

Project: ZH2024120501

Date.: 2024.12.06

Ver.: A0-1206

Antenna SPEC

Customer name: 臻火Customer project: KA104Customer P/N: 014.02.K104.0137B&T P/N: 74220551Spec.: Built-in antenna -2.4G- gray 1.13 tin-tin wire-1st generation
terminal-l = 120mm-FPC-41.5x8.1mm

Factory signature:

compilation	verify	approval
Qiucuiqing	Liulihua	Zhouquan

Sealed by customer:

check	verify	approval

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Form number: B&T-OR-EN-002 version: B3

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3、Product drawing

			Version	Modification date	Revised content
			A0	24-12-5	
			A0-1206	24-12-6	Update the specs description

Technical requirements

1. The antenna welding part is firm and the cable size is accurate (the holding force of the connector is $\geq 1\text{kgf}$).
2. The silk screen color is the original color of the substrate, and the font is clear and not easy to fall off.
3. "*" indicates the dimensions that are key to IQC inspection.
4. The packaging and quality standards refer to the Boantong Packaging Specifications and B&T Quality Standards respectively.
5. The materials comply with ROHS.
6. Connector ports are not orientation sensitive.

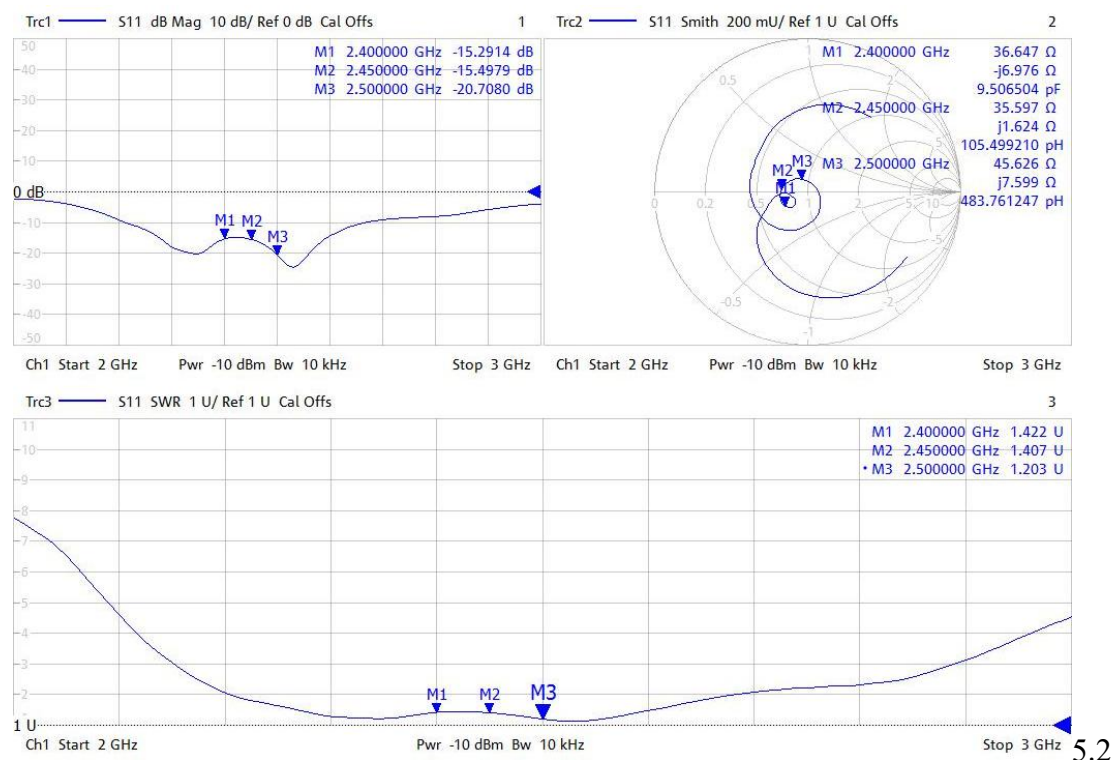
Number	Part Name	Remarks	Design	Xie Meiquan	name	Built-in antenna-2.4G-grey 1.13 tin wire-first generation terminal-L=120mm-FPC-41.5×8.1mm
①	1st connector		Toexamine		Project number	ZH2024120501
②	Coaxial line		Approval		Part number	74220551
③	FPC		1 > X	±0.05		
			1 ~ 9.99	±0.10		
			10 ~ 19.99	±0.15		
			20 ~ 39.99	±0.20		
			40 ~	±0.30		
Page 1 1 in total				B&T		

