



PRODUCT SPECIFICATION

6252B-PRX

Wi-Fi Dual-band 2x2 11ax + BT 5.2

WIFI BT Module

PCIe Combo Module

Version:v2.1

Customer: _____

Customer P/N: _____

Signature: _____

Date: _____

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Revision History

[illegible]

1. General Description

1.1 Introduction

6252B-PR support 2-stream 802.11ax solution with MU-MIMO with WLAN PCIe interface and HS-UART mixed interface. It combines a WLAN MAC, a 2T2R capable WLAN baseband, RF Support 802.11 a/b/g/n/ac/ax 20MHz/40MHz/80MHz bandwidth and provide up to 1201Mbps for 11ax MIMO OFDM.

Support STBC,LDPC,TXBF.combined with BPSK,QPSK,16QAM,64QAM,256QAM,1024QAM modulation of individual subcarriers. Module can receive with OFDMA technology.the RU size can be supported from small unit,e.g,RU26,and RU52,106,242,484,and finally up to RU996.

Module solution supports 802.11e/i/WAPI.

1.2 Description

Model Name	6252B-PRX
Product Description	Support Wi-Fi/Bluetooth functionalities
Dimension	L x W x H: 15 x 13 mm
Wi-Fi Interface	Support PCIe
BT Interface	UART / PCM
OS supported	Android /Linux/ Win CE /iOS /XP/WIN7/WIN10
Operating temperature	0°C to 70°C
Storage temperature	-40°C to 85°C

2. Features

General

- Support IEEE802.11a/b/g/n/ac/ax .
- Support 802.11ac 2x2, Wave-2 compliant with RX MU-MIMO.
- Support 802.11ax 2x2, with OFDMA and MU-MIMO, by 4 types PPDU format, such as HE-SU-PPDU, HE-ER-SU-PPDU, HEMU-PPDU, and HE-TB-PPDU.
- Dual-stream spatial multiplexing up to 1201 Mbps data rate.
- Supports 20/40MHz bandwidth at 2.4GHz and 20/40/80MHz 5GHz band channels .
- Complies with PCI express base specification revision 1.1.
- Support 802.11e,i,h,k. WAPI.
- Supports Wake-On-WLAN via Magic Packet and Wake-up.
- Transmit Beamforming.
- Support DFS, Channelinfo, PPDU state by Rx path.
- Support STBC, LDPC, and Hardware antenna diversity, Maximum-Likelihood Detection.

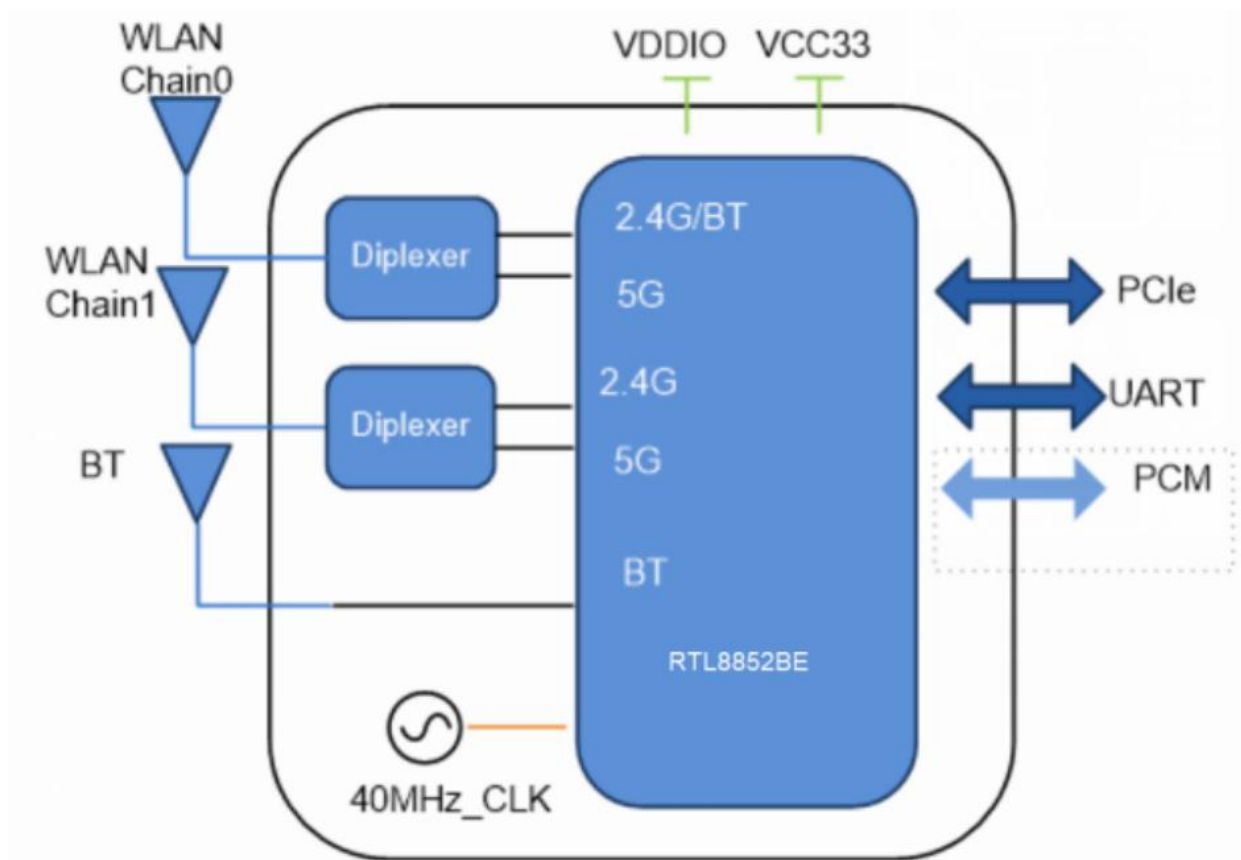
Host Interface

- PCIe LTR/L1.Off state supported
- Supports WLAN/Bluetooth coexistence

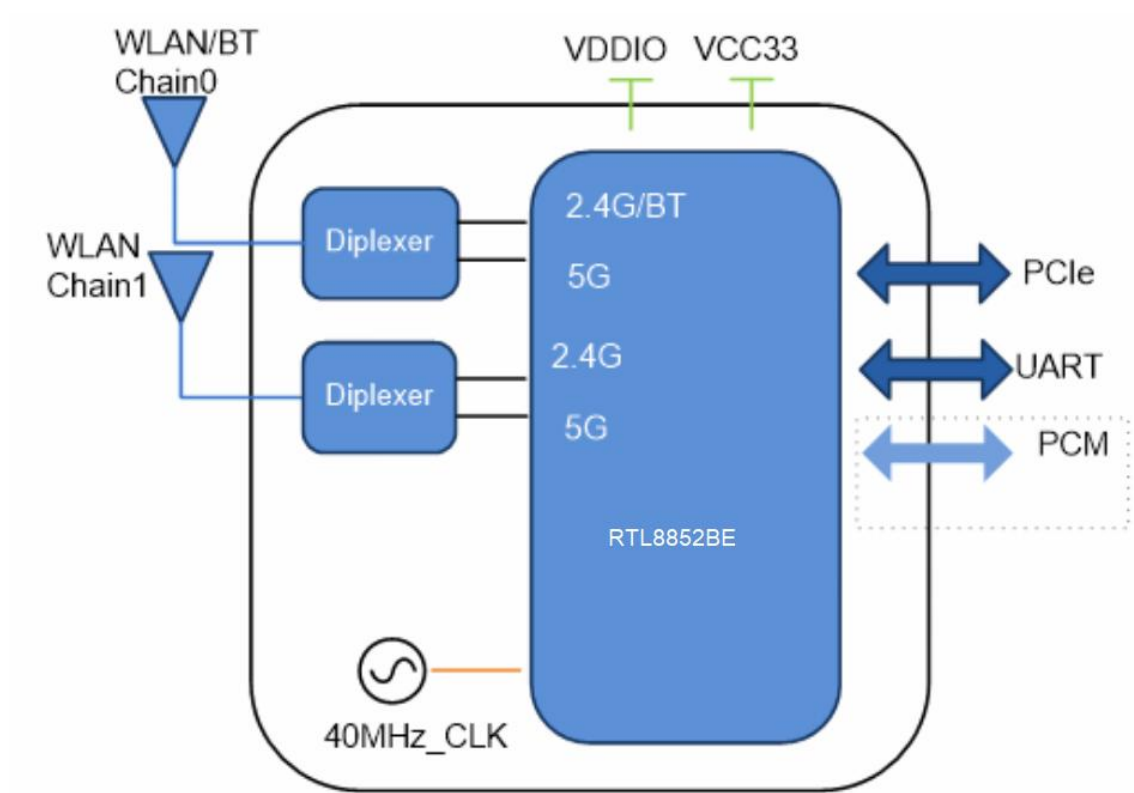
Bluetooth Features

- Complies with HS-UART with configurable baud rate for BT
- Supports Bluetooth 5 system (BT5.2 Logo Compliant)
- Compatible with Bluetooth v2.1+EDR
- Dual Mode support: Simultaneous LE and BR/EDR
- Supports multiple Low Energy states
- Integrated 32K oscillator for power management
- BT host digital interface:
 - HCI UART

