



Product Specification

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81800U252

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1. Antenna Specification/天線標準

Antenna Specification/天線技術參數

Electrical Specification/電氣特性

Item/目錄	Specification/規格		Comment/備註
Freq. Range/頻段範圍	2400-2500&5150-5850(MHz)		
Impedance/阻抗	50 (Ω)		
VSWR/駐波比	2400-2500&5150-5850(MHz) ≤2.0		
Directional/輻射方向	Omni directional		
Polarization/極化形式	Vertical		
Peak Gain/峯值增益	2.75dBi	3.44dBi	
Test condition/測試條件	passive test (無源測試)		
Total Efficiency/無源效率	2400-2500&5150-5850(MHz) > 60%		

Mechanical Specification/機械指标

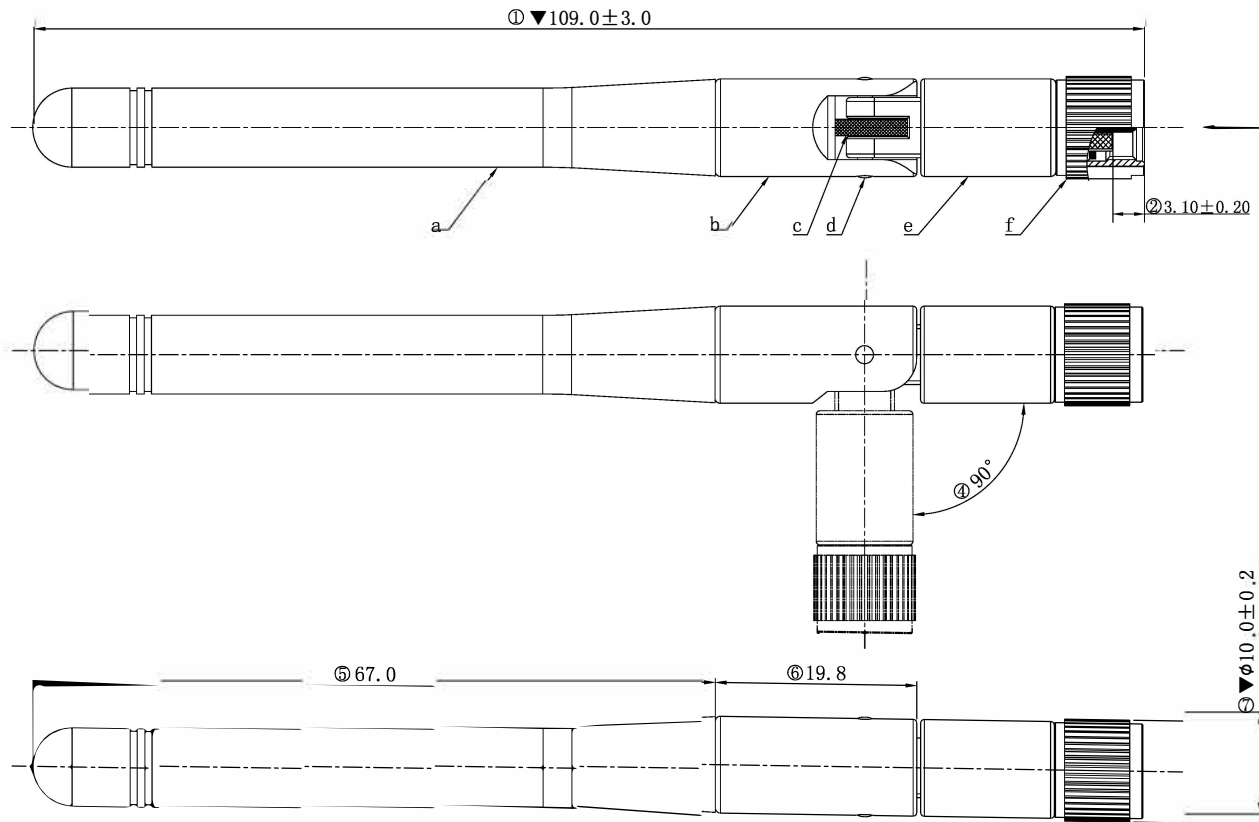
Antenna type/天線類型	膠棒天線/ Glue stick antenna		
Connector Type/連接器類型	SMA-J(公頭公針)		
RF Cable Type/射頻線型號	RG178		
Connector Torque Test/連接器扭力	N/A		
Connector Pull Test/連接器拉力	≥3.0Kgf		
Salt Spray/鹽霧測試	48 (H)		

Environmental Specification /環境指標

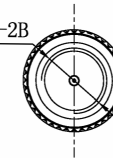
Operating temp/工作溫度	-40°C ~ +75°C		
Storage temp/存儲溫度	-40°C ~ +75°C		

2. Antenna Picture/天線圖片

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN200148	初版發行/Initial release	07/17'20	梁兌泉 duiquan.Liang	丁第斌 dibin.Din	張英傑 yingjie.Zhang



內針式/
Internal pin



說明:

- 各部件裝配完後不得有油污、劃痕、變形等外觀不良。
- 各部件裝配完成後無明顯色差。
- 本體與連接軸的裝配後保持力: 3KG MIN;
連接器扭力為: 0.2~0.6 Kg-cm.
- 標有“ ∇ ”為QC重點檢測尺寸。
- 測試要求: VSWR測試全檢, 網分測試。
頻率範圍: 2400~2500&5150~5850 MHz, VSWR: ≤ 2.0 ;
- 有害物質須符合ECT

