



东莞市仁丰电子科技有限公司

Dongguan RF Electronic Technology Co.,LTD

# 承 认 书

## SPECIFICATION FOR APPROVAL

客 户 名 称

CUSTOMER NAME: 九安光电

产 品 名 称

PRODUCT NAME: 2.4G SMA 天线

客 户 料 号

CUSTOMER P/N:

仁 丰 料 号

Ren Feng P/N: RF21S00165A REV: A

|              | MANUFACTURER<br>SIGNATURE | CUSTOMER<br>SIGNATURE |
|--------------|---------------------------|-----------------------|
| CHECKED BY:  | 吴玉鸣                       |                       |
| AUDITOR BY:  | 牛玉伟                       |                       |
| APPROVED BY: | 姚定军                       |                       |
| DATE:        | 2014-10-20                |                       |



## Contents

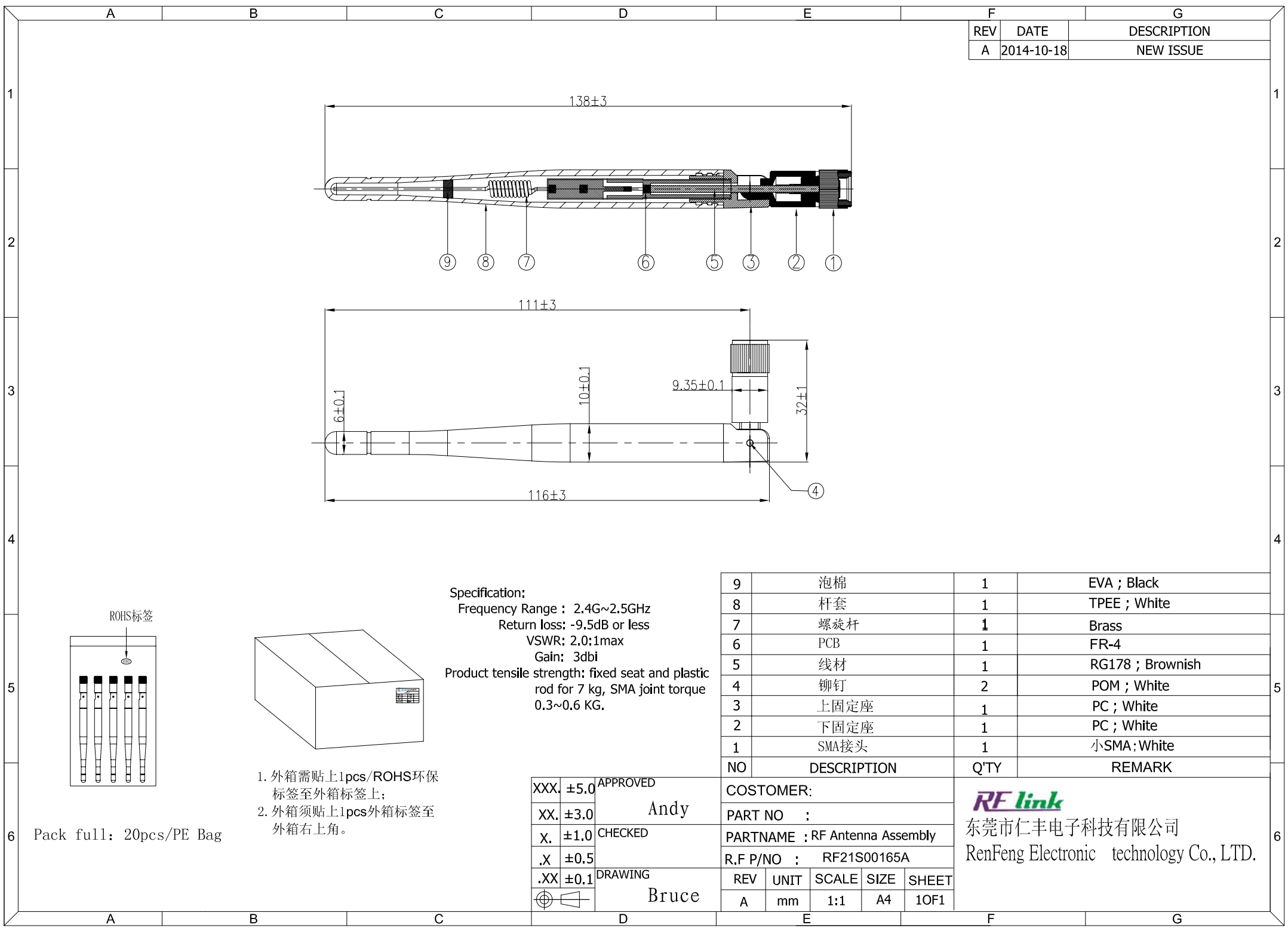
| <i>Item</i> | <i>Description</i> |
|-------------|--------------------|
| 1、-----     | 封面                 |
| 2、-----     | 目录                 |
| 3、-----     | 规格表                |
| 4、-----     | 成品图                |
| 5-6、-----   | 测试报告               |
| 7-16、-----  | 材质证明               |



