

深圳市亚冠天线连接器有限公司

Shenzhen Yagang Antenna Connector Co., Ltd.

产品规格书

Product Specification

客户名称 Customer Name: 深圳市昊一源科技有限公司

Shenzhen Haoyiyuan Technology Co., Ltd.

项目名称 Project Name: 9831

规格描述 Product Spec: 双频天线-2.4+5.8G-SMAJ (65*10.61MM)

Dual-band Antenna - 2.4+5.8G - SMAJ (65*10.61mm)

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制 作 drawing	审 核 check	批 准 approved
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客户承认 Customer Approve

审 核 check	批 准 approved	承 认 approval

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一、电性能以及机械性能

Electrical and Mechanical Properties

电性能指标		Electrical Specifications	
频率范围	2400-2480/5150-5850MHz	Frequency Range	2400-2480/5150-5850MHz
电压驻波比	≤2.0/2.0	VSWR	≤2.0/2.0
增益	≥1.0DBI	GAIN	≥1.0DBI
辐射方式	全向	Radiation	OMNI
极化方式	垂直极化	Polarizatin	Vertical Polarization
输入阻抗	50Ω	Input Impedance	50Ω
机械指标		Mechanical Specifications	
接口形式	SMA 公头母针	Input connector	RP-SMA-J
天线材质	铜	Antenna materia	CU
工作温度	-30℃~+85℃	Working Temperature	-30℃~+85℃
工作湿度	40~85%	Working Humidity	40~85%

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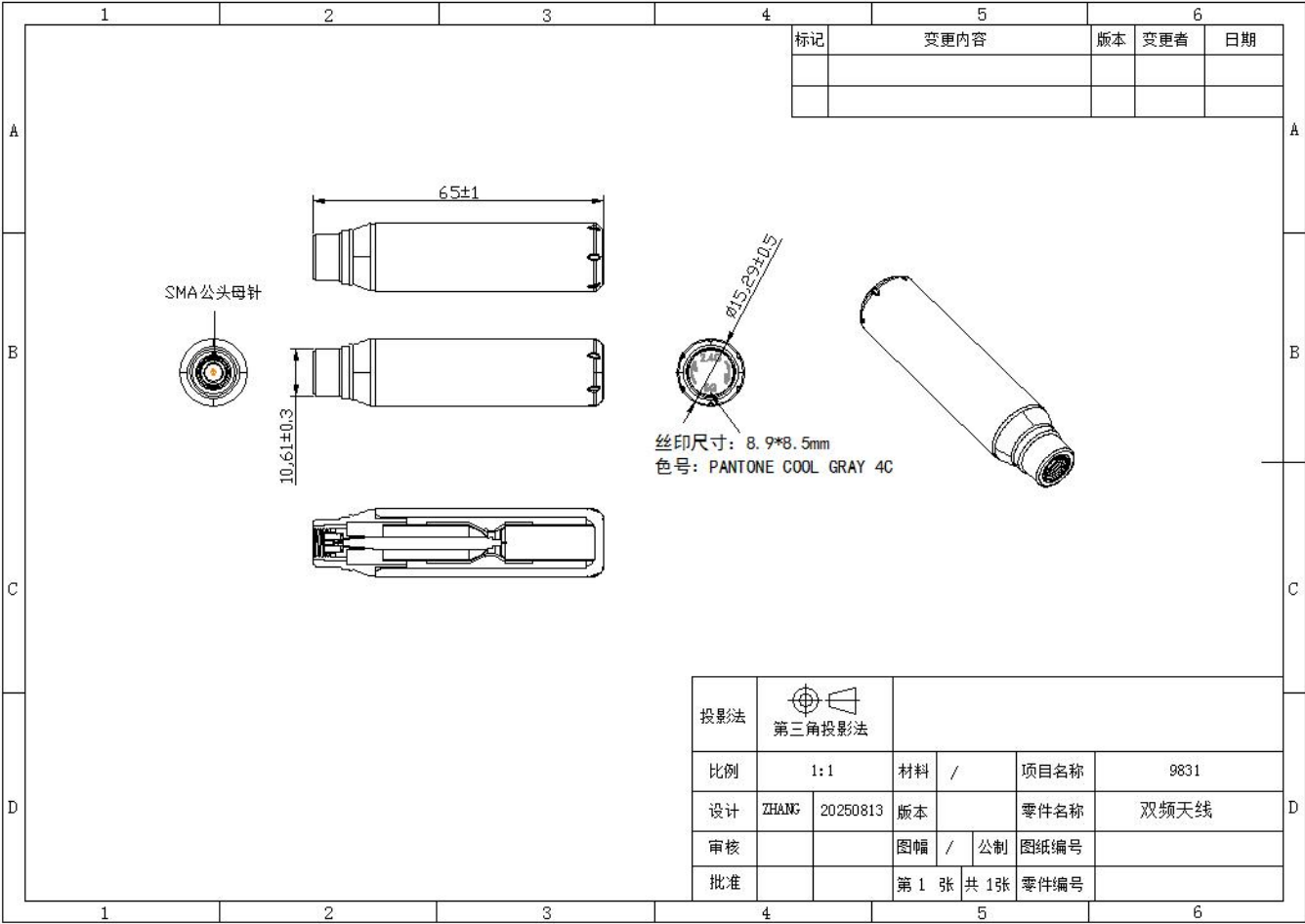
二、天线结构尺寸图

