

Antenna Specification

Supplier name	Shenzhen Hoogwell Communication Technology Co., Ltd.
Supplier address	Room 230 Zhihui Creative,No 2005,Shajing Xihuan Road,Baoan District ,Shenzhen,Guangdong
Product model	ah203-2.4GFPCANT
Product Name	ah203-BT-R-04
Application	ah203
Sample delivery time	2025-6-27
Customer material code	
Supplier Project Contact	Mingqiu Liu
Phone Number	18576402166

Supplier confirmation	RF	MD	Quality	Audit
Customer confirmation	RF	MD	Quality	Audit

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Description:

1. The samples and the acknowledgment shall be made in quadruplicate respectively. Each sample shall be nailed on the top left corner of the acknowledgment cover and sealed with electrostatic bag (electronic material) or thick PP bag.

1.The report mainly provides test data of passive performance parameters of AH203 R BT antenna,

The frequency band of AH203 BT is 2.4-2.483GHz.

The antenna sample is shown in picture (1).



picture (1)

2.Electrical performance

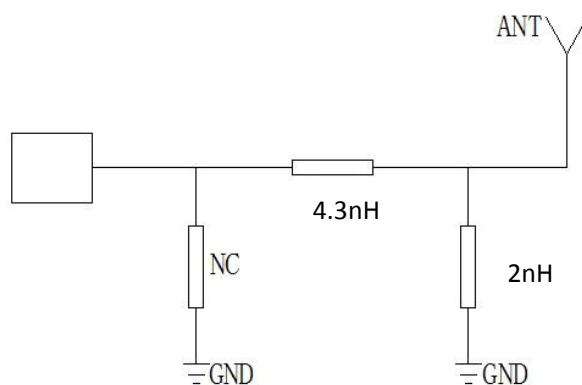
2-1 Specification

AH203 R BT antenna operating frequency band 2.4~2.483 GHz.

Below table is the return loss performance test index of AH203 L BT antenna.

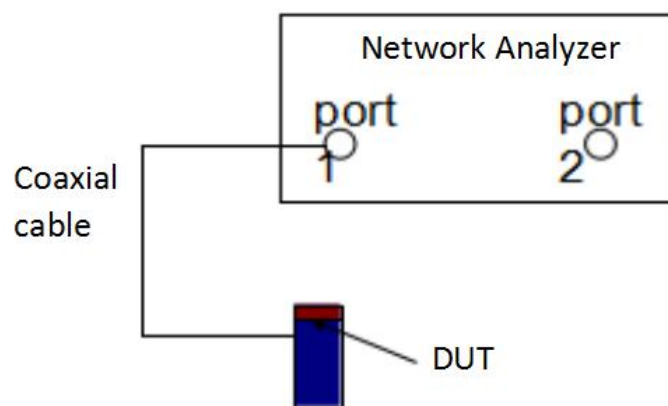
Frequency band (MHz)	Return loss (dB)
2400~2483	≤ -6 dB

