

SHENZHEN SUNNYWAY TECHNOLOGY CO.,LTD

ANTENNA SPEC

Customer name: Telpouc		Entry name: : T10
Workingband:WIFI2.4/5.8		
Motherboard version: T10_MAIN_V1.0.4_20231229		
Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
WIFI Antenna	SZ23409IB75-1	3170300260

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Sunnyway Countersign column				
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1. Project information

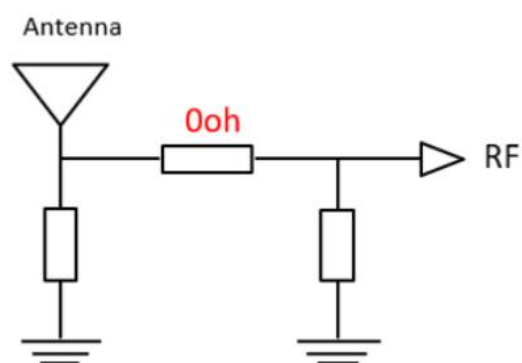
1.1 Mockup picture



1.2 Antenna product picture



2. Matching circuit



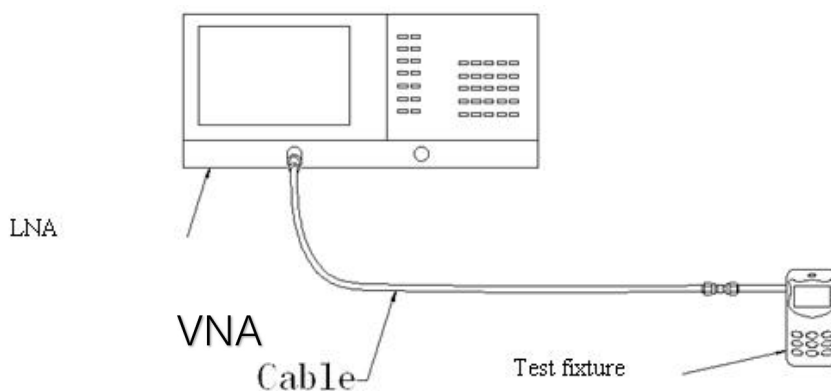
3. Antenna passive testing data

3.1 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

3.2 S11 Test parameters

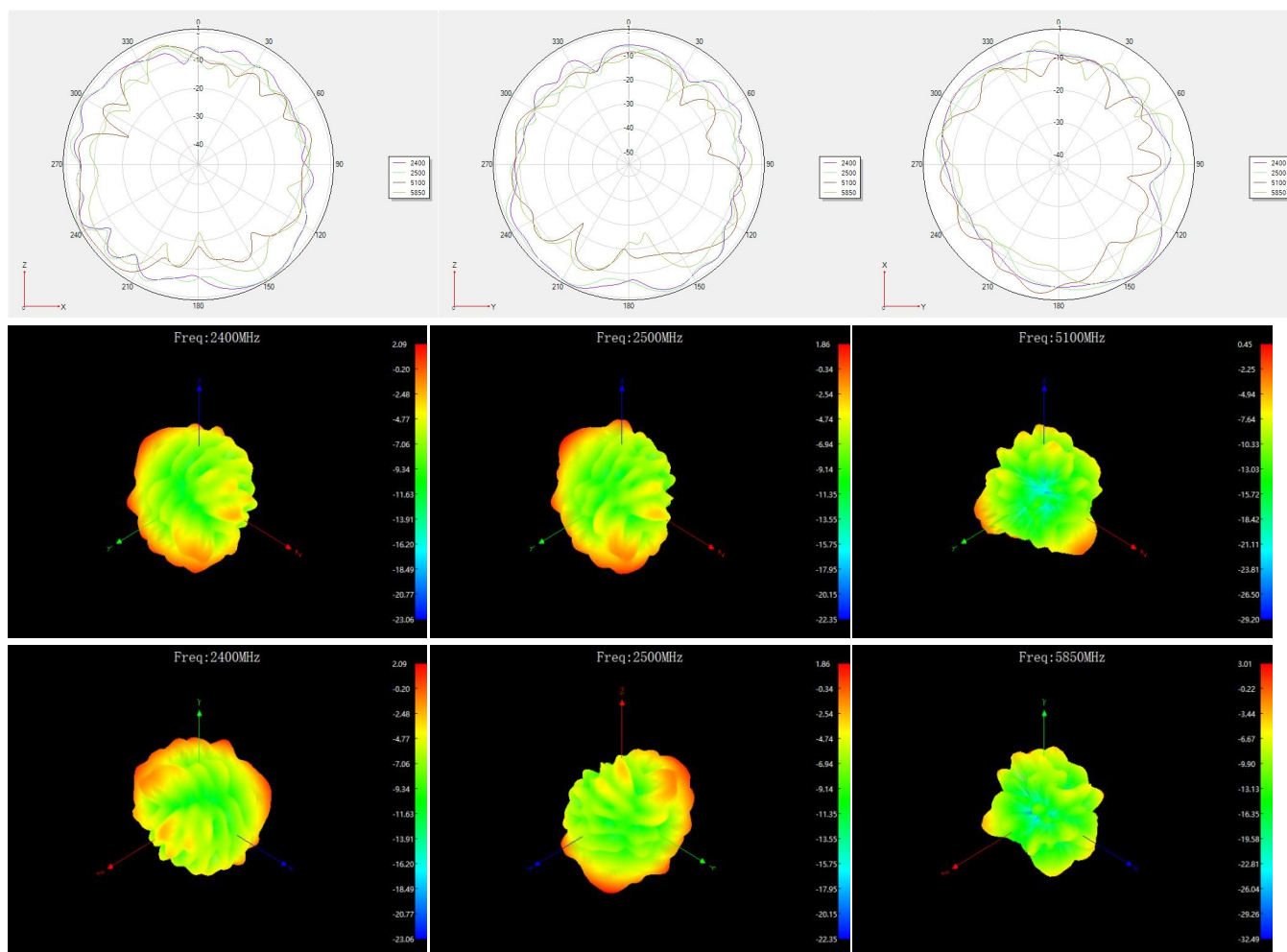
(Freq.) MHz	2400	2500	4200	5150	5850
VSWR	1.89	1.75	1.32	1.84	1.97

