



Development case number: Y2506161303

Date: 2025.06.25

Edition: A0

Letter of acceptance

Customer name: Perfect fire

Debugging projects: HA110

Customer part number: 014.02.H110.0146

Bo'an is a general material number: 74270082

Specification description: Built-in antenna - 2.4/5G - gray 1.13 tin
tin wire - 1st generation terminal - L=120mm - FPC
- 41.5×8.1mm

Factory signature:

Writing	Review	Approval
Xuzhangjin	Liuwei	Liulihua

The customer acknowledges the signature:

Inspection	Review	Approval

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表单编号: B&T-QR-EN-002 版本: B3

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3、 Product drawing

Version		Modification date	Revised content	
A0		25-8-19		

Technical drawing of a connector assembly. Dimensions: 8.10±0.50, 41.50±0.50, 120±3, 0.20MM. Labels: Fracture location of release paper, BAT-HA110-2.4+5G-A0, Reverse side reinforcement, PET T = 0.20MM. Callouts: 1, 2, 3.

screen printing font is bright white

Technical requirements

- The antenna welding part is firm and the cable size is accurate (the holding force of the connector is ≥0.8kgf).
- The silk screen color is the original color of the substrate, and the font is clear and not easy to fall off.
- "*" indicates the dimensions that are key to IQC inspection.
- The packaging and quality standards refer to the Boantong Packaging Specifications and B&T Quality Standards respectively.
- The materials comply with ROHS.
- Terminal cup orientation is non-directional

Front view

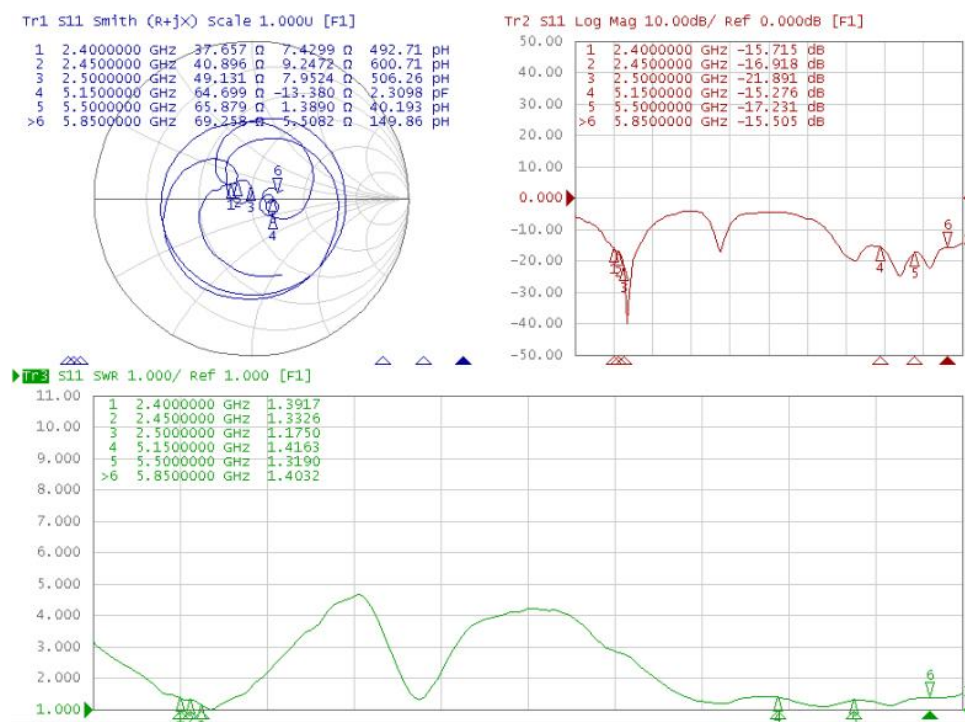
Number	Part Name	Remarks	Design	Tang Hai Lin	Name				
①	1st connector		Toexamine		Weight	Quantity	Project number		
②	Coaxial line								
③	FPC		Approval	Zeng Kang	1:1	mm	Part number		
			1 > X	±0.05					
			1 ~ 9.99	±0.10	Page 1 1 in total				
			10 ~ 19.99	±0.15					
			20 ~ 39.99	±0.20					
			40 ~	±0.30					
				B&T					

