Regulatory WLAN Antenna Information (Template)

English Language Required for Intel Regulatory Review / Approval

(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.

Remove Intel references and make this your own document)

Platform information

Brand	ODM	****End product model name	Intel platform (ex: Yes, No or NA)	Platform type (ex: regular NB, convertible PC, AIO…etc)	*SAR minimum separation (mm)
Ricoh	Quanta Corporation	DLX	NA	Mobile Display	

*****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection.**

Antenna information

Vendor	Type	Antenna Part number (Main)	Antenna Part number (Aux)
Pulse Electronics	PIFA	TZ22940	TZ22950

Peak gain w/ cable loss (dBi)*

	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	1.44	2.95	2.89	2.82	2.94	2.96	2.96	2.62	0.77
Aux	1.23	2.97	2.28	2.52	1.21	0.91	-0.02	1.15	2.41

Intel Reference Gain/Type/ Separation distance

Antenna Type	Antenna Peak gain (In dBi)*									Distance to the end user (mm)
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0GHz 6875-7125MHz	Generic: refer to modular FCC SAR report
Design	**3.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	Mid-power: ≥ 8 mm
PIFA	**3.24**	**3.64**	**3.73**	**4.77**	**4.97**	**4.83**	**4.30**	**5.37**	**5.59**	Low power: ≥ 5 mm
Dipole	**2.89**	**2.92**	**3.19**	**4.41**	**4.22**	**4.83**	**4.30**	**4.49**	**5.34**	

Notes (marked with *)

*** SAR minimum separation (mm)**

- Regular NB: Minimum antenna-to-body (from antenna bottom to the bottom of the device)

- Tablet / Convertible PC: Minimum antenna-to-edge (5 sides of the device)

- Mini-tablet: Minimum antenna-to-edge (6 sides of the device)

*** 3D Peak Antenna gain should be equal or greater than -2 dBi**
- If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

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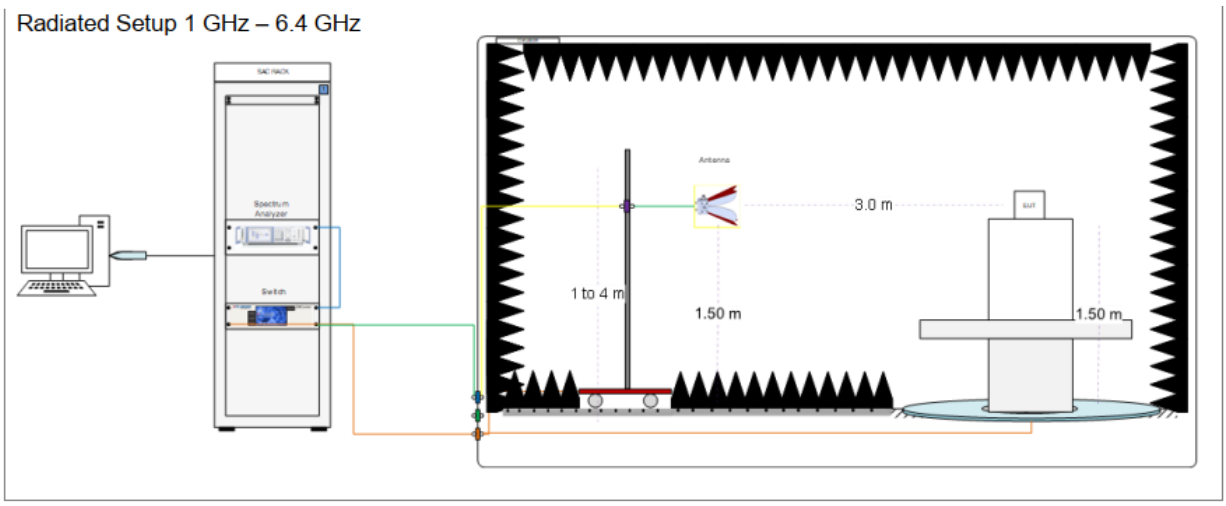
1. **Applicable test methods**

   This test report is prepared for host antenna testing under a Full Anechoic Chamber.

