DJI Antenna Datasheet
WA150 antenna
2024-09-18

Revision history

Version	Change notes	Modificator	Date
V0.1	First draft.	Freeman.Deng	2024.09.02

DJI Antenna Datasheet

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	WA150 Ant		
2	Brand	DJI		
3	Operation Frequency	2.4~2.483GHz; 5.15-5.25GHz; 5.725~5.85GHz;		
4	Connector Type	Ipex-4		
5	Impedance	50ohm		
6	Efficiency	≥50%		
7	VSWR	≤2		
8	Polarization type	Linear		
9	3dB Beamwidth	Omnidirectional horizon		
10	Weight	1g		
11	Antenna type	Dipole		
12	Gain	2.4G/5.1G: 1dBi; 5/8G: 1.5dBi		
13	Manufacturer	Kunshan Innowave Communication Technology Co., Ltd. Building H, No. 55, Shengchuang Road, Yushan Town, Kunshan City, Jiangsu Province, China		

2、 Antenna Gain

3.1 SDR/WIFI antenna 1

Frequency	Efficiency	Gain(dBi)
2400MHz	62%	0.96179
2420MHz	58%	0.95465

2450MHz	59%	0.95479
2470MHz	56%	0.90767

Frequency	Efficiency	Gain(dBi)
5150MHz	57%	0.92303
5200MHz	50%	0.94971
5250MHz	53%	0.95188
Frequency	**Efficiency**	**Gain(dBi)**
5725MHz	60%	1.48728
5775MHz	61%	1.46493
5800MHz	61%	1.44863
5850MHz	56%	1.41608

3.2 SDR antenna 0

Frequency	Efficiency	Gain(dBi)
2400MHz	66%	0.92728
2420MHz	58%	0.95077
2450MHz	53%	0.92628
2470MHz	50%	0.98723
Frequency	**Efficiency**	**Gain(dBi)**
5150MHz	57%	0.97663
5200MHz	48%	0.98486
5250MHz	50%	0.93423

Frequency	Efficiency	Gain(dBi)
5725MHz	59%	1.48620
5775MHz	60%	1.48726
5800MHz	59%	1.48849
5850MHz	53%	1.39856

3.3 SDR/WIFI/BT antenna 3

Frequency	Efficiency	Gain(dBi)
2400MHz	55%	0.93796
2420MHz	50%	0.92015

2450MHz	46%	0.94461
2470MHz	43%	0.98573
Frequency	**Efficiency**	**Gain(dBi)**
5150MHz	34%	0.96085
5200MHz	36%	0.86751
5250MHz	44%	0.85989

Frequency	**Efficiency**	**Gain(dBi)**
5725MHz	51%	1.42310
5775MHz	56%	1.14226
5800MHz	58%	1.37016
5850MHz	56%	1.14408