4、Performance parameters

Electrical parameters	
Frequency range	2400~2500/5150~5850MHz
Input impedance	50 Ω
Stop the wave	<2
gain	4.79dBi
Power capacity	$<10\text{w}$
Polarization mode	Line polarization
Radiation direction	Omnidirectional
Connector model	Terminal
Mechanical parameters	
Line length	$120 \pm 3\text{mm}$
Terminal retention	$\geq 0.8\text{kgf}$
coaxial cable	Grey 1.13 tin wire
Salt spray test	24H
Environmental parameters	
Operating temperature	$-30^{\circ}\text{C} \sim 65^{\circ}\text{C}$

5、Electrical performance test report (Machine)

S11



➤ VSWBN data

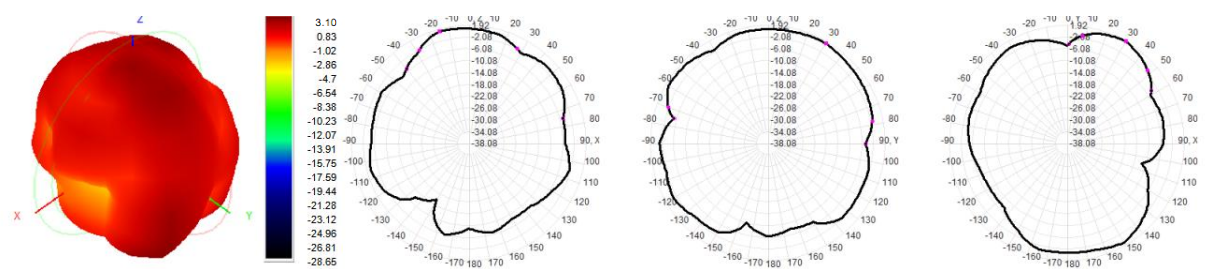
Freq/MHz	2400	2450	2500	5150	5500	5850
VSWR	1.39	1.33	1.17	1.41	1.31	1.40

Antenna anchoric test data

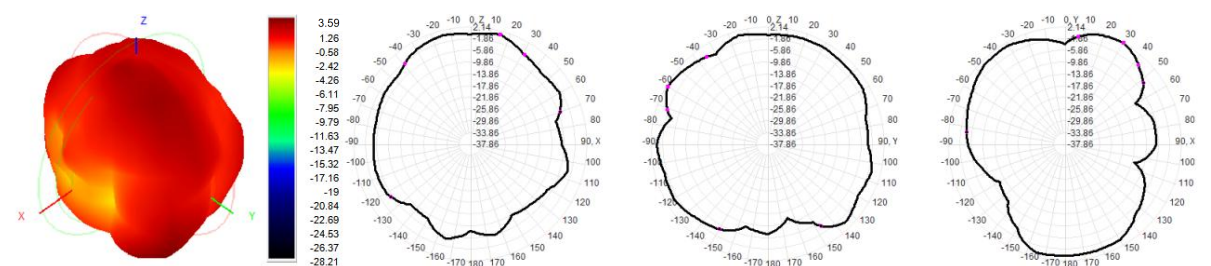
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	2.67	54.60
2410	2.80	55.21
2420	2.63	55.86
2430	3.03	56.58
2440	2.90	57.59
2450	3.10	59.48
2460	3.48	60.06
2470	3.08	59.12
2480	3.12	58.89
2490	3.23	57.30
2500	3.59	56.50
5150	4.15	59.23
5200	3.98	59.12
5250	3.80	59.97
5300	4.64	62.01
5350	4.01	63.59
5400	4.79	63.62
5450	4.25	63.25
5500	4.24	64.09
5550	3.95	63.22
5600	3.84	61.66
5650	4.25	66.14
5700	4.49	60.38
5750	3.86	66.77
5800	3.37	61.00
5850	4.24	59.73

