

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A1)

	CUSTOMER(客户名称)		
	CS P/N(客户机种)	GPON1079	AEDWZ01
	PART NAME(品名)	2.4G-2天线成品	
	FREQUENCY(频率)	2400~2500Mhz	
	ZTX NO.(物料编号)	1.22.00346	2.048.1646-01
	DATE(日期)	2021-09-27	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注): 外置天线 wifi,白色外壳,2.4G,5dbi,L=195mm,线长=151mm,灰色线,带扣,  
( 1.22.00346 ),中天迅

Sign(客户确认签字盖章): \_\_\_\_\_

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	QA CHECKED
		韦英俊	农林娟	



深圳市中天迅通信科技股份有限公司

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# ANTENNA SPECIFICATION

CUS.P/N :GPON1079 2.4G-2 WIFI天线

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## Revision history

版本	日期	状态
A1	2021-09-27	首版



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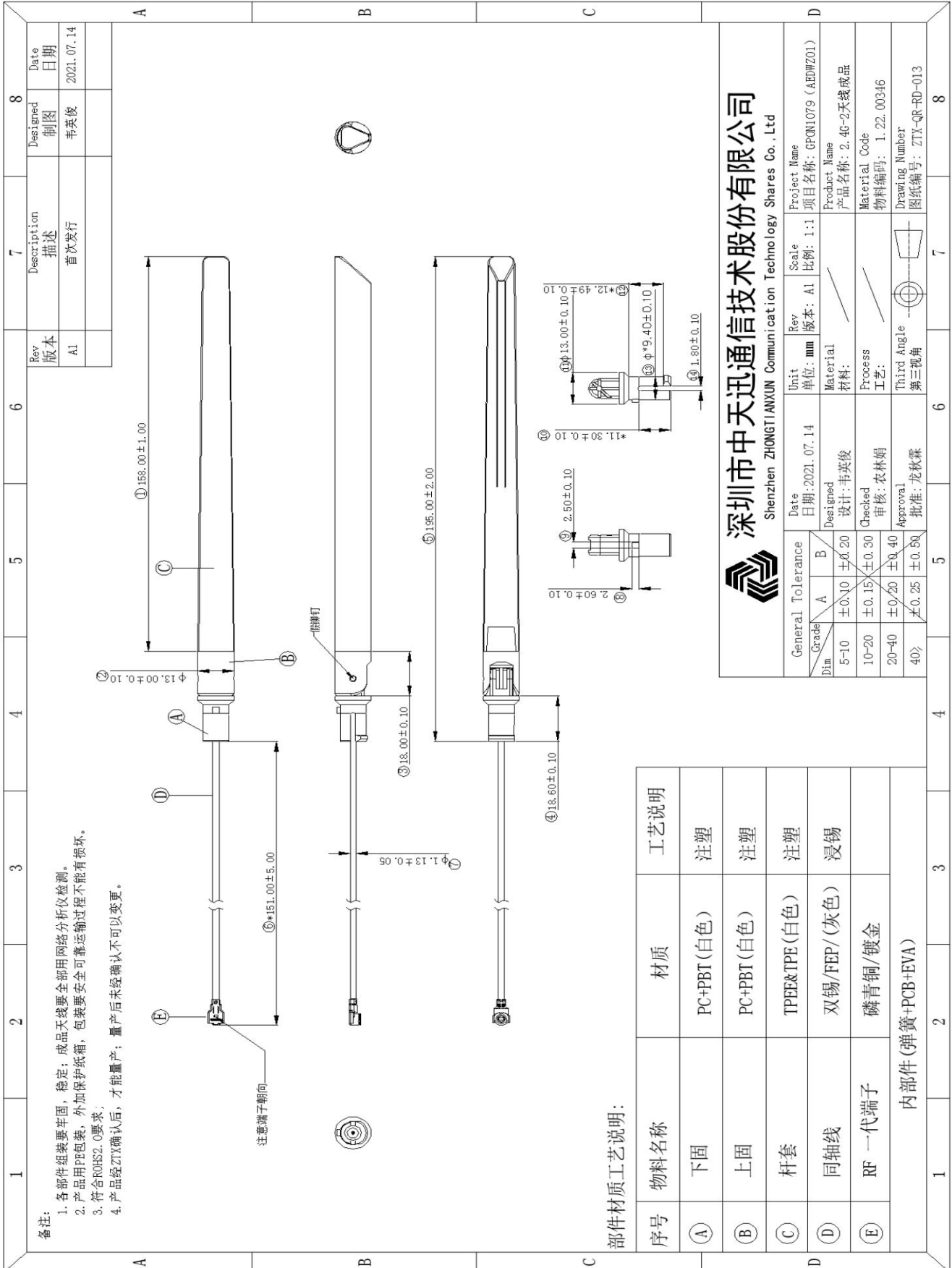
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## 1.Mechanical Specification

