

BW0132-44B1

IEEE 802.11 a/b/g/n 1T1R Wi-Fi +BT5.2 Combo Module

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1. Device Overview

1.1 Features

- Full IEEE 802.11a/b/g/n legacy compatibility with enhanced performance.
- Single spatial stream up to a 72 Mbps data rate.
- IEEE 802.11n beamforming support.
- TX and RX low-density parity check (LDPC) support for improved range and power efficiency.
- Receive space-time block coding.
- Shared Bluetooth and WLAN receive signal path.
- Supports standard SDIO v2.0 and SDIO v3.0 (SDR50 at 80 MHz and DDR50 at 40 MHz).
- Complies with Bluetooth Core Specification Version 5.2 with provisions for supporting future specifications.
- Bluetooth Class 1 or Class 2 transmitter operation.
- LE Long Range support
- LE 2Mbps PHY rate support
- Host controller interface (HCI) through high-speed UART or SDIO.
- PCM interface for audio data.
- Low power consumption improves battery life of handheld devices.
- Supports extended synchronous connections (eSCO), for enhanced voice quality by allowing for retransmission of dropped packets.
- Supports multiple simultaneous Advanced Audio Distribution Profiles (A2DP) for stereo sound.
- Adaptive frequency hopping (AFH) for reducing radio frequency interference.
- Security:
 - WPA, WPA2 (Personal) with security improvements, and WPA3 (Personal) support for powerful encryption and authentication
 - AES and TKIP in hardware for faster data encryption and IEEE 802.11i compatibility

1.2 Applications

- IP camera
- Tablet
- Smart appliances
- Other multimedia devices
- Mobile devices
- Network devices
- Smartphone

1.3 Descriptions

This module is designed around Synaptics® SYN430132. The BW0132-44B1 is a ultra-low power module that supports a single-stream IEEE 802.11n MAC/baseband/radio and Bluetooth 5.2. All rates specified in the IEEE 802.11a/b/g/n

specification are supported. The chip includes low-noise amplifiers in all receive paths and power amplifiers in all transmit paths.

The WLAN section supports an SDIO v3.0 interface that can operate in 4b or 1b mode.

The Bluetooth section supports a high-speed 4-wire UART interface.

The BW0132-44B1 module is designed for mobile devices that require minimal power consumption and compact size. It includes a power management unit that simplifies the system power topology and allows for direct operation from a mobile platform battery while maximizing battery life.

