

供应商:

东莞市腾祥电子有限公司

Tengxiang Technology. Inc
地 址: 东莞市 长安镇 沙头沙涌路53号

承 認 書

SPECIFICATION FOR APPROVAL

AN2450-FPC19B0

騰祥料號 SOREDE P/N	
品 名 / 規 格 DESCRIPTION	2. 4/5. 0G FPC天线，出黑色线90mm
騰祥送樣編號 SOREDE DWG#	20220520002
送样日期 SAMPLE DATE	2022. 05. 20

MANUFACTURER/制造商			
APPROVED BY 核 准	Q.C.DEPT. 品 管	CHECKED BY 核 准	TESTED BY 檢 測
韦佳	罗宗友	胡超	LRK

客户:

深圳市视壮科技有限公司

视 壮 料 號 CUSTOMER P/N	
视 壮 名 稱 CUSTOMER	
品 名 / 規 格 DESCRIPTION	

CUSTOMER APPROVAL/客户审核			
APPROVED BY 核 准	Q.C.DEPT. 品 管	CHECKED BY 审核	TESTED BY 檢 測



Tengxiang Technology.Inc

东莞市腾祥电子有限公司

Product Number: AN2450-FPC19B0

Product Name: Antenna

Specification For Approval

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Revision History (变更履历)

Revision	Date	Change Notification	Description
1.0	2022.05.20	初版	

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency 频率	2400-2500MHz / 5150-5850 MHz
S.W.R. 驻波比	参照样品波形
Antenna Gain 增益	3.59 dBi / 2.09dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm
B. Material & Mechanical Characteristics	
Material of Plastic 塑胶材质	FPC
Cable Type 线材规格	OD1.13mm
Connector Type 连接器规格	/
C. Environmental	
Storage Temperature 存储温度	- 40 °C ~ + 80 °C
Operation Temperature 工作温度	- 40 °C ~ + 80 °C
Antenna Color Storage life 天线颜色存储寿命	< 2 year

