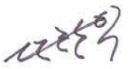


APPROVAL SHEET

MODEL : TXT V2 ANTENNA

Review	Consent	Approval
이중건	문병인	
J.G Lee	B.I Mun	C.I Jeon
23.10.16	23.10.16	23.10.16

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 - 5.4 2D-Gain
- 6. Passive Measurement
- 7. Measurement Process



1. Revision History

[illegible]

2. Product Information

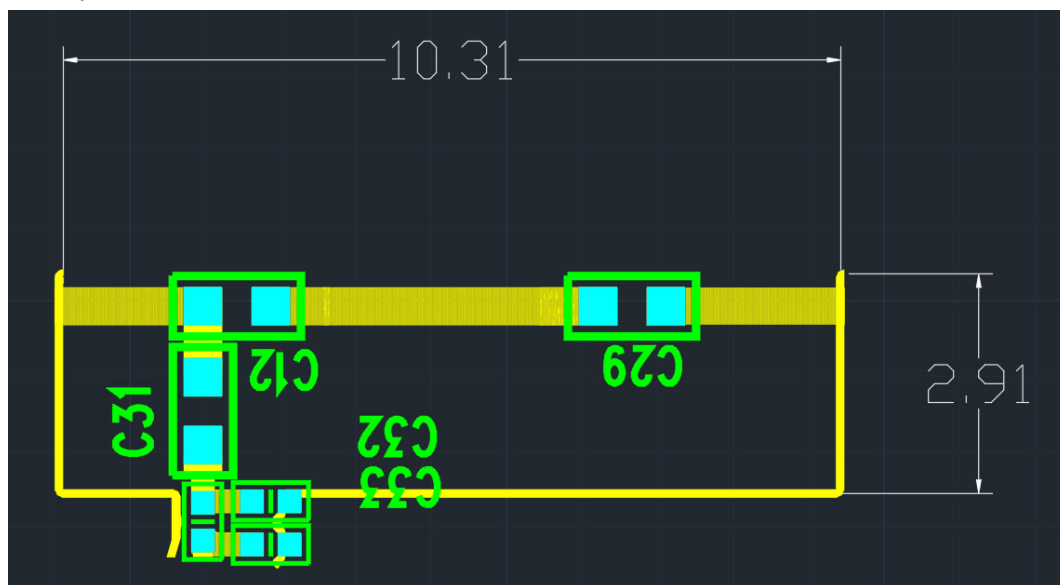
2.1 General Features

PART NEMBER	SEVENTEEN ANT
ANTENNA TYPE	PCB PATTERN ANTENNA
APPLICATIONS	Bluetooth

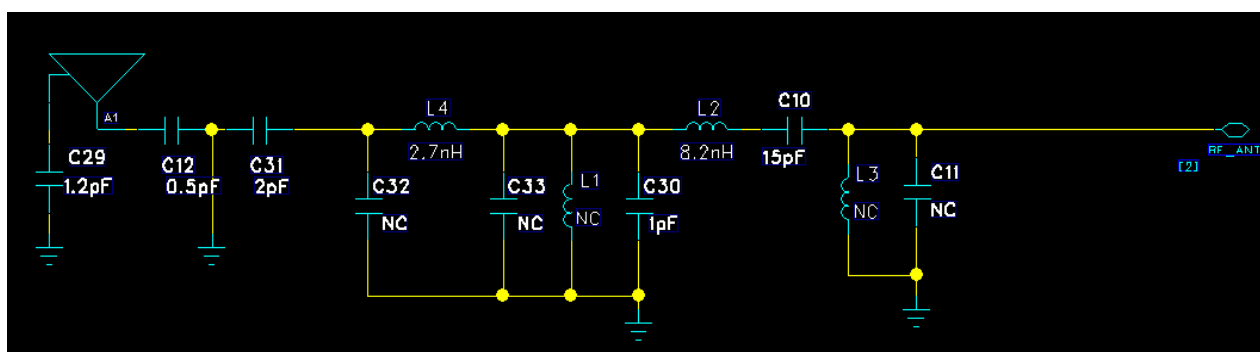
2.2 Electrical Specifications

Frequency Range (Tx)	2400MHz~2480MHz
Frequency Range (Rx)	2400MHz~2480MHz
IMPEDANCE	50Ω
POLARIZATION	Linear

3. Pattern Specifications

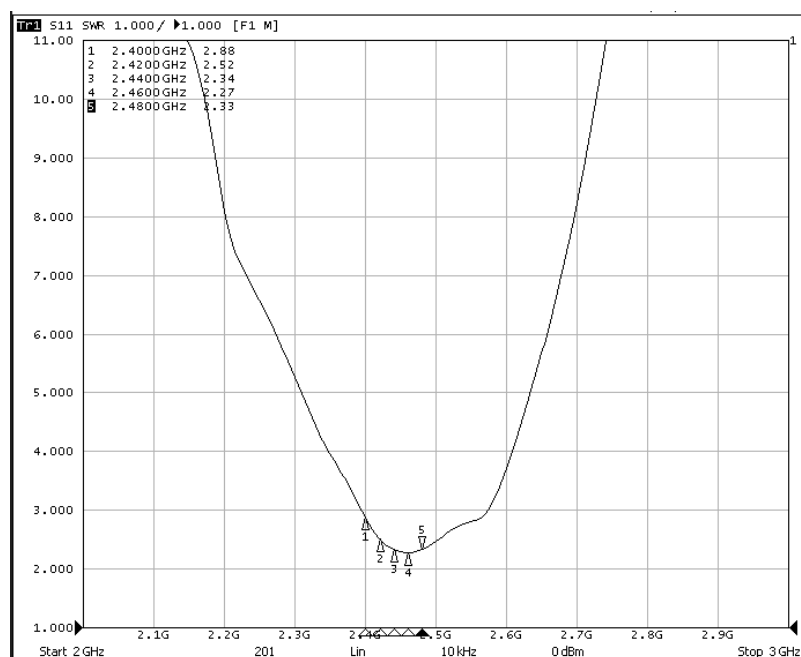


4. Matching Network

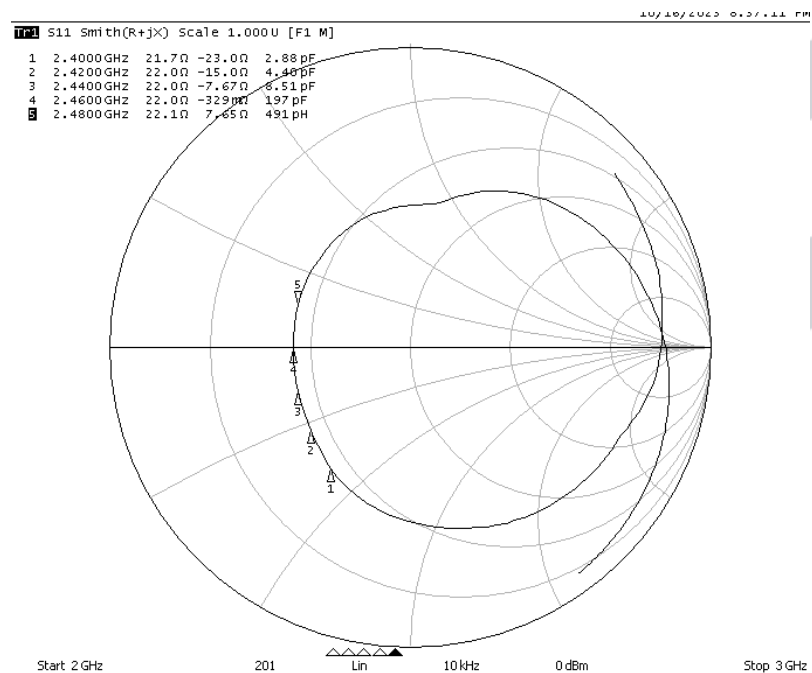


5. Electrical Characteristics

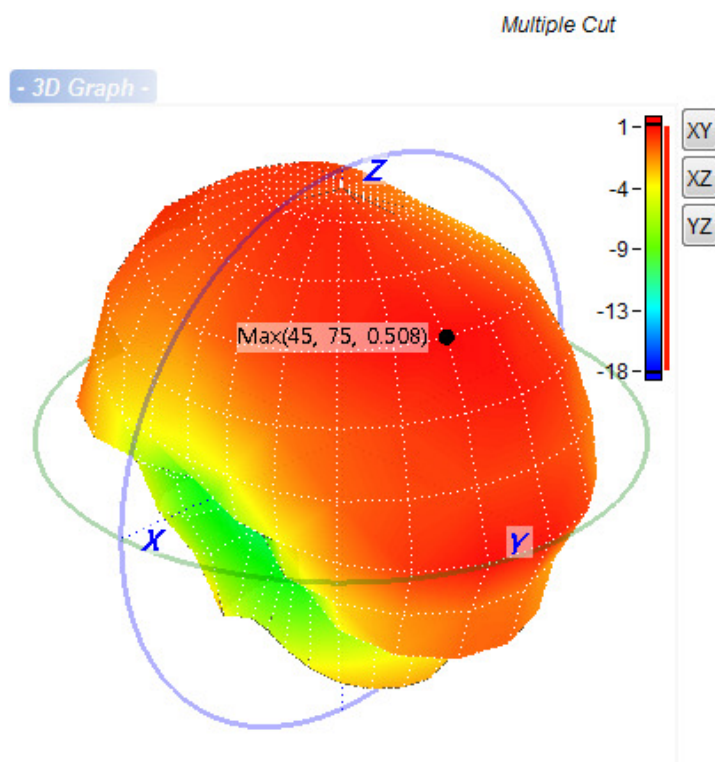
5.1 VSWR



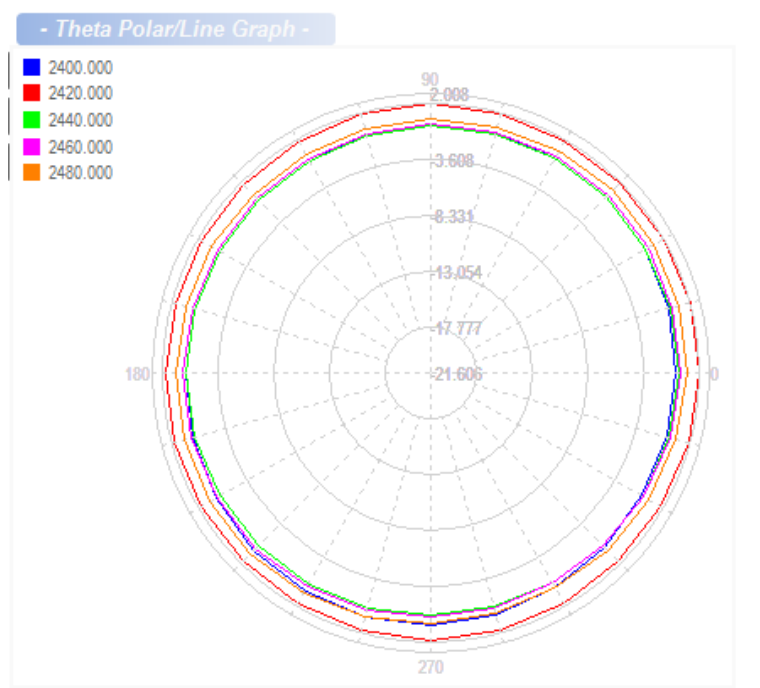
5.2 SMITH CHART

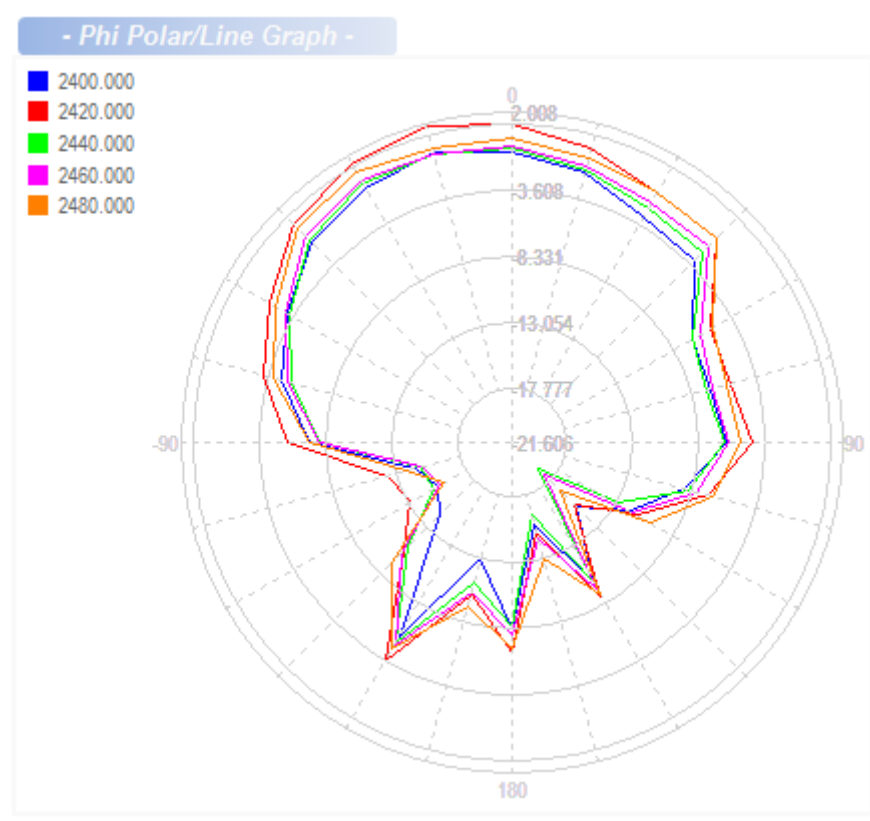


5.3 3D-PLOTS



5.4 2D-Gain



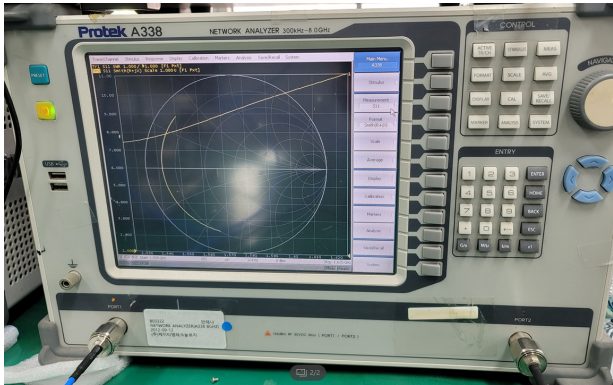


6. Passive Measurement

Frequency	Max Gain			Min Gain			Average Gain	Efficiency
[MHz]	θ [Deg]	Φ [Deg]	Gain[dBi]	θ [Deg]	Φ [Deg]	Gain[dBi]	Gain[dBi]	[%]
2,400.000	45.0	75.0	0.508	105.0	345.0	-17.944	-3.210	47.748
2,420.000	45.0	75.0	2.008	105.0	345.0	-18.627	-1.693	67.717
2,440.000	45.0	75.0	0.308	105.0	345.0	-21.606	-3.463	45.049
2,460.000	45.0	60.0	0.661	105.0	345.0	-19.577	-3.137	48.557
2,480.000	45.0	60.0	1.381	135.0	195.0	-17.180	-2.401	57.536

7. Measurement Process

7.1 SWR/Return loss

	Set Condition
Network Analyzer	Protek A338
Cable	RF cable (300 mm)
Test condition	

7.2 Gain

Antenna gain is measured in the anechoic chamber of this company.



7.3 Gain Test block diagram

