

Acknowledgement

Supplier:Dongguan Tianmin Communication Technology Co., LTD.

Customer name:Shenzhen Hui Lian Unlimited Technology Co., LTD.

Material name:G200 Gateway 4G Antenna (Reverse Pole SMA)

Customer part number:ANT-4G3DB-05

Model: ANTWLWQ4G2V70SJBBHW01

Sample submission date:December 30,2025

Supplier Acknowledgement

authorized strength	admit	ratify
Wu Huiqin	Meng Guoming	Zheng Baofeng

Customer Acknowledgment

admit	examine and verify	ratify

Catalogue

I. Prototype images

II. Testing Fixture

III. **RF** Matching Circuit

IV. Electrical Properties of Antenna

V. **S11** Test

5.0 S11 Test Method Description

5.1 passive
data

VI. Structural

Drawings

VII. Darkroom Test Data

7.0 testing
facility

7.1 active
data

8. Mass Production Antenna Specifications

IX. Material Certification

X. Packaging Instructions

1. Prototype Images

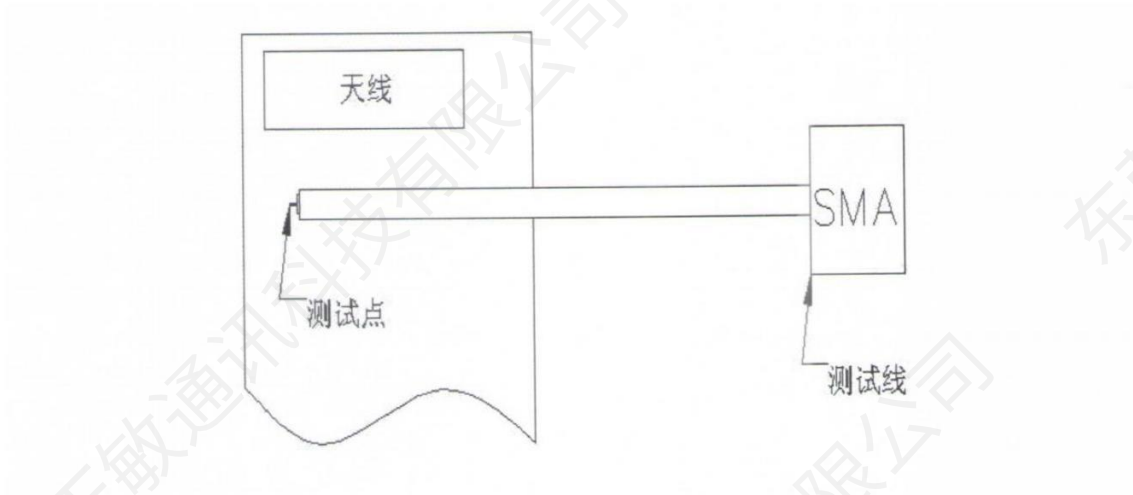
1.1 Antenna image



II. Testing Fixture

Objective: To test the passive parameters of the antenna as accurately as possible. Method: The prototype device is constructed using a 50-ohm coaxial cable, with one end connected to the test point at the rear end of the matching circuit (front end of the RF test port) on the prototype motherboard, and the other end connected to an SMA connector. The schematic diagram is shown as follows.

Down :



3. RF Matching Circuit (The Motherboard's RF Matching Circuit Remains Unchanged)

The equipment provided by the customer has not modified the original RF matching circuit. Please match it according to the documentation provided by the customer.

IV. Electrical Properties of Antenna

ANIWLWQ4G2V70SJBBHW01

G200网关4G天线（反极SMA）

G200 Gateway 4G Antenna (Reverse Polarity SMA)



天线“芯”启程
专注·专业

版本Edition: V3.0

电气指标Electrical Index		
通用参数 Common	工作频段FreqRange (MHz)	600-800/824-960/1710-2690MHz
	工作带宽Bandwidth (MHz)	200/140/980
	极化方式Polarization	垂直/vertical
射频电路 RF Circuit	驻波比VSWR	≤3.5/≤3.0
	三阶互调 (dBm , @2×43dBm)	/
	功率Max Power (W)	≥200
	阻抗Impedance (Ω)	50
辐射特性 Radiation	水平3dB波瓣宽度(°) Horizontal 3dB beamwidth(°)	360
	垂直3dB波瓣宽度(°) Vertical 3dB beamwidth(°)	70±5
	增益 Gain(dBi)	2±1
	交叉极化比Cross-polar ratio (dB, 轴向/ ±60° 范围内)	/
	前后比 Front-to-back ratio (dB, 180° ±30°)	/
	第一上旁瓣抑制 Sidelobe suppression(dB)	≤-15
	不圆度 Out-of-roundness(dB)	±3



机械指标Mechanical Index	
接口型号 Connector	SMA-J
天线尺寸 Antenna dimensions (L*W*H) (mm)	Φ13*197
包装尺寸 Packing dimensions (L*W*H) (mm)	以实际包装为准/ Subject to actual packaging
天线重量 Antenna weight(kg)	0.02
天线罩材质 Radome material	ABS
抱杆直径 Derrick diameter (mm)	/
极限风速 Extreme wind speed(km/h)	200
环境温度 The environment temperature(° C)	工作温度Operating temperature: -40~+60 极限温度Limiting temperature: -55~+75
雷电保护 Lightning protection	直流接地(DC grounding)
防水等级 Waterproof level	IP65
产品等级 Product Level	商业版 (Commercial Edition)

600-2690

V



本文件所提供信息仅供参考，不作为任何订单或合同的一部分。
天敏有权在没有事先通知的情况下改变指标。

电话: +86-0769-89601101 传真: +86-769-89601102
网站: www.chinatetx.com 电子邮箱: sales@chinatetx.com