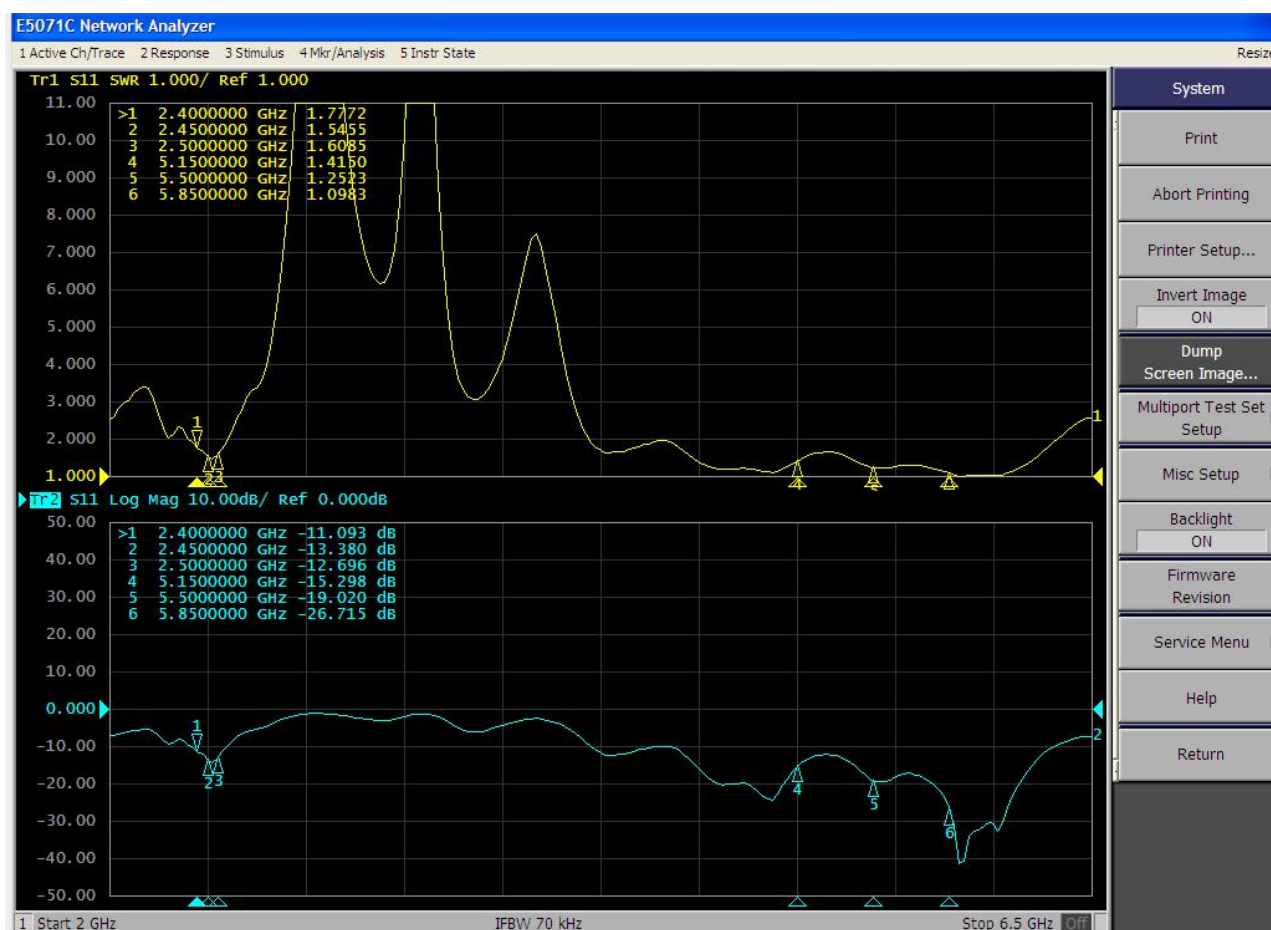
2. Characteristics and Reliability Test

Test Items 测试项目		Test Condition and Procedure 测试方法	Requirements 要求	Result 结果
C1	V.S.W.R. 电压驻波比	Set DUT on Network Analyzer; make individual calibration to test 设置网络分析仪参数进行测试	Directive DUT specification 符合待测物规范	PASS
C2	Insertion	Set DUT on Network Analyzer; make individual	Directive DUT specification	PASS

	Loss 插入损失	calibration to test 设置网络分析仪参数进行测试	Directive DUT specification 符合待测物规范	
C3	Antenna Gain 天线增益	Set DUT on Antenna Chamber; make individual calibration to test 设置天线暗室参数进行测试	Directive DUT specification 符合待测物规范	PASS
C4	Voltage Breakdown 耐电压	Test voltage should be applied between insulated portions, or between ground as specified. 在绝缘部分测试电压,或指定接地面之间	Max Voltage ≥ 500 V or directive material specification 最大电压 ≥ 500 V 或符合材料规范	PASS
C5	Insulation Resistance 绝缘阻抗	Set Voltage: 500 ± 50 V; between the insulated portions, or between ground as specified. 设置电压 500 ± 50 V,在绝缘部份测试或指定接地面之间	Resistance ≥ 500 M ohm or directive material specification 阻抗 ≥ 500 M ohm 或符合材料规范	PASS
C6	Contact Resistance 接触阻抗	Air Temp: 26°C ; measured with test equipment 室温 26°C , 指定量测设备	Directive material specification 符合材料规范	PASS
M1	Vibration 震动	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 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. $\leq 5\%$ 无明显外观不良;频率偏移 $\leq 5\%$	PASS
M2	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. $\leq 5\%$ 产品无脱落、断裂;频率偏移 $\leq 5\%$	NA
		Packing: Height: 0.76 Meter; 1 corner, 3 edges, 6 surface 包装: 高 0.76m, 一角、三棱、六面各一次		NA
		Antenna+Machine: Height: 0.76 Meter; 1 corner, 3 edges, 6 surface. 整机: 高 0.76m, 一角、三棱、六面各一次		NA
M3	Solderability 可焊性	GB / T2423.28-2005 Temp: $260 \pm 5^{\circ}\text{C}$; Duration: 5 seconds 温度 $260 \pm 5^{\circ}\text{C}$; 持续 5 秒	Tin evenly on full 上锡均匀饱满	N/A
M4	Pull Test	Holding with individual specification; force	1. Directive DUT specification	NA