2. **Test & System Description**

   a. Test setup



b. Equipment list

Radiated Setup #1						
ID#	Device	Type/Model	Serial#	Manufactuter	Cal. Date	Cal. Due Date
1	Anechoic Chamber	AMS8500	-	ETS-Lindgren	2022-05-10	2023-05-10
2	Turn Table	ETS	-	ETS-Lindgren	N/A	N/A
3	Switch & Positioning system	2090	-	ETS-Lindgren	N/A	N/A
4	Horn Antenna	3164-08	99210	ETS-Lindgren	N/A	N/A
5	Network Analyzer	E5071C	MY46103999	Agilient	2022-05-10	2023-05-10
N/A: Not Applicable						

Antenna Information

Section 1. Antenna Assembly Specifications

1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	Freq RangeMHz	1E *Total Peak Gain W/ Cable loss (dBi)	1F Total Peak Gain w/o Cable Loss (dBi)	1G Max VSWR	1H Cable Loss (dB)
Customer P/N: DQ602294000 Pulse P/N: TZ22940 Tx1 Main Antenna	Pulse	PIFA	Connector: 彩美 NGFF or compatible. Cable: SY113L/50-001 or compatible. 50 ohm Coaxial. Length: 35 mm diameter: 1.13 LLS mm	2400-2483.5	1.44	1.55	3.00 max	0.11
				5150-5250	2.95	3.09	3.00 max	0.14
				5250-5350	2.89	3.03	3.00 max	0.14
				5470-5725	2.82	2.97	3.00 max	0.15
				5725-5850	2.94	3.09	3.00 max	0.15
				5925-6425	2.96	3.12	3.00 max	0.16
				6425-6525	2.96	3.12	3.00 max	0.16
				6525-6875	2.62	2.78	3.00 max	0.16
				6875-7125	0.77	0.93	3.00 max	0.16
Customer P/N: DQ602295000 Pulse P/N: TZ22950 Tx2 Aux Antenna	Pulse	PIFA	Connector: 彩美 NGFF or compatible. Cable: SY113L/50-001 or compatible. 50 ohm Coaxial. Length: 283 mm diameter: 1.13 LLS mm	2400-2483.5	1.23	2.08	3.00 max	0.85
				5150-5250	2.97	4.10	3.00 max	1.13
				5250-5350	2.28	3.42	3.00 max	1.14
				5470-5725	2.52	3.71	3.00 max	1.19
				5725-5850	1.21	2.41	3.00 max	1.20
				5925-6425	0.91	2.17	3.00 max	1.26
				6425-6525	-0.02	1.25	3.00 max	1.27
				6525-6875	1.15	2.46	3.00 max	1.31
				6875-7125	2.41	3.74	3.00 max	1.33

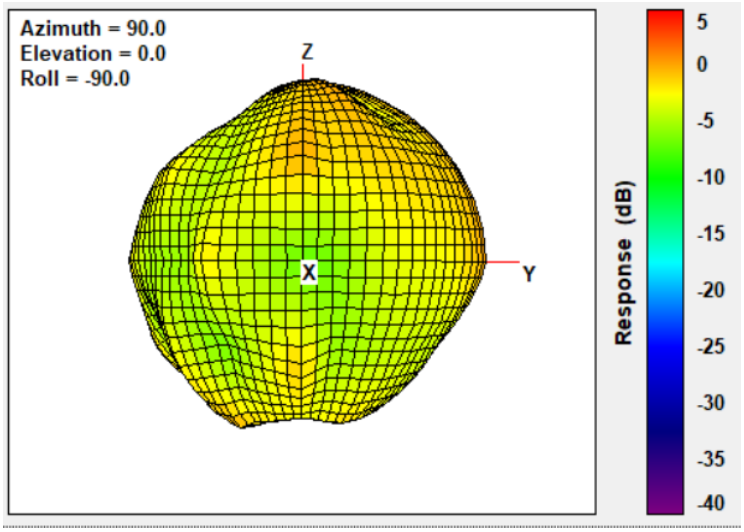
- **3D Antenna Peak Gain required being test in system basis.**

