25.05.21

RA-N2505-15

APPROVAL SHEET

MODEL : LATITUDU S2 SUB

Antenna layout

Review	Consent	Approval

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1. Revision History

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2. Product Information

2.1 General Features

PART NUMBER	GradiANT
ANTENNA TYPE	PCB pattern Antenna
APPLICATIONS	SUB

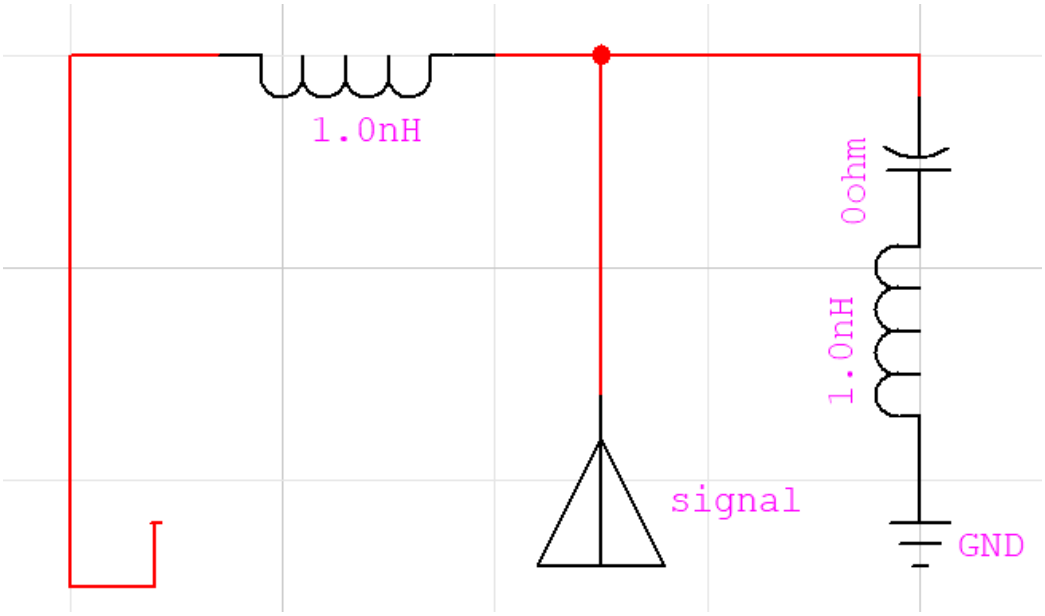
2.2 Electrical Specifications

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	

3. Pattern Specifications

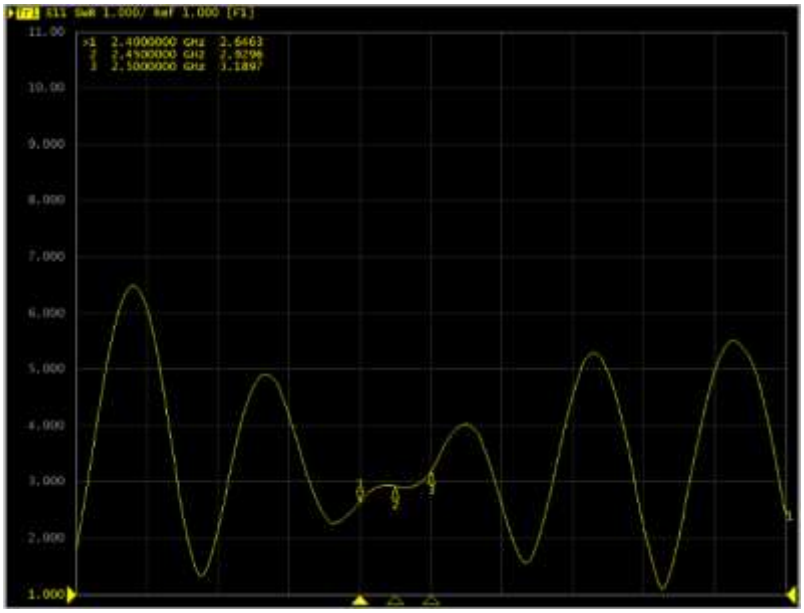
4. Matching Network

Capacitor value can be changed depending on different situation

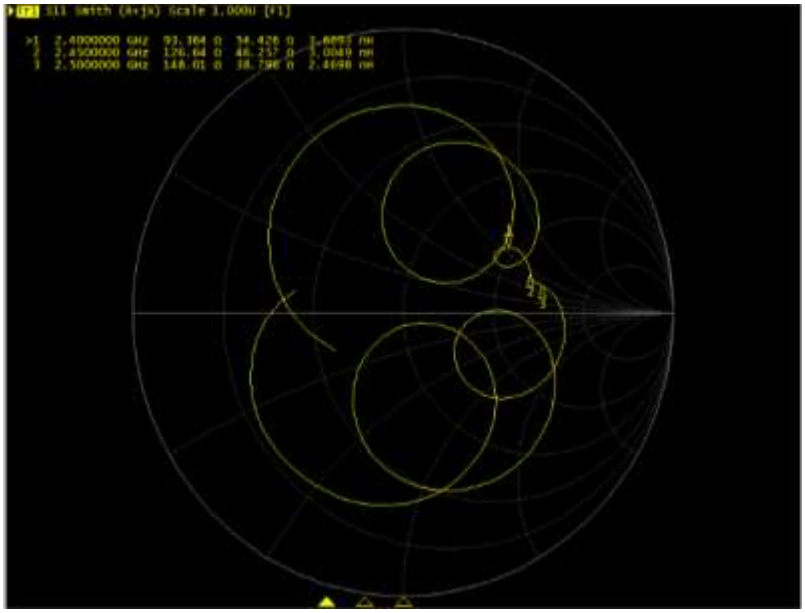


5. Electrical Characterristics

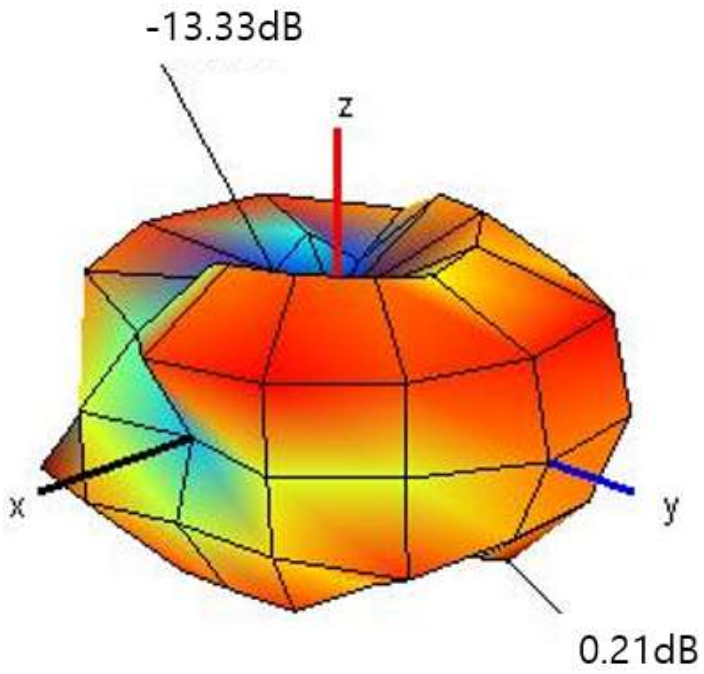
5.1 VSWR



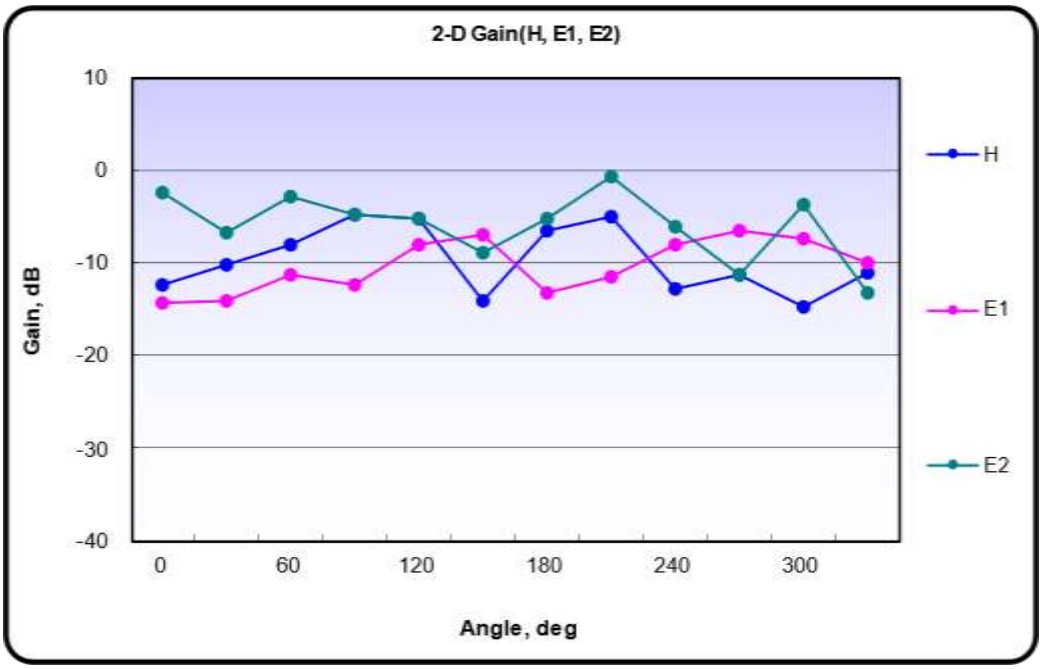
5.2 SMITH CHART



5.3 3D-PLOTs



5.4 2D-Gain



6. 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]	**-5.24**	**-5.09**	**-4.89**	**-4.78**	**-4.70**	**-4.76**	**-4.58**	**-4.43**	**-4.27**	**-4.05**
Efficiency [%]	**29.9**	**31.0**	**32.4**	**33.3**	**33.9**	**33.4**	**34.8**	**36.0**	**37.4**	**39.3**
TRG$_\theta$ [dB]	-8.56	-8.36	-8.10	-7.93	-7.80	-7.88	-7.54	-7.32	-7.22	-6.96
TRG$_\varphi$ [dB]	-7.96	-7.86	-7.72	-7.65	-7.62	-7.65	-7.65	-7.57	-7.35	-7.17
UHRG [dB]	-9.31	-9.06	-8.77	-8.58	-8.45	-8.48	-8.23	-8.04	-7.87	-7.63
UHRG/TRG [%]	39.2	40.1	41.0	41.7	42.1	42.5	43.2	43.6	43.7	43.9
H-Plane	-11.05	-11.05	-10.81	-10.62	-10.25	-10.07	-9.56	-9.09	-8.78	-8.37
E1-Plane, AVG [dB]	-10.96	-10.70	-10.46	-10.46	-10.26	-10.43	-10.04	-9.84	-9.74	-9.56
E2-Plane, AVG [dB]	-6.01	-5.78	-5.67	-5.55	-5.40	-5.60	-5.35	-5.16	-5.03	-4.78
Peak Gain [dB]	-0.14	0.10	0.13	0.06	0.14	-0.07	-0.11	0.12	0.04	0.21
Directivity [dB]	5.10	5.19	5.02	4.83	4.83	4.69	4.48	4.55	4.31	4.26
Minimum Gain [dB]	-16.94	-16.37	-15.79	-16.11	-15.31	-15.31	-14.36	-13.66	-13.77	-13.33

	11	12	13	14	15	16	17	18	19	20
Frequency [MHz]	**2450**	**2455**	**2460**	**2465**	**2470**	**2475**	**2480**	**2485**	**2490**	**2497**
Efficiency [dB]	**-4.13**	**-4.18**	**-4.30**	**-4.23**	**-4.05**	**-4.13**	**-4.27**	**-4.76**	**-5.02**	**-4.95**
Efficiency [%]	**38.7**	**38.2**	**37.1**	**37.7**	**39.4**	**38.7**	**37.4**	**33.4**	**31.4**	**32.0**
TRG$_\theta$ [dB]	-7.01	-6.97	-7.13	-7.06	-6.83	-6.89	-6.96	-7.51	-7.73	-7.58
TRG$_\varphi$ [dB]	-7.26	-7.42	-7.51	-7.44	-7.30	-7.40	-7.62	-8.05	-8.36	-8.38
UHRG [dB]	-7.73	-7.77	-7.88	-7.86	-7.63	-7.75	-7.84	-8.31	-8.54	-8.41
UHRG/TRG [%]	43.7	43.8	43.9	43.4	43.8	43.4	43.9	44.2	44.5	45.1
H-Plane	-8.28	-8.24	-8.29	-8.22	-8.01	-8.14	-8.31	-8.97	-9.41	-9.53
E1-Plane, AVG [dB]	-9.68	-9.55	-9.68	-9.69	-9.34	-9.48	-9.46	-10.23	-10.25	-10.12
E2-Plane, AVG [dB]	-4.87	-4.92	-5.00	-5.01	-4.75	-4.83	-4.84	-5.42	-5.60	-5.51
Peak Gain [dB]	0.05	0.01	-0.19	0.01	0.15	0.05	-0.01	-0.55	-0.79	-0.68
Directivity [dB]	4.17	4.19	4.12	4.25	4.19	4.18	4.26	4.21	4.23	4.27
Minimum Gain [dB]	-12.82	-13.55	-13.68	-14.10	-13.81	-14.44	-14.63	-16.88	-16.75	-17.77

Average Efficiency	**-4.53dBi**	**35.28%**
Average Efficiency	**0.21dBi**	