2-2 AH203 R BT Antenna Matching Circuit



3 Return Loss Test

3-1 Test setup



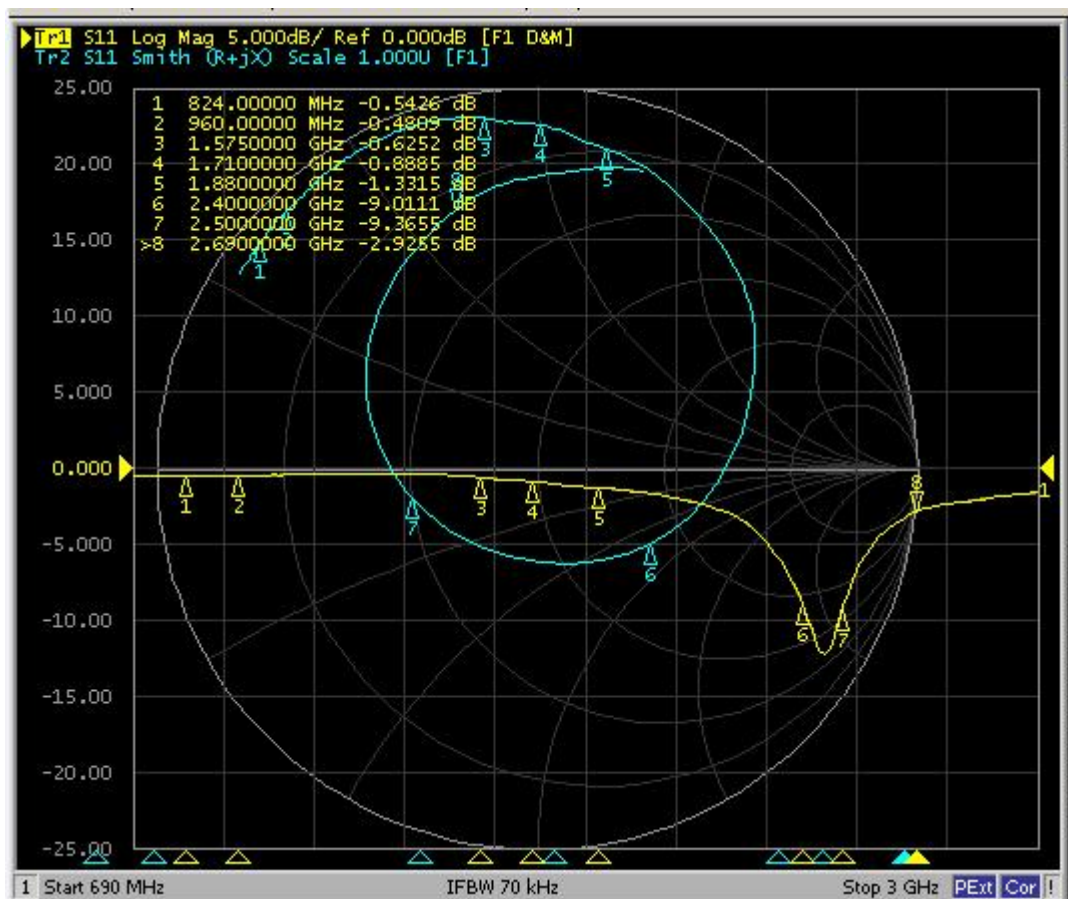
Return Loss Test Setup

3-2 Return Loss Test Data

As shown in the following table, the return loss test data of the edge frequency points of the BT antenna.

Band	Return Loss (dB)	
2400~2500MHz	2400	2485
Free space RL	-9	-9.3

3-3 Return Loss

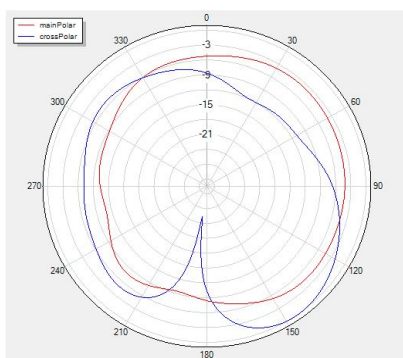


3-4 Passive Efficiency (freed Space)

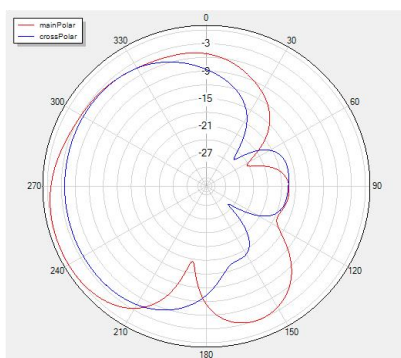
frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
gain (dBi)	-3.88	-3.67	-4.24	-4.73	-4.68	-5.1	-5.36	-5.03	-5.09	-5.32	-5.04
efficiency (dB)	-8.94	-9.11	-9.22	-9.72	-9.78	-10.11	-10.31	-10.2	-10.38	-10.03	-9.77
efficiency (%)	12.75	12.27	11.96	10.67	10.53	9.74	9.32	9.56	9.16	9.94	10.54