### 1-1 Mechanical Configuration(2.4G-2天线成品)



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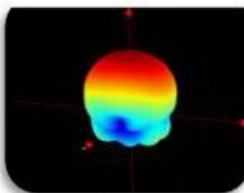
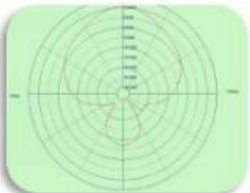
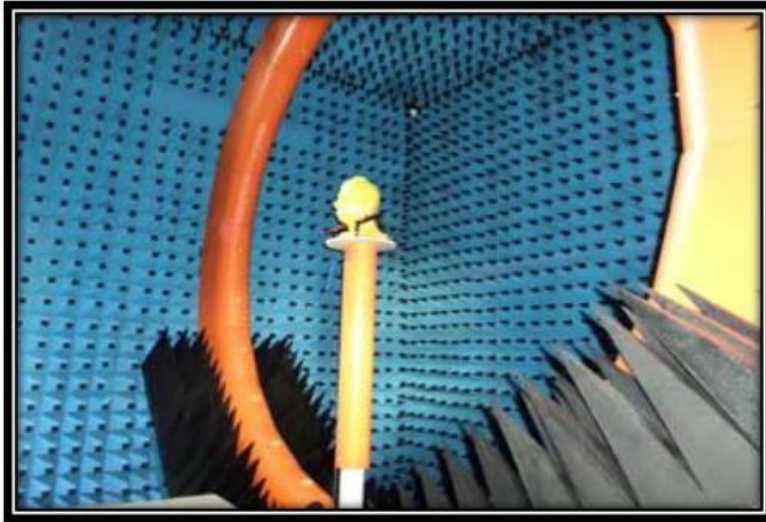
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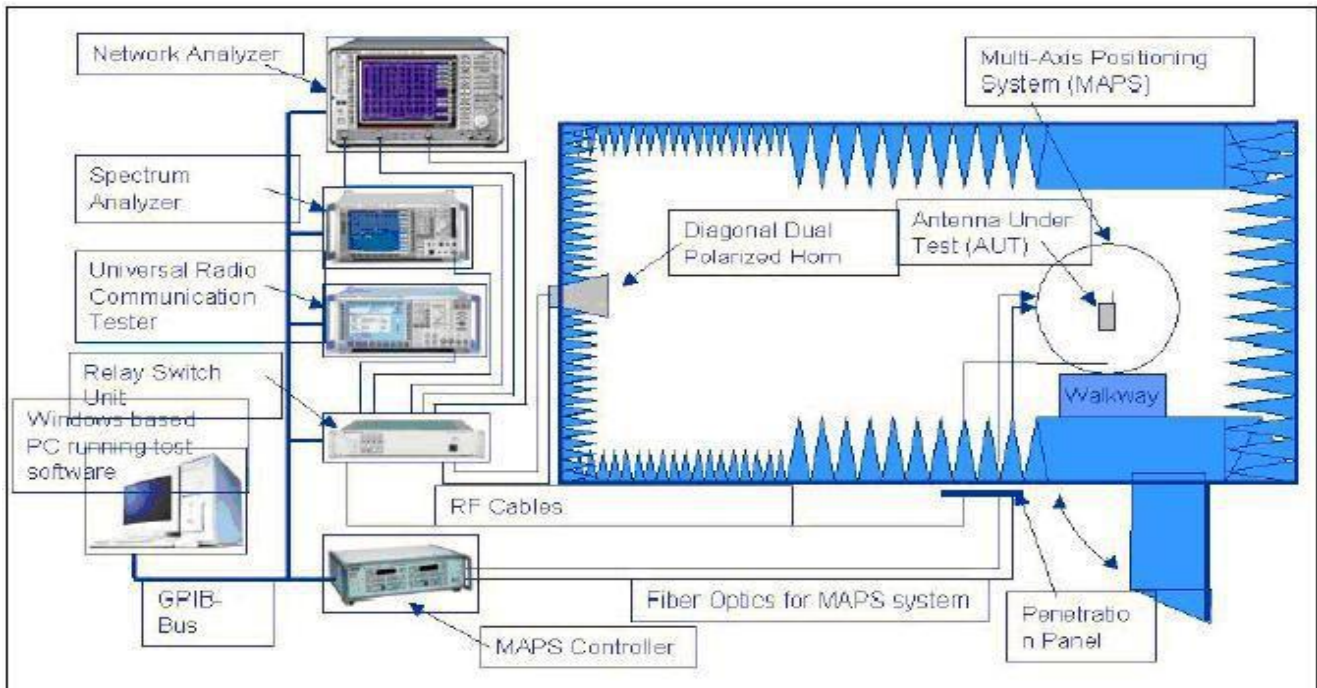
## 2.Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.



