

SPECIFICATION

Shenzhen Guandetong Electronic Limited



深圳市冠得通电子有限公司

*Shenzhen Guandetong Electronic Co., Ltd.*2.4 G/5.8G 3DB ultrasonic antenna 1.13 gray wire length 180MM band terminal

Product Specification

connection		frequency range	2400-2500MHz 5200-5800MHZ
Frequency band wire name		edition	A1
Customer part number		Guandetong part number	
Guandeton g No			
R F design	Xiao Bin	RF Manager	Liu Liang
Structural design	Wang Dong	Structure Manager	Wang Hua
Technical Director	Ye Ding kun	Date	2024-7-2

Customer confirmation:

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

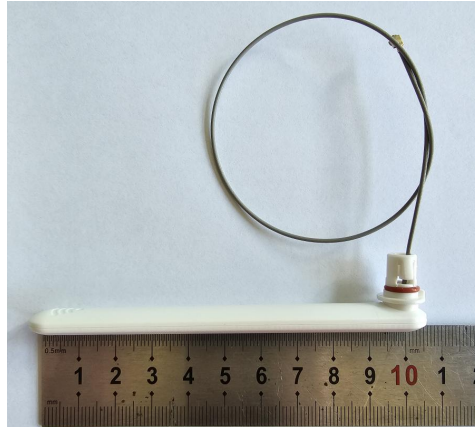
catalogue

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一、 Product pictures



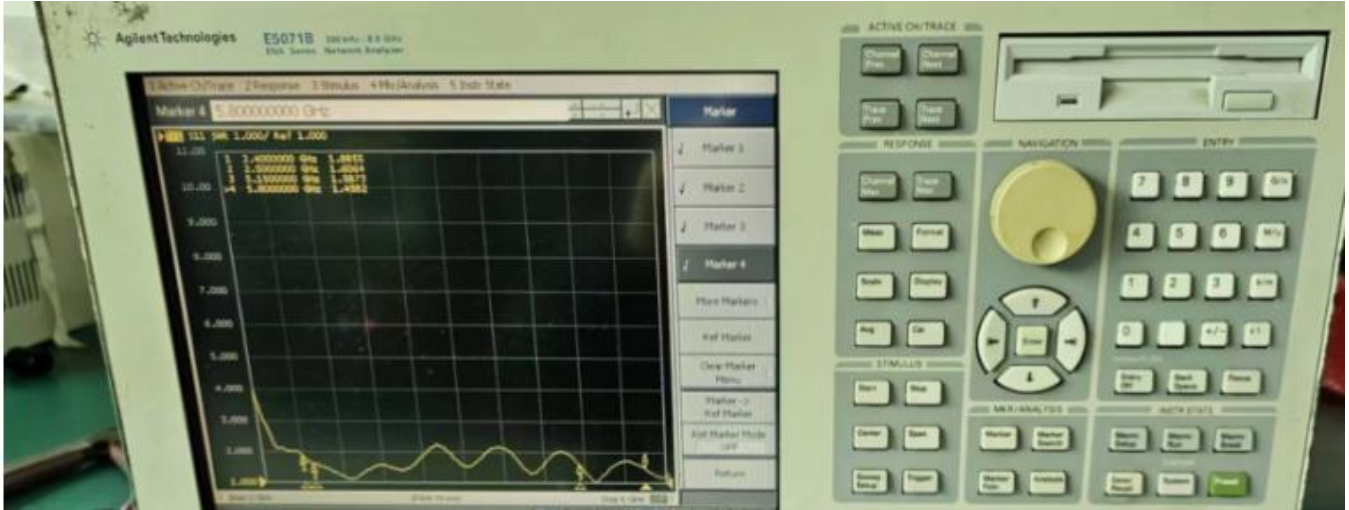
二、 Product parameters

Product testing parameters			
Product name	2.4 g/5.8 g antenna	(Model Type)	GDT-P2.4-5.8-L180
(Electrical Specifications)			
(Frequency Range)	2400-2500MHz 5200-5800MHz	(Polarization)	perpendicular
(Impedance)	50Ω	Radiation	QXCOMM
(VSWR)	≤2.0	(Power)	50W
(Gain)	2.9dBi for 2.4G	(Bandwidth)	100M
(Mechanical Specifications)			
(Dimensions)	104.99*11.95-+0.3mm	(Chassis Color)	White
(Connector)	IPEX	(Cable Length)	180±5MM
(Chassis Material)	ABS		
(Working Temperature)	-40℃-+85℃	(Limit Temperature)	-40℃-+85℃

