



WIFI 天线承认书

Acknowledgement of WIFI Antenna

客户/项目 Customer/Project		WIFI Antenna		频段 Frequency Band		WIFI	
SCT P/N		RQAC-0401-41-A		版本 Version			
日期 Date		2020.05.25					
检查 Checked by	RF		设计 Design by	RF			
	ME			ME			
				备注 Remark			
Customer							
Date							
Confirmed by	RF						
	ME						
Remark		PIFA Antenna					



1 简介 Introduction

这份承认书主要介绍了 WIFI 天线的电气性能。天线频段 WIFI(2.4GHz,5GHz).

This Acknowledgement summarizes the electrical performance results of the proposed antenna to support the WIFI antenna project. The antenna covers the band WIFI(2.4GHz,5GHz), .



2 电气性能 Electrical Performance

2.1 电气规格 Specification

天线无源性能 Antenna Passive Performance

天线频段 Antenna Band		WIFI	
1	频率 Frequency	2.4GHz	5G
2	回波损耗 S11	<5dB	
3	阻抗 Impedance	50ohm	
4	效率(AVG)	35%	40%
5	极化 Polarization	Linear	

天线结构及环境特性 Antenna Mechanical and Environment Performance

1	天线尺寸 Antenna Size	见工程图纸
2	工作温度 Working Temperature	-40℃~+85℃
3	存储温度 Storage Temperature	-55℃~+85℃

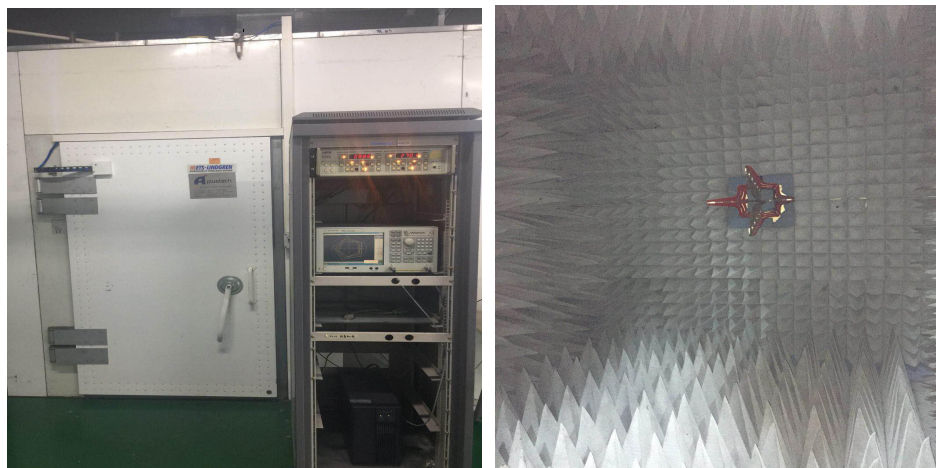
2.2 测试设备 Test Set-up

天线反射系数和驻波测试使用安捷伦的 E5071C 矢量网络分析仪。

The return loss and VSWR were measured with Agilent E5071C.

天线效率和辐射增益测试使用 ETS 远场暗室测试。

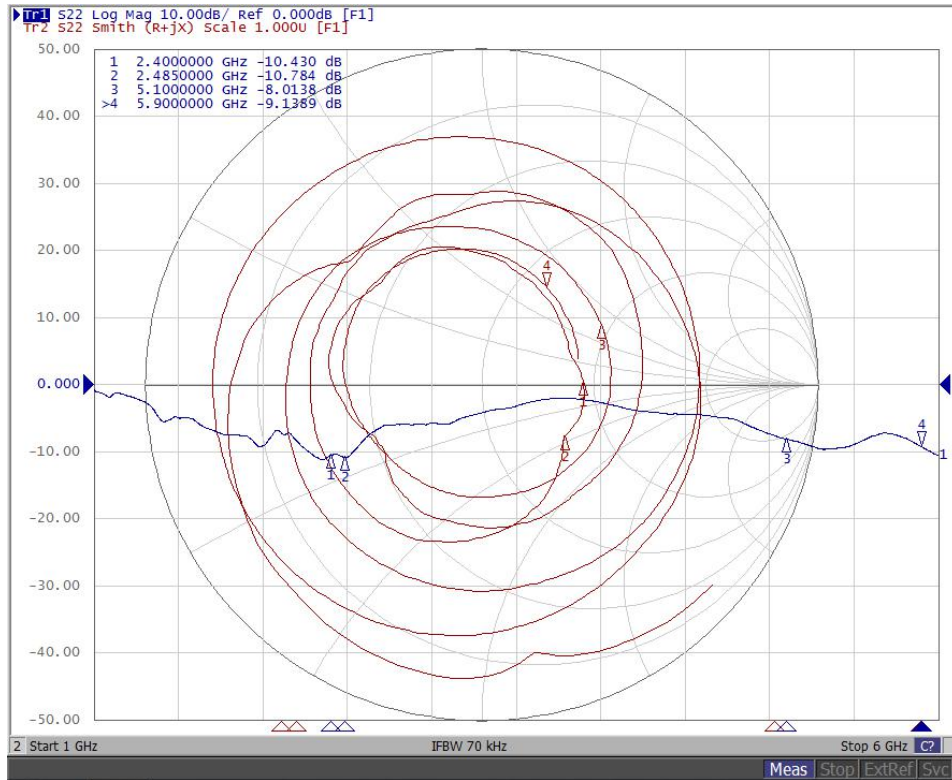
The efficiency and gain were measured in ETS Chamber lab in picture2.



