



# Antenna Specification

Antenna Manufacturer Company Name: Wieson Technologies Co., LTD.

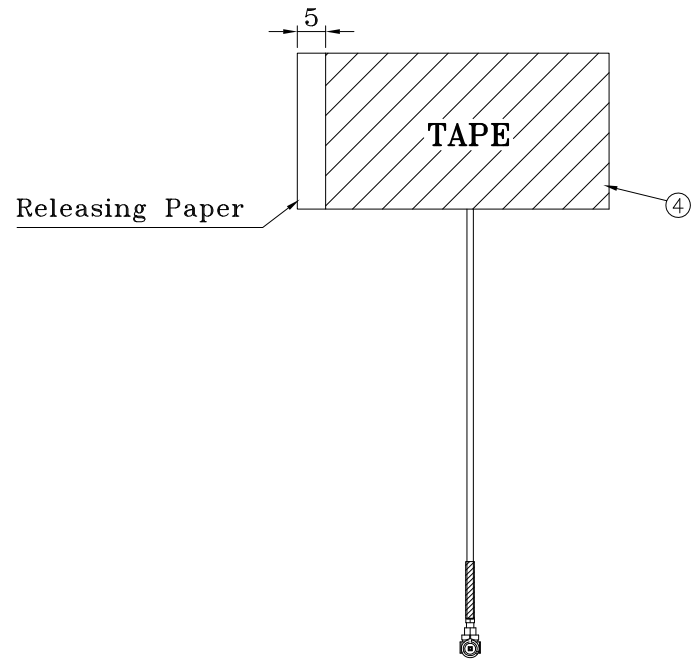
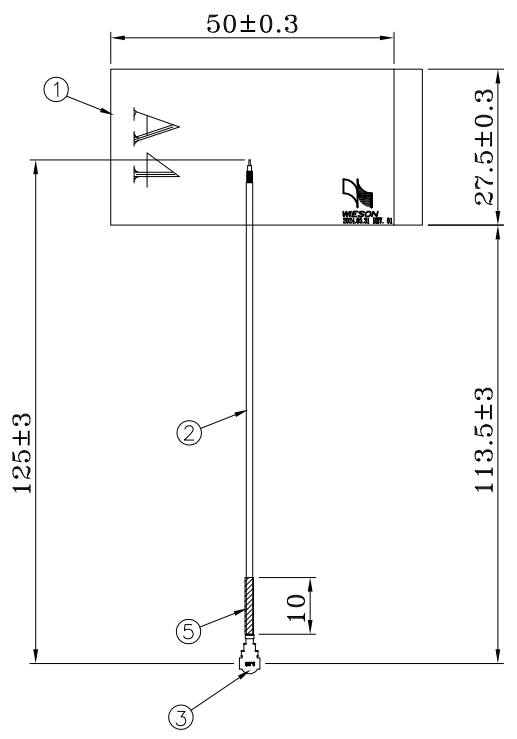
Antenna Manufacturer Company Address: 15F, No.237, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 221006, Taiwan

Antenna Model: ARY196-0232-040-00

Antenna Type: PCB antenna

RoHS Compliant

REV	DATE	DESCRIPTION	ECN NO.	NAME
A1	24.05.31	PROPOSAL		DAVID



A  
B  
C  
D

CUST NO.:  
11320Y20ZQ00303A1  
PART NO.:  
ARY196-0232-040-00

⑦			
⑥			
⑤	H.S TUBE	COLOR : BLUE , L : 10mm	1
④	TAPE	G9000 , SIZE: 26.7 X 49.2MM	1
③	CONNECTOR	MHF I PLUG FOR 1.37MM CABLE , GOLD PLATED	1
②	CABLE	1.37MM LOW LOSS COAXIAL CABLE , FEP BLACK JACKET	1
①	PCB	FR-4 , SIZE: 27.5 X 50 X 0.8MM SOLDER MASK COLOR :GREEN	1
NO.	ITEM	DESCRIPTION	QTY

WIESON TECHNOLOGIES CO., LTD  
WIESON

TITLE: ANTENNA 4			
DRAWN BY	DAVID(WST)	DRAWING NO.	ARY196-0232-040-00
CHECKED BY		DRAWING SIZE	A4
APPROVED BY		UNIT	mm
SORTING NO.	WSC	PAGE	1 OF 1



