

深圳市联航数码科技有限公司

United Digital Technology Co., Limited

Address: 1105, MingTeng Building, QingHu Road, Longhua District, Shenzhen

IGB18-WiFi Antenna Specification

客 户:

CUSTOMER:

TASTEMAKERS LLC

客 户 案 号:

***CUSTOMER P/N:**

本 厂 编 号:

OUR MODEL NO:

品 名 / 规 格:

SPECIFICATIONS:

IGB18-WiFi antenna

样 品 数:

QTY:

日 期:

Date:

2022-11-18

Test unit & Test engineers:

Shenzhen Yuchen Technology Co., Ltd			Customer 客户承认
射频 RF	结构 Structural	核准 Approved	签名 (盖章)
王家喜 Wang Jiayi	周磊 Zhou Lei	代文振 Dai Wenzheng	

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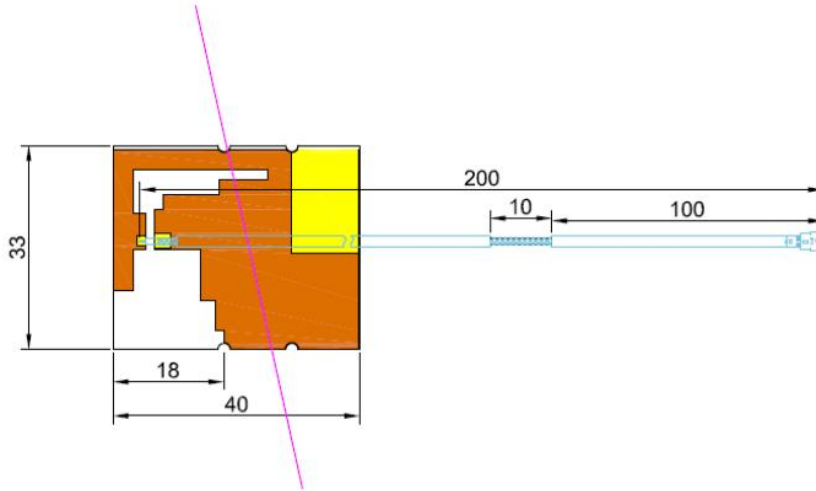
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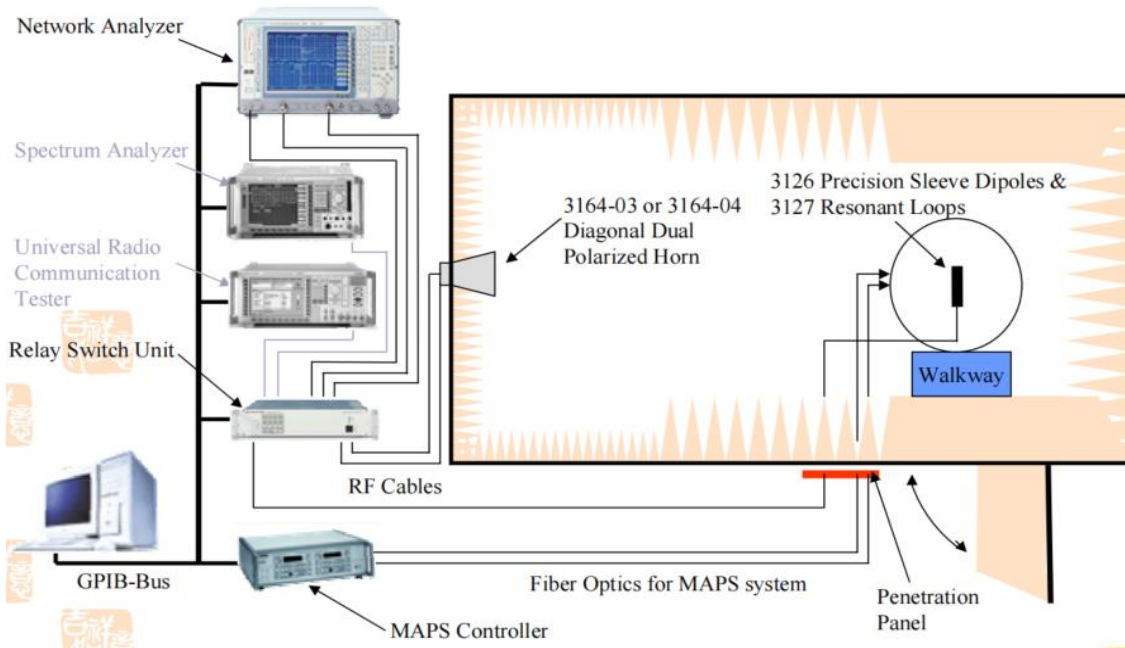
三 基本参数 The basic parameters

