

SPECIFICATION

2.4G onboard antenna

Product Specification

connection		frequency range	2400-2500MHz
Frequency band wire name		edition	A1
Customer part number		Guandetong part number	W04ZA3
Guandeton g No			
R F design	XIAO	RF Manager	LI
Structural design	WU	Structure Manager	HUANG
Technical Director	ADD	Date	2026-04-04

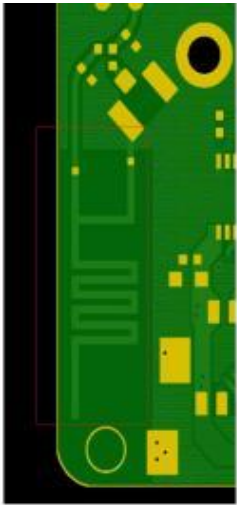
Customer confirmation:

Does the assembly meet your company's requirements: ☐OK ☐NG

catalogue

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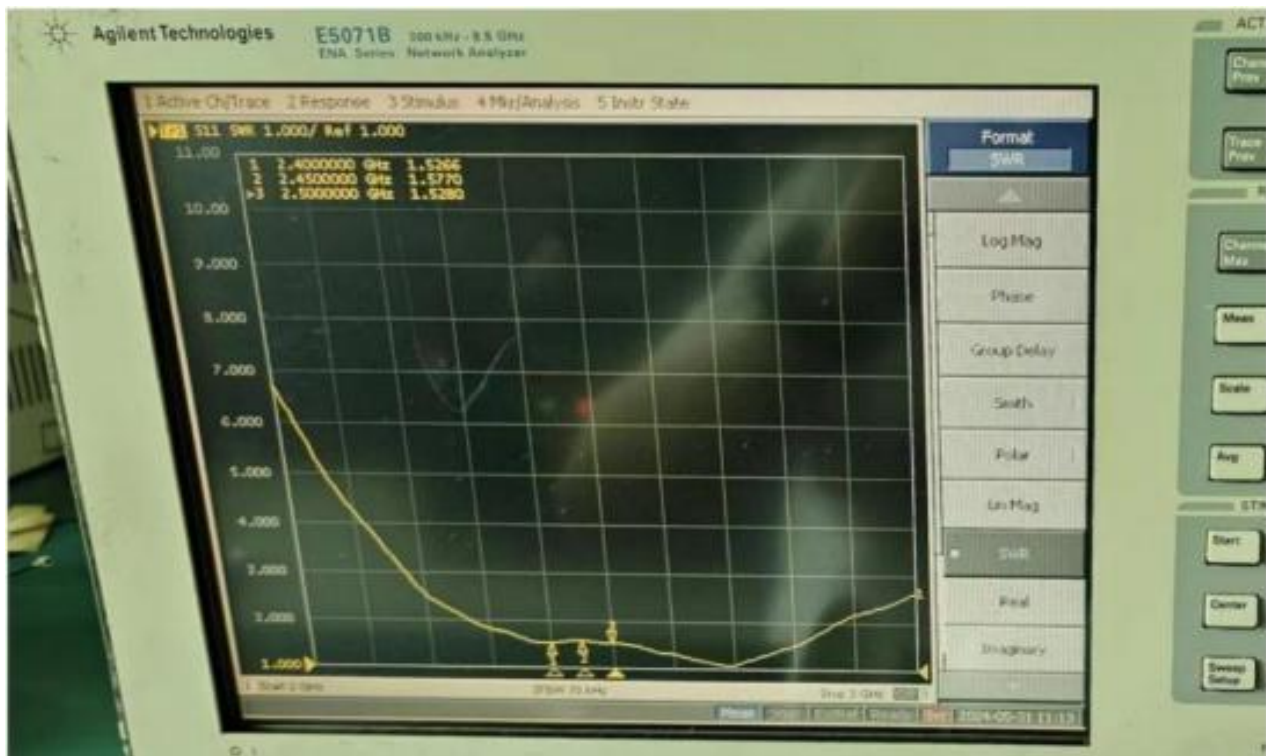
一、 Product pictures



