

2025.06.25

RA-N2501-03

APPROVAL SHEET

MODEL : SRL3
Antenna layout

Review	Consent	Approval

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1. Revision History

NO.	Before	After	Reason	Date
1				
2				
3				
4				
5				
6				
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13				

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2.Product Information

2.1 General Features

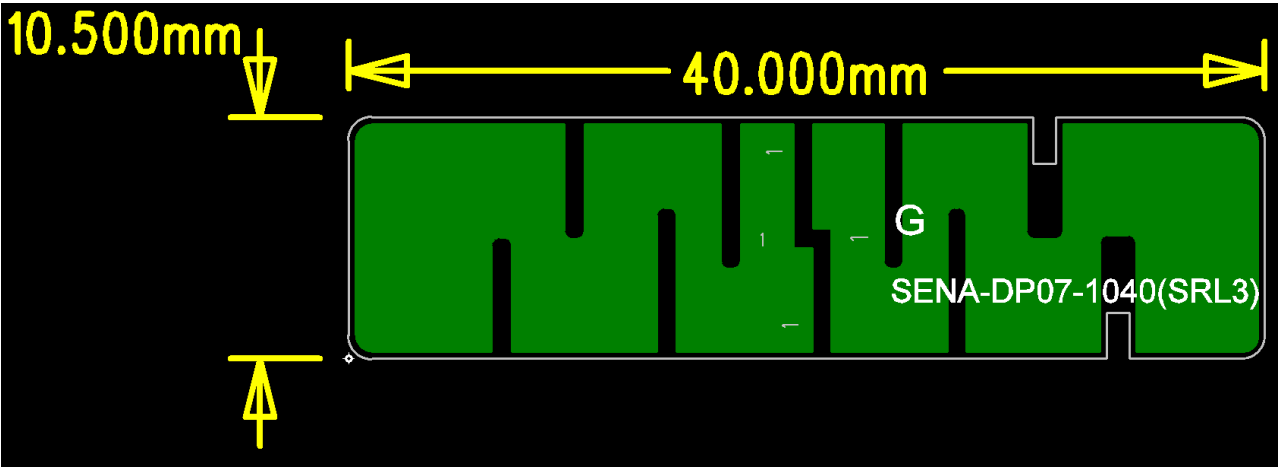
PART NUMBER	GRSN22128MS53
ANTENNA TYPE	PCB Pattern Antenna
APPLICATIONS	Mesh

2.2 Electrical Specifications

Frequency Range1 (TX)		2400MHz~2485MHz	
Frequency Range1 (RX)		2400MHz~2485MHz	
IMPEDANCE		50 Ω	
V.S.W.R	TX	2400MHz	2485MHz
		3 ↓	3 ↓
	RX	2400MHz	2485MHz
		3 ↓	3 ↓
RADIATION PATTERN		Omni-directional	
POLARIZATION		Linear	

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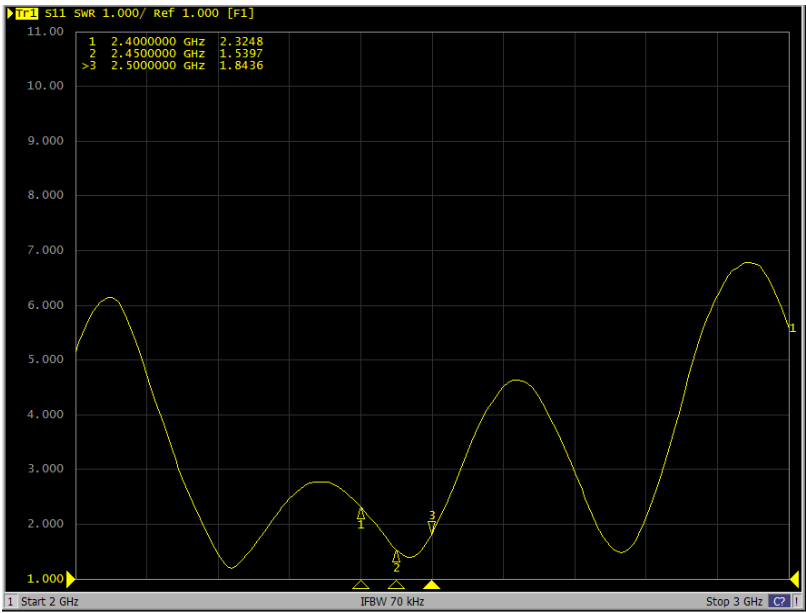
2.3 Antenna Dimensioin



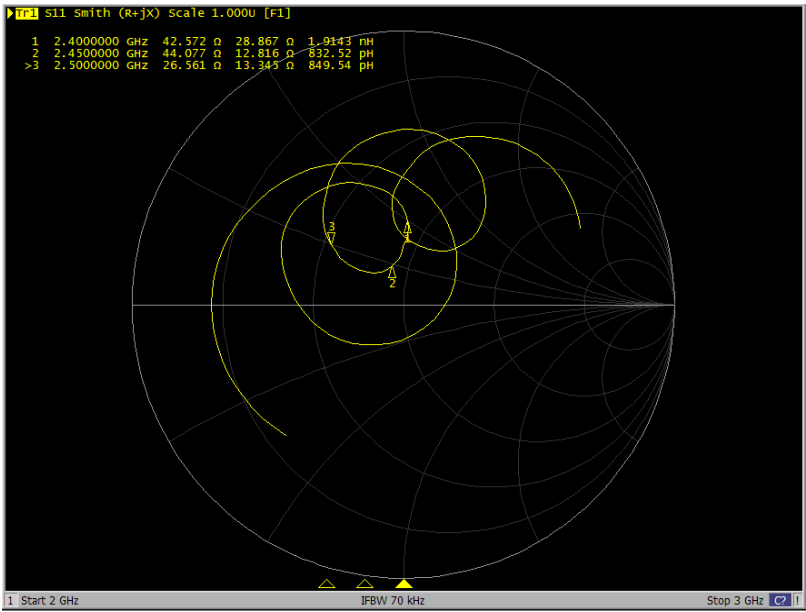
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3. Electrical Characterristics

3.1 VSWR

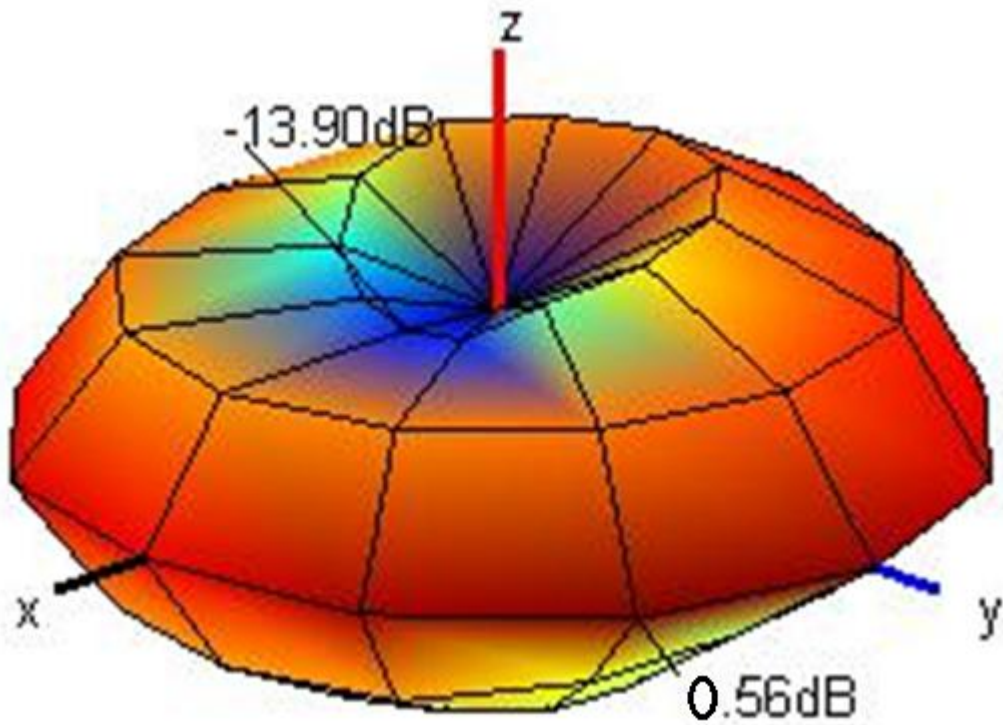


3.2 SMITH CHART

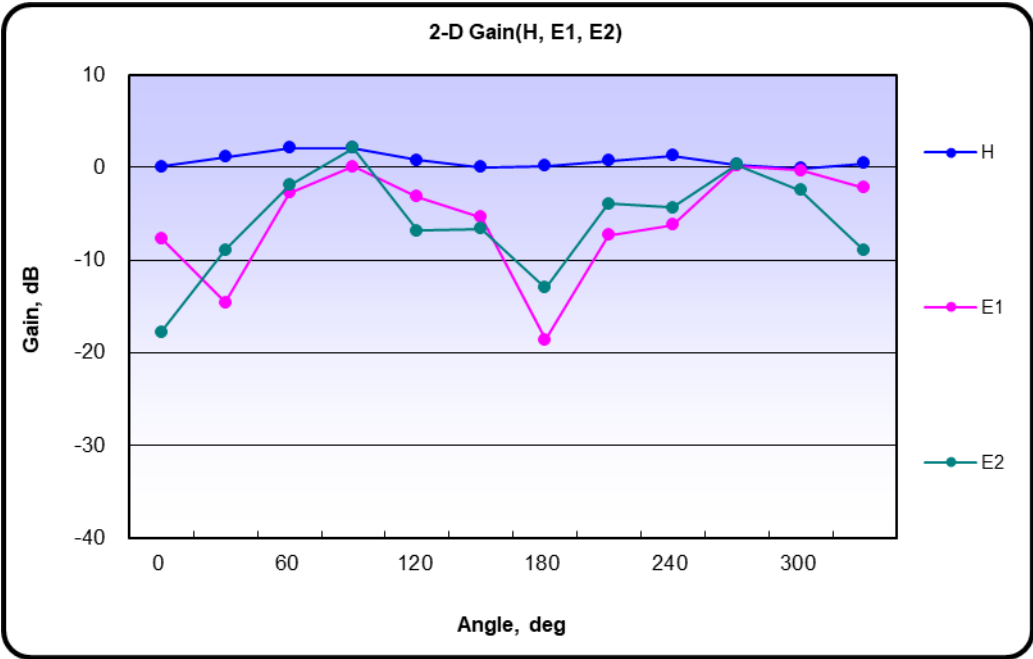


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3.3 3D-PLoTs



3.4 2D-GAIN



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4. Passive Measurement

	1	2	3	4	5	6	7	8	9	10
Frequency(MHz)	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445
Efficiency(dB)	-2.18	-2.13	-2.07	-2.06	-2.07	-2.11	-1.88	-1.86	-1.88	-1.70
Efficiency(%)	60.6	61.2	62.1	62.2	62.0	61.5	64.9	65.1	64.9	67.5
TRG(dB)	-2.50	-2.48	-2.44	-2.46	-2.50	-2.56	-2.33	-2.32	-2.37	-2.18
TRG _{Theta} (dB)	0.95	1.13	1.32	1.39	1.58	1.60	2.11	2.13	2.28	2.08
TRG _{Phi} (dB)	-9.55	-10.34	-11.68	-13.03	-14.01	-12.61	-14.80	-14.57	-15.41	-14.66
UHRG(dB)	-4.48	-4.42	-4.40	-4.42	-4.45	-4.54	-4.35	-4.36	-4.43	-4.28
UHRG/TRG(%)	58.8	59.1	58.5	58.2	57.9	57.1	56.6	56.2	55.6	55.2
H-Plane	-0.31	-0.19	0.00	0.10	0.20	0.21	0.55	0.60	0.60	0.80
E1-Plane, AVG(dB)	-3.47	-3.39	-3.43	-3.54	-3.64	-3.74	-3.53	-3.45	-3.60	-3.37
E2-Plane, AVG(dB)	-3.91	-3.77	-3.83	-3.88	-3.76	-3.85	-3.64	-3.62	-3.72	-3.47
Peak Gain(dB)	-0.90	-0.72	-0.46	-0.49	-0.21	-0.27	0.49	0.48	0.72	0.56
Directivity(dB)	1.27	1.42	1.61	1.57	1.87	1.84	2.37	2.35	2.59	2.26
Minimum Gain(dB)	-8.79	-9.60	-10.15	-11.25	-11.19	-12.18	-12.81	-13.43	-13.88	-13.90

	11	12	13	14	15	16	17	18	19	20
Frequency(MHz)	2450	2455	2460	2465	2470	2475	2480	2485	2490	2497
Efficiency(dB)	-1.76	-1.70	-1.91	-1.96	-2.04	-2.17	-2.19	-2.75	-2.69	-2.73
Efficiency(%)	66.7	67.7	64.5	63.7	62.6	60.7	60.3	53.1	53.8	53.4
TRG(dB)	-2.23	-2.17	-2.39	-2.44	-2.52	-2.65	-2.68	-3.24	-3.18	-3.22
TRG _{Theta} (dB)	2.25	2.29	1.87	1.59	1.37	1.12	0.88	0.32	0.21	0.34
TRG _{Phi} (dB)	-13.94	-13.09	-12.20	-11.71	-11.89	-11.81	-11.86	-11.57	-13.26	-13.60
UHRG(dB)	-4.35	-4.29	-4.51	-4.54	-4.64	-4.77	-4.79	-5.36	-5.35	-5.40
UHRG/TRG(%)	55.1	55.0	54.9	55.1	54.9	54.9	55.0	54.8	54.2	54.0
H-Plane	0.73	0.82	0.54	0.44	0.32	0.18	0.13	-0.49	-0.48	-0.55
E1-Plane, AVG(dB)	-3.42	-3.33	-3.47	-3.50	-3.58	-3.65	-3.65	-4.26	-4.20	-4.19
E2-Plane, AVG(dB)	-3.57	-3.55	-3.84	-3.82	-4.09	-4.28	-4.30	-4.84	-4.67	-4.70
Peak Gain(dB)	0.70	0.75	0.40	0.11	-0.10	-0.39	-0.61	-0.20	-0.50	-0.30
Directivity(dB)	2.46	2.45	2.30	2.06	1.93	1.78	2.59	2.55	2.19	2.43
Minimum Gain(dB)	-12.84	-11.86	-10.99	-11.06	-11.25	-11.08	-11.13	-10.65	-12.66	-13.46

Average Efficiency	-2.08 dBi,	61.92%
Peak Gain	0.75 dBi,	