

# ANTENNA INFORMATION

OEM	
ODM	Samsung
Platform model name	
Intel platform (ex: Yes, No or NA)	Yes
Platform type (ex: regular NB, convertible PC, AIO...etc)	NB
SAR minimum separation (mm)	

Antenna manufacturer	WNC	
Address	88 central Avenue, Comprehensive Free Trade Zone, Kunshan City, Jiangsu Province, China	
Antenna Part number	Main: BA42-00791A	Aux: BA42-00792A
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	1.88	1.59	2.89	2.45	0.7	0.05	4.06	4.12	4.27	4.08
Aux	1.85	1.07	1.37	1.34	0.82	0.51	2.28	3.61	4.12	2.48

Cable Assembly Part Number and Information					
	Cable PN	Cable length(cm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	81XLAC15.G04	26.7	1.13	50 ohm Coaxial	MHF4L(IPEX)
Aux	81XLAC15.G04	35.7	0.81	50 ohm Coaxial	MHF4L(IPEX)

\* 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

### 3D Peak Antenna gain should be equal or greater than -2 dBi

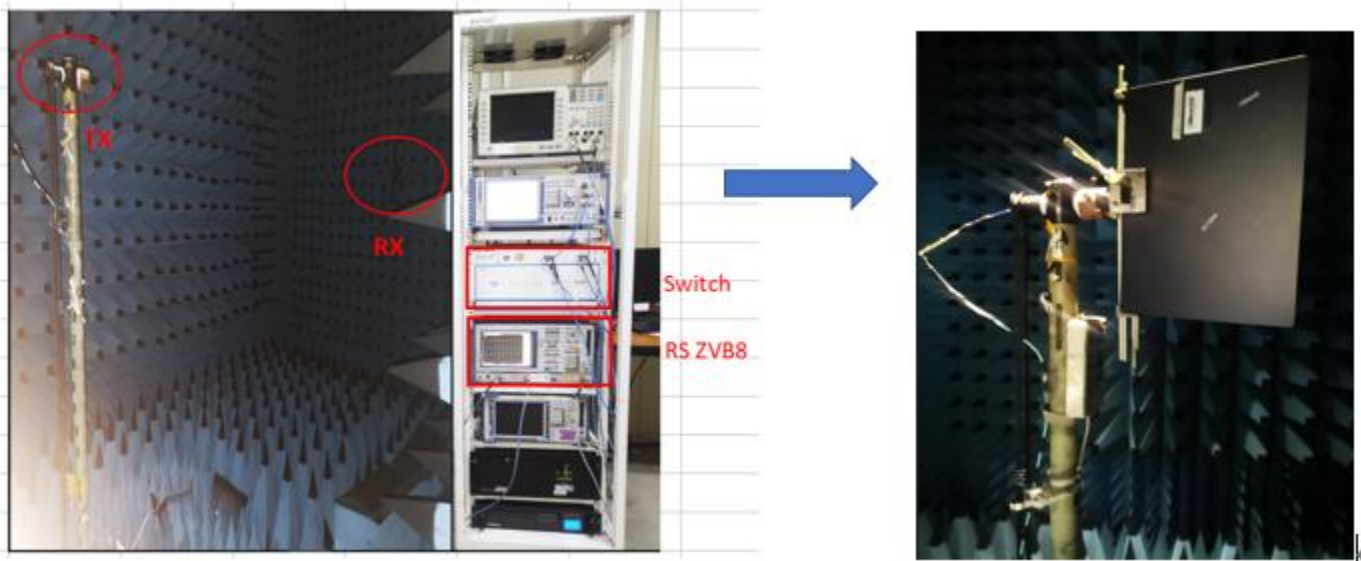
If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