《QE-Q-19-001-環境有害物質管理基準》管控標準

- NOTES:
- After the assembly of different parts can not have bad appearance of greasy dirt, scratches, deformation, etc.
 - The assembly after the completion of the various components without clear off color.
 - The ontology and the connecting shaft assembly after retention: 3KG MIN;
Connector torque is: 0.2~0.6 Kg - cm.
 - Marked with “ ∇ ” key size detection for QC.
 - Pattern test requirements: the VSWR test all inspection, Mesh points test
Frequency range: 2400~2500&5150~5850 MHz, VSWR: ≤ 2.0 ;
 - HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

f	連接器/connector	1	SMA-J, 公頭公針, 黑色, 塑料/SMA-J, male needle, black, plastic
e	下固/Lower solid	1	下固, OD9.5*24.8mm, PC+PBT, 黑色/Lower solid, OD9.5*24.8mm, PC+PBT, black
d	鉚釘/Rivet	2	OD1.7*3.7mm, POM, 黑色/OD1.7*3.7mm, POM, black
c	線纜/Cable	1	RG178, 棕色/RG178, brown
b	上固/Upper solid	1	上固, OD9.5*29 mm, PC+PBT, 黑色/Upper solid, OD9.5*29 mm, PC+PBT, black
a	杆套/Rod sleeve	1	杆套, OD9.5*67 mm, TPEE, 黑色/Rod sleeve, OD9.5*67 mm, TPEE, black
ITEM	PART NAME	Q' TY	MATERIAL / FINISH



GENERAL TOLERANCE	
XX. ± 2.00	XX. $^{\circ} \pm 3^{\circ}$
.X. ± 1.00	.X. $^{\circ} \pm 2^{\circ}$
.X ± 0.50	.X $^{\circ} \pm 1^{\circ}$
.XX ± 0.30	

SCALE:	1:1
UNIT:	mm
SIZE:	A4

DRAWN:	梁兌泉 duiquan.Liang
CHECK:	
APPROVE:	

DATE:	07/17'20
DATE:	
DATE:	

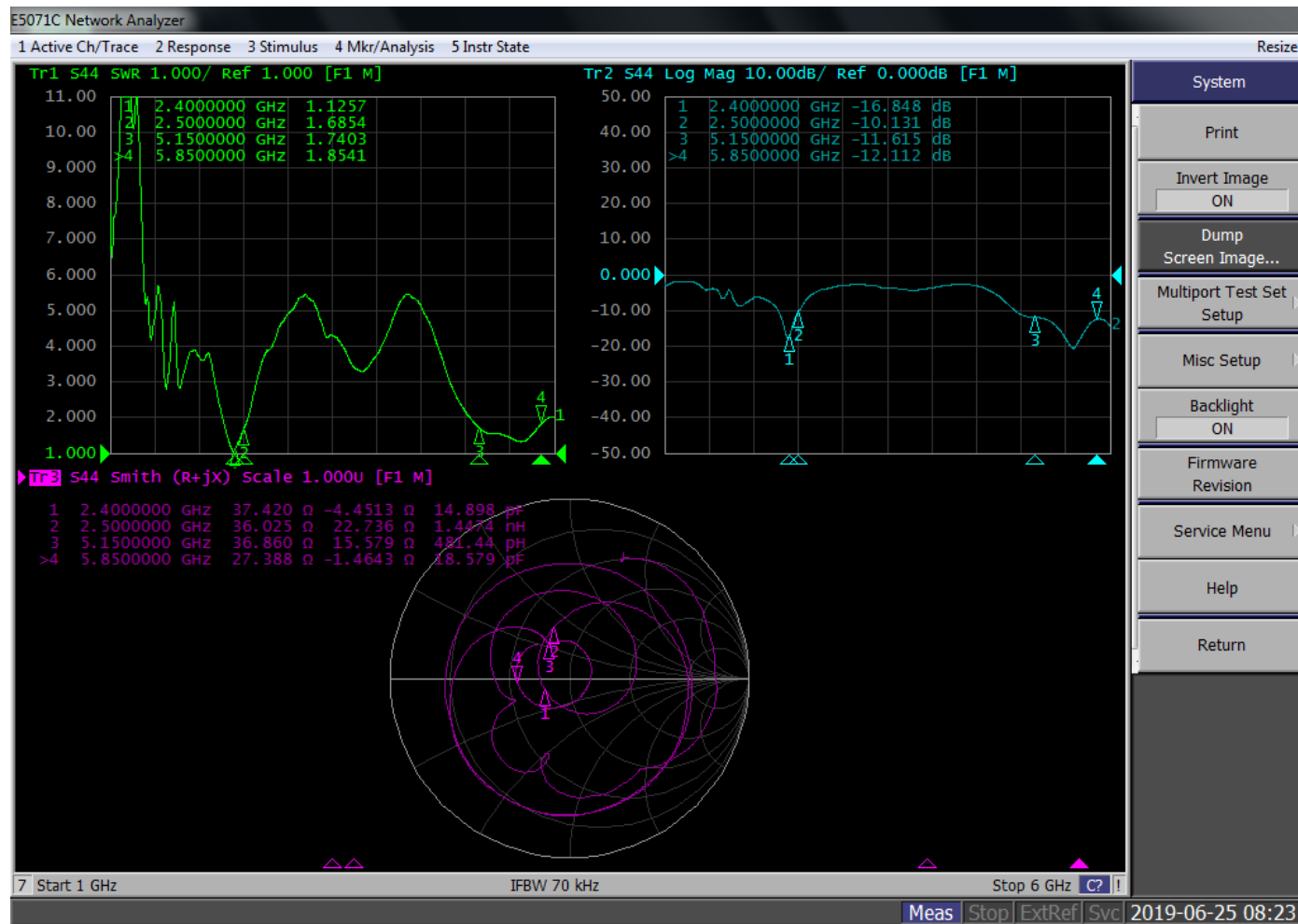
DWG. NO:	600-U252-01
PARTS NO. (INTENDED USE):	81800U252

