Antenna data sheet

Product: WIFI External Antenna(L=350MM)

Model: WIFI Short blade antenna

Part Number:LXC-202406210002

Issued Date: 2024-06-21

Frequency range	WIFI:(2.4/5.8)（MHz）
VSWR	<2.0
Input Impedance	50（Ω）
Polarization	Vertical Polarization
（3dB）HPW	180° H-plane 120° E-plane
Peak Gain	3.3dBi

8Project:		Author:Wang	**WIFI** antenna
Date: 2024-06-21			
TEST:	Language:	Check: Zhong	
A	English		

Manufacturer：Shenzhen Lxc Electronics Technology Co ., Ltd

Add：4th Floor, Building C,Jinruihua Industrial Park, No. 12, Huafang Road, Dalang Sub-district, Longhua District, Shenzhen City, China

Date	Revision	Description of Changes
2024-06-21	RA	Measured with SUS301 sample.

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description

4 Electrical Performance

4.1 Set-up

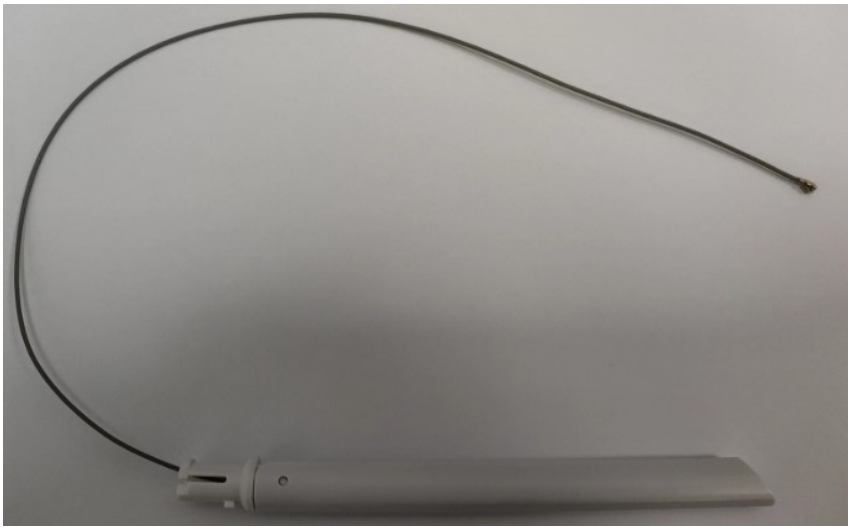
4.1.1 VSWR

VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

4.1.2 Gain & Radiation Patterns

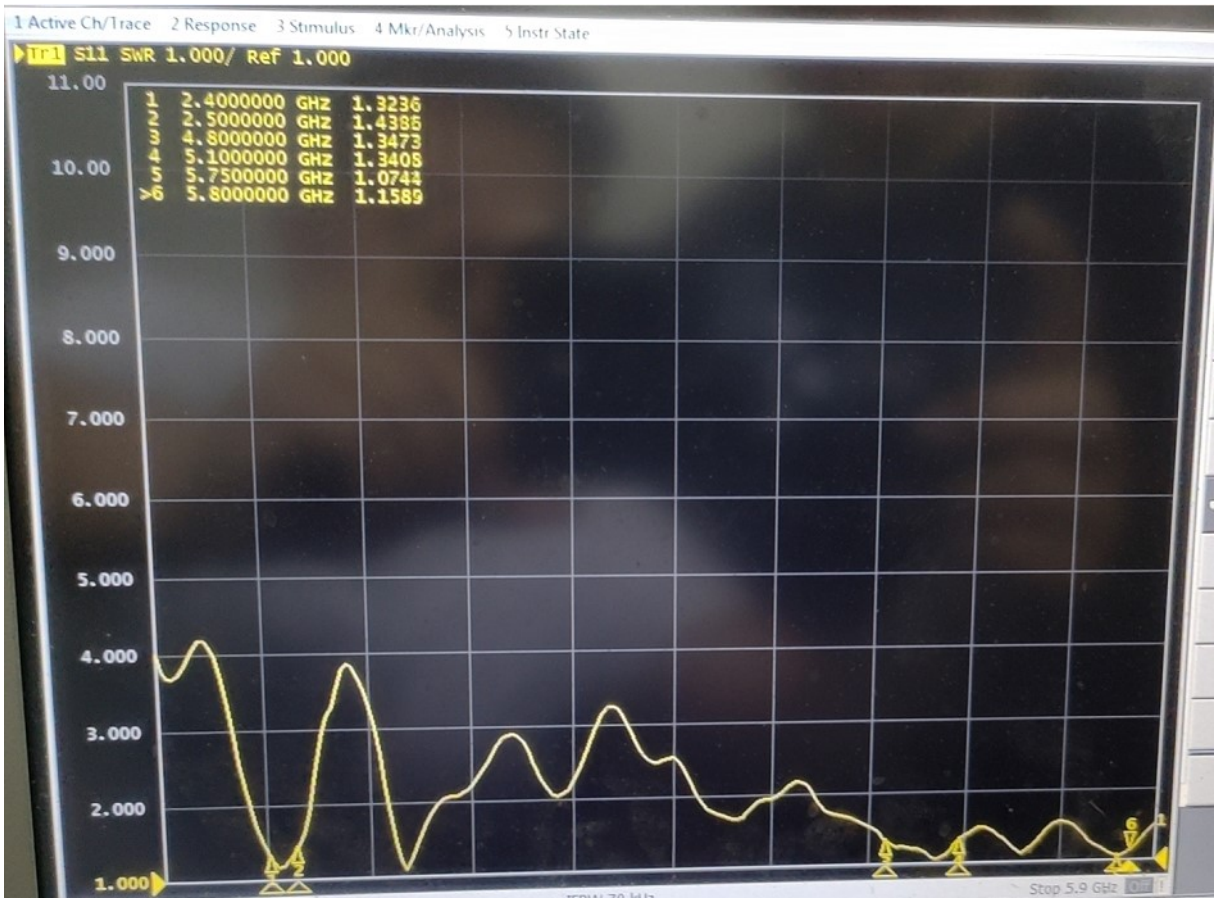
The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than –30 dB reflectivity from 800 MHz through 3 GHz and an 18" diameter spherical quite zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

4.1.3 Matching Circuit Description



4.2 Measurement Data

4.2.1 Active result（WIFI）



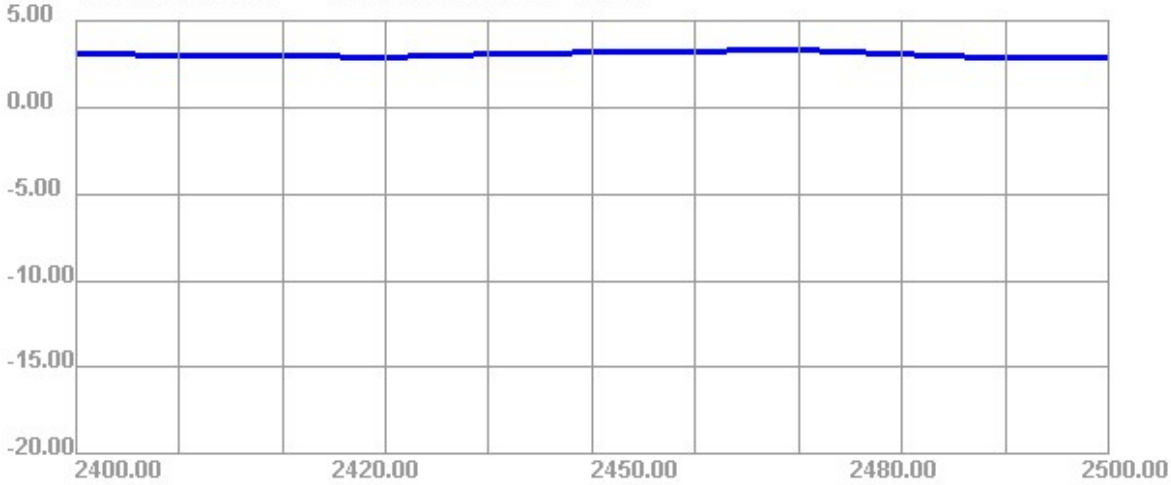
有源测试数据

天线测试报告	802.11B Antenna Performance Table			802.11G Antenna Performance Table		
Channel	CH 1	CH 6	CH11	CH 1	CH 6	CH 11
Max Power(dBm)	20.4	20.6	20.4	20.2	19.6	19.3
TRP(dBm)	17.1	17.9	17.5	17.1	16.2	16.7
Sensitivity(dBm)	-89.6	-89.8	-90.2	-78.3	-78.8	-79.6
TIS(dBm)	-87.7	-87.8	-88.8	-76.6	-76.4	-77.2

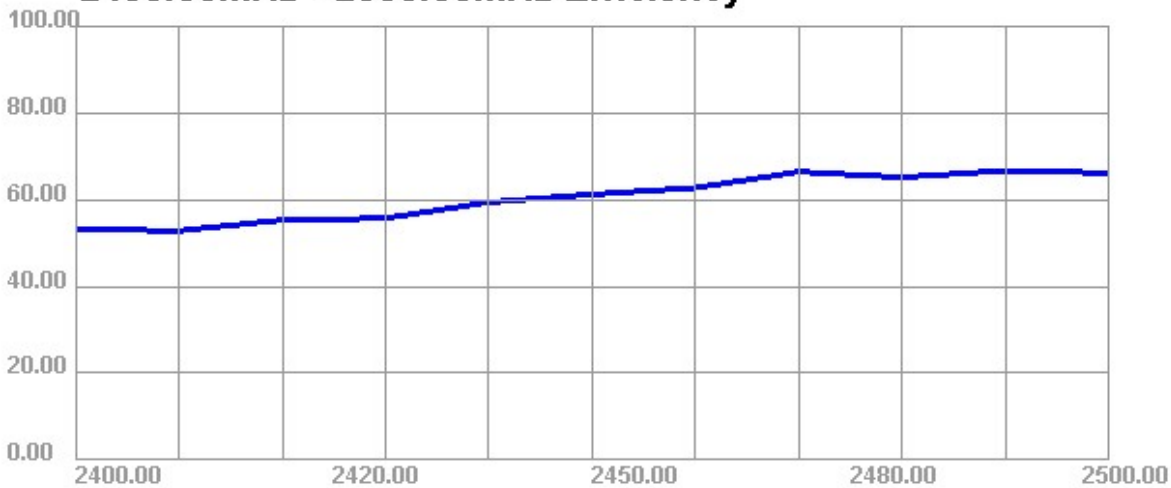
天线测试报告	802.11N Antenna Performance Table		
Channel	CH1	CH6	CH11
Max Power(dBm)	18.3	18.2	19.2
TRP(dBm)	16.6	16.7	17.9
Sensitivity(dBm)	-72.5	-72.2	-72.4
TIS(dBm)	-69.2	-69.7	-69.9

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	53.18	-2.74	3.09
2410	52.84	-2.77	2.99
2420	55.31	-2.57	2.97
2430	55.72	-2.54	2.88
2440	59.42	-2.26	3.06
2450	61.23	-2.13	3.16
2460	62.74	-2.02	3.23
2470	66.43	-1.78	3.3
2480	65.16	-1.86	3.06
2490	66.7	-1.76	2.83
2500	66.16	-1.79	2.83

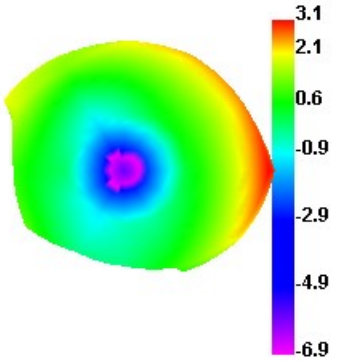
2400.00MHz - 2500.00MHz Gain



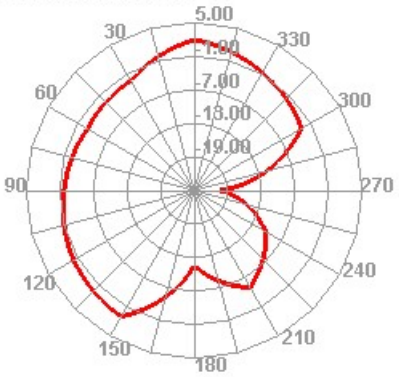
2400.00MHz - 2500.00MHz Efficiency



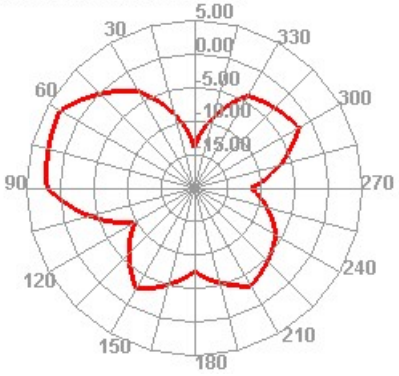
2400.000MHz



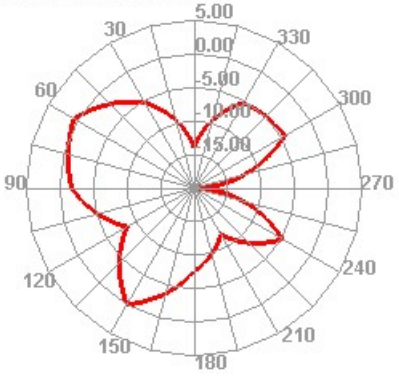
2400.000MHz H



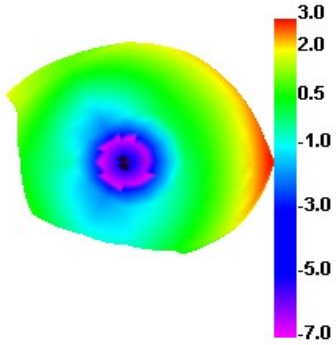
2400.000MHz E1



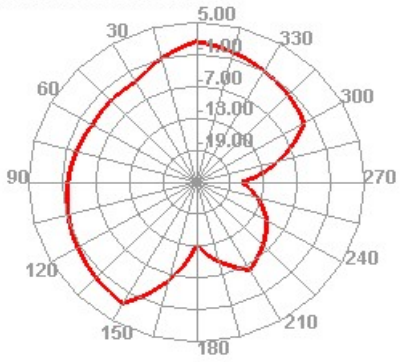
2400.000MHz E2



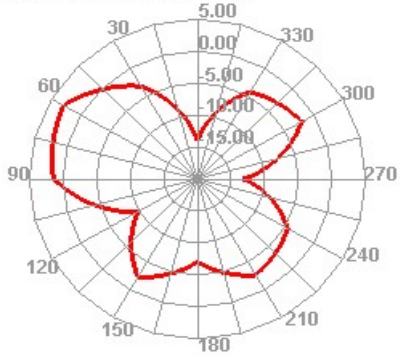
2410.000MHz



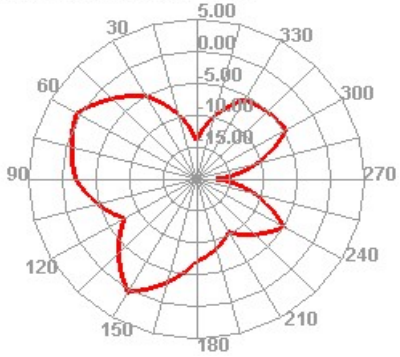
2410.000MHz H



2410.000MHz E1

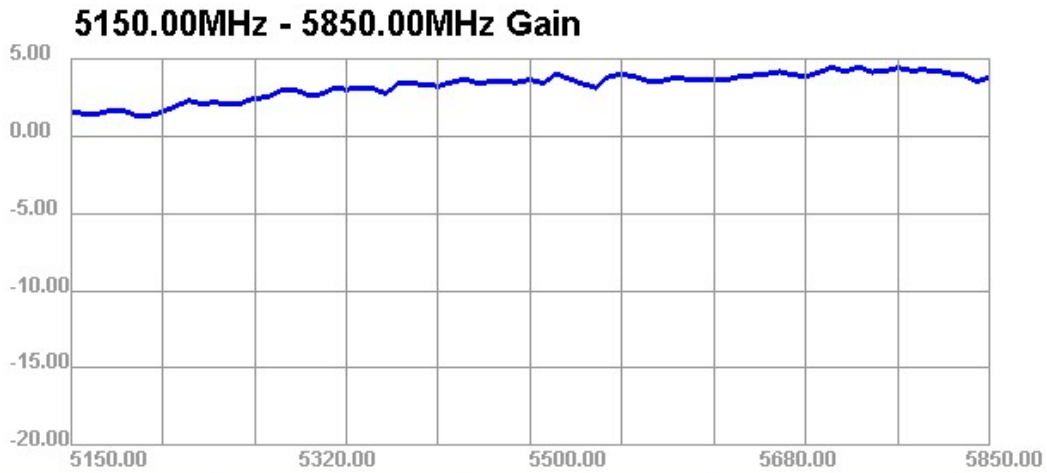


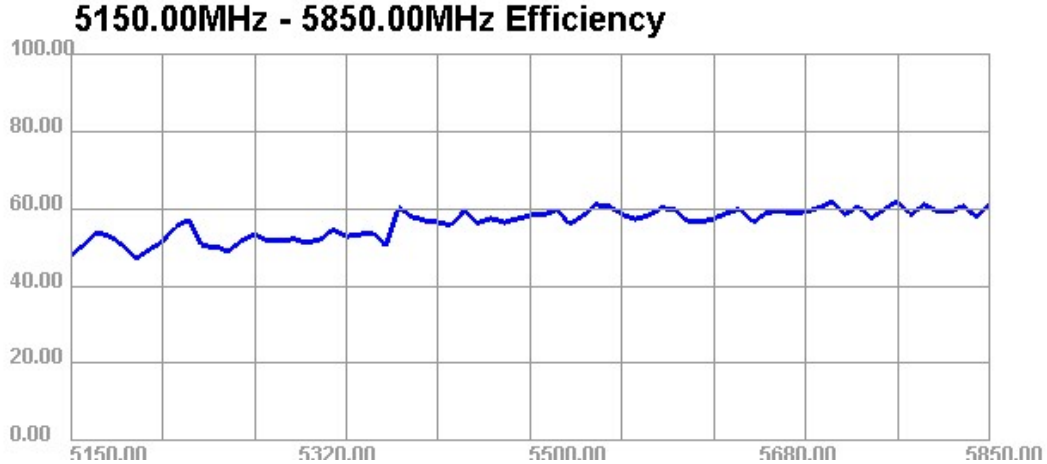
2410.000MHz E2



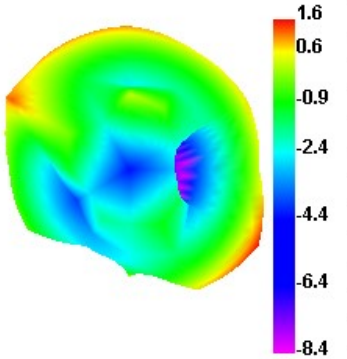
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	50.84	-3.2	2.55
5160	50.91	-2.95	2.44
5170	53.82	-2.69	2.46
5180	52.88	-2.77	2.64
5190	50.48	-2.97	2.66
5200	49.24	-3.26	2.32
5210	49.42	-3.06	2.33
5220	51.52	-2.88	2.56
5230	55.3	-2.57	2.93
5240	57.23	-2.42	2.28
5250	50.33	-2.98	2.09
5260	50.22	-2.99	2.17
5270	48.98	-3.1	2.03
5280	51.73	-2.86	2.11
5290	53.3	-2.73	2.46
5300	51.79	-2.86	2.49
5310	51.68	-2.87	2.94
5320	52.18	-2.83	3.01
5330	51.18	-2.91	2.68
5340	52.01	-2.84	2.68
5350	54.68	-2.62	3.09
5360	52.86	-2.77	3.01
5370	53.3	-2.73	3.09
5380	53.78	-2.69	3.11
5390	50.33	-2.98	2.71
5400	60.27	-2.2	3.47
5410	57.92	-2.37	3.4
5420	56.91	-2.45	3.31
5430	56.42	-2.49	3.23
5440	55.8	-2.53	3.46
5450	59.59	-2.25	3.69
5460	56.29	-2.5	3.43
5470	57.54	-2.4	3.5
5480	56.43	-2.48	3.49
5490	57.37	-2.41	3.47
5500	58.29	-2.34	3.63

5510	58.34	−2.34	3.42
5520	59.76	−2.24	4.01
5530	56.02	−2.52	3.7
5540	58.12	−2.36	3.37
5550	61.06	−2.14	3.13
5560	60.62	−2.17	3.87
5570	58.55	−2.32	3.98
5580	57.27	−2.42	3.82
5590	58.2	−2.35	3.56
5600	60.17	−2.21	3.55
5610	59.79	−2.23	3.79
5620	56.76	−2.46	3.68
5630	56.56	−2.47	3.7
5640	57.45	−2.41	3.6
5650	58.91	−2.3	3.62
5660	59.94	−2.22	3.88
5670	56.49	−2.48	3.92
5680	58.98	−2.29	4.02
5690	59.39	−2.26	4.15
5700	58.88	−2.3	3.96
5710	59.26	−2.27	3.85
5720	60.22	−2.2	4.1
5730	61.8	−2.09	4.46
5740	58.63	−2.32	4.15
5750	60.52	−2.18	4.48
5760	57.48	−2.4	4.14
5770	59.96	−2.22	4.19
5780	61.97	−2.08	4.41
5790	58.48	−2.33	4.24
5800	61.07	−2.14	4.27
5810	59.34	−2.27	4.2
5820	59.25	−2.27	4.03
5830	60.59	−2.18	3.98
5840	57.94	−2.37	3.53
5850	61.11	−2.14	3.79