**WIESON TECHNOLOGIES CO.,LTD**

**BILL OF MATERIAL**

Cust.	永洋	TITLE	RF ANTENNA				
Cust.P/N		WIESON P/N	ARY196-0232-040-00				
NO.	DESCRIPTION	SUPPLIER	SUPPLIER PART NO.	UL NO.	AVL	QUANTITY	REMARK
1	FR-4 , SIZE: 27.5 X 50 X 0.8MM SOLDER MASK COLOR :GREEN	/	PCB	/		1PCS	
2	1.37MM LOW LOSS COAXIAL CABLE , FEP BLACK JACKET	/	/CABLE	/		MM	
3	MHF I Plug For 1.37mm Cable , Gold Plated	/	Connector/	/		1PCS	
4	G9000 , SIZE: 26.7 X 49.2MM	/	TAPE/			1PCS	
5	COLOR : BLUE , L : 10mm		H.S TUBE			1PCS	
6							
7							
8							

**APPROVED BY: ROX**

**CHECKD BY: JOSN**

**DESIGNED BY: REASON**

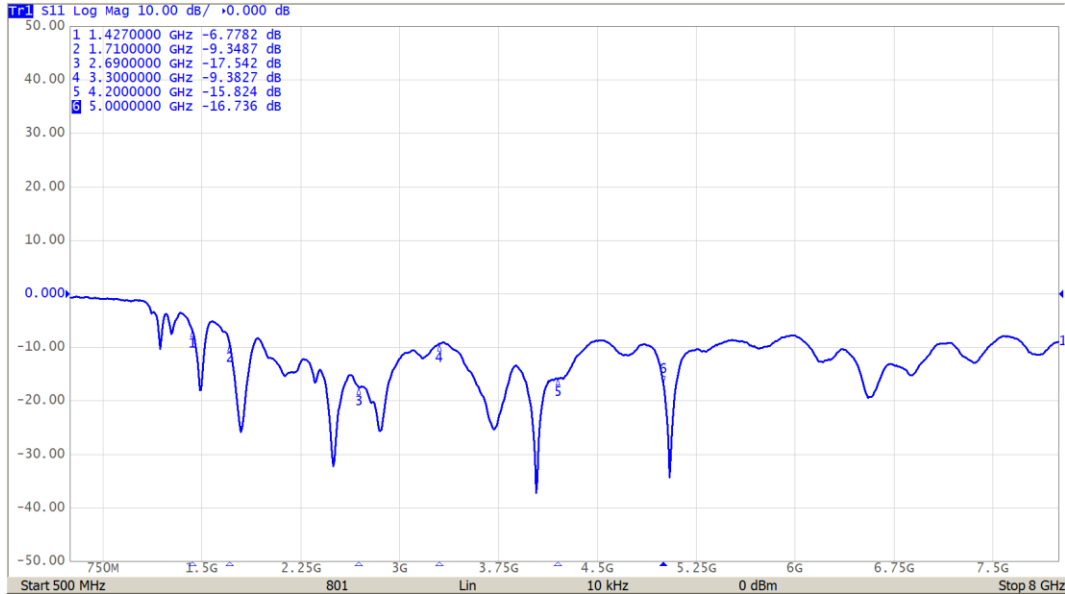
A4

# Antenna specification

Item	Specification	Item	Specification	Item	Specification
Operating Frequency(GHz)	1.427-2.69	Operating Frequency(GHz)	3.3-4.2	Operating Frequency(GHz)	4.4-5
Bandwidth	1263 MHz (Min.)	Bandwidth	900 MHz (Min.)	Bandwidth	600 MHz (Min.)
Return Loss	6 dB (Min.)	Return Loss	9 dB (Min.)	Return Loss	9 dB (Min.)
Polarization	Linear	Polarization	Linear	Polarization	Linear
Azimuth Bandwidth	Omni-directional	Azimuth Bandwidth	Omni-directional	Azimuth Bandwidth	Omni-directional
Impedance	50Ω	Impedance	50Ω	Impedance	50Ω
Material	PCB	Material	PCB	Material	PCB
Connector	MHF I	Connector	MHF I	Connector	MHF I
Cable type	O.D. 1.37 L/L	Cable type	O.D. 1.37 L/L	Cable type	O.D. 1.37 L/L
Maximum Power	1W	Maximum Power	1W	Maximum Power	1W
V.S.W.R	3 : 1	V.S.W.R	2.1 : 1	V.S.W.R	2.1 : 1
Radiation	Omni directional	Radiation	Omni directional	Radiation	Omni directional
Efficiency	56%(Max.)	Efficiency	66%(Max.)	Efficiency	64%(Max.)
Operating Temperature	-10~60°C	Operating Temperature	-10~60°C	Operating Temperature	-10~60°C
Storage temp	-10~70°C	Storage temp	-10~70°C	Storage temp	-10~70°C

