Regulatory BT Antenna Information (Template)

English Language Required for Intel Regulatory Review / Approval

(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.

Remove Intel references and make this your own document)

Platform information

Brand	ODM	****End product model name	Intel platform (ex: Yes, No or NA)	Platform type (ex: regular NB, convertible PC, AIO…etc)	*SAR minimum separation (mm)
Lenovo	闻泰	X80	YES	PAD	

*****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection.**

Antenna information

Vendor	Type	Antenna Part number (BT)	
INNOWAVE	PIFA	F002C4512T90001	

Peak gain w/ cable loss (dBi)*

	2.4GHz 2400-2450 MHz	2.5GHz 2450-2500MHz							
BT	2.56	2.34							

Intel Reference Gain/Type/ Separation distance

Antenna Type	Antenna Peak gain (In dBi)*									Distance to the end user (mm)
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0GHz 6875-7125MHz	Generic: refer to modular FCC SAR report Mid-power: ≥ 8 mm Low power: ≥ 5 mm
Design	**3.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	
PIFA	**3.24**	**3.64**	**3.73**	**4.77**	**4.97**	**4.83**	**4.30**	**5.37**	**5.59**	
Dipole	**2.89**	**2.92**	**3.19**	**4.41**	**4.22**	**4.83**	**4.30**	**4.49**	**5.34**	

Notes (marked with *)

*** SAR minimum separation (mm)**

- Regular NB: Minimum antenna-to-body (from antenna bottom to the bottom of the device)

- Tablet / Convertible PC: Minimum antenna-to-edge (5 sides of the device)

- Mini-tablet: Minimum antenna-to-edge (6 sides of the device)