	拉力	applied to axis of terminal .单独定义产品端子拉力	2. Frequency Tol.≤5% 符合待测物规范;频率偏移≤5%	
M5	Torque Test 扭力	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal 单独定义产品端子之顺时针及逆时针扭力	1. Directive DUT specification 2. Frequency Tol.≤ 5% 符合待测物规范;频率偏移≤5%	NA
M6	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
E1	Waterproof 防水	With Reference to IEC 60529 // IP Code Definition 参考 IEC60529 IP 定义	Directive DUT specification 符合待测物规范	N/A
E2	Salt Spray 盐雾	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H 温度 35°C; 湿度≥95%;盐水浓度≥5%; 测试 24H	1. No Visual Damage 2. Frequency Tol.≤5% 无明显外观不良;频率偏移≤5%	N/A
E3	Temperature and Humidity Chamber 恒温恒湿	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 温度 80°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
E4	Thermal Shock 冷热冲击	GB / T 2423.22 - 2008 - 40° C (30 minutes) to + 80° C (30 minutes); Cycles: 24 - 40° C 测试 30 分转 80° 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
E5	Aging test 老化	GB / T 2423.2 - 2008 Temp: 80°C; Time: 24 hours 温度 80° C, 测试 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 无明显外观不良;频率偏移≤5%	PASS
E6	High Temp. 高温	Temp. 270±10° C; Times: 120 seconds 温度 270±10° C, 测试时间 120 秒	No Visual Damage 无明显外观不良	N/A
R1	RoHS	With Reference to IEC 62321:2008 with flow chart 参考 IEC 62321 测试流程	Directive RoHS 2011/65/EU 符合 RoHS 2015/863/EU 标准	PASS

3. Antenna - S Parameter Test Data

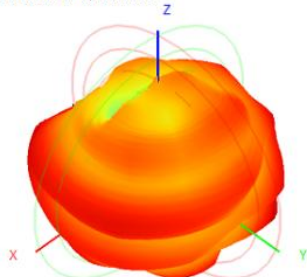


4. Antenna - Radiation Pattern Test Data

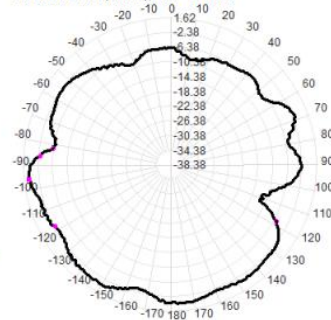
Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5500.0	5850.0
Gain (dBi)	2.57	3.59	3.43	2.09	0.77	1.28
Efficiency (%)	44.41	50.72	52.93	51.87	38.96	42.59