3. Block Diagram



3 ANT version



2 ANT version

4. General Specification

4.1 2.4G RF Specification

Conditions : VBAT=3.3V ; VDDIO=3.3V ; Temp:25°C

Feature	Description	
WLAN Standard	IEEE 802.11 b/g/n/ax Wi-Fi compliant	
Frequency Range	2.400 GHz ~ 2.4835 GHz (2.4 GHz ISM Band)	
Number of Channels	2.4GHz: Ch1 ~ Ch14	
Test Items	Typical Value	EVM
Output Power ¹	802.11b /11Mbps : 19dBm ± 2 dB	EVM ≤ -9dB
	802.11g /54Mbps : 18dBm ± 2 dB	EVM ≤ -25dB
	802.11n /MCS7 : 17dBm ± 2 dB	EVM ≤ -28dB
	802.11ax HE20/MCS11: 13dBm ± 2 dB	EVM ≤ -35dB
	802.11ax HE40/MCS11: 13dBm ± 2 dB	EVM ≤ -35dB
Spectrum Mask	Meet with IEEE standard	

Freq. Tolerance	$\pm 20\text{ppm}$	
SISO Receive Sensitivity (11b,20MHz) @8% PER	- 1Mbps @ -94 dBm	$\leq -83\text{ dBm}$
	- 11Mbps @ -85 dBm	$\leq -76\text{ dBm}$
SISO Receive Sensitivity (11g,20MHz) @10% PER	- 6Mbps @ -90 dBm	$\leq -85\text{ dBm}$
	- 54Mbps @ -71 dBm	$\leq -68\text{ dBm}$
SISO Receive Sensitivity (11n,20MHz) @10% PER	- MCS=0 @ -90 dBm	$\leq -85\text{ dBm}$
	- MCS=7 @ -69 dBm	$\leq -67\text{ dBm}$
SISO Receive Sensitivity (11n,40MHz) @10% PER	- MCS=0 @ -87 dBm	$\leq -82\text{ dBm}$
	- MCS=7 @ -66 dBm	$\leq -64\text{ dBm}$
SISO Receive Sensitivity (11ax,20MHz) @10% PER	- MCS=0 @ -90 dBm	$\leq -74\text{ dBm}$
	- MCS=11 @ -60 dBm	$\leq -52\text{ dBm}$
SISO Receive Sensitivity (11ax ,40MHz) @10% PER	- MCS=0 @ -87 dBm	$\leq -71\text{ dBm}$
	- MCS=11 @ -57 dBm	$\leq -49\text{ dBm}$
Maximum Input Level	802.11b : -10 dBm	
	802.11g/n : -20 dBm	
Antenna Reference	Small antennas with 0~2 dBi peak gain	

4.2 5GHz RF Specification

Conditions : VBAT=3.3V ; VDDIO=3.3V ; Temp:25°C

Feature	Description	
WLAN Standard	IEEE 802.11a/n/ac/ax, Wi-Fi compliant	
Frequency Range	5.15 GHz ~ 5.850 GHz (5 GHz Band)	
Number of Channels	5.0GHz: Please see the table ¹	
Test Items	Typical Value	EVM
Output Power ²	802.11a /54Mbps: 18 dBm $\pm$ 2 dB	EVM $\leq$ -25dB
	802.11n /MCS7: 17 dBm $\pm$ 2 dB	EVM $\leq$ -28dB
	802.11ac VHT20/MCS8: 16 dBm $\pm$ 2 dB	EVM $\leq$ -30dB
	802.11ac VHT40/MCS9: 15 dBm $\pm$ 2 dB	EVM $\leq$ -32dB
	802.11ac VHT80/MCS9: 15 dBm $\pm$ 2 dB	EVM $\leq$ -32dB
	802.11ax HE20/MCS11: 13 dBm $\pm$ 2 dB	EVM $\leq$ -35dB
	802.11ax HE40/MCS11: 13 dBm $\pm$ 2 dB	EVM $\leq$ -35dB
	802.11ax HE80/MCS11: 13 dBm $\pm$ 2 dB	EVM $\leq$ -35dB
Test Items	Test Value	Standard Value

SISO Receive Sensitivity (11a,20MHz) @10% PER	- 6Mbps @ -90 dBm	≤-85 dBm
	- 54Mbps @ -71 dBm	≤-68 dBm
SISO Receive Sensitivity (11n,20MHz) @10% PER	- MCS=0 @ -90 dBm	≤-85 dBm
	- MCS=7 @ -69 dBm	≤-67 dBm
SISO Receive Sensitivity (11n,40MHz) @10% PER	- MCS=0 @ -87 dBm	≤-82 dBm
	- MCS=7 @ -66 dBm	≤-64 dBm
SISO Receive Sensitivity (11ac,20MHz)@10% PER	- MCS=0, NSS1 @ 90 dBm	≤-82 dBm
	- MCS=8, NSS1 @ -64 dBm	≤-60 dBm
SISO Receive Sensitivity (11ac,40MHz) @10% PER	- MCS=0, NSS1 @ -87 dBm	≤-79 dBm
	- MCS=9, NSS1 @ -59 dBm	≤-55 dBm
SISO Receive Sensitivity (11ac,80MHz) @10% PER	- MCS=0, NSS1 @ -84 dBm	≤-79 dBm
	- MCS=9, NSS1 @ -56 dBm	≤-54 dBm
SISO Receive Sensitivity (11ax,20MHz) @10% PER	- MCS=0 @ -90 dBm	≤-74 dBm
	- MCS=11 @ -60 dBm	≤-52 dBm
SISO Receive Sensitivity (11ax,40MHz) @10% PER	- MCS=0 @ -87 dBm	≤-71 dBm
	- MCS=11 @ -57 dBm	≤-49 dBm
SISO Receive Sensitivity (11ax,80MHz) @10% PER	- MCS=0 @ -84 dBm	≤-68 dBm
	- MCS=11 @ -54 dBm	≤-46 dBm
Maximum Input Level	802.11a/n: -30 dBm	
Antenna Reference	Small antennas with 0~2 dBi peak gain	

1. 2. 2.4G,5G output power control by firmware power by rate table

15GHz(20MHz) Channel table

Band range	Operating Channel Numbers	Channel center frequencies(MHz)
5150MHz~5250MHz	36	5180
	40	5200
	44	5220
	48	5240
5250MHz~5350MHz	52	5260
	56	5280
	60	5300
	64	5320
5470MHz~5725MHz	100	5500
	104	5520
	108	5540
	112	5560

	116	5580
	120	5600
	124	5620
	128	5640
	132	5660
	136	5680
	140	5700
5725MHz~5850MHz	149	5745
	153	5765
	157	5785
	161	5805
	165	5825

4.3 Bluetooth Specification

Feature	Description		
General Specification			
Bluetooth Standard	Bluetooth V5.2		
Host Interface	UART		
Antenna Reference	Small antennas with 0~2 dBi peak gain		
Frequency Band	2400 MHz ~ 2483.5 MHz		
Number of Channels	79 channels		
Modulation	GFSK, $\pi/4$ -DQPSK, 8-DPSK		
RF Specification			
	Min(dBm)	Typical(dBm)	Max(dBm)
Output Power (Class 1)	3	5	7
Sensitivity @ BER=0.1% for GFSK (1Mbps)		-89	

