



深圳信诺山通信技术有限公司

Shenzhen Signalsen Telecom Technology Co., .Ltd

双频铜管天线规格书

Specification for dual band copper tube antenna

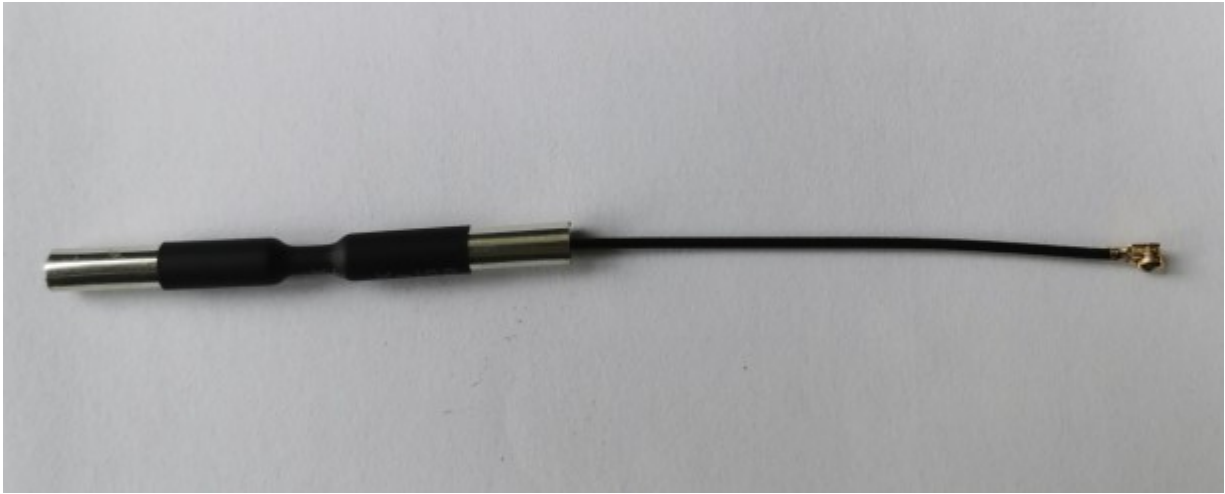
物料编码 Material code: XNS-SP-L110

客户 Customer: 乐韵瑞 Leyunrui		项目名 Project name: wake up light	
频段 Frequency band : 2.4G/5.8G		日期 Date: 2022.12.08	
我司研发 R&D of our company	结构 Structure:	审核 To examine:	批准 Approval:
	射频 Radio frequency:	审核 To examine:	
客户研发承认 Customer R&D recognition:			
客户采购承认 Customer procurement recognition:			
客户质量承认 Customer quality recognition:			

目录 Catalogue

1: 产品图片 Product pictures.....	3
2: 产品参数 Product parameters.....	3
3: 无源参数 Passive parameters	4
4: 可靠性测试 Reliability test	9
5: 结构图纸 Structural drawings	10