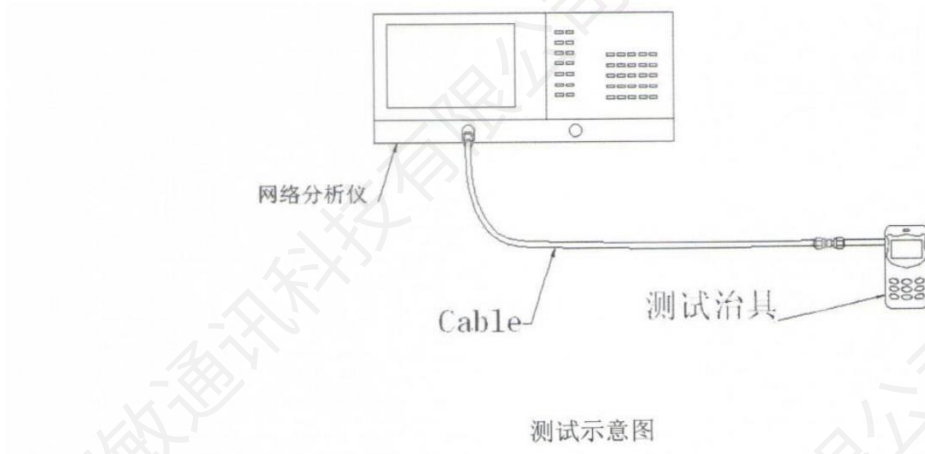
Five.S11 Test

5.0 S11 Test Method Description

Test equipment: Network analyzer (Roed ZV8)

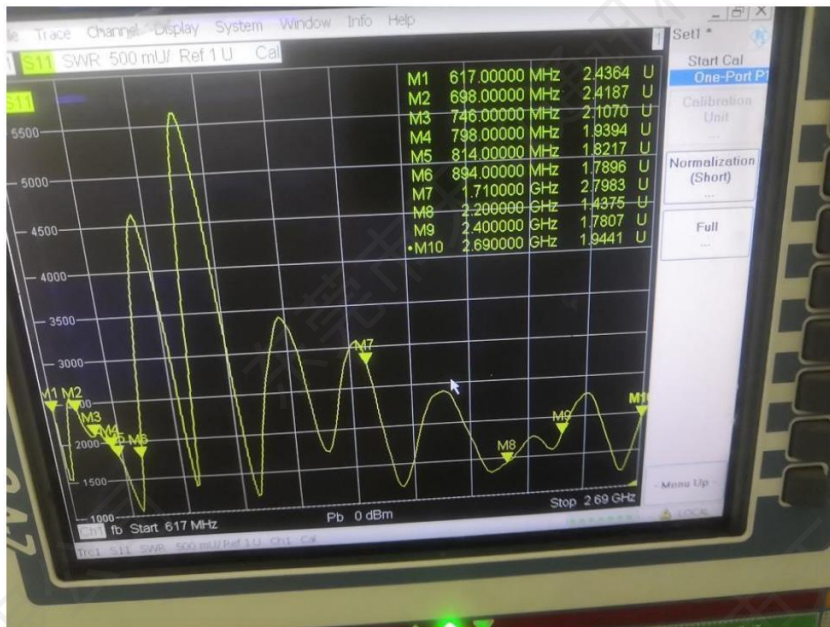
Test method: A 50-ohm CABLE is used to connect the instrument's test port to the sample device's SMA connector after calibration. The return loss and VSWR at relevant frequencies are recorded.

The test diagram is as follows:

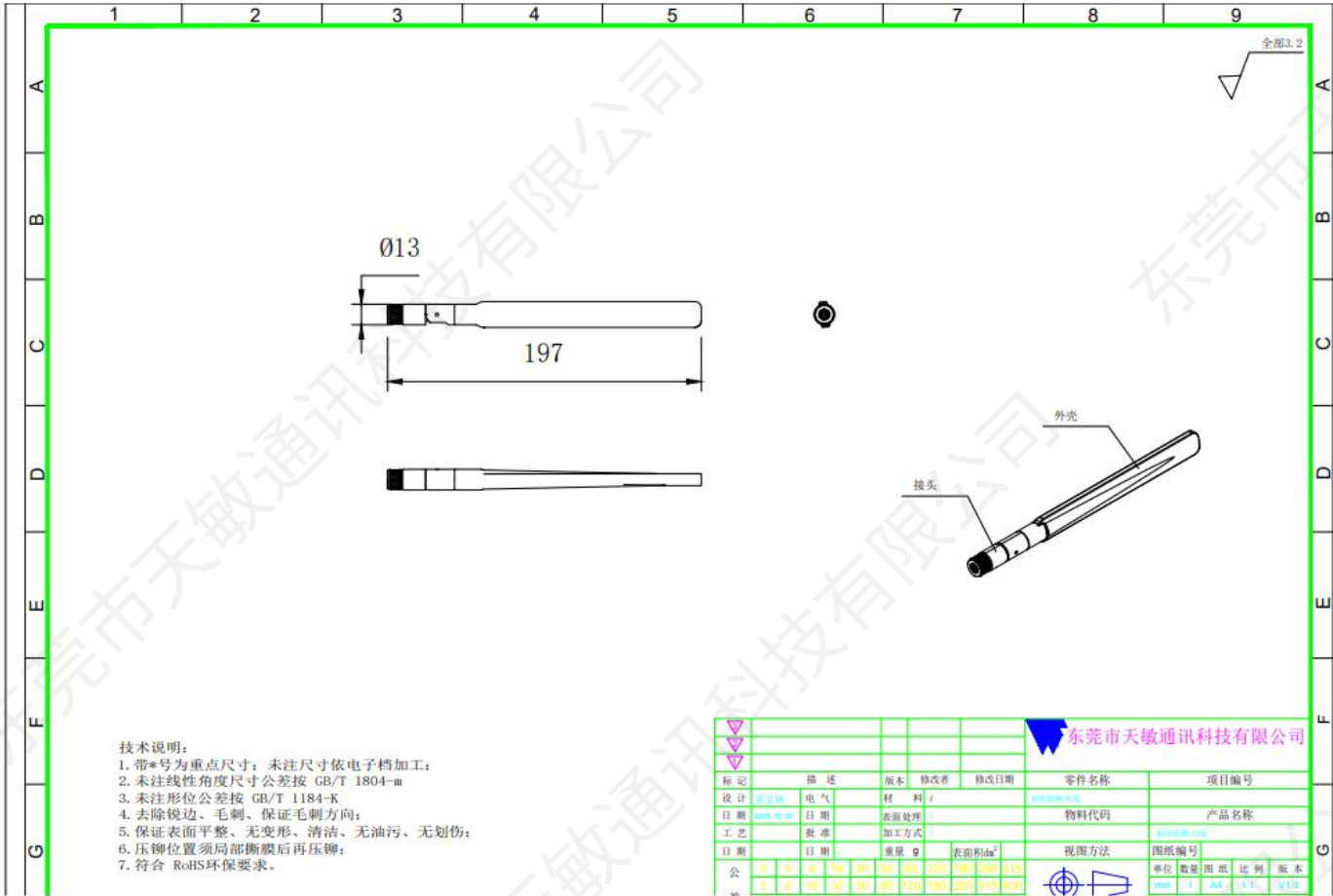


5.1 passive data

Frequency (MHz)	617	698	746	798	814	894	1710	2200	2400	2690
VSWR	2.43	2.41	2.10	1.93	1.82	1.78	2.79	1.43	1.78	1.94



VI. Structural Diagram



VII. Darkroom Test Data

7.0 testing facility

Test System: OTA Darkroom

Test environment: Temperature $23\pm3^{\circ}\text{C}$, Humidity: $50\pm15\%$

Testing equipment: For passive data testing: Use the Agilent E5062C vector network analyzer.

For active data testing: Use the comprehensive tester Rod CMW500 7.1 for passive data testing (antenna vertically mounted on the motherboard).

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dBi)	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	610.0	610.00	-0.58	4.57	30.6%	-5.15	-0.58	150	120	-60.31	0	0	-5.20	59.73	4.62	-55.11
2	650.0	650.00	-1.12	4.55	27.1%	-5.67	-1.12	150	120	-59.98	0	0	-5.72	58.86	4.60	-54.26
3	690.0	690.00	-0.98	4.16	30.7%	-5.13	-0.98	150	120	-60.07	0	0	-5.22	59.10	4.24	-54.85
4	730.0	730.00	-1.00	4.18	30.3%	-5.18	-1.00	150	0	-59.70	0	0	-5.24	58.69	4.24	-54.45
5	770.0	770.00	-1.01	3.98	31.6%	-5.00	-1.01	150	0	-59.44	0	0	-5.11	58.43	4.09	-54.33
6	800.0	800.00	-1.12	3.94	31.1%	-5.07	-1.12	150	0	-59.33	0	0	-5.20	58.21	4.08	-54.13
7	820.0	820.00	-1.26	3.90	30.5%	-5.16	-1.26	150	150	-59.23	0	0	-5.40	57.97	4.14	-53.82
8	840.0	840.00	-1.20	3.94	30.6%	-5.15	-1.20	150	165	-59.33	0	0	-5.47	58.12	4.27	-53.85
9	860.0	860.00	-0.84	3.95	33.2%	-4.79	-0.84	150	165	-58.98	0	0	-5.21	58.15	4.38	-53.77
10	880.0	880.00	-0.71	3.97	34.0%	-4.68	-0.71	150	165	-58.86	0	0	-5.19	58.15	4.48	-53.67
11	900.0	900.00	-0.28	4.48	33.4%	-4.76	-0.28	75	180	-58.69	0	0	-5.37	58.41	5.09	-53.32
12	920.0	920.00	0.19	4.68	35.6%	-4.49	0.19	75	195	-58.56	0	0	-5.17	58.75	5.36	-53.39
13	940.0	940.00	0.47	4.71	37.7%	-4.24	0.47	75	195	-58.35	0	0	-5.02	58.81	5.48	-53.33
14	960.0	960.00	0.83	4.48	43.2%	-3.65	0.83	75	195	-58.10	0	0	-4.48	58.93	5.31	-53.62
15	1700.0	1700.00	5.40	6.54	76.8%	-1.15	5.40	165	255	-51.32	0	0	-1.22	56.72	6.62	-50.10
16	1750.0	1750.00	4.45	6.43	63.4%	-1.98	4.45	165	240	-51.64	0	0	-2.05	56.09	6.50	-49.59
17	1800.0	1800.00	3.41	6.26	51.9%	-2.85	3.41	165	240	-51.37	0	0	-3.03	54.78	6.43	-48.35
18	1850.0	1850.00	3.82	6.75	50.9%	-2.93	3.82	165	240	-50.98	0	0	-3.13	54.81	6.95	-47.85
19	1900.0	1900.00	3.90	6.59	53.8%	-2.70	3.90	165	240	-50.58	0	0	-2.92	54.48	6.81	-47.66
20	1950.0	1950.00	2.97	6.14	48.1%	-3.18	2.97	165	225	-50.66	0	0	-3.42	53.63	6.39	-47.24
21	2000.0	2000.00	3.41	6.47	49.5%	-3.06	3.41	165	225	-50.59	0	0	-3.24	54.00	6.66	-47.34
22	2050.0	2050.00	3.82	6.79	50.5%	-2.97	3.82	165	240	-50.77	0	0	-3.11	54.59	6.93	-47.66
23	2100.0	2100.00	3.94	6.78	52.0%	-2.84	3.94	165	240	-50.34	0	0	-3.03	54.28	6.96	-47.32
24	2150.0	2150.00	3.78	6.16	57.8%	-2.38	3.78	165	240	-50.10	0	0	-2.65	53.88	6.42	-47.45
25	2200.0	2200.00	3.20	5.92	53.5%	-2.72	3.20	165	240	-50.18	0	0	-3.01	53.38	6.21	-47.17
26	2250.0	2250.00	2.95	5.50	55.6%	-2.55	2.95	165	240	-49.56	0	0	-2.85	52.51	5.80	-46.70
27	2300.0	2300.00	2.05	4.96	51.1%	-2.92	2.05	120	300	-48.65	0	0	-3.25	50.69	5.29	-45.40
28	2350.0	2350.00	1.55	4.98	45.4%	-3.43	1.55	45	195	-48.02	0	0	-3.92	49.57	5.47	-44.10
29	2400.0	2400.00	1.60	4.45	51.8%	-2.85	1.60	135	195	-48.58	0	0	-3.33	50.18	4.93	-45.25
30	2450.0	2450.00	1.21	4.00	52.6%	-2.79	1.21	135	195	-48.16	0	0	-3.21	49.37	4.42	-44.95
31	2500.0	2500.00	0.09	3.68	43.8%	-3.58	0.09	135	195	-47.58	0	0	-4.05	47.67	4.14	-43.53
32	2550.0	2550.00	-0.16	3.62	41.9%	-3.78	-0.16	135	195	-48.00	0	0	-4.18	47.84	4.02	-43.82
33	2600.0	2600.00	0.02	3.76	42.3%	-3.73	0.02	165	75	-47.48	0	0	-4.09	47.50	4.12	-43.39
34	2650.0	2650.00	0.54	3.71	48.2%	-3.17	0.54	165	90	-47.25	0	0	-3.53	47.78	4.06	-43.72
35	2700.0	2700.00	0.00	3.40	45.7%	-3.40	0.00	165	90	-46.77	0	0	-3.76	46.78	3.77	-43.01