Sensitivity @ BER=0.01% for $\pi/4$ -DQPSK (2Mbps)		-86	
Sensitivity @ BER=0.01% for 8DPSK (3Mbps)		-85	
Maximum Input Level	GFSK (1Mbps):-20dBm		
	$\pi/4$ -DQPSK (2Mbps) :-20dBm		
	8DPSK (3Mbps) :-20dBm		

5. ID setting information

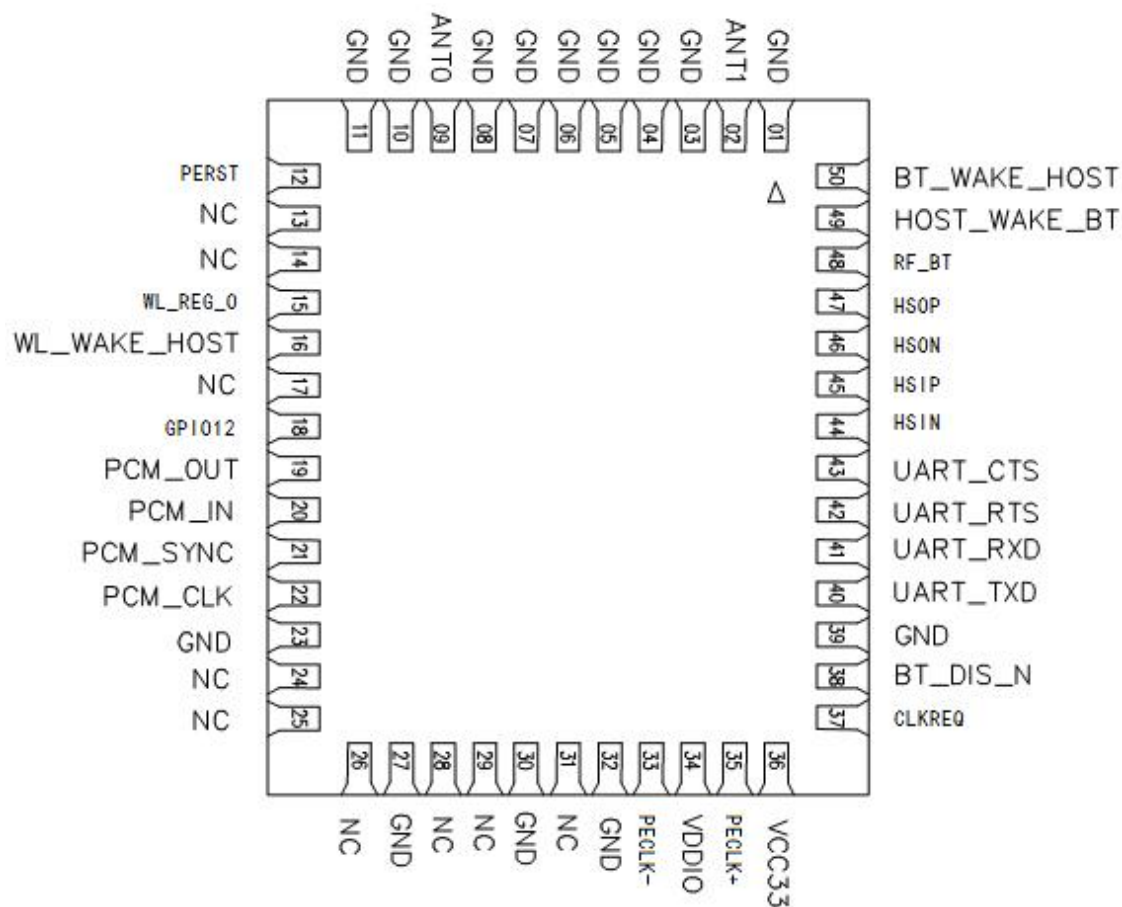
WI-FI

Vendor ID	10EC
Product ID	B852

6. Pin Definition

6.1 Pin Outline

< TOP VIEW >



6.2 Pin Definition details

NO.	Name	Type	Description	Voltage
1	GND	—	Ground connections	
2	ANT1	I/O	RF I/O port chain1, Dual band Wi-Fi and BT(2 ant type)	
3	GND	—	Ground connections	
4	GND	—	Ground connections	
5	GND	—	Ground connections	
6	GND	—	Ground connections	
7	GND	—	Ground connections	
8	GND	—	Ground connections	
9	ANT0	I/O	RF I/O port chain0, dual band Wi-Fi	

10	GND	—	Ground connections	
11	GND	—	Ground connections	
12	PERST	I/O	PCIE reset, active low	1.8V or 3.3V
13	NC	—	No connect	
14	NC	—	No connect	
15	WL_REG_O	I	GPIO9,WL RESET, Default ON: pull high; OFF: pull low	VDDIO
16	WL_WAKE_HOST	O	WAKE#, WLAN wake-up HOST, active low	1.8V or 3.3V
17	NC	—	No connect	
18	GPIO12	I/O	IO pin, if not used please NC	VDDIO
19	PCM_OUT	O	PCM Data output Not supported please NC	VDDIO
20	PCM_IN	I	PCM data input Not supported please NC	VDDIO
21	PCM_SYNC	I/O	PCM sync signal Not supported please NC	VDDIO
22	PCM_CLK	I/O	PCM clock Not supported please NC	VDDIO
23	GND	—	Ground connections	
24	NC	—	No connect	
25	NC	—	No connect	
26	NC	—	No connect	
27	GND	—	Ground connections	
28	NC	—	No connect	
29	NC	—	No connect	
30	GND	—	Ground connections	
31	NC	—	No connect	
32	GND	—	Ground connections	
33	PECLK-	I/O	PCIE CLK-	
34	VDDIO	P	I/O Voltage supply input 1.8V or 3.3V	1.8V or 3.3V
35	PECLK+	I/O	PCIE CLK+	
36	VCC33	P	Main power voltage source input 3.3V	3.3V
37	CLK REQ	I/O	PCIE clk request	1.8V or 3.3V
38	BT_DIS_N	I	Enable pin for Bluetooth device Default ON: pull high; OFF: pull low	VDDIO
39	GND	—	Ground connections	

40	UART_TXD	O	Bluetooth UART interface	VDDIO
41	UART_RXD	I	Bluetooth UART interface	VDDIO
42	UART_RTS	O	Bluetooth UART interface	VDDIO
43	UART_CTS	I	Bluetooth UART interface	VDDIO
44	HSIN	I	PCIE RX-	
45	HSIP	I	PCIE RX+	
46	HS0N	O	PCIE TX-	
47	HS0P	O	PCIE TX+	
48	RF_BT	I/O	BT antenna (optional if 3 ant type) 2 ant type NC this pin	
49	HOST_WAKE_BT	I	HOST wake-up Bluetooth device	VDDIO
50	BT_WAKE_HOST	O	Bluetooth device to wake-up HOST	VDDIO

P:POWER I:INPUT O:OUTPUT VDDIO:1.8V or 3.3V

7. Electrical Specifications

7.1 Power Supply DC Characteristics

	MIN	TYP	MAX	Unit
Operating Temperature	0	25	70	deg.C
VCC33	3.0	3.3	3.6	V
VDDIO (3.3V)	3.0	3.3	3.6	V
VDDIO (1.8V)	1.7	1.8	3.6	V

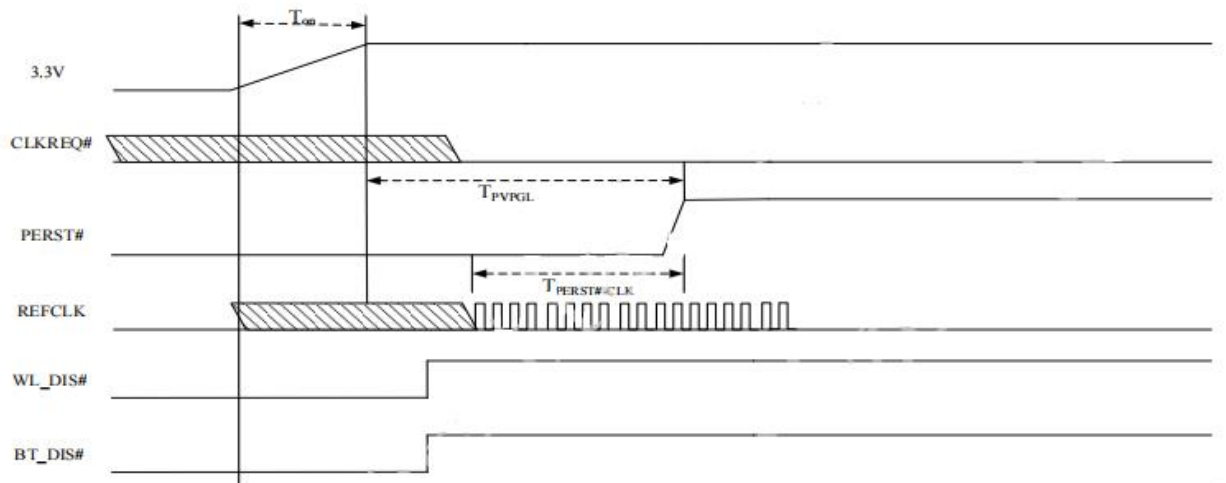
7.2 Power Consumption

Power Consumption	VCC33 = 3.3V(Unit:mA)	
	5G TX (HE80 11ax)	750
	5G RX (HE80 11ax)	295
	5G TX (VHT80 11ac)	765
	5G RX (VHT80 11ac)	285

