

# Antenna Specification for 2.4G Wi-Fi

# 1. Antenna Characteristic Specification

This specification describes the physical characteristics and electrical performance of the following 2.4 G Wi-Fi antenna.

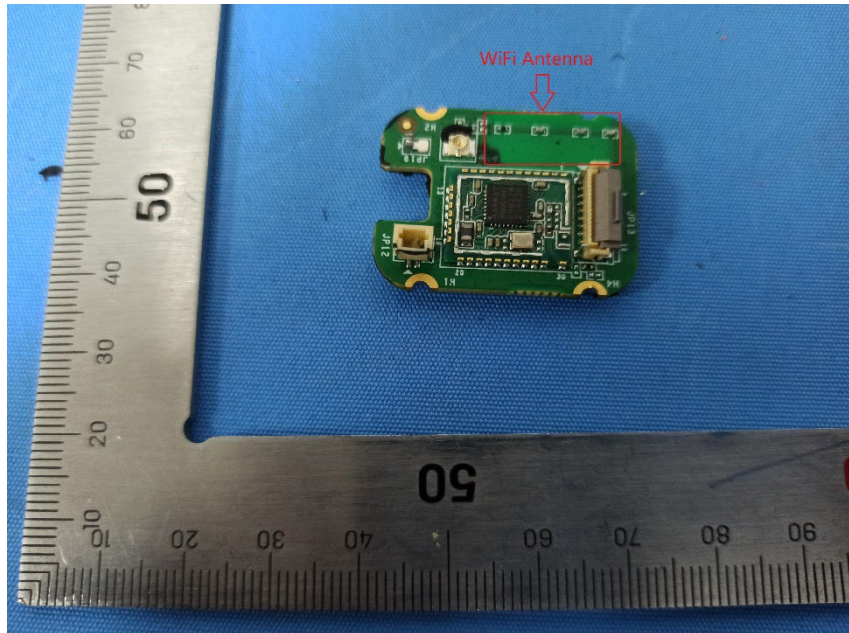


Figure 1. Antenna Actual Effect Picture

## 1.1 Antenna Structure

The antenna is mainly composed of on-board wiring on the PCB.

## 1.2 Antenna Technical Parameters and Interface

Design Specifications	Typical	Units
天线类型(Antenna Type)	PCB	\
工作频率 (Frequency)	2400-2500	MHz
增益 (Gain)	-3.5@2400MHz -3.85@2450MHz -2.16@2500MHz	dBi
天线平均效率 (Antenna efficiency)	11	%
电压驻波比 (VSWR)	<3	\
极化方式(Polarization)	Linear Polarization	\

轴比(Axial Ratio)	\	\
辐射方向(Radiation pattern)	Omnibearing	\
输入阻抗(impedance)	50	ohm
功率容量(Power handling)	33	dBm
天线接口(Interface)	\	\
天线尺寸(Overall dimensions)	5mm*15mm	\
重量(Weight)	\	\
工作温度(Operatin Temp)	-30° -70°	\
储存温度(Storing Temp)	-30° -70°	\