*** 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.

Table of contents

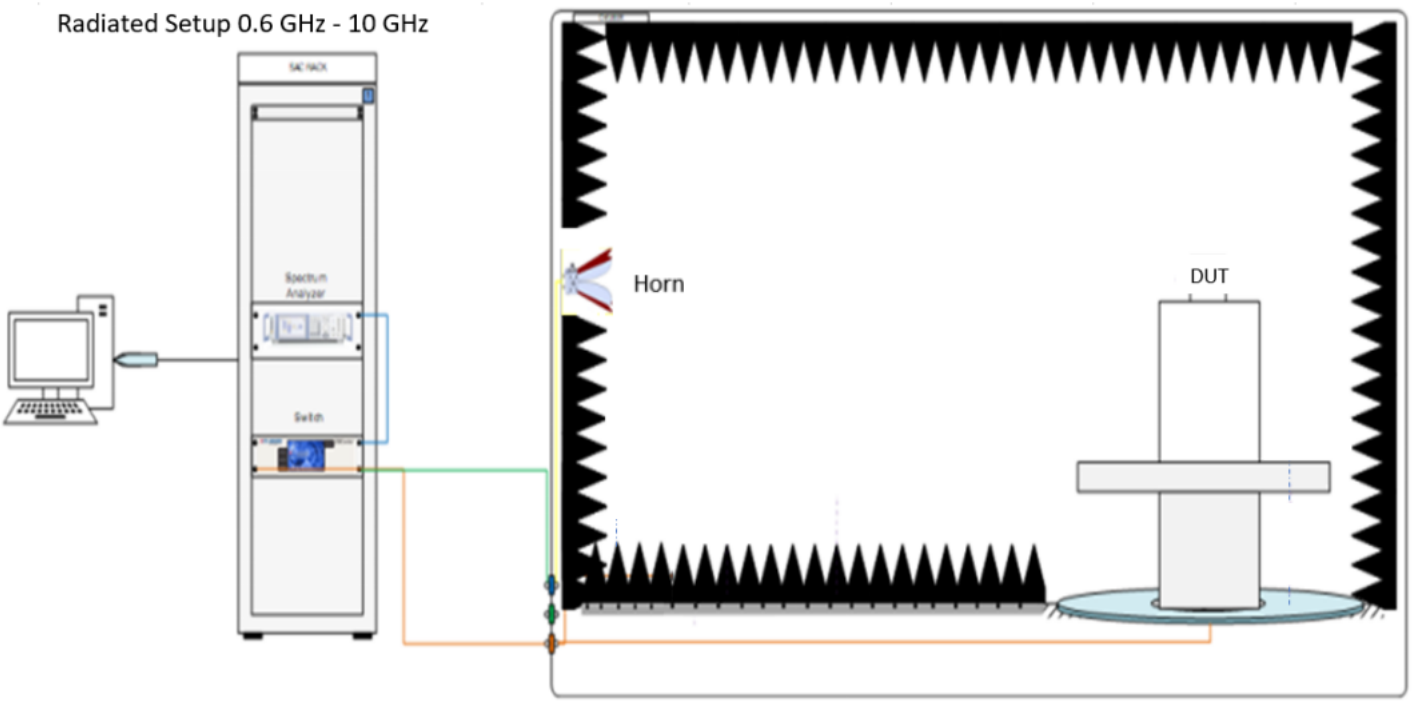
1. **Applicable test methods**

   <insert test description here for test method>

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

2. **Test & System Description**
   a. Test setup

   <insert test diagram here for test site utilized>

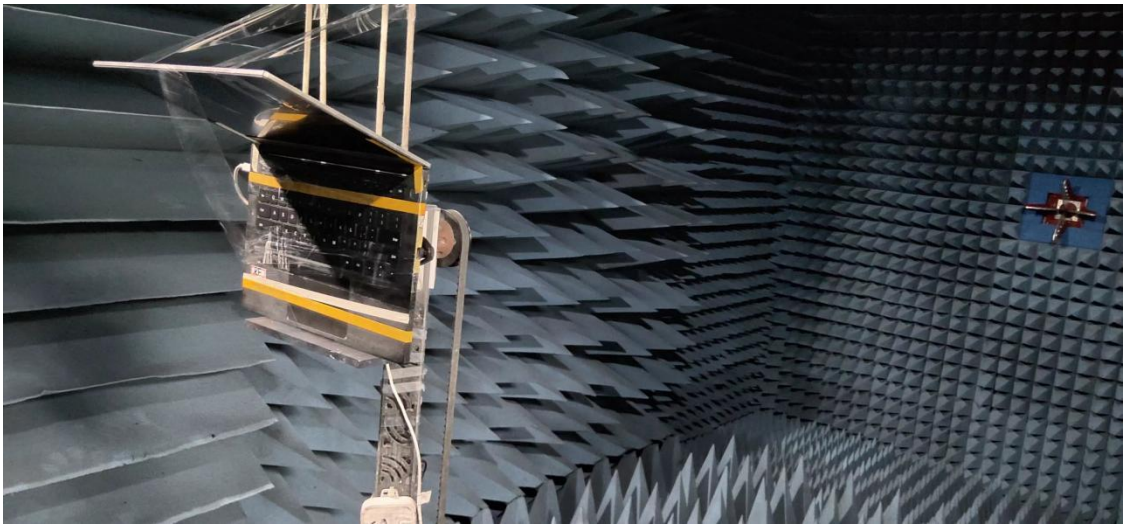


b. Equipment list

<insert test diagram here for test site utilized>

Number	Device	Type/Model	Serial	Manufacturer	Cal.Date	Cal.due.Date
1	Chamber	FATC3	5720	ETS-Lindgren	2023/5/15	2024/3/15
2	Turn table control box	ETS	-	ETS-Lindgren	N/A	N/A
3	Turn table control computer	Desktop	LPTPTOP-JQTTOKRA	LENOVO	N/A	N/A
4	Notwork Analyzer	5071C	5071C	Keysight	2023/5/18	2024/5/18
5	Hron Antenna	3117	E00157734	Bwant	2022/1/23	2024/1/23
6	Test system host	EMC Center	159757	ETS-Lindgren	N/A	N/A
7	RF Line TX	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2023/5/20	2024/5/20
8	RF Line RX	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2023/5/20	2024/5/20
9	Cable 2m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2023/5/20	2024/5/20
10	Optical fiber line	RXY-00727-1603	-	Jmtt	N/A	N/A
11	Cable 2.5m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2022/8/21	2023/8/21
12	Cable 1.2m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2022/8/21	2023/8/21
13	Cable 1m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2022/8/21	2023/8/21
14	Cable 2m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2022/8/21	2023/8/21
15	Cable 1m 1GHz-8.5GHz	UFA147A-0-0480-200200	MFR64639223720	Micro-coax	2022/9/13	2023/9/13
16	Temp&Humidity Logger	RA12E-TH1-RAS	RA12-D0EB1A	Avtech	2023/3/20	2024/3/20

