

SUNNYWAY TECHNOLOGY(CHINA)

ANTENNA SPEC

Customer name: Wuxi iData Technology Co., Ltd.		Entry name: Q3000
Working band: BT/2.4GHZ		
Motherboard version:		
Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
BT Antenna	SZ22632IB75-1	

Revision history			
Date of preparation/change	Change content	Altered person	Edition
2022.12.22	New issue	Yang XIN	A

Sunnyway Countersign column				
R&D	ME:	To examine:	QE:	Approval:
	RF:	To examine:		

Customer will sign the column			
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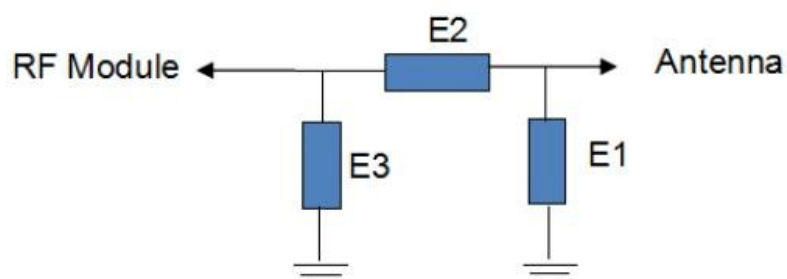
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1. Matching circuit



Element	Value
E1	N/A
E2	0Ω
E3	N/A

2. Antenna passive testing data

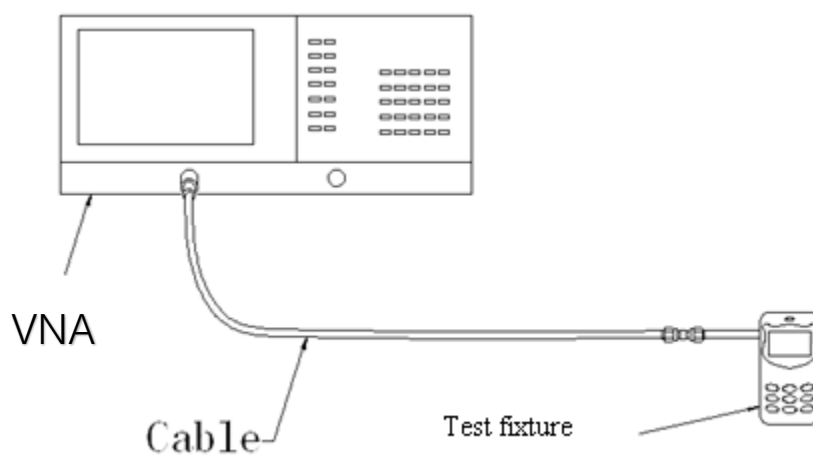
2.1 S11 Description of the test method

Test the equipment: Vector network analyzer (Agilent E5071C)

Test methodology: Use a 50 ohm CABLE cable to export from the instrument test port, use the calibration

piece to calibrate and connect the SMA connector of the test fixture, and record the return loss and standing wave ratio corresponding to the relevant frequency point.

