

ANTENNA INFORMATION

OEM	Lenovo
ODM	Wistron
Platform model name	Lenovo 300w Yoga Gen 4; Lenovo 300w 2-in-1 Gen 5
Intel platform (ex: Yes, No or NA)	Yes
Platform type (ex: regular NB, convertible PC, AIO...etc)	Convertible NB
SAR minimum separation (mm)	FCC (1g) 3
	ISED (1g) 3
	ISED (10g) N/A

Antenna manufacturer	Company name	AWAN
	Address	5F, No. 225, Sec. 3, Bei-Hsin Rd., Xindian Dist., New Taipei City, 231, Taiwan
Test location	Company name	AWAN
	Address	5F, No. 225, Sec. 3, Bei-Hsin Rd., Xindian Dist., New Taipei City, 231, Taiwan
Test Personnel	Name(Full name)	Kanni Ke
	E-mail	Kanni.ke@awan-ant.com
	Tel/Mobile	+886-2-8913-1939
Testing date		2024/08/05

Antenna Part number	Main	025.90274.0011
	Aux	025.90275.0011
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	2.41	1.65	1.16	2.24	2.06	2.72	1.67	1.05	1.19	1.47
Aux	-0.52	-1.12	-0.43	1.02	2.35	2.52	1.97	0.82	0.86	0.15

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	SY081L/50-003	351	0.81	50	I-pex NGFF: 20572-001R-08
Aux	SY081L/50-004	502	0.81	50	I-pex NGFF: 20572-001R-08

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

Table of Contents

Cover page..... 1

4. Radiation characteristics of antenna loaded in Host Platform..... 3

Annex A. Photographs

A.1 Setup Photo..... 13

A.2 Test sample..... 14

Annex B. Antenna Location

B.1 Antenna Host Platform Location Information.....16

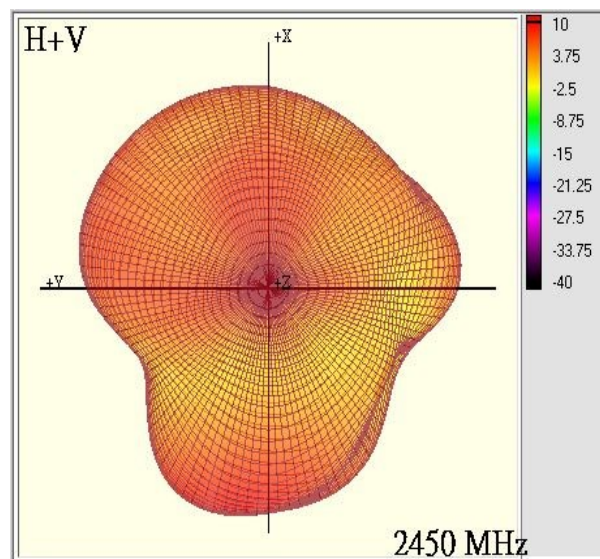
B.2 Antenna dimensional information for SAR evaluation..... 17

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

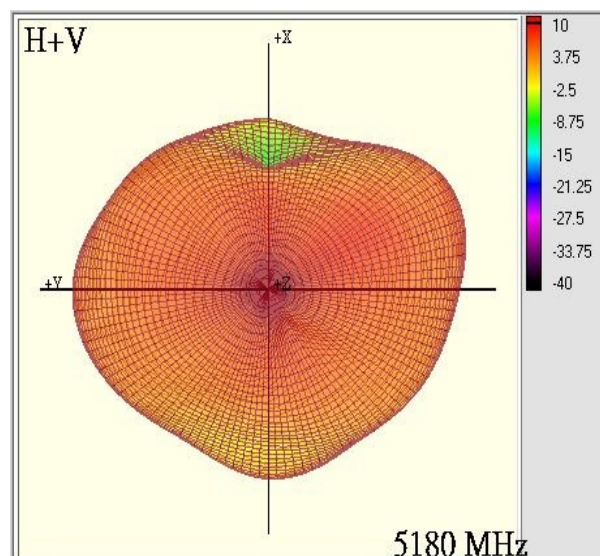
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.41



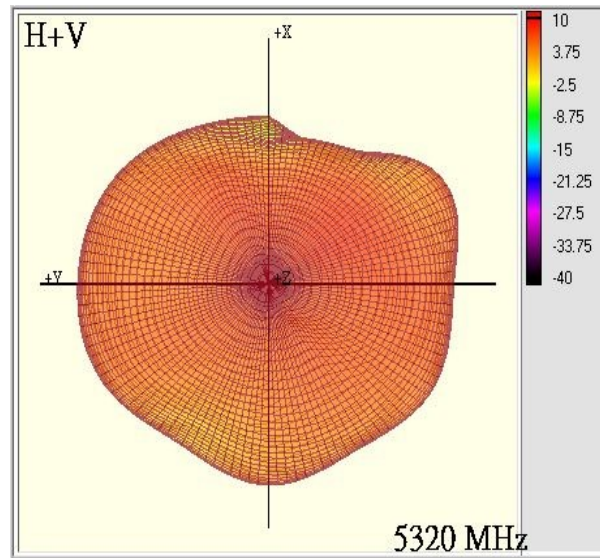
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.65



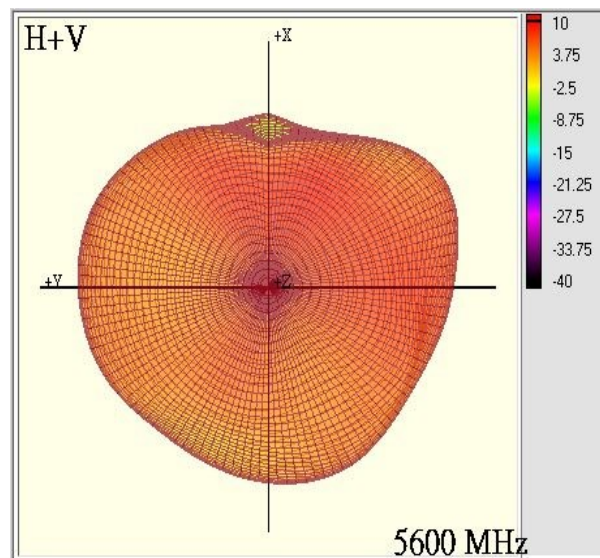
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.16



