

Product Number: HX-113B-81-181

Product Name: 2.4G Antenna

Specification For Approval

规格承认书

日期 Date : 2025/11/11

编号 File No. : H251111001

版次 Version : 1.0

客 户

Customer : 桑田照明

客 户 料 号

Customer P/N :

信鸿料号

XinHong P/N : HX-113B-81-181

品 名

Description : 2.4G Antenna

信鸿核对

XinHong Checked By:

客户核对

Customer Approved By:

东莞市信鸿电子有限公司

Dongguan Xinhong Electronics Co., Ltd.

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Product Number: HX-113B-81-181

Product Name: 2.4G Antenna

1.产品规格 (Product Specification)

产品图片 (Product Photo)	
	
A. 电性参数 (Electrical Characteristics)	
频率 (Frequency)	2400 ~ 2500 MHz
电压驻波比 (V.S.W.R)	<=2.0 @2400 ~ 2500 MHz
返回损失 (Return Loss)	<=-10dB @ 2400 ~ 2500 MHz
天线增益 (Antenna Gain)	0-1dBi
辐射效率 (Radiation Efficiency)	20 ~ 40 %
阻抗 (Impedance)	50±15 Ohm
极化方式 (Polarization)	线性 (Linear)
天线类型 (Antenna Type)	Dipole
B. 材质及机械特性 (Material & Mechanical Characteristics)	
辐射材质 (Material of Radiator)	线材
线材类型 (Cable Type)	1.13 黑色线材 (O.D. 1.13mm Black)
接头类型 (Connector Type)	Mini Connector
拉力测试 (Pull Test)	=>1.0KG
C. 环境因素 (Environmental)	
工作温度 (Operation Temperature)	- 40 °C ~ + 75 °C
储存温度 (Storage Temperature)	- 40 °C ~ + 85 °C

2. Characteristics and Reliability Test(可靠性测试)

Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	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 ; 頻率 20~80~20Hz ; 3 個方向各 2H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
M2	Random Drop 跌落	GB / T2423.8-1995 Single : Height: 1.0 Meter; 3 directions; 1 time for each direction 單支天線 , 高 1m ; 3 個方向各 1 次	1. No parts separated、fracture 2. Frequency Tol.≤5% 產品無脫落、斷裂;頻率偏移≤5%	PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待測物規範;頻率偏移≤5%	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.检查尺寸,颜色,材料,包装,表面處理	Directive DUT specification 符合待測物規範	PASS
E2	Salt Spray 鹽霧	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H 溫度 35°C ; 濕度≥95%;鹽水濃度≥5% ; 測試 24H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉-40°C 測試 12H ; 濕度≥ 90% ; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后 , 無明顯外觀不良;頻率偏移≤5%	PASS
E4	Thermal Shock 冷熱衝擊	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes) ; Cycles: 24 - 40°C 測試 30 分轉 80°C 測試 30 分為一個週期 ; 共 24 週期	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后 , 無明顯外觀不良;頻率偏移≤5%	PASS
E5	Aging test 老化	GB /T 2423.2 - 2008 Temp: 80°C; Time: 24 hours 溫度 80°C , 測試 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%無明顯外觀不良;頻率偏移≤5%	PASS

