



东莞市一佳电子通讯科技有限公司

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Antenna Test Report

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Tester : Liu tao

Approval : Yin tao

Date : 2024/02/02

真诚 务实 开拓 创新



Project name	A8700
Name of antenna	FPC
Antenna form	WIFI/BT PIFA
Radiate	Omni-directional
Polarization	Line polarization



1. Antenna Specification

Electrical Properties

Frequency	2.4-2.5GHz 5.15-5.85GHz
Impedance	50 Ohm Nominal
V.S.W.R	2.0 Max
Gain	0.4 dBi@2.4-2.5GHz 2.3 dBi@5.15-5.85GHz
Radiation	Omni-directional
Polarization	Linear

Physical Properties

Connector	None
Cable Type	None
Cable Length	None
Cable Color	None
Operating Temp.	-40 ~ +85 °C
Storage Temp / Humidity	25±5°C / <70%



2. Test Procedure

Test Step Flow

1. Maintain the test ambient temperature of 25°C, the instrument is powered on and preheated for more than 30 minutes.
2. Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard.
3. Outline sets the test content objectives and conducts calibration tests.
4. Run the GTS OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory.

Test Principle

The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

Test Conditions

1. The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy.
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period.
3. The analyte should be complete and undamaged, and the test environment should be kept clean.

Test standard:

Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021
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Equipment list:

Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	2022.07.21	2024.07.20

Test software being used: GTS MaxSign-RayZone1800NR_Z
Software Version: V1.4.1



3. Antenna Passive Test

Please refer to Antenna set up photos

Please refer to Antenna set up photos



4. Device Profile

<i>Device</i>	Please refer to external photos
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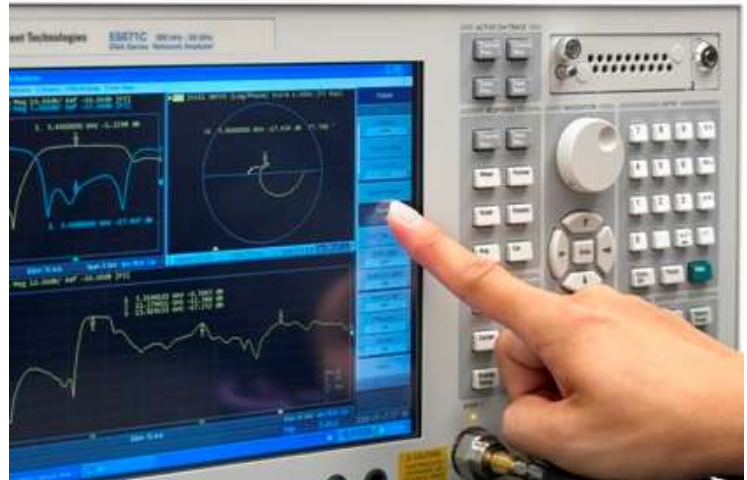
5. WiFi /BT Antenna Test

*WIFI/BT
Antenna*

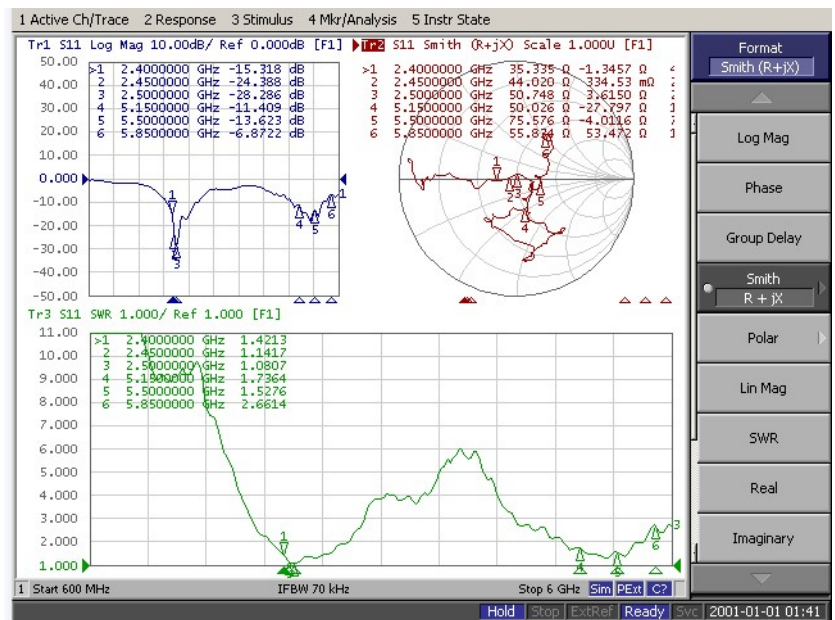




Agilent E5071B



S Parameter Test /WiFi/BT Antenna





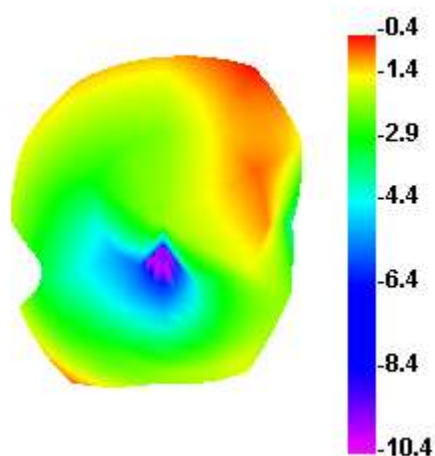
Passive Test For WiFi/BT Antenna(2.4G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	39.4	-4.1	-0.4
2410	37.4	-4.3	-0.5
2420	35.9	-4.5	-0.7
2430	34.6	-4.6	-0.7
2440	34.3	-4.7	-0.7
2450	38.1	-4.2	-0.2
2460	39.3	-4.1	-0.4
2470	41.9	-3.8	-0.2
2480	42.4	-3.7	0.0
2490	44.7	-3.5	0.4
2500	45.9	-3.4	0.9

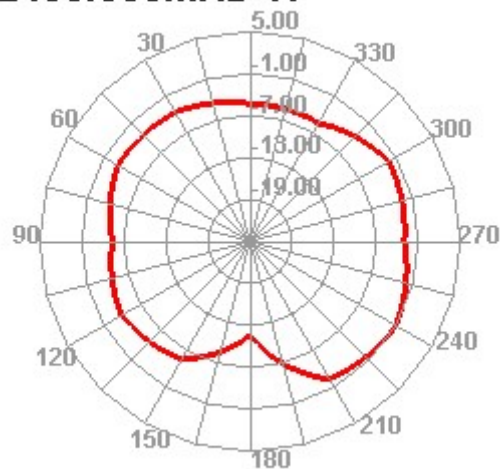


Radiation Pattern For WiFi/BT Antenna(2400MHz)

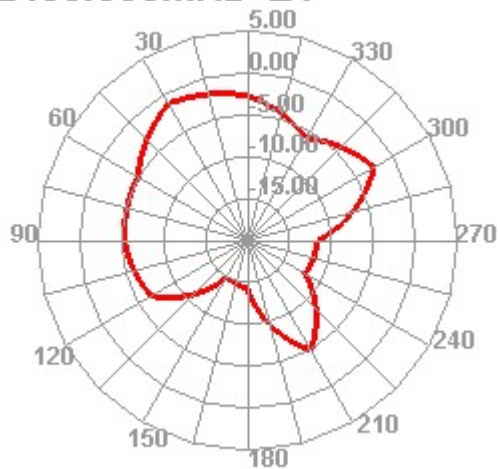
2400.000MHz



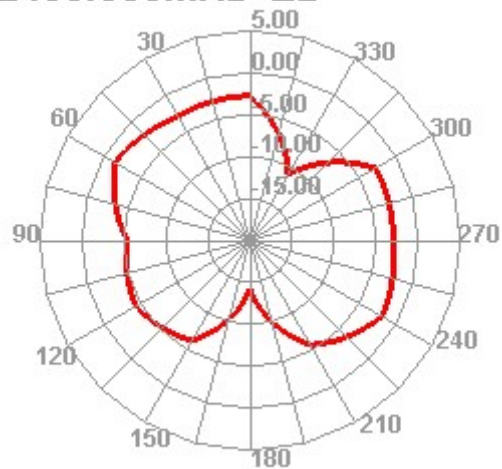
2400.000MHz H



2400.000MHz E1



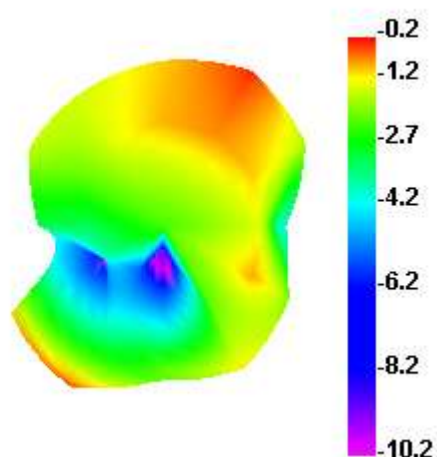
2400.000MHz E2



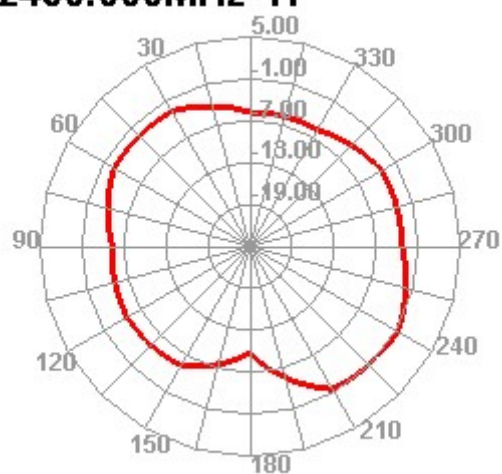


Radiation Pattern For WiFi/BT Antenna(2450MHz)

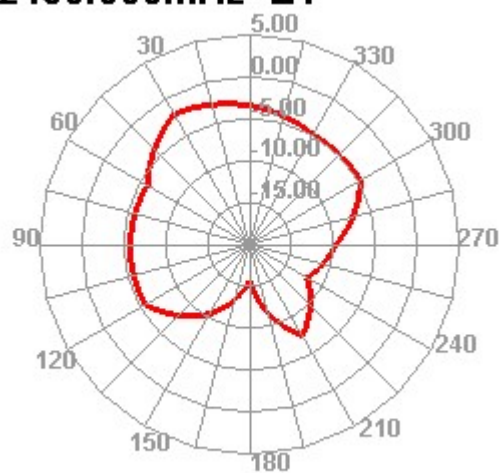
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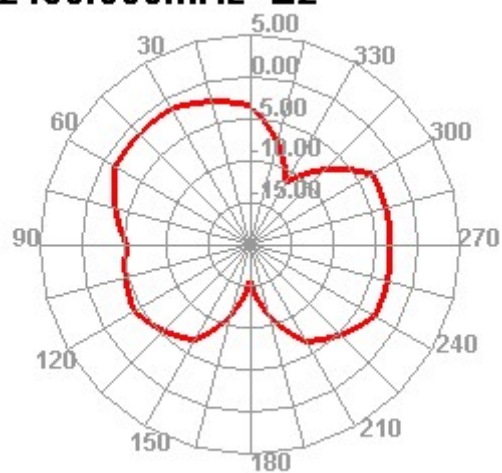
2450.000MHz H



2450.000MHz E1



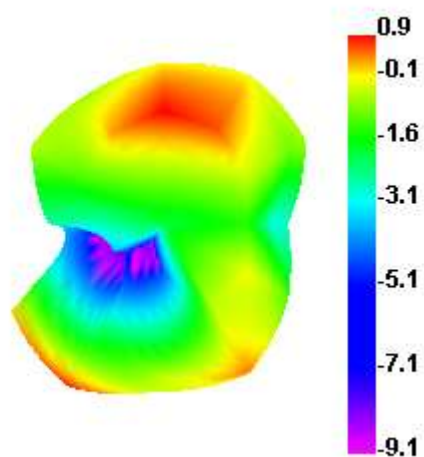
2450.000MHz E2



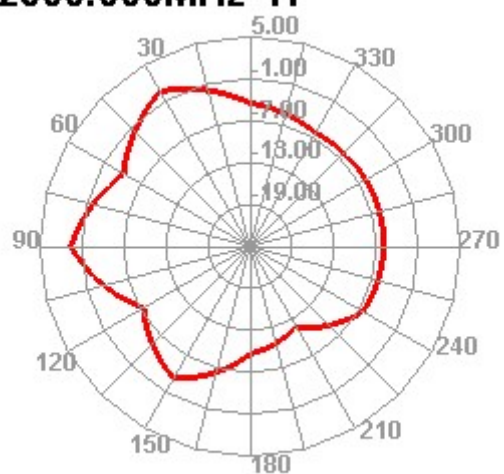


Radiation Pattern For WiFi/BT Antenna(2500MHz)

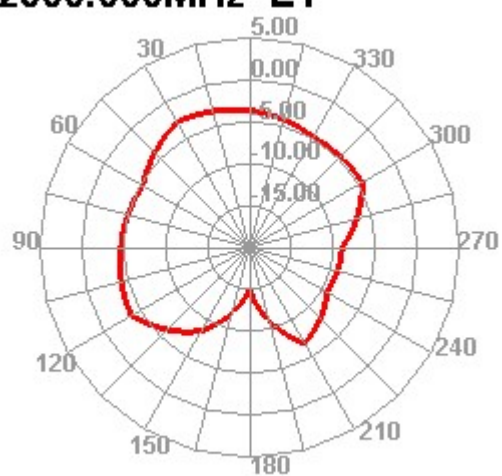
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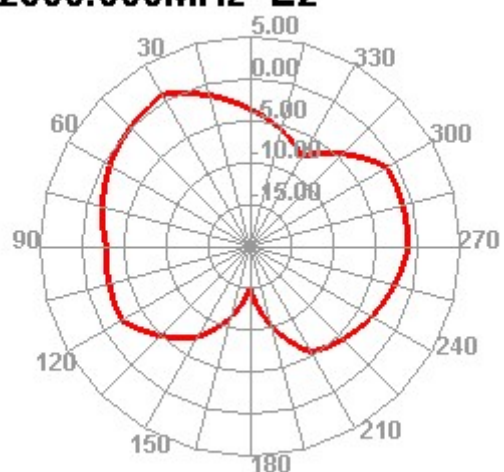
2500.000MHz H



2500.000MHz E1



2500.000MHz E2





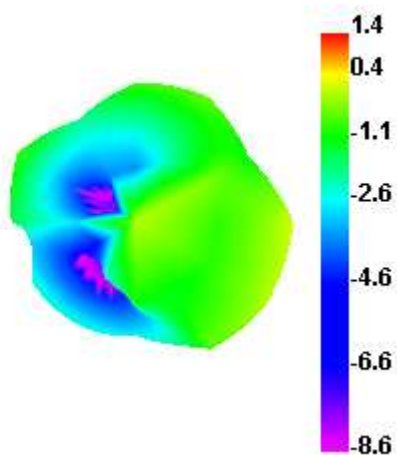
Passive Test For WiFi Antenna(5.8G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	35.3	-4.5	1.4
5200	39.9	-4.0	1.9
5250	39.3	-4.1	1.8
5300	43.0	-3.7	1.9
5350	46.3	-3.4	1.8
5400	44.7	-3.5	1.4
5450	41.1	-3.9	1.6
5500	39.2	-4.1	1.5
5550	35.3	-4.5	1.5
5600	36.6	-4.4	1.9
5650	50.9	-2.9	2.3
5700	43.8	-3.6	1.5
5750	38.4	-4.2	0.4
5800	37.3	-4.3	-0.4
5850	40.8	-3.9	0.2

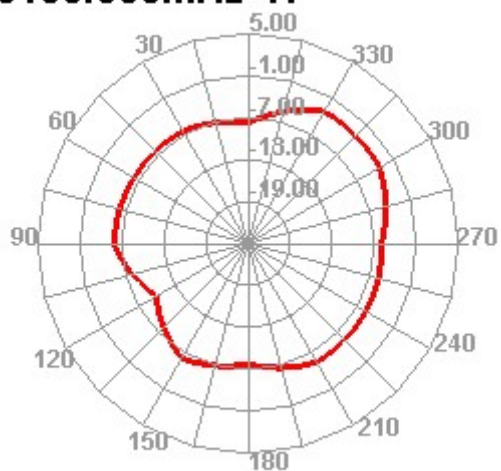


Radiation Pattern For WiFi Antenna(5150MHz)

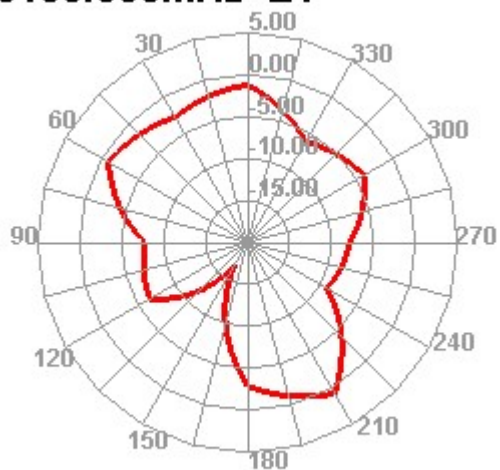
5150.000MHz



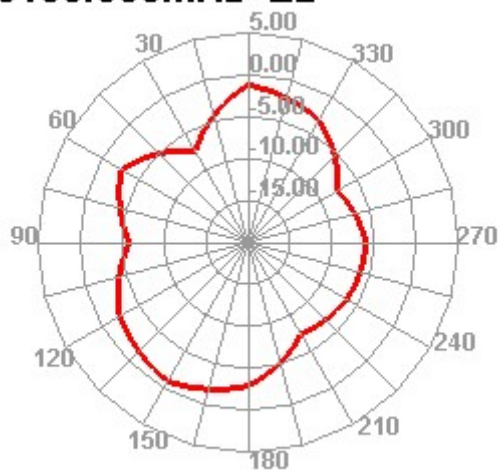
5150.000MHz H



5150.000MHz E1



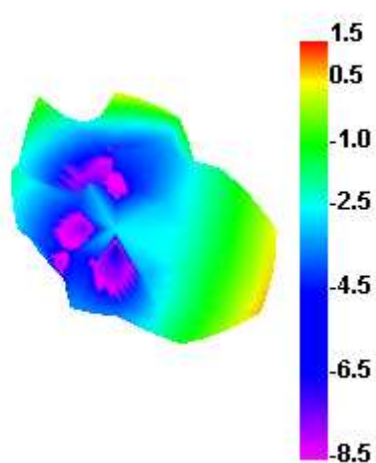
5150.000MHz E2



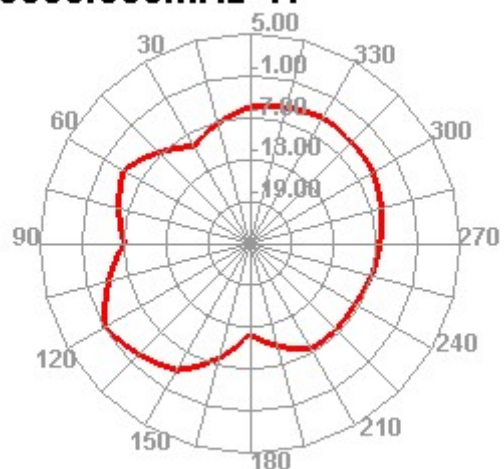


Radiation Pattern For WiFi Antenna(5500MHz)

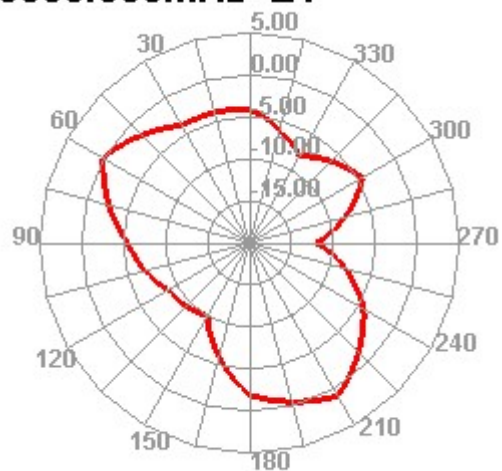
5500.000MHz



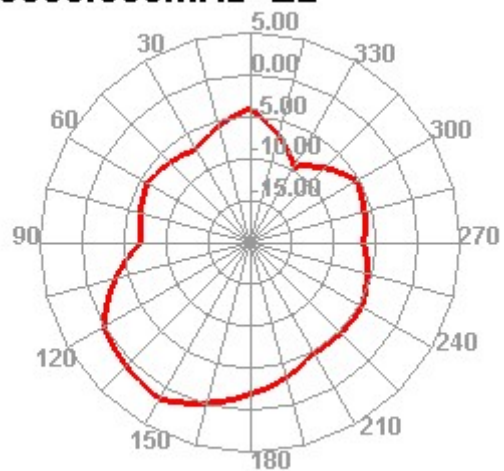
5500.000MHz H



5500.000MHz E1



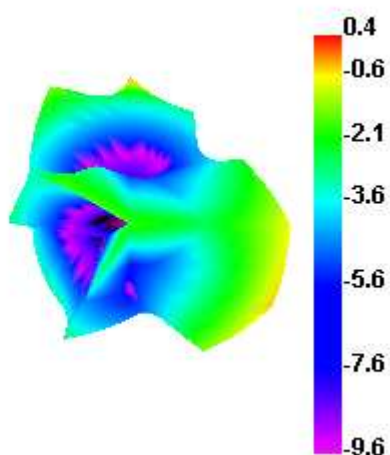
5500.000MHz E2



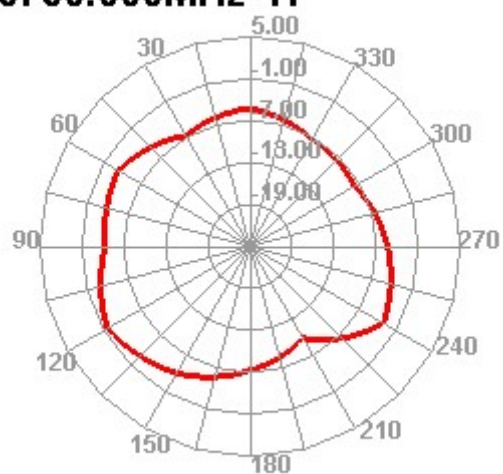


Radiation Pattern For WiFi Antenna(5750MHz)

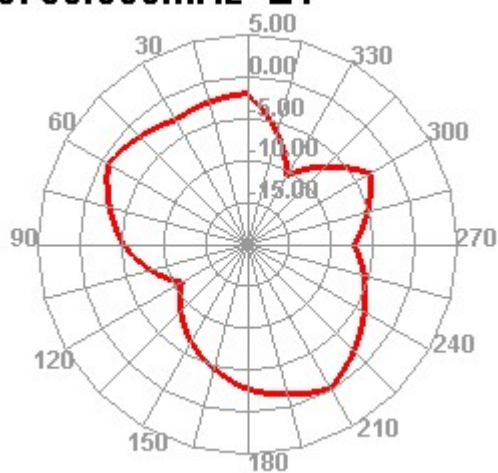
5750.000MHz



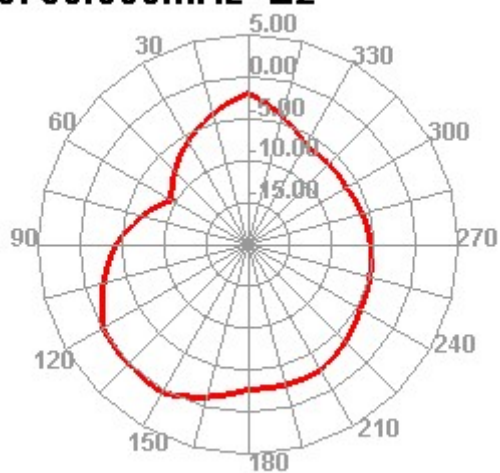
5750.000MHz H



5750.000MHz E1



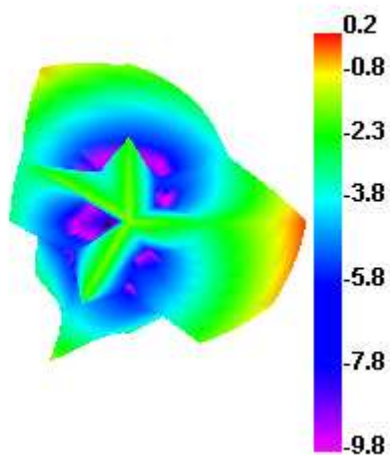
5750.000MHz E2



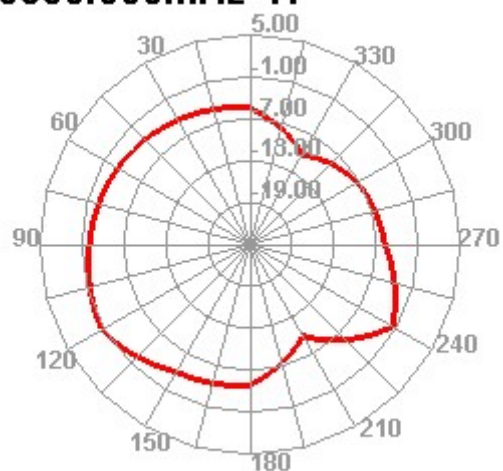


Radiation Pattern For WiFi Antenna(5850MHz)

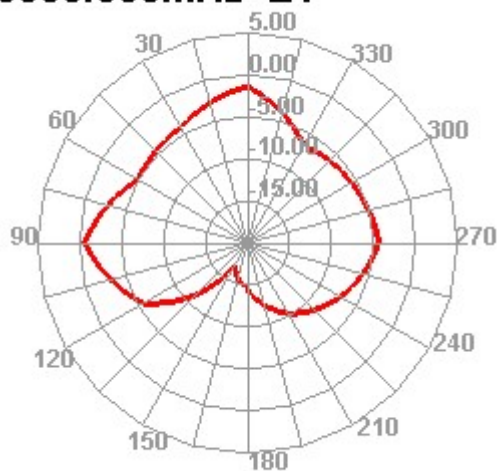
5850.000MHz



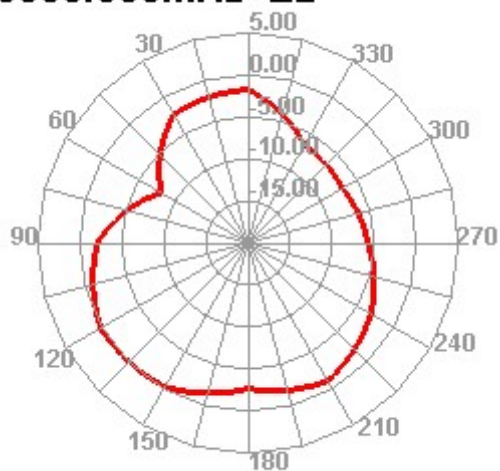
5850.000MHz H



5850.000MHz E1



5850.000MHz E2





6. WIFI Antenna size