	2.4G TX (HE40 11ax)	600
	2.4G RX(HE40 11ax)	235
	2.4G TX (HT40 11n)	605
	2.4G RX (HT40 11n)	225
	2.4G TX (OFDM 54M)	515
	2.4G RX (OFDM 54M)	235

7.3 Interface Circuit time series

7.3.1 PCIe bus during power on sequence



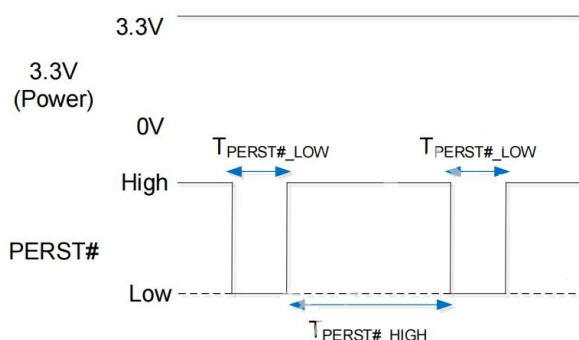
T_{on} : the main power ramp up duration

T_{PVPL} : power valid to PERST# input inactive

$T_{PERST\#-CLK}$: reference clock stable before PERST# inactive

Symbol	Unit	Min	Typical	Max
T_{on}	ms	0.5	1.5	5
T_{PVPL}	ms	Implementation specific; recommended 50ms		
$T_{PERST\#-CLK}$	us	100	--	--

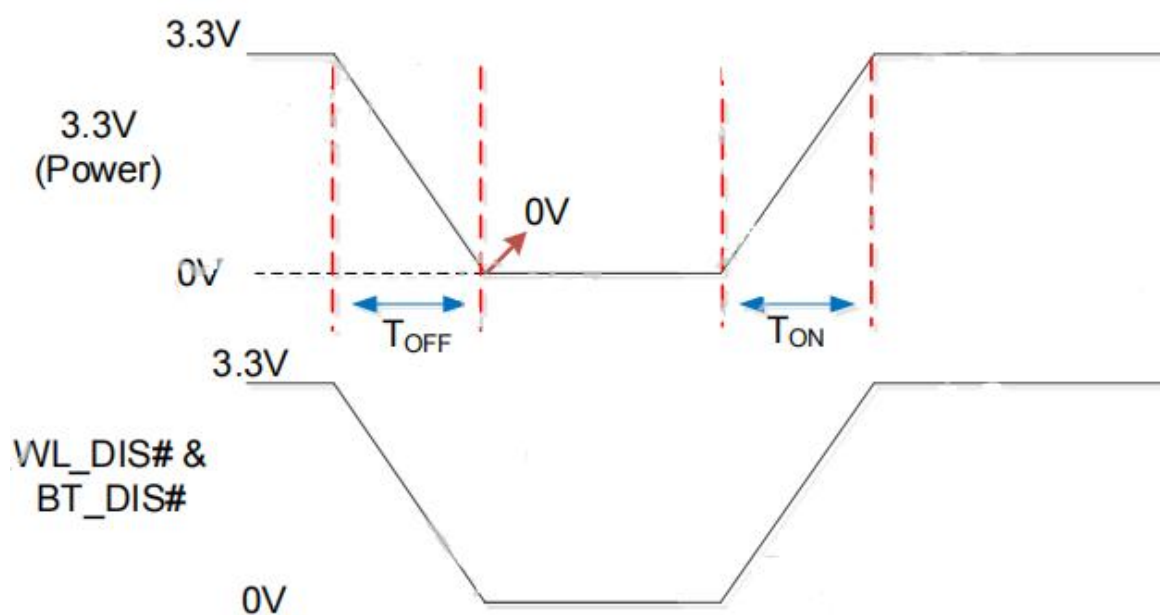
7.3.2 PCIe PERST# Timing sequence



PCIE PERST# Timing Parameters

	Min	Typical	Max	Unit	Description
T _{PERST#_LOW}	6	10	X	ms	PERST# low duration
T _{PERST#_HIGH}	400	500	X	ms	PERST# high duration

7.3.3 power off sequence

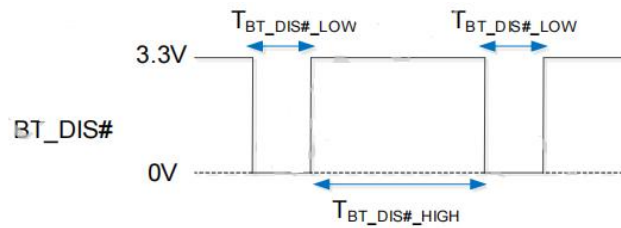


Power Off Timing Parameters

Symbol	Min.	Typical	Max.	Unit	Description
T _{OFF}	1.5	--	--	ms	Measure point start on 100% Measure point end on 0% (must be 0V)
T _{ON}	0.5	1.5	5	ms	Measure point start on 0% (must be 0V) Measure point end on 100%

Note: If BT_DIS# can't connect to the same power source with 3.3V, it need to be de-asserted before PERST# with 100ms in power on sequence.

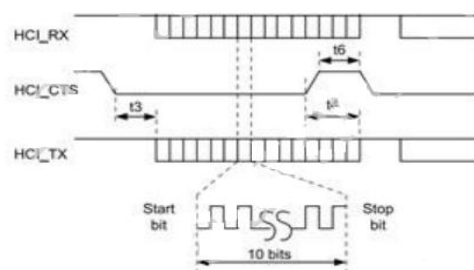
7.3.4 BT_DIS Timing sequence



	Min.	Typical	Max.	Unit	Description
BT_DIS#_LOW	200	--	--	ms	BT_DIS# low duration
BT_DIS#_HIGH	500	--	--	ms	BT_DIS# high duration

7.3.5 UART interface timing

The interface includes four signals, TXD/RXD/CTS. Flow control between the host and the device is byte-wise by hardware. When the UART_CTS signal is set high, the device stops transmitting on the interface. If HCI_CTS is set high in the middle of transmitting a byte, the device finishes transmitting the byte and stops the transmission.



UART Timing Diagram

UART Timing Characteristics

Parameter	Condition	Symbol	Min.	Typ	Max.	Unit
Baud rate			115.2		3000	Kbps
Baud rate accuracy per	Receive/Transmit		-3		3	%
CTS low to TX_DATA on		T3	0	2		ns
CTS high to TX_DATA off	Hardware flow	T4			1	byte
CTS High Pulse Width		T6	1			bit

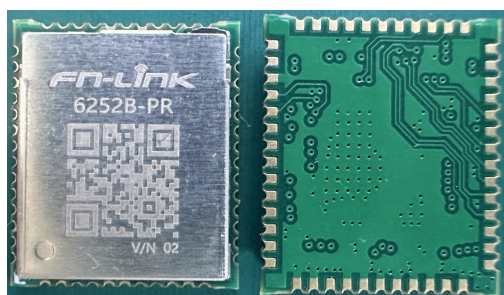
* Note : HCI packet means HCI command(256 bytes), HCI event(256 bytes), ACL(1024 bytes), SCO(256 bytes)