1: 产品图片 Product pictures



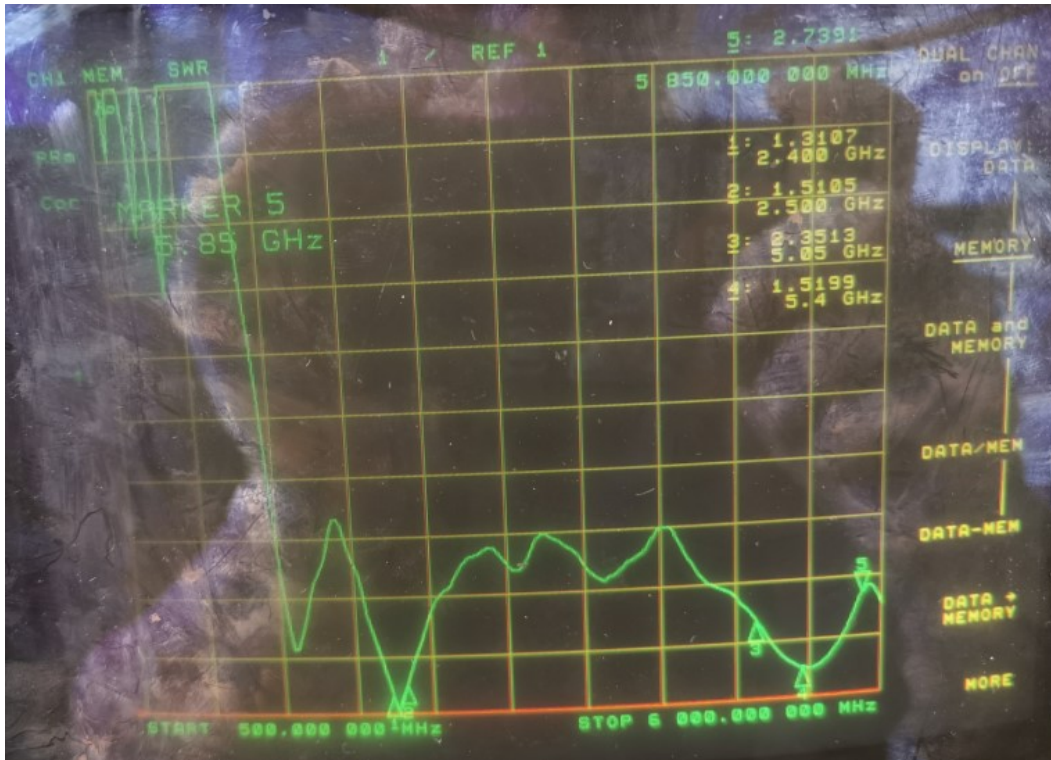
2: 产品参数 Product parameters

2.0 产品电子特性 Product electronic characteristics			
2.1 电性能指标 Electrical performance index (天线 Antenna)			
1	极化方式 Polarization mode	水平 Level	
2	频率范围 Frequency range	2400-2500MHZ/5050-5850MHZ	
3	驻波比 Standing wave ratio	$\leq 2.0 / \leq 3.0$	
4	带宽 Bandwidth	100MHZ/800MHZ	
5	阻抗 Impedance	50 ohm	
6	增益 Gain	$2.8 \pm 0.5\text{dbi} / 2.2 \pm 0.5\text{dbi}$	
7	功率容量 Power capacity	50W	
8	辐射方向 Radiation direction	全向 Omnidirectional	
2.2 机械指标 Mechanical index			
铜管尺寸 Copper pipe size	24.25*4.40mm	天线颜色 Antenna color	黑色 Black
连接器型号 Connector model	1.13 黑色线材一代 IPEX (1.13 First generation IPEX of black wire)	引线长度 Lead Length	$110 \pm 1\text{mm}$
工作温度 Working temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	存放温度 Storage temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

3: 无源参数 Passive parameters

3.0 驻波比 Standing wave ratio:

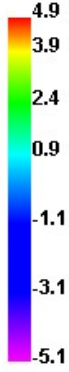
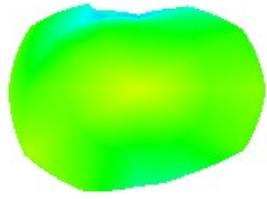
频率 Frequency (MHZ)	2400	2500	5050	5850
驻波 Standing wave	1.3	1.5	2.3	2.7



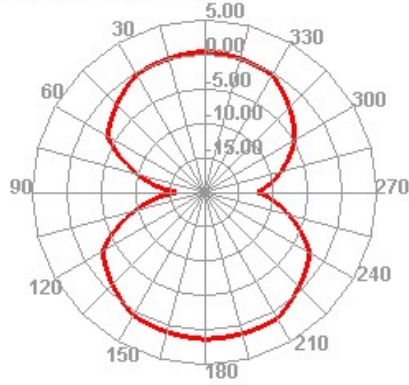
3.1 效率和增益 Efficiency and gain:

BAND	WIFI/BT					
Freq.[MHZ]	2400	2450	2500	5050	5450	5850
Eff.[%]	74.50	76.19	71.26	63.18	60.32	66.56
Peak Gain [dBi]	2.8	2.8	2.4	1.8	1.9	2.2

