

ANTENNA INFORMATION

OEM	Lenovo	
ODM	Huaqin Technology Co.,Ltd	
Platform model name	Lenovo Chrome 2in1 14IRU10	
Intel platform (ex: Yes, No or NA)	Yes	
Platform type (ex: regular NB, convertible PC, AIO...etc)	Convertible PC	
SAR minimum separation (mm)	FCC (1g)	NB:3.95mm, Pad:3.28mm
	ISED (1g)	NA
	ISED (10g)	

Antenna manufacturer	Company name	Luxshare-ICT
	Address	Block A,SANYO New Industrial Zone, West HaoYi,Shajing, Bao'an,Shenzhen, 518104, China.
Test location	Company name	Luxshare-ICT
	Address	Block A,SANYO New Industrial Zone, West HaoYi,Shajing, Bao'an,Shenzhen, 518104, China.
Test Personnel	Name(Full name)	Zongming Song
	E-mail	Zongming.Song@luxshare-ict.com
	Tel/Mobile	18588468475
Testing date	2024/10/25	

Antenna Part number	Main	L01RF358-NB-H
	Aux	L01RF359-NB-H
Antenna type (ex: PIFA, Dipole...etc)	PIFA	

Antenna Peak gain w/ cable loss*											
Open		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	Peak gain(dBi)	1.63	1.02	1.02	1.69	1.27	0.98	3.15	3.13	4.28	4.35
	cable loss (dB)	1.04	1.52	1.56	1.61	1.64	1.68	1.77	1.93	2.06	2.31
Aux	Peak gain(dBi)	0.42	0.49	0.98	2.1	2.95	2.95	3.53	3.17	3.62	3.3
	cable loss (dB)	0.53	0.70	0.71	0.74	0.77	0.89	0.93	1.01	1.10	1.25

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	I-PEX(20565-001R-13)	366	1.13	50	MHF-4L
Aux	I-PEX(20565-001R-13)	191	1.13	50	MHF-4L

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

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1. Intel Reference Gain and Type

Antenna Peak gain w/ cable loss (dBi)											
Band/Frequency		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
Design	EU/UK	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFA	For WiFi 6E and earlier	3.24	3.64	3.73	4.77	4.97	4.72	4.83	4.30	5.37	5.59
	From WiFi 7	2.95	5.11	4.55	5.15	5.13	4.45	5.02	5.02	4.96	4.96
Dipole	For WiFi 6E and earlier	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
	From WiFi 7	2.95	4.03	4.11	5.15	5.13	4.45	5.02	4.71	4.49	4.96
Monopole	From WiFi 7	2.83	4.57	4.44	4.95	4.95	4.43	4.87	4.91	4.91	4.79

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.

2. Document Revision History

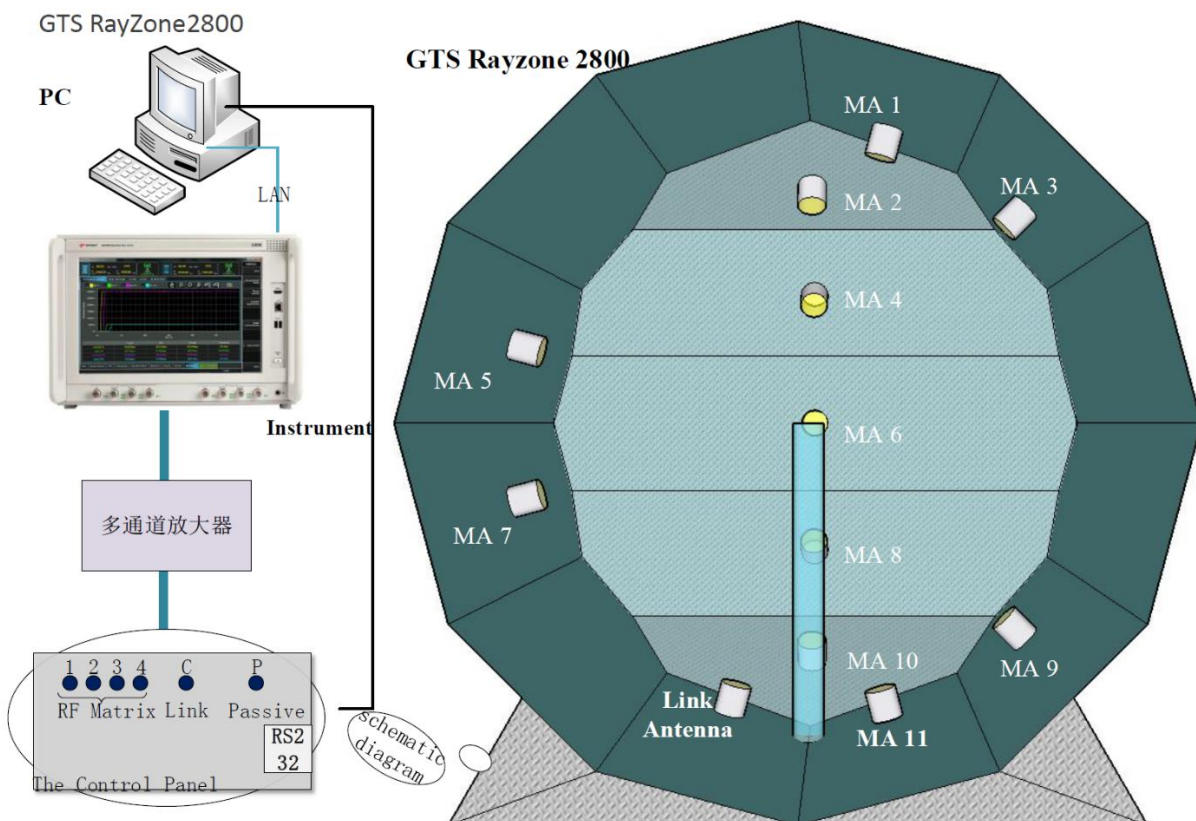
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024/10/25

3. Test & System Description

3.1 Measurement Method and System

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

3.2 Test setup



3.3 Equipment list

Number	Device	Type/Model	Serial#	Manufacturer	Cal. Date	Cal. Due Date
1	GTS Chamber	RayZone-2800	1603000026	GTS	2023/10/09	2024/12/21
2	RF Amplifier Unit	RayZone-2800	1612000032	GTS	2023/10/09	2024/12/21
3	Test software	GTS MaxSign 100	1603000054	GTS	2023/10/09	2024/12/21
4	Test system host	Lenovo	1603000056	GTS	2023/10/09	2024/12/21
5	23 Probe Antenna	TEM23	1603000057	GTS	2023/10/09	2024/12/21
6	Wi-Fi Dynamic Amplifier	WDAP	1604000002	GTS	2023/10/09	2024/12/21
7	RF line TX	FL18-SM	1612000078	GTS	2023/10/09	2024/12/21
8	RF line RX	FL18-SM	1612000559	GTS	2023/10/09	2024/12/21
9	Cable 0.6m – 50MHz -18GHz	UFB	1604000339	GTS	2023/10/09	2024/12/21
10	Cable 0.8m – 50MHz -18GHz	UFB	1608000001	GTS	2023/10/09	2024/12/21
11	General-purpose Tester	CMW500	1608000036	RS	2023/10/09	2024/12/21
12	EXA Signal Analyzer	N9020A	1612000560	KeySight	2023/10/09	2024/12/21
13	Network analyzer	E5071C	1608000022	KeySight	2023/10/09	2024/12/21

N/A: Not Applicable

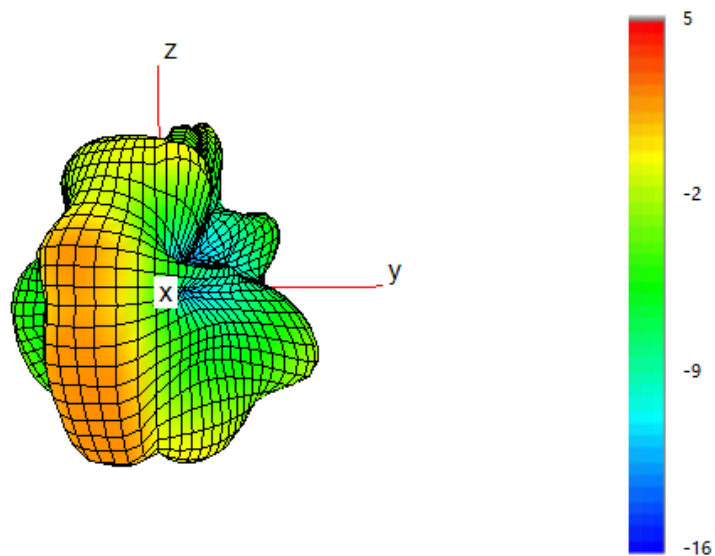
Note: Chamber calibration included full set of implement

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

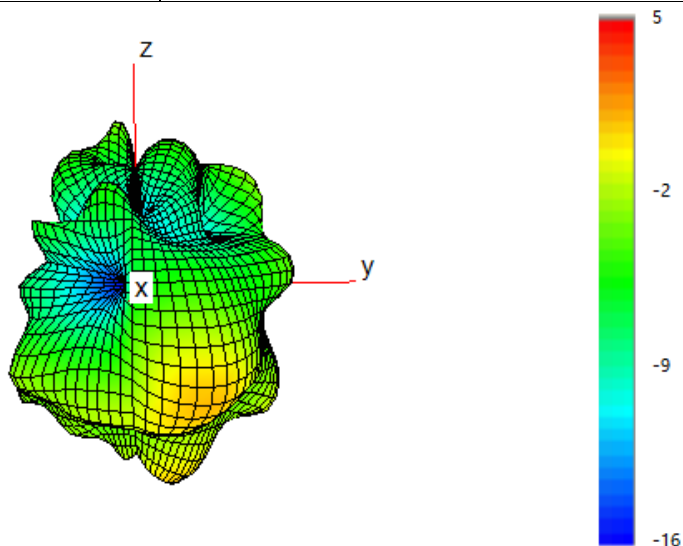
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.63



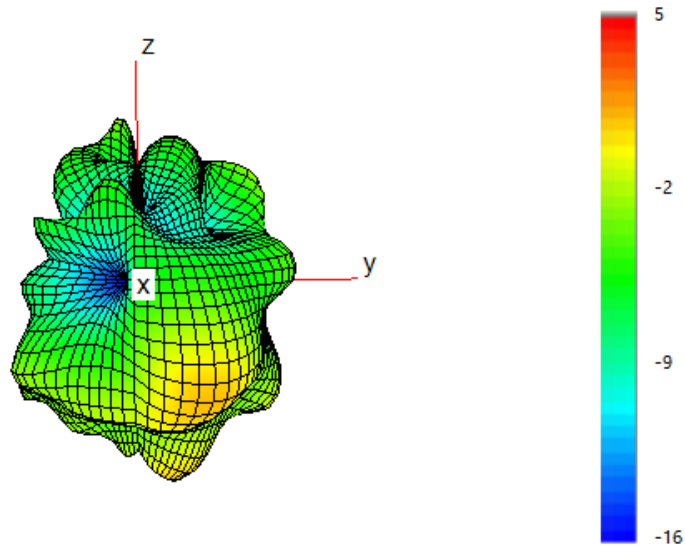
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.02



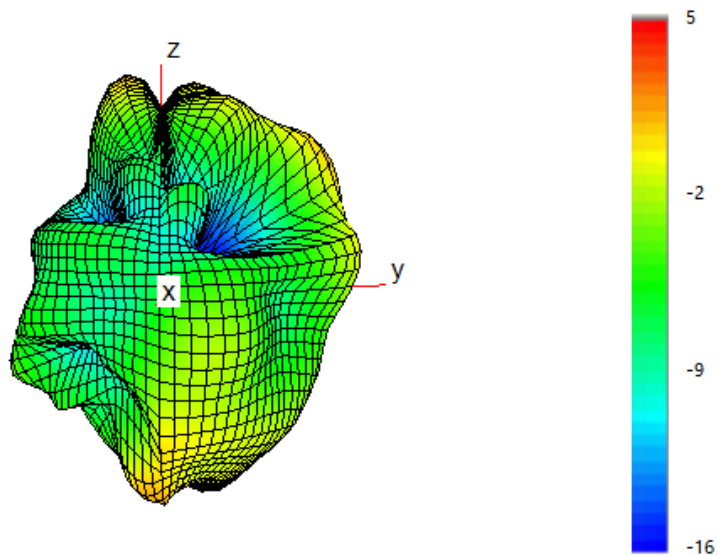
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.02



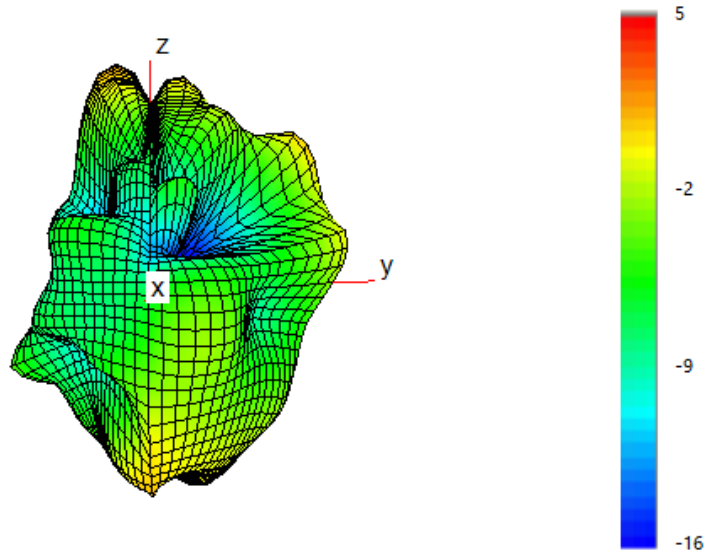
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	1.69



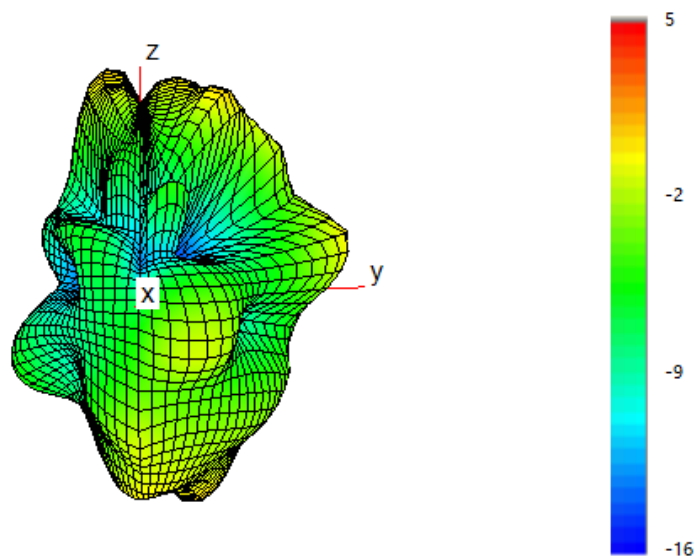
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.27



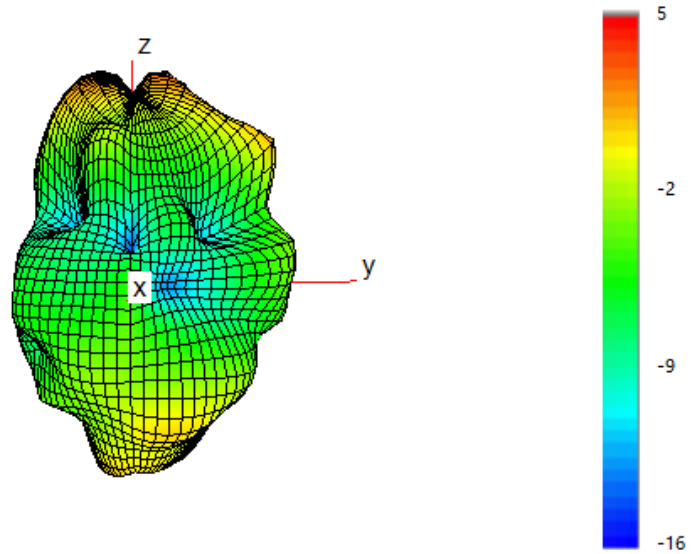
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	0.98



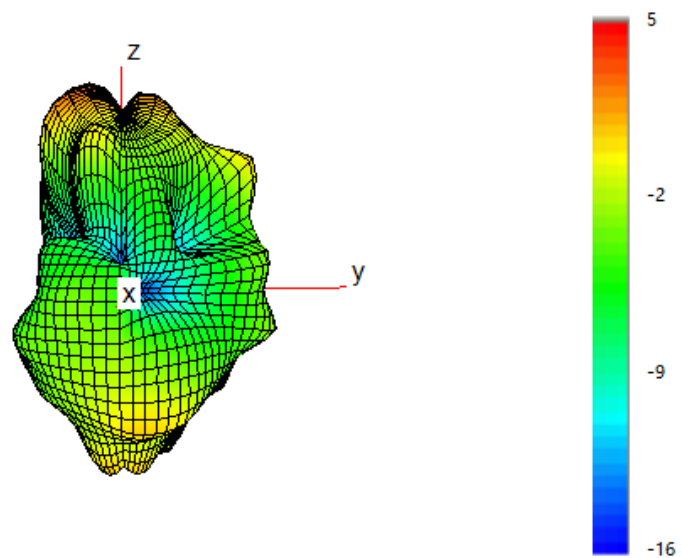
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.15



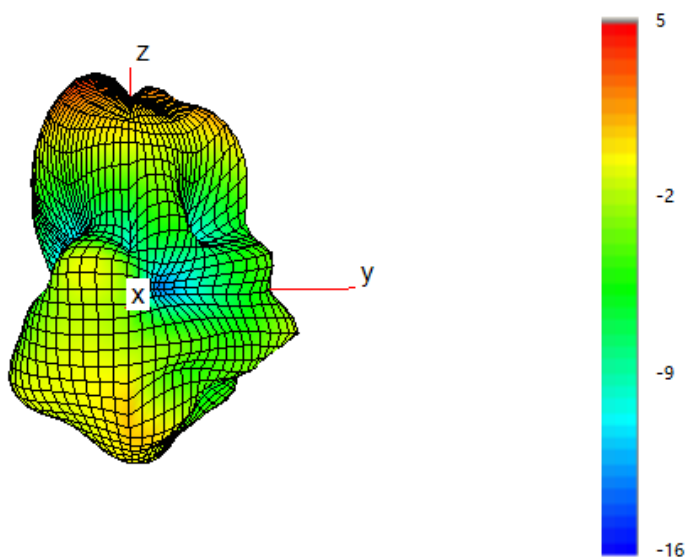
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.13



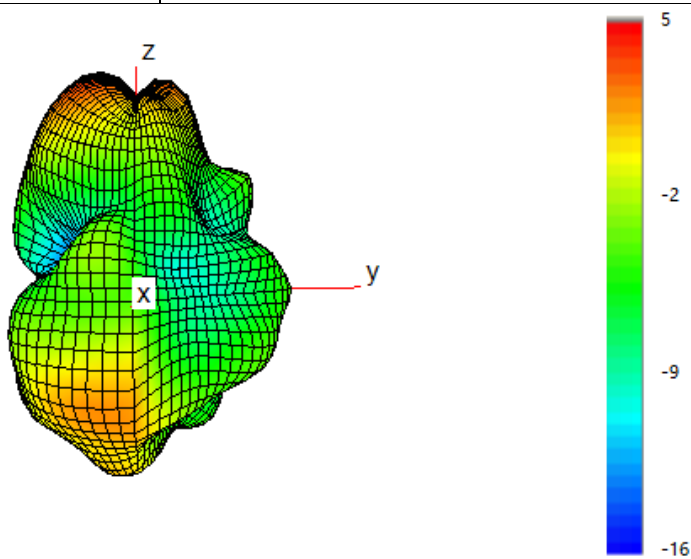
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	4.28



Max Antenna 3D Radiation Pattern 6875-7125 MHz

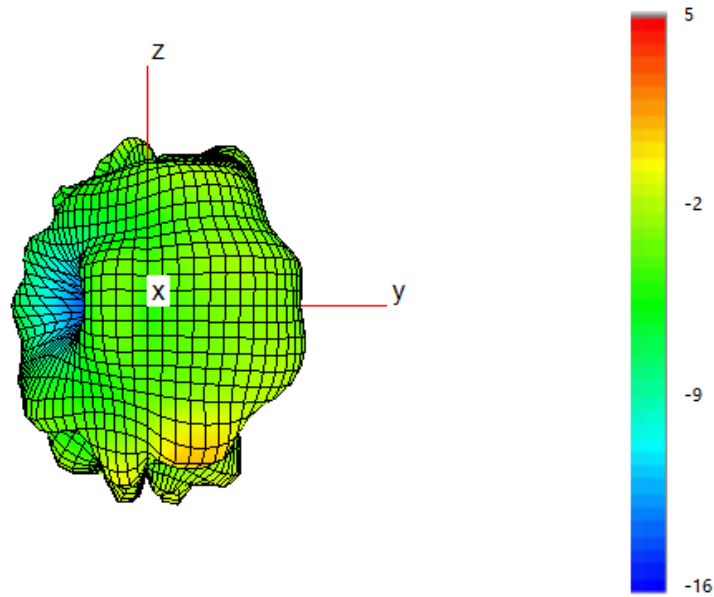
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	4.35



Auxiliary Antenna

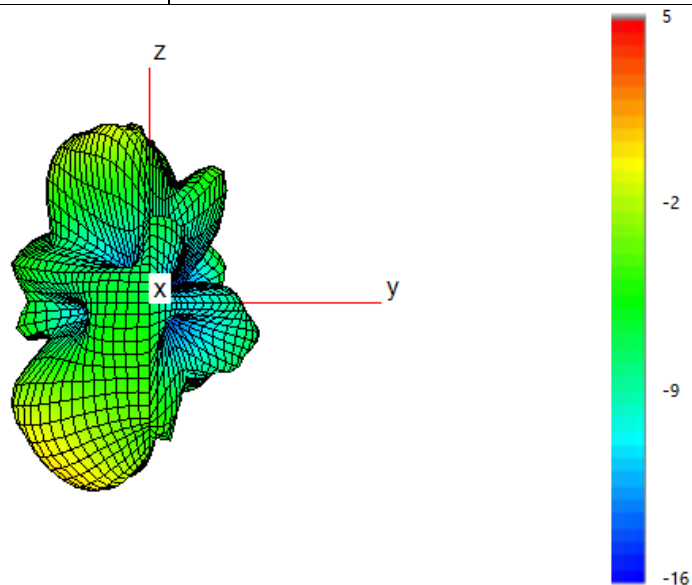
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	0.42



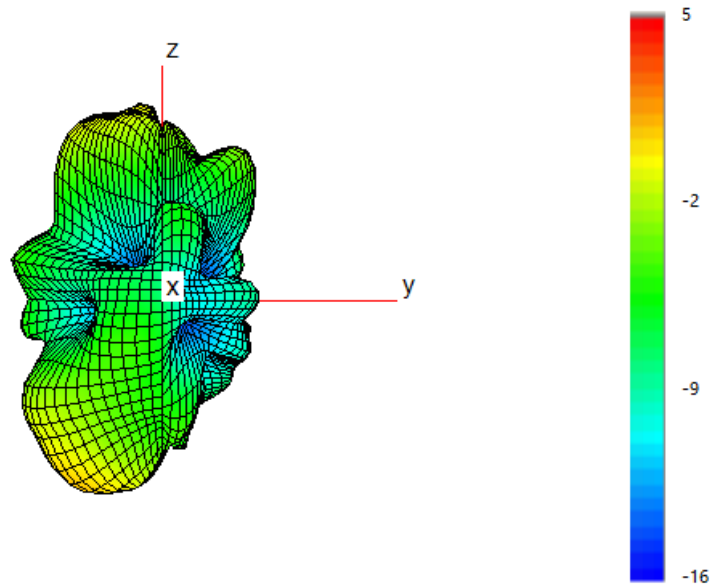
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	0.49



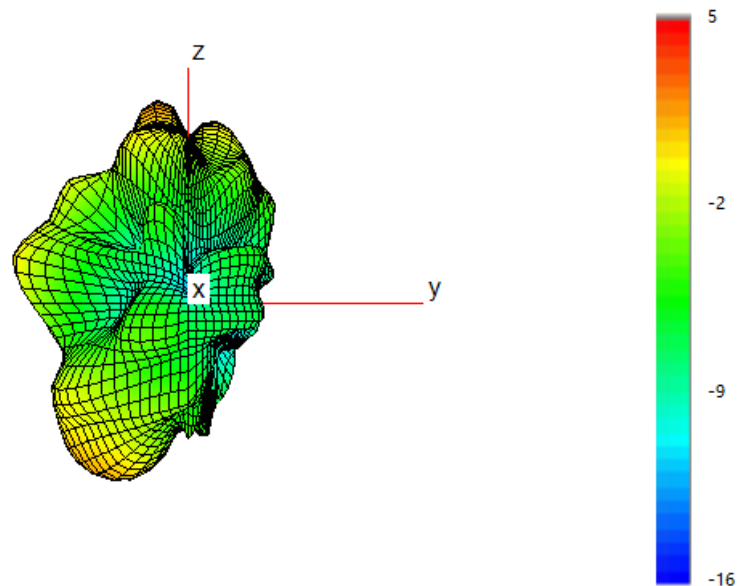
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	0.98



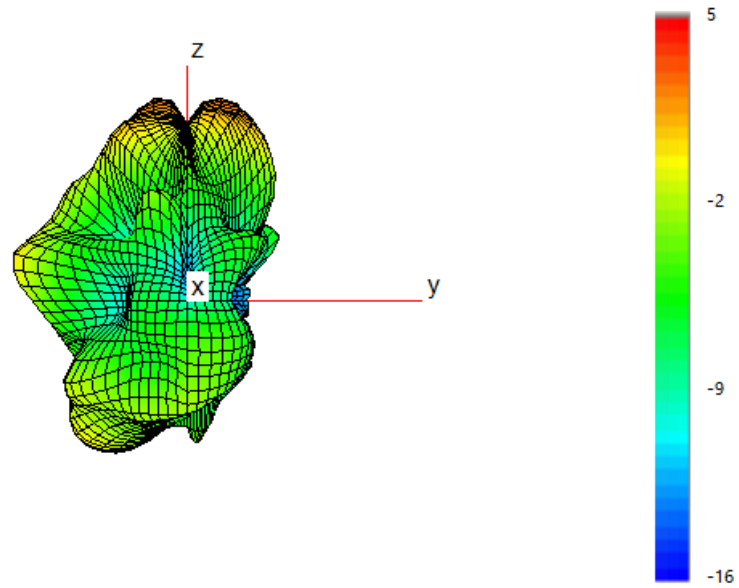
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.1



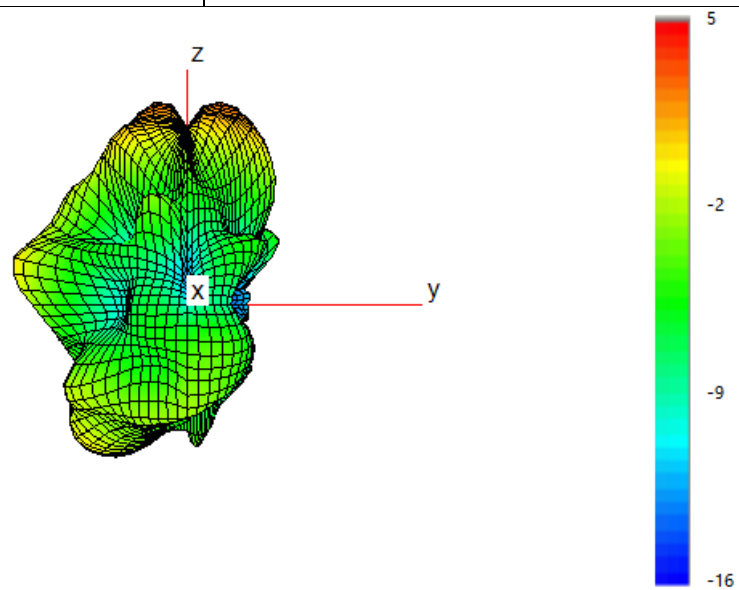
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.95



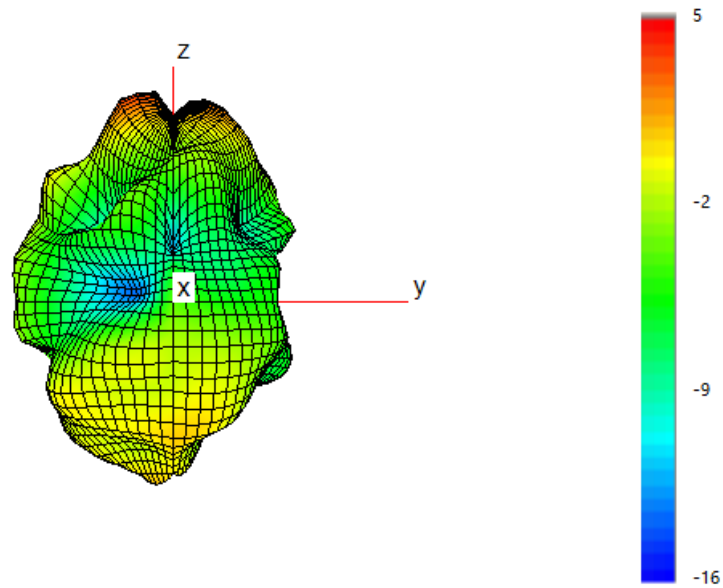
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.95



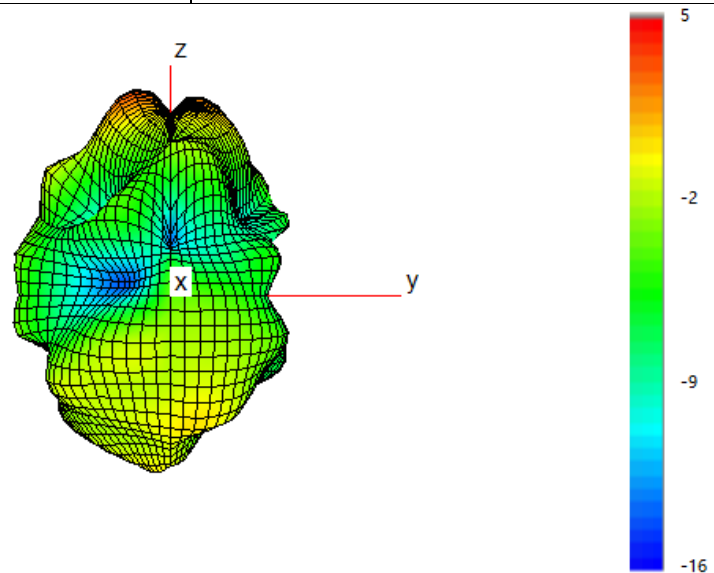
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.53



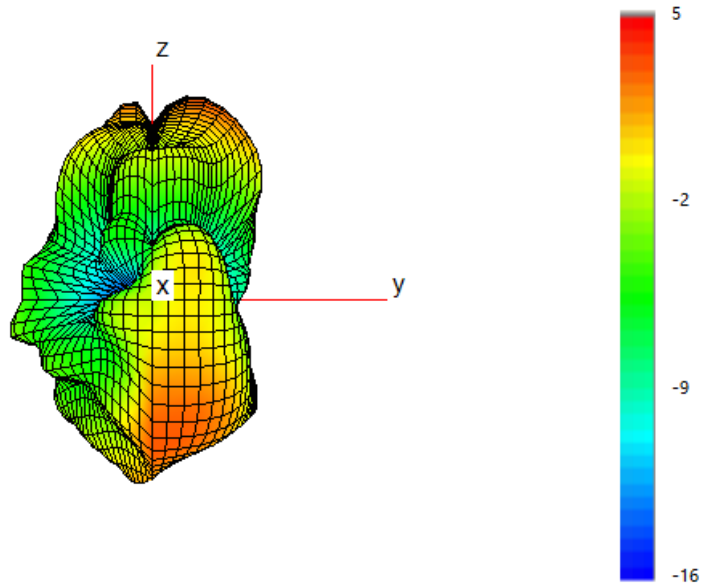
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.17



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.62



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.3

