

Product Number: GC-2400N2043W-L=280

东莞市高畅电子科技有限公司
产 品 规 格 书
Product specification

客 户:

CUSTOMER:

客 户 案 号:

CUSTOMER P/N:

本 厂 编 号:

GC-2400N2043W-L=280

OUR MODEL NO:

品 名 / 规 格:

WIFI external G type white ultrasonic antenna

SPECIFICATIONS:

样 品 数:

0

Q. TY:

日 期:

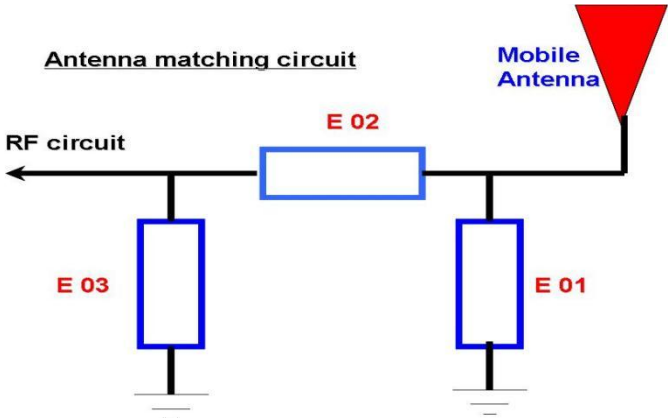
2025-11-25

东莞市高畅电子科技有限公司			客户承认
工程 Engineering	品保 Quality	核准 Approved	签名 (盖章)
xieJingFu	LuRiShan	Mr. Gao	

1. Technical Specification

A. Electrical Characteristics	
Working Frequency Range	2400~5850MHz
S.W.R.	2400~5850MHz:<2.0
Antenna Gain(avg.)	2400~5850MHz: 3 . 6 dBi
Impedance	50ohm
B. Material	
brass	
C. Environmental	
Operation Temperature	-45℃~+85℃
Storage Temperature	-45℃~+85℃

2. Matching Circuits



Element	Value	Vender
E1(0402)	OPEN	/
E2(0402)	SHORT	50 Ω
E3(0402)	OPEN	/

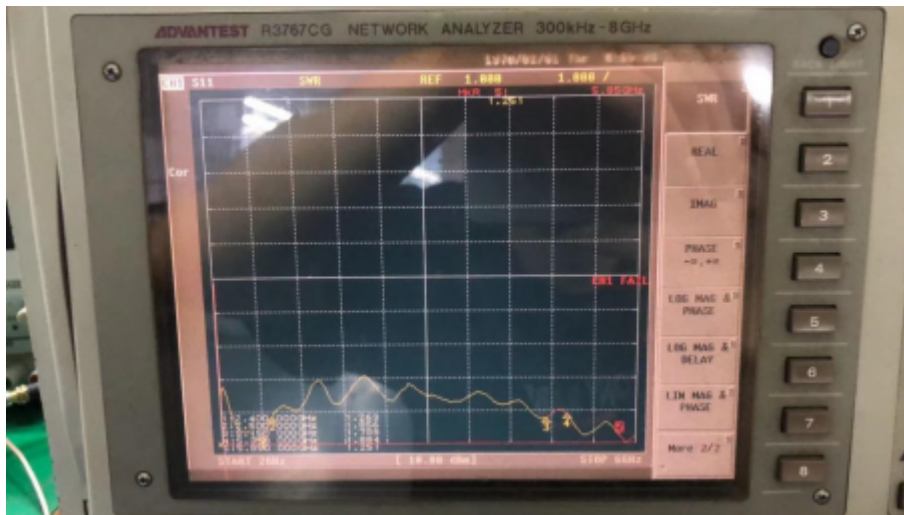
3. Curing antenna S11 Testing Result.

The S11 parameter was performed using a Agilent 8753D Network Analyzer and BEST'S test fixture that was using customer-providing device.

VSWR (Voltage standing wave ratio)

The Voltage Standing Wave Ratio (VSWR) is an indication of how good the impedance match is. VSWR is often abbreviated as SWR. If the transmission line and the antenna are not matched, the antenna will not accept all the power from the transmission line. The part it does not accept is reflected back and forth between the transmitter and the antenna. This sets up a fixed wave pattern along the line which we can measure and which is called the voltage standing wave ration(VSWR).The VSWR (ratio of maximum voltage to the minimum voltage along the line)expresses the degree of match between the transmission line and the antenna. When the VSWR is 1 to 1(1:1) the match is perfect and all the energy is transferred to the antenna prior to be radiated. When the VSWR is 1.5:1, 96% of the power reaches the antenna. By definition VSWR can never be less than 1.VSWR and reflected power are different ways of measuring and expressing the same thing. A high VSWR is indication that the signal is reflected prior to being radiated by the antenna.