4、Properties ¶meter

Electrical parameter	
Freq Range	2400~2500MHz
Characteristic Impedance	50Ω
VSWR	<2
Gain	≥3dBi, ≤4dBi
Power capacity	<10w
Polarization mode	Linear polarization
Radiation mode	omnidirectional
Joint type	IPEX connector
Mechanical parameter	
visible length	120±3mm
Coaxial cable	grey1.13 tin tin cable
Salt fog test	24H
Environment parameter	
Operating Temp	-30°C~65°C

5、Electrical performance test report(Whole machine testing)

S11 Parameter



Standing wave ratio data

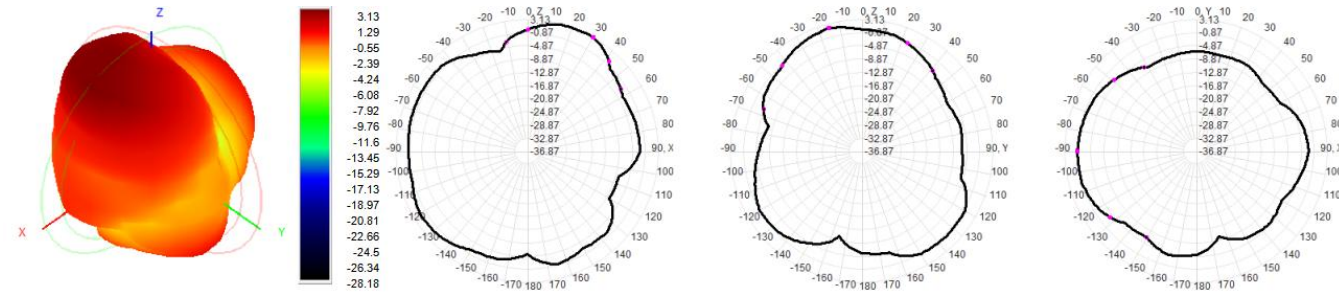
Freq/MHz	2400	2450	2500
VSWR	1.422	1.407	1.203

➤ Antenna darkroom test data

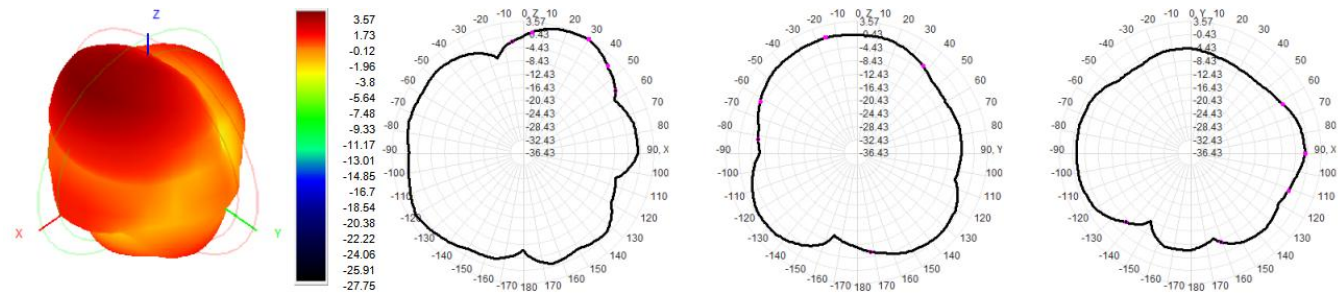
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	3.13	53.91
2410	3.13	54.20
2420	3.27	54.81
2430	3.43	55.13
2440	3.61	55.36
2450	3.57	56.18
2460	3.53	56.96
2470	3.44	57.22
2480	3.41	58.30
2490	3.49	58.92
2500	3.42	59.61

