

# Realtek Semiconductor (Shenzhen) Co., LTD

## Product Specifications for Approval

客户名称customer name:

天线频段Antenna band: 2400-2500MHz 5150-5850MHz

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结构construction:	<u>郭曦 Xi. Guo</u>	编辑compile:	<u>郭曦Xi. Guo</u>
审核Check:	<u>顾志飞Zhifei. Gu</u>	批准approve:	<u>杨智Zhi. Yang</u>
<b>制造商manufacturer</b>			
名称Name:	<u>瑞昱半导体(深圳)有限公司</u> <u>Realtek Semiconductor (Shenzhen) Co., LTD</u>		
地址Address:	<u>广东省深圳市南山区粤海街道高新南七道7号深圳市数字技术园A3栋3层</u> <u>3rd Floor, Building A3, Shenzhen Digital Technology Park, No. 7, Gaoxin</u> <u>South 7th Road, Yuehai Street, Nanshan District, Shenzhen, Guangdong</u>		

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## 修改记录amendant record

版本version	日期 date	工程师engineer	修改内容 Note
01	2022-05-09	郭曦	

# 产品特性规格表

## Product characteristic specification sheet

### 一、产品基本特性Basic product characteristics:

产品名称 Name: 天线 Antenna	
DESCRIPTION	VALUE
Frequency range (工作频段)	2400-2500MHz 5150-5850MHz
Impedance (特性阻抗)	50 Ω
V.S.W.R (电压驻波比)	对比波形
Gain (增益)	2.42dBi Max
Radiation (方向性)	Omni-directional
Polarization (线化方式)	linear Vertical
Admitted power (功率)	1W
Connector (接头型号)	IPEX CONN
Operating temp (工作温度)	-10°C~+70°C
Storage temp (储存温度)	-10°C~+60°C

## 1. Summary 概要:

This report to account for the measurement setup and result of the Antenna. The measurement setup includes s-parameter, The measured data for Antenna are presented and analysis.

这份报告用以说明量测的天线的结果，该测量设置包括 S 参数的 电压驻波比及反射系数，为量测天线的数据表示及分析

## 2. S-Parameter Measurement S 参数的量测:

### A. Reflection coefficient 反射系数:

(a) Instrument (仪器): Network Analyzer (网络分析仪).

### (b) Setup 建立:

(1) Calibrate the Network Analyzer by one port calibration using O.S.L. calibration kits.

仪器的校正通过 OSL 校准套件进行一个端口的校正.

(2) Connect the antenna under test to the Network Analyzer.

连接待测天线至网络分析仪.

(3) Measure the S11(reflection coefficient) shown in Fig. 1.

测量 S11 如图一所示.

(4) Generally, the S11 is less than  $-10\text{dB}$  to ensure the 90% VSWR 2.0:1 power into antenna and only less than 10% power back to system.

一般来说, S11 小于  $-10\text{dB}$  VSWR 小于 2.0: 1, 以确保 90% 的功率转换成天线和只有不到 10% 的功率反射回系统.

