



APPENDIX J

: ANTENNA SPECIFICATION

ANTENNA SPECIFICATIONS

Product Name	Wi-Fi Antenna
Model Name	C307-HW-WF Antenna

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1. Features

- Wi-Fi Antenna
- Frequency range : 2.4GHz ~ 2.5GHz
- PCB Pattern Antenna

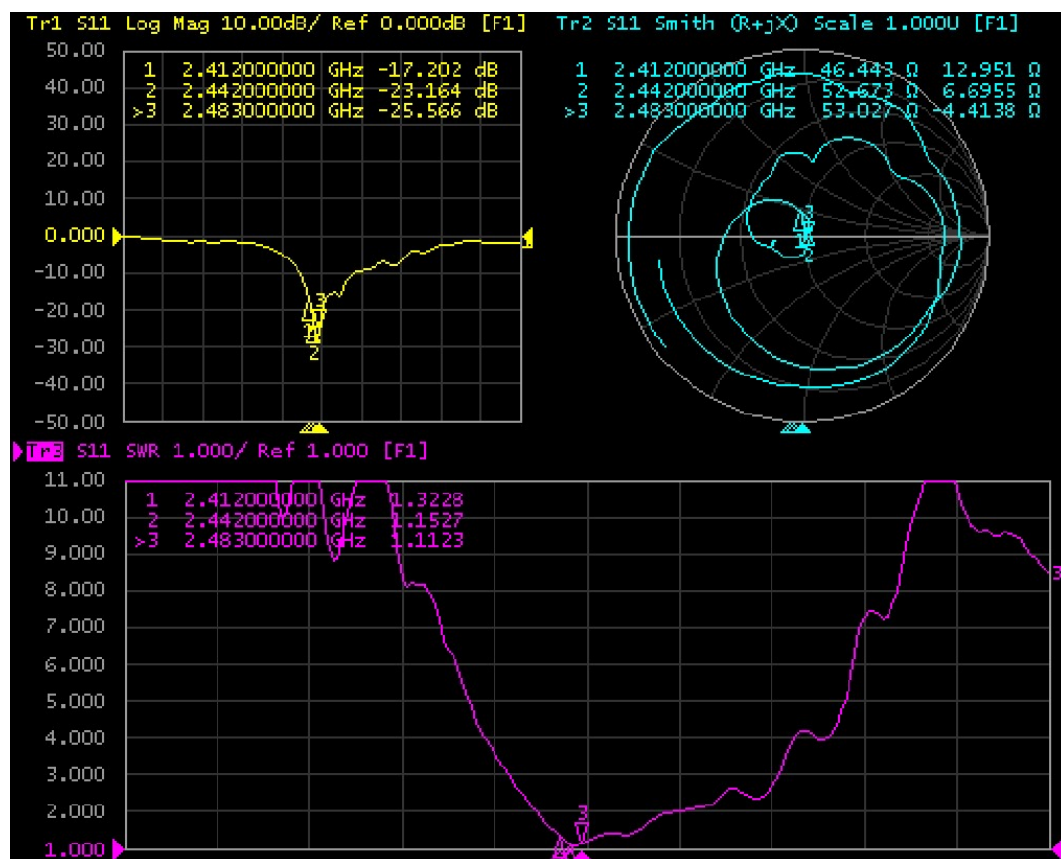
2. Antenna Characteristics

2.1 Antenna Performance

Parameter	Min.	Typ.	Max.	Unit
Frequency Range	2400	2450	2500	MHz
Directivity		Omni		-
Polarization		Linear		-
VSWR	3:1			Under
Impedance		50		Ohm

2.2 Network Analyzer Data

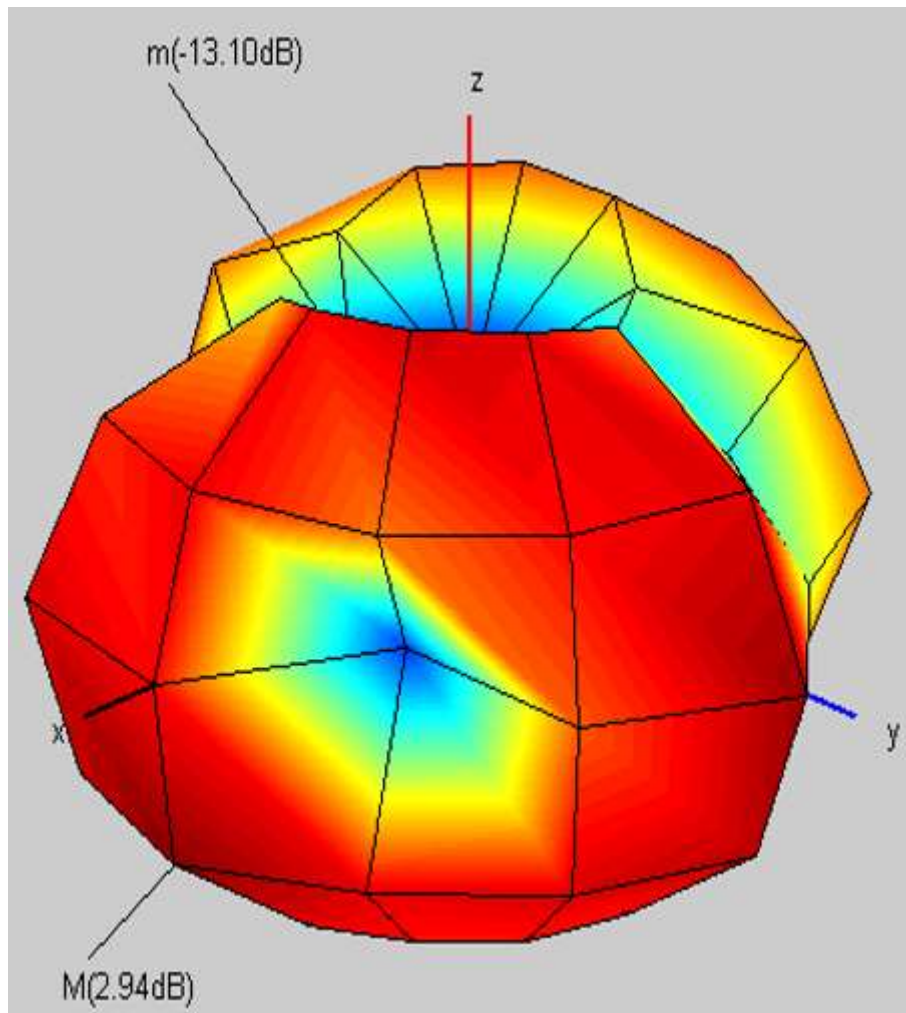
- S11 SWR & SMITH CHART



2.3 Efficiency

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Frequency [MHz]	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485	2490	2500
Efficiency [dB]	-1.13	-1.15	-1.19	-1.14	-1.18	-1.24	-1.14	-1.11	-1.12	-1.09	-1.08	-1.20	-1.16	-1.28	-1.23	-1.27	-1.28	-1.31	-1.32	-1.41
Efficiency [%]	77.04	76.65	76.11	76.91	76.26	75.08	76.95	77.45	77.22	77.89	78.01	75.93	76.57	74.53	75.26	74.67	74.52	73.90	73.84	72.30
TRG [dB]	-1.13	-1.15	-1.19	-1.14	-1.18	-1.24	-1.14	-1.11	-1.12	-1.09	-1.08	-1.20	-1.16	-1.28	-1.23	-1.27	-1.28	-1.31	-1.32	-1.41
TRG _e [dB]	-5.24	-5.26	-5.30	-5.28	-5.31	-5.23	-5.28	-5.25	-5.24	-5.23	-5.22	-5.30	-5.29	-5.37	-5.37	-5.38	-5.41	-5.50	-5.47	-5.51
Gain _{g Peak} [dB]	1.61	1.61	1.60	1.64	1.60	1.63	1.55	1.58	1.57	1.55	1.57	1.51	1.47	1.35	1.34	1.33	1.19	1.00	0.95	1.05
Gain _{g Min} [dB]	-22.14	-21.83	-21.58	-21.08	-20.43	-19.54	-19.74	-20.03	-20.26	-20.37	-20.24	-20.09	-19.79	-19.74	-19.68	-19.84	-20.33	-21.07	-21.70	-21.98
TRG _e [dB]	-3.27	-3.29	-3.32	-3.25	-3.29	-3.46	-3.25	-3.22	-3.25	-3.20	-3.19	-3.33	-3.28	-3.42	-3.35	-3.40	-3.40	-3.40	-3.42	-3.55
Gain _{g Peak} [dB]	2.22	2.22	2.27	2.38	2.42	2.27	2.51	2.62	2.54	2.62	2.55	2.37	2.34	2.12	2.14	2.02	2.02	1.94	1.94	1.69
Gain _{g Min} [dB]	-25.23	-25.99	-26.87	-27.49	-27.73	-27.25	-26.32	-25.44	-24.75	-24.32	-24.43	-24.64	-24.83	-25.04	-25.14	-25.15	-24.78	-24.52	-24.12	-24.22
UHRG [dB]	-4.63	-4.66	-4.70	-4.67	-4.69	-4.78	-4.67	-4.63	-4.65	-4.60	-4.59	-4.69	-4.65	-4.75	-4.71	-4.73	-4.72	-4.77	-4.75	-4.85
UHRG/TRG [%]	44.73	44.58	44.54	44.35	44.48	44.31	44.35	44.45	44.44	44.50	44.56	44.75	44.80	44.93	44.94	45.11	45.26	45.15	45.32	45.24
H-Plane	-11.95	-11.97	-12.13	-12.20	-12.36	-12.33	-12.45	-12.48	-12.52	-12.59	-12.69	-12.95	-13.09	-13.41	-13.58	-13.75	-13.93	-14.12	-14.19	-14.48
E1-Plane, AVG [dB]	-4.41	-4.42	-4.41	-4.35	-4.33	-4.25	-4.27	-4.16	-4.13	-4.12	-4.10	-4.17	-4.14	-4.23	-4.22	-4.20	-4.21	-4.30	-4.25	-4.24
E2-Plane, AVG [dB]	-8.34	-8.35	-8.40	-8.40	-8.43	-8.34	-8.37	-8.36	-8.33	-8.28	-8.26	-8.32	-8.30	-8.36	-8.37	-8.38	-8.36	-8.41	-8.38	-8.34
Peak Gain [dB]	2.90	2.89	2.86	2.90	2.81	2.79	2.84	2.89	2.88	2.91	2.94	2.79	2.84	2.68	2.74	2.65	2.57	2.52	2.46	2.20
Directivity [dB]	4.04	4.04	4.04	4.04	3.99	4.04	3.98	4.00	4.00	3.99	4.02	3.99	4.00	3.96	3.97	3.92	3.85	3.83	3.78	3.61
Minimum Gain [dB]	-14.37	-14.47	-14.52	-14.52	-14.50	-14.51	-14.28	-14.05	-13.82	-13.43	-13.11	-13.09	-13.05	-13.16	-13.07	-13.02	-13.01	-13.08	-13.09	-13.33
Test Condition	FS																			
Antenna Type																				
i=Free Space, BHR=Beside Head Right Side, BHL=Beside Head Left Side, HR=Hand Right, HL=Hand Left, BHHR=Beside Head and Hand Right Side, BHHL=Beside Head and Hand Left Side, NB=Notebook																				
Average Efficiency	-1.20 dB, 75.86 %																			

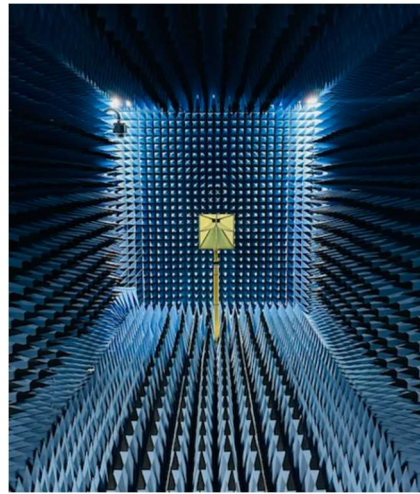
2.4 Radiation Pattern



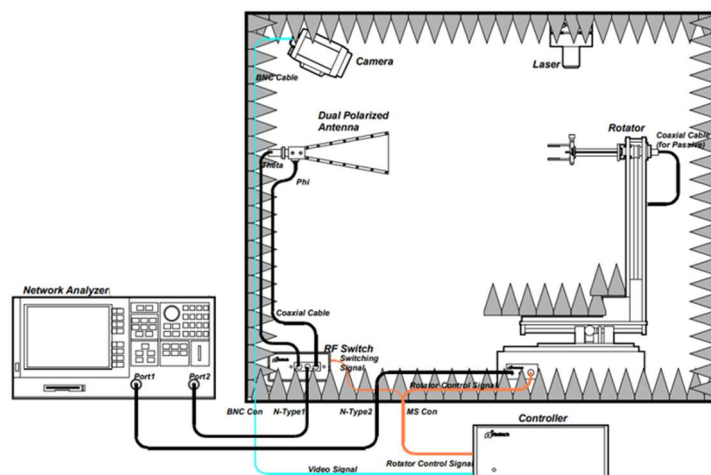
<2450MHz>

3. Antenna Test Condition

- CTIA OTA Test Chamber : 6.0 x 3.0 x 3.0 m



- Passive Test System



- Active Test System

