

# SPECIFICATION

Shenzhen Guandetong Electronic Limited



*Shenzhen Guandetong Electronic Co., Ltd.*

2.4G FPC S1 1.13 black line with 70MM strip terminal

## Product Specification

<b>connection</b>		<b>frequency range</b>	2400-2500MHz
<b>Frequency band wire name</b>		<b>edition</b>	A1
<b>Customer part number</b>		<i>Guandetong</i> <b>part number</b>	
<b>Guandetong No</b>			
<b>R F design</b>	肖彬	<b>RF Manager</b>	刘亮
<b>Structural design</b>	王栋	<b>Structure Manager</b>	王华
<b>Technical Director</b>	叶定坤	<b>Date</b>	2024-6-7

Customer confirmation:

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

# catalogue

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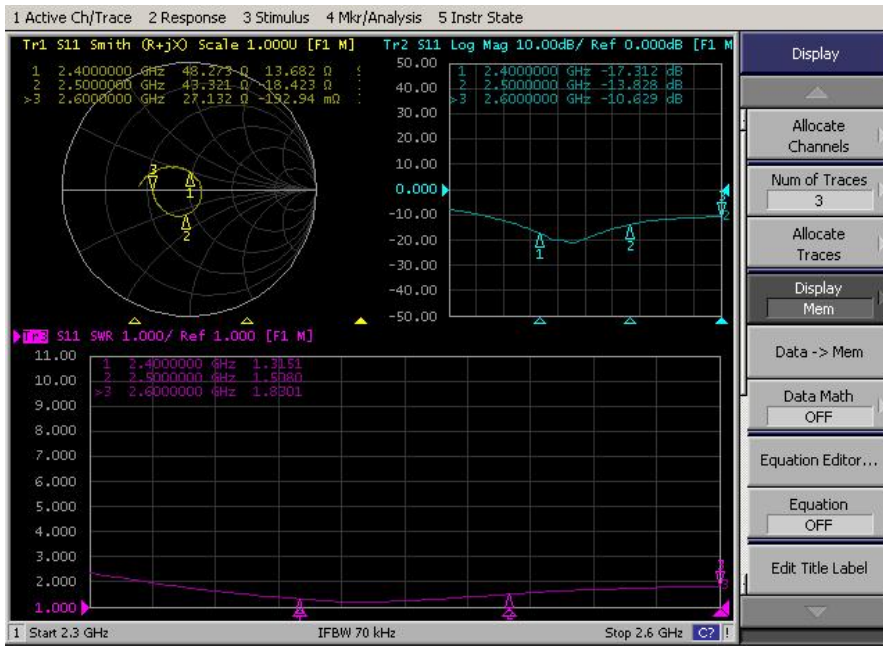
## 一、 Product pictures



## 二、 Product parameters

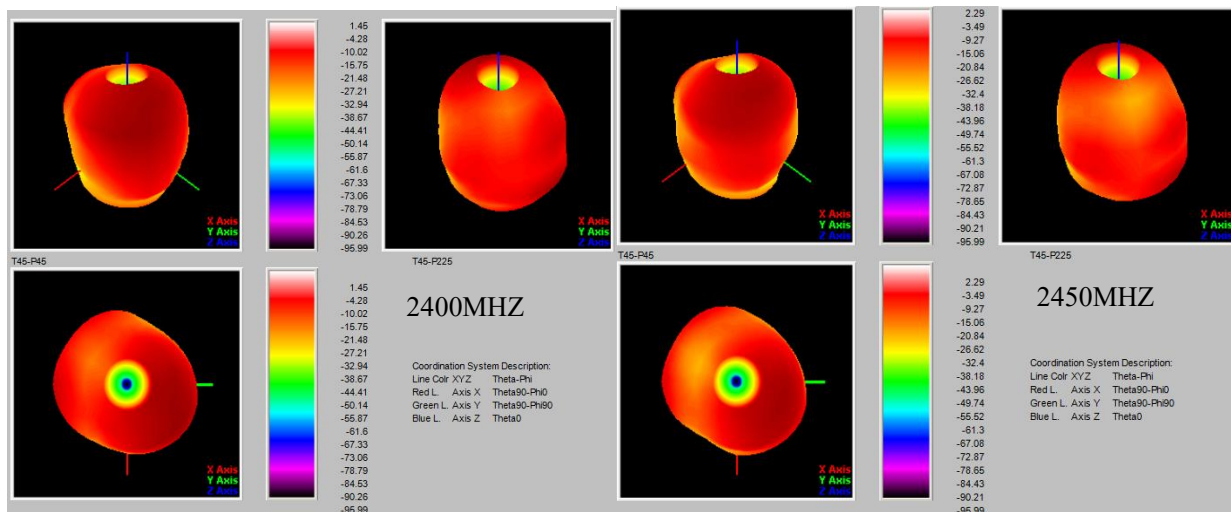
Product testing parameters			
<b>Product name</b>	FPC Antenna	<b>(Model Type)</b>	GDT-S1--70
<b>(Electrical Specifications)</b>			
<b>(Frequency Range)</b>	2400-2500MHz	<b>(Polarization)</b>	perpendicular
<b>(Impedance)</b>	50Ω	<b>Radiation</b>	QXCOMM
<b>(VSWR)</b>	≅ 2.0	<b>(Power)</b>	50W
<b>(Gain)</b>	2.52dBi	<b>(Bandwidth)</b>	100M
<b>(Mechanical Specifications)</b>			
<b>(Dimensions)</b>	32*16±2mm	<b>(Chassis Color)</b>	Black
<b>(Connector)</b>	IPEX generation	<b>(Cable Length)</b>	70±5MM
<b>(Chassis Material)</b>	FPC		
<b>(Working Temperature)</b>	-40℃--+85℃	<b>(Limit Temperature)</b>	-40℃--+85℃

