

SPECIFICATION



Shenzhen Guandetong Electronic Limited

Copper tube antenna 1.13 black line total length 75mm with IPEX terminal (full coverage sleeve) According to 2.4G 5.8G dual band

Product specification

Customers	深圳市丽欧	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	2024-12-09

Customer confirmation:

Whether the Assembly meets your requirements: ☐OK ☐NG

catalogue

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一、 Product pictures



二、 Product parameters

Product test parameters			
(Name)	2.4G/5.8G dual copper tube antenna	(Model Type)	GDT-2.4G-5.8G-75MM
(Electrical Specifications)			
(Frenquency Range)	2400-2500MHz 5150-5800MHZ	(Polarization)	perpendicular
(Impedance)	50 欧	Radiation	QXCOMM
(VSWR)	≤2.0	(Power)	50W
(Gain)	0.65dBi	(Bandwidth	100M
(Mechanical Specifications)			
(Copper tube dimensions)	24.5*4.4*75MM	(Chassis Color)	black
(Connector)	IPEX	(Cable Length)	75±2mm
(Chassis Material)	copper tube	(Wire specifications and colors)	1.13 black
(Working Temperature)	-40℃--+85℃	(Limit Temperature)	-40℃--+85℃

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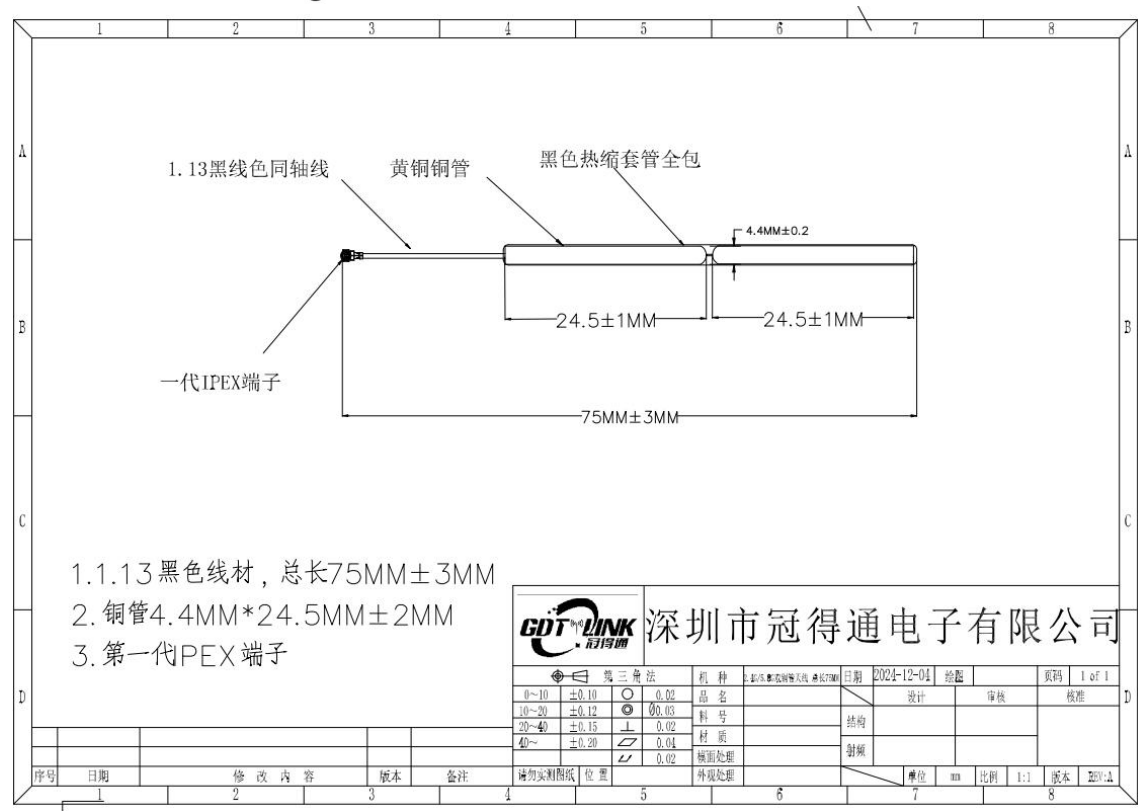
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三、S11(VSWR/Return/Smith



