



深圳市雨盛通讯电子有限公司

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承认书 APPROVAL

版本: A1

客 户
CUSTOMER:

品 名 规 格
DESCRIPTION: **2.4G-PCB-Antenna-150mm**

料 号
PART NO.: HF-002

客 户 料 号
CUS PART NO.:

日 期
D A T E: 2026-8-19

呈样签章:

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT

客户承认签章 :

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	采 购 PURCHASING DEPARTMENT

※ 客户确认样品附意栏:

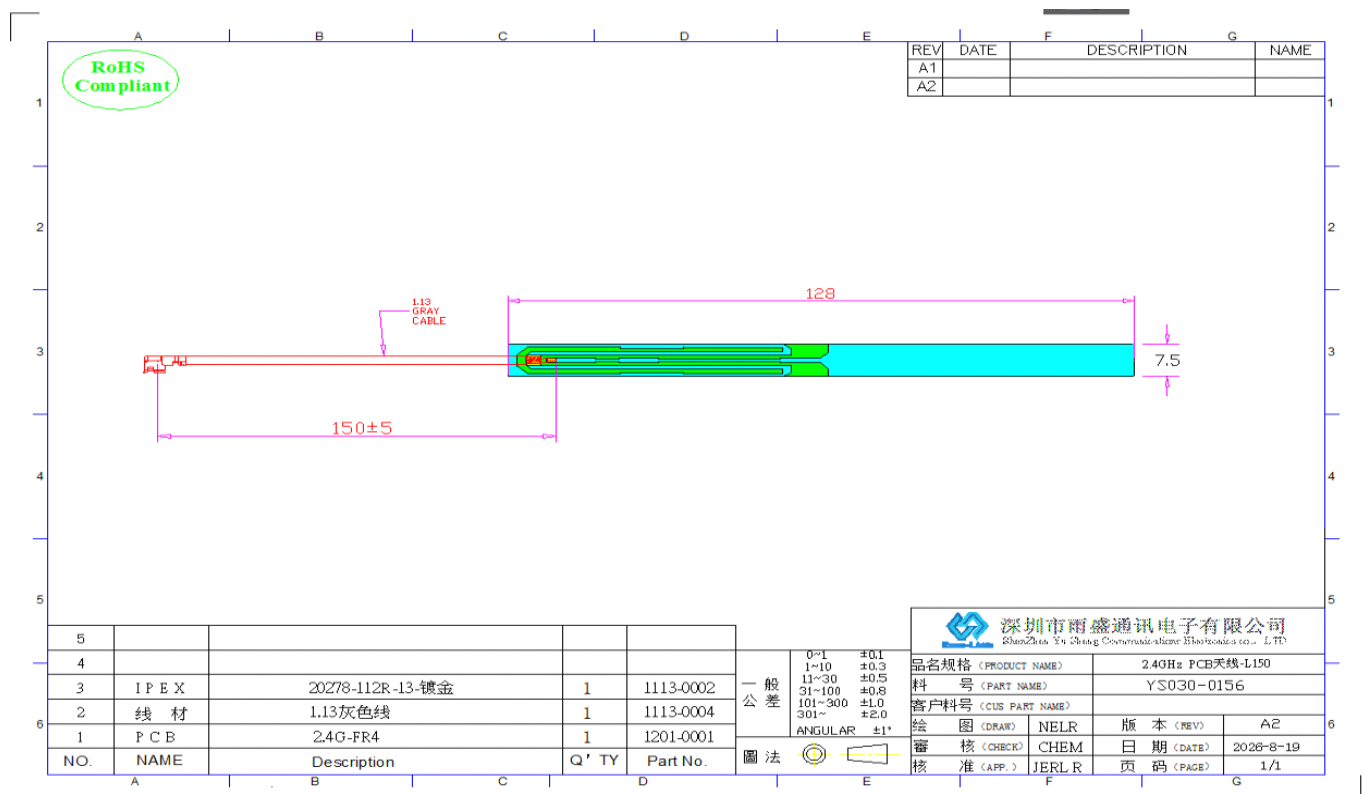
Factory Address: 3-4 floors, No. 102, Daobai Road, Daobai Village, Henggang Town, Longgang District, Shenzhen City



电器技术参数

电 性 能 指 标		Electrical Specifications	
频率范围	2400-2500MHZ	Frequency Range	2400-2500MHZ
电压驻波比	≤2.0	VSWR	≤2.0
增益	3.09DBI	GAIN	3.09DBI
输入阻抗	50 Ω	Input Impedance	50 Ω
机 械 指 标		Mechanical Specifications	
线材颜色	灰色	Cable Color	GRAY
接口形式	IPEX	Input connector	ipex
工作温度	-40℃~+85℃	Working Temperature	-40℃~+85℃
工作湿度	20~80%	Working Humidity	20~80%

