

ANTENNA INFORMATION

OEM	Lenovo	
ODM	Huaqin Technology Co.,Ltd.	
Platform model name	Yoga 7 2-in-1 14ILL10	
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)	2.65mm
	ISED (1g)	2.65
	ISED (10g)	N/A

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)	Huaiyang Zou
	E-mail	Huaiyang.Zou@luxshare-ict.com
	Tel/Mobile	16620809787
Testing date	2024/9/23	

Antenna Part number	Main	L01RF454-NB-H
	Aux	L01RF453-NB-H
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	-1.29	0.06	-0.35	2.4	2.64	2.64	2.72	2.74	2.27	2.93
Aux	-0.01	2.58	2.58	1.98	1.13	1.49	2.08	1.28	1.81	1.22

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	I-PEX(20565-001R-13)	277	1.13	50	IPEX4
Aux	I-PEX(20565-001R-13)	82	1.13	50	IPEX4

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

Table of Contents

Cover page.....	1
1. Intel Reference Gain and Type.....	3
2. Document Revision History.....	3
3. Test & System Description	
3.1 Measurement Method and System.....	4
3.2 Test setup.....	4
3.3 Equipment list.....	5
4. Radiation characteristics of antenna loaded in Host Platform.....	6

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

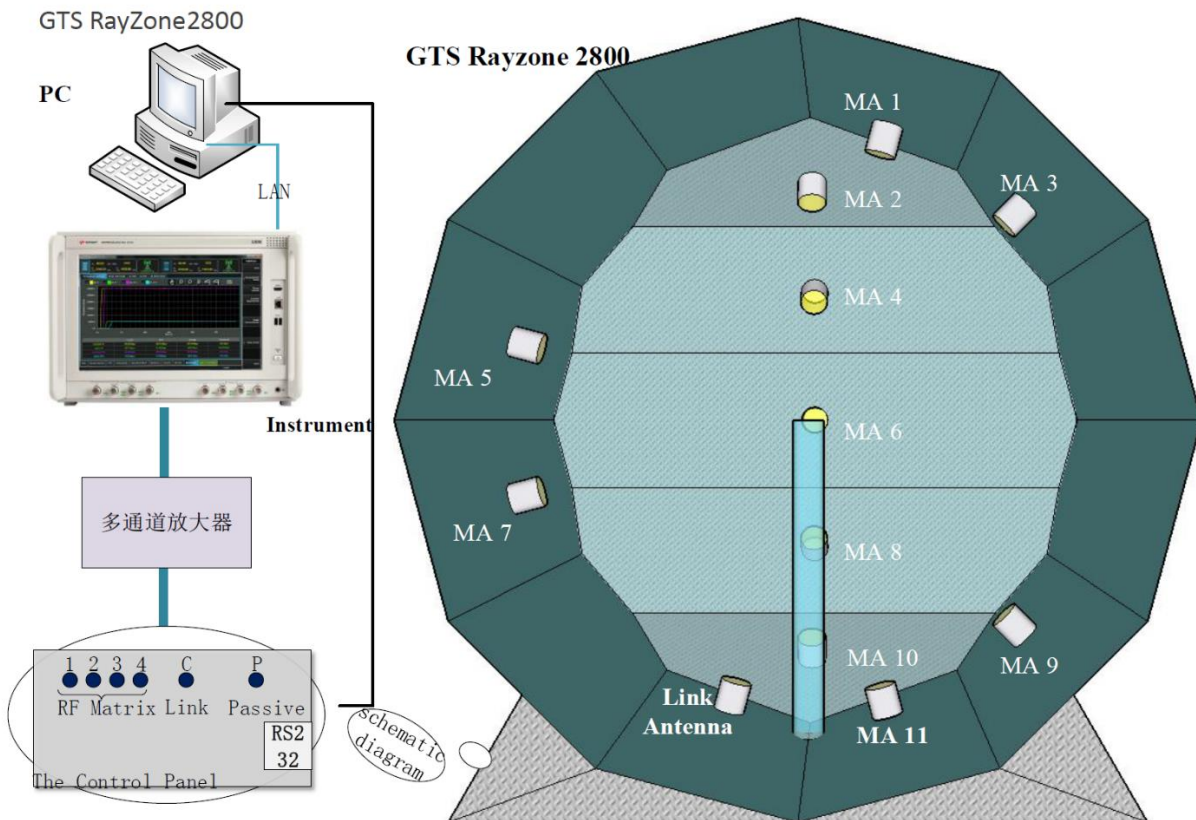
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024/9/23