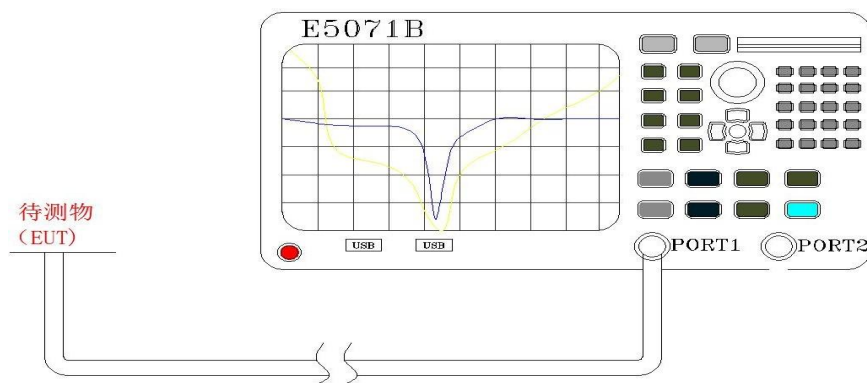


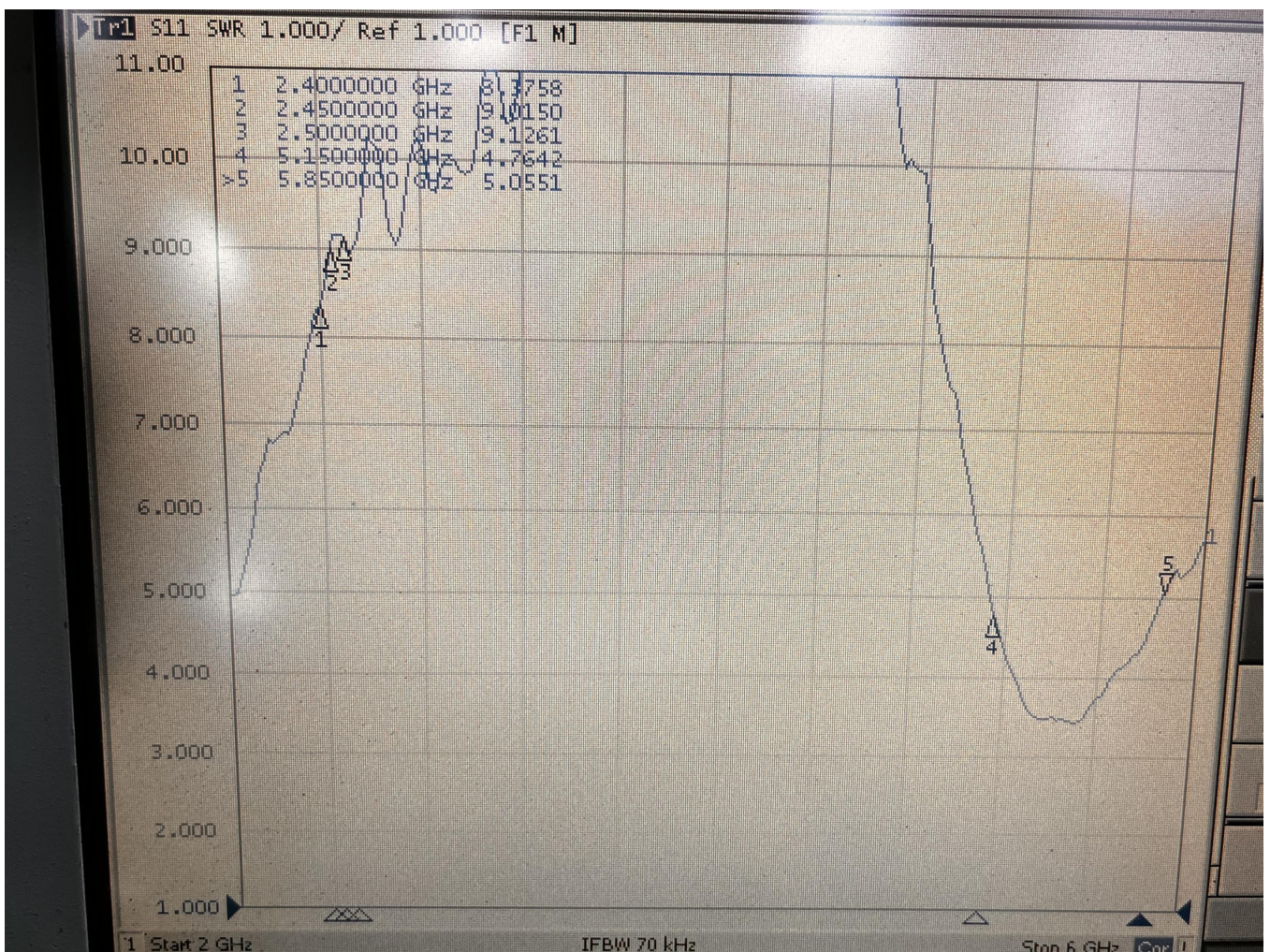
Fig.1 Antenna measured in Network Analyzer 图 1 天线测量网络分析仪