➤ Antenna direction diagram

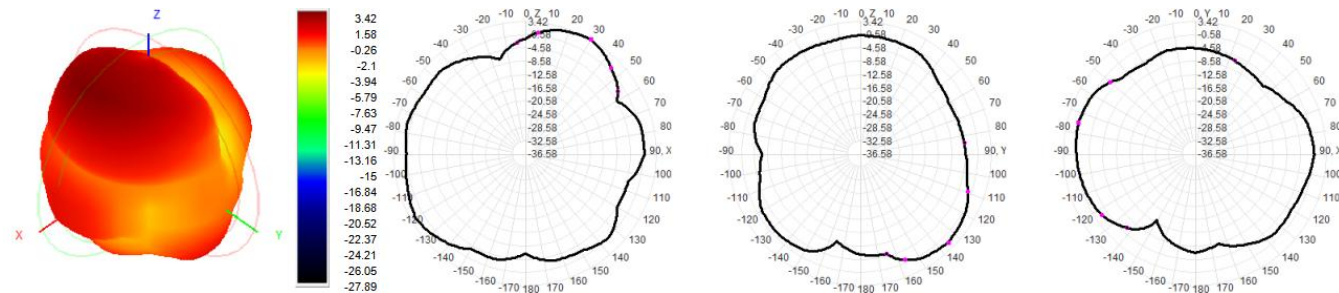
2400MHz



2450MHz



2500MHz



6、List of Material Composition and Hazardous Substances

Item	Specific ation	Texture of material	ROHS Test Results (PPM)						ICP test number	Test time
			Cd	Pb	Hg	Cr+6	PBB	PBDE		
1	wire	FEP	ND	ND	ND	ND	ND	ND	NGBPC24000131241	2024/1/16
		Tinned wire	ND	ND	ND	ND	ND	ND	A2240376995101001	2024/7/1
2	Terminal	PBT	ND	ND	ND	ND	ND	ND	A2240126395101004E	2024/3/16
		Phosphor Bronze	ND	6	ND	ND	ND	ND	CANEC24000977301	2024/1/22
3	FPC	PI	ND	ND	ND	ND	ND	ND	SHAEC24000428805	2024/1/12
		Tape	ND	ND	ND	ND	ND	ND	SHAEC24027480901	2024/12/6

PACKING CRITERION

P/N: 74220551

Spec : Built-in antenna -2.4G- gray 1.13 tin-tin wire-1st generation terminal-l = 120mm-FPC-41.5x8.1mm

一、Contents of label(according to the customer's name, refer to the corresponding finished product label production requirements. If there is no requirement, it will follow the ordinary label requirements.)

The inner and outer labels are about 10cm long and 6cm wide

buyer	*****		
vender	Sichuan B&T Technology Co., Ltd.		
Purchase No	*****		
Material No.	*****		
Name specification	*****	QC	**
Q' ty/Unit	*****	Manufacture date	****.*.*
Trace code	*****	Serial number	**

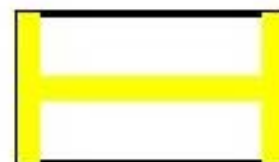
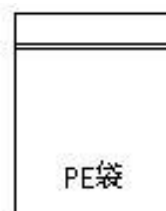
二、Packing requirement

Operating description:

1. inner packing:

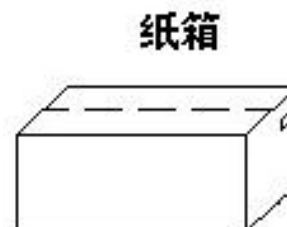
50 PCS/small bag, The terminal head is wrapped with pearl cotton for protection.

200 PCS/big bag, Put a bag of desiccant to prevent moisture.



2. outer packing:

Quantity according to actual packing/carton



Notice:

- Whether to add partitions, pearl cotton;
- Labeling, such as ROHS;

8、Antenna installation position Diagram



9、Antenna test darkroom placement

No.	Reliability test name	Test conditions	Judgment criteria
1	Constant temperature and humidity test	High temperature: 70°C, Humidity: 80%RH 24H; low temperature: -40°C 24H; total duration: 48H;	Appearance requirements before and after the test: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. The non-metallic parts should not change color, crack, deform, degumming or other defects. Electrical performance testing meets standard requirements;
2	High and low temperature thermal shock test	70°C for 2H, -40°C for 2H, 6 cycles, 24 hours in total;	Appearance requirements before and after the test: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. The non-metallic parts should not change color, crack, deform, degumming or other defects. Electrical performance testing meets standard requirements.
3	Salt spray test	24H; Prepare a concentration (5±1)% NaCL solution to ensure that the pH value of the salt solution is neutral (6.5~7.2); The temperature of the pressure barrel is 47±1°C, the spray pressure is maintained at 1.00±0.1kgf/cm ² , and the spray volume is 1.0~2.0ml/80cm ² /h; Test time: 24H;	There should be no oxidation or rust on the exposed areas of the product surface; Oxidation/rust area after salt spray test in other areas < 1.0%

4	Connector retention test	Normal temperature and humidity; Test maintenance requirements: ≥ 1.0 kgf;	There are no loose or loose terminals or cables. After the test, the electrical performance test meets the standard requirements.
5	Connector insertion and extraction force test	Normal temperature and humidity; The terminal and the seat are connected normally, and the insertion force/pull-out force is ≥ 1.0kgf;	The terminal insertion force/extraction force meets the requirements, and the terminals have no defects such as falling off or damage.