

ANTENNA INFORMATION

Antenna manufacturer	Company name	AWAN
	Address	5F., No. 225, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
Test location	Company name	SGS, Taiwan
	Address	No.2, Keji 1st Rd., Guishan District, Taoyuan City, 33383, Taiwan.
Test Personnel	Name(Full name)	Matt Wu
	E-mail	Matt_wu@pegatroncorp.com
	Tel/Mobile	(02) 81439001 EXT:32569
Testing date		2024/9/20~9/27

Antenna Part number	Main	1415-0ASN0QS
	Aux	1415-0ASM0QS
Antenna type (ex: PIFA, Dipole...etc)		PIFA

Antenna 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	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	2.18	3.82	4.00	4.33	4.31	3.59	3.97	2.96	4.15	4.24
Aux	1.24	4.42	4.16	3.49	3.51	3.38	4.21	4.21	4.38	4.50

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	20565-001R-13	105	1.13	50 ohm	IPEX 4 NGFF(MHF 4)
Aux	20565-001R-13	46	1.13	50 ohm	IPEX 4 NGFF(MHF 4)

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

Antenna manufacturer	Company name	Hongbo
	Address	4 F., No. 143, Xinhua 1st Rd., Neihu Dist., Taipei City 11494, Taiwan
Test location	Company name	SGS, Taiwan
	Address	No.2, Keji 1st Rd., Guishan District, Taoyuan City, 33383, Taiwan.
Test Personnel	Name(Full name)	Matt Wu
	E-mail	Matt_wu@pegatroncorp.com
	Tel/Mobile	(02) 81439001 EXT:32569
Testing date		2024/09/30~10/4

Antenna Part number	Main	1415-0ASS0QS
	Aux	1415-0ASQ0QS
Antenna type (ex: PIFA, Dipole...etc)		PIFA

Antenna 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	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	2.14	3.41	3.65	3.83	3.83	3.06	3.31	2.53	3.95	3.91
Aux	1.11	4.16	4.03	3.07	2.96	2.99	3.99	4.04	4.20	4.37

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	20565-001R-13	105	1.13	50 ohm	IPEX 4 NGFF(MHF 4)
Aux	20565-001R-13	46	1.13	50 ohm	IPEX 4 NGFF(MHF 4)

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

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1. Document Revision History

Revision #	Revision Details	Issued Date
Rev. 00	First Release	

2. Test & System Description

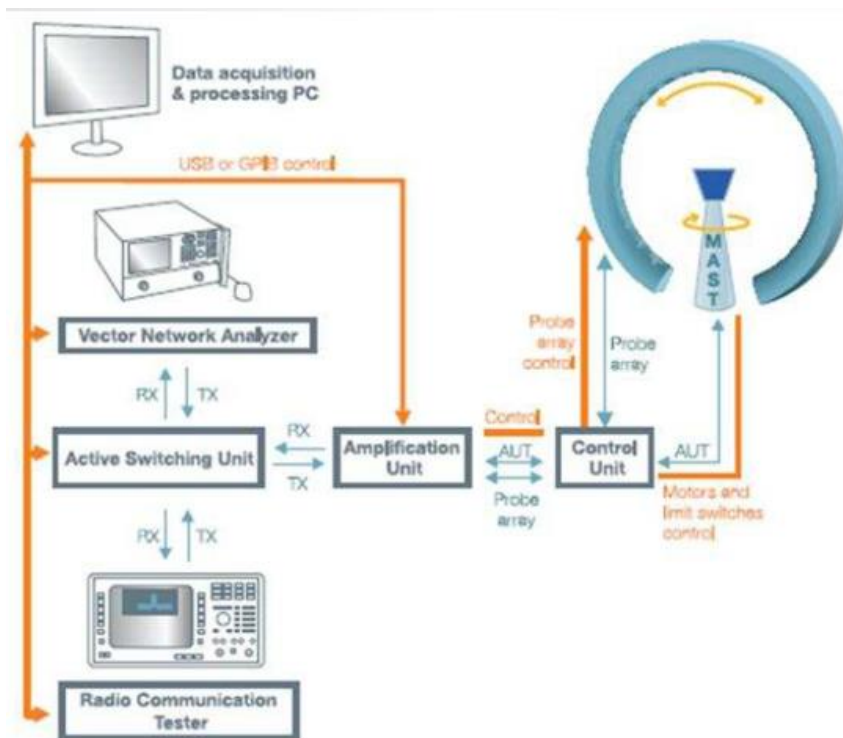
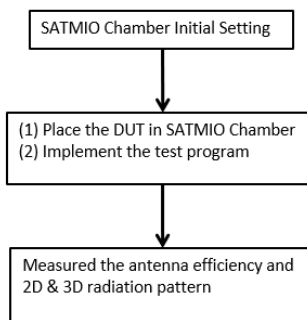
2.1 Measurement Method and System

This test report is prepared for host antenna testing under a Full Anechoic Chamber (Satimo Chamber SG24).

