

SPECIFICATION



Shenzhen Guandetong Electronic Limited

2. 4G/5. 8G FPC antenna (1. 13 wire gray*150MM)

Product specification

Customers		Frequency	2400–2500MHz 5150–5800MHz
Name of wire rod		Version	A1
Customer data		GuandetongNo	
GuandetongNo			
R FDesign	肖彬	RF manager	刘亮
Structural design	王栋	Structure manager	王华
Technical Director	ANDY	Date	2025-5-26

Customer confirmation:

Whether the Assembly meets your requirements: OK NG

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catalogue

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Address: 3/F, Tower D, Huanguan Nanmaoyuan Industrial Park, Guanhу Street,
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一、 Product pictures



二、 Product parameters

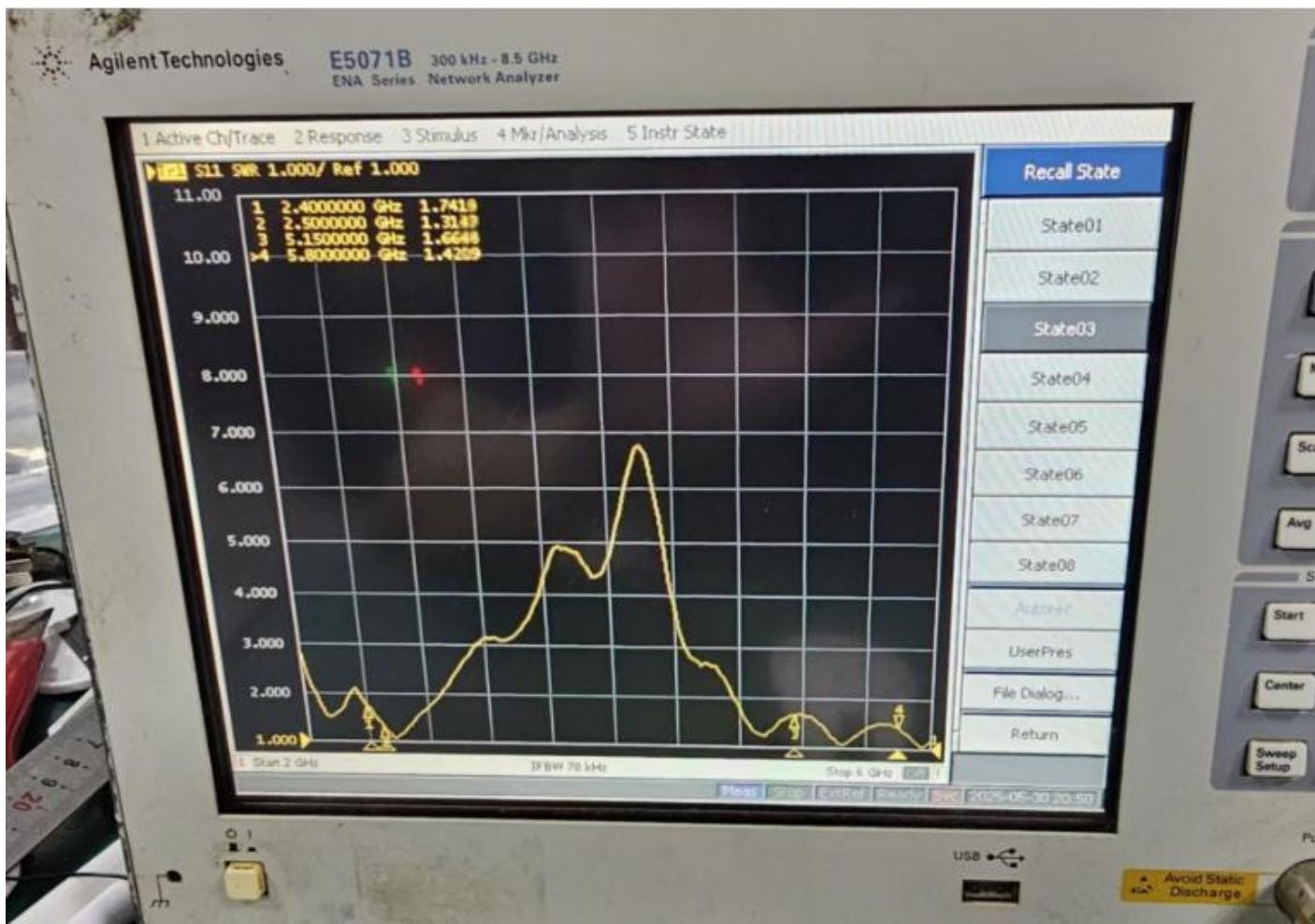
Product test parameters

(Name)	2.4 G/5.8G antenna	(Model Type)	
(Electrical Specifications)			
(Frequency Range)	2400-2500MHZ	(Polarization)	perpendicular
(Impedance)	50	Radiation	QXCOMM
(VSWR)	≤ 2.0	(Power)	50W
(Gain)	3dBi	(Bandwidth)	100M
(Mechanical Specifications)			
(Copper tube dimensions)	$41.4 \pm 2\text{mm} * 12 \pm 1\text{MM}$	(Chassis Color)	black
(Connector)	IPEX	(Cable Length)	$150 \pm 2\text{mm}$
(Wire)	1. 13 gray		
(Working Temperature)	$-40^\circ\text{C} \text{--} +85^\circ\text{C}$	(Limit Temperature)	$-40^\circ\text{C} \text{--} +85^\circ\text{C}$