# S-Parameter

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Freq(MHz)	1427	1710	2690	3300	4200	5000
S11(dB)	-6.8	-9.3	-17.5	-9.4	-15.8	-16.7

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# 3D Gain Total



Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
<b>1.427</b>	4.2	-3.6	43
<b>1.452</b>	4.4	-3.4	46
<b>1.47</b>	4.1	-3.8	42
<b>1.496</b>	4.0	-3.7	43
<b>1.517</b>	2.8	-4.0	40
<b>1.71</b>	3.7	-3.4	46
<b>1.76</b>	2.7	-3.4	46
<b>1.81</b>	3.1	-3.7	42
<b>1.88</b>	2.6	-4.0	40
<b>1.91</b>	1.7	-4.0	40
<b>1.96</b>	4.4	-3.6	44
<b>2.01</b>	4.0	-3.9	40

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
<b>2.06</b>	4.7	-3.0	50
<b>2.11</b>	4.6	-3.1	49
<b>2.17</b>	2.1	-2.8	52
<b>2.3</b>	0.9	-3.3	47
<b>2.35</b>	0.7	-3.3	47
<b>2.4</b>	1.0	-3.4	46
<b>2.45</b>	0.1	-2.8	53
<b>2.5</b>	0.1	-2.9	51
<b>2.55</b>	0.0	-2.5	56
<b>2.6</b>	0.2	-2.6	55
<b>2.65</b>	0.0	-2.7	54
<b>2.69</b>	0.1	-2.9	52

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# 3D Gain Total

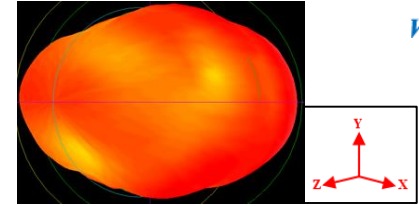
Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.3	1.8	-3.0	50
3.4	0.5	-2.9	52
3.5	0.4	-2.9	51
3.6	0.1	-2.6	55
3.7	0.9	-2.4	57
3.8	0.2	-2.5	56
3.9	0.9	-1.8	66
4	0.8	-2.1	62
4.1	1.7	-1.8	66
4.2	2.3	-2.2	61
4.4	4.6	-2.0	64
4.5	4.2	-1.9	64

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
4.6	4.3	-2.2	60
4.7	4.5	-2.0	63
4.8	3.8	-2.4	57
4.9	4.3	-2.3	59
5	2.9	-2.6	55

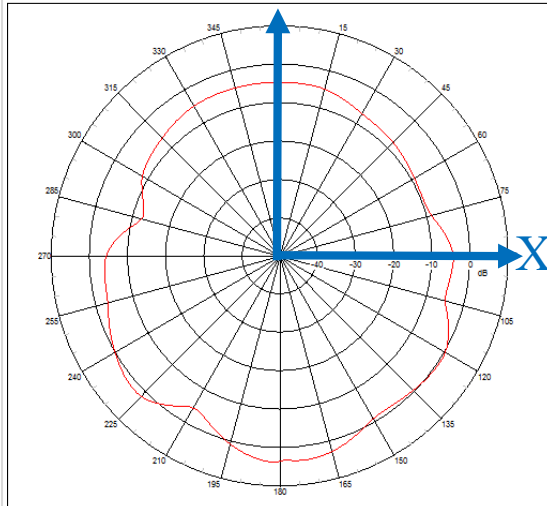
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# Antenna Pattern