Names of commercial software being used for antenna measurement: SatEnv ver. 3.0.3.0 build 30

2.2 Test setup

Diagram



Equipment for Antenna Passive Test Coverage

- Satimo Chamber SG24
- Agilent VNA E5071C
- Antenna Passive Measurement up to 8GHz

2.3 Equipment list

	Device	Model	Manufacturer	Cal. Date	Cal. Due Date
1	SATMIO Chamber	SG24	MVG	2024-08-05	2025-08-04
2	Network Analyzer	E5071C	Keysight	2023-12-20	2024-12-19

Name of Person and Signature:

Test Engineer: Matt Wu

Signature: *Matt Wu*

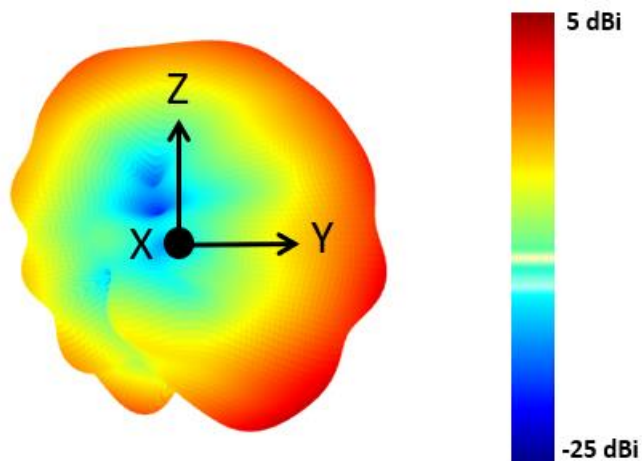
Commercial test software: MVG WaveStudio 24.1.2

3. Radiation characteristics of antenna loaded in Host Platform

AWAN Main Antenna

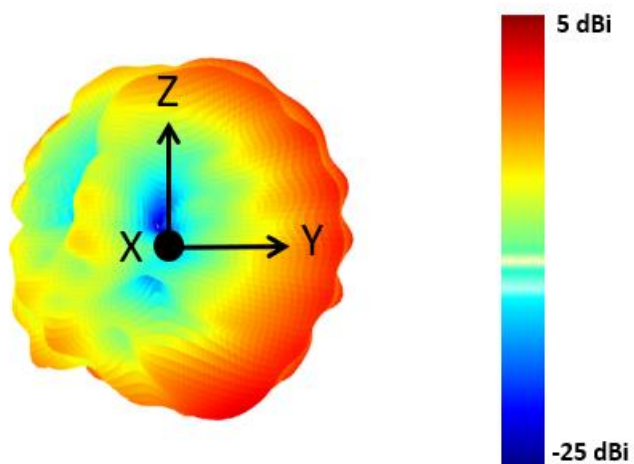
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.18



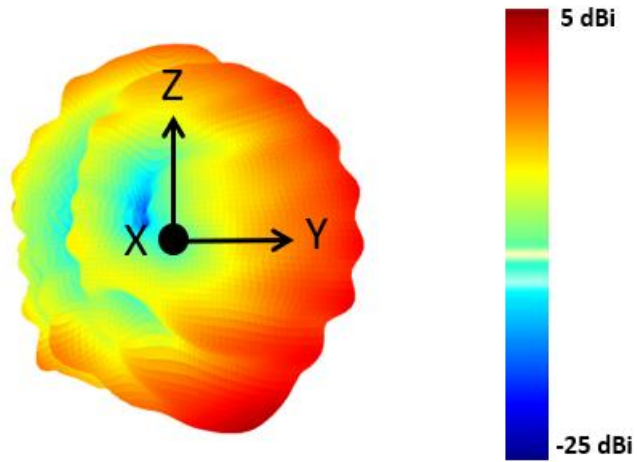
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.82



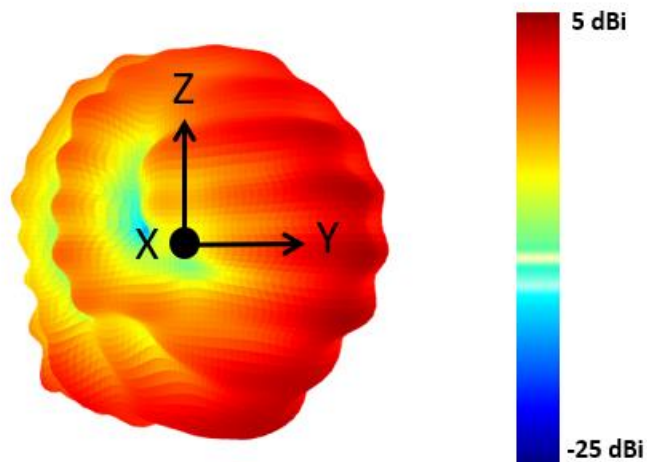
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	4.00



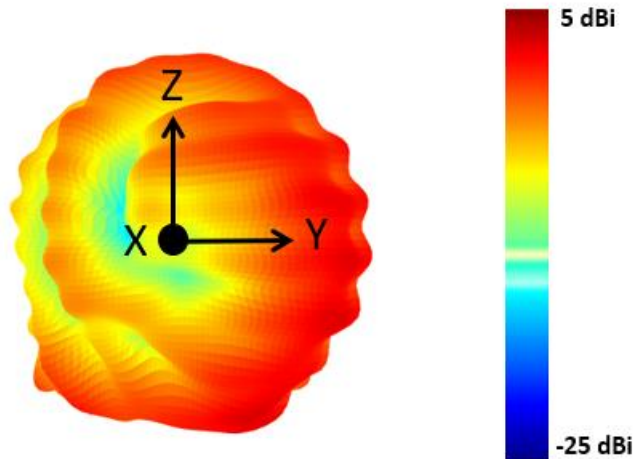
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	4.33



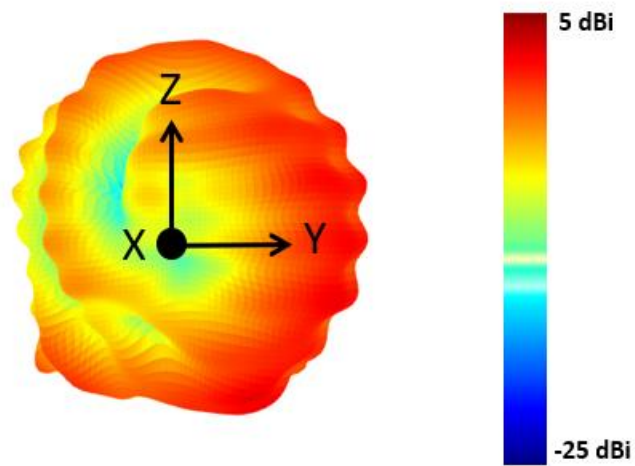
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	4.31



