

承认书

Sampe Approval Drawing

客户			
CUSTOME			
日期	2016. 01. 23		
Date			
产品型号	50mm 双频 FPC 天线		
Product Type			
料号			
Part No			
必联电子承认栏			
工程 ENGINEER	品保 QC	业务 SALES	
客户承认栏			
工程 ENGINEER	品保 QC	生产 MANUFACTORY	采购 PURCHASING

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1. 产品简介 Product introduction

长=50mm FPC 天线是一款软 2.4GHz+5.8G 双频 FPC 天线，此天线应用 dipole 天线原理设计而成，具有较高增益，较高效率，全向性，良好端口匹配等特点。其用于无线终端产品可以有较大的覆盖区域与很好的联通速率。

The =50mm FPC antenna is a soft 2.4ghz +5.8G dual-frequency FPC antenna, which applies Dipole antenna principle

Designed with high gain, high efficiency, omnidirectional, good port matching and other characteristics. It is used for wireless terminals

The product can have large coverage area and very good connection rate.

2. 应用领域 Application field

智能电视机、智能车载 DVD 导航、MID, 网络摄像头, 机顶盒 GPS, 电子书, 硬盘播放器, 网络收音机, PSP 等需要实现无线联网设备

Smart TV, smart car DVD navigation, MID, webcam, GPS set-top box, ebook, hard disk player, Internet radio,PSP and other devices need to achieve wireless networking

3. 主要特性 The main features

- ◆ 符合常规 PCB 天线性能要求实现近全向覆盖；

Nearly omnidirectional coverage meets the performance requirements of conventional PCB antenna;

- ◆ 平均增益较为饱满减少覆盖盲区；

The average gain is relatively full and the coverage blind area is reduced;

- ◆ 端口匹配良好提高了发射接收的效率；

Good matching of the interface improves the efficiency of transmitting and receiving;

4. 常规规格 General specification

一、电气参数 Electrical parameters

频率范围 Frequency range	2.4-5.8GHz
特性阻抗 The characteristic impedance	50 Ω
电压驻波比 Voltage standing wave ratio	≤2:1
增益 gain	5.0dB
功率容量 Power capacity	2W
极化形式 Polarization form	水平 The level of
辐射方向 Radiation direction	全向 omnidirectional

二、机械参数 The mechanical parameters

见线长 See the line length	180MM +IPEX
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同轴电缆 Coaxial cable	1.13 灰线 Gray line
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三、工作/储存温度 Operating/storage temperature

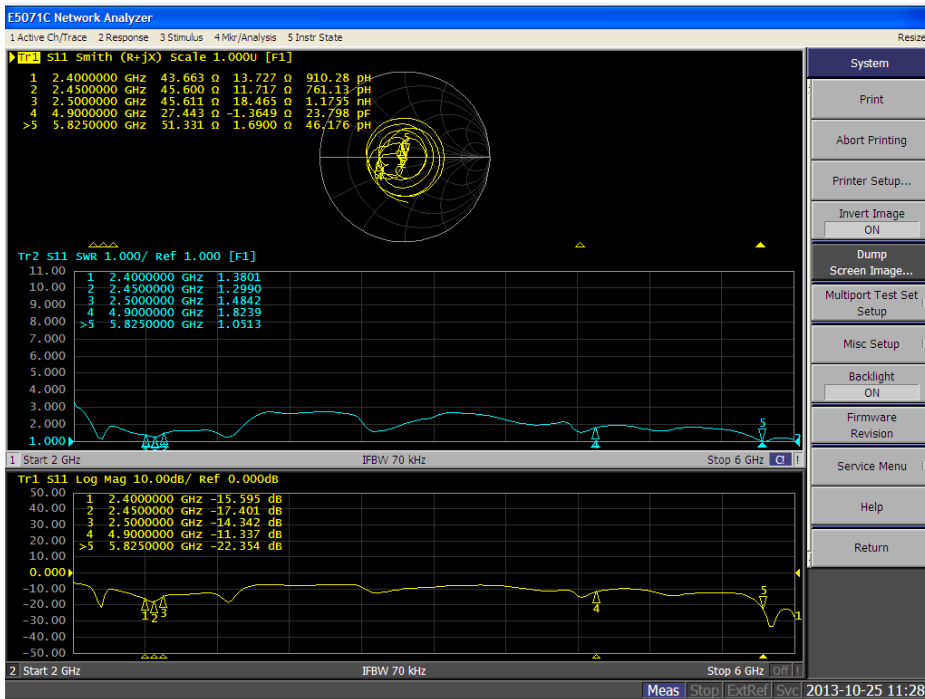
工作温度 Working temperature	-30℃~65℃
储存温度 Storage temperature	-30℃~75℃

