



深圳市英佳创电子科技有限公司

<http://www.szsyjc.com>

APPROVAL SHEET

承认书

CUSTOMER NAME 客户名称	涂 鸦 (poor handwriting)	
CUSTOMER P/N 客户料号		
PART NAME 品 名	2.4G/5.8GHz 黑色 FPC 内置天线 (2.4G/5.8GHz Black FPC built-in antenna)	
P/ N 料 号	YJC-6N050-B110	
APPROVAL REV. 版 次	A0	
DELIVERY DATE 送样日期	2024 年 08 月 06 日 (August 06, 2024)	
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APPROVED BY 核 准	肖 汉 (Xiao Han)	
Customer Approved 客 户 承 认		
Prepared By 承 办	Checked By 审 核	Approved By 核 准

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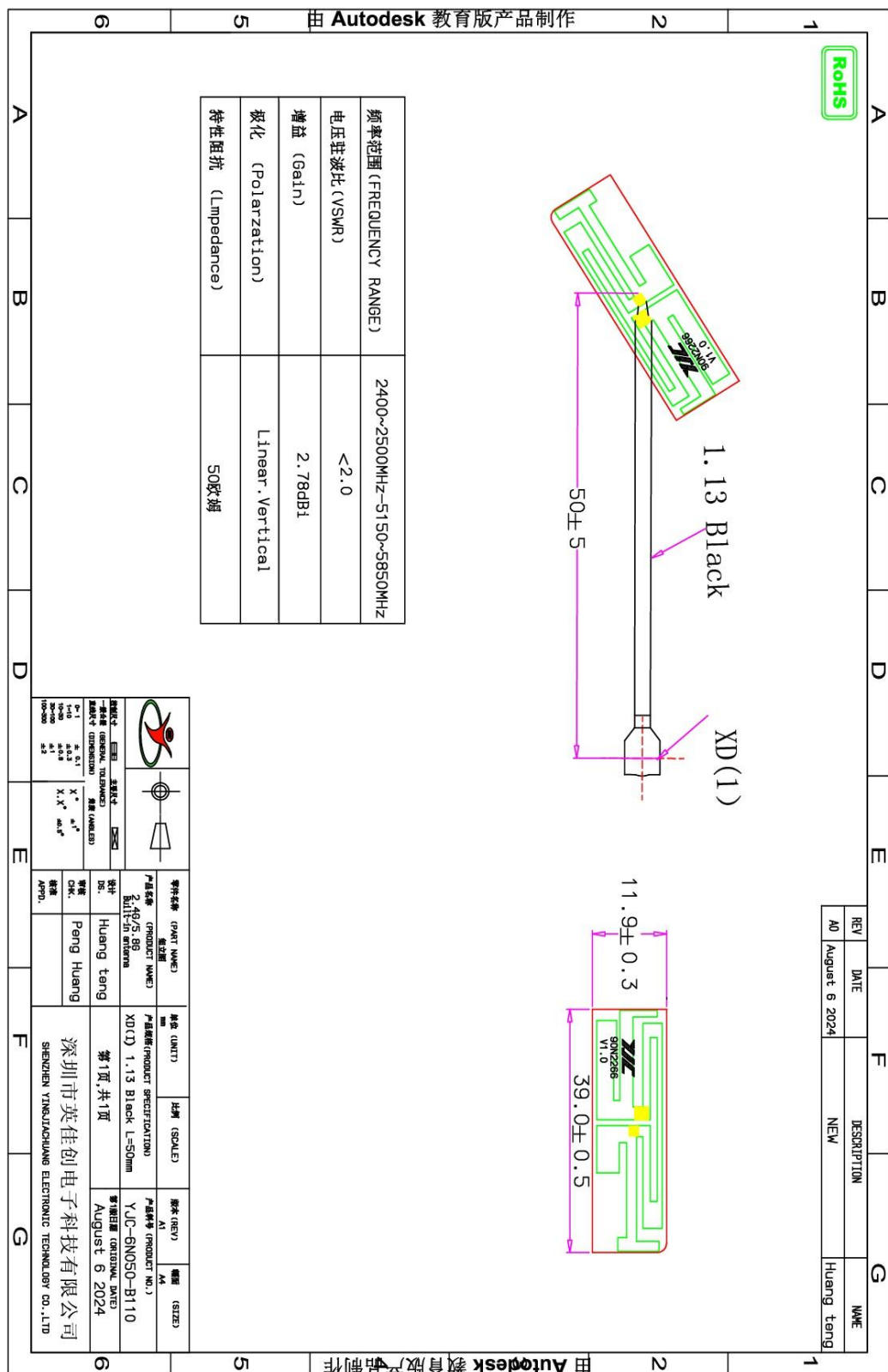
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修订履历表 (Revised resume) :