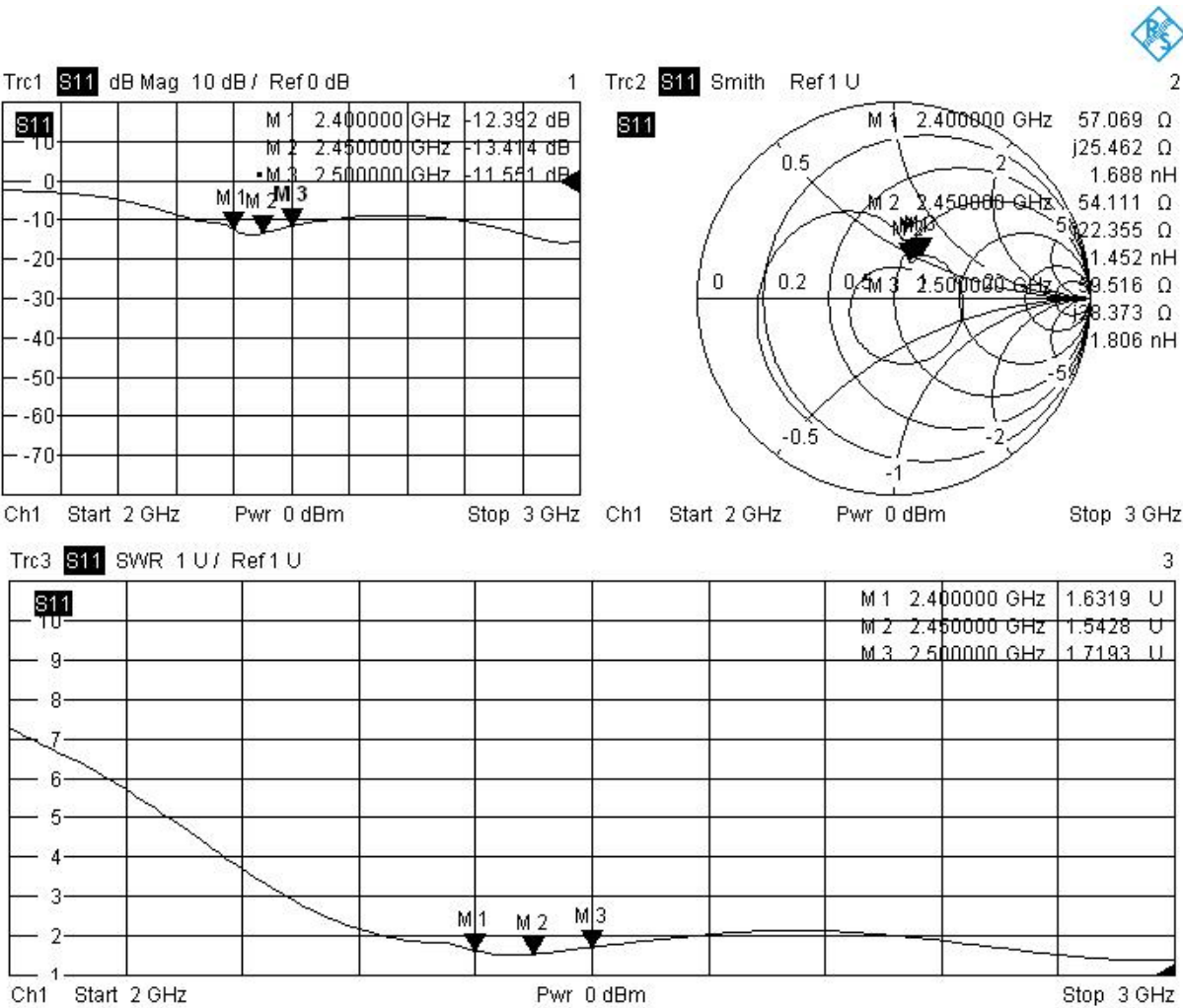
4.网络参数测试数据 (S Parameter Test Data)



(ROHDE&SCHWARZ) ZVL矢量网络分析仪

测试频率范围：9KHz-6GHz

测试能力：V.S.W.R、Return Loss、Smith等



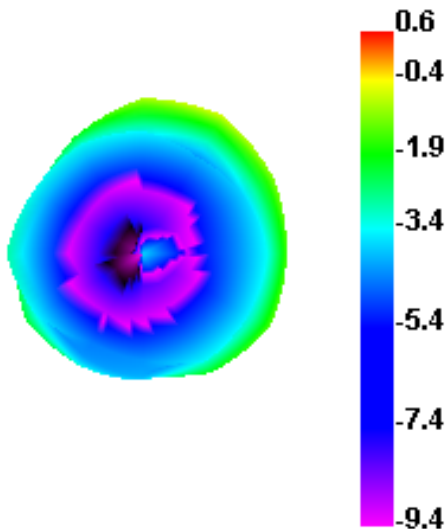
Product Number: HX-113B-81-181

Product Name: 2.4G Antenna

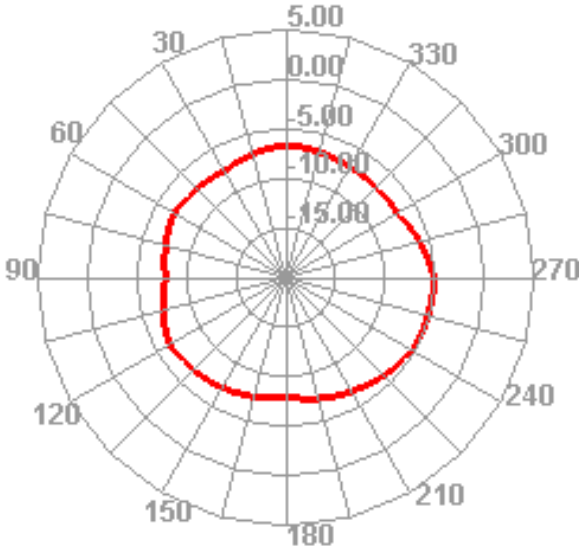
5.效率及增益测试数据（Efficiency and Gain Test Data）