规格表:

产品主要技术参数

| 主要技术指标                   |                                   | Main technical specifications |                                   |
|--------------------------|-----------------------------------|-------------------------------|-----------------------------------|
| 频率范围<br>(MHZ)            | 2400~2500                         | Frequency Range<br>(MHZ)      | 2400~2500                         |
| 中心频率<br>特性阻抗( $\Omega$ ) | 50 $\pm$ 10                       | Impedance( $\Omega$ )         | 50 $\pm$ 10                       |
| 增益(dBi)                  | 2.01@2.4G                         | Gain(dBi)                     | 2.01@2.4G                         |
| 不圆度(dBi)                 | $\leq$ 3dbi                       | out-of-roundness              | $\leq$ 3dbi                       |
| 反射损耗                     | $\leq$ -10dbi                     | ReTurnLoss(dB)                | $\leq$ -10dbi                     |
| 输出电压<br>驻波比              | $\leq$ 1.34                       | VSWR                          | $\leq$ 1.34                       |
| 最大功率                     | 1W                                | Admitted Power                | 1W                                |
| 极化方式                     | 垂直极化                              | Polarization                  | Linear, Vertical                  |
| 方向性                      | 全向性                               | Radiation                     | Omni-directional                  |
| 连接方式                     | SMA                               | Connector Type                | SMA                               |
| 物理性能                     |                                   | Physical Properties           |                                   |
| 天线本体材料                   | TPEE                              | Antenna Base                  | TPEE                              |
| 工作温度                     | -20 $^{\circ}$ C~+60 $^{\circ}$ C | Operating Temp                | -20 $^{\circ}$ C~+60 $^{\circ}$ C |
| 保存温度                     | -20 $^{\circ}$ C~+70 $^{\circ}$ C | Storage Temp                  | -20 $^{\circ}$ C~+70 $^{\circ}$ C |



| F   |            | G           |
|-----|------------|-------------|
| REV | DATE       | DESCRIPTION |
| A   | 2014-10-18 | NEW ISSUE   |

Specification:  
Frequency Range : 2.4G~2.5GHz  
Return loss: -9.5dB or less  
VSWR: 2.0:1max  
Gain: 3dbi  
Product tensile strength: fixed seat and plastic rod for 7 kg, SMA joint torque 0.3~0.6 KG.

