



Tengxiang Technology.Inc

东莞市腾祥电子有限公司

Product Number: AN2400-78F08GX-W

Product Name: Antenna

Specification For Approval

Date: 2022.11.12

Version: 1.0

客户名称

Customer:

客户料号

Customer P/N:

AN2400-78F08GX-W

腾祥料号

TX P/N:

规格描述

Description:

2.4G 白色天线, 1.13 深灰色线 L=350mm+IPEX

Tengxiang Checked By: 腾祥审核		Customer Approved By: 客户审核	
DRAWN 制作	李艳坪	TESTED BY 检测	
CHECKED BY 审核	胡超	CHECKED BY 审核	
Q.C.DEPT. 品管	袁旭阳	Q.C.DEPT. 品管	
APPROVED BY 核准	韦佳	APPROVEDBY 核准	



NO.53 Shatou ShaChong Road, ChangAn Town, Guangdong province, China

中国广东省东莞市长安镇沙头区沙涌路 53 号

TEL:86-769-81873082 FAX:86-769-82663788

<http://www.tenxiang.cn>



Tengxiang Technology.Inc

东莞市腾祥电子有限公司

Product Number: AN2400-78F08GX-W

Product Name: Antenna

Index:

1. Specification (规格)
2. Characteristics and Reliability Test (产品特性和可靠性测试标准)
3. Antenna - S Parameter Test Data (样品测试数据)
4. Antenna - Radiation Pattern Test Data (辐射模式测试数据)
5. Mechanical and Packing Drawing (图纸包装规范)

Revision History (变更履历)

Revision	Date	Change Notification	Description
1.0	2022.11.12	初版	

Product Number: AN2400-78F08GX-W

Product Name: Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency 频率	2400~2500MHz
S.W.R. 驻波比	<= 2.0
Antenna Gain 增益	2.91dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm
B. Material & Mechanical Characteristics	
Material of Plastic 塑胶材质	TPE/ABS/PC+PBT
Cable Type 线材规格	OD1.13mm , GRAY
Connector Type 连接器规格	I-PEX
C. Environmental	
Storage Temperature 存储温度	- 30 °C ~ + 65 °C
Operation Temperature 工作温度	- 30 °C ~ + 65 °C
Antenna Color Storage life 天线颜色存储寿命	< 2 year

2. Characteristics and Reliability Test

Product Number: AN2400-78F08GX-W

Product Name: Antenna

Test Items 测试项目		Test Condition and Procedure 测试方法	Requirements 要求	Result 结果
1	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
2	Insertion Loss 插入损失	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
3	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
4	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
5	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
6	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
7	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
8	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 $\leq 5\%$	PASS
		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		PASS

