

深圳市天联凌科技有限公司

Shenzhen SKYLink Technology Co.,Ltd

天线规格承认书

编号：SLSOA20221115FZF01

客户名称：深圳市乐信兴业科技有限公司
Customer Name

项目名称：
Project Name

Single copper pipe welded 1.13mm black coaxial line, wire length is 84mm, strip wire 111,5.0*28 mm white heat shrink tubing, 2mm reserved at the plate end.

产品描述：单铜管焊接 1.13mm 黑色同轴线，线长 84mm，剥线 111, 5.0*28 mm 白色热缩套管，板端预留 2mm.
Product Description

客户料号：
Customer material number

我司料号：WF95A. C113. 84B. 123200. 111. W
Our company's material number

板 本：V1.0
Version

日 期：2022-11-15
Date

此承认书严禁修改

客户

工程	采购	承认

天联凌

研发	工程	审核

电特性Electrical characteristics	
频率Frequency	2400MHz ~2500MHz
回波损耗 Loss of return	<-10dB
效率Efficiency	>50%
增益Gain	1.45dbi
阻抗Impedance	50 Ω
极化方式 Mode of polarization	Polarization of line
材料和机械特性Material and mechanical properties	
材料Material	Cu
线材类型Type of wire	Wire diameter 1.13mm, black
端子类型Terminal Type	/
图纸尺寸Size of drawing	See the drawing for details
丝印方式 Screen printing method	/
环境特性Environmental Characteristics	
储存温度 Temperature of storage	- 30 °C ~ + 85 °C
FPC 焊接温度 FRC Temperature of welding	280±5°C Impregnation time :10 seconds
射频线焊接温度 Welding temperature of the RF cable	320±5°C 2-3s

● Test Equipment & Conditions

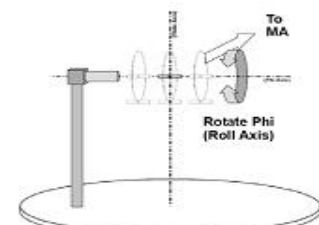
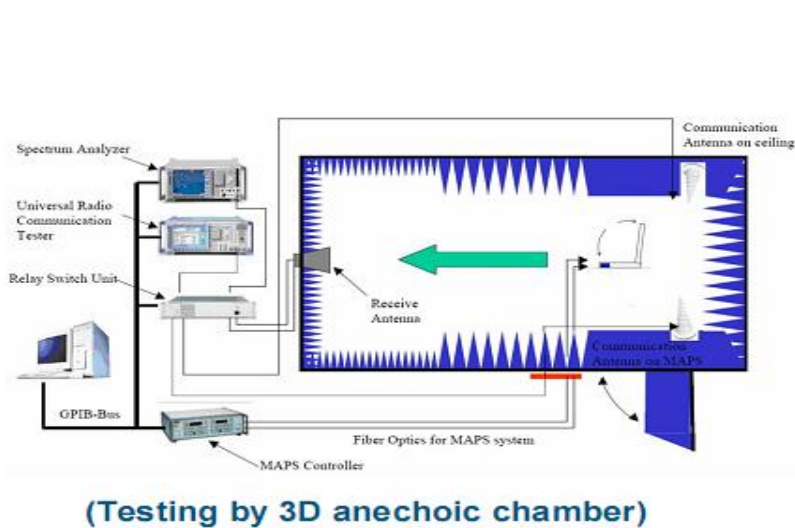
1. Network Analyzers :

Agilent 8753D 5071B

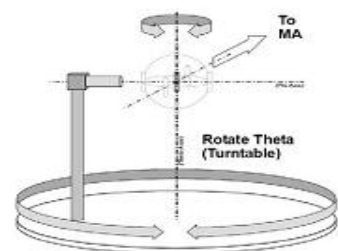
Communications Test Set:

Agilent E5515C CMW500

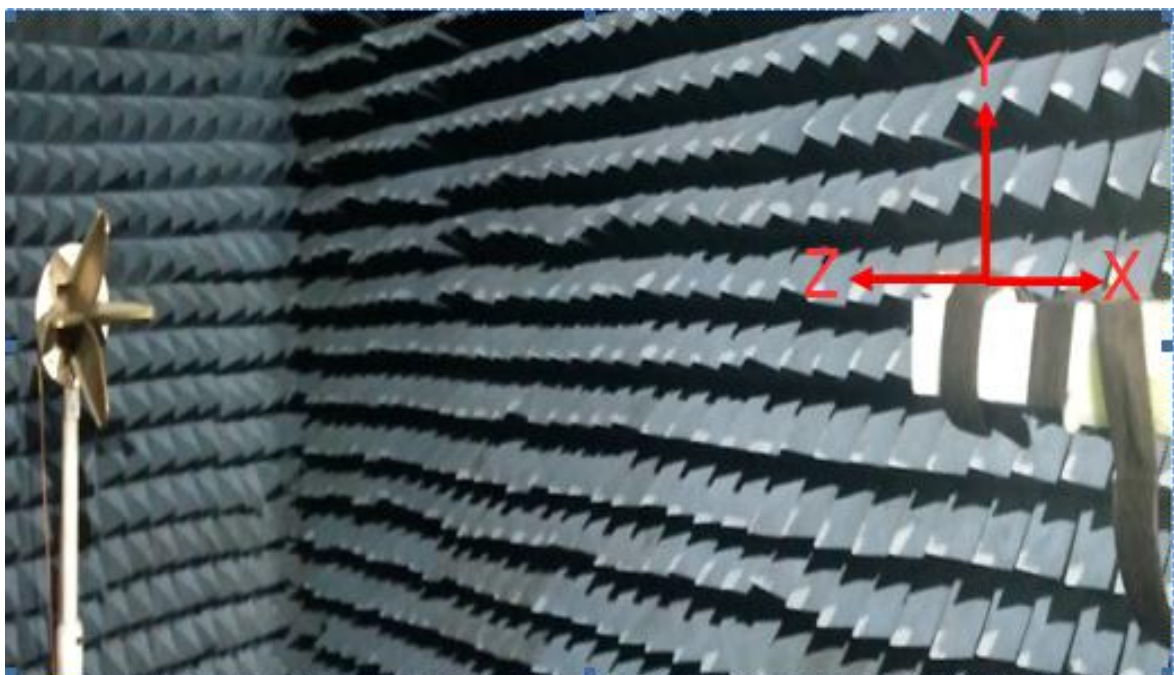
2. 3D Chamber Test System

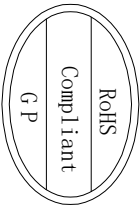


Phi axis test

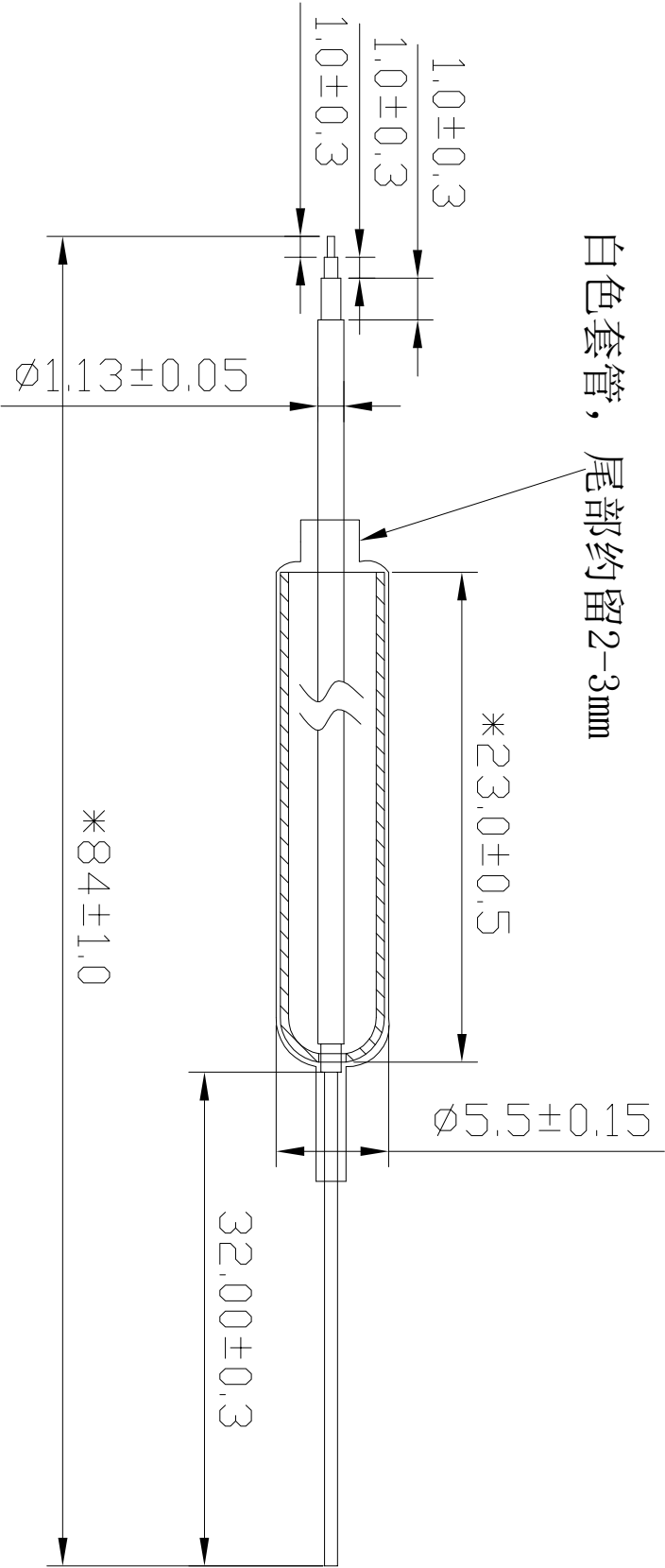


Theta axis test



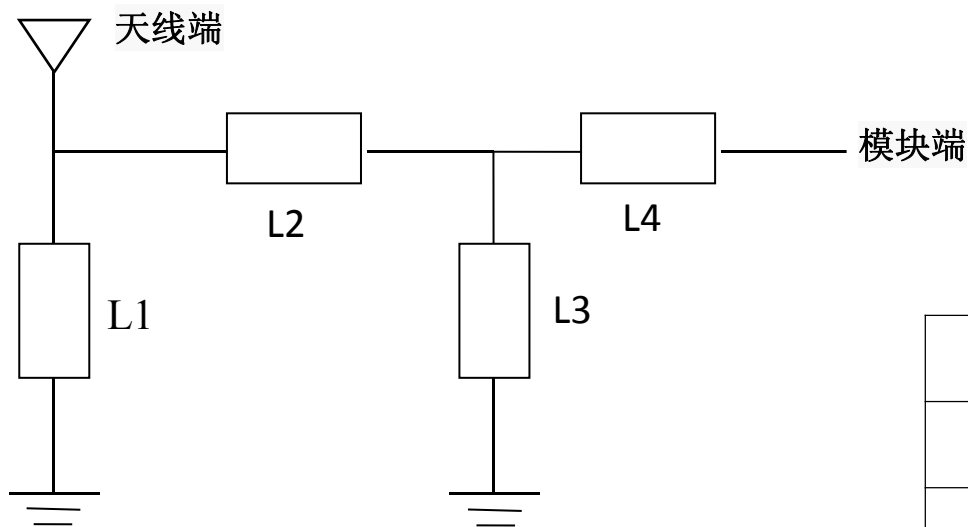


白色套管，尾部约留2-3mm



				深 圳 天 联 凌 科 技 有 限 公 司							
				SHEN ZHEN SKYLink CO., LTD							
				Third Angle		Project		Date		2022-11-15	
		0~10		±0.05		○		0.02		Part Name	
		10~18		±0.10		◎		ø0.03		Part No. WF95A.C113.84B.123200.111.W	
		18~30		±0.12		⊥		0.02		Material	
A		New drawing		30~40		±0.15				0.04	
				40~		±0.20		Angle		±0.5°	
Rev		Description		Date		Remark		Location		DWG No.	
1		2		3		4		5		6	
								7		8	

