

SPECIFICATION

Shenzhen Guandetong Electronic Limited



深圳市冠得通电子有限公司

Shenzhen Guandetong Electronic Co., Ltd.

Antenna/external/integrated antenna/2.4 G, 5G dual-band
antenna/line length 80MM with IPEX terminal

Product Specification

connection	深圳市创泽视	frequency range	2400-2500MHz 5200-5800MHZ
Frequency band wire name		edition	A1
Customer part number		Guandetong part number	
Guandeton g No			
R F design	肖彬	RF Manager	刘亮
Structural design	王栋	Structure Manager	王华
Technical Director	叶定坤	Date	2024-11-19

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/5.8G Ultrasonic antenna	(Model Type)	GDT-P2.4-5.8-L80
(Electrical Specifications)			
(Frequency Range)	2400-2500MHz 5200-5800MHz	(Polarization)	perpendicular
(Impedance)	50 欧	Radiation	Omnidirectional
(VSWR)	≤ 2.0	(Power)	50W
(Gain)	2.60dBi (2400-2500MHz) 5.83dBi (5200-5800MHz)	(Bandwidth)	100M
(Mechanical Specifications)			
(Dimensions)	56.5-+0.5mm	(Chassis Color)	White
(Connector)	IPEX	(Cable Length)	80±3MM
(Chassis Material)	ABS		
(Working Temperature)	-40℃-+85℃	(Limit Temperature)	-40℃-+85℃

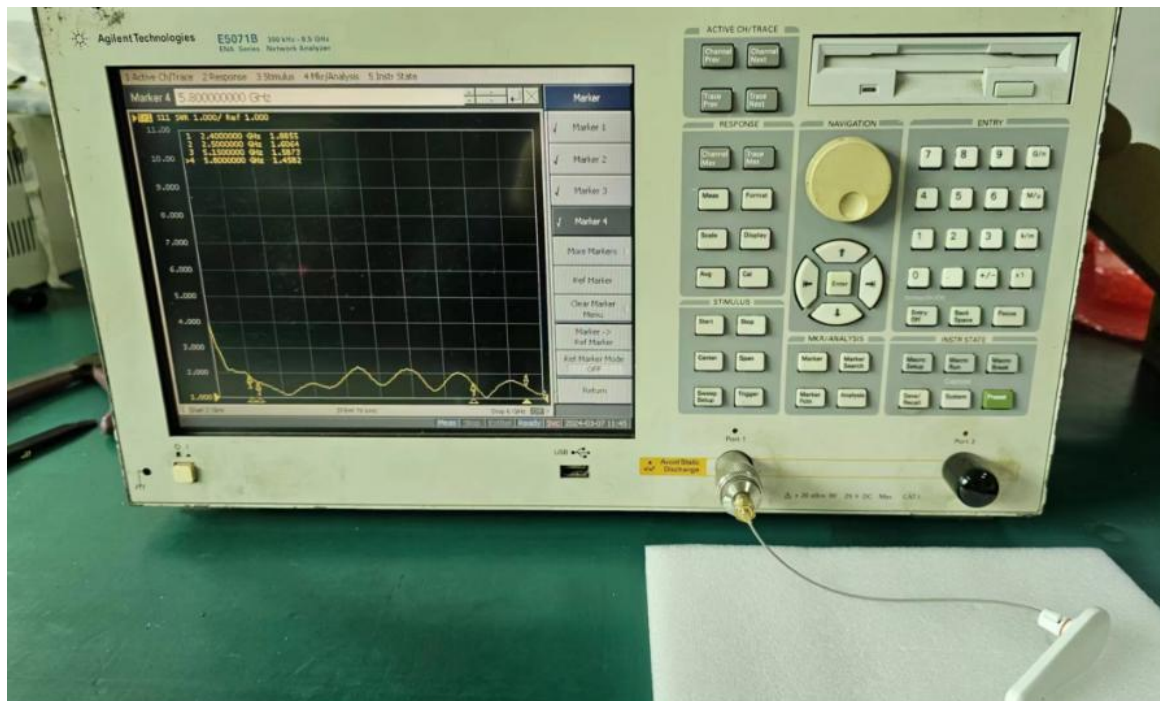
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三、S11(VSWR、Return、Smith)数据