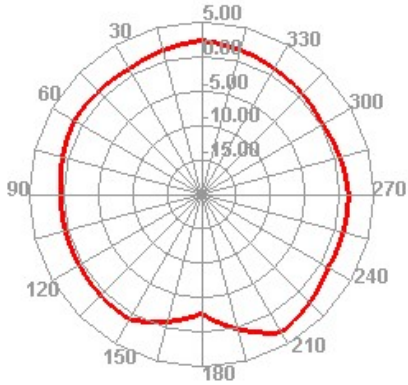
2400.000MHz



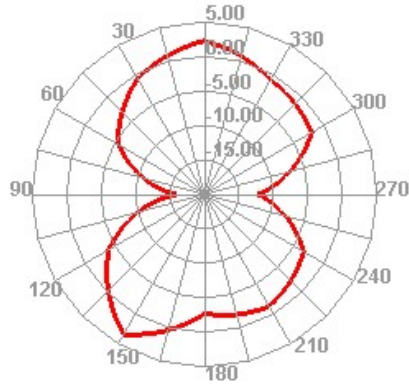
2400.000MHz H



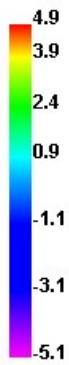
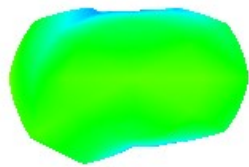
2400.000MHz E1