3.Setup photo



Antenna Information

Section 1. Antenna Assembly Specifications

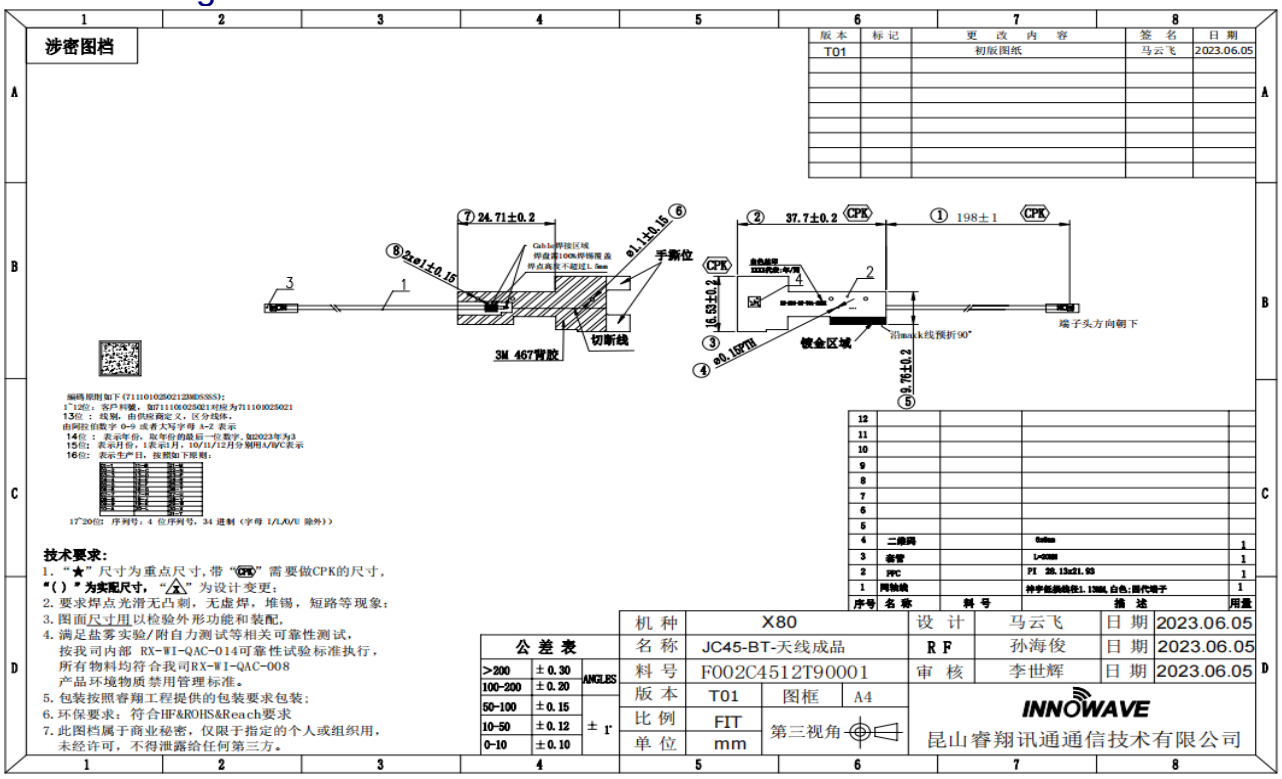
1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	Freq Range MHz	1E * Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G Max VSWR	1H Cable Loss (dB)
(P/N: F002C4512T90001) BT Antenna	INNOWAVE	PIFA	1) INNOWAVE 2) 50 ohm Coaxial 3) length: 198mm diameter: 1.13 LL 4) Connector PN: 康硕四代端子 MHF-08-4-N-01	2400-2450	2.56	3.4	3.0	0.48
				2450-2500	2.34	2.82	3.0	0.48

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

Section 2. Dimensioned Photos and Drawings of Antennas

Include the dimensioned photo and drawing of Main antenna here.