TITLE:	ANT_EX_2.4-5.8G_110*10_ WIFI-BK-PR+SMA-J
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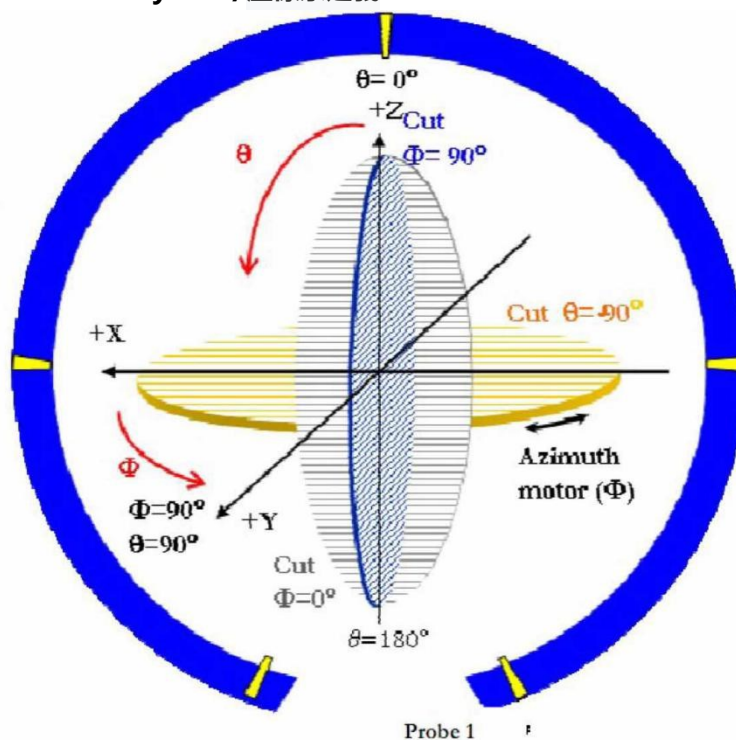
4. Antenna test result/測試結果

4.1 Return loss/Smith chart/VSWR/回波損耗/史密斯圖/駐波比



4.2 The gain and total efficiency test/增益和效率測試

4.2.1 The definition of coordinate system/座標系定義-Satimo SG24



The coordinate system of Chamber/暗室座標系



The production test position/天線測試放置位置

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4.2.2 The test result of total efficiency and total gain/天線效率及增益測試結果

2400MHz-2500MHz

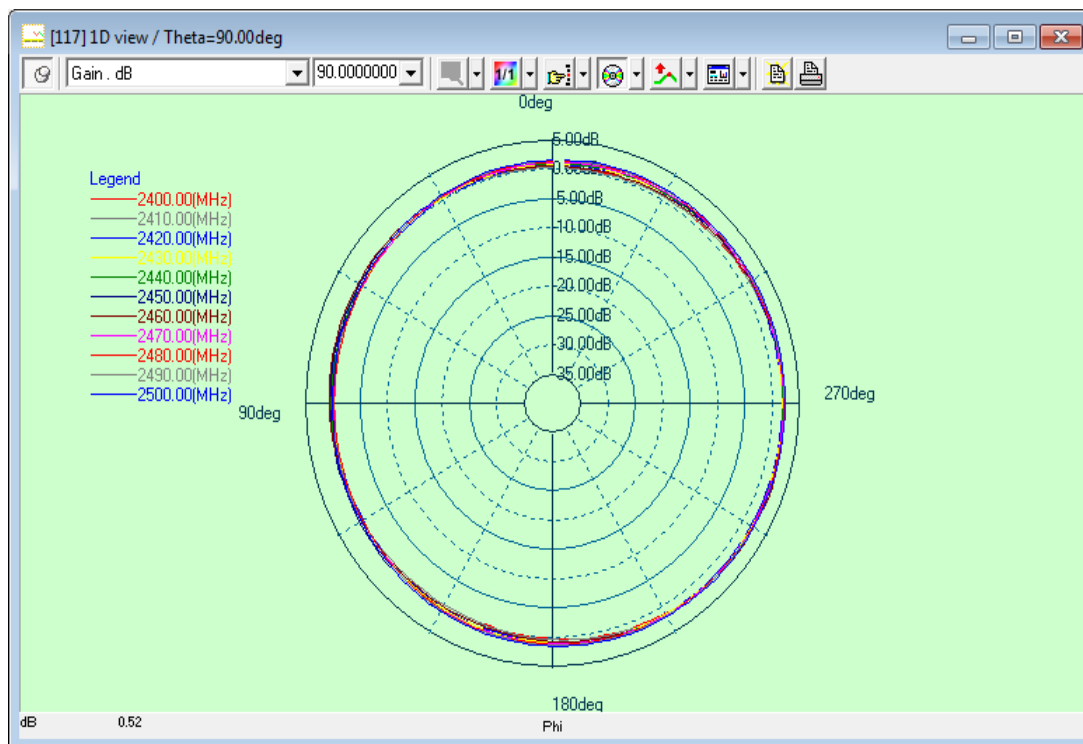
Frequency	Efficiency(%)	Gain (dBi)
2400MHz	72%	2.41
2410MHz	77%	2.66
2420MHz	76%	2.74
2430MHz	74%	2.52
2440MHz	75%	2.62
2450MHz	73%	2.23
2460MHz	72%	2.21
2470MHz	77%	2.75
2480MHz	72%	2.36
2490MHz	74%	2.56
2500MHz	71%	2.15
AVG	74%	2.47