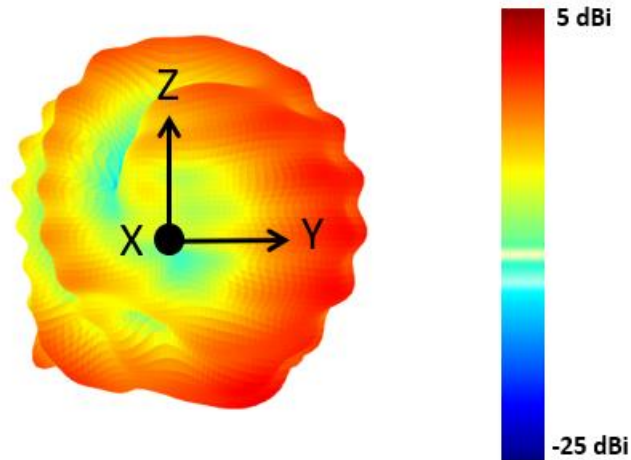
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.59



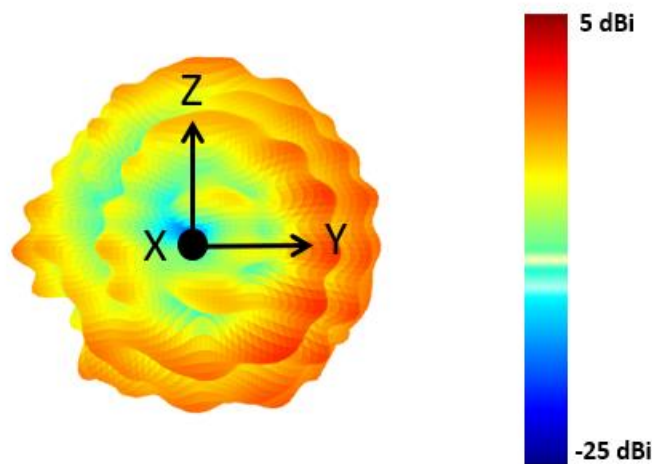
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.97



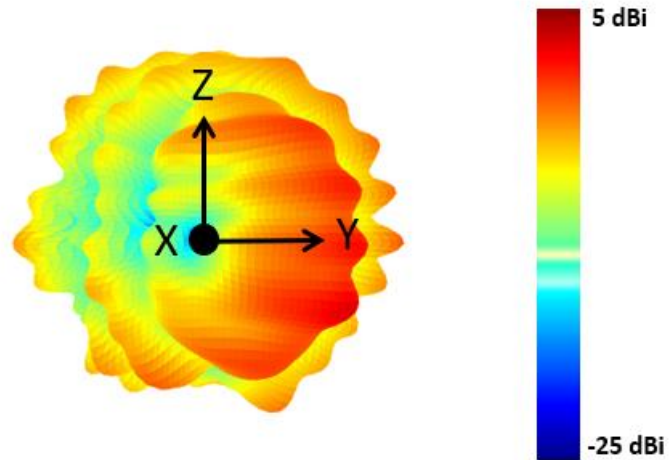
Max Antenna 3D Radiation Pattern 6425-6525 MHz

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



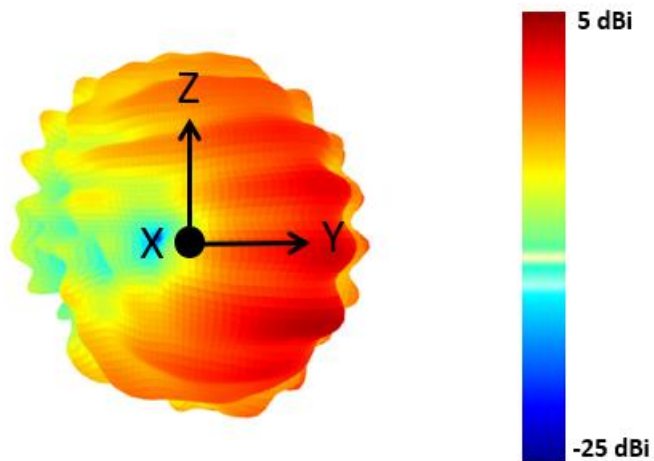
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	4.15



Max Antenna 3D Radiation Pattern 6875-7125 MHz

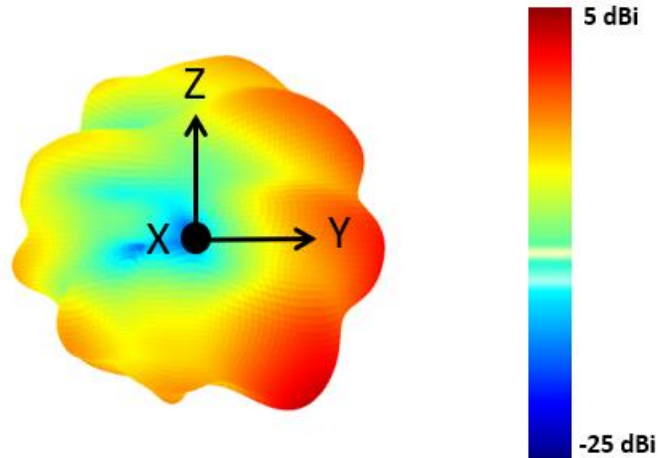
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6875-7125	4.24