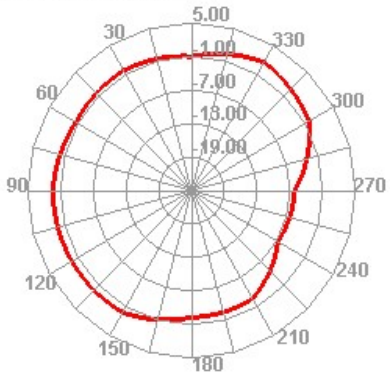

5150.00MHz - 5850.00MHz Gain
5.00
0.00
-5.00
-10.00
-15.00
-20.00
5150.00
5320.00
5500.00
5680.00
5850.00


5150.00MHz - 5850.00MHz Efficiency
100.00
80.00
60.00
40.00
20.00
0.00
5150.00
5320.00
5500.00
5680.00
5850.00

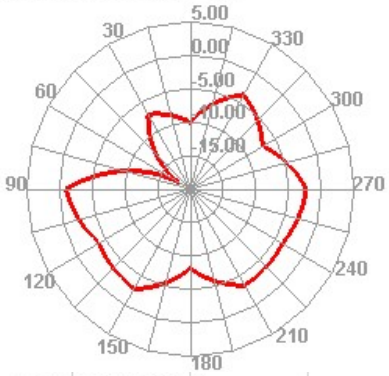
5150.000MHz



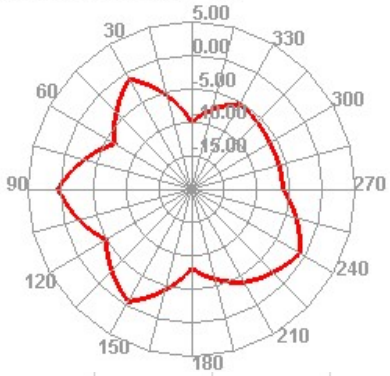
5150.000MHz H



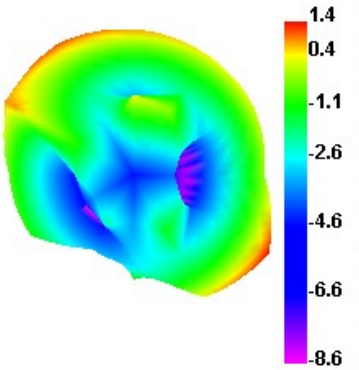
5150.000MHz E1



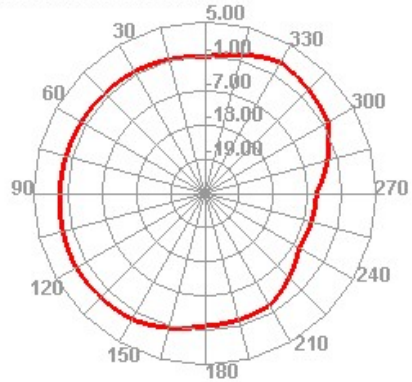
5150.000MHz E2



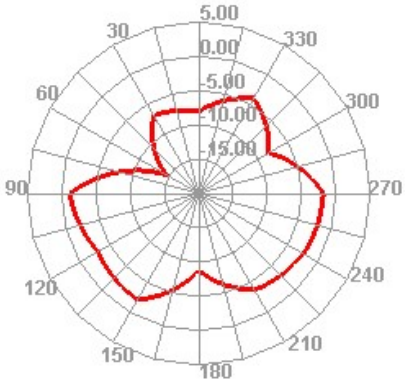
5160.000MHz



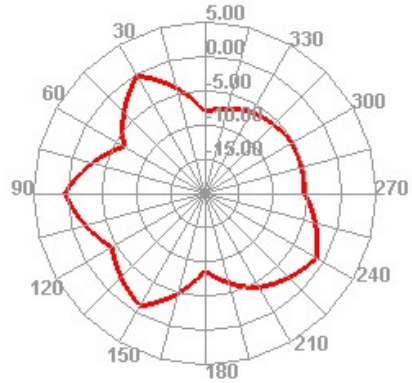
5160.000MHz H



5160.000MHz E1



5160.000MHz E2



6 Mechanical drawing