ETS 暗室及测试系统

Figure 2: ETS chamber and measurement system

2.3 回波损耗，史密斯圆图 Return Loss, Smith Chart



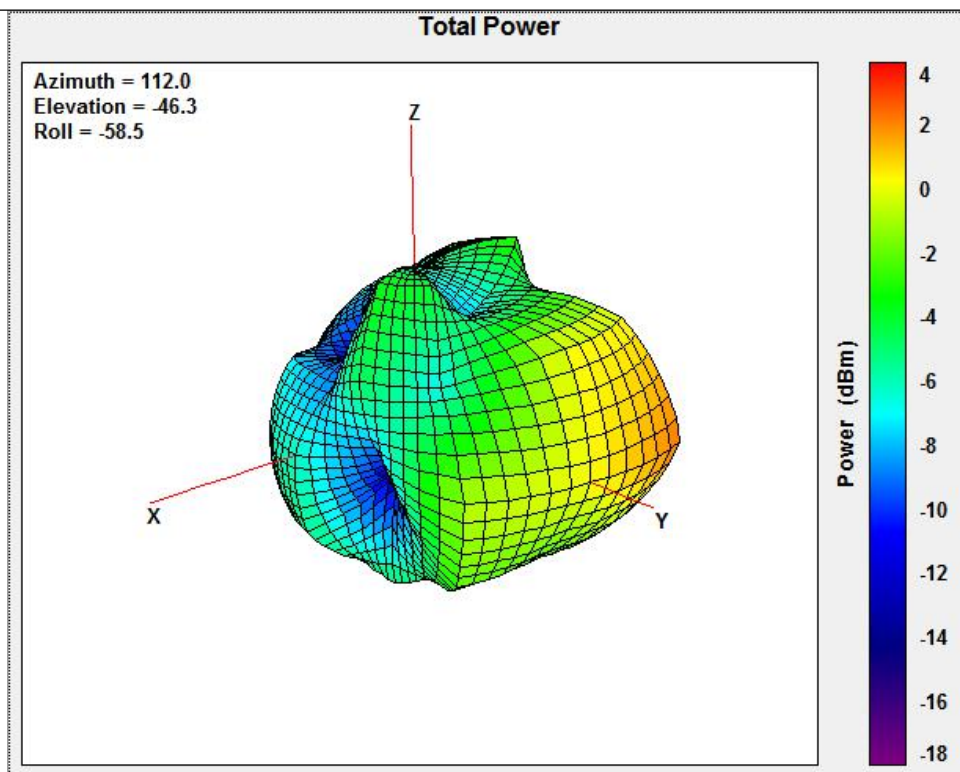
WiFi 天线回波损耗和 Smith 圆



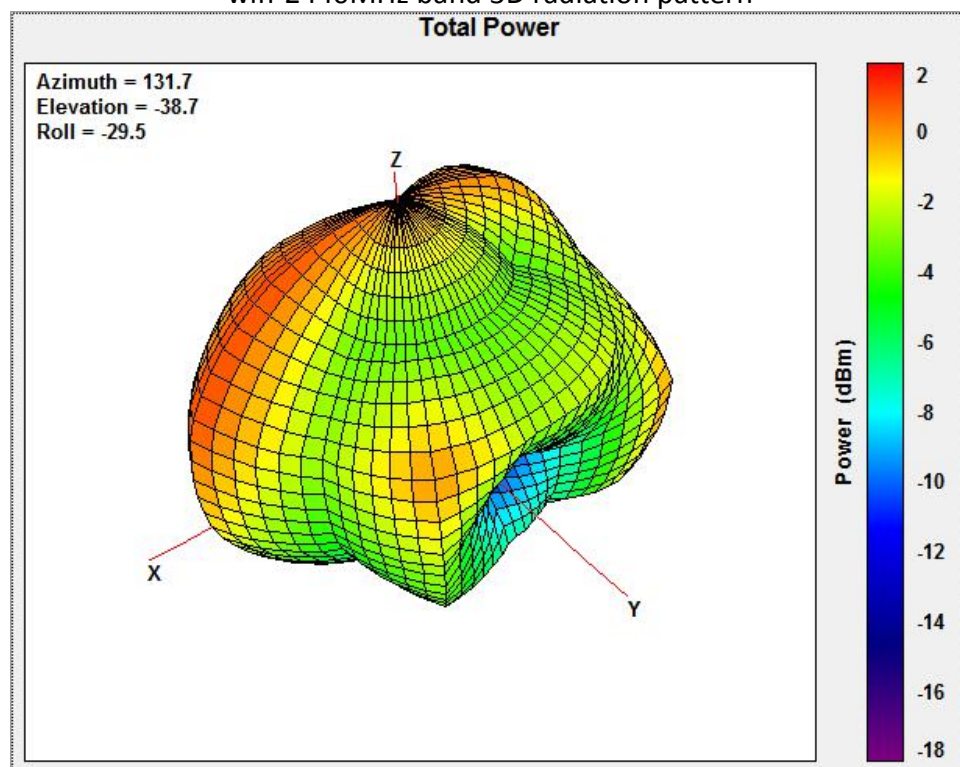
2.4 效率及增益 Efficiency and Gain

频率 Frequency(MHz)	增益 Gain(dB)	效率 Efficiency (%)	频率 Frequency(MHz)	增益 Gain(dB)	效率 Efficiency (%)
2400	-4.48	35.68	5100	-4.24	37.67
2410	-4.46	35.78	5150	-4.25	37.59
2420	-4.55	35.06	5200	-4.46	35.84
2430	-4.54	35.15	5250	-4.13	38.68
2440	-4.52	35.35	5300	-3.59	43.75
2450	-4.46	35.81	5350	-3.89	40.83