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三、S11(VSWR/Return/Smith



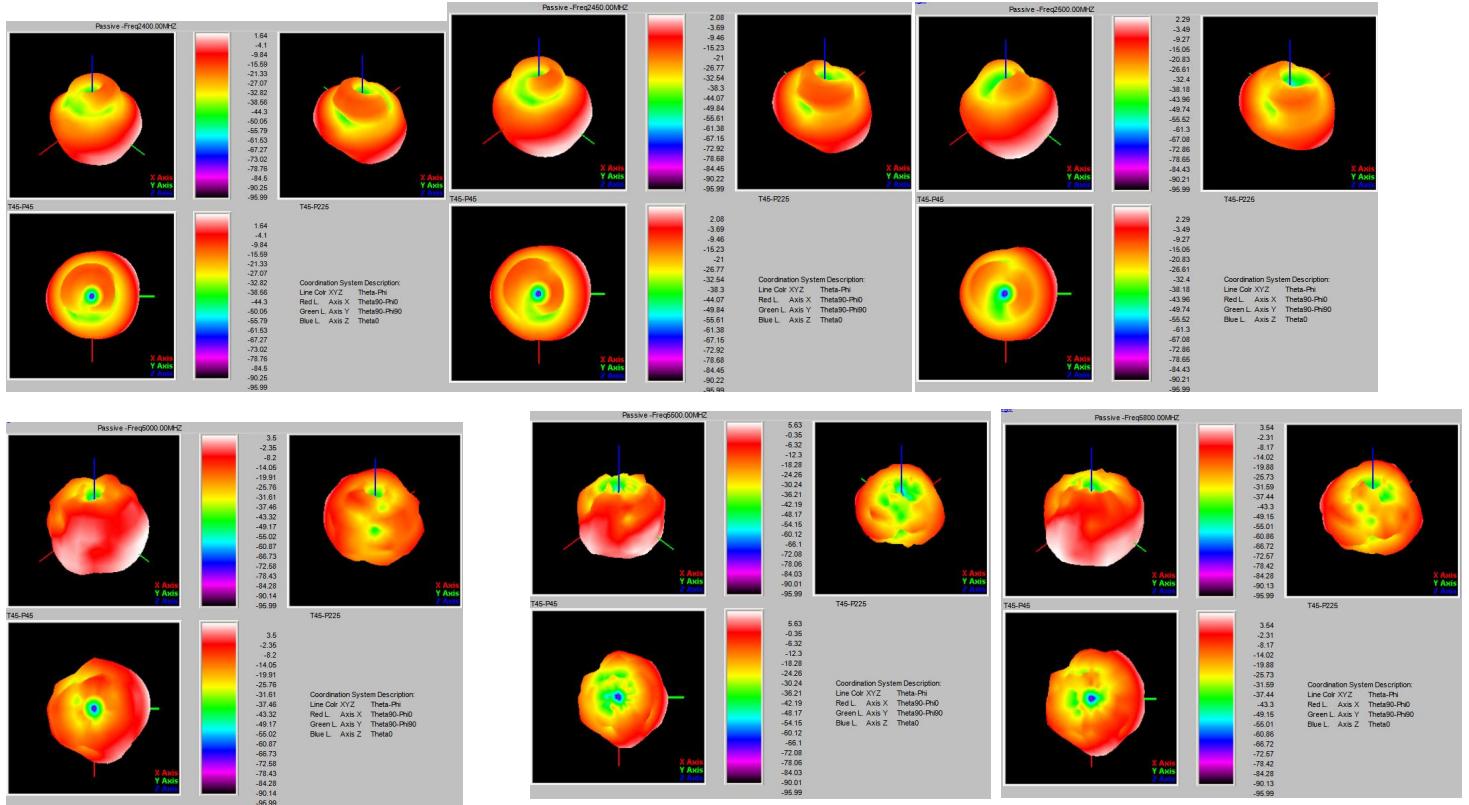
四、Antenna gain and efficiency

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/Avg (dB)	Min/Avg (dB)
1	2400.0	2400.00	1.64	6.09	35.9%	-4.44	1.64	90	120	-95.99	0	0	-4.94	97.63	6.58	-91.05
2	2410.0	2410.00	1.71	6.22	35.4%	-4.51	1.71	90	120	-95.99	0	0	-4.80	97.70	6.51	-91.19
3	2420.0	2420.00	2.06	6.22	38.4%	-4.16	2.06	90	120	-95.99	0	0	-4.19	98.05	6.25	-91.80
4	2430.0	2430.00	2.33	6.27	40.3%	-3.94	2.33	90	120	-95.99	0	0	-3.84	98.32	6.17	-92.15
5	2440.0	2440.00	2.09	6.24	38.5%	-4.15	2.09	90	120	-95.99	0	0	-4.14	98.08	6.23	-91.85
6	2450.0	2450.00	2.08	6.19	38.8%	-4.12	2.08	90	120	-95.99	0	0	-4.11	98.07	6.19	-91.88
7	2460.0	2460.00	2.29	6.28	39.9%	-3.99	2.29	105	60	-95.99	0	0	-4.04	98.28	6.33	-91.95
8	2470.0	2470.00	2.30	6.14	41.2%	-3.85	2.30	105	60	-95.99	0	0	-4.10	98.29	6.40	-91.88
9	2480.0	2480.00	2.06	5.87	41.6%	-3.81	2.06	105	60	-95.99	0	0	-4.46	98.05	6.52	-91.53
10	2490.0	2490.00	2.18	5.96	41.9%	-3.78	2.18	105	60	-95.99	0	0	-4.53	98.17	6.71	-91.46
11	2500.0	2500.00	2.29	5.86	44.0%	-3.56	2.29	105	60	-95.99	0	0	-4.38	98.28	6.67	-91.61
12	5000.0	5000.00	3.50	5.29	66.3%	-1.78	3.50	105	105	-95.99	0	0	-3.01	99.49	6.52	-92.98
13	5050.0	5050.00	2.76	5.68	51.0%	-2.93	2.76	105	105	-95.99	0	0	-3.94	98.75	6.70	-92.05
