



Shenzhen Shuodian Electronic Technology Co.,Ltd

Date:2022-11-14

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Antenna Specification

for

HUB2.0 Hardware Bluetooth Antenna

Woan Technology (Shenzhen) Co., Ltd.

Customer Item No

Material No. of the Company

WA-HUB2.0-Hardware Bluetooth

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Date: November 14, 2022

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1.Both parties confirm.

1.1 Customer confirmation signature

Customer: Woan Technology (Shenzhen) Co., Ltd.

Customer Department /Position	Signature of confirmer	Confirmation date
Hardware/RF		
structure		
project manager		
Business/Procurement		
review		

1.2 Confirmation signature of Shuodian Technology

Department/Position	Signature of confirmer	Confirmation date
Antenna Engineer		
Structural Engineer		
project manager		
QA		
review		



2.General matters

2.1 Scope of application

This specification is only applicable to Woan Technology HUB2.0 hardware Bluetooth antenna

2.2 Operating temperature range

The temperature range of this product is - 20~+65 °C

2.3 Storage temperature range

This product is stored in -30 ~ +75 °C

3.General product specifications

NO.	ITEMS	DETAILS
1	model	HUB2.0
2	Frequency band	Bluetooth 2400-2500MHz
3	VSWR	≤2.0
4	impedance	50 Ω
5	Gain	3.66dBi
6	efficiency	≥50%
7	Antenna type	IFA
8	Antenna implementation form	Hardware (foreign white copper)
9	Antenna picture	



4.Product specification details

4.1 Product structure parameters

4.11 Product material composition:

Serial No	Material Science	Specifications (MM)
1	Hardware (foreign white copper 0.3MM)	21.8*8.39

4.12 appearance

The appearance of the product is good, without scars, sweat stains, protrusions and other defects that seriously affect the appearance.

