

深圳市红心科技电子有限公司
**Shenzhen Hongxin Technology
Electronics Co., Ltd.**

产品规格书

SPECIFICATION FOR APPROVAL

项目名称 corporate name	
品 名 Product Name	2.4G PCB Antenna
料 号 Part number	HX-PCB24-4908R1-50B1
客户料号 Customer part number	
规 格 Specification	详见规格书 see specification
日 期 Date	2026.10.14 October 14, 2026
制表人 Watchmaker	Gui Yan P

一：主要参数 (Antenna parameter)

Design Specifications	Typical	Units
天线形式 (Antenna configuration)	PCB 天线 (PCB Antenna)	N/A
工作频率 (working Frequency)	2400-2500	MHZ
增益(Gain)	2.85	DBi
天线效率 (Antenna efficiency)	35~80	%
电压驻波比 (VSWR)	≤ 1.9	N/A
极化方式 (Polarization)	垂直极化 (vertical polarization)	N/A
辐射方向 (Radiation pattern)	全向 (all directions)	N/A
馈电阻抗 (impedance)	50	ohm
功率容量 (Power handling)	33	dbm
天线接口 (Interface)	IPEX1	N/A
天线尺寸 (Antenna dimensions)	49*8	mm
重量 (Weight)	/	g
工作温度 (Operating Temp)	-40~+85	°C
储存温度 (Storing Temp)	-40~+85	°C

二：天线实物图（Antenna physical diagram）

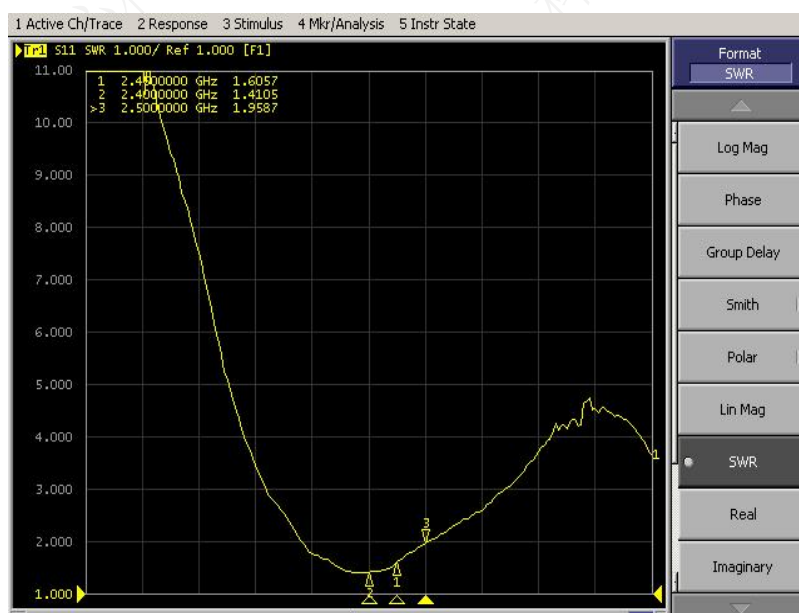


注：1. 天线参数是根据模拟环境测试，针对不同的产品会有性能偏差
2. 天线功能较为敏感，主体周边结构有变更请通知我们评估

Note: 1. Antenna parameters are based on testing in a simulated environment, and performance may vary depending on the specific product.

2. The antenna functionality is quite sensitive, and any changes to the surrounding structure of the main unit should be reported to us for evaluation.

三: VSWR (电压驻波比) /Return Loss (回波损耗) /Smith Chart (史密斯圆图)



参数图数据解读 (Interpretation of parameter chart data) :

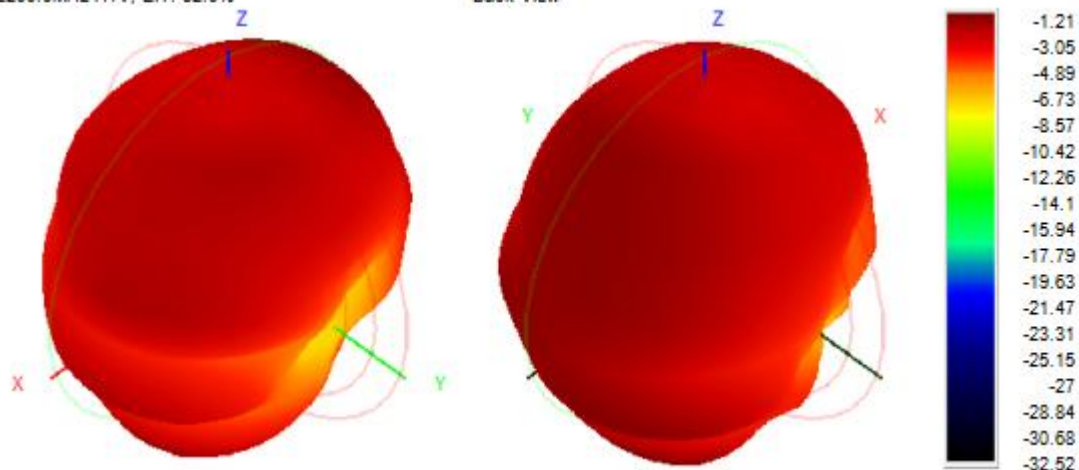
频率 Frequency	2400MHz	2450MHz	2500MHz
VSWR(电压驻波比)	1.6	1.4	1.9