Passive Test For WIFI2400		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	38.86	0.61
2410	34.34	0.05
2420	33.76	0.03
2430	33.3	0.09
2440	31.75	0.05
2450	31.35	0.2
2460	30.98	0.32
2470	43.46	1.77
2480	28.44	0.44
2490	26.67	0.28
2500	25.65	0.12

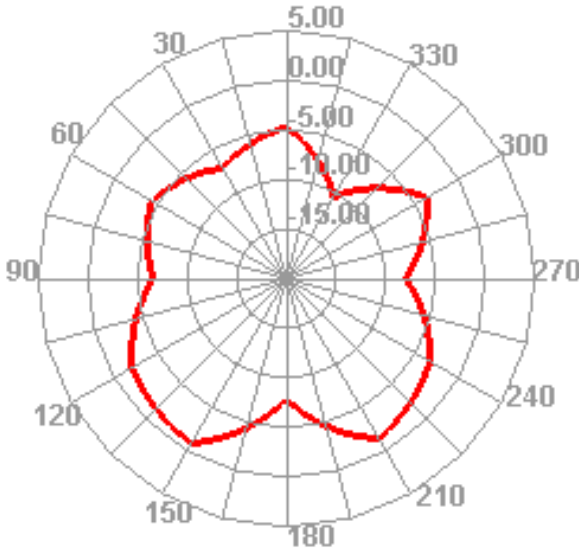
2400.000MHz



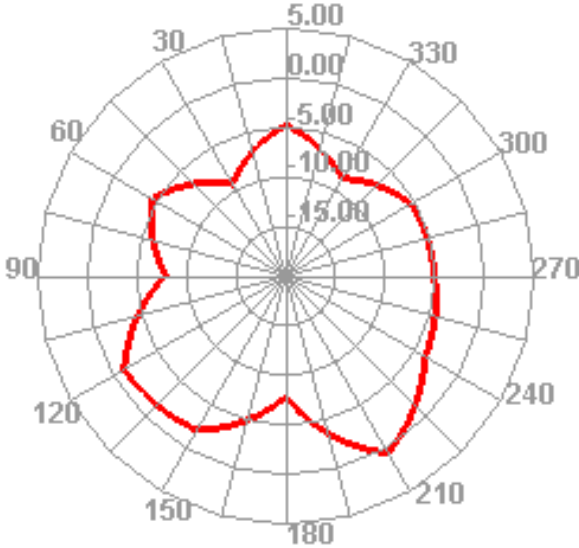
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



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HF☐ RoHS☒ REACH☐ CONFIDENTIAL					<table><tr><td>SIGN</td><td>DATE</td><td>DESCRIPTION</td><td>APPROVER</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>			SIGN	DATE	DESCRIPTION	APPROVER																														
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一代IPEX *50.0±0.5 31.00±0.5 Ø1.13mm Cable Color:黑色																																									
备注: 1. 线材为RG1.13黑色线材，特性阻抗为50 Ω 2. *为重点检验尺寸						信鸿 东莞市信鸿电子有限公司 <table><tr><td colspan="2">TITLE: RG1.13线材</td><td colspan="2">CUSTOMER P/N: /</td></tr><tr><td colspan="2">PART NO.: HX-113B-81-181</td><td colspan="2"></td></tr><tr><td>APP BY</td><td>CHK BY</td><td>RF BY</td><td>DES BY</td></tr><tr><td>City 2025/11/11</td><td>Yixin 2025/11/11</td><td></td><td>XRS 2025/11/11</td></tr><tr><td colspan="2"></td><td colspan="2"></td></tr></table><table><tr><td colspan="2">Standard Tolerance</td></tr><tr><td>X.X ±1.0</td><td>○ 0.02</td></tr><tr><td>X.XX ±0.5</td><td>◎ 0.03</td></tr><tr><td>X° ±1</td><td>▱ 0.05</td></tr><tr><td>UNITS: mm</td><td>// 0.03</td></tr><tr><td>SCALE: 1/1</td><td>⊥ 0.05</td></tr><tr><td>REVISION: A</td><td>≡ 0.05</td></tr></table>		TITLE: RG1.13线材		CUSTOMER P/N: /		PART NO.: HX-113B-81-181				APP BY	CHK BY	RF BY	DES BY	City 2025/11/11	Yixin 2025/11/11		XRS 2025/11/11					Standard Tolerance		X.X ±1.0	○ 0.02	X.XX ±0.5	◎ 0.03	X° ±1	▱ 0.05	UNITS: mm	// 0.03	SCALE: 1/1	⊥ 0.05	REVISION: A	≡ 0.05
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產品包裝規範