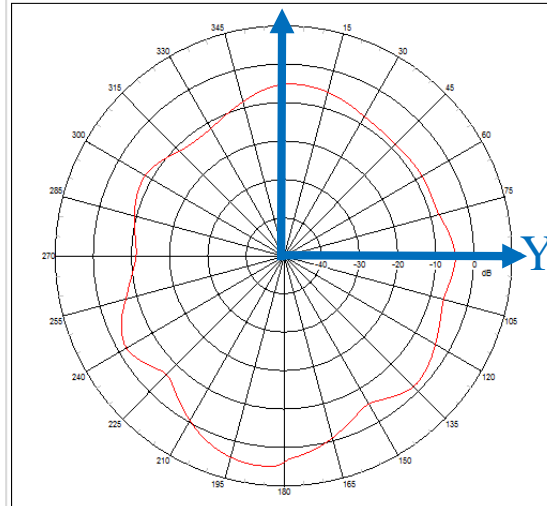
Frequency : 1427MHz



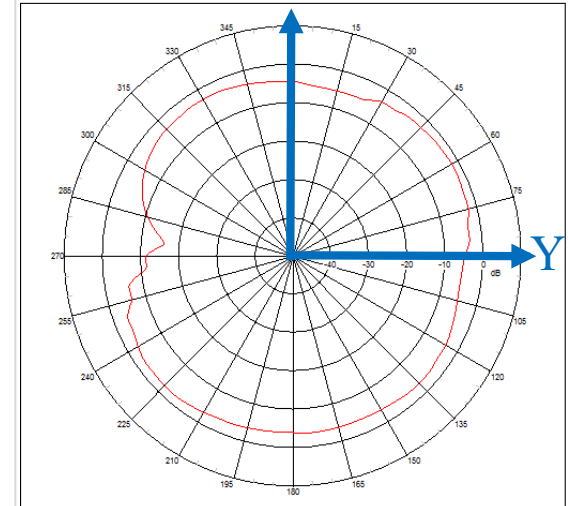
## XZ-plane



## YZ-plane



## XY-plane

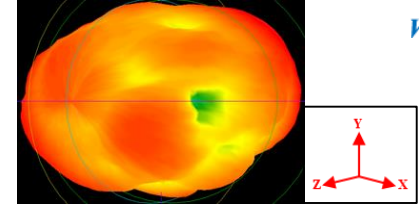




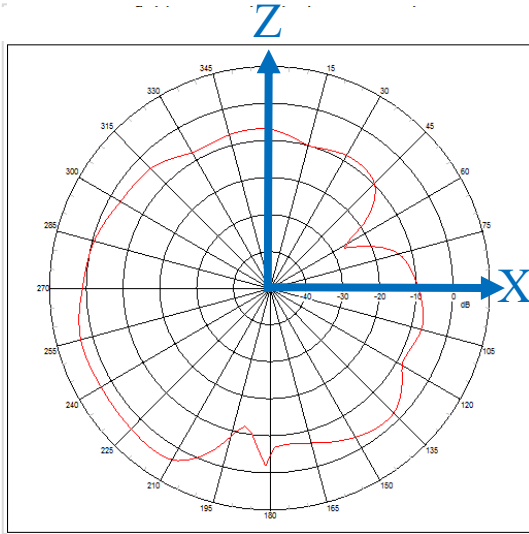
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# Antenna Pattern

