

		文件编号: Document Number:	
<h1>样品承认书</h1> <h2>Specification For Approval</h2>			
客户名称: Customer:		深圳市玩视科技股份有限公司 Shenzhen Play Technology Co., Ltd	
供应商名称: Customer:		深圳市广源发电子有限公司 Shenzhen Guangyuanfa Electronics Co., Ltd	
客户料号: Part Number:	3. 2. 04. 00313	供应商料号: Number:	GYF-2. 4-5. 8G-001-V1. 0
产品描述: Description:	2. 4-5. 8G胶棒天线接小S公头母针L=108. 0MM (2. 4-5. 8G GLUE ROD ANTENNA CONNECTED TO SMALL S MALE FEMALE PIN L=108. 0MM)	配用机型: Models	
供应商承认(盖章): Supplier acknowledgement (stamp):		客户承认(盖章): The customer acknowledges (stamps):	
Production: Huang Wangchun		Structure: Huang Wangchun	
审核: Audit:	date: 2024-09-05		

目录 (directory)

1. 规格 (Specifications)
 - 1.1 电气规格 (Electrical Specifications)
 - 1.2 天线频率范围 (Antenna frequency range)
2. 匹配电路图 (Match the circuit diagram)
3. 结构形式 (Structural form)
 - 3.1 天线组成 (Antenna composition)
4. 测试设备 (Test the equipment)
5. VSWR 测试连接 (VSWR test connection)
 - 5.1 测试连接 (Test Connection)
6. 测试
 - 6.1 测试的场地 (Test Venue)
 - 6.2 测试的仪表 (Tested Instruments)
 - 6.3 天线测试驻波 (Antenna test standing wave)
 - 6.4 天线测试数据 (Antenna test data)
7. 图纸规格 (Drawing Specifications)
 - 7.1 图纸 (Drawings)
 - 7.2 样品尺寸检测 (Sample size testing)
 - 7.3 物料清单 (Bill of Material)
8. 可靠性测试 (Reliability test)
 - 8.1 可靠性测试报告 (Reliability test report)
 - 8.2 产品储存说明 (Product Storage Instructions)

1.规格 (specification)

1.1 电气规格 (Electrical Specifications)

本报告主要提供 胶棒 天线各项电气和结构性能参数的测试状况。
(This report mainly provides the test status of various electrical and structural performance parameters of the glue stick antenna.)

规格型号 Specifications and models	广源发料号 Guangyuan issued material number
胶棒天线 Glue stick antenna	GYF-2.4-5.8G-001-V1.0

1.2 天线频率范围 (Antenna frequency range)

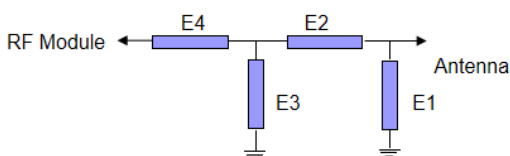
下表是广源发设计和量产天线的电性能指标.

(The following table is the index of the electrical performance of the antenna designed and mass-produced by Guangyuanfa)

Models	Glue sticks				
Antenna type	Glue sticks				
Frequency band and antenna material	Main antenna	Band		Material	
		2G	/		
		3G	/		
	LTE	/			
	Other antennas	Episode	/		
WIFI+GPS+BT		2.4G/5.8			
Performance requirements	Execute according to customer requirements				

2. 匹配电路图 (Matching circuit diagram)

天线匹配无更改(There are no changes to the antenna matching)



WIFI	Element	Value
	E1 (0402)	N/A
	E2 (0402)	0欧姆
	E3 (0402)	N/A
	E4 (0402)	0欧姆

3. 结构形式 (Structural form)

3.1 天线组成天线主要是由 软性线路印刷板 组成。(Antenna composition
The antenna is mainly composed of a flexible circuit printed board.)