四、Structural drawings



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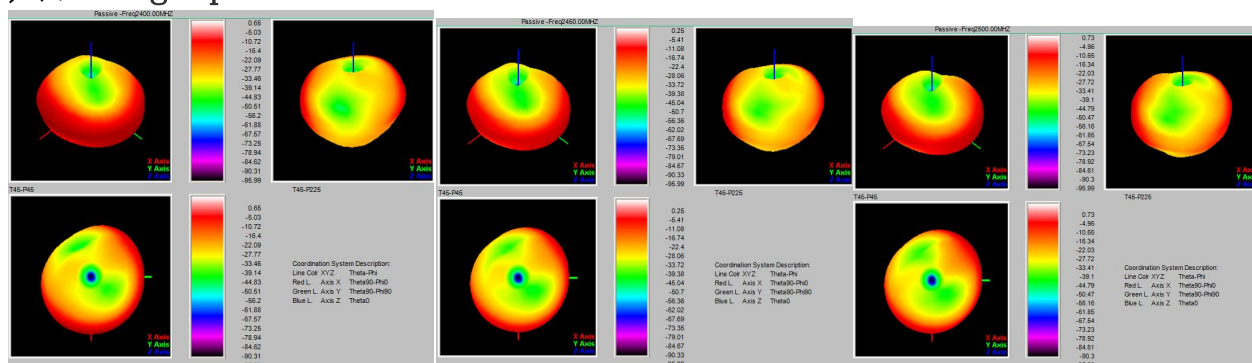
<http://www.szgdtrf.com>

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五、Antenna gain and efficiency