AWAN Auxiliary Antenna

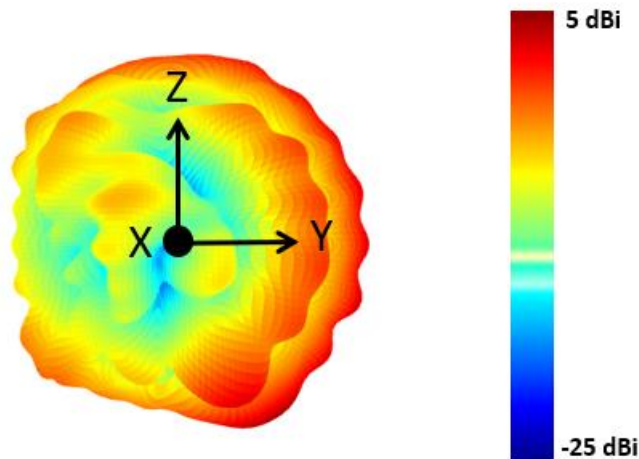
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.24



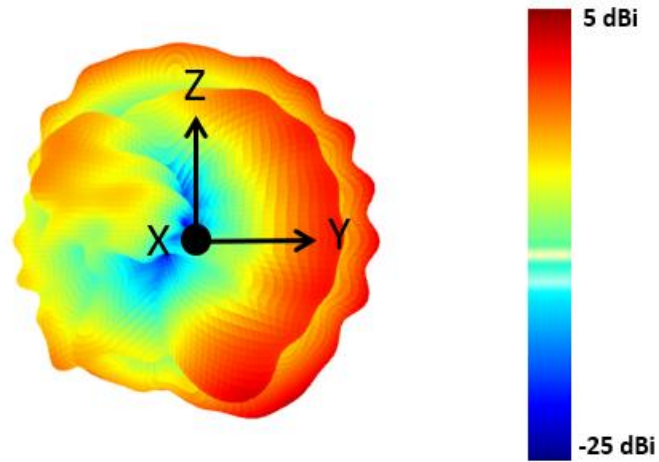
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	4.42



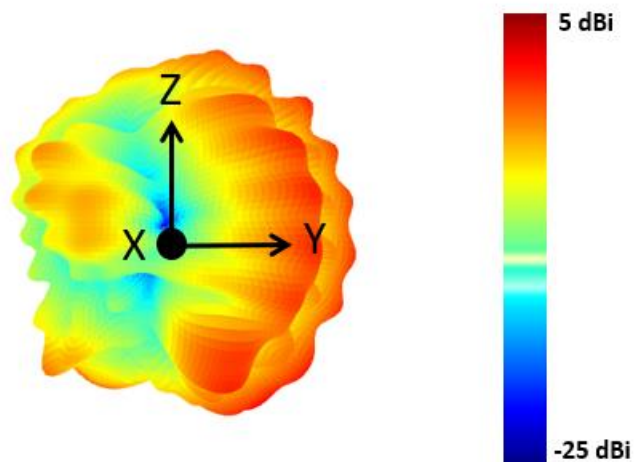
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	4.16



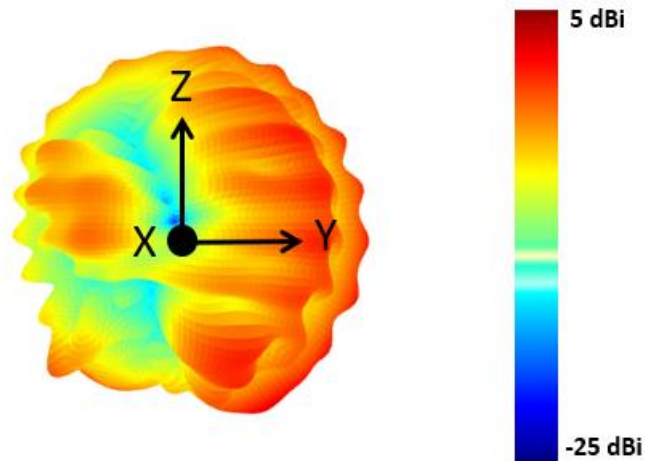
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.49



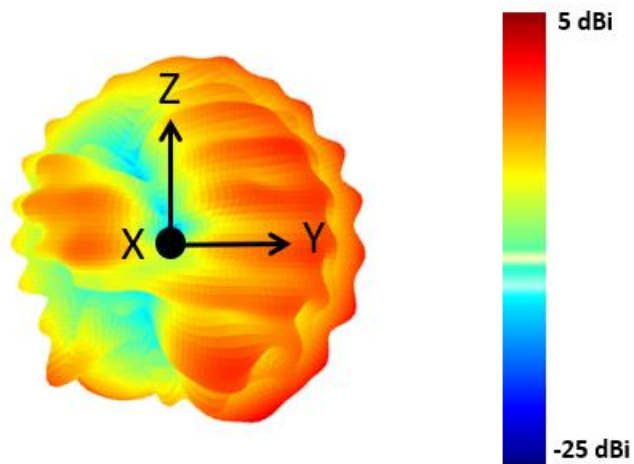
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.51



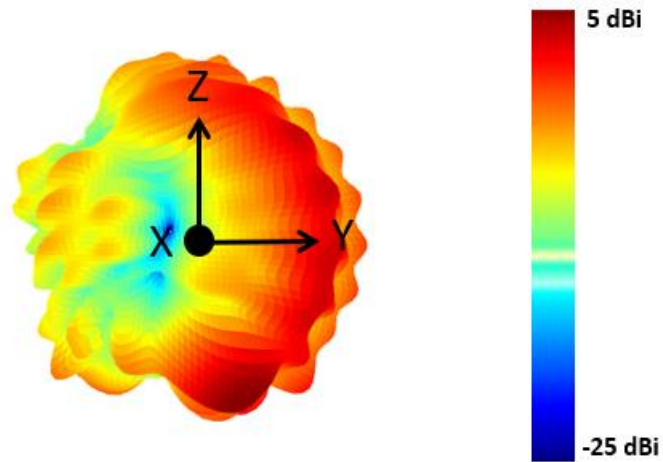
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.38



