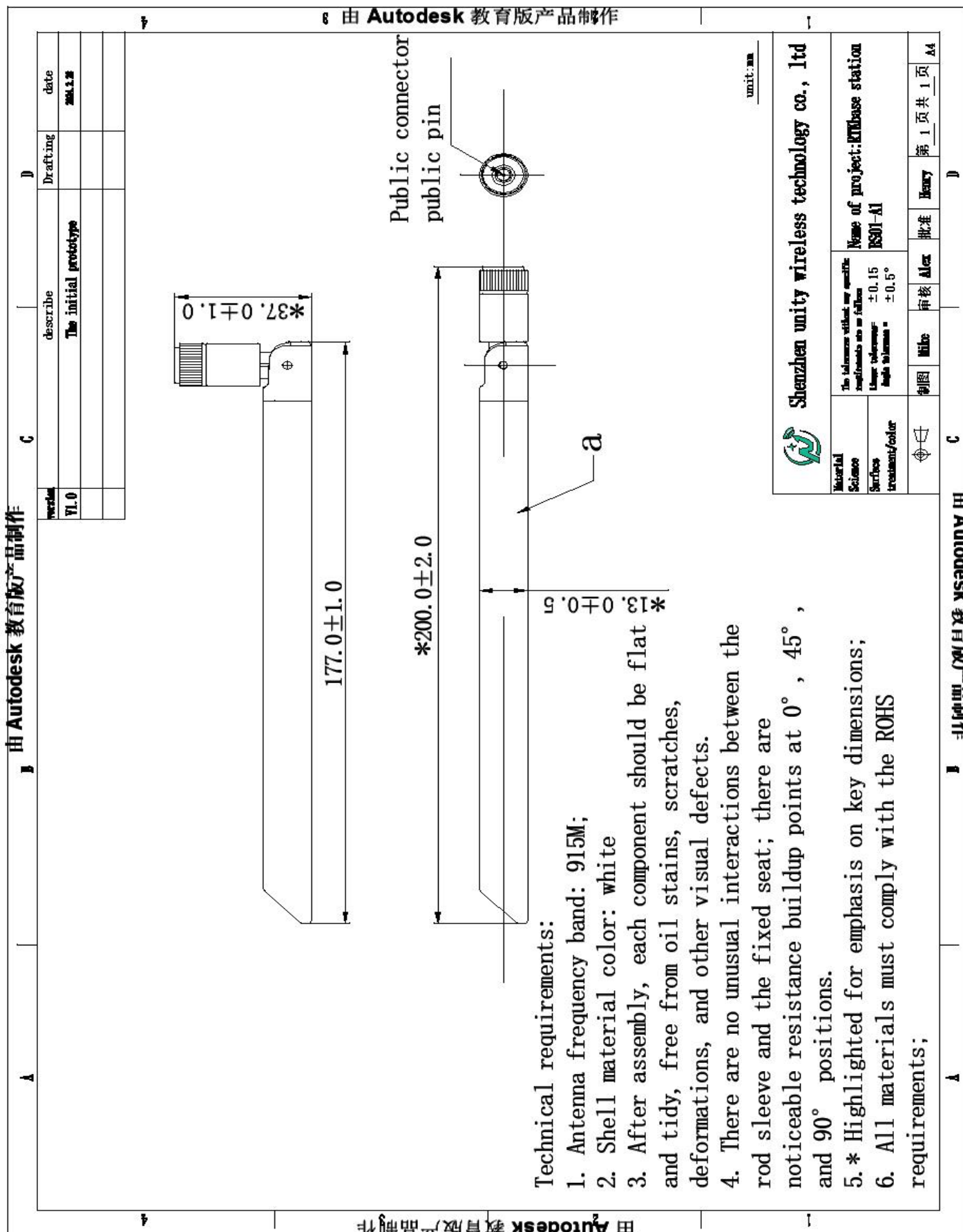


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engineering drawing:



