
	5203-Motherboard	 RoHS Compliant
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Specification Approval Sheet

Vender Name	Bluetooth headset (for calls)
Project Name	311-5203000-001
Part Name	S5203_QCC3072 earphone PCBA
Part Number	AP.S5203BTA01 (iP.00696)
Part Version	V1. 1
Part Spec.	S5203_QCC3072_Main_M_01_01_0423_P



The materials meet the following environmental requirements:

- ☒ Banned and Monitored Substances Control Standard(Latest Edition)
☐ Halogen-free technical standard

Vender Confirm (Stamp)	Prepared by	Checked by	Approved by



Customer Approved (Stamp)	Sourcing	DQ	RD	Approved by

Adress: 7th Floor, No. 11, Factory 2, Daqian Industrial Zone, Area 67, Xindong Community, Xin'an Street, Bao'an District, Shenzhen

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Number	Effective date	Change record
V1.1	2025.8.12	Initial release

Change history

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The basic parameters

A. Electrical Characteristics	
Frequency	2400MHZ~2500MHZ
VSWR	< 2
Avg Efficiency	>20%
Impedance	50 ± 25 Ohm
Polarization	Linear
Peak Gain	2.4G:0.19dBi
B. Material & Mechanical Characteristics	
Material of Radiator	PCB black
Cable Type	
Connector Type	
Dimension	
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

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Introduction:

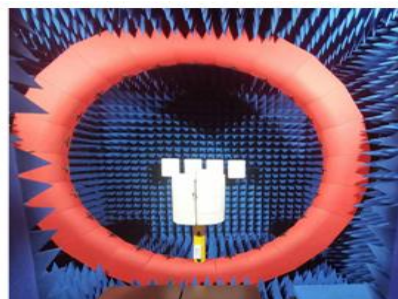
Microwave darkroom and no reflection chamber, absorbing short wave darkroom dark room. Microwave darkroom by electromagnetic shielding room, filtering and isolation, grounding device, the ventilation duct, indoor distribution system, monitoring system, ceiling wave material part. It is based on the wave absorbing material as the lining of the shield room, it can absorb the most of the electromagnetic energy into the six wall is a better simulation of the free space conditions.

The main working principle of microwave anechoic chamber is according to the electromagnetic wave in the medium from the low magnetic guide magnetic direction of propagation rules, absorbing materials to guide the electromagnetic wave using high permeability, through resonance, a substantial absorption of electromagnetic wave radiation energy, by coupling the electromagnetic energy into heat energy.

main performance :

Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite)

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Test Report



Those specifications were specially defined for 5203 model.