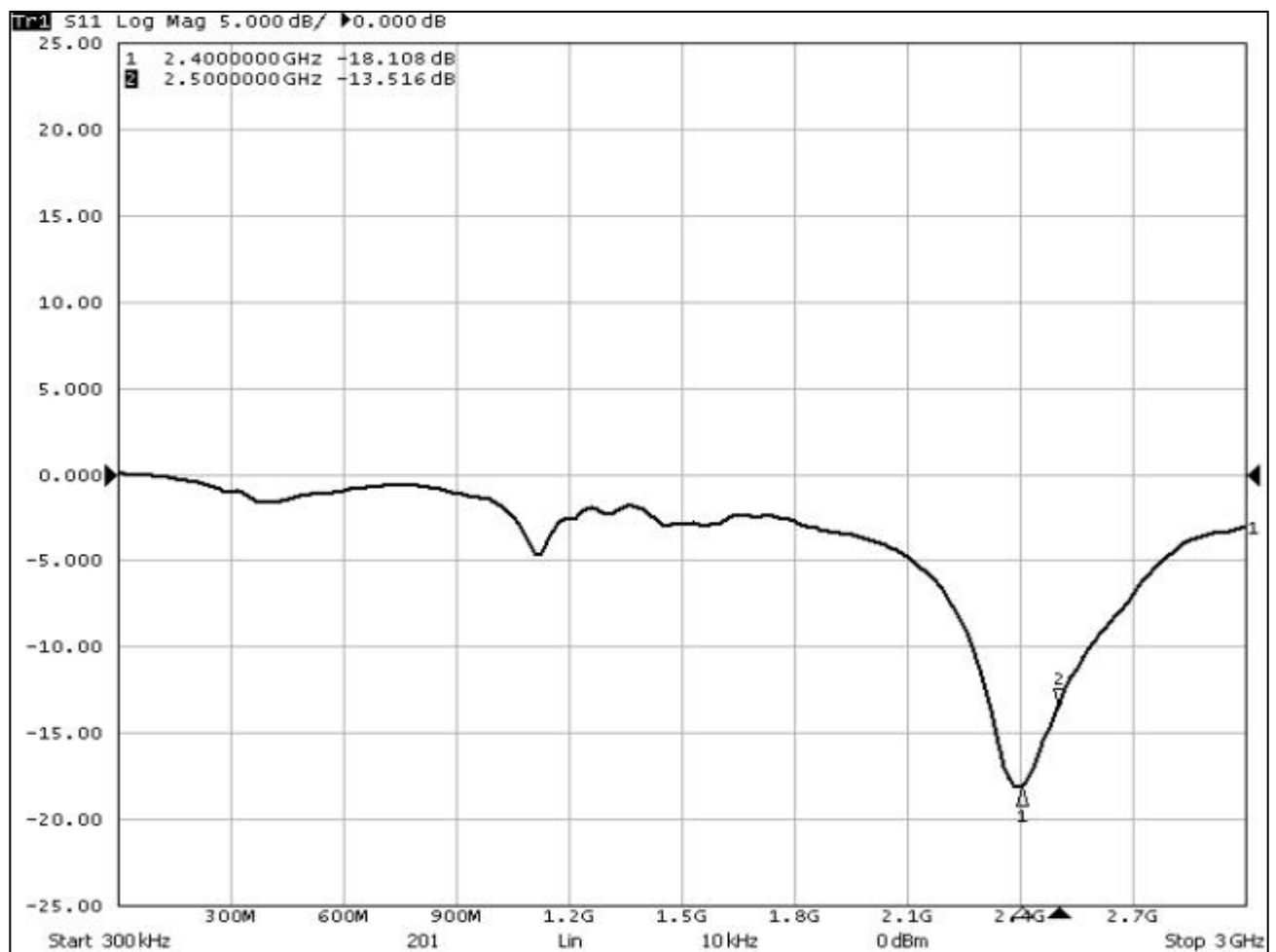
● 匹配电路（matching circuit）



L1	/
L2	/
L3	/
L4	/

原主板匹配电路不变

◆ Return Loss

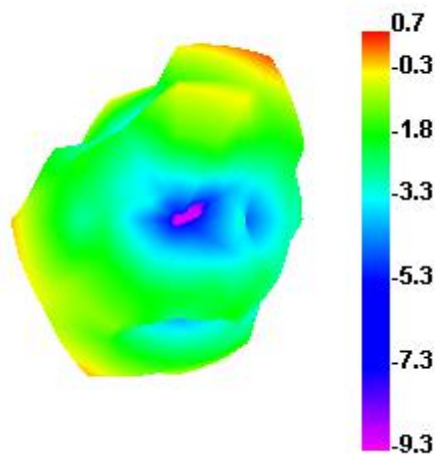


◆ Gain & Efficiency

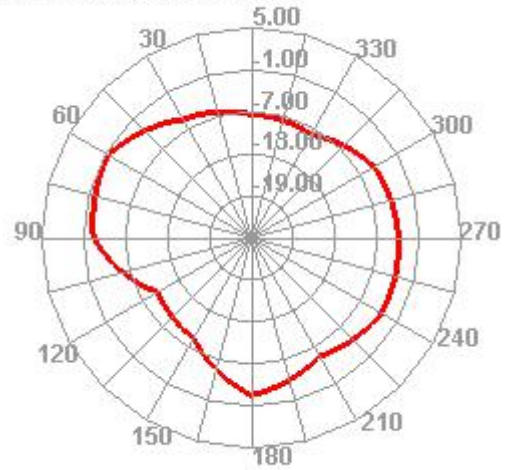
Freq (MHz)	Effi (%)	Gain (dBi)
2400	53.66	0.7
2410	52.19	0.8
2420	53.03	1.09
2430	54.41	1.32
2440	56.67	1.45
2450	55.24	1.2
2460	55.61	1.21
2470	51.91	1.29
2480	54.39	1.66
2490	56.96	2.03
2500	56.23	2.16