版本 (version)	变更内容及更改原因 (Change contents and reasons)	日 期 (date)	发 行 (sell wholesale)
A0	初版发行 (NEW)	2025 年 02 月 12 日 (February 12, 2025)	

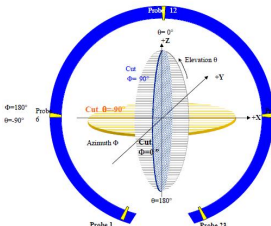
天线平面图 (Antenna plan) :



测试设备（Instrumentation）：

	Test itens	Test equipment
S 参数 (S Parameter)	1. Return Loss（回波损耗） 2.VSWR（电压驻波比）	Network analyzer (Agilent E5071B) (校准日期: 2024 年 10 月 23 日-2025 年 10 月 22 日) (Calibration date: October 23,2024-October 22,2025)
无源测试 (Passive test)	1. Frequency（频率） 2. Gain（增益） 3. Radiation Pattern（辐射图）	1.3Dmicrowave darkroom (5m*4m*4m) 2.Network analyzer (Agilent E5071B) (校准日期: 2024 年 10 月 22 日-2025 年 10 月 21 日) (Calibration date: October 22,2024-October 21,2025)
有源测试 (Active test)	1. TRP 2. TIS	1.3Dmicrowave darkroom (5m*4m*4m) 2.Comprehensive test instrument (CMW500) (校准日期: 2024 年 10 月 20 日-2025 年 10 月 19 日) (Calibration date: October 20,2024-October 19,2025)

无源是通过多探头采集 DUT 球面近场数据，再通过近远场转换公式算出 DUT 的方向图，最后通过方向图上的方向性系数计算出增益及效率（Passive is to collect DUT spherical near-field data through multi-probe, and then the direction map of DUT is calculated by the near-far-field conversion formula. Finally, the gain and efficiency are calculated by the directionality coefficient on the direction map）

暗室坐标(Dark room coordinates)	测试状态(test mode)
	
CMW500	Agilent E5071B
	



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

电气技术参数(Electrical technical parameters)			
电性能指标 (Electrical Specifications)		机械指标 (Mechanical Specifications)	
频率范围 (Frequency Range)	2400-2500/5150-5850MHz	天线颜色 (Antenna Color)	黑色 (Black)
电压驻波比 (VSWR)	<2.0	工作温度 (Working Temperature)	-20℃~+70℃
输入阻抗 (Input Impedance)	50 Ω	工作湿度 (Working Humidity)	20%~80%
方向 (Direction)	全向	增益 (Gain)	2.78dBi

天线性能测试图（Antenna performance test diagram）：



OTA 有源测试数据（OTA active test data）：

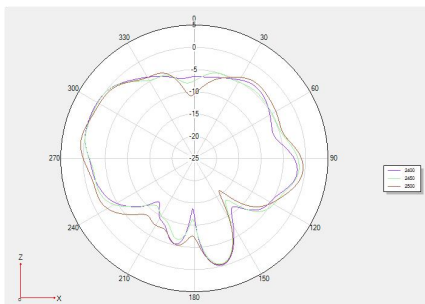
Item	Measurement	Standard	Band	Channel	Total
1	TRP	WIFI (AP)	WIFI_B (11M)	1	19.27
2	TRP	WIFI (AP)	WIFI_B (11M)	6	18.76
3	TRP	WIFI (AP)	WIFI_B (11M)	11	18.08
4	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	1	-81.67
5	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	6	-81.29
6	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	11	-80.52
7	TRP	WIFI (AP)	WIFI_A (6M)	36	18.75
8	TRP	WIFI (AP)	WIFI_A (6M)	165	19.12
9	TIS(EIRP)	WIFI (AP)	WIFI_A (54M)	36	-74.51
10	TIS(EIRP)	WIFI (AP)	WIFI_A (54M)	165	-74.37

2D、3D 测试数据（2D,3D test data）：

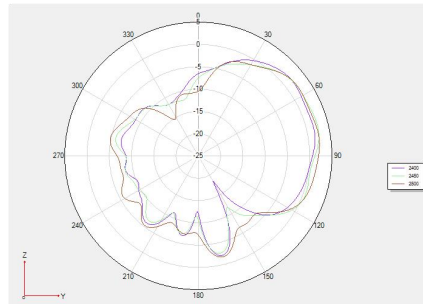
2.4G

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	50.77	2.23
2410MHz	51.97	2.33
2420MHz	52.53	2.73
2430MHz	53.00	2.44
2440MHz	52.32	2.57
2450MHz	53.58	2.72
2460MHz	52.66	2.36
2470MHz	54.88	2.78
2480MHz	53.58	2.66
2490MHz	54.17	2.28
2500MHz	52.77	2.49