1. Machine pictures and antenna assembly



VSWR

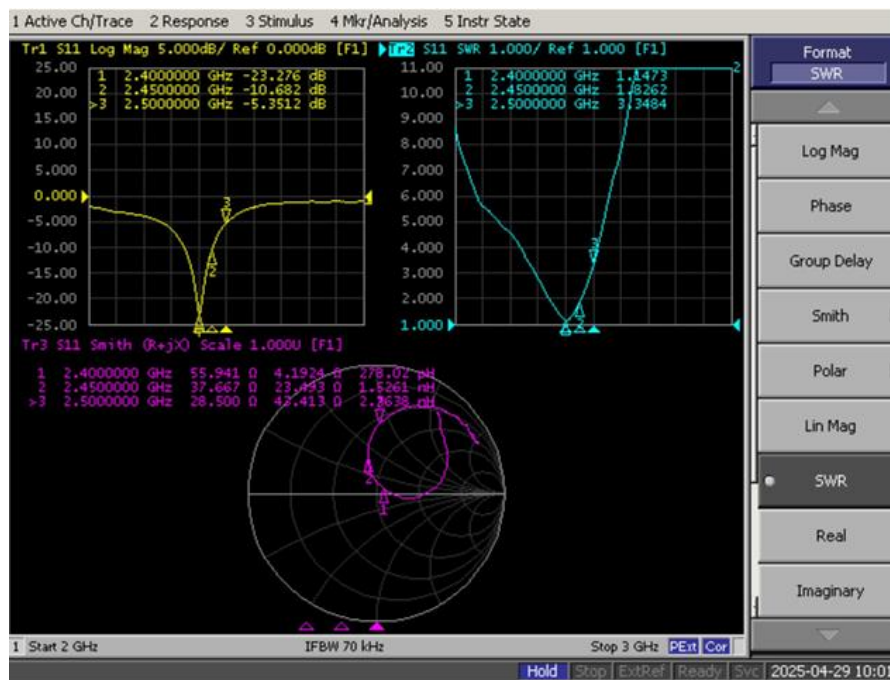
2.Measuring Method

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1.A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR

2.Keeping this jig away from metal at least 20cm

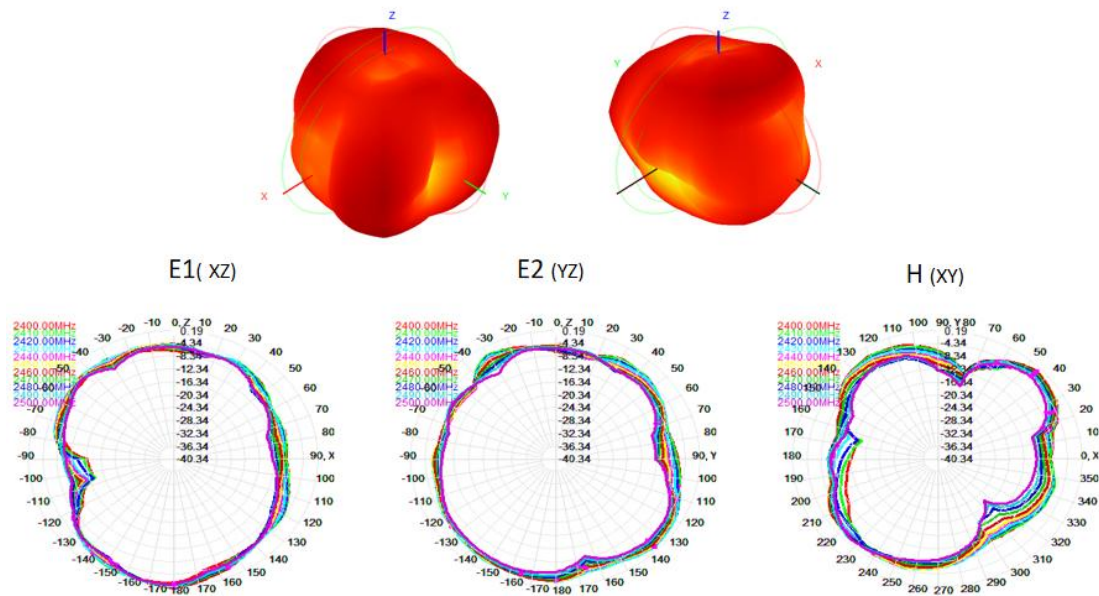
3.Measurement frequency points and VSWR value



4.Gain table of Antenna:

Passive field pattern diagram-R



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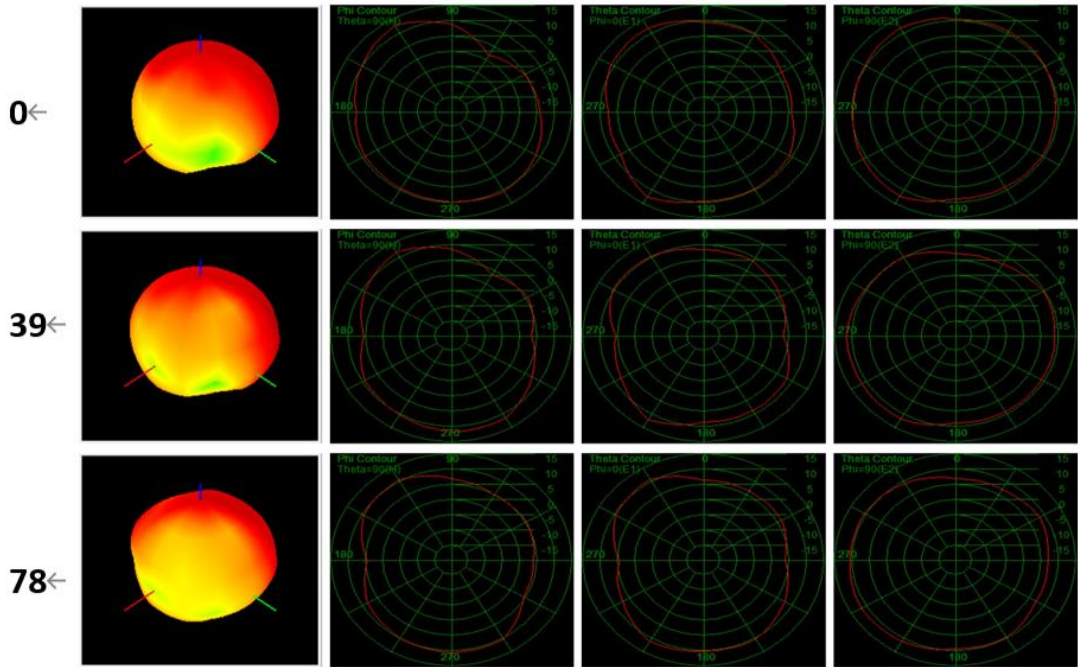


Passive efficiency gain-R

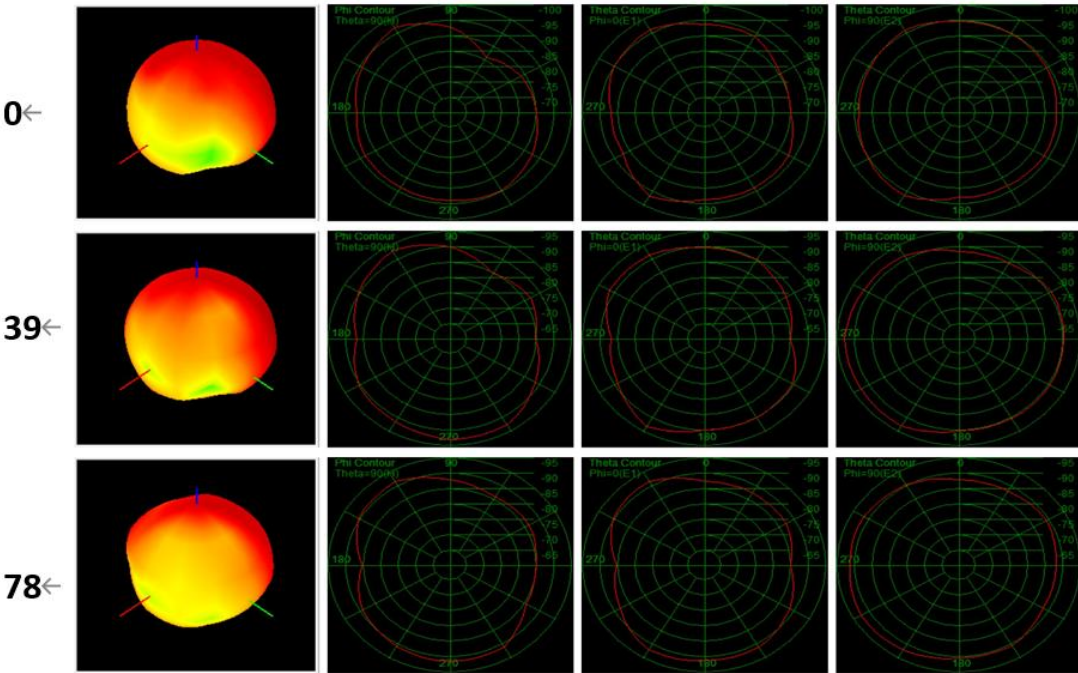
2400MHZ-2500MHZ		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	30.04	-0.88
2410	31.14	-0.45
2420	30.54	-0.29
2430	30.34	0.04
2440	28.79	0.13
2450	27.47	0.19
2460	25.75	0.16
2470	24.44	-0.05
2480	22.91	-0.47
2490	22.34	-0.73
2500	21.44	-1.07