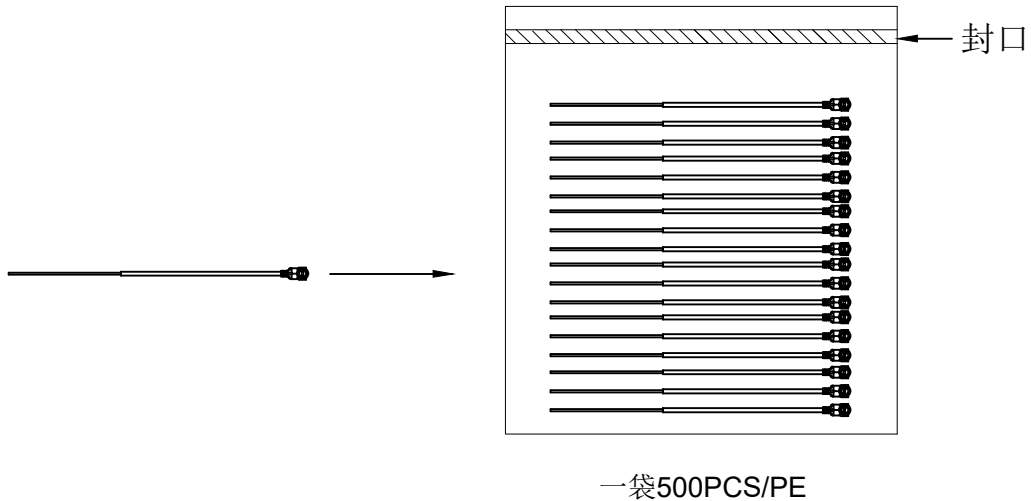
PACKING CRITERION

Date: 2025/11/11

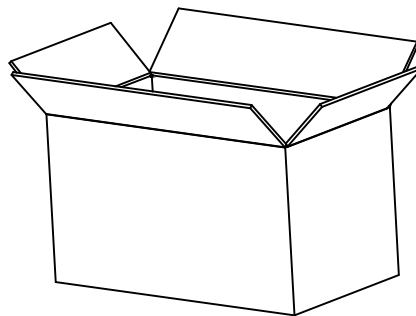
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Part Number : HX-113B-81-181	Revision : A
Name: 2.4G Antenna	Customer :

一. WITH THE ANT INTO THE PE BAG

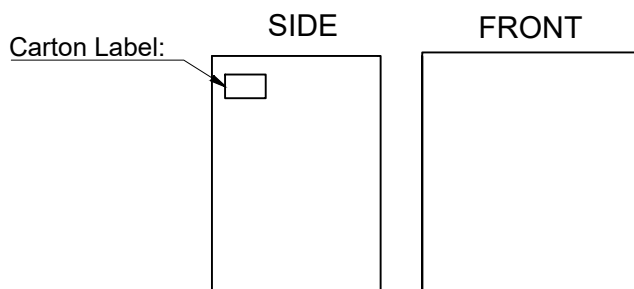
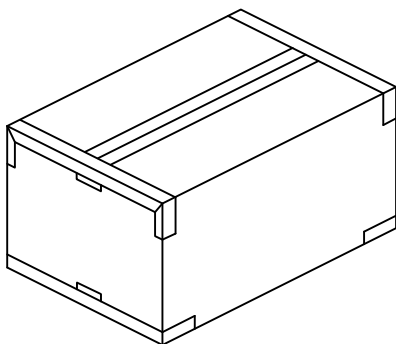


二. PACKING



20000PCS/CARTON
包装数量视客人订单量而定

三. SEALING



APPROVED BY : City

CHECKED BY : Yixin

DESIGNED BY : XRS