4.13 structure size

Refer to product drawings



4.2 Product electrical performance test data

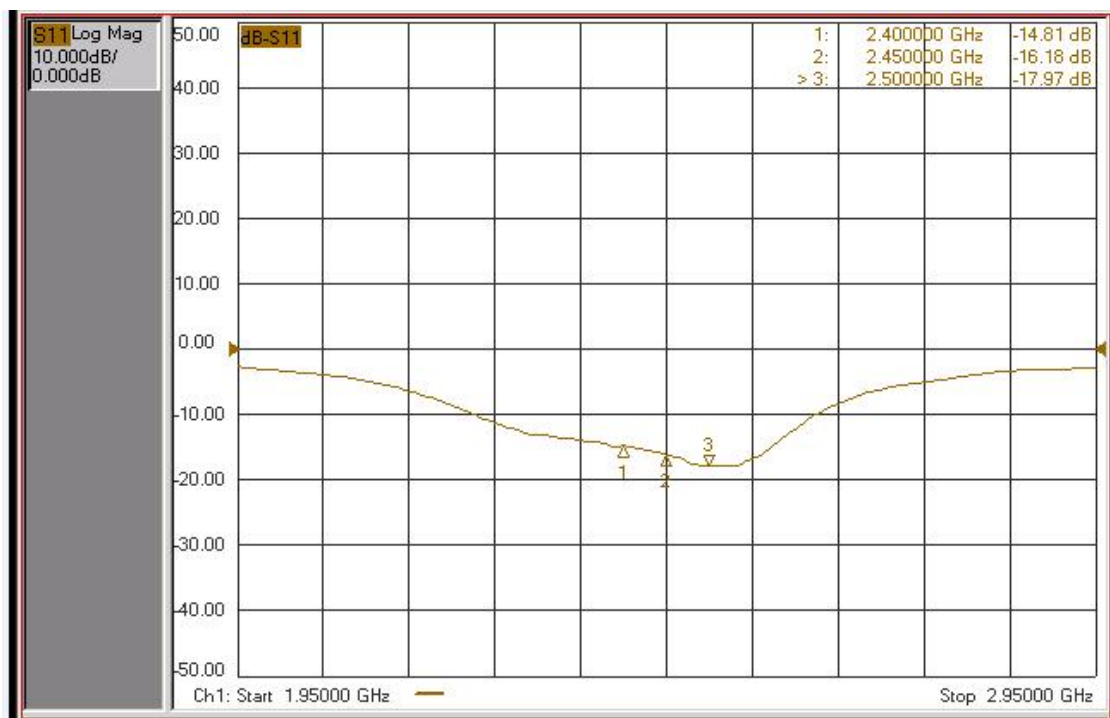
4.21 Test environment and instruments

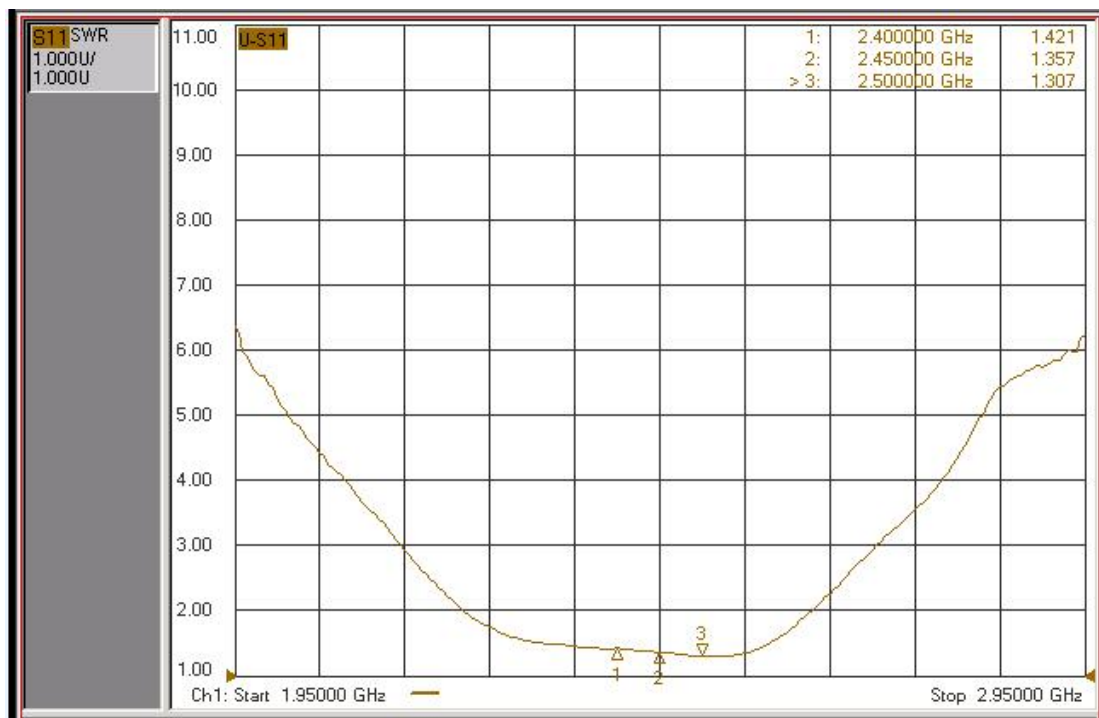
Test environment: temperature: 10℃——+30℃ relative humidity: ≤80% (+40℃) atmospheric pressure: 750mmkg±30mmkg	Test equipment: network analyzer Agilent E8358A ETS Microwave anechoic chamber
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4.22 Product electrical performance test data:

4.22.1 S11 figure of the product:

Marker	2400MHz	2450MHz	2500MHz
Returnloss	-14.81	-16.18	-17.97
VSWR	1.42	1.35	1.31





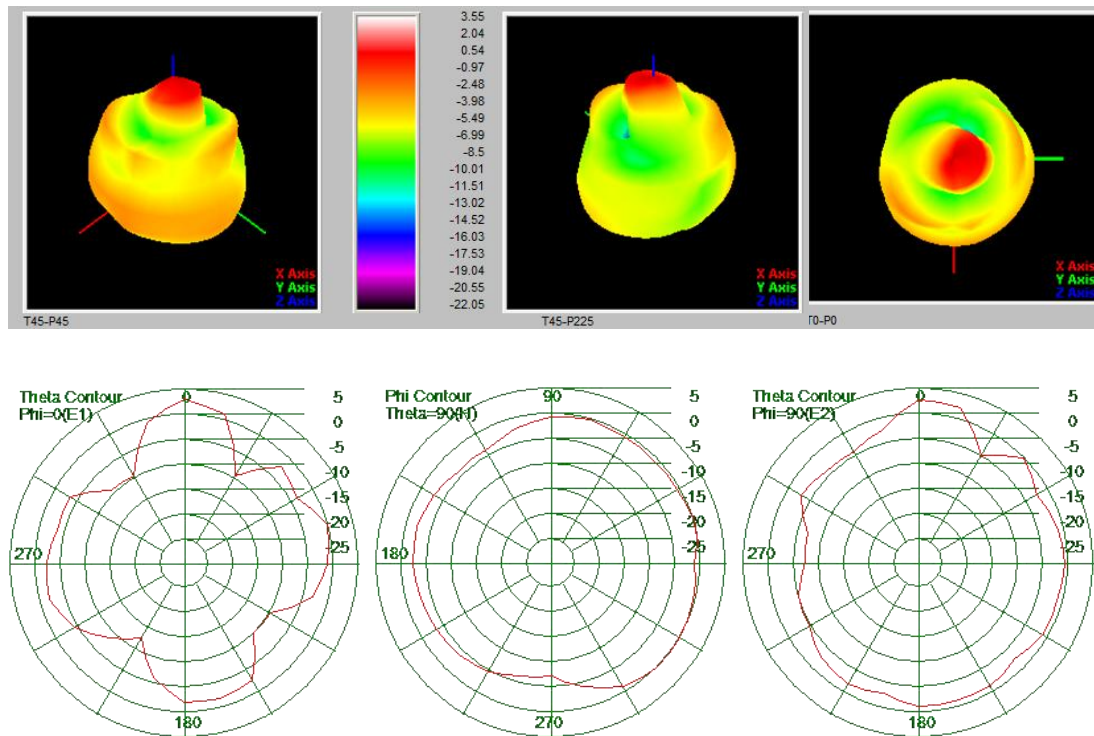
4.22.2 Gain, efficiency and radiation pattern

frequency (MHz)	Gain (dBi)	Efficiency (%)
2400.0	3.55	53.9
2410.0	3.40	51.6
2420.0	3.44	51.8
2430.0	3.29	50.0
2440.0	3.46	50.5
2450.0	3.56	52.4
2460.0	3.60	53.0
2470.0	3.59	53.1
2480.0	3.66	53.5
2490.0	3.70	53.7
2500.0	3.71	53.5



4.22.3 Radiation pattern:

Passive -Freq2450.00MHZ





5. Product packaging method

Packaging method:

Packed in self sealing bags, 200PCS each.

6. Document resume

Document No.	
Release Date	2022/11/14
Author	Hungjie
Review	WH

Revised History

Date	Version	Revised Record
2022/11/14	1.00	New Project