规格图纸（Product Specification）：

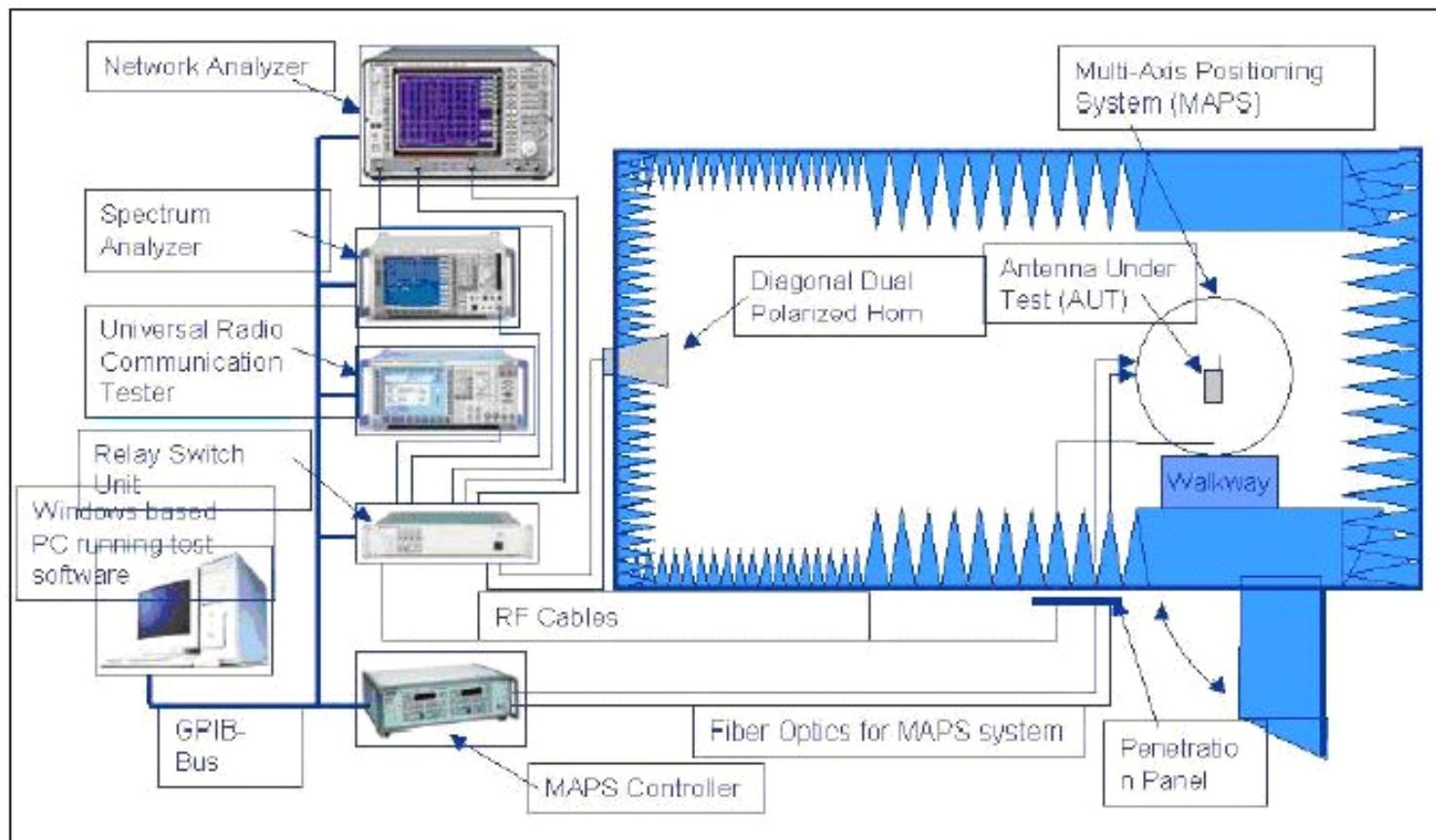




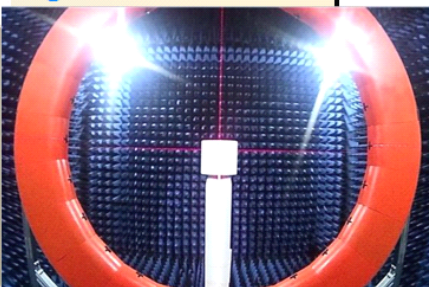
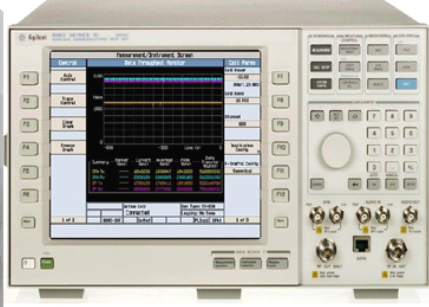
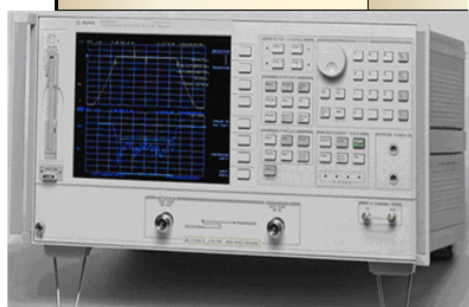
环境性能测试 (Environmental performance test) :

