

SUNNYWAY TECHNOLOGY(CHINA)

ANTENNA SPEC

Customer name: 三旗		Entry name: SI9811
Working band:5G 77		
Motherboard version: A9811M1A2-1		
Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
B41_M1 FPC Antenna	SZ24247IB75-2	

Revision history			
Date of preparation/change	Change content	Altered person	Edition
2024.10.26	New issue	XUWEI	A

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

Customer will sign the column			
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Directory

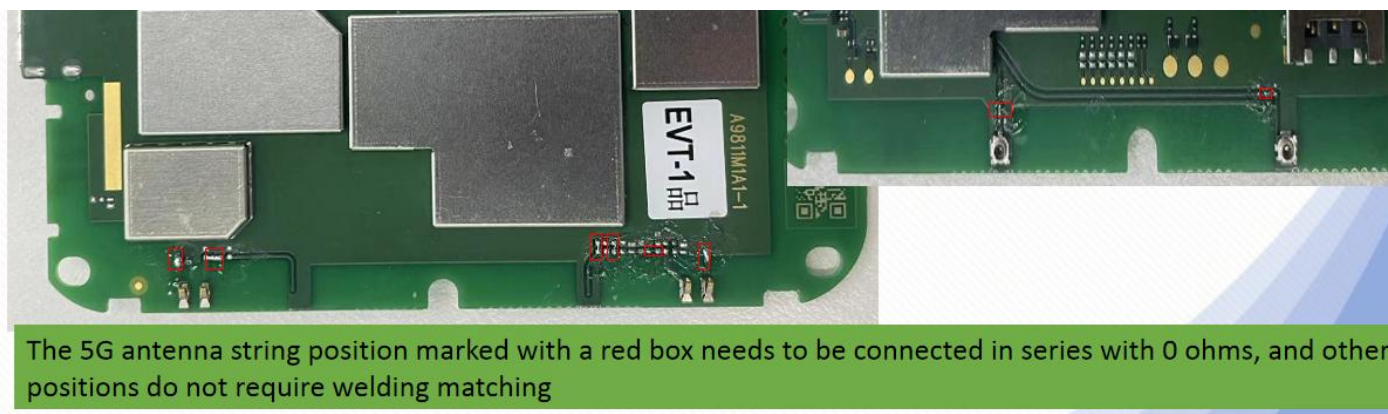
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1. Project information

1.1 Mockup picture



2. Matching circuit



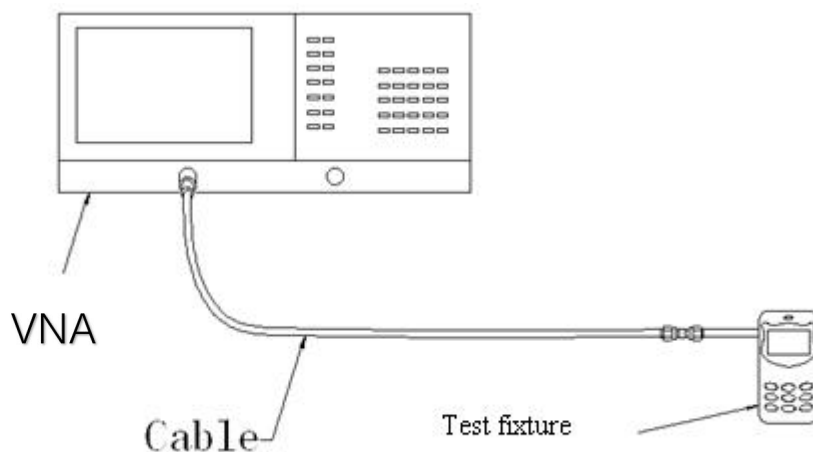
3. Antenna passive testing data

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 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 $50\% \pm 15\%$

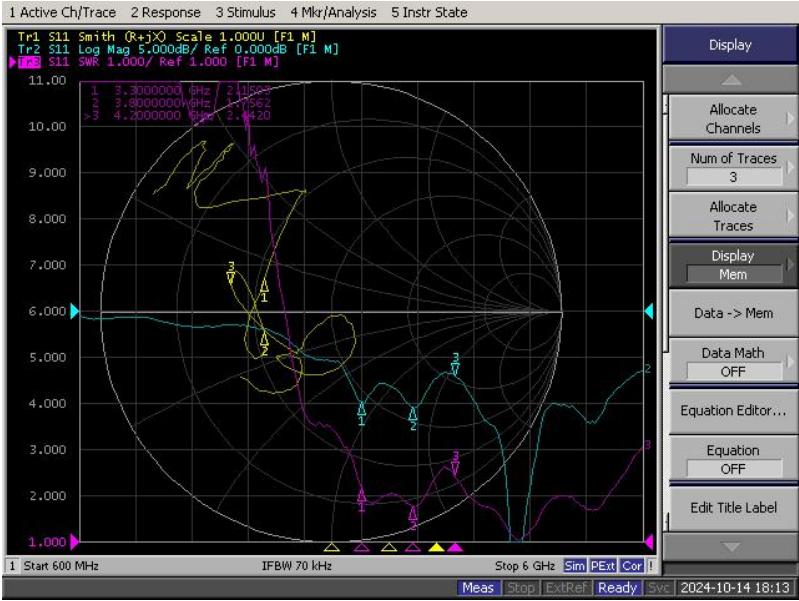
Test the equipment: When testing passive data, use the network analyzer R&S ZND/ Agilent E5071C