主要技术指标		Main technical specifications	
频率范围 (MHz)	2400-2500	Frequency Range (MHz)	2400-2500
特性阻抗(Ω)	50	Impedance(Ω)	50
峰值增益(dBi)	>4	Peak Gain(dBi)	>4
电压驻波比	≤ 2.0	VSWR	≤ 2.0
最大功率	10W	Admitted Power	10W
极化方式	线极化	Polarization	Linear polarization
连接方式	IPEX-1	Connector Type	IPEX-1
物理性能		Physical Properties	
天线本体材料	FPC	Antenna Base	FPC
颜色	黑色	Colour	Black
天线尺寸	30.5*43.2mm	Antenna Dimensions	30.5*43.2mm
连接线长度	200mm	Connecting line length	200mm
工作温度	-20 $^{\circ}$ C~+85 $^{\circ}$ C	Operating Temp	-20 $^{\circ}$ C~+85 $^{\circ}$ C

四 工程图纸 Product Drawing



五 测试设备 The Equipment&Conditions



Test standard:

Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021
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Test Procedure

Test Step Flow

1. Maintain the test ambient temperature of 23±2 C, the instrument is powered on and preheated for more than 30 minutes
2. Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard
3. Outline sets the test content objectives and conducts calibration tests
4. Run the EMQuest OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory

Test Principle

The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

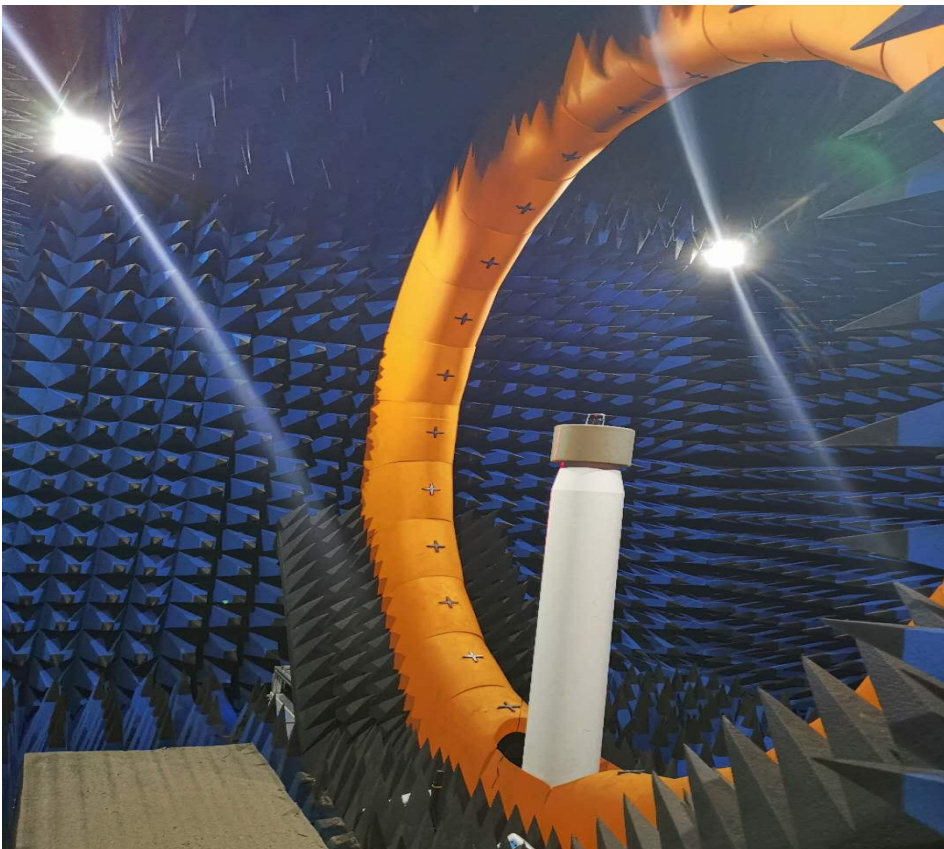
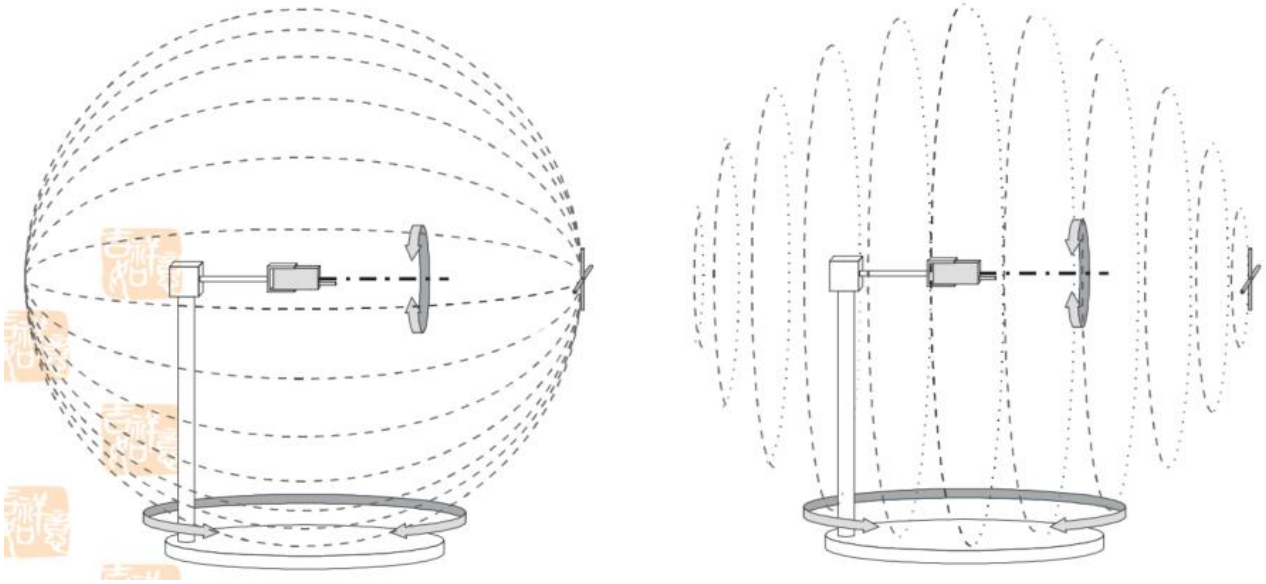
Test Conditions

1. The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period
3. The analyte should be complete and undamaged, and the test environment should be kept clean

