

Dongguan Gaochang Electronic Technology Co., Ltd.

Antenna Specifications

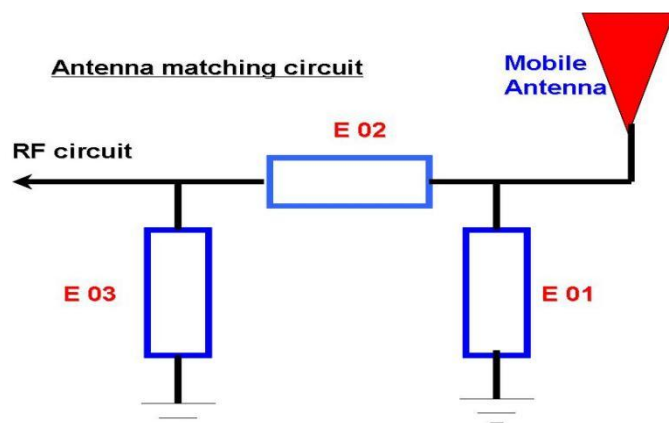
客 户: CUSTOMER: 客 户 案 号: CUSTOMER P/N: 本 厂 编 号: GC2400TG2-L135 OUR MODEL NO: 品 名 / 规 格: 2.4G Built-in copper tube antenna SPECIFICATIONS: 样 品 数: 0 Q' TY: DATE: 2026-1-10

Dongguan Gaochang Electronic Technology Co., Ltd.			The customer acknowledges
工程 Engineering	品保 Quality	核准 Approved	Signature (Stamp)
Mr. Xie	Mr. Huang	Mr.Gao	

1. Technical Specification 技术规格

A. Electrical Characteristics	
Working Frequency Range	2400~2500MHz
S.W.R.	2400~2500MHz:<2.0
Antenna Gain(avg.)	2400~2500MHz: 3.57dBi
Impedance	50ohm
B. Material	
brass	
C. Environmental	
Operation Temperature	-45℃~+85℃
Storage Temperature	-45℃~+85℃

2. Matching Circuits 匹配电路



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

3. Curing antenna S11 Testing Result. 无源测试

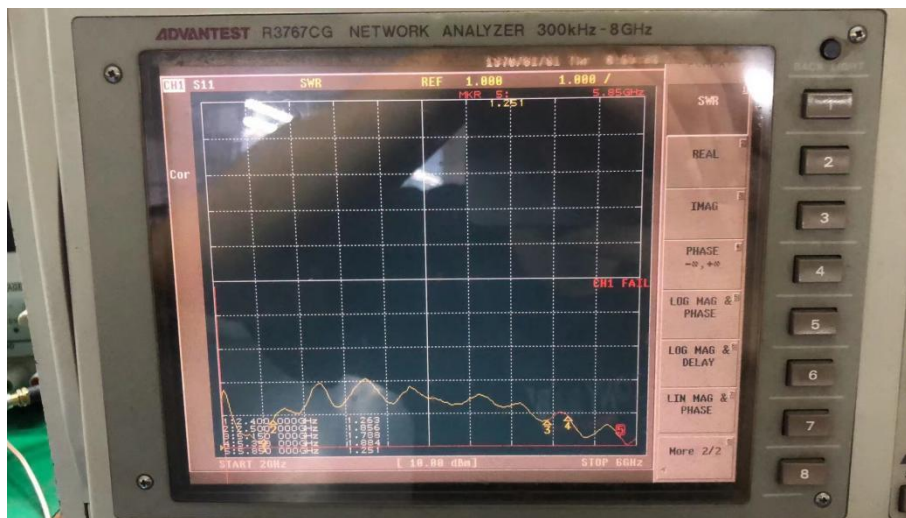
The S11 parameter was performed using a Agilent 8753D Network Analyzer

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 ratio(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.

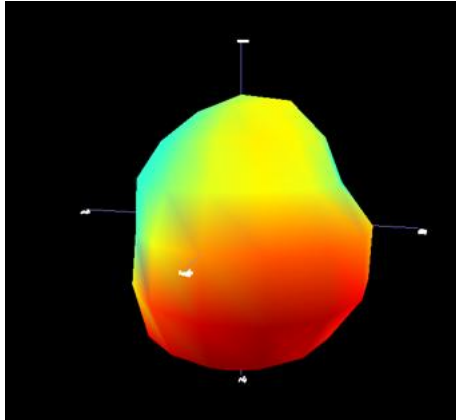
VSWR



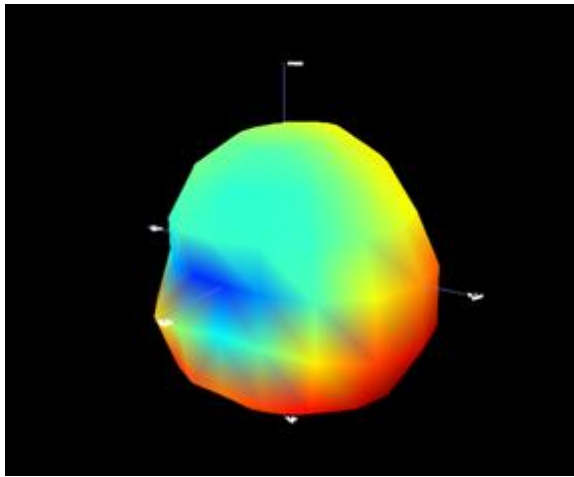
Marker	2400MHz	2450MHz	2500MHz
S.W.R	≤ 2.0	≤ 2.0	≤ 2.0