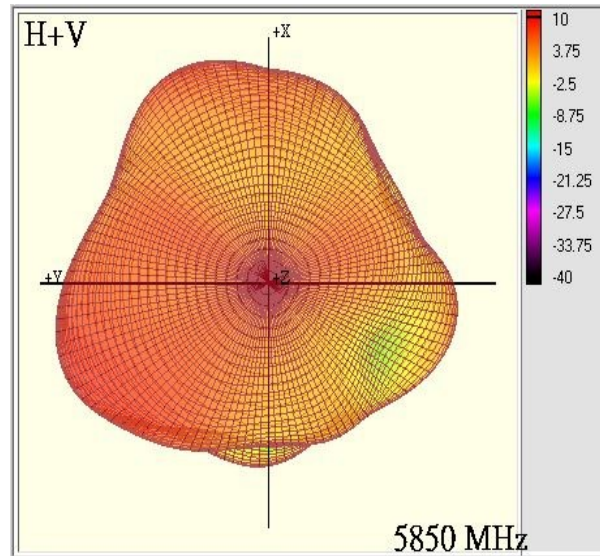
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.24



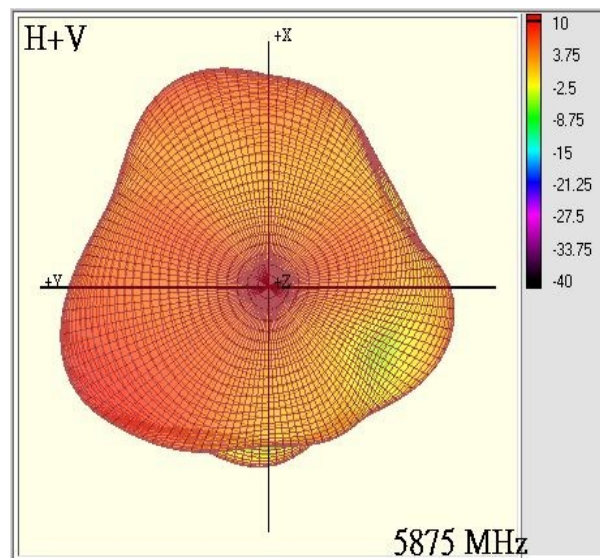
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.06



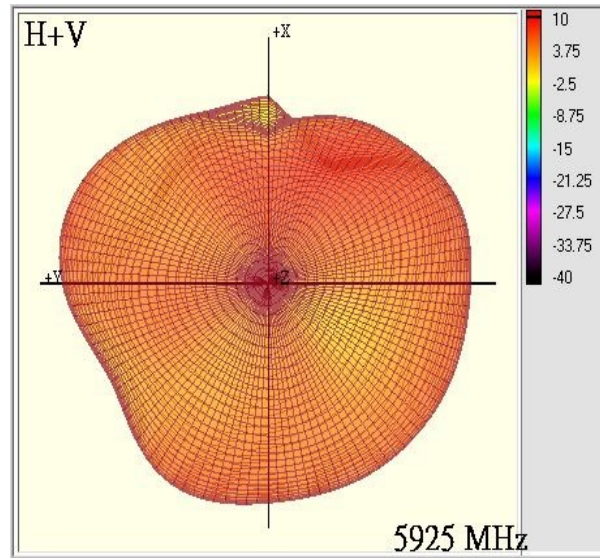
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.72



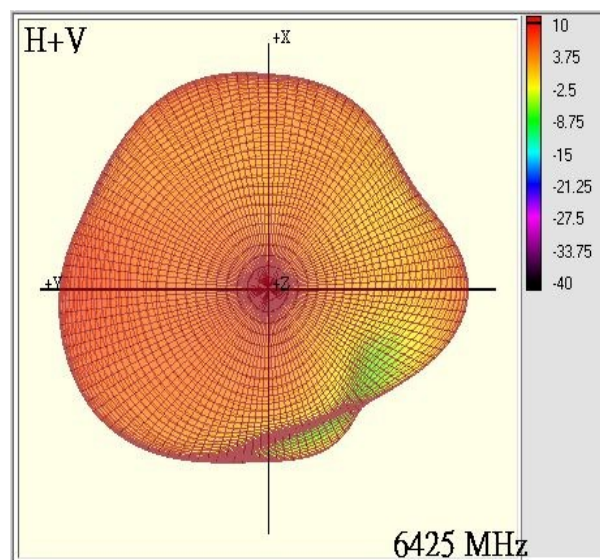
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	1.67



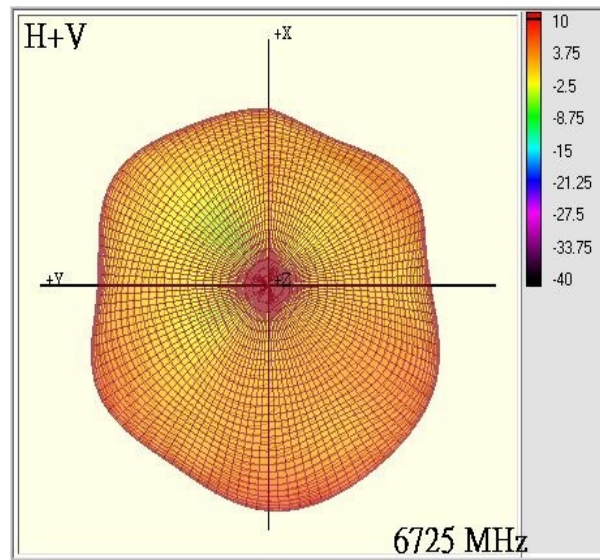
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	1.05