7.2 Active Test Data (antenna Vertically Placed on the Motherboard)

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Total
1	TRP	Every30	Every30	FDD_LTE	FDD_B2(10MHz)	18650	1855	19.51
2	TRP	Every30	Every30	FDD_LTE	FDD_B2(10MHz)	18900	1880	19.63
3	TRP	Every30	Every30	FDD_LTE	FDD_B2(10MHz)	19150	1905	18.95
4	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B2(10MHz)	1150	1985	-90.06
5	TRP	Every30	Every30	FDD_LTE	FDD_B4(10MHz)	20000	1715	19.59
6	TRP	Every30	Every30	FDD_LTE	FDD_B4(10MHz)	20175	1732.5	19.39
7	TRP	Every30	Every30	FDD_LTE	FDD_B4(10MHz)	20350	1750	19.42
8	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B4(10MHz)	2350	2150	-92.22
9	TRP	Every30	Every30	FDD_LTE	FDD_B5(10MHz)	20450	829	20.55
10	TRP	Every30	Every30	FDD_LTE	FDD_B5(10MHz)	20525	836.5	21.43
11	TRP	Every30	Every30	FDD_LTE	FDD_B5(10MHz)	20600	844	21.89
12	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B5(10MHz)	2600	889	-87.84
13	TRP	Every30	Every30	FDD_LTE	FDD_B12(10MHz)	23060	704	17.41
14	TRP	Every30	Every30	FDD_LTE	FDD_B12(10MHz)	23095	707.5	17.53
15	TRP	Every30	Every30	FDD_LTE	FDD_B12(10MHz)	23130	711	17.76
16	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B12(10MHz)	5130	741	-87.43
17	TRP	Every30	Every30	FDD_LTE	FDD_B13(10MHz)	23230	782	21.22
18	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B13(10MHz)	5230	751	-83.7
19	TRP	Every30	Every30	FDD_LTE	FDD_B14(10MHz)	23330	793	18.76
20	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B14(10MHz)	5330	763	-85.42
21	TRP	Every30	Every30	FDD_LTE	FDD_B25(10MHz)	26090	1855	18.86
22	TRP	Every30	Every30	FDD_LTE	FDD_B25(10MHz)	26365	1882.5	19.36
23	TRP	Every30	Every30	FDD_LTE	FDD_B25(10MHz)	26640	1910	19.12
24	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B25(10MHz)	8640	1990	-91.9
25	TRP	Every30	Every30	FDD_LTE	FDD_B26(10MHz)	26740	819	18.4
26	TRP	Every30	Every30	FDD_LTE	FDD_B26(10MHz)	26865	831.5	20.11
27	TRP	Every30	Every30	FDD_LTE	FDD_B26(10MHz)	26990	844	21.22
28	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B26(10MHz)	8990	889	-88.18
29	TRP	Every30	Every30	FDD_LTE	FDD_B66(10MHz)	132022	1715	18.41
30	TRP	Every30	Every30	FDD_LTE	FDD_B66(10MHz)	132322	1745	18.34

31	TRP	Every30	Every30	FDD_LTE	FDD_B66(10MHz)	132622	1775	18.89
32	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B66(10MHz)	67036	2170	-94.21
33	TRP	Every30	Every30	FDD_LTE	FDD_B71(10MHz)	133172	668	16.6
34	TRP	Every30	Every30	FDD_LTE	FDD_B71(10MHz)	133297	680.5	16.46
35	TRP	Every30	Every30	FDD_LTE	FDD_B71(10MHz)	133422	693	16.41
36	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B71(10MHz)	68836	642	-83.41
37	TIS(RSSI)	Every30	Every30	FDD_LTE	FDD_B71(10MHz)	68886	647	-79.8
38	TRP	Every30	Every30	TDD_LTE	TDD_B41(20MHz)	40340	2565	20.38
39	TRP	Every30	Every30	TDD_LTE	TDD_B41(20MHz)	40620	2593	20.63
40	TRP	Every30	Every30	TDD_LTE	TDD_B41(20MHz)	41140	2645	20.58

8. Mass Production Antenna Specifications

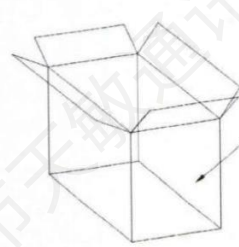
For antenna mass production, VSWR is adopted as the standard test metric. The following test criteria are specified based on project-specific requirements.

frequency (MHz)	mass production standard
617-697/698-960/1710-2690	VSWR (mass production performance) <VSWR (sample recognition performance) +0.5