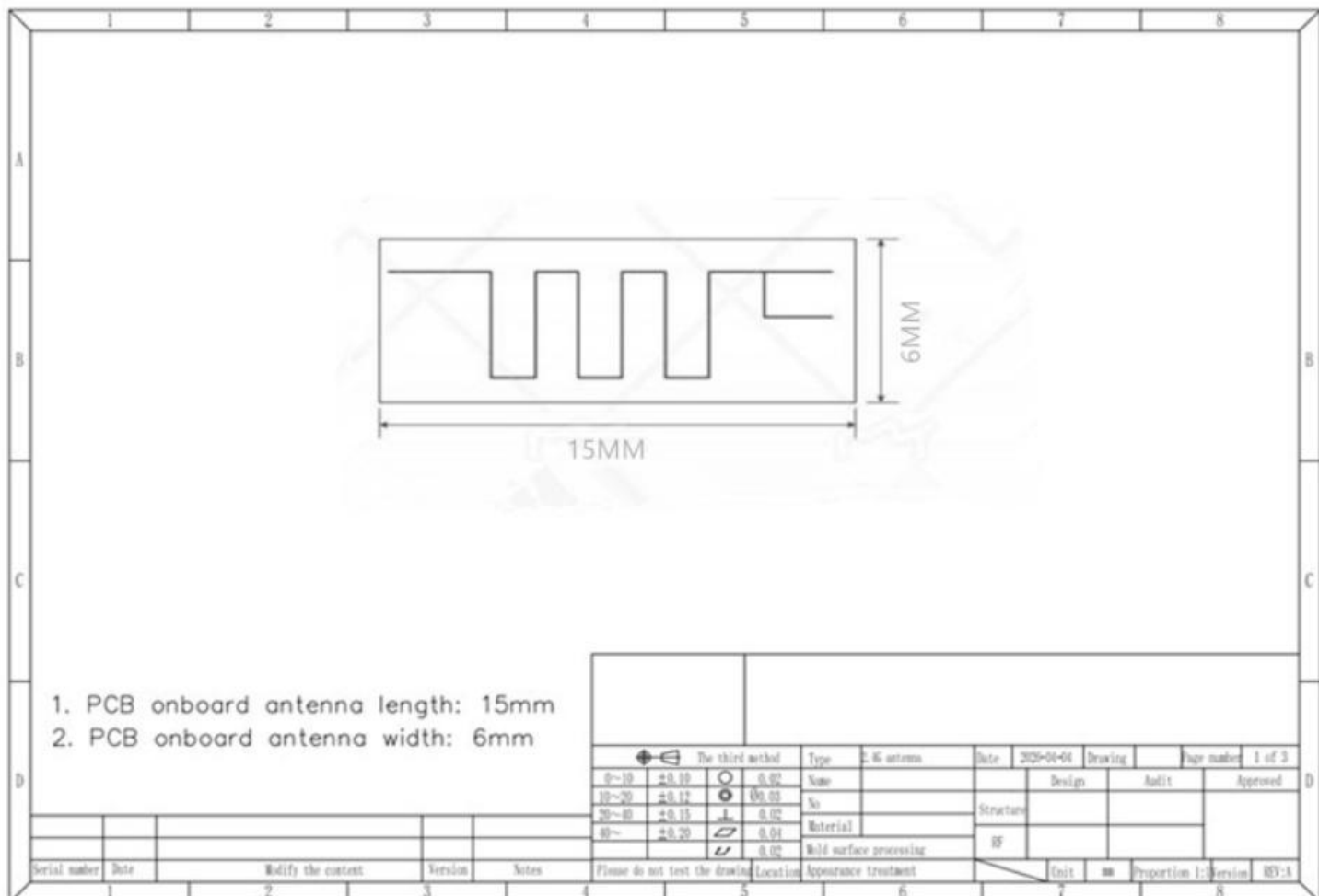
二、 Product parameters

Product testing parameters			
Product name	2. 4G Antenna	(Model Type)	
(Electrical Specifications)			
(Frenquency Range)	2400-2500MHz	(Polarization)	perpendicular
(Impedance)	50Ω	Radiation	QXCOMM
(VSWR)	≦2. 0	(Power)	50W
(Gain)	1.5dBi	(Bandwidth	100M
(Mechanical Specifications)			
(Dimensions)	15*6±0.5mm	(Chassis Color)	PCB inkjet printing
(Connector)	//	(Cable Length)	//
(Chassis Material)	PCB	Color of wire	//
(Working Temperature)	-40℃-+85℃	(Limit Temperature)	-40℃-+85℃

三、S11(VSWR、Return、Smith)



