

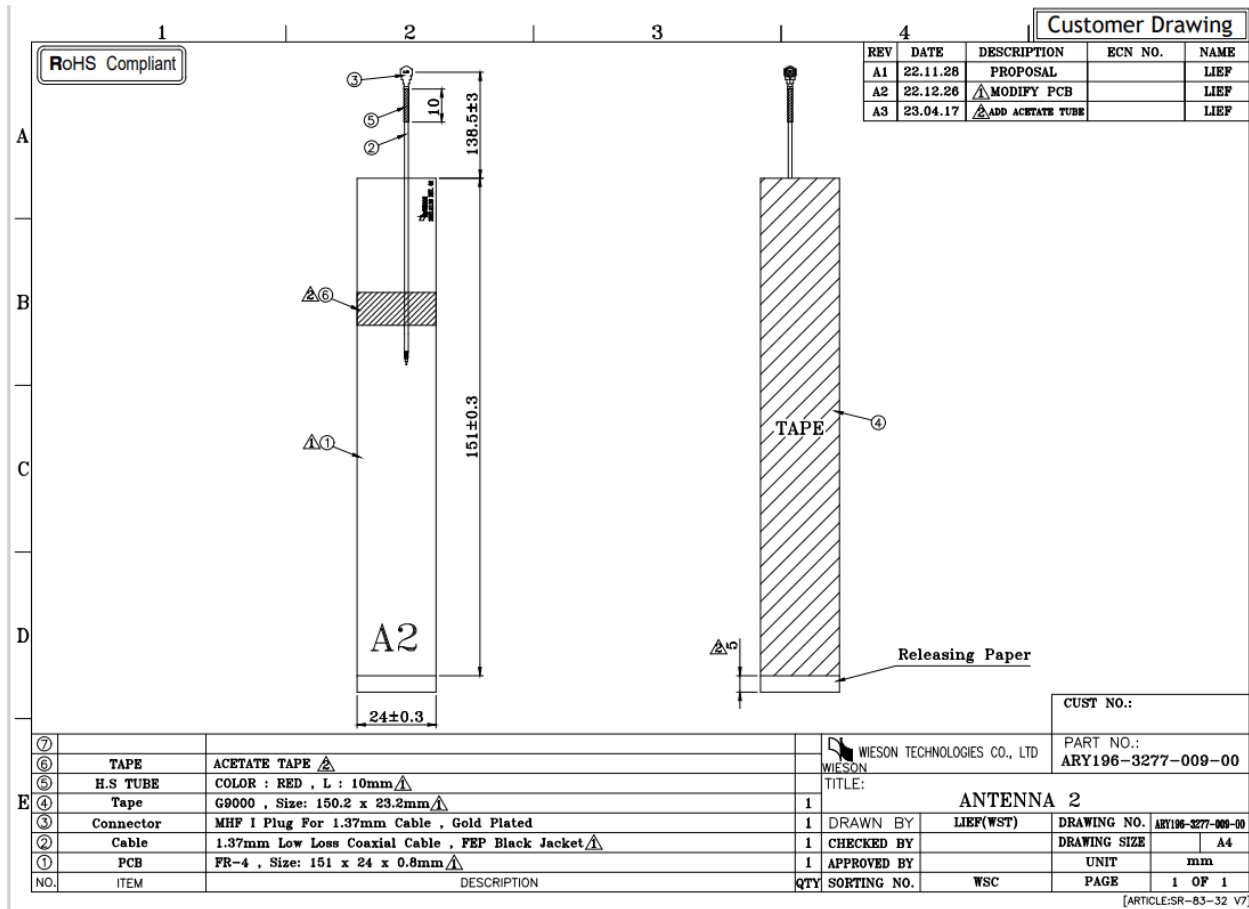


D-Link 530 ARY196-3277-009-00 Only Antenna

Engineer :Wade

Report date : 2023/04/13





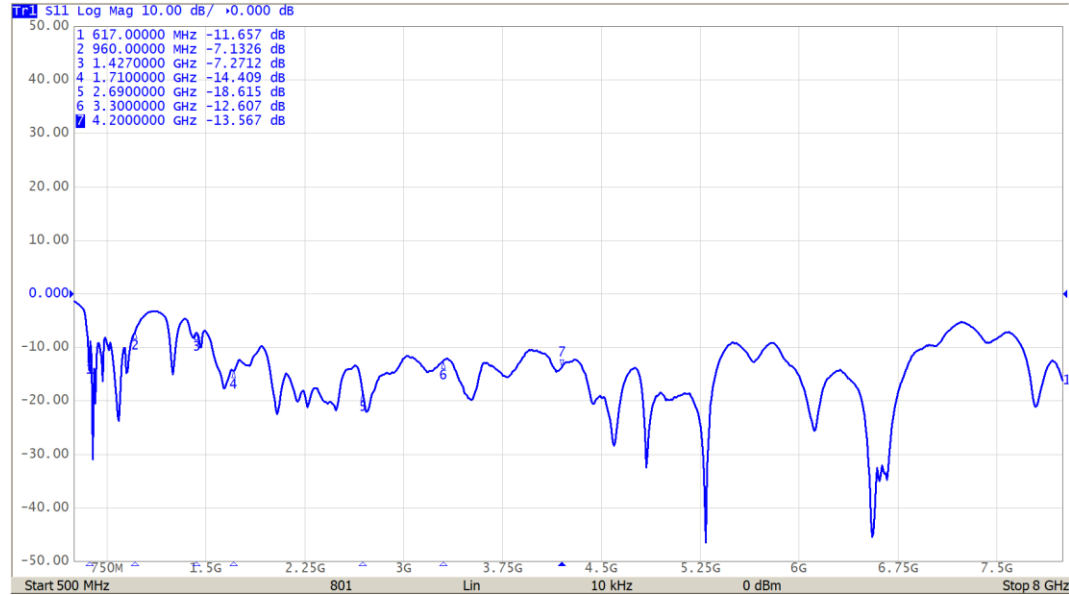
A2

Antenna specification

Item	Specification	Item	Specification	Item	Specification
Operating Frequency(GHz)	0.617-0.96	Operating Frequency(GHz)	1.427-2.69	Operating Frequency(GHz)	3.3-4.2
Bandwidth	343 MHz (Min.)	Bandwidth	1263 MHz (Min.)	Bandwidth	900 MHz (Min.)
Return Loss	7 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	4.7dBi (Max.)	Peak Gain	4.9dBi (Max.)	Peak Gain	4.7dBi (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	2.5 : 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	57%(Max.)	Efficiency	63%(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

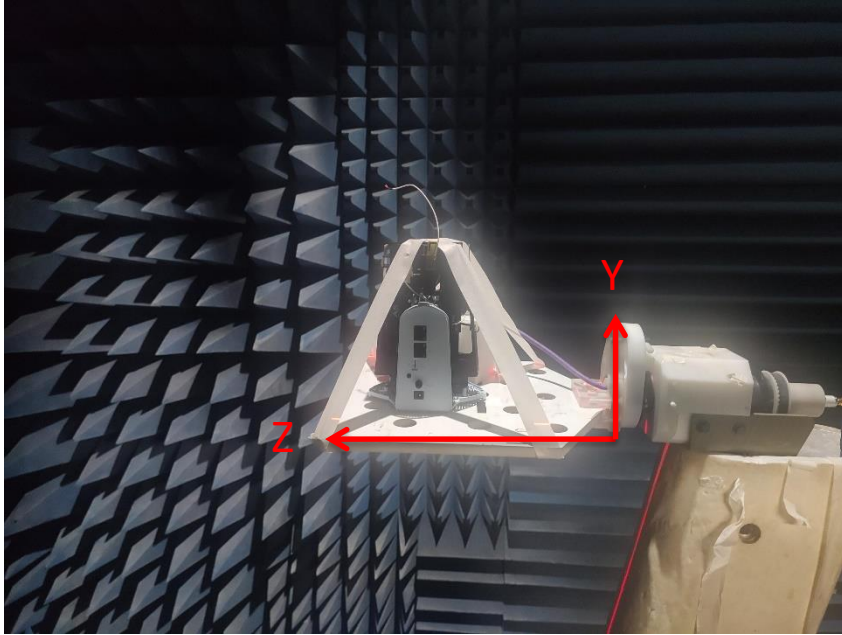
S-Parameter

A2



Freq(MHz)	617	960	1427	1710	2690	3300	4200
S11(dB)	-11.7	-7.1	-7.3	-14.4	-18.6	-12.6	-13.6

chamber measurement photo



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3D Gain Total

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.617	1.9	-3.9	41
0.658	1.7	-3.7	43
0.698	2.2	-4.0	40
0.703	2.6	-4.0	40
0.74	3.7	-3.7	42
0.78	2.7	-3.6	44
0.84	2.3	-3.9	40
0.88	3.6	-3.8	41
0.894	3.4	-3.9	41
0.92	3.9	-3.7	43
0.96	4.7	-3.1	49
1.427	2.4	-4.0	40

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
1.452	3.1	-3.9	41
1.47	1.5	-3.6	44
1.496	2.6	-3.2	48
1.517	2.0	-3.6	44
1.71	2.8	-2.9	52
1.76	2.6	-2.8	53
1.81	2.3	-3.0	50
1.88	2.1	-3.6	43
1.91	2.2	-4.0	40
1.96	3.2	-3.7	43
2.01	3.3	-3.2	48
2.06	4.3	-2.8	53

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3D Gain Total

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.11	3.2	-3.4	45
2.17	2.8	-2.8	52
2.3	4.9	-2.6	55
2.35	4.0	-2.6	55
2.4	4.0	-2.9	51
2.45	4.2	-2.6	55
2.5	4.5	-2.7	54
2.55	4.4	-2.5	57
2.6	3.7	-3.0	50
2.65	3.0	-2.6	55
2.69	2.9	-2.9	52
3.3	4.2	-2.7	53

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.4	3.6	-2.7	54
3.5	3.0	-2.8	53
3.6	4.1	-2.7	54
3.7	4.5	-2.8	53
3.8	4.7	-2.4	57
3.9	3.9	-2.0	63
4	3.5	-2.3	59
4.1	4.0	-2.2	60
4.2	3.5	-2.4	58

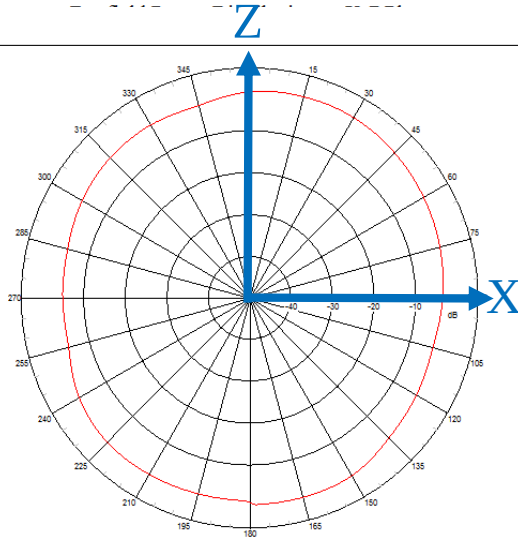
Antenna Pattern

A2

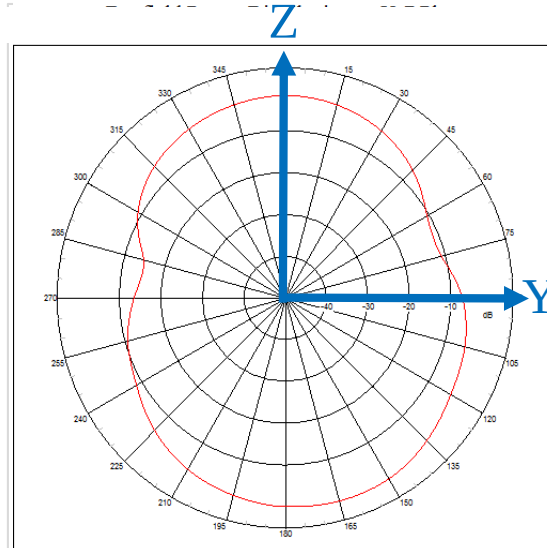
Frequency : 617MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.617	1.9	-3.9	41

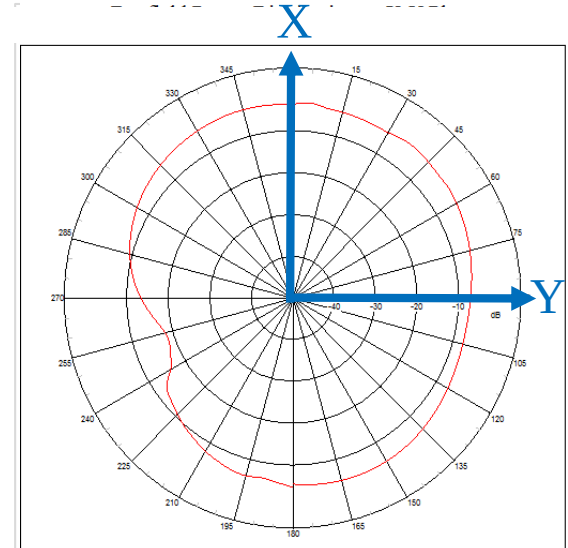
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

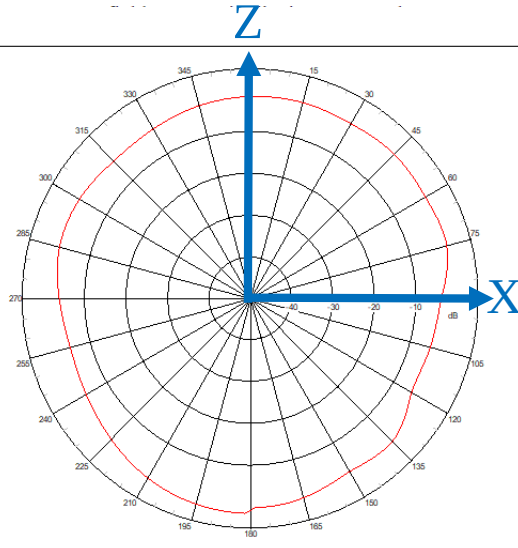
Antenna Pattern

A2

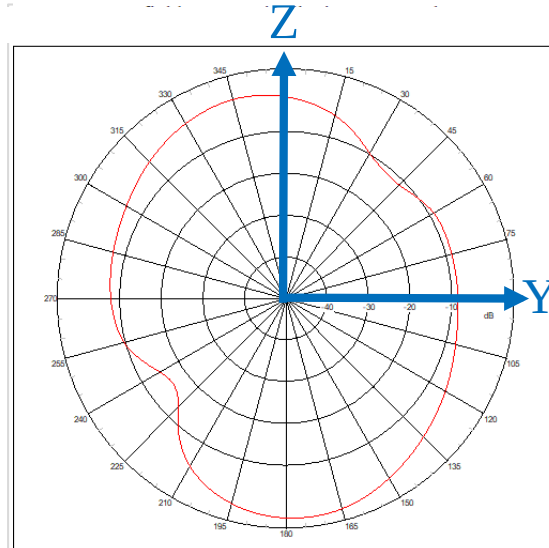
Frequency : 840MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.84	2.3	-3.9	40

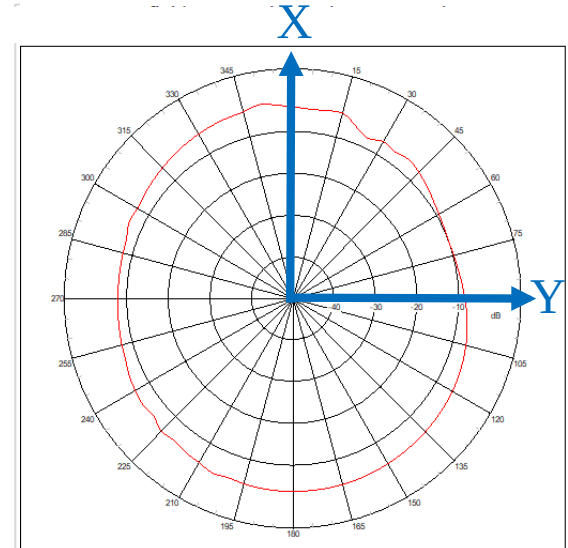
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

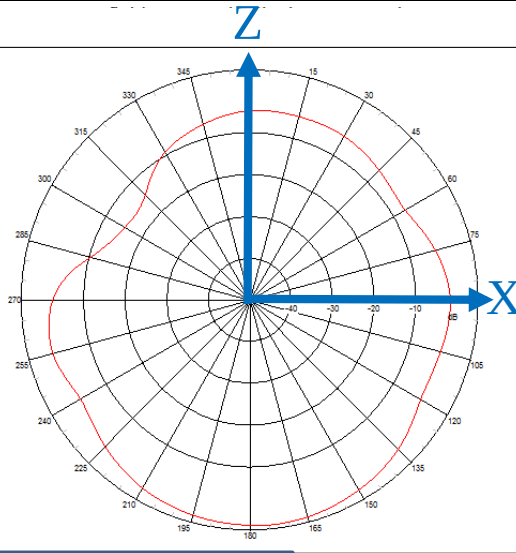
Antenna Pattern

A2

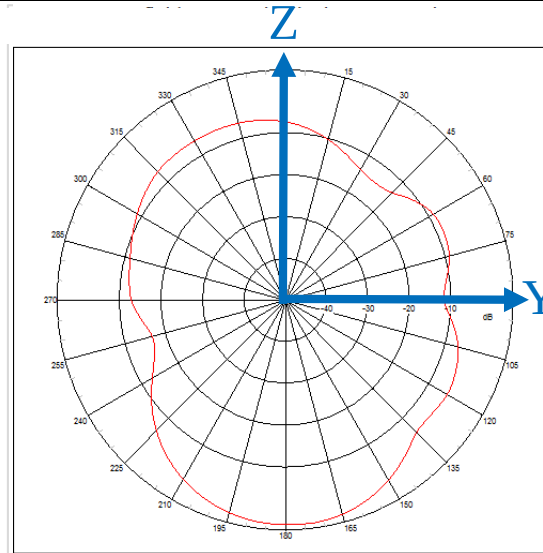
Frequency : 960MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
0.96	4.7	-3.1	49

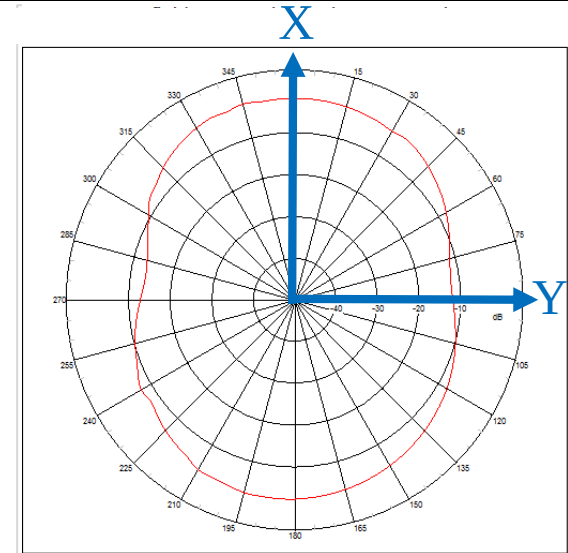
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

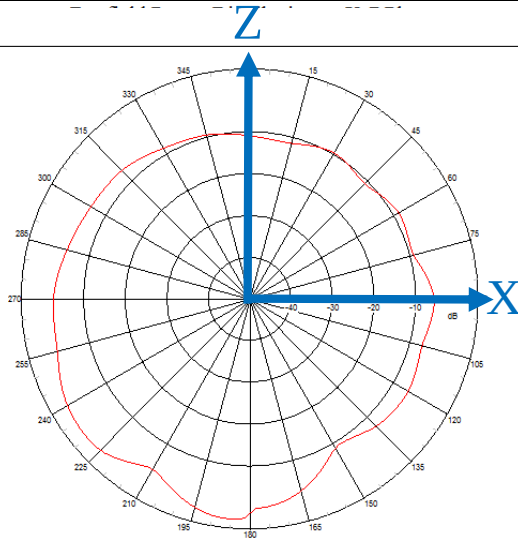
Antenna Pattern

A2

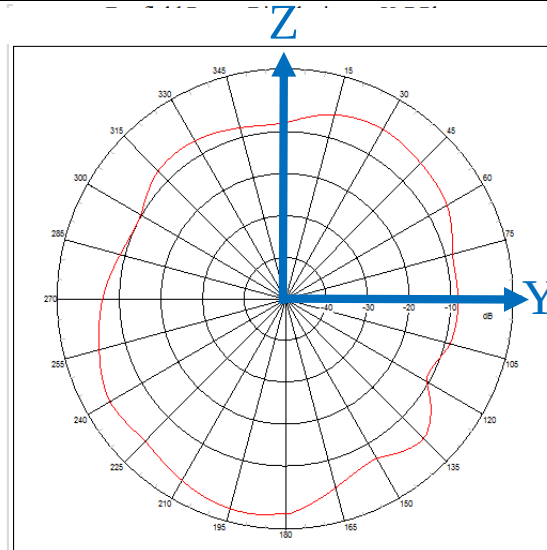
Frequency : 1427MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
1.427	2.4	-4.0	40

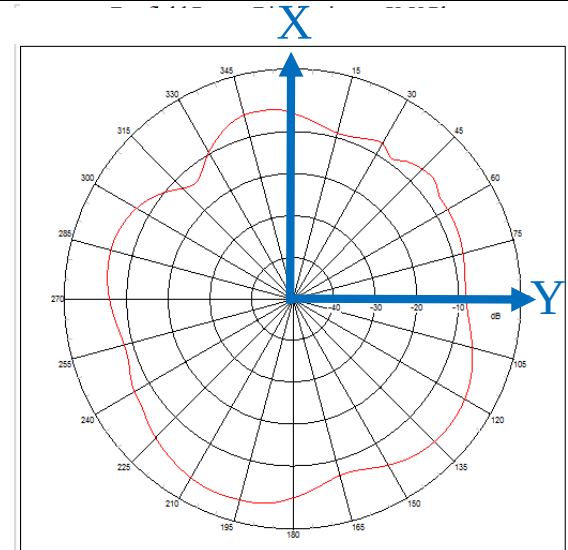
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

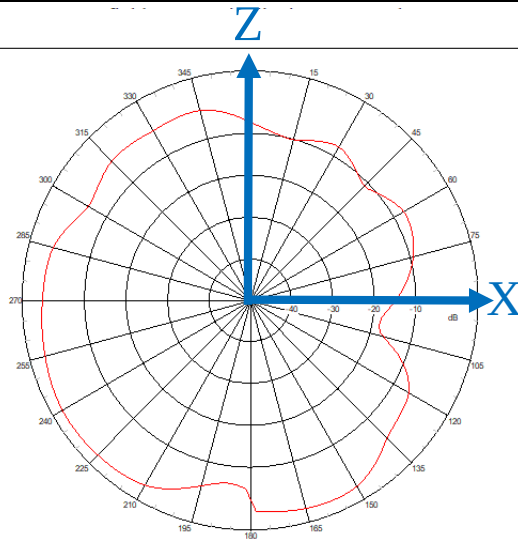
Antenna Pattern

A2

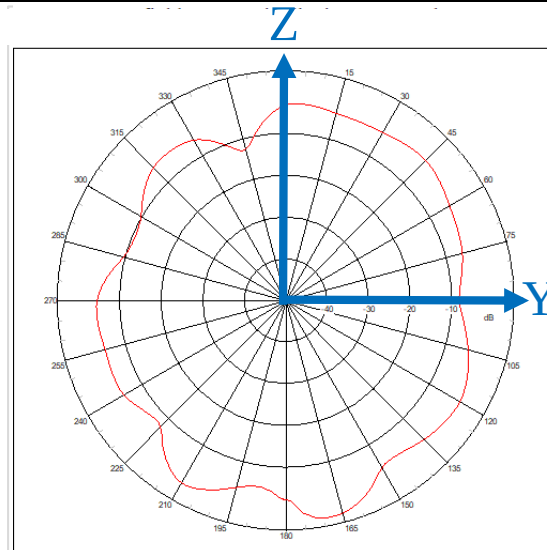
Frequency : 2170MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.17	2.8	-2.8	52

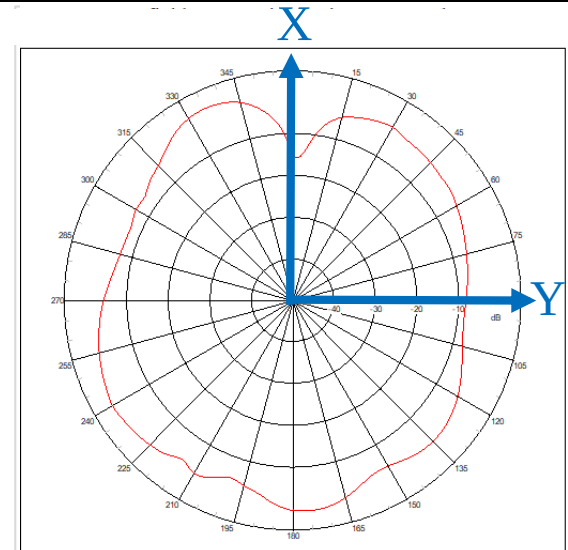
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

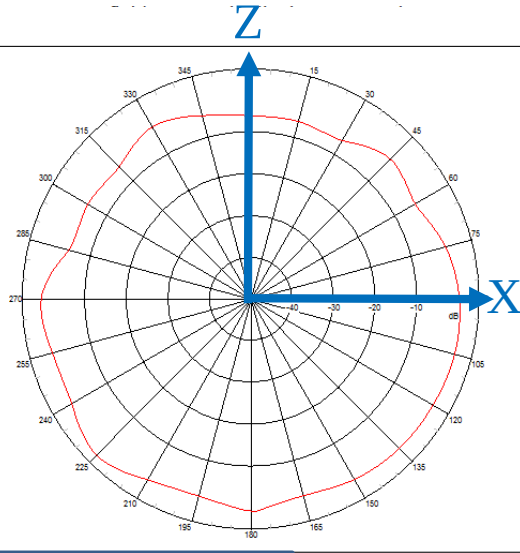
Antenna Pattern

A2

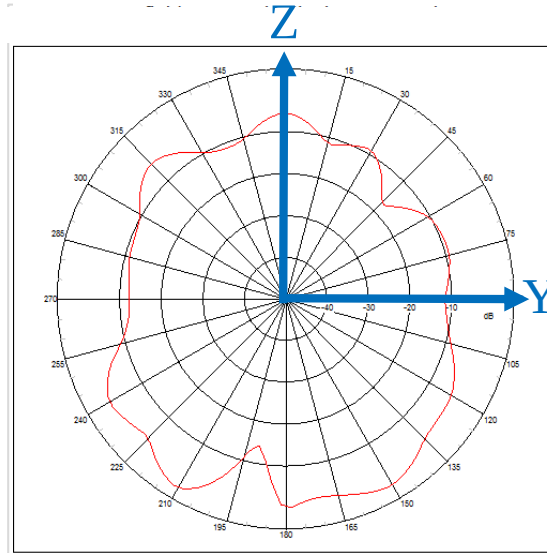
Frequency : 2690MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
2.69	2.9	-2.9	52

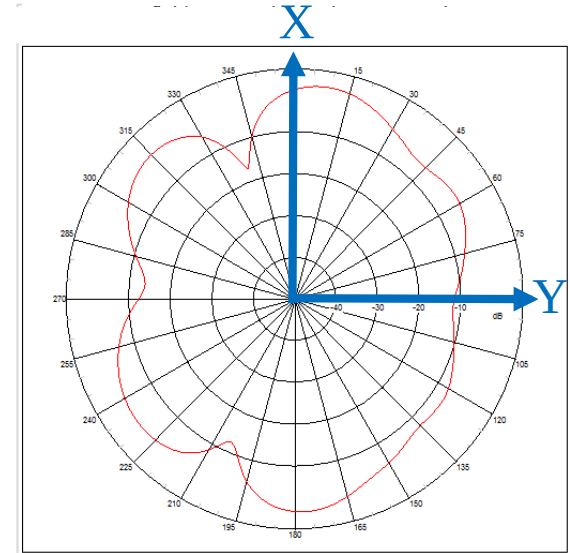
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

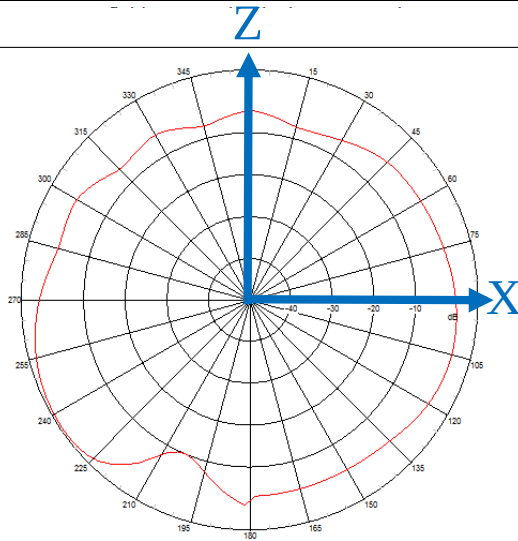
Antenna Pattern

A2

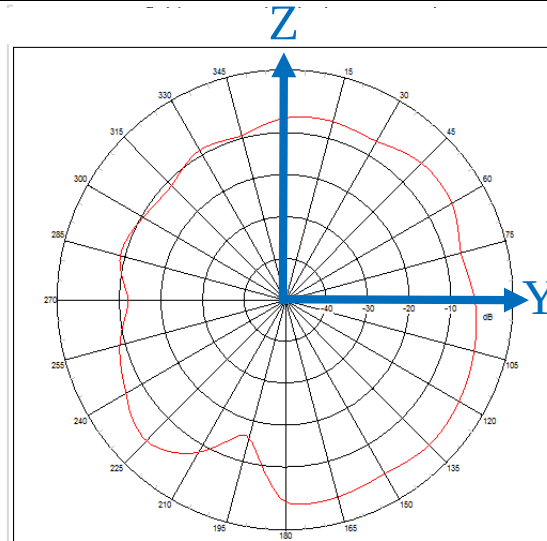
Frequency : 3300MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.3	4.2	-2.7	53

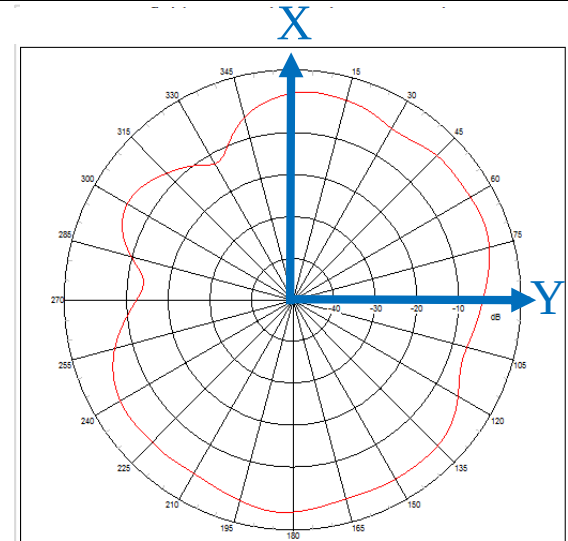
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

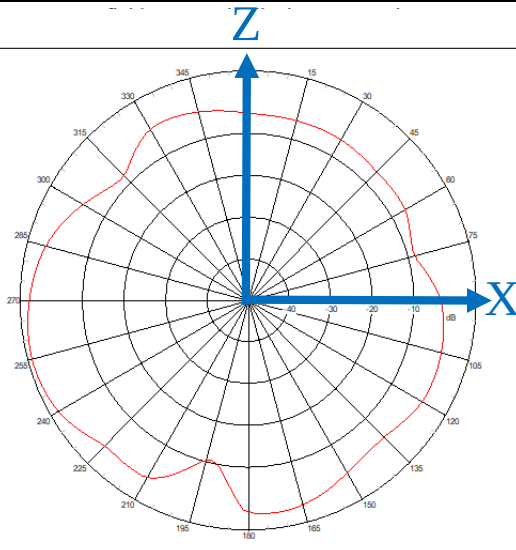
Antenna Pattern

A2

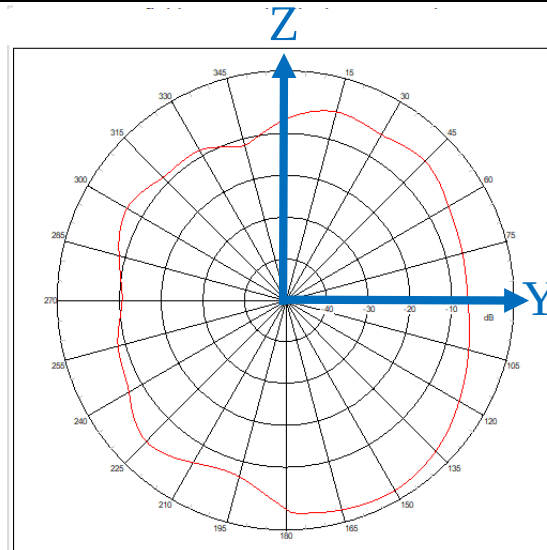
Frequency : 3800MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
3.8	4.7	-2.4	57

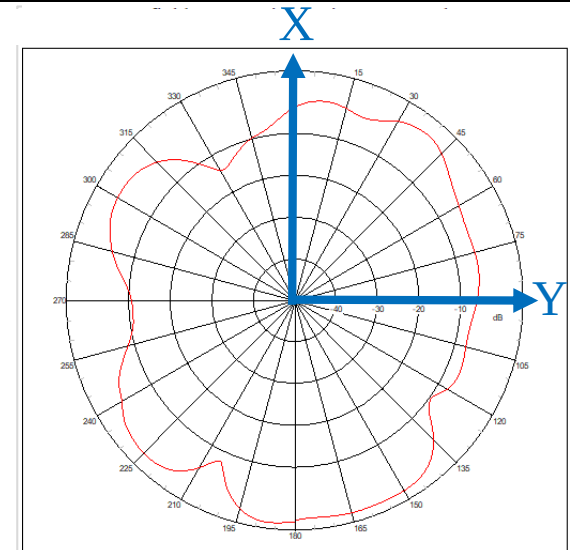
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

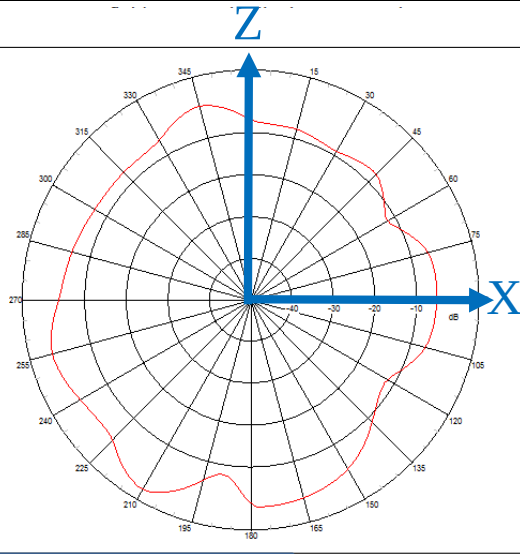
Antenna Pattern

A2

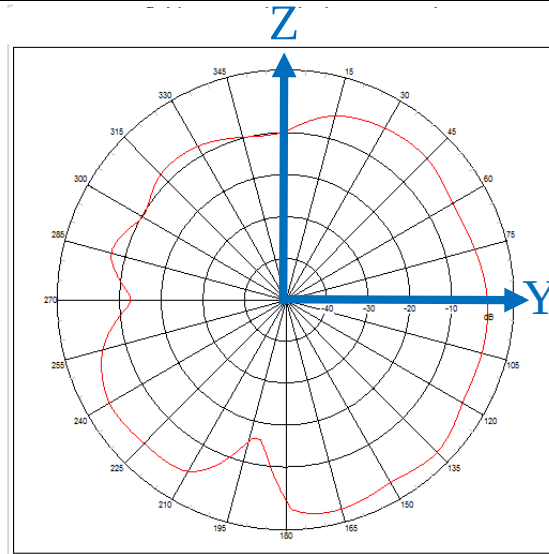
Frequency : 4200MHz

Freq(GHz)	Peak Gain(dBi)	3D-avg Gain(dBi)	Efficiency(%)
4.2	3.5	-2.4	58

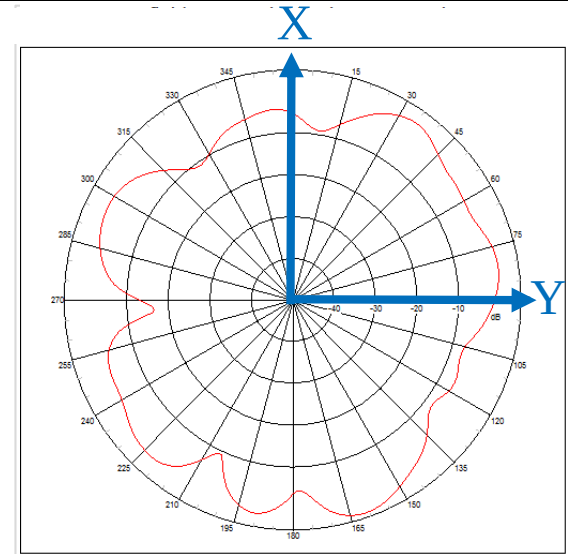
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB



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