3-5 Polar Graphs

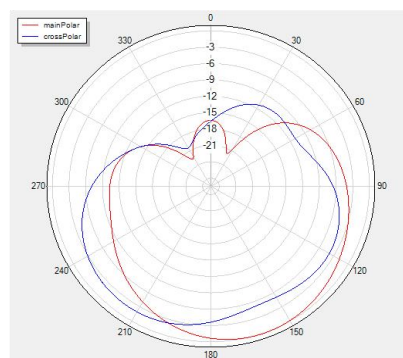
Phi=90 freq=2410MHz



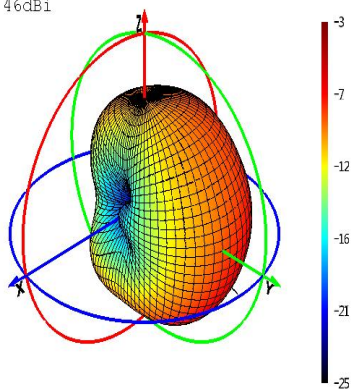
Phi=0 freq=2410MHz



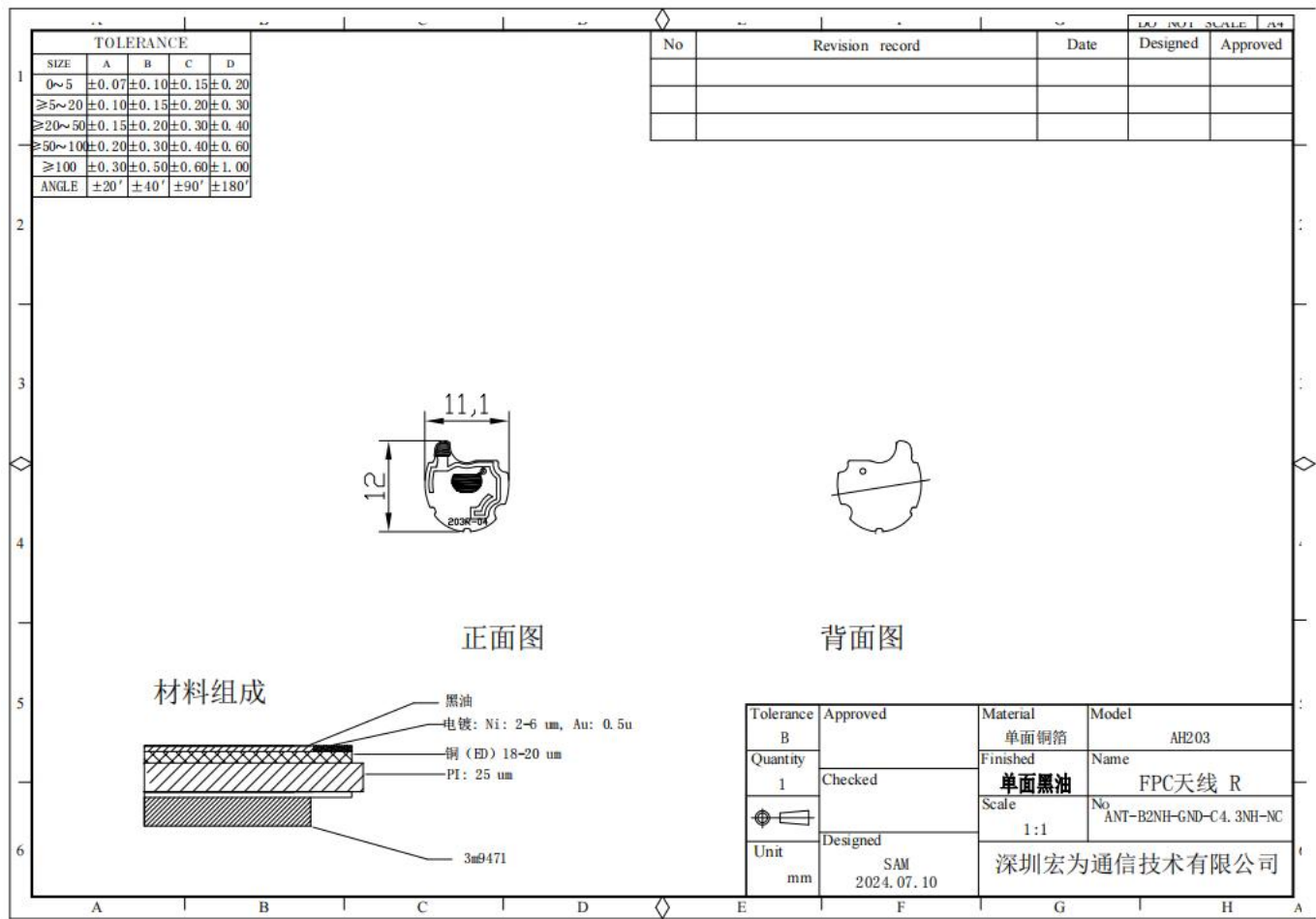
Theta=90 freq=2410MHz



MAX:-3.67dBi
MIN:-26.46dBi



4.Antenna Drawings



5.Appearance and Function Test Report

Item		Requirement	Results
Appearance	Date Code	☒ YYWW ☐ WWYY ☐ Other	☐ Acc ☐ Rej
Inspection	UL Indication		NA
	Visual Inspection	100% visual inspection and tally with customer specification.	☒ Acc ☐ Rej
Testing	FPC O/S Testing	100% visual inspection and no open/short is found.	
	Insulation Resistance		☒ Acc ☐ Rej
		1*108Ω or higher when DC500V	
	SolderabilityTest	No de-wetting or non-wetting is visible.	☐ Acc ☐ Rej
	AdhesionTest	No material shall be attached on the peeled tape.	☐ Acc ☐ Rej
	Au Coating Thk.	Au: 0.5-3 μ" Ni: 100-150 μ"	☒ Acc ☐ Rej
	Canned substances Confirm	Non-inclusion banned substances contained in products	☒ Acc ☐ Rej
	Heat-durability	Tin temperature: 280 ± 5 °C, immersion time: 10sec The base material / protective film shall be free of expansion, lifting, foaming and other phenomena	☒ Acc ☐ Rej
	Pulling test	0.5kg, 30sec, no electrical performance defect	
	Bending test		☐ Acc ☐ Rej
		R = 0.5mm, 180 ° , 10cyc, no electrical performance defect	
			NA

Num.	Profile tolerance	Requirement	Measured Data						Judge
1		11.1±0.2							√Acc□Rej
2		12±0.2							
3									
4									
5									
6									

7. Material Homogeneous Declaration Form