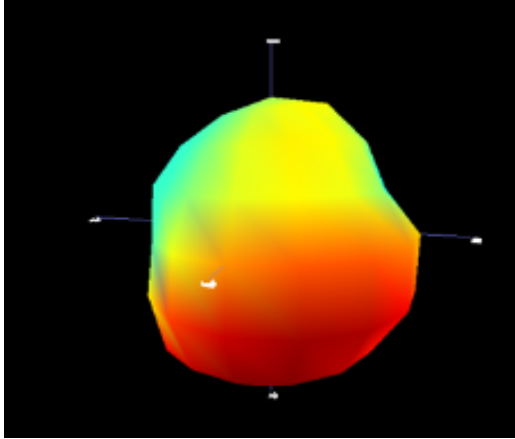
VSWR



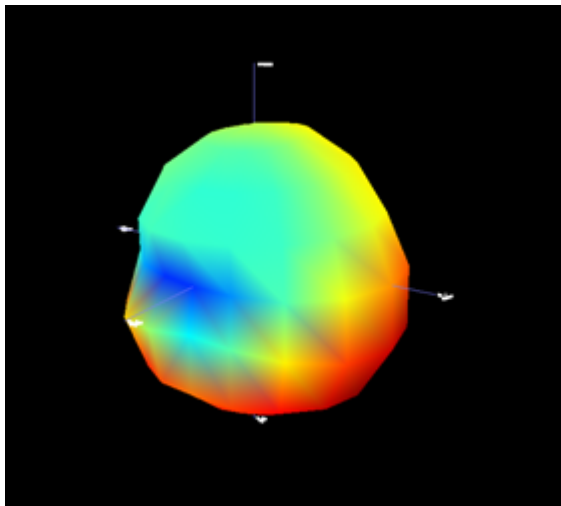
Marker	2400MHz	5100MHz	5800MHz
S.W.R	<2.0		