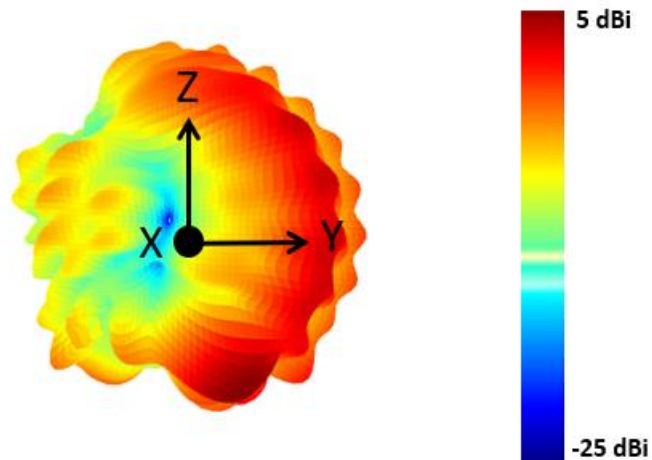
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	4.21



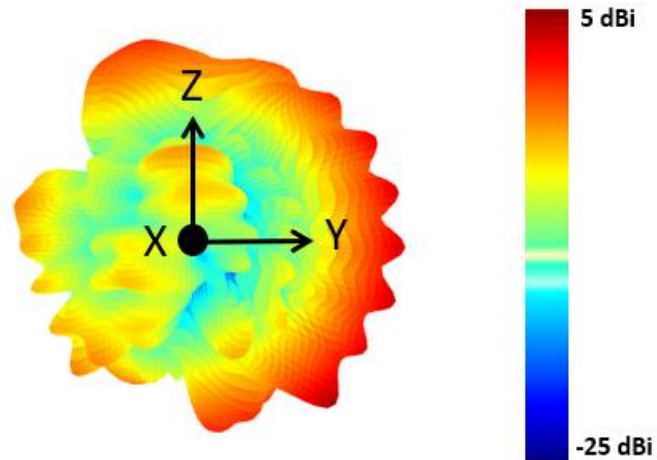
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	4.21



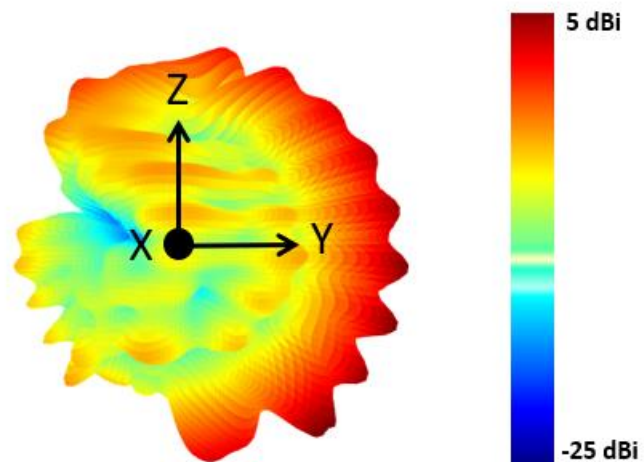
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	4.38



Max Antenna 3D Radiation Pattern 6875-7125 MHz

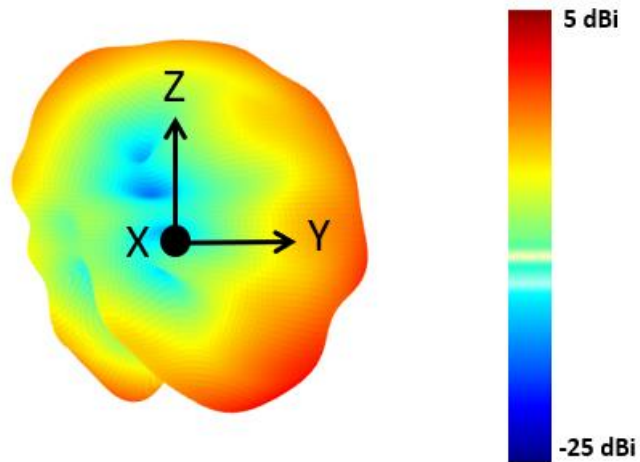
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	4.50



HongBo Main Antenna

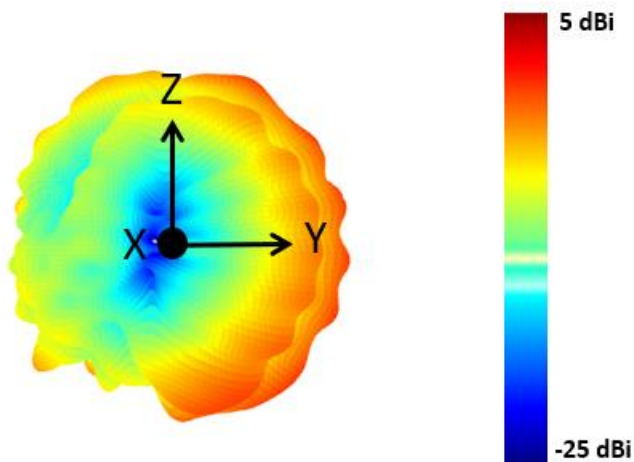
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.14