Active free space field pattern diagram -R - TRP

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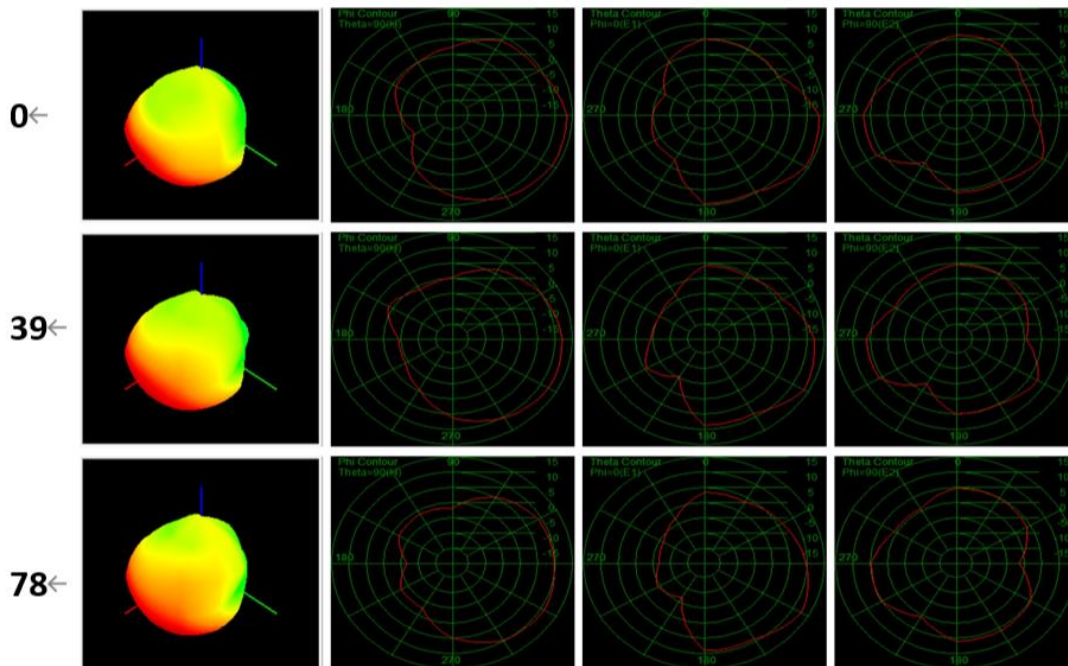