5150MHz-5850MHz

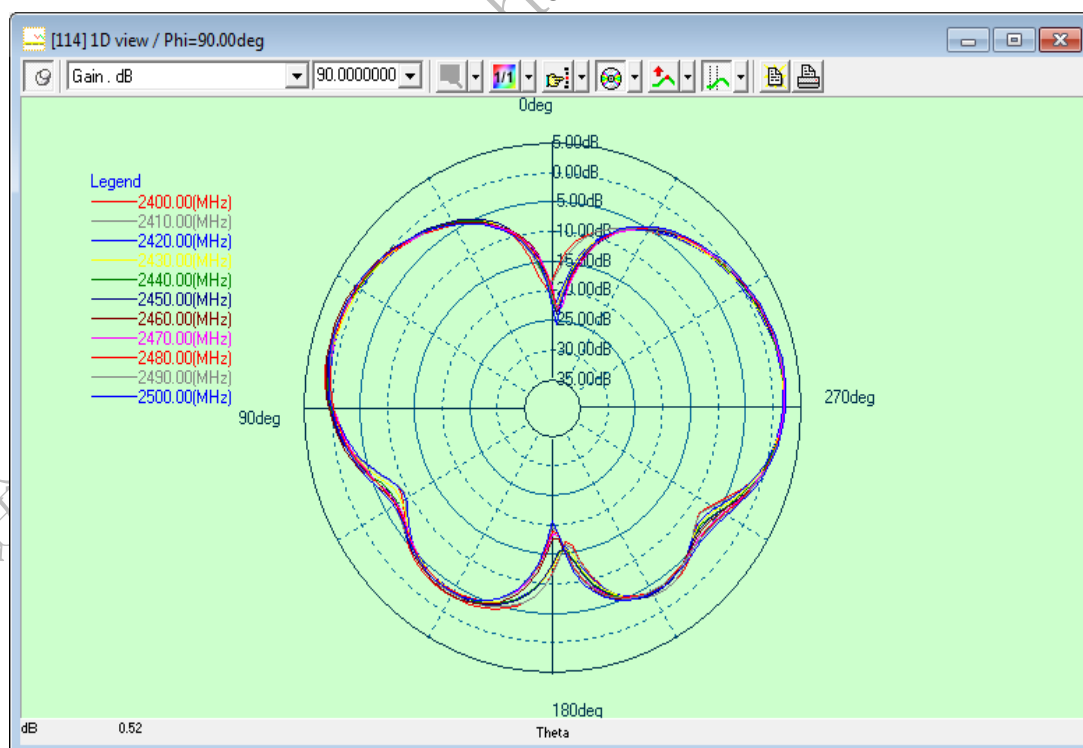
Frequency	Efficiency(%)	Gain (dBi)
5150MHz	72%	2.58
5200MHz	72%	2.60
5250MHz	71%	2.64
5300MHz	69%	2.53
5350MHz	73%	3.05
5400MHz	75%	3.26
5450MHz	73%	3.17
5500MHz	73%	3.12
5550MHz	74%	3.44
5600MHz	72%	3.00
5650MHz	67%	2.56
5700MHz	70%	2.90
5750MHz	71%	2.79
5800MHz	72%	2.61
5850MHz	75%	3.20
AVG	72%	2.90

4.2.3 The antenna radiation pattern(2D)/天線輻射方向圖 (2D)

2400-2500MHz



XOY



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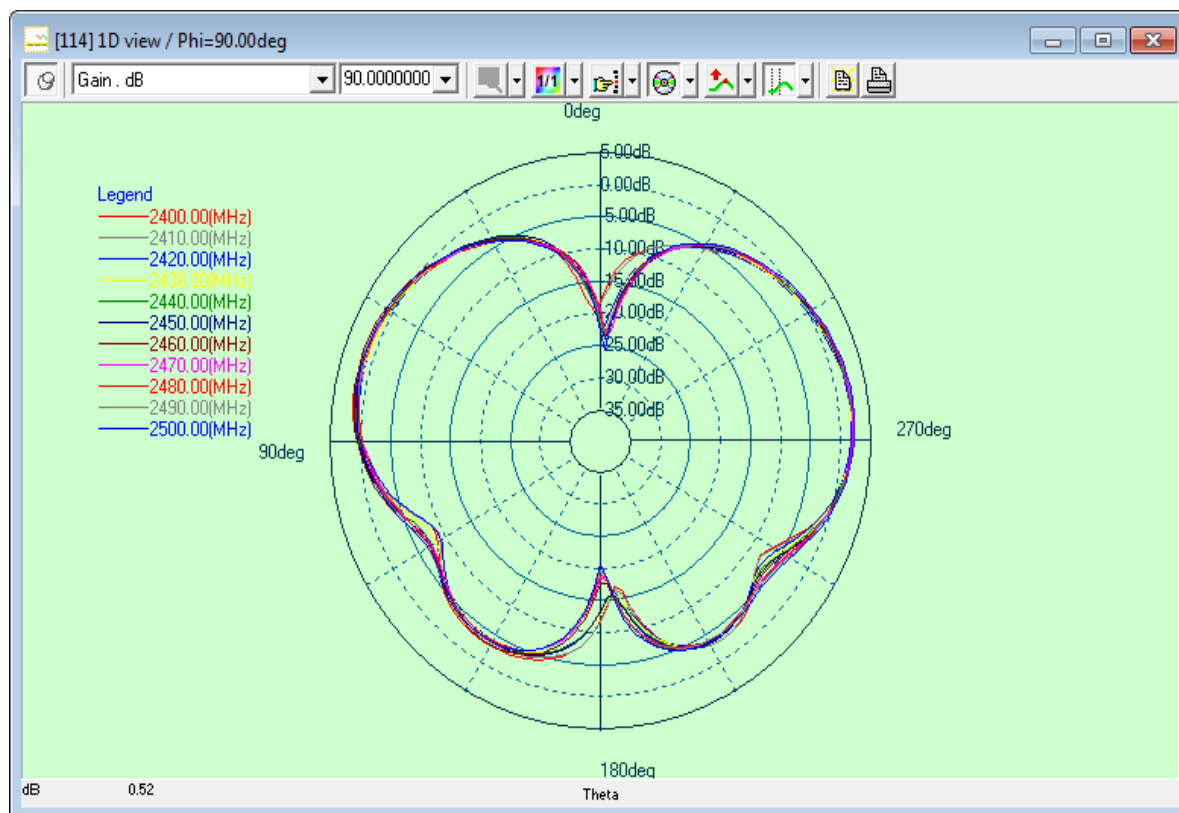
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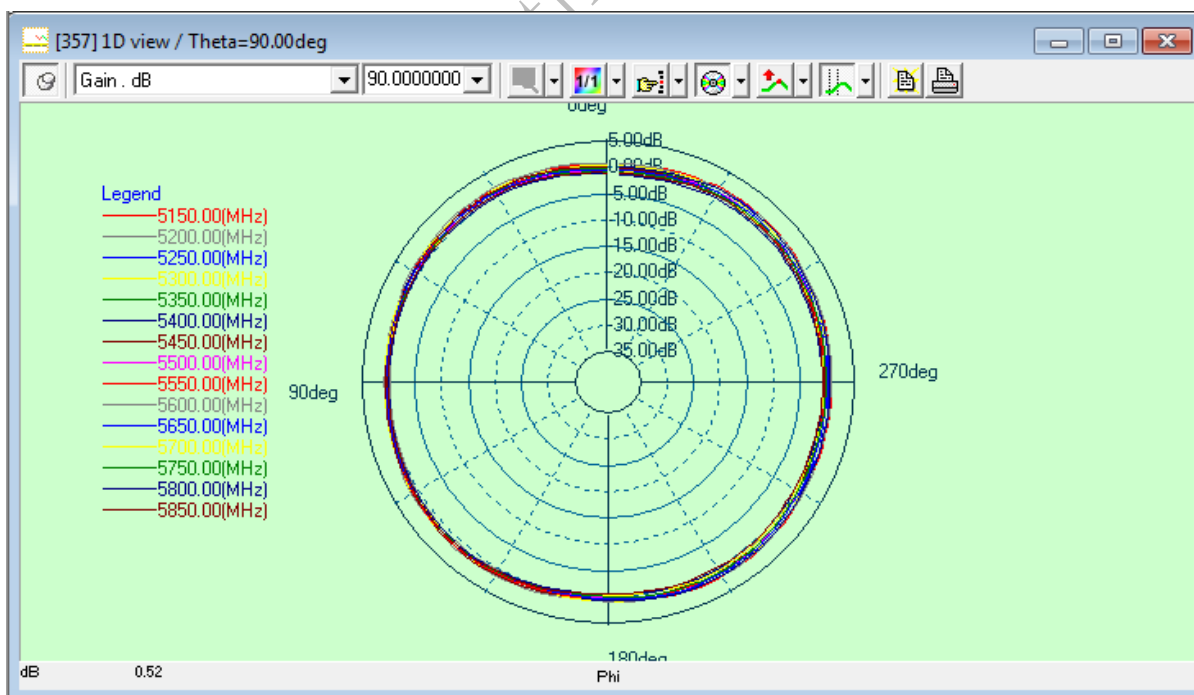
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5150-5850MHz