## 2. Antenna Test Conditions

### 2.1 Test Equipment

Antenna Vector Network Analyzer ROHDE&SCHWARZ ZNB 20

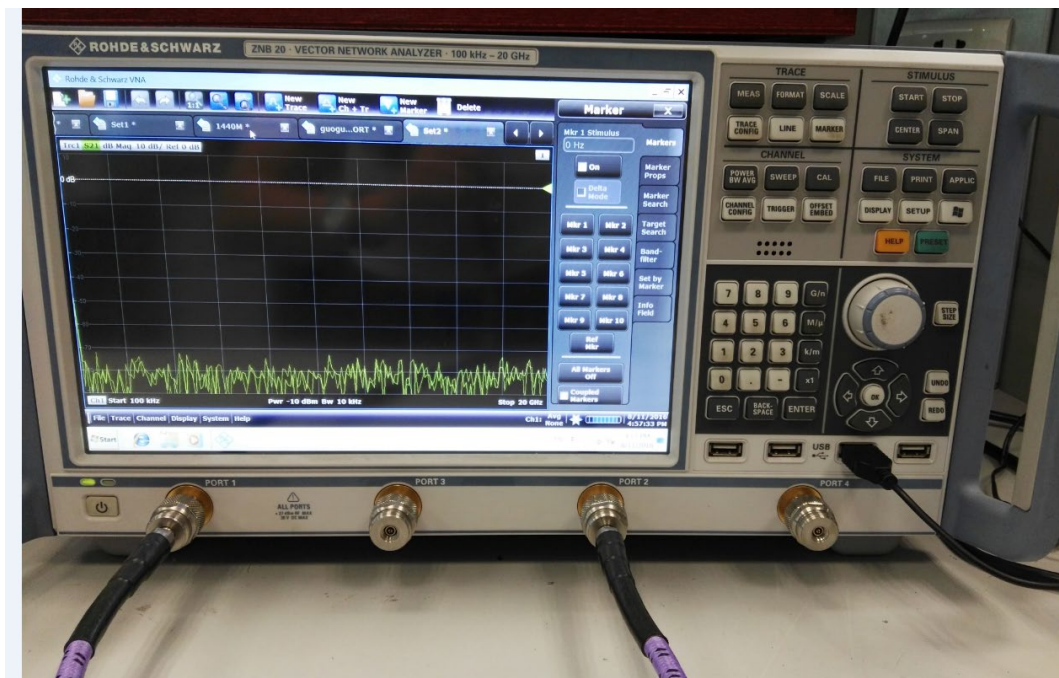


Figure 2.Vector Network Analyzer

## 2.2 Test Result

### Return Loss (S11)

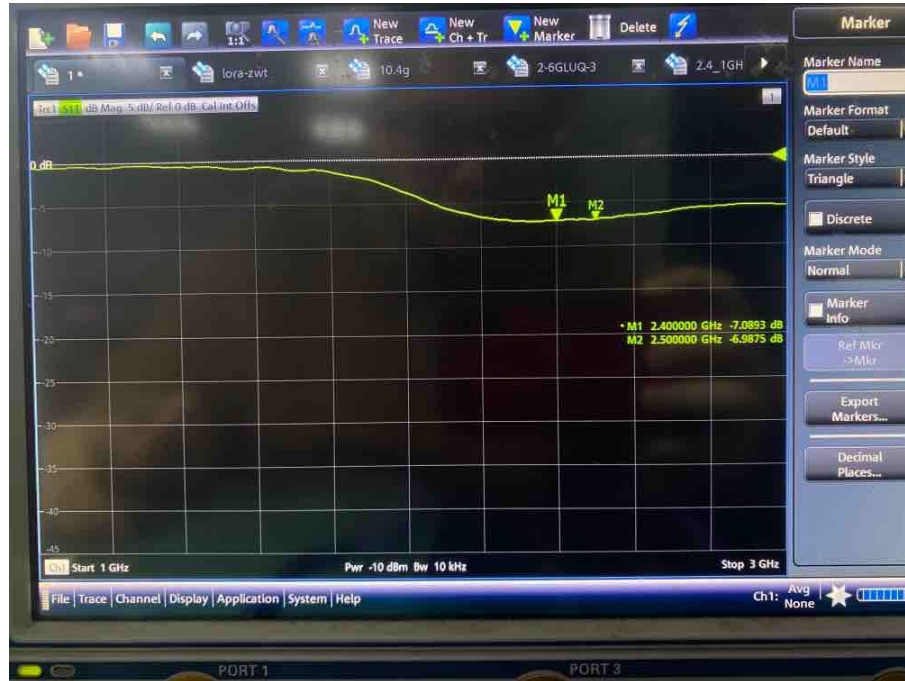
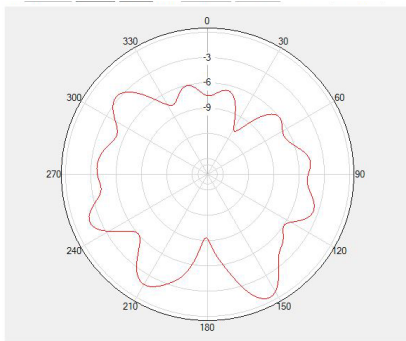