Section 3. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

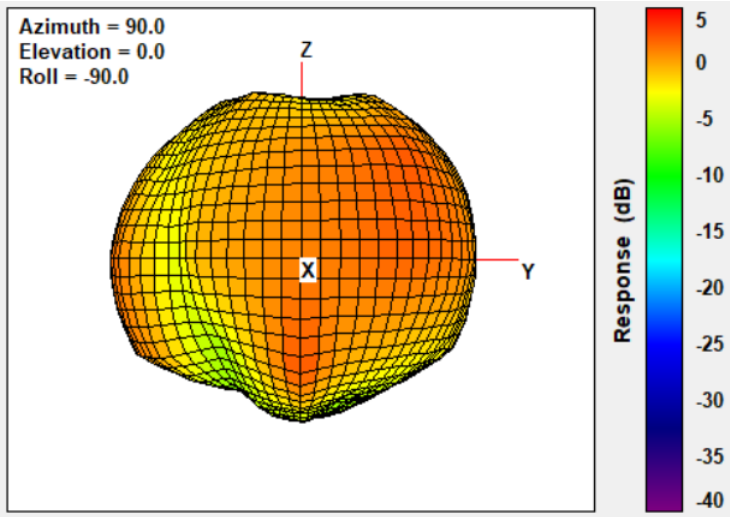
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.44



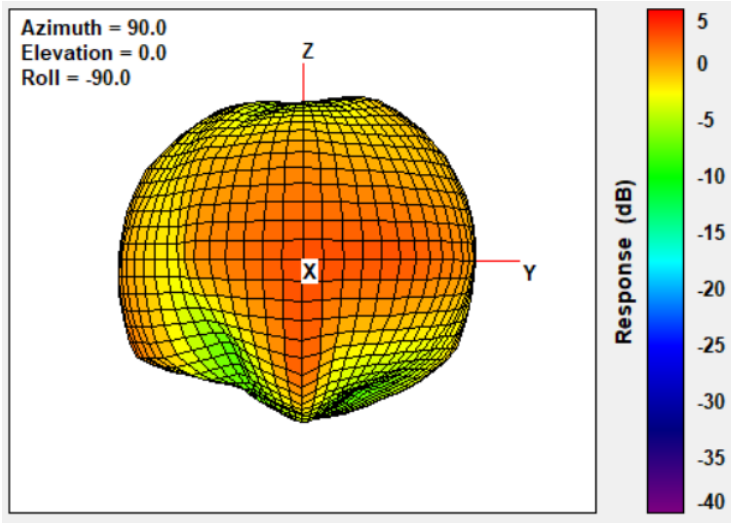
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.95



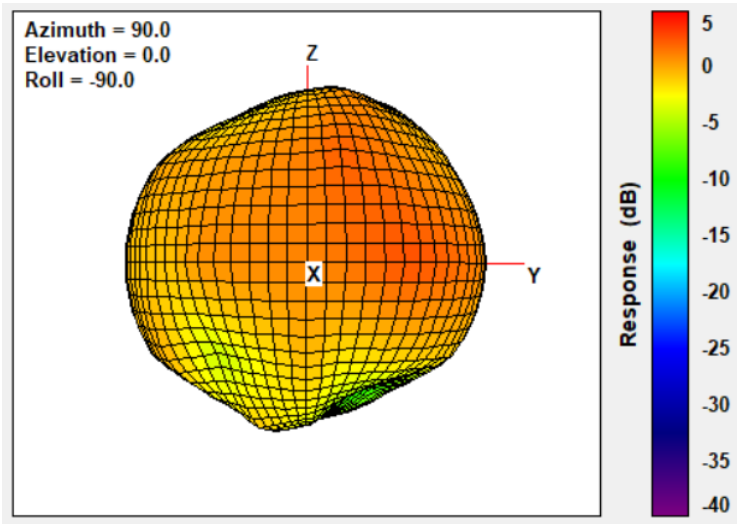
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.89