IX. Material Description

The Summary of Hazardous Substances in Product																							
产品环保资料汇总表																							
表单编号:		F-AD-TB-RD02-03		版本: B																			
Supplier Part Number 制造商料号	Part Name 零件名称	Vendor Name 制造商名称	Material Name/Type 材料名称/型号	Material Vendor 原材料供应商	Content of Hazardous Substance (PPM) 有害物质含量 (PPM)										Halogen Free 无卤		Testing institutions 测试机构	Test Report No. 测试报告编号	Issued Date 发布日期	RoHS report RoHS 附件	REACH report REACH 附件	MSDS 材料安全 数据表	Remarks 备注
					Cd	Cr (V)	Hg	Pb	PBBs	PBDEs	DEHP	BSP	DBP	DIBP	Cl	Br							
ANTWLWQ4G2V70S JBBRW01	4G全向板 天线 (海外款)	东莞市天敏通 讯科技有限公 司	线材	东莞市锦网通讯科技有限公	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SGS	NO.CANEC2102653702	2021年3月4日				
			胶棉/ABS+PC	LG CHEMICAL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CTI	A2210027970101004	2021年7月22日				
			铜	宜兴震辰调业有限公司	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SGS	NO.SHAEC2122206806	2021年10月20日				
Issued By/制作:卿鸿文																							
											Approved By/批准:												

X. Packaging Instructions

产品包装作业规范					
客 户:					
包 材 明 细	编 号	品 名	规 格	用 量	包 装 产 品 图 示
		封口袋	120*85*0.12	100/10000	
		纸箱	280*230*170	1/10000	
作 业 步 骤	1. 準備所需包材放於有利工作之位置。 2. 按照SYC-BZ01包裝規範, 用紙箱 (SYC-01), 封口袋 (PE) 包裝, 100PCS/包, , 每箱100包共10000PCS, 3. 每箱放100包, 共10000PCS. 裝滿箱後, 用透明膠帶封箱,				注 意 事 項
图 示 说 明					
					
备注: 数量以实际包装为准, 此为参考数量。					
核 準		審 核		制 作	
日 期					

Acknowledgement

Supplier:Dongguan Tianmin Communication Technology Co., LTD.

Customer name:Shenzhen Hui Lian Unlimited Technology Co., LTD.

Material name:G200 Gateway Lora Antenna (Reverse Pole SMA) 863-93 0MHz

Customer part number: ANT-895M2DB15-03

Model:ANTWLWQ8602V70SJBB02

Sample submission date:December 30,2025

Supplier Acknowledgement

authorized strength	admit	ratify
Wu Huiqin	Meng Guoming	Zheng Baofeng

Customer Acknowledgment

admit	examine and verify	ratify

Catalogue

I. Prototype images

II. Testing Fixture

III. **RF** Matching Circuit

IV. Electrical Properties of Antenna

V. **S11** Test

5.0 S11 Test Method Description

5.1 passive
data

VI. Structural
Drawings

VII. Darkroom Test Data

7.0 testing
facility

7.1 passive
data

8. Mass Production Antenna Specifications

IX. Material Certification

X. Packaging Instructions

1. Prototype Images

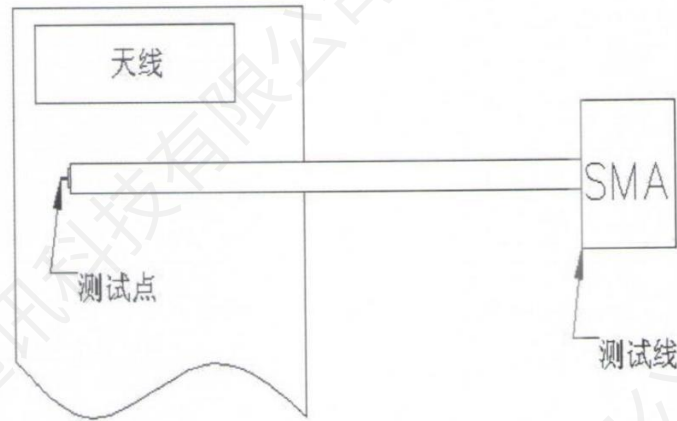
1.1 Antenna image



II. Testing Fixture

Objective: To test the passive parameters of the antenna as accurately as possible. Method: The prototype device is constructed using a 50-ohm coaxial cable, with one end connected to the test point at the rear end of the matching circuit (front end of the RF test port) on the prototype motherboard, and the other end connected to an SMA connector. The schematic diagram is shown as follows.

Down :



3. RF Matching Circuit (The Motherboard's RF Matching Circuit Remains Unchanged)

The equipment provided by the customer has not modified the original RF matching circuit. Please match it according to the documentation provided by the customer.

IV. Electrical Properties of Antenna

ANTWLWQ8602V70SJBB02

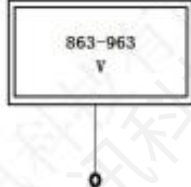
G200网关Lora天线（反极SMA）

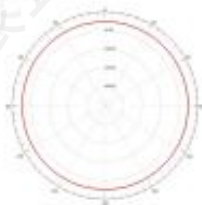
G200 Gateway Lora Antenna (Reverse Polarity SMA)

天线“芯”启程
专注·专业

版本Edition: V3.0

电气指标Electrical Index			
通用参数 Common	工作频段FreqRange (MHz)	863-963	
	工作带宽Bandwidth (MHz)	100	
	极化方式Polarization	垂直/vertical	
电学参数 Electrical	驻波比VSWR	≤ 3.0	
	三阶互调 (dBm, @2×43dBm)	/	
	功率Max Power (W)	≥ 200	
	阻抗Impedance (Ω)	50	
辐射参数 Radiation	水平3dB波瓣宽度(°) Horizontal 3dB beamwidth(°)	360	
	垂直3dB波瓣宽度(°) Vertical 3dB beamwidth(°)	70±5	
	增益 Gain(dBi)	2±1	
	交叉极化比Cross-polar ratio (dB, 轴向/±60°范围内)	/	
	前后比 Front-to-back ratio (dB, 180°±30°)	/	
	第一上旁瓣抑制 Sidelobe suppression(dB)	≤ -15	
	不圆度 Out-of-roundness(dB)	±3	