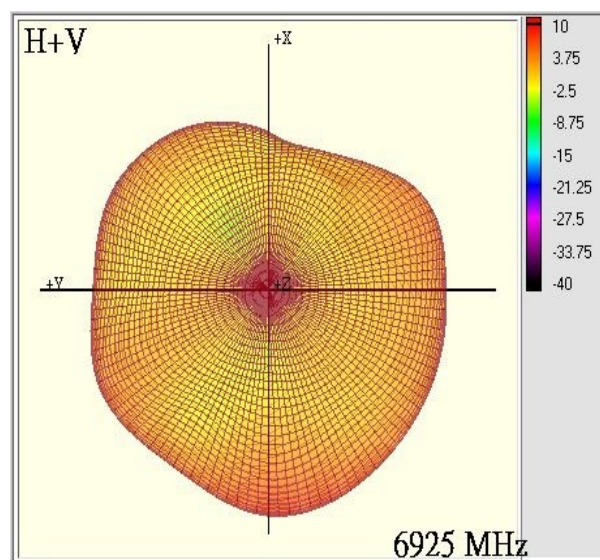
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	1.19



Max Antenna 3D Radiation Pattern 6875-7125 MHz

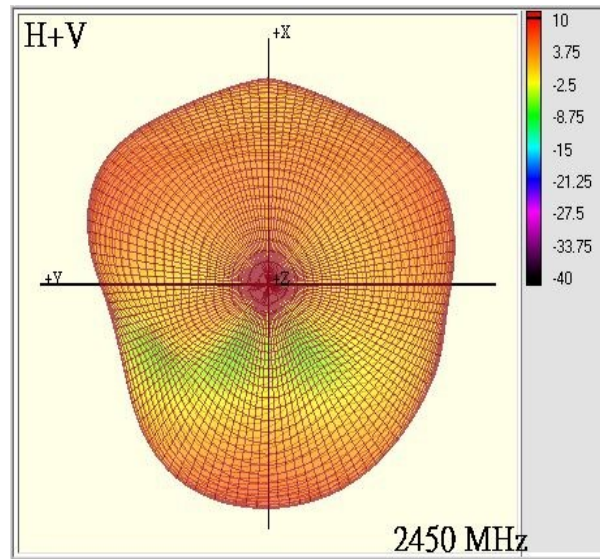
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	1.47



Auxiliary Antenna

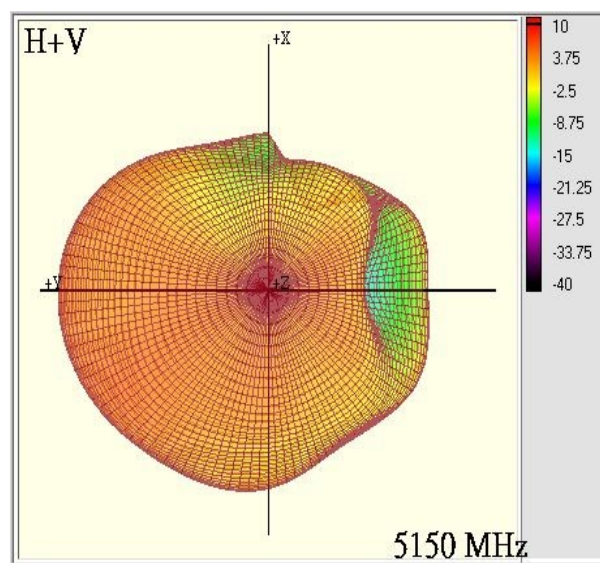
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-0.52



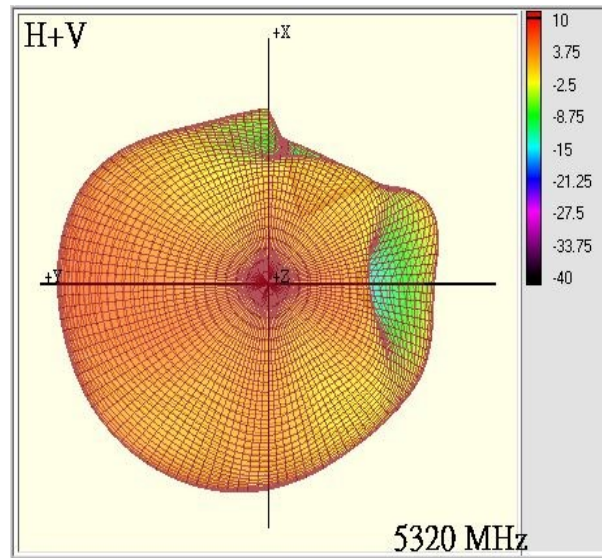
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	-1.12



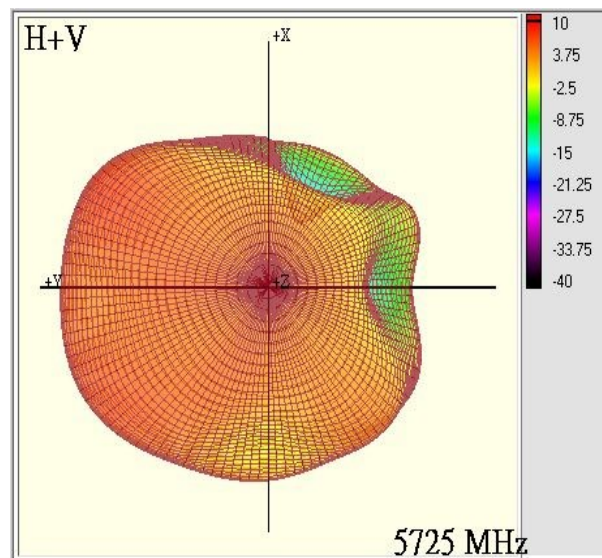
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	-0.43



