

25.05.09

RA-N2505-20

APPROVAL SHEET

**MODEL : Expand-Mono
Antenna layout**

Review	Consent	Approval

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1. Revision History

NO.	Before	After	Reason	Date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

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2.Product Information

2.1 General Features

PART NUMBER	GradiANT
ANTENNA TYPE	PCB pattern Antenna
APPLICATIONS	Mesh

2.2 Electrical Specifications

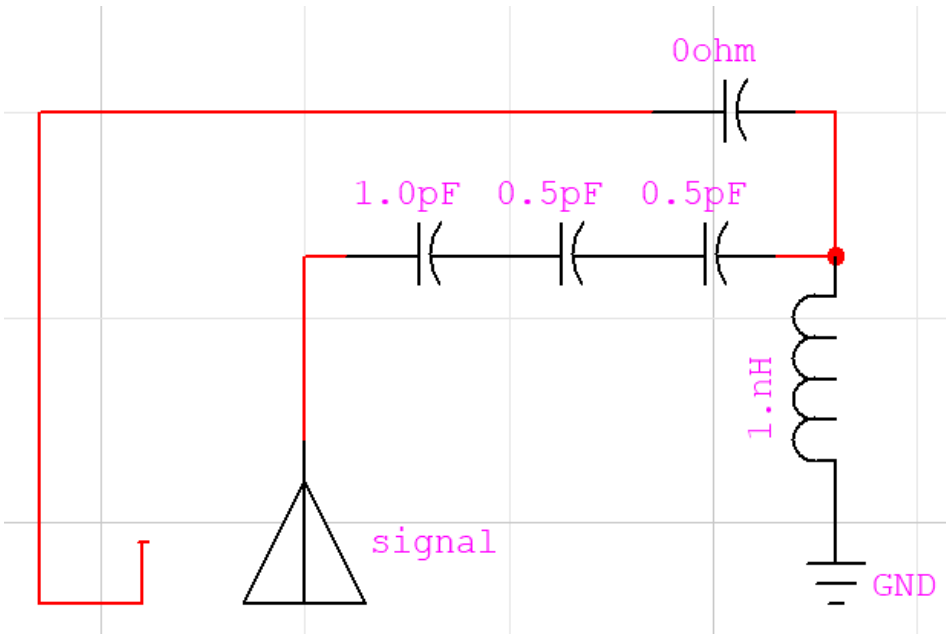
Frequency Range1 (TX)		2400MHz~2485MHz	
Frequency Range1 (RX)		2400MHz~2485MHz	
IMPEDANCE		50 Ω	
V.S.W.R	TX	2400MHz	2485MHz
		5 ↓	5 ↓
	RX	2400MHz	2485MHz
		5 ↓	5 ↓
RADIATION PATTERN		Omni-directional	
POLARIZATION		Linear	

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3. Pattern Specifications

4. Matching Network

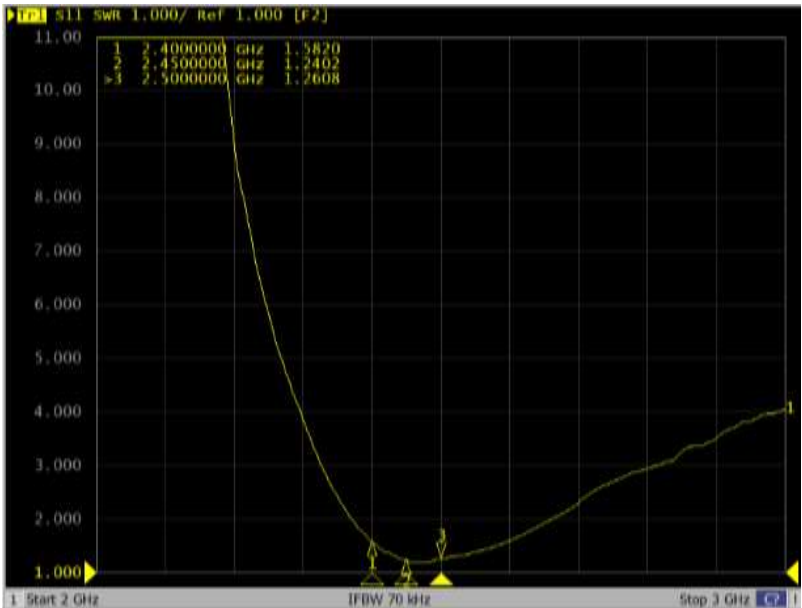
Capacitor value can be changed depending on different situation



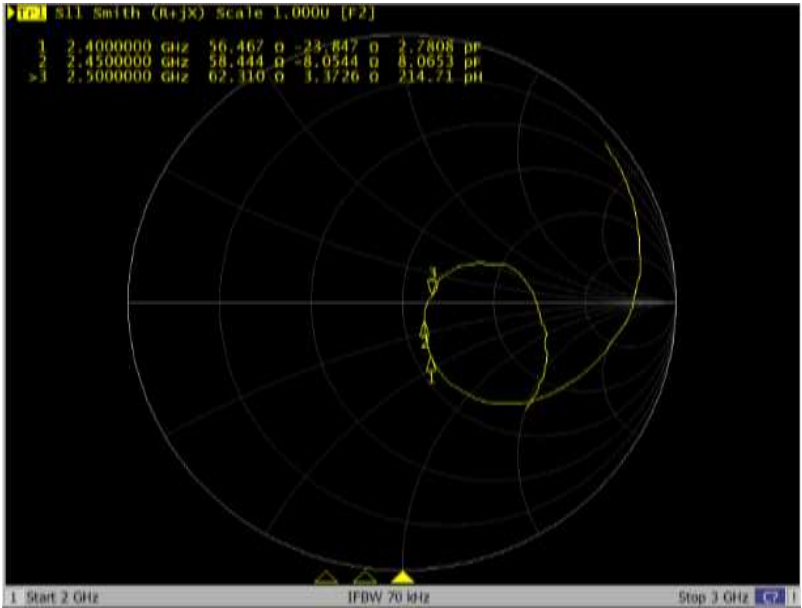
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5. Electrical Characterristics

5.1 VSWR

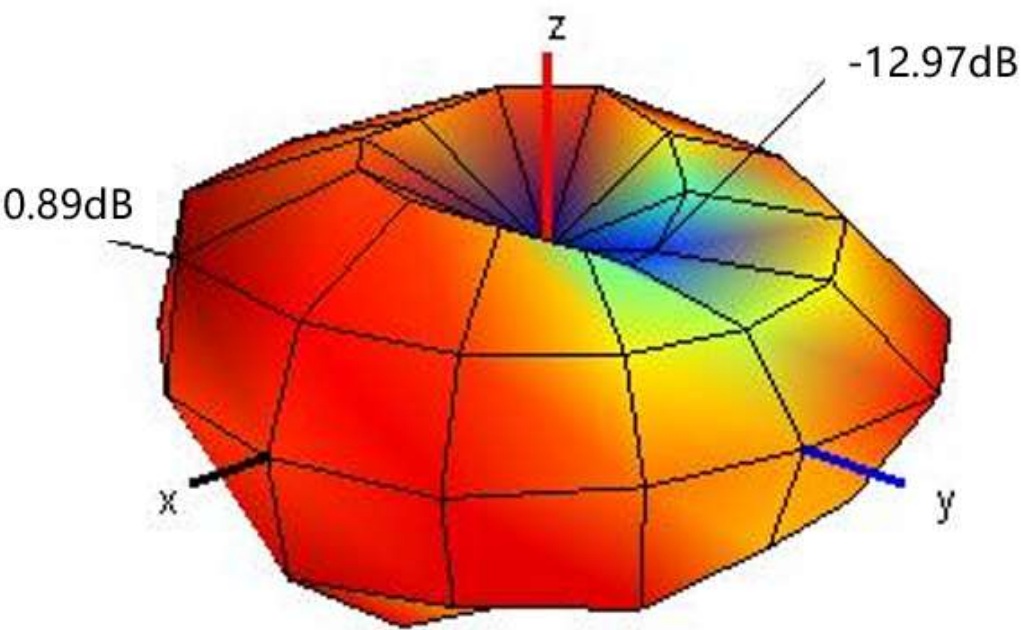


5.2 SMITH CHART

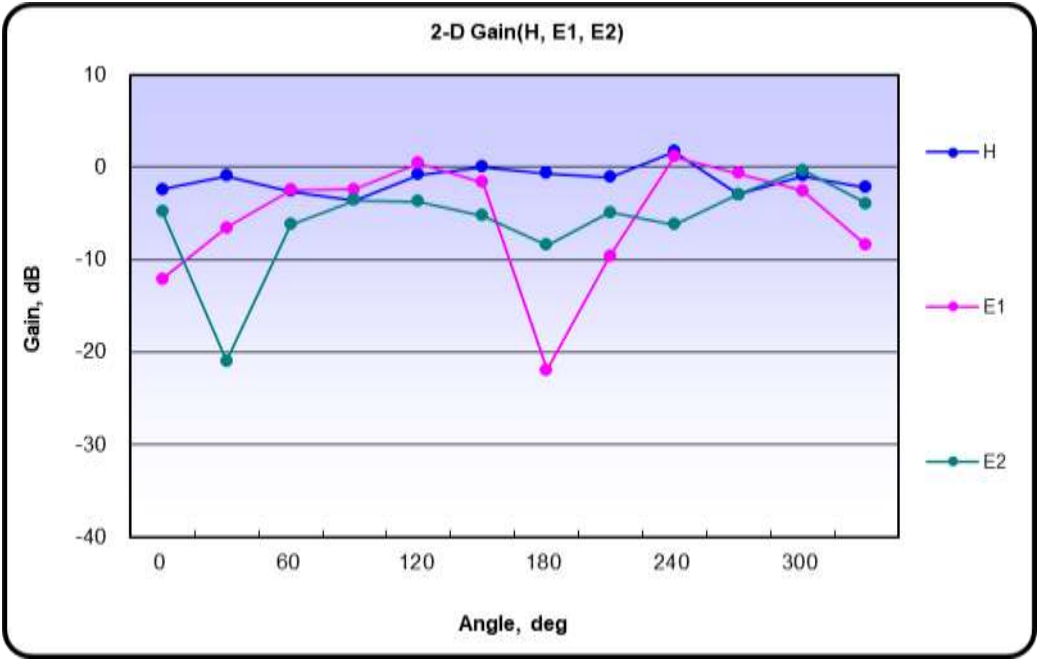


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5.3 3D-PLOTs



5.4 2D-Gain



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6. Passive Measurement

	1	2	3	4	5	6	7	8	9
Frequency [MHz]	2400	2405	2410	2415	2420	2425	2430	2435	2440
Efficiency [dB]	-1.60	-1.62	-1.66	-1.65	-1.80	-1.78	-1.58	-1.48	-1.60
Efficiency [%]	69.2	68.8	68.2	68.3	66.1	66.4	69.6	71.2	69.1
UHRG [dB]	-4.53	-4.53	-4.63	-4.56	-4.70	-4.71	-4.50	-4.39	-4.51
UHRG/TRG [%]	50.9	51.3	50.5	51.2	51.2	50.9	51.0	51.1	51.2
H-Plane	-1.32	-1.33	-1.24	-1.31	-1.39	-1.32	-1.20	-0.95	-1.16
E1-Plane, AVG [dB]	-2.85	-2.80	-2.89	-2.86	-3.13	-2.95	-2.70	-2.78	-2.96
E2-Plane, AVG [dB]	-4.29	-4.39	-4.54	-4.56	-4.61	-4.75	-4.73	-4.40	-4.34
Peak Gain [dB]	0.71	0.77	0.69	0.57	0.62	0.68	0.65	0.88	0.83
Directivity [dB]	2.31	2.39	2.36	2.23	2.42	2.45	2.23	2.35	2.43
Minimum Gain [dB]	-10.15	-10.76	-10.58	-10.84	-11.97	-11.49	-11.58	-11.74	-11.34

	10	11	12	13	14	15	16	17	18
Frequency [MHz]	2445	2450	2455	2460	2465	2470	2475	2480	2485
Efficiency [dB]	-1.56	-1.58	-1.64	-1.73	-1.76	-1.53	-1.52	-1.51	-1.96
Efficiency [%]	69.9	69.5	68.5	67.2	66.7	70.2	70.4	70.7	63.6
UHRG [dB]	-4.48	-4.55	-4.62	-4.68	-4.76	-4.51	-4.52	-4.47	-4.95
UHRG/TRG [%]	51.0	50.5	50.3	50.7	50.1	50.3	50.2	50.5	50.3
H-Plane	-1.15	-1.10	-1.20	-1.35	-1.47	-1.16	-1.21	-1.13	-1.51
E1-Plane, AVG [dB]	-2.89	-2.83	-2.92	-2.94	-3.00	-2.85	-2.80	-2.77	-3.25
E2-Plane, AVG [dB]	-4.47	-4.52	-4.46	-4.59	-4.65	-4.14	-4.27	-4.16	-4.52
Peak Gain [dB]	0.89	0.91	0.60	0.72	0.57	0.81	0.91	0.70	-0.02
Directivity [dB]	2.45	2.49	2.24	2.45	2.33	2.34	2.43	2.20	1.94
Minimum Gain [dB]	-12.97	-12.34	-13.42	-16.62	-14.30	-13.50	-14.60	-14.54	-14.12

Average Efficiency	-1.68dBi	67.86%
Peak Gain	0.91dBi	