1. Antenna Specification/天线标准

Antenna Specification/天线技术参数			
Electrical Specification/电气特性			
Item/目录	**Specification/规格**		**Comment/备注**
Freq. Range/频段范围	2400MHz-2500MHz/5150MHz-5850MHz		
Impedance/阻抗	50 (Ω)		
VSWR/驻波比	<14.0	<8.0	
Directional/辐射方向	Omni directional/全向辐射		
Polarization/极化形式	Vertical polarization/垂直极化		
Peak Gain/峰值增益	-3.02dBi	4.07dBi	
Test condition/测试条件	passive test（无源测试）		
Total Efficiency/无源效率	10%	15%	
Mechanical Specification/机械指标			
Antenna type/天线类型	FPC 天线		
Connector Type/连接器类型	USS RF PLUG 1 代端子		
RF Cable Type/射频线型号	USS RF Coaxial Cable,32AWG D=1.13(S+T)黑色		
Connector Torque Test/连接器扭力	N/A		
Connector Pull Test/连接器拉力	≥1.0Kgf		
Salt Spray/盐雾测试	24 (H)		
EnvironmentalSpecification /环境指标			
Operating temp/工作温度	-40℃ ~ +75℃		
Storage temp/存储温度	-40℃ ~ +75℃		

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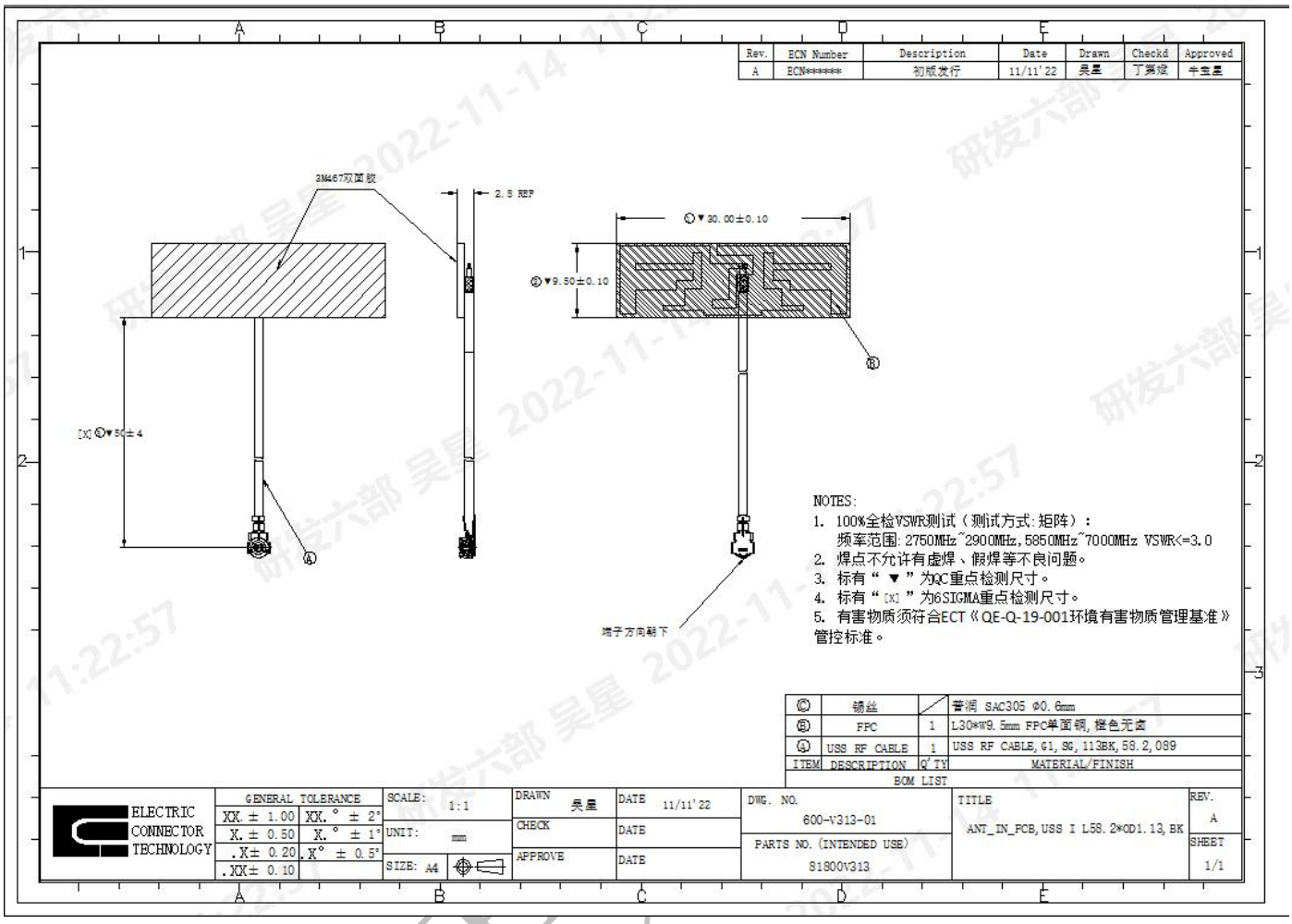
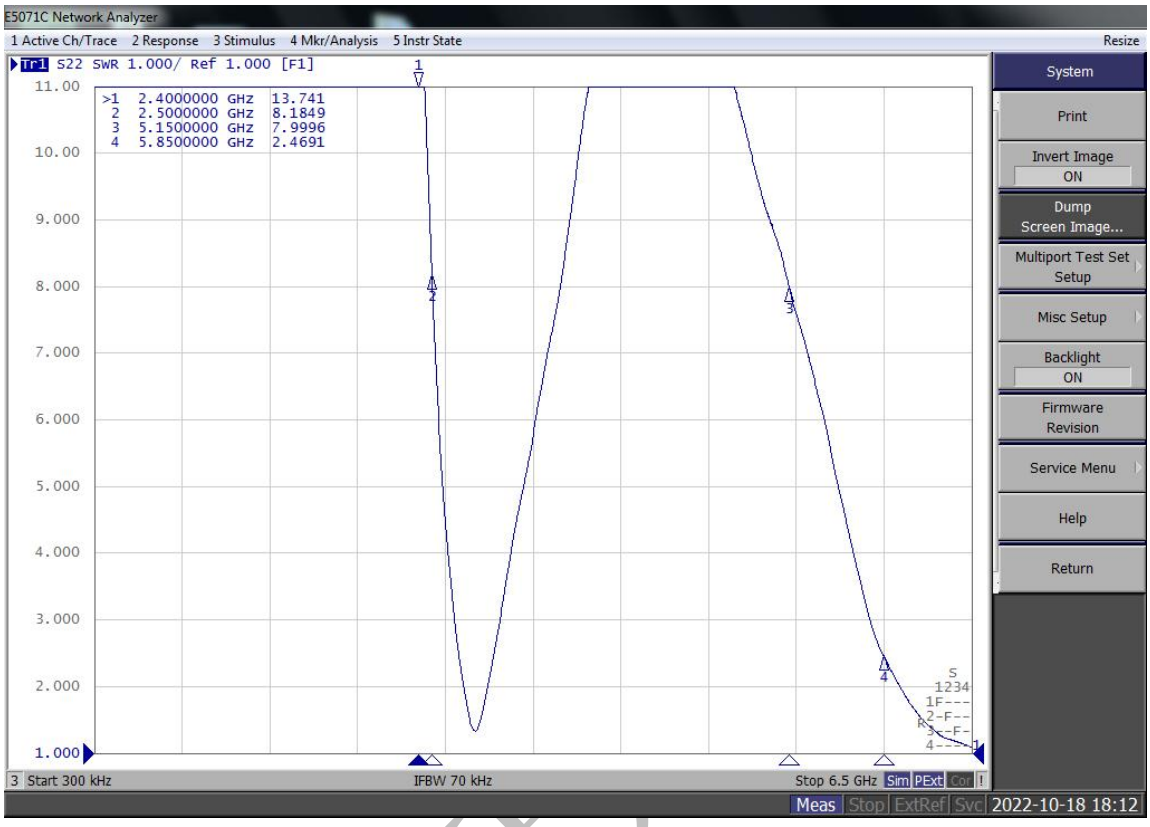
2. Antenna Picture/天线图片