◆ Radiation Pattern

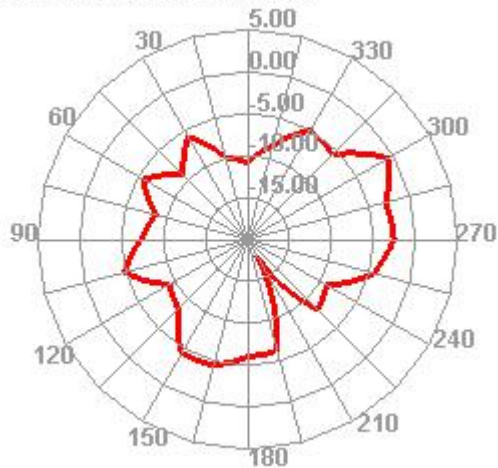
2400.000MHz



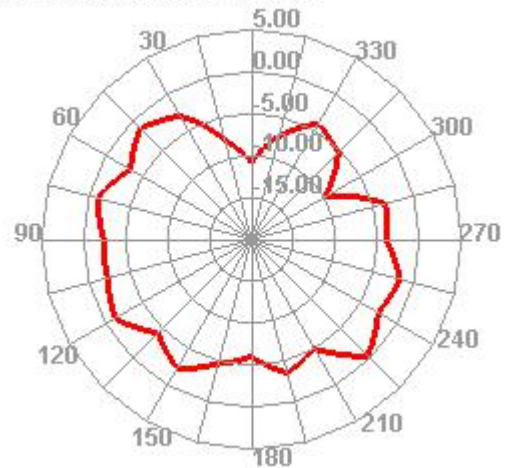
2400.000MHz H



2400.000MHz E1

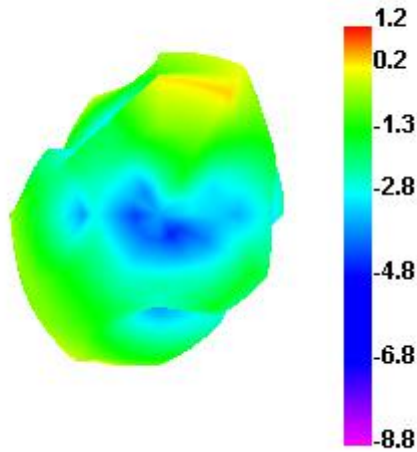


2400.000MHz E2

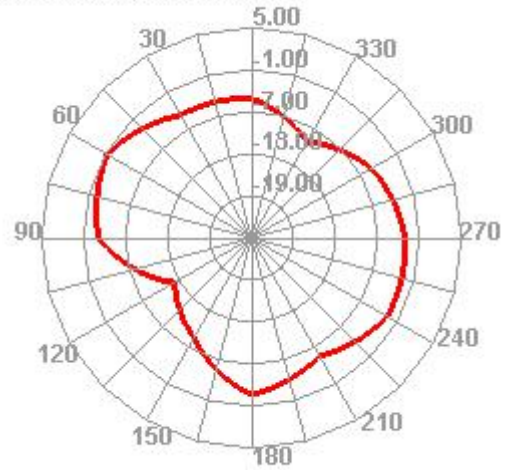


◆ Radiation Pattern

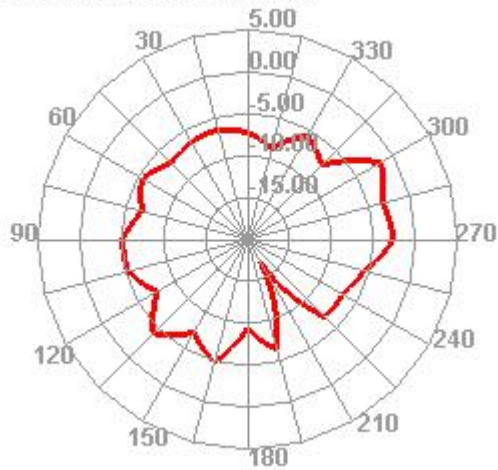
2450.000MHz



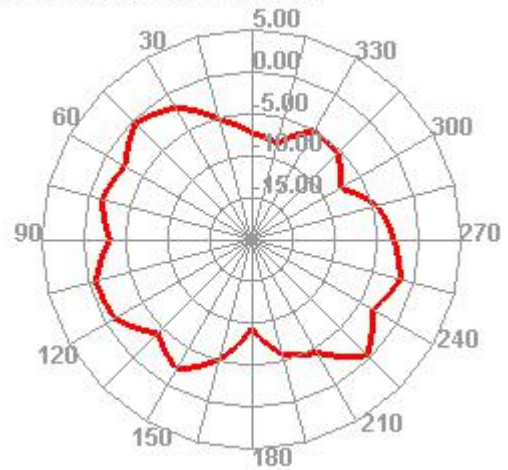
2450.000MHz H



2450.000MHz E1

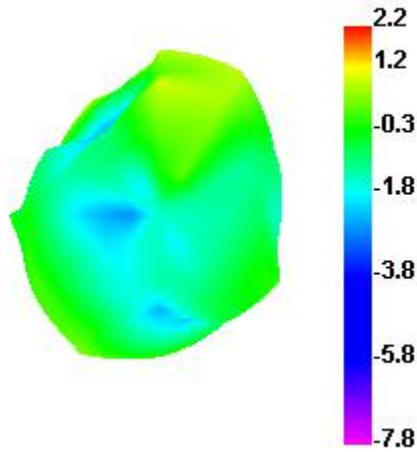


2450.000MHz E2

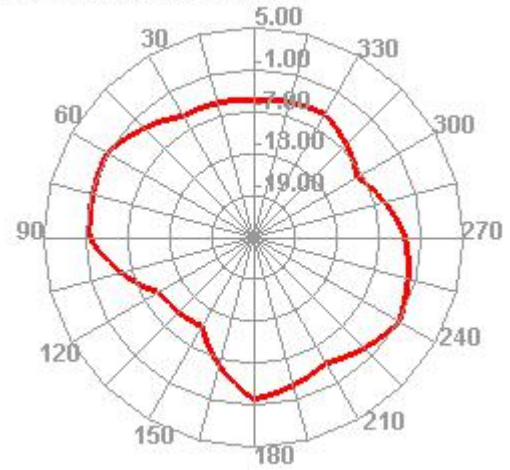


◆ Radiation Pattern

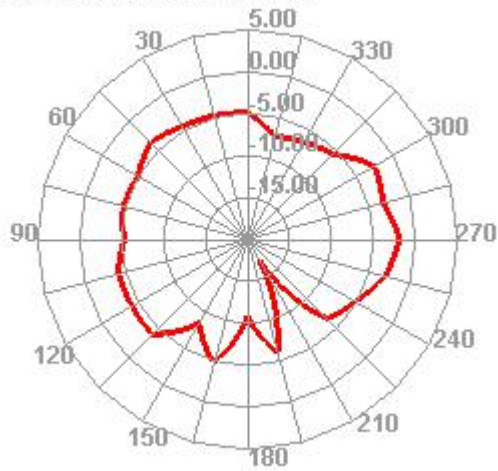