Software being used: AnTestpro97

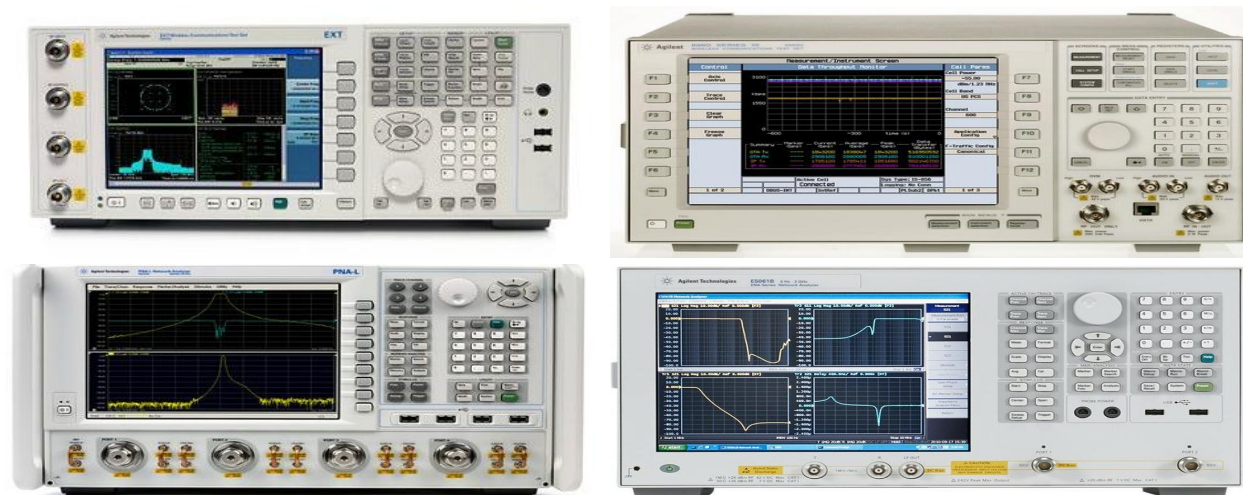
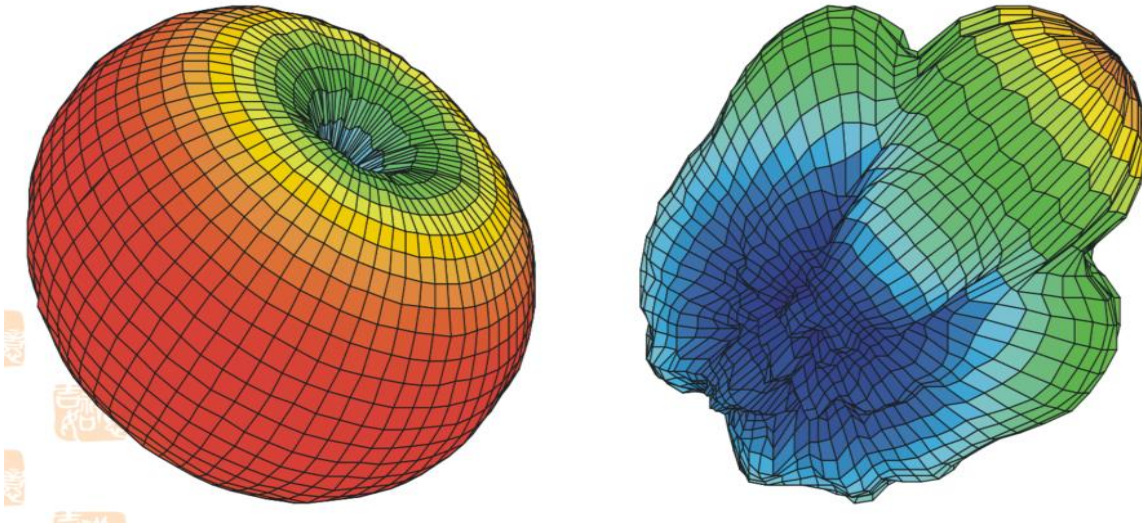
Software version: V015