Product Number: AN2400-78F08GX-W

Product Name: Antenna

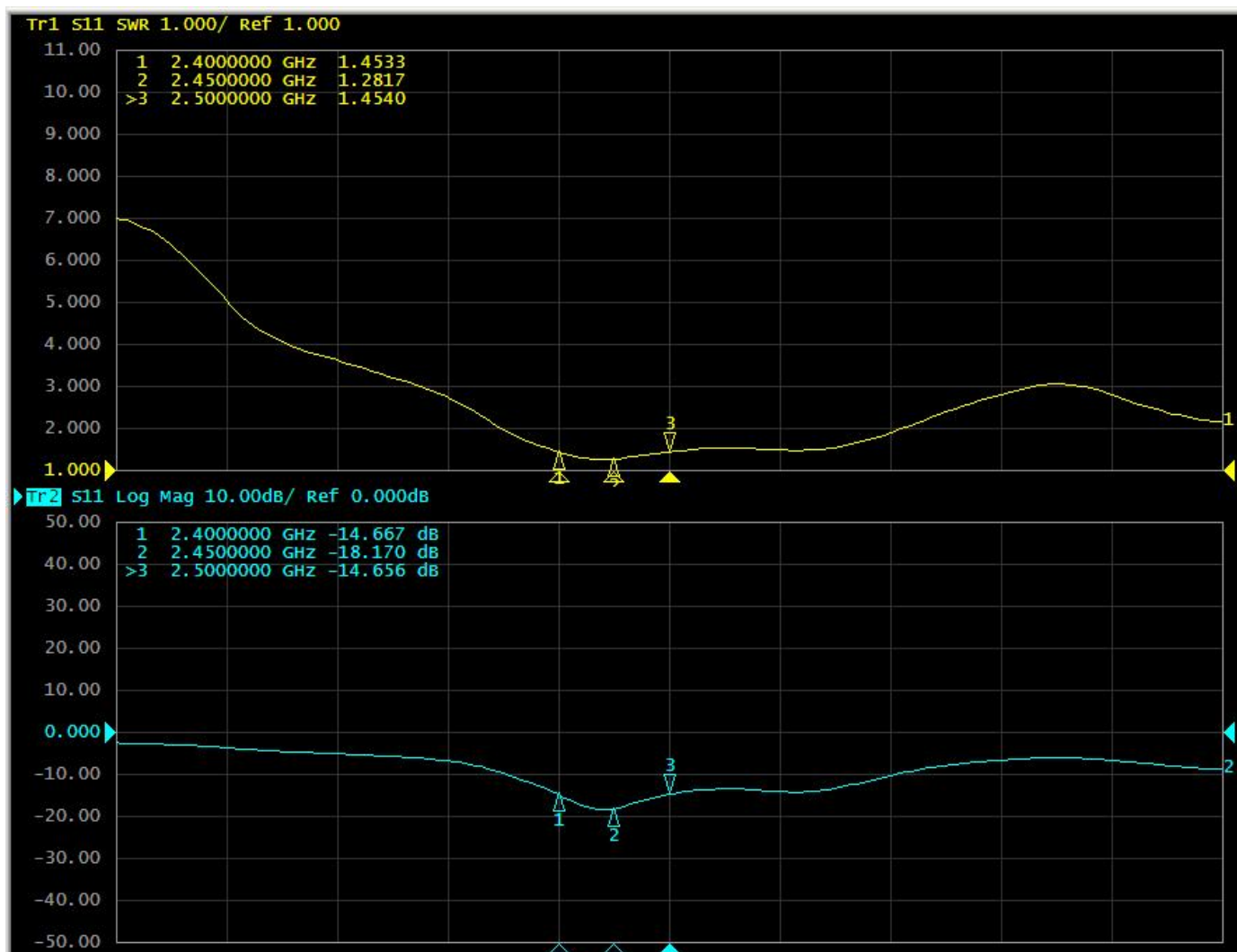
		Antenna+Machine:Height: 0.76 Meter; 1 corner, 3 edges, 6 surface.整机: 高 0.76m, 一角、三棱、六面各一次		PASS
9	Solderability 可焊性	GB / T2423.28-2005 Temp: 260±5° C;Duration: 5 seconds 温度 260±5° C;持续 5 秒	Tin evenly on full 上锡均匀饱满	PASS
10	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .单独定义产品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待测物规范;频率偏移≤5%	PASS
11	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
12	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
13	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%	PASS
14	Temperature and Humidity Chamber 恒温恒湿	GB / T 2423.3-2006 Temp: 65°C / 12 H; -30°C / 12H RH: ≥ 90%; Time: 24H 温度 65°C 测试 12H 转-30°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
15	Aging test 老化	GB / T 2423.2 - 2008 Temp: 65°C; Time: 24 hours 温度 65° 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
16	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

Product Number: AN2400-78F08GX-W

Product Name: Antenna

Data



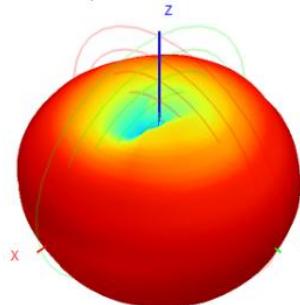
Product Number: AN2400-78F08GX-W

Product Name: Antenna

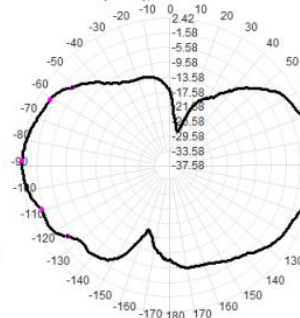
4. Antenna - Radiation Pattern Test Data

Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0
Gain (dbi)	2.74	2.57	2.55	2.91	2.05	2.81	2.46	2.46	2.14	2.48
Efficiency (%)	73.61	73.20	72.36	75.14	72.56	71.00	70.60	71.13	71.14	70.75