5. Antenna - Radiation Pattern Test Data

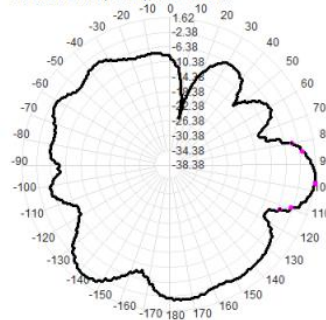
2400.0MHz H+V, Eff: 44.4%



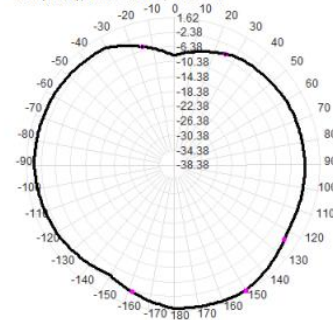
2400.0MHz Total(E1-XZ), Max= 0.34dBi



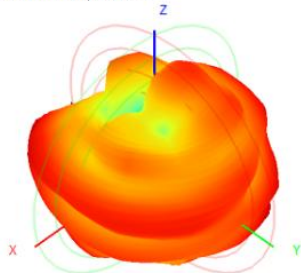
2400.0MHz Total(E2-YZ), Max= 1.62dBi



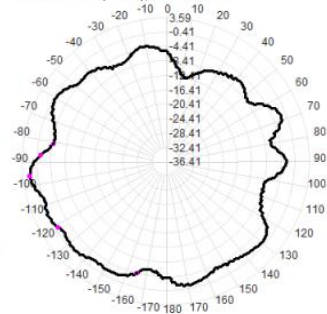
Total(H+V), Max= 0.96dBi, CirD=9.57



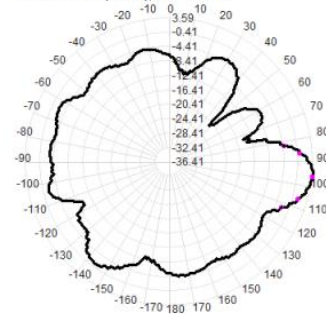
2450.0MHz H+V, Eff: 50.7%



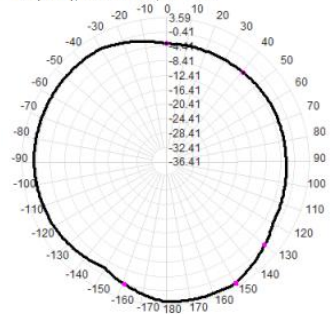
2450.0MHz Total(E1-XZ), Max= 1.62dBi



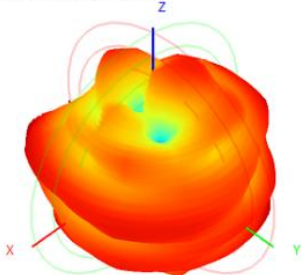
2450.0MHz Total(E2-YZ), Max= 3.59dBi



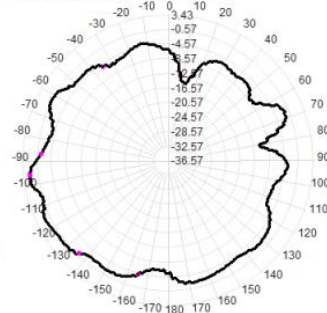
Total(H+V), Max= 2.39dBi, CirD=6.22



