ANTENNA INFORMATION

OEM		Lenovo
ODM		LCFC
Platform model name		Lenovo Chrome 14M9610
Intel platform (ex: Yes, No or NA)		NA
Platform type (ex: regular NB, convertible PC, AIO…etc)		regular NB
SAR minimum separation (mm)	FCC (1g)	8mm
	ISED (1g)	8mm
	ISED (10g)	NA

Antenna manufacturer	Company name	ZTX
	Address	Rm 503,Ic Design & Application industrial Park,No.1089 XiLiChaguang Road, NanShan District, ShenZen City, Guangdong Province, China
Test location	Company name	ZTX
	Address	Rm 503,Ic Design & Application industrial Park,No.1089 XiLiChaguang Road, NanShan District, ShenZen City, Guangdong Province, China
Test Personnel	Name(Full name)	Kevin Chen
	E-mail	kevin.chen@chinaztx.com
	Tel/Mobile	+886958559776
Testing date		2024/11/12

Antenna Part number	Main	DC330025M00
	Aux	DC330025M00
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	1.98	1.29	2.73	1.46	1.06	2.6	1.49	0.89	0.97	1.02
Aux	2.19	1.94	2.53	1.02	2.26	1.59	1.33	1.87	1.64	0.85

Cable Assembly Part Number and Information					
	Cable PN	**Cable length**(mm)	**Cable diameter**(mm)	**Impedance**(ohm)	**Connector type**
Main	1.13 low loss	203mm	1.13	50	MHF-B13L-N-01 of equivalent
Aux	1.13 low loss	198mm	1.13	50	MHF-B13L-N-01 of equivalent

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

Table of Contents

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	2024.11.12

3. Test & System Description

3.1 Measurement Method and System

<insert test description here for test method>

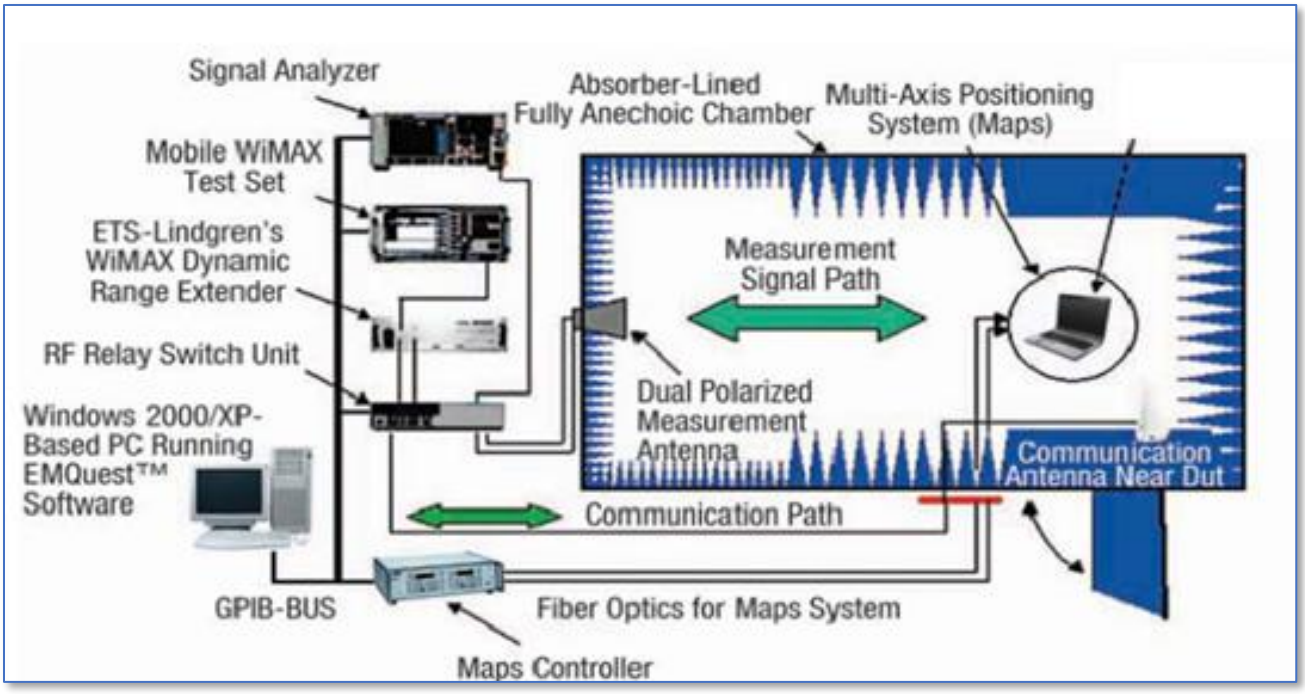
This test report is prepared for host antenna testing under a Full Anechoic Chamber.