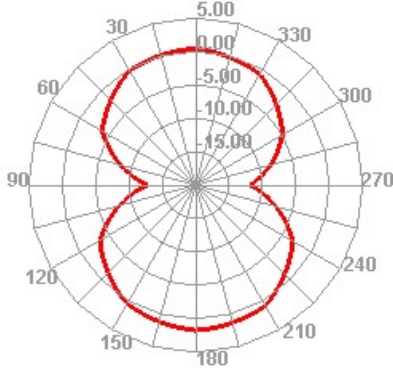
2400.000MHz E2



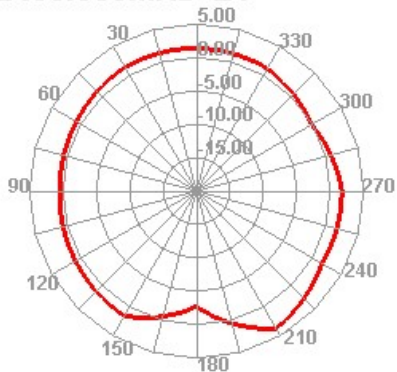
2450.000MHz



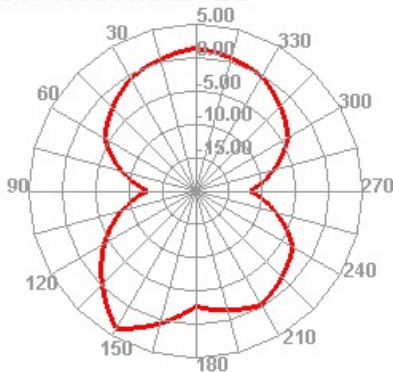
2450.000MHz H

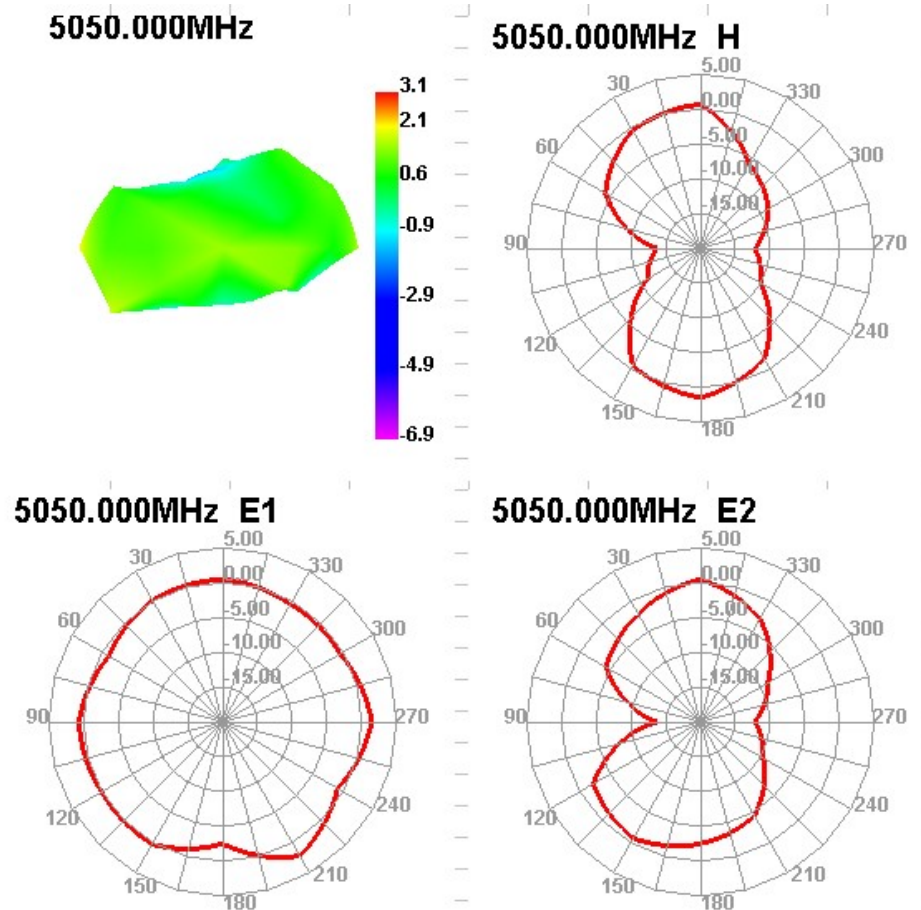
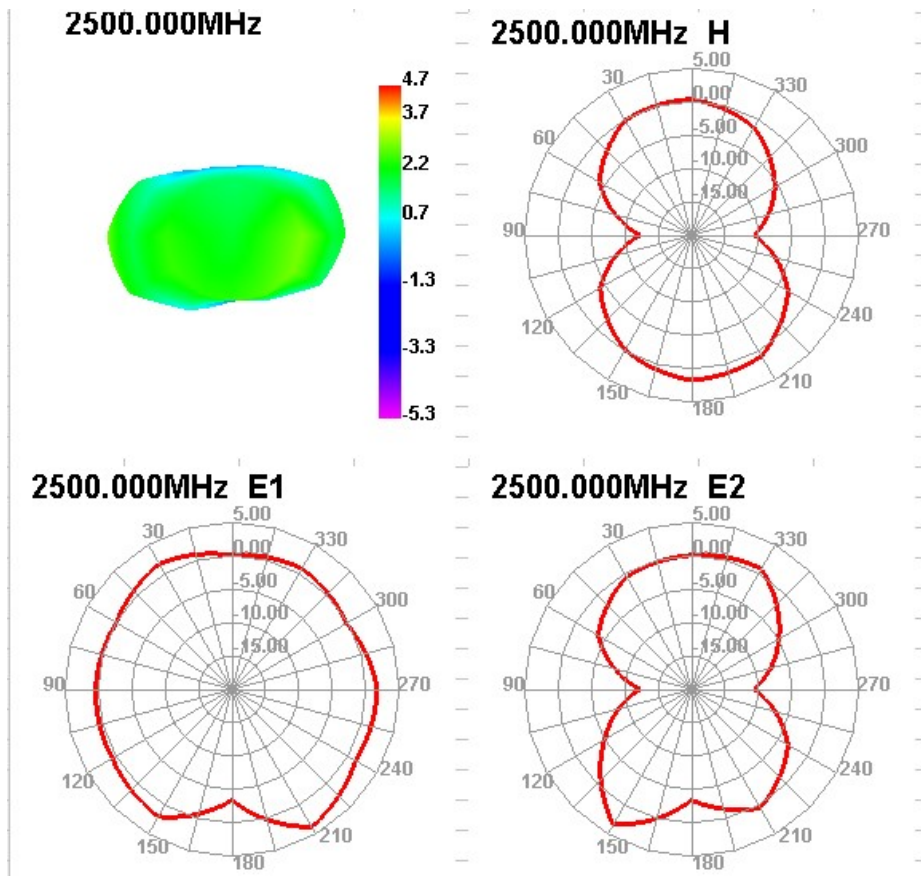


