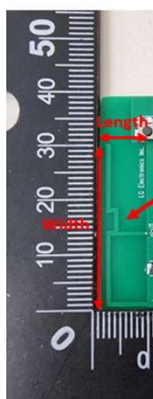


Antenna Information

Item	Contents
Antenna Type	PCB Pattern Antenna
Antenna peak gain	1.75 dBi
Manufacturer / Model name	RADINA Co., Ltd. / S905
Address of manufacturer	606-2 Edgineering Center Annex Bldg., 222, Wangsimni-ro, Seongdong-gu, Seoul, Republic of Korea, 04763
Test Laboratory	RADINA Co., Ltd
Antenna Length	1.0 cm
Antenna Width	3.0 cm



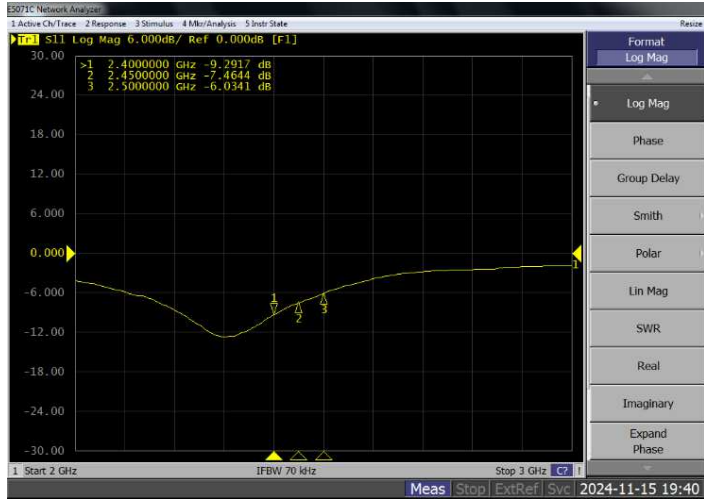
PCB Pattern Antenna

Model name: PWFMD202

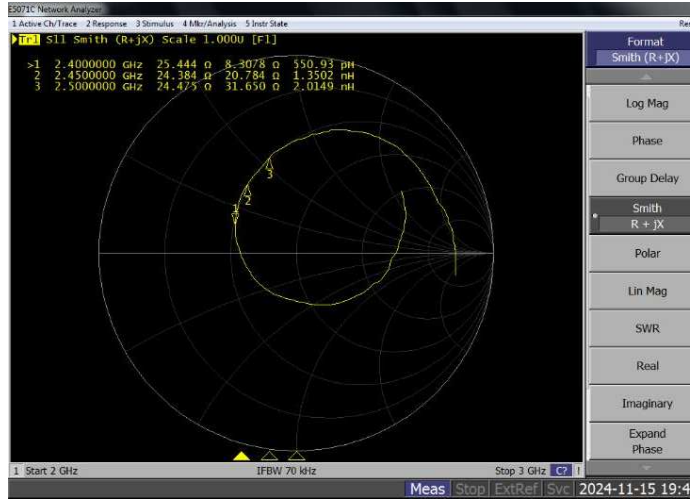
SMT PCB Measurement Data (+Case)



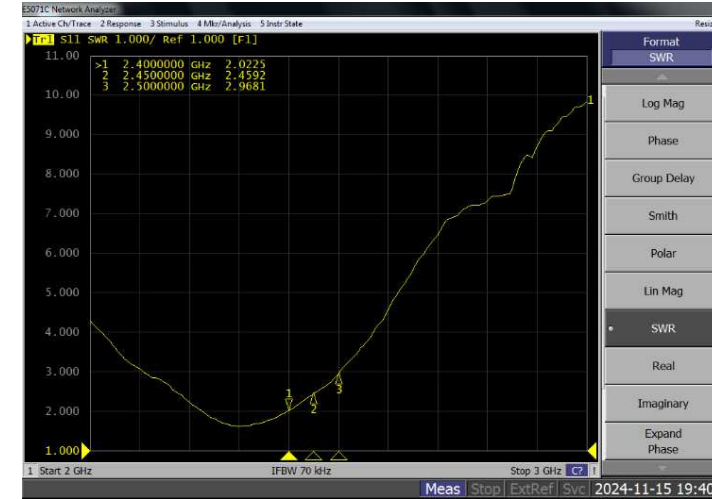
S11



SC



SWR



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	2497
Efficiency [dB]	-1.78	-1.78	-1.83	-1.78	-1.86	-1.93	-1.88	-2.02	-2.17	-1.87	-1.96	-1.77	-2.11	-2.20	-2.26	-2.27	-1.94	-2.31	-2.54	-2.43
Efficiency [%]	66.4	66.4	65.6	66.4	65.2	64.1	64.8	62.8	60.6	65.0	63.7	66.6	61.5	60.3	59.4	59.3	63.9	58.7	55.7	57.1
TRG _θ [dB]	-3.60	-3.53	-3.60	-3.53	-3.68	-3.79	-3.73	-3.87	-4.01	-3.74	-3.85	-3.60	-3.98	-4.11	-4.12	-4.07	-3.71	-4.08	-4.33	-4.14
Gain _{θ Peak} [dBi]	1.33	1.68	1.34	1.45	0.74	1.20	1.59	1.26	1.30	1.71	1.48	1.33	1.13	1.07	0.95	0.96	1.15	0.83	0.84	0.52
Gain _{θ Min} [dBi]	-23.84	-20.65	-21.35	-25.58	-20.81	-23.91	-21.38	-23.19	-22.33	-18.60	-18.95	-19.49	-19.88	-18.32	-20.93	-20.46	-19.22	-22.71	-21.02	-20.55
TRG _φ [dB]	-6.44	-6.55	-6.59	-6.58	-6.50	-6.51	-6.48	-6.63	-6.80	-6.44	-6.48	-6.39	-6.68	-6.68	-6.86	-6.96	-6.70	-7.06	-7.25	-7.31
Gain _{φ Peak} [dBi]	-1.56	-1.39	-1.69	-1.76	-1.75	-1.87	-1.61	-2.15	-1.82	-1.63	-1.90	-1.17	-2.28	-1.59	-2.61	-2.38	-2.61	-3.21	-2.69	-3.05
Gain _{φ Min} [dBi]	-24.93	-24.14	-23.60	-25.10	-24.35	-24.33	-22.87	-28.62	-27.44	-24.80	-27.55	-27.24	-25.26	-26.73	-21.58	-26.48	-27.27	-37.26	-33.78	-27.00
UHRG [dB]	-5.51	-5.51	-5.55	-5.44	-5.54	-5.63	-5.55	-5.74	-5.92	-5.61	-5.65	-5.53	-5.87	-5.94	-6.02	-6.07	-5.73	-6.13	-6.36	-6.21
UHRG/TRG [%]	42.4	42.4	42.5	43.1	42.8	42.6	42.9	42.5	42.2	42.3	42.7	42.1	42.1	42.2	42.2	41.7	41.8	41.6	41.5	41.9
H-Plane	-3.71	-3.59	-3.80	-3.61	-3.82	-3.99	-4.07	-4.07	-4.44	-4.20	-4.35	-4.16	-4.48	-4.60	-4.60	-4.92	-4.47	-4.77	-5.19	-4.75
E1-Plane, AVG [dB]	-5.81	-5.77	-5.96	-6.17	-6.17	-6.33	-6.50	-6.63	-6.62	-6.38	-6.55	-6.43	-6.71	-6.86	-6.84	-6.80	-6.47	-6.77	-7.13	-7.21
E2-Plane, AVG [dB]	-2.64	-2.50	-2.52	-2.36	-2.67	-2.67	-2.42	-2.56	-2.77	-2.52	-2.68	-2.35	-2.79	-2.90	-2.85	-2.85	-2.48	-2.65	-2.95	-2.83
Peak Gain [dBi]	1.40	1.75	1.41	1.57	0.81	1.36	1.64	1.38	1.37	1.75	1.56	1.41	1.22	1.11	1.00	1.03	1.22	0.92	0.89	0.58
Directivity [dB]	3.17	3.53	3.25	3.35	2.67	3.29	3.52	3.40	3.55	3.62	3.52	3.18	3.33	3.31	3.27	3.31	3.16	3.23	3.43	3.02
Minimum Gain [dB]	-12.25	-12.84	-11.88	-12.11	-11.52	-11.85	-11.27	-11.16	-11.76	-11.16	-11.90	-12.81	-11.69	-13.71	-13.36	-11.31	-11.51	-11.03	-11.66	-11.39
Average Efficiency	-2.03 dB		62.68 %				Peak	Gain		1.75 dBi										