4. 测试设备 (Test the equipment)

测试设备说明

			
24探头微波暗室	CMW500	7*4*3M ETS微波暗室	Agilent 8960
			
Agilent E5071B	高低温试验箱	MT8820C	HP8753ES
测试系统 ETS 暗室 24探头OTA暗室	测试环境 温度: 22°C ± 3°C 湿度: 50% ± 15%	有源测试 支持2G/3G/4G 支持NB-IoT/CAT-M/BT/WIFI	无源测试 700MHz—6G

5 . VSWR 测试连接 (VSWR test connection)

5.1 测试连接: VSWR 测试装置依次连接为: R&S ZVL 网络分析仪 → 测试线 → 测试治具.
Test Connections: The VSWR test setups are connected in turn as follows: R&S ZVL Network Analyzer--Test line--Test fixtures.

6. 测试 (Test)

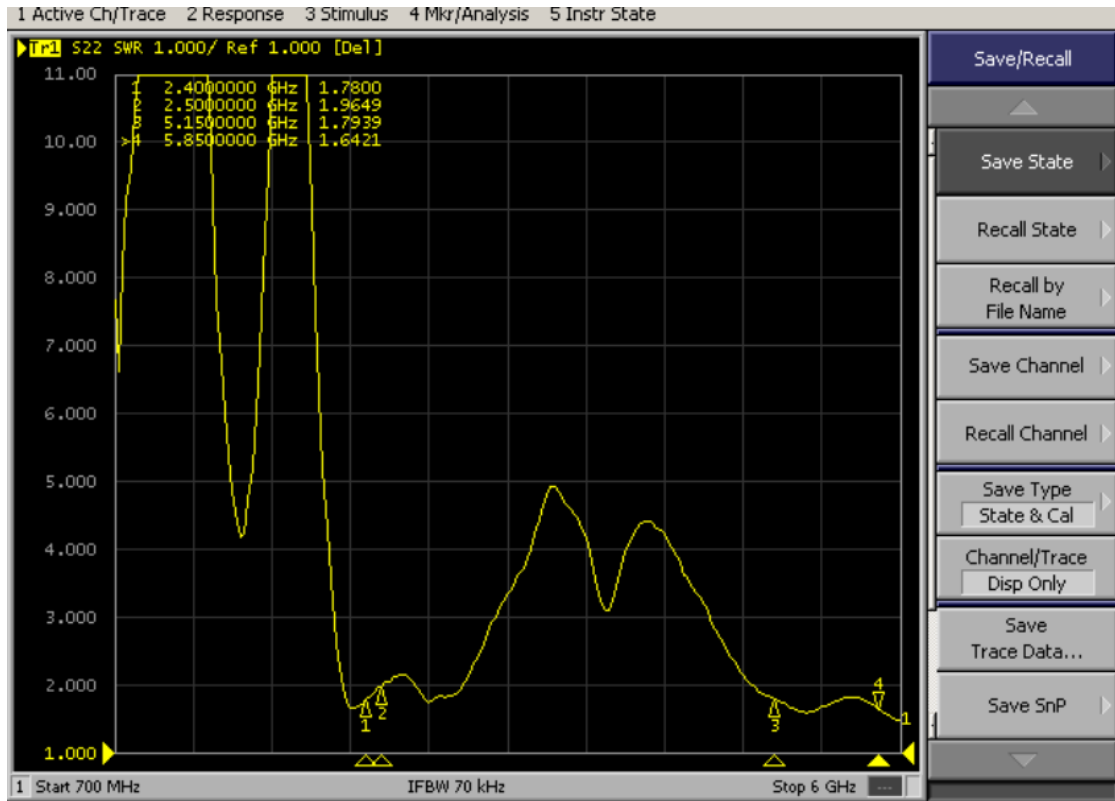
6.1 测试的场地 : 广源发微波暗室 。测试频率范围为 400MHz—6GHz, 静区范围为 50cm 圆周, 反射率小于-50 dB.

6.2 测试的仪表: Agilent5071B 、 CMW500、 Agilent8960 E5515C、 标准喇叭天线、 24 探头 OTA 微波室测试系统、 打印机等暗

(6.1 Test site: Guangyuanfa microwave anechoic chamber. The test frequency range is 400MHz-6GHz, the quiet zone range is 50cm circumferential circle, and the reflectivity Less than -50 dB.