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C

D

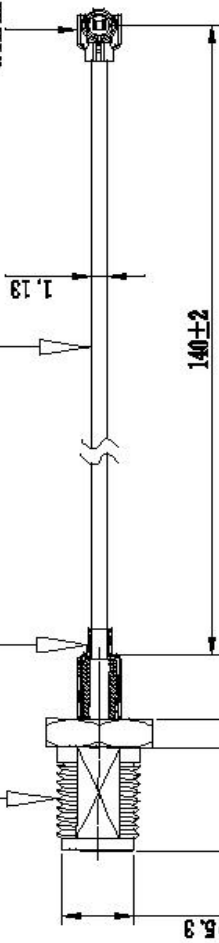
版本	描述	制图	日期
A	MCX		2025.5.29

1. SMA female connector with 11 internal teeth (gold-plated)

2. Black heat-shrink tubing (length and width 140mm)

3. 1.15mm black line

6. IP6X



4. Screw nut (gold-plated)

5. Shim (gold-plated)

7. Floral cushion

Key Points:

1. The wire is neatly arranged, with no damage to the outer casing, no oil stains, spots, or other defects.
2. The highest point of the weld should not exceed 1.8 mm.
3. Joint Pull Force MCX: 1 KG, IP6X: 0.5 KG
4. All the materials used meet the ROHS standards.

7	Floral cushion	gold-plated	yellow	1	1
6	Screw nut	IP6X	yellow	1	1
5	Shim	gold-plated	yellow	1	1
4	Screw nut	gold-plated	yellow	1	1
3	Heat-shrink tube	1.15mm black	black	1	1
2	Heat-shrink tube	1.15mm black	black	1	1
1	Floral cushion	gold-plated	yellow	1	1
0	Shim	black	black	1	1

unit:mm

Shenzhen unity wireless technology co., ltd

Material	The materials without any specific requirements are as follows			Name of project: KTHesse station		
Surface	Linear tolerance: ± 0.15			KS01-A1		
treatment/color	Angle tolerance: $\pm 0.5^\circ$					
制图			审核	批准	审核	第 1 页共 1 页
			Miko	Henry		A4

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B

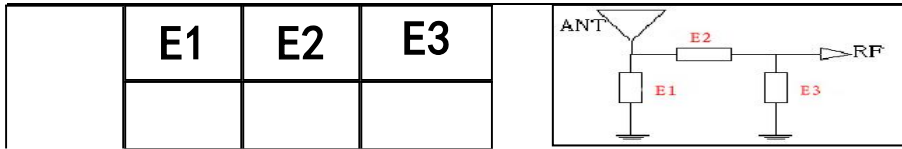
C

D

产 Product Parameter:

品名		Model	
频率范围 (MHz)	915-930	Frequency	915-930
带宽 (MHz)	100	Bandwidth (MHz)	100
极化方式	线极化	Polarization Type	线极化
天线增益 (dBi)	3.54	Gain (dBi)	3.54
电压驻波比	≤ 2	VSWR	≤ 2
输入阻抗 (Ω)	50	Input Impedance (Ω)	50
天线长度 (mm)		Cable length (mm)	
电缆线颜色		Cable Colour	
接口形式	SMA 内孔	Connector Type	SMA 内孔
工作温度 ($^{\circ}\text{C}$)	-40~+85	Operation temperature ($^{\circ}\text{C}$)	-40~+85
存储温度 ($^{\circ}\text{C}$)	-40~+85	Store temperat ($^{\circ}\text{C}$)	-40~+85