Active free space field pattern diagram -R - TIS

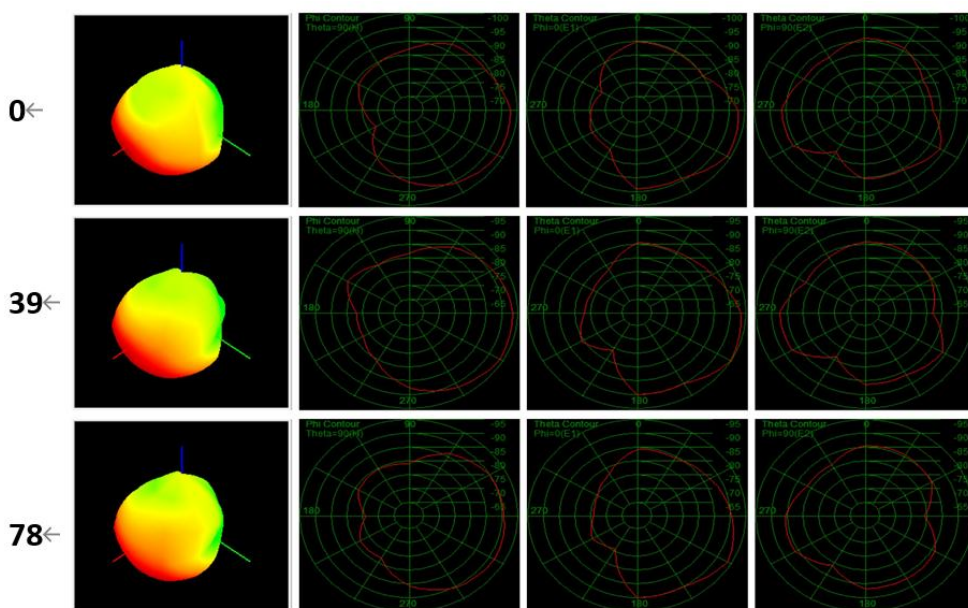




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Source field pattern diagram -R - TRP



Source field pattern diagram -R - TIS

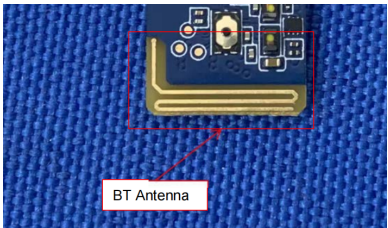
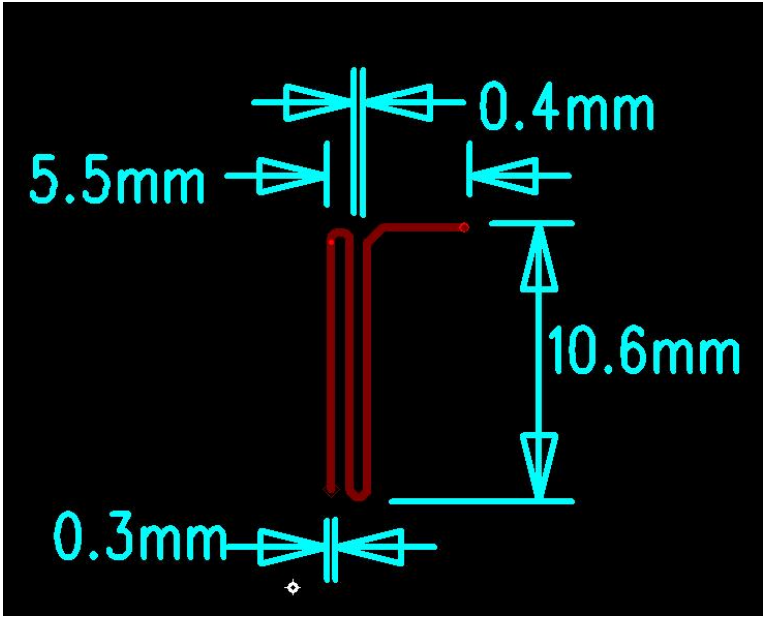


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5.OTA:

5203					
自由空间			头模		
BAND	TRP (dBm)	TIS (dBm)	BAND	TRP (dBm)	TIS (dBm)
0	10.06	-94.16	0	7.04	-91.59
39	9.38	-90.61	39	6.19	-87.50
78	9.02	-89.98	78	5.44	-86.28

Dimensional drawing:



ROHS

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Antenna 5203

meets ROHS requirements See electronic file for details.

Product packaging instructions

A. packing should meet the moisture-proof, vibration, pressure and mildew proof, etc.

B. the smallest packing unit logo must have the manufacturer trademarks, product model, name, code and quantity.

C. in the attached packing list, certificate of approval, and the factory inspection report.

*****END*****