

Antenna Report

Rev.04

Radiation Characteristics of antenna located into a Host Platform

Antenna Peak Gain and VSWR w/ cable loss (dB) ¹													2400 ~ 2483.5 MHz 5150-5250 MHz 5250-5350 MHz 5470-5725 MHz 5725-5850 MHz 5850-5895 MHz 5925-6425 MHz 6425-6525 MHz 6525-6675 MHz 6675-7125 MHz										Unique ID Generator				
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Antenna Cycle	DEM	COM	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, RED, DoC, 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
202505	DELL	COMPAL	Blackhawk	Regular NB	YES	Hongfibo	Monopole	260-24474 (DC330031J0L)	Main/Ant.2	(w/o bumper) -197.5	AX211			Gain	1.98	1.91	2.62	3.31	3.33	2.43	4.69	4.21	3.82	3.67			202505-160927
202505	DELL	COMPAL	Blackhawk	Regular NB	YES	Hongfibo	Monopole	260-24475 (DC330031J1L)	Aux/Ant.1	(w/o bumper) -197.5	AX211	0	0	Gain	2.03	0.42	1.64	2.41	2.41	-0.24	2.14	0.57	0.90	1.15	0	1900-01-00	202505-160927
202505	DELL	COMPAL	Blackhawk	Regular NB	YES	Hongfibo	Monopole	260-24474(DC330031J0L)	Main/Ant.2	(w/o bumper) -197.5	AX211	0	0	VSWR	1.02	2.30	1.85	1.50	1.46	1.42	1.53	1.65	1.34	1.25	0	1900-01-00	202505-160927
202505	DELL	COMPAL	Blackhawk	Regular NB	YES	Hongfibo	Monopole	260-24475(DC330031J1L)	Aux/Ant.1	(w/o bumper) -197.5	AX211	0	0	VSWR	1.44	1.59	1.59	1.10	1.10	1.59	1.45	1.93	1.72	1.61	0	1900-01-00	202505-160927

1. 3D Antenna Peak Gain required being test in system basis

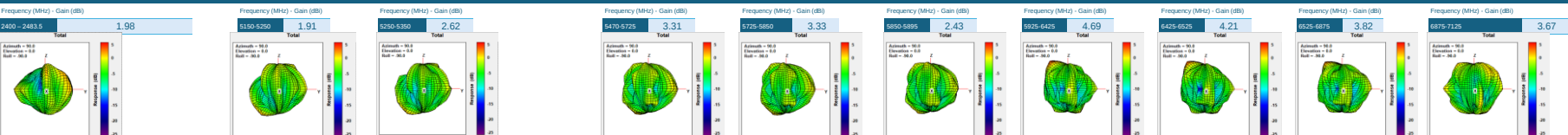
2. DEM/COM and platform antenna vendors should try to adapt the antenna with a VSWR of 2 (311<-10dB) for a good antenna matching, and if not possible, try to achieve a VSWR of 3 (311<-6dB) for a medium antenna matching.

Intel Reference Antenna Gain and Type

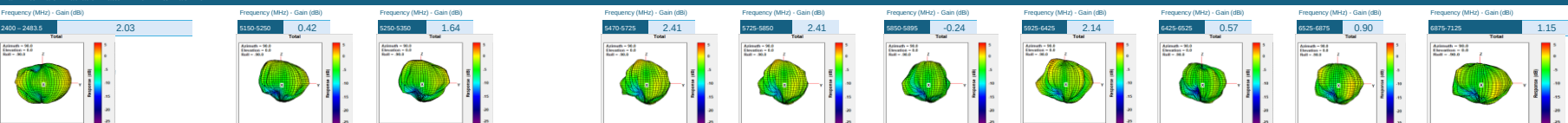
Antenna Type	Application Module	2.4 GHz	5.2 GHz	5.3 GHz	5.6 GHz	5.8 GHz	5.9 GHz	6.2 GHz	6.5GHz	6.7 GHz	7.0 GHz
PIFAS	Design Reference	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFAS	For WiFi 6E and earlier modules	3.24	3.64	3.72	4.77	4.97	4.72	4.83	4.30	5.37	5.59
PIFA7	From WiFi 7 modules	2.95	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
Dipole7	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 dB. 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.

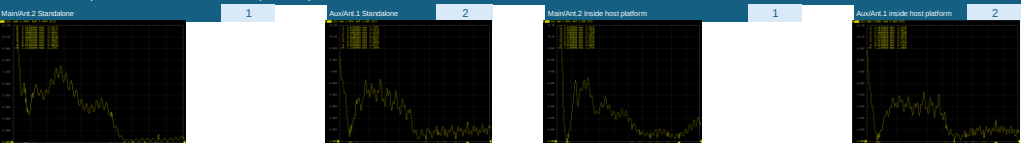
Max Antenna 3D Radiation Pattern - Main Antenna / Ant.2



Max Antenna 3D Radiation Pattern - Aux Antenna / Ant.1



Antenna VSWR data plot inside and outside a host Platform (standalone)



Maximum VSWR level required by the Wi-Fi module vendor to ensure proper antenna matching is 2 (311 < -10dB)