8. Size reference

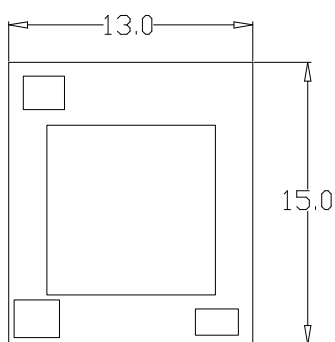
8.1 Module Picture

L x W : 15 x 13 (+0.3/-0.1) mm

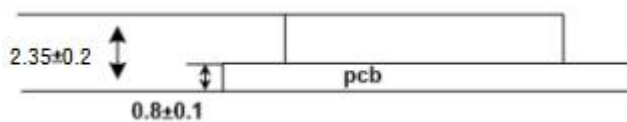
Pin1 mark ●



-03



With shielding H: 2.35 (±0.2) mm
No shielding H: 1.8 (±0.2) mm



Weight

With shielding 0.93g
No shielding 0.71g

8.2 Marking Description

01 Lable



备注：

二维码内容：112233445566;FG6252BPRX-01

1. 二维码：编码规则为“wifi mac 地址;成品料号”

例如：112233445566;FG6252BPRX-01（MAC 地址以实际为准）

——BT MAC 在 WIFI MAC 基础上+1（WIFI 地址需跳 1，不能与 BT 地址重复），二维码中不显示此内容。



备注：

二维码内容：112233445566;FG6252BPRX-02

1.fn-link 商标 LOGO

2.机型：6252B-PR

3. 二维码：编码规则为“wifi mac 地址;成品料号”

例如：112233445566;FG6252BPRX-02（MAC 地址以实际为准）。

-----BT MAC 在 WIFI MAC 基础上+1（WIFI 地址需跳 1，不能与 BT 地址重复），二维码中不显示此内容。

4.V/N 02(V/N 到 02 之间为两个空格，02 为成品料号尾缀，与二维码右对齐.)



备注：

二维码内容：112233445566;FG6252BPRX-03

1. fn-link 商标 LOGO

2. 机型：6252B-PR

3. 二维码：编码规则为“wifi mac 地址;成品料号”

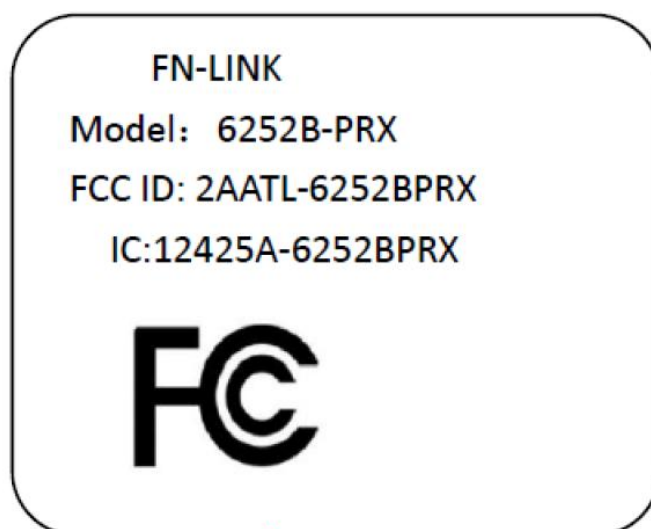
例如：112233445566;FG6252BPRX-03（MAC 地址以实际为准）。

-----BT MAC 在 WIFI MAC 基础上+1（WIFI 地址需跳 1，不能与 BT 地址重复），二维码中不显示此内容。

4. V/N 03(V/N 到 03 之间为两个空格，03 为成品料号尾缀，与二维码右对齐。)

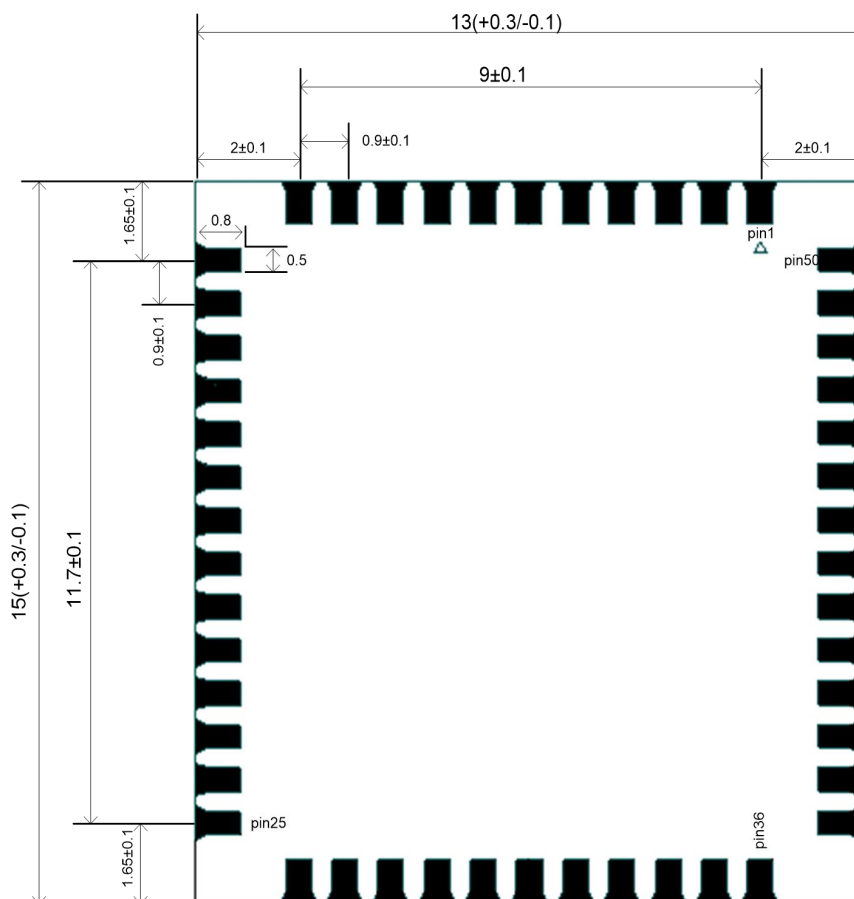
8.3 List of certified information

Certification project	Certificate number
SRRC	CMIIT ID:2023AP7405(M)
FCC	FCC ID:2AATL-6252BPRX
CE	2129-12-2022-124167
IC	IC ID:12425A-6252BPRX
NCC	TBD
KCC	TBD
TELEC	TBD
Brazil	TBD
Argentina	TBD
Japan	TBD