3. DWG/工程图纸


Rev. | ECN Number | Description | Date | Drawn | Checkd | Approved
A | ECN******* | 初版发行 | 11/11'22 | 吴星 | 丁雯斌 | 牛金星
2M467双面胶
2.5 REF
Ⓒ▼30.00±0.10
Ⓑ▼9.50±0.10
[X] Ⓐ▼50±4
端子方向朝下
NOTES:
1. 100%全检VSWR测试（测试方式:矩阵）:
频率范围:2750MHz~2900MHz,5850MHz~7000MHz VSWR<=3.0
2. 焊点不允许有虚焊、假焊等不良问题。
3. 标有“ ▼ ”为QC重点检测尺寸。
4. 标有“ [X] ”为6SIGMA重点检测尺寸。
5. 有害物质须符合ECT《QE-Q-19-001环境有害物质管理基准》管控标准。
Ⓒ 锡丝 普调 SAC305 Φ0.6mm
Ⓑ FPC 1 L30*W9.5mm FPC单面铜,橙色无盐
Ⓐ USS RF CABLE 1 USS RF CABLE,G1,SG,113BK,58.2,089
ITEM DESCRIPTION Q'TY MATERIAL/FINISH
BOM LIST
ELECTRIC CONNECTOR TECHNOLOGY
GENERAL TOLERANCE
XX.± 1.00 XX.° ± 2°
X.± 0.50 X.° ± 1°
.X± 0.20 .X° ± 0.5°
.XX± 0.10
SCALE: 1:1
UNIT: mm
SIZE: A4
DRAWN 吴星 DATE 11/11'22
CHECK DATE
APPROVE DATE
DWG. NO. 600-V313-01
PARTS NO. (INTENDED USE) 81800V313
TITLE ANT_IN_PCB,USS I L58.2*OD1.13,BK
REV. A
SHEET 1/1

4. Antenna test result/测试结果

4.1Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比



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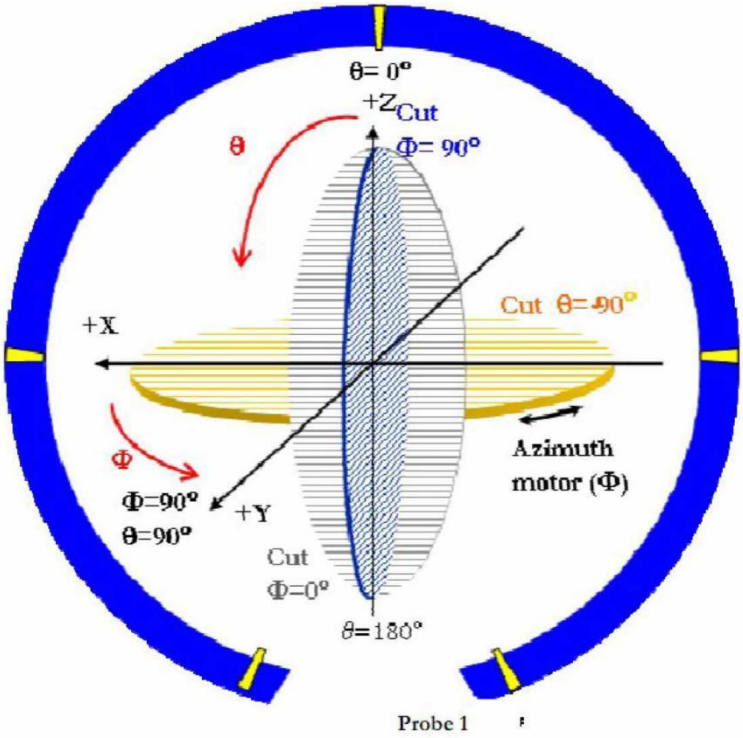
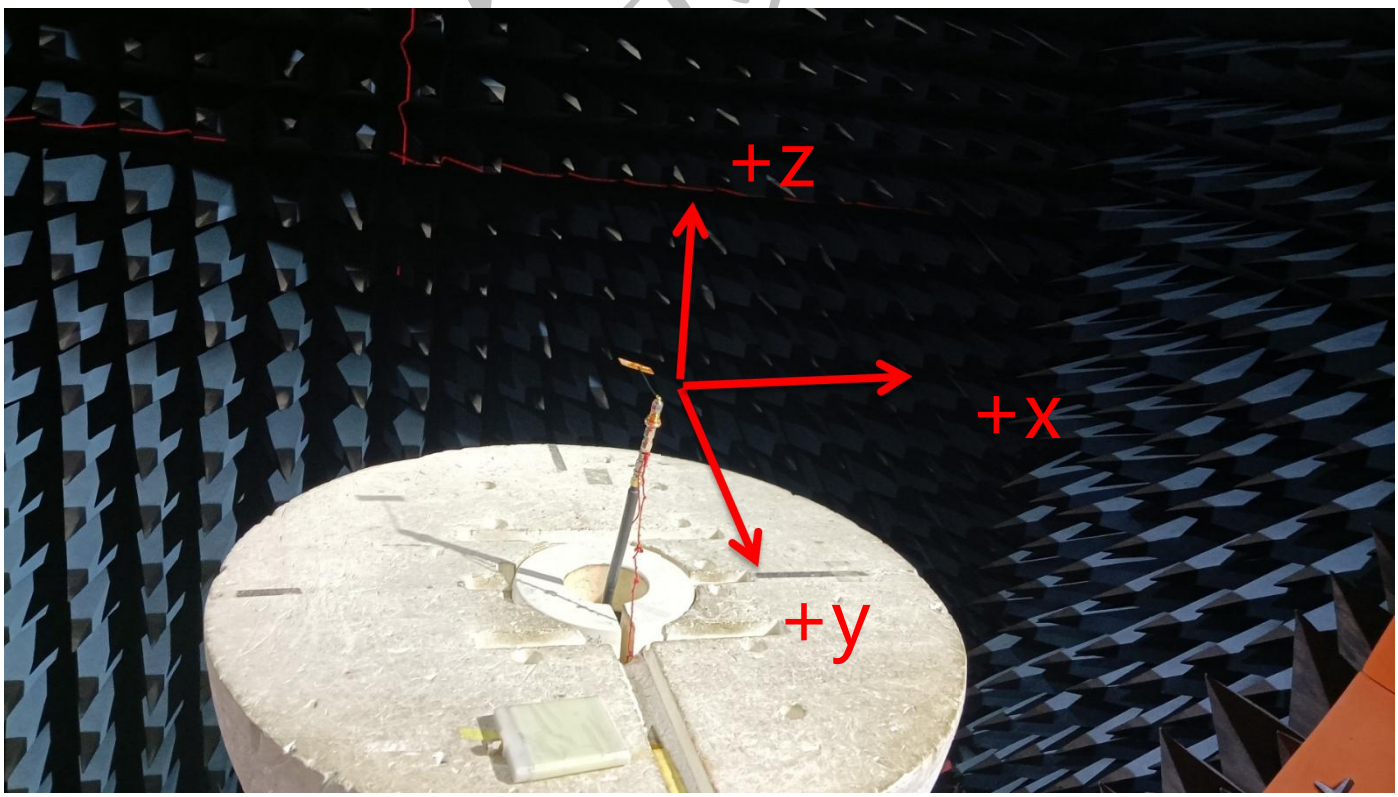
4.2The gain and total efficiency test/增益和效率测试

4.2.1 The definition of coordinate system/坐标系定义-Satimo SG24



The coordinate system of Chamber/暗室坐标系



The production test position/天线测试放置位置

4.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果

2400MHz-2500MHz

Frequency	Efficiency(%)	Gain (dBi)
2400MHz	14%	-5.48
2405MHz	14%	-5.13
2410MHz	15%	-4.87
2415MHz	17%	-4.55
2420MHz	17%	-4.39
2425MHz	18%	-4.48
2430MHz	18%	-4.69
2435MHz	18%	-4.66
2440MHz	18%	-4.65
2445MHz	18%	-4.60
2450MHz	18%	-4.58
2455MHz	19%	-4.45
2460MHz	20%	-4.15
2465MHz	22%	-3.68
2470MHz	23%	-3.37
2475MHz	24%	-3.15
2480MHz	25%	-3.10
2485MHz	25%	-3.02
2490MHz	25%	-3.11
2495MHz	24%	-3.25
2500MHz	23%	-3.23
AVG	20%	-4.12

5150MHz-5850MHz

Frequency	Efficiency(%)	Gain (dBi)
5150MHz	21%	-3.24
5200MHz	18%	-3.89
5250MHz	20%	-3.01
5300MHz	24%	-2.08
5350MHz	25%	-1.92
5400MHz	39%	0.16
5450MHz	31%	-0.70
5500MHz	38%	0.19
5550MHz	38%	0.29

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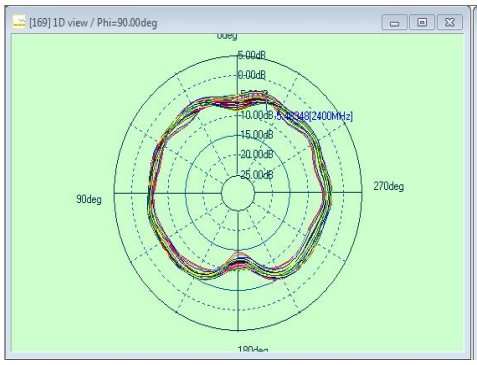
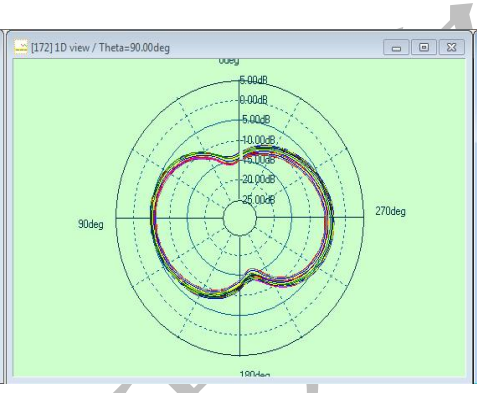
5600MHz	40%	0.74
5650MHz	54%	2.24
5700MHz	54%	2.43
5750MHz	68%	3.49
5800MHz	60%	3.20
5850MHz	70%	4.07
AVG	40%	0.13

4.2.3The antenna radiation pattern(2D)/天线辐射方向图（2D）

2400MHz -2500MHz



XOY



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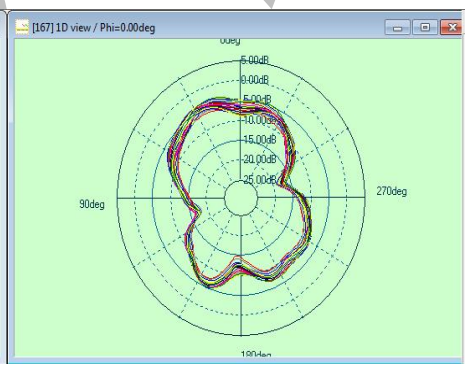

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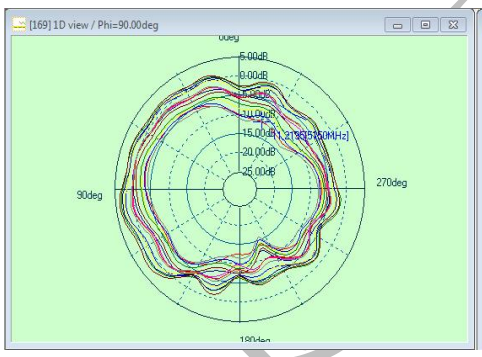
5150MHz -5850MHz



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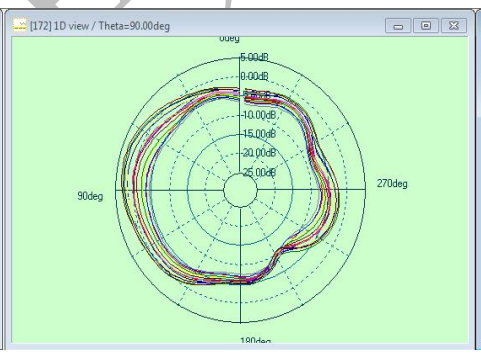