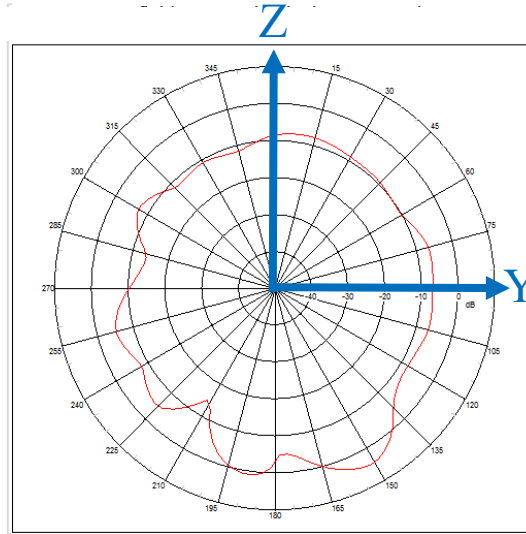
Frequency : 2170MHz



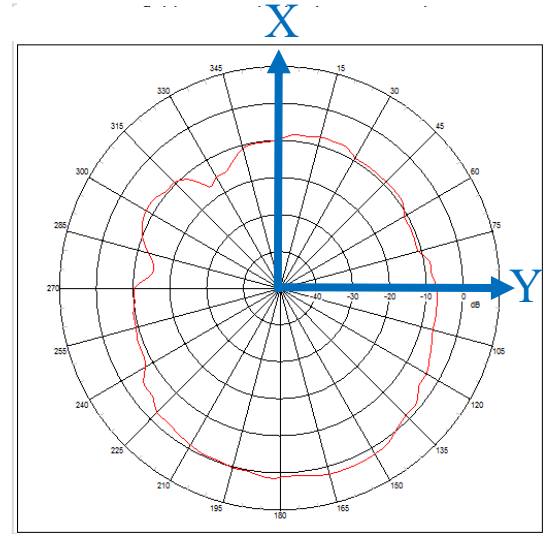
XZ-plane



YZ-plane



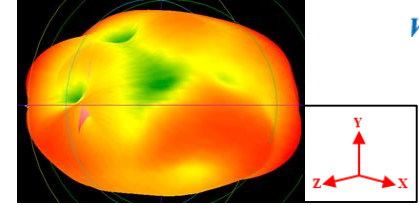
XY-plane



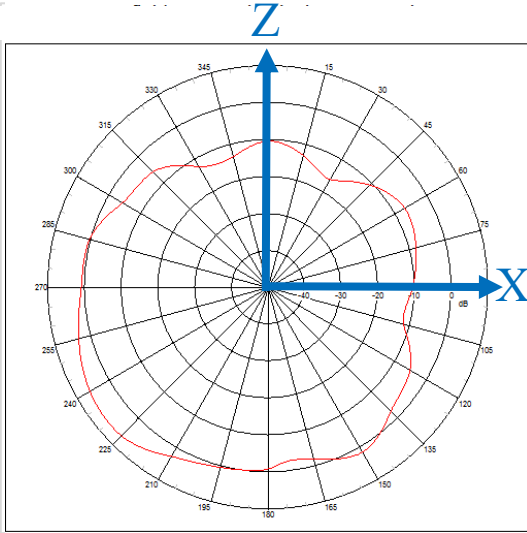
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# Antenna Pattern