四：增益、效率、辐射方向图 (Gain, efficiency)

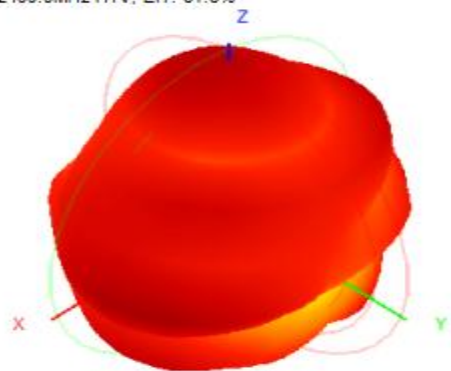
Frequency(MHz)	Efficiency (%)	Max. Gain dBi
2200	31.99	-1.21
2400	61.61	2.85
2410	60.90	2.55
2420	62.50	2.37
2430	62.02	2.11
2440	61.58	2.17
2450	60.44	2.23
2460	60.31	2.28
2470	60.33	2.28
2480	60.39	2.21
2490	62.01	2.36
2500	61.44	2.35

2200.0MHz H+V, Eff: 32.0%

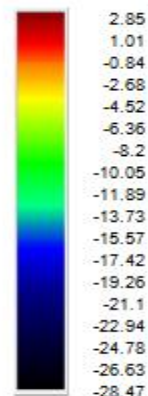
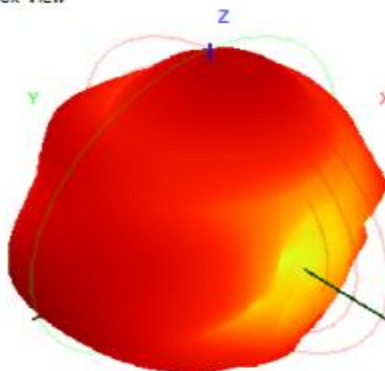
Back View



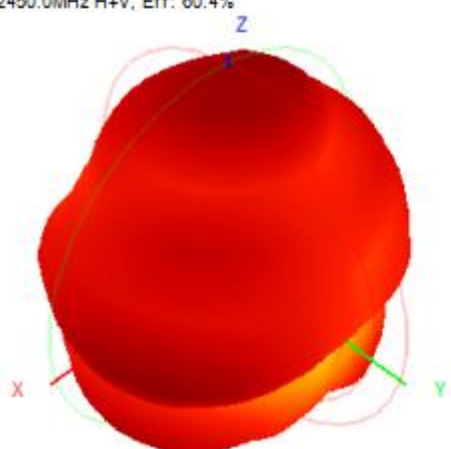
2400.0MHz H+V, Eff: 61.6%



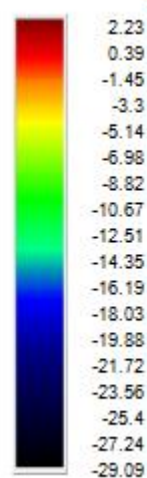
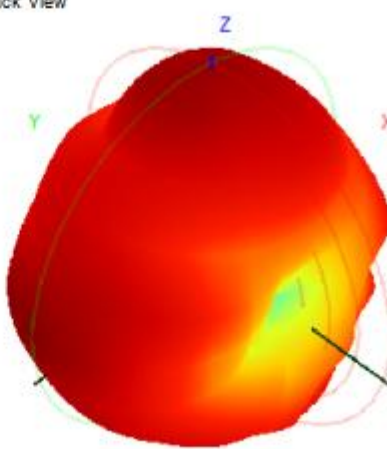
Back View