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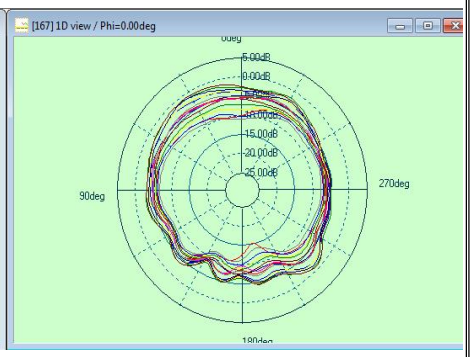

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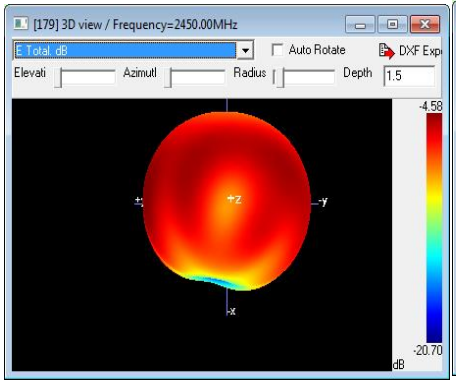
4.2.4The antenna radiation pattern(3D)/天线辐射方向图（3D）

Frequency/频点 2450MHz



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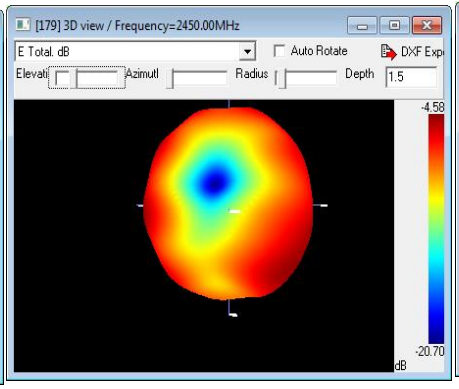

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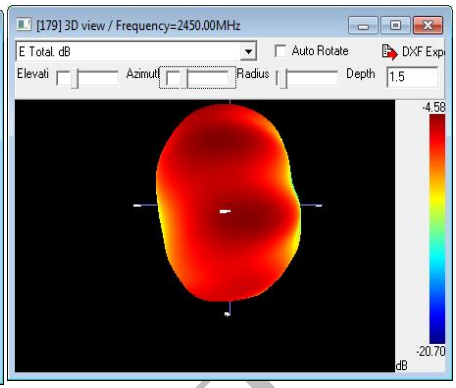

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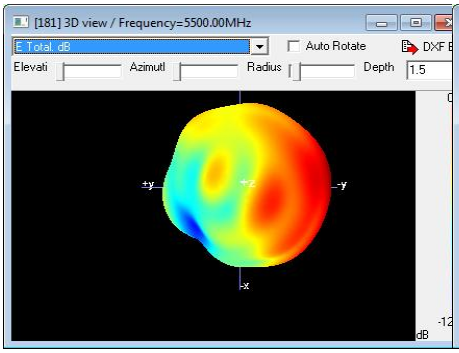
Frequency/频点 5500MHz



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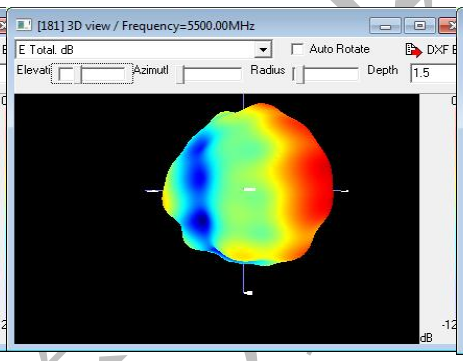

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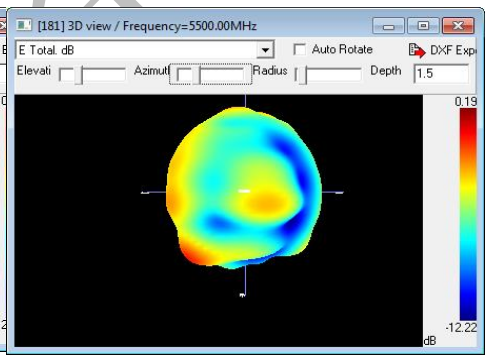

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