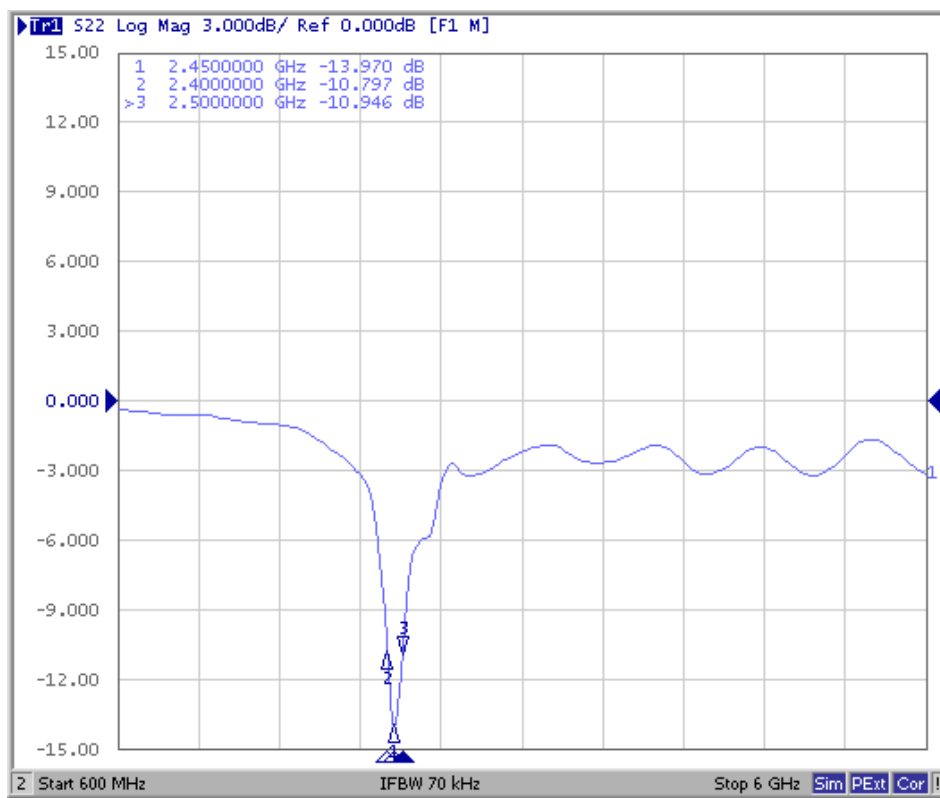
Below is a schematic picture of the test:



Test schematic diagram

2.2 S11 Test parameters

(Freq.) MHz	2400	2450	2500
VSWR	-10.9	-13.9	-10.9



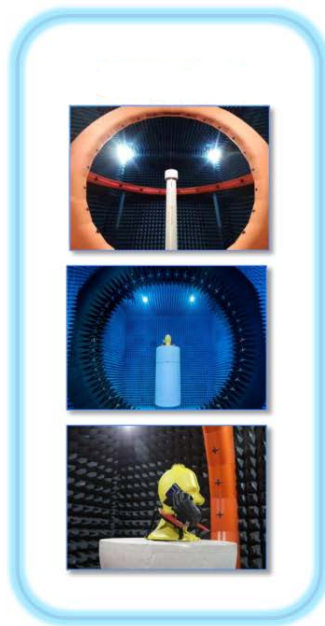
3. Antenna active testing data

3.1 Test the environment

Test the system: Multi-probe OTA measurement system (XH-IoT)