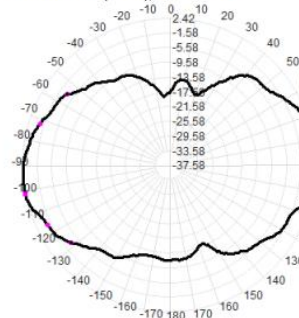
2400.0MHz H+V, Eff: 73.6%



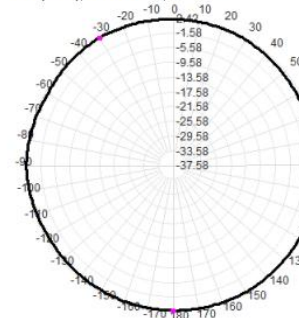
2400.0MHz Total(E1-XZ), Max= 2.30dBi



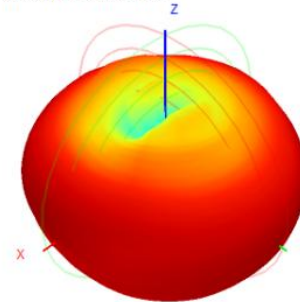
2400.0MHz Total(E2-YZ), Max= 2.37dBi



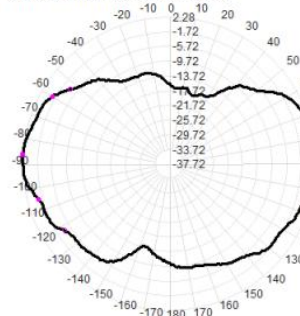
Total(H-XY), Max= 2.42dBi, CirD=1.25



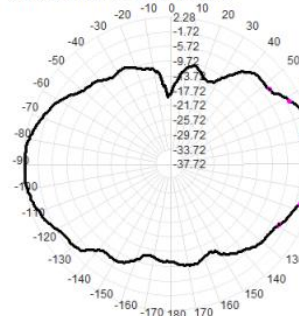
2450.0MHz H+V, Eff: 71.0%



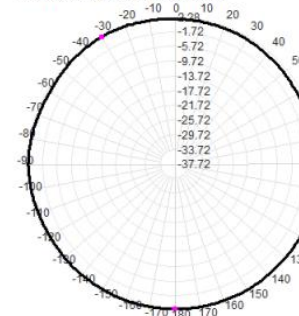
2450.0MHz Total(E1-XZ), Max= 2.21dBi



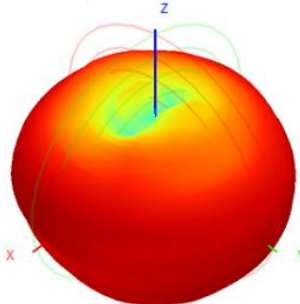
2450.0MHz Total(E2-YZ), Max= 2.28dBi



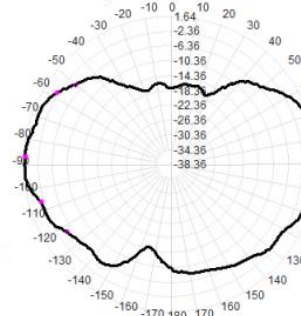
Total(H-XY), Max= 2.20dBi, CirD=1.48



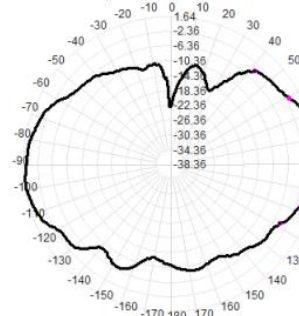
2500.0MHz H+V, Eff: 61.0%



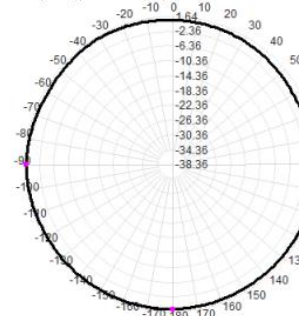