机械指标Mechanical Index		
接口型号 Connector	SMA-J	
天线尺寸 Antenna dimensions (L*W*H) (mm)	Φ13*197	
包装尺寸 Packing dimensions (L*W*H) (mm)	以实际包装为准/ Subject to actual packaging	
天线重量 Antenna weight (kg)	0.02	
天线罩材质 Radome material	ABS	
抱杆直径 Derrick diameter (mm)	/	
极限风速 Extreme wind speed (km/h)	200	
环境温度 The environment temperature (°C)	工作温度Operating temperature: -40~+60 极限温度Limiting temperature: -55~+75	
雷电保护 Lightning protection	直流感地 (DC grounding)	
防水等级 Waterproof level	IP65	
产品等级 Product Level	商业版 (Commercial Edition)	

水平3dB波瓣宽度(°)
Horizontal 3dB beamwidth(°)垂直3dB波瓣宽度(°)
Vertical 3dB beamwidth(°)

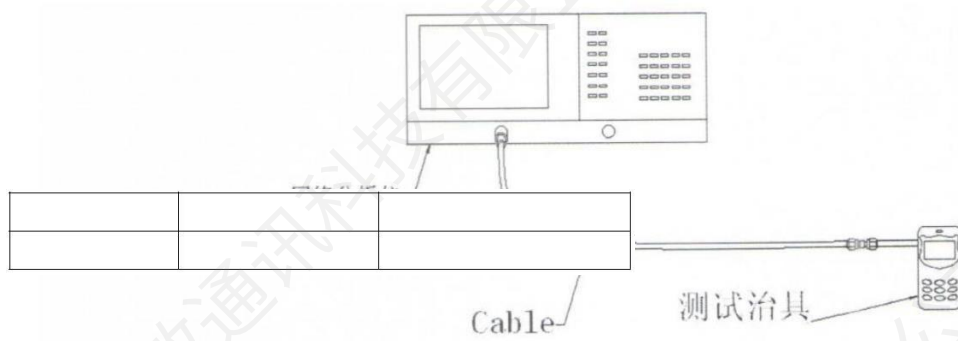
Five.S11 Test

5.0 S11 Test Method Description

Test equipment: Network analyzer (Roed ZV8)

Test method: A 50-ohm CABLE is used to connect the instrument's test port to the sample device's SMA connector after calibration. The return loss and VSWR at relevant frequencies are recorded.

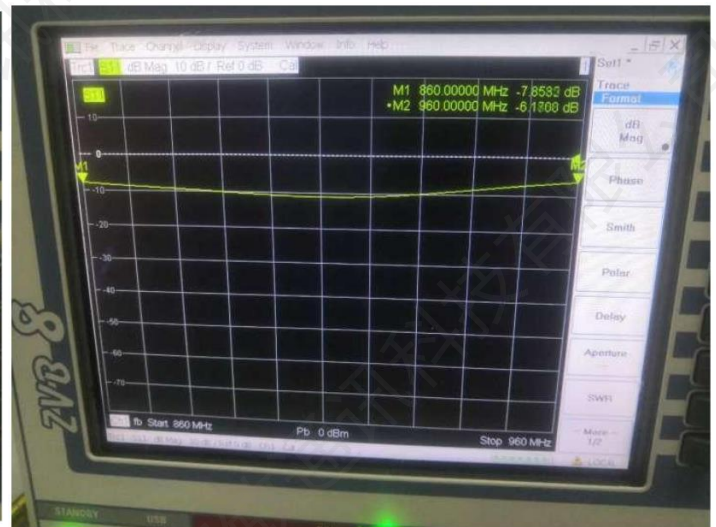
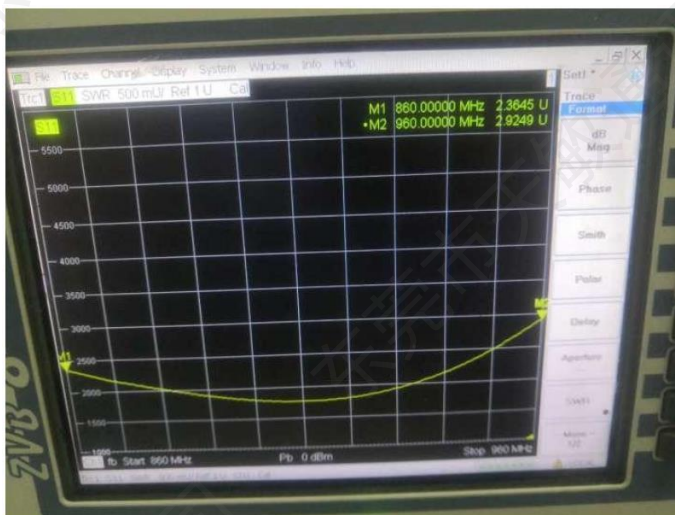
The test diagram is as follows:



5.1 passive data

测试示意图

Frequency (MHz)	860	960
VSWR	2.36	2.92



1 2 3 4 5 6 7 8 9

A B C D E F G

全部3.2

Ø13

197

接头

外壳

技术说明:

1. 带*号为重点尺寸; 未注尺寸依电子档加工;
2. 未注线性角度尺寸公差按 GB/T 1804-m
3. 未注形位公差按 GB/T 1184-K
4. 去除锐边、毛刺、保证毛刺方向;
5. 保证表面平整、无变形、清洁、无油污、无划伤;
6. 压铆位置须局部撕膜后再压铆;
7. 符合 RoHS环保要求。

标记	描述	版本	修改者	修改日期	零件名称	项目编号
设计	蓝宝德	电气	材料		蓝宝德	
日期	2025-12-10	日期	表面处理		物料代码	产品名称
工艺	批准	日期	加工方式			
日期		日期	重量 g	表面积dm²	视图方法	图纸编号
公	0	2	0	1.8	0.1	0.1
	3	6	10	20	30	40
	50	60	70	80	90	100
	110	120	130	140	150	160
	170	180	190	200	210	220
	230	240	250	260	270	280
	290	300	310	320	330	340
	350	360	370	380	390	400
	410	420	430	440	450	460
	470	480	490	500	510	520
	530	540	550	560	570	580
	590	600	610	620	630	640
	650	660	670	680	690	700
	710	720	730	740	750	760
	770	780	790	800	810	820
	830	840	850	860	870	880
	890	900	910	920	930	940
	950	960	970	980	990	1000