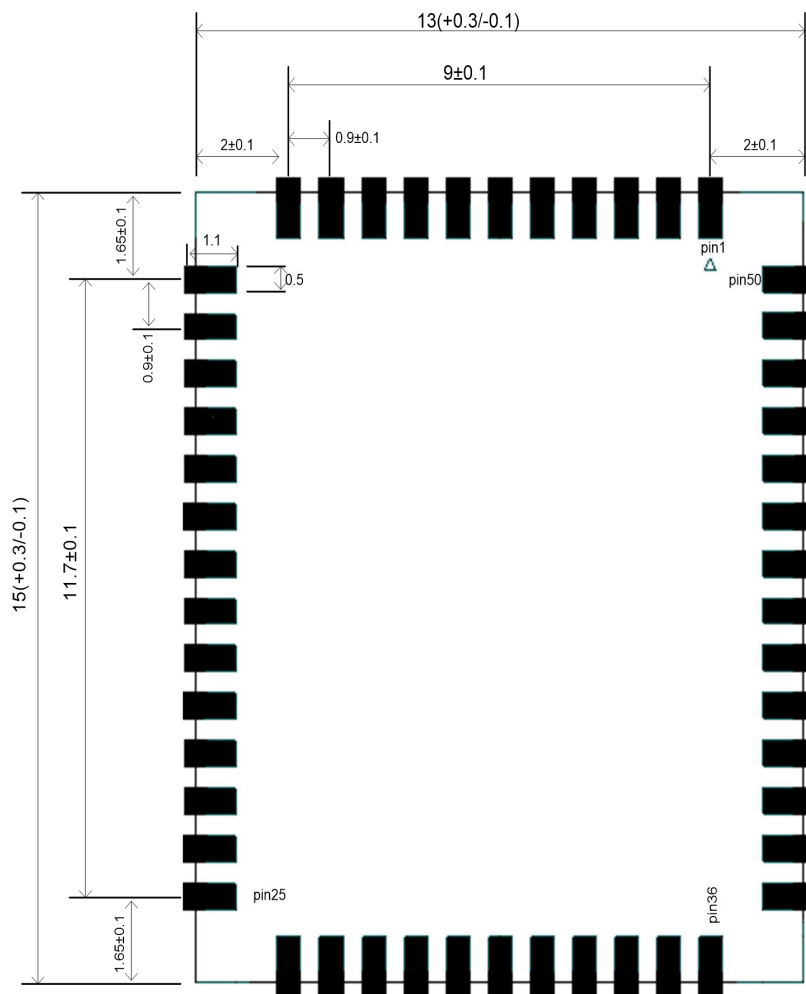


8.4 Physical Dimensions

<TOP View>



8.5 Layout Recommendation



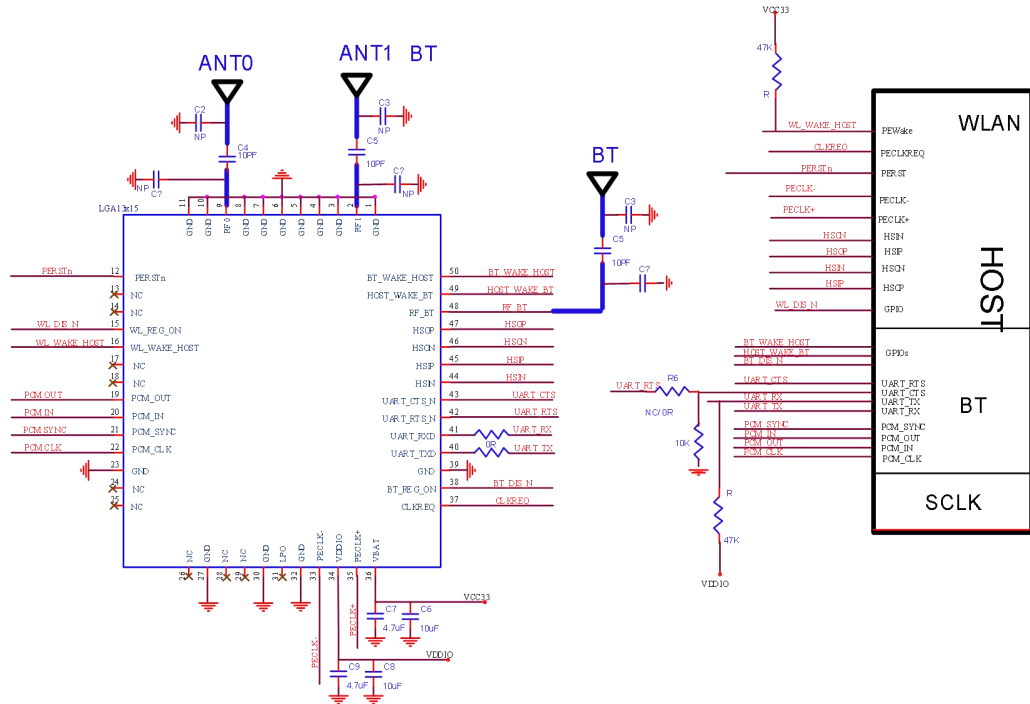
9. The Key Material List

Item	Part Name	Description	Manufacturer
1	Inductor	0603 2.2UH,±10%,DCR:0.56Ω,560mA	Sunlord,Ceaiya,cenker,TAIYO,Chilisin,INPAQ
2	Inductor	2016,1.0uH,±20%,DCR 0.095Ω,耐流 1.45A	Sunlord,Ceaiya,cenker,TAIYO,Chilisin,INPAQ
3	Diplexer	1608 Dual-band, dual-mode 2.4GHz/5GHz WLAN	Glead, Walsin, ACX, Murata, MAG.LAYERS,TDK,FTR
4	Crystal	2016 40MHz ±10ppm	ECEC, TKD, Hosonic, JWT, TXC
5	Chipset	RTL8852BE-VR-CG	Realtek

6	PCB	13X15x0.8mm,FR4, 6 LAYER, GREEN	XY-PCB,GDKX,Sunlord, SL-PCB,TRULY
7	Shielding	6252B-PRB,shielding,13.5*11.5*1.55mm,T=0.15mm	信太，精力通，卓益

10. Reference Design

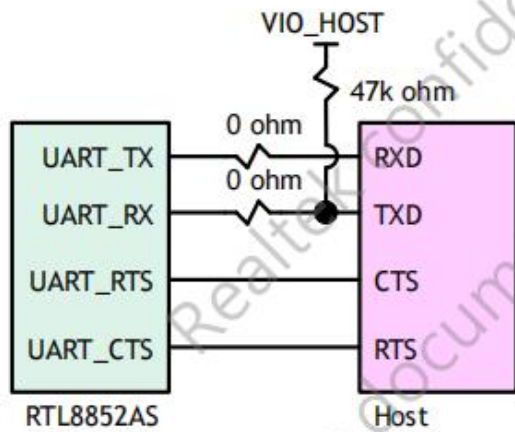
50 ohm RF trace



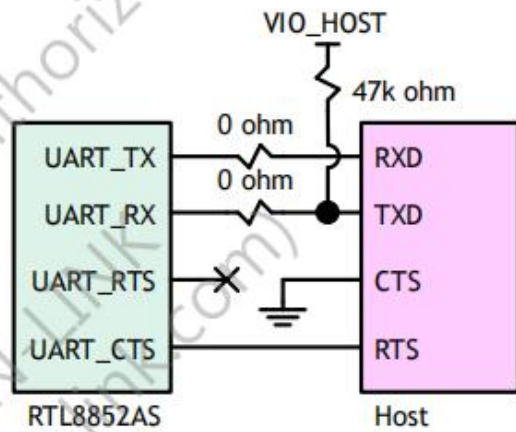
C6, C7 caps should be closed to pin36 of the module

C8, C9 caps should be closed to pin34 of the module

HCI Connection for H4 protocol



HCI Connection for H5 protocol



Note: There must be 0 ohm jumper-resistors on TX/RX paths, for BQB certification test

Note:

RF_BT is optional for 3 ANT version. 2 ANT type NC this pin;

PCIe TX /RX trace please put in PCB inner layer;

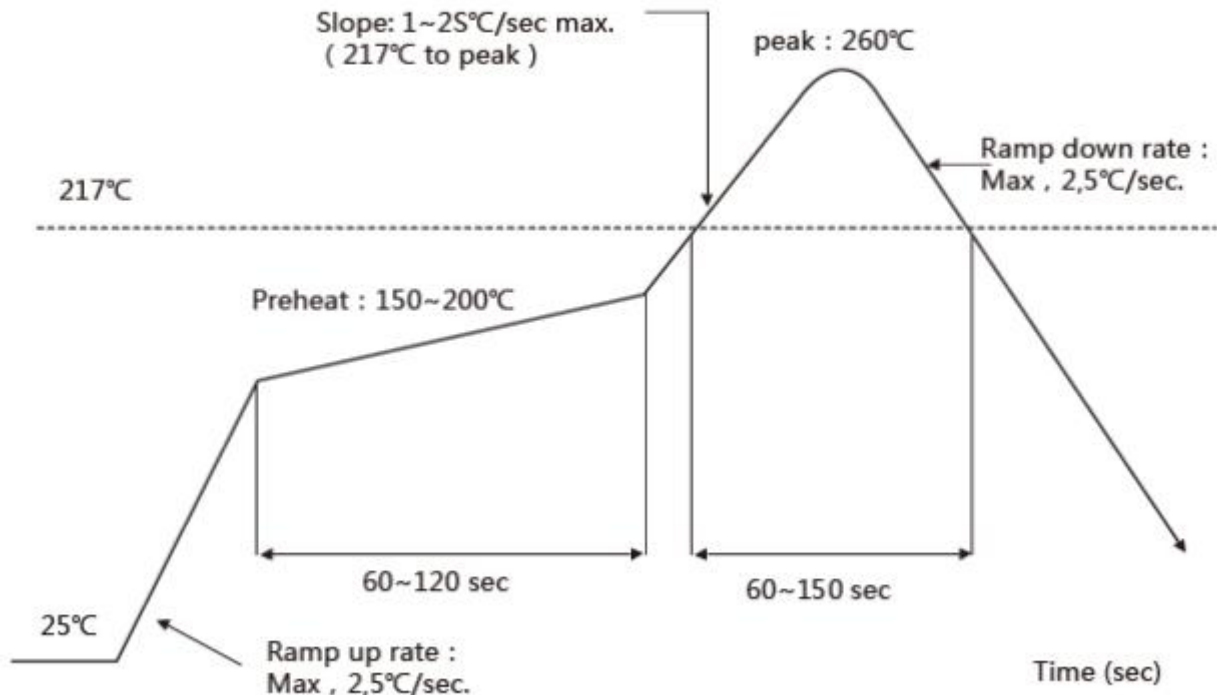
11. Recommended Reflow Profile

Referred to IPC/JEDEC standard.