When testing active data, use the Agilent 8960/CMW500/SP9500E/SP8315



3.3 S11 Test parameters

驻波比 VSWR



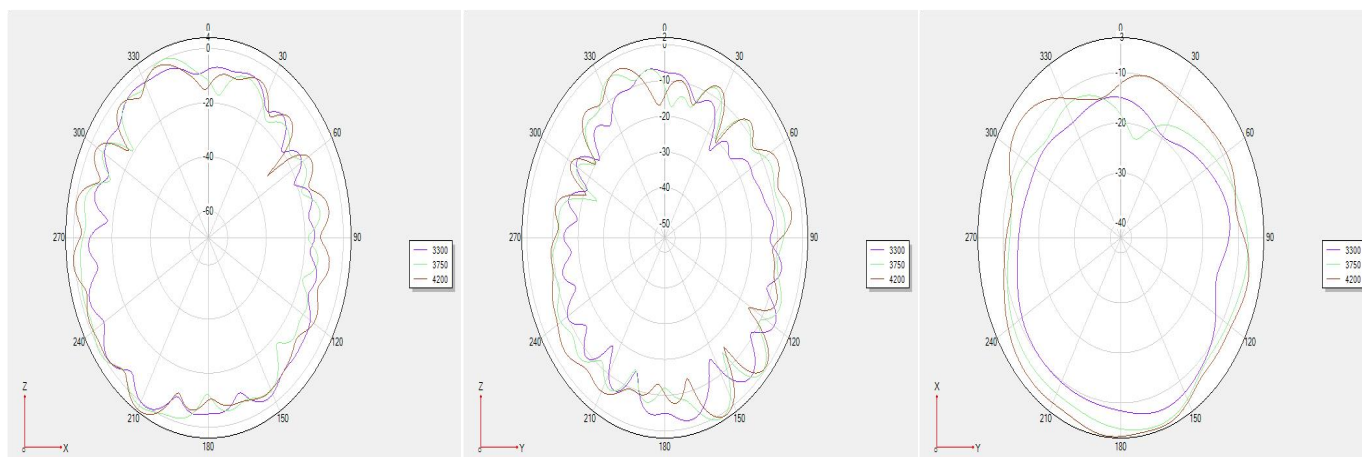
Antenna efficiency and gain

5G-1天线

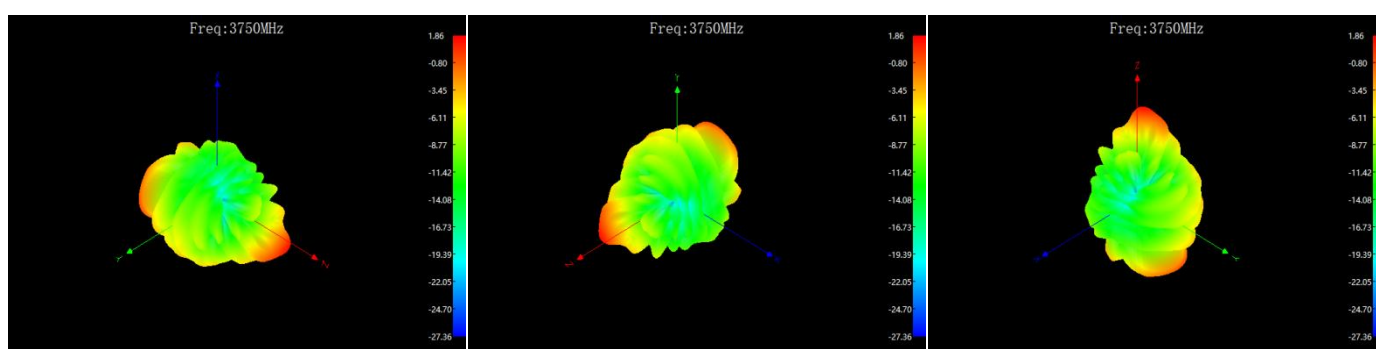
Freq (MHz)	Effi (%)	Gain (dBi)
3300	33.79	0.95
3330	35.33	0.73
3360	33.95	0.92
3390	32.82	0.26
3420	34.7	0.27
3450	33.58	0.31
3480	32.33	0.25
3510	33.07	0.38
3540	32.41	0.81
3570	33.69	0.88
3600	32.17	0.58
3630	32.45	0.94
3660	32.03	0.81
3690	31.55	0.65
3720	32.79	0.6
3750	32.33	0.88
3780	33.95	0.85
3810	31.82	0.63
3840	33.8	0.73

3870	34.22	0.85
3900	34.86	0.7
3930	35.56	0.41
3960	34.33	0.48
3990	33.91	0.5
4020	34.14	0.62
4050	32.71	0.66
4080	34.38	0.3
4110	34.09	0.6
4140	35.84	0.52
4170	33.03	0.61
4200	33.28	0.63

Passive direction diagram



Radiation Apple Figure



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
3300-4200	$VSWR(\text{Production performance}) < VSWR(\text{Confirmed performance}) \pm 0.5$

6. Engineering drawings