四、环境与可靠性实验 Environmental and reliability experiments

项目 project	实验条件 Experimental conditions	性能要求 The performance requirements	试验/测试设备 Test/test equipment
低温储存 Low temperature storage	温度-30℃±2℃/湿度 0% /RH/时间 48H Temperature -30℃±2℃/ humidity 0% /RH/ time 48H	试验后外观及功能测试无影响 The appearance and function tests had no effect after the test	恒温恒湿试验机 Constant temperature and humidity testing machine
高温高湿储存 Storage at high temperature and humidity	温度-70℃,湿度 90~95% /RH 时间 48H Temperature -70 °C , humidity 90~ 95% /RH 48H	试验后外观及功能测试无影响 The appearance and function tests had no effect after the test	恒温恒湿试验机 Constant temperature and humidity testing machine
温度冲击 Temperature shock	产品环境: -35℃放置 2H 转入 80℃放置 2H, 共进行 12 个循环 48H Product environment: place at -35 ° C for 2H and transfer to 80 ° C for 2H, 12 cycles for 48H	试验后外观及功能测试无影响 The appearance and function tests had no effect after the test	冷热冲击试验机 Hot and cold impact testing machine

5、测试数据 The test data

一、回波损耗与驻波比 Return loss to standing wave ratio (2.4G~2.5GHz)

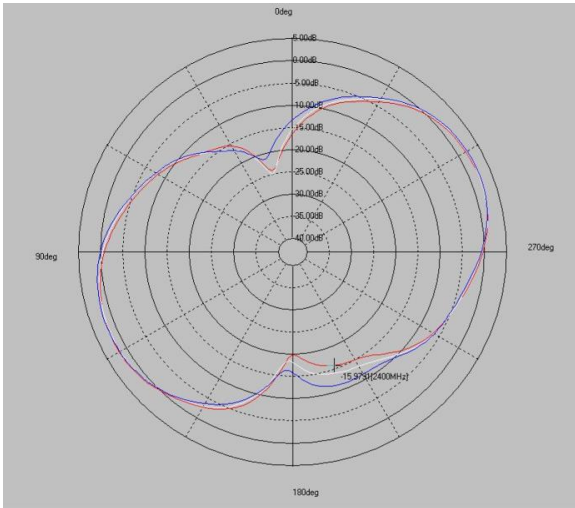


二、效益与增益 Benefits and gains

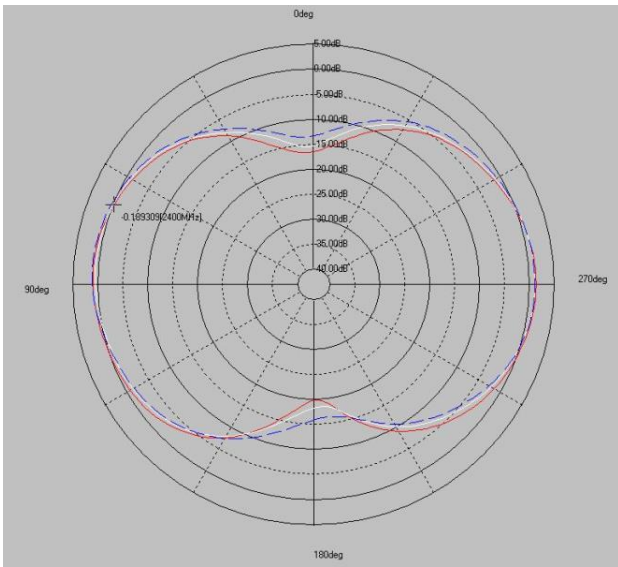
Frequency (MHz)	X-Z plane		Y-Z plane		X-Y plane		E-total (dBi)	Efficiency (%)
	Peak Gain	Average Gain	Peak Gain	Average Gain	Peak Gain	Average Gain		
2400	3.11	-2.54	3.40	-5.05	2.62	2.45	4.65	71%
2450	3.20	-2.21	3.13	-5.19	2.70	2.36	4.85	70%
2500	3.32	-2.91	3.30	-4.88	2.63	2.56	5.00	72%