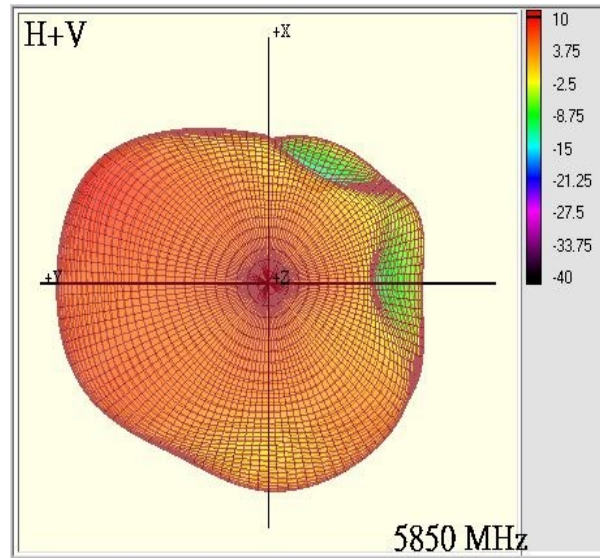
Max Antenna 3D Radiation Pattern 5470-5725 MHz

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



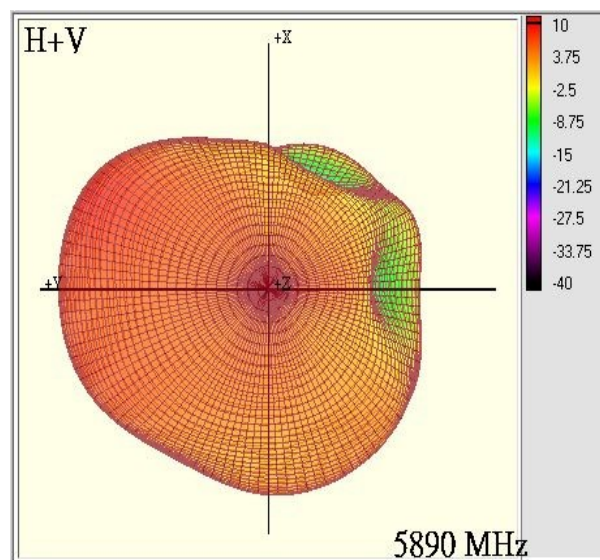
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.35



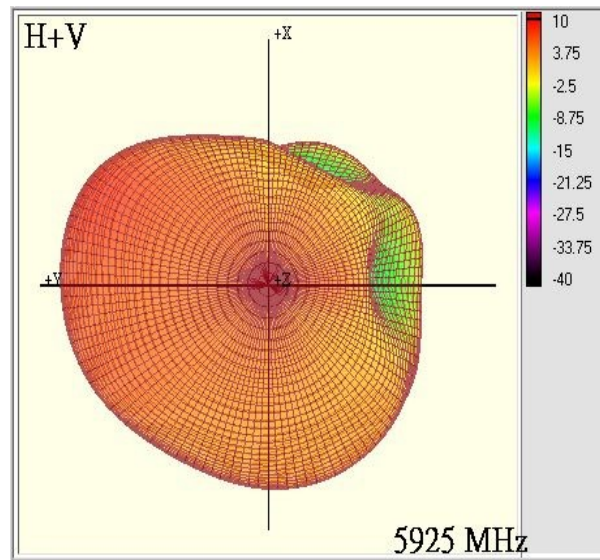
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.52



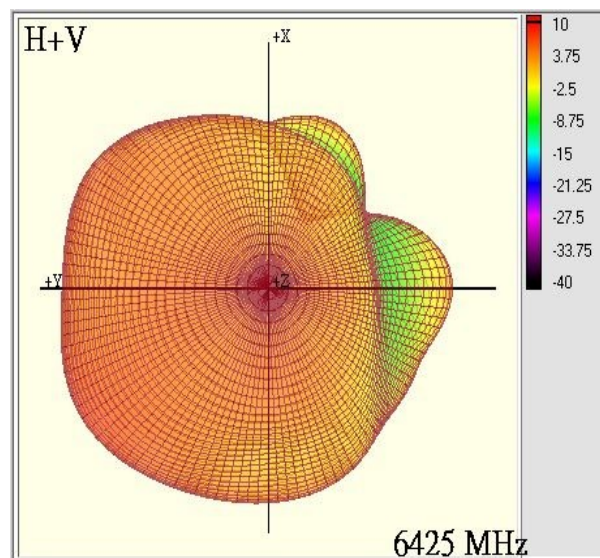
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	1.97



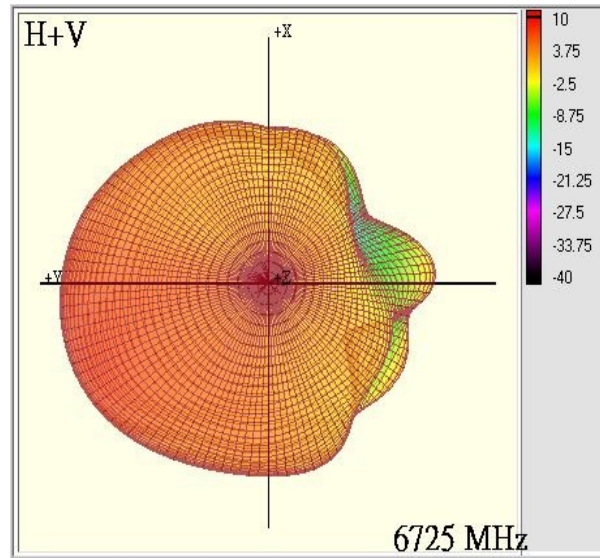
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	0.82



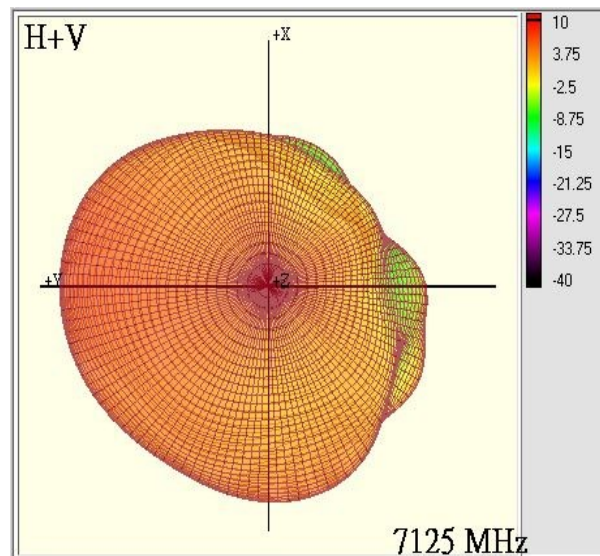
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	0.86