2450.000MHz E1

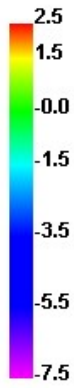
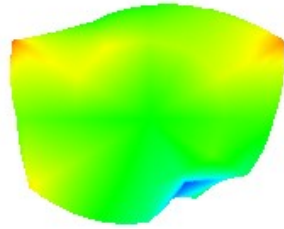


2450.000MHz E2

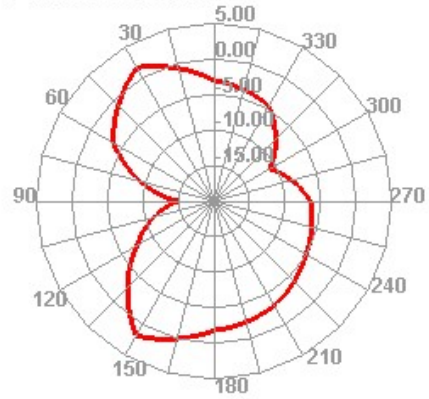




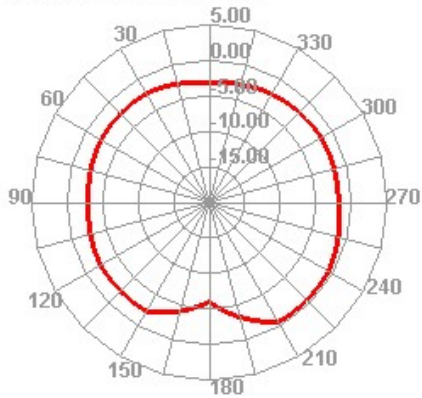
5450.000MHz



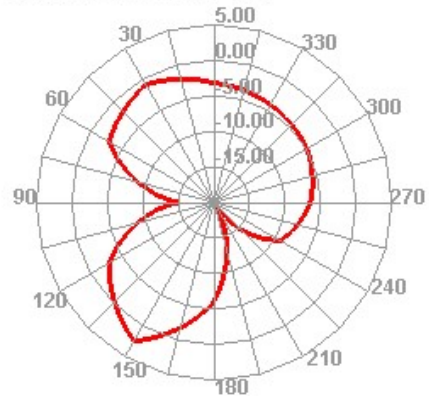
5450.000MHz H

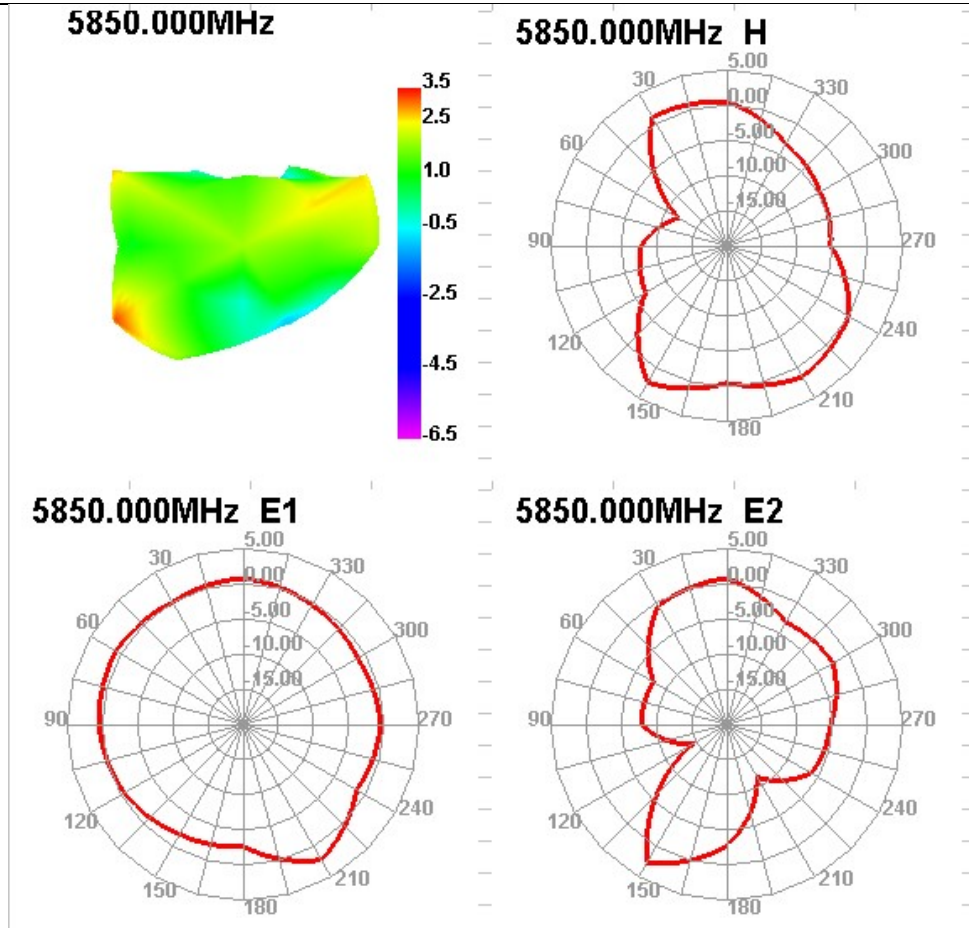


5450.000MHz E1



5450.000MHz E2



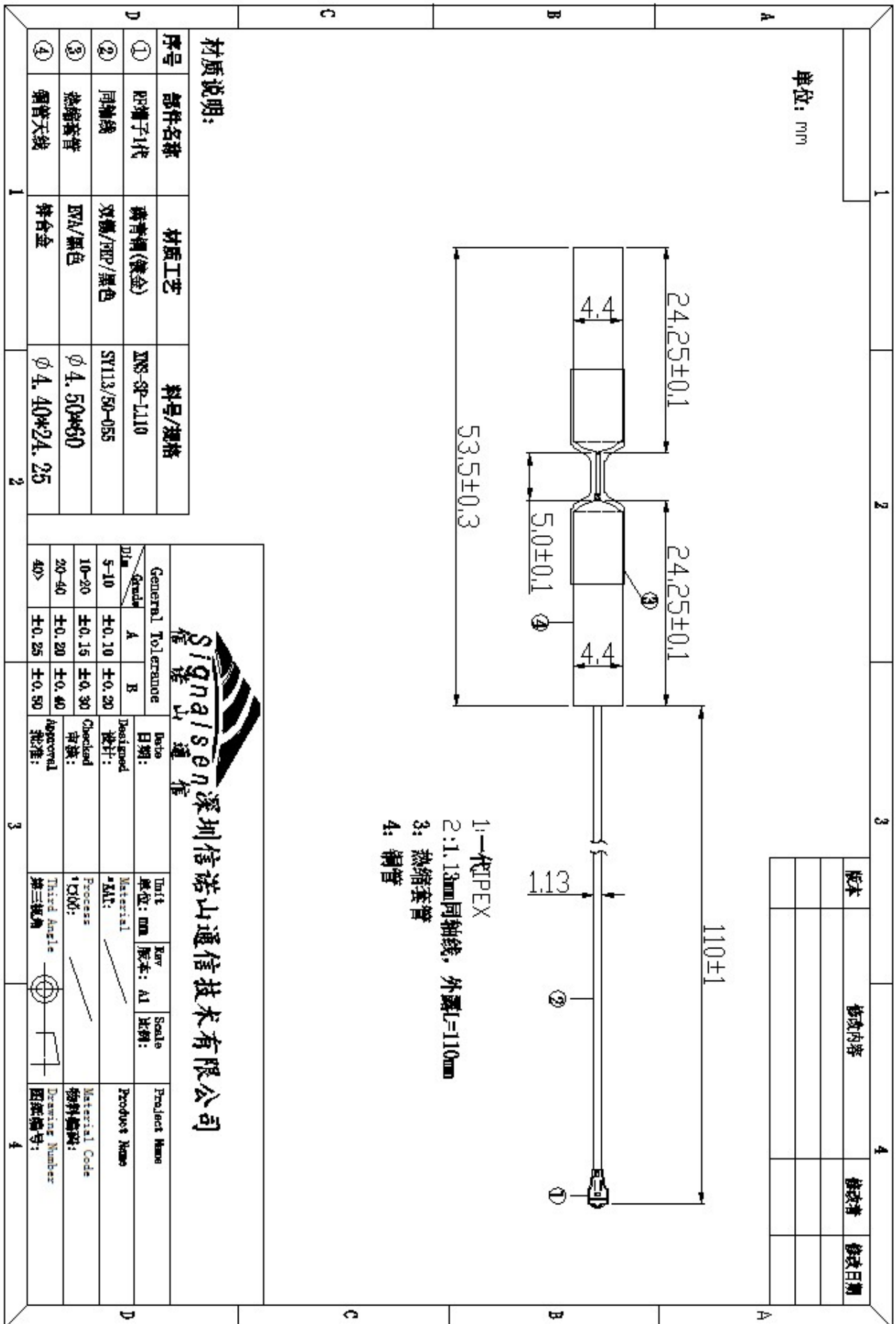


4: 可靠性能测试 Reliability performance test

项目 Project	测试条件 Test conditions	规格 Specifications
存储环境 Storage environment	在没有指定的情况下测试温度,湿度,气压如下 Test the temperature, humidity and air pressure without specifying: 1. 温度为 Temperature is-30℃—+80℃ 2. 相对湿度为 The relative humidity is45%-85% 3. 气压为 The air pressure is86kpa—106kpa	电气机械性能正常 Normal electrical and mechanical performance

