

Shanghai Shangyuan Communication Technology Co., Ltd.

Skyline Acknowledgement

Customer Name: Yingda		Project Name: RS200 Base	
Working frequency band: BT			
Hardware version: W1_DZ_V2			
Shangyuan Material Specifications			
Specifications and models	Shangyuan Material Number		Customer part number
RS200 base BT antenna assembly	SZ25495IB77		207110633

Change resume			
Creation/Change Date	Change content		Altering party
2025.12.25	New release		Long Chaoqun
			A

Shangyuan co-signature				
Research and development	Structure: Long Chaoqun	Review: Xu Wei	Quality Engineer: Song Dongdong	Approved by: Li Bin
	Radio Frequency: He Jinzhu	Review: Huang Xiong		

Customer co-signature field			
Electronic engineer	Project manager	Construction engineer	Quality Engineer

Shangyuan Technology (China) Co., Ltd.

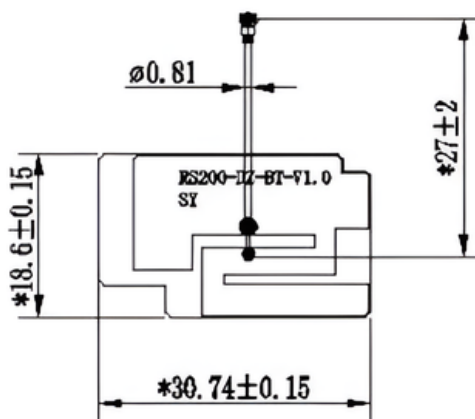
Shanghai R&D Center: 1st Floor, Building 4, No.99, Lane 215, Gaoguang Road, Qingpu District, Shanghai. Shenzhen R&D Center: 6th Floor, Building 5, Nantai Cloud Valley Center, Guangming District, Shenzhen.
Chongqing R&D Center: 1F, ARM Eco-Industrial Park, 19 Xiantao Data Valley East Road, Yubei District, Chongqing. Huizhou Manufacturing Center: Floors 4-6, Building 8, Xiongtao Technology City, 15 Qingli 2nd Road, Shuikou Street, Huicheng District, Huizhou City.Email: sales@sunnyway-iot.com Web: www.sunnyway-iot.com

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1. Project Information

1.1 Prototype Diagram



II. Antenna Matching Circuit

Match without changes

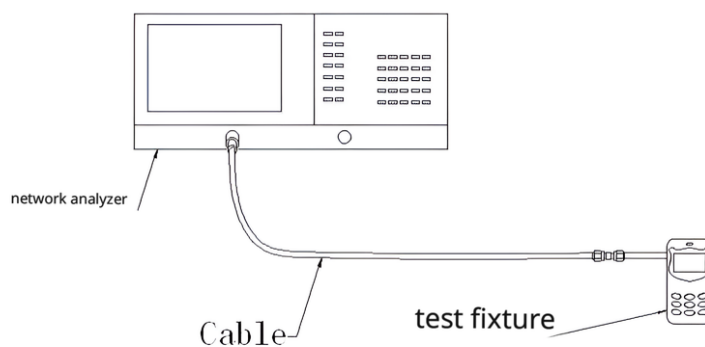
III. Antenna S 11 Parameters

3.1 S 11 Test Method Description

Test equipment: Network analyzer (Agilent E5071C)

The test method is to use a 50 ohm CABLE cable from the instrument test port, and connect the SMA connector of the test fixture after calibration with a calibration piece, and record the return loss and the standing wave ratio corresponding to the relevant frequency.

The test diagram is as follows:



Test diagram

4. Antenna OTA Test Data

4.1 Testing Environment

Test System: Multi-probe OTA Measurement System (XH-IoT)

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

Testing equipment: For passive data testing, use the network analyzer R&S ZND;

for active data testing, use the comprehensive tester Agilent 8960/CMW500/SP9500

E/SP8315.