Max Antenna 3D Radiation Pattern 6875-7125 MHz

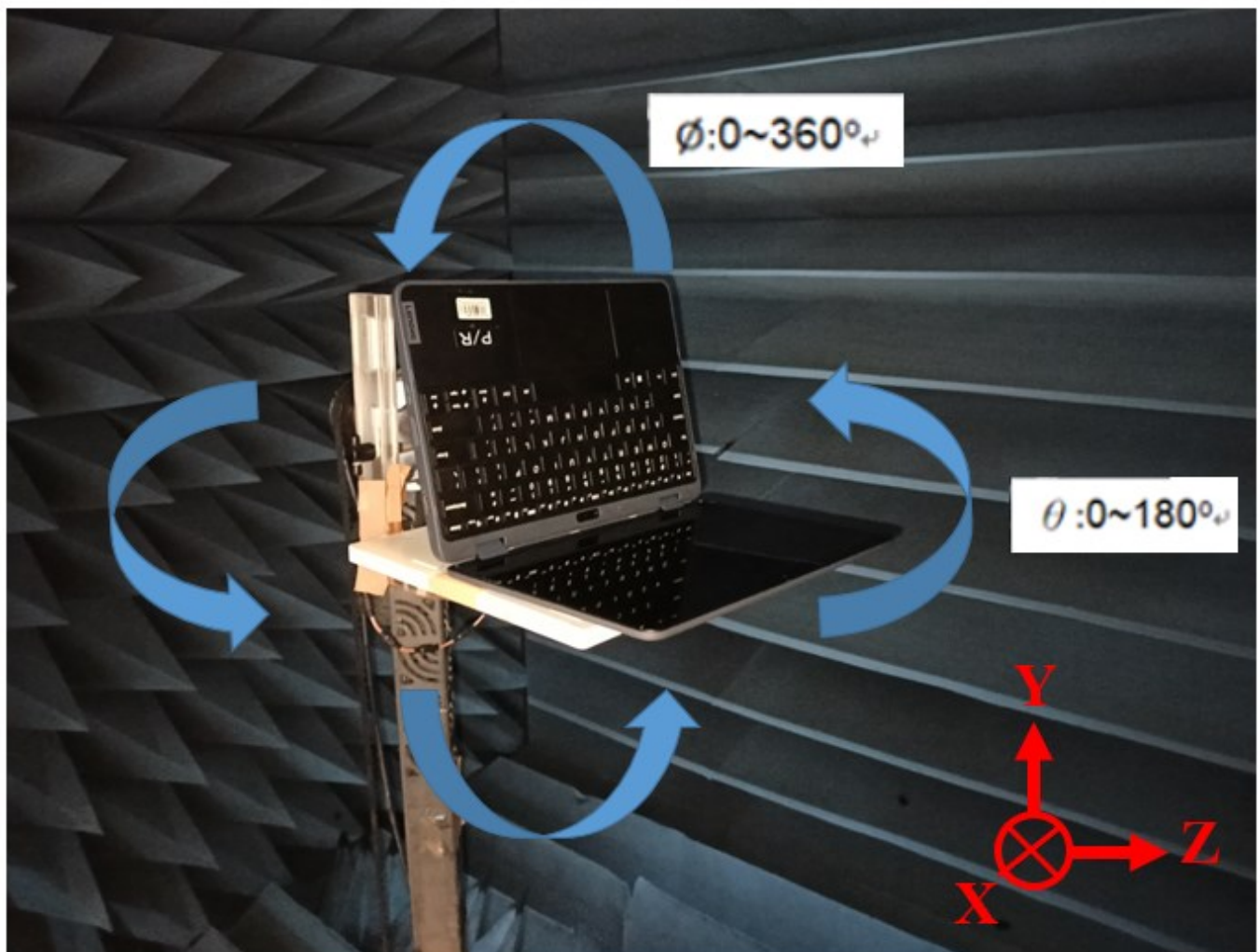
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	0.15



Annex A. Photographs

A.1 Setup Photo

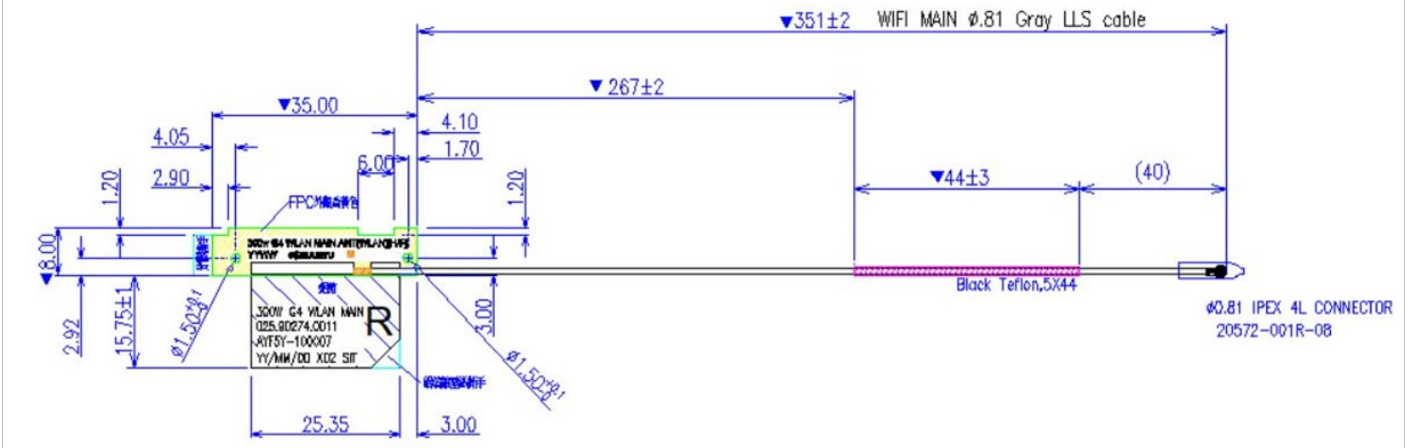
Test Conditions
NB under test placed on a non-conductive structure at sufficient height to be in the 'quiet zone' of the chamber
The NB under test must be fully populated with a power, motherboard, hard drive, disk drives, etc... The purpose is to characterize the antennas on a fully populated customer deliverable unit.
NB's panel should be parallel with YZ-plane and face to -X-axle, see diagram below.