四、Antenna gain and efficiency&Apple in 3D

FETUKE11																					
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	5200.0	5220.0	5240.0	5260.0	5280.0	5300.0	5320.0	5340.0	5360.0	5380.0
Point Values																					
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-3.10	-3.17	-2.95	-2.58	-2.86	-2.84	-2.69	-2.59	-2.42	-2.56	-2.33	-3.24	-3.71	-3.11	-3.07	-2.81	-2.45	-1.96	-2.20	-2.18	-2.58
Peak EIRP (dBm)	1.33	1.52	2.05	2.60	2.13	2.15	2.23	2.05	1.82	1.39	1.42	2.16	1.42	2.88	3.16	3.44	3.95	3.90	4.36	4.63	3.78
Directivity (dB)	4.43	4.69	5.00	5.18	4.99	4.99	4.91	4.64	4.23	3.96	3.75	5.40	5.13	5.98	6.24	6.25	6.40	5.86	6.56	6.81	6.36
Efficiency (dB)	-3.10	-3.17	-2.95	-2.58	-2.86	-2.84	-2.69	-2.59	-2.42	-2.56	-2.33	-3.24	-3.71	-3.11	-3.07	-2.81	-2.45	-1.96	-2.20	-2.18	-2.58
Efficiency (%)	49.00	48.20	50.70	55.20	51.80	52.00	53.90	55.10	57.30	55.50	58.50	47.40	42.50	48.90	49.30	52.40	56.90	63.70	60.30	60.50	55.30
Gain (dB)	1.33	1.52	2.05	2.60	2.13	2.15	2.23	2.05	1.82	1.39	1.42	2.16	1.42	2.88	3.16	3.44	3.95	3.90	4.36	4.63	3.78
NIHPRP ±Pi/4 (dBm)	-4.11	-3.94	-3.45	-2.92	-3.27	-3.26	-3.13	-3.25	-3.45	-3.69	-3.52	-5.31	-5.87	-5.27	-4.88	-4.53	-4.12	-3.94	-4.15	-4.11	-4.20
NIHPRP ±Pi/6 (dBm)	-5.80	-5.65	-5.16	-4.66	-5.04	-5.00	-4.87	-4.97	-5.16	-5.41	-5.23	-7.09	-7.64	-7.07	-6.75	-6.40	-5.94	-5.71	-5.91	-5.86	-5.98
NIHPRP ±Pi/8 (dBm)	-7.06	-6.92	-6.46	-5.98	-6.40	-6.37	-6.25	-6.35	-6.54	-6.82	-6.66	-8.30	-8.83	-8.32	-8.08	-7.82	-7.28	-6.95	-7.10	-6.96	-7.28
Upper Hem. PRP (dBm)	-5.98	-6.09	-5.92	-5.59	-5.91	-5.91	-5.78	-5.72	-5.58	-5.79	-5.59	-6.40	-6.86	-6.18	-6.24	-5.90	-5.51	-4.91	-5.21	-5.18	-5.49
Lower Hem. PRP (dBm)	-6.24	-6.27	-6.00	-5.58	-5.83	-5.79	-5.62	-5.49	-5.28	-5.37	-5.10	-6.11	-6.59	-6.06	-5.93	-5.74	-5.41	-5.03	-5.21	-5.21	-5.68
Upper Hem. PRP (%)	25.21	24.58	25.60	27.59	25.65	25.62	26.43	26.81	27.67	26.39	27.61	22.90	20.62	24.13	23.76	25.68	28.15	32.29	30.12	30.36	28.24
Lower Hem. PRP (%)	23.76	23.60	25.11	27.64	26.14	26.34	27.43	28.24	29.65	29.06	30.89	24.52	21.92	24.77	25.51	26.68	28.75	31.42	30.15	30.12	27.02