东莞市天敏通讯科技有限公司

VII. Darkroom Test Data

7.0 testing facility

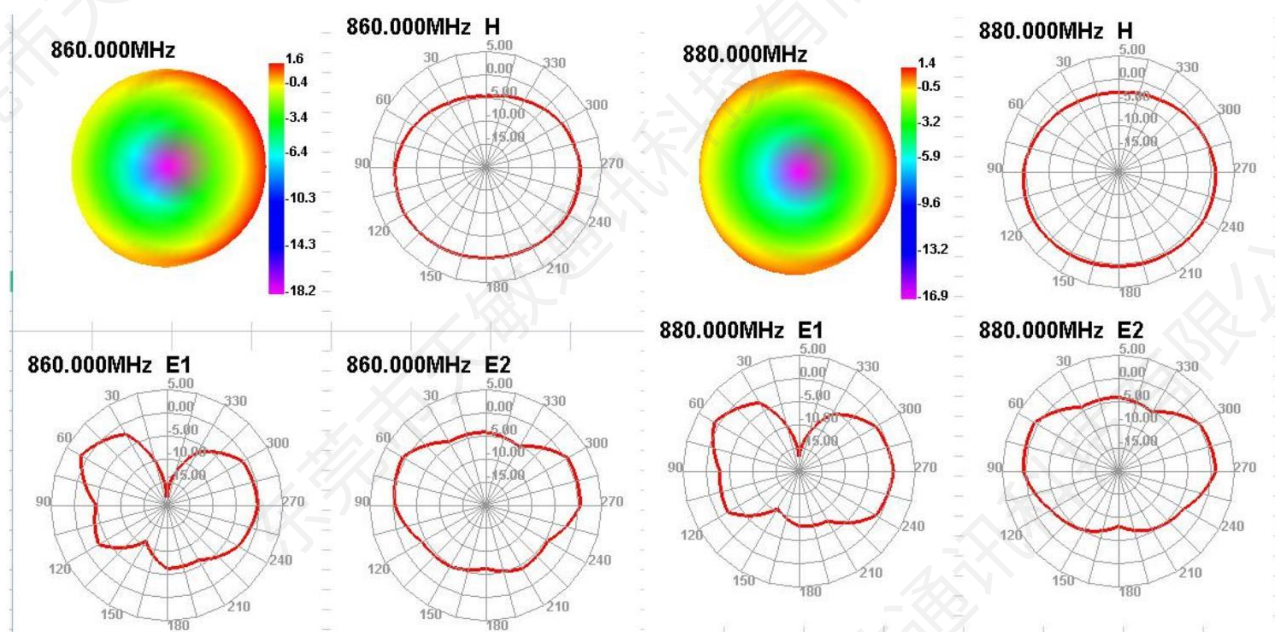
Test System: OTA Darkroom

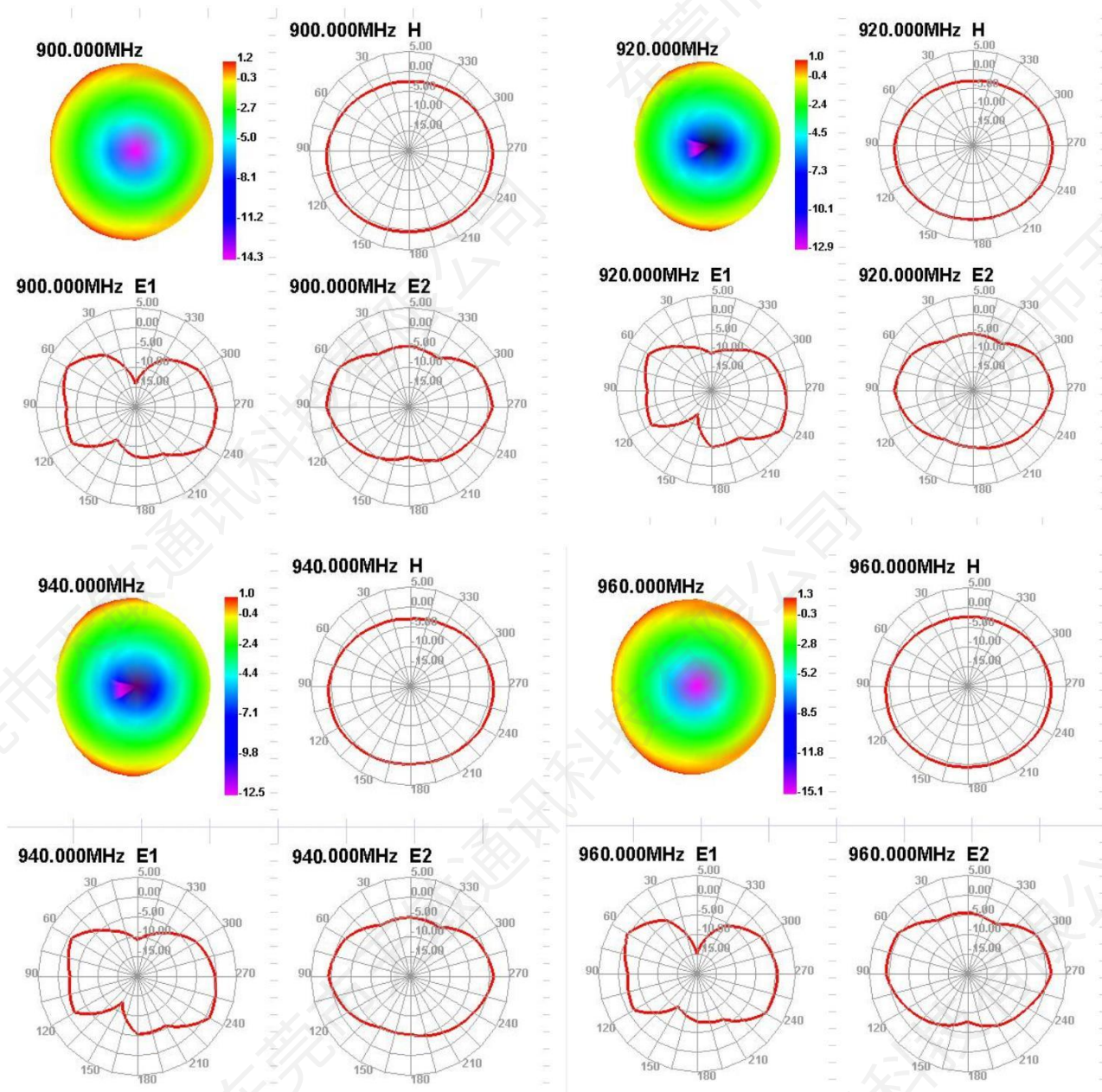
Test environment: Temperature $23\pm 3^{\circ}\text{C}$, Humidity: $50\pm 15\%$

Testing equipment: For passive data testing: Use the Agilent E5062C vector network analyzer.