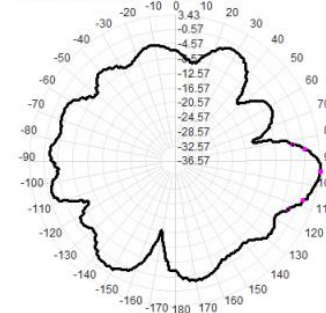
2500.0MHz H+V, Eff: 52.9%



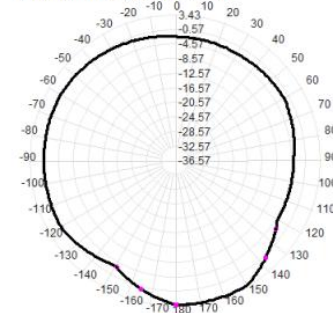
2500.0MHz Total(E1-XZ), Max= 1.63dBi

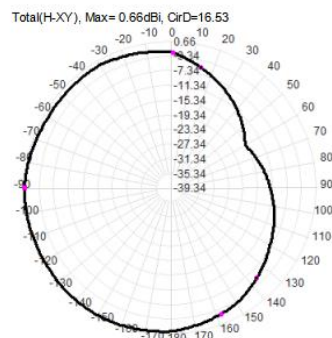
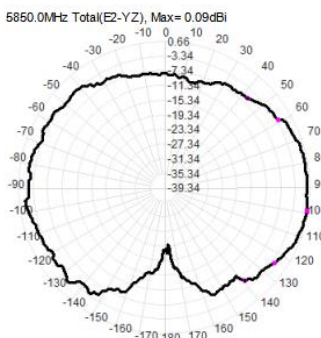
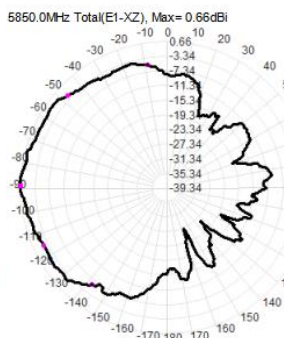
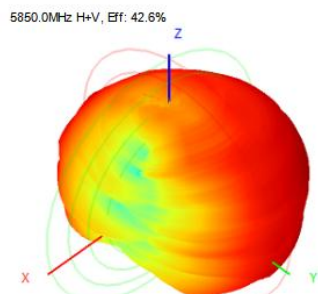
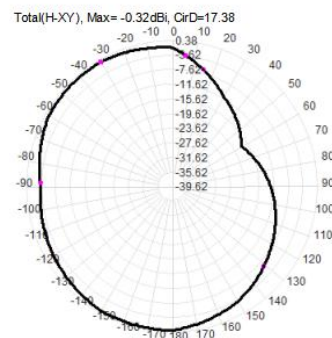
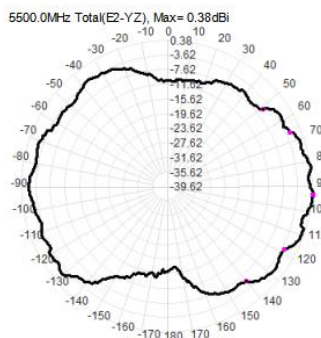
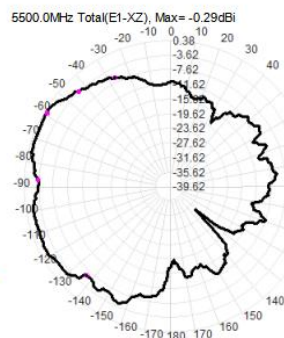
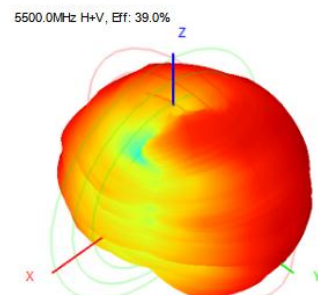
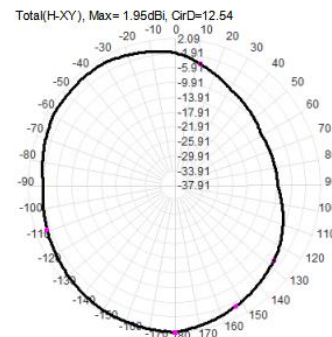
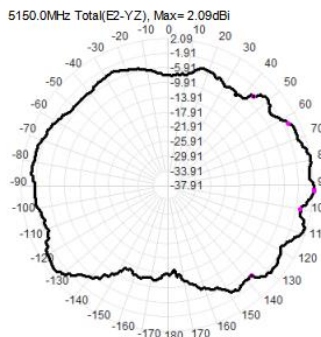
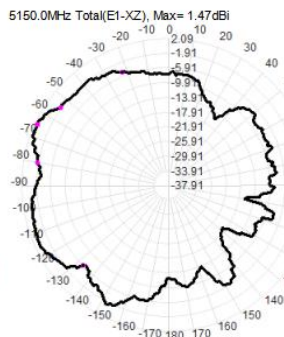
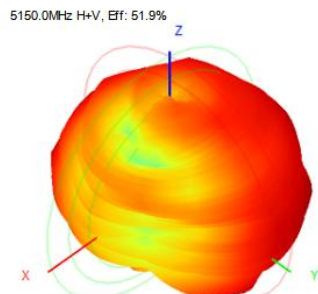


