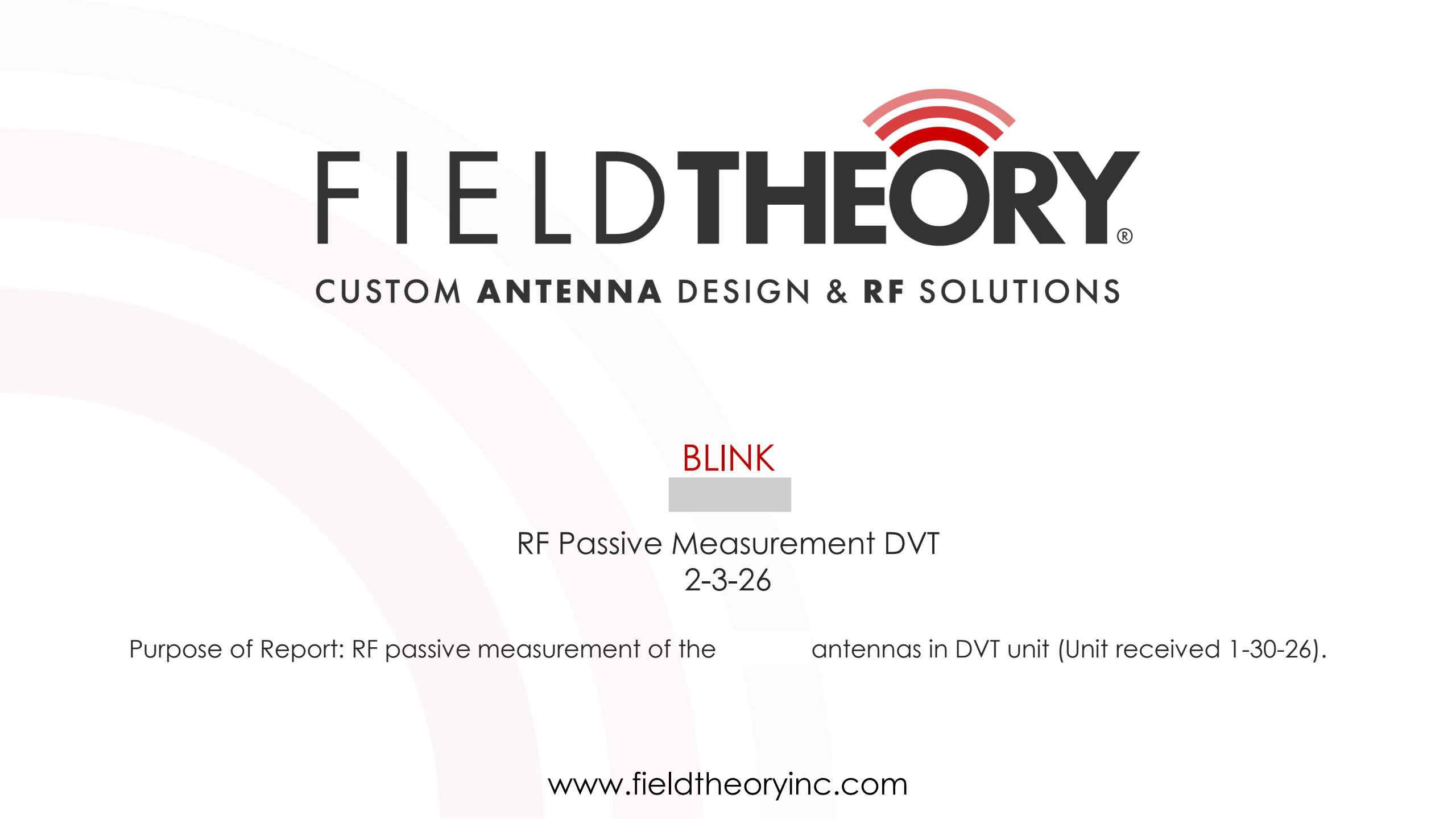




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RF Passive Measurement DVT
2-3-26

Purpose of Report: RF passive measurement of the antennas in DVT unit (Unit received 1-30-26).

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Outline:

- Testing Conditions
- DUT Photos
- Summary
- Wi-Fi Antenna [DVT]
 - S-Parameters
 - Passive Efficiency
 - Peak Gain
 - 1D Radiation Patterns
 - 2D Heat Maps and 3D Spherical
 - Passive Efficiency & Peak Gain to 8.5GHz



Testing Conditions

Field Theory Setup

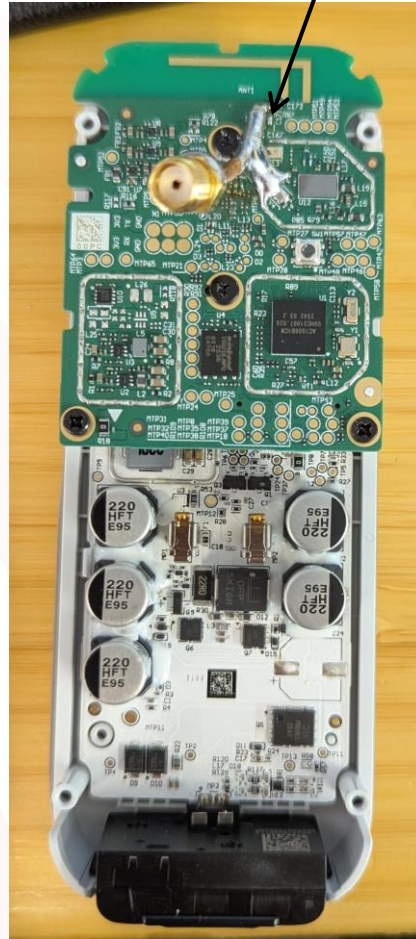
Test Conducted	Passive RF measurements of Antennas DVT
Equipment Used	3-meter anechoic antenna chamber equipped with a dual-pol quad-ridge horn receiver antenna and an EL-AZ positioner with laser positioner
Notes on DUT	GVP5-B801-6046-GUE2
Lab Address	Field Theory Inc 1029 Butterfield Rd Vernon Hills, IL 60061
Tester	Zabed Iqbal

Equipment	Manufacturer	Model No.	Serial No.	last Cal.	Due Date
Network Analyzer	Anritsu	MS46122B	2135304	7/10/2025	11/10/2026
Quad-Ridge Horn Antenna	ETS-Lindgreen	3164-10	217936	7/10/2025	11/10/2026
3 Meter Anechoic Chamber	Braden Shielding Systems	NA	F70331	NA	NA
RF Cable	ENS Microwave	S160-160-MKS-MKS	3042020	7/10/2025	11/10/2026
RF Cable	ENS Microwave	S160-120-MKS-MKS	12042018	7/10/2025	11/10/2026
RF Cable	ENS Microwave	EMC1-K1K1-72	1GVT4 19002201	7/10/2025	11/10/2026
RF Cable	ENS Microwave	EMC1-K1K1-72	1GVT4 19002202	7/10/2025	11/10/2026
RF Cable	ENS Microwave	EMC1-K1K1-216	1GVT4 19002202 001	7/10/2025	11/10/2026
RF Cable	ENS Microwave	EMC1-K1K1-216	1GVT4 19002202 002	7/10/2025	11/10/2026
DUT Positioner	DE LCC	D6025	NA	NA	NA
RF Switch	Mini-Circuits	RC-1SPDT-A18	1810010005	7/10/2025	11/10/2026



GVP5-B801-6046-GUE2

Pigtail was inserted at the RF switch



Black Rubber was removed



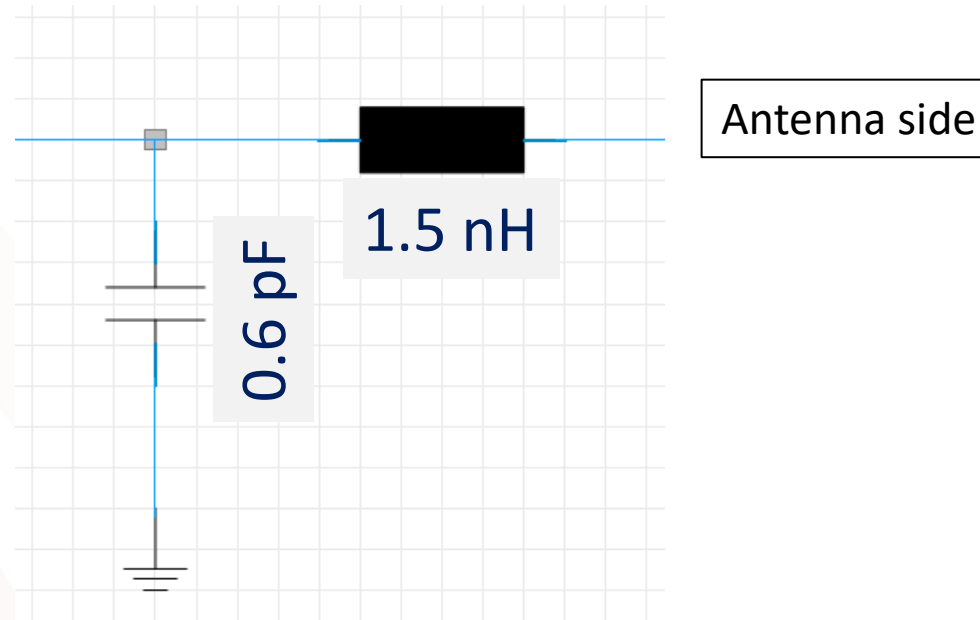
	Frequency(GHz)	Efficiency(dB)	Peak Gain(dBi)
DVT as received [With LPF match]	2.4 GHz	-0.69	3.10 dBi
	2.44 GHz	-0.53	3.24 dBi
	2.48 GHz	-0.89	3.05 dBi

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Wi-Fi Antenna [DVT]

[Unit: GVP5-B801-6046-GUE2]

LPF Matching

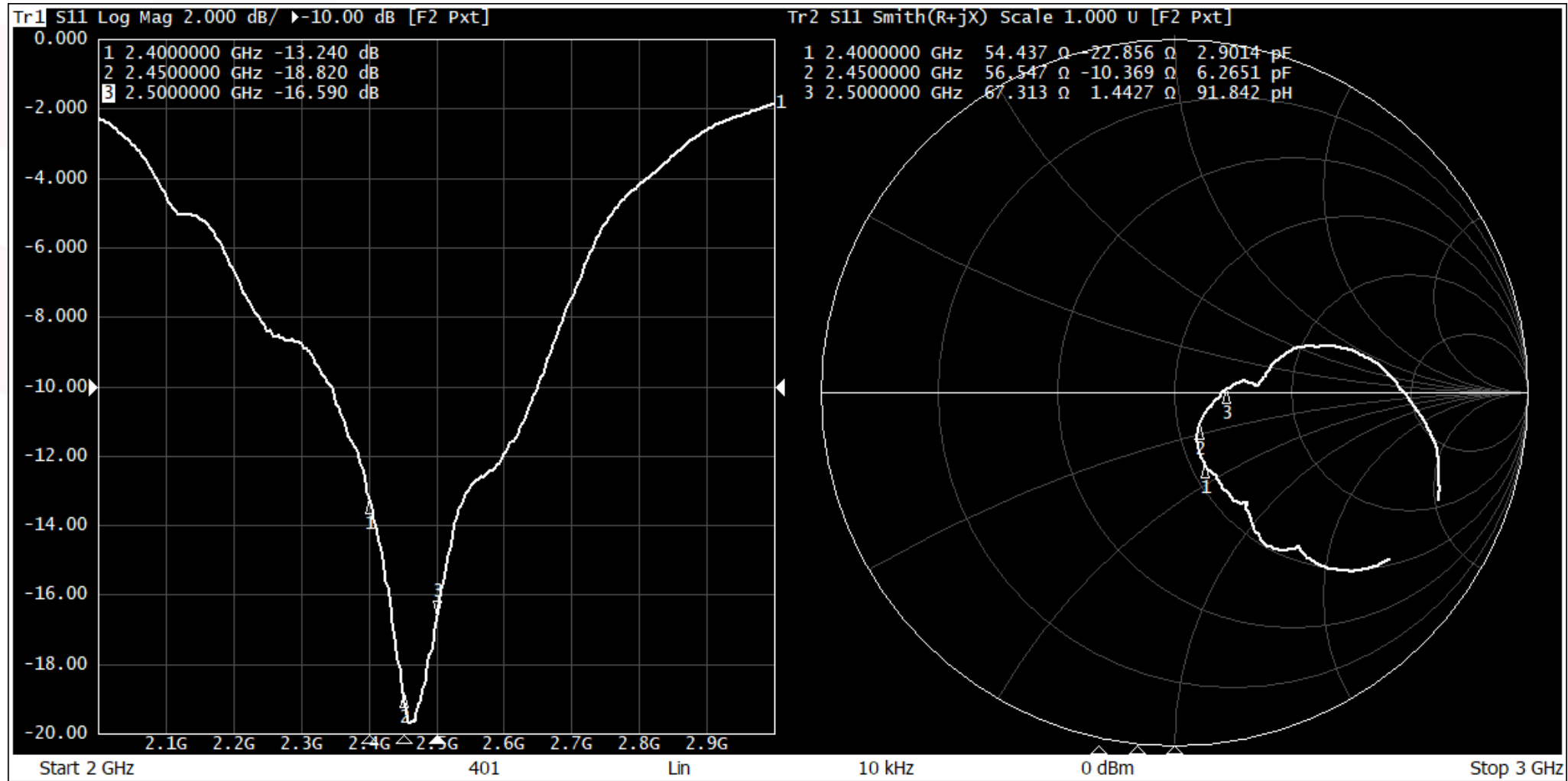


Name	Value
C	0.6 pF
L	1.5 nH

*Matching is the same as in the EVT, no change needed

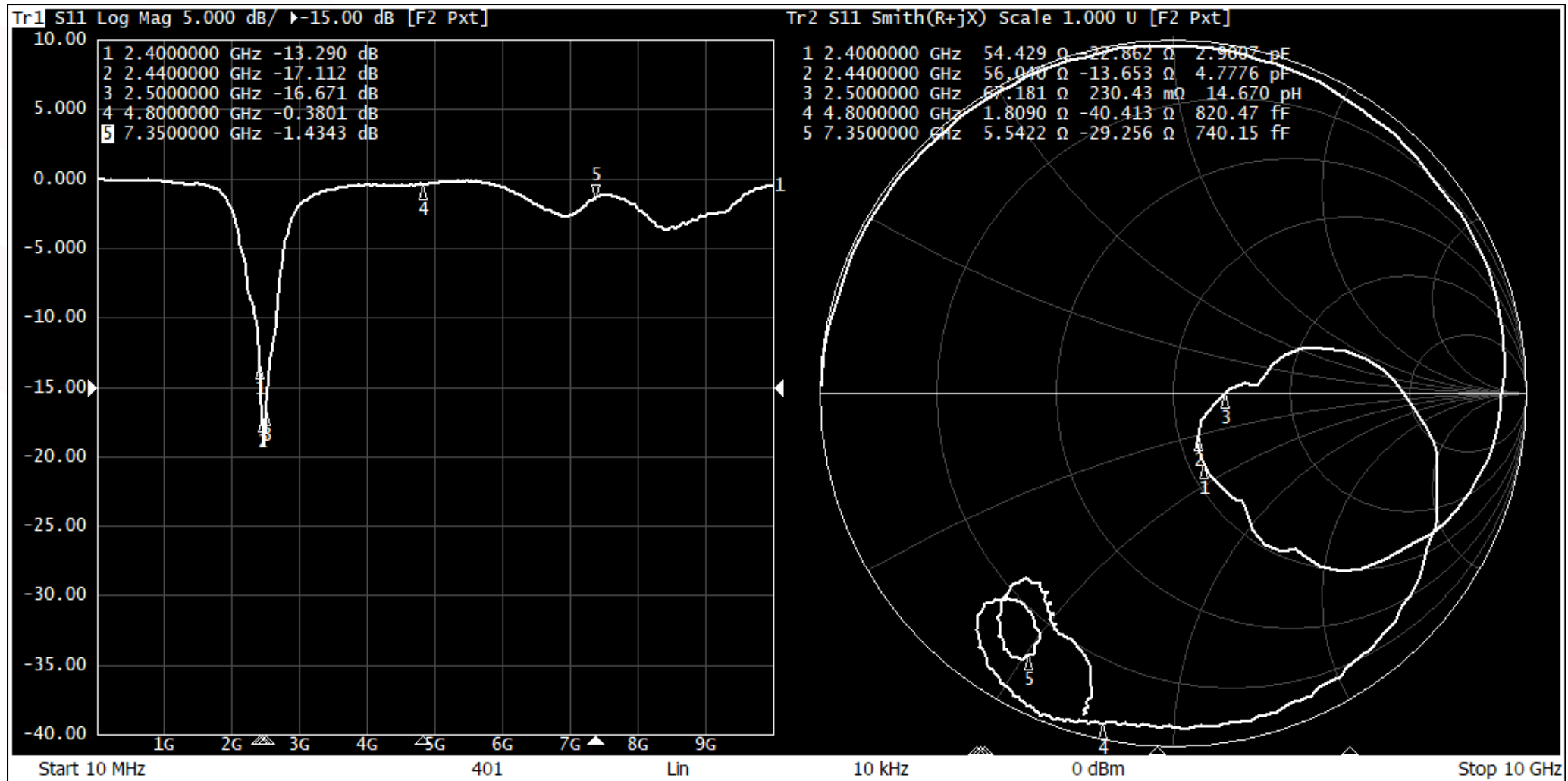
S-parameter

Wi-Fi Antenna [DVT]