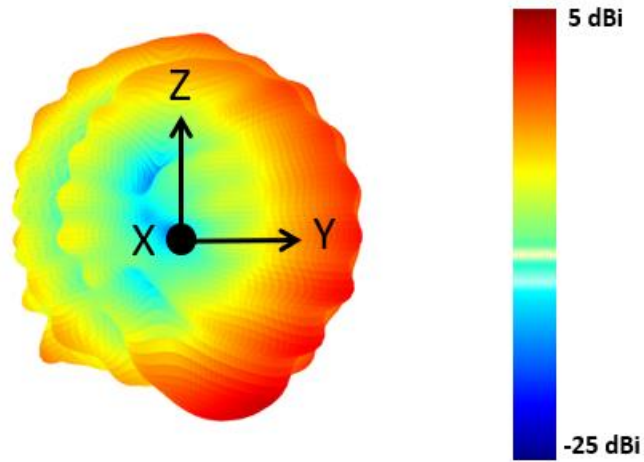
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.41



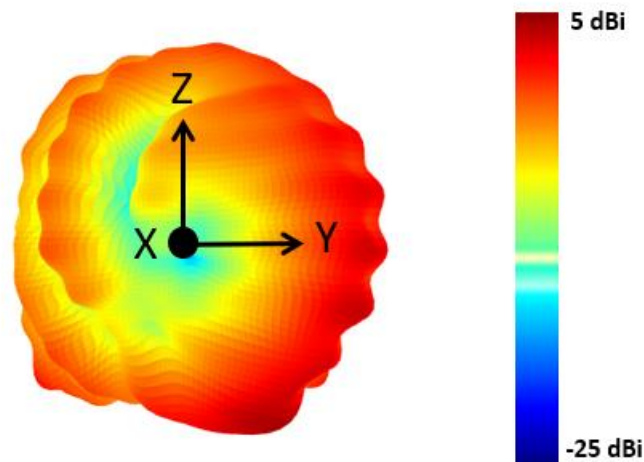
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.65



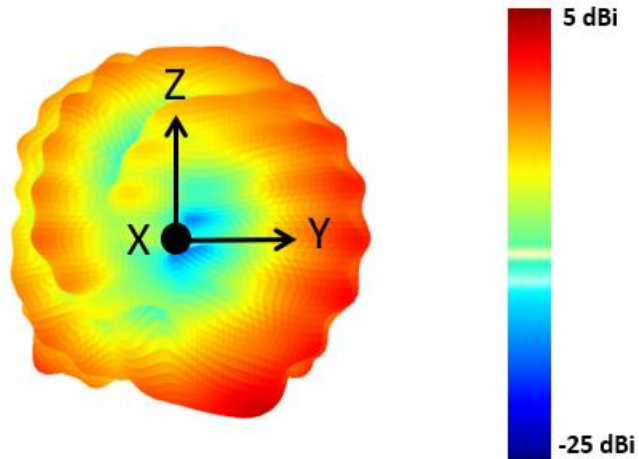
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.83



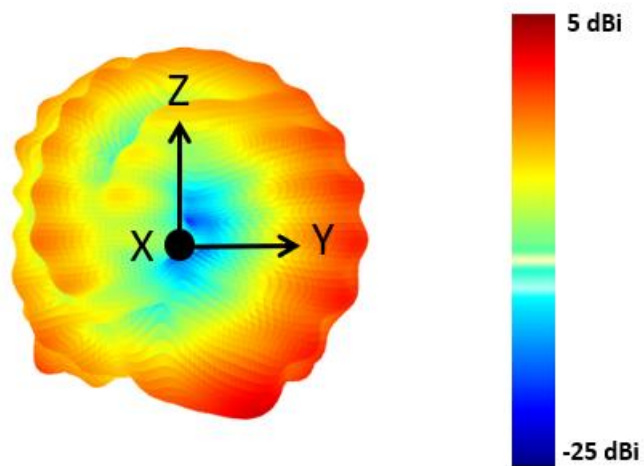
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.83



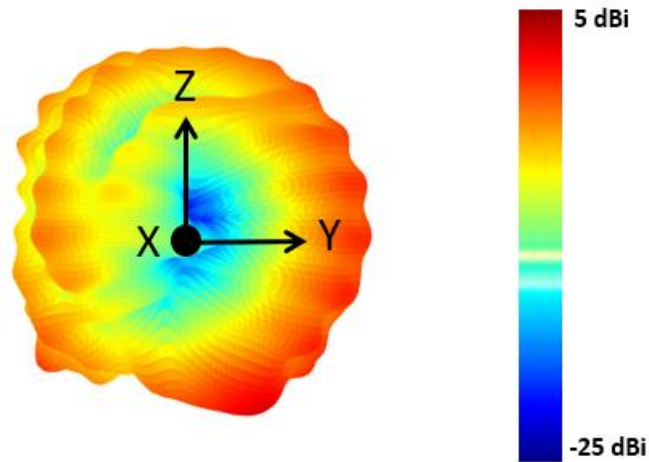
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.06



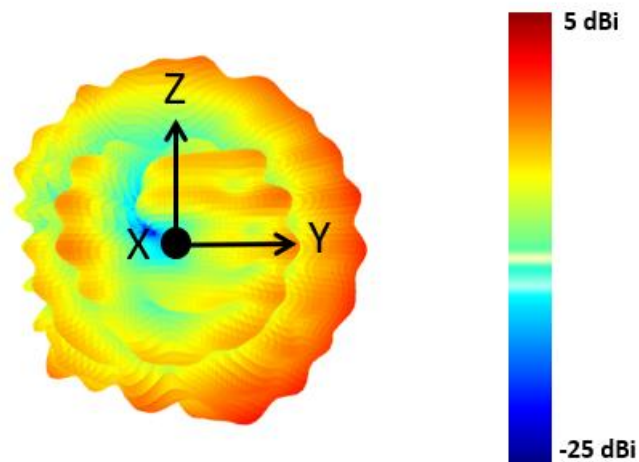
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.31