BT Antenna Drawing:



BT Antenna Photo (Front/Back):

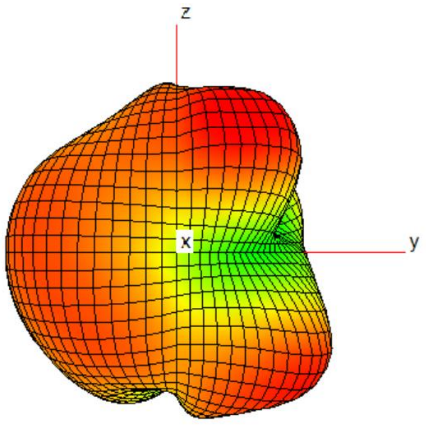
Note: antenna photo should include L type ruler

Section 3. Radiation characteristics of antenna loaded in Host Platform

BT Antenna

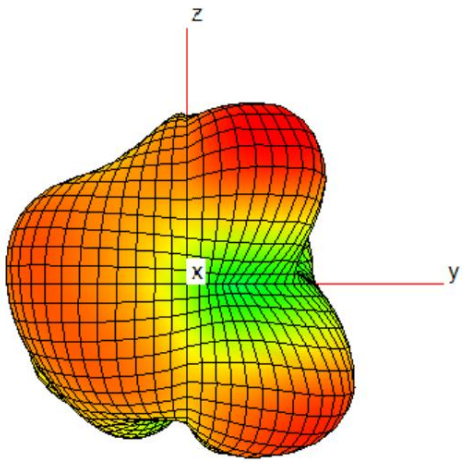
Max Antenna 3D Radiation Pattern 2400 – 2450 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2450	2.56



Max Antenna 3D Radiation Pattern 2450-2500 MHz

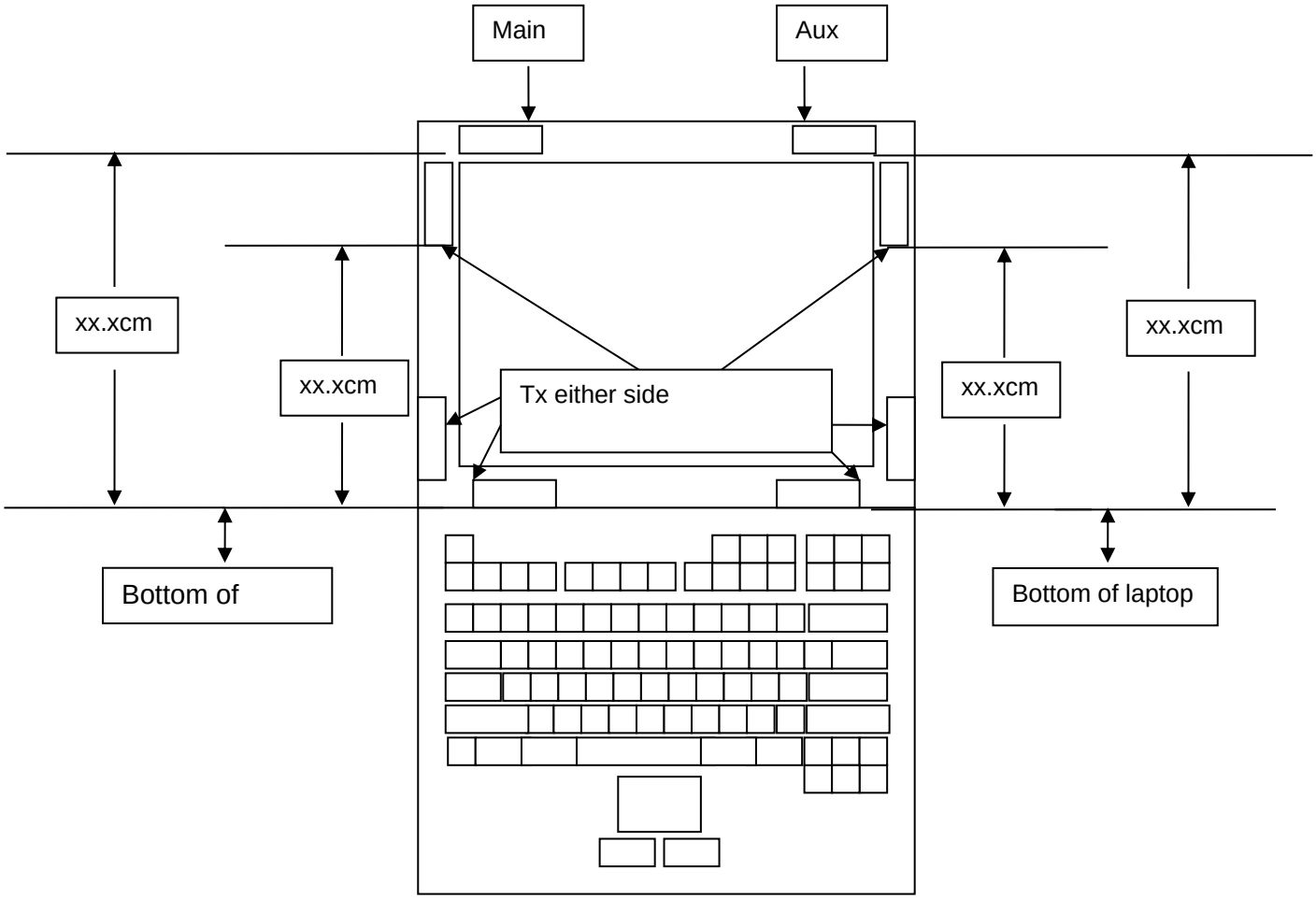
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2450-2500	2.34