6.2 Instruments tested: Agilent5071B, CMW500, Agilent8960 E5515C, standard horn antenna, 24-probe OTA microwave chamber test system, printer, etc)

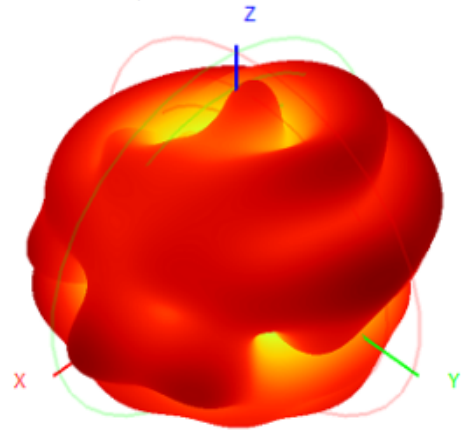
6.3 天线无源测试驻波 (The antenna passively tests the standing wave)



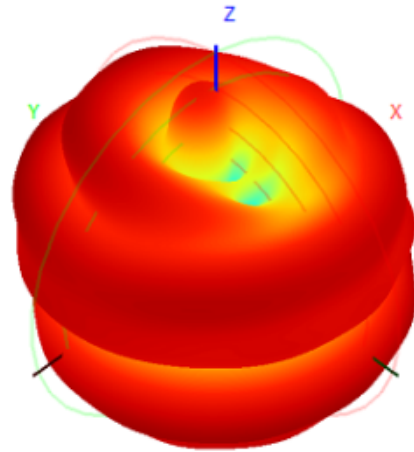
6.4 天线无源测试数据 (Antenna passive test data)

Frequency ID	1	6	11	12	47
Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5850.0
Efficiency (dBi)	-1.82	-1.70	-1.57	-1.64	-2.56
Gain (dBi)	3.17	2.98	5.17	5.80	4.66
Efficiency (%)	65.82	67.66	69.59	68.51	55.42
Directivity (dB)	4.99	4.68	6.74	7.45	7.23
Peak Gain Position (Theta)	58.00	79.00	80.00	82.00	83.00
Peak Gain Position (Phi)	81.00	10.00	322.00	180.00	317.00
Efficiency ThetaPol (%)	60.26	62.33	63.48	63.59	49.89
Efficiency PhiPol (%)	5.56	5.33	6.10	4.92	5.53
Upper Hem. Efficiency (%)	36.62	36.98	43.51	45.54	42.62
Lower Hem. Efficiency (%)	29.20	30.67	26.08	22.97	12.80

