



深圳市英佳创电子科技有限公司

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APPROVAL SHEET

承认书

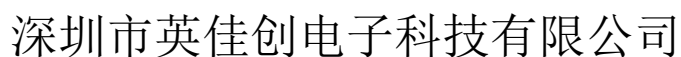
CUSTOMER NAME 客户名称	Shenzhen Four Seas Global Link Network Technology Co., Ltd.	
CUSTOMER P/N 客户料号		
PART NAME 品 名	2.4Gwhiteintegratedantenna1.13black wireL=110mm	
P/ N 料 号	YJC-6C110-W23	
APPROVAL REV. 版 次	A0	
DELIVERY DATE 送样日期	July03,2023	
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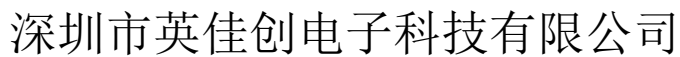
目录

1、	Cover.	1
2、	Contents.	2
3、	Curriculum vitae.	3
4、	Antenna plan.	4
5、	Antenna technical parameters and environmental performance tests.	5
6、	Antenna physical diagram.	6
7、	Antenna performance test diagram.	6
8、	2D、3D test data (2.4G)	6-7
9、	Wire specification parameters.	8
10、	ROHS material control report.	9

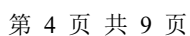


履历表curriculum VITAC:

edition	Change content and reason for change	date	issued
A/0	First edition	July03,2023	



天线平面图Antenna plan:





天线技术参数及环境测试Antenna technical parameters and environmental tests:

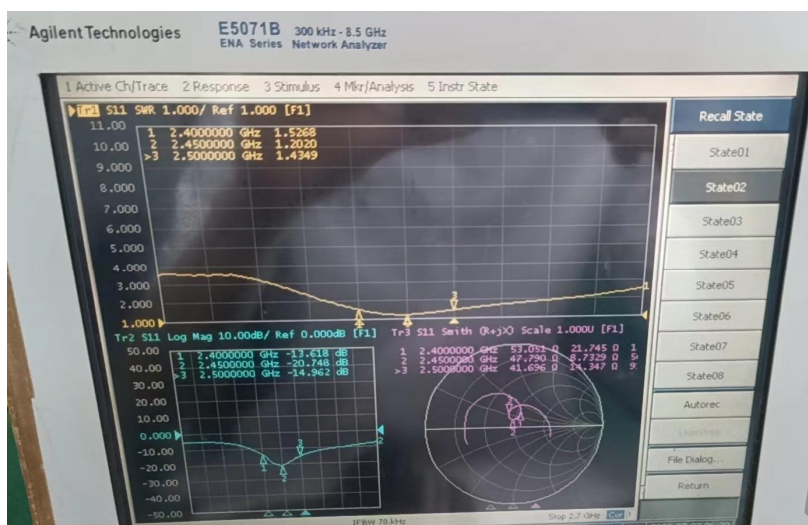
电气技术参Electrical technical parameters			
电 性 能 指 标		Electrical Specifications	
频率范围	2400-2500 MHz	Frequency Range	2400-2500 MHz
电压驻波比	<1.92	VSWR	<1.92
输入阻抗	50 Ω	Input Impedance	50 Ω
方向	全向	Direction	All
增益	2.0±1dBi	Gain	2.0±1dBi
机 械 指 标		Mechanical Specifications	
天线颜色	白色	Antenna Color	White
接口形式	OPEN	Input connector	OPEN
线材长度	110mm	Wire length	110mm
工作温度	-20℃~+70℃	Working Temperature	-20℃~+70℃
工作湿度	20%~80%	Working Humidity	20%~80%