14	5100.0	5100.00	4.03	6.64	54.9%	-2.61	4.03	105	90	-95.99	0	0	-3.02	100.02	7.05	-92.97
15	5150.0	5150.00	3.26	6.12	51.8%	-2.86	3.26	105	90	-95.99	0	0	-3.54	99.25	6.80	-92.45
16	5200.0	5200.00	2.62	5.40	52.7%	-2.78	2.62	90	15	-95.99	0	0	-4.06	98.61	6.68	-91.93
17	5250.0	5250.00	3.55	6.14	55.1%	-2.59	3.55	105	120	-95.99	0	0	-3.85	99.54	7.40	-92.14
18	5300.0	5300.00	4.68	6.04	73.0%	-1.36	4.68	105	90	-95.99	0	0	-2.37	100.67	7.05	-93.62
19	5350.0	5350.00	4.47	5.59	77.4%	-1.11	4.47	90	75	-95.99	0	0	-2.33	100.46	6.80	-93.66
20	5400.0	5400.00	4.24	6.26	62.8%	-2.02	4.24	105	90	-95.99	0	0	-2.98	100.23	7.22	-93.01
21	5450.0	5450.00	4.40	6.29	64.7%	-1.89	4.40	105	75	-95.99	0	0	-2.37	100.39	6.77	-93.62
22	5500.0	5500.00	5.63	6.25	86.8%	-0.62	5.63	105	75	-95.99	0	0	-1.38	101.62	7.01	-94.61
23	5550.0	5550.00	4.64	5.94	74.1%	-1.30	4.64	105	75	-95.99	0	0	-2.46	100.63	7.10	-93.53
24	5600.0	5600.00	4.47	5.73	74.9%	-1.26	4.47	105	75	-95.99	0	0	-2.43	100.46	6.91	-93.56
25	5650.0	5650.00	4.90	6.07	76.3%	-1.18	4.90	90	15	-95.99	0	0	-2.10	100.89	7.00	-93.89
26	5700.0	5700.00	4.89	6.22	73.7%	-1.33	4.89	105	60	-95.99	0	0	-2.28	100.88	7.18	-93.71
27	5750.0	5750.00	4.71	6.04	73.5%	-1.34	4.71	90	15	-95.99	0	0	-2.32	100.69	7.03	-93.66
28	5800.0	5800.00	3.54	5.32	66.5%	-1.77	3.54	105	15	-95.99	0	0	-3.15	99.53	6.69	-92.84