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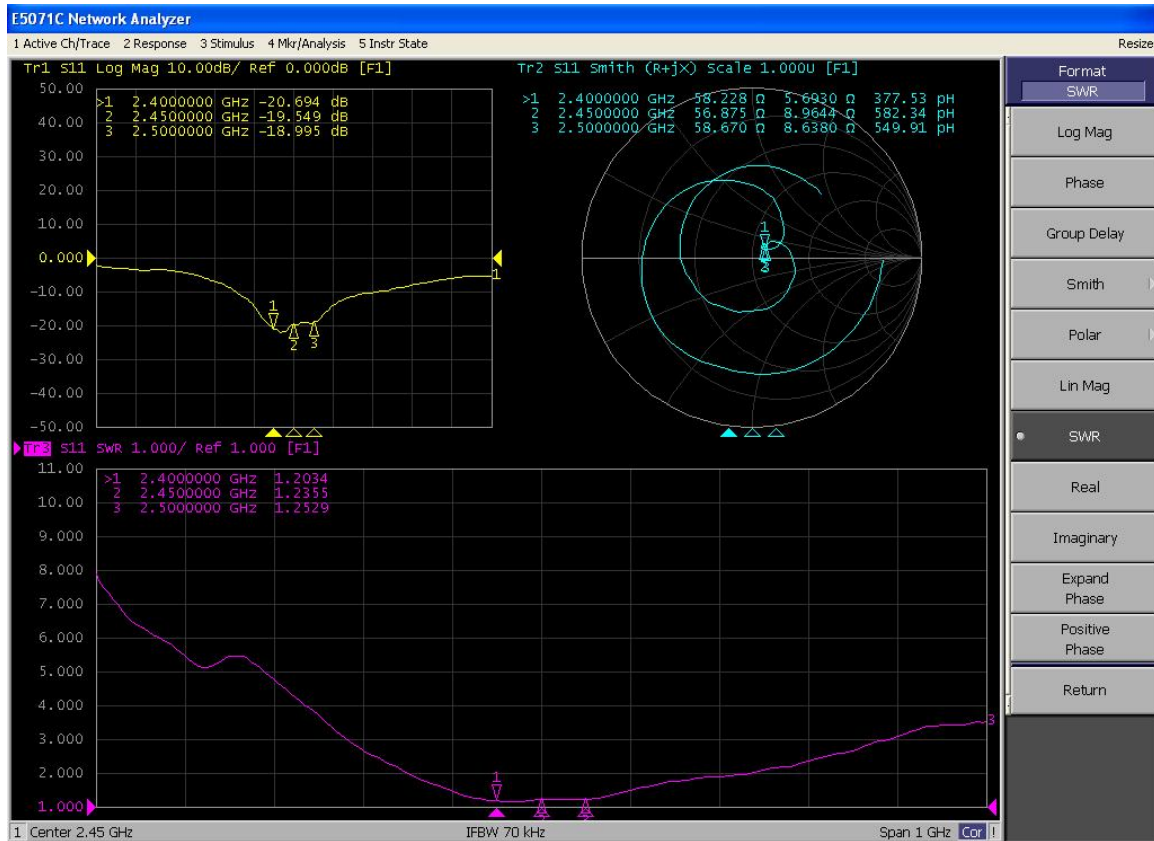
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Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Communication comprehensive tester	R&S	CMW500	2022.11.04	2023.11.03
Network analyzer	Agilent	5071C	2022.11.04	2023.11.03
Network analyzer	R&S	ZVB 8	2022.11.04	2023.11.03

六 性能测试报告 (The Report)

6.1 驻波 (SWR)



Frequency	2400MHz	2450 MHz	2500 MHz
SWR	1.20	1.24	1.25

6.2 无源增益、效率 (Passive gain, efficiency)