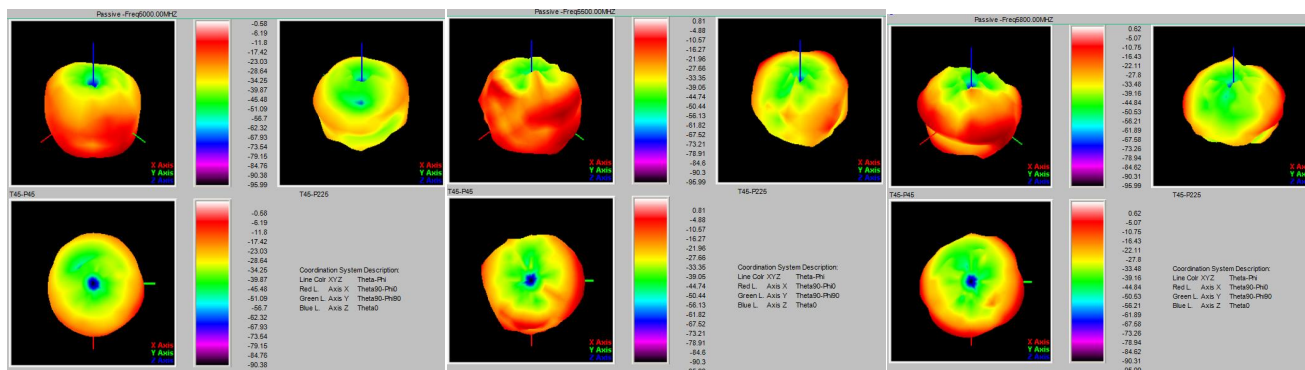
Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dB)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	2400.0	2400.00	0.65	4.96	37.1%	-4.31	0.65	7500	0	-95.99	0	0	-5.41	96.64	6.06	-90.58
2	2410.0	2410.00	0.44	4.86	36.1%	-4.42	0.44	7500	0	-95.99	0	0	-5.49	96.43	5.94	-90.50
3	2420.0	2420.00	0.02	4.70	34.1%	-4.67	0.02	7500	0	-95.99	0	0	-5.72	96.01	5.75	-90.27
4	2430.0	2430.00	0.26	4.73	35.7%	-4.47	0.26	9000	12000	-95.99	0	0	-5.52	96.25	5.78	-90.47
5	2440.0	2440.00	0.35	4.89	35.2%	-4.54	0.35	9000	13500	-95.99	0	0	-5.61	96.34	5.97	-90.38
6	2450.0	2450.00	0.25	4.98	33.7%	-4.73	0.25	9000	13500	-95.99	0	0	-5.82	96.24	6.06	-90.17
7	2460.0	2460.00	0.12	5.07	32.0%	-4.95	0.12	9000	13500	-95.99	0	0	-6.05	96.11	6.17	-89.94
8	2470.0	2470.00	0.20	5.10	32.3%	-4.90	0.20	9000	13500	-95.99	0	0	-6.00	96.18	6.20	-89.99
9	2480.0	2480.00	0.40	5.11	33.8%	-4.71	0.40	9000	13500	-95.99	0	0	-5.80	96.39	6.20	-90.19
10	2490.0	2490.00	0.60	5.16	35.0%	-4.56	0.60	9000	13500	-95.99	0	0	-5.65	96.59	6.25	-90.34
11	2500.0	2500.00	0.73	5.23	35.5%	-4.50	0.73	9000	13500	-95.99	0	0	-5.59	96.72	6.32	-90.40
12	5000.0	5000.00	-0.58	6.25	20.8%	-6.83	-0.58	10500	7500	-95.99	0	0	-8.10	95.41	7.52	-87.89
13	5020.0	5020.00	-0.20	6.03	23.8%	-6.24	-0.20	10500	7500	-95.99	0	0	-7.52	95.79	7.32	-88.47
14	5040.0	5040.00	-0.11	5.86	25.3%	-5.97	-0.11	10500	7500	-95.99	0	0	-7.25	95.88	7.15	-88.74
15	5060.0	5060.00	0.24	6.07	26.1%	-5.83	0.24	10500	7500	-95.99	0	0	-7.13	96.22	7.36	-88.86
16	5080.0	5080.00	0.14	5.76	27.4%	-5.62	0.14	10500	7500	-95.99	0	0	-6.91	96.13	7.06	-89.08
17	5100.0	5100.00	0.44	6.09	27.2%	-5.66	0.44	10500	7500	-95.99	0	0	-6.96	96.43	7.40	-89.03
18	5120.0	5120.00	0.55	6.33	26.4%	-5.78	0.55	10500	7500	-95.99	0	0	-7.07	96.54	7.62	-88.92
19	5140.0	5140.00	0.58	6.43	26.0%	-5.86	0.58	10500	7500	-95.99	0	0	-7.12	96.57	7.70	-88.87
20	5160.0	5160.00	0.68	5.89	30.2%	-5.21	0.68	10500	7500	-95.99	0	0	-6.42	96.67	7.10	-89.57
21	5180.0	5180.00	1.40	6.15	33.5%	-4.75	1.40	10500	7500	-95.99	0	0	-5.94	97.39	7.34	-90.05
22	5200.0	5200.00	0.80	6.11	29.5%	-5.30	0.80	10500	9000	-95.99	0	0	-6.44	96.79	7.24	-89.55
23	5220.0	5220.00	0.96	6.51	27.8%	-5.55	0.96	10500	7500	-95.99	0	0	-6.61	96.95	7.57	-89.38
24	5240.0	5240.00	1.09	6.82	26.7%	-5.73	1.09	10500	7500	-95.99	0	0	-6.72	97.08	7.81	-89.27
25	5260.0	5260.00	1.08	7.01	25.5%	-5.94	1.08	10500	7500	-95.99	0	0	-6.82	97.07	7.90	-89.17
26	5280.0	5280.00	0.48	6.26	26.4%	-5.78	0.48	10500	7500	-95.99	0	0	-6.63	96.47	7.11	-89.36
27	5300.0	5300.00	0.51	5.89	29.0%	-5.38	0.51	10500	7500	-95.99	0	0	-6.19	96.50	6.71	-89.79
28	5320.0	5320.00	0.57	5.83	29.8%	-5.25	0.57	10500	7500	-95.99	0	0	-6.08	96.56	6.86	-89.91
