

SPECIFICATION

Shenzhen Guandetong Electronic Limited

Shenzhen Guandetong Electronic Co., Ltd.

Antenna/external/integrated antenna/2.4 G, 5G dual-band
antenna/line length 100MM with IPEX terminal

Product Specification

connection	SHARE TORONIC	frequency range	2400-2500MHz 5200-5800MHZ
Frequency band wire name		edition	A1
Customer part number		Guandetong part number	
Guandeton g No			
R F design	Bin. Xiao	RF Manager	Liang. liu
Structural design	Dong. Wang	Structure Manager	Hua. Wang
Technical Director		Date	2024-3-07

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-L100
(Electrical Specifications)			
(Frequency Range)	2400-2500MHz 5200-5800MHz	(Polarization)	perpendicular
(Impedance)	50 Ω	Radiation	Omnidirectional
(VSWR)	≤ 2.0	(Power)	50W
(Gain)	2.4G:2.6dBi 5G:5.83dBi	(Bandwidth)	100M
(Mechanical Specifications)			
(Dimensions)	56.5-+0.5mm	(Chassis Color)	White
(Connector)	IPEX	(Cable Length)	100 \pm 3MM
(Chassis Material)	ABS		
(Working Temperature)	-40 $^{\circ}$ C-+85 $^{\circ}$ C	(Limit Temperature)	-40 $^{\circ}$ C-+85 $^{\circ}$ C

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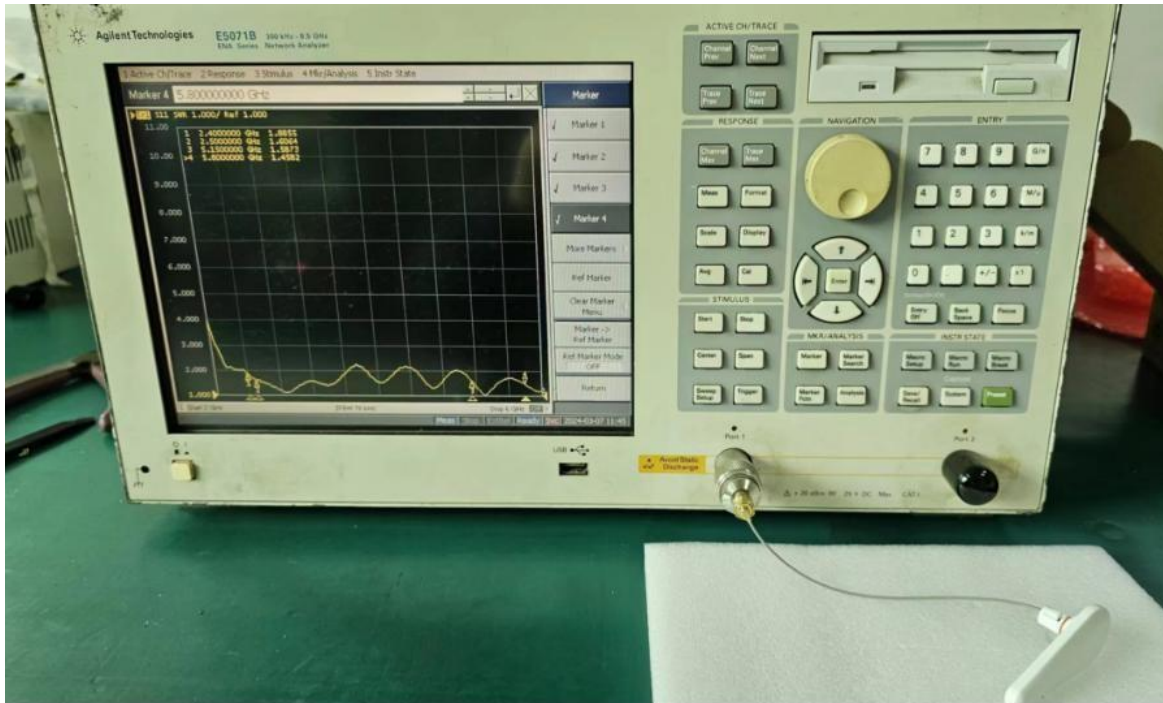
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三、S11(VSWR、Return、Smith)