### 3. S-Parameter Measurement Result S 参数的量测结果:

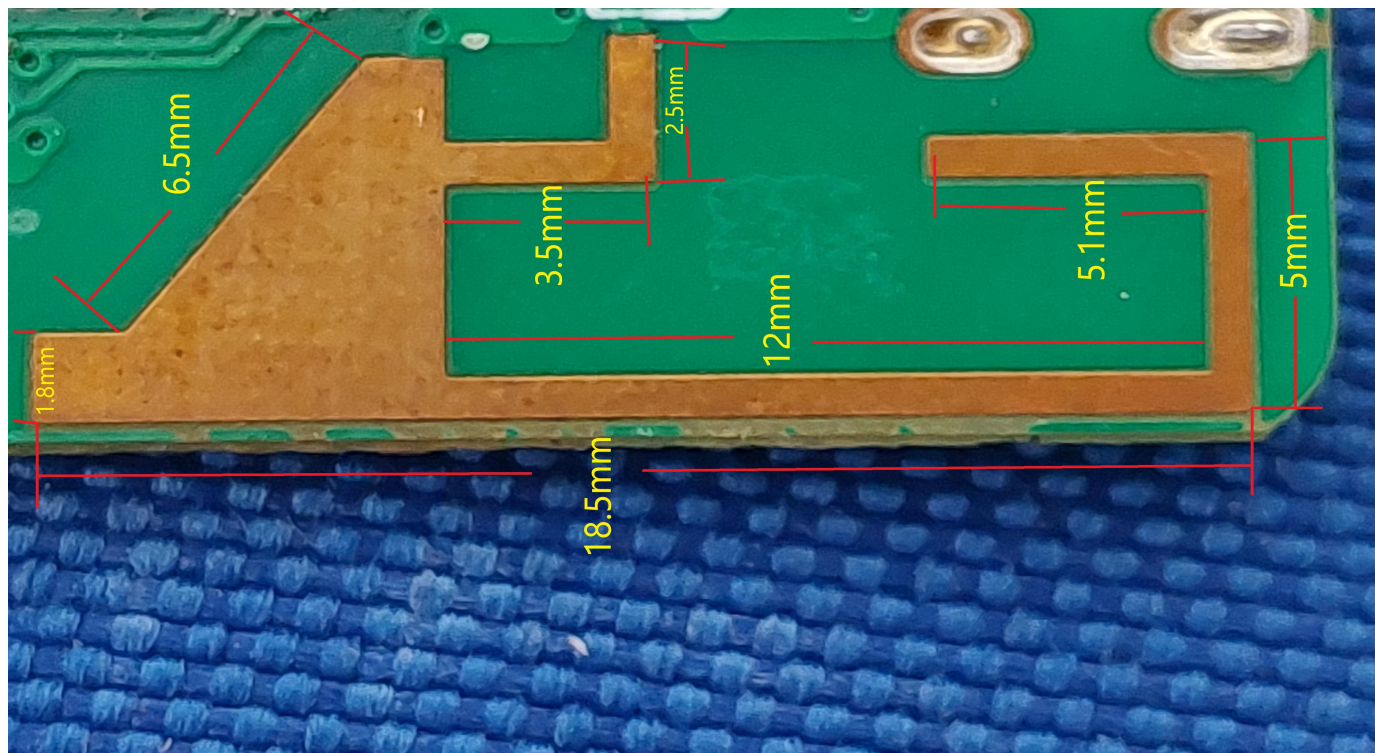
S-Parameter test data S-参数量测数据:

Frequency MHz 工作频段	2400	2450	2500	5150	5850
V.S.W.R 驻波比	8.37	9.01	9.12	4.76	5.05

S-Parameter test image S-参数量测图片:



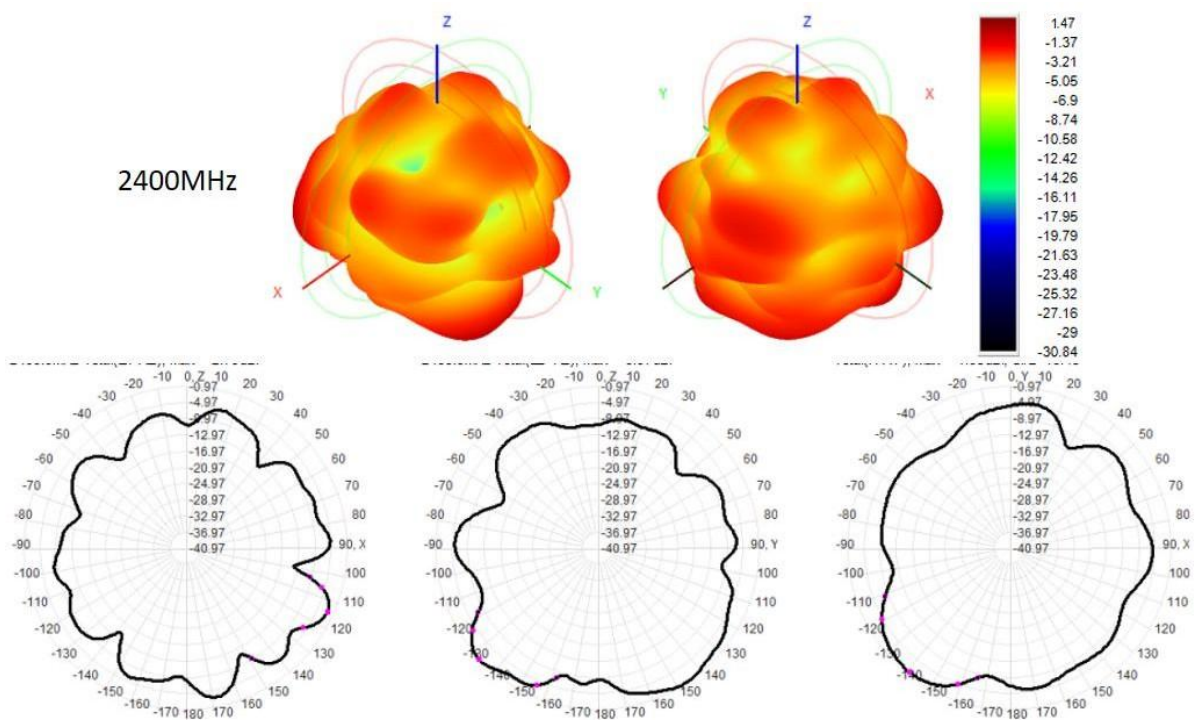
# 天线图片



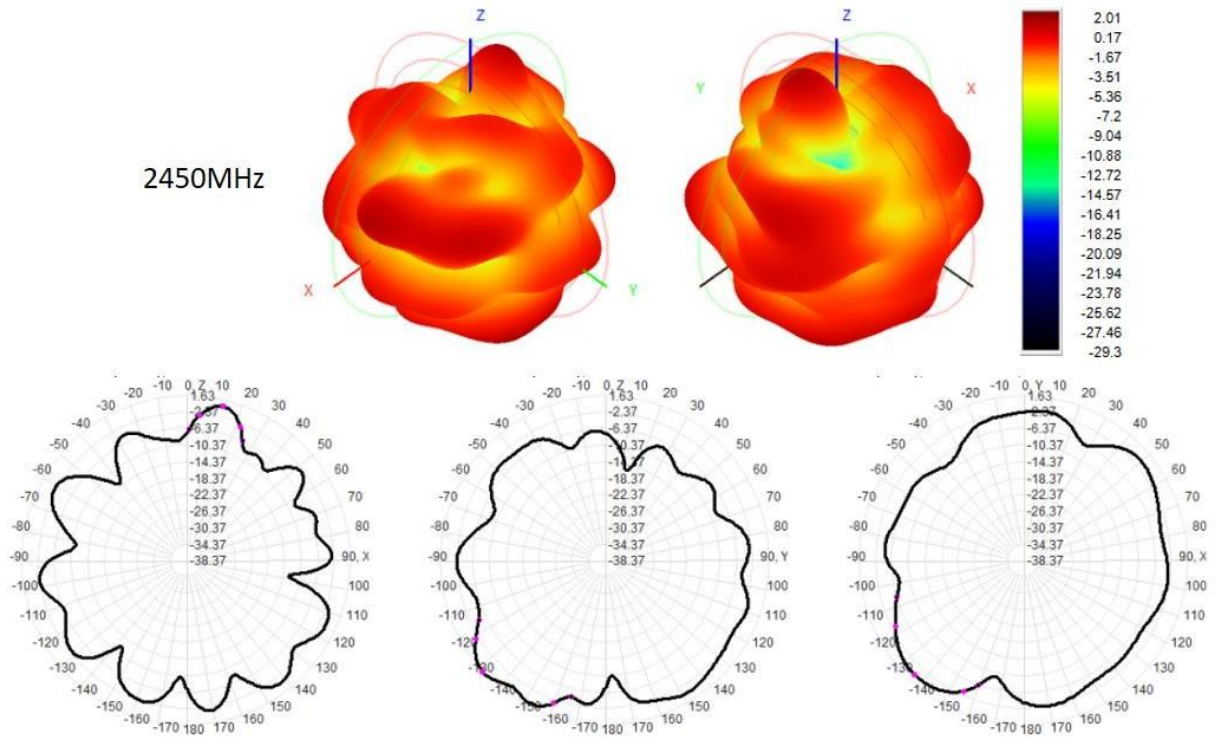
## 无源数据

Frequency (MHz) (工作频段)	Efficiency (%) (效率)	Peak GAIN (dBi) (增益)
2400	30.42	1.47
2450	43.37	2.01
2500	41.53	2.24
5150	41.68	2.42
5850	45.71	2.21