II. Antenna Structure Dimension Drawing

1. 天线实物图 Antenna Physical Image



2. 天线规格图纸 Antenna Specification Drawing



三、天线性能测试

1. 测试设备及原理 Testing Equipment and Principle

1. 测试设备:

网络分析仪 Network Analyzers :

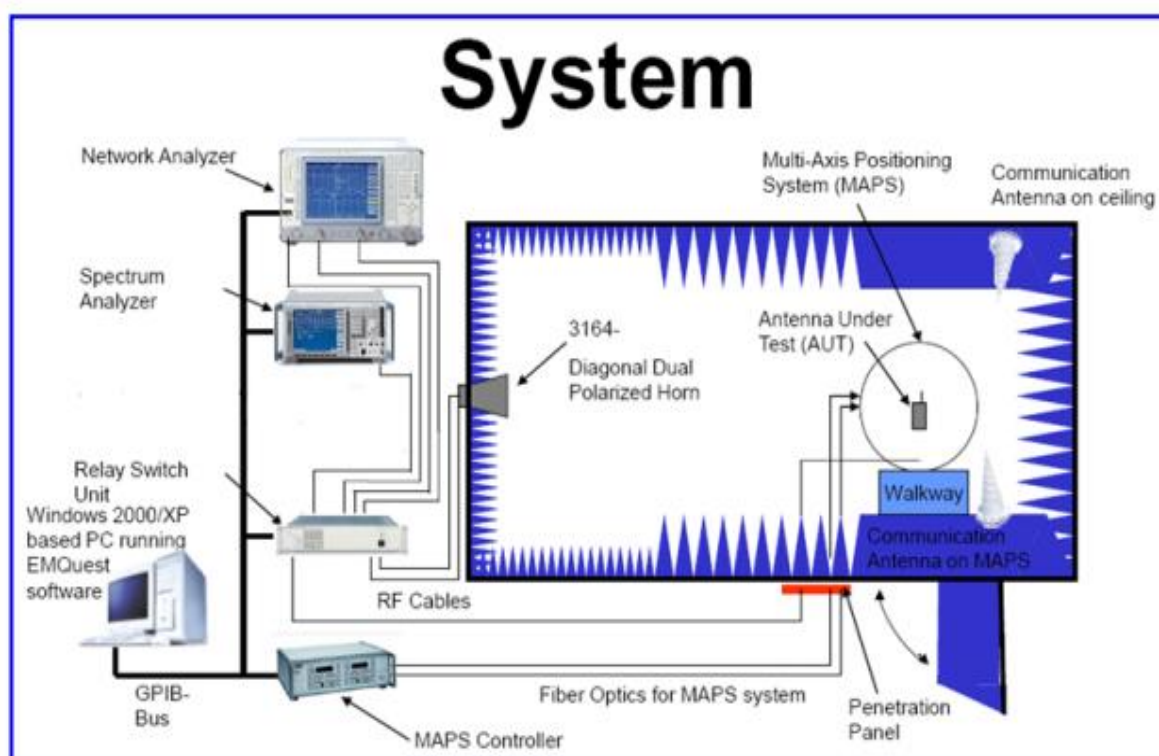
Agilent 8753D 5071B

综合测试仪 Communications Test Set:

Agilent E5515C

3D 暗室测试系统 3D Chamber Test System:

2. 测试原理:



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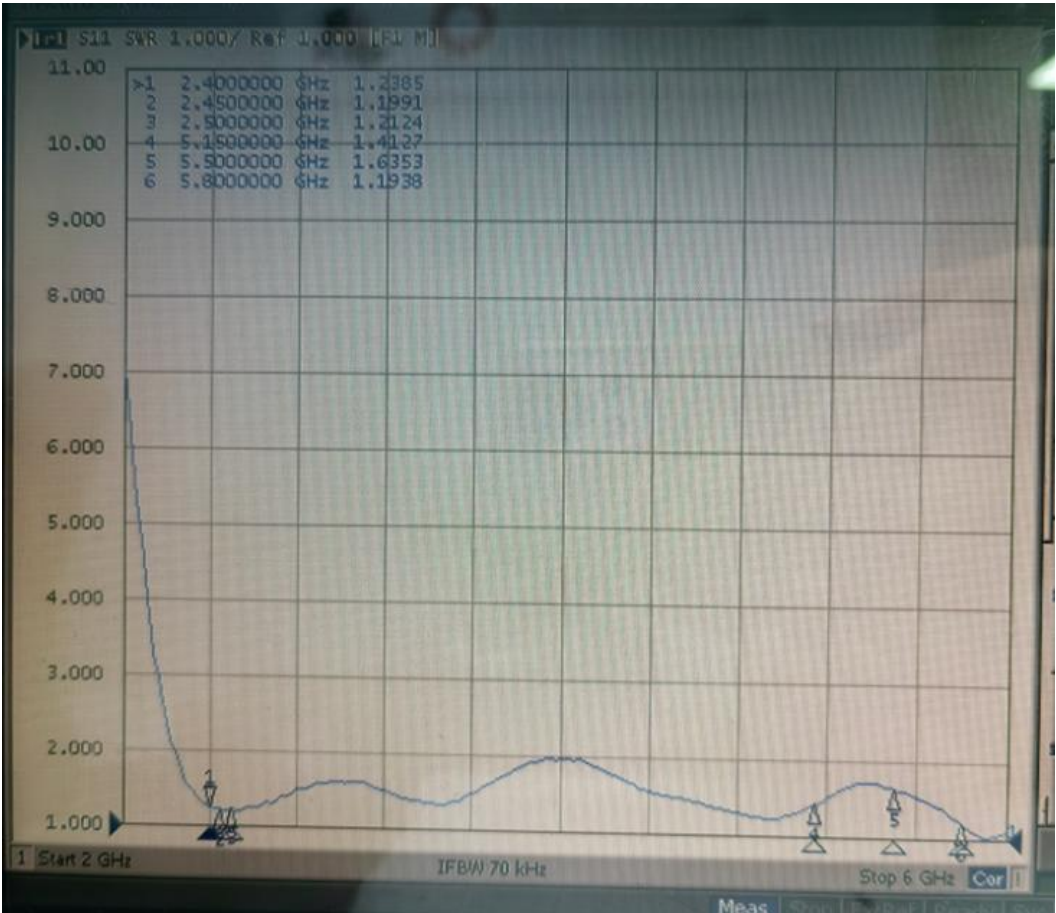
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3. S11



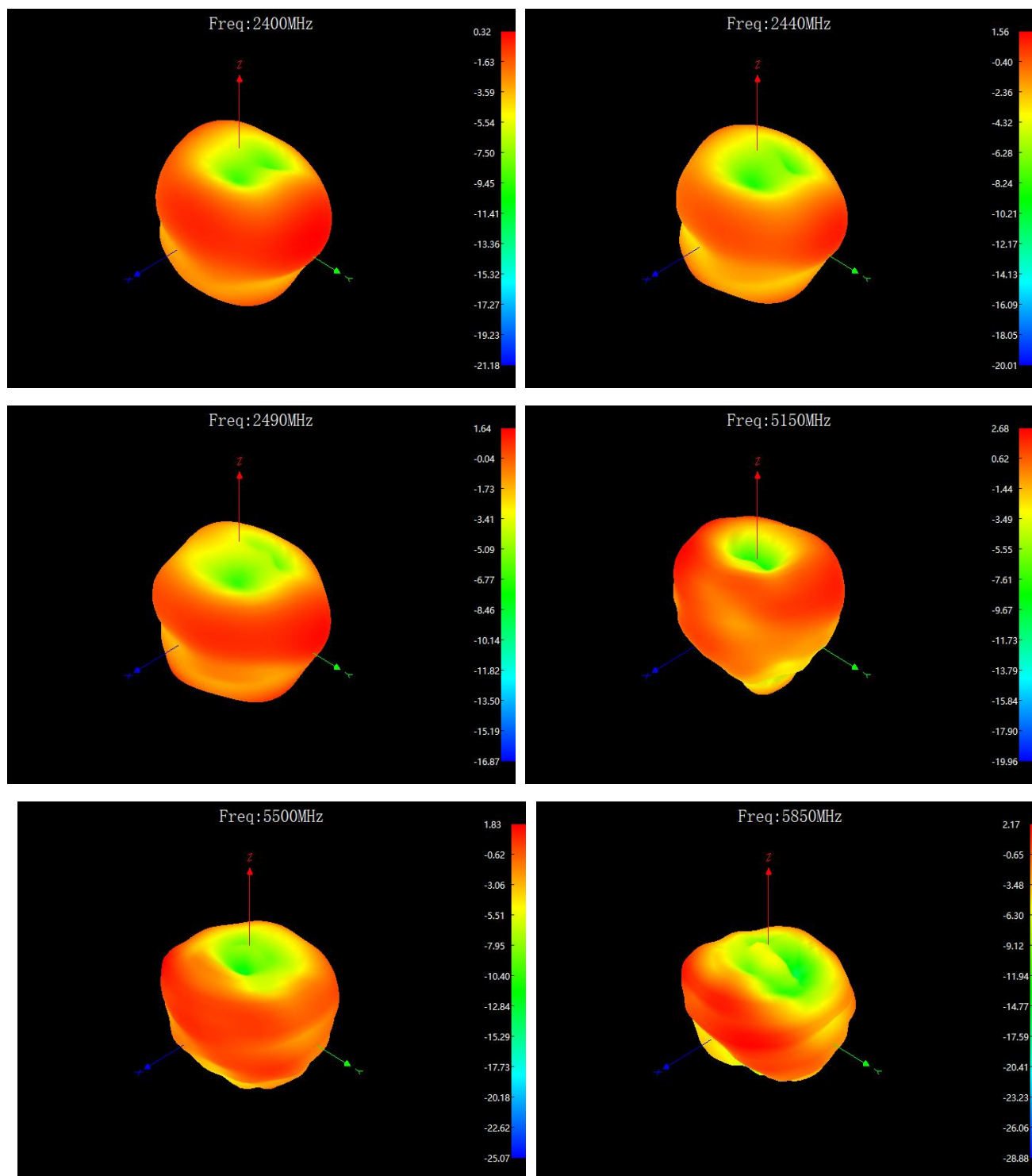
4. 增益效率

Gain Efficiency

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	52.84	0.32
2410	52.72	0.54
2420	52.36	0.8
2430	54.95	0.3
2440	60.12	1.56
2450	61.09	1.11
2460	65.77	1.43
2470	60.67	1.41
2480	66.07	1.43
2490	63.97	1.64
2500	63.24	1.62
5150	54.7	2.68
5200	56.36	2.75
5250	60.67	2.18
5300	61.38	2.02
5350	60.67	1.84
5400	58.34	1.94
5450	57.15	1.96
5500	52.72	1.83
5550	47.21	1.49
5600	44.46	1.03
5650	45.5	1.28
5700	44.67	1.24
5750	48.64	2.48
5800	48.08	1.65
5850	49.66	2.17

5. 方向图:

Radiation Pattern



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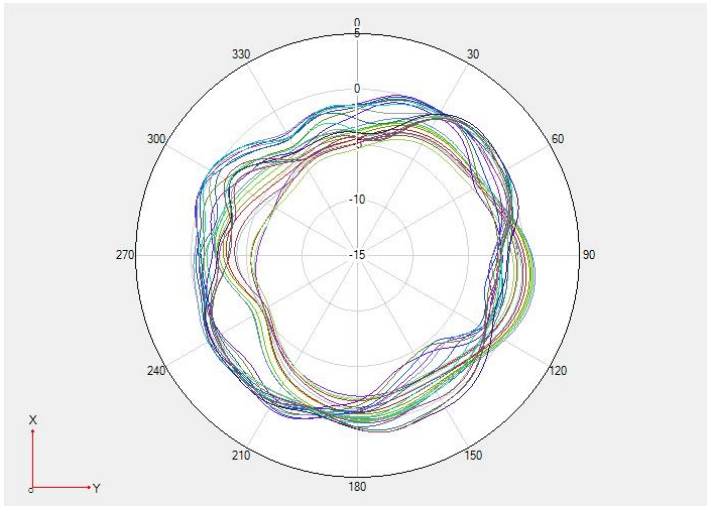
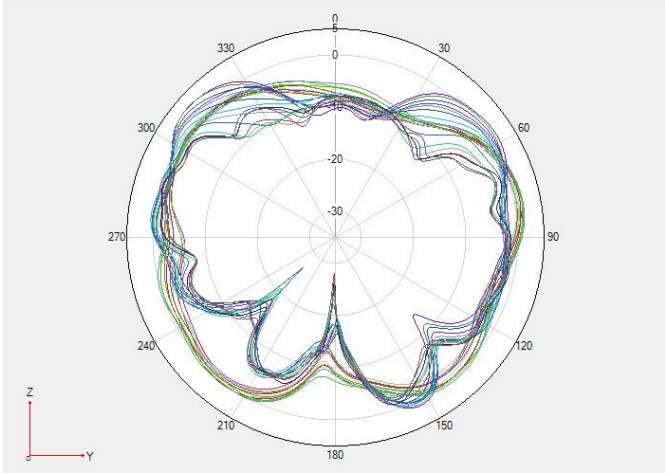
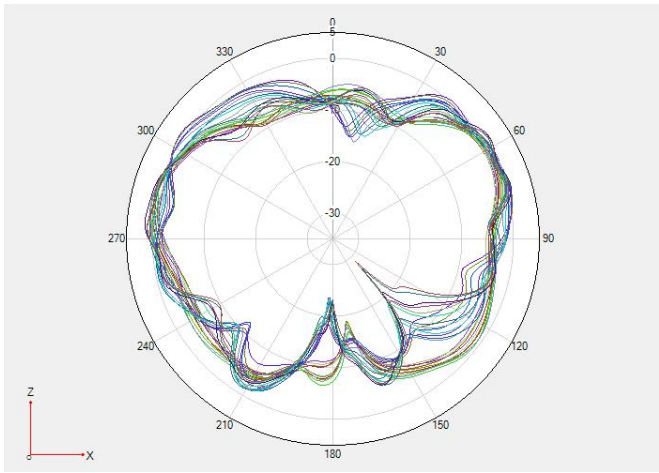
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四、可靠性试验报告

IV. Reliability Test Report

测试项目 Test Items		测试方法 Test Method	要求 Requirements	结果 Result
C1	V. S. W. R. 电性驻波比	设计网路分析仪参数进行测试	符合待测物规范	pass
M1	天线增益	设计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 80to 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
E4	Temperature and Humidity Chamber 恒温恒湿	GB / T 2423. 3-2006 Temp: 85° C / 12 H; -40° C / 12H RH: ≥ 90%; Time: 24H 温度 85° C 测试 12H 转-40° C 测试 12H; 湿度 ≥ 90%; 时间 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5% 恢复 2H 后, 无明显外观不良; 频率偏移 ≤5%	pass
E5	Thermal Shock 冷热冲击	GB / T 2423. 22 - 2008 - 40° C (30 minutes) to + 85° C (30 minutes); Cycles: 24 - 40° C 测试 30 分转 85° C 测试 30 分为一个周期; 共 24 周期	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5% 恢复 2H 后, 无明显外观不良; 频率偏移 ≤5%	pass
R1	Salt spray test 盐雾测试	GB /T 2423. 2 - 2008 Temp: 85° C; Time: 48 hours 温度 85° C, 测试 48H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5% 無明顯外觀不良; 频率偏移≤5%	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

五. 产品包装规范

V. Product Packaging Specification

产品名称/规格
Product Name / Specification

一、标签要求
I. Label Requirements

采购单号	*****
物料编码	*****
品名规格	*****
数量/单位	*****
备注	*****

采购单号	*****
物料编码	*****
品名规格	*****
数量/单位	*****
备注	*****

二、装箱要求
Packing Requirements

作业说明:
Operation Instructions:

1. 内包装:
Inner Packaging:

产品 50 PCS 一小袋 50 PCS
of products per small bag

2. 外包装:
Outer Packaging:

根据实际数量定数量/箱
Determine quantity per carton according to the actual quantity.



注意事项:
Matters Needing Attention:

1. 是否要增设隔板、珍珠棉;

Whether to add partitions and pearl cotton;

2. 标签的贴附, 如 ROHS 等;

Label attachment, such as RoHS and other labels;

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