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

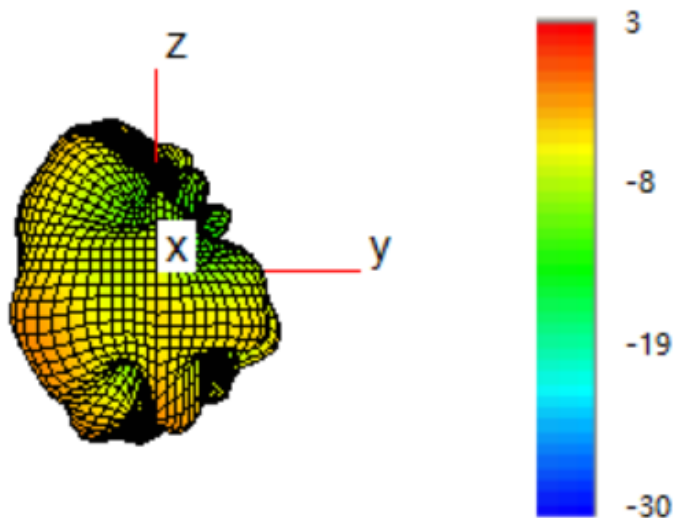
Note: Chamber calibration included full set of implement

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

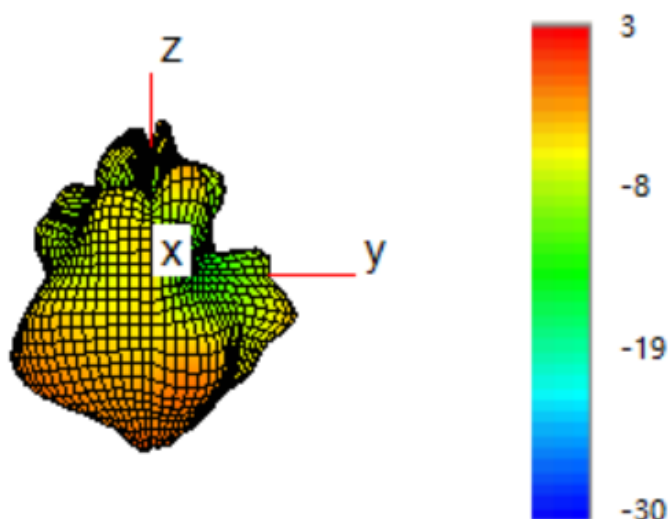
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-1.29



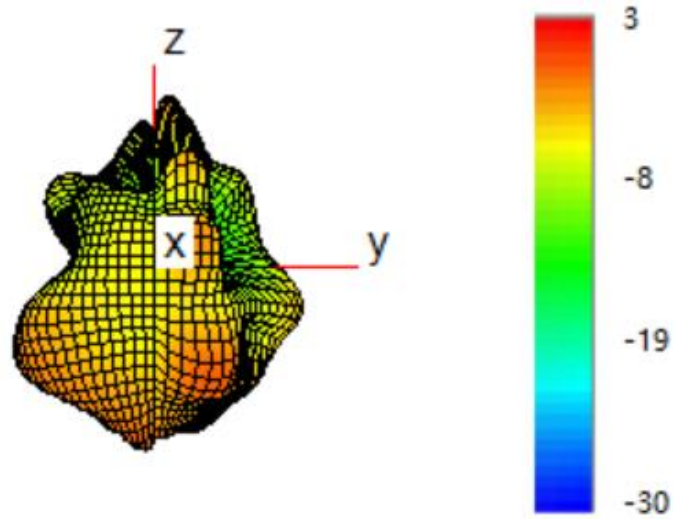
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	0.06



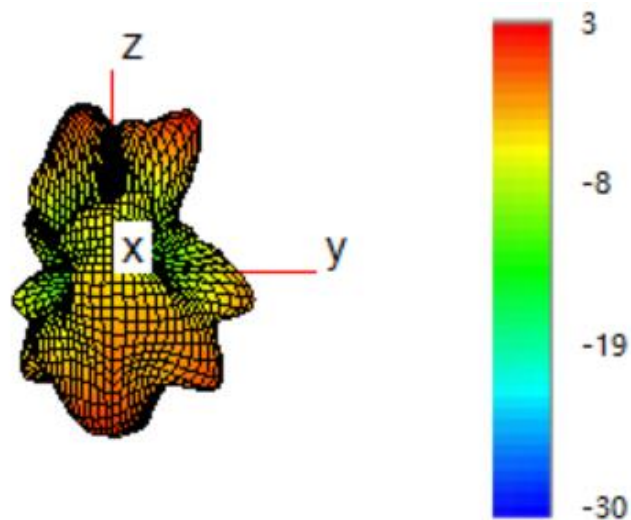
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	-0.35