Test the environment: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

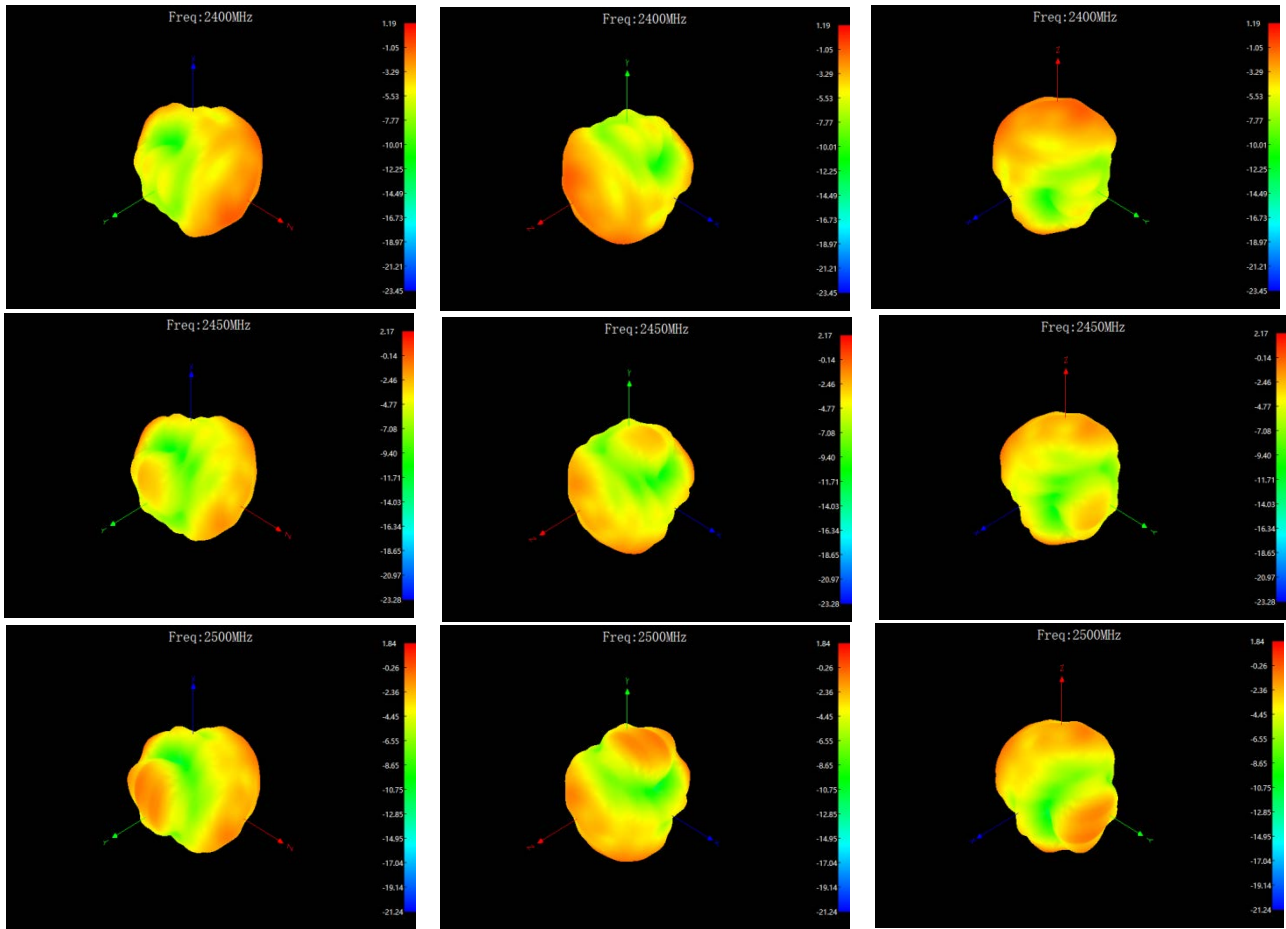
Test the equipment: When testing passive data, use the network analyzer R&S ZND/ Agilent E5071C
When testing active data, use the Agilent 8960/CMW500/SP9500E/SP8315



3.2Antenna efficiency and gain

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	1.19	47.42
2410	1.95	49.43
2420	0.44	41.11
2430	1.18	43.15
2440	0.93	43.55
2450	2.17	49.32
2460	1.58	46.88
2470	1.95	46.56
2480	1.49	45.29
2490	2	45.08
2500	1.84	44.67

3D-TOTAL



3.3 Antenna OTA data

Item	Measurement	Band	Channel	Total
1	TRP	BLUETOOTH	0	1.77
2	TRP	BLUETOOTH	19	2.1
3	TRP	BLUETOOTH	39	2.22
4	TIS(EIRP)	BLUETOOTH	0	-91.31
5	TIS(EIRP)	BLUETOOTH	19	-91.83
6	TIS(EIRP)	BLUETOOTH	39	-91.67

4. Environmental treatment methods

No design

5. Standard for mass production antennas

When the antenna is mass-produced, the VSWR is used as the mass production test standard.

According to the differences in the project itself, the following criteria are given:

Freq. (MHz)	Mass production standards
2400-2500	$VSWR(\text{Production performance}) < VSWR(\text{Confirmed performance}) + 0.5$

6. Engineering drawings