<p>高低温试验 High and low temperature test</p>	<p>在 70℃ 与 40℃ 之间进行 5 次循环，然后在正常条件下 1-2H，检查外观质量。Conduct 5 cycles between 70 °C and 40 °C, and then check the appearance quality under normal conditions for 1-2H.</p>	<p>尺寸应满足规定并应满足于机械, 电气性能 The size shall meet the requirements and the mechanical and electrical properties</p>
<p>耐恒定湿热试验 Constant damp heat resistance test</p>	<p>相对湿度 95±3%，试验温度：40℃.持续 2H 小时作用后，试品取出后 5min 之内测定电气性能，试品在正常情况下 1-2H，检查外观质量。Relative humidity: 95 ± 3%, test temperature: 40 °C After the test object is taken out for 2h, the electrical performance shall be measured within 5min. The appearance quality of the test object shall be checked for 1-2h under normal conditions.</p>	<p>尺寸应满足规定并应满足于机械, 电气性能 The size shall meet the requirements and the mechanical and electrical properties</p>
<p>振动试验 Vibration test</p>	<p>振频范围 10-55HZ，位移幅值：0.35mm，加速度幅值：50.0M/S，扫频循环次数：30 次 Vibration frequency range: 10-55HZ, displacement amplitude: 0.35mm, acceleration amplitude: 50.0M/s, frequency sweeping cycles: 30 times</p>	<p>电气机械性能正常 Normal electrical and mechanical performance</p>