材料名称 material Name	料号 Part No.	部件重量 Part Weight (g)	组品件名 Component name	组成部件名称 Homogeneous Material Name	均质材料重量 Homogeneous Material Weight(g)	原材料厂商名称 Raw Material Manufacturer Name	切屑材料中有害物质质量 Hazardous Substances Concentration in Homogeneous Material (FPM)																有害物质 Test Report of Hazardous	MSDS报告 MSDS Report of	备注 Remark	
							Cd	Pb	Hg	Cr6 +	PEBS	PCDE	DEHP	DBP	BBP	DEHP	Cl	Br	REACH (项)	VOC	S&P FOA	PAH				CFR Be s
PPC天线	AH203		基材	PI薄膜		聚化特帝	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SSS			
				环氧树脂粘合剂			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				环氧树脂填充剂			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				芳香族溶剂		保立	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2025-5-20	SSS		
				二氧化矽			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				二丙二醇甲醚			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				石脑油			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				二乙二胺阻凝剂			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2025-9-23	SSS		
				环氧树脂				裕谷	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
				光引发剂907					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
			树脂	可擦算低摩擦油墨		3M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2024-12-6	SSS			
				丙烯酸酯类合金			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
				金			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
				键金		键金 base metal alloy		乾芝	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2025-3-18	CTI华测			

8.Process flow chart