This test with host with fixed position and allow to UUT turn different angels.

3.2 Test setup

<insert test diagram here for test site utilized>

AMS-8500



3.3 Equipment list

<insert test diagram here for test site utilized>

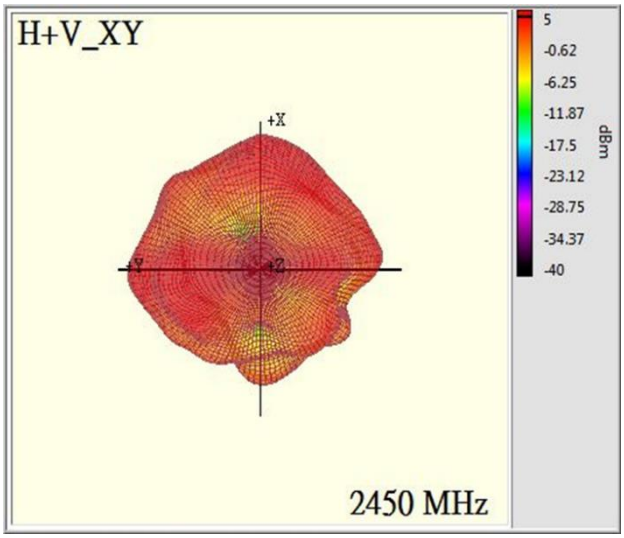
Device	Type/Model	Serial#	Manufacturer	Cal. Date	Cal. Due Date
Anechoic Chamber	AMS-8500	1191	ETS-Lindgren	2024/3/9	2026/3/9
Turn Table	2090	-	ETS-Lindgren	N/A	N/A
Switch & Positioning systems	7001-002	116599	ETS-Lindgren	N/A	N/A
Measurement SW	EMQuest v1.0.8	1352	ETS-Lindgren	N/A	N/A
Boresight antenna mast	2090	-	ETS-Lindgren	N/A	N/A
Spectrum Analyzer	FPL1007	1201.0002K50	Rohde&Schwarz	2024/7/25	2026/7/25
Wideband Radio Communication	CMW500	-	Rohde&Schwarz	2024/7/25	2026/7/25
Horn antenna	3164-08	00143257	ETS-Lindgren	2024/4/3	2026/4//3
Horn antenna + Amplifier + HPF6.4	115195	00117614	ETS-Lindgren	2024/8/1	2026/8/1
Cable 2.5m - 30MHz to 18GHz	0500990992500KE	19.23.395	Radial	2024/1/10	2026/1/10
Cable 1.2m 18 to 40GHz	UFA147A-0-0480-200200	MFR 64639223720-003	Micro-caox	2024/1/10	2026/1/10
Cable 1m 1GHz to 18GHz	UFA147A	-	Utillflex	2024/1/10	2026/1/10
Cable 2m - 26.5MHz to 40GHz	794-9191-200A	E00327	Atem	2024/1/10	2026/1/10
Cable 1m - 30MHz to 18GHz	UFB311A-0-0590-50U50U	MFR 64639223230-001	Micro-caox	2024/1/10	2026/1/10
Cable 7m - DC-18GHz	0501051057000GX	19.35.850	Radial	2024/1/10	2026/1/10
Cable 7m 18GHz to 40GHz	R286304009	-	Radial	2024/1/10	2026/1/10
Cable 1.5m - DC-18GHz	CBL-1.5M-SMSM+	202879	Mini-Circuits	2024/1/10	2026/1/10
Temp & Humidity Logger	GM-108A	-		2024/5/2	2026/5/2

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

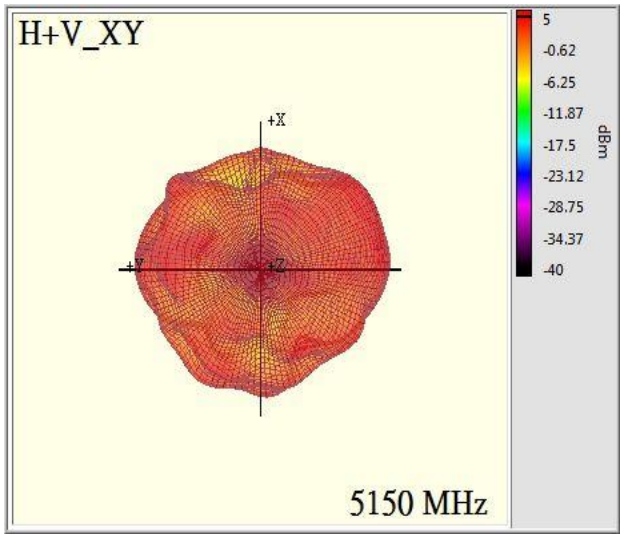
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.98



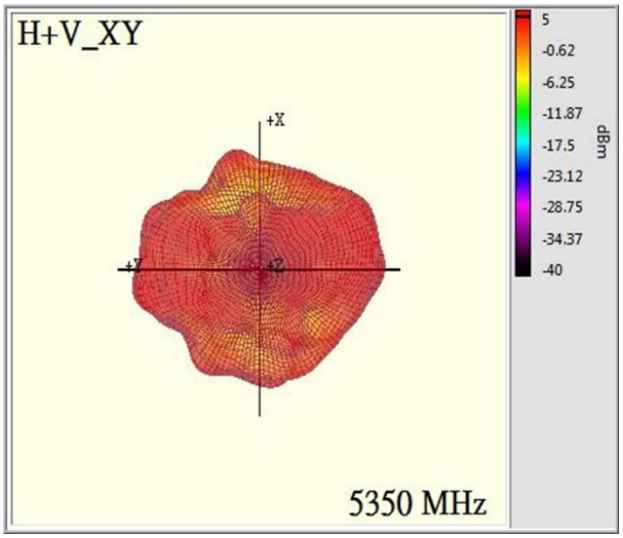
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.29



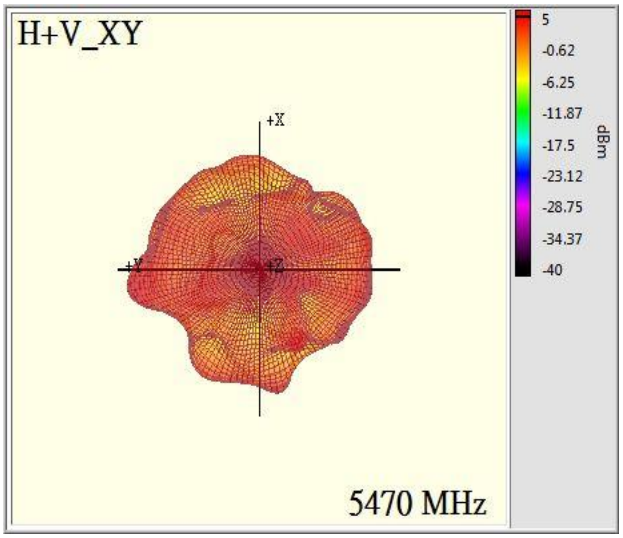
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.73



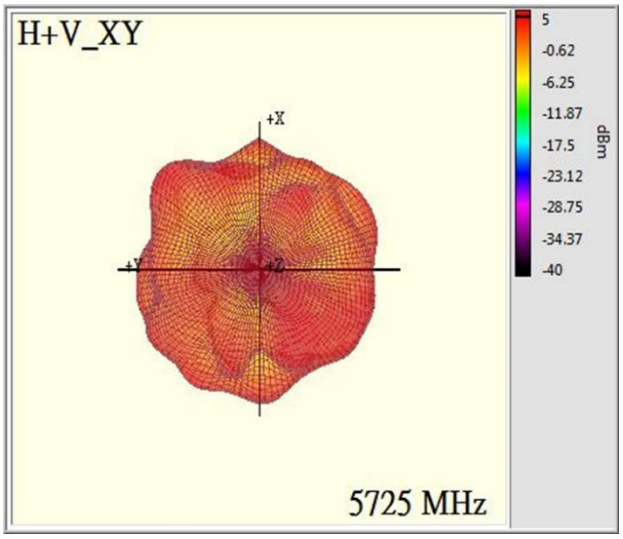
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	1.46



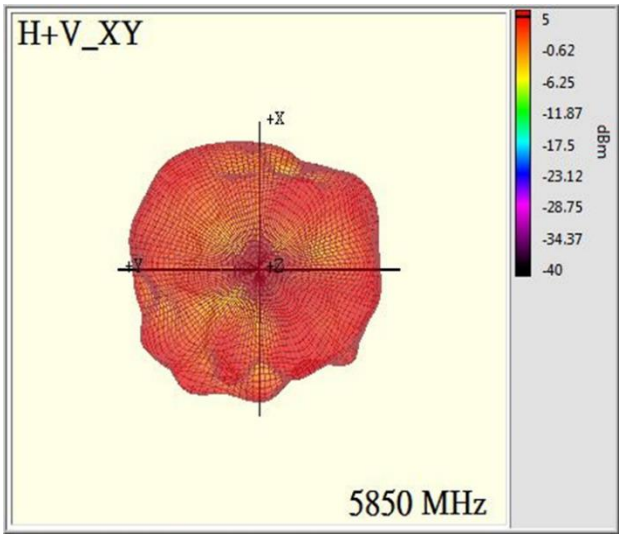
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.06



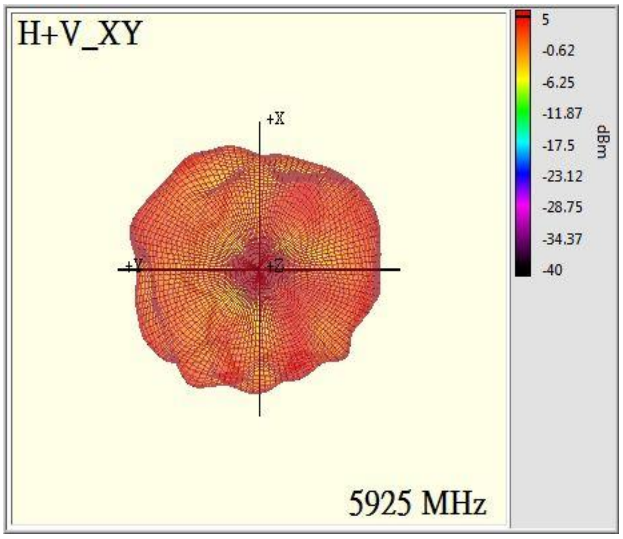
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.6



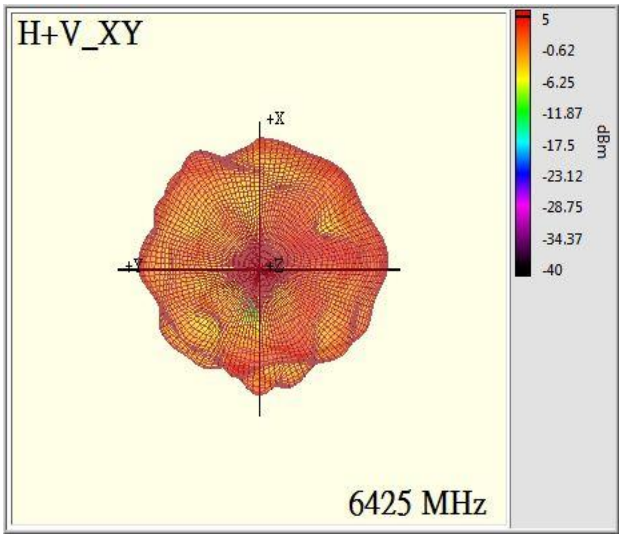
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	1.49



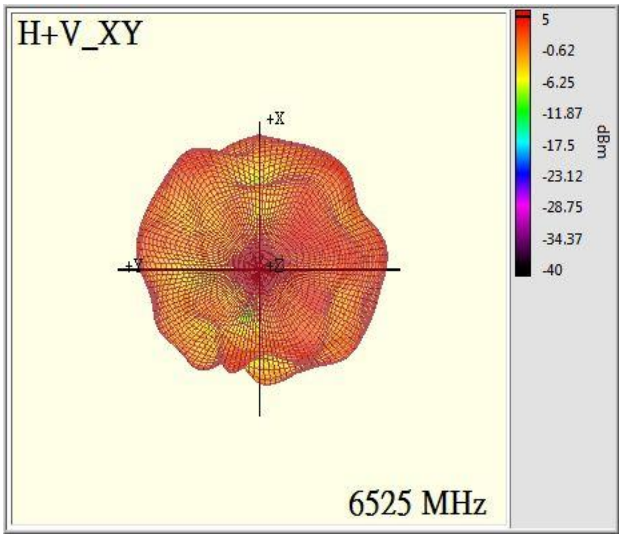
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	0.89



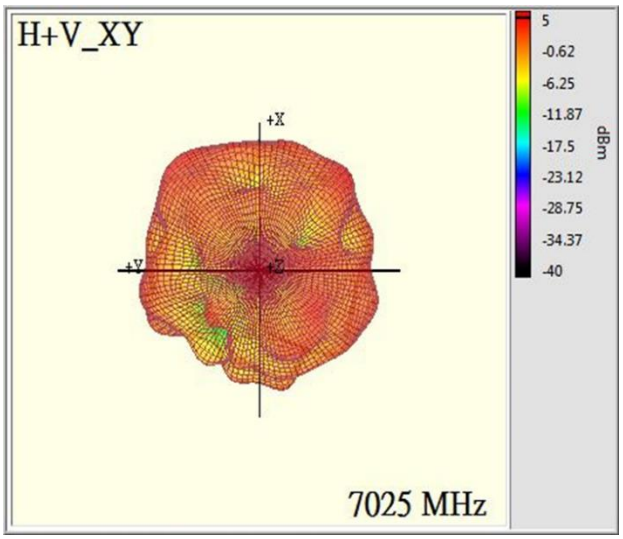
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	0.97



Max Antenna 3D Radiation Pattern 6875-7125 MHz

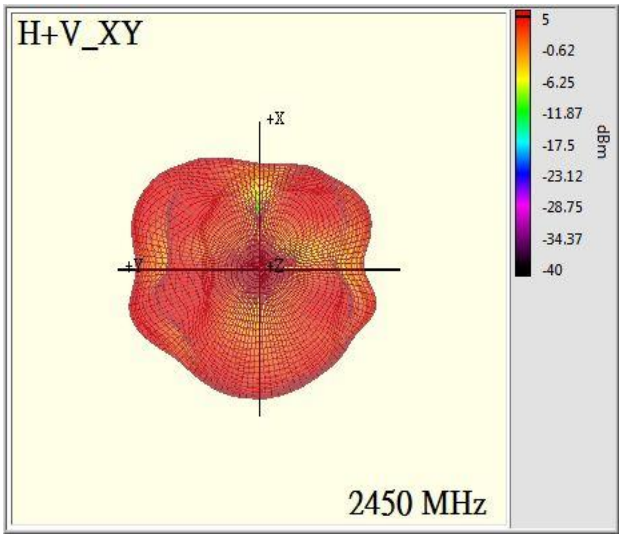
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	1.02



Auxiliary Antenna

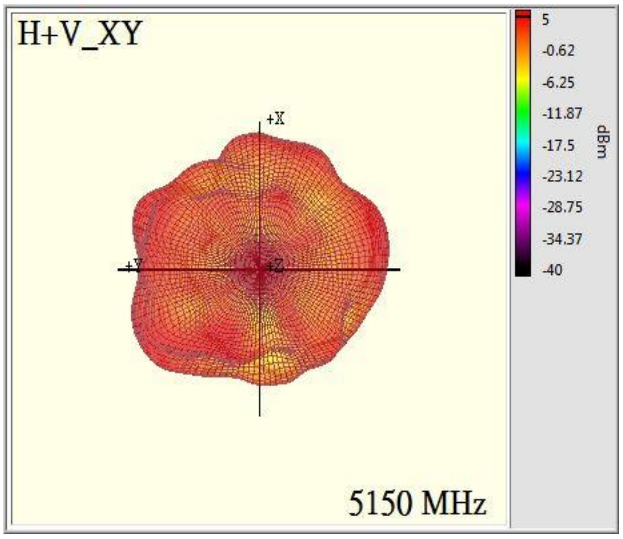
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.19



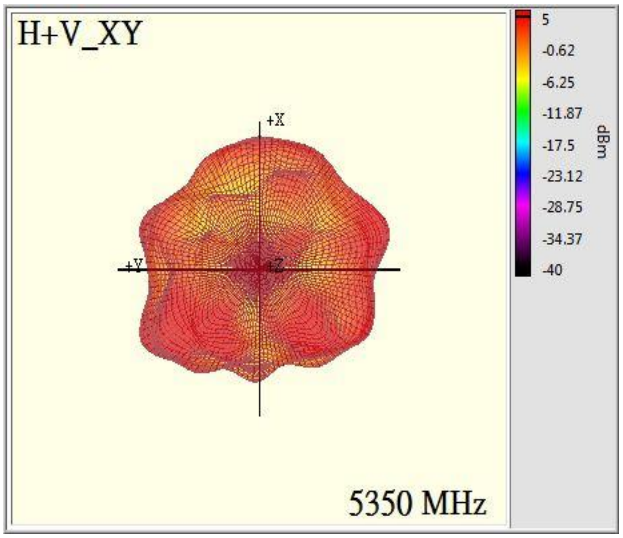
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.94



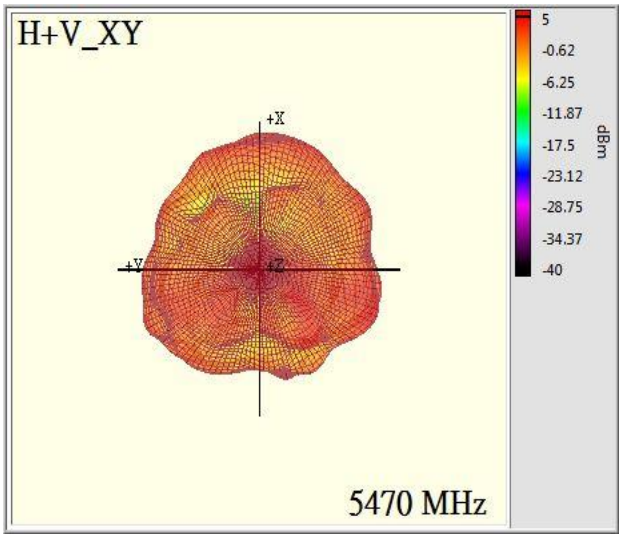
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.53



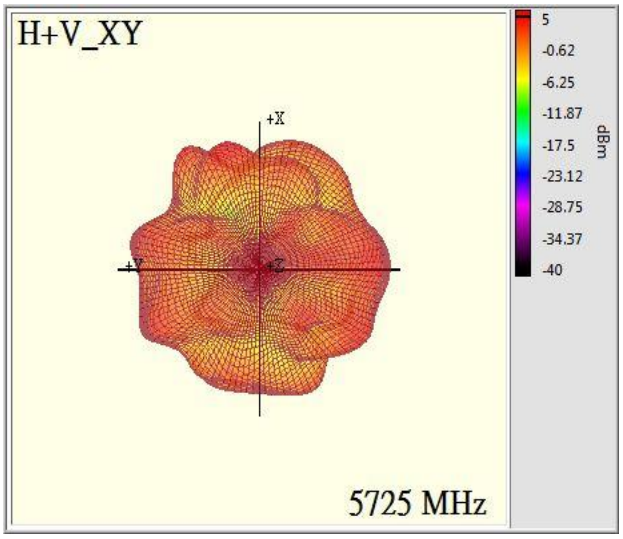
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	1.02



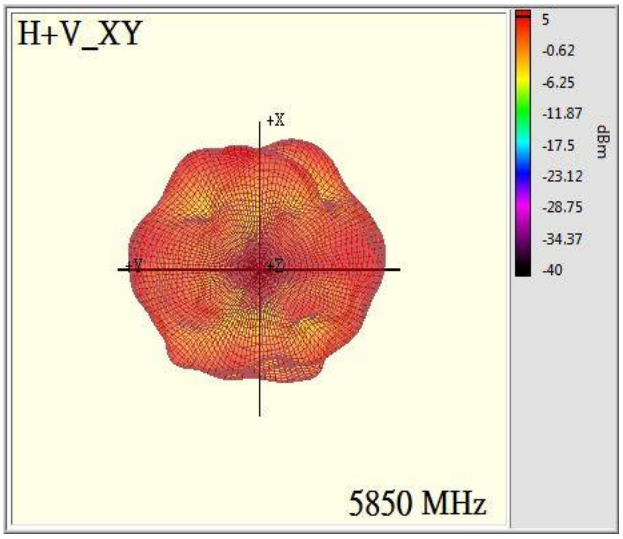
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.26



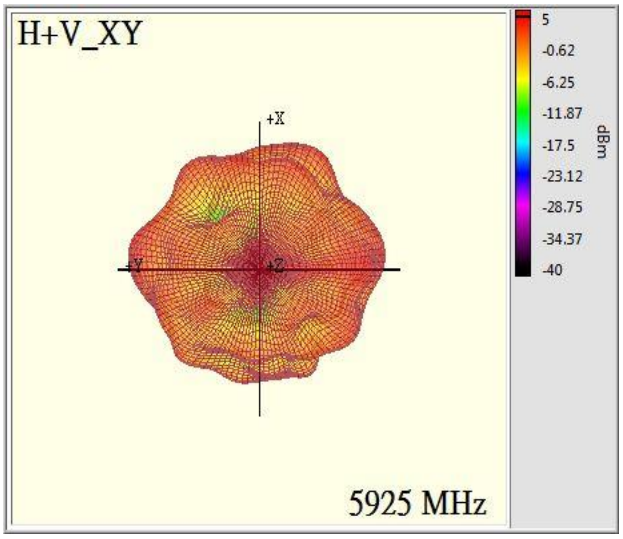
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	1.59



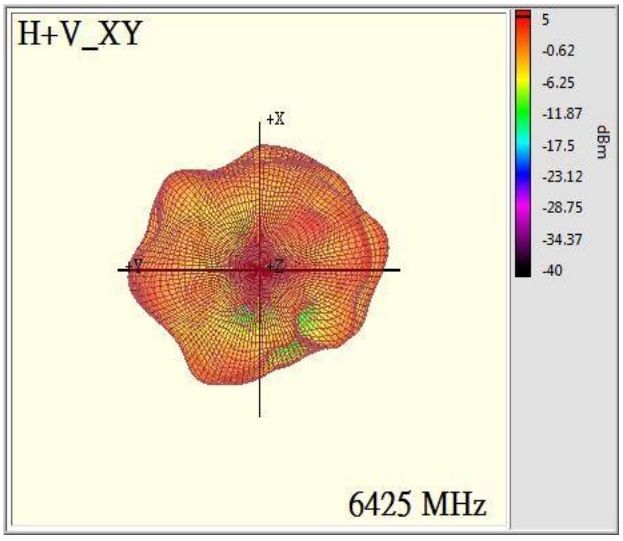
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	1.33



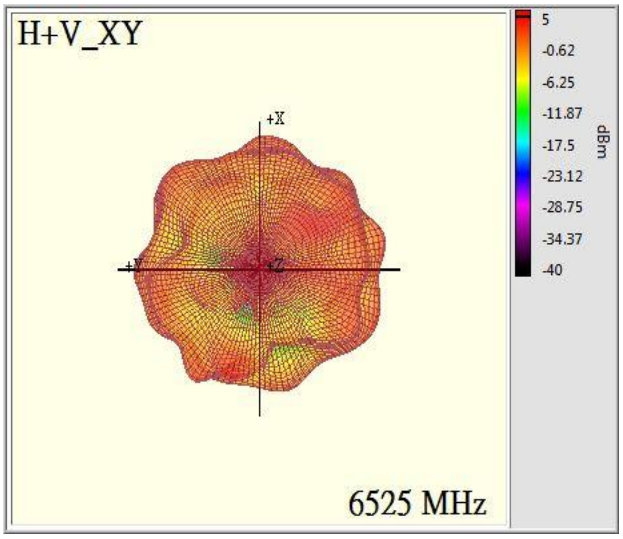
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	1.87



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	1.64



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	0.85