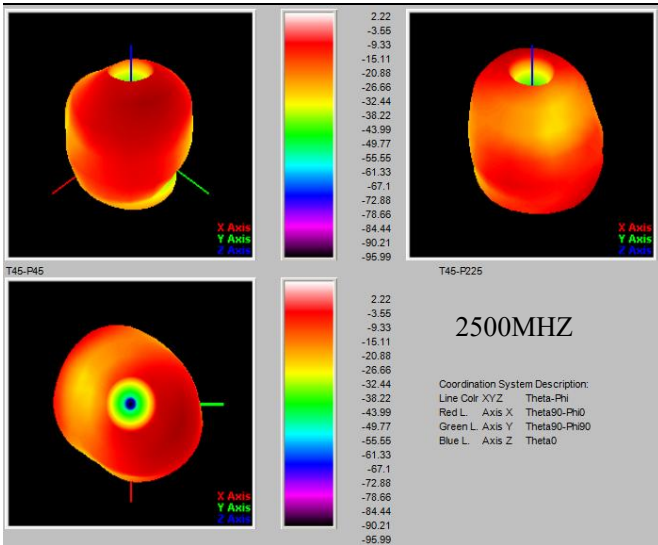
### 三、S11(VSWR、Return、Smith)



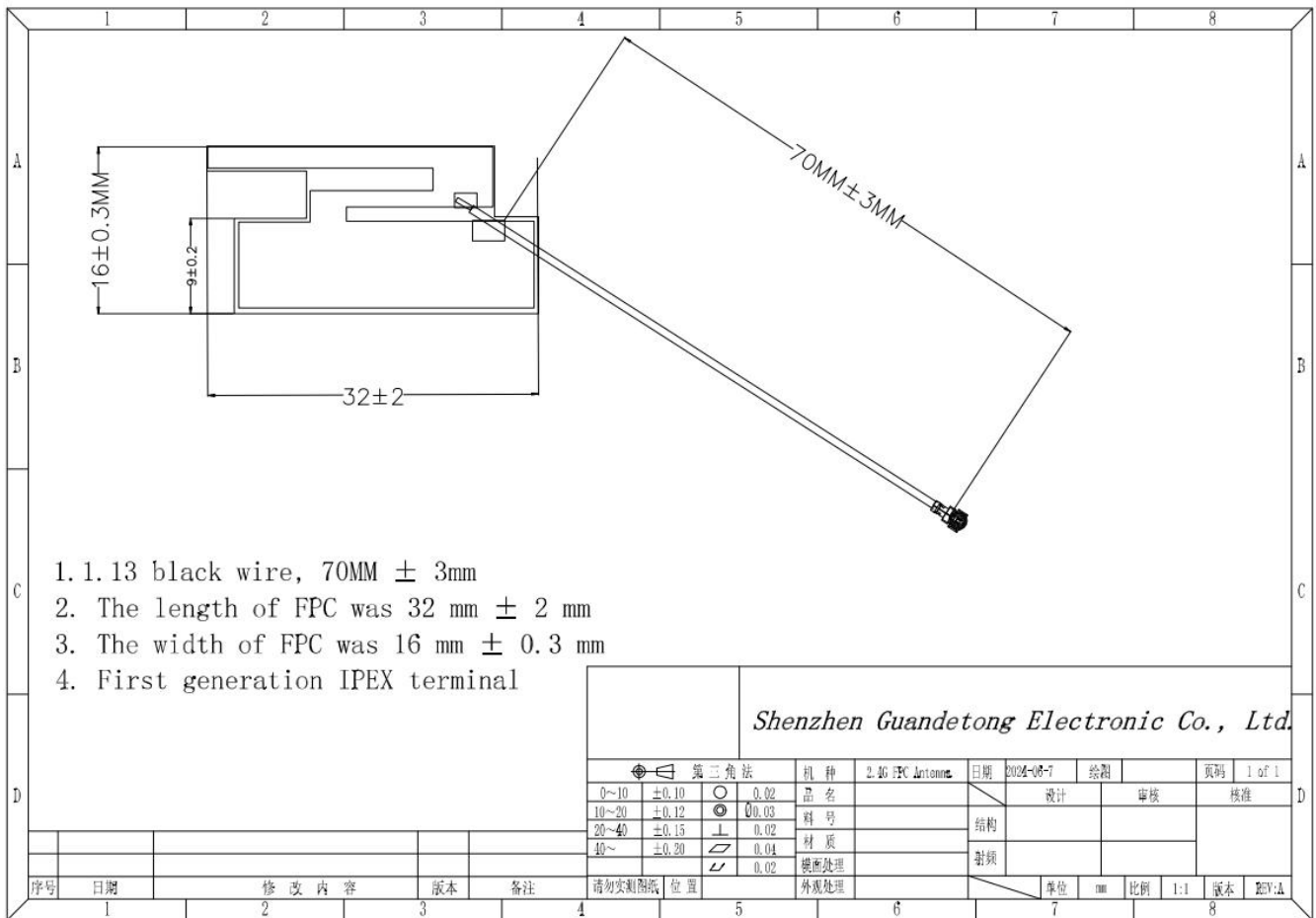
### 四、Antenna gain and efficiency&Apple in 3D

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	1.45	4.34	51.3%	-2.90	1.45	4500	6000	-95.99	0	0	-2.66	97.44	4.11	-93.33
2	2410.0	2410.00	1.66	4.57	51.2%	-2.91	1.66	3000	7500	-95.99	0	0	-2.44	97.65	4.10	-93.55
3	2420.0	2420.00	2.04	4.91	51.6%	-2.87	2.04	3000	6000	-95.99	0	0	-2.15	98.03	4.19	-93.84
4	2430.0	2430.00	2.52	5.09	55.3%	-2.57	2.52	3000	7500	-95.99	0	0	-1.71	98.51	4.23	-94.28
5	2440.0	2440.00	2.29	5.05	53.0%	-2.76	2.29	3000	6000	-95.99	0	0	-1.97	98.28	4.26	-94.02
6	2450.0	2450.00	2.29	5.07	52.7%	-2.78	2.29	3000	6000	-95.99	0	0	-2.02	98.28	4.30	-93.97
7	2460.0	2460.00	2.37	5.11	53.2%	-2.74	2.37	3000	7500	-95.99	0	0	-1.99	98.36	4.36	-94.00
8	2470.0	2470.00	2.41	4.98	55.4%	-2.56	2.41	3000	7500	-95.99	0	0	-2.03	98.40	4.45	-93.96
9	2480.0	2480.00	2.27	4.70	57.2%	-2.43	2.27	3000	7500	-95.99	0	0	-2.29	98.26	4.57	-93.69
10	2490.0	2490.00	2.08	4.55	56.6%	-2.47	2.08	3000	7500	-95.99	0	0	-2.42	98.06	4.49	-93.57
11	2500.0	2500.00	2.22	4.52	59.0%	-2.29	2.22	3000	6000	-95.99	0	0	-2.32	98.21	4.55	-93.67





## 五、 Structural drawings



## 六、 Environmental performance test

project	Project test conditions	Specificati ons
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"> <li>1. The temperature is - 30 °C~+80 °C</li> <li>2. Relative humidity: 45% - 85%</li> <li>3. The air pressure is 86kpa-106kpa</li> </ol>	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.	The size shall meet the requirements and  Mechanical and electrical performance
Constant damp heat resistance test	<p>Relative humidity: <math>95 \pm 3\%</math>, 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>	The size shall meet the requirements and  Mechanical and electrical performance
vibration test	<p>Vibration frequency range: 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude:</p> <p>50.0M/s, frequency sweep cycles: 30 times</p>	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