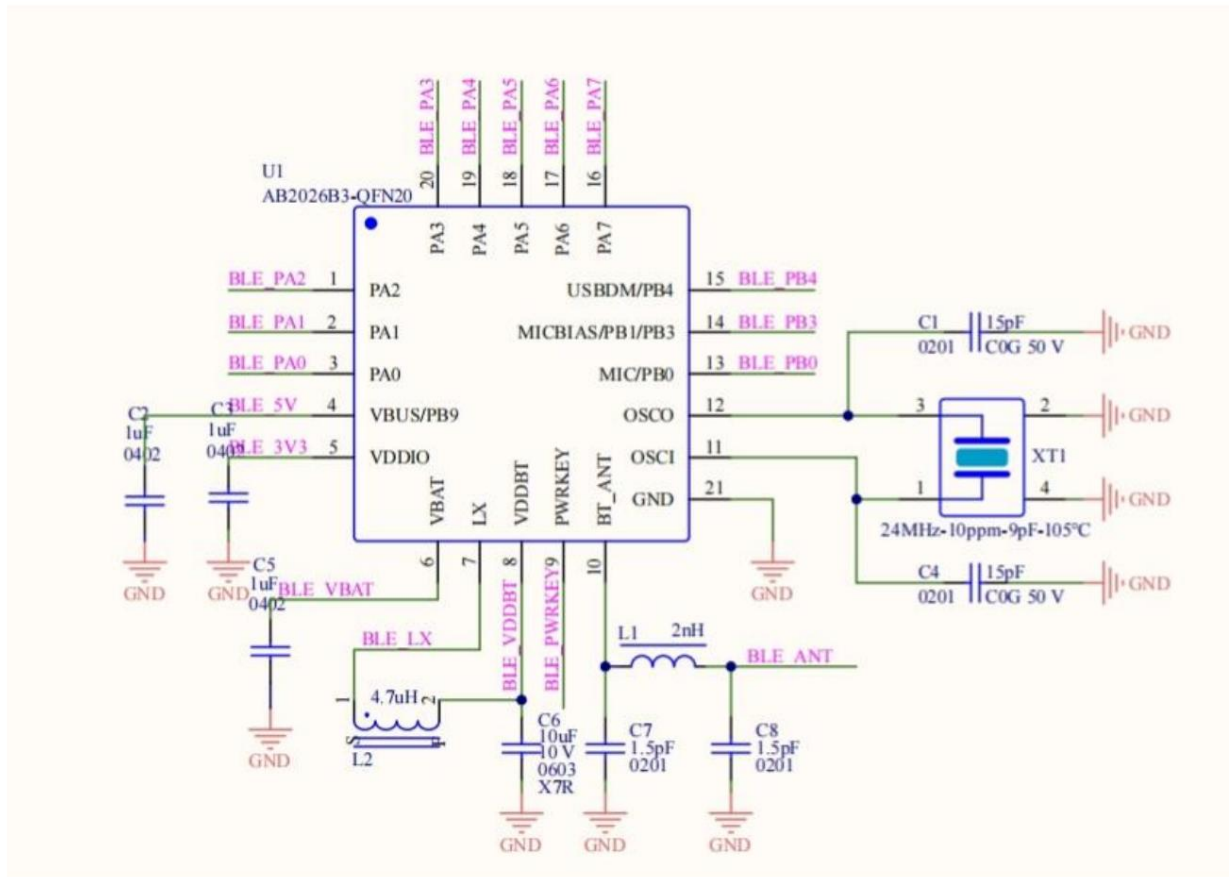


Figure 6 Pin diagram

Table 6 Pin function definition table

Footer name		Functional Description
1	GND Ground	
2	PB0	Wake up/MIC/ADC6/PB0
3	PB3/PB1	Wake up/MICBIAS/ADC7/Update IO/ADC8/USBDP/PB1/PB3
4	GND Ground	
5	PA7	Wake up/ADC5/SDDAT0-G2/PA7
6	PB4	Wake up/ADC9/USBDM/PB4
7	PA6	Wake up/KEY6/ADC4/SDCLK-G2/PA6
8	PA5	Wake up/KEY5/ADC3/TK3/SDCMD-G2/PA5
9	PA4	Wake up/KEY4/ADC2/TK2/SDDAT0-G1/PA4
10	PA3	Wake up/KEY3/ADC1/TK1/SDCLK-G1/PA3
11	PA2	Wake up/1bit DAC output/ADC0/SDCMD-G1/PA2
12	PA1	Wake up/High voltage IO/PA1
13	PA0	Wake up/KEY0/High voltage IO/PA0
14	GND Ground	
15	PWRKEY	PWRDOWN mode Wakeup/TK0 Wakeup/10s long Press
16	VUSB/PB9	VUSB power input/Reset/ADC12/Power key input/Update IO/Wake up/PB9
17	VDDIO	VDDIO power output
18	VBAT	VBAT power input
19	GND Ground	

5. Schematic



6. Storage conditions

Products sealed in moisture-proof bags should be stored in a non-condensing atmosphere of $<40^{\circ}\text{C}/90\%\text{RH}$.

The module's moisture sensitivity level MSL is level 3.

After the vacuum bag is opened, it must be used within 168 hours at $25\pm 5^{\circ}\text{C}/60\%\text{RH}$, otherwise it needs to be baked before it can be put online again.