<p>跌落试验 Drop test</p>	<p>1M 高空按照互相垂直的轴方向自由跌落 3 次 Free fall for 3 times in the direction of mutually perpendicular axes at a height of 1M</p>	<p>电气机械性能正常 Normal electrical and mechanical performance</p>

5: 结构图纸 Structural drawings



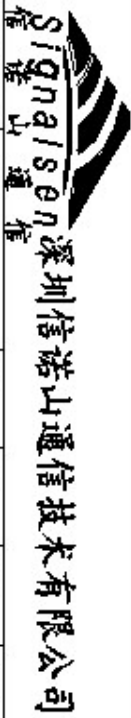
单位: mm

版本	修改内容	修改者	修改日期

- 1: 代PEX
- 2: 1.13mm同轴线, 外径L=110mm
- 3: 热缩套管
- 4: 铜管

材质说明:

序号	部件名称	材质工艺	料号/规格
①	PE端子1代	磷青铜(镀金)	TMS-SR-L110
②	同轴线	双绞/PEP/黑色	SY113/50-055
③	热缩套管	EVA/黑色	φ4.50*60
④	铜管天线	锌合金	φ4.40*24.25



General Tolerance		Date		Unit	Rev	Scale	Product Name
Grade	A	B	日期:	单位: mm	版本: A1	比例:	Product Name
5-10	±0.10	±0.20	设计:	Material			Product Name
10-20	±0.15	±0.30	Checked	*MAT:			Material Code
20-40	±0.20	±0.40	字族:	Process			物料描述:
40>	±0.25	±0.50	Approval	*C00:			Drawing Number
			批准:	Third Angle			图框编号: