

Antenna Report

Product Name: MS-642(M410D)

Manufacture: Dingnan Jinpeng Electronic Co., LTD

Address: Jinpeng Industrial Park, Futian Industrial Park, Dingnan County,
Ganzhou City, Jiangxi Province

Antenna Type: PCB antenna

Antenna Size: 8.5mm*2.3mm

Project Engineer: Issac

Test Standards: ANSI/IEEE Std 149-2021

Test software being used: Emquest

Software Version:1.13

Test Result: PASS

Issued Date: 2022-09-05

Name	Parameter	Method	Standard no.
Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149- 2021

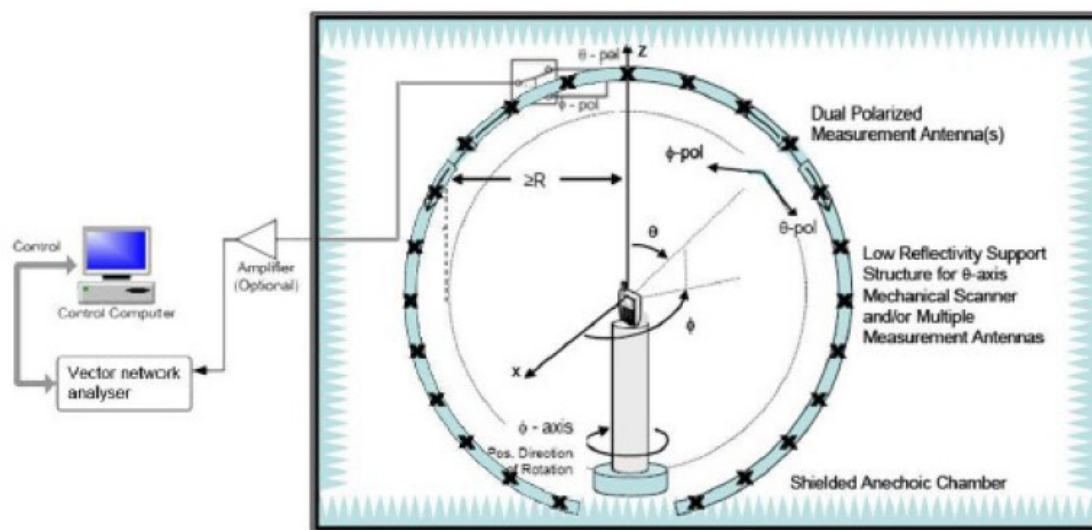
Equipment	Manufacturer	Mode No	Serial No	Cal date	Cal Due
Network Analyzer	Agilent	E5071B	MY48360957	2021/5/20	2022/5/19
Quad-Ridge Horn Antenna	ETS	Apr-64	62743	2021/5/20	2022/5/19
700 MHz-6 GHz	ETS	7006	59957	2021/12/17	2022/12/16
MAPS Controller					
Switch Control System	ETS	7001	MY42001152	2021/12/17	2022/12/16

2 Test Temperature and Humidity

Temperature: 23.2°C

Humidity: 65%

Test Setup



Name	Shenzhen RFI-LAB Communication Technology Co.,Ltd.
Address	10/F A, Lingyun Bld, Liufang Rd, Baoan District, SZ
Tel	13682621346
E-mail	rfi-lab@tech-now.com

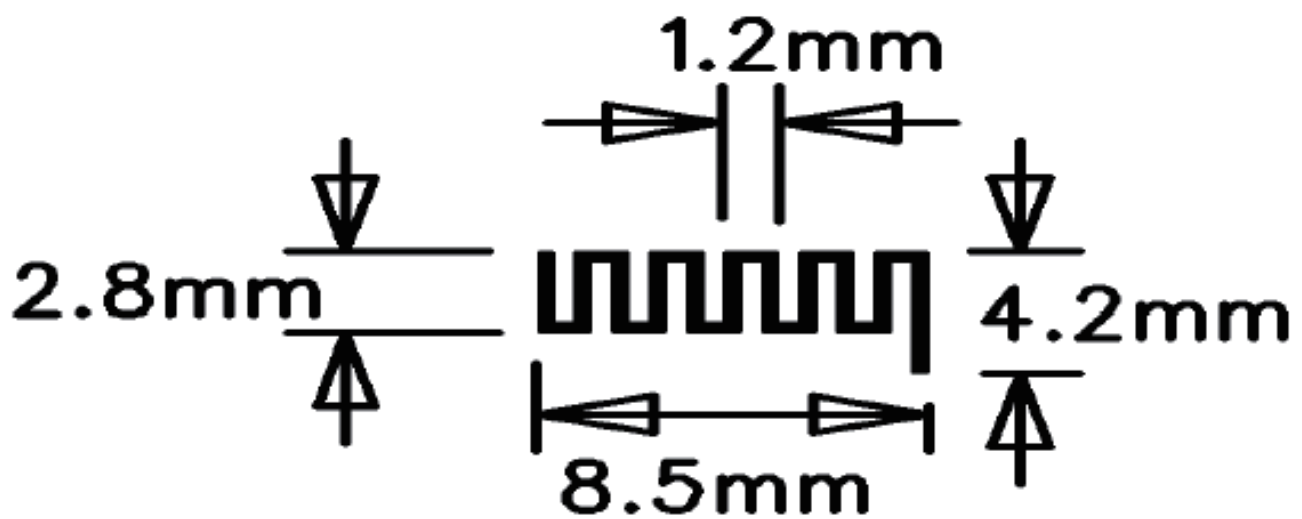
Product name:MS-642(M410D)

Antenna Specification

Specifications Summary

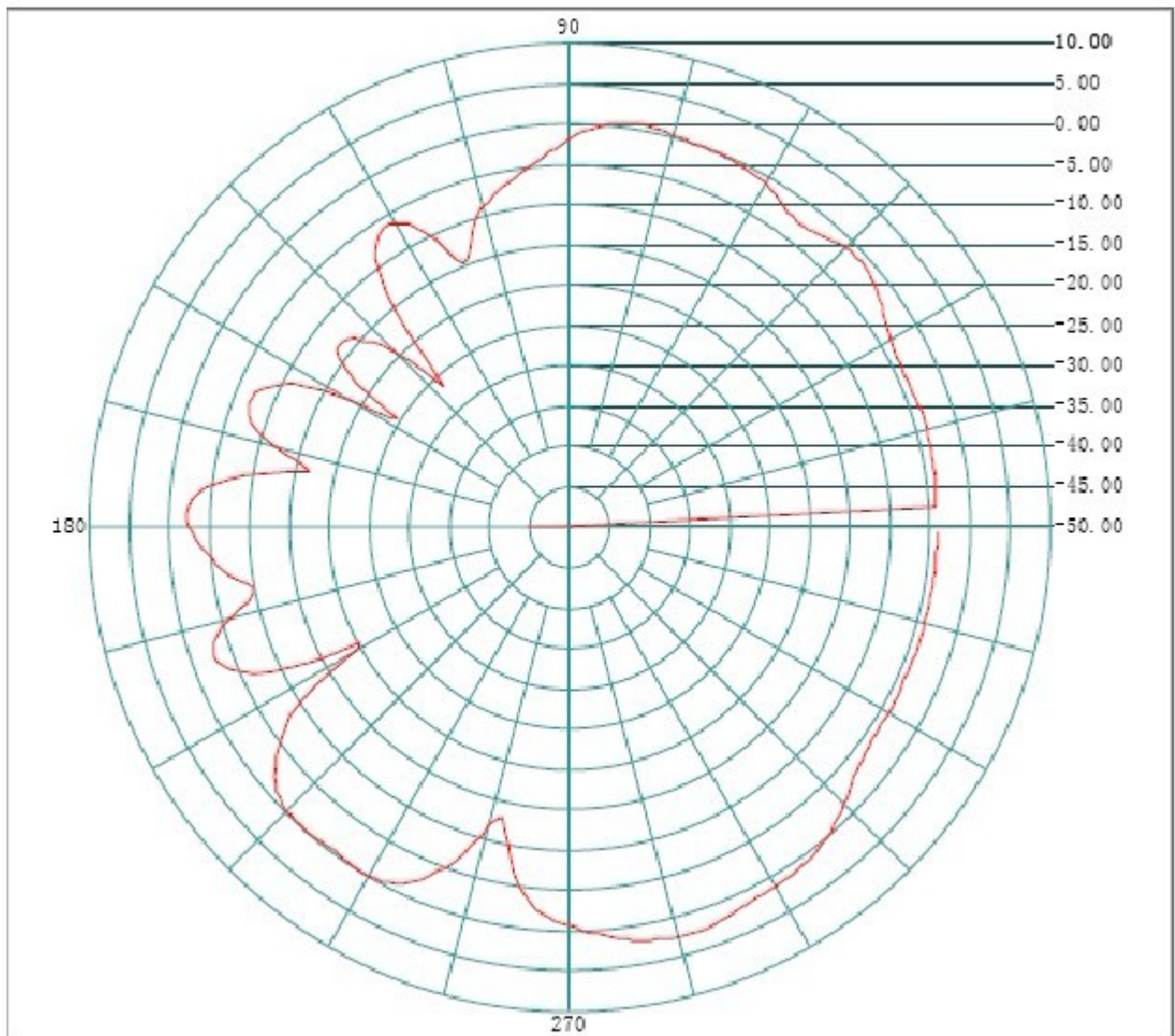
ITEM	SPEC.	
Model Name	IBM 2.4 GHz	
Center Frequency	2402 MHz	2.18dBi
	2441 MHz	2.01dBi
	2480 MHz	1.40 dBi
MAX. GAIN	2.18 dBi	
Polarization	Horizontal	
Azimuth Beam Pattern	Omni-directional	
Impedance	50 Ω	
Antenna Length	3.1cm	

Antenna Photo & Length (mm)



1. Main antenna : 2402 MHz

1.1 Horizontal



Frequency(MHZ): **2402**

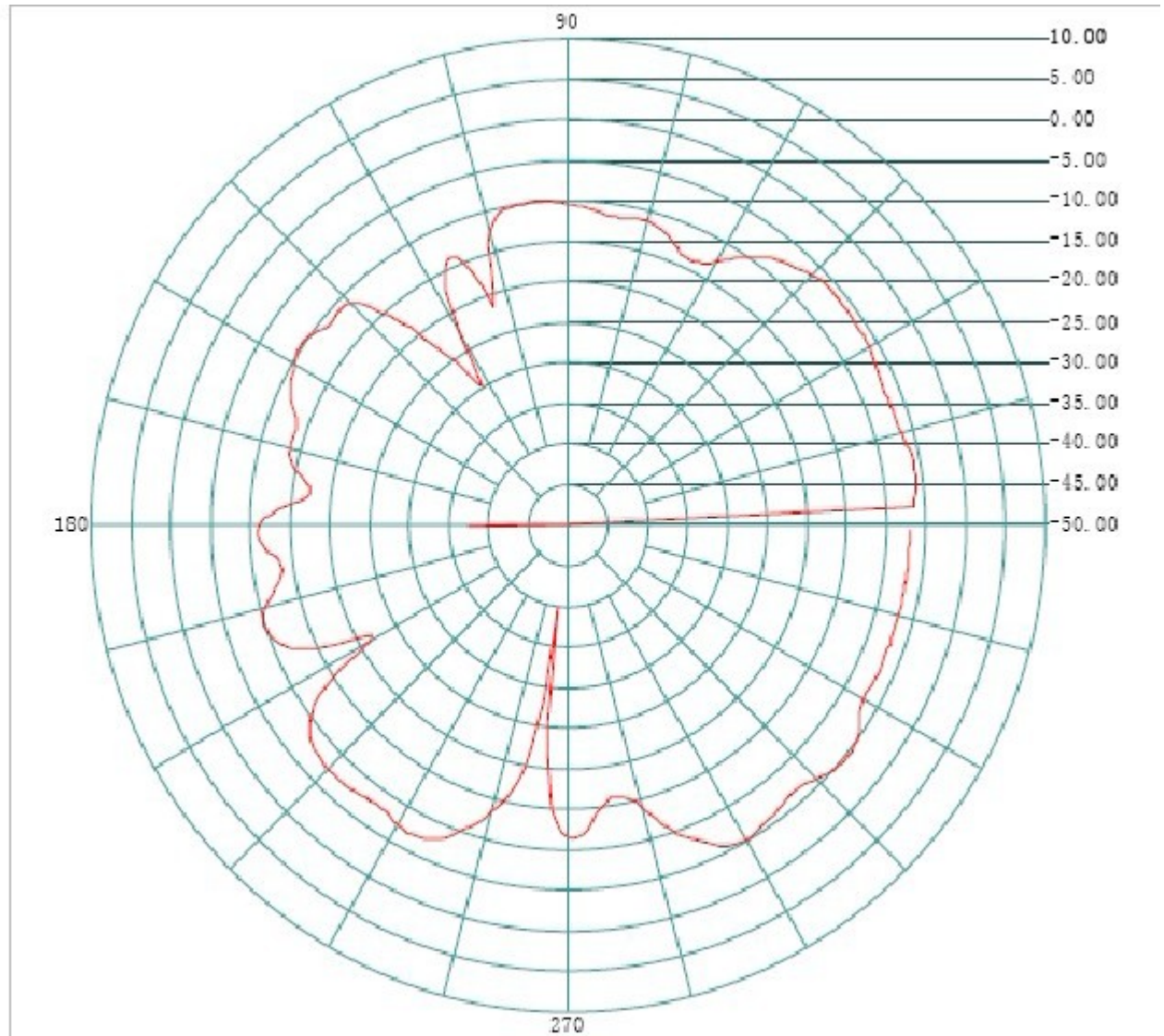
Antenna Polarity: **Horizontal**

Maximum Value(dBi): **2.18**

Average Gain(dBi) : **-2.48**

Minimum Gain(dBi): **-55.18**

1.2 Vertical



Frequency(MHZ): **2402**

Antenna Polarity: **Vertical**

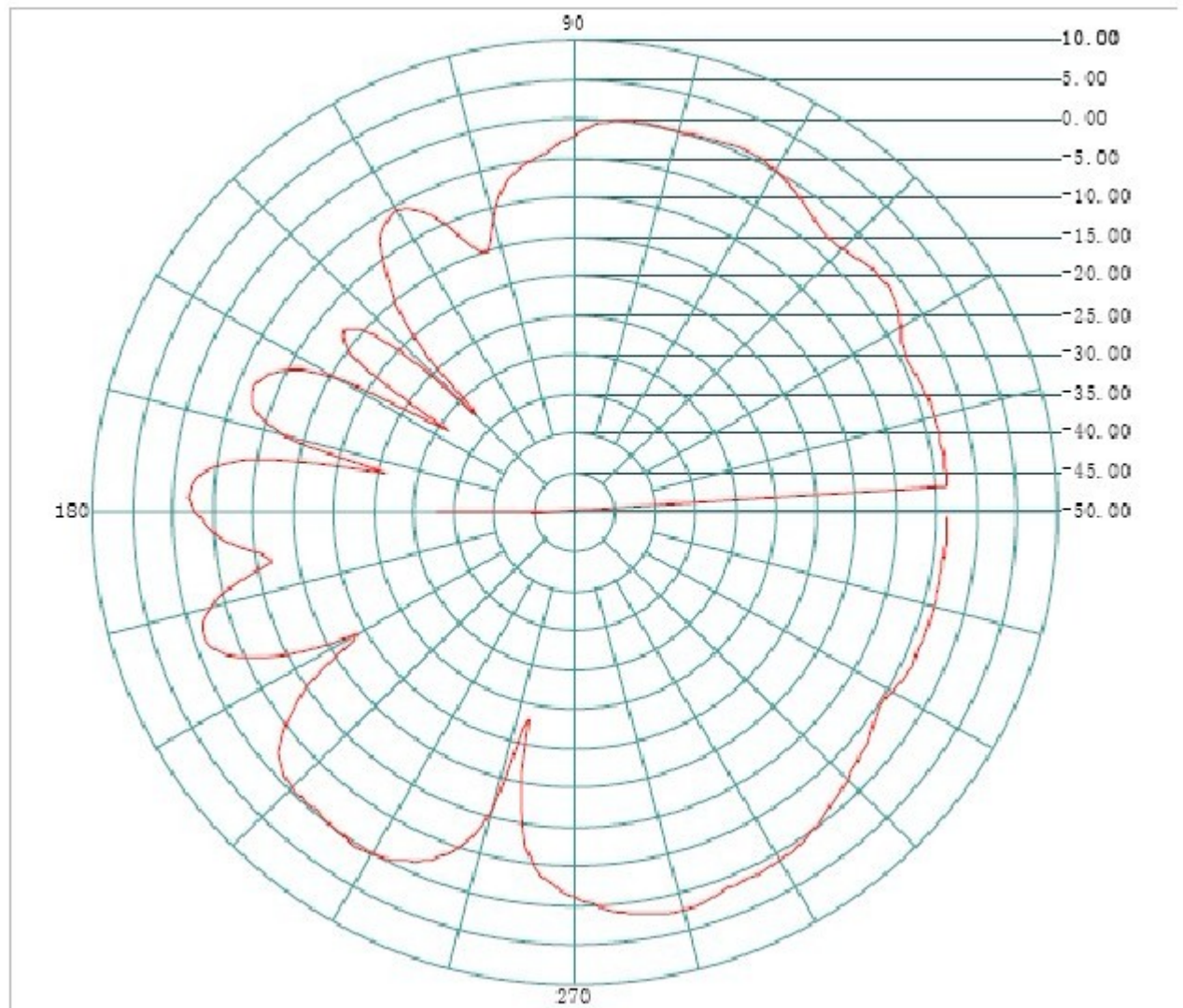
Maximum Value(dBi): **-4.51**

Average Gain(dBi) : **-8.98**

Minimum Gain(dBi): **-62.3**

2. Main antenna : 2441 MHz

2.1 Horizontal



Frequency(MHZ): **2441**

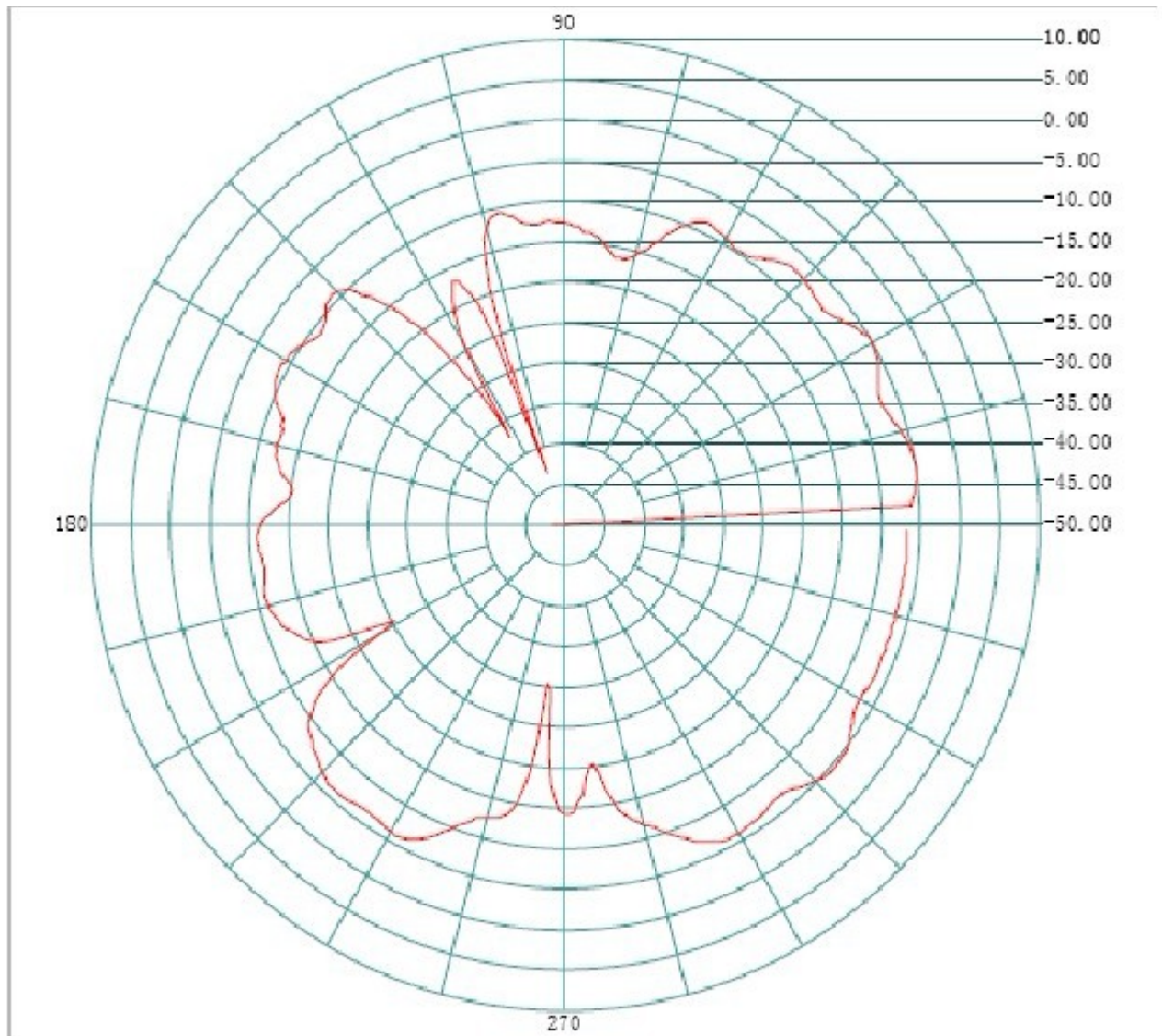
Antenna Polarity: **Horizontal**

Maximum Value(dBi): **2.01**

Average Gain(dBi) : **-2.54**

Minimum Gain(dBi): **-66.98**

2.2 Vertical



Frequency(MHZ): **2441**

Antenna Polarity: **Vertical**

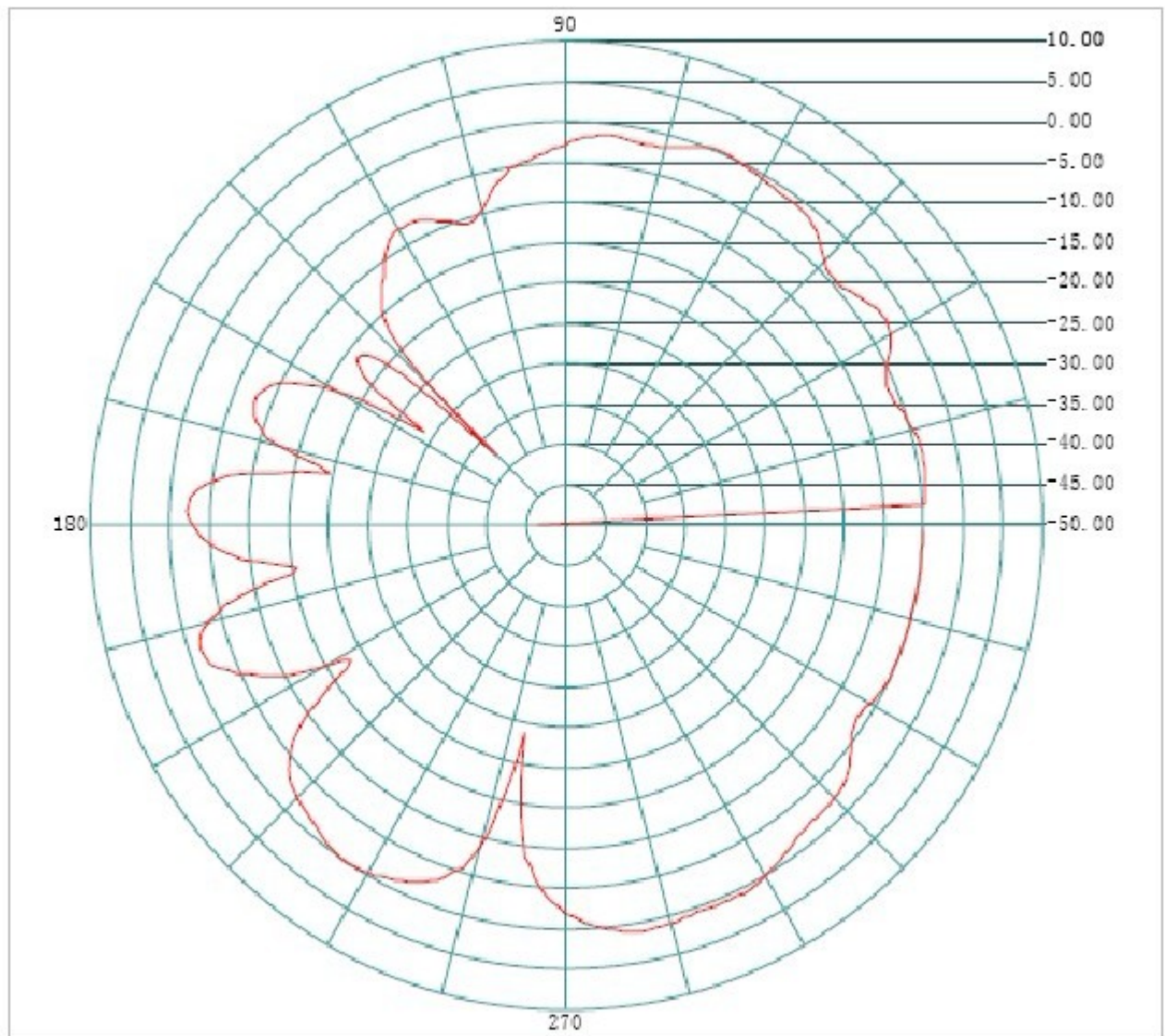
Maximum Value(dBi): **-4.29**

Average Gain(dBi) : **-8.81**

Minimum Gain(dBi): **-51.4**

2. Main antenna : 2480 MHz

2.1 Horizontal



Frequency(MHZ): **2480**

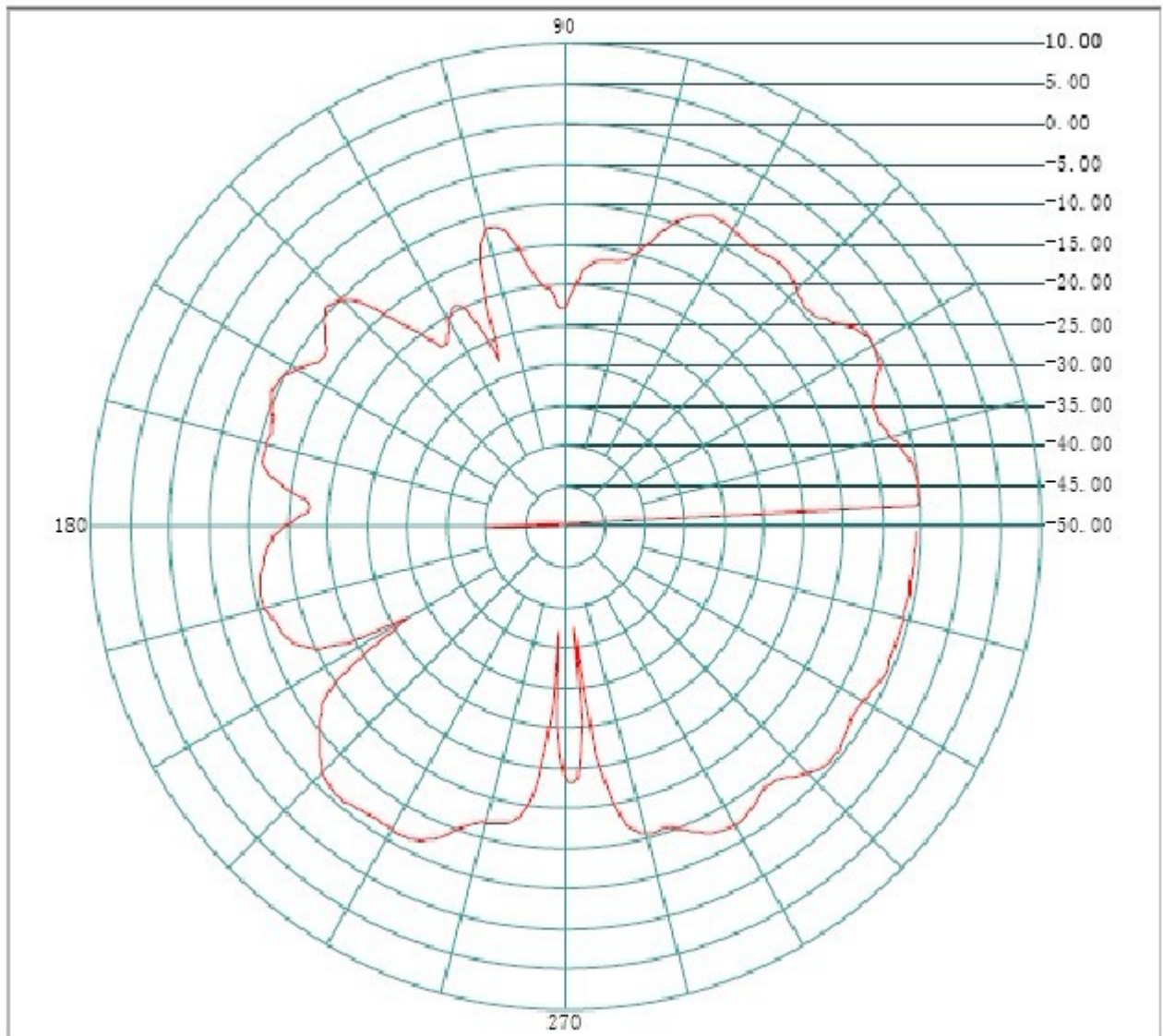
Antenna Polarity: **Horizontal**

Maximum Value(dBi): **1.40**

Average Gain(dBi) : **-3.34**

Minimum Gain(dBi): **-53.4**

2.2 Vertical



Frequency(MHZ): **2480**

Antenna Polarity: **Vertical**

Maximum Value(dBi): **-4.95**

Average Gain(dBi) : **-9.06**

Minimum Gain(dBi): **-60.00**