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三、S11(VSWR、Return、Smith)



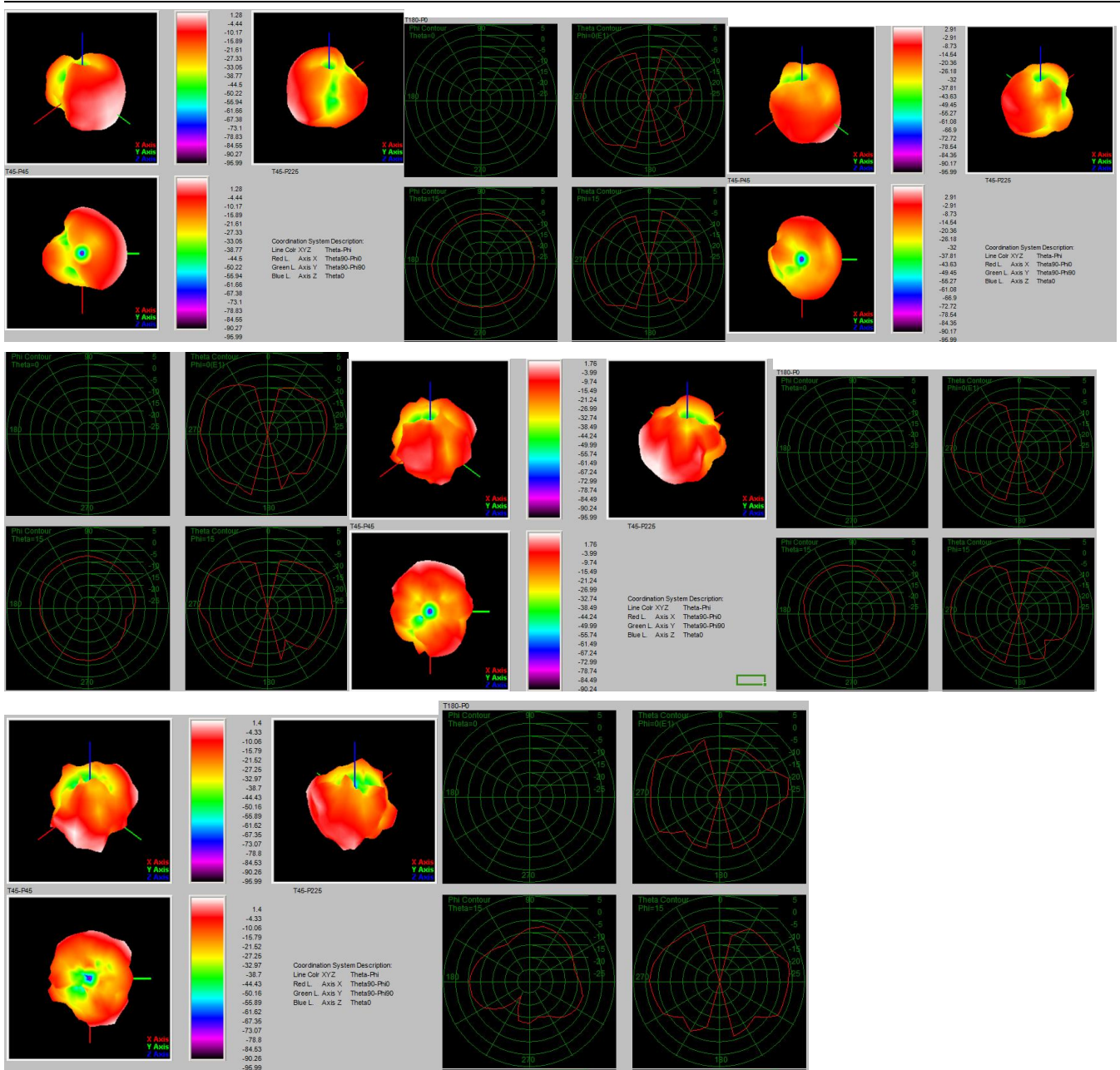
四、Antenna gain and efficiency&Apple in 3D