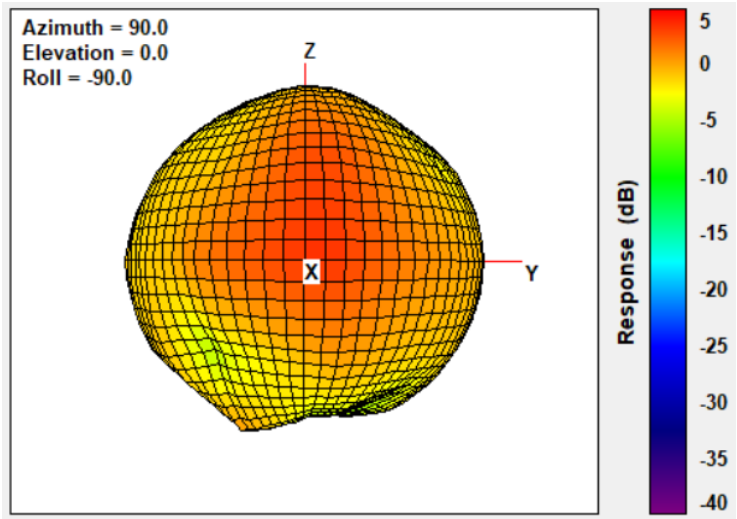
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.82



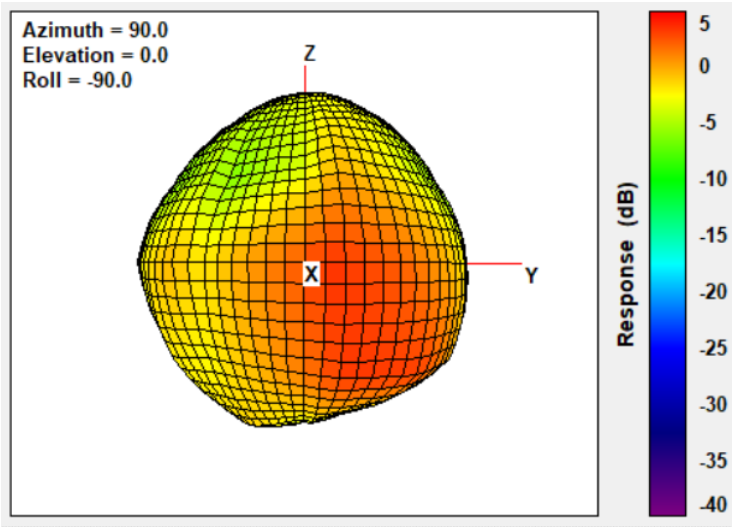
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.94



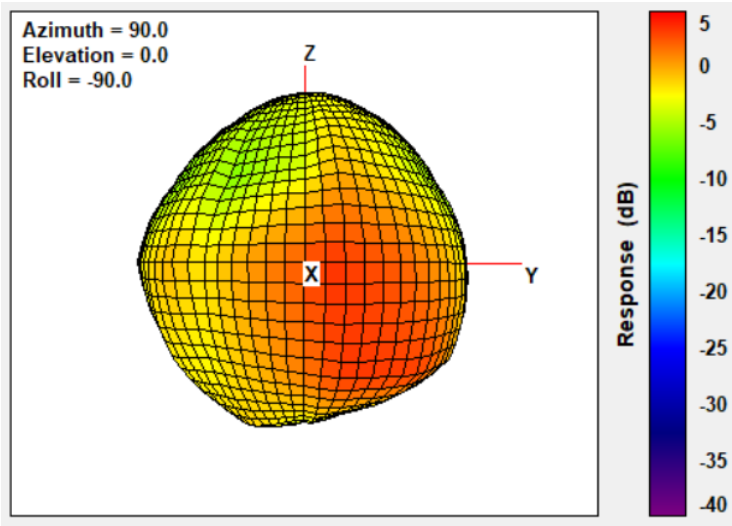
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.96



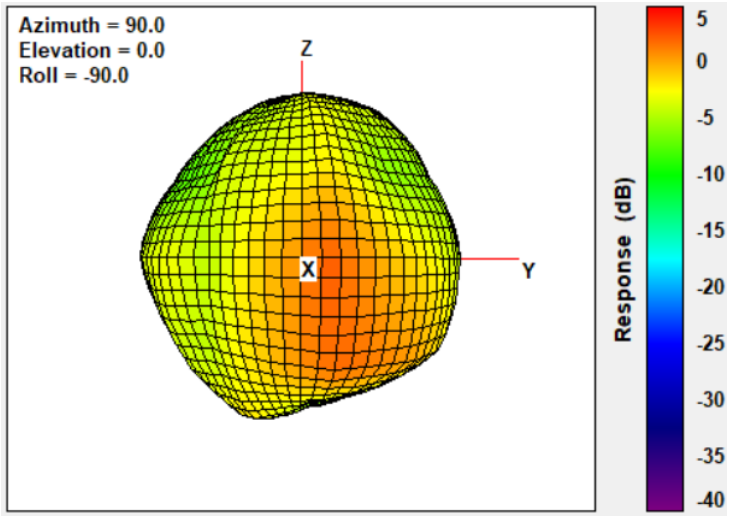
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.96



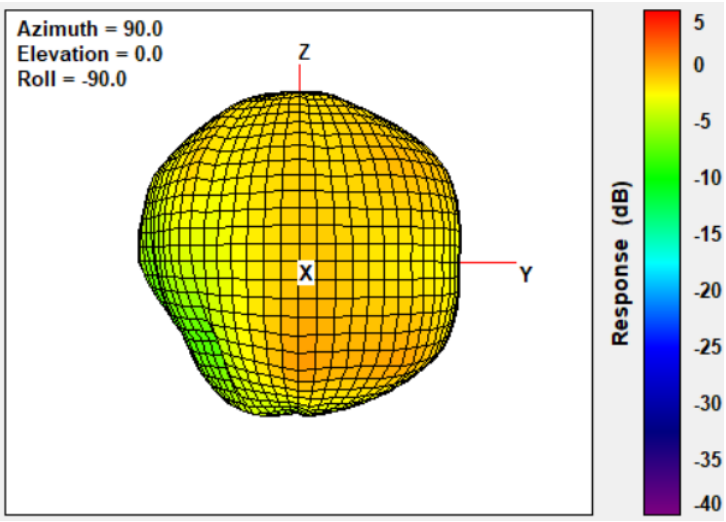
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	2.62



Max Antenna 3D Radiation Pattern 6875-7125 MHz

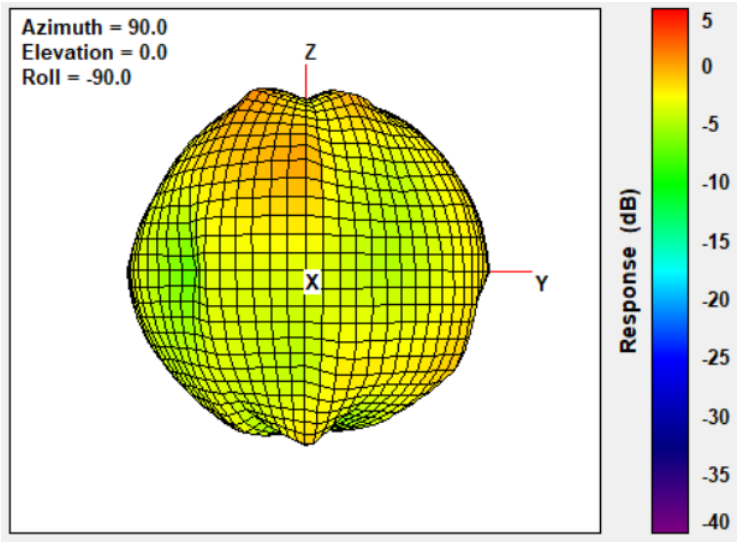
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	0.77



Auxiliary Antenna

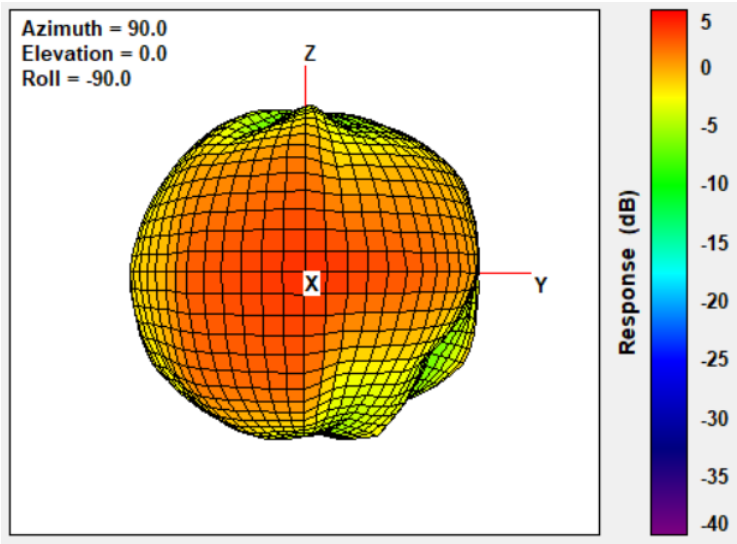
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.23



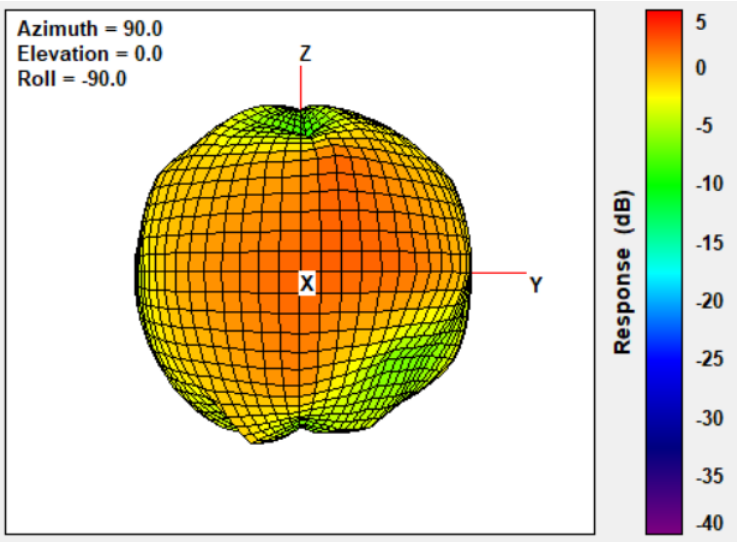
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.97