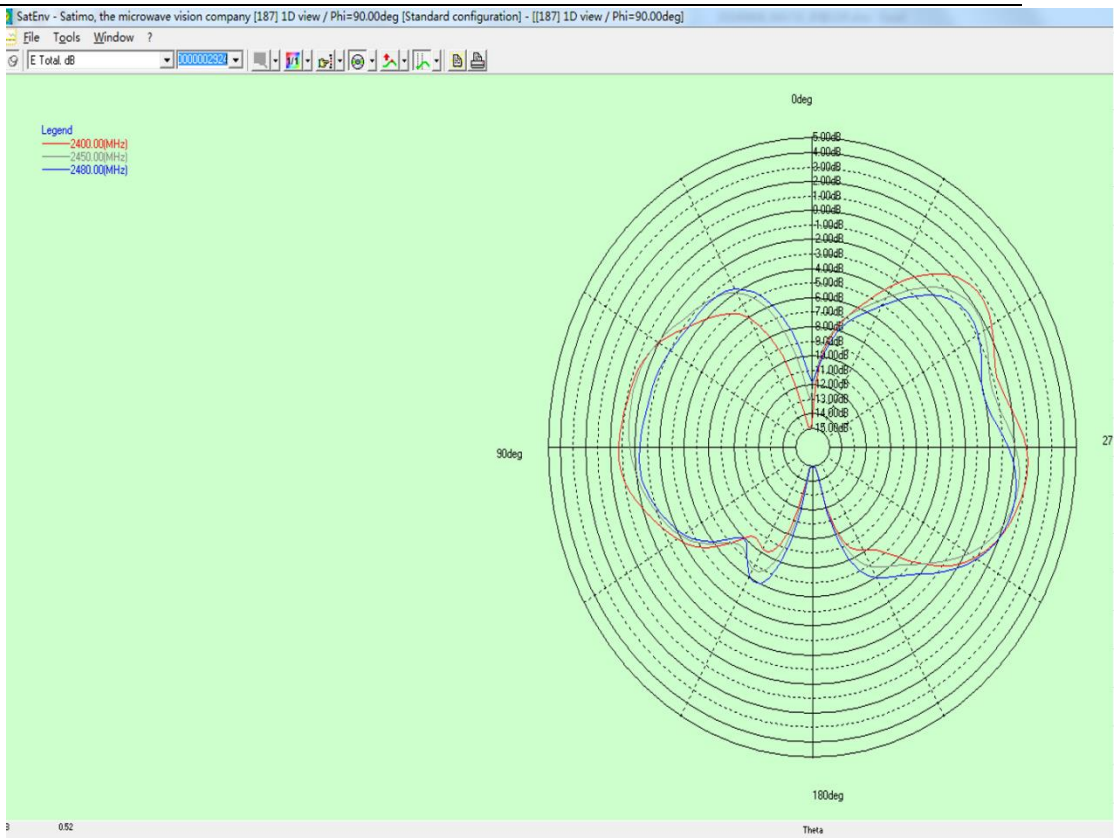
3.4 SDR antenna 2

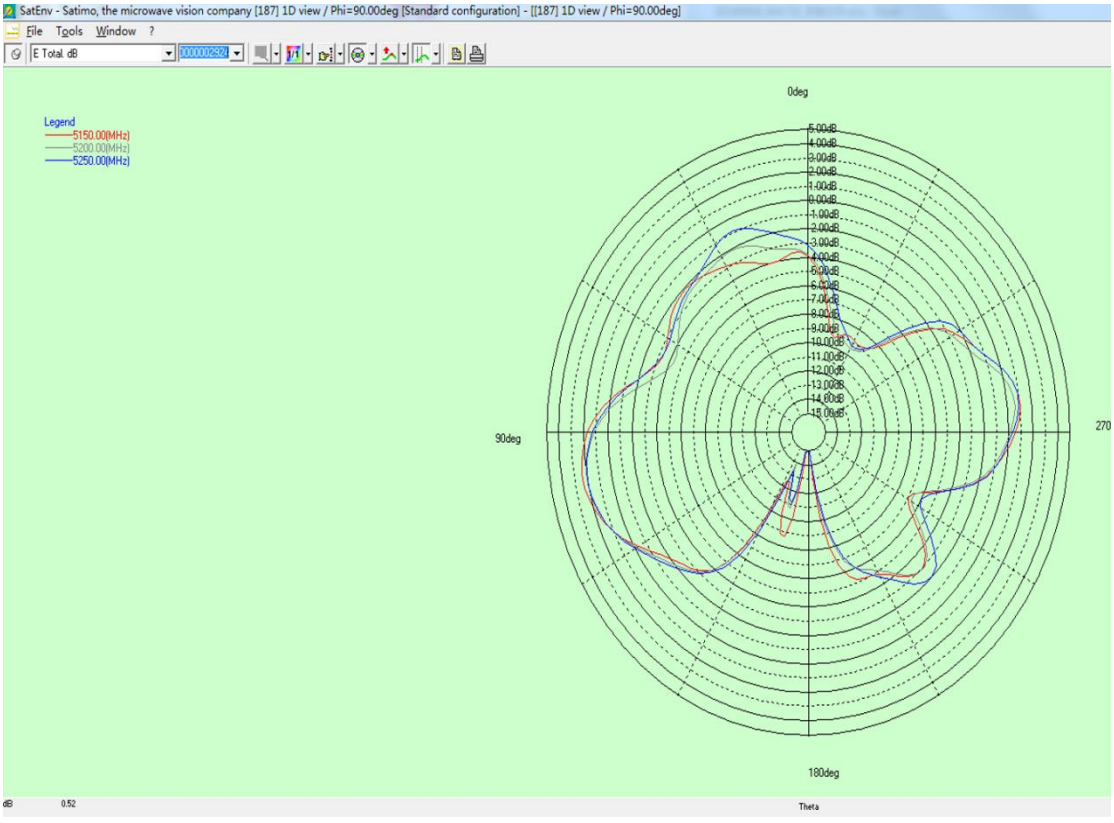
Frequency	**Efficiency**	**Gain(dBi)**
2400MHz	45%	0.94518
2420MHz	56%	0.96221
2450MHz	49%	0.99034
2470MHz	46%	0.89381
Frequency	**Efficiency**	**Gain(dBi)**
5150MHz	36%	0.98272
5200MHz	37%	0.95104
5250MHz	36%	0.6971

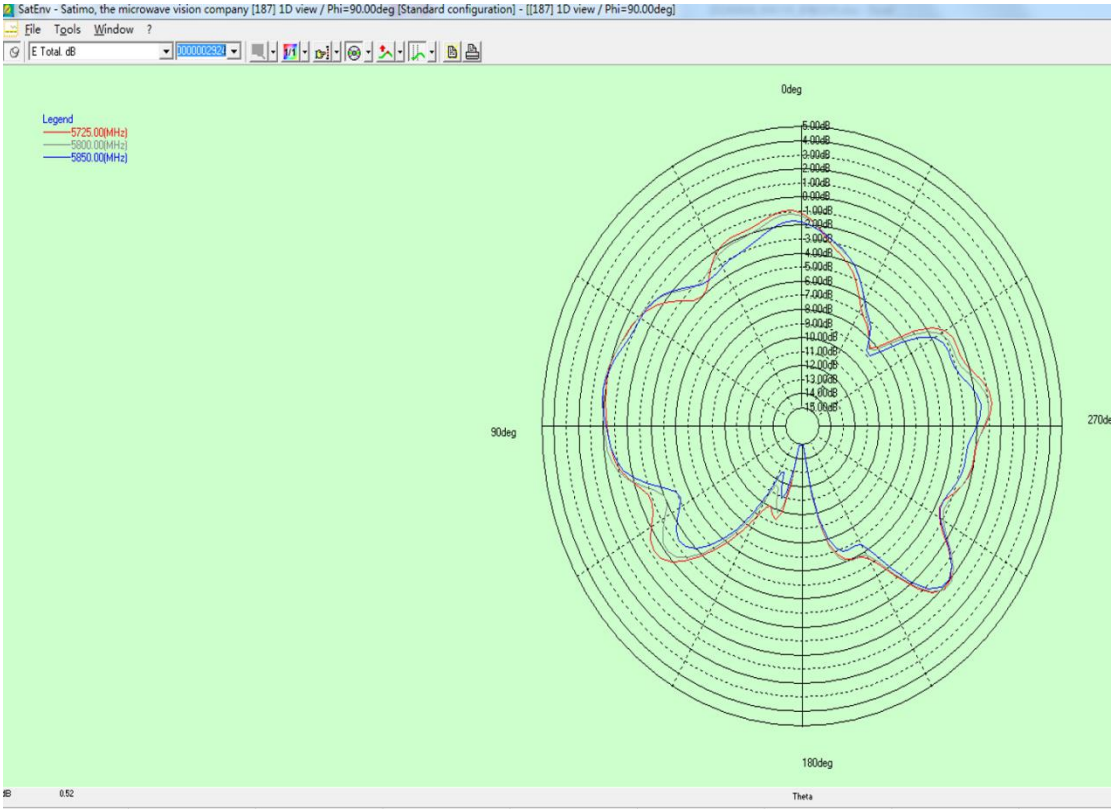
Frequency	**Efficiency**	**Gain(dBi)**
5725MHz	41%	1.43682
5775MHz	47%	1.34618
5800MHz	50%	1.31086
5850MHz	49%	1.47647

3、 Radiation Pattern 4.1

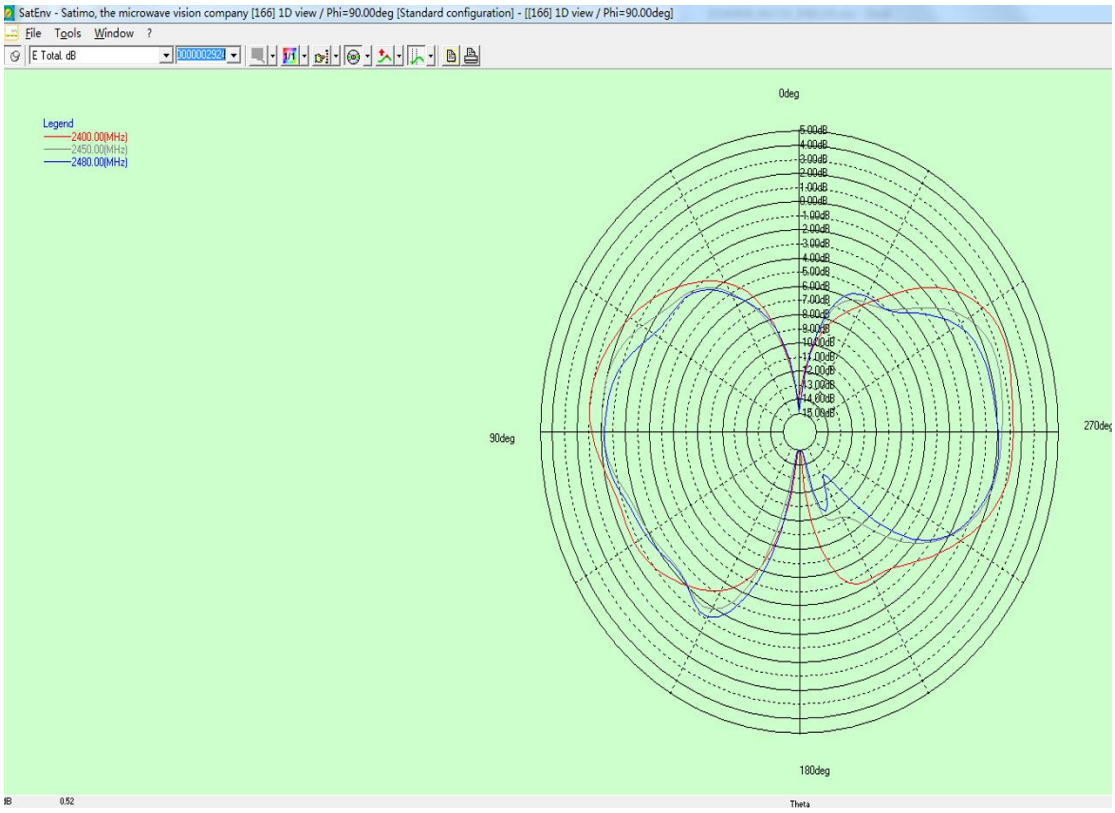
SDR/WIFI antenna 1

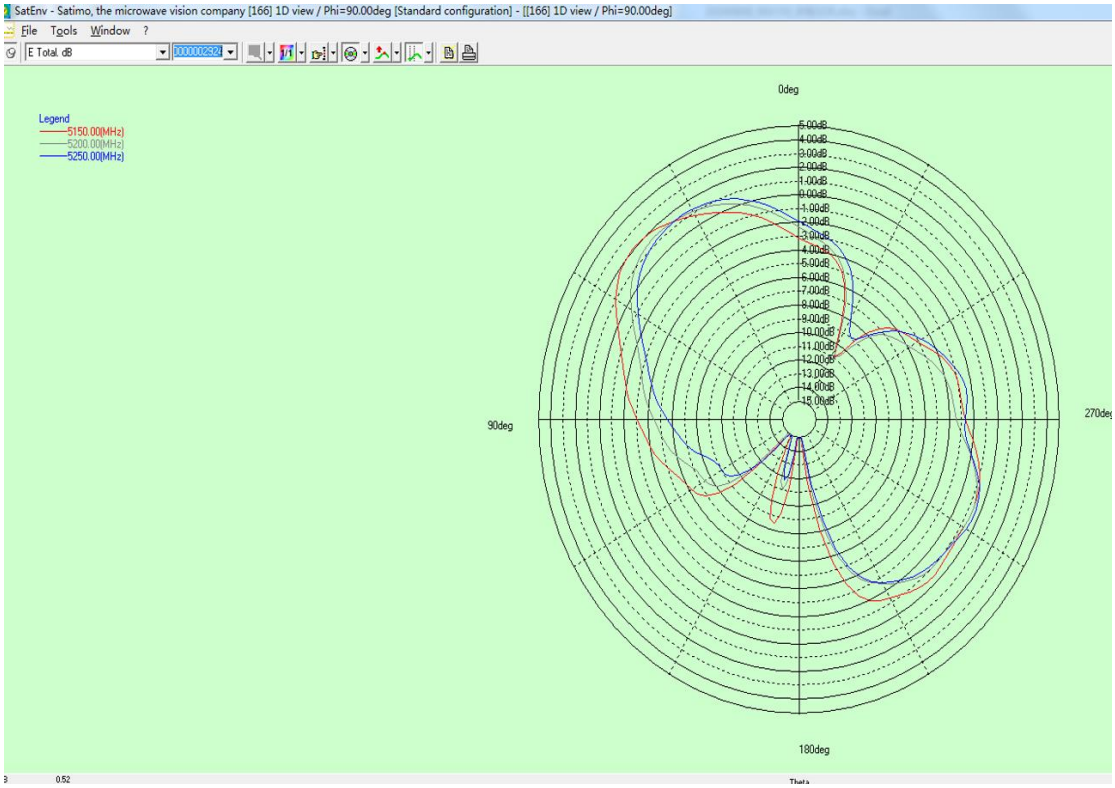

SatEnv - Satimo, the microwave vision company [187] 1D view / Phi=90.00deg [Standard configuration] - [[187] 1D view / Phi=90.00deg]
File Tools Window ?
E Total dB
Legend
2400.00(MHz)
2450.00(MHz)
2480.00(MHz)
0deg
90deg
180deg
Theta

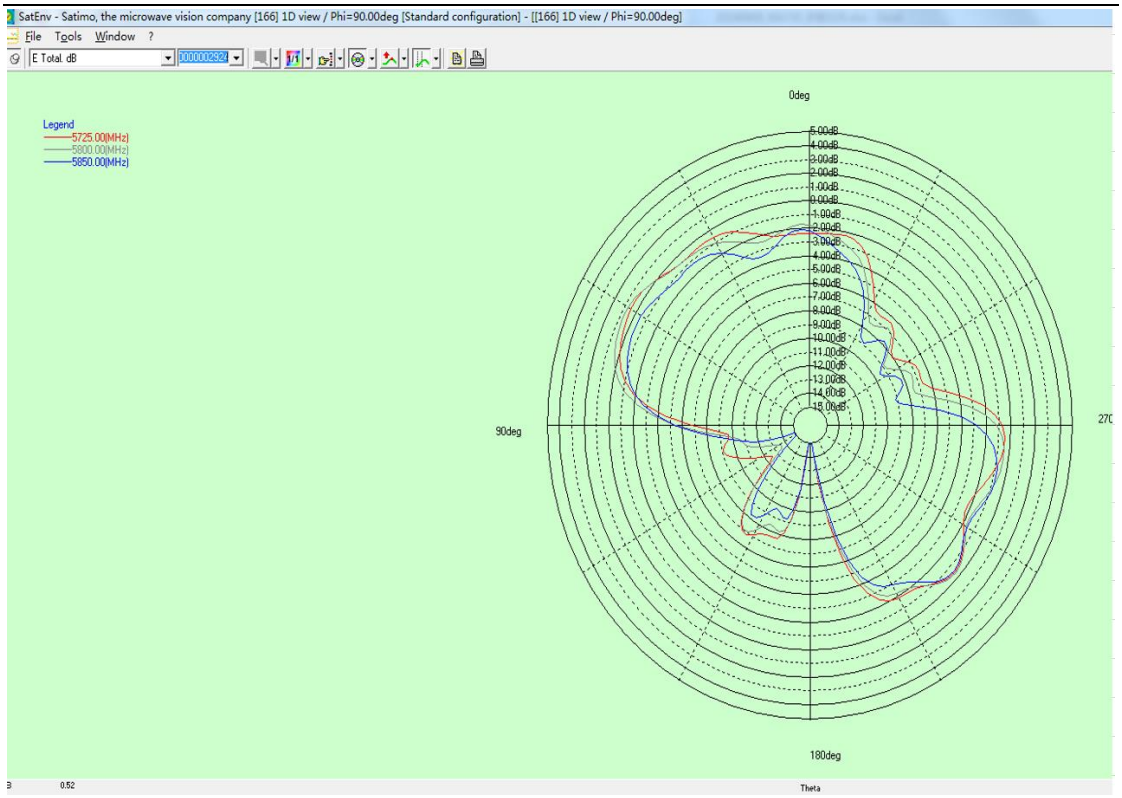

SatEnv - Satimo, the microwave vision company [187] 1D view / Phi=90.00deg [Standard configuration] - [[187] 1D view / Phi=90.00deg]
File Tools Window ?
E Total dB
Legend
5150.00(MHz)
5200.00(MHz)
5250.00(MHz)
0deg
90deg
180deg
Theta



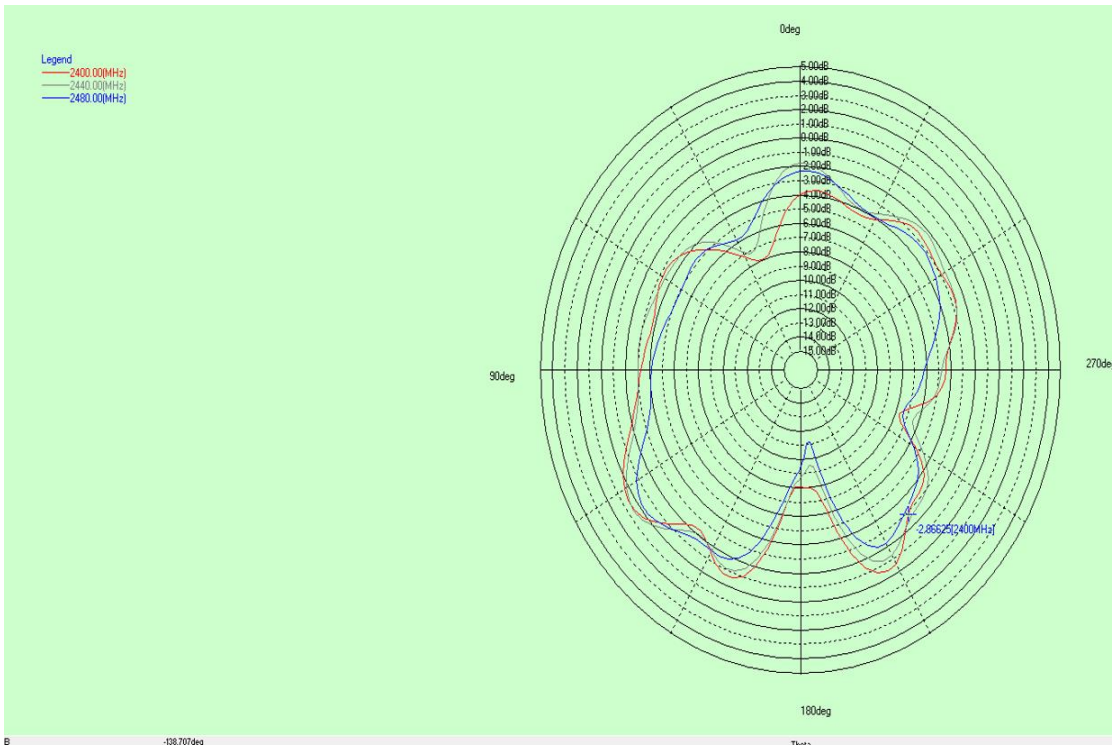
4.2 SDR antenna 0

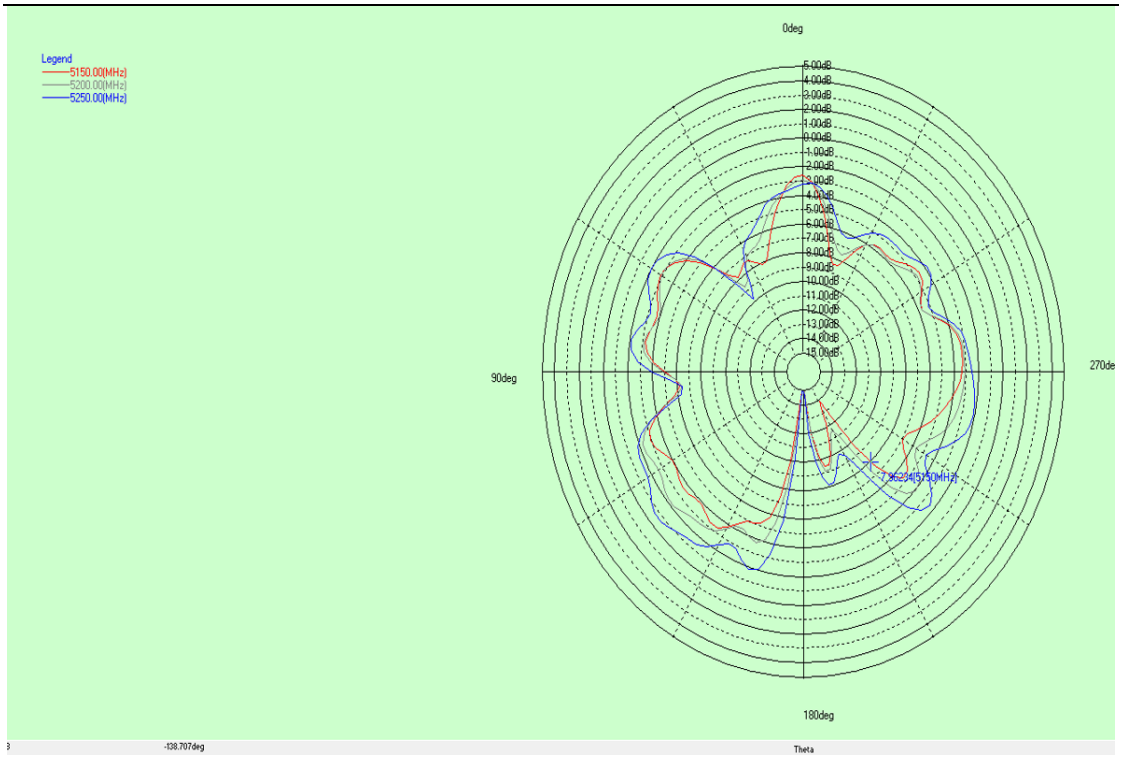

SatEnv - Satimo, the microwave vision company [166] 1D view / Phi=90.00deg [Standard configuration] - [[166] 1D view / Phi=90.00deg]
File Tools Window ?
E Total dB
Legend
2400.00(MHz)
2450.00(MHz)
2480.00(MHz)
0deg
90deg
270deg
180deg
Theta

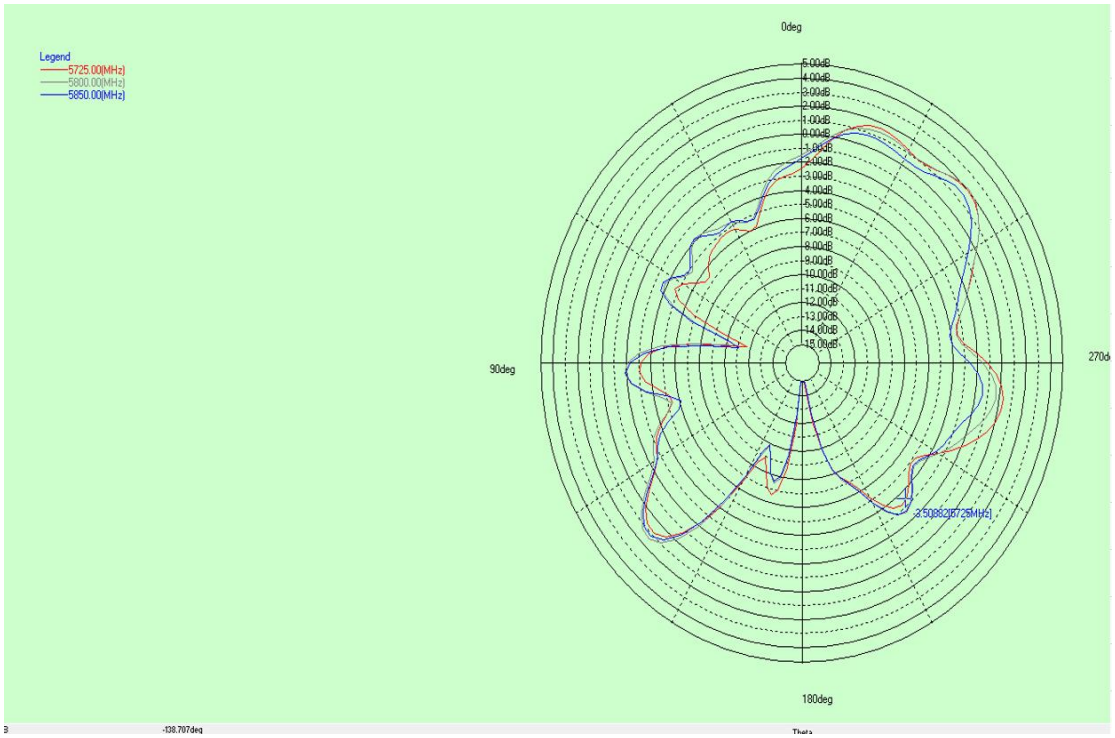

SatEnv - Satimo, the microwave vision company [166] 1D view / Phi=90.00deg [Standard configuration] - [[166] 1D view / Phi=90.00deg]
File Tools Window ?
E Total dB
Legend
5150.00(MHz)
5200.00(MHz)
5250.00(MHz)
0deg
90deg
270deg
180deg
Theta



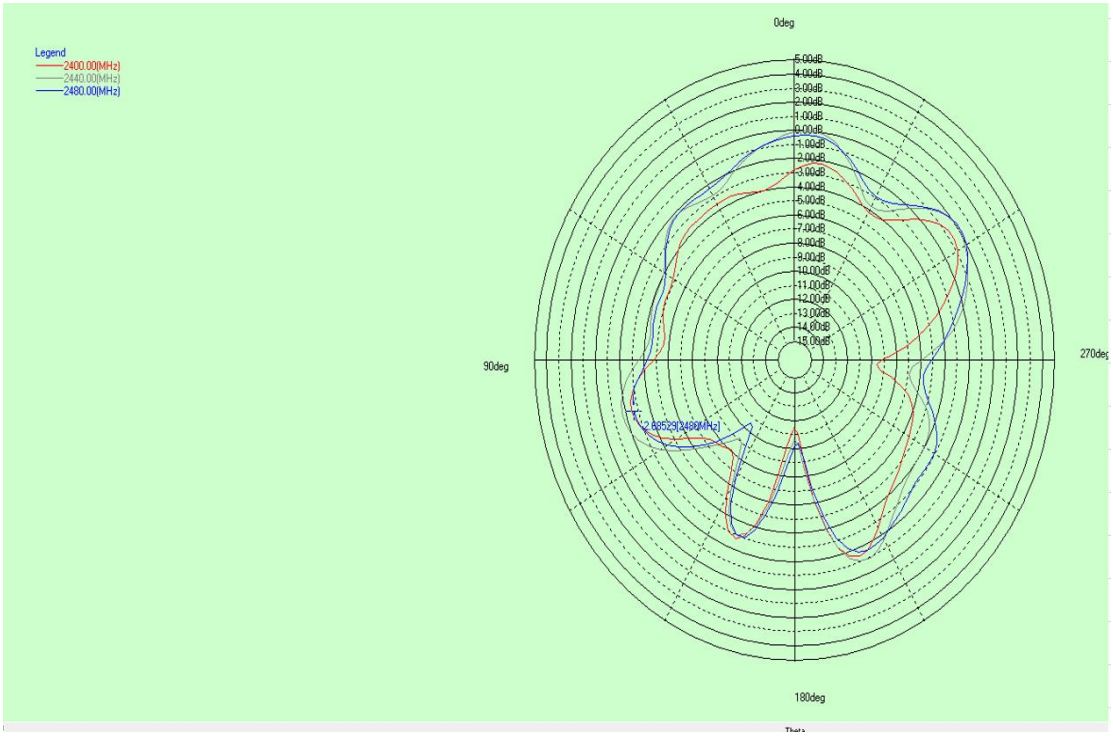
4.3 SDR/WIFI/BT antenna 3

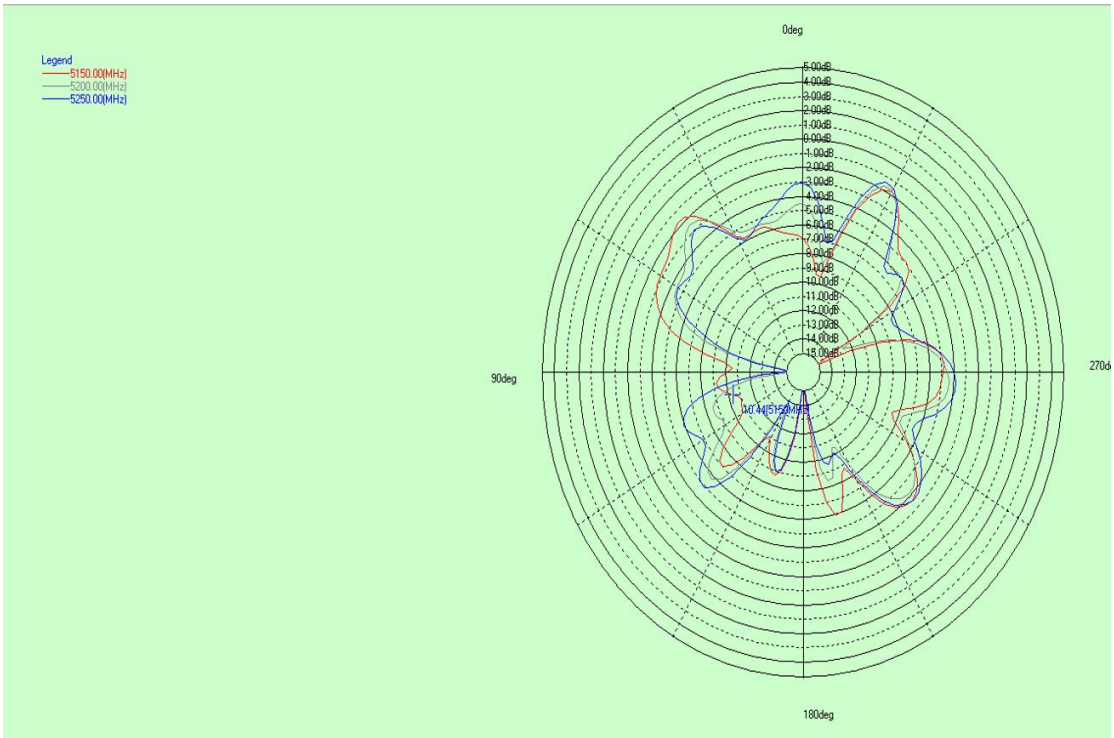


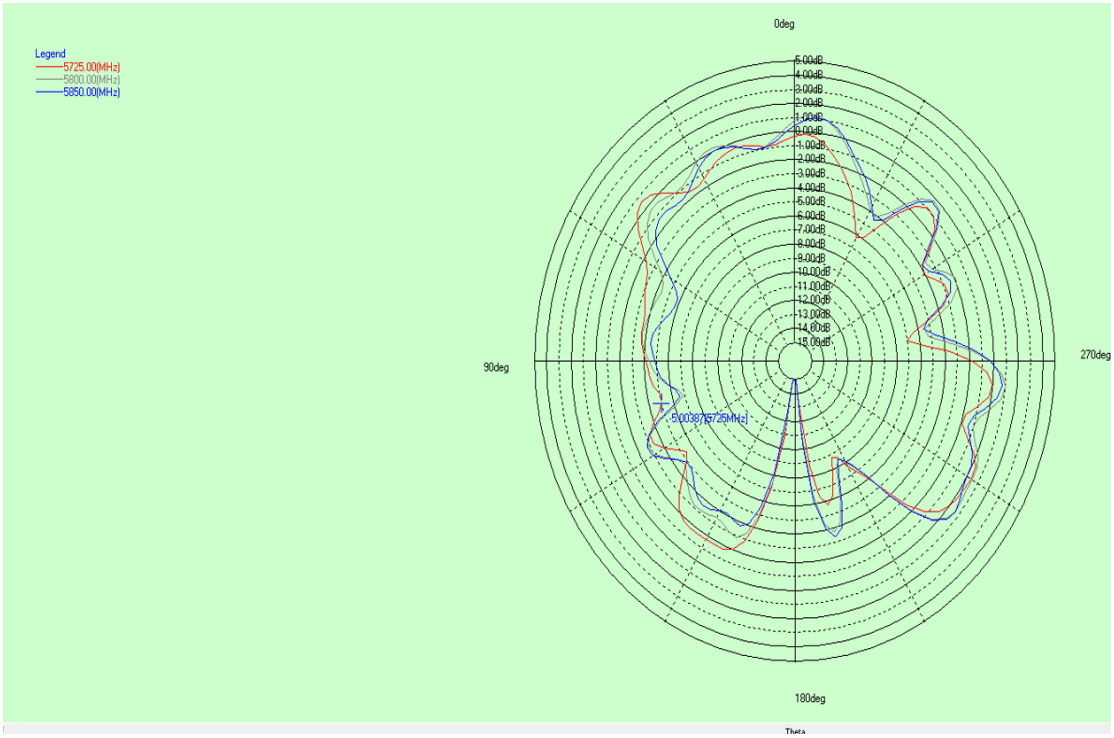




4.4 SDR antenna 2

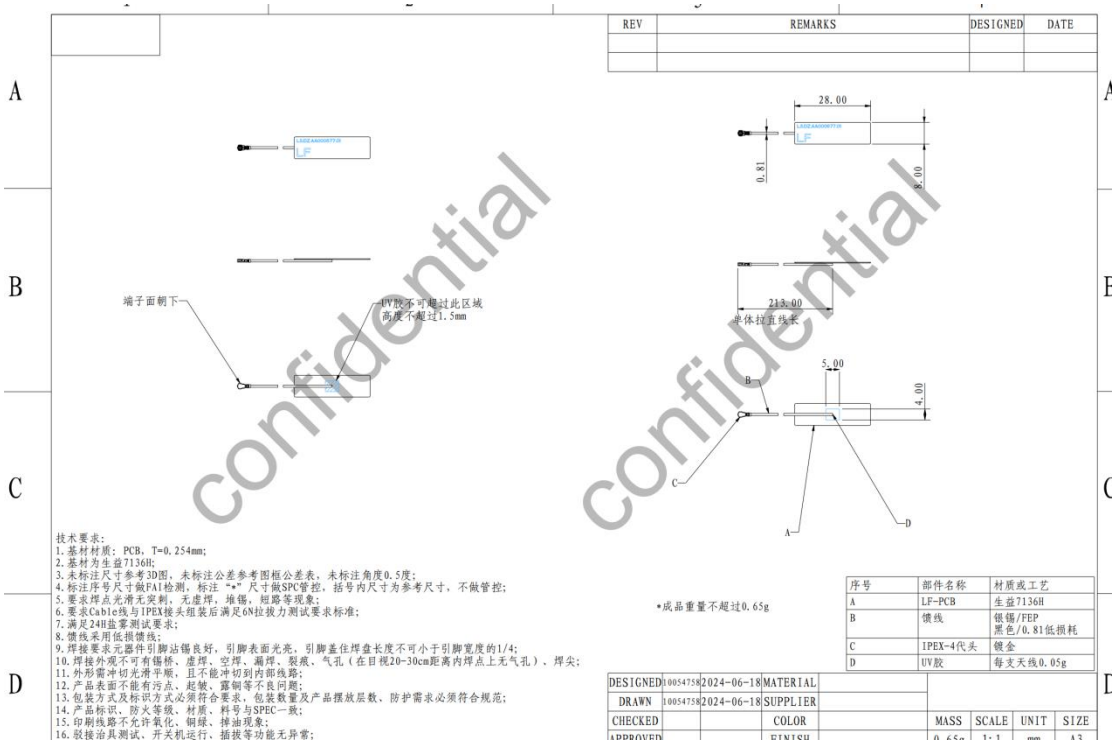

Legend
2400.00(MHz)
2440.00(MHz)
2480.00(MHz)
0deg
90deg
270deg
180deg
5.00dB
4.00dB
3.00dB
2.00dB
1.00dB
0.00dB
-1.00dB
-2.00dB
-3.00dB
-4.00dB
-5.00dB
-6.00dB
-7.00dB
-8.00dB
-9.00dB
-10.00dB
-11.00dB
-12.00dB
-13.00dB
-14.00dB
-15.00dB


Legend
5150.00(MHz)
5200.00(MHz)
5250.00(MHz)
0deg
90deg
180deg
5.00dB
4.00dB
3.00dB
2.00dB
1.00dB
0.00dB
-1.00dB
-2.00dB
-3.00dB
-4.00dB
-5.00dB
-6.00dB
-7.00dB
-8.00dB
-9.00dB
-10.00dB
-11.00dB
-12.00dB
-13.00dB
-14.00dB
-15.00dB



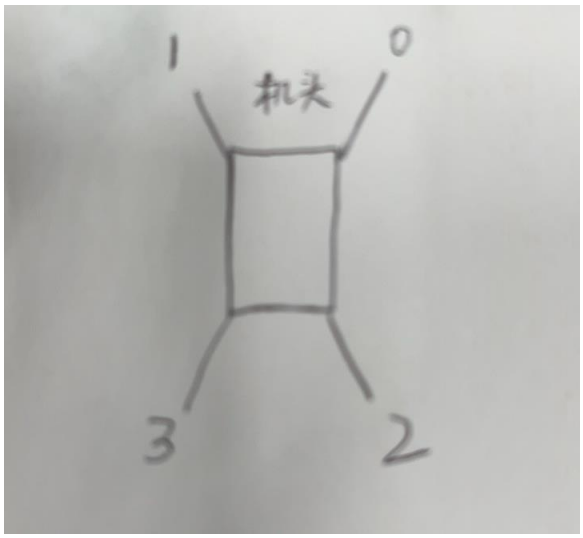
4、 Structure drawing

Antenna 0/1:



Antenna 2/3:


REV
REMARKS
DESIGNED
DATE
28.00
11.00
手撕位
单体拉直线长
0.10
105.00
4.00
UV胶不超过此区域
端子面朝下
背面背胶
背胶开窗区域
confidential
confidential
技术要求：
1.基材材质：FPC，T=0.1mm；
2.未标注尺寸参考3D图，未标注公差参考图框公差表，未标注角度0.5度；
3.标注序号尺寸做FAI检测，标注“*”尺寸做SPC管控，括号内尺寸为参考尺寸，不做管控；
4.要求焊点光滑无空洞，无虚焊，堆锡，短路等现象；
5.要求Cable线与IPEX接头组装后满足6N拉拔力测试要求标准；
6.满足24H盐雾测试要求；
7.馈线采用低损馈线；
8.焊接要求元器件引脚沾锡良好，引脚表面光亮，引脚盖住焊盘长度不可小于引脚宽度的1/4；
9.焊接外观不可有锡桥、虚焊、空焊、漏焊、裂痕、气孔（在目视20-30cm距离内焊点上无气孔）、焊尖；
10.外形需冲切光滑平顺，且不能冲切到内部线路；
*重量不超过0.39g(不含离型纸)
序号
部件名称
材质或工艺
A
LB-FPC
B
馈线
银镀/FEP
灰色/0.81低损耗
C
IPEX-4代头
镀金
D
UV胶
每支天线0.05g
DESIGNED
2024-06-18
MATERIAL


1
0
机头
3
2