4.Test 3D report

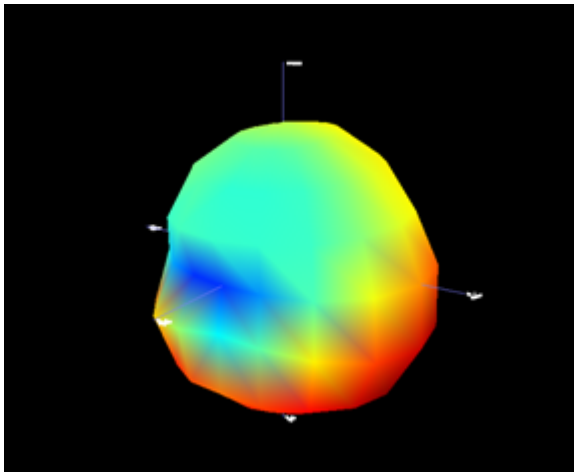
frequency: 2400MHZ gain: 1.76dbi



frequency: 5100MHZ gain: 2.04dbi



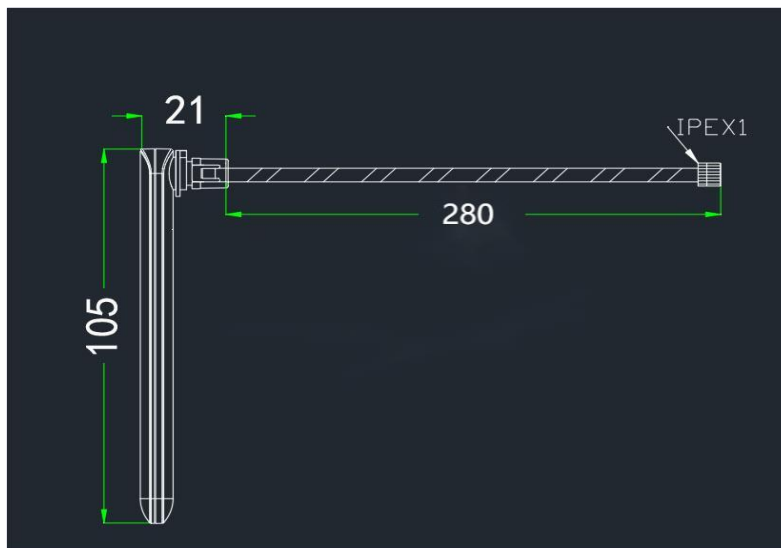
frequency: 5800MHZ gain: 1.44dbi



5. Passive test data

Passive Test For 2.4G-5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	53.04	-2.75	1.76	-0.39	27.359	25.681	1.76	-17.22	4.51	30	45.51	45.06
2450	56.22	-2.5	2.99	0.84	30.615	25.6	2.99	-14.31	5.49	30	45.36	44.92
2500	56.42	-2.49	3.6	1.45	29.673	26.745	3.6	-19.59	6.09	120	45.93	45.51
2550	43.26	-3.64	2.03	-0.12	22.489	20.774	2.03	-16.42	5.67	0	45.05	44.56
2600	46.67	-3.31	1.57	-0.58	24.433	22.235	1.57	-17.41	4.88	0	45.41	44.84
4900	39.62	-4.02	2.24	0.09	21.031	18.593	2.24	-13.47	6.26	90	49.24	49.37
4950	43.76	-3.59	2.27	0.12	22.888	20.87	2.27	-13.2	5.86	60	49.13	49.18
5000	43.43	-3.62	2.11	-0.04	22.68	20.752	2.11	-14.4	5.73	60	49.33	49.3
5050	44.32	-3.53	1.74	-0.41	23.188	21.133	1.74	-12.9	5.28	30	48.99	49.03
5100	48.19	-3.17	2.04	-0.11	25.118	23.071	2.04	-11.83	5.21	30	49.4	49.42
5150	46.66	-3.31	2.28	0.13	24.468	22.192	2.28	-11.98	5.6	0	49.51	49.62
5200	47.83	-3.2	2.34	0.19	24.976	22.858	2.34	-13.59	5.54	0	49.88	49.93
5250	46.92	-3.29	1.93	-0.22	24.63	22.288	1.93	-16.85	5.22	0	50.05	50.08
5300	50.42	-2.97	1.9	-0.25	25.837	24.579	1.9	-19.98	4.88	0	49.91	49.86
5350	54.23	-2.66	1.54	-0.61	26.502	27.724	1.54	-15.13	4.2	90	50.3	50.23
5400	55.11	-2.59	1.38	-0.77	27.212	27.899	1.38	-13.74	3.97	0	49.93	49.9
5450	53.87	-2.69	1.74	-0.41	26.835	27.036	1.74	-10.47	4.43	0	49.96	49.92
5500	54.3	-2.65	2.09	-0.06	27.365	26.934	2.09	-12.21	4.74	0	50.05	50.1
5550	53.97	-2.68	2.75	0.6	27.949	26.02	2.75	-14.76	5.43	0	50.39	50.49
5600	45.69	-3.4	2.31	0.16	24.021	21.671	2.31	-14.04	5.71	0	50.3	50.36
5650	43.55	-3.61	2.54	0.39	23.085	20.466	2.54	-11.91	6.15	0	50.34	50.36
5700	41.11	-3.86	2.28	0.13	21.388	19.724	2.28	-12.15	6.14	0	50.48	50.46
5750	42.02	-3.77	2.13	-0.02	21.654	20.368	2.13	-13.72	5.89	90	50.66	50.59
5800	40.36	-3.94	1.44	-0.71	20.504	19.857	1.44	-13.15	5.38	90	50.5	50.47
5850	42.8	-3.69	1.47	-0.68	21.153	21.651	1.47	-14.93	5.15	30	51.22	51.05

6.Product appearance diagram



Product physical white G model 1.13 gray L=280MM-IPEX (7 * 1.2 waterproof ring) (N2043)

Salt spray test

Test purpose: To test the antenna's resistance to salt spray corrosion

Test method:

Solution content: 5% sodium chloride solution (prepared with distilled water, 95ml distilled water+5g sodium chloride)

Place the antenna in the salt spray test chamber and hang it with a rope to prevent uneven solution spraying or surface failure.

The antenna needs to be immediately placed in the testing box. The experimental period is 48 hours.

During the experiment, it is not allowed to remove it midway.

After the experiment, remove the antenna, clean it with cotton cloth and ion air gun, and let it dry at room temperature for 49 hours. Then, inspect the appearance, mechanical properties, and electrical properties of the antenna.

Test report		admit	confirm 代工	Experimenter 杨工
Test content and antenna model: Dual frequency external antenna				
Test objective: To test the appearance, mechanical properties, and electrical performance changes of the antenna in a salt spray environment.				
Test quantity: 5pcs				
Before the test				
NO.			appearan ce	Mechanical and electrical properties
1#			N/A	meet the requirements
2#			N/A	meet the requirements
3#			N/A	meet the requirements
4#			N/A	meet the requirements
5#			N/A	meet the requirements
after the experiment				
NO.				
1#			N/A	meet the requirements
2#			N/A	meet the requirements
3#			N/A	meet the requirements
4#			N/A	meet the requirements
5#			N/A	meet the requirements
Result judgment: The salt spray test has ended, the appearance is OK, the antenna is in good contact with the motherboard (multimeter test is conductive), and the mechanical properties have not changed. Signal testing shows that the standing wave varies within a range of ± 0.3 , which meets the allowable testing requirements.. In summary, the dual frequency external antenna meets the requirements of salt spray testing.				