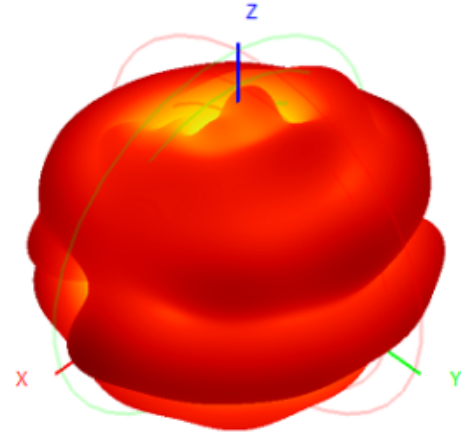
2400.0MHz Total, Eff: 65.8%



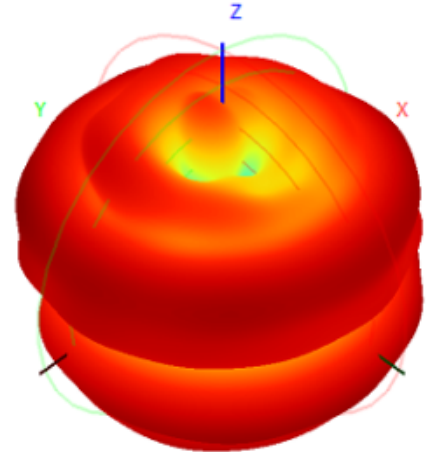
Back View



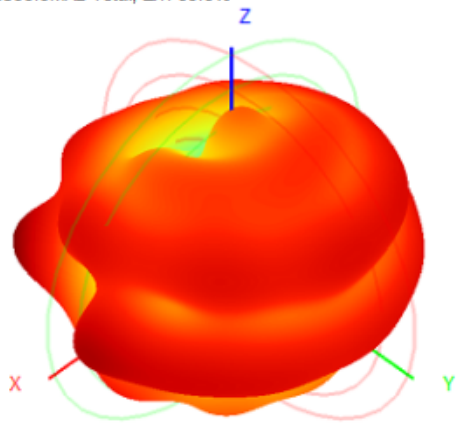
2450.0MHz Total, Eff: 67.7%



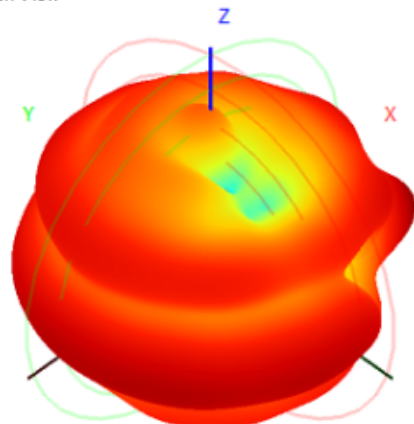
Back View



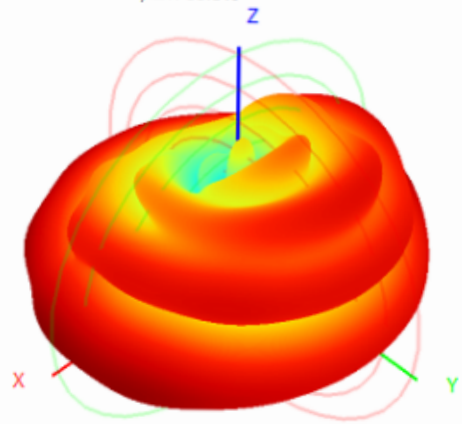
2500.0MHz Total, Eff: 69.6%