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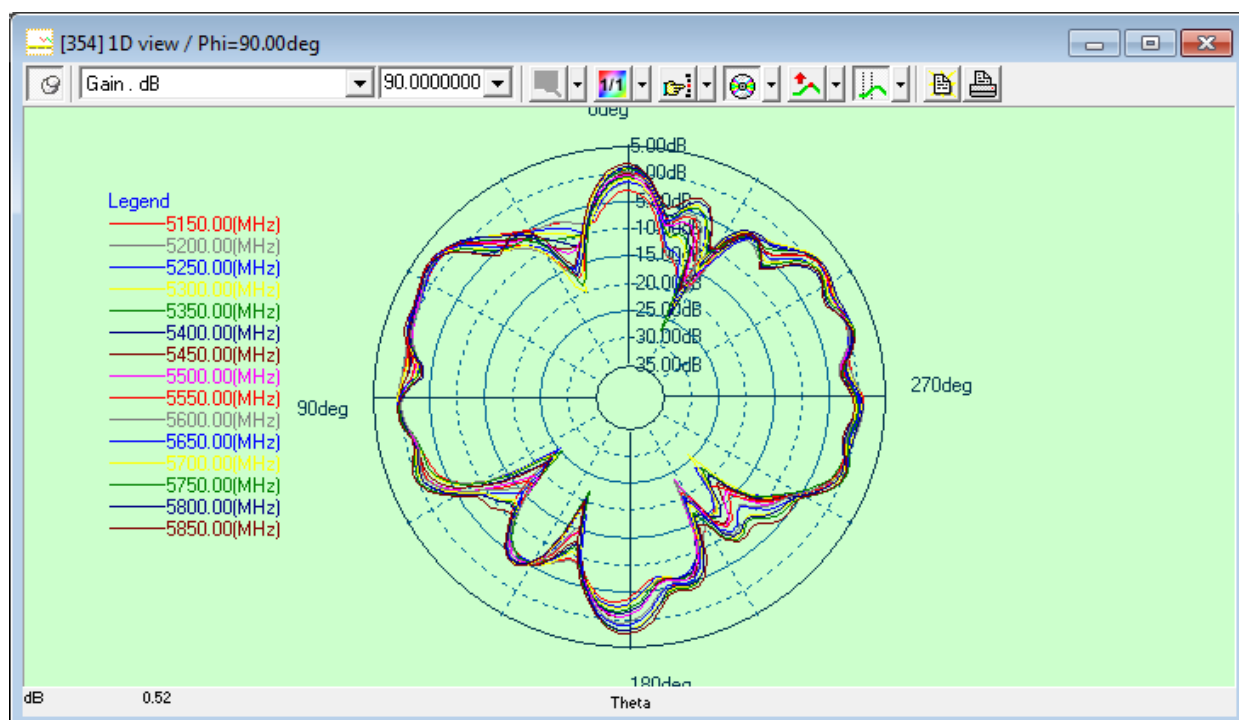
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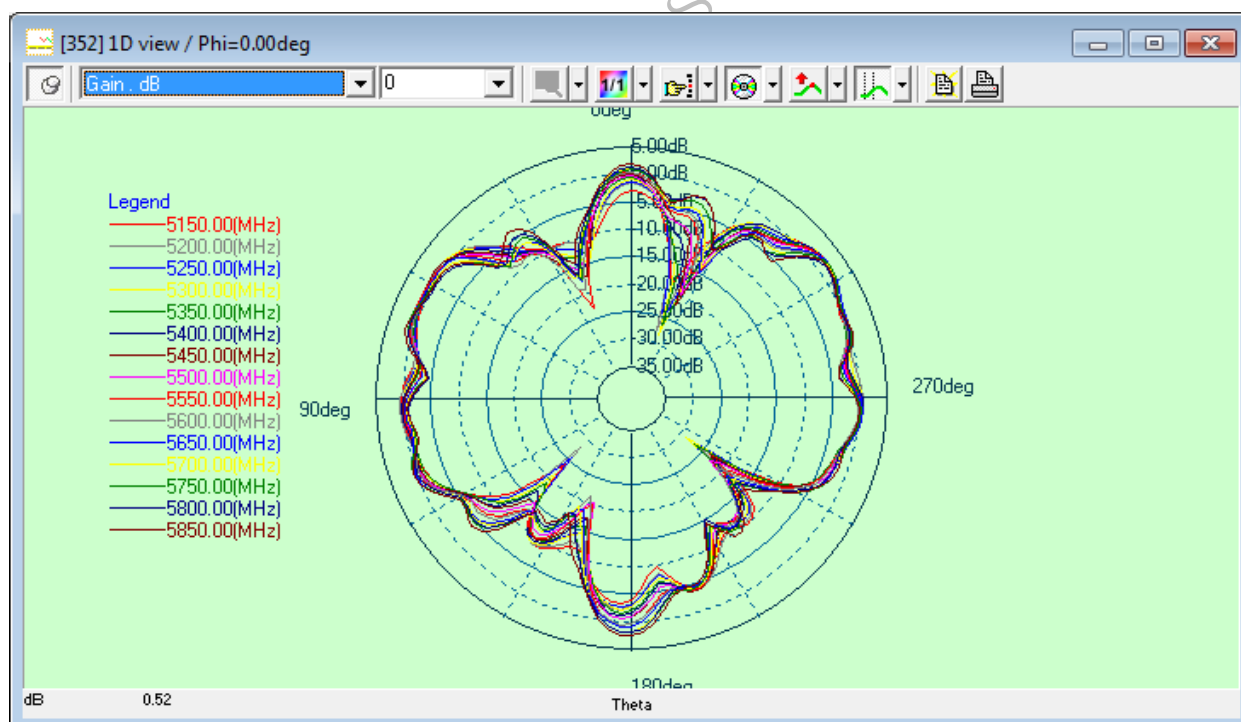