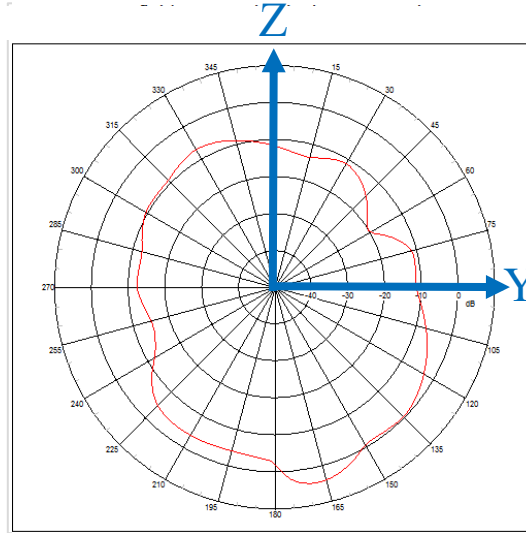
Frequency : 2690MHz



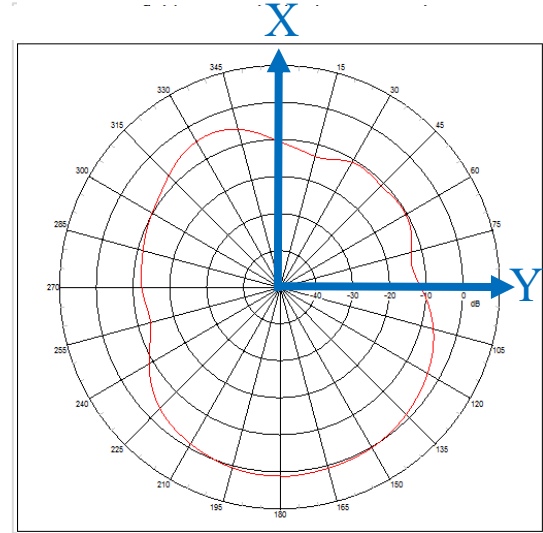
XZ-plane



YZ-plane



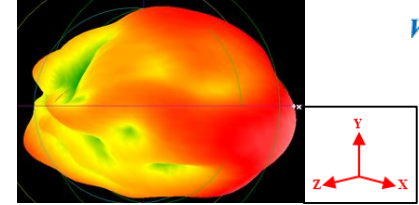
XY-plane



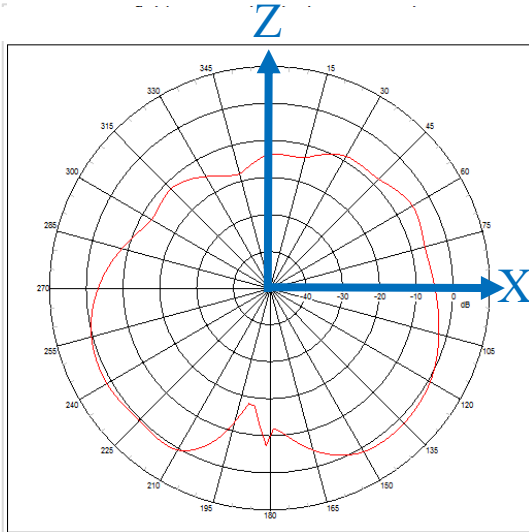
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# Antenna Pattern

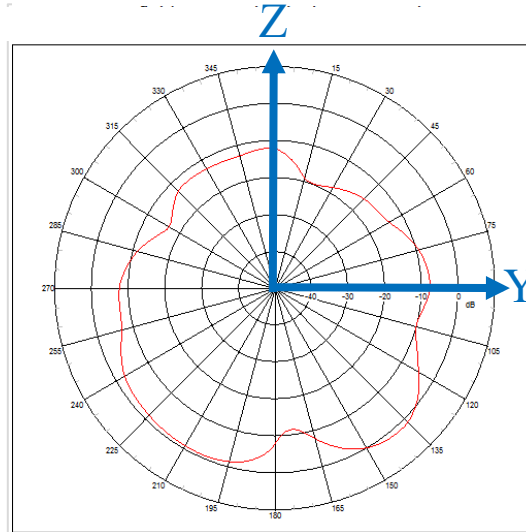
Frequency : 3300MHz



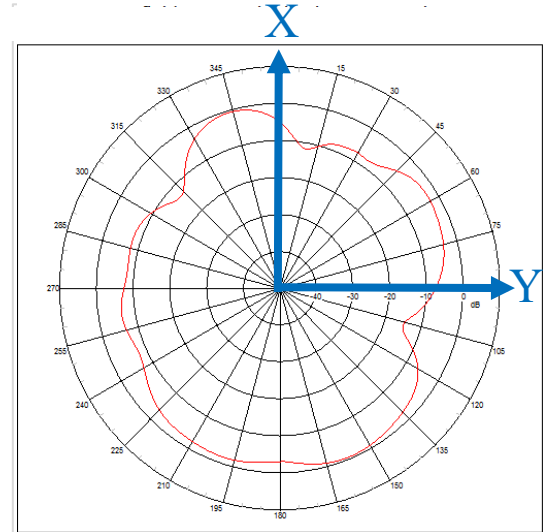
XZ-plane



YZ-plane



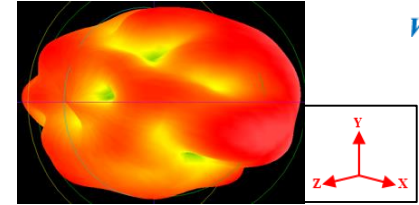
XY-plane



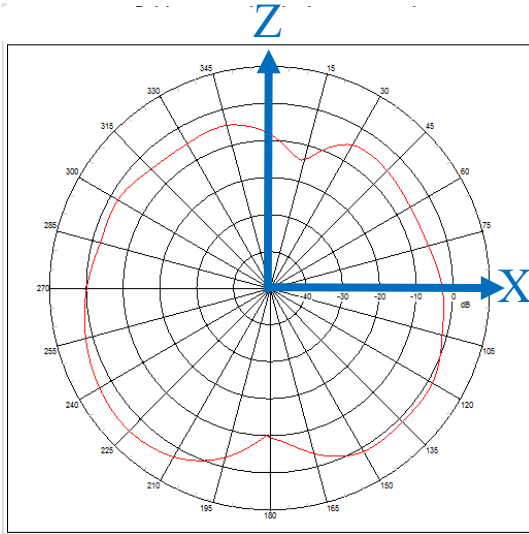
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# Antenna Pattern