2460	-4.49	35.60	5400	-3.54	44.29
2470	-4.26	37.50	5450	-3.5	44.67
2480	-3.63	43.37	5500	-3.42	45.52
2490	-4.48	35.62	5550	-3.1	48.98
2500	-4.30	37.18	5600	-3.59	43.75
			5650	-3.84	41.27
			5700	-3.42	45.52
			5750	-3.85	41.19
			5800	-3.82	41.49
			5850	-4.09	38.97
			5900	-4.01	39.75

2.5 天线辐射方向图 Antenna Radiation Pattern



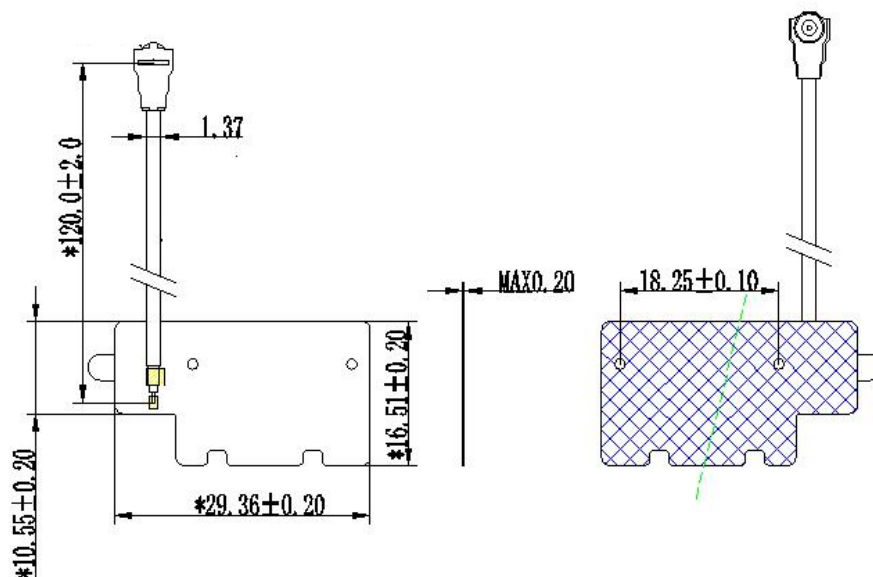
wifi-2440MHz 频点的 3D 辐射方向图
wifi-2440MHz band 3D radiation pattern



wifi-2440MHz 频点的 3D 辐射方向图
wifi-2440MHz band 3D radiation pattern

3 工程图纸 Mechanical Drawing (Unit: mm)

WIFI



RQAC-0401-41-A

±0.2mm