2500.0MHz Total(E2-YZ), Max= 3.43dBi



Total(H+V), Max= 2.90dBi, CirD=7.18





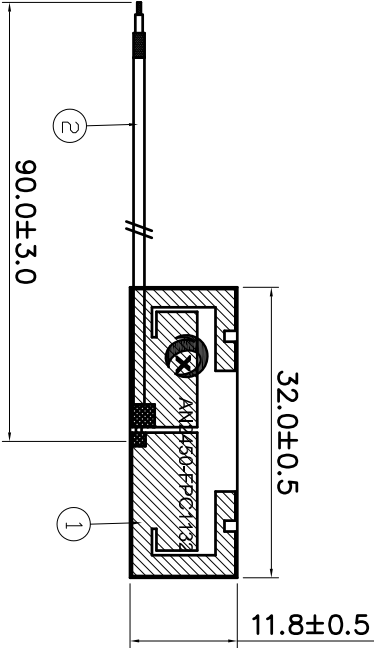
6.Mechanical Drawing See attached files

插入图纸 和包装规范

HF	☐
RoHS2.0	☒
REACH	☐
CONFIDENTIAL	

焊接區 (OSP)

布線區



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



Tengxiang Electronics Co., Ltd.

TITLE: 2400-2500 / 5150-5850 MHz

PART NO.: AN2450-FPC19BO

CUSTOMER P/N: /

APP BY	CHK BY	RF BY	DES BY	UNIT S: mm	Tolerance
			LRK	SCALE: 1/1	X.X ±0.5
			2022.05.20	REVISION: A	X.XX ±0.2
					X' ±1

產品包裝規範

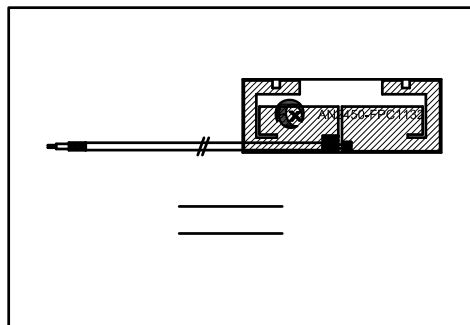
PACKING CRITERION

Date: 2022.05.20

Page: 1 of 1

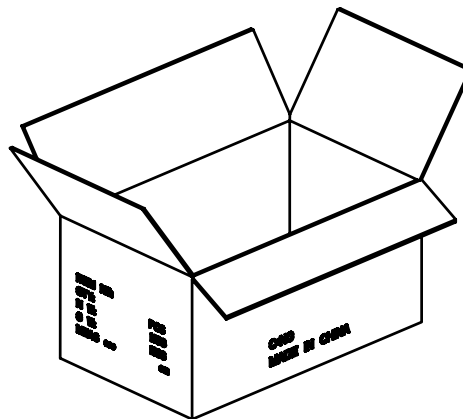
Part Number : AN2450-FPC19BO	Revision : A
Name: Antenna	Customer : ALL

1 . Enter PE bag。



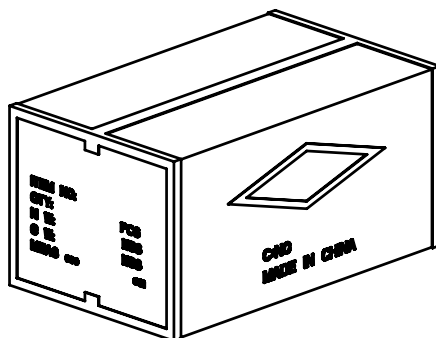
100pcs/ PE bag

2.PACKING。



5000pcs/Carton

3. SEALING。

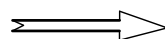


SIDE

ITEM NO:
QTY: PCS
N W: KGS
G W: KGS
MEAS

FRONT

C/NO
MADE IN CHINA



APPROVED BY: YCX

CHECKED BY: HC

DESIGNED BY: LRK