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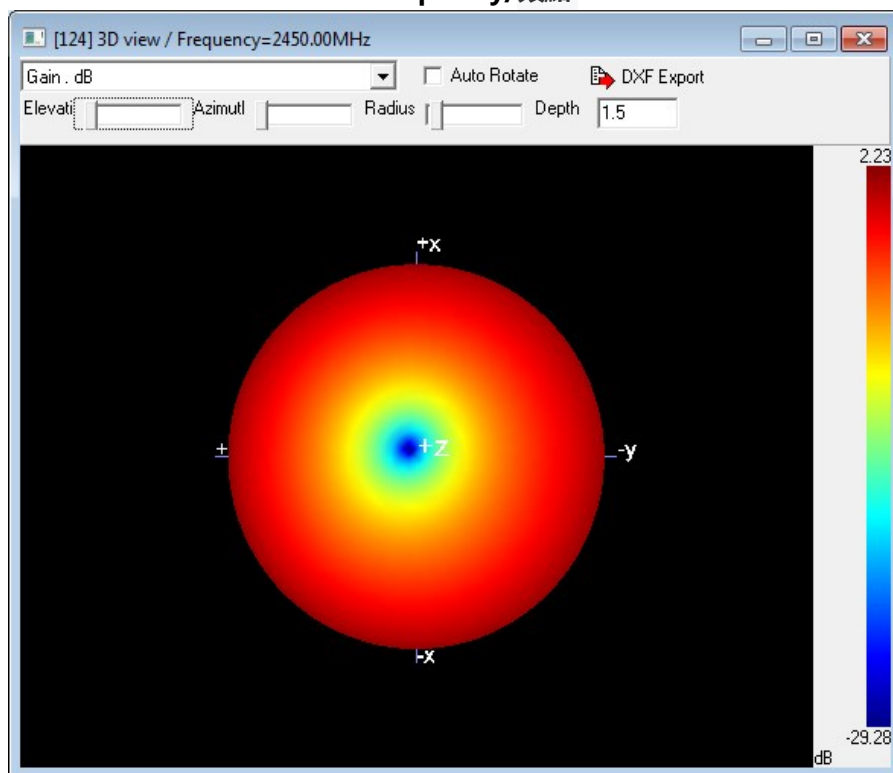
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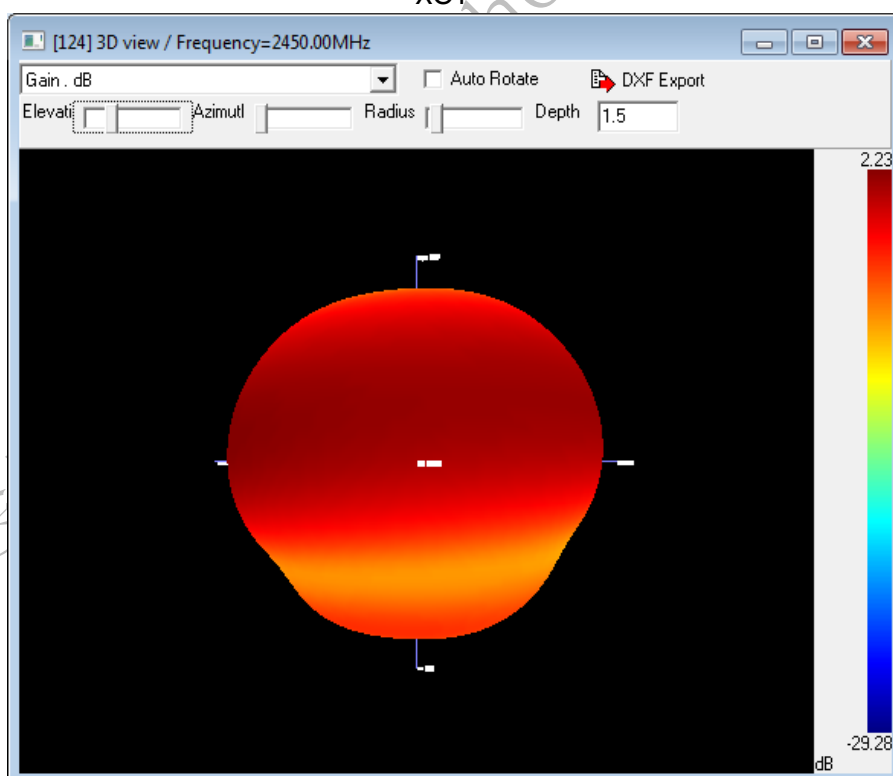
XOZ