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBm)	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	1.28	5.27	39.9%	-3.99	1.28	105	90	-95.99	0	0	-4.49	97.27	5.76	-91.50
2	2410.0	2410.00	1.51	5.55	39.5%	-4.04	1.51	105	90	-95.99	0	0	-4.32	97.50	5.84	-91.66
3	2420.0	2420.00	2.02	5.92	40.8%	-3.89	2.02	105	90	-95.99	0	0	-3.93	98.01	5.96	-92.06
4	2430.0	2430.00	2.56	6.24	42.9%	-3.67	2.56	105	90	-95.99	0	0	-3.57	98.55	6.14	-92.42
5	2440.0	2440.00	2.51	6.36	41.2%	-3.85	2.51	105	90	-95.99	0	0	-3.82	98.50	6.33	-92.17
6	2450.0	2450.00	2.63	6.46	41.4%	-3.84	2.63	105	90	-95.99	0	0	-3.81	98.62	6.44	-92.18
7	2460.0	2460.00	2.84	6.64	42.7%	-3.70	2.84	105	90	-95.99	0	0	-3.67	98.83	6.51	-92.32
8	2470.0	2470.00	2.90	6.68	43.0%	-3.66	2.90	120	105	-95.99	0	0	-3.61	98.89	6.70	-92.18
9	2480.0	2480.00	2.73	6.51	41.9%	-3.78	2.73	120	90	-95.99	0	0	-4.25	98.72	6.99	-91.73
10	2490.0	2490.00	2.81	6.72	40.8%	-3.91	2.81	120	90	-95.99	0	0	-4.43	98.80	7.25	-91.56
11	2500.0	2500.00	2.91	6.64	42.3%	-3.74	2.91	120	90	-95.99	0	0	-4.31	98.90	7.22	-91.68
12	5000.0	5000.00	1.37	5.92	35.1%	-4.54	1.37	90	195	-95.99	0	0	-5.61	97.38	6.98	-90.38
13	5020.0	5020.00	1.29	5.73	36.0%	-4.44	1.29	90	195	-95.99	0	0	-5.57	97.28	6.86	-90.42
14	5040.0	5040.00	1.38	5.76	36.5%	-4.38	1.38	90	195	-95.99	0	0	-5.40	97.37	6.78	-90.59
15	5060.0	5060.00	1.80	6.00	38.0%	-4.20	1.80	90	195	-95.99	0	0	-4.96	97.79	6.76	-91.03
16	5080.0	5080.00	1.90	6.46	35.0%	-4.56	1.90	90	195	-95.99	0	0	-5.06	97.89	6.96	-90.93
17	5100.0	5100.00	2.66	6.79	38.8%	-4.14	2.66	90	195	-95.99	0	0	-4.42	98.65	7.08	-91.57
18	5120.0	5120.00	2.04	6.43	36.4%	-4.39	2.04	90	195	-95.99	0	0	-4.85	98.03	6.90	-91.13
19	5140.0	5140.00	2.01	6.44	36.0%	-4.43	2.01	90	195	-95.99	0	0	-4.85	98.00	6.85	-91.14
20	5160.0	5160.00	1.85	6.27	36.2%	-4.42	1.85	90	165	-95.99	0	0	-5.05	97.84	6.91	-90.94
21	5180.0	5180.00	1.76	6.04	37.4%	-4.28	1.76	90	165	-95.99	0	0	-4.99	97.75	6.75	-91.00
22	5200.0	5200.00	1.63	5.49	41.1%	-3.86	1.63	75	195	-95.99	0	0	-4.97	97.62	6.59	-91.02
23	5220.0	5220.00	1.46	5.65	38.0%	-4.20	1.46	75	195	-95.99	0	0	-5.44	97.45	6.89	-90.55
24	5240.0	5240.00	1.98	5.92	40.3%	-3.94	1.98	75	195	-95.99	0	0	-5.15	97.97	7.13	-90.84
25	5260.0	5260.00	1.96	6.34	36.5%	-4.38	1.96	75	195	-95.99	0	0	-5.21	97.95	7.17	-90.78