OTA laboratory



comprehensive
measuring
instrument



SP9500-CTS-5G



CMW500



SP8315 NB-IoT
/eMTC

Other devices



OTA head hand



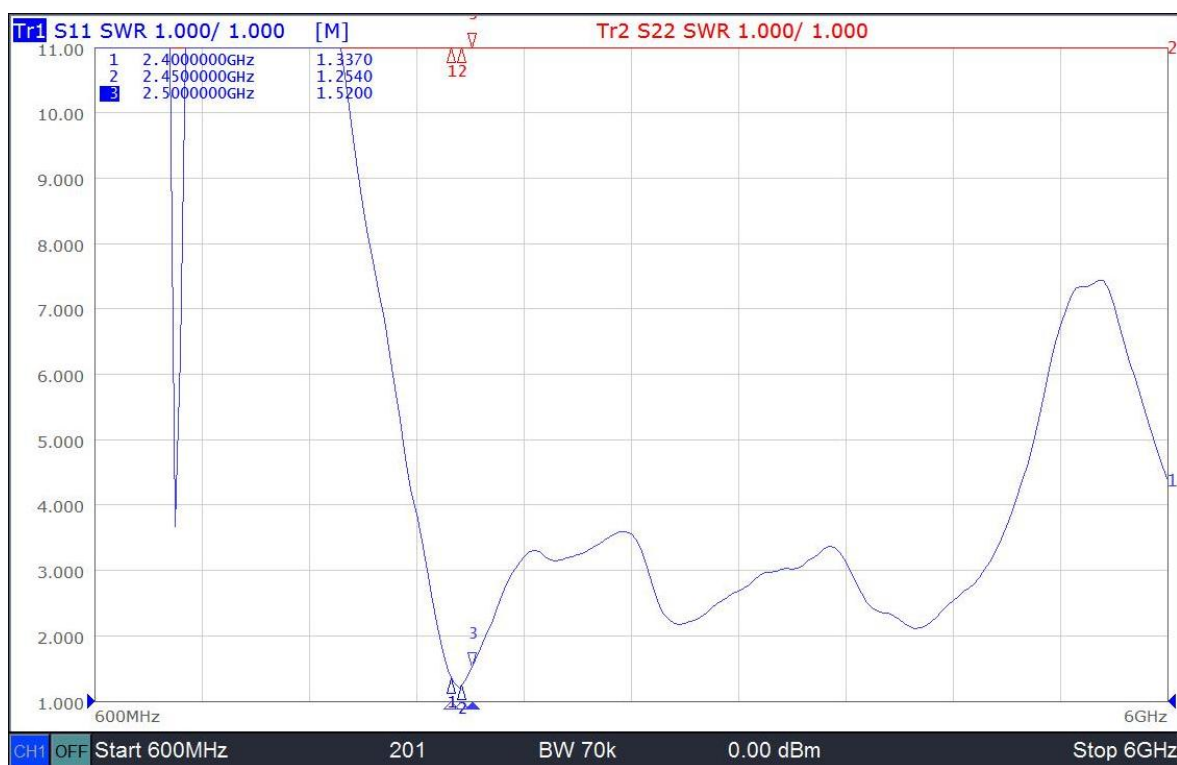
OTA ear hand



OTA arm hand

4.2 S 11 Parameters

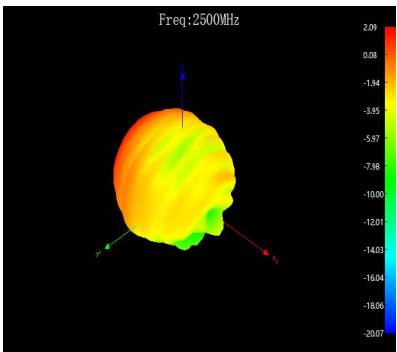
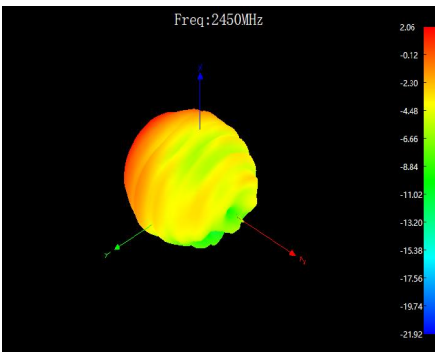
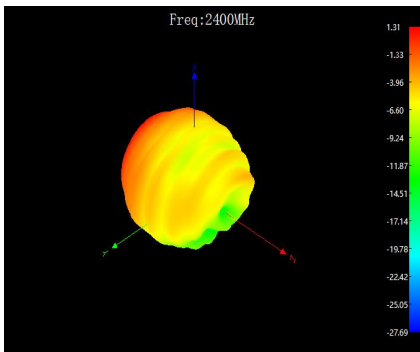
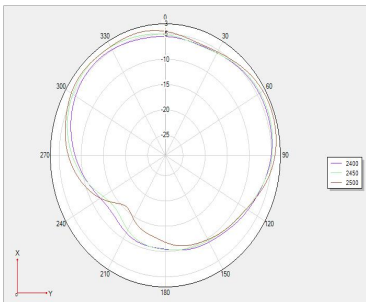
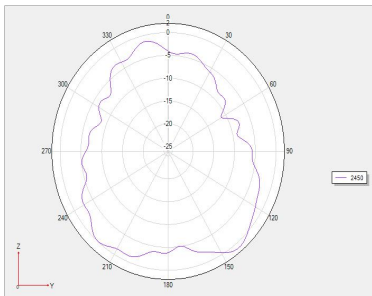
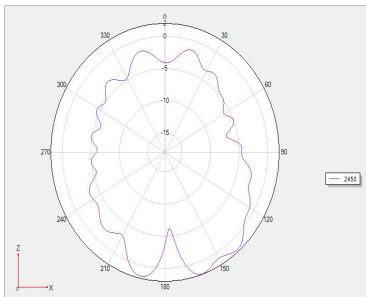
VSWR



4.3 Passive Test Data

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	1.31	39.08
2410	1.52	40.46
2420	0.74	34.99
2430	1.03	35.81
2440	1.22	36.56
2450	2.06	42.66
2460	1.82	40.09
2470	2	41.21
2480	1.92	41.21
2490	2.25	42.17
2500	2.09	40.74

4.3.1 Directional Diagram



4.4 Active Test Data

Measurement	Band	Channel	Total
TRP	BLUETOOTH	0	2.33
TRP	BLUETOOTH	19	2.28
TRP	BLUETOOTH	39	2.25
TIS(EIRP)	BLUETOOTH	0	-91.37
TIS(EIRP)	BLUETOOTH	19	-92.46
TIS(EIRP)	BLUETOOTH	39	-92.63