2500.000MHz



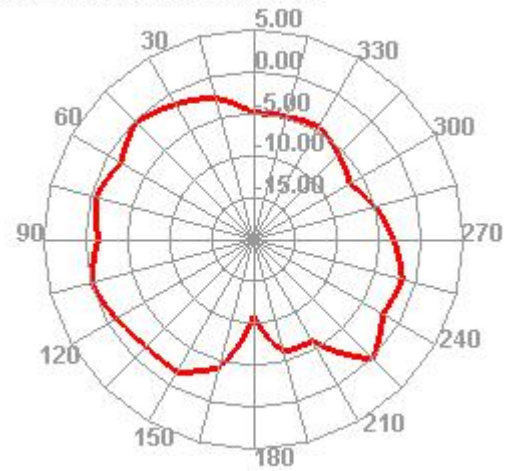
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



◆ 可靠性测试

测试项目		测试条件	设备	规范	结果
1	低温测试	温度：-30℃，湿度：65%，时间：48小时 测试条件： 把天线放置在高低温测试箱里，温度保持在25℃，湿度保持在65%,时间为1小时，然后在1小时内降低温度到-30℃，保持44小时，再升温到25℃，保持2小时	高低温测试机	不允许材料变形 电子性能好	通过
2	高温测试	温度：85℃，湿度：85%，时间：48小时 测试条件： 把天线放置在高低温测试箱里，温度保持在25℃，湿度保持在65%，时间为1小时，然后在1小时内，把温度升到80℃，湿度为85%,保持44小时，再把温度降到25℃，保持2小时。	高低温测试机	不允许材料变形 电子性能好	通过
3	盐雾测试	盐雾测试： 把天线放置在盐雾测试机内 设置测试环境： 温度 $35 \pm 2^{\circ}\text{C}$ 湿度85% 盐雾喷剂： $5 \pm 1\%$ PH值6.5~7.2 时间：24小时	盐雾测试机	没有颜色变化 没有出现生锈	通过