四、Antenna gain and efficiency

FEITUKUJ																					
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	-5.16	-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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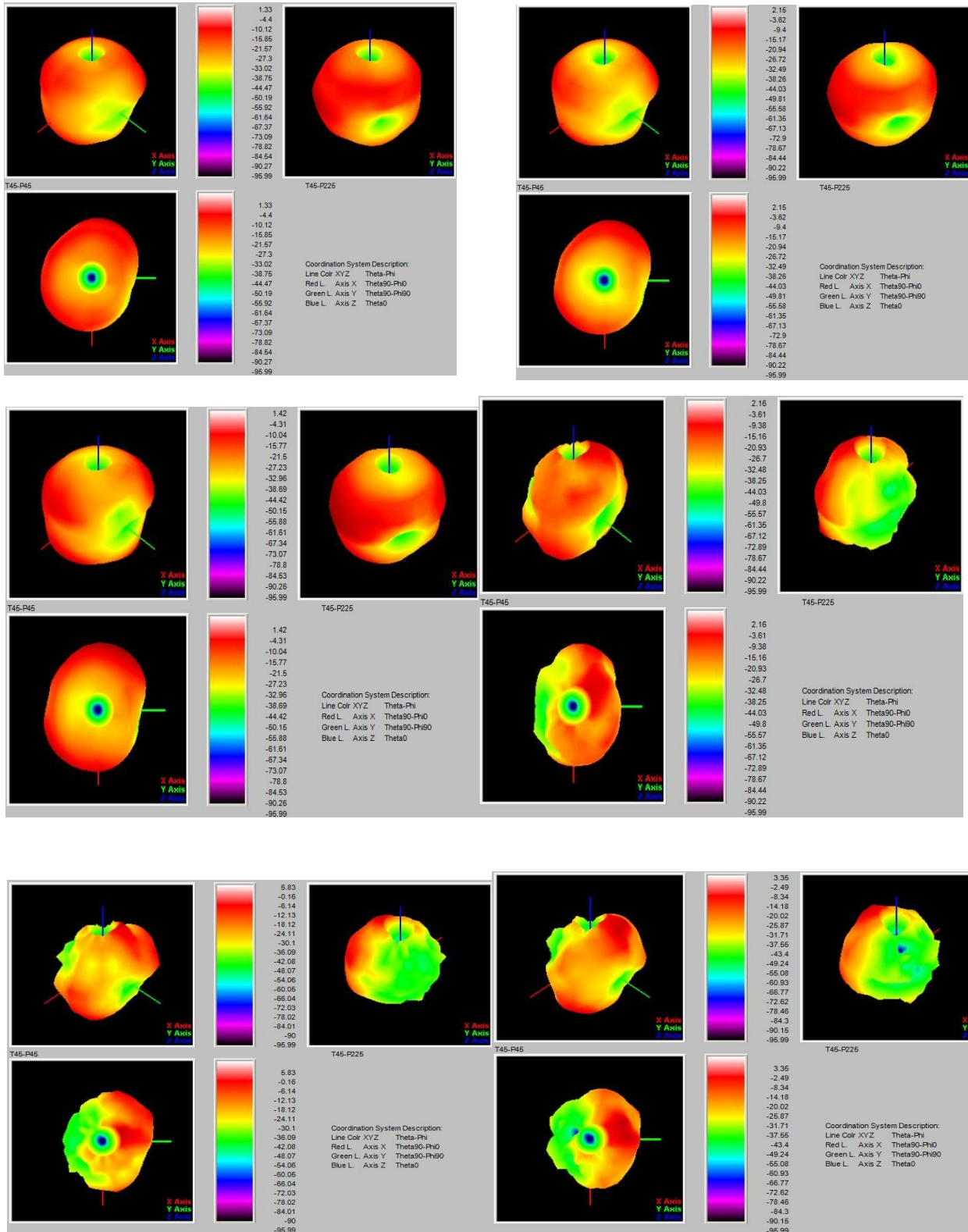
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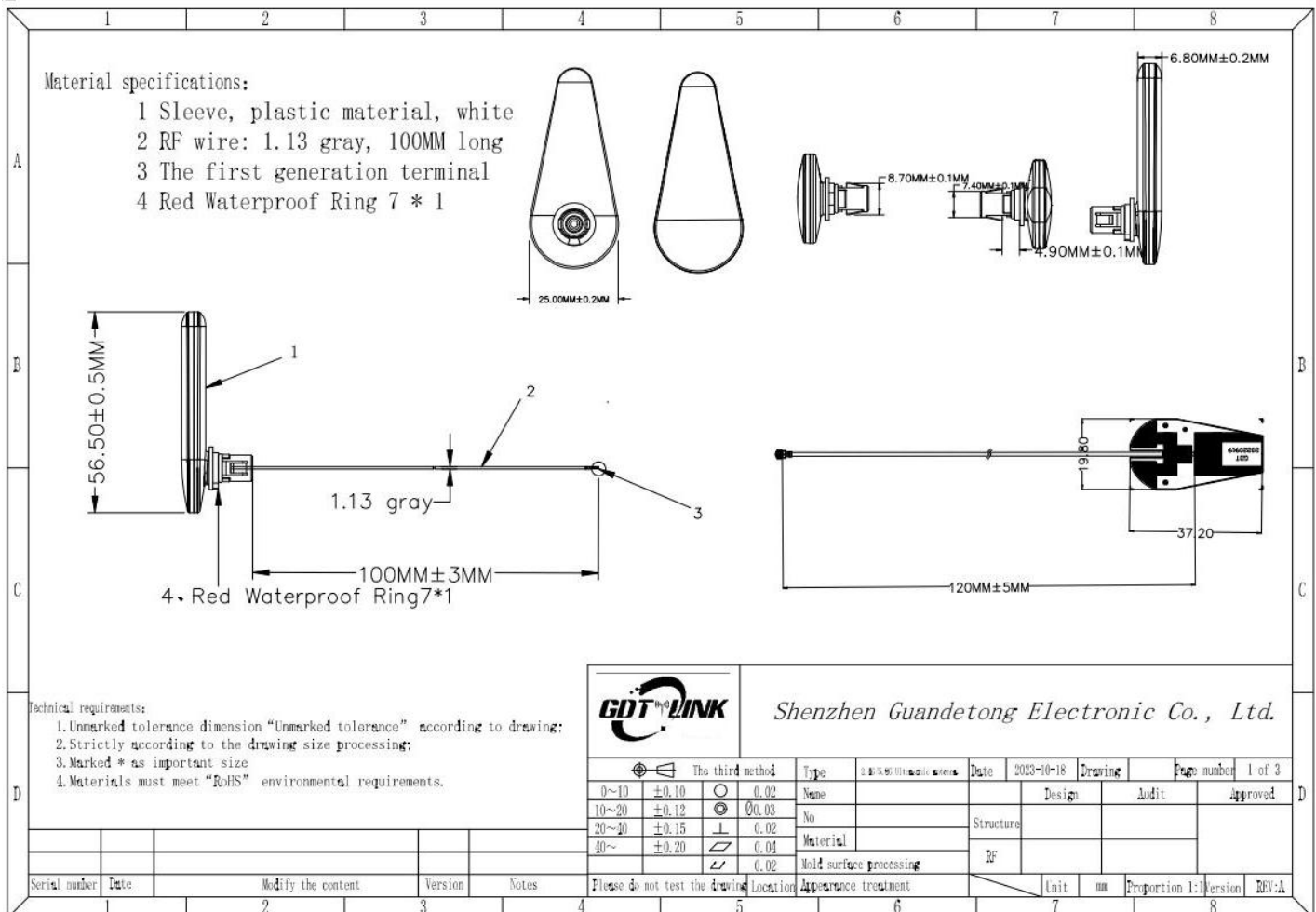
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五、Product Structure Diagram



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"> 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

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High and low temperature test	5 cycles between 70 ° C and 40 ° C, then under normal conditions1-2H, check the appearance quality.	The size shall meet the requirements and Mechanical and electrical performance
Constant damp heat resistance test	Relative humidity: 95 ± 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