## 2. Document Revision History

Revision #	Revision Details	Issued Date
Rev.A00	First Issue	2024.07

### 3. Test & System Description

#### 3.1 Measurement Method and System



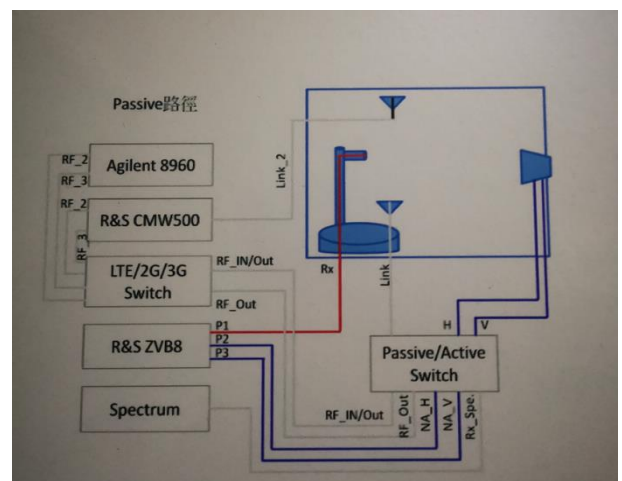
As right picture, make DUT to be 110 degree, lay it on chamber transmitting terminal, RX antenna receive the signal and feedback to Network analyzer, then test result come out by software calculating

#### 3.2 Test setup

Test Environment



Test philosophy



### 3.3 Equipment list



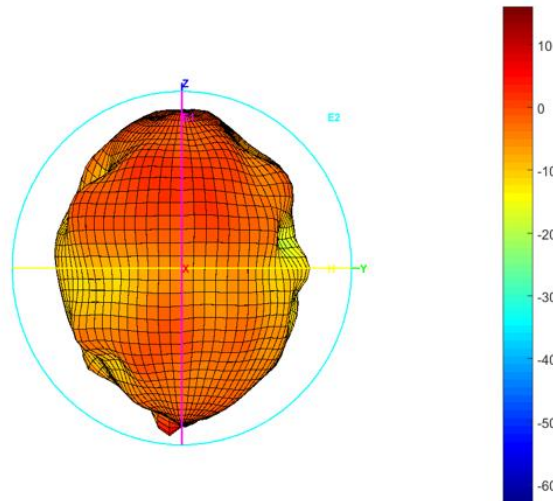
Equipment list						
NO.	Device	Type/Model	Serial#	Manufacturer	Cal-Date	Cal.DueDate
1	Chamber	\	\	ATEN LAB	2024.04.24	2024.10.24
2	Software	\	\	ATEN LAB	\	\
3	Active/passive switch	\	\	ATEN LAB	\	\
4	Network analyzer	ZVB8	1145.1010.10	R&S	2024.1.18	2025.1.17
5	Horn antenna	BBHX9120E	\	SCHWARZBECK	2020.06.22	\
Tester: Dongxiu.Ma    Sign: <i>Dongxiu.Ma</i> Test Date: 2024.06						

#### 4. Radiation characteristics of antenna loaded in Host Platform

##### Main Antenna

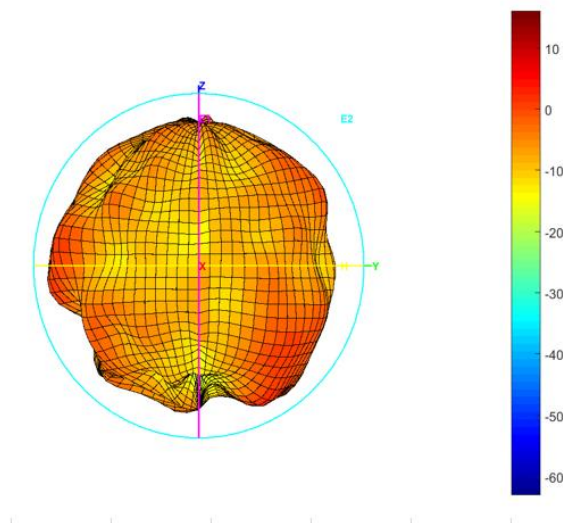
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	<b>1.88</b>



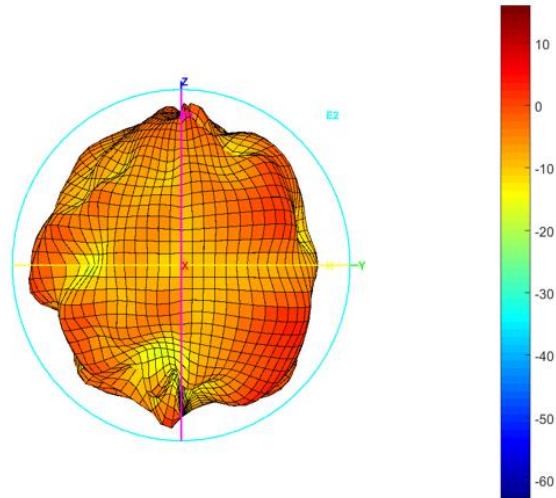
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	<b>1.59</b>



