

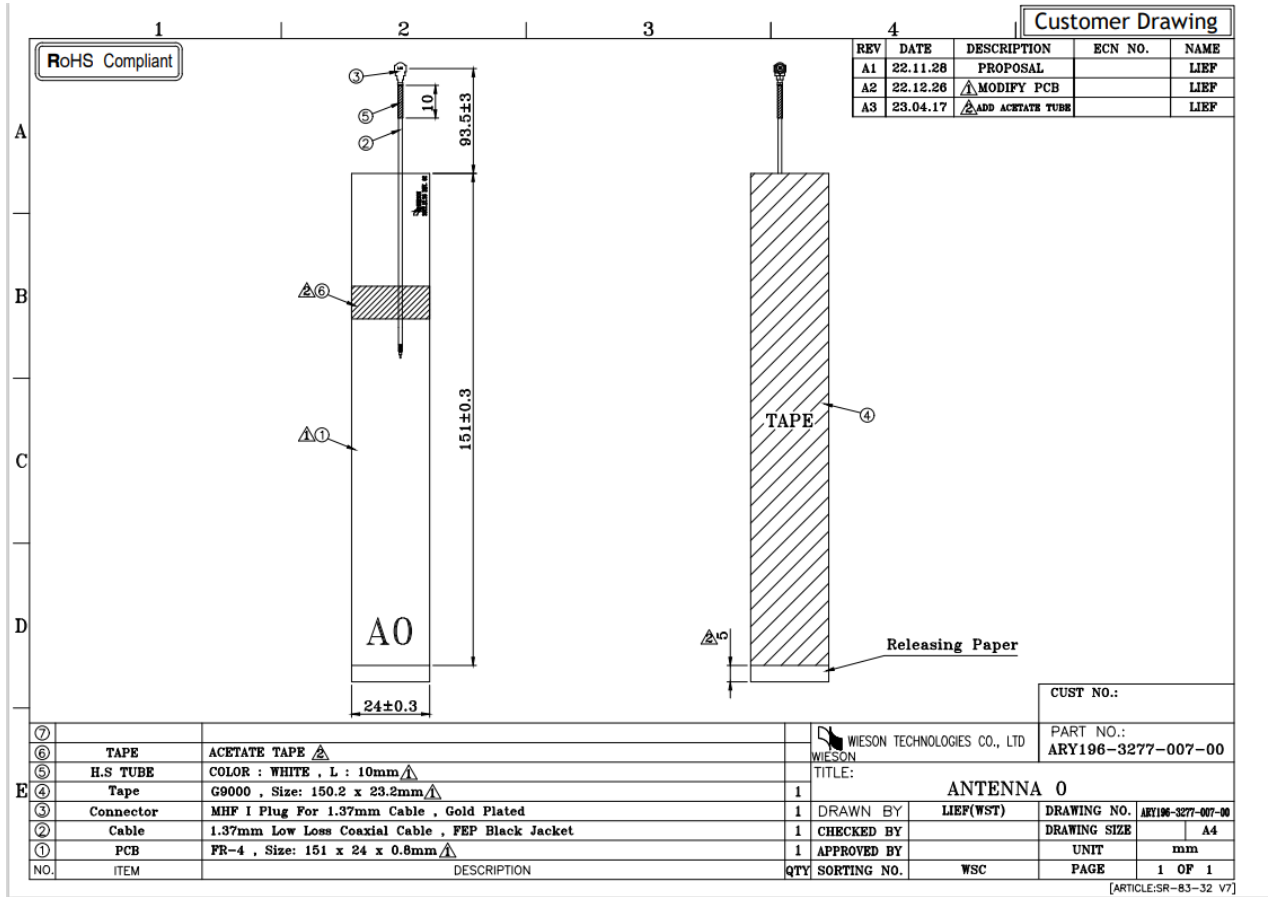


# **D-Link 530 ARY196-3277-007-00 Only Antenna**

**Engineer : Wade**

**Report date : 2023/04/13**





RoHS Compliant

Customer Drawing

REV	DATE	DESCRIPTION	ECN NO.	NAME
A1	22.11.28	PROPOSAL		LIEF
A2	22.12.26	⚠️ MODIFY PCB		LIEF
A3	23.04.17	⚠️ ADD ACETATE TUBE		LIEF

⑦									
⑥	TAPE	ACETATE TAPE ⚠️							
⑤	H.S TUBE	COLOR : WHITE , L : 10mm ⚠️							
④	Tape	G9000 , Size: 150.2 x 23.2mm ⚠️	1						
③	Connector	MHF I Plug For 1.37mm Cable , Gold Plated	1	DRAWN BY	LIEF(WST)	DRAWING NO.	ARY196-3277-007-00		
②	Cable	1.37mm Low Loss Coaxial Cable , FEP Black Jacket	1	CHECKED BY		DRAWING SIZE	A4		
①	PCB	FR-4 , Size: 151 x 24 x 0.6mm ⚠️	1	APPROVED BY		UNIT	mm		
NO.	ITEM	DESCRIPTION	QTY	SORTING NO.	WSC	PAGE	1 OF 1		