1.4 Functional Block Diagram

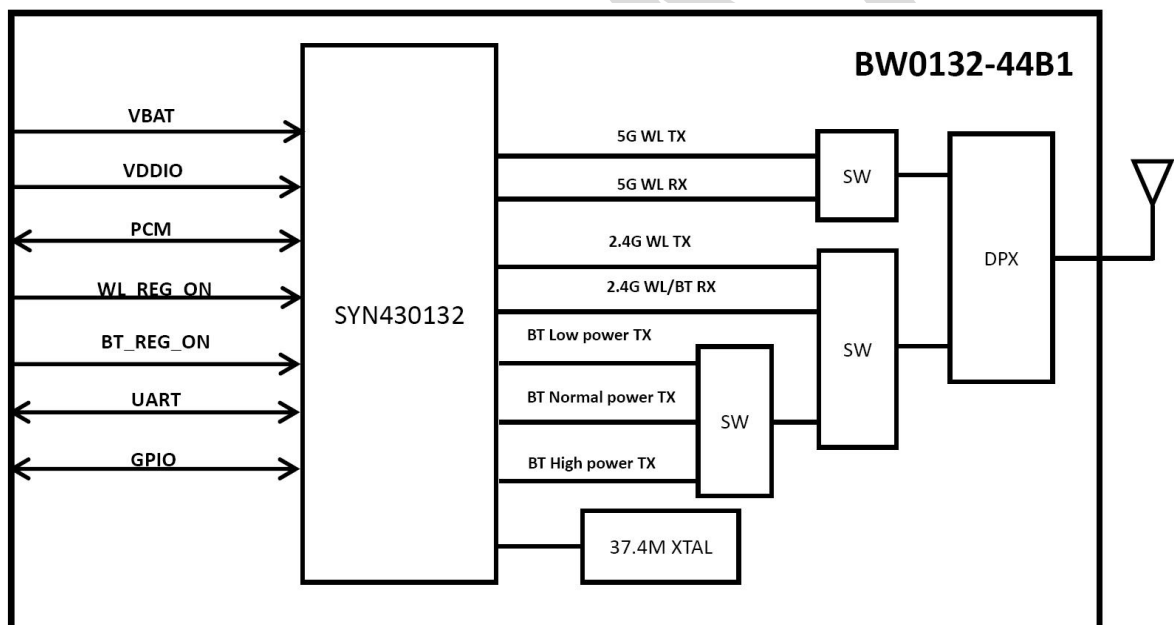


Figure 1. Block Diagram of BW0132-44B1

2. Pin Configuration and Functions

2.1 Module Pin Diagram

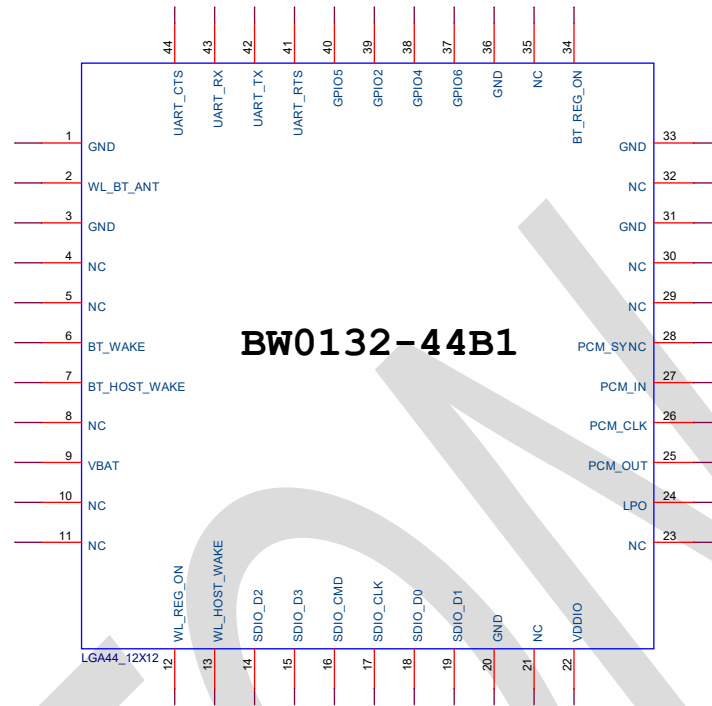


Figure 2. Pin Diagram of BW0132-44B1

2.2 Pin Functions

Pin	Name	Description
1	GND	Ground
2	WL_BT_ANT	WLAN/BT RF TX/RX path
3	GND	Ground
4	NC	Floating Pin, No connect to anything
5	NC	Floating Pin, No connect to anything
6	BT_WAKE	Host Wake up BT
7	BT_HOST_WAKE	BT Wake up Host
8	NC	Floating Pin, No connect to anything
9	VBAT	3.3V power supply
10	NC	Floating Pin, No connect to anything.
11	NC	Floating Pin, No connect to anything.
12	WL_REG_ON	Used by PMU to power up or power down the internal regulators used by the WLAN section. Also, when deasserted, this pin holds the WLAN section in reset. This pin has an internal 200k ohm pull

		down resistor that is enabled by default. It can be disabled through programming
13	WL_HOST_WAKE	WL Wake up Host
14	SDIO_D2	SDIO Data Line 2
15	SDIO_D3	SDIO Data Line 3
16	SDIO_CMD	SDIO Command Line
17	SDIO_CLK	SDIO Clock
18	SDIO_D0	SDIO Data Line 0
19	SDIO_D1	SDIO Data Line 1
20	GND	Ground
21	NC	Floating Pin, No connect to anything.
22	VDDIO	1.8V power supply
23	NC	Floating Pin, No connect to anything.
24	LPO	External 32.768K or RTC clock input
25	PCM_OUT	PCM data Out
26	PCM_CLK	PCM Clock
27	PCM_IN	PCM data Input
28	PCM_SYNC	PCM Synchronization control
29	NC	Floating Pin, No connect to anything
30	NC	Floating Pin, No connect to anything
31	GND	Ground
32	NC	Floating Pin, No connect to anything
33	GND	Ground
34	BT_REG_ON	Used by PMU to power up or power down the internal regulators used by the Bluetooth section. Also, when deasserted, this pin holds the Bluetooth section in reset. This pin has an internal 200k ohm pull down resistor that is enabled by default. It can be disabled through programming
35	NC	Floating Pin, No connect to anything
36	GND	Ground
37	GPIO6	GPIO configuration pin
38	GPIO4	GPIO configuration pin
39	GPIO2	GPIO configuration pin
40	GPIO5	GPIO configuration pin
41	UART_RTS	High-Speed UART RTS

42	UART_TX	High-Speed UART Data Out
43	UART_RX	High-Speed UART Data In
44	UART_CTS	High-Speed UART CTS

3. Specifications

3.1 Absolute Maximum Rating

Caution! The absolute maximum ratings in the following table indicates voltages levels where permanent physical damage to the device can occur, even if these limits were exceeded for only a brief duration.

Parameter	Specification			Unit
	Min.	Typ.	Max.	
V _{BAT}	-0.5	3.3	5.25	V
V _{DIO}	-0.5	1.8	2.05	V

3.2 Recommended Operating Conditions

Power Supply Voltage (V _{BAT})	3.0V~5.0V
DC supply voltage for digital I/O (V _{DIO})	1.62V~1.98V
Operating Temperature	-30 °C ~ +85 °C
Storage Temperature	-40 °C ~ +125 °C

3.3 Digital IO Pin DC Characteristics

Symbol	Parameter	Min	Typ	Max	Unit
V _{IL}	Input Low Voltage			V _{DIO} ×0.35	V
V _{IH}	Input High Voltage	V _{DIO} ×0.65			V
V _{oL}	Output Low Voltage			0.45	V
V _{oH}	Output High Voltage	V _{DIO} -0.45			V

3.4 RF Characteristics

3.4.1 WiFi RF Specifications

Category	Descriptions
Dimension	L*W*H :12.0mm (±0.2mm)*12.0mm (±0.2mm)*2.2mm (±0.2 mm)
Chip-set	SYN430132
Standard	IEEE 802.11a/b/g/n +BT 5.2
Modulation Type	CCK, OFDM (16 QAM/64 QAM)
Frequency Band	2400~2500MHz,4900-5845MHz
Interface	WLAN: SDIO, Bluetooth: UART
Data Security	AES/TKIP,WPA/WPA2/WPA3
Transmit Power	2.4G: 11b 1M:18±2dBm 11b 11M:18±2dBm 11g 6M:18±2dBm 11g 54M:15±2dBm 11n HT20 MCS0:18±2dBm 11n HT20 MCS7:15±2dBm 5G: 11a 6M:16±2dBm 11a 54M:13±2dBm 11n HT20 MCS0:16±2dBm 11n HT20 MCS7:13±2dBm
Rx Sensitivity	2.4G: 11b 11M:-90dBm@8% PER 11g 54M: -76dBm@10% PER 11n HT20 MCS7: -74dBm@10% PER 5G: 11a 54M:-75dBm@10% PER 11n HT20 MCS7: -73.5dBm@10% PER
Data Rate	802.11b [11,5.5,2 and 1Mbps] 802.11g [54,48,36,24,18,12,9&6Mbps] 802.11n HT20:up to 72.2Mbps
Frequency Error	2.4GHz:<±25 ppm(11b),<±20 ppm(11g/n);5GHz:<±20 ppm
Antenna	External antenna
Operating System	Linux
Operating Voltage	VBAT:3.3V VDDIO:1.8V

3.4.2 BT RF Specifications

Parameter	Conditions	Minimum	Typical	Maximum	Unit
Frequency range		2402		2480	MHz
RX sensitivity	BDR		-93		dBm
	EDR(2DH5)		-92		dBm
	EDR(3DH5)		-87		dBm
Output power	BDR	6	8	10	dBm
	EDR	2	4	6	dBm
	LE	6	8	10	dBm