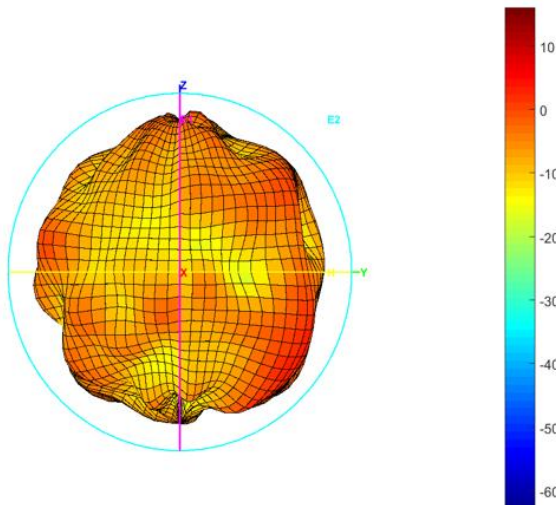
## Max Antenna 3D Radiation Pattern 5250-5350 MHz

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



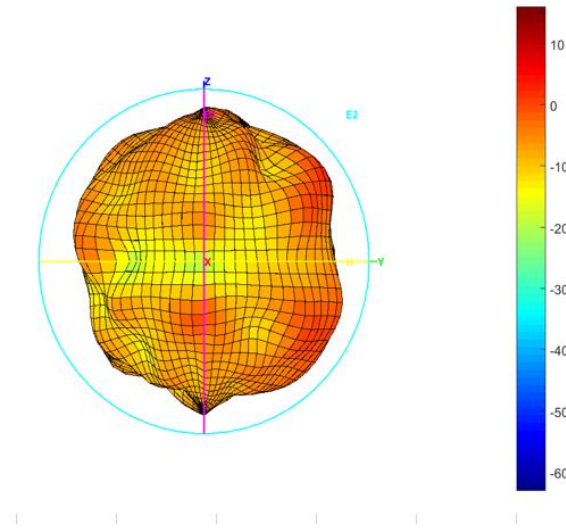
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	<b>2.45</b>



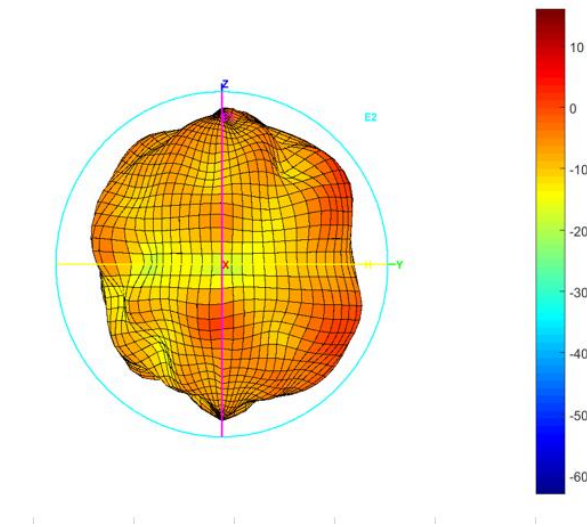
### Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	<b>0.7</b>



### Max Antenna 3D Radiation Pattern 5850-5895 MHz

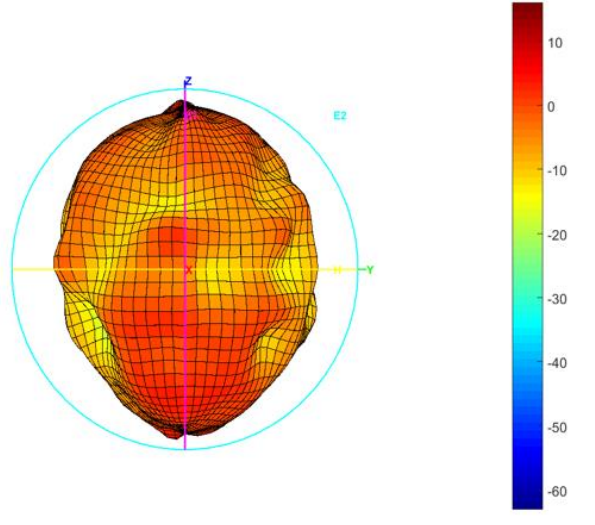
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	<b>0.05</b>





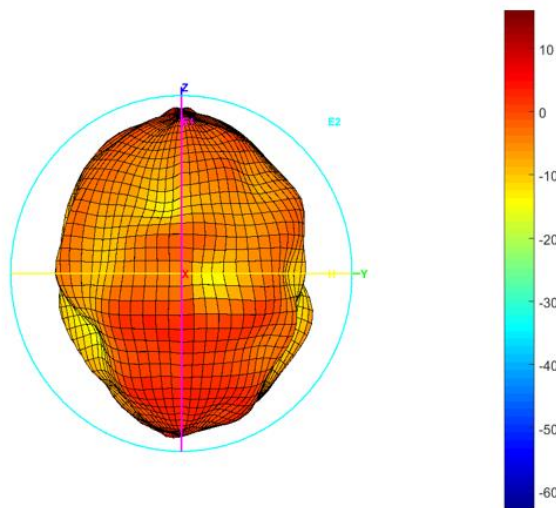
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	<b>4.06</b>



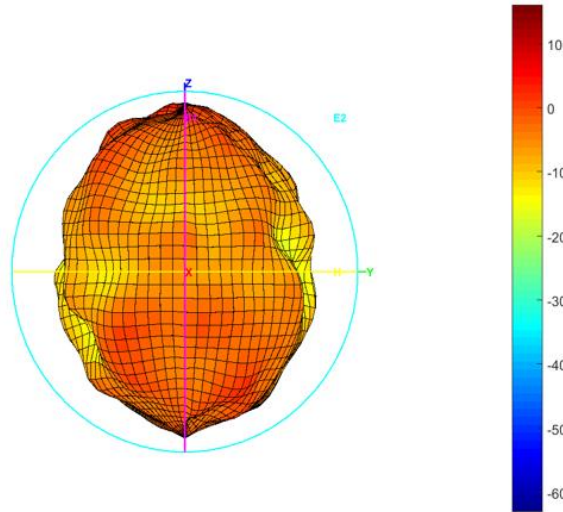
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	<b>4.12</b>



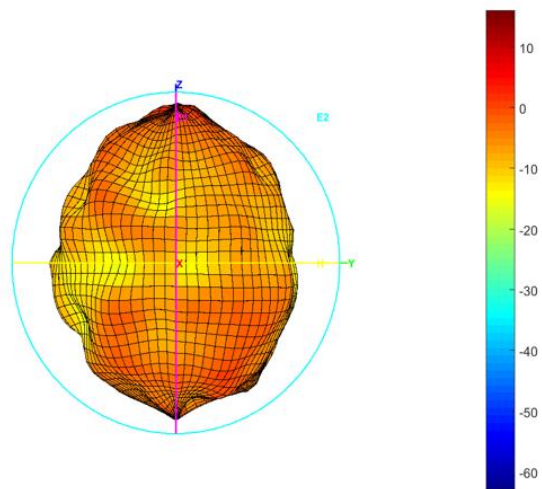
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	<b>4.27</b>



Max Antenna 3D Radiation Pattern 6875-7125 MHz

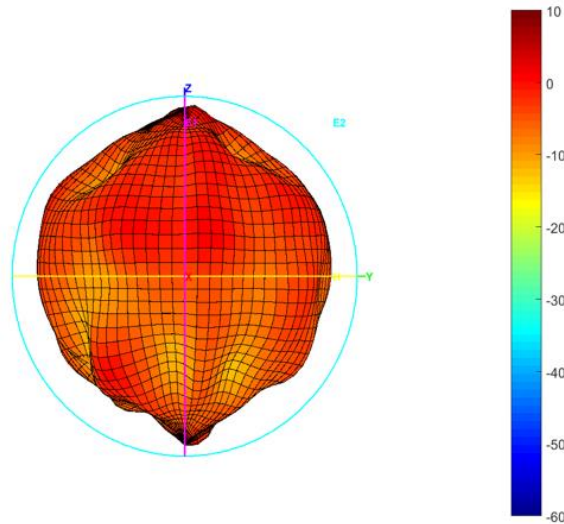
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	<b>4.08</b>



### Auxiliary Antenna

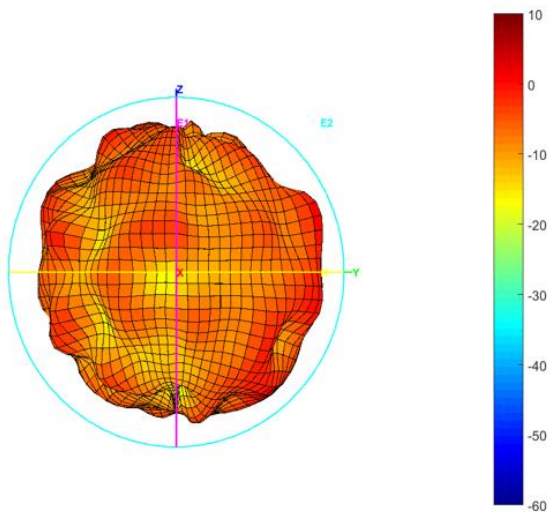
#### Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	<b>1.85</b>



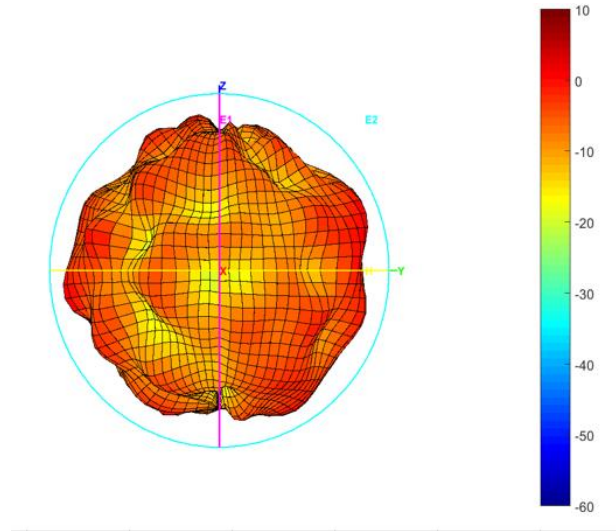
#### Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	<b>1.07</b>



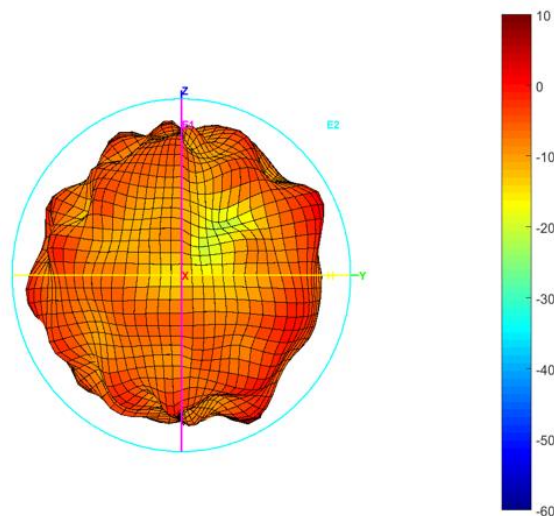
### Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	<b>1.37</b>



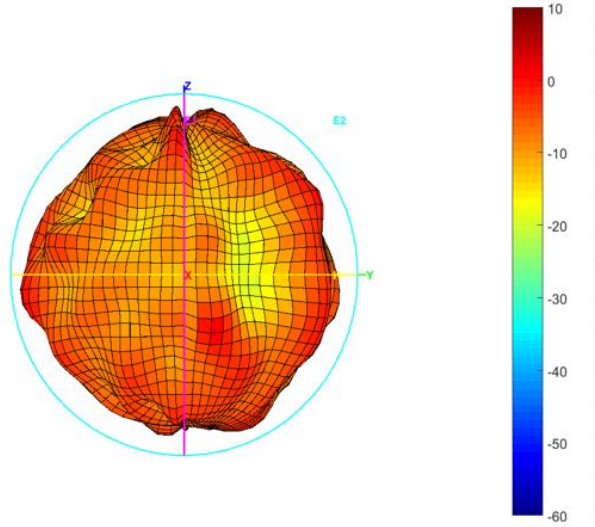
### Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	<b>1.34</b>



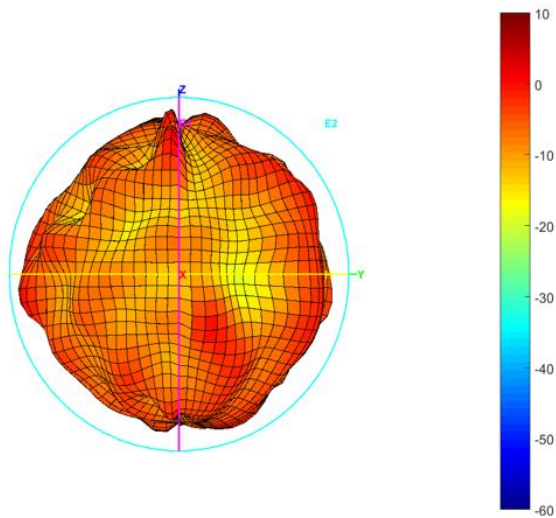
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	<b>0.82</b>



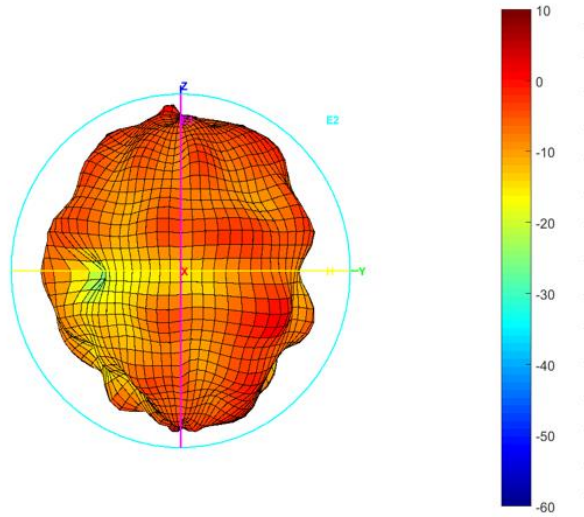
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	<b>0.51</b>



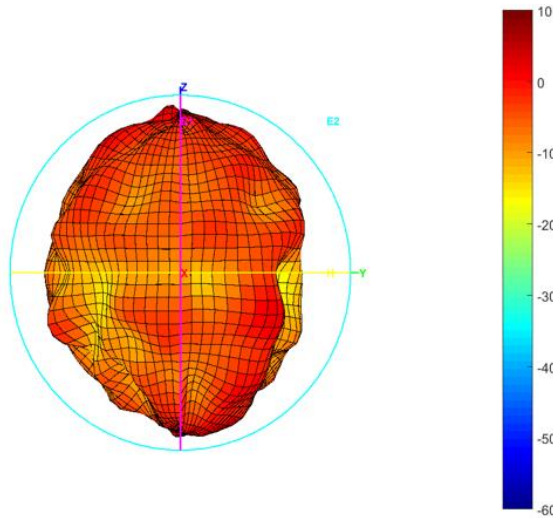
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	<b>2.28</b>



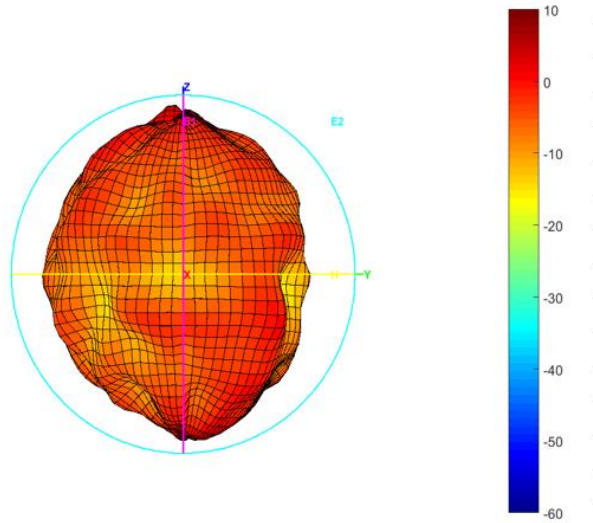
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	<b>3.61</b>



### Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	<b>4.12</b>



### Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	<b>2.48</b>