Section 4. Antenna Host Platform Location Information

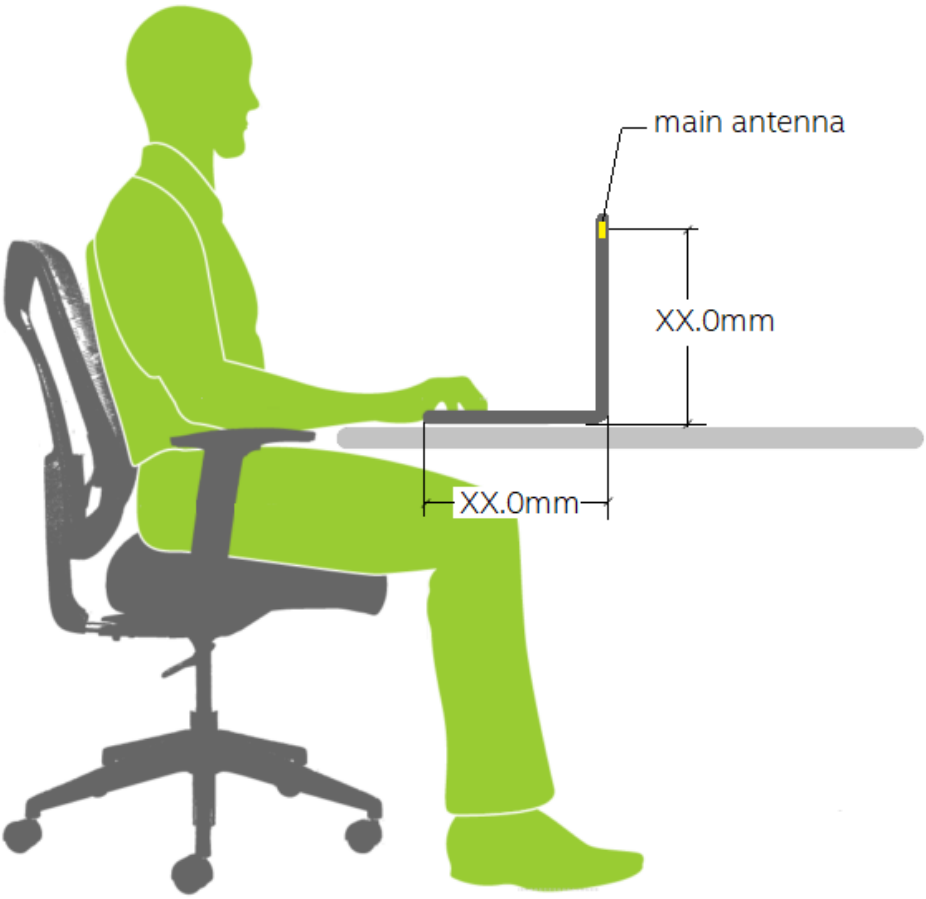
Include a **dimensioned photo(s) or dimensioned drawing(s)** of Main and Aux antenna placements (measurements are not required for receive-only antenna).

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.



Section 5. 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.



Section 6. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between **all WLAN transmit antennas** and other co-located radiator transmit antenna such as Bluetooth, WWAN,..

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)