|    |             |      |                  |
|----|-------------|------|------------------|
| 9  | 泡棉          | 1    | EVA ; Black      |
| 8  | 杆套          | 1    | TPEE ; White     |
| 7  | 螺旋杆         | 1    | Brass            |
| 6  | PCB         | 1    | FR-4             |
| 5  | 线材          | 1    | RG178 ; Brownish |
| 4  | 铆钉          | 2    | POM ; White      |
| 3  | 上固定座        | 1    | PC ; White       |
| 2  | 下固定座        | 1    | PC ; White       |
| 1  | SMA接头       | 1    | 小SMA;White       |
| NO | DESCRIPTION | Q'TY | REMARK           |

|      |      |          |
|------|------|----------|
| XXX. | ±5.0 | APPROVED |
| XX.  | ±3.0 | Andy     |
| X.   | ±1.0 | CHECKED  |
| .X   | ±0.5 |          |
| .XX  | ±0.1 | DRAWING  |
| ⊕    |      | Bruce    |

|                                |      |       |      |       |
|--------------------------------|------|-------|------|-------|
| COSTOMER:                      |      |       |      |       |
| PART NO :                      |      |       |      |       |
| PARTNAME : RF Antenna Assembly |      |       |      |       |
| R,F P/NO : RF21S00165A         |      |       |      |       |
| REV                            | UNIT | SCALE | SIZE | SHEET |
| A                              | mm   | 1:1   | A4   | 10F1  |

**RF link**  
东莞市仁丰电子科技有限公司  
RenFeng Electronic technology Co., LTD.

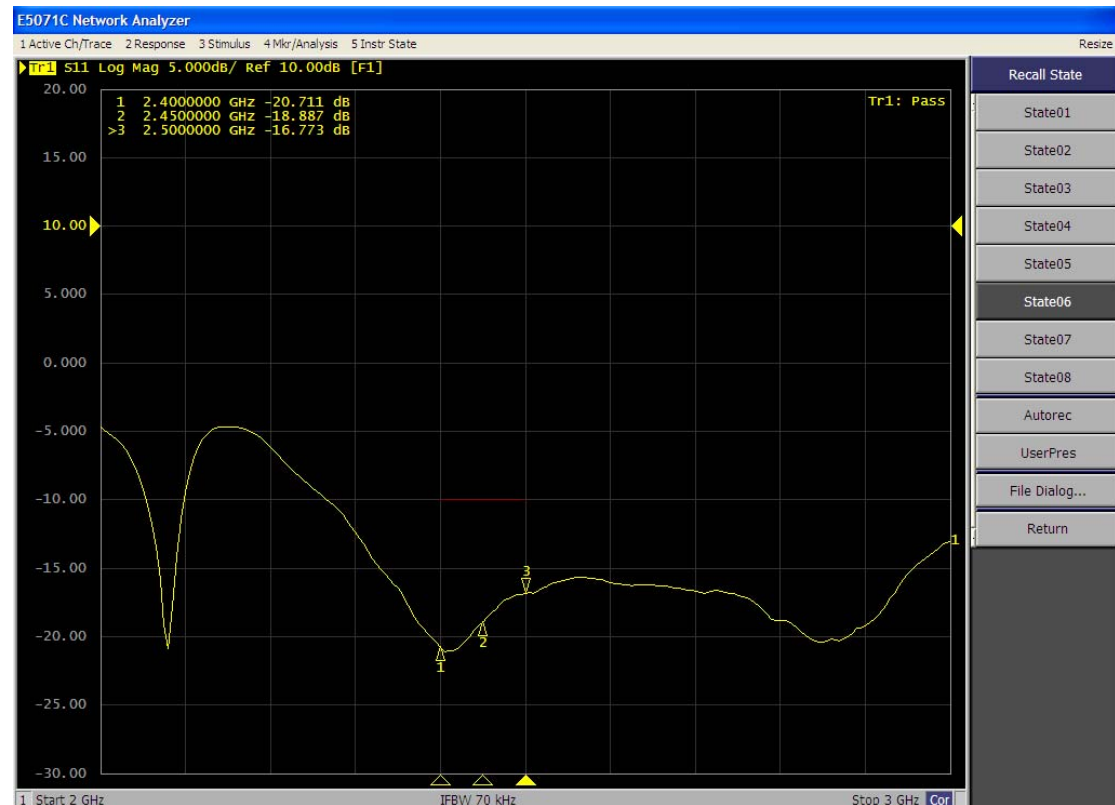
1. 外箱需贴上1pcs/ROHS环保标签至外箱标签上;  
2. 外箱须贴上1pcs外箱标签至外箱右上角。