4.3D Test Report

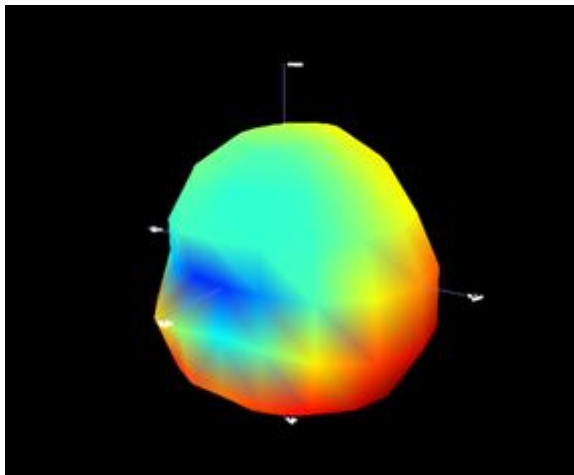
Frequency: 2400 MHz Gain: 3.57 dBi



Frequency: 2450 MHz Gain: 2.11 dBi



Frequency: 2500 MHz Gain: 1.94 dBi

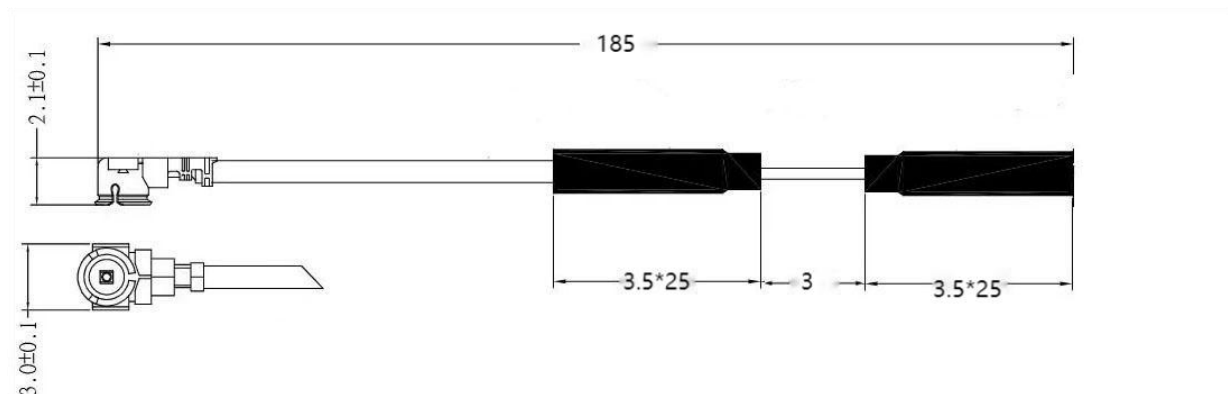


5. Passive test data

Product Number: **GC2400TG2-L135**

Passive Test For WIFI-2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	72.28	-1.41	2.88	0.73	37.318	34.965	3.57	-14.36	4.29	90	46.18	46.07
2410	71.1	-1.48	2.73	0.58	36.882	34.214	2.73	-14.05	4.21	90	45.78	45.63
2420	71.08	-1.48	2.58	0.43	36.997	34.082	2.58	-13.5	4.06	90	46.26	46.12
2430	68.54	-1.64	2.24	0.09	35.399	33.143	2.24	-13	3.89	60	45.65	45.5
2440	68.13	-1.67	2.1	-0.05	34.896	33.231	2.1	-12.49	3.77	60	46.3	46.18
2450	66.9	-1.75	2.11	-0.04	33.716	33.187	2.11	-12.12	3.86	60	46.12	45.96
2460	65.25	-1.85	2.09	-0.06	32.41	32.84	2.09	-12.36	3.95	45	46.12	45.98
2470	64.56	-1.9	2	-0.15	31.563	32.998	2	-14.04	3.9	45	46.05	45.94
2480	64.09	-1.93	1.84	-0.31	31.028	33.064	1.84	-15.07	3.78	45	45.82	45.78
2490	65.48	-1.84	2.1	-0.05	31.553	33.932	2.1	-14.76	3.94	30	46.03	46.01
2500	60.7	-2.17	1.94	-0.21	29.248	31.449	1.94	-14.74	4.11	30	46.01	45.99

6.Product appearance picture



Product: 2.4G copper tube antenna. Color: Black. Output cable length: 135MM. IPEX (3.5*23)

A 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, 95 milliliters of distilled water + 5 grams of sodium chloride)

Place the antenna in the salt spray test chamber and suspend it with a rope to prevent uneven solution spraying or some surfaces from not being sprayed.

The antenna should be immediately placed in the test chamber. The test period is 48 hours. During the experiment, it is not allowed to remove it halfway.

After the test, remove the antenna, clean it with a cotton cloth and an ion wind gun, and place it for 49 hours at room temperature for drying. Then, check the antenna's appearance, mechanical properties, and electrical properties.