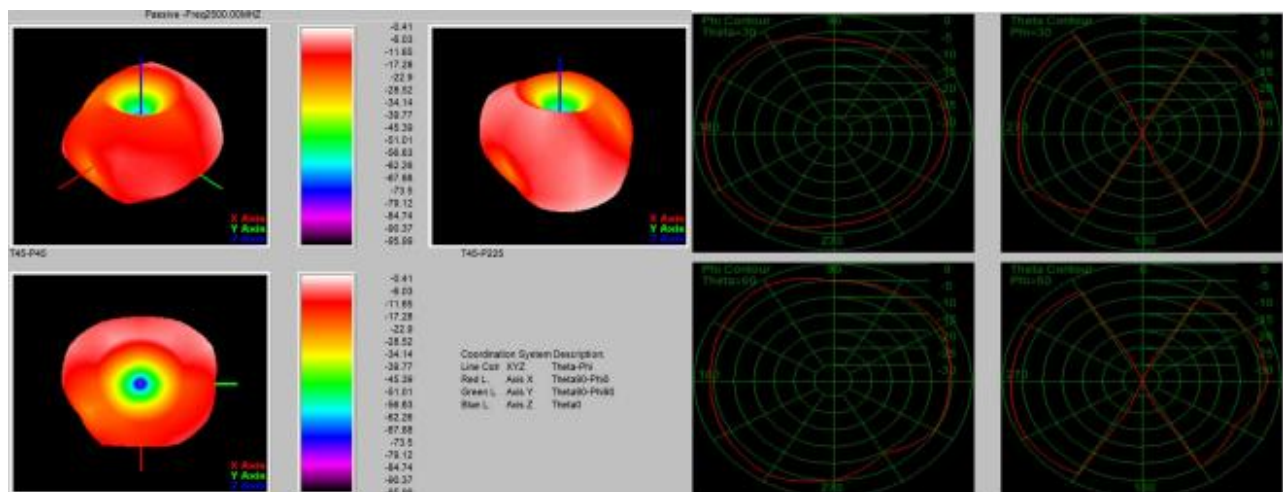
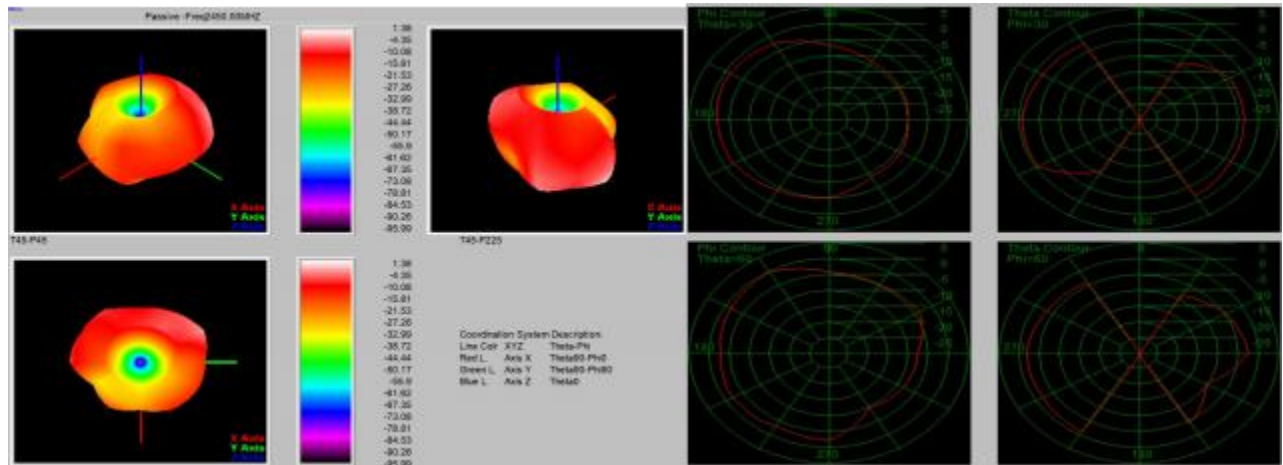
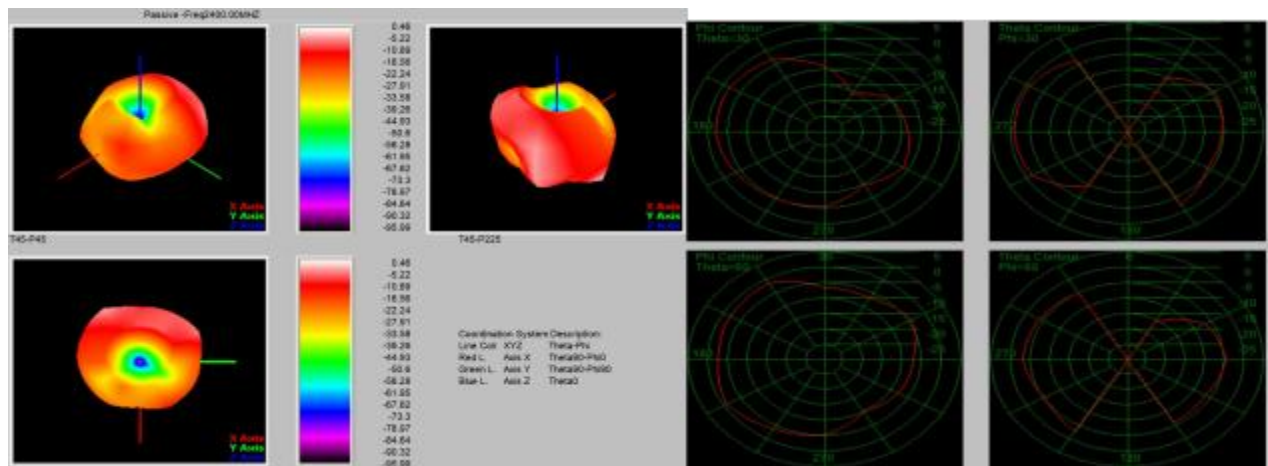
四、Structural drawings