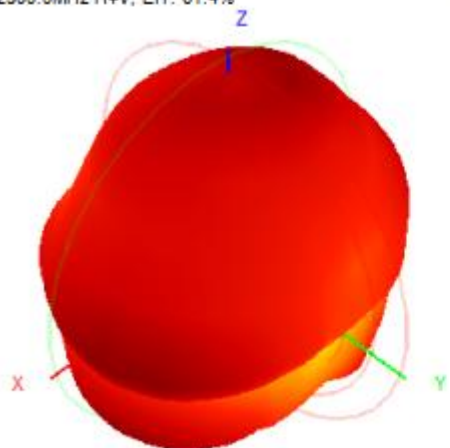
2450.0MHz H+V, Eff: 60.4%



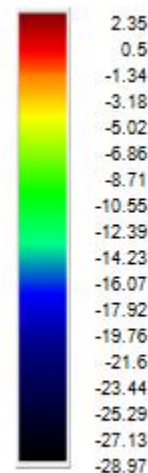
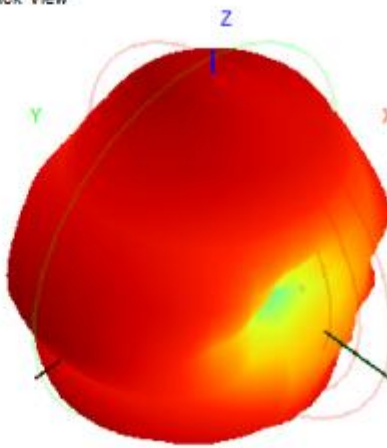
Back View



2500.0MHz H+V, Eff: 61.4%



Back View

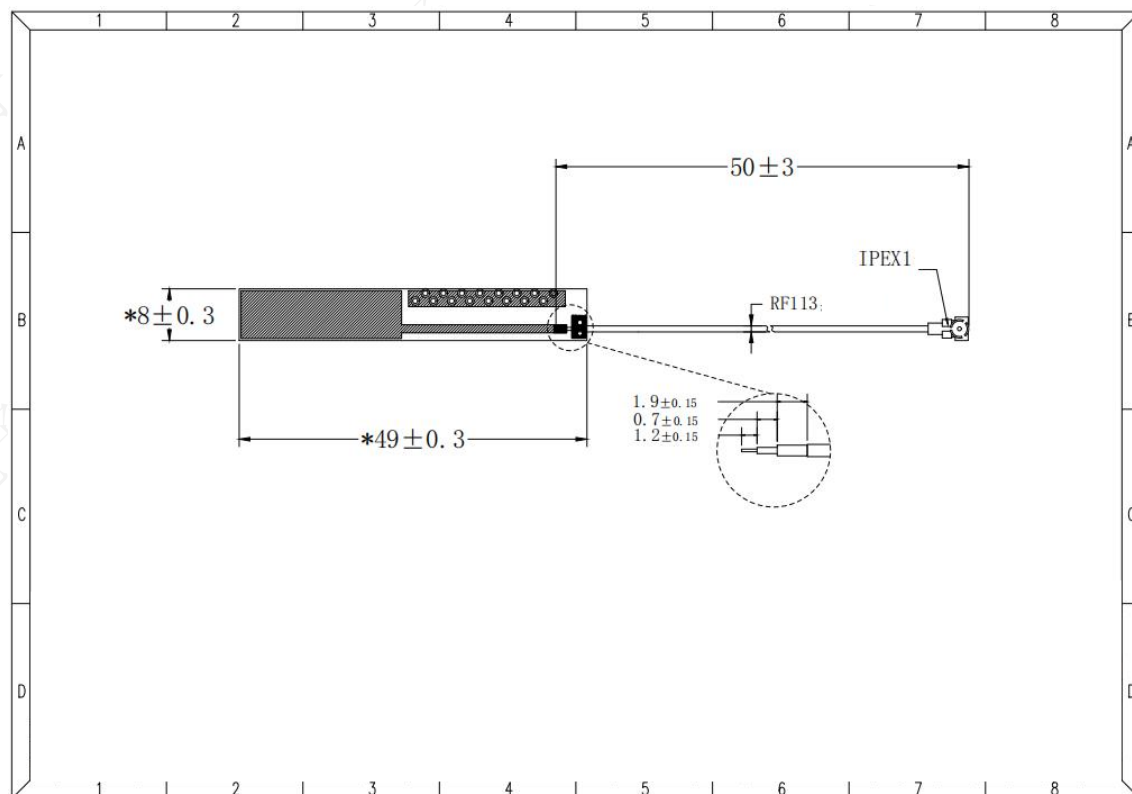


五：贮藏环境 (Storage environment)

工作温度 (Operating temperature) : -40 to +85°C

贮藏温度 (Storage temperature) : -40 to +85°C

六：规格尺寸 (Specifications and dimensions)



七：注意事项 (Precautions)

1. 不要对产品组件施加多大的机械应力，不要试图弯曲或拆解并重新组件产品，因为这样会导致产品组件或零部件受到破坏。
 2. 产品不要直接暴露在明火下。
 3. 本规格书仅适用于 HX-PCB24-4908R1-50B1 产品作为单个单元的功能。
1. Avoid applying excessive mechanical stress to product components. Do not attempt to bend or disassemble and reassemble the product, as this can cause damage.
This can result in damage to product components or parts.
2. The product should not be exposed directly to open flames.
3. This specification applies solely to the functionality of the HX-PCB24-4908R1-50B1 product as a standalone unit.