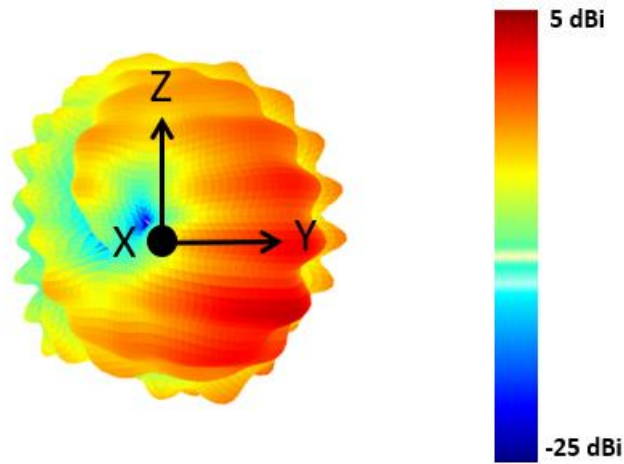
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.53



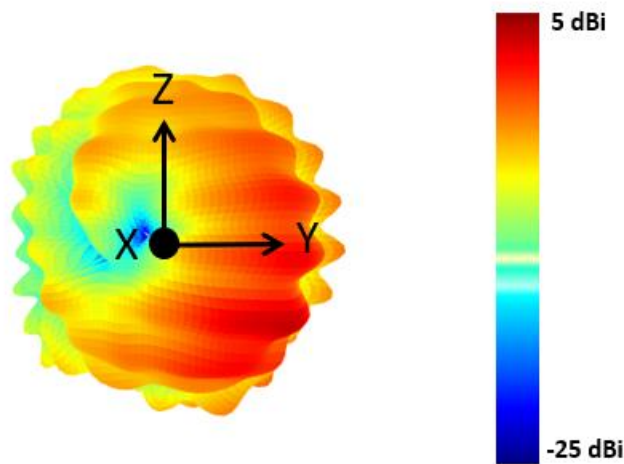
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.95



Max Antenna 3D Radiation Pattern 6875-7125 MHz

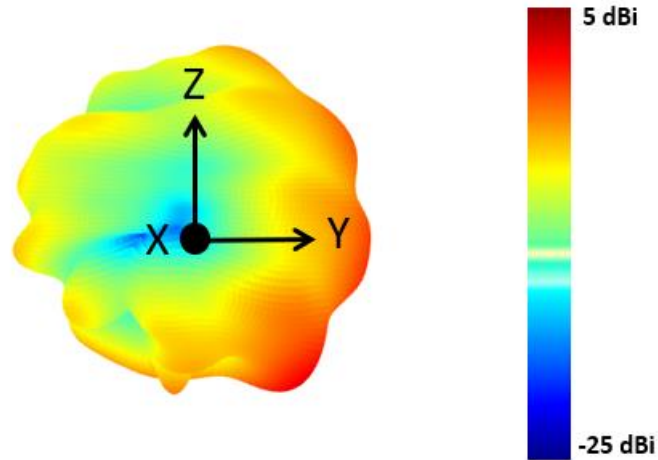
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.91



HongBo Auxiliary Antenna

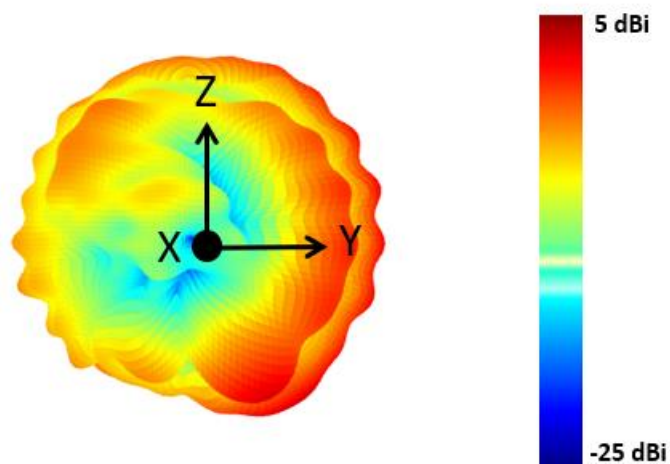
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.11



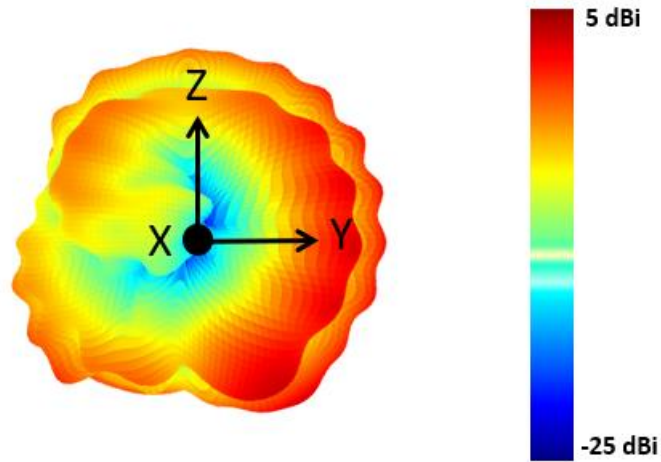
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	4.16