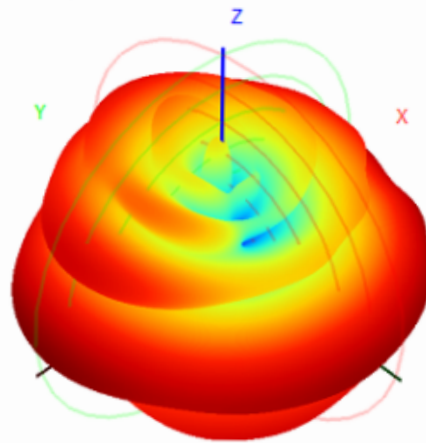
Back View



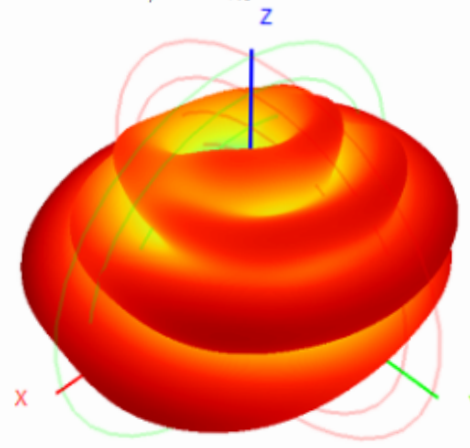
5150.0MHz Total, Eff: 68.5%



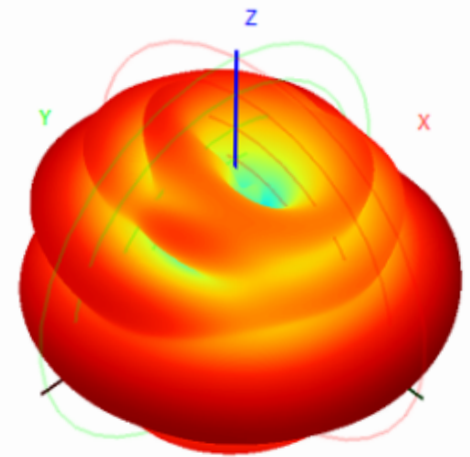
Back View

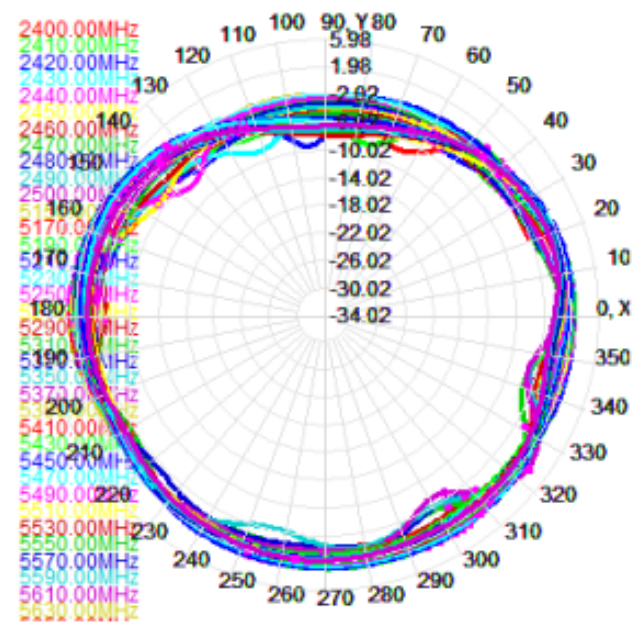
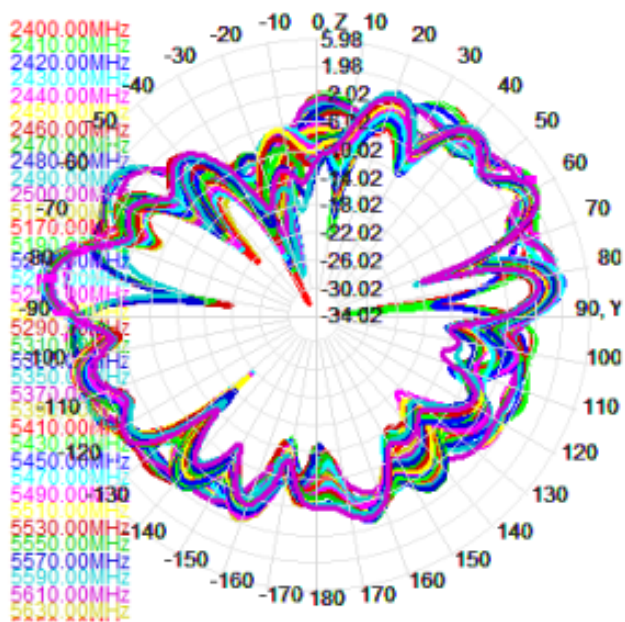
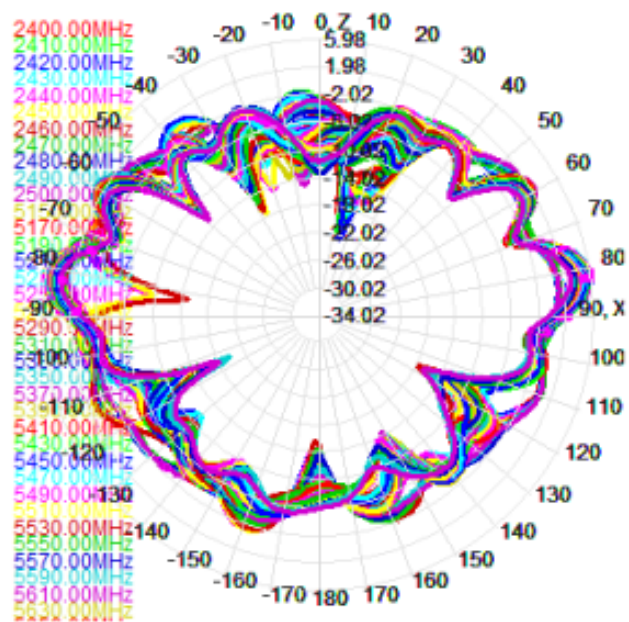


