


APPROVAL SHEET

MODEL : PROMIS9 ANTENNA

Review	Consent	Approval
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22.11.12	22.11.12	22.11.12

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2. Product Information

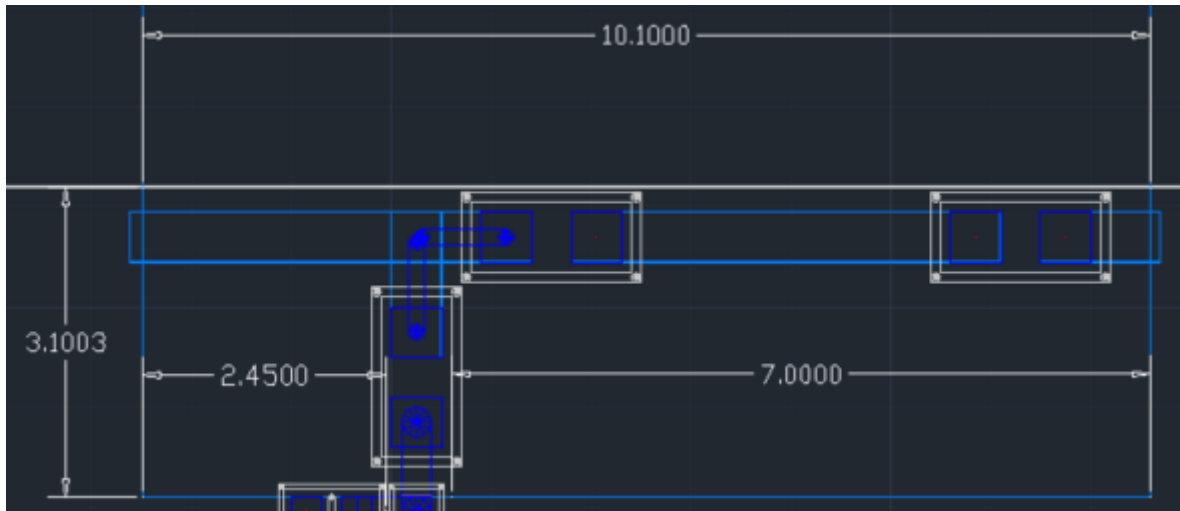
2.1 General Features

PART NUMBER	FROMIS9 ANT
ANTENNA TYPE	PCB PATTERN ANTENNA
APPLICATIONS	Bluetooth

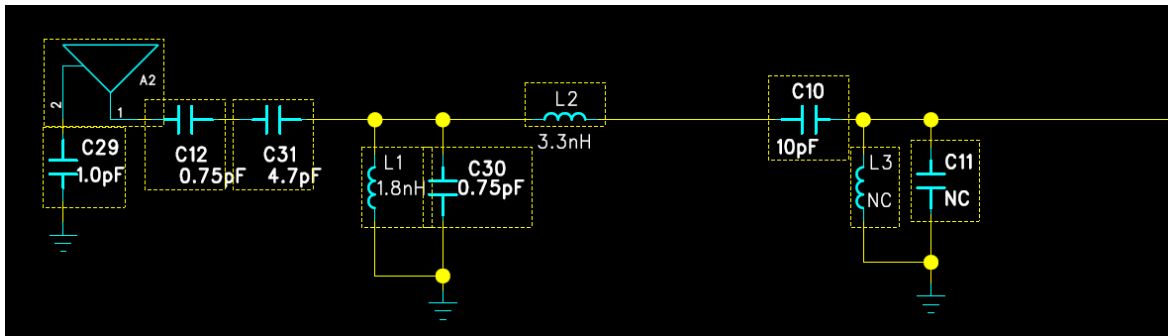
2.2 Electrical Specifications

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

3. Pattern Specifications

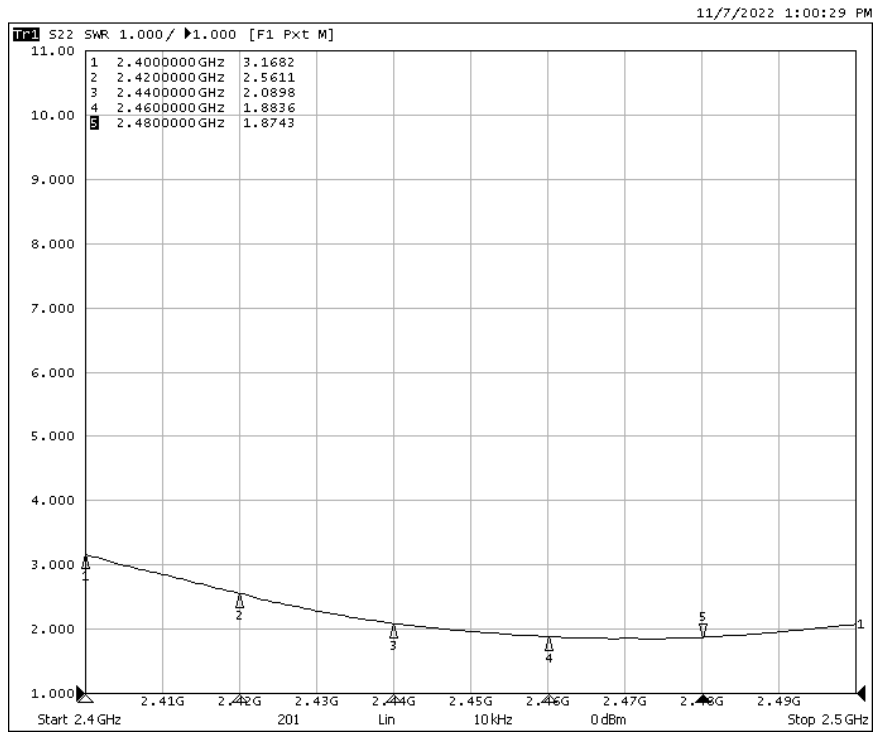


4. Matching Network

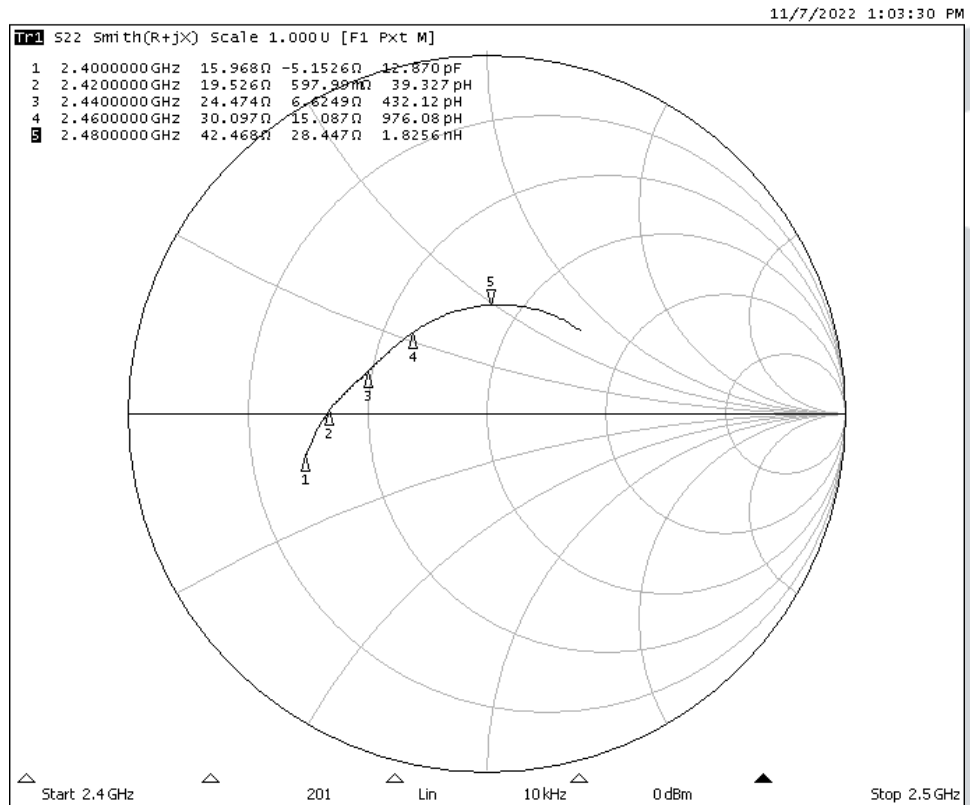


5. Electrical Characteristics

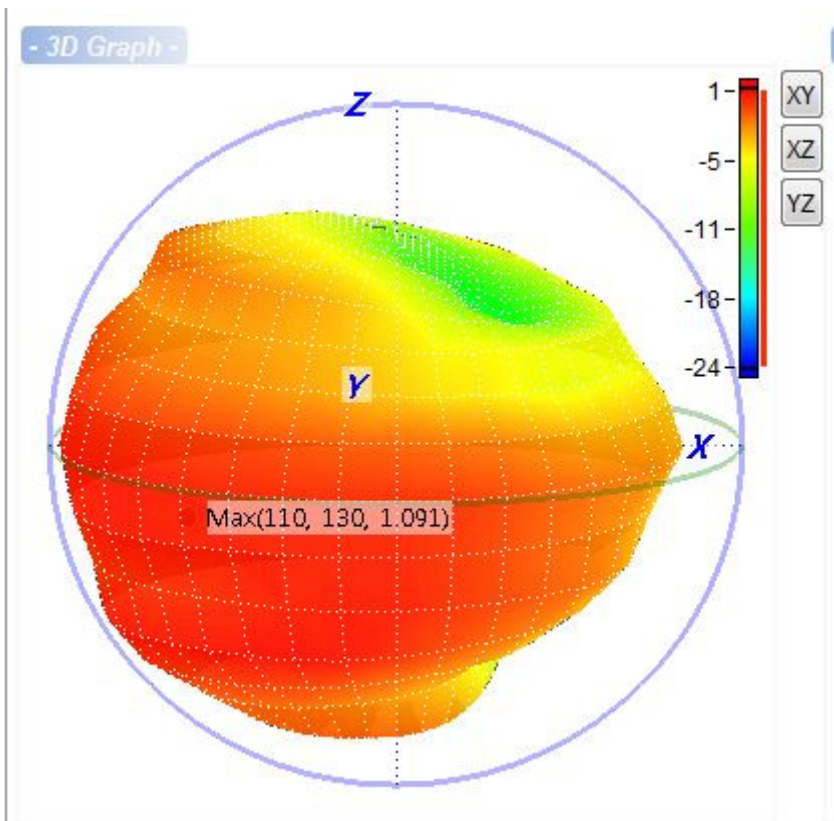
5.1 VSWR



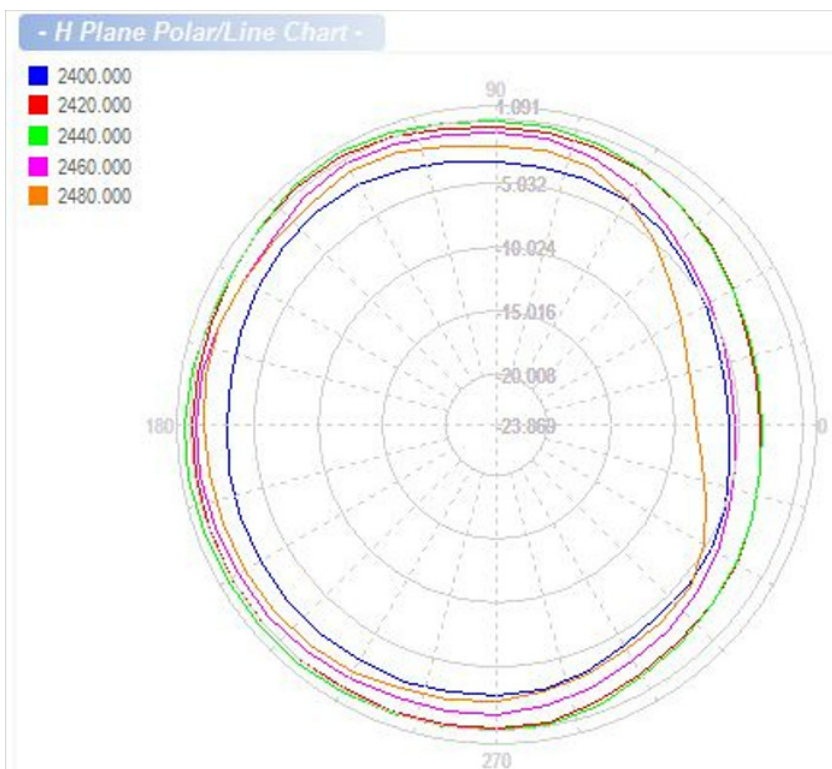
5.2 SMITH CHART

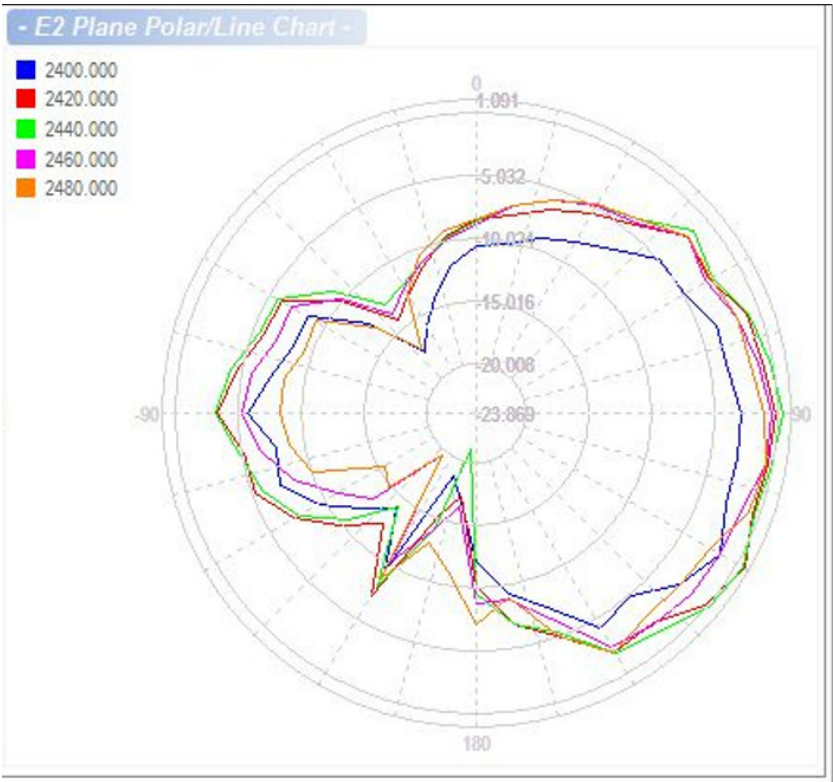
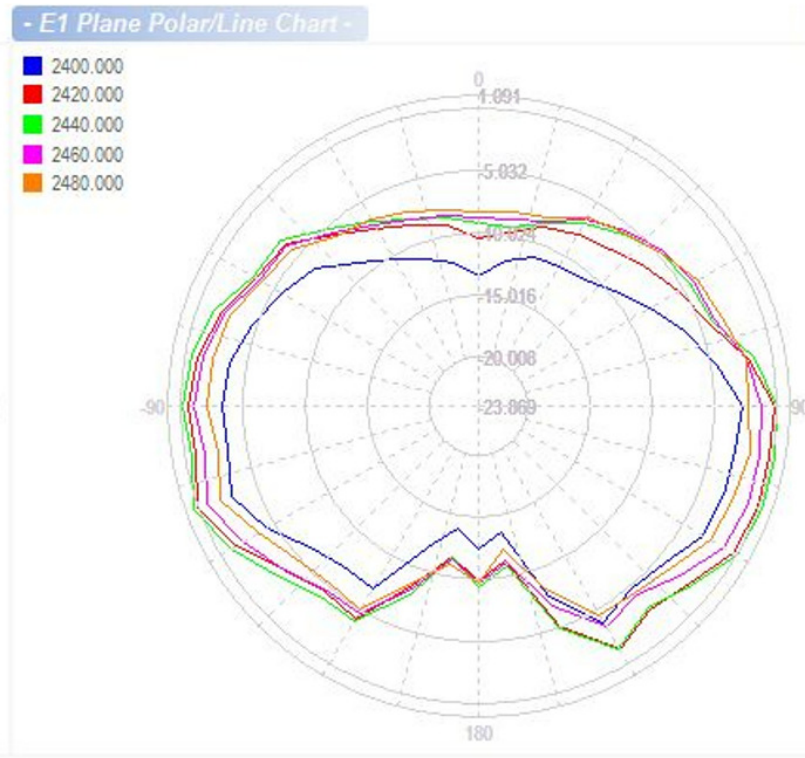


5.3 3D-PLOTS



5.4 2D-Gain



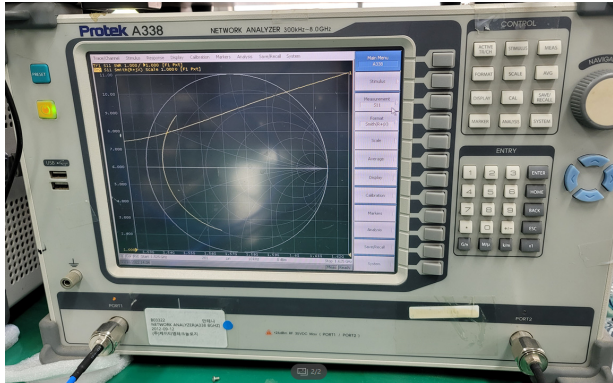


6. Passive Measurement

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	120.0	180.0	-1.483	170.0	320.0	-20.972	-5.371	29.031
2,420.000	120.0	190.0	0.784	170.0	330.0	-22.556	-2.793	52.570
2,440.000	110.0	130.0	1.091	170.0	340.0	-23.869	-2.460	56.751
2,460.000	110.0	130.0	0.125	140.0	0.0	-19.598	-3.481	44.862
2,480.000	100.0	190.0	-0.514	140.0	0.0	-19.549	-4.015	39.676
2,500.000	110.0	180.0	0.726	40.0	10.0	-18.354	-3.182	48.063

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