CUST NO.:  
PART NO.:  
ARY196-3277-007-00

WIESON TECHNOLOGIES CO., LTD  
WIESON  
TITLE:  
ANTENNA 0

[ARTICLE:SR-83-32 V7]

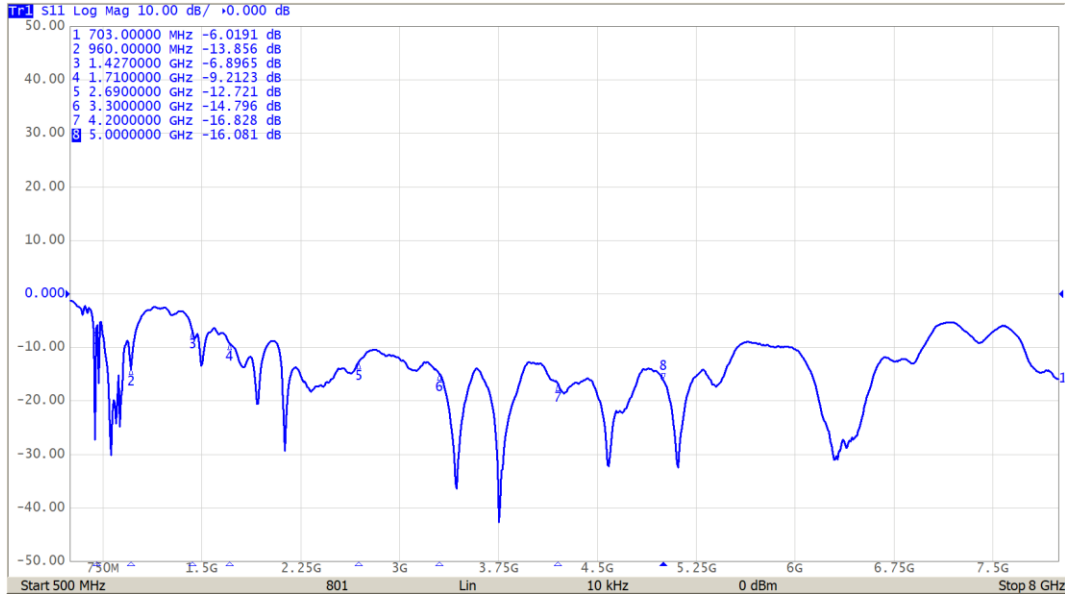
A0

# Antenna specification

Item	Specification	Item	Specification	Item	Specification
Operating Frequency(GHz)	0.703-0.96	Operating Frequency(GHz)	1.427-2.69	Operating Frequency(GHz)	3.3-4.2
Bandwidth	257 MHz (Min.)	Bandwidth	1263 MHz (Min.)	Bandwidth	900 MHz (Min.)
Return Loss	6 dB (Min.)	Return Loss	6 dB (Min.)	Return Loss	10 dB (Min.)
Polarization	Linear	Polarization	Linear	Polarization	Linear
Azimuth Bandwidth	Omni-directional	Azimuth Bandwidth	Omni-directional	Azimuth Bandwidth	Omni-directional
Peak Gain	2.2dBi (Max.)	Peak Gain	4.4dBi (Max.)	Peak Gain	4.8dBi (Max.)
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	3 : 1	V.S.W.R	2 : 1
Radiation	Omni directional	Radiation	Omni directional	Radiation	Omni directional
Efficiency	49%(Max.)	Efficiency	54%(Max.)	Efficiency	67%(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

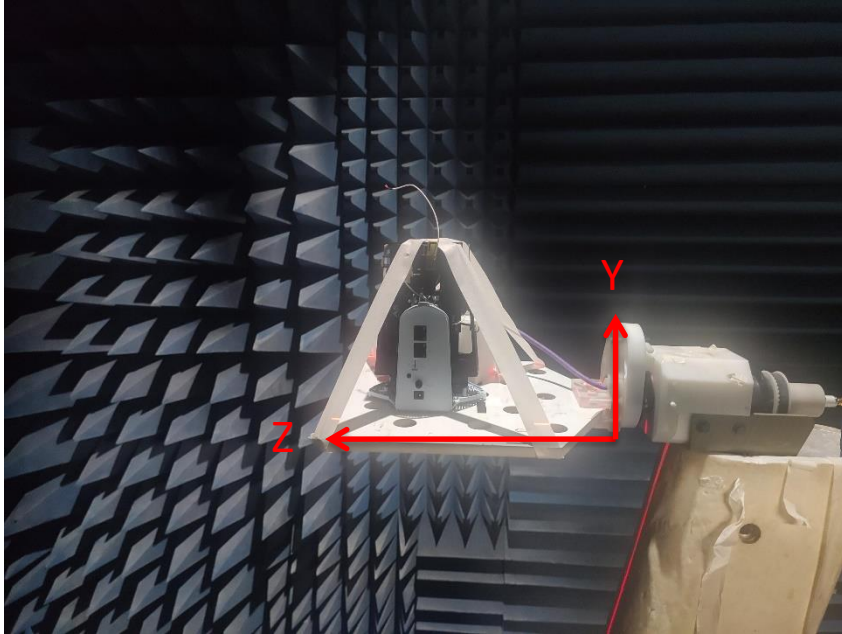
# S-Parameter

A0



Freq(MHz)	703	960	1427	1710	2690	3300	4200	5000
S11(dB)	-6.0	-13.9	-6.9	-9.2	-12.7	-14.8	-16.8	-16.1