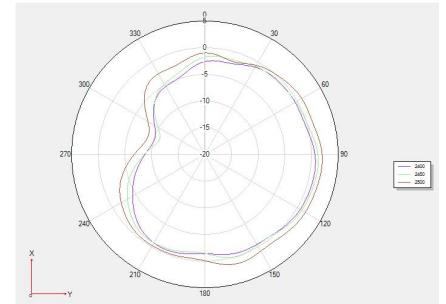
Phi 0 2D 图



Phi 90 2D 图

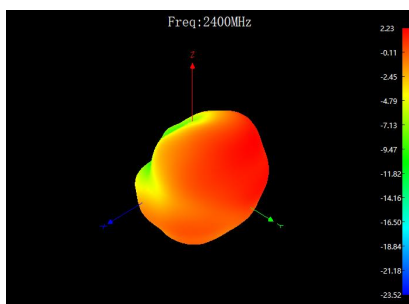


Theta 90 2D 图

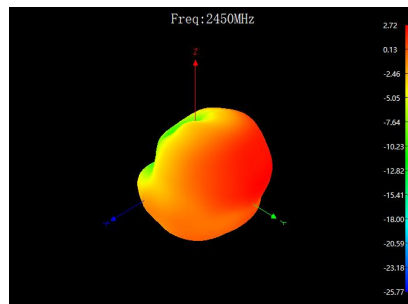


3D 测试数据（3D test data）：

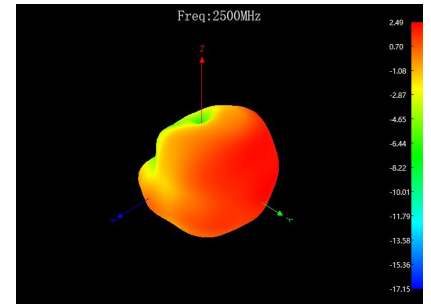
3D 2400MHz



3D 2450MHz



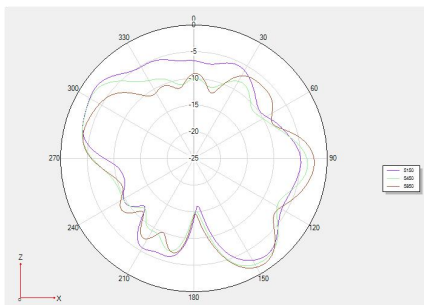
3D 2500MHz



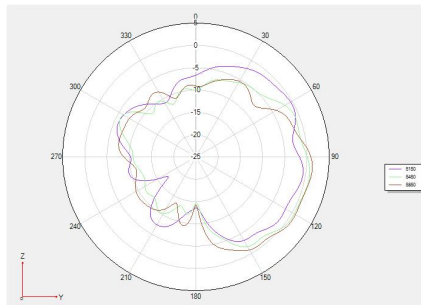
5G

Frequency	Efficiency (%)	Gain. (dBi)
5150Mhz	43.15	1.04
5250Mhz	45.68	1.64
5350Mhz	45.89	1.89
5450Mhz	48.02	2.35
5550Mhz	47.54	2.25
5650Mhz	48.35	2.30
5750Mhz	47.68	2.34
5850Mhz	46.57	2.44

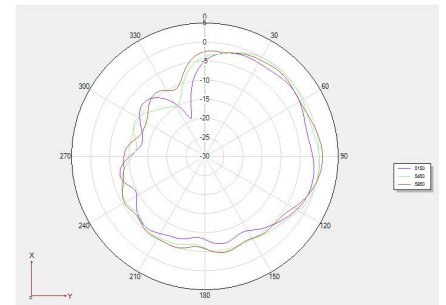
Phi 0 2D 图:



Phi 90 2D 图

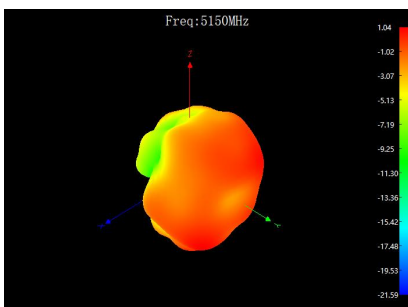


Theta 90 2D 图

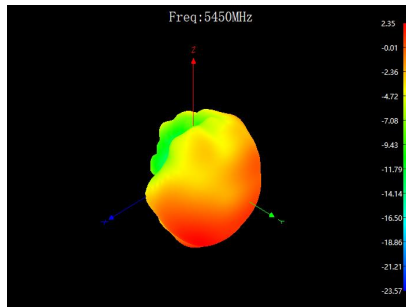


3D 测试数据 (3D test data) :

3D 5150MHz



3D 5450MHz



3D 5850MHz