4.2.4 The antenna radiation pattern(3D)/天線輻射方向圖 (3D)

Frequency/頻點 2450MHz



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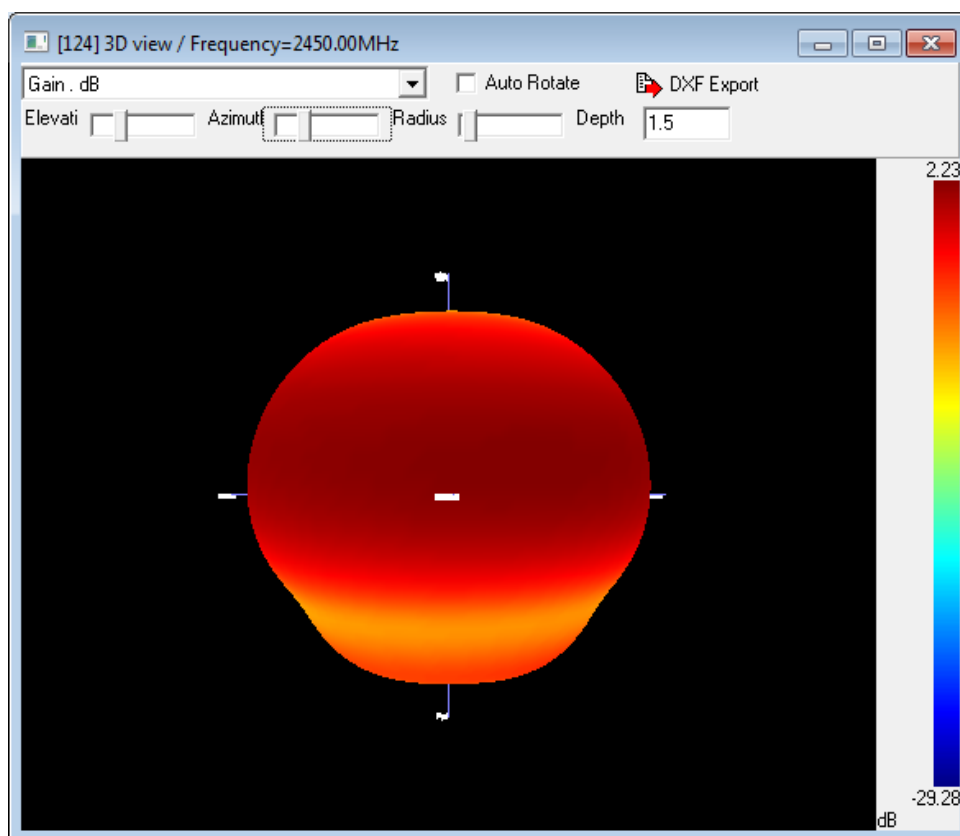
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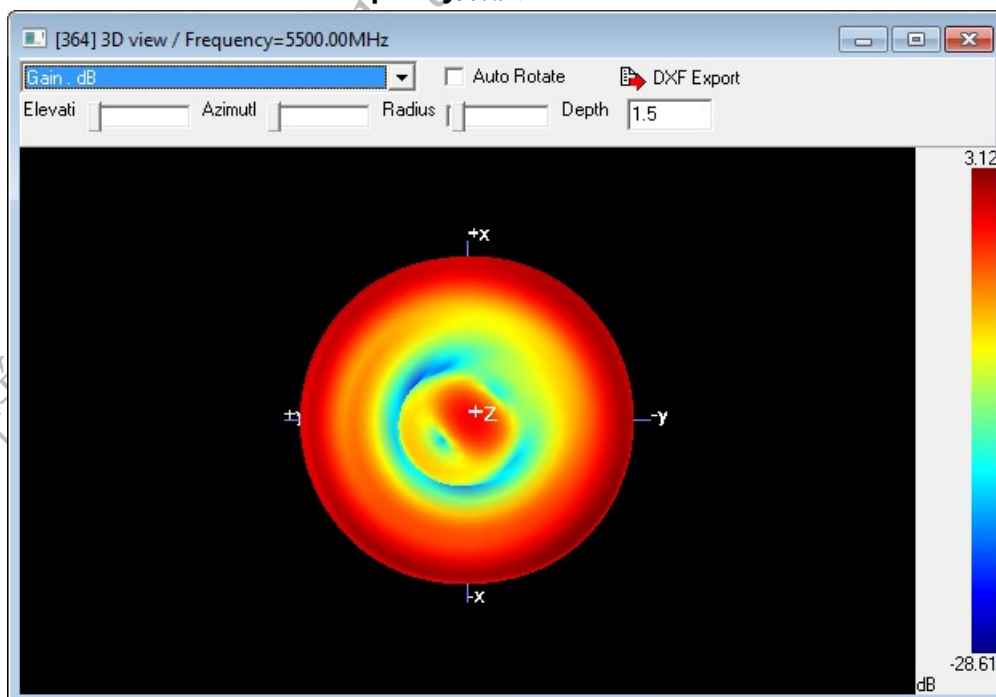
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Frequency/频点 5500MHz