2500.0MHz Total(E1-XZ), Max= 1.25dBi



2500.0MHz Total(E2-YZ), Max= 1.64dBi



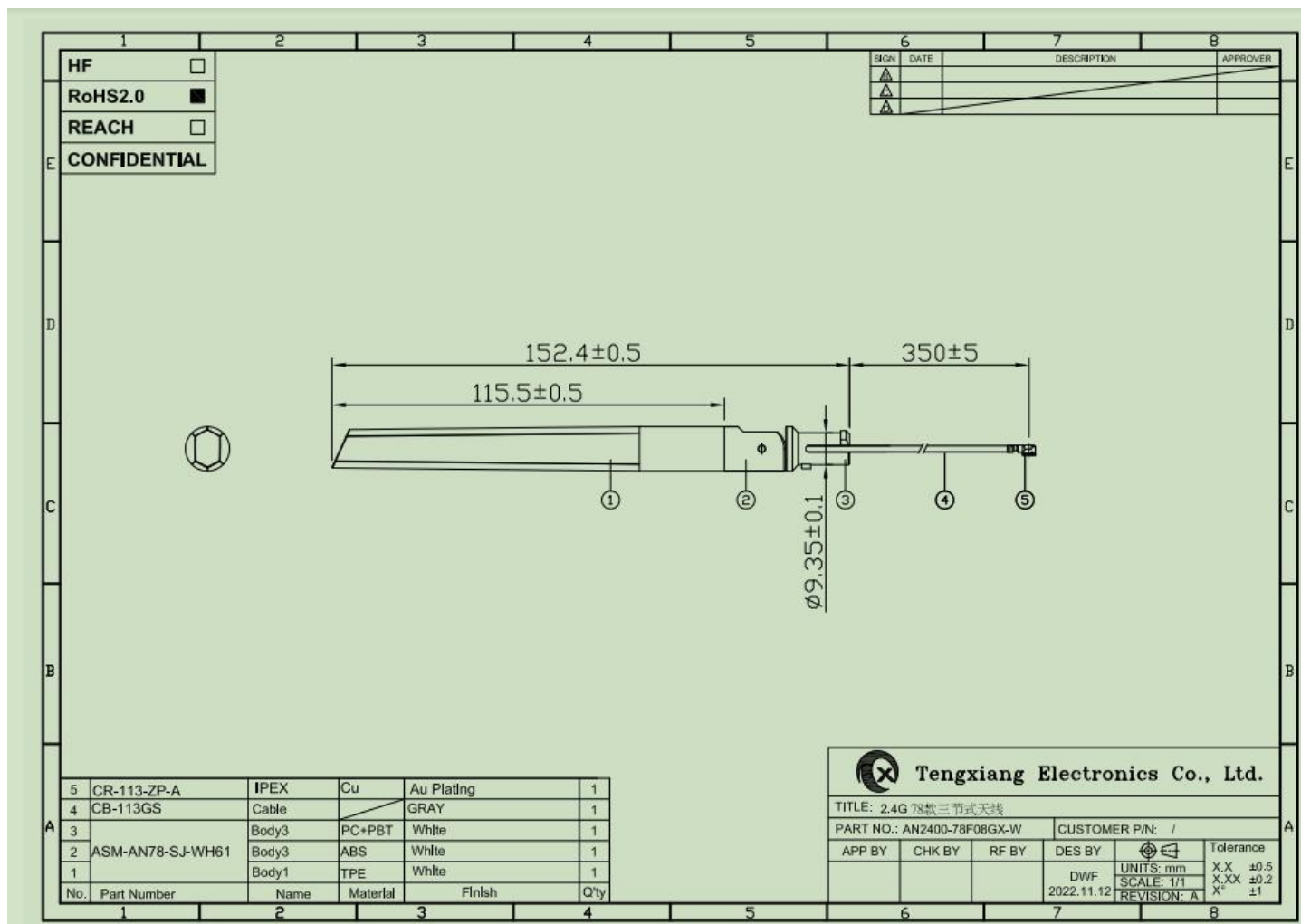
Total(H-XY), Max= 1.22dBi, CirD=1.82



5. Mechanical Drawing (See attached files)

Product Number: AN2400-78F08GX-W

Product Name: Antenna



Product Number: AN2400-78F08GX-W

Product Name: Antenna

產品包裝規範

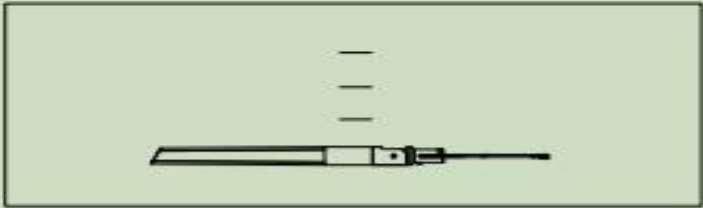
PACKING CRITERION

Date: 2022.11.12

Page: 1 of 1

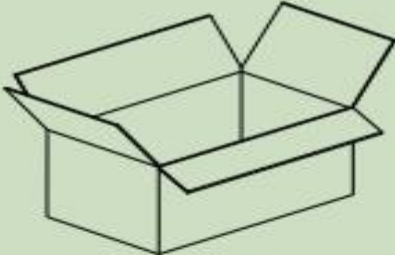
Part Number : AN2400-78F08GX-W	Revlsion : A
Name: Antenna	Customer : ALL

1. Enter PE bag.



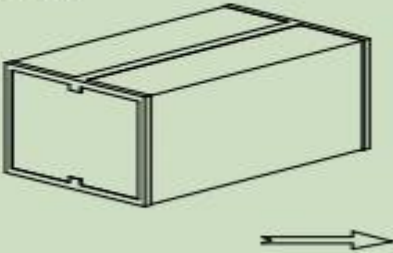
20pcs/ PE bag

2.PACKING -



1000pcs/Carton

3. SEALING.



SIDE



FRONT



APPROVED BY : YCX

CHECKED BY : HC

DESIGNED BY : DWF