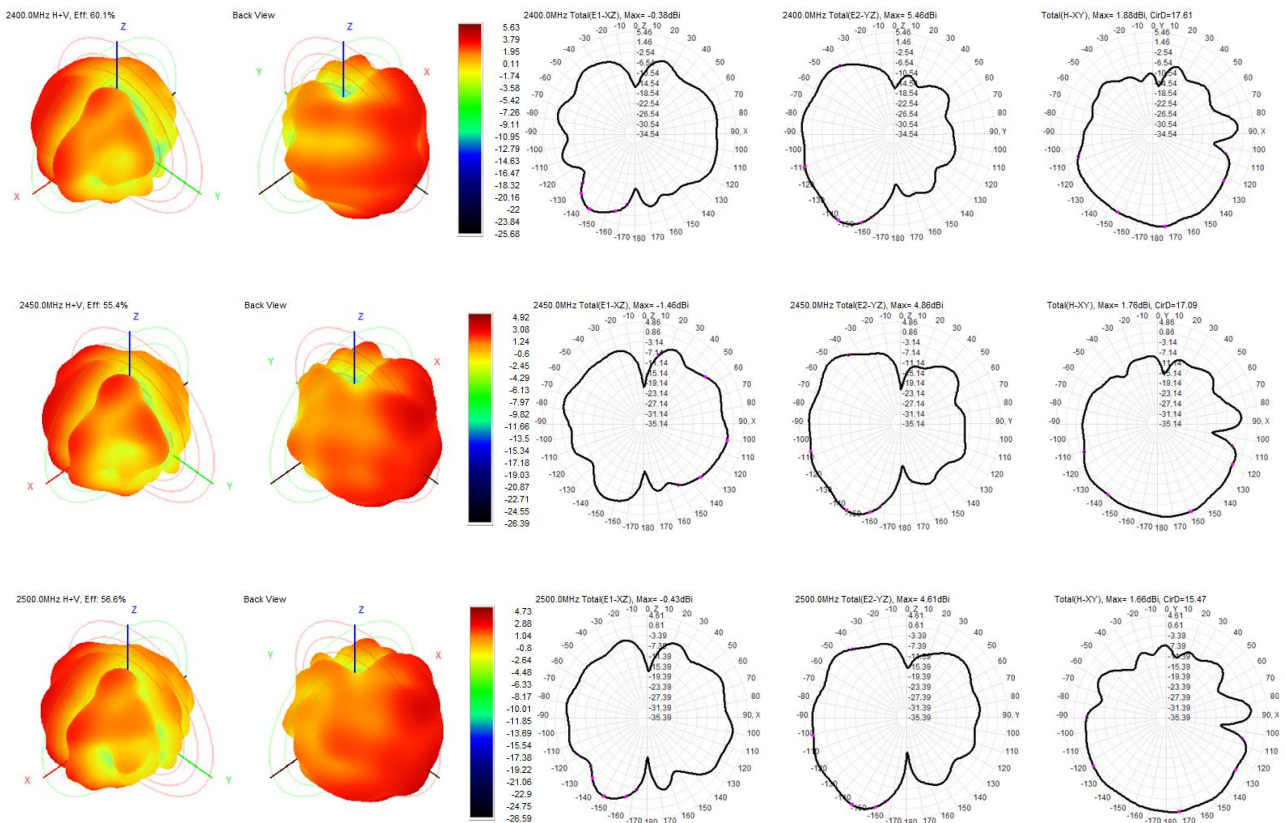
Frequency ID	1	2	3
Frequency (MHz)	2400.0	2450.0	2500.0
Efficiency (dBi)	-2.21	-2.56	-2.47
Gain (dBi)	4.92	4.86	4.73
Efficiency (%)	60.08	55.40	56.58
Directivity (dB)	7.84	7.49	7.20
Peak Gain Position (Theta)	147.00	148.00	149.00
Peak Gain Position (Phi)	263.00	265.00	263.00

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Efficiency ThetaPol (%)	36.60	34.01	33.85
Efficiency PhiPol (%)	23.48	21.40	22.74
Upper Hem. Efficiency (%)	24.31	23.10	22.33
Lower Hem. Efficiency (%)	35.78	32.30	34.26

6.3 辐射方向图(Radiation pattern)



6.4 有源测试数据 (Active Test Data)

802.11b	ch1	ch6	ch11	802.11g	ch1	ch6	ch11
TRP-11M	12.56	13.11	13.51	TRP-6M	12.34	12.17	12.16
TIS-11M	-82.47	-82.25	-82.35	TIS-54M	-70.41	-70.36	-70.22
802.11n	ch1	ch6	ch11				
TRP-MCS0	12.37	12.56	12.18				
TIS-MCS7	-67.72	-67.12	-67.57				

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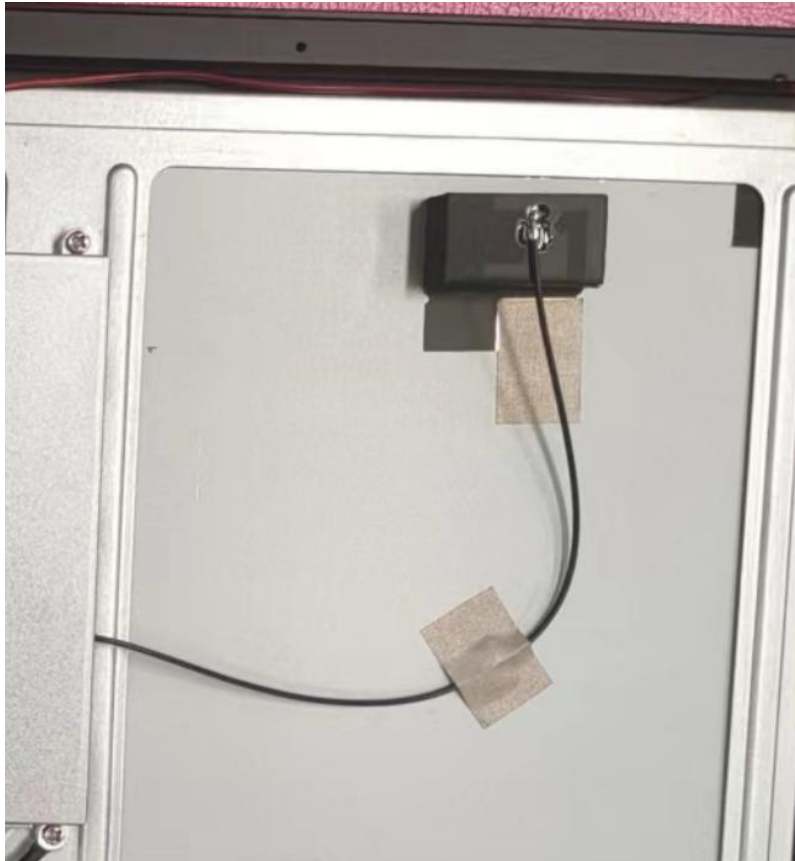
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七、环境可靠性试验报告 environmental testing