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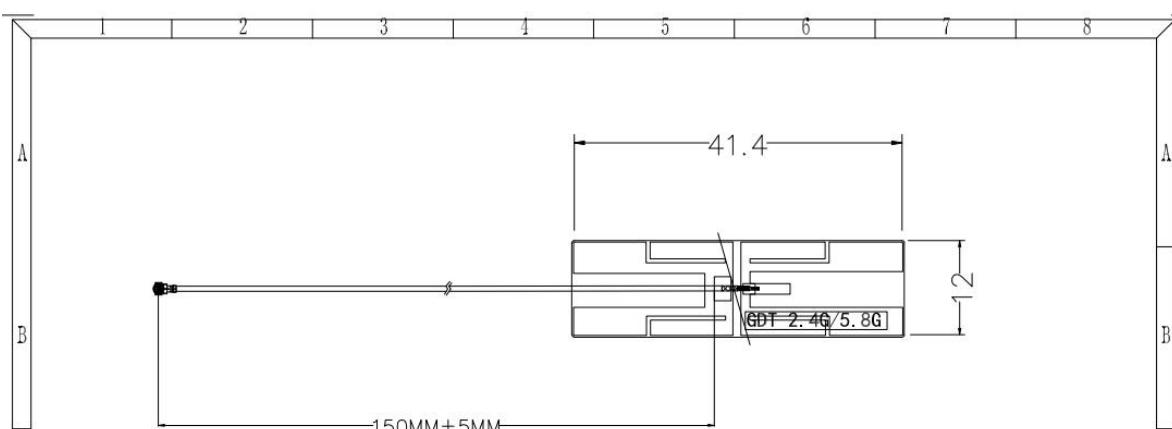
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五、Apple chart



Structural drawings

六



1.1.13 gray, line length 150MM±5MM

2.FPC Length41.4MM±2MM

3.FPC Width12MM±1MM

4. First generation IPFX



Shenzhen Guandetong Electronic Co., Ltd.

◆ 角度		第三角法		机 种	2.4G/5.8G Antenn	日期	2025-05-26	页码	1 of 1		
0~10~	±0.10	○	0.02	品 名		设计	审核	核准			
10~20~	±0.12	○	0.03	料 号	结构						
20~40~	±0.15	±	0.02	材 质				D			
40~	±0.20	○	0.04	接面处理	射频						
请勿使用热风		位置		外观处理		单位	mm	比例	1:1	版本	REV.1
		5			6	7				8	

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七、Environmental performance test

project	Project test conditions	Specifications
Storage environment	<p>The test temperature, humidity and air pressure are as follows when there is no specific condition:</p> <ol style="list-style-type: none"> 1. The temperature is $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 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°C and 40°C , then under normal conditions 1-2H, check the appearance quality.	<p>The size shall meet the requirements and</p> <p>Mechanical and electrical performance</p>
Constant damp heat resistance test	<p>Relative humidity: $95 \pm 3\%$, test temperature: 40°C. After lasting for 2h,</p> <p>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</p> <p>Part 1-2H, check the appearance quality</p>	<p>The size shall meet the requirements and</p> <p>Mechanical and electrical performance</p>
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

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