Pack full: 20pcs/PE Bag

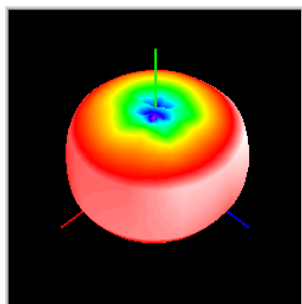
#### 产品主要技术参数

#### 测试报告:

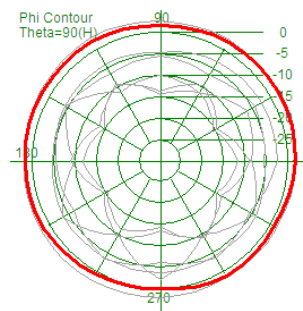
#### 网络分析仪测试报告:



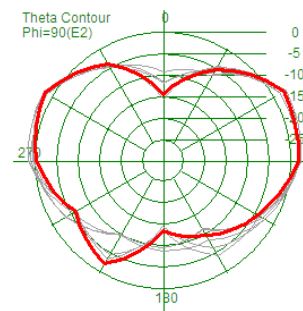
#### 暗室 2D、3DRadiation Pattern



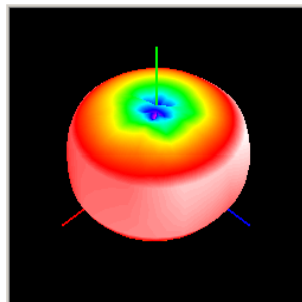
2.4 GHz z



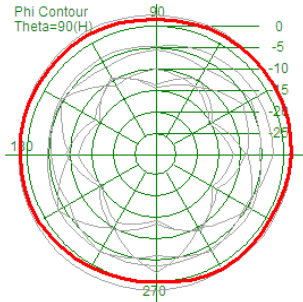
Gain(Peak): 2.01 dBi



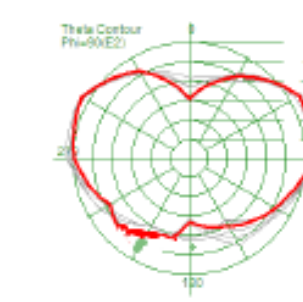
Efficiency: 85.6%



2.45 GHz z



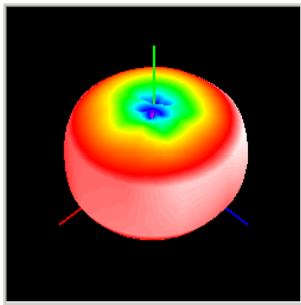
Gain(Peak): 1.36 dBi



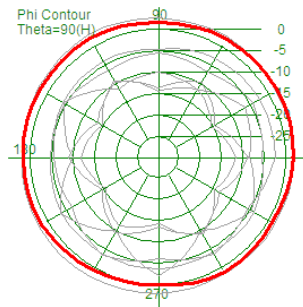
Efficiency: 88.4%

地址: 东莞市塘厦镇科苑城沙苑一路 3 号 BC 栋 3 楼  
传真: 0769--38940199

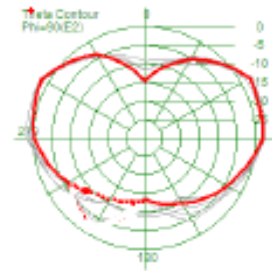
电话: 0769--38940168  
网址: [www.rflink.net.cn](http://www.rflink.net.cn)



2.5GHz z



Gain (Peak): 0.61 dBi



Efficiency: 83.1%