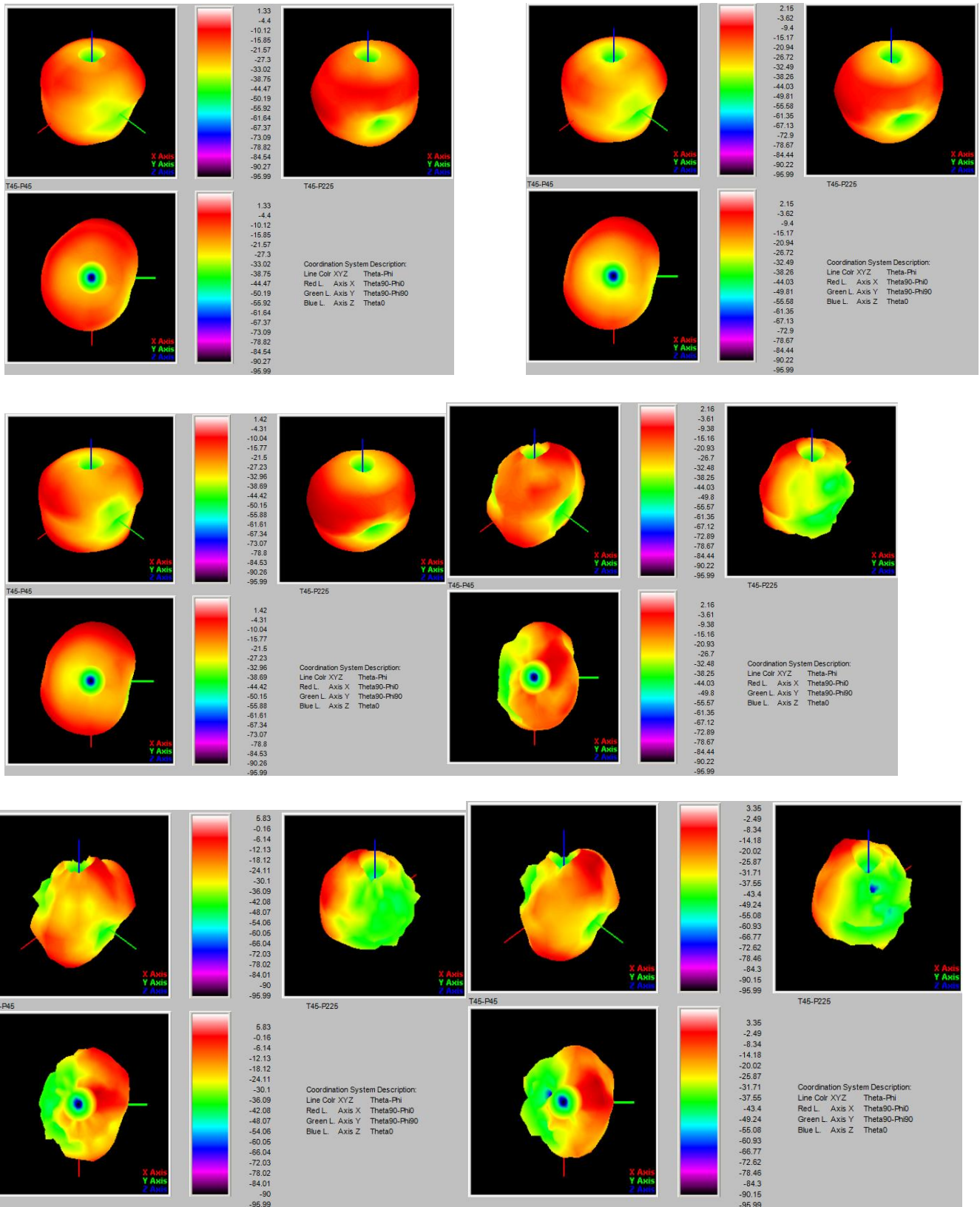
22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
5400.0	5420.0	5440.0	5460.0	5480.0	5500.0	5520.0	5540.0	5560.0	5580.0	5600.0	5620.0	5640.0	5660.0	5680.0	5700.0	5720.0	5740.0	5760.0	5780.0	5800.0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-2.53	-2.83	-2.69	-2.66	-2.57	-1.75	-1.74	-2.65	-2.75	-2.40	-2.29	-2.36	-2.05	-1.94	-1.80	-2.13	-2.10	-2.07	-2.20	-2.43	-3.05
4.14	4.06	4.62	4.46	5.19	5.83	5.43	4.15	4.13	4.05	3.93	3.88	4.12	4.56	4.14	3.69	4.72	4.42	4.07	4.05	3.35
6.67	6.88	7.31	7.12	7.75	7.59	7.17	6.80	6.88	6.45	6.21	6.24	6.17	6.50	5.94	5.82	6.82	6.48	6.27	6.48	6.40
-2.53	-2.83	-2.69	-2.66	-2.57	-1.75	-1.74	-2.65	-2.75	-2.40	-2.29	-2.36	-2.05	-1.94	-1.80	-2.13	-2.10	-2.07	-2.20	-2.43	-3.05
55.80	52.20	53.90	54.10	55.40	66.80	67.00	54.30	53.00	57.50	59.10	58.10	62.40	64.00	66.10	61.30	61.70	62.10	60.30	57.10	49.50
4.14	4.06	4.62	4.46	5.19	5.83	5.43	4.15	4.13	4.05	3.93	3.88	4.12	4.56	4.14	3.69	4.72	4.42	4.07	4.05	3.35
-4.06	-4.00	-3.84	-3.64	-3.79	-2.98	-3.20	-4.25	-4.43	-3.93	-3.95	-3.79	-3.43	-3.37	-3.52	-3.60	-3.41	-3.52	-3.65	-3.95	-4.91
-5.84	-5.80	-5.57	-5.35	-5.63	-4.76	-5.04	-6.07	-6.24	-5.75	-5.77	-5.58	-5.13	-5.06	-5.33	-5.39	-5.18	-5.31	-5.36	-5.62	-6.68
-7.13	-7.15	-6.72	-6.47	-6.99	-6.08	-6.47	-7.41	-7.63	-7.08	-7.02	-6.86	-6.26	-6.18	-6.56	-6.58	-6.38	-6.61	-6.66	-6.87	-7.97
-5.36	-5.54	-5.45	-5.56	-5.45	-4.61	-4.55	-5.47	-5.66	-5.46	-5.36	-5.37	-5.11	-5.03	-4.90	-5.36	-5.43	-5.29	-5.47	-5.75	-6.30
-5.73	-6.15	-5.96	-5.79	-5.71	-4.92	-4.95	-5.86	-5.87	-5.37	-5.23	-5.36	-5.01	-4.87	-4.72	-4.93	-4.81	-4.88	-4.96	-5.16	-5.84
29.10	27.89	28.51	27.78	28.54	34.61	35.04	28.41	27.18	28.45	29.11	29.02	30.81	31.41	32.37	29.13	28.65	29.61	28.37	26.60	23.46
26.71	24.28	25.34	26.36	26.85	32.20	31.96	25.93	25.86	29.04	29.97	29.08	31.57	32.56	33.75	32.12	33.03	32.52	31.94	30.50	26.06