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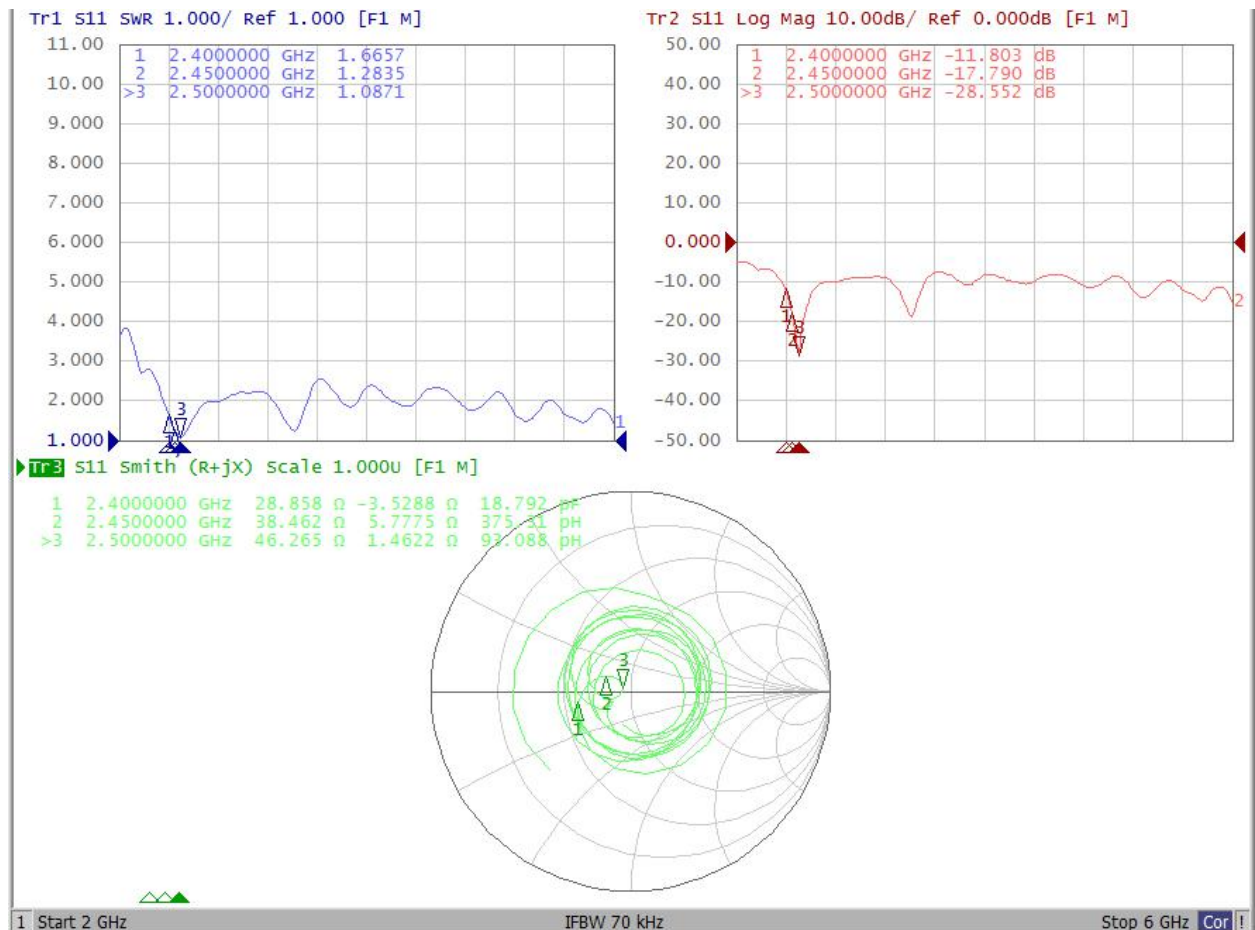
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## 3.Antenna test data

### 3-1 Test Data

带宽	3D测试数据		802.11b-HT20-11M			
20M	2.4G	信道	1	6	11	速率
		TRP	19.3	19.6	19.4	1Mbps
		TIS	-82.1	-82.3	-82.6	11Mbps
带宽	3D测试数据		802.11g-HT20-54M			
20M	2.4G	信道	1	6	11	速率
		TRP	18.3	18.6	18.4	6Mbps
		TIS	-72.8	-72.3	-72.5	54Mbps
带宽	3D测试数据		802.11n-HT20-65M			
20M	2.4G	信道	1	6	11	速率
		TRP	18.1	18.5	18.3	6.5Mbps
		TIS	-69.4	-69.2	-69.5	65Mbps

### 3-2 VSWR&Return loss &Smith Chart



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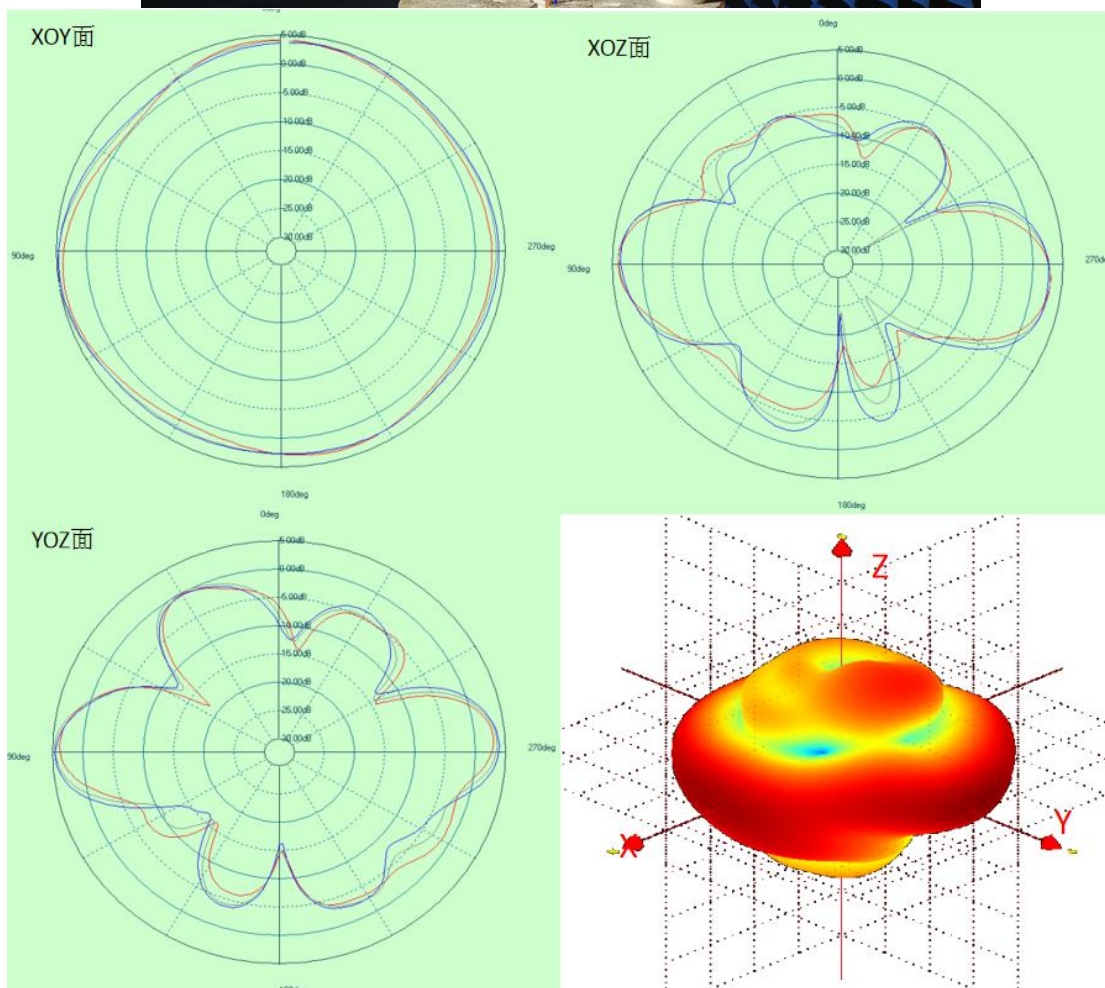
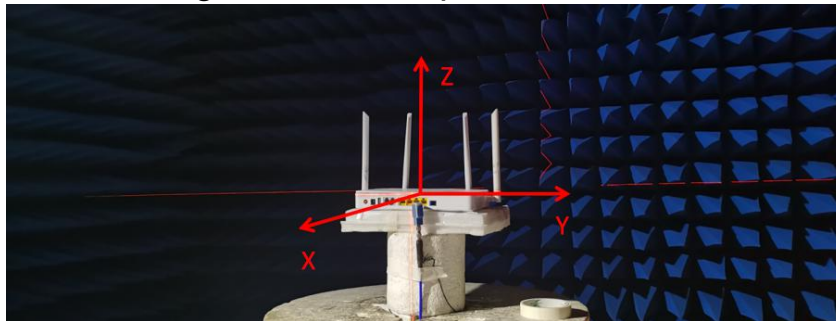
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## 3-3 No-source test data

Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
2400000000	64%	-1.91	2400000000	4.20
2410000000	64%	-1.93	2410000000	4.17
2420000000	67%	-1.76	2420000000	4.30
2430000000	68%	-1.69	2430000000	4.77
2440000000	68%	-1.67	2440000000	4.91
2450000000	67%	-1.71	2450000000	4.87
2460000000	65%	-1.85	2460000000	4.67
2470000000	66%	-1.79	2470000000	5.03
2480000000	67%	-1.76	2480000000	4.91
2490000000	68%	-1.67	2490000000	4.70
2500000000	68%	-1.71	2500000000	4.72

## 3-4 Directional drawing of horizontal plane of&3D radiation drawing



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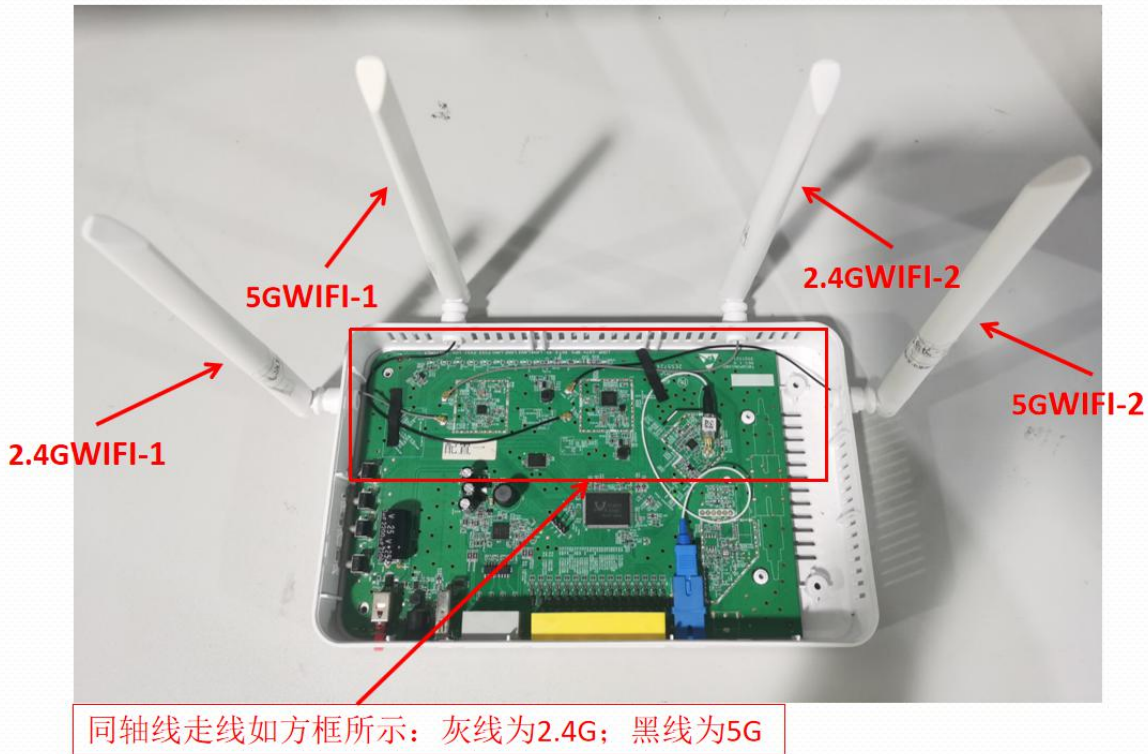
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## 3-5 Environment treatment

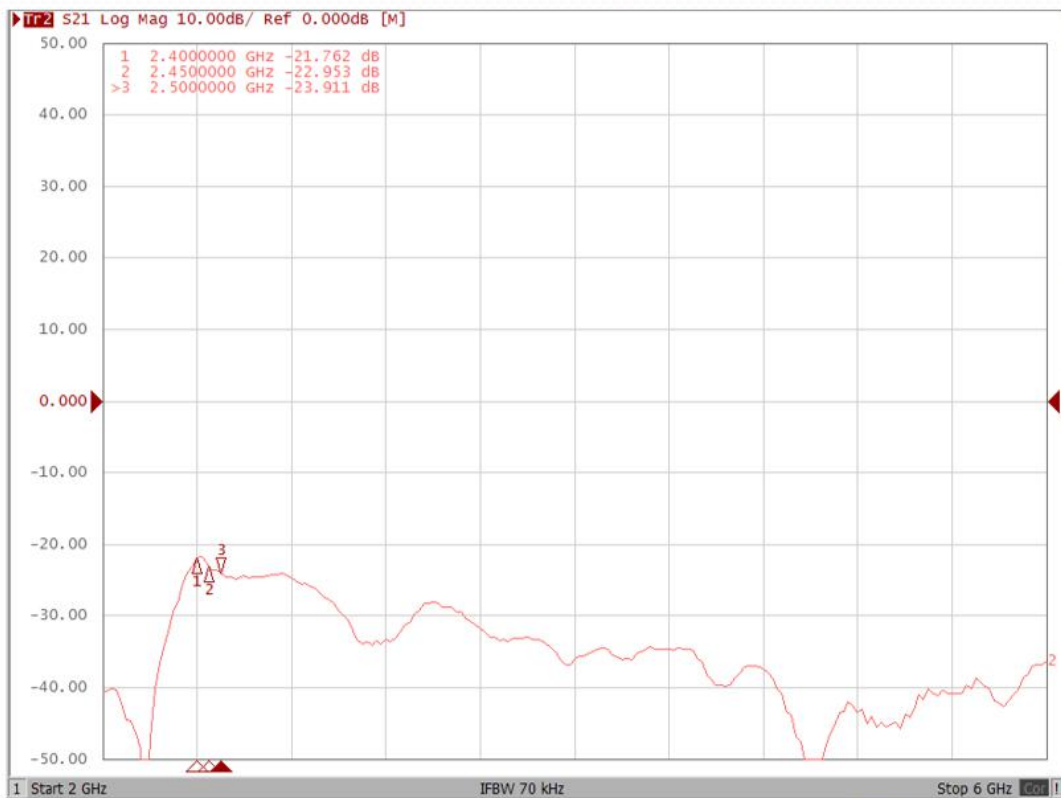
同轴线摆放说明



## 3-6 Antenna isolation

2.4G WIFI-1和2.4G WIFI-2天线隔离度

频率 (MHz)	2400	2450	2500
隔离度	-21.76	-22.95	-23.91





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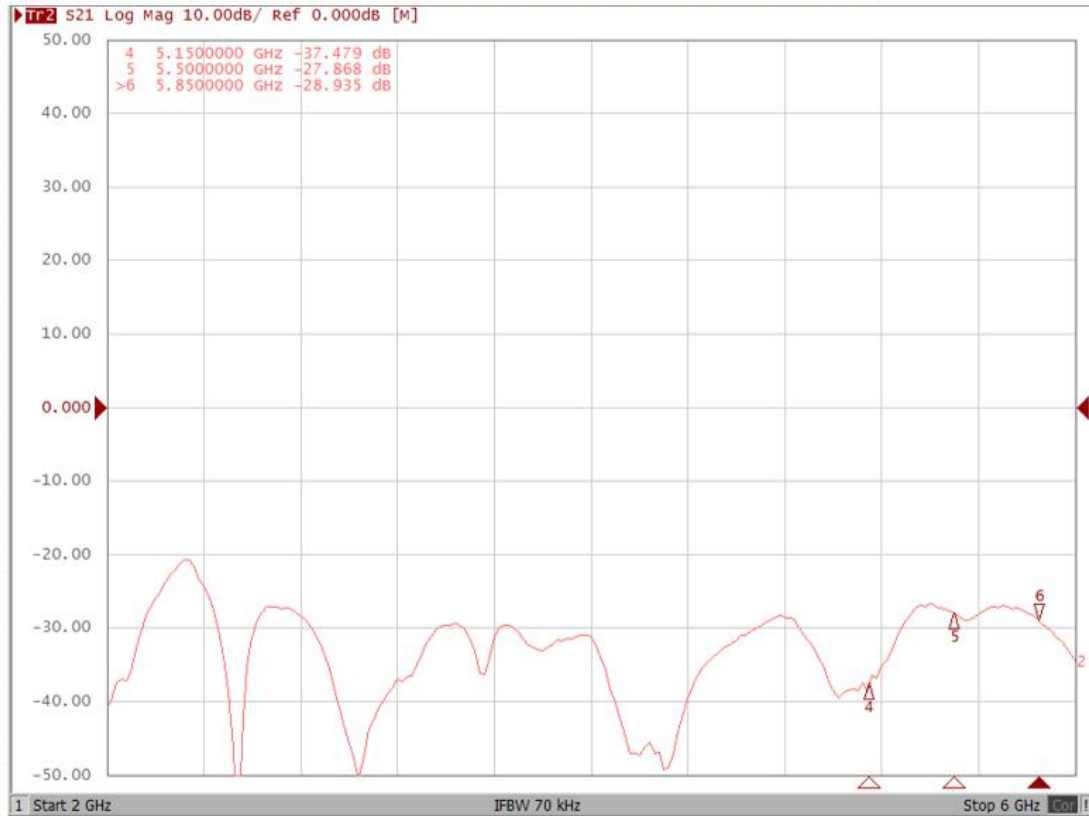
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## 5G WIFI-1和5G WIFI-2天线隔离度

频率 (MHz)	5150	5500	5850
隔离度	-37.47	-27.86	-28.93



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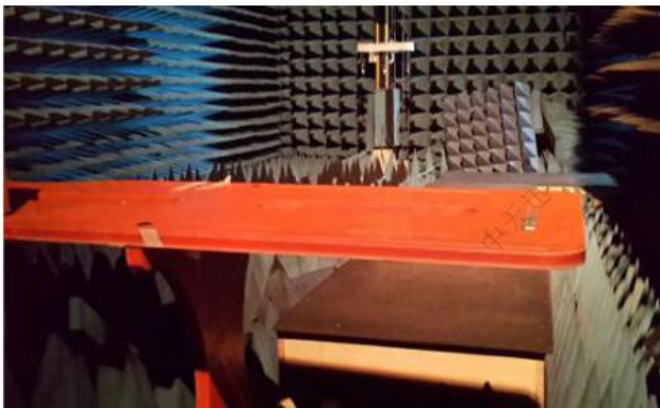
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## 3-7 Throughput testing



7m\*4m\*3m暗室，  
屏蔽外界干扰。



程控测试转台，距  
离标准天线3.5m，  
可实现360°旋转。



屏蔽箱：放置接收路由  
器，为了减少对测试路  
由器的同频干扰。



华硕ASUS RT-AC68U路由器

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## 2.4G 40M 0dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	224.29	205.31
45度	225.57	208.04
90度	234.18	205.54
135度	233.05	208.12
180度	225.07	207.31
225度	226.66	208.1
270度	224.1	206.89
315度	230.73	209.64

## 2.4G 40M 50dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	174.78	162.64
45度	173.11	161.37
90度	169.9	163.86
135度	178.5	161.78
180度	173.36	161.58
225度	169.56	164.38
270度	178.02	165.27
315度	174.82	161.49

## 2.4G 20M 0dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	115.35	107.19
45度	113.48	108.25
90度	112.56	106.74
135度	113.54	111.49
180度	115.53	110.11
225度	110.2	111.84
270度	116.55	109.24
315度	110.42	110.46



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## 2.4G 20M 50dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	89.42	92.1
45度	91.49	94.44
90度	92.43	90.13
135度	92.55	89.11
180度	92.7	89.85
225度	93.74	90.73
270度	91.35	88.97
315度	95	95.75

## 5G 80M 0dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	647.18	617.53
45度	644.72	621.06
90度	640.04	622.95
135度	648.8	619.34
180度	642.42	615.63
225度	641.37	621.43
270度	646.91	623.82
315度	648.25	623.38

## 5G 80M 50dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	469.09	447.48
45度	469.91	449.74
90度	465.95	446.45
135度	464.14	449.11
180度	468.8	446.37
225度	461.76	448.55
270度	468.16	445.56
315度	471.9	449.96



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## 5G 40M 0dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	319.06	308.58
45度	318.64	307.15
90度	316.65	309.53
135度	317.98	310.15
180度	320.45	307.43
225度	315.2	310.33
270度	320.17	306.02
315度	319.88	310.01

## 5G 40M 50dB衰减吞吐量测试数据

角度	RX (Mbits/sec)	TX (Mbits/sec)
0度	214.78	199.8
45度	212.62	203.71
90度	215.73	197.14
135度	210.14	198.46
180度	207.01	199.33
225度	209.09	202.9
270度	209.47	199.88
315度	215.57	201.64

备注：所测数据为暗室1米所测得



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## 4.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: <b>+70 ±2°C</b> 2.Humidity: <b>90~95%RH</b> 3.Time: <b>48hrs</b>	No material deformation is allowed.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: <b>-30±2°C</b> 2.Humidity: <b>0%RH</b> 3.Time: <b>48hrs</b>	The VSWR, Gain, Radiation Pattern must be met specifications after these test.



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## 5.The packing way

包装规范			
版本	工序序号/名称	工序工时 (s)	文件编号
A1	包装		
<b>作业方法</b> 作业参数 (自该工序作业合格后,方能流入下一道工序)			
取料 包扎	1. 每20pcs产品出线端分别采用珍珠棉包裹、橡皮筋包扎; 2. 将包扎好的(100PCS)产品装入PE开口袋中(42*30cm),贴小标签,填写产品名称、物料号、数量、周期等信息;		
装箱 贴标签	3. 装箱,纸箱规格(45*32.5*32cm),箱底/中/顶部用纸板隔开,每层放5袋,每箱装(1000pcs)尾数除外,并附手写检验报告一份;		
装箱	4. 标签贴于外箱的右上角,外标签内容(含:企业名称,供应商代码,客户规格号,生产日期,生产批次包装数量,供应商代码,内附检验报告,ROHS等);		
贴外箱 标签 附报告	5. 将贴好标签的箱子用胶纸以“工”字型封箱;		
封箱	<b>6S要求:</b> 1. 保持检测现场台面整洁,无尘、水、油污; 2. 物料摆放整齐,标识清楚;		
<b>注意事项:</b> 1. 客户物料编码和数量是否正确,标签必须用机打印的 2. 内标签、外标签、出货报告、送货单内容需一致。 3. 如是试产物料或有变更均需贴相应标识,尾数箱需贴尾数标识,内附检验报告等			
物料名称	物料代码	用量	备注
珍珠棉			
橡皮筋			
标签			
PE开口袋	240*160*0.05mm	100/袋	
纸板	42*30cm	3张/箱	
纸箱	45*32.5*21cm	1/箱	
<b>修订内容</b>		<b>修订日期</b>	<b>修订人</b>
A1 新制定		2020/8/27	邹一麟
制订	邹一麟	审核	易爱玲
		批准	胡春梅

深圳市中天迅通信股份有限公司  
SHENZHEN ZHONGTIAN XUN Communication Technology Co., Ltd.

产品名称  
外置天线

产品型号  
GPON1079

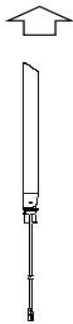


图1: 确认数量/包扎



图2: 装箱/贴标签



图4: 贴外箱标签 附出货检验报告



图3: 装箱



图5: 封箱