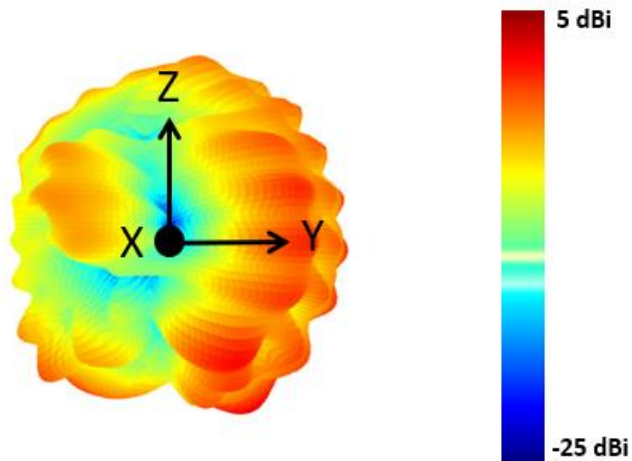
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	4.03



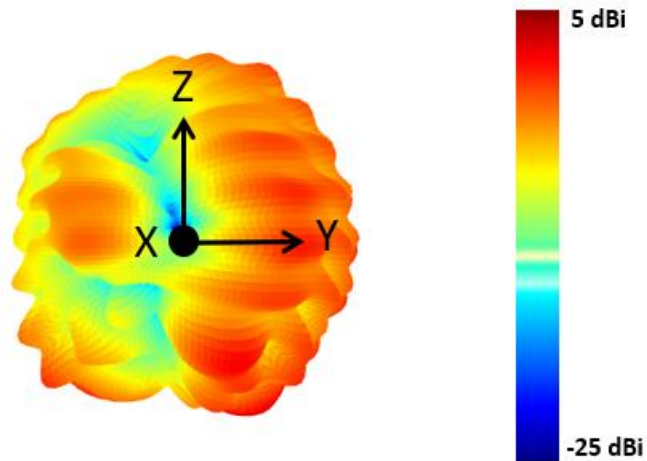
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.07



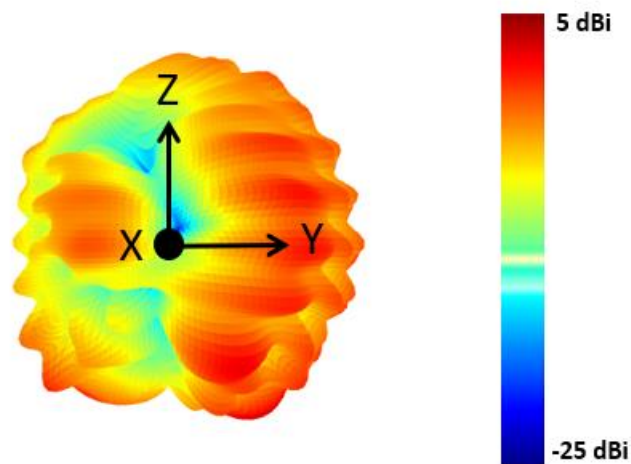
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.96



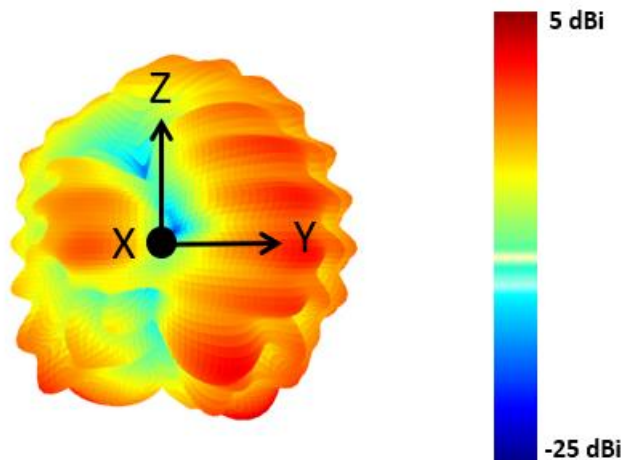
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.99



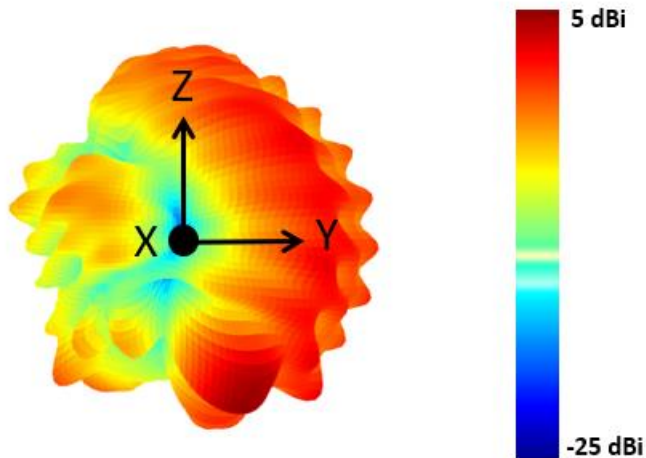
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.99



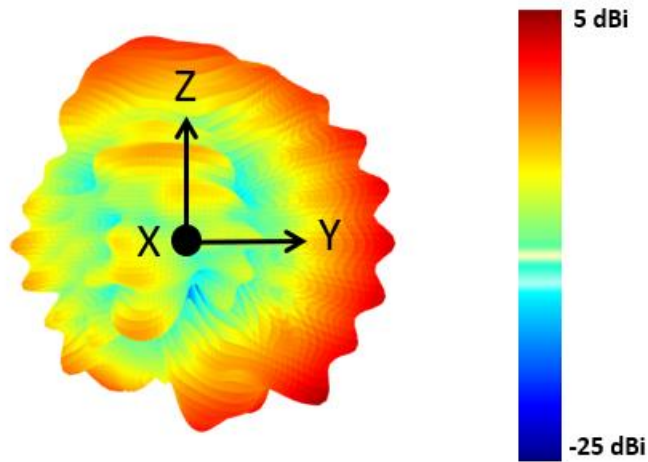
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	4.04



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	4.20



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	4.37