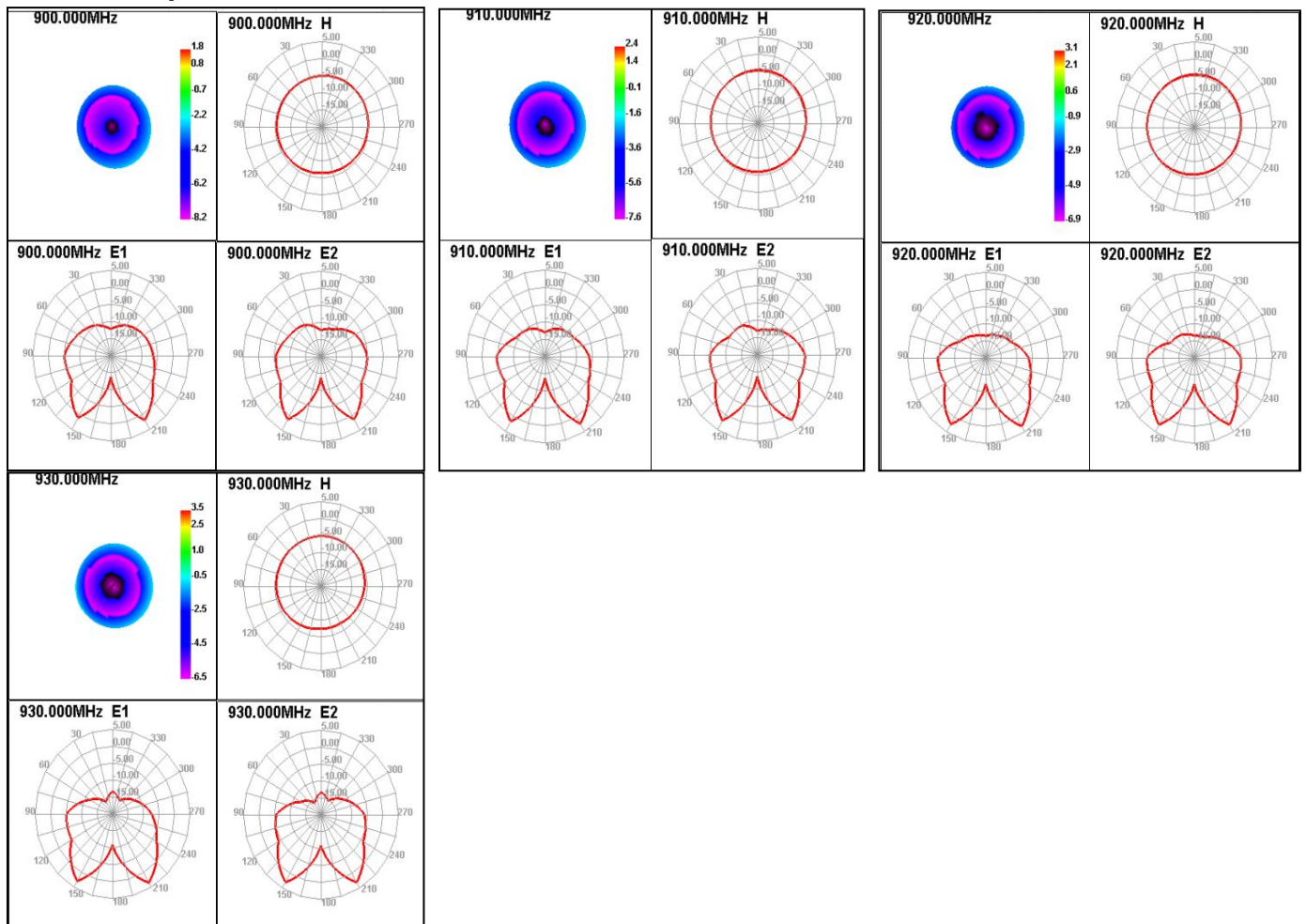
1. antenna loading coil (Original antenna matching)



