

G5-T5 Onboard Antenna Specification V1.0

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1. Antenna Characteristic Specification

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



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
Form	On-board PCB	\
Frequency	2400-2500	MHz
Gain	High channel: -0.33	dB
	Medium channel: 0.75	dB
	Low channel: -0.22	dB
Antenna Efficiency	26.5	%
VSWR	< 3	\
Polarization	Linear Polarization	\
Axial Ratio	\	\
Radiation pattern	Omnibearing	\
impedance	50	ohm
Power handling	33	dBm
Interface	\	\
Overall dimensions	55mm*2mm	\

Weight	\	\
Operation Temp.	-30-70	°C
Storing Temp.	-30-70	°C

2. Antenna Test Conditions

2.1 Test Equipment

Antenna Vector Network Analyzer ROHDE&SCHWARZ ZNB 20

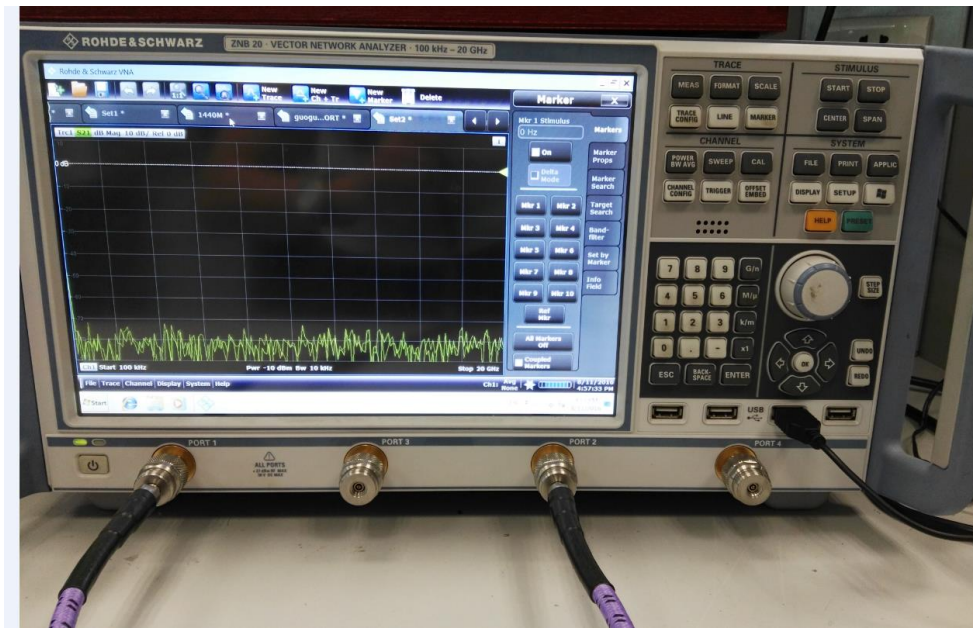


Figure 2.Vector Network Analyzer

2.2 Test Result

Return Loss (S11)



Figure 4.Return Loss

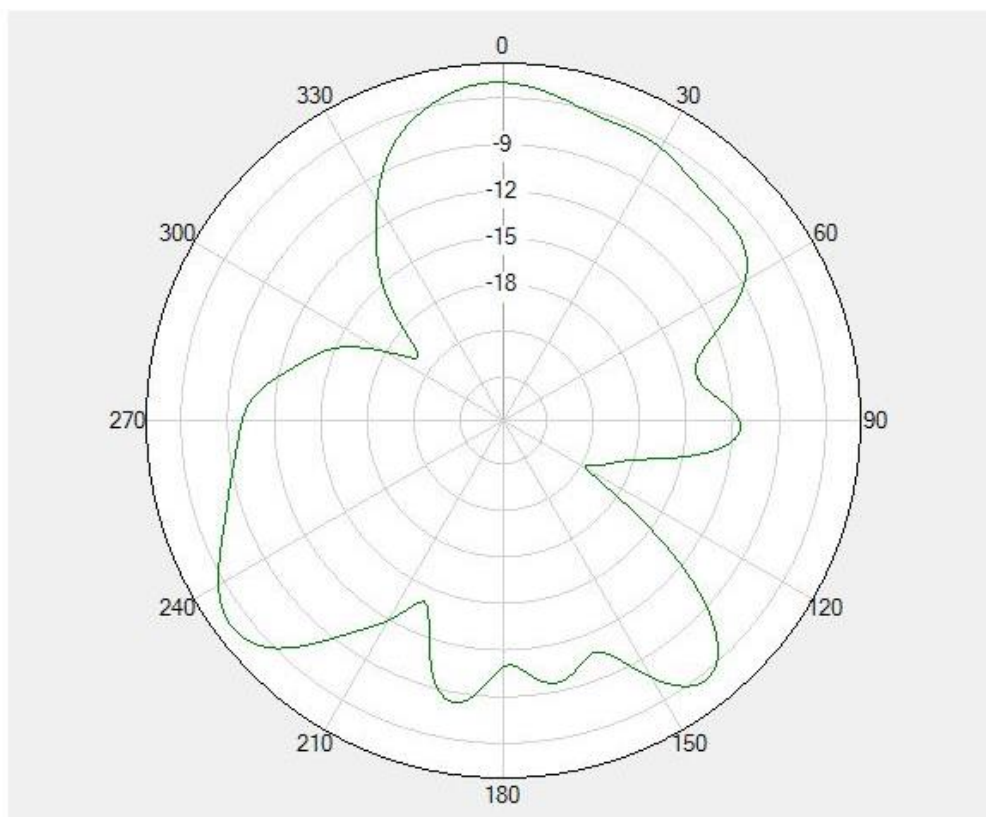
The yellow curve in the figure above shows that the antenna syntonny is realized well, and the resistance condition matches well.

Antenna Efficiency

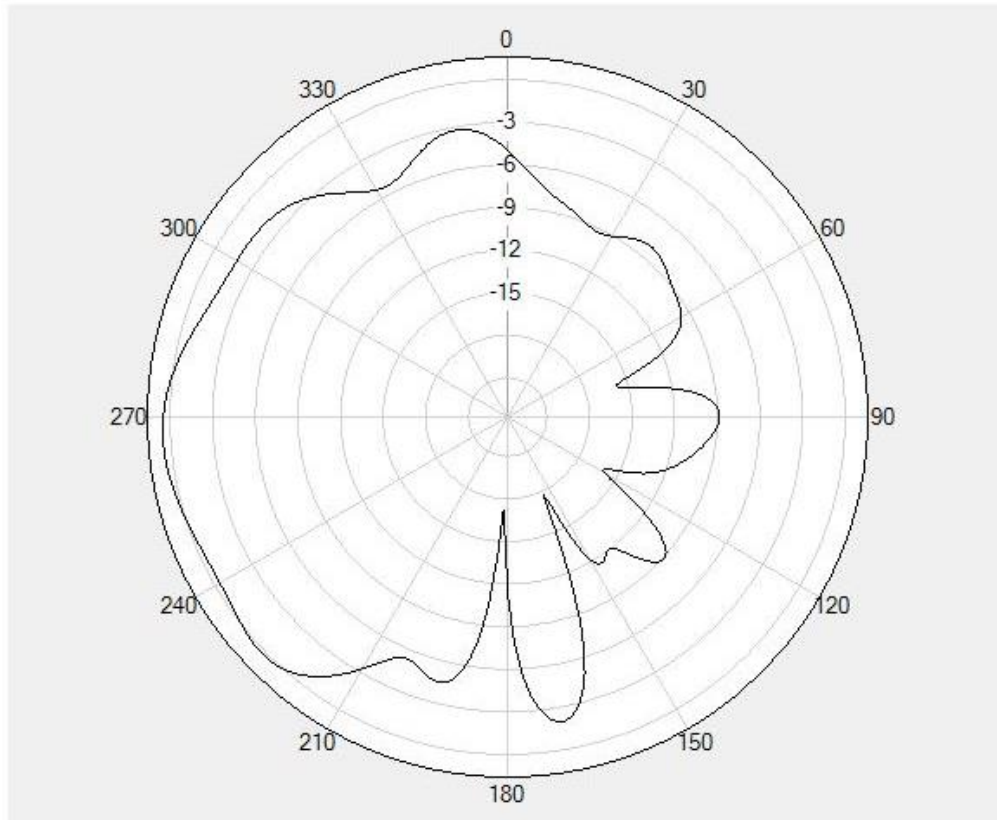
Table 1. 2.4GHz WiFi Antenna Efficiency

Frequency /MHz	Efficiency /%
2400	20.06
2410	21.35
2420	23.1
2430	25.33
2440	27.5
2450	27.12
2460	26.62
2470	25.44
2480	24.11
2490	22.56
2500	21.98

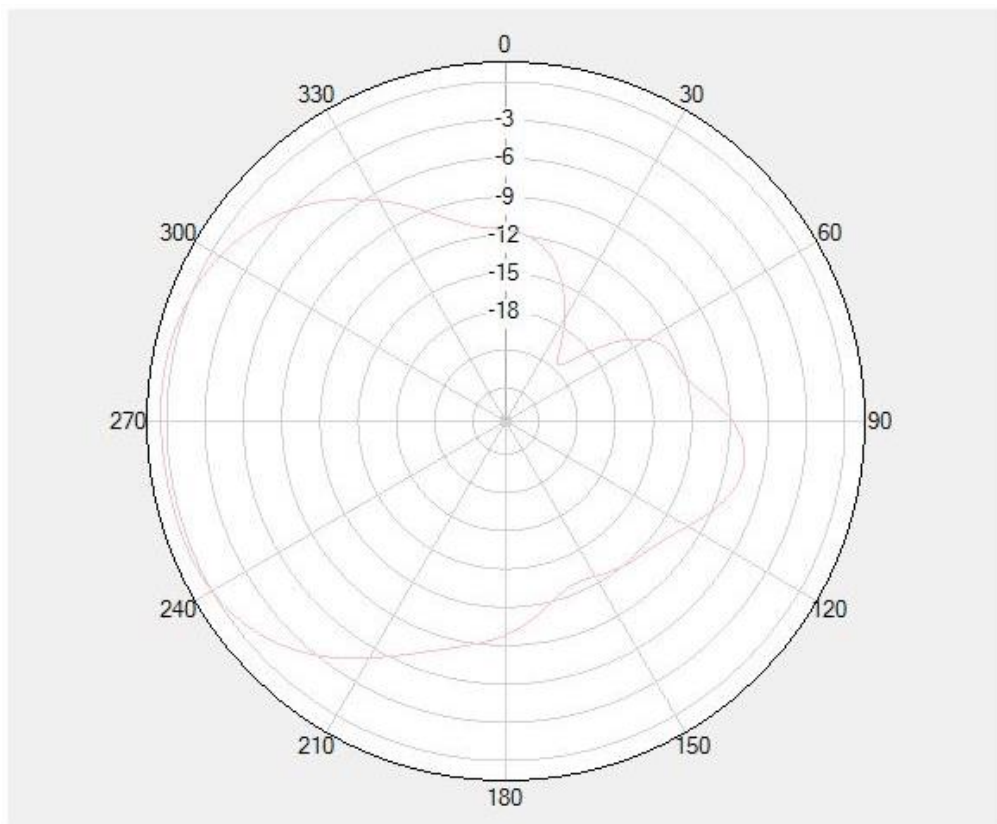
Antenna 2D Radiation Pattern



Phi=0 deg



Phi=90 deg



Theta=90 deg

Revision History

Revision	Content	Date	Author
V1.0	First Edition	Aug. 10, 2022	kechenghuang