

PoE Antenna report

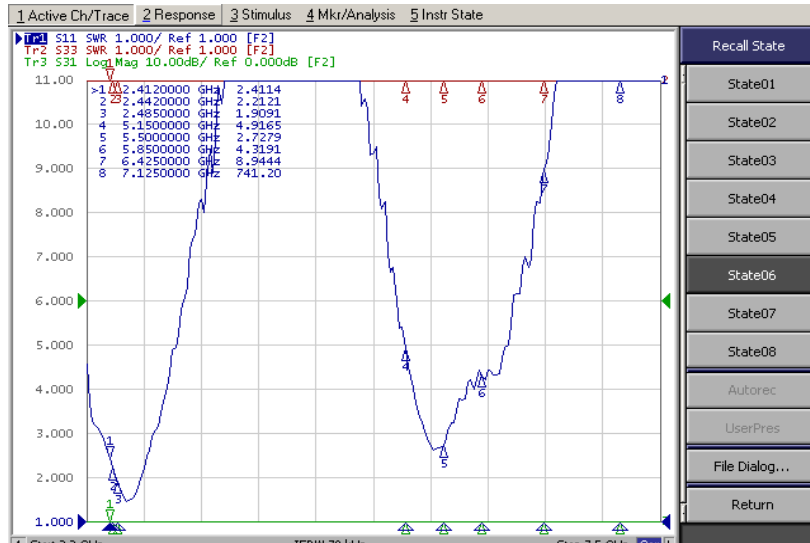
Contents
1. Test condition & VSWR 2. Efficiency

2025.3.25

1. WiFi Antenna

대외비 2급

1.1 Network Data(VSWR)



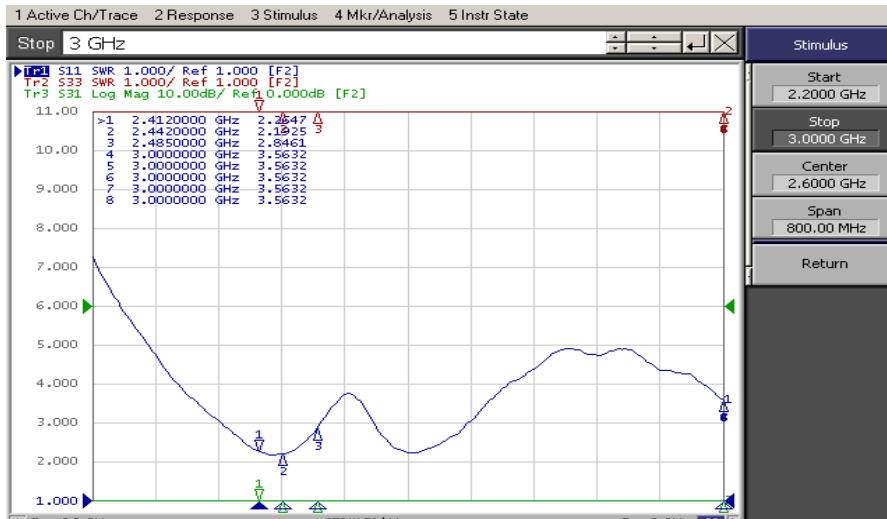
1.2. Built-in efficiency

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Frequency(MHz)	2412	2420	2450	2460	2485	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Efficiency(dB)	-3.19	-3.20	-2.78	-2.68	-2.59	-4.20	-4.52	-4.94	-5.08	-3.97	-2.89	-3.21	-4.06	-4.66	-4.89	-4.26	-3.31	-3.29	-4.59	-4.43
Efficiency(%)	47.98	47.82	52.69	54.00	55.04	38.05	35.29	32.04	31.06	40.06	51.43	47.74	39.27	34.21	32.40	37.47	46.62	46.90	34.77	36.06
TRG(dB)	-3.19	-3.20	-2.78	-2.68	-2.59	-4.20	-4.52	-4.94	-5.08	-3.97	-2.89	-3.21	-4.06	-4.66	-4.89	-4.26	-3.31	-3.29	-4.59	-4.43
TRG _{Theta} (dB)	-4.46	-4.50	-4.20	-4.13	-4.05	-8.94	-9.28	-9.52	-9.65	-8.44	-7.43	-7.73	-8.46	-9.06	-9.25	-8.38	-7.39	-7.24	-8.50	-8.11
TRG _{Phi} (dB)	-9.15	-9.09	-8.32	-8.14	-8.04	-5.97	-6.29	-6.81	-6.94	-5.89	-4.77	-5.11	-6.02	-6.62	-6.88	-6.39	-5.47	-5.52	-6.85	-6.86
UHRG(dB)	-6.49	-6.54	-6.26	-6.18	-6.06	-6.49	-6.80	-7.23	-7.38	-6.29	-5.16	-5.37	-6.14	-6.70	-6.88	-6.18	-5.14	-5.06	-6.35	-6.23
UHRG/TRG(%)	46.76	46.34	44.86	44.62	44.98	59.02	59.13	59.08	58.83	58.70	59.29	60.81	61.94	62.48	63.27	64.33	65.61	66.56	66.64	65.98
H-Plane	-2.41	-2.45	-2.15	-2.10	-2.14	-9.59	-9.85	-9.92	-9.91	-8.75	-7.98	-8.52	-9.31	-10.10	-10.72	-9.98	-9.23	-8.86	-10.02	-9.42
E1-Plane, AVG(dB)	-5.84	-5.85	-5.50	-5.37	-5.27	-12.63	-13.97	-14.82	-15.09	-14.01	-13.19	-13.78	-14.40	-14.65	-14.77	-14.05	-13.03	-12.66	-13.35	-12.35
E2-Plane, AVG(dB)	-5.08	-5.14	-4.90	-4.86	-4.77	-7.58	-7.76	-8.00	-8.16	-6.82	-5.74	-5.94	-6.66	-7.23	-7.24	-6.15	-5.02	-4.94	-6.27	-5.90
Peak Gain(dB)	0.53	0.59	0.87	0.84	0.86	0.22	-0.34	-0.74	-1.17	-0.09	0.94	0.74	0.03	-0.50	-0.57	0.36	1.56	1.39	0.03	0.07
Directivity(dB)	3.72	3.79	3.65	3.51	3.46	4.42	4.18	4.20	3.91	3.88	3.83	3.95	4.09	4.16	4.33	4.62	4.88	4.68	4.62	4.50
Minimum Gain(dB)	-18.31	-18.44	-17.05	-16.76	-16.00	-17.64	-22.01	-21.97	-21.71	-20.44	-19.25	-19.51	-22.00	-22.57	-25.09	-22.72	-20.59	-21.18	-20.47	-16.58
Test Condition	FS																			
Antenna Type																				
Average Efficiency	-3.76 dB, 42.05 %																			

2. BLE Antenna

대외비 2급

2.1 Network Data(VSWR)



2.2. Built-in efficiency

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Frequency(MHz)	2412	2420	2430	2440	2445	2450	2460	2470	2480	2485	2485	5450	5500	5550	5600	5650	5700	5750	5800	5850
Efficiency(dB)	-4.39	-4.34	-3.88	-3.86	-4.31	-4.70	-4.69	-4.44	-5.38	-5.93										
Efficiency(%)	36.39	36.78	40.96	41.11	37.10	33.91	33.98	35.96	29.00	25.56										
TRG(dB)	-4.39	-4.34	-3.88	-3.86	-4.31	-4.70	-4.69	-4.44	-5.38	-5.93										
TRG _{Theta} (dB)	-7.99	-7.88	-7.35	-7.28	-7.70	-8.10	-8.08	-7.84	-8.76	-9.32										
TRG _{Phi} (dB)	-6.88	-6.89	-6.47	-6.50	-6.96	-7.35	-7.35	-7.10	-8.05	-8.58										
UHRG(dB)	-6.33	-6.26	-5.77	-5.73	-6.16	-6.54	-6.52	-6.25	-7.18	-7.71										
UHRG/TRG(%)	63.99	64.27	64.61	65.06	65.28	65.44	65.61	65.92	66.06	66.27										
H-Plane	-9.02	-8.87	-8.28	-8.19	-8.61	-9.00	-9.00	-8.74	-9.67	-10.25										
E1-Plane, AVG(dB)	-17.34	-17.27	-16.78	-16.66	-17.10	-17.48	-17.55	-17.38	-18.45	-19.11										
E2-Plane, AVG(dB)	-6.05	-5.97	-5.51	-5.46	-5.93	-6.33	-6.32	-6.08	-6.98	-7.55										
Peak Gain(dB)	-0.47	-0.33	0.15	0.14	-0.26	-0.68	-0.73	-0.56	-1.55	-2.12										
Directivity(dB)	3.92	4.01	4.02	4.00	4.05	4.02	3.96	3.88	3.83	3.81										
Minimum Gain(dB)	-20.53	-21.47	-22.16	-22.70	-23.04	-23.15	-22.33	-21.00	-20.90	-21.00										
Test Condition	FS																			
Antenna Type																				
Average Efficiency	-4.55 dB, 35.07 %																			