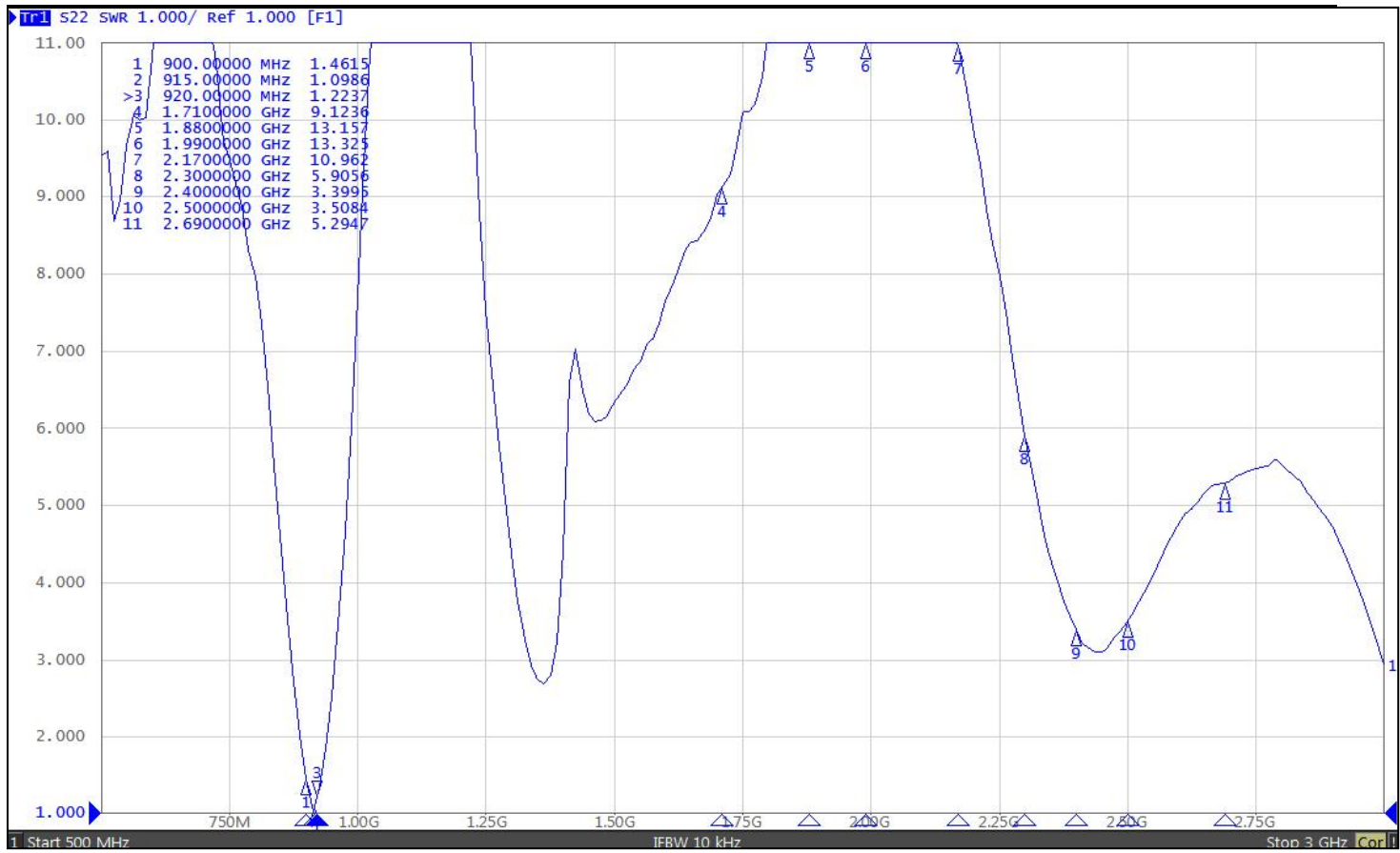
2.915MHz passive test data:

Freq (MHz)	Effi (%)	Gain (dBi)
900	37.53	1.8
910	39.76	2.38
920	42.95	3.05
930	44.22	3.54

antenna pattern:



2. Antenna Standing Wave:



3. Antenna placement:



三. Cable Head Specifications

Materials and coatings

order number	part name	material quality	cladding material	remarks
1	inner conductor	brass	gilding	
2	dielectric, insulator	PTFE		
3	monoblock	brass	gilding	
4	gold plating thickness	gilding	1~1.2u"	

behaviour of electricity

order number	surveillance project	qualification	remarks
1	characteristic impedance	50 Ω	
2	temperature range	-55~+155℃	
3	frequency range	0~3GHZ	
4	Medium pressure	1000V (rms)	
5	contact resistance	内导体 $\leq 3m\Omega$ 外导体 $\leq 2m\Omega$	
6	nsulation resistance	$\geq 5000M\Omega$	
7	voltage standing-wave ratio	≤ 1.25 (软电缆)	

instrumentation

- 量测仪器：微波暗室，网络分析仪，标准天线。
- 微波暗室说明：

这是本公司设置在深圳的微波暗室,本微波暗室是属于一套远场量测系统,暗室的大小为 7.0 米 x4.0 米 x3.0 米 , 静区尺寸(Quiet zone)大小为 15 厘米 x15 厘米 x15 厘米。