26	5280.0	5280.00	1.92	6.38	35.8%	-4.46	1.92	75	195	-95.99	0	0	-5.26	97.91	7.18	-90.73
27	5300.0	5300.00	1.56	6.25	34.0%	-4.69	1.56	75	195	-95.99	0	0	-5.43	97.55	6.99	-90.56
28	5320.0	5320.00	1.56	5.79	37.8%	-4.23	1.56	75	195	-95.99	0	0	-5.30	97.55	6.86	-90.69
29	5340.0	5340.00	1.22	5.62	36.3%	-4.40	1.22	75	195	-95.99	0	0	-5.37	97.21	6.59	-90.62
30	5360.0	5360.00	1.29	5.62	36.9%	-4.34	1.29	75	150	-95.99	0	0	-5.30	97.28	6.58	-90.69
31	5380.0	5380.00	1.54	5.80	37.5%	-4.26	1.54	75	150	-95.99	0	0	-5.05	97.53	6.59	-90.94
32	5400.0	5400.00	1.55	5.78	37.8%	-4.22	1.55	75	150	-95.99	0	0	-4.92	97.54	6.48	-91.07
33	5420.0	5420.00	2.10	6.20	38.9%	-4.10	2.10	90	210	-95.99	0	0	-4.51	98.09	6.61	-91.48
34	5440.0	5440.00	2.22	6.26	39.5%	-4.04	2.22	75	150	-95.99	0	0	-4.34	98.21	6.56	-91.65
35	5460.0	5460.00	2.78	6.56	41.9%	-3.77	2.78	75	150	-95.99	0	0	-4.00	98.77	6.78	-91.99
36	5480.0	5480.00	2.66	6.42	42.0%	-3.76	2.66	75	150	-95.99	0	0	-4.22	98.65	6.88	-91.77
37	5500.0	5500.00	2.79	6.25	45.0%	-3.47	2.79	75	150	-95.99	0	0	-4.02	98.78	6.80	-91.97
38	5520.0	5520.00	2.20	5.71	44.8%	-3.51	2.20	75	150	-95.99	0	0	-4.31	98.19	6.52	-91.67
39	5540.0	5540.00	1.76	5.70	40.4%	-3.94	1.76	75	210	-95.99	0	0	-4.83	97.75	6.59	-91.16
40	5560.0	5560.00	1.61	5.53	40.5%	-3.93	1.61	75	210	-95.99	0	0	-4.92	97.60	6.52	-91.07
41	5580.0	5580.00	1.46	5.77	37.0%	-4.32	1.46	105	210	-95.99	0	0	-5.15	97.45	6.61	-90.84
42	5600.0	5600.00	1.16	5.82	34.2%	-4.66	1.16	105	210	-95.99	0	0	-5.66	97.15	6.82	-90.33
43	5620.0	5620.00	1.14	6.14	31.6%	-5.00	1.14	105	210	-95.99	0	0	-5.78	97.13	6.92	-90.21
44	5640.0	5640.00	1.59	6.12	35.3%	-4.52	1.59	105	210	-95.99	0	0	-5.27	97.58	6.86	-90.72
45	5660.0	5660.00	1.25	5.81	34.9%	-4.57	1.25	75	30	-95.99	0	0	-5.40	97.24	6.64	-90.59
46	5680.0	5680.00	1.14	5.68	35.1%	-4.54	1.14	75	30	-95.99	0	0	-5.61	97.13	6.75	-90.38
47	5700.0	5700.00	1.24	5.84	34.7%	-4.60	1.24	75	30	-95.99	0	0	-5.47	97.23	6.71	-90.52
48	5720.0	5720.00	2.19	6.14	40.2%	-3.95	2.19	75	30	-95.99	0	0	-4.70	98.18	6.89	-91.29
49	5740.0	5740.00	2.12	6.02	40.7%	-3.90	2.12	75	30	-95.99	0	0	-4.76	98.11	6.89	-91.23
50	5760.0	5760.00	2.07	5.98	40.5%	-3.91	2.07	75	30	-95.99	0	0	-4.81	98.08	6.88	-91.18
51	5780.0	5780.00	1.88	5.94	39.3%	-4.06	1.88	75	30	-95.99	0	0	-5.00	97.87	6.88	-90.99
52	5800.0	5800.00	1.40	5.64	37.7%	-4.24	1.40	120	60	-95.99	0	0	-5.51	97.39	6.91	-90.48