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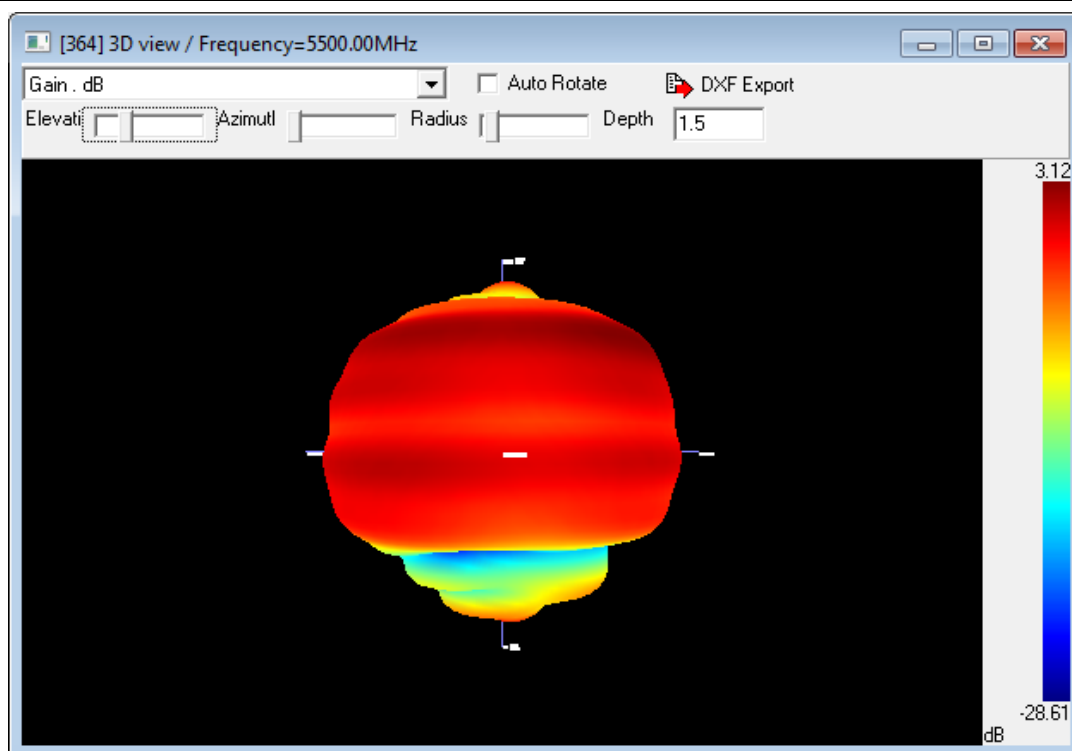
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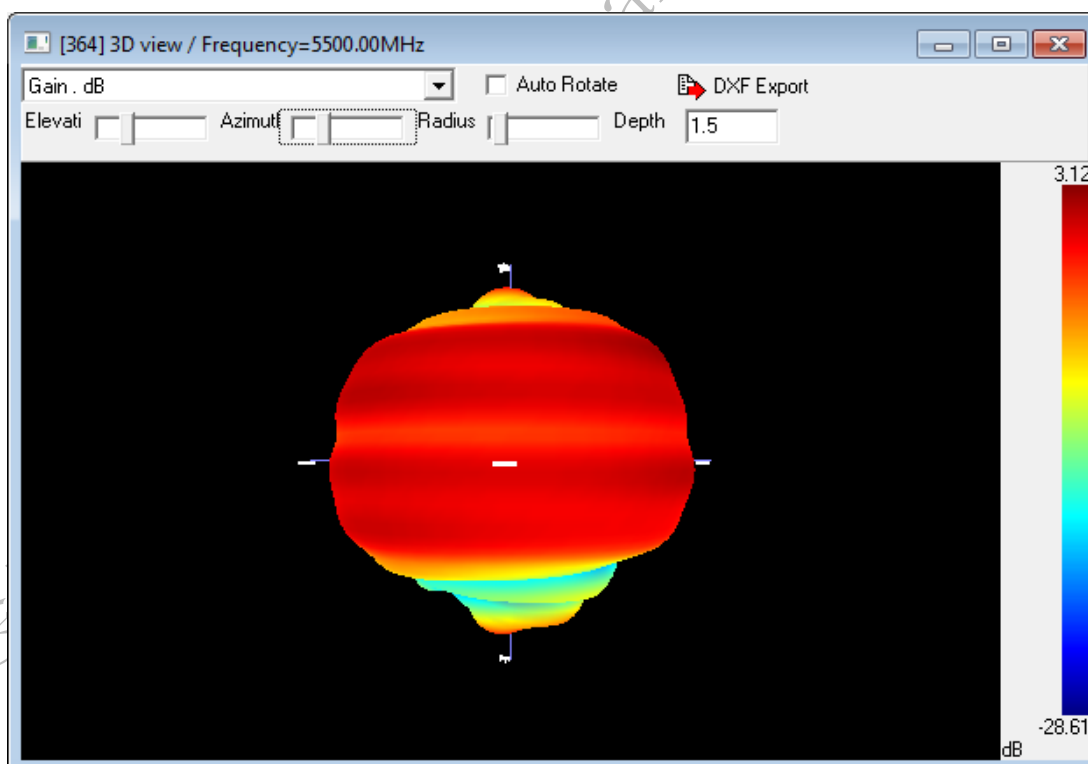
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YOZ



XOZ