五、Antenna gain and efficiency

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dBi)	Max (dBi)	Theta of Max	Phi of Max	Min (dBi)	Theta of Min	Phi of Min	AVG (dBi)	Max/Min (dBi)	Max/AVG (dBi)	Min/AVG (dBi)
1	2400.0	2400.00	0.48	5.48	31.4%	-5.03	0.48	120	270	-95.99	0	0	-5.27	96.45	5.73	-90.72
2	2410.0	2410.00	0.59	5.78	30.2%	-5.19	0.59	120	270	-95.99	0	0	-5.24	96.58	5.82	-90.75
3	2420.0	2420.00	0.91	6.09	30.4%	-5.17	0.91	120	270	-95.99	0	0	-4.99	96.90	5.90	-91.00
4	2430.0	2430.00	1.41	6.21	33.1%	-4.80	1.41	120	270	-95.99	0	0	-4.51	97.40	5.92	-91.48
5	2440.0	2440.00	1.12	6.00	32.5%	-4.88	1.12	120	270	-95.99	0	0	-4.68	97.11	5.81	-91.31
6	2450.0	2450.00	1.38	5.92	35.1%	-4.55	1.38	120	270	-95.99	0	0	-4.39	97.37	5.77	-91.60
7	2460.0	2460.00	1.50	5.84	36.8%	-4.34	1.50	120	270	-95.99	0	0	-4.22	97.49	5.72	-91.77
8	2470.0	2470.00	1.12	5.52	36.3%	-4.40	1.12	120	270	-95.99	0	0	-4.50	97.11	5.62	-91.49
9	2480.0	2480.00	0.50	4.98	35.7%	-4.48	0.50	120	270	-95.99	0	0	-4.87	96.49	5.48	-91.02
10	2490.0	2490.00	-0.35	4.58	32.2%	-4.93	-0.35	120	270	-95.99	0	0	-5.49	95.64	5.14	-90.50
11	2500.0	2500.00	-0.41	4.25	34.2%	-4.66	-0.41	120	270	-95.99	0	0	-5.28	95.58	4.87	-90.71

六、2D & 3D Images



六、Environmental performance test

project	Project test conditions	Specifications
Storage environment	The test temperature, humidity and air pressure are as follows when there is no specific condition: 1. The temperature is $-30\text{ }^{\circ}\text{C}\sim+80\text{ }^{\circ}\text{C}$ 2. Relative humidity: 45% - 85% 3. The air pressure is 86kpa-106kpa	Normal electrical and mechanical performance
High and low temperature test	5 cycles between $70\text{ }^{\circ}\text{C}$ and $40\text{ }^{\circ}\text{C}$, then under normal conditions 1-2H, check the appearance quality.	The size shall meet the requirements and Mechanical and electrical performance
Constant damp heat resistance test	Relative humidity: $95\pm 3\%$, test temperature: $40\text{ }^{\circ}\text{C}$. After lasting for 2h, The electrical performance shall be measured within 5 minutes after the test object is taken out, and the test object shall be within the normal range Part 1-2H, check the appearance quality	The size shall meet the requirements and Mechanical and electrical performance
vibration test	Vibration frequency range: 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M/s, frequency sweep cycles: 30 times	Normal electrical and mechanical performance
Drop test	Free fall for 3 times in the direction of mutually perpendicular axes at a height of 1M	Normal electrical and mechanical performance