

Antenna Report

Radiation Characteristics of antenna located into a Host Platform

Antenna Peak Gain and VSWR w/ cable loss (dBi) ¹														2400 – 2483.5 MHz 5150-5250 MHz 5250-5350 MHz 5470-5725 MHz 5725-5850 MHz 5850-5895 MHz 5925-6425 MHz 6425-6825 MHz 6825-6875 MHz 6875-7125 MHz										Unique ID Generator			
																								202601-132104			
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Antenna Cycle	OEM	ODM	Host Platform Name	Host Platform Type	Intel Platform	Antenna-Manufacturer	Antenna-Type	Antenna-PN	Antenna Main/Aux	SAR min separation (mm)	WiFi-Module	Applicable Certification	SAR FCC-ISED G/PC Apply	Antenna Metrics ²	2.4 GHz	5.2 GHz	5.3 GHz	5.6 GHz	5.8 GHz	5.9 GHz	6.2 GHz	6.5 GHz	6.7 GHz	7.0 GHz	Applicant e-mail	Application Date	UniqueID
202601	Lenovo China	LCFC	TP001726, ThinkPad T14s Gen 7	Regular NB	AMD Panther Lake	ATC	PIFA	DC33002BE10	Main/Ant.2	10.80	MT7925B14L	CE, UKCA, FCC, BSEL, NCC, NCC, NCC	YES	Gain	1.88	2.57	2.66	3.30	3.32	3.13	2.56	3.06	2.41	1.75	-----	2025-12-17	202601-094841
202601	Lenovo China	LCFC	TP001726, ThinkPad T14s Gen 7	Regular NB	AMD Panther Lake	ATC	PIFA	DC33002BE10	Aux/Ant.1	10.80	MT7925B14L	CE, UKCA, FCC, BSEL, NCC, NCC, NCC	YES	Gain	1.76	2.55	2.41	3.48	3.67	3.33	3.21	3.72	3.73	3.97	-----	2025-12-17	202601-094841
202601	Lenovo China	LCFC	TP001726, ThinkPad T14s Gen 7	Regular NB	AMD Panther Lake	ATC	PIFA	DC33002BE10	Main/Ant.2	10.80	MT7925B14L	CE, UKCA, FCC, BSEL, NCC, NCC, NCC	YES	VSWR	1.21	1.41	1.38	1.29	1.55	1.46	1.61	1.38	1.40	1.25	-----	2025-12-17	202601-094841
202601	Lenovo China	LCFC	TP001726, ThinkPad T14s Gen 7	Regular NB	AMD Panther Lake	ATC	PIFA	DC33002BE10	Aux/Ant.1	10.80	MT7925B14L	CE, UKCA, FCC, BSEL, NCC, NCC, NCC	YES	VSWR	1.32	1.76	1.21	1.49	1.11	1.19	1.35	1.79	1.58	1.08	-----	2025-12-17	202601-094841

1: 3D Antenna Peak Gain required being test in system basis
2: OEM/ODM and platform antenna vendors should try to adapt the antenna with a VSWR of 2 (S11<-10dB) for a good antenna matching, and if not possible, try to achieve a VSWR of 3 (S11<-6dB) for a medium antenna matching.

Intel Reference Antenna Gain and Type											
Antenna Type	Application	2.4 GHz	5.2 GHz	5.3 GHz	5.6 GHz	5.8 GHz	5.9 GHz	6.2 GHz	6.5GHz	6.7 GHz	7.0 GHz
PIFAD	Design Reference	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFAD	For WiFi 6E and eat	3.24	3.64	3.73	4.77	4.72	4.83	4.30	5.37	5.59	
PIFAD	From WiFi 7 module	2.95	5.11	4.95	5.15	5.13	4.45	5.02	5.02	4.96	4.96
Dipole	For WiFi 6E and eat	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
Dipole/	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	4.67	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 CBR(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

Max Antenna 3D Radiation Pattern - Main Antenna / Ant.2										
Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)
2400 - 2483.5 1.88	5150-5250 2.57	5250-5350 2.66	5470-5725 3.30	5725-5850 3.32	5850-5895 3.13	5925-6425 2.56	6425-6825 3.06	6825-6875 2.41	6875-7125 1.75	



Max Antenna 3D Radiation Pattern - Aux Antenna / Ant.1										
Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)	Frequency (MHz) - Gain (dBi)
2400 - 2483.5 1.76	5150-5250 2.55	5250-5350 2.41	5470-5725 3.48	5725-5850 3.67	5850-5895 3.33	5925-6425 3.21	6425-6825 3.72	6825-6875 3.73	6875-7125 3.97	



Maximum VSWR of 2 (S11<-10dB) is a good antenna matching. If not possible, try to achieve a VSWR of 3 (S11<-6dB) for a medium antenna matching.

Combo Cable Loss (dB)										
	2.4GHz	5.2GHz	5.3GHz	5.6GHz	5.8GHz	5.9GHz	6.2GHz	6.5GHz	6.7GHz	7.0 GHz
	2400-2483.5 MHz	5150-5250MHz	5250-5350MHz	5470-5725MHz	5725-5850MHz	5850-5895MHz	5925-6425MHz	6425-6525MHz	6525-6875MHz	6875-7125MHz
Main	0.52	0.79	0.80	0.82	0.83	0.83	0.85	0.87	0.88	0.89
Aux	0.71	1.09	1.10	1.13	1.14	1.15	1.18	1.20	1.21	1.23