1、可靠性测试报告 Reliability test report

测试项目		测试方法	要求	结果
C1	V.S.W.R.电性驻波比	网络分析仪参数进行测试	符合待测物规范	pass
M1	天线增益	天线暗室参数进行测试	符合待测物规范	pass
M2	Vibration 震动	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz3 directions; 2 hours for each direction 振幅 1.5mm; 频率 20~80~20Hz; 3 个方向各 2H	1. No Visual Damage 2. Frequency Tol.≤5% 无明显外观不良;频率偏移≤5%	pass
M6	Random Drop 跌落	GB / T2423.8-1995 Single: Height: 1.0 Meter;3 directions; 1 time for each direction 单支天线, 高 1m; 3 个方向各 1 次	1. No parts separated、fracture 2. Frequency Tol.≤5% 产品无脱落、断裂;频率偏移≤5%	pass
E3	Dimension 尺寸	Inspection of dimension, color, material, package, surface process. 检查尺寸, 颜色, 材料, 包装, 表面处理	Directive DUT specification 符合待测物规范	pass
M1	RoHS	With Reference to IEC 62321:2008 with flow chart 参考 IEC 62321 测试流程	Directive RoHS 2015/863/EU 符合 RoHS 2015/863/EU 标准	pass

八 安装方式 (installation method)



- 1、将天线贴在支撑棉上。（Attach the antenna to the support cotton.）
- 2、参考样机，将支撑棉和天线贴在指定位置。（Refer to the prototype, stick the support cotton and the antenna in the designated position.）
- 3、天线外露焊盘处贴上导电布。（Affix a conductive cloth to the exposed pad of the antenna.）
- 4、在同轴电缆中剥位置对应的金属板位置贴上导电海绵。（A conductive sponge is pasted on the metal plate corresponding to the stripping position in the coaxial cable.）
- 5、将同轴电缆中剥位置放置在导电海绵居中位置，然后贴上导电布并压实导电布，让同轴电缆中剥部分与金属板充分接触。（Place the stripping position of the coaxial cable in the center of the

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conductive sponge, and then paste the conductive cloth and compact the conductive cloth, so that the stripping part of the coaxial cable is in full contact with the metal plate.)

九 包装 (packaging)

一、装箱要求(The packing requirements)

作业说明(job description):

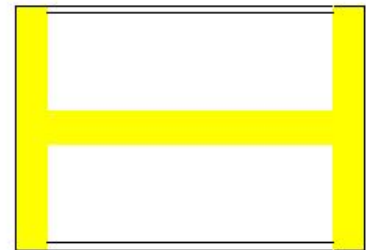
1.内包装(inner packing; inside packing; make-up):

产品 100 PCS/小袋(Product 100 PCS / pouch)



2.外包装(external packing):

根据实际包装数量/箱(According to the actual packing quantity / box)



注意事项(take care):

1、包装需根据产品实际情况增加保护措施如隔板、珍珠棉等(Packaging should increase protection measures such as partition, pearl cotton according to the actual situation of the product)。

2、需按照客户指定要求增加标签或其他内容、月份标签等(Labels or other content, monthly labels, etc. should be added as specified by the customer)。