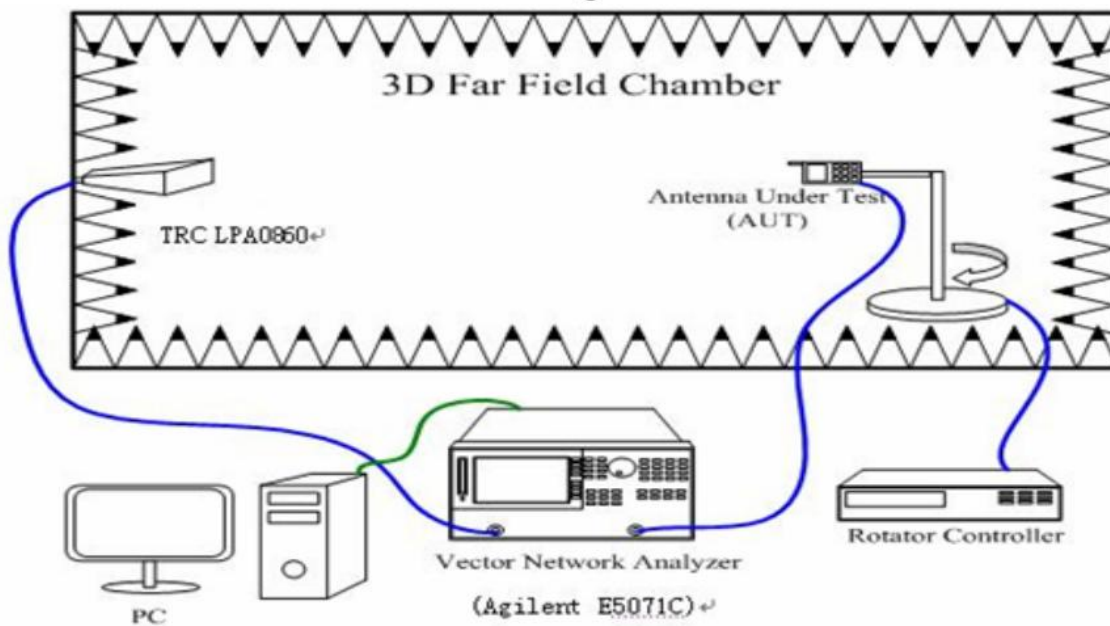


图. 1. 微波暗室内仪器设置

图. 1 为微波暗室内的仪器设置及网络分析仪的联接图, 发射天线(本暗室所使用发射天线的型号为 TRC LPA0860 800MHZ-6GHZ)到待测天线(AUT)的距离为 1.35 米, 待测天线放置在旋转平台上,藉由控制转台旋转的角度可对待测天线做概略性及较为准确的量测。

将待测天线放置于旋转台上,并测得其各个平面(ZY 平面及 ZX 平面)的 360 度场强数据。再将待测天线换置成标准偶极天线(本暗室所使用的标准偶极天线型号为 TRC AD series dipole antenna 800MHZ~2500MHZ)将其 360 度的场强数据测出,以作换算增益标准值,经由式 1 的换算即可获得待测天线的增益值及方向图。

$$G_{AUT} = G_{stand} + P_{AUT} - P_{stand}$$

G_{AUT} : Gain of AUT

G_{stand} : Gain of Standard Gain Antenna

P_{AUT} : Measured Power of AUT

P_{stand} : Measured Power of Standard Gain Antenna

Environmental and reliability testing

project	Reference standards, and experimental conditions	Judgment basis	Sample quantity / bad quantity (PCS)	Test / test the equipment
collide	GB/T 2423.6-1995 Acceleration: 200m / s ² Collision pulse duration: 6ms Number of collisions per minute: 40~80 times Total collisions: 400 vertical direction, front and back Left and right horizontal direction each 300 times, a total of 1000 times.	It should meet the requirements of electrical characteristics, and the mechanical properties are normal, but the appearance of touch marks, whitening and bending in the allowable range.	5/0	Collision experiment machine
vibrate	GB/T2423.10-1995 Test the FcFrequency: 10~30; 30~50Hz; Resonance point amplitude: 0.35mm Amplitude: 0.75mm Duration: X, Y & Z, 0.5 hours per direction. Cycle: 1min; Test for 1 hour after completing the experiment.	And firmware without loose, parts without rupture or fatigue; No original fall off, no solder point fracture; The electrical performance index meets the requirements of the technical specifications;	5/0	Vibration test machine
retentivity	Verification conditions: both ends of the joint and wire are fixed on the drawing machine fixture, and the pulling force returns to zero Verification method: manually pull to the product IPEX connector and wire fall off	>10N	5/0	Pull force test machine