A.2 Test sample

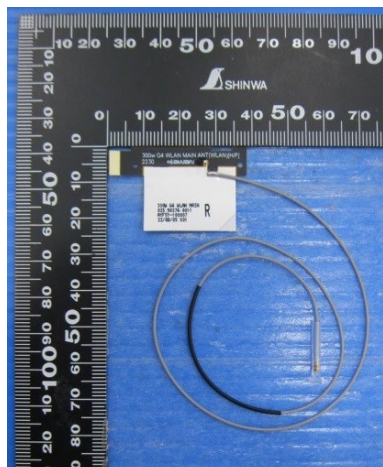
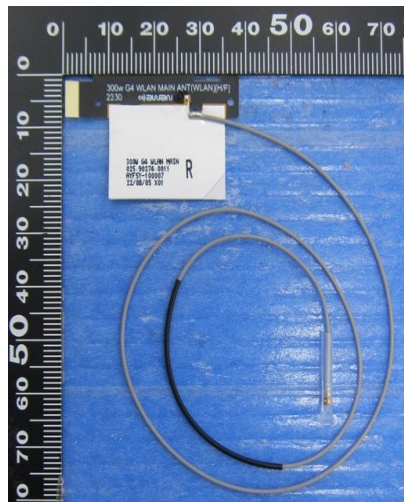
Main Antenna

Antenna Drawing

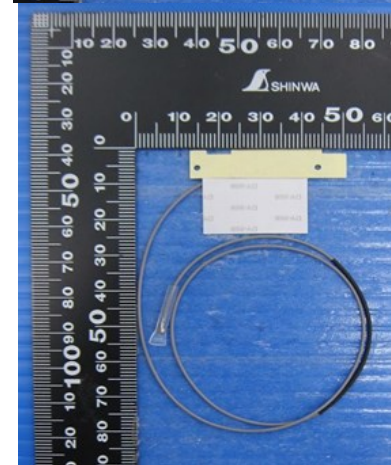
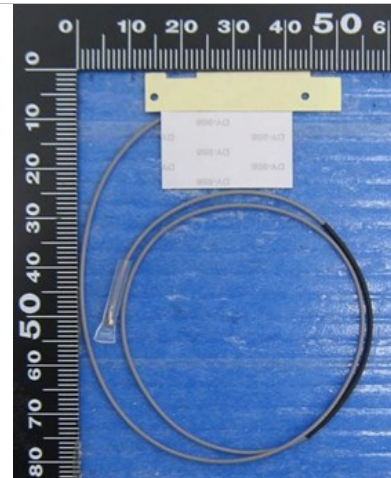