Peak Temperature: 260 ± 5 °C

Time within 5° C of peak temperature: ≥ 10 s

Number of Times: 2 times



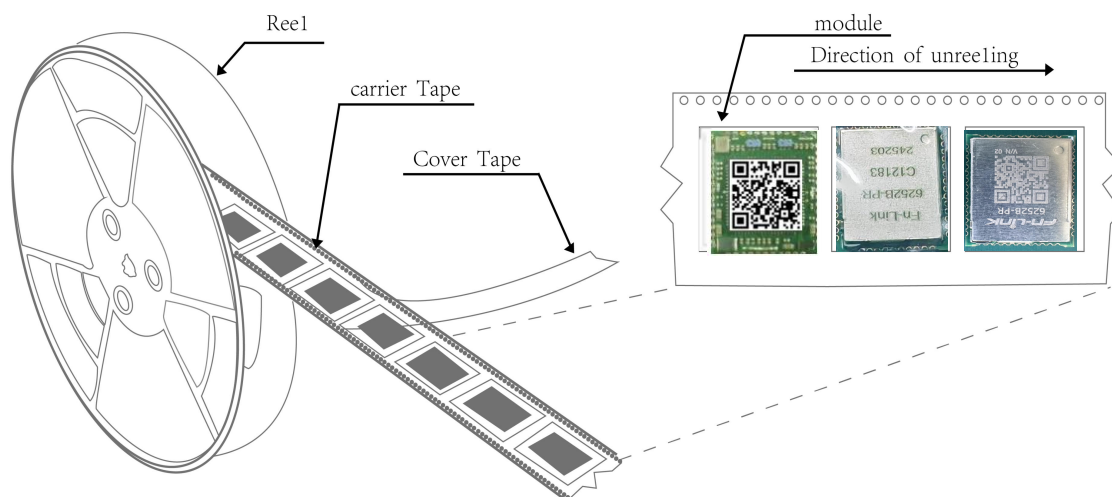
12. RoHS compliance

All hardware components are fully compliant with EU RoHS directive

13. Package

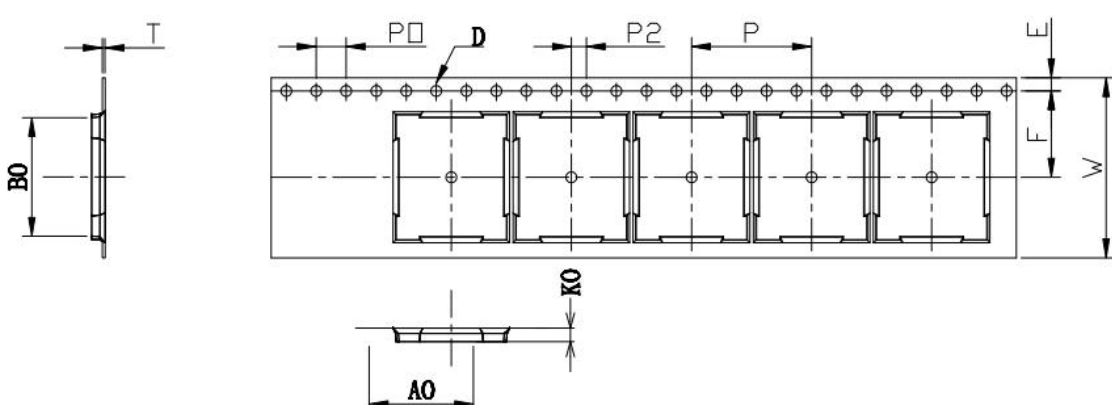
13.1 Reel

A roll of 1500pcs

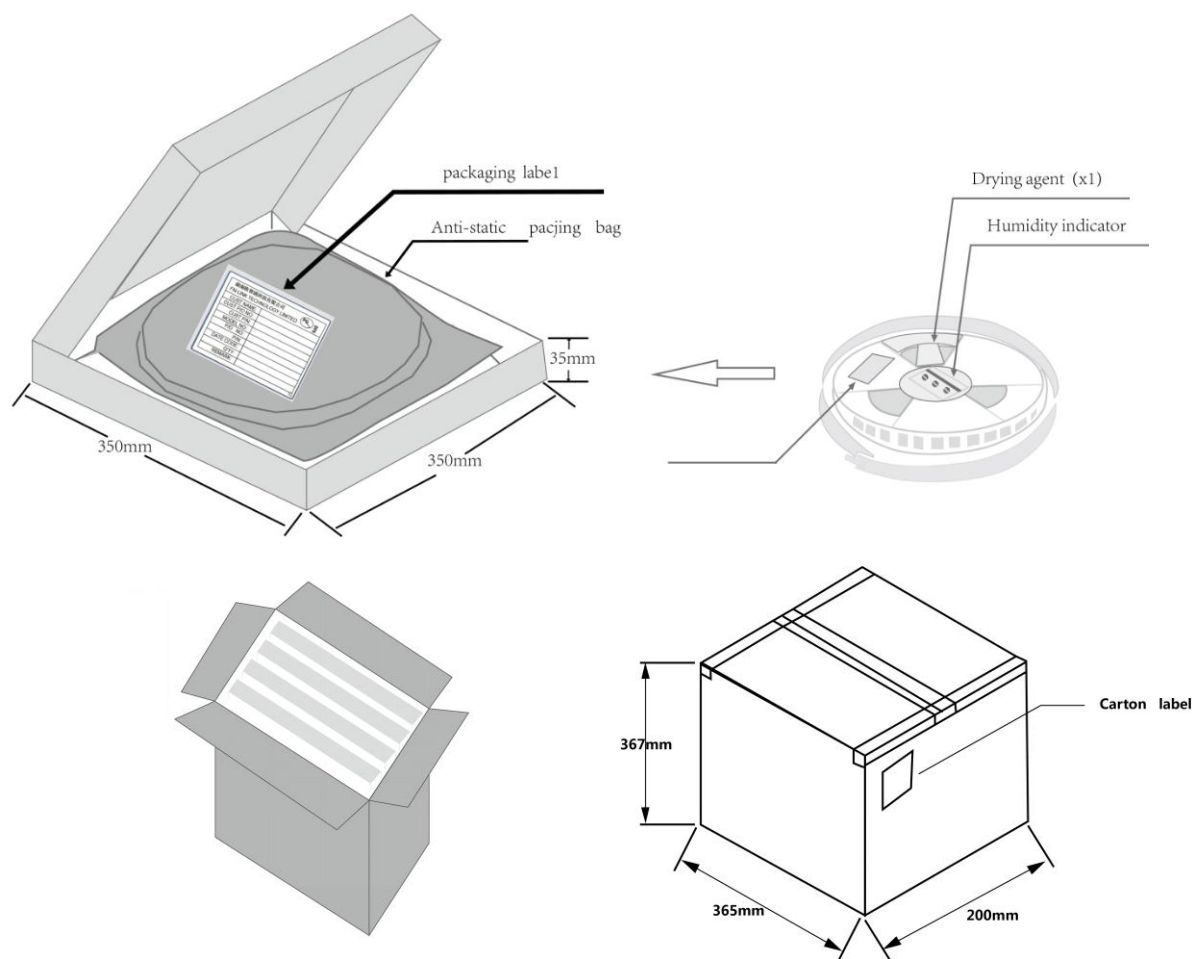


13.2 Carrier Tape Detail

ITEM	W	A0	B0	D	F	E	K0	P0	P2	P	T
DIM	24	13.40	15.40	1.50	11.5	1.75	2.65	4.0	2.0	16.0	0.30
TOLE	$\begin{smallmatrix} +0.3 \\ -0.3 \end{smallmatrix}$	± 0.15	± 0.15	$\begin{smallmatrix} +0.1 \\ -0.0 \end{smallmatrix}$	$\begin{smallmatrix} +0.1 \\ -0.1 \end{smallmatrix}$	± 0.1	± 0.10	± 0.1	± 0.1	± 0.1	± 0.05