ITEM	TEST CONDITION	TEST RESULT
The storage environment	In the absence of the specified circumstances test temperature, humidity, air pressure is as follows: 1 temperature is -30 °C ~ +80 °C 2 relative humidity for 45%-85% The 3 pressure is 86kpa-106kpa	Electrical and mechanical properties of normal
Thermocycling ;	5 cycles between 70 °C and 40 °C, then under normal conditions 1-2H, appearance quality inspection.	Dimensions should meet the requirements and shall satisfy In the mechanical, electrical properties
Resistance to damp heat Test	Relative humidity is $95 \pm 3\%$, test temperature: 40 °C. Continue after 2H, Test within the product after removing the 5min determination of the electrical properties, in the normal sample Under 1-2H, the appearance of quality inspection	Dimensions should meet the requirements and shall satisfy In the mechanical, electrical properties
vibration test ;	Displacement amplitude of vibration frequency range: 10-55HZ, 0.35MM, the amplitude of acceleration: 50.0M/S, sweep cycle times: 30 times	Electrical and mechanical properties of normal
fall-down test ;	1M high altitude in accordance with the perpendicular axis free fall 3	Electrical and mechanical properties of normal

网分仪器测试图 (Agilent network analyzer test chart):



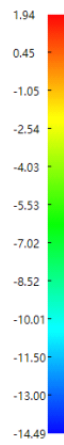
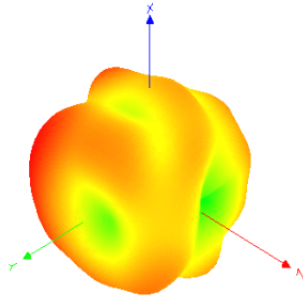
	测试项目	设备
1. S参数	1. 回波损耗 2. 驻波比	网络分析仪: Agilent E5071B
2. 耦合功率测试	1. 发射功率 2. 接收灵敏度	GSM 测试仪: Agilent 8960 E5515C LTE /WIFI/BT测试仪: R&S CMW500
3. 辐射模式与增益	1. 辐射模式 2. 天线增益	1. 暗室: 8x4x4 m (3D) 2. 网络分析仪: Agilent E5071B



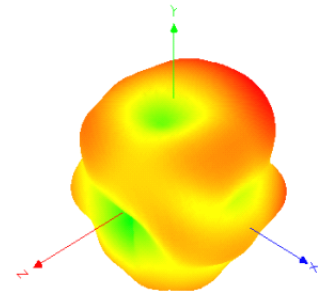
增益测试(GAIN TEST):

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)
1	2400.0	2400.00	1.94	5.87	38.0%	-4.20
2	2410.0	2410.00	1.97	6.17	38.0%	-4.20
3	2420.0	2420.00	2.35	6.47	38.8%	-4.11
4	2430.0	2430.00	2.95	6.73	41.8%	-3.78
5	2440.0	2440.00	2.81	6.71	40.8%	-3.90
6	2450.0	2450.00	1.24	6.72	39.9%	-3.99
7	2460.0	2460.00	2.91	6.80	40.8%	-3.89
8	2470.0	2470.00	3.01	6.78	42.0%	-3.77
9	2480.0	2480.00	2.94	6.63	42.8%	-3.69
10	2490.0	2490.00	3.05	6.76	42.5%	-3.71
11	2500.0	2500.00	0.24	6.78	42.7%	-3.69

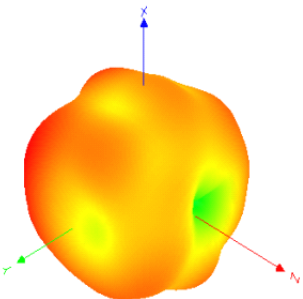
Frequency (MHz) : 2400



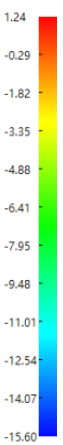
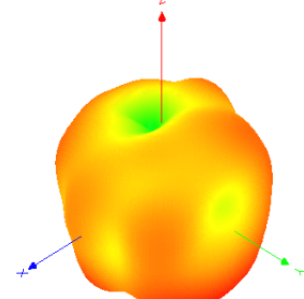
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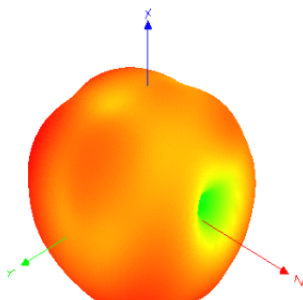
Frequency (MHz) : 2450



Frequency (MHz) : 2450



Frequency (MHz) : 2500



Frequency (MHz) : 2500