Antenna Photo

Front

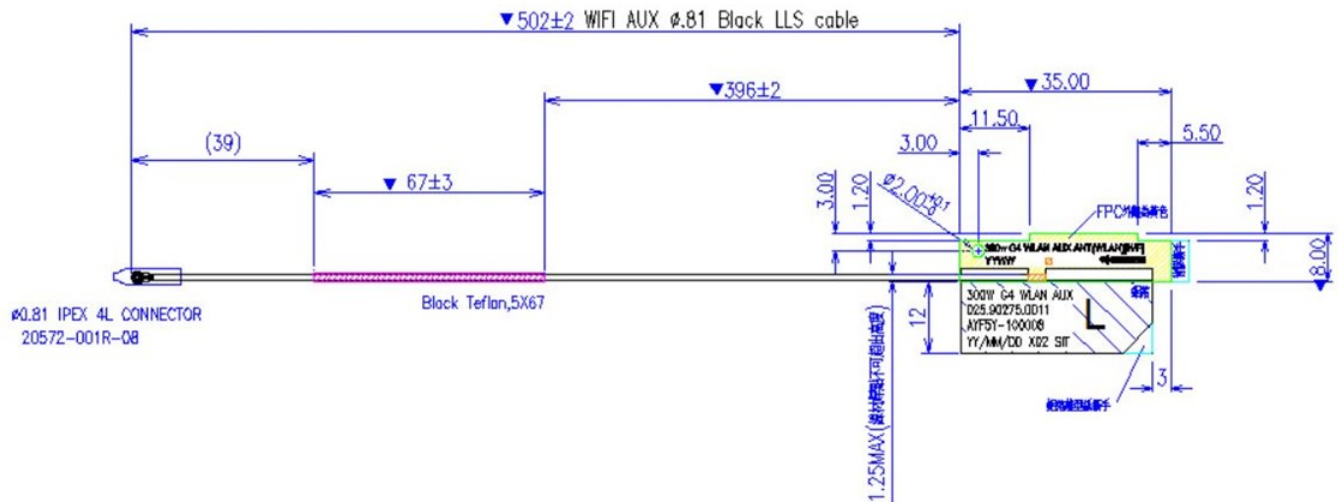


Back



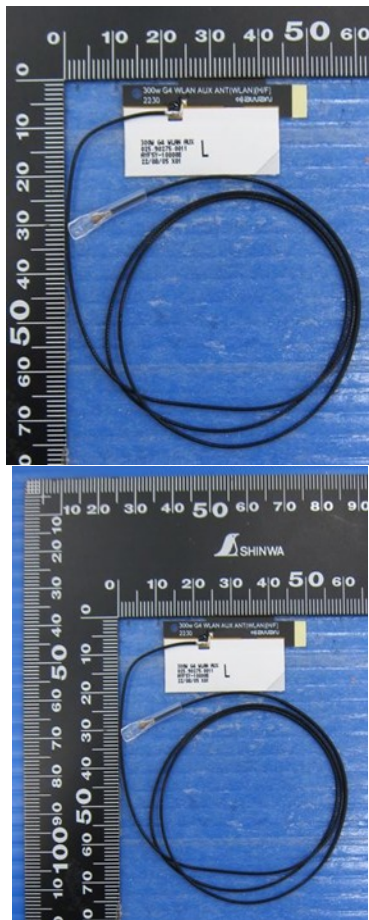
Aux Antenna

Antenna Drawing

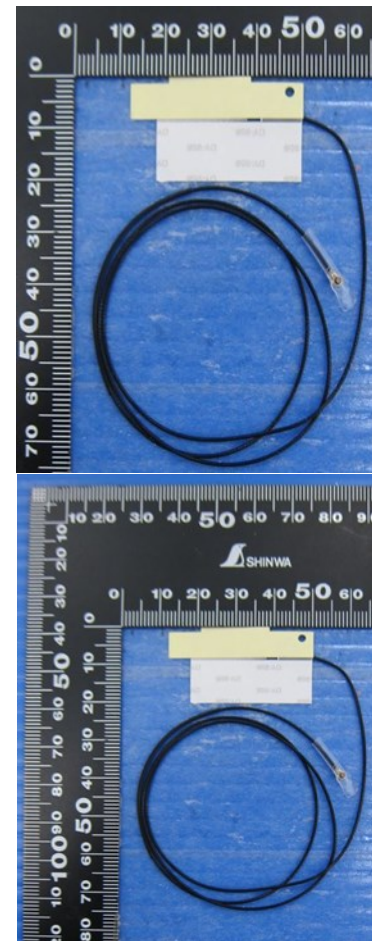


Antenna Photo

Front



[Back](#)

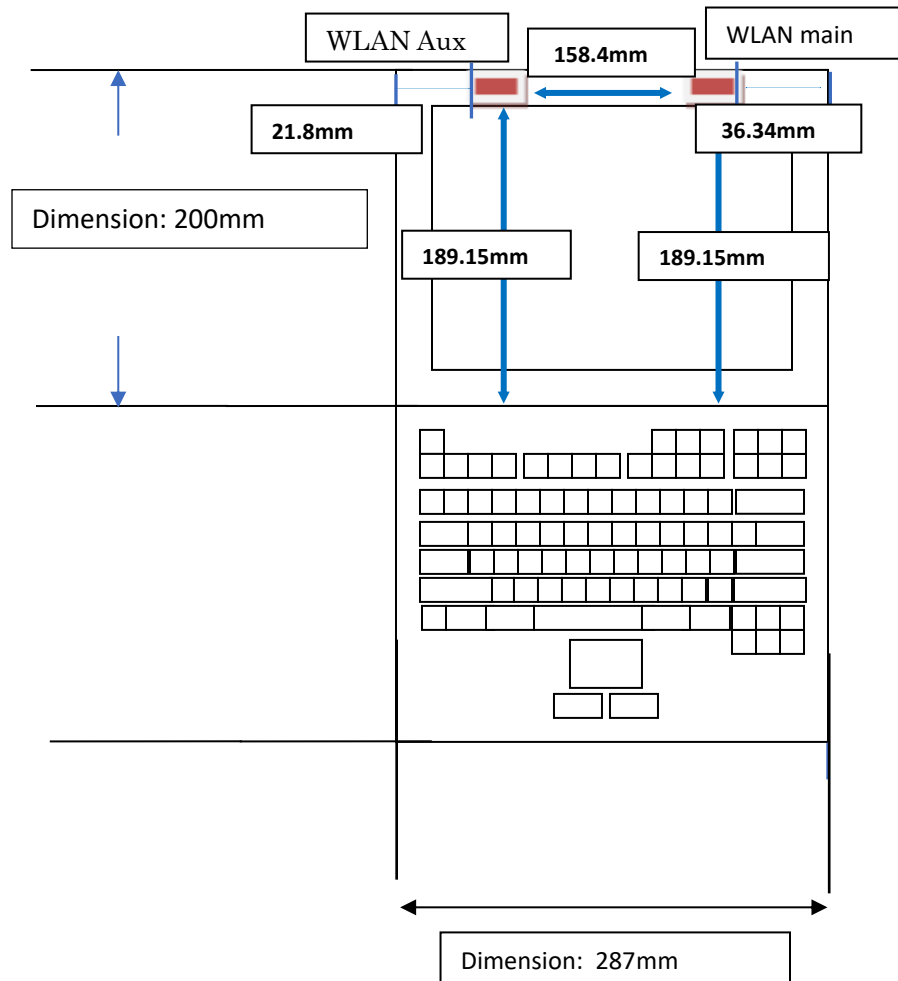


Annex B. Antenna Location

B.1 Antenna Host Platform Location Information

Include a dimensioned photo(s) or dimensioned drawing(s) of Main and Aux antenna placements (measurements are not required for receive-only antenna).

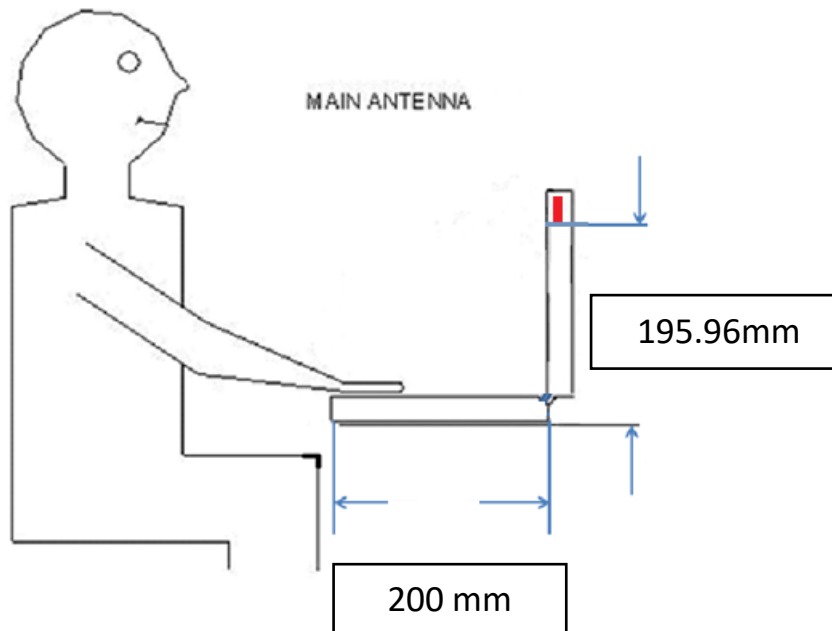
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



B.2 Antenna dimensional information for SAR evaluation

Include a dimensioned photo(s) or dimensioned drawing(s) showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.