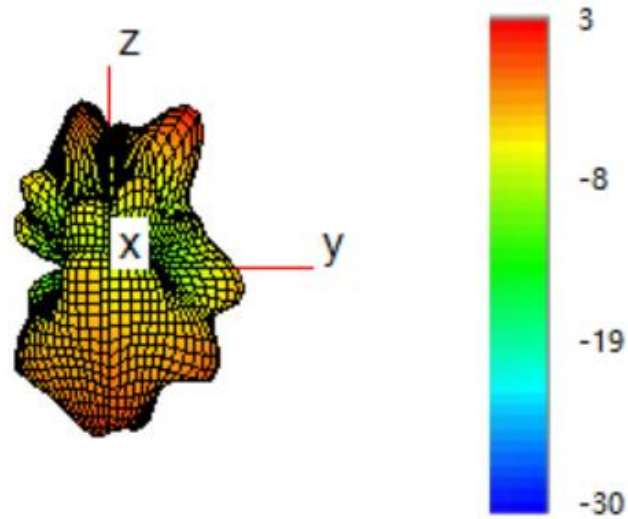
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.4



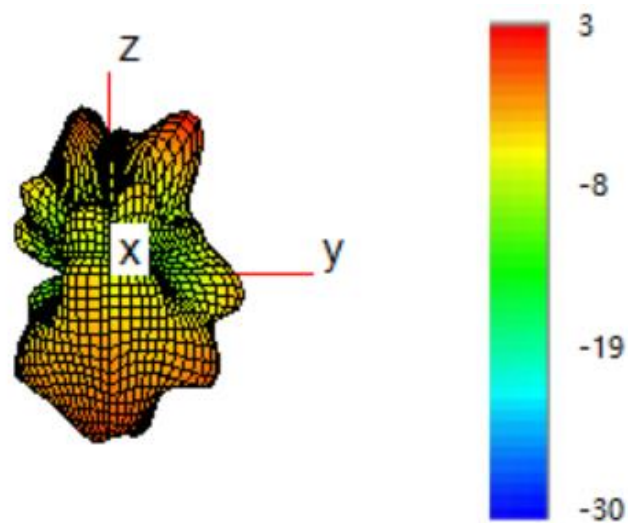
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.64



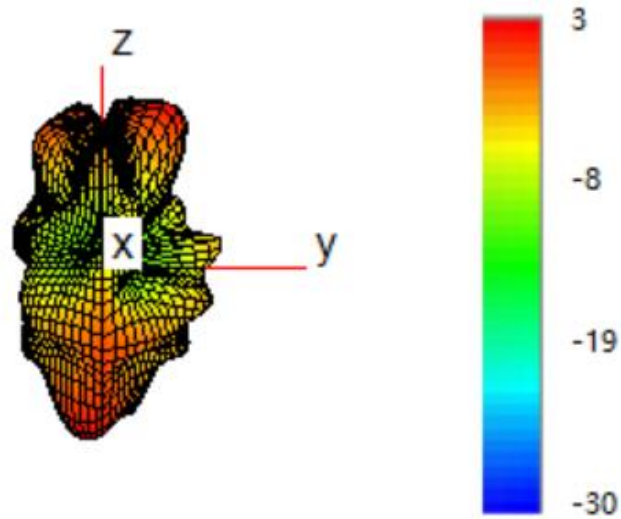
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.64



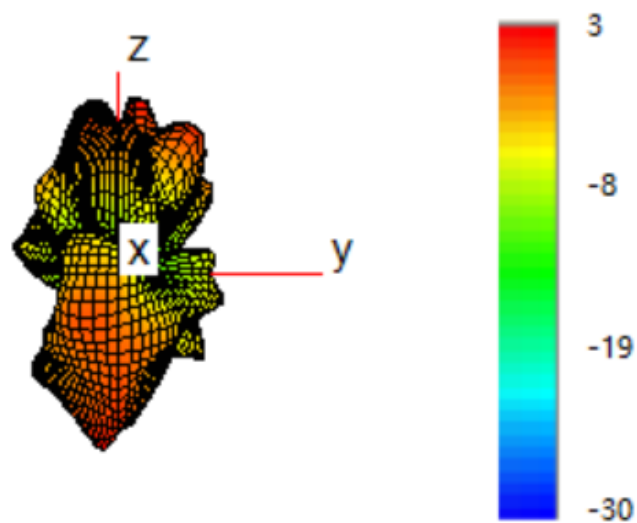
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.72



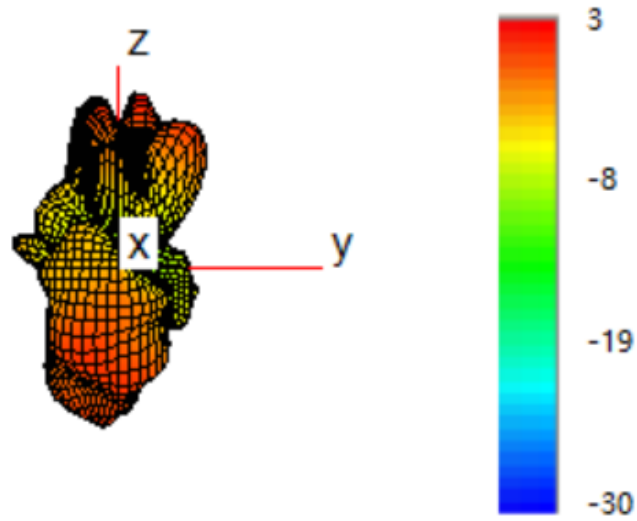
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.74



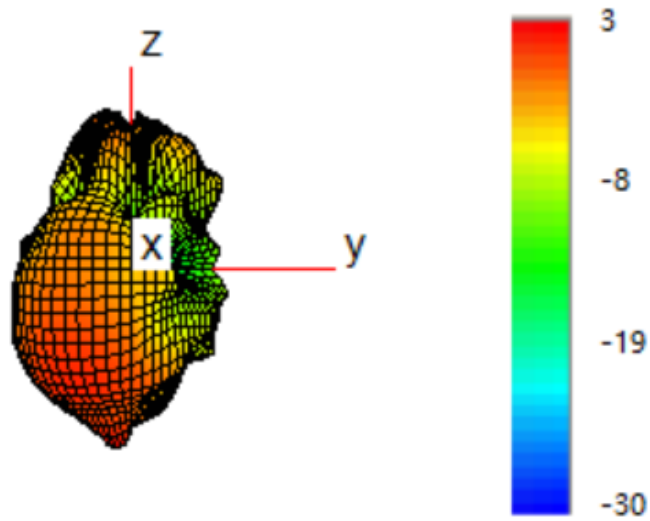
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	2.27



Max Antenna 3D Radiation Pattern 6875-7125 MHz

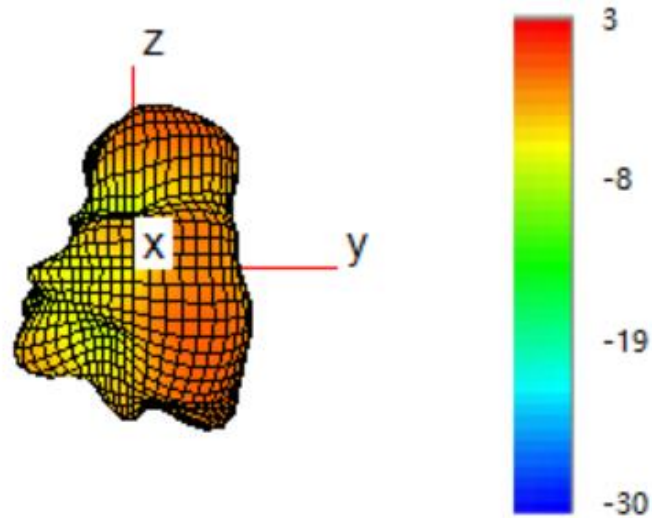
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.93



Auxiliary Antenna

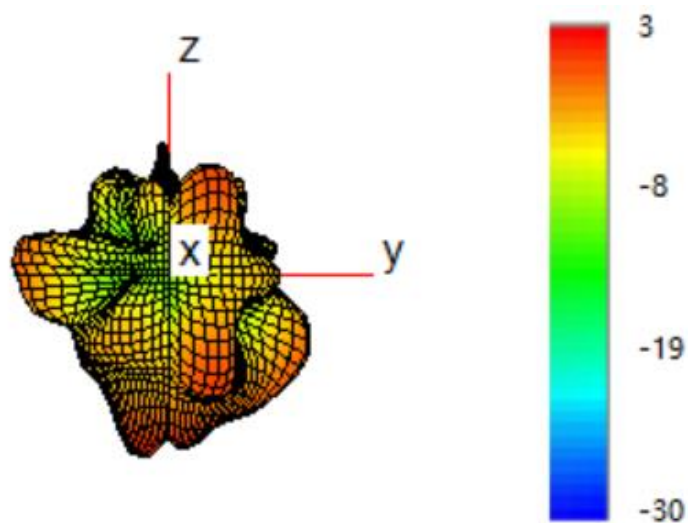
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-0.01



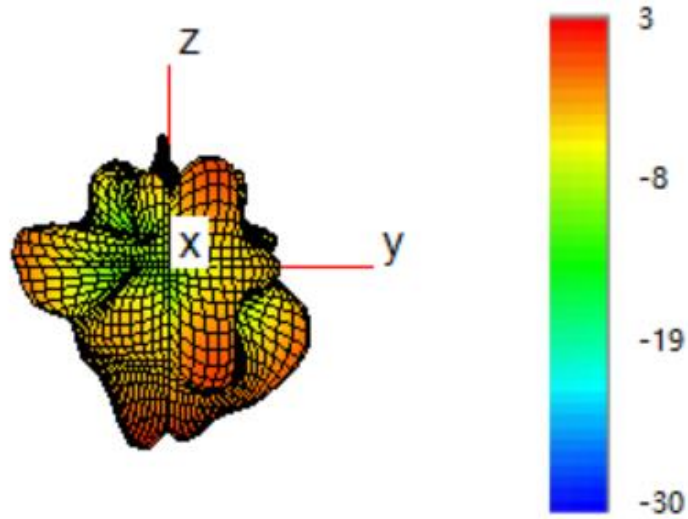
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.58



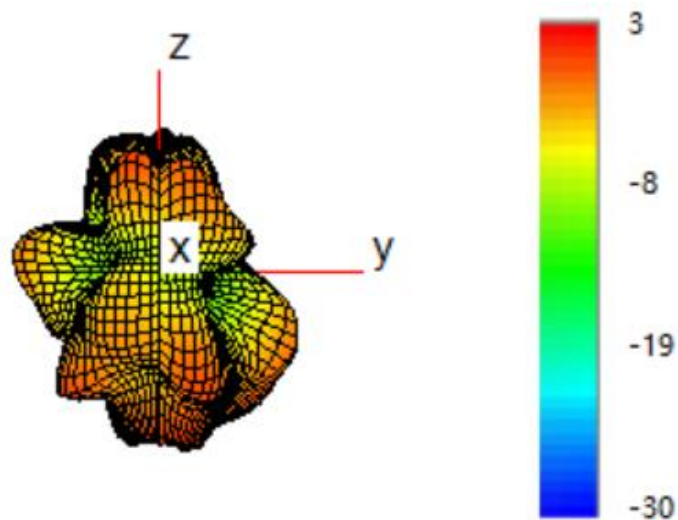
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.58



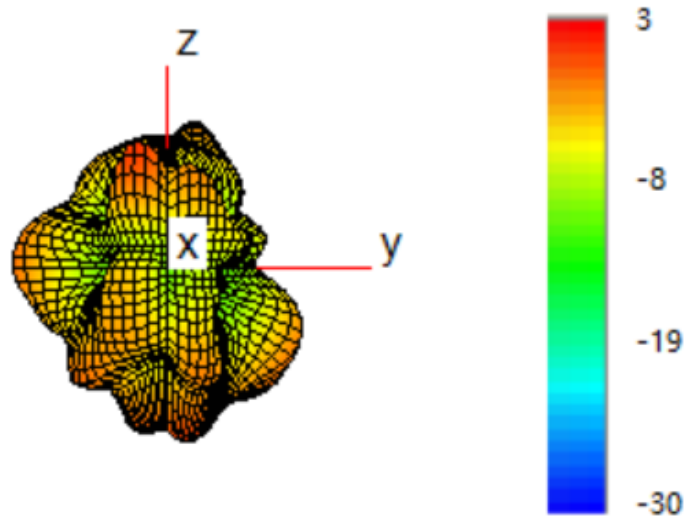
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	1.98



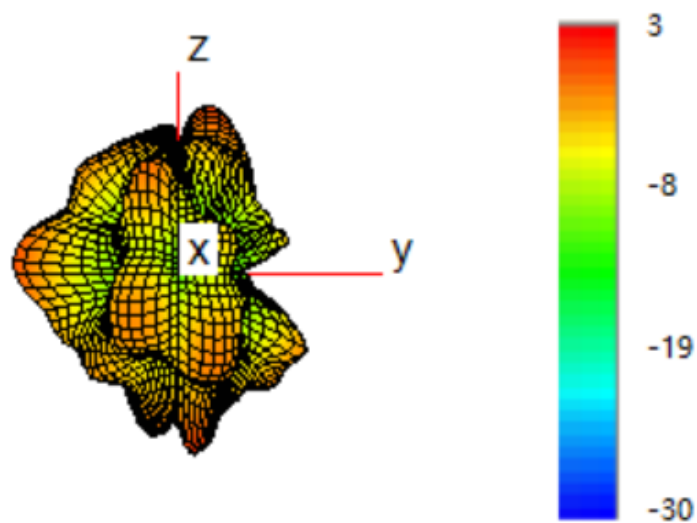
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.13



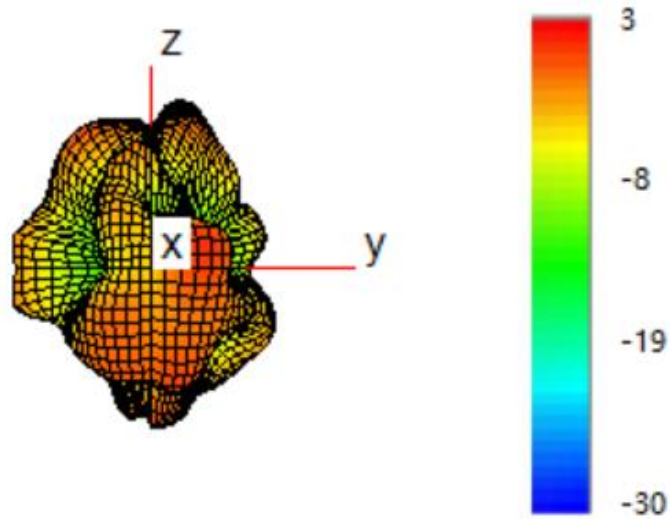
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	1.49



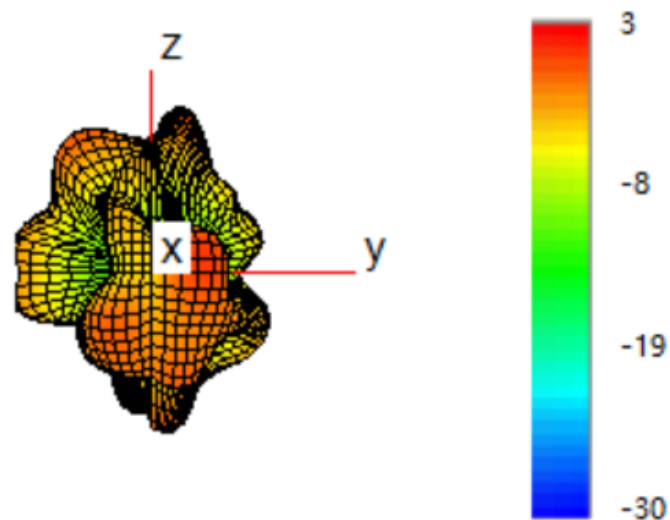
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.08



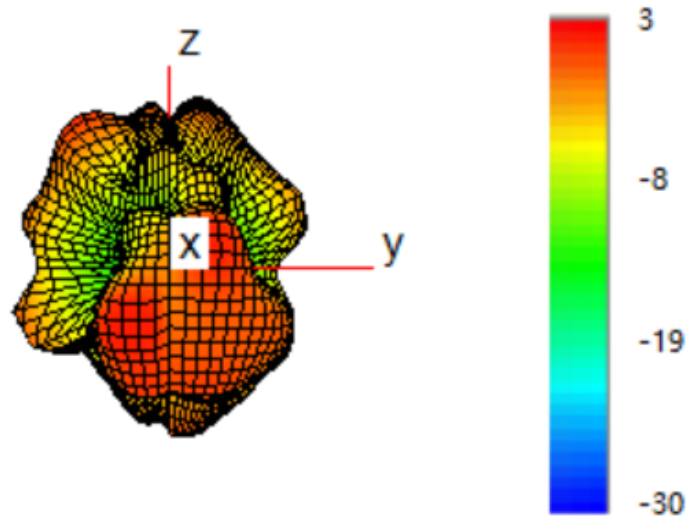
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	1.28



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	1.81



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	1.22