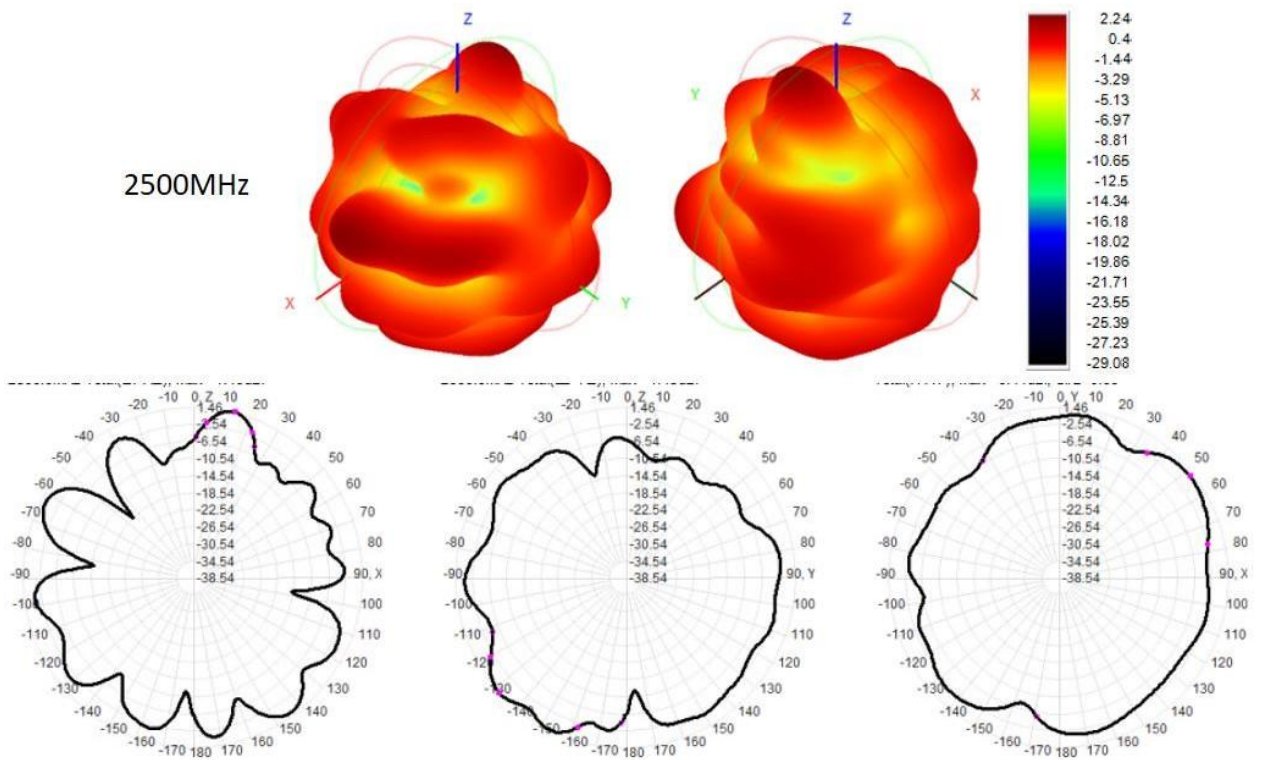
## 2D/3D 图



2450MHz

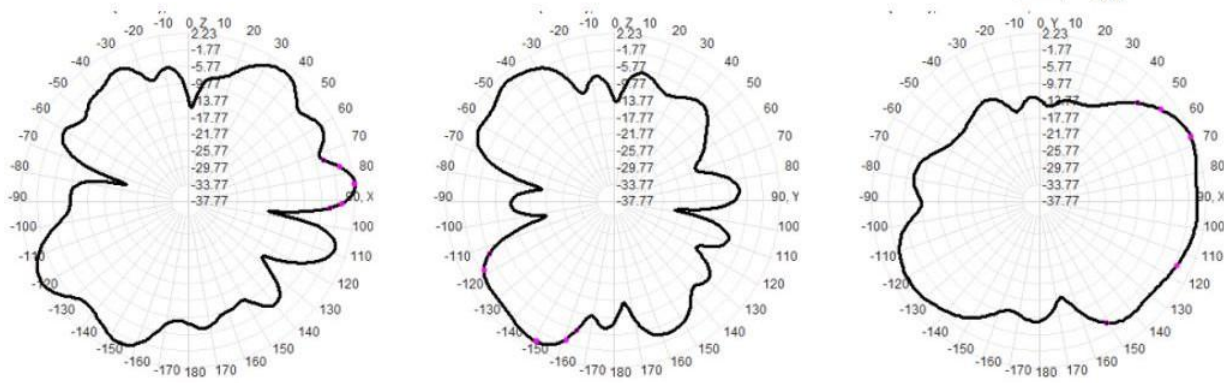
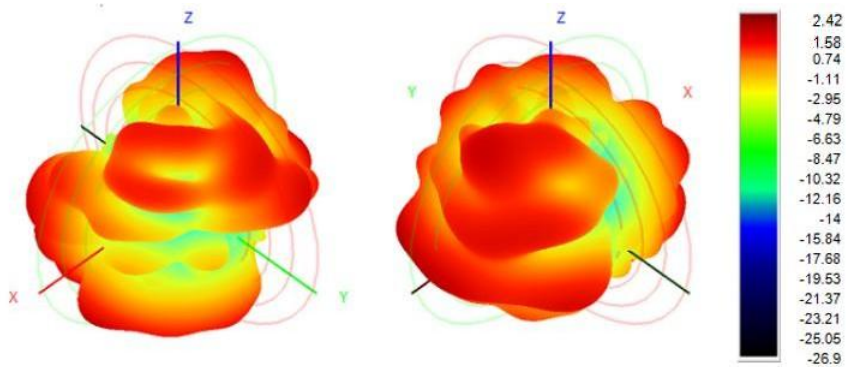


2500MHz





5150MHz



5850MHz

