

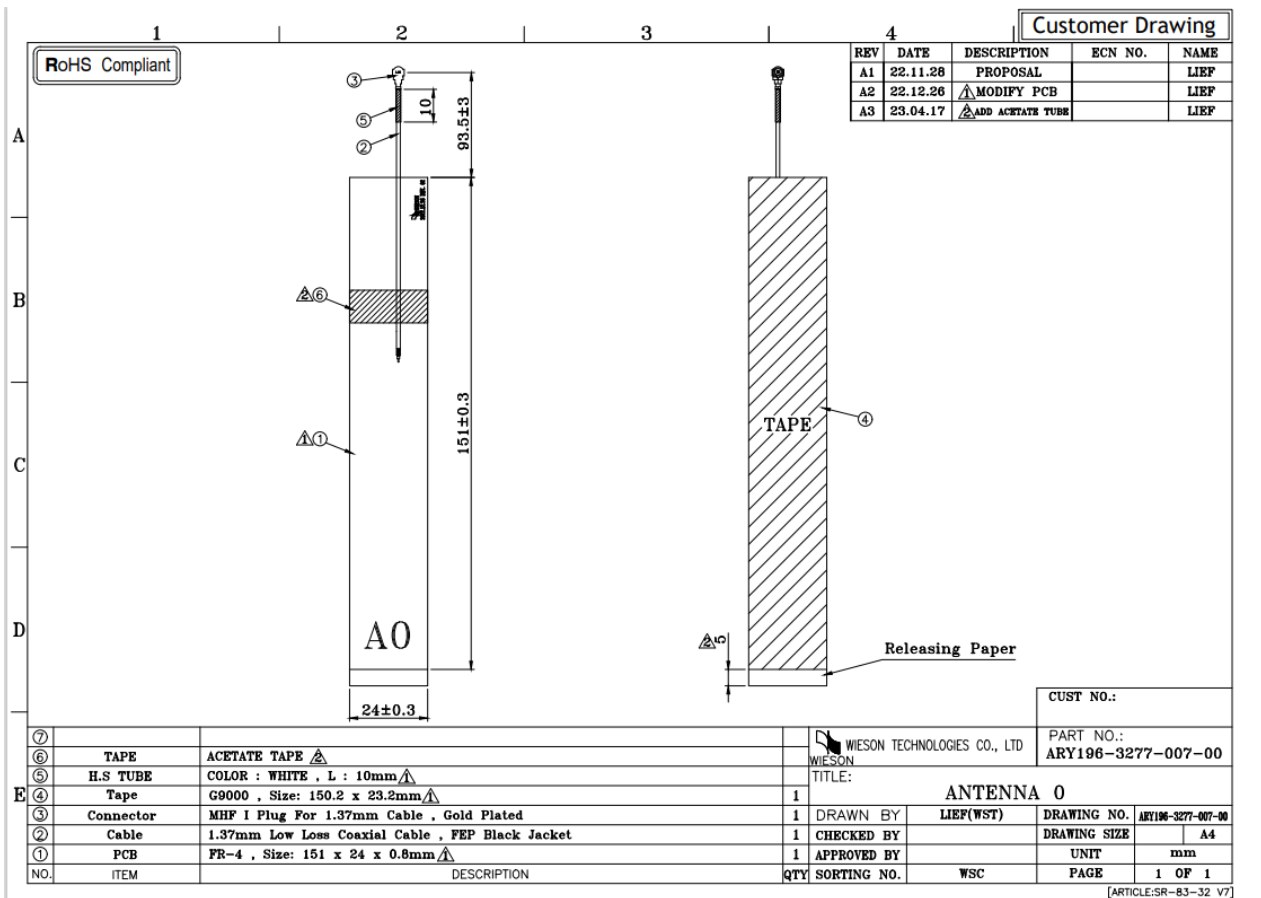


D-Link 530 ARY196-3277-007-00 Only Antenna

Engineer :Wade

Report date : 2023/04/13





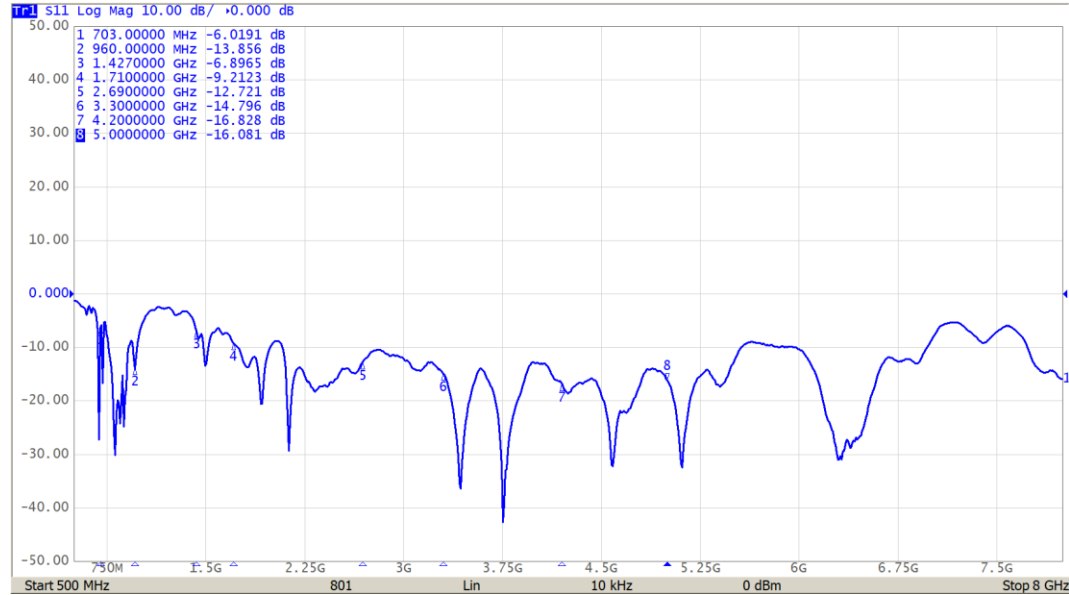
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Antenna specification

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

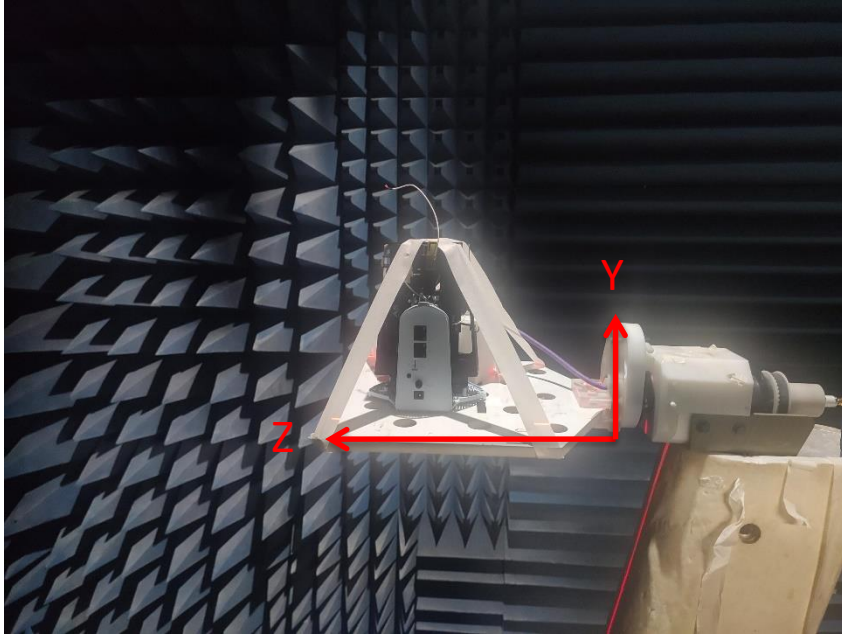
S-Parameter

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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



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3D Gain Total

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

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

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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

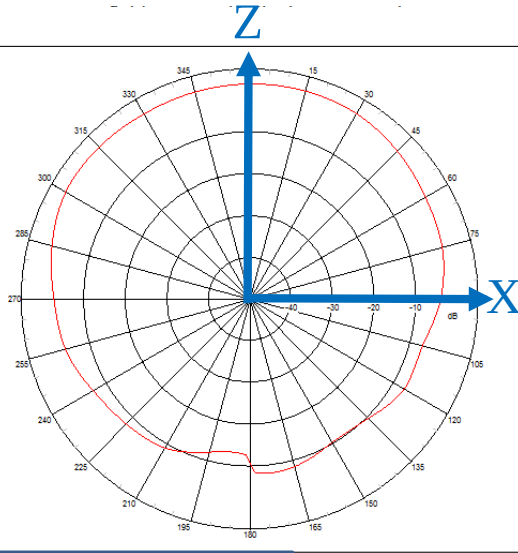
Antenna Pattern

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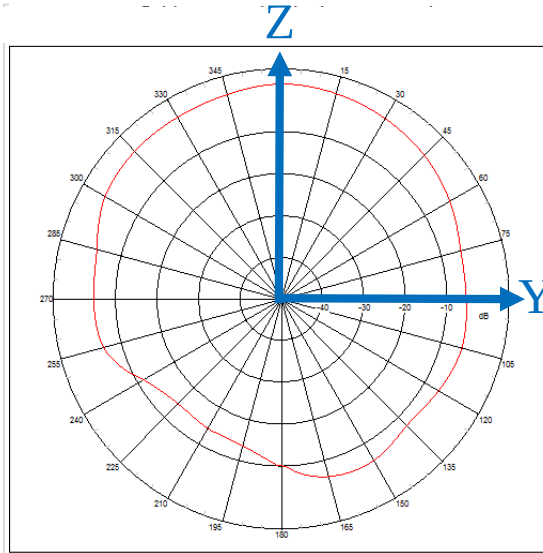
Frequency : 703MHz

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

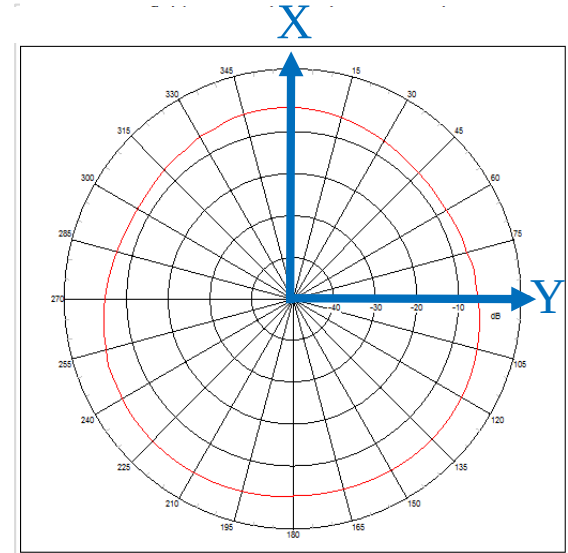
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

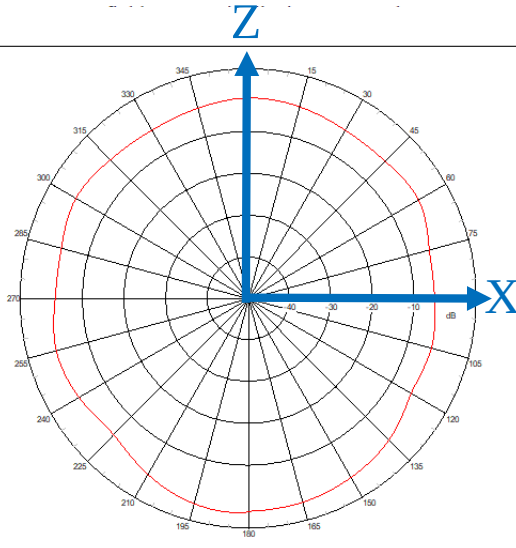
Antenna Pattern

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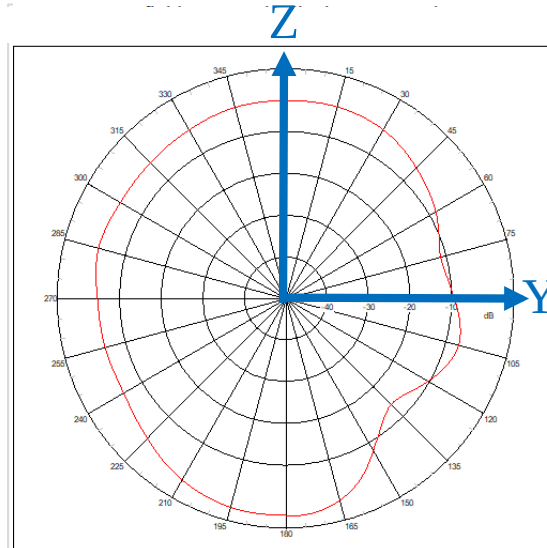
Frequency : 840MHz

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

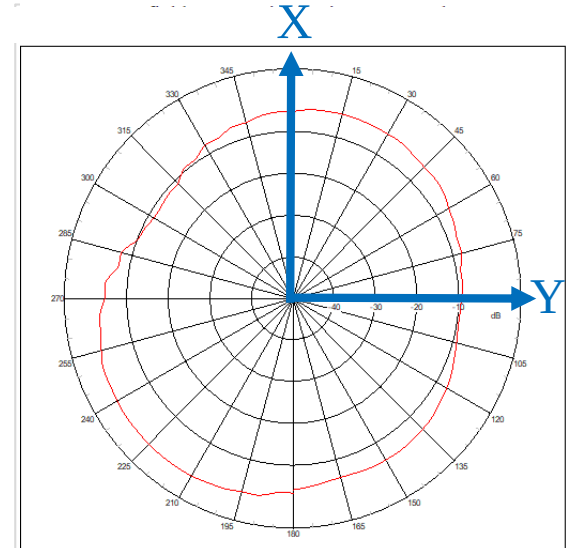
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

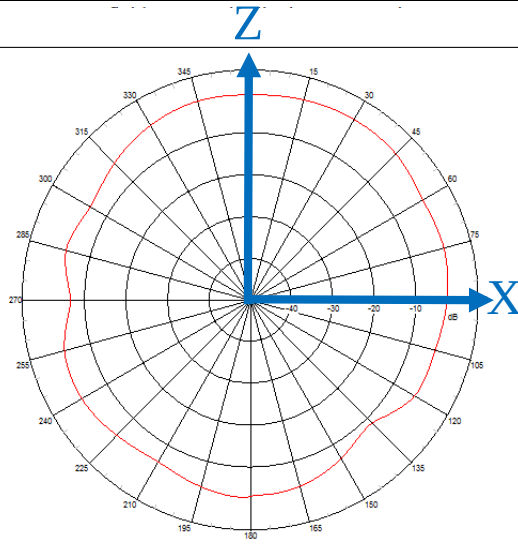
Antenna Pattern

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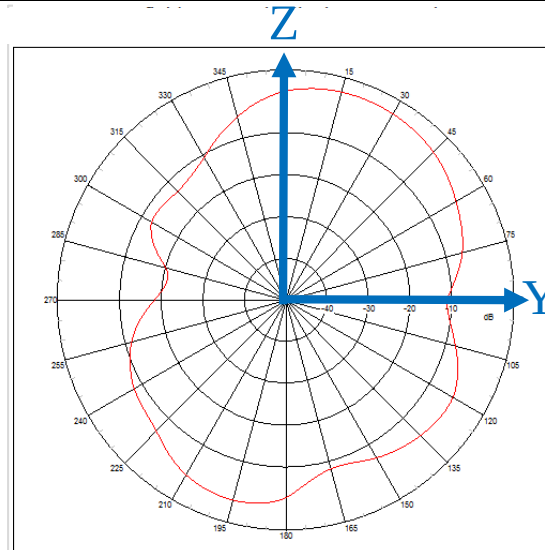
Frequency : 960MHz

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

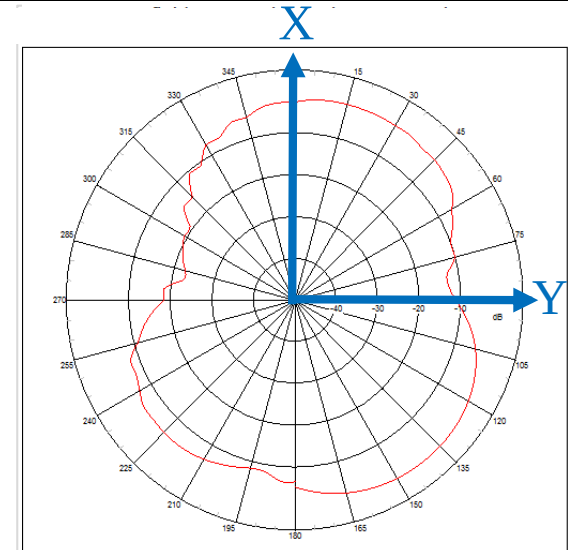
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

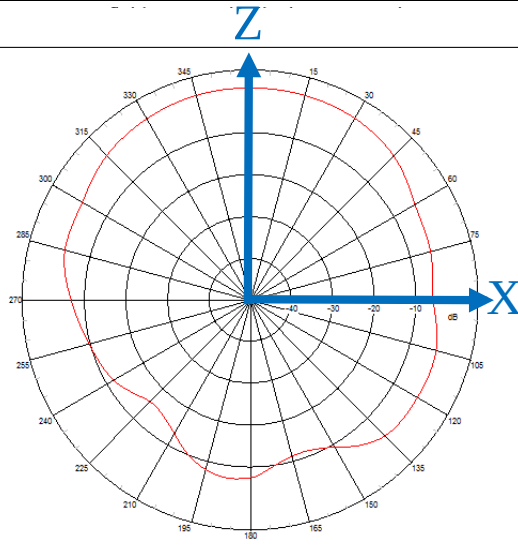
Antenna Pattern

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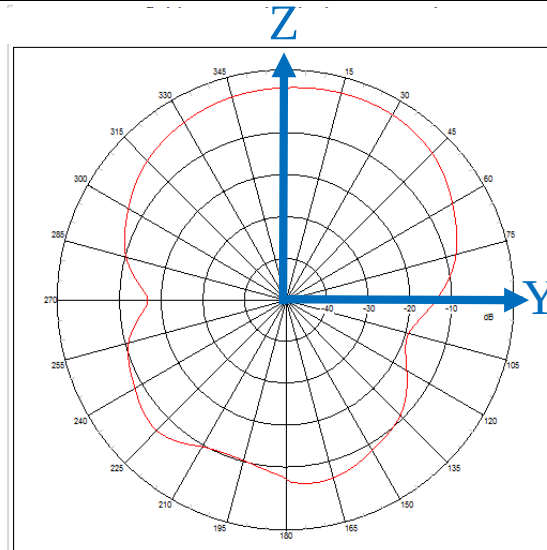
Frequency : 1427MHz

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

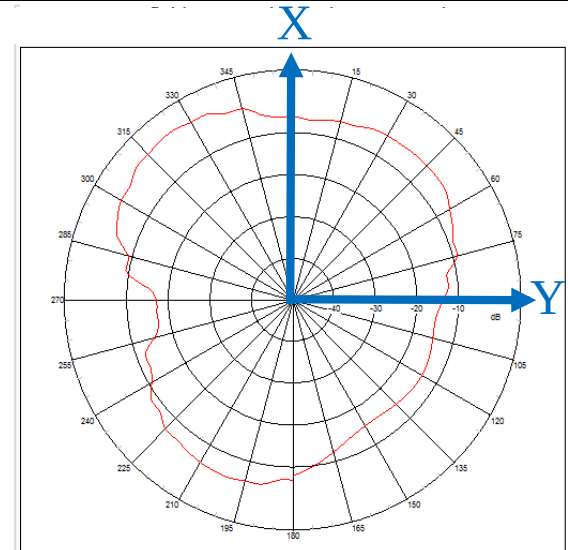
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

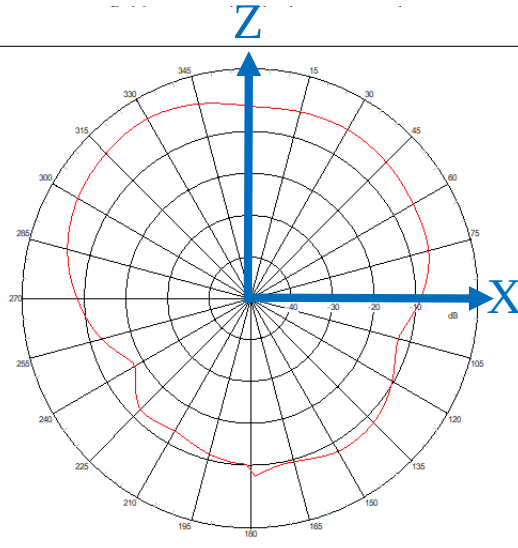
Antenna Pattern

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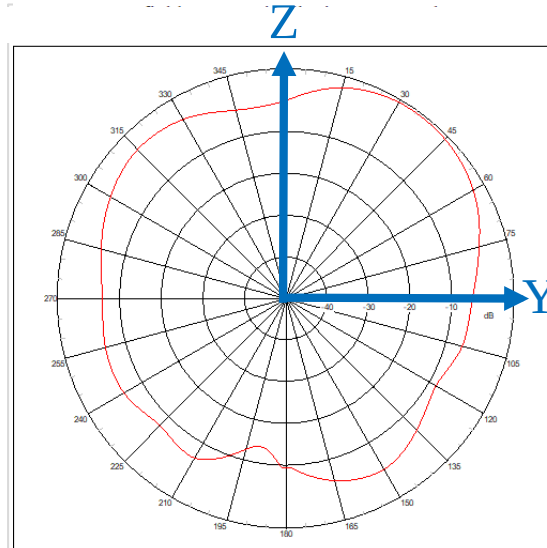
Frequency : 2170MHz

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

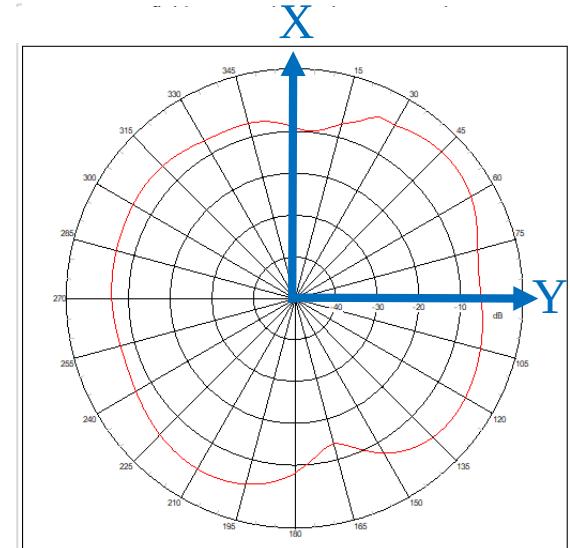
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

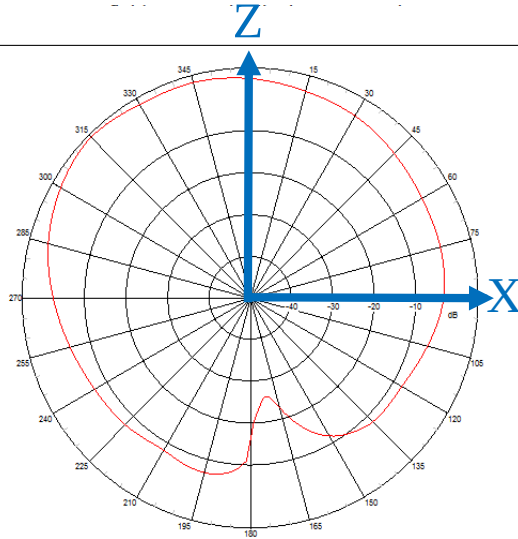
Antenna Pattern

A0

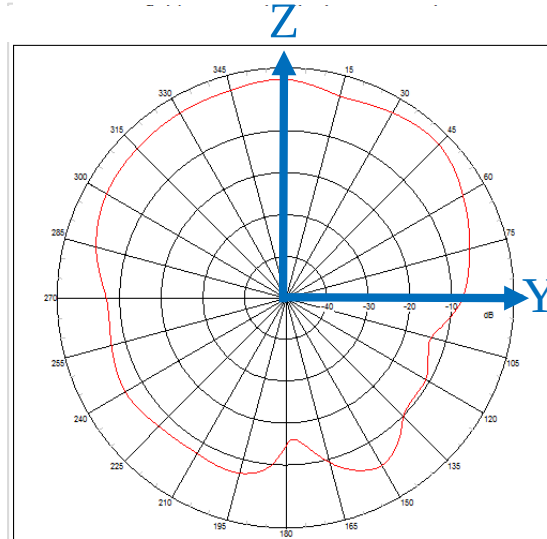
Frequency : 2690MHz

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

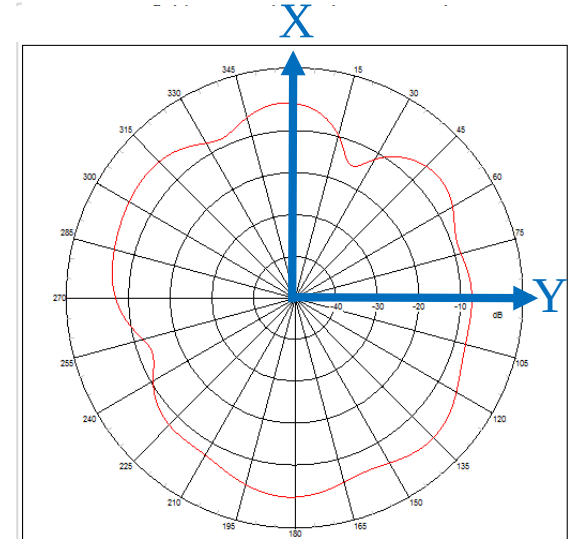
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

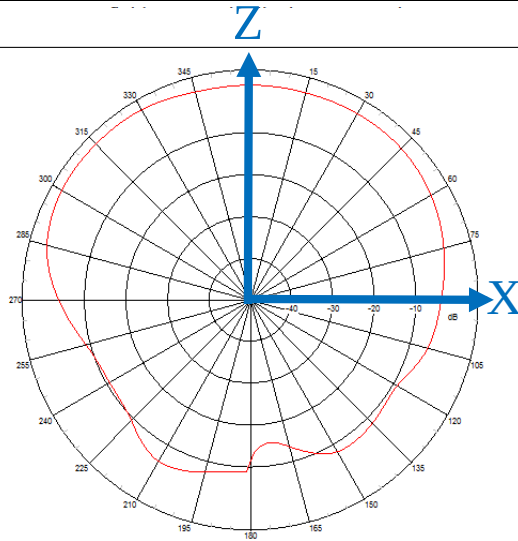
Antenna Pattern

A0

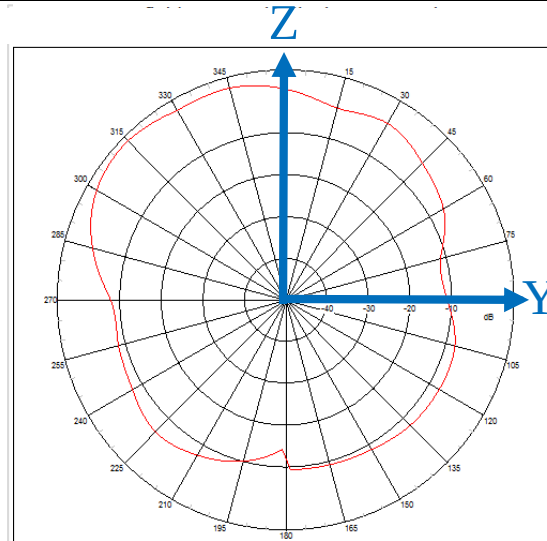
Frequency : 3300MHz

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

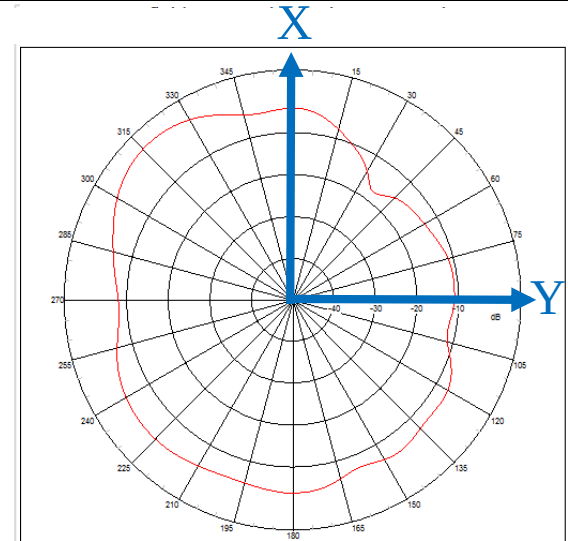
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

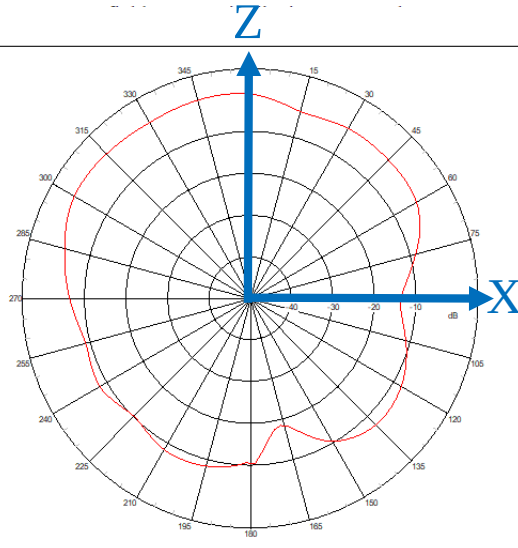
Antenna Pattern

A0

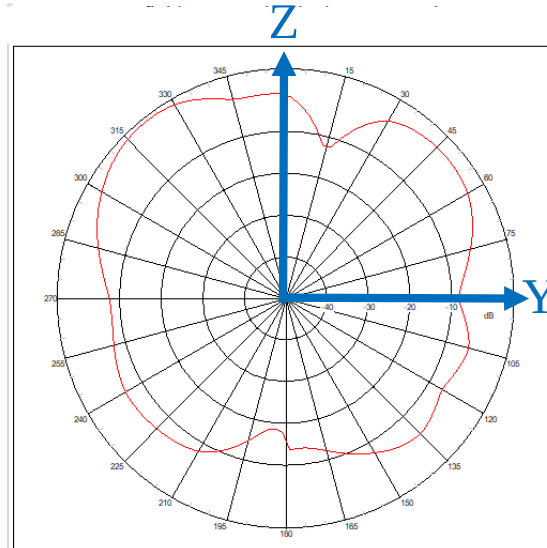
Frequency : 3800MHz

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

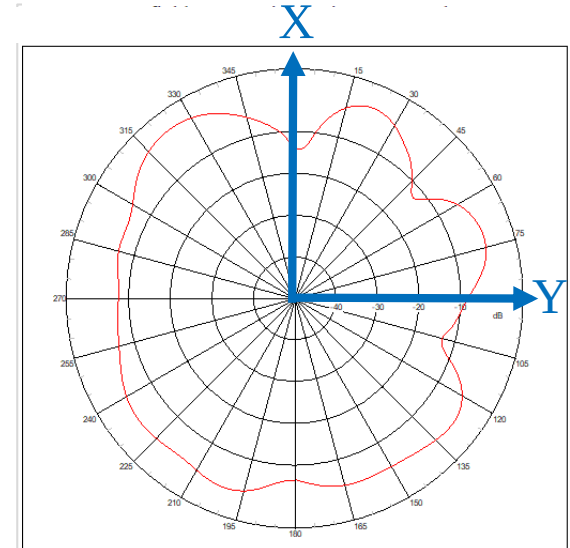
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB

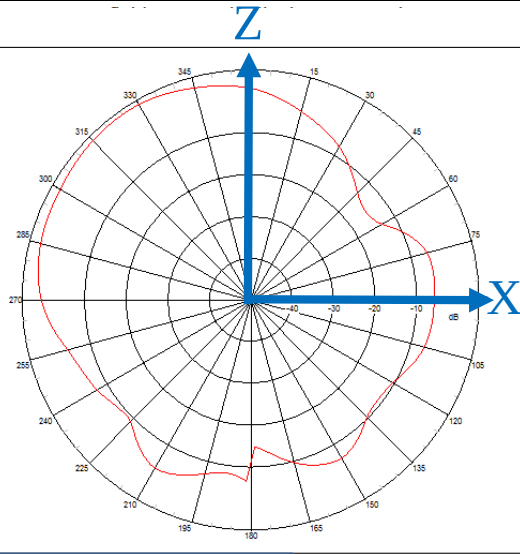
Antenna Pattern

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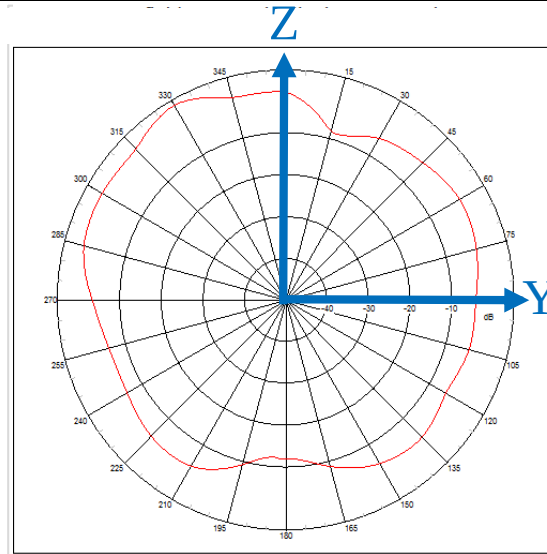
Frequency : 4200MHz

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

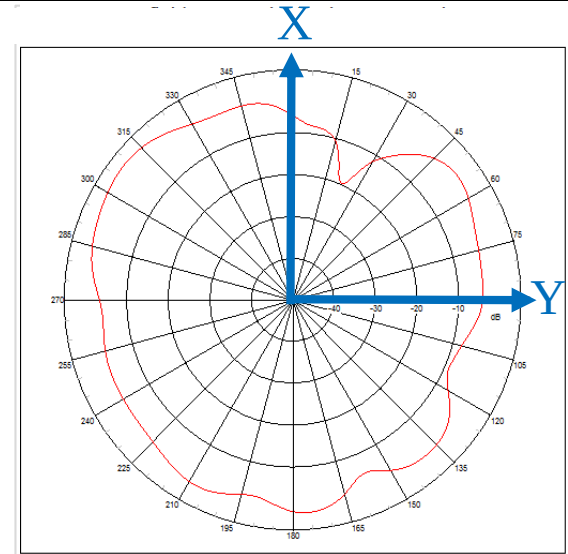
XZ-plane



YZ-plane



XY-plane



Far-field amplitude limits:

Max: 5dB

min: -50dB



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