环境性能测试Environmental performance test:

project	测试条件test condition	规格specifications
Storage environment	The temperature, humidity and air pressure tested without any specification are as follows: 1. Temperature is -30℃~+80℃ 2. Relative humidity is 45%-85% 3. Air pressure is 86kpa-106kpa	Electrical and mechanical performance is normal
High and low temperature test	Carry out 5 cycles between 70℃ and -20℃, then place under normal conditions for 1-2H, and check the appearance quality.	The dimensions should meet the requirements and should satisfy the mechanical and electrical performance
Constant humidity and heat resistance test	Relative humidity: 95±3%, test temperature: 40℃. After 2 hours of continuous action, measure the electrical performance within 5 minutes after the test sample is taken out. Check the appearance quality of the test sample under normal conditions for 1-2 hours.	The dimensions should meet the requirements and should satisfy the mechanical and electrical performance
Vibration test	Frequency range: 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M/S, sweep cycle number:30 times	Electrical and mechanical performance is normal
Drop test	1M high altitude free fall 3 times along mutually perpendicular axes	Electrical and mechanical performance is normal

天线实物图Antenna physical diagram:

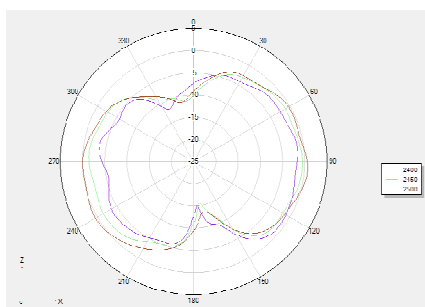
天线性能测试图Antenna performance test diagram:



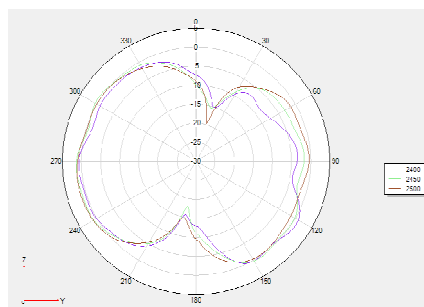
2D .3D test data(2.4G):

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	61.8	1.72
2410MHz	66.37	1.95
2420MHz	66.68	2.02
2430MHz	69.82	1.94
2440MHz	71.61	1.99
2450MHz	71.78	1.89
2460MHz	72.44	1.79
2470MHz	75.86	2.11
2480MHz	72.78	1.89
2490MHz	76.21	2.06
2500MHz	67.45	2.12

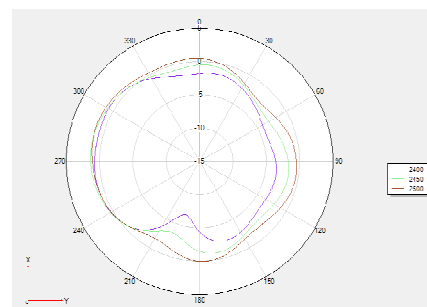
Phi 0 2D graph:



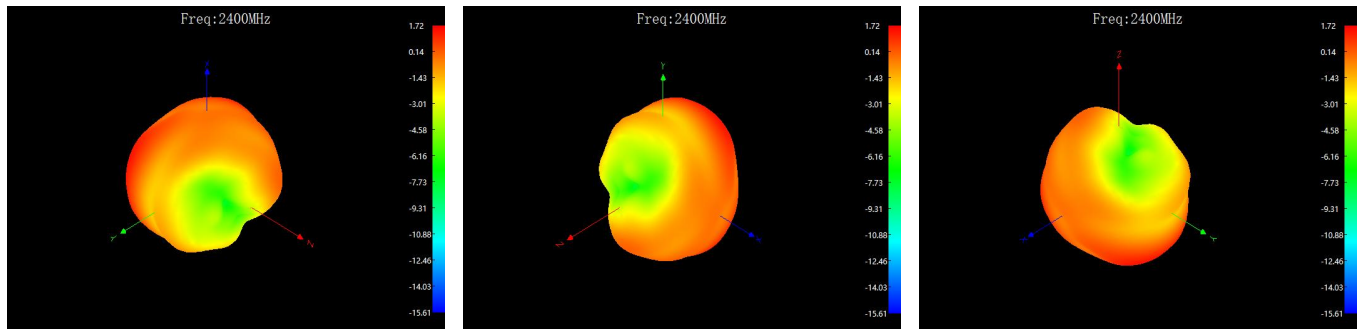
Phi 90 2D graph :