Antenna pattern

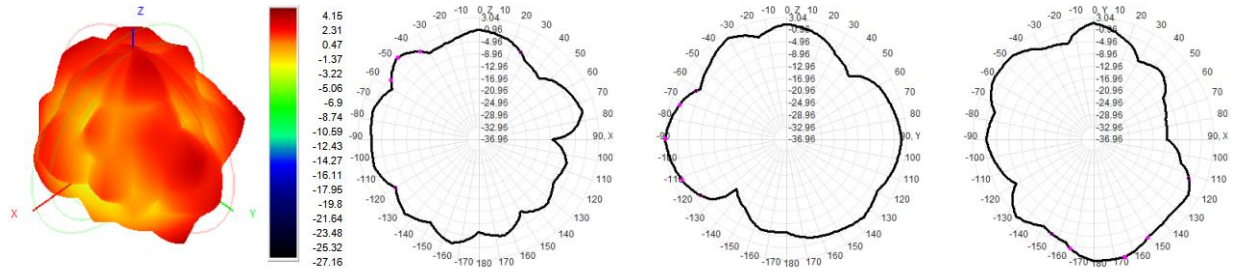
2450M 3D-E1-E2-H



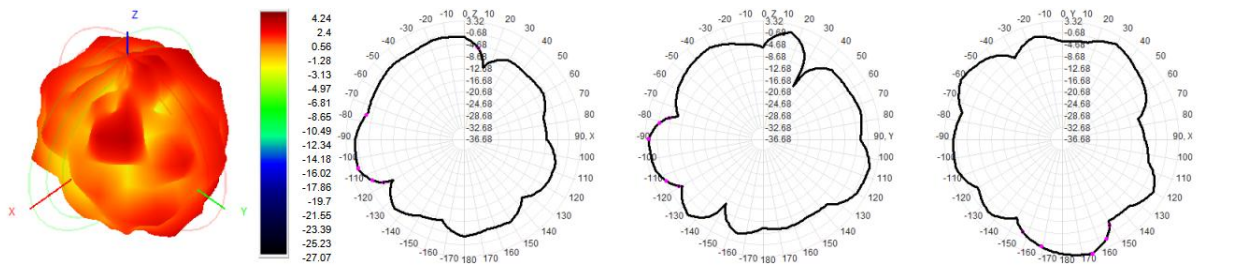
2500M 3D-E1-E2-H



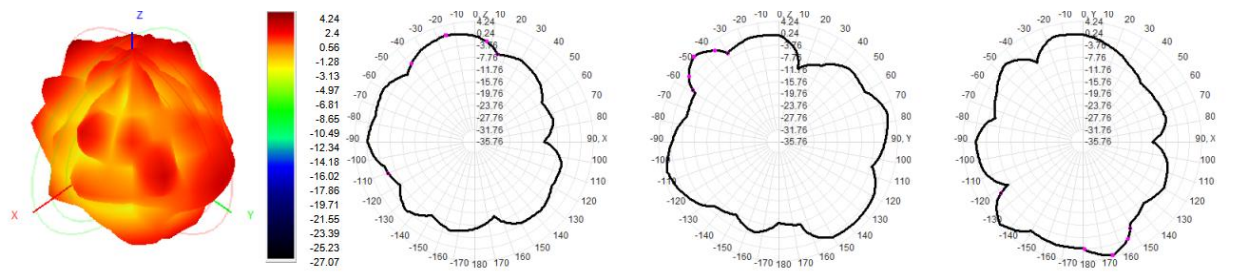
5150M 3D-E1-E2-H



5500M 3D-E1-E2-H



5850M 3D-E1-E2-H



6、Material composition and hazardous substance table

Item	Specification	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	NGBPC24007471211	2024/12/23
		Tinned wire	ND	ND	ND	ND	ND	ND	A2250416468101001	2025/6/20
2	Terminal	PBT	ND	ND	ND	ND	ND	ND	A2250134628103008E	2025/3/12
		Phosphor Bronze	ND	4	ND	ND	ND	ND	CANEC24029407215	2025/1/8
3	FPC	PI	ND	ND	ND	ND	ND	ND	SHAEC24028809005	2024/12/20
		Tape	ND	ND	ND	ND	ND	ND	SZxEC24002878835	2024/9/14

Product packaging specifications

PACKING CRITERION

Product Part Number: 74270082

Product Specifications: Built-in antenna - 2.4/5G - gray 1.13 tin tin wire - 1st generation terminal - L=120mm - FPC - 41.5×8.1mm

一、Label requirements (refer to the corresponding finished product label production requirements according to the customer's name, and if there is no requirement, it will be according to the general label requirements)

内标签 长 10cm 宽 6cm 左右

需方	*****		
供方	中山市博安通通信技术有限公司 四川博安通通信技术有限公司		
物料编码	*****		
生产单号	*****		
品名规格	*****	检验员	**
数量/单位	*****	日期	****.***
追溯码	*****	流水号	**

外标签 长 10cm 宽 6cm 左右

需方	*****		
供方	中山市博安通通信技术有限公司 四川博安通通信技术有限公司		
物料编码	*****		
生产单号	*****		
品名规格	*****	检验员	**
数量/单位	*****	日期	****.***
追溯码	*****	流水号	**

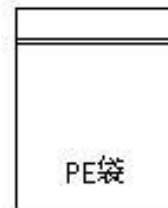
二、Box requirements

Job description:

1. Inner packaging:

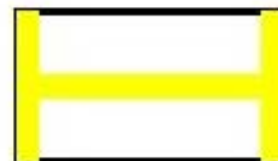
Product 50 PCS/sachet

200 PCS/Big bag

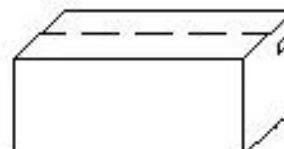


2. Outer packaging:

Quantity/carton according to actual packaging



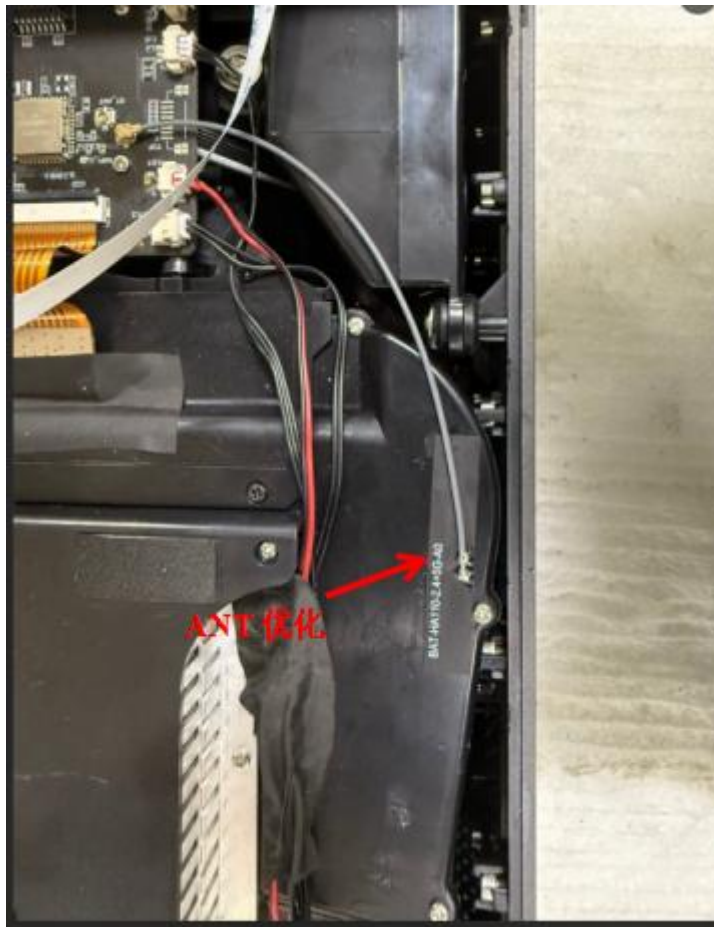
纸箱



Notes:

- Whether to add partitions and pearl cotton;
- Label attachment, such as ROHS, etc.;

8、Antenna installation diagram



9、Reliability testing requirements

序号 Serial Number	可靠性试验名称 Reliability Test Name	试验条件 Experimental conditions	判定标准 Judgment criteria
1	恒温恒湿试验 Constant temperature and humidity test	高温:70℃, 湿度:80%RH 24H; 低温 -40℃ 24H;共持续 48H; High temperature: 70 ℃, humidity: 80% RH for 24 hours; Low temperature -40 ℃ for 24 hours; continuous for 48 hours in total;	试验前后外观要求: 金属表面 镀层应无剥落, 裂痕起皱, 分 离等。非金属部分不应变色, 发生开裂, 变形, 脱胶等不良; 电气性能测试符合标准要求; Appearance requirements before and after the experiment: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. Non metallic parts should not discolor, crack, deform, or peel off; The electrical performance test meets the standard requirements;
2	高低温冷热冲击试验 High and low temperature thermal shock test	70℃持续 2H、-40℃持续 2H, 6 次循环, 共 24 小时; 70 ℃ for 2 hours, -40 ℃ for 2 hours, 6 cycles, for a total of 24 hours;	试验前后外观要求: 金属表面 镀层应无剥落, 裂痕起皱, 分 离等。非金属部分不应变色, 发生开裂, 变形, 脱胶等不良; 电气性能测试符合标准要求; Appearance requirements before and after the experiment: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. Non metallic parts should not discolor, crack, deform, or peel off; The electrical performance test meets the standard requirements;

3	盐雾试验 Salt spray test	配制浓度 $(5 \pm 1)\%$ NaCl 溶液，确保盐溶液的 pH 值为中性 $(6.5 \sim 7.2)$；压力桶温度 $47 \pm 1^\circ\text{C}$，喷雾压力保持在 $1.00 \pm 0.1\text{kgf/cm}^2$，喷雾量 $1.0 \sim 2.0\text{ml}/80\text{cm}^2/\text{h}$；试验时间 24H； Prepare a $(5 \pm 1)\%$ NaCl solution to ensure that the pH value of the salt solution is neutral $(6.5-7.2)$; The pressure barrel temperature is $47 \pm 1^\circ\text{C}$, the spray pressure is kept at $1.00 \pm 0.1\text{kgf/cm}^2$, and the spray volume is $1.0 \sim 2.0\text{ml}/80\text{cm}^2/\text{h}$; The experiment lasted for 24 hours;	产品表面外露区域不可有氧化、锈蚀现象；其它区域盐雾试验后的氧化/生锈面积 $< 1.0\%$ The exposed area of the product surface must not have oxidation or rust; Oxidation/rusting area after salt spray test in other areas $< 1.0\%$
4	端子维持力试验 Terminal holding force test	常温常湿；试验维持力要求： $\geq 0.8\text{kgf}$； Normal temperature and humidity; Test maintenance force requirement: $\geq 0.8\text{kgf}$;	端子与线缆无脱落、松动等；测试后电气性能测试符合标准要求； The terminals and cables are not loose or detached; The electrical performance test after testing meets the standard requirements;
5	端子插拔力试验 Terminal insertion and extraction force test	常温常湿；端子与座子正常连接，插入力/拔出力 $\geq 1.0\text{kgf}$； Normal temperature and humidity; The terminal and seat are connected normally, with an insertion/extraction force of $\geq 1.0\text{kgf}$;	端子插入力/拔出力符合要求，且端子无脱落、损伤等不良； The insertion/extraction force of the terminal meets the requirements, and the terminal has no defects such as detachment or damage;