三、方向图 The direction of figure

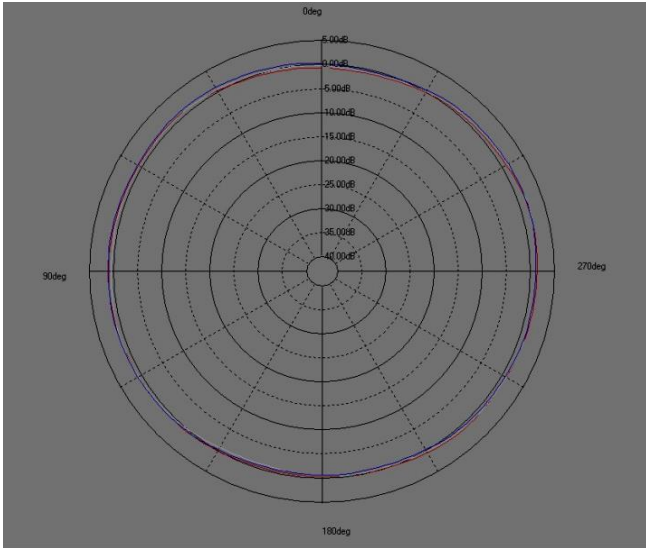
x-z plane



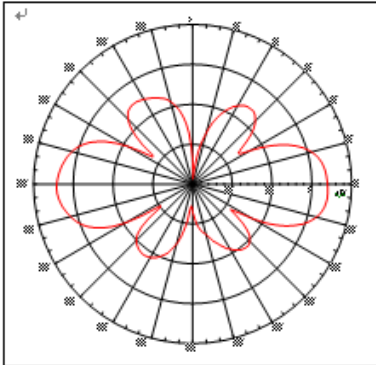
y-z plane



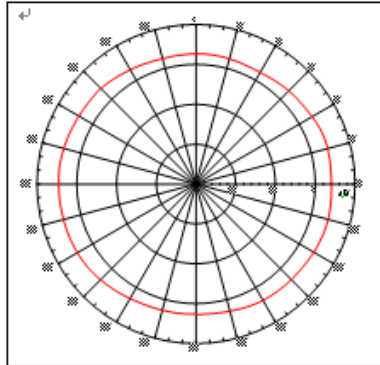
x-y plane



Fa-field amplitude[C1 20.510331-A] SSR-34821_H E-PLANE.mri Fa-field amplitude[C1 20.510331-A] SSR-34821_X H-PLANE.mri

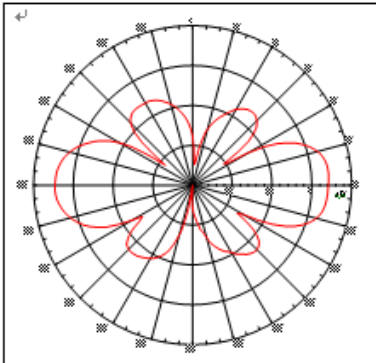


5.15GHz Gain = 4.11803 dBi



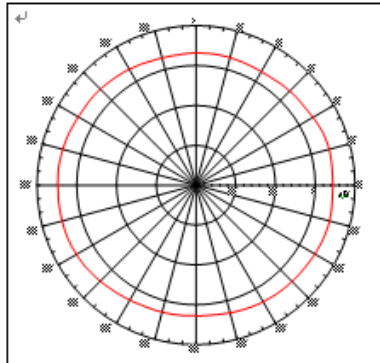
5.15GHz Gain = 4.39372 dBi

Fa-field amplitude[C1 20.510331-A] SSR-34821_H E-PLANE.mri



5.25GHz Gain = 4.6122 dBi

Fa-field amplitude[C1 20.510331-A] SSR-34821_X H-PLANE.mri

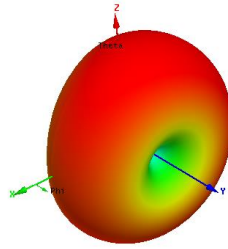
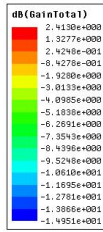


5.25GHz Gain = 4.88733 dBi

6. 产品性能 Product performance

Agilent 网络分析仪 E5071C 9KHz~8.5GHz，测试天线的相关端口参数。

Agilent network analyzer E5071C 9KHz~8.5ghz, test the relevant port parameters of the antenna.



天线远场场型图如上图所示，在电场面 E 面上，天线辐射是全向性的。

The antenna far-field pattern is shown in the figure above. The antenna radiation is omnidirectional on E plane of the electric field.

7. 产品结构图片参考 Product structure picture for reference

