

ANTENNA INFORMATION

FCC ID : A3LNP960XMA

(NP960XMA / NP960XMB / NP964XMA / NP964XMB)

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)	8. 18

Antenna manufacturer	WNC	
Address	Du Juan Road NO.121 Precision Machinery Industrial Park, Kunshan city, Jiangsu, China	
Antenna Part number	Main: BA42-00783A	Aux: BA42-00783A
Antenna type (ex: PIFA, Dipole...etc)	PIFA	

Antenna Peak gain w/ cable loss (dBi)*										(Test date : 24.02.05)
	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	-1.62	-3.44	-3.38	-3.56	-3.64	-4.16	-3.67	-3.21	-4.11	-4.28
Aux	-1.82	-3.51	-3.16	-3.04	-3.14	-3.37	-3.58	-3.02	-3.4	-4.31

Cable Assembly Part Number and Information					
	Cable PN	Cable length(cm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	81XBLD15.G15	34.35	1.13	50 ohm Coaxial	MHF4L(IPEX)
Aux	81XBLD15.G15	27.65	1.13	50 ohm Coaxial	MHF4L(IPEX)

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

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1. Gain and Type

*Continued on page 6~15

2. Document Revision History

Revision #	Revision Details	Issued Date
A00	First Issue	2024.02.06

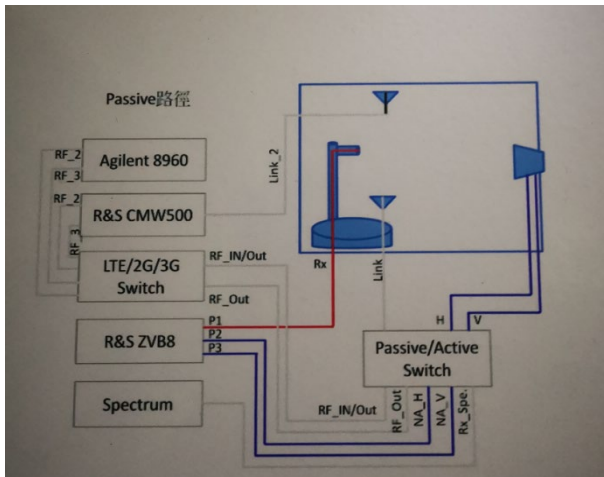
3. Test & System Description

3.1 Measurement Method and System

As right picture(@ Annex B), 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 philosophy



3.3 Equipment list

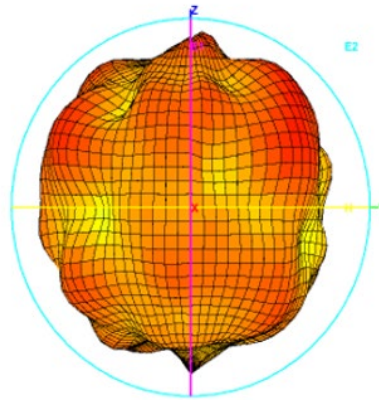
Equipment list						
NO.	Device	Type/Model	Serial#	Manufacturer	Cal-Date	Cal.DueDate
1	Chamber	\	\	ATEN LAB	2023.12.24	2024.06.01
2	Software	Maxwell	Ver : 3.3.0	ATEN LAB	\	\
3	Active/passive switch	\	\	ATEN LAB	\	\
4	Network analyzer	ZVB8	1145.1010.10	R&S	2024.1.08	2025.1.07
5	Horn antenna	BBHX9120E	\	SCHWARZBECK	2023.12.24	\
Tester: Dongxiu.Ma Sign: <i>Dongxiu.Ma</i> Test Date: 2024.02.05						

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

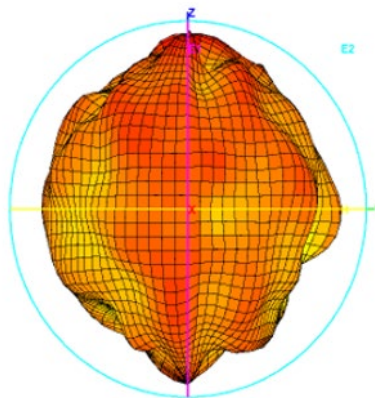
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-1.62



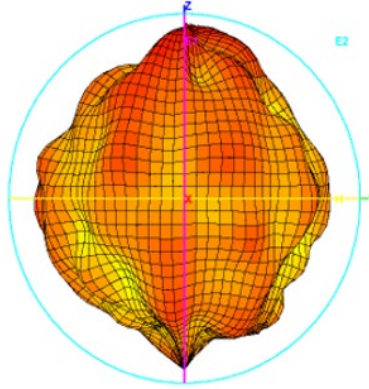
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	-3.44



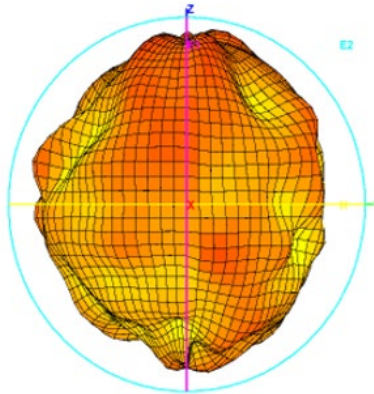
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	-3.38



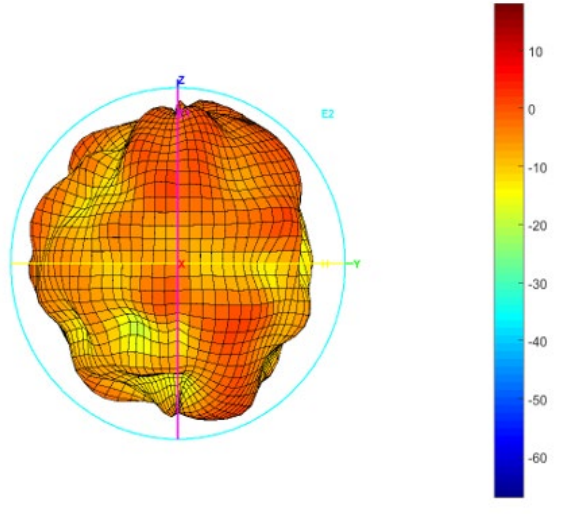
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	-3.56



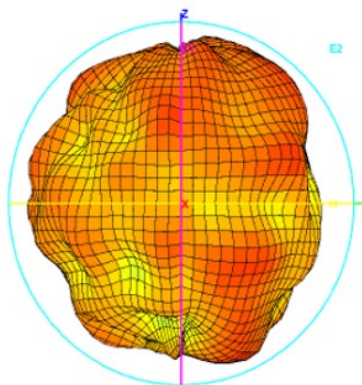
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	-3.64



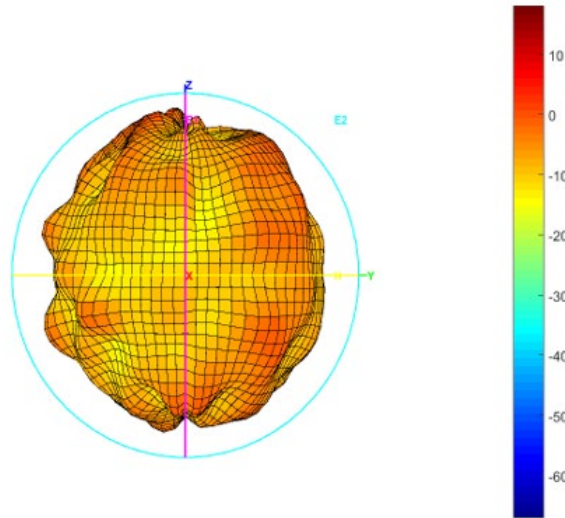
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	-4.16



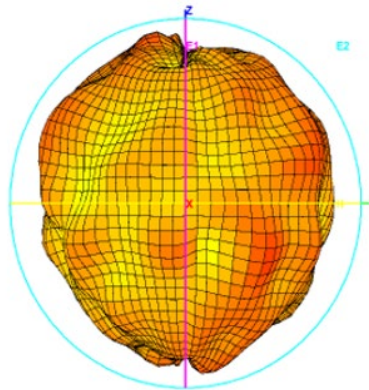
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	-3.67



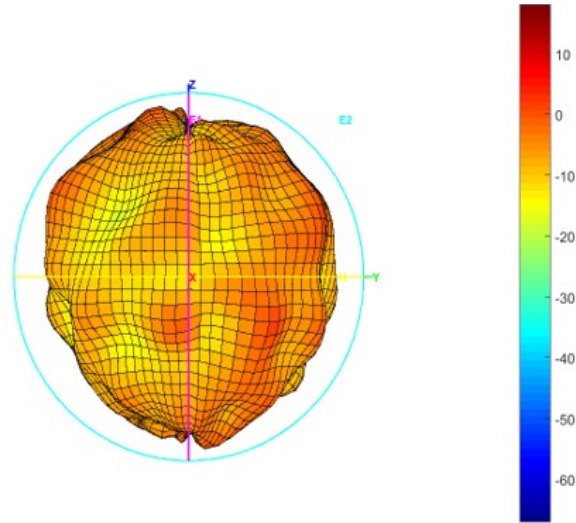
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	-3.21



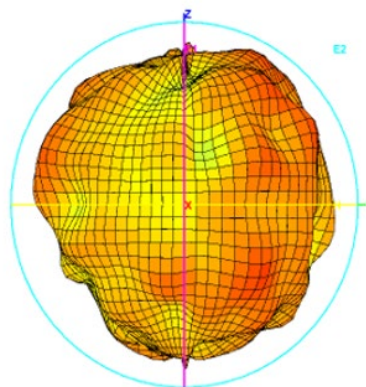
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	-4.11



Max Antenna 3D Radiation Pattern 6875-7125 MHz

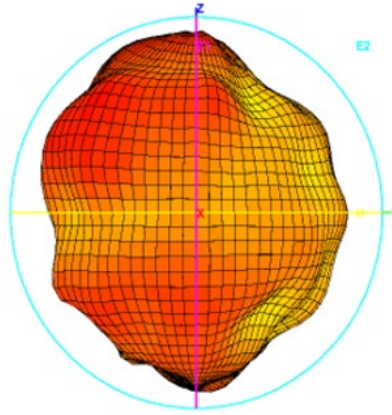
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	-4.28



Auxiliary Antenna

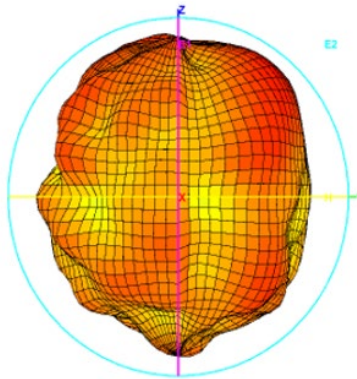
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-1.82



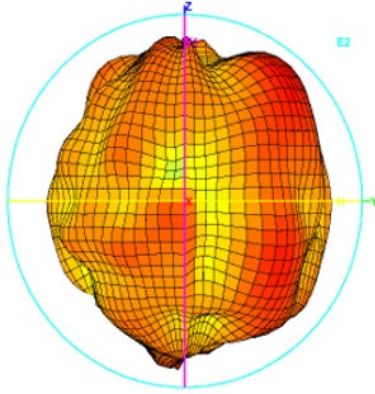
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	-3.51



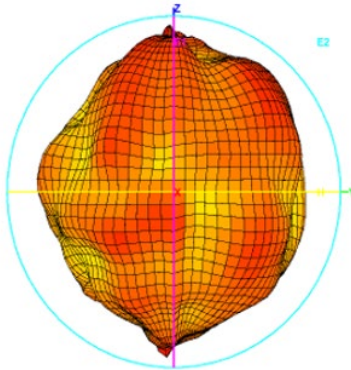
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	-3.16



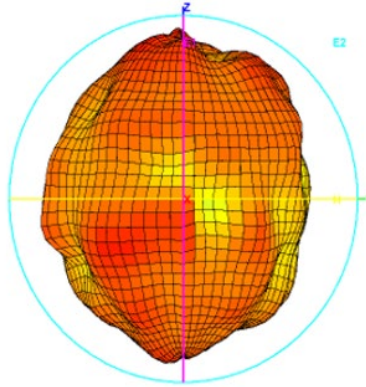
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	-3.04



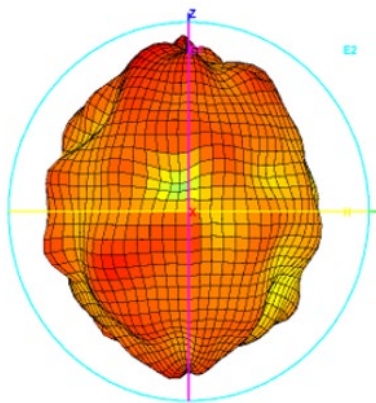
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	-3.14



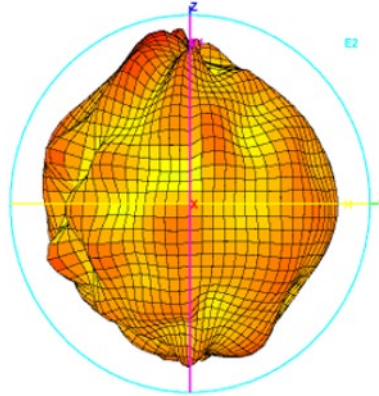
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	-3.37



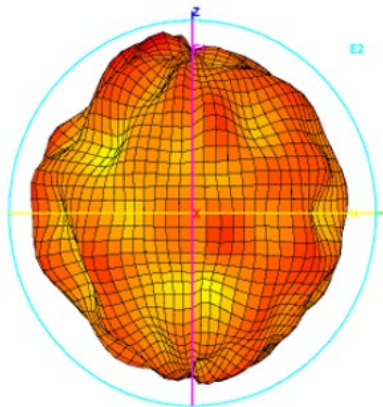
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	-3.58



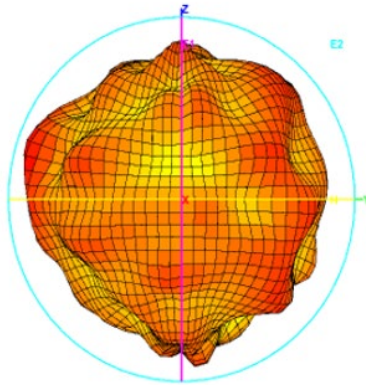
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	-3.02



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	-3.4



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	-4.31