4. Application, Implementation, and Layout

4.1 Application Diagram

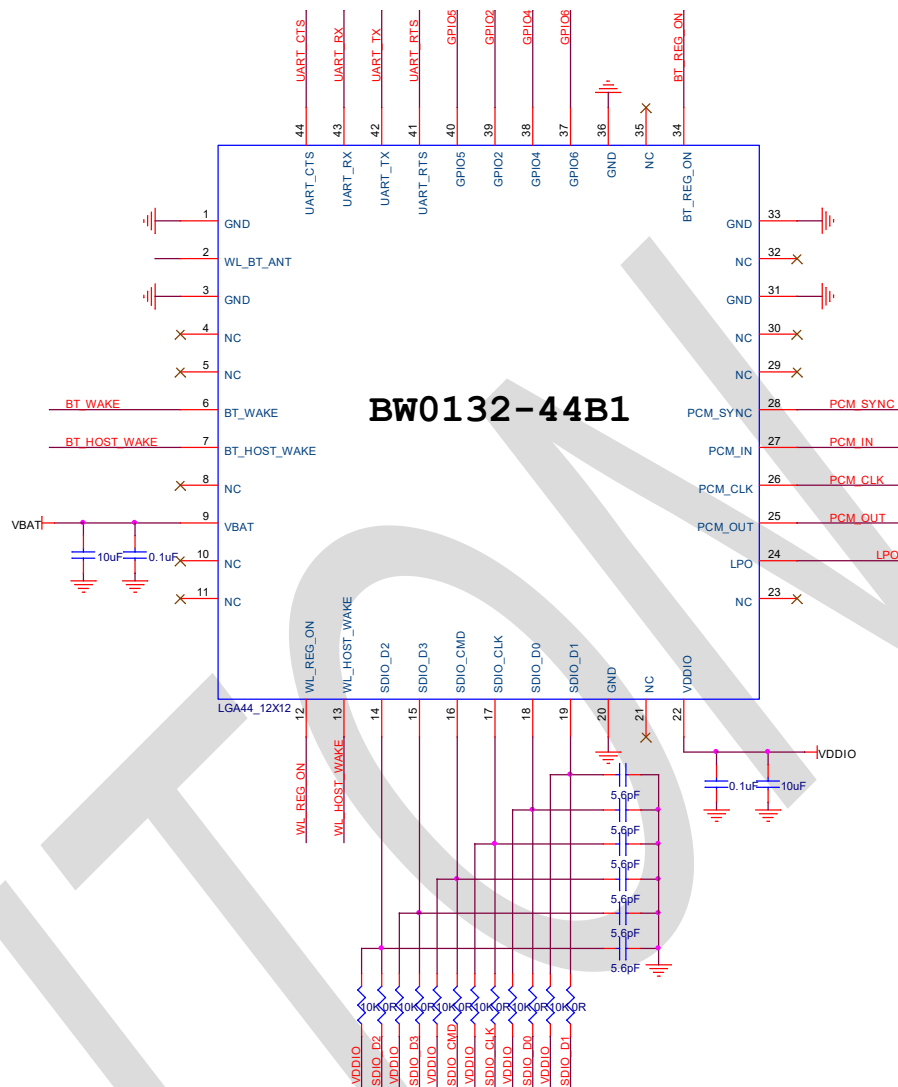


Figure 3. Application Schematic Diagram of BW0132-44B1

4.2 External 32.768 kHz Low-Power Oscillator

Note 1: External 32.768 kHz sleep clock specifications

Parameter	Specification	Units
Nominal input frequency	32.768	kHz
Frequency accuracy	±200	ppm
Duty cycle	30 - 70	%
Input signal amplitude	500 to 1800	mV, p-p
Signal type	Square-wave or sine wave	-

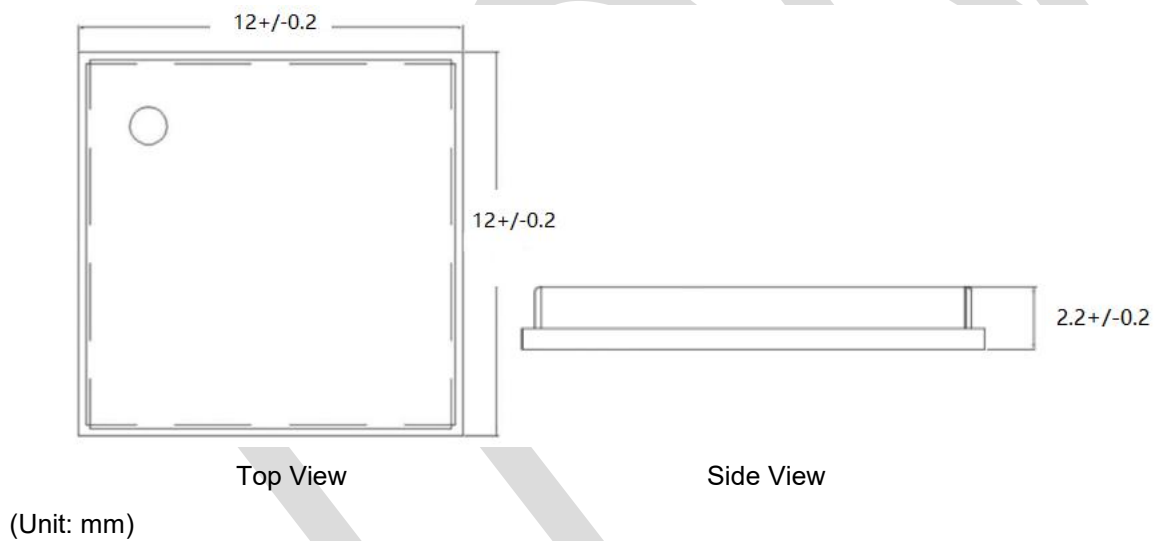
Input impedance	>100k	Ω
	<5	pF

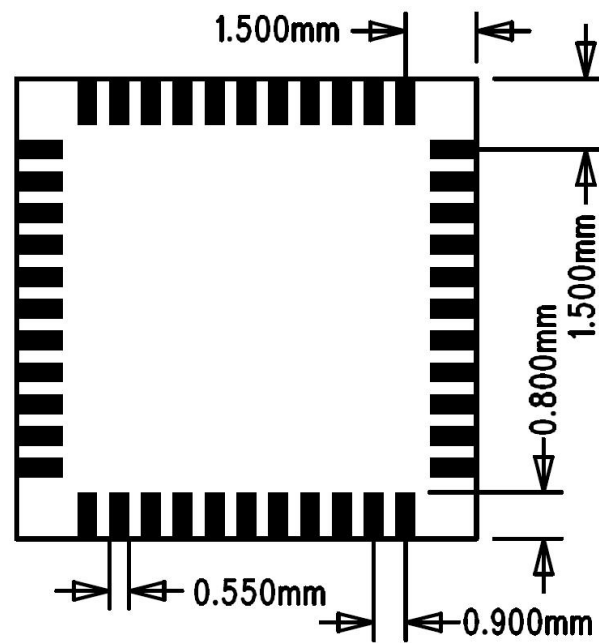
4.3 Layout Guideline

1. Keep RF traces with 50 Ohm impedance.
2. The antenna needs to have enough clearance area.
3. The filter capacitor should be as close as possible to the module.
4. Do not place strong interference lines under the module.