7. Reflow Oven Profile

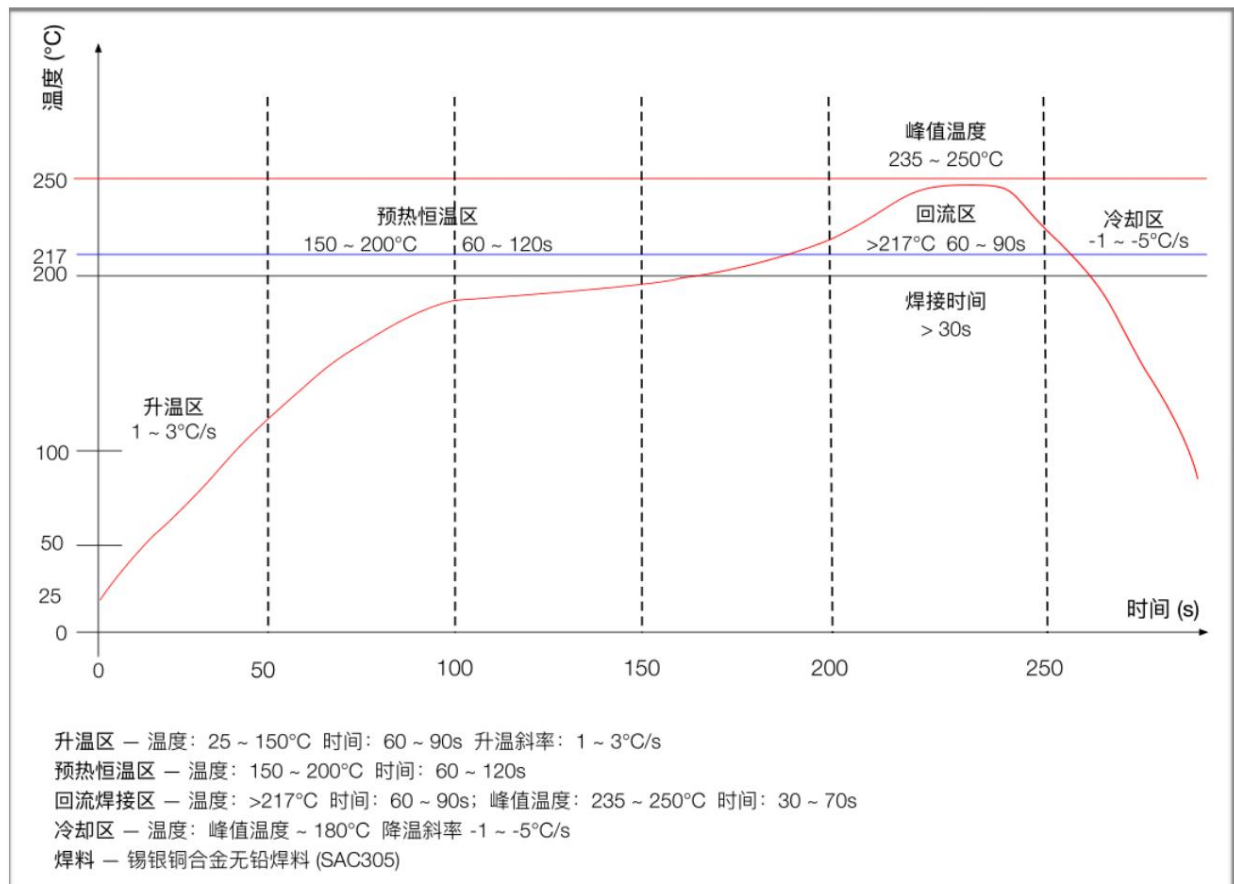


Figure 16 Reflow curve

8. Product Packaging Information

The BLE-V1.1 module is packaged in tape, 1200 pieces per tray. As shown in the figure below:



Figure 17 Packaging tape diagram

9. Contact Us

[Anxinke official website](#)

[Official Forum](#)

[Develop DOCS](#)

[Essence LinkedIn](#)

[Tmall flagship store](#)

[Taobao store](#)

[Alibaba International Station](#)

[Technical support email: support@aithinker.com](mailto:support@aithinker.com)

[Domestic business cooperation: sales@aithinker.com](mailto:sales@aithinker.com)

[Overseas business cooperation: overseas@aithinker.com](mailto:overseas@aithinker.com)

Company Address: Room 403, 408-410, Building C, Huafeng Smart Innovation Port, Gushu, Xixiang, Bao'an District, Shenzhen

Contact number: 0755-29162996



Ask Anxinke



Anxinke Official Account

Disclaimer and Copyright Notice

Information in this document, including URL references, is subject to change without notice.

This document is provided "as is" without warranty of any kind, including any warranty of merchantability, fitness for a particular purpose, or non-infringement, and any warranty otherwise expressly provided in any proposal, specification, or sample. No liability is assumed with respect to this document, including liability for infringement of any patent arising from the use of the information in this document. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document.

The test data obtained in this article are all obtained from the Anxinke laboratory test, and the actual results may vary slightly.

All trade names, trademarks and registered trademarks mentioned herein are the property of their respective owners and are hereby acknowledged.

The final right of interpretation belongs to Shenzhen Anxinke Technology Co., Ltd.

Notice

The contents of this manual may be changed due to product version upgrades or other reasons.

Shenzhen Anxinke Technology Co., Ltd. reserves the right to modify the contents of this manual without any notice or reminder.

This manual is for use as a guide only. Shenzhen Anxinke Technology Co., Ltd. makes every effort to provide accurate information in this manual. However, Shenzhen Anxinke Technology Co., Ltd. does not ensure that the contents of this manual are completely error-free, and all statements, information and suggestions in this manual do not constitute any express or implied warranty.