V. Environmental Treatment Methods for Sample Machines

No Additional Environmental Treatment Was Added

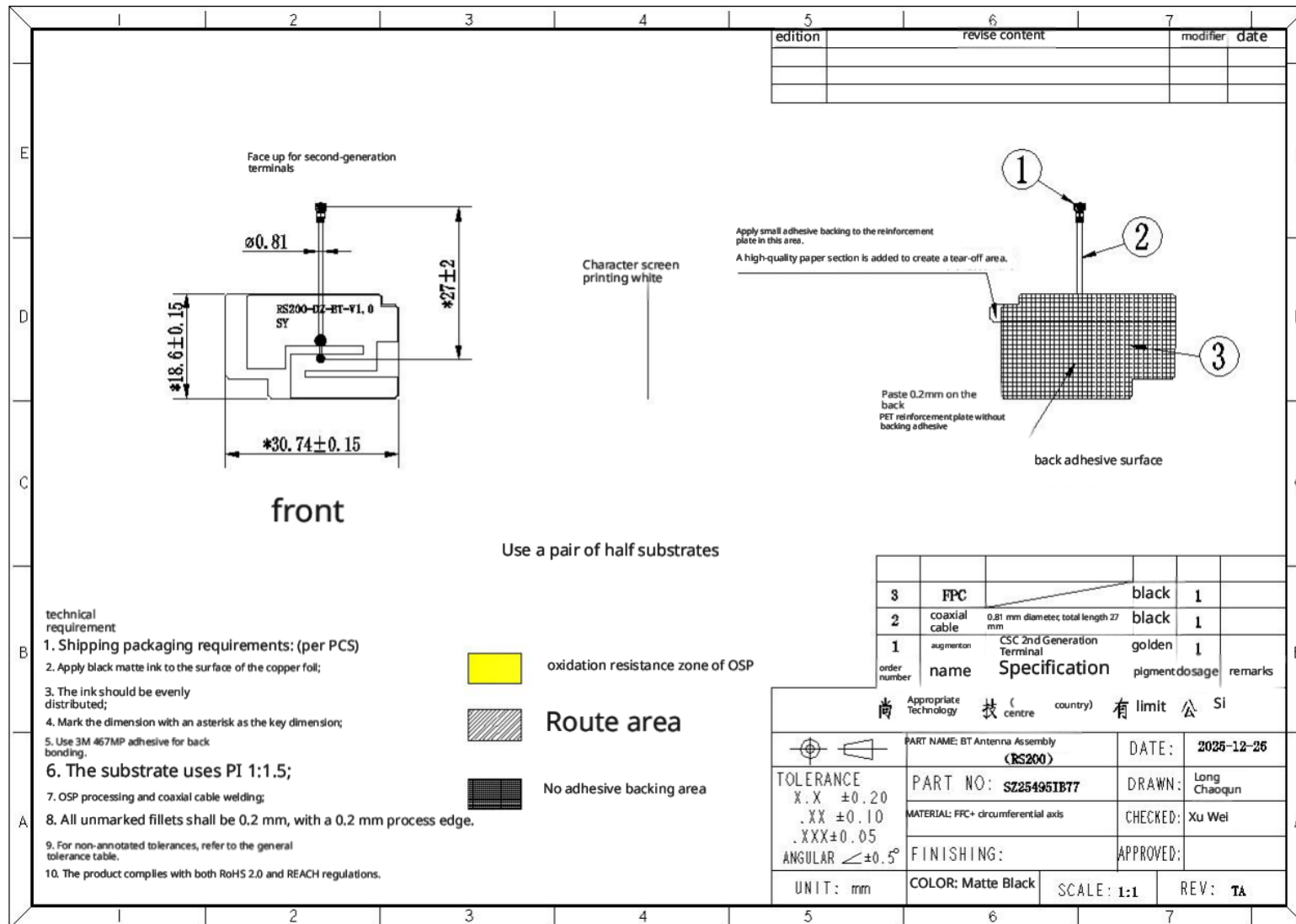
VI. Mass Production Antenna Specifications

The standing wave ratio is used as the standard of mass production test.

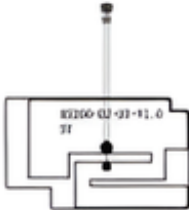
Provide the following criteria based on the project's specific differences:

Frequency (MHz)	Mass production standard
2400-2500	VSWR (production performance) < VSWR (acknowledged performance) ± 0.5

VII. Engineering Drawings



VIII. Packaging Method

Shangyuan (China) Technology Co., Ltd.									
Product Packaging Operation Specifications									
Host: Yingda			Package Name: RS200 Base BT Antenna			Packaging Number: SYC-BZ-001		Package version: TEST.A	
Packaging details	Puzi	name of a part	specifications	Use the	Packaging product illustration				
		PE bag							
	SYC-BZ-01	carton							
job step	1. Prepare the required packaging materials and place them in a location that is conducive to work. 2. Pack according to the SY0-BZ01 packaging specifications using cardboard boxes (SY0-01) and PE bags. 3. After filling the box, seal it with transparent tape.				matters need attention	1. Operators must wear gloves during operation. 2. Note that the quantity of packing must not be excessive or insufficient. The number of items should be clear and precise. 3. Keep the manuscript from being stacked too high to prevent glue overflow due to excessive weight.			
Caption	 Note: Quantity is based on actual packaging This is the reference quantity.								
approval			pit		make do		date		
					Long Chaoqun		2025-12-25		