For active data testing: Use the comprehensive tester Rod CMW500 7.1 for passive data testing (antenna vertically mounted on the motherboard).

Passive Test For 860										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
860	64.88	-1.88	1.55	-0.6	40.614	24.265	1.55	-18.25	42.43	42.66
870	68.03	-1.67	1.53	-0.62	41.899	26.132	1.53	-17.99	42.21	42.62
880	70.43	-1.52	1.36	-0.79	41.926	28.501	1.36	-16.88	42.1	42.47
890	71.97	-1.43	1.27	-0.88	40.824	31.141	1.27	-15.92	42	41.65
900	69.92	-1.55	1.21	-0.94	37.138	32.779	1.21	-14.32	41.93	41.91
910	68.04	-1.67	1.1	-1.05	33.639	34.399	1.1	-11.78	41.99	41.87
920	66.82	-1.75	1.03	-1.12	32.558	34.265	1.03	-12.03	42.02	41.86
930	65.63	-1.83	0.98	-1.17	31.548	34.086	0.98	-12.46	42.05	41.85
940	65.1	-1.86	1.03	-1.12	30.886	34.21	1.03	-12.88	42.07	41.84
950	65.29	-1.85	1.18	-0.97	30.573	34.716	1.18	-13.3	42.1	41.83
960	65.78	-1.82	1.34	-0.81	30.449	35.331	1.34	-13.68	42.13	41.82





8. Mass Production Antenna Specifications

For antenna mass production, VSWR is adopted as the standard test metric. The following test criteria are specified based on project-specific requirements.

frequency (MHz)	mass production standard
860-960	VSWR (mass production performance) < VSWR (sample recognition performance) + 0.5

IX. Material Description

The Summary of Hazardous Substances in Product 产 品 环 保 资 料 汇 总 表																							
表单编号: F-AD-TB-RD02-03		版本: B																					
Supplier Part Number 制造商料号	Part Name 部件名称	Vendor Name 制造商名称	Material Name/Type 材料名称/型号	Material Vendor 原材料供应商	Content of Hazardous Substance (PPM) 有害物质含量 (PPM)										Halogens Free 无卤		Testing institutions 测试机构	Test Report No. 测试报告编号	Issued Date 发布日期	RoHS report RoHS 附件	REACH report REACH 附件	MSDS 材料安全 数据表	Remarks 备注
					Cd	Cr (VI)	Hg	Pb	PBBs	PBDEs	DEHP	BBP	DBP	DIBP	Cl	Br							
ANTWLWQ462Y705 JTBW01	4G全向胶棒天线 (海外款)	东莞市天通通讯科技有限公司	线材	东莞市天通通讯科技有限公司	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SGS	NO.CANEC2102653702	2021年3月4日				
			胶棒/ABS+PC	LG CHEMICAL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CTI	A2210027970101004	2021年7月22日			
			铜	宜兴震展铜业有限公司	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SGS	NO.SHAEC2122206806	2021年10月20日			
Issued By/制作:卿鸿文																							
Approved By/批准:																							

X. Packaging Instructions

产品包装作业规范

客 户:

编 号	品 名	规 格	用 量
	封口袋	120*85*0.12	100/10000
	纸箱	280*230*170	1/10000

包 装 产 品 图 示

作 业 步 骤

1. 準備所需包材放於有利工作之位置。
2. 按照SYC-BZ01包裝規範, 用紙箱 (SYC-01), 封口袋 (PE) 包裝, 100PCS/包, , 每箱100包共10000PCS,
3. 每箱放100包, 共10000PCS. 裝滿箱後, 用透明膠帶封箱,

注 意 事 項

1. 作業員須戴手套操作。
2. 注意裝箱數量, 不可多裝, 少裝. 尾數箱須註明
3. 紙箱不可堆放過高, 以防重壓溢膠。

图 示 说 明

每箱放100包, 共10000PCS

备注: 數量以實際包裝為準, 此為參考數量。

核 準	審 核	制 作	日 期

SHENZHEN EASYLINKIN TECHNOLOGY CO., LTD

Supplier:Dongguan Tianmin Communication Technology Co., LTD.

Customer name:Shenzhen Hui Lian Unlimited Technology Co., LTD.

Material name:2.4G ANT

Customer part number:ANT-2.4G-01

Model: ANTWLWQ2.4GJBBZC01

Sample submission date:December 30, 2025

This antenna is designed for 2.4G Gateway.

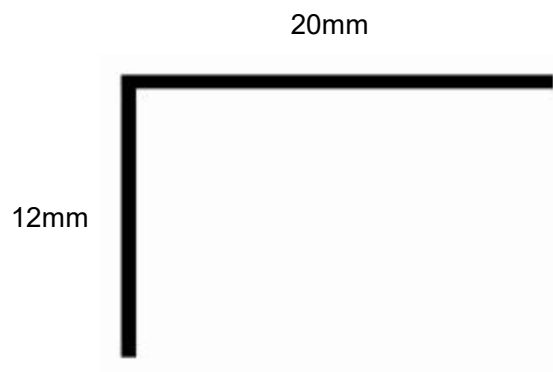
Electrical Characteristics

Frequency Band: 2400MHz ~ 2483.5MHz

Polarization *Gain : Max peak gain: 1.6dBi

Feature: This is a PCB antenna.

The size is 20*12mm.



Frequency (MHz)	2400MHz ~ 2483.5MHz
Gain (dBi)	1.6dbi
Antenna Designation	PCB antenna