5. Mechanical and Package

5.1 Module Size





Bottom View

(Unit: mm)

Figure 4. Module Size of BW0132-44B1

5.2 Recommended PCB Footprint

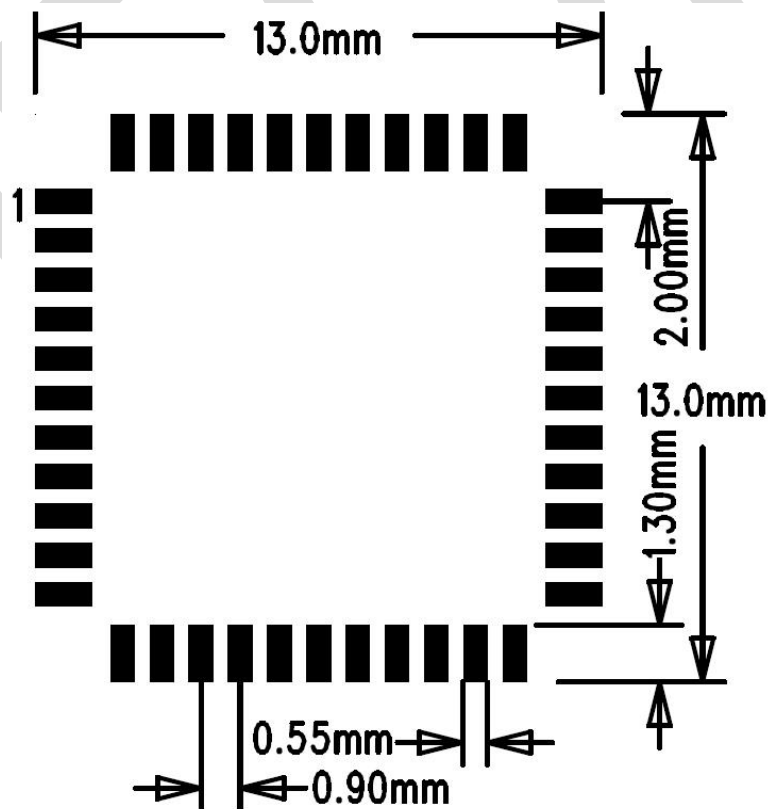


Figure 5. Recommended PCB Footprint of BW0132-44B1

5.3 Package Information

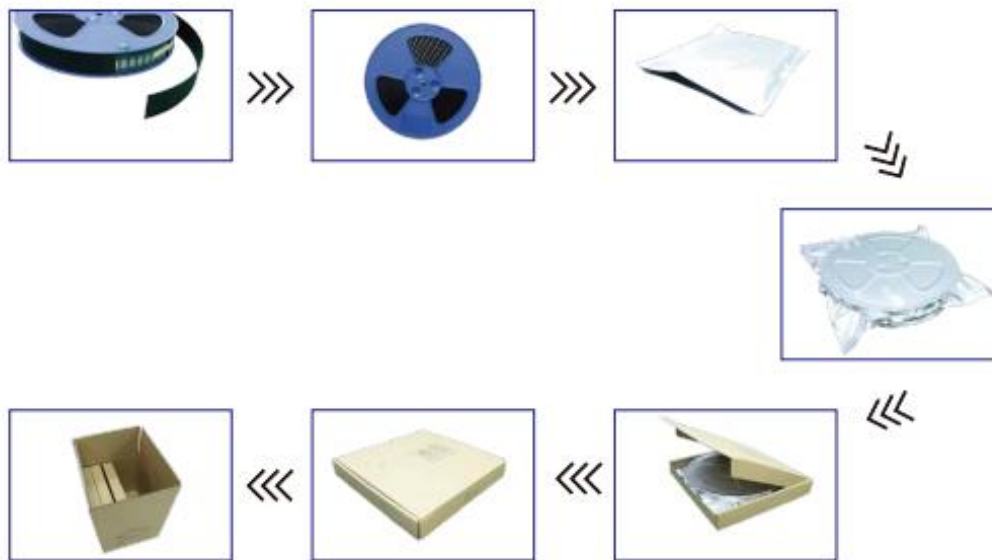


Figure 6. Brief Packaging Process of BW0132-44B1 Modules

6. Thermal Reflow

Referred to IPC/JEDEC standard.

Peak temperature: <250°C

Number of times: ≤2

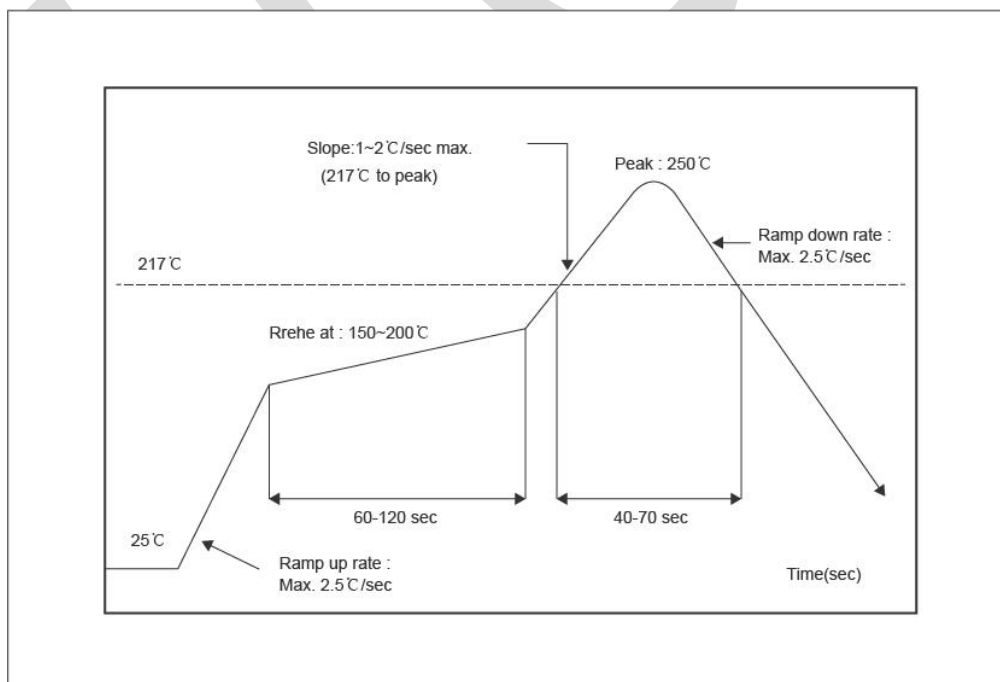


Figure 7. Recommended Reflow for Lead Free Solder

Note: The module is recommended not to go through reflow over twice.

7. Ordering Information

Part NO.	Working Voltage(VBAT)	Operating Temperature	Shielding Cover	Remark
BW0132-44B1	3.3V	-30℃~+85℃	Included	

8. Revision History

Version	Change Content	Reviser	Date
V1.0	Initial Version	Phil	2023.07.16

FCC

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.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

*RF warning for Mobile device:

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.

The OEM must certify the final end product to comply with unintentional radiators (FCC Sections 15.107 and 15.109) before

declaring compliance of the final product to Part 15 of the FCC rules and regulations. Integration into devices that are directly or indirectly connected to AC lines must add with Class II Permissive Change.

The OEM must comply with the FCC labeling requirements. If the module's label is not visible when installed, then an additional permanent label must be applied on the outside of the finished product which states: "Contains transmitter module FCC ID: VYVBW0132-44B1".

Additionally, the following statement should be included on the label and in the final product's user manual:

"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 interferences, and

(2) this device must accept any interference received, including interference that may cause undesired operation." The module is limited to installation in applications. Separate approval is required for all other operating configurations, including mobile configuration with respect to Part 2.1093 and different antenna configurations. A module or modules can only be used without additional authorizations if they have been tested and granted under the same intended end - use operational conditions, including simultaneous transmission operations. When they have not been tested and granted in this manner, additional testing and/or FCC application filing may be required. The most straightforward approach to address additional testing conditions is to have the grantee responsible for the certification of at least one of the modules submit a permissive change application. When having a module grantee file a permissive change is not practical or feasible, the following guidance provides some additional options for host manufacturers. Integrations using modules where additional testing and/or FCC application filing(s) may be required are: (A) a module used in devices requiring additional RF exposure compliance information (e.g., MPE evaluation or SAR testing); (B) limited and/or split modules not meeting all of the module requirements; and (C) simultaneous transmissions for independent collocated transmitters not previously granted together. This Module is full modular approval, it is limited to OEM installation ONLY. Integration into devices that are directly or indirectly connected to AC lines must add with Class II Permissive Change. (OEM) Integrator has to assure compliance of the entire end product include the integrated Module. Additional measurements (15B) and/or equipment authorizations (e.g. Verification) may need to be addressed depending on co-location or simultaneous transmission issues if applicable. (OEM) Integrator is reminded to assure that these installation instructions will not be made available to the end user.

Integration instructions for host product manufacturers according to KDB 996369 D03

OEMManual v01

2.2 List of applicable FCC rules

FCC Part 15 Subpart C 15.247 & 15.207 & 15.209 & 15.205; 47 CFR Part 15E

2.3 Specific operational use conditions

BDR+EDR

Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	79
Modulation Type	:	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	2.53dBi

BLE

Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	40
Modulation Type	:	GFSK
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	2.53dBi

WIFI 2.4G

Operation Frequency	:	802.11b/g/n(HT20): 2412MHz to 2462MHz
Number of Channel	:	802.11b/g/n(HT20): 11
Modulation Type	:	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	2.53dBi

WIFI 5G

Operation Frequency	:	802.11a/n(HT20): U-NII Band 1: 5180MHz to 5240MHz; U-NII Band 2A: 5260MHz to 5320MHz; U-NII Band 2C: 5500MHz to 5700MHz; U-NII Band 3: 5745MHz to 5825MHz
Number of Channel	:	802.11a/n(HT20): U-NII Band 1: 4; U-NII Band 2A: 4;

		U-NII Band 2C: 11; U-NII Band 3: 5
Modulation Type	:	802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	WiFi 5.2G: 1.87 dBi WiFi 5.3G: 2.11 dBi WiFi 5.6G: 2.93 dBi WiFi 5.8G: 3.16 dBi

The module can be used for mobile applications with a **maximum 2.53 dBi antenna for 2.4G, maximum 1.87 dBi antenna for WiFi 5.2G, maximum 2.11 dBi antenna for WiFi 5.3G, maximum 2.93 dBi antenna for WiFi 5.6G, maximum 3.16 dBi antenna for WiFi 5.8G.** The host manufacturer installing this module into their product must ensure that the final composit product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operation. The host manufacturer has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

2.4 Limited module procedures

Not applicable. The module is a Single module and complies with the requirement of FCC Part 15.212.

2.5 Trace antenna designs

You can see antenna size is 108.2mm*7.9mm* From below Specification.

APPROVE:

REV	DATE	ECN NO	DESCRIPTION	NAME
A	2210.26		NEW RELEASE	

NOTES:

1. Electrical:

1.1 Impedance: 50 OHM.

1.2 Frequency: 2.4Ghz~2.5Ghz & 5.15Ghz~5.85Ghz

1.3 VSWR: ≤2.0

1.4 Peck Gain: 2dBi/3dBi

1.5 Polarization: Linear

1.6 Radiation Patten:Omni-directional

2. Enviromental:

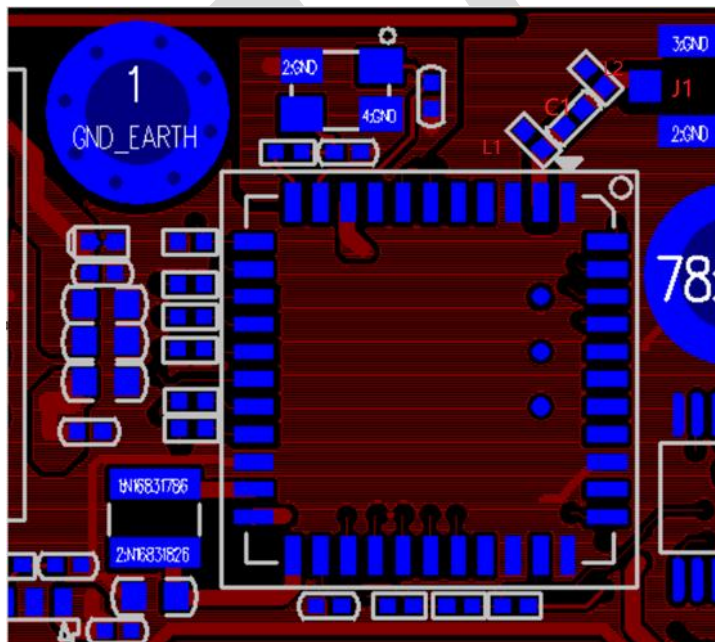
2.1 Storage Temperature Range: -40 TO +85°C

2.2 Operating Temperature Range: -40 TO +85°C

3. All material must meet RoHS Request.

6	RIVET		POM;COLOR:BLACK	2		CUSTOMER:		
5	COVER		TPEE;COLOR:BLACK	1				
4	MIDDLE BASE		PC;COLOR:BLACK	1				
3	UP BASE		PBT;COLOR:BLACK	1		PART NO:	2.4G&5.8GHZ ANTENNA	
2	CABLE	1RG178BR011CA-36	RG178 ,COLOR:BROWN 1.80	1		ORD NO:	C-400187P	
1	CONNECTOR	50SMAB09HBT2G1N	SMA R/P PLUG WITH BLACK COAT	1		REF NO:		
ITEM	NAME	PART NO.	SPEC	Q'TY	VENDOR	APPROVE	CHECKED	DRAWN
TITLE: 2.4Ghz&5.8Ghz Dual band dipole Antenna								Sean
DWG NO: C-400187P			SHEET 1 OF 1	UNIT	m/m	SCALE	FREE	

Please refer to the chart below for PCB size of RF line terminal.



Scrape a GND off the side of the J1, connect the FPC antenna to the PCB at the position of the J1 connector.

[The line between the Dipole antenna and the WiFi module] must be 50 ohm.

C1 is 10pF Capacitors.

L1 is NC.

L2 is NC.

2.6 RF exposure considerations

The device can be used in mobile exposure condition without restriction and if RF exposure statement or module layout is changed, then the host product manufacturer required to take responsibility of the module through a change in FCC ID or new application. The FCC ID of the module cannot be used on the final product. In these circumstances, the host manufacturer will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

2.7 Antennas

This module has been approved to operate with the antenna types listed below, with the maximum permissible gain indicated. The module requires professional installation, and the antenna type cannot be changed. The gain cannot exceed 2.25dBi with 2.4G, 1.87 dBi with WiFi 5.2G, 2.11 dBi with WiFi 5.3G, 2.93 dBi with for WiFi 5.6G, 3.16 dBi with WiFi 5.8G..

Frequency band	Antenna Type	Model Number	Max Gain
2400-2500MHz	Dipole Antenna	2.4Ghz&5.8Ghz Dual band dipole Antenna	2.53(dBi)
5100-5250MHz	Dipole Antenna	2.4Ghz&5.8Ghz Dual band dipole Antenna	1.87(dBi)
5250-5350MHz	Dipole Antenna	2.4Ghz&5.8Ghz Dual band dipole Antenna	2.11(dBi)
5300-5750MHz	Dipole Antenna	2.4Ghz&5.8Ghz Dual band dipole Antenna	2.93(dBi)
5700-5850MHz	Dipole Antenna	2.4Ghz&5.8Ghz Dual band dipole Antenna	3.16(dBi)

This device is intended only for host manufacturers under the following conditions: The transmitter module may not be co-located with any other transmitter or antenna;

The module shall be only used with the External antenna(s) that has been originally tested and certified with this module. The antenna must be either permanently attached or employ a 'unique' antenna coupler.

As long as the conditions above are met, further transmitter test will not be required.

However, the host manufacturer is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

2.8 Label and compliance information

Host product manufacturers need to provide a physical or e-label stating

"Contains **FCC ID: VYVBW0132-44B1** With their finished product.

2.9 Information on test modes and additional testing requirements

BDR+EDR

Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	79
Modulation Type	:	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	2.53dBi

BLE

Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	40
Modulation Type	:	GFSK
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WIFI 2.4G

Operation Frequency	:	802.11b/g/n(HT20): 2412MHz to 2462MHz
Number of Channel	:	802.11b/g/n(HT20): 11
Modulation Type	:	802.11b: DSSS(CCK, DQPSK, DBPSK);

		802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	2.53dBi

WIFI 5G

Operation Frequency	:	802.11a/n(HT20): U-NII Band 1: 5180MHz to 5240MHz; U-NII Band 2A: 5260MHz to 5320MHz; U-NII Band 2C: 5500MHz to 5700MHz; U-NII Band 3: 5745MHz to 5825MHz
Number of Channel	:	802.11a/n(HT20): U-NII Band 1: 4; U-NII Band 2A: 4; U-NII Band 2C: 11; U-NII Band 3: 5
Modulation Type	:	802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	:	Dipole Antenna
Antenna Gain(Peak)	:	WiFi 5.2G: 1.87 dBi WiFi 5.3G: 2.11 dBi WiFi 5.6G: 2.93 dBi WiFi 5.8G: 3.16 dBi

Host manufacturer must perform test of radiated & conducted emission and spurious emission, etc according to the actual test modes for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.

Only when all the test results of test modes comply with FCC requirements, then the end product can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for FCC Part 15 Subpart C 15.247 & 15.207 & 15.209 & 15.205, 47 CFR Part 15E and that 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.

2.11 The user manual of the end product should include:

- a) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- b) The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.
- c) 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.
- d) This device is restricted to indoor use.
- e) The antenna(s) used for this transmitter must not transmit simultaneously with any other antenna or transmitter.

承 认 书

APPROVAL SHEET

客户名称Customer Name	深圳市中易腾达科技有限公司
产品型号 Product Model	转接线：SMA直母头公针转MHF I代端子， 1.13黑色同轴线，L=100mm
客户料号Customer P/N	/
立捷料号Lijie P/N	LJ85QTRF002R
制作日期Date Prepared	2022-08-23
制作版本Revision	A0

汉阳电子(HYICT)		
设计	审核	核准
客户 (Customer)		
设计	审核	核准

射频线

Antenna Specification

1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

2. Product Overview :



3. Electrical Specification:

3-1. Frequency Band:

Frequency Band
0-6GHz

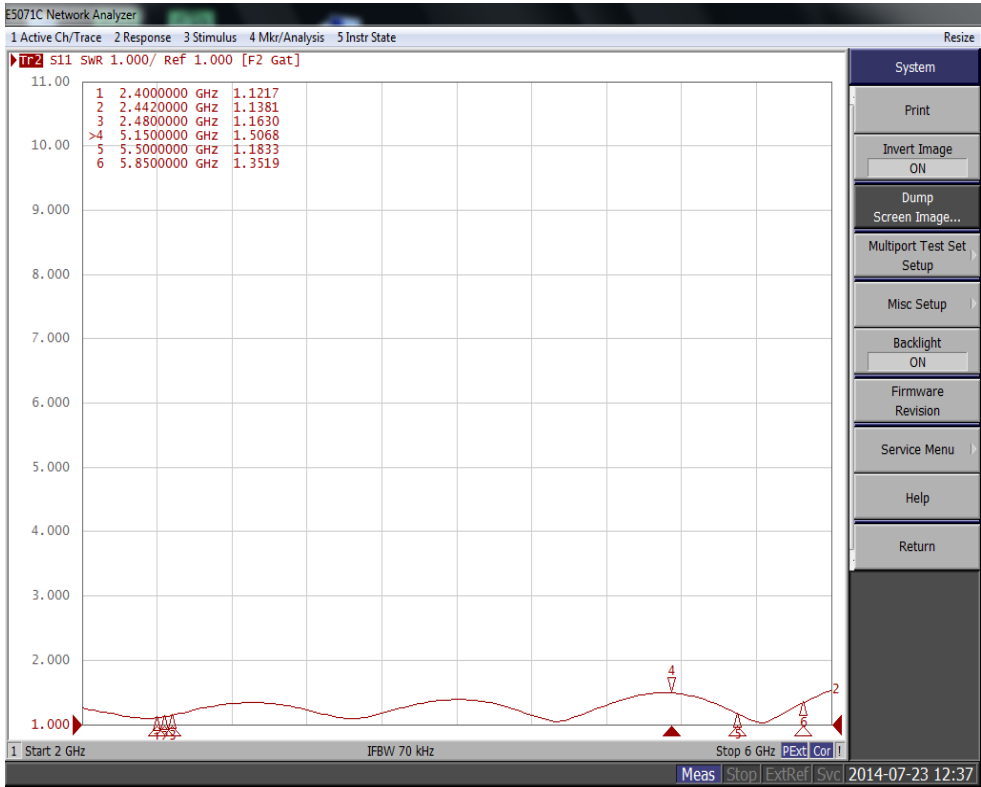
3-2. Impedance

50 ohm nominal

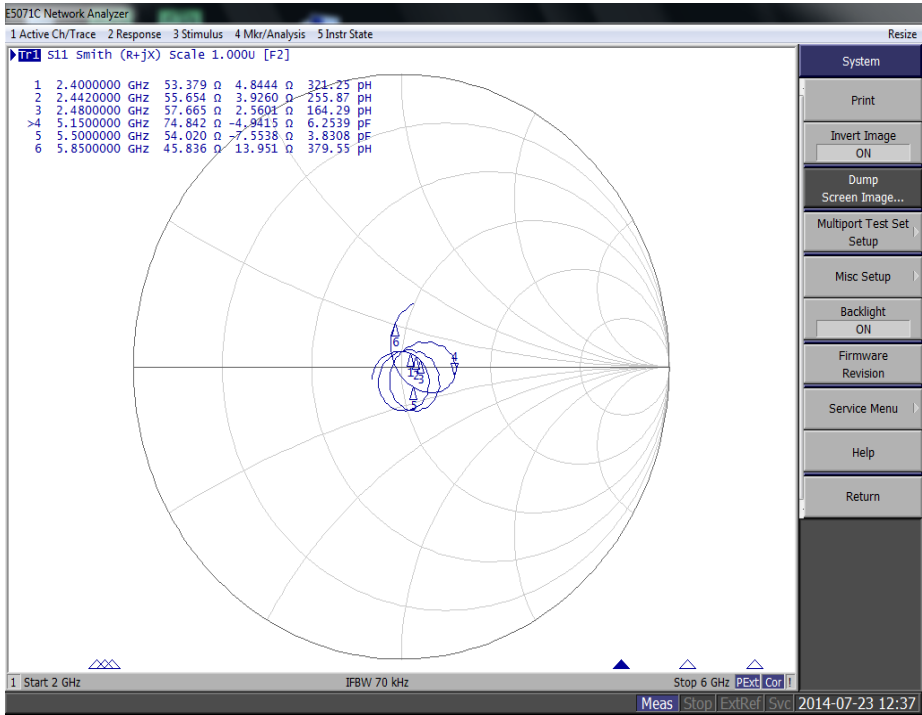
3-3. VSWR

Freq.(MHz)	0-6GHz
Typical Value:	≤ 1.5

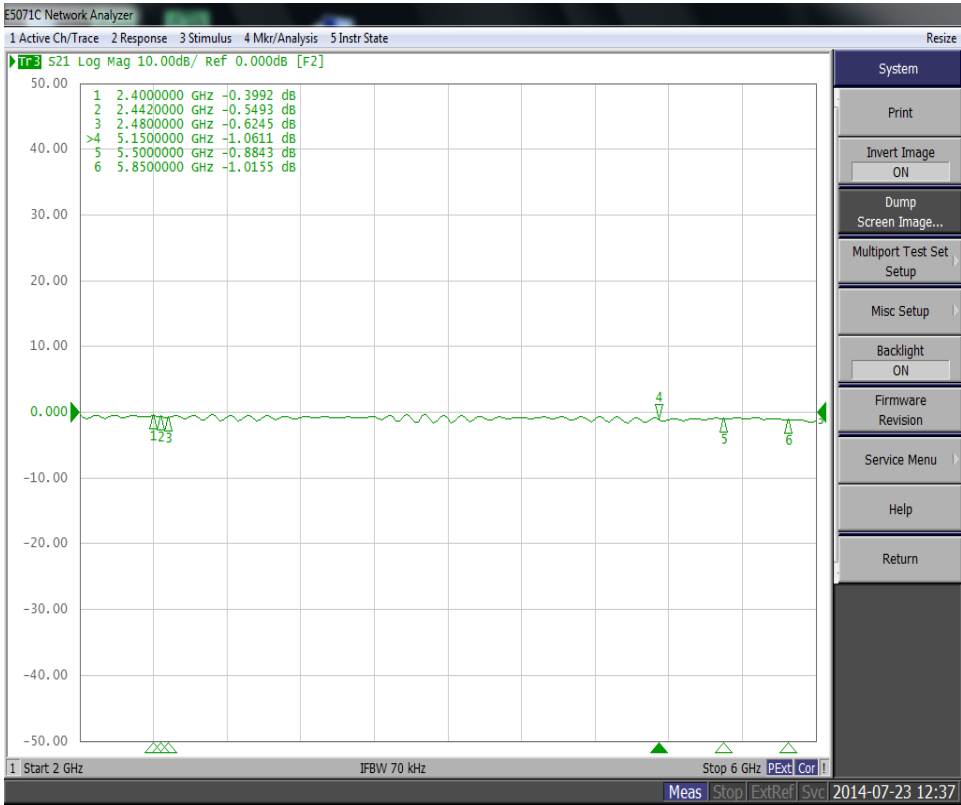
Picture



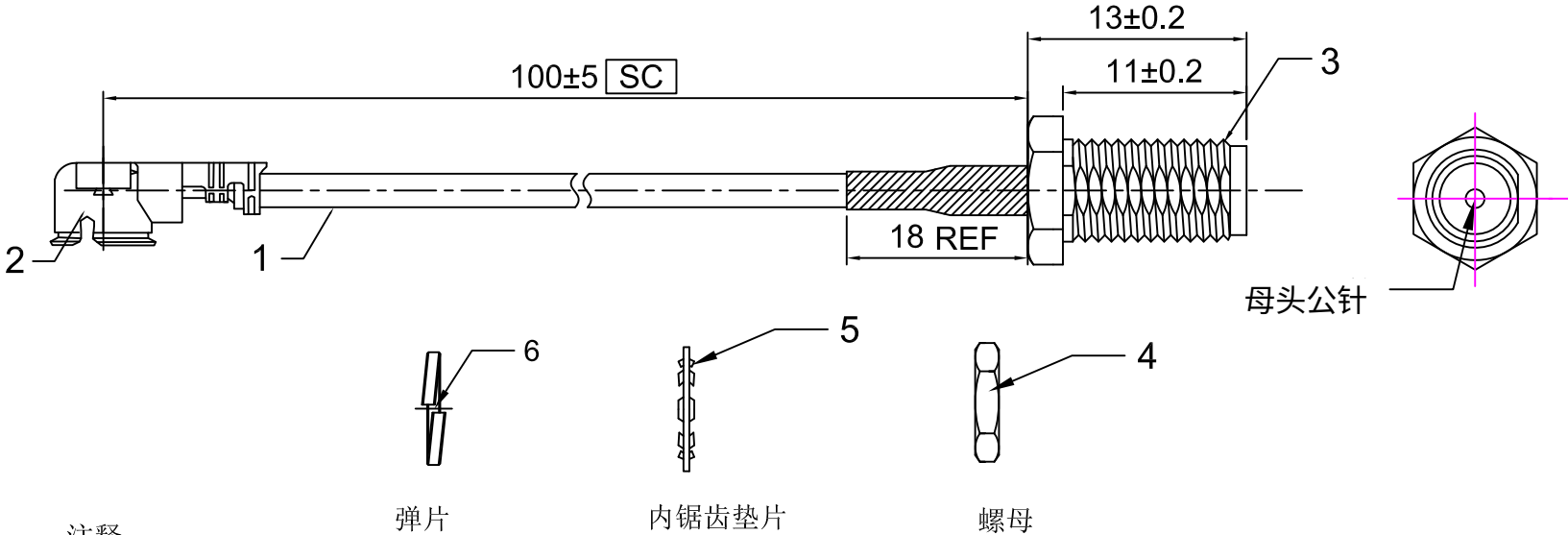
Picture



Picture



REV.	DATE	DESCRIPTION	Owner
A0	2022.8.26	新发行	ZHANG



注释:

1. 电缆组件应进行100%的连续性、短路和开路测试。
2. 电气:
 - 2.1 电缆组件标称阻抗: 50欧姆。
3. 机械:
 - 3.1 连接器耐用性: 100个配合循环。
4. 环境:
 - 4.1 储存温度范围: -20至+65°C
 - 4.2 工作温度范围: -20至+65°C
5. 所有材料应符合ROHS。

6	弹垫	磷青铜镀金	1
5	外锯齿垫片	磷青铜镀金	1
4	螺母	黄铜镀金	1
3	连接器	SMA母头公针	1
2	连接器	MHF I 1.13	1
1	同轴线	黑色 OD=1.13 RF CABLE L=100MM	1
ITEM	NAME	SPEC	Q'TY

TITLE	SMA母头公针-MHF I FOR RG1.13 黑 L=100MM			UNIT	m/m	TOLERANCES UNLESS OTHERWISE SPECIFIED		APPROVE	CHECKED	DRAWN	CUSTOMER
ORD. NO.	LJ85QTRF002R	MODEL NO.			ONE PLACE DECIMAL .X ±0.2						
BOM NO.	LJ85QTRF002R	SCALE	FREE	SHEET: 1 OF 1	TWO PLACE DECIMAL .XX ±0.1						
CUSTOMER PART NO.		DWG NO.			THREE PLACE DECIMAL .XXX ±0.05						
					HOLE DIA. VARIATION .XX N/A						
					ANGULAR DIMENSION (ENG) N/A						

5. Packing Specification:

一、标签要求:

产品名称:	
规格型号:	
客户料号:	
产品料号:	
批 号:	
数 量:	
生产日期:	

二、装箱要求:

作业说明: 包装:

每个大袋装 100PCS，一箱五十袋共5000PCS。