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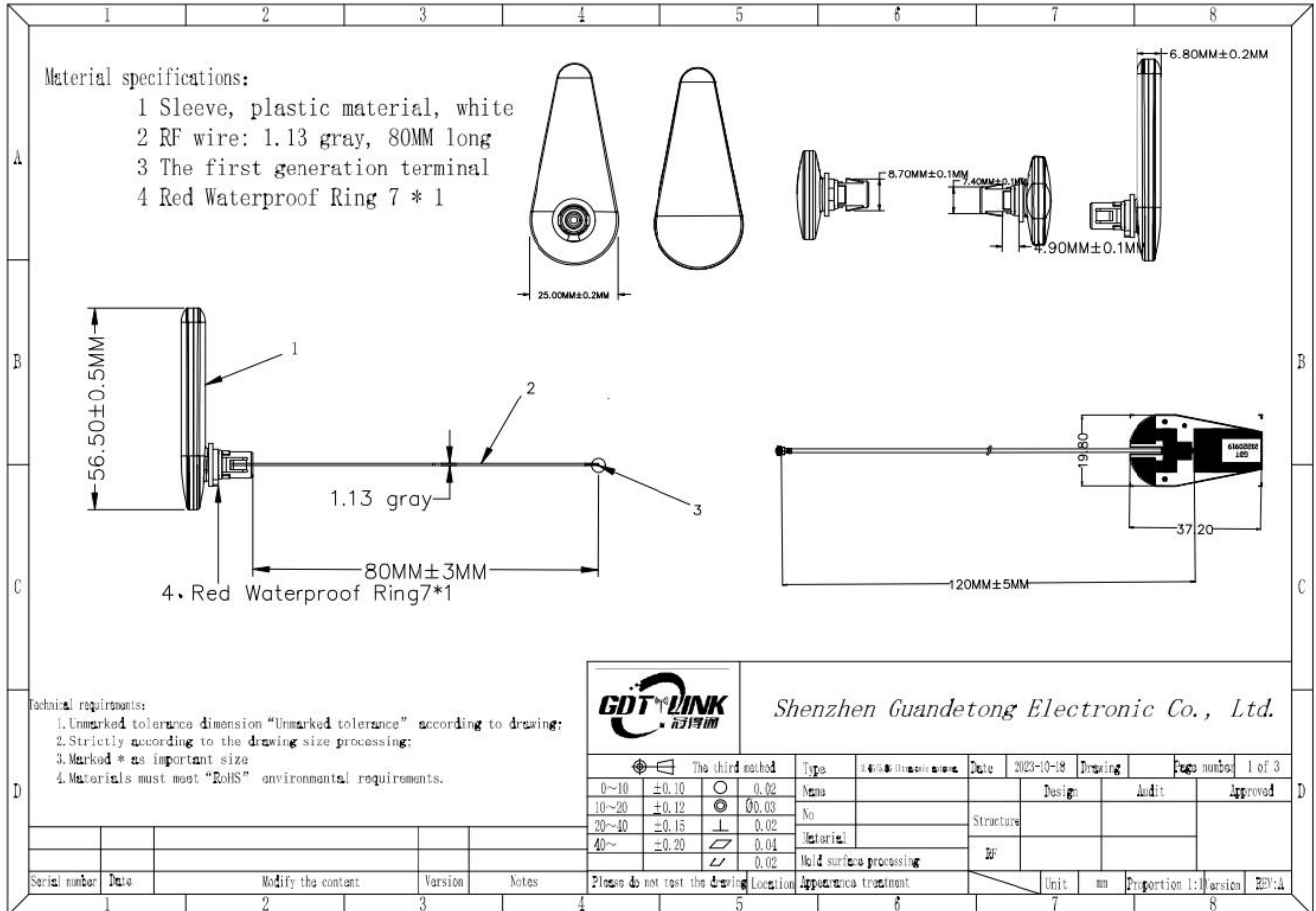
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五、Product Structure Diagram



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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