29	5340.0	5340.00	-0.02	5.51	27.9%	-5.54	-0.02	12000	7500	-95.99	0	0	-6.39	95.97	6.36	-89.60
30	5360.0	5360.00	0.23	6.18	25.4%	-5.95	0.23	10500	9000	-95.99	0	0	-6.81	96.22	7.04	-89.18
31	5380.0	5380.00	-0.42	5.83	23.7%	-6.25	-0.42	12000	9000	-95.99	0	0	-7.17	95.57	6.75	-88.82
32	5400.0	5400.00	0.47	6.12	27.2%	-5.66	0.47	12000	7500	-95.99	0	0	-6.60	96.46	7.07	-89.39
33	5420.0	5420.00	0.46	5.69	30.0%	-5.23	0.46	4500	0	-95.99	0	0	-6.21	96.45	6.67	-89.78
34	5440.0	5440.00	1.25	6.04	33.2%	-4.79	1.25	12000	7500	-95.99	0	0	-5.79	97.24	7.04	-90.20
35	5460.0	5460.00	0.99	6.46	28.4%	-5.47	0.99	12000	7500	-95.99	0	0	-6.51	96.98	7.50	-89.48
36	5480.0	5480.00	-0.40	5.27	27.1%	-5.66	-0.40	12000	9000	-95.99	0	0	-6.73	95.59	6.33	-89.26
37	5500.0	5500.00	0.81	5.62	33.1%	-4.80	0.81	12000	7500	-95.99	0	0	-5.88	96.80	6.70	-90.11
38	5520.0	5520.00	1.13	6.00	32.6%	-4.87	1.13	12000	7500	-95.99	0	0	-5.97	97.12	7.09	-90.02
39	5540.0	5540.00	0.61	5.72	30.9%	-5.10	0.61	9000	9000	-95.99	0	0	-6.22	96.60	6.83	-89.77
40	5560.0	5560.00	-0.06	4.99	31.3%	-5.05	-0.06	9000	9000	-95.99	0	0	-6.23	95.93	6.17	-89.76
41	5580.0	5580.00	0.85	5.42	34.9%	-4.57	0.85	9000	9000	-95.99	0	0	-5.79	96.84	6.63	-90.20
42	5600.0	5600.00	0.56	5.18	34.5%	-4.63	0.56	9000	7500	-95.99	0	0	-5.87	96.55	6.43	-90.12
43	5620.0	5620.00	0.39	5.22	32.9%	-4.82	0.39	9000	7500	-95.99	0	0	-6.03	96.38	6.42	-89.96
44	5640.0	5640.00	0.44	5.58	30.7%	-5.13	0.44	9000	9000	-95.99	0	0	-6.35	96.43	6.79	-89.64
45	5660.0	5660.00	0.01	4.99	31.8%	-4.98	0.01	7500	9000	-95.99	0	0	-6.22	96.00	6.23	-89.77
46	5680.0	5680.00	0.44	5.53	30.9%	-5.10	0.44	9000	9000	-95.99	0	0	-6.33	96.42	6.76	-89.66
47	5700.0	5700.00	0.34	5.71	29.0%	-5.38	0.34	7500	6000	-95.99	0	0	-6.59	96.32	6.92	-89.40
48	5720.0	5720.00	0.86	6.08	30.1%	-5.22	0.86	9000	7500	-95.99	0	0	-6.48	96.85	7.34	-89.51
49	5740.0	5740.00	0.73	6.05	29.4%	-5.32	0.73	7500	7500	-95.99	0	0	-6.59	96.72	7.32	-89.40
50	5760.0	5760.00	1.13	5.85	33.7%	-4.73	1.13	10500	0	-95.99	0	0	-5.98	97.12	7.11	-90.00
51	5780.0	5780.00	1.36	5.89	35.3%	-4.53	1.36	7500	7500	-95.99	0	0	-5.78	97.35	7.14	-90.21
52	5800.0	5800.00	0.62	6.06	28.5%	-5.45	0.62	7500	6000	-95.99	0	0	-6.68	96.61	7.30	-89.31

六、3D graph



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七、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 $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 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.	The size shall meet the requirements and Mechanical and electrical performance
Constant damp heat resistance test	Relative humidity: $95 \pm 3\%$, test temperature: 40°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

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