# chamber measurement photo



**A0**

# 3D Gain Total



Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
<b>0.703</b>	1.5	-3.1	49
<b>0.74</b>	2.2	-4.0	40
<b>0.78</b>	1.9	-3.2	48
<b>0.84</b>	1.7	-3.8	41
<b>0.88</b>	1.3	-3.9	41
<b>0.894</b>	1.5	-3.5	45
<b>0.92</b>	1.7	-3.9	41
<b>0.96</b>	1.5	-3.7	43
<b>1.427</b>	2.1	-4.0	40
<b>1.452</b>	2.2	-3.5	45
<b>1.47</b>	2.0	-4.0	40
<b>1.496</b>	2.6	-3.5	44

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
<b>1.517</b>	2.3	-3.7	42
<b>1.71</b>	1.2	-3.9	41
<b>1.76</b>	2.0	-3.9	41
<b>1.81</b>	2.5	-3.7	42
<b>1.88</b>	1.7	-3.6	43
<b>1.91</b>	2.1	-3.1	49
<b>1.96</b>	3.3	-3.3	47
<b>2.01</b>	3.3	-3.7	43
<b>2.06</b>	3.5	-3.3	47
<b>2.11</b>	2.6	-3.5	45
<b>2.17</b>	4.0	-2.7	54
<b>2.3</b>	3.0	-2.9	51

**A0**

# 3D Gain Total

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.35	2.8	-2.8	52
2.4	2.5	-3.4	46
2.45	3.5	-2.9	51
2.5	3.3	-2.7	53
2.55	3.4	-2.9	51
2.6	4.2	-2.8	52
2.65	4.3	-2.7	53
2.69	4.0	-2.7	54
3.3	3.6	-2.5	57
3.4	3.4	-2.5	56
3.5	3.9	-2.4	57
3.6	3.6	-2.3	59

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.7	4.5	-2.2	60
3.8	4.1	-2.2	61
3.9	4.5	-1.7	67
4	3.9	-1.9	65
4.1	4.5	-1.8	66
4.2	4.7	-1.8	65

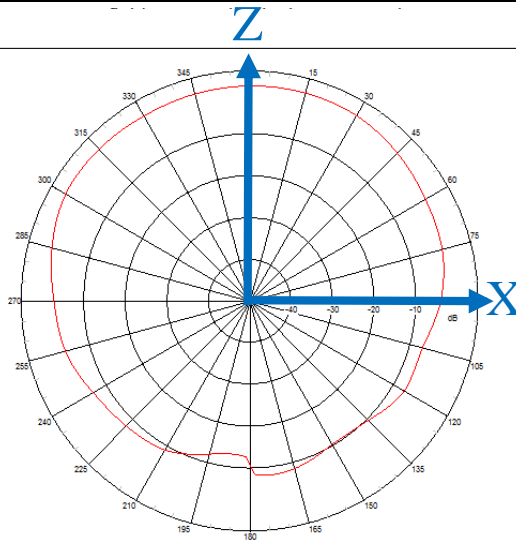
# Antenna Pattern

**A0**

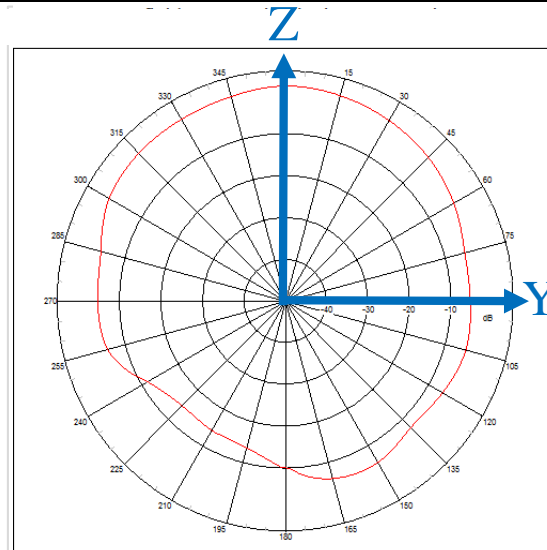
Frequency : 703MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
<b>0.703</b>	1.5	-3.1	49

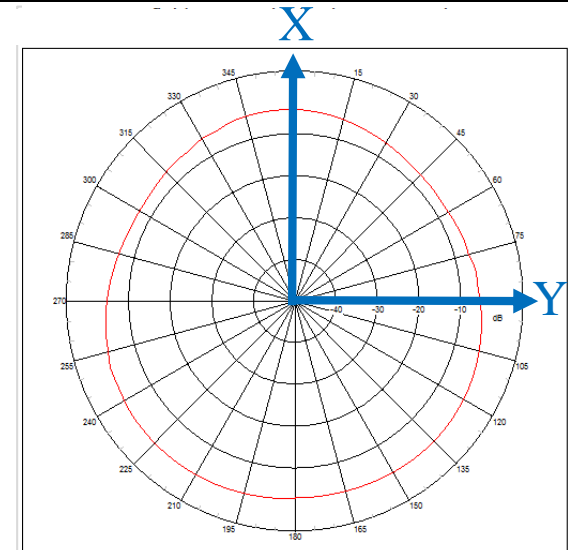
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

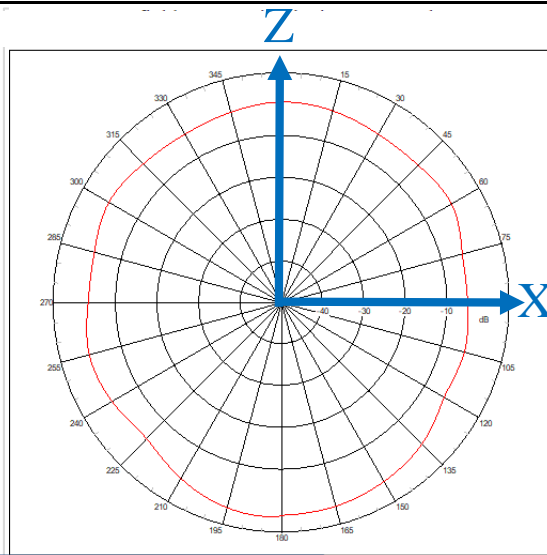
# Antenna Pattern

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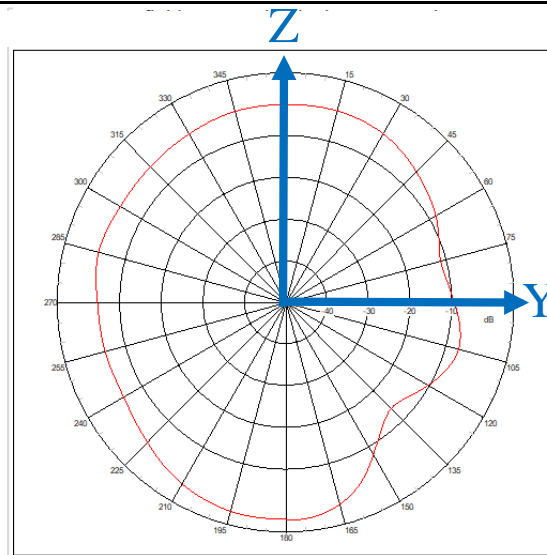
Frequency : 840MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.84	1.7	-3.8	41

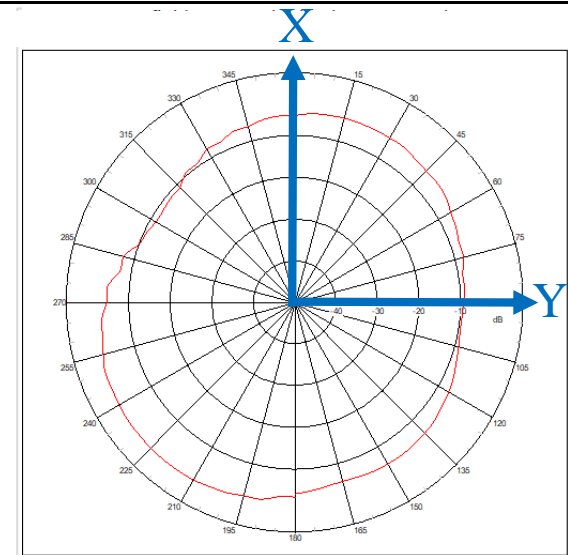
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

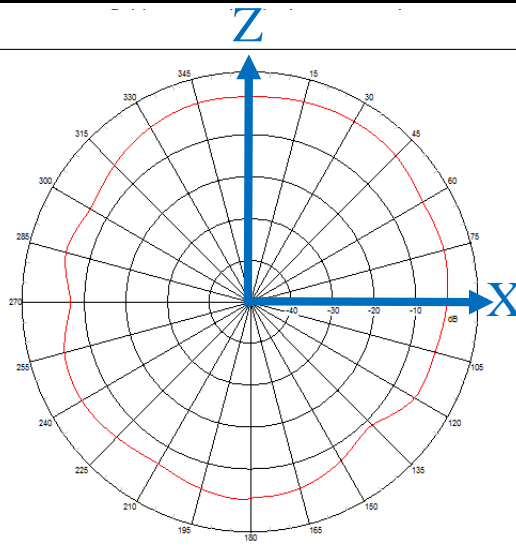
# Antenna Pattern

**A0**

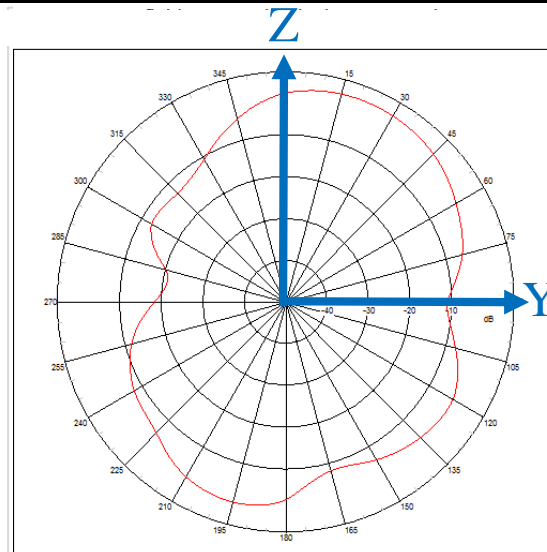
Frequency : 960MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.96	1.5	-3.7	43

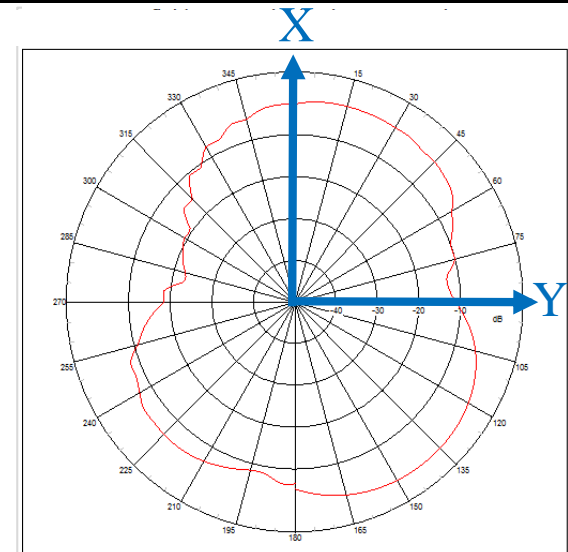
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

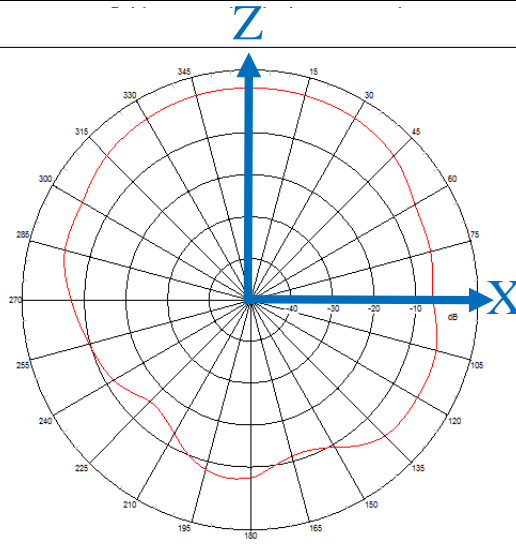
# Antenna Pattern

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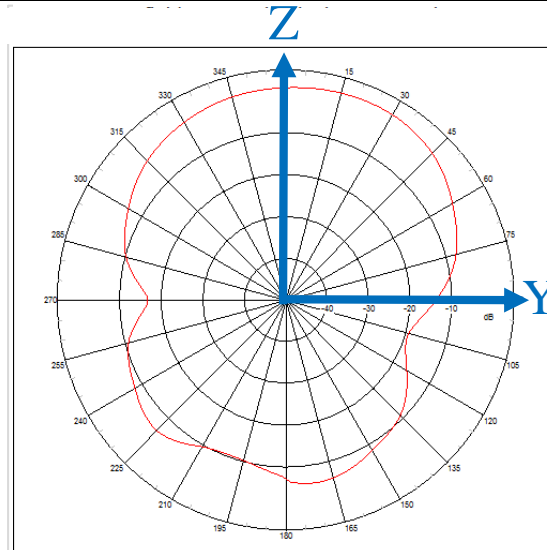
Frequency : 1427MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
1.427	2.1	-4.0	40

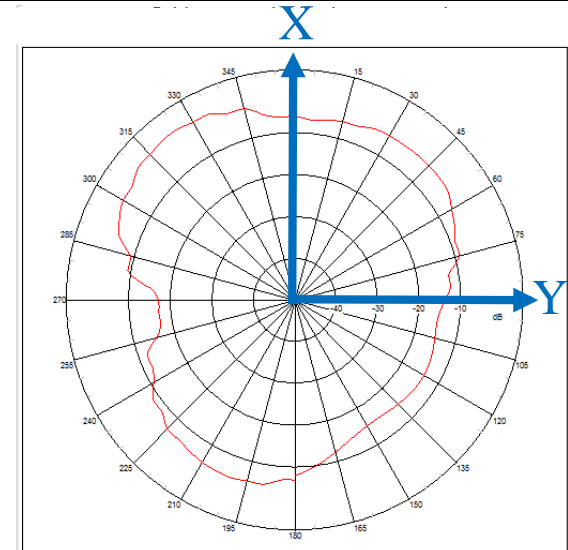
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

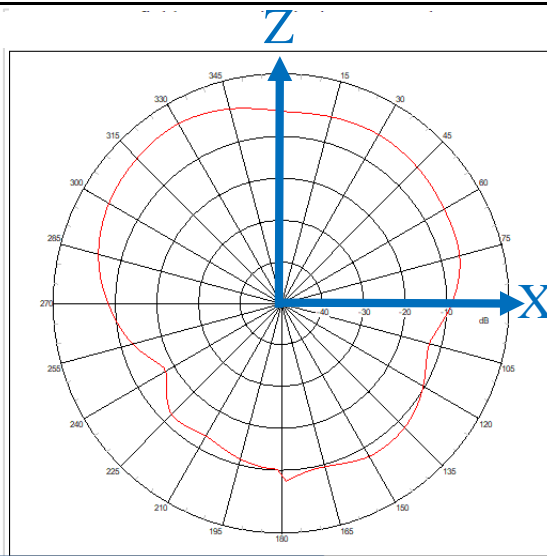
# Antenna Pattern

A0

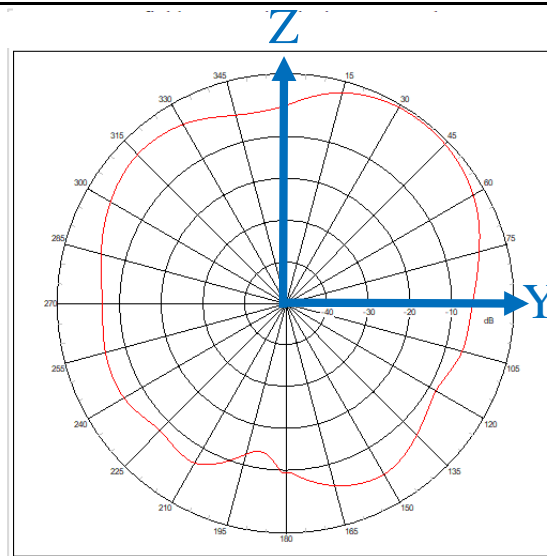
Frequency : 2170MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.17	4.0	-2.7	54

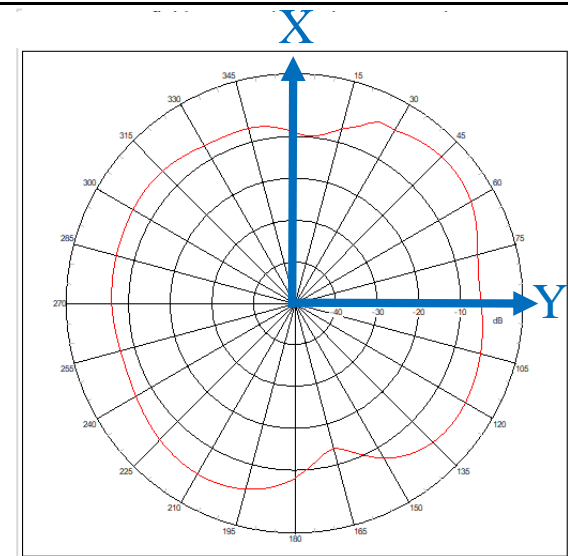
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

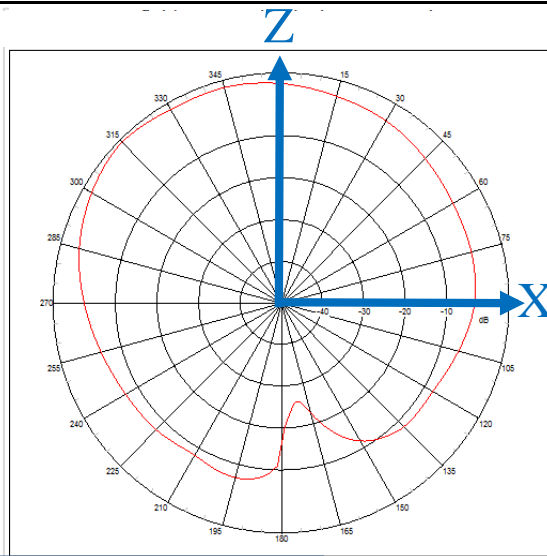
# Antenna Pattern

**A0**

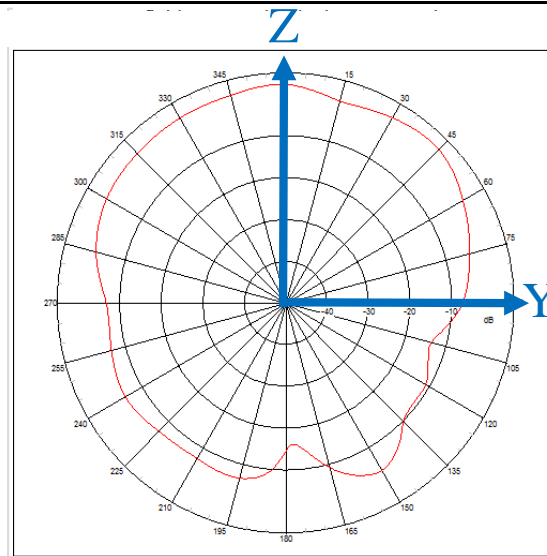
Frequency : 2690MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.69	4.0	-2.7	54

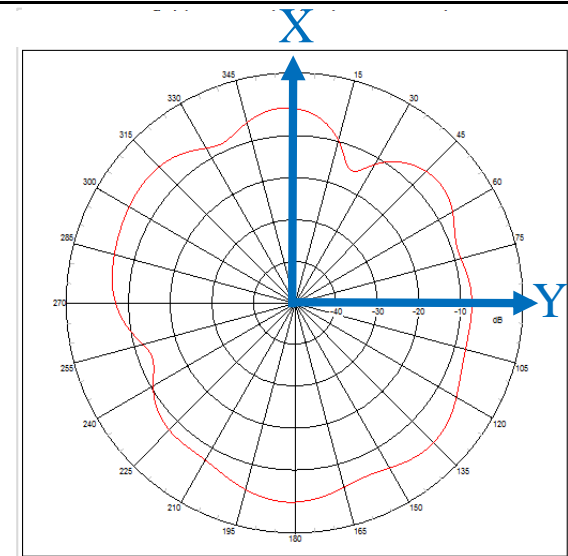
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

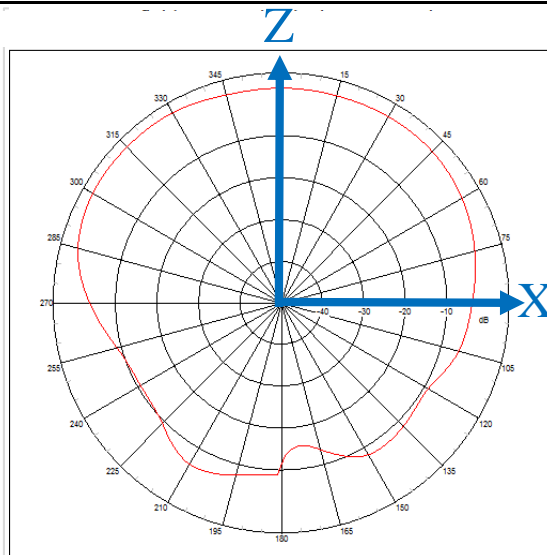
# Antenna Pattern

**A0**

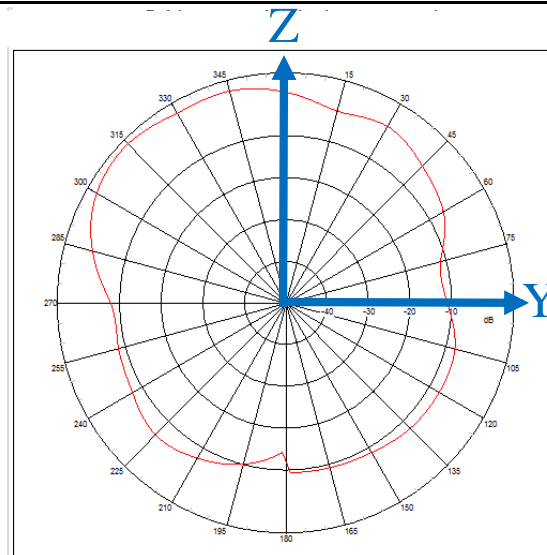
Frequency : 3300MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.3	3.6	-2.5	57

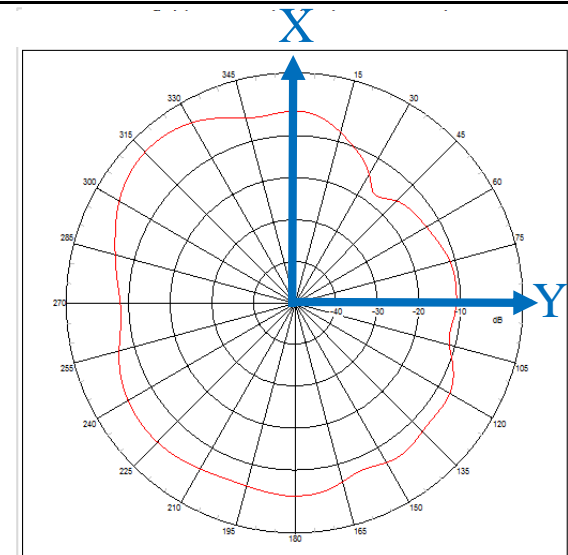
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

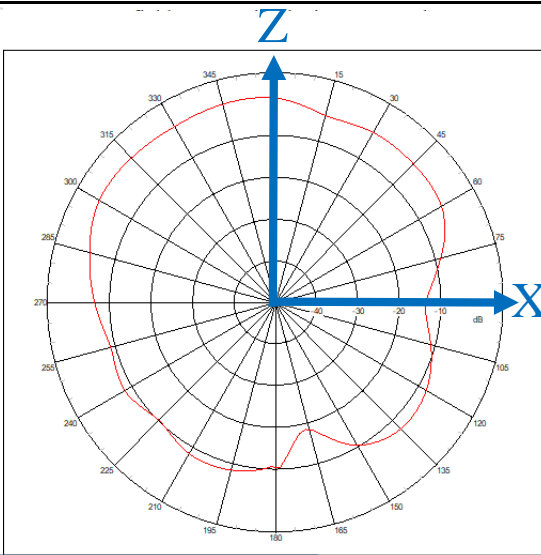
# Antenna Pattern

**A0**

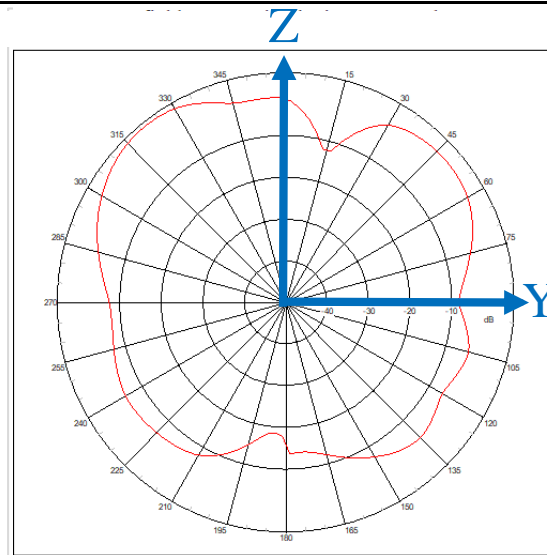
Frequency : 3800MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.8	4.1	-2.2	61

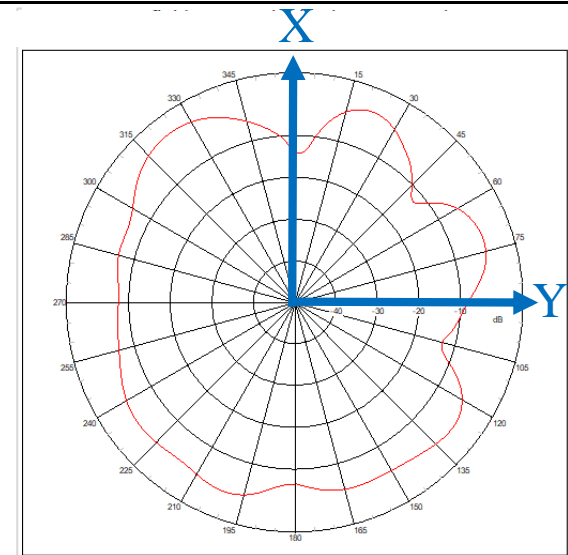
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

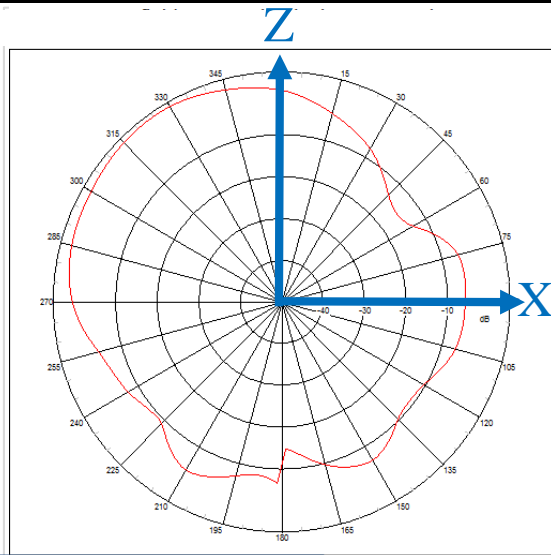
# Antenna Pattern

A0

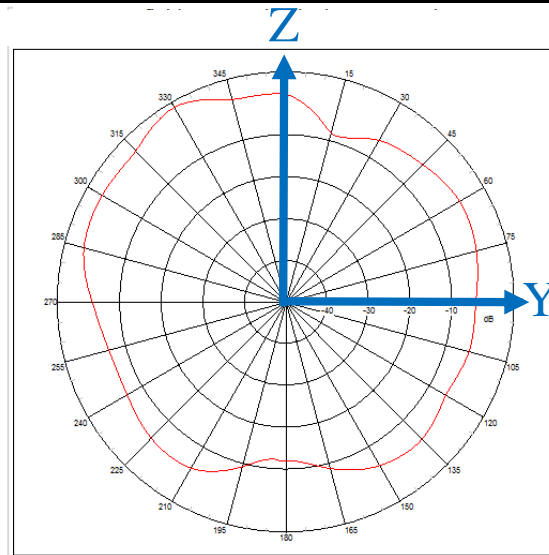
Frequency : 4200MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
4.2	4.7	-1.8	65

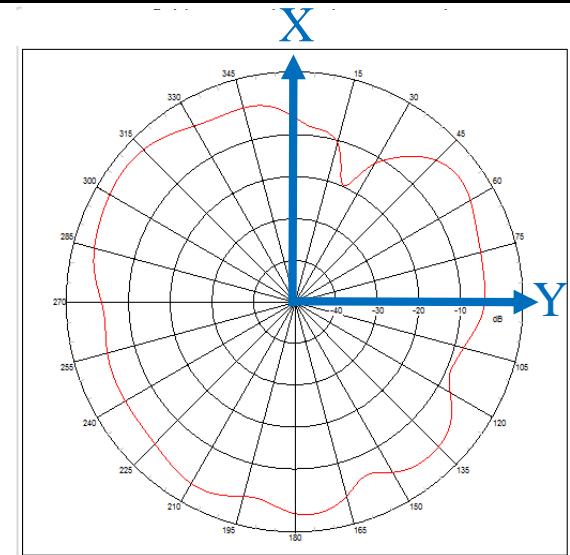
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB



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