Figure 4. Return Loss

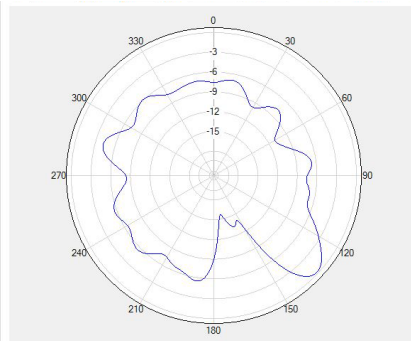
### Antenna Efficiency

Frequency / MHz	Efficiency /%
2400	11.08
2410	11.54
2420	11.67
2430	12.13
2440	12.78
2450	11.68
2460	11.55
2470	11.47
2480	11.09
2490	10.56
2500	11.35

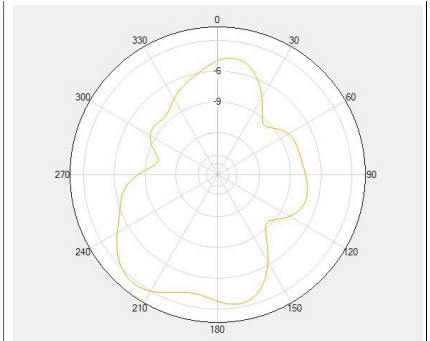
# Antenna 2D Radiation Pattern



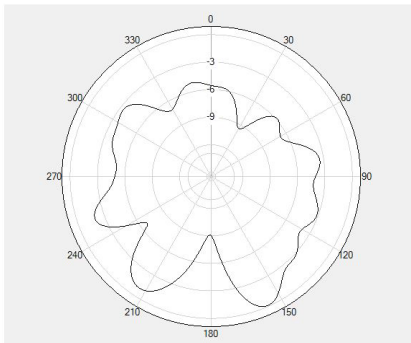
Phi=0°



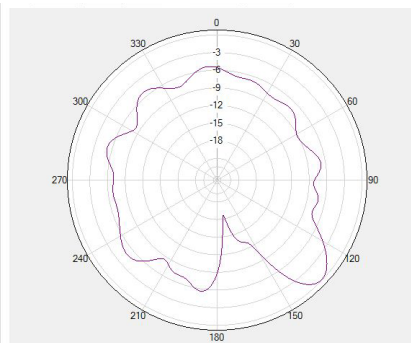
phi=90°  
2400MHz



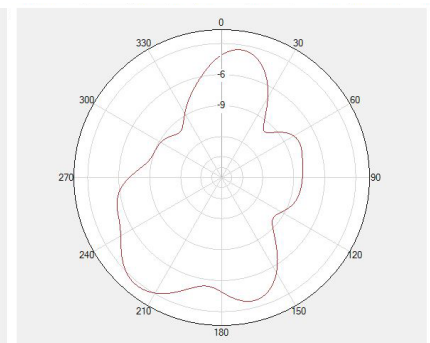
theta=90°



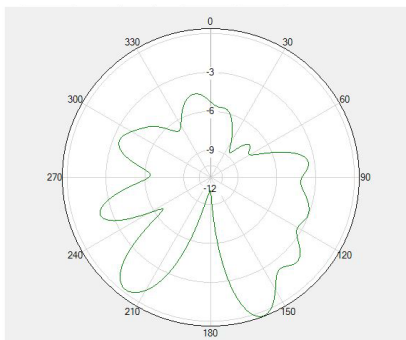
Phi=0°



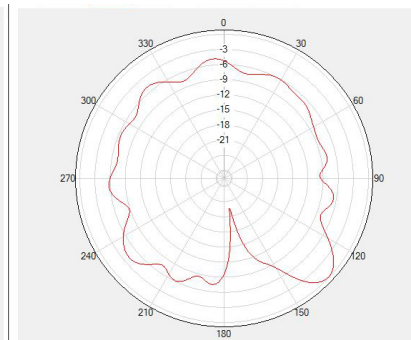
phi=90°  
2450MHz



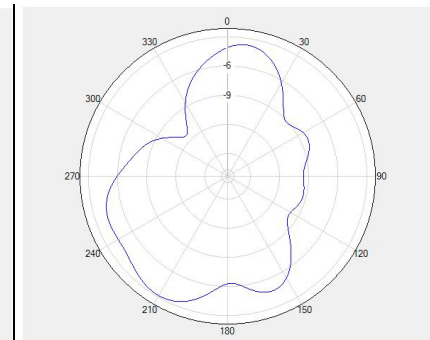
theta=90°



Phi=0°



phi=90°  
2500MHz



theta=90°