5850.0MHz Total, Eff: 55.4%

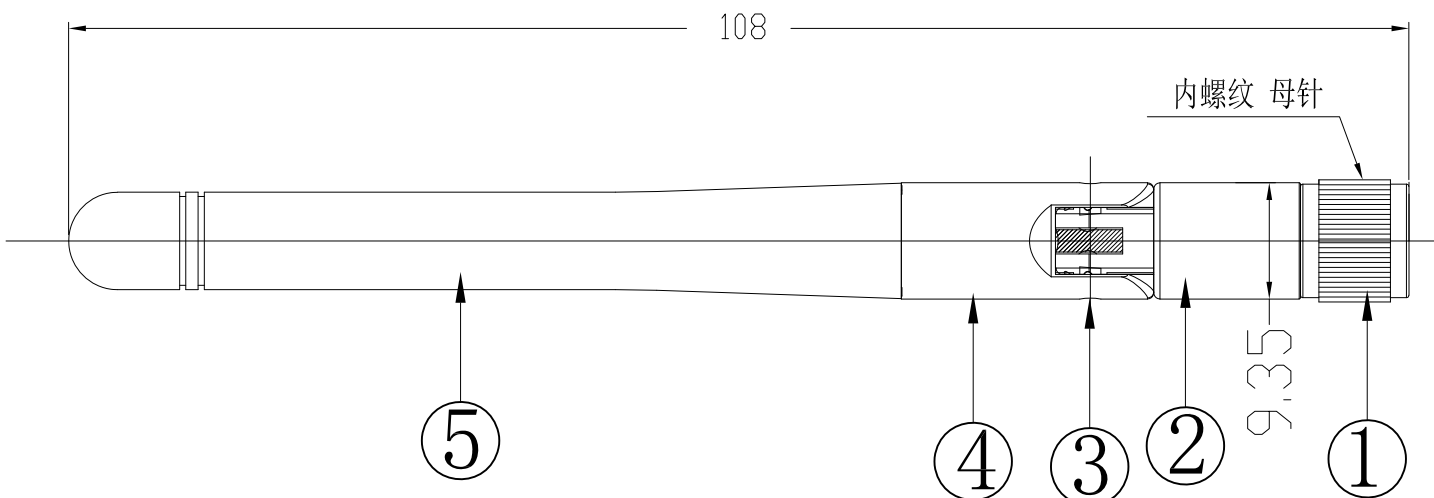


Back View





1	2	3	4
版次	修改内容	修改日期	
V1.0	首次发行	2024-09-05	



5	外壳	TPE 黑色	1
4	小S上固	ABS, 黑色	1
3	铆钉	ABS, 黑色	2
2	小S下固	ABS, 黑色	1
1	小S公头母针	半塑镀镍	1
NO	PART NAME	DESCRIPTION	Q. TY

深圳市广源发电子有限公司			
X.	± 0.5	描述: 2.4-5.8G	制图: 黄望春
.X	± 0.25	图纸编号: GYF-2.4-5.8G-001-V1.0	审核:
.XX	± 0.10	客户料号:	批准:
.XXX	± 0.05	比例: ---	单位: mm
ANGULAR	∠ ± 0.5°		日期: 2024-09-05

1

2

3

4

7.2 样品尺寸检测 (Sample size inspection)

name	2.4-5.8G		Part number	GYF-2.4-5.8G-001-V1.0			date	2024-09-05	
item	specification	Measured data					decide	remark	
		1	2	3	4	5			
1	108	108.1	108.1	108	108	108	OK		
2	9.4	9.35	9.4	9.35	9.36	9.37	OK		
3									

7.3 物料清单(Bill of Materials)

Bill of Materials

name	2.4-5.8G	Part number	GYF-2.4-5.8G-001-V1.0	date	2024-09-03
Bill of Materials	category	Material	specification	Dosage	
1	Glue stick antenna	ABS+TPE	9.4*108.0MM	1	
2	SMA male and female needles	Nickel		1	

8.可靠性测试(Reliability testing)

8.1 可靠性测试报告(Reliability test report)

name	2.4-5.8G	Part number	GYF-2.4-5.8G-001-V1.0	date	2024-08-28
Number of tests	15pcs	Time	8月25日09:15	Completion time	8月27日11:25

Test items	Test Standards	Test PCS	Test results	remark
Salt spray corrosion test	(1) Test temperature: 35° C±2° C for salt water test; Pressure drum 47° C±1° C (2) Test conditions/methods: brine concentration more than 5%, solution PH value: 6.5~7.2, air pressure: 1.0~1.2kg/cm², test time according to product requirements (3) After the test: after 2 hours, observe the oxidation and discoloration of the surface of the product, and the appearance of the coating falling off	5pcs	OK	Test time 24H
Low temperature test	(1) Temperature: -30° C (-25° C--- pilot stage) (2) Test time: 20 hours / Packing condition: not packed (3) The tested product is not turned on and placed in the high and low temperature test chamber, the temperature in the chamber is adjusted to 25° C, the humidity is 65%, and the temperature is kept warm for 1 hour, and the temperature is cooled to -30° C within 1 hour, the humidity is turned off, the heat is kept for 20 hours, the temperature is raised for 1 hour to normal temperature, and the performance test is carried out after 2 hours. Appearance and structure: The surface of the antenna appearance is free of defects, and the antenna should not be deformed, warped and damaged, and the performance is normal, and the VSWR ratio should not exceed 10% specified in the product standard	5pcs	OK	Test time 20H
High temperature test	(1) Temperature: +70° C (+65° C ---pilot stage) Humidity 85% (80%--- pilot stage) (2) Test time: 20 hours / Packing condition: not packed (3) The tested product is placed in the high and low temperature test chamber without booting, the temperature in the chamber is adjusted to 25° C, the humidity is 65%, and the temperature is kept warm for 1 hour, the temperature is raised to +70° C within 1 hour, the humidity is 85%, the temperature is kept warm for 20 hours, the cooling temperature is 1 hour to normal temperature, and the performance test is carried out after 2 hours. Appearance and structure: The surface of the antenna appearance is free of defects, and the antenna should not be deformed, warped and damaged, and the performance is normal, and the VSWR ratio should not exceed 10% specified in the product standard	5pcs	OK	

8.2 产品储存说明 (Product Storage Instructions)

1. 金手指导体裸露部分，需经过表面镀层（防锈）处理，如镀/化金、OSP、镀锡等，储存环境需要避免腐蚀性气体。
2. 天线温度需管控 21-38℃，湿度需管控 50-70%。温度过高会使得 3M 胶融化，导致天线粘性变差。
3. 建议若初始粘接温度低于 10℃时，不适于粘接，因此时的胶粘剂太硬，而无法牢固的粘接在物体上;但是，如果已经粘接上了，低温下的持粘力同样是令人满意的。
4. 在 21℃和 50%相对湿度条件下，原包装状态下自生产之日起保存期为 24个月。
 - (1. The exposed part of the gold hand guide body needs to be treated with surface plating (anti-rust), such as gold plating/chemical plating, OSP, tin plating, etc., and the storage environment needs to avoid corrosive gases.
 2. The antenna temperature should be controlled at 21-38° C, and the humidity should be controlled by 50-70%. Excessive temperature can cause the 3M adhesive to melt, resulting in poor antenna viscosity.
 3. It is recommended that if the initial bonding temperature is lower than 10° C, it is not suitable for bonding, so the adhesive is too hard to bond firmly to the object; However, if it has been bonded, the adhesion at low temperatures is also satisfactory.
 4. Shelf life is 24 months from the date of manufacture in the original packaging at 21° C and 50% relative humidity.)