VSWR



3.3 Antenna efficiency and gain

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	35.16	2.09
2410	34.91	1.65
2420	32.81	1.73
2430	33.81	1.8
2440	35.4	2.03
2450	35.48	2.33
2460	34.36	2.21
2470	35.73	2.48
2480	35.97	2.36
2490	34.83	2.22
2500	33.81	1.86
5100	16.94	0.45
5150	18.45	1.44
5200	18.37	1.96
5250	20.09	2.49
5300	22.08	2.71
5350	21.78	2.61
5400	24.55	3.09
5450	25.12	3.56
5500	24.55	3.16
5550	24.89	3.42
5600	23.07	3.11
5650	24.49	3.91
5700	23.23	3.91
5750	21.98	3.69
5800	20.61	3.5
5850	19.19	3.01



4. Antenna active testing data

4.1 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



4.2 OTA Active test data

Measurement	Band	Channel	Total
TRP	WIFI_B (1M)	1	10.27
TRP	WIFI_B (1M)	7	11.21
TRP	WIFI_B (1M)	13	10.64
TIS(EIRP)	WIFI_B (11M)	13	-76.31
TRP	WIFI_G (6M)	1	12.26
TRP	WIFI_G (6M)	7	13.26
TRP	WIFI_G (6M)	13	12.57
TRP	WIFI_N_ISM (6.5M)	1	12.17
TRP	WIFI_N_ISM (6.5M)	7	12.56
TRP	WIFI_N_ISM (6.5M)	13	10.64
TIS(EIRP)	WIFI_N_ISM (65M)	13	-61.98
TRP	WIFI_A (6M)	36	12.49
TRP	WIFI_A (6M)	149	13.35
TRP	WIFI_A (6M)	165	12.04
TIS(EIRP)	WIFI_A (54M)	165	-68.05

5. Environmental treatment methods

No design

6. Antenna loading position



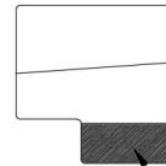
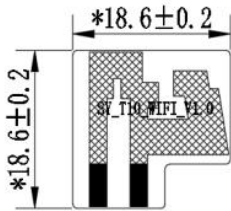
7. Standard for mass production antennas

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
2400-2500MHz	$VSWR(\text{Production performance}) < VSWR(\text{Confirmed performance}) \pm 0.5$
5150-5850MHz	$VSWR(\text{Production performance}) < VSWR(\text{Confirmed performance}) \pm 0.5$

8.Engineering drawings



0.2mm补强 PET