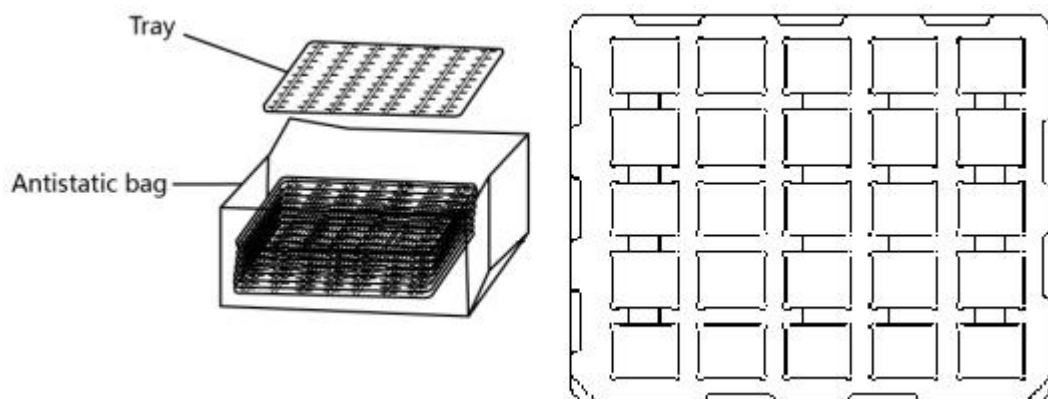


13.3 Packaging Detail



13.4 Tray

Use pallet packaging for less than 300 pieces



14. Moisture sensitivity

The Modules is a Moisture Sensitive Device level 3, in according with standard IPC/JEDEC J-STD-020, take care

all the relatives requirements for using this kind of components.

Moreover, the customer has to take care of the following conditions:

- a) Calculated shelf life in sealed bag: 12 months at <40°C and <90% relative humidity (RH)
- b) Environmental condition during the production: 30°C / 60% RH according to IPC/JEDEC J-STD-033A paragraph 5
- c) The maximum time between the opening of the sealed bag and the reflow process must be 168 hours if condition
- d) "IPC/JEDEC J-STD-033A paragraph 5.2" is respected
- e) Baking is required if conditions b) or c) are not respected
- f) Baking is required if the humidity indicator inside the bag indicates 10% RH or more

The Module is designed to comply with the FCC statement. FCC ID is 2AATL-6252BPRX. The host system using Module, should have label indicated it contain modular's FCC ID: 2AATL-6252BPRX. This radio module must not installed to collocate and operating simultaneously with other radios in host system additional testing and equipment authorization may be required to operating simultaneously with other radio.

The Module and its antenna must not be co-located or operating in conjunction with any other transmitter or antenna within a host device.

The modular must be installed in the host that assign by Company name: FN-LINK TECHNOLOGY LIMITED, Model no.: 6252B-PRX if other host types used would need further evaluation and possible C2PC if they are not significantly similar to the one tested The WIFI Module is designed for a compact PCB design. It should be installed and operated with host or other minimum distance of 20 centimeters between the radiator and your body." To comply with FCC regulations limiting both

maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed 4.77 dBi in the 2.4G band, 5.24 dBi in the 5G band. The module uses FPC Antennas, these antennas are sold with the module.

Notice to OEM integrator

The end user manual shall include all required regulatory information/warning as show in this manual. The OEM integrator is responsible for testing their end-product for any additional compliance requirements required with this module installed. If the final product contains circuits of other FCC PART 15 Subparts, the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed The intended use is generally not for the general public. It is generally for industry/commercial use. The connector is within the transmitter enclosure and can only be accessed by disassembly of the transmitter that is not normally required, the user has no access to the connector. Installation must be controlled. Installation requires special training.

This device complies with Part 15 of the FCC Rules.

This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

2.2

This module has been assessed against the following FCC rule parts: CFR 47 FCC Part 15 C (15.247. DTS) and CFR 47 FCC Part 15 E (NII). It is applicable to the modular transmitter

2.3

This radio transmitter Module has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

The concrete contents to check are the following three points.

- 1) Maximum antenna gains are shown in item 2.7 below.
- 2) Should be installed so that the end user cannot modify the antenna
- 3) Feed line should be designed in 50ohm

Fine-tuning of return loss etc. can be performed using a matching network.

The antenna shall not be accessible for modification or change by the end user.

2.4

The module complies with FCC Part 15.247 / Part 15.407 and apply for Single module approval.

2.5

Trace antenna designs: applicable.

Any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify the module grantee that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the grantee, or the host manufacturer can take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application.

The device must be professionally installed.

The intended use is generally not for the general public.

It is generally for industry/commercial use.

The connector is within the transmitter enclosure and can only be accessed by disassembly of the transmitter that is not normally required.

The user has no access to the connector.

Installation must be controlled.

Installation requires special training.

2.6

This equipment 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 & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2.7

The following antennas have been certified for use with this module.

Only antennas of the same type with equal or lower gain may also be used with this module.

Other types of antennas and/or higher gain antennas may require the additional authorization for operation. The installer should use unique antenna connector and Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device. The manufacturer of module will inform installer to meet with the FCC part 15.203 in the warning part.

Antenna Specification list below:

2.4G:

Antenna type: FPC Antenna

The max antenna gain (in dBi):

BR+EDR: 4.77 dBi

BLE: 4.77 dBi

2.4G WIFI

4.77 dBi for antenna 1

4.77 dBi for antenna 2

5G:

Antenna type: FPC Antenna

The max antenna gain (in dBi):

5.24 dBi for antenna 1

5.24 dBi for antenna 2

2.8

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. This exterior label can use wording such as "Contains FCC ID: 6252B-PRX "; any similar wording that expresses the same meaning may be used.

2.9

Testing of the host product with all the transmitters installed - referred to as the composite investigation test- is recommended, to verify that the host product meets all the applicable FCC rules. The radio spectrum is to be investigated with all the transmitters in the final host product functioning to determine that no emissions exceed the highest limit permitted for any one individual transmitter as required by Section 2.947(f). The host manufacturer is responsible to ensure that when their product operates as intended it does not have any emissions present that are out of compliance that were not present when the transmitters were tested individually.

If the modular transmitter has been fully tested by the module grantee on the required number of channels, modulation types, and modes, it should not be necessary for the host installer to re-test all the available transmitter modes or settings. It is recommended that the host product manufacturer, installing the modular transmitter, perform some investigative measurements to confirm that the resulting composite system does not exceed the spurious emissions limits or band edge limits (e.g., where a different antenna may be causing additional emissions).

The testing should check for emissions that may occur due to the intermixing of emissions with the other transmitters, digital circuitry, or due to physical properties of the host product (enclosure). This investigation is especially important when integrating multiple modular transmitters where the certification is based on testing each of them in a stand-alone configuration.

2.10

Any company of the host device which install this modular should perform the test of radiated & conducted emission and spurious emission etc. according to FCC Part 15C: 15.247 and 15.209 & 15.207, part 15 E 15.407, 15B class B requirement, only if the test result comply with FCC part 15C: 15.247 and 15.209 & 15.207 part 15 E 15.407, 15B class B requirement. Then the host can be sold legally.

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, If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuitry), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

FCC Statement

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.

2. 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.

The device has been evaluated to meet general RF exposure requirement. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

ISED Statement

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.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The device has been evaluated to meet general RF exposure requirement. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

L'appareil ne doit pas produire de brouillage;

L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

Les opérations dans la bande 5.15-5.25GHz sont limitées à une utilisation à l'intérieur seulement.

The Module is designed to comply with the ISED statement. IC is 12425A-6252BPRX. The host system using Module, should have label indicated it contain modular's IC: 12425A-6252BPRX. This

radio module must not installed to collocate and operating simultaneously with other radios in host system additional testing and equipment authorization may be required to operating simultaneously with other radio.

The Module and its antenna must not be co-located or operating in conjunction with any other transmitter or antenna within a host device.

This radio transmitter [IC: 12425A-6252BPRX] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

The modular must be installed in the host that assign by Company name: FN-LINK TECHNOLOGY LIMITED, Model no.: 6252B-PRX. If other host types used would need further evaluation and possible C2PC if they are not significantly similar to the one tested The WIFI Module is designed for a compact PCB design. It should be installed and operated with host or other minimum distance of 20 centimeters between the radiator and your body. To comply with ISED regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed Antenna 4.77 dBi in the 2.4G band and 5.24 dBi in the 5G band. The module uses External antenna, this antenna is sold with the module.