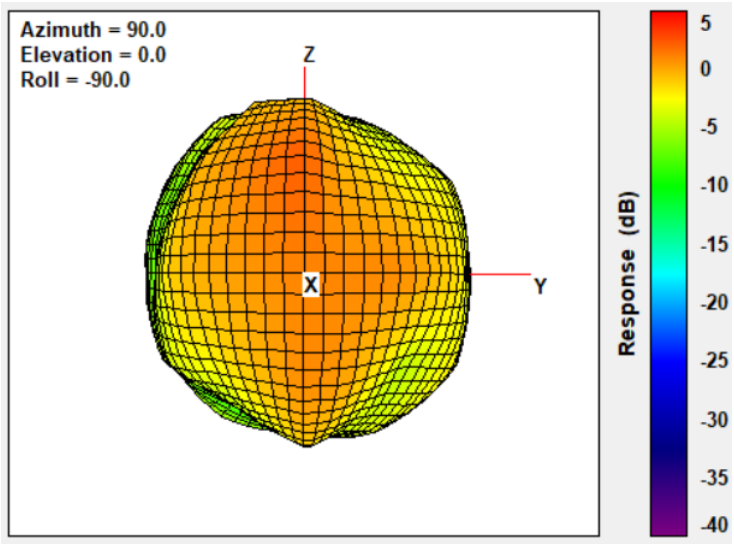
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.28



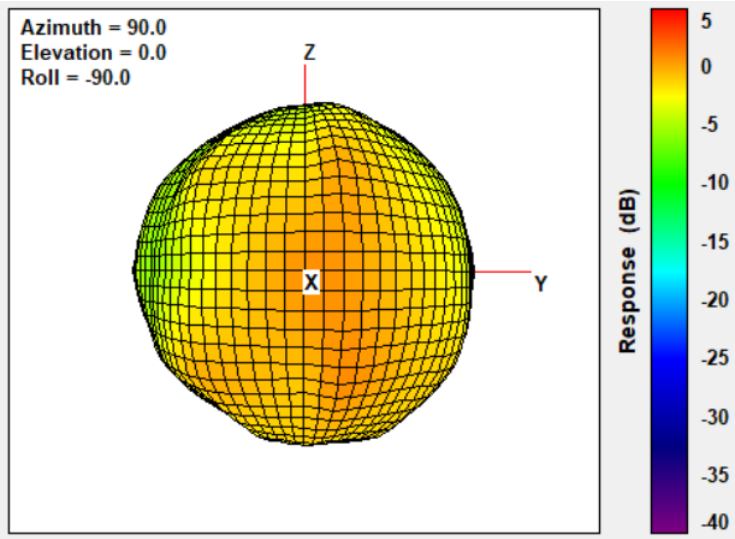
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.52



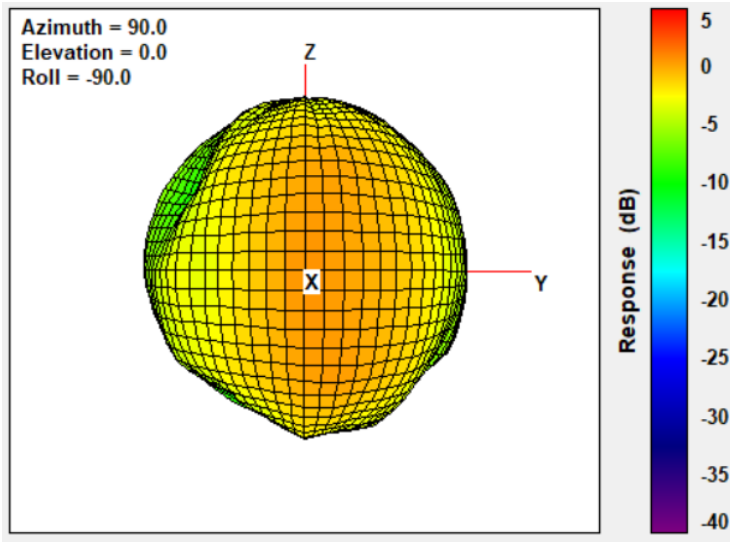
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.21