decline	GB/T2423.8-95 From 100cm height to the floor 10 times. GB/T2423.8-95	1. No significant abnormality in appearance 2. After the test, the electrical performance shall meet the requirements of the electrical characteristics, and the mechanical performance shall be normal, but the external collision marks, whitening and bending shall be in the allowable range.	5/0	Drop test machine
high-temperature storage	GB/T 2423.2-2001 trial B Ambient conditions: + 85 ± 3°C for 96H The experiment was completed 24 hours after room temperature.	The surface coating shall have no peeling, crack, wrinkle and separation; the non-metallic structures have no permanent deformation, cracking, bonding; the mobile components are not stuck or detached; the electrical performance indexes meet the requirements of technical specifications	10/0	Temperature and humidity cycle test box
Low temperature storage	The gb / t 2423.1-2001 test a ambient conditions: -40 ± 3°C for 96h was tested 24 hours after the experiment was at room temperature.	The surface coating shall have no peeling, crack, wrinkle and separation; the non-metallic structures have no permanent deformation, cracking, bonding; the mobile components are not stuck or detached; the electrical performance indexes meet the requirements of technical specifications	10/0	Temperature and humidity cycle test box

High and low temperature cycle	gb/t2423.22-2002 Test n: Place the antenna in t1=-40°C incubator for 30 minutes, then raise the temperature for 60 minutes to t2=80°C, then keep the temperature for 30 minutes, relative humidity at 50% rh, and the cycle is repeated 20 times.	The surface coating shall have no peeling, crack, wrinkle and separation; the non-metallic structures have no permanent deformation, cracking, bonding; the mobile components are not stuck or detached; the electrical performance indexes meet the requirements of technical specifications	10/0	Temperature and humidity cycle test box
humid heat test;	Test gb / t 2423.3-1993 ca: ambient conditions: 40 ± 2°C, relative humidity 80 ~90% for 96 hours. The experiment was completed 24 hours after room temperature.	2. After the test, the electrical performance meets the specification requirements, and the electrical performance meets the specification range.	10/0	Temperature and humidity cycle test box
salt spray test	The gb / t 2423.18-2000 test kb places the test in a salt spray chamber with saline injection concentration (5 ± 1)%, 35°C± 1°C, sedimentation rate (1-2) ml / 50mm2 * h, 48 hours, check the appearance.	No rust phenomenon, mechanical performance and electrical performance to meet the range of specification.	5/0	Saline spray machine

Product material number: 01.11.0059/01.04.0037

size of product,: White Blade AntennaSMAHead and Tail size,:200MM frequency range: 915/SMA female head with 11 teeth, 48-hour salt spray test, coaxial inner hole, 1.13mm diameter, black finish, 150mm net length, 1st-generation IPEX terminal

一、labeling requirement (according to the customer name reference corresponding finished product label production requirements, no requirements, according to the ordinary label requirements)

The inner label is about 8cm long and 5.5cm wide

 众城无线 SHENZHEN UNITY WIRELESS TECHNOLOGY., LTD 深圳众城无线技术有限公司			
客户		规格型号	
订单号		送货数量	
客户料号		众城无线料号	
日期		生产批次	
TEL:0755-23285621		FAX:0755-23285621	

The outer label is about 8cm long and 5.5cm wide

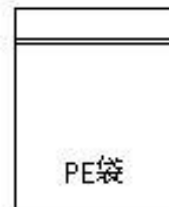
 众城无线 SHENZHEN UNITY WIRELESS TECHNOLOGY., LTD 深圳众城无线技术有限公司			
客户		规格型号	
订单号		送货数量	
客户料号		众城无线料号	
日期		生产批次	
TEL:0755-23285621		FAX:0755-23285621	

二、Packaging requirements

job description:

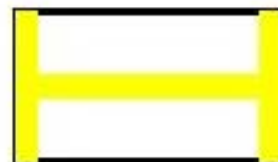
1. inner packing:

product According to the actual packing quantity PCS/satchel,
According to the actual packing quantity PCS/sack



2. external packing:

According to the actual packaging quantity /box



纸箱

matters need attention:

- Whether to add partition and pearl cotton;
- Labeling, such as ROHS;