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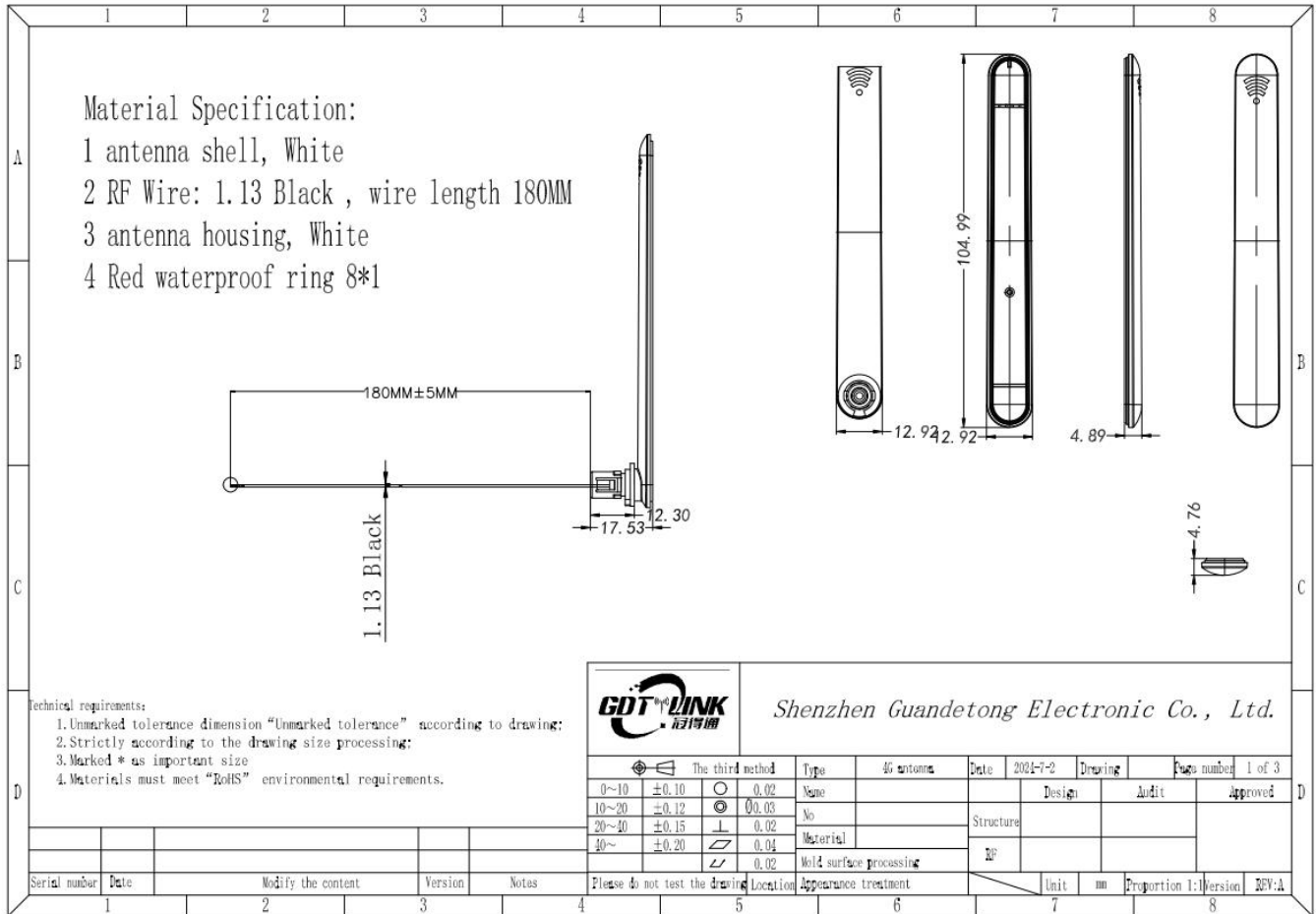
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五、Structural drawings



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 °C~+80 °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

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		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

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