

DS-K1T6QT-F43MFW
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 WIFI 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: 1.44	dBi
	Medium channel: 1.36	dBi
	Low channel: 0.72	dBi
Antenna Efficiency	43.58	%
VSWR	< 10	\
Polarization	Linear Polarization	\
Axial Ratio	\	\
Radiation pattern	Omnibearing	\
impedance	50	ohm

Power handling	33	dBm
Interface	\	\
Overall dimensions	20mm*7mm	\
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

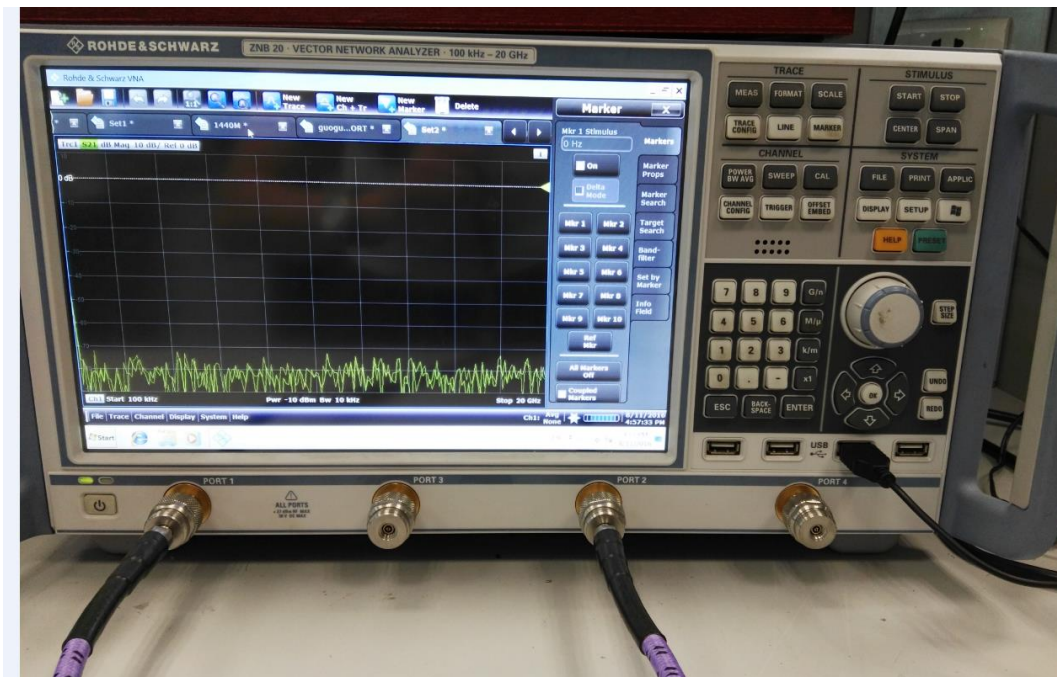


Figure 2.Vector Network Analyzer

2.2 Test Result

Return Loss (S11)



Figure 4.Return Loss

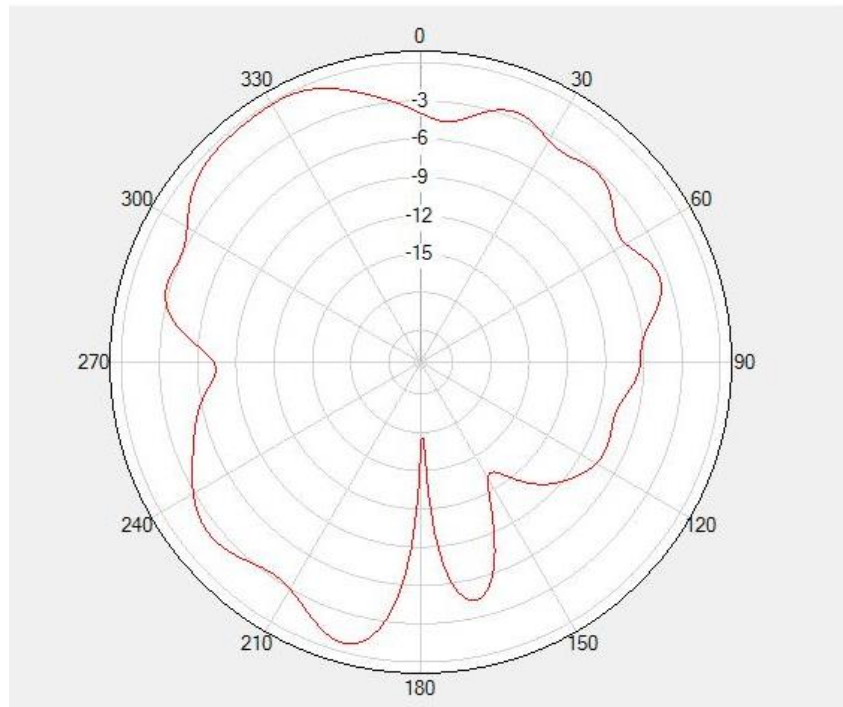
The blue curve in the figure above shows that the antenna syntonny is realized well, and the resistance condition matches well.

Antenna Efficiency

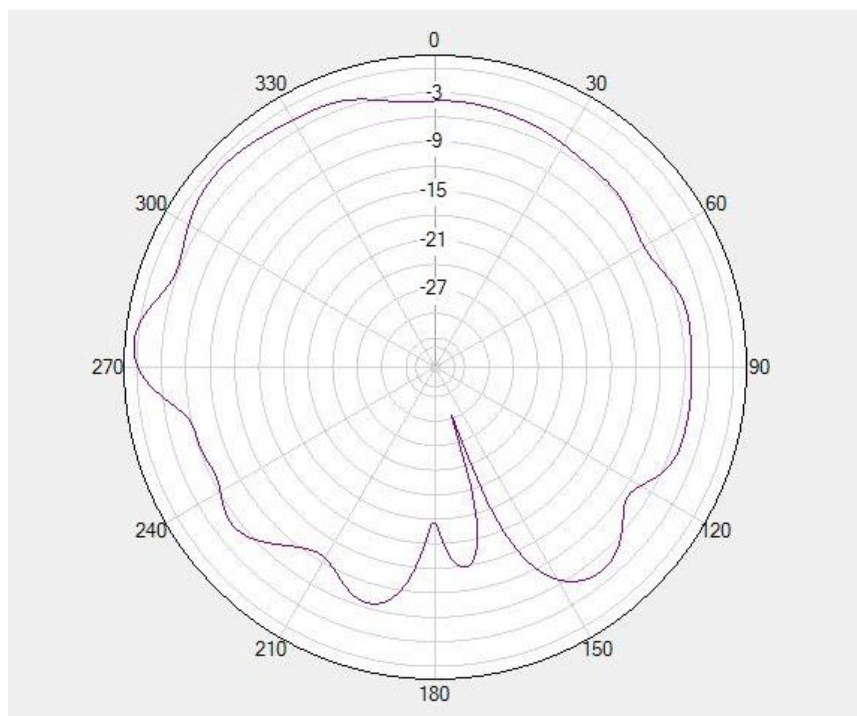
Frequency /MHz	Efficiency /%
2400	42.69
2410	44.46
2420	45.17
2430	45.05
2440	45.04
2450	44.05
2460	43.73
2470	43.31
2480	42.36
2490	41.37
2500	42.19

Antenna 2D Radiation Pattern

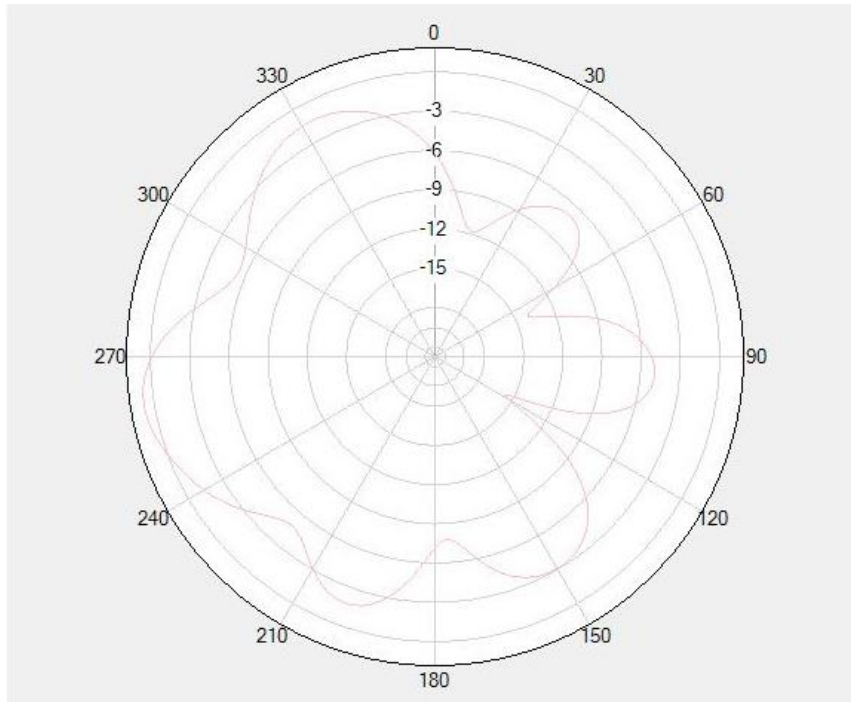
2400MHz:



Phi=0 deg

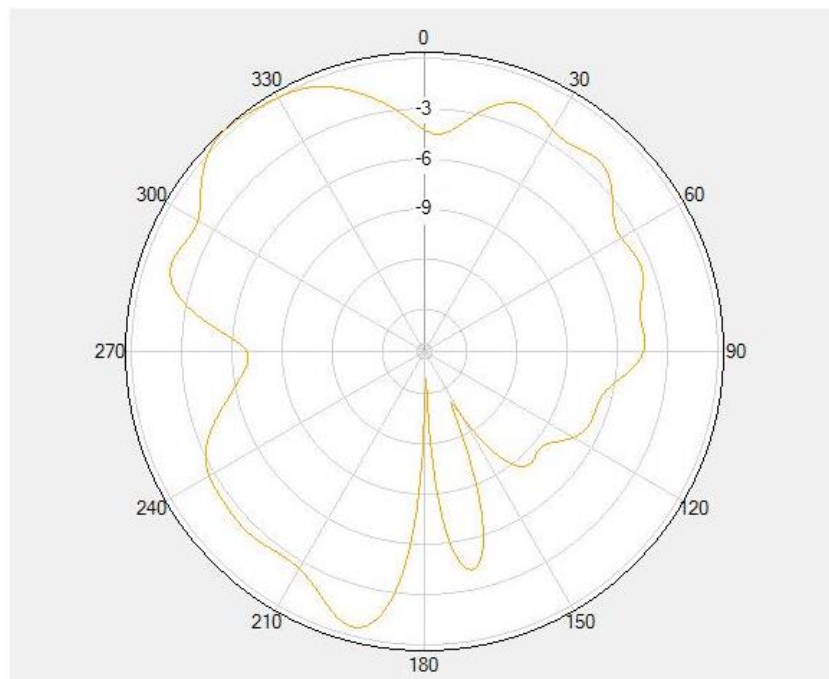


Phi=90 deg

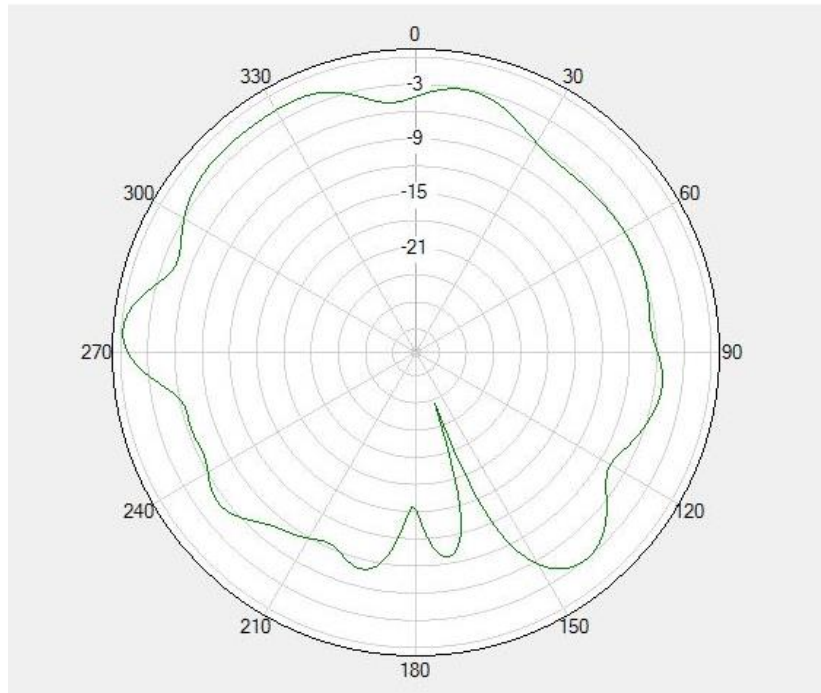


Theta=90 deg

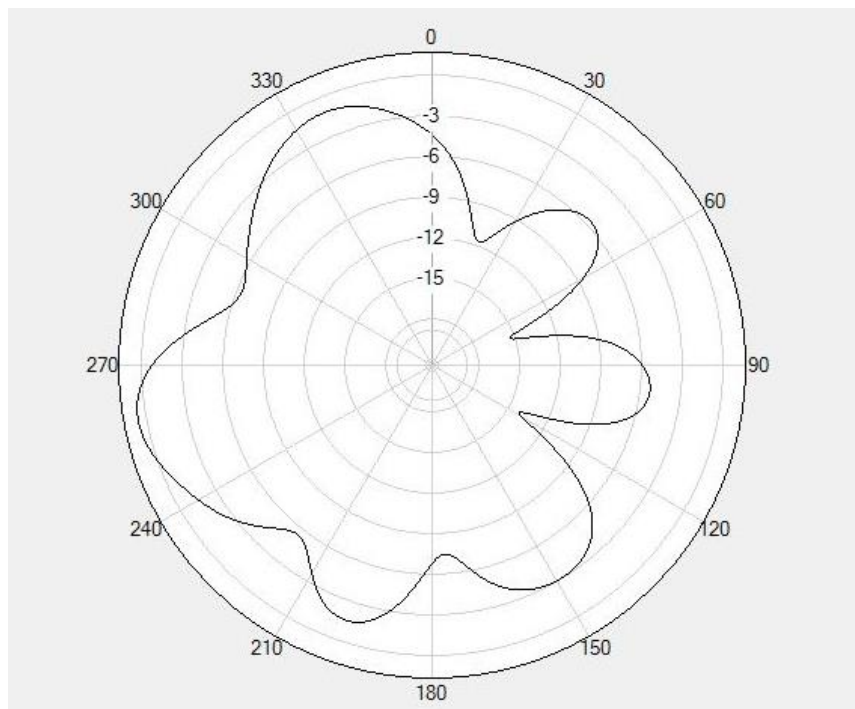
2450MHz:



Phi=0 deg

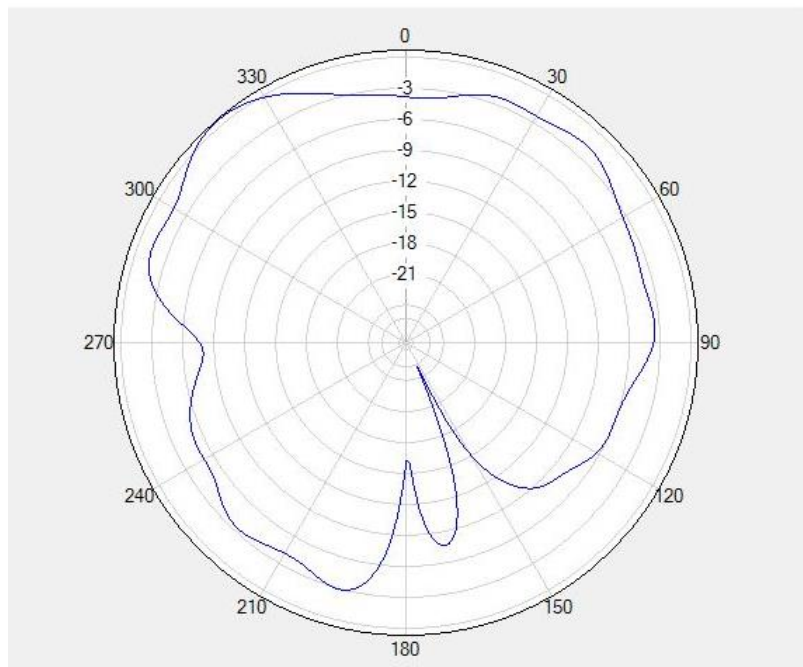


Phi=90 deg

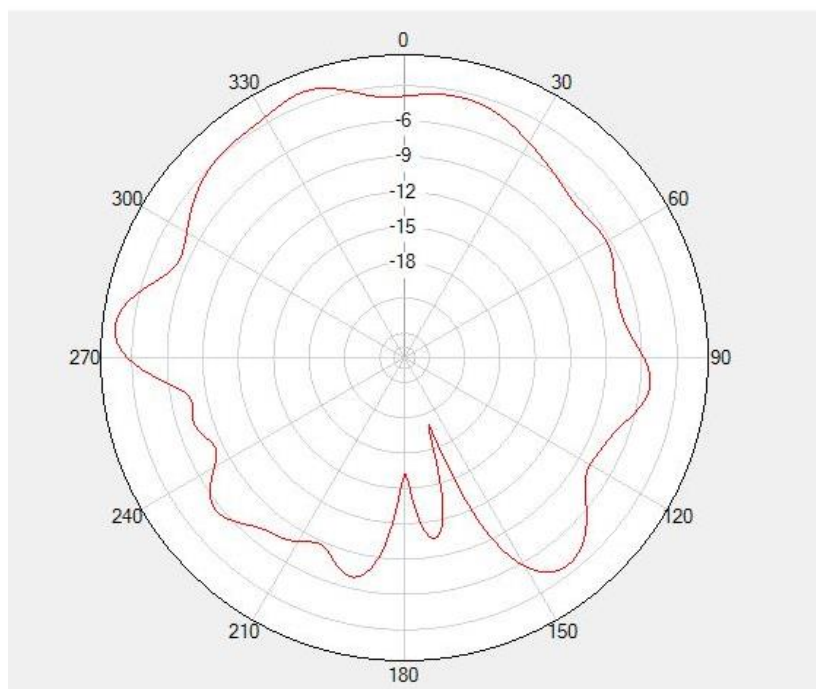


Theta=90 deg

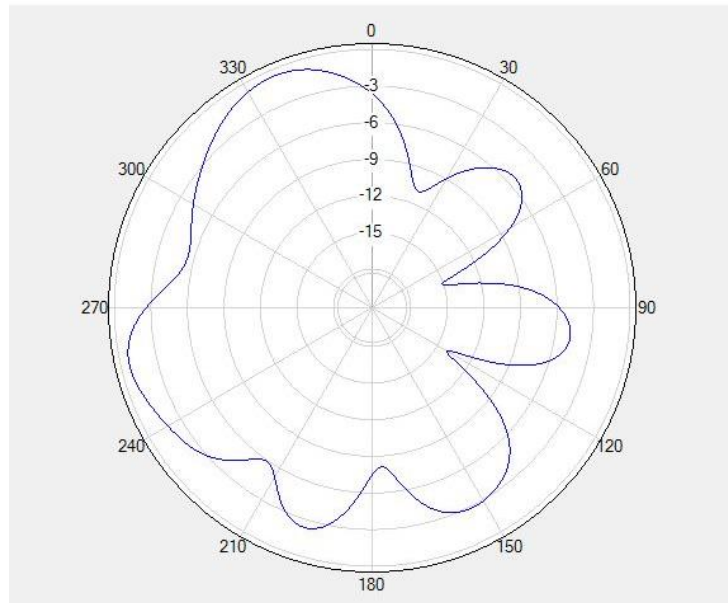
2500MHz:



Phi=0 deg



Phi=90 deg



Theta=90 deg

Revision History

Revision	Content	Date	Author
V1.0	First Edition	November 1, 2022.	Hua Lina