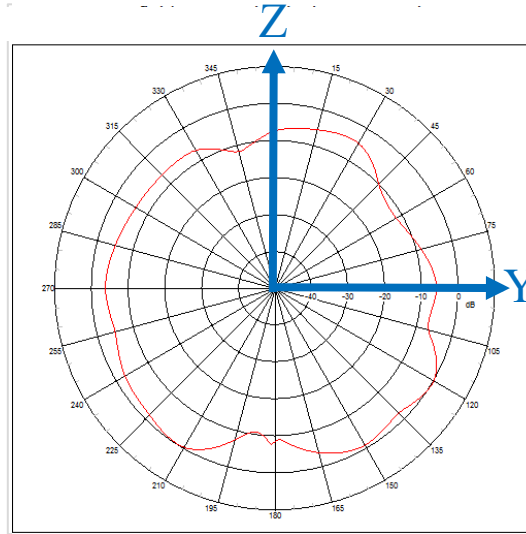
Frequency : 3800MHz



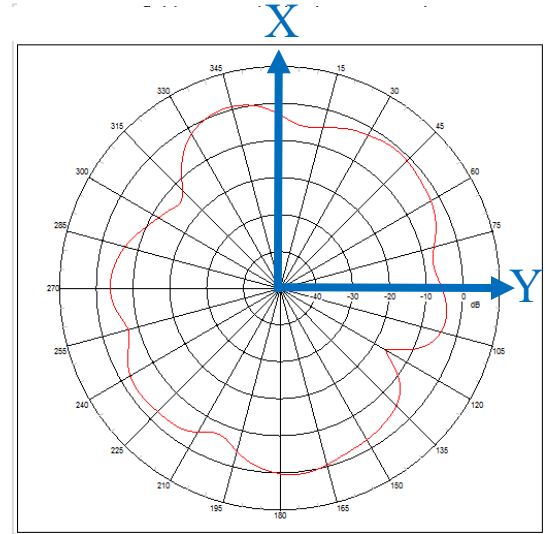
### XZ-plane



### YZ-plane



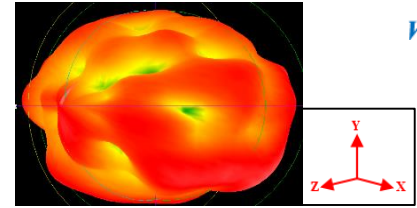
### XY-plane



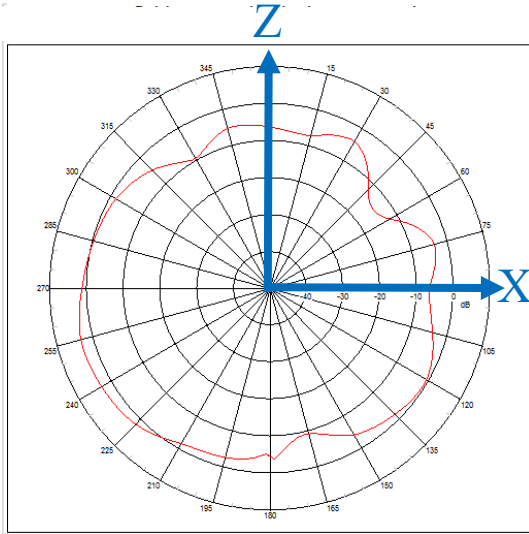
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# Antenna Pattern

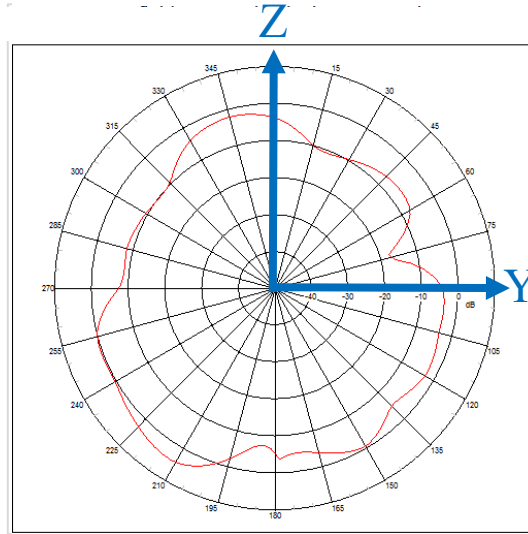
Frequency : 4700MHz



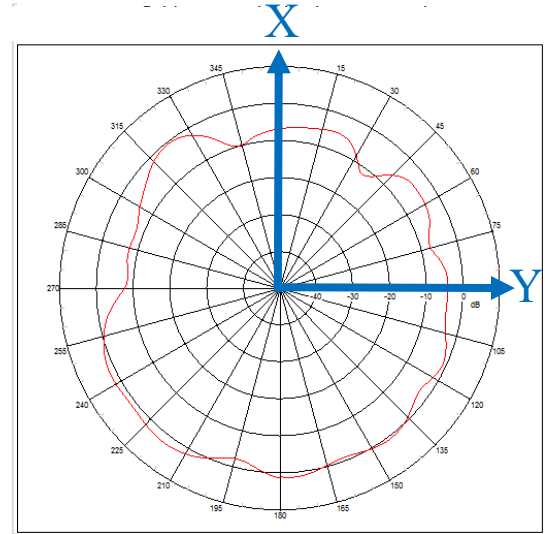
XZ-plane



YZ-plane

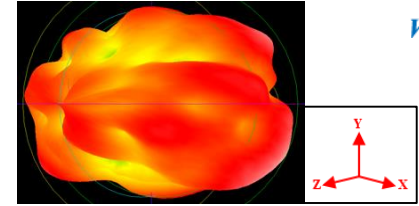


XY-plane



A4

# Antenna Pattern



Frequency : 5000MHz

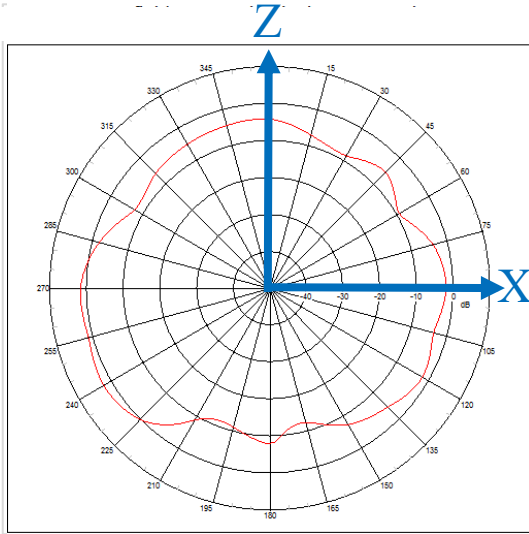
5

2.9

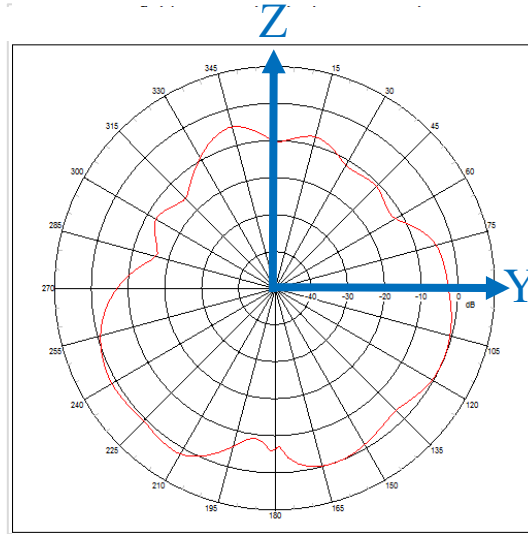
-2.6

55

## XZ-plane



## YZ-plane



## XY-plane