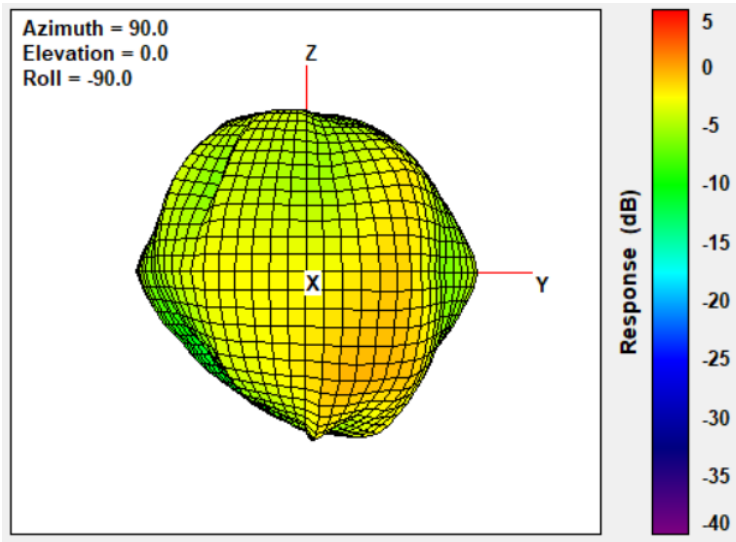
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	0.91



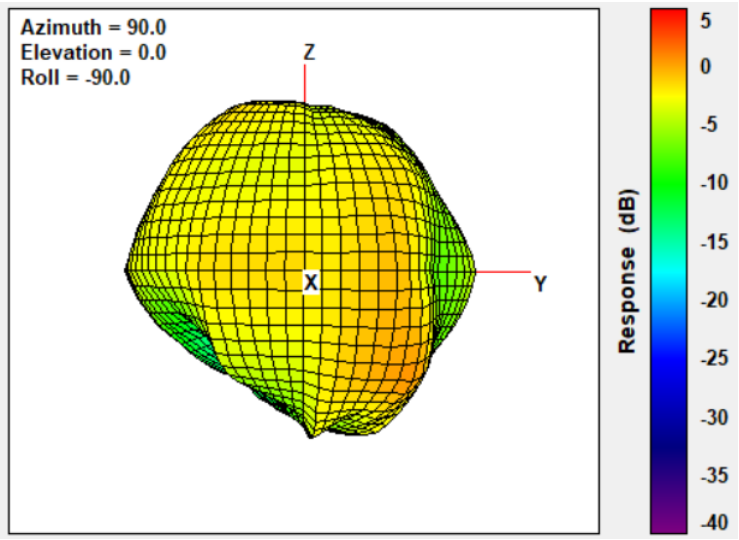
Max Antenna 3D Radiation Pattern 6425-6525 MHz

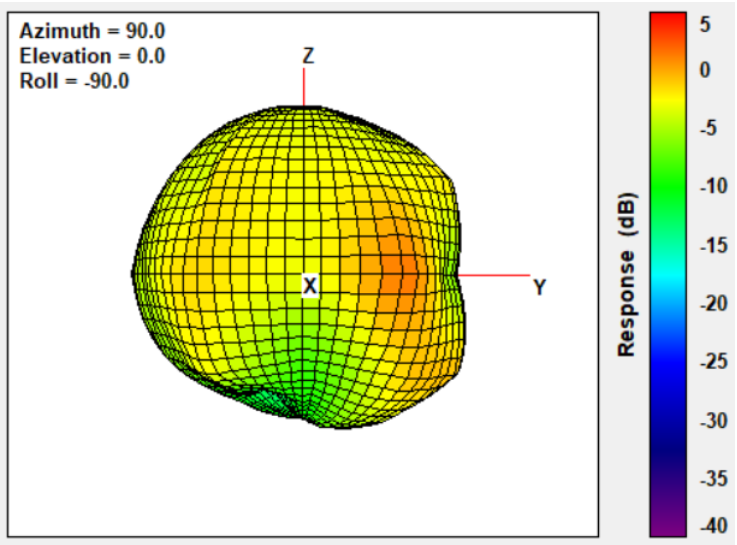
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	-0.02



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	1.15



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.41