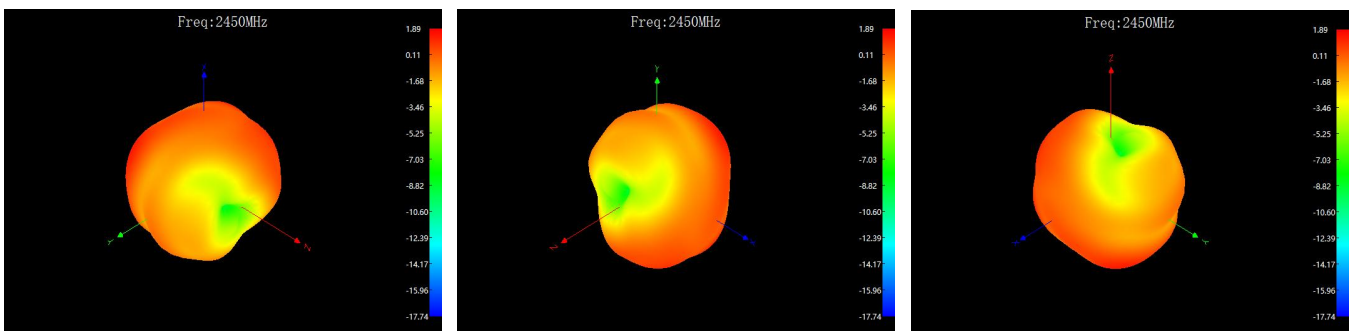
Theta 90 2D graph :



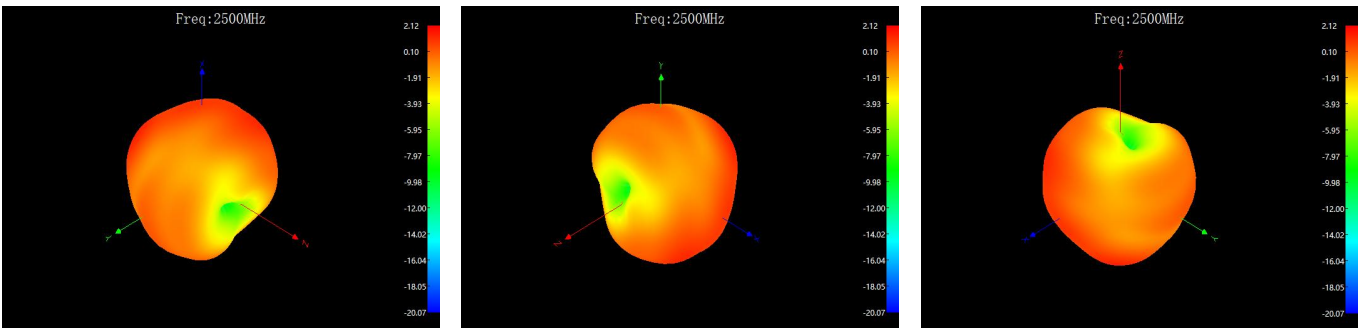
3D 2400:



3D 2450:



3D 2500:



产品规格 Product Type		1.13 线 Wire		
结构图 Structure Drawing				
结构特性 Structure Characteristics				
结构 Structure	项目 Item	标准值 Standard Value		
内导体 Inner Conductor	材质 Material	镀银铜线 Silver plated copper wire		
	构成(根/mm/Composition(No./mm)	7/0.08±0.005		
	标称外径 Nom.Dia(mm)	Φ0.24±0.01		
绝缘层 Insulation	材质 Material	聚全氟乙丙烯/FEP		
	标称外径 Nom.Dia(mm)	Φ0.7±0.03		
外导体 Outer Conductor	材质 Material	镀锡铜线 Tinned copper		
	形式 From	编织/Weaving		
	遮蔽率/ Shielding rate	≥90%		
	标称外径 Nom.Dia(mm)	Φ0.92±0.03		
护套 Jacket	材质 Material	聚全氟乙丙烯/FEP		
	标称外径 Nom.Dia(mm)	Φ1.13±0.05		
电气性能 Electrical Characteristics				
项目 Item	标准值 Standard Value	项目 Item	频率 Frequency	标准值 Standard Value
阻抗 Impedanc (Ω)	50±3	衰减 Attenuation@20 ℃ (dB/100m)	1GHz	≤2.23
电容 Capacitance(pF/m)	98		2GHz	≤3.15
抗拉强度 Tensile strengthkgf/mm²	1.76		3GHz	≤3.96
驻波比 VSWR	≤1.40@0-6GHz		4GHz	≤4.6
耐压强度 Dielectric Strength (A.C V/1min)	1000		5GHz	≤5.15
最大工作频率 (MHz) Max.oper. frequency	6000		6GHz	≤5.7
可靠性 Dependability				
最小弯曲半径(单次)Min.Bending Radius/Single		mm	4	
最小弯曲半径 (重复) Min.Bending Radius/Repeated		mm	8	
工作温度范围 Operating Temperature		℃	-20~+80	
包装 Packing				
包装方式 Packing Mode		1000 (m/盘) 成卷 Reel		
使用提示 Trips for Use				
存储环境 Storage Environment	温度: 30℃以下, 湿度: 20-65%.Temperature: below 30℃, humidity: 20-65%.			
铁氟龙收缩 Teflon Shrink	绝缘层收缩≤0.2mm; 护套层收缩≤0.3mm Insulation layer shrinkage ≤ 0.2mm; sheath layer shrinkage ≤ 0.3mm			
加工温度 Processing temperature	250℃~260℃的情况下, 可短时间承受; 300℃以上会出现热分解现象。At 250℃~260℃, it can withstand for a short time; above 300℃, thermal decomposition will occur			
最佳保存周期 The best save cycle	2 个月, 2 个月以上锡效果变差,但电性不受影响, 夏季高温高湿环境开剥后需尽快流转。2 months. After 2 months, the tin effect will deteriorate, but the electrical properties will not be affected. In the summer, in high temperature and high humidity environment, it needs to be circulated as soon as possible after stripping.			



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ROHS 物料控制报告Material Control Report

This is to certify that the components, raw materials used in auxiliary materials, and additives used in the production process delivered to your company comply with the environmental protection requirements of the RoHS Directive on the Restriction of the Use of Hazardous Substances (RoHS Directive 2011/65/EC)

The composition of the raw materials, packaging materials and additives used in the production process of components and auxiliary materials is reported as follows:

组成物料名称 Component /Part Name	组成材料 Material Composition	ICP 报告编号 ICP report #	测试机 构 Test Org.	测试时间 Test Date	有 害 物 质 含 量(ppm)						是否合格? PASS?
					Cd	Pb	Hg	Cr ⁶⁺	PBB	PBDE	PASS
Wire	Teflon coaxial cable	SZXEC2202766604	SGS	22/08/18	ND	ND	ND	ND	ND	ND	PASS
Plastic parts	TPE	CANEC2222870701	SGS	22/10/31	ND	ND	ND	ND	ND	ND	PASS
	PC+PBT	CANEC23000452601	SGS	23/03/02	ND	ND	ND	ND	ND	ND	PASS
Environmentally friendly tin wire	Environmentally friendly tin wire	ZXEC2203054802	SGS	22/09/19	ND	46	ND	ND	ND	ND	PASS
EVA sponge	EVA foam	CANEC2227574118	SGS	23/01/03	ND	8	ND	ND	ND	ND	PASS
spring	copper	CANEC2219550104	SGS	22/09/16	ND	20	ND	ND	ND	ND	PASS
Bullet	Zinc Alloy	SZXPC23000139304	SGS	23/03/02	ND	23	ND	ND	ND	ND	PASS