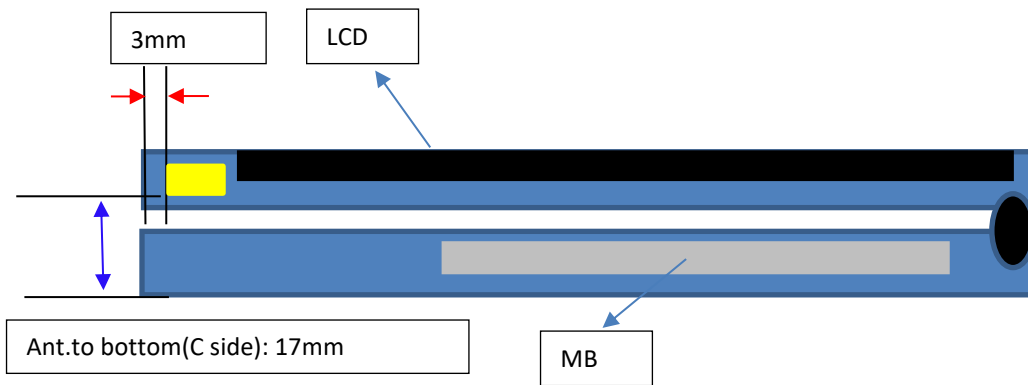
Antennas on the panel section



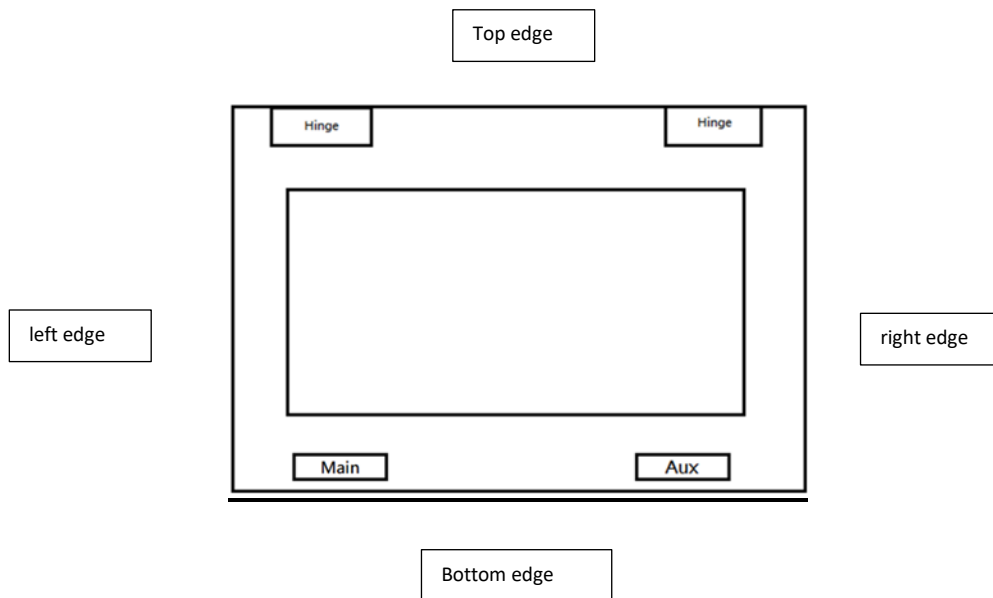
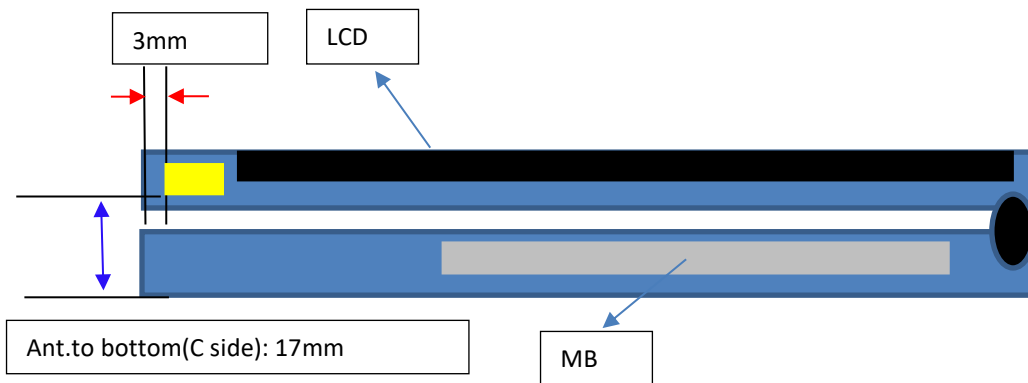
Measuring Surface	Antenna	Separation Distance(antenna-to- Surface)(mm)	1g SAR
Bottom Side	Main	195.96	FCC/ISED
	Aux	195.96	FCC/ISED

Tablet model:

WLAN Main Tx1



WLAN Aux Tx1



Measuring Surface	Antenna	Separation Distance(antenna-to- Surface)(mm)	1g SAR
Bottom Side (tablet mode)	Main	17	FCC/ISED
	Aux	17	FCC/ISED
Top edge(tablet mode)	Main	189.15	FCC/ISED
	Aux	189.15	FCC/ISED
Bottom edge(tablet mode)	Main	3	FCC/ISED
	Aux	3	FCC/ISED
right edge(tablet mode)	Main	214.62	FCC/ISED
	Aux	21.22	FCC/ISED
Left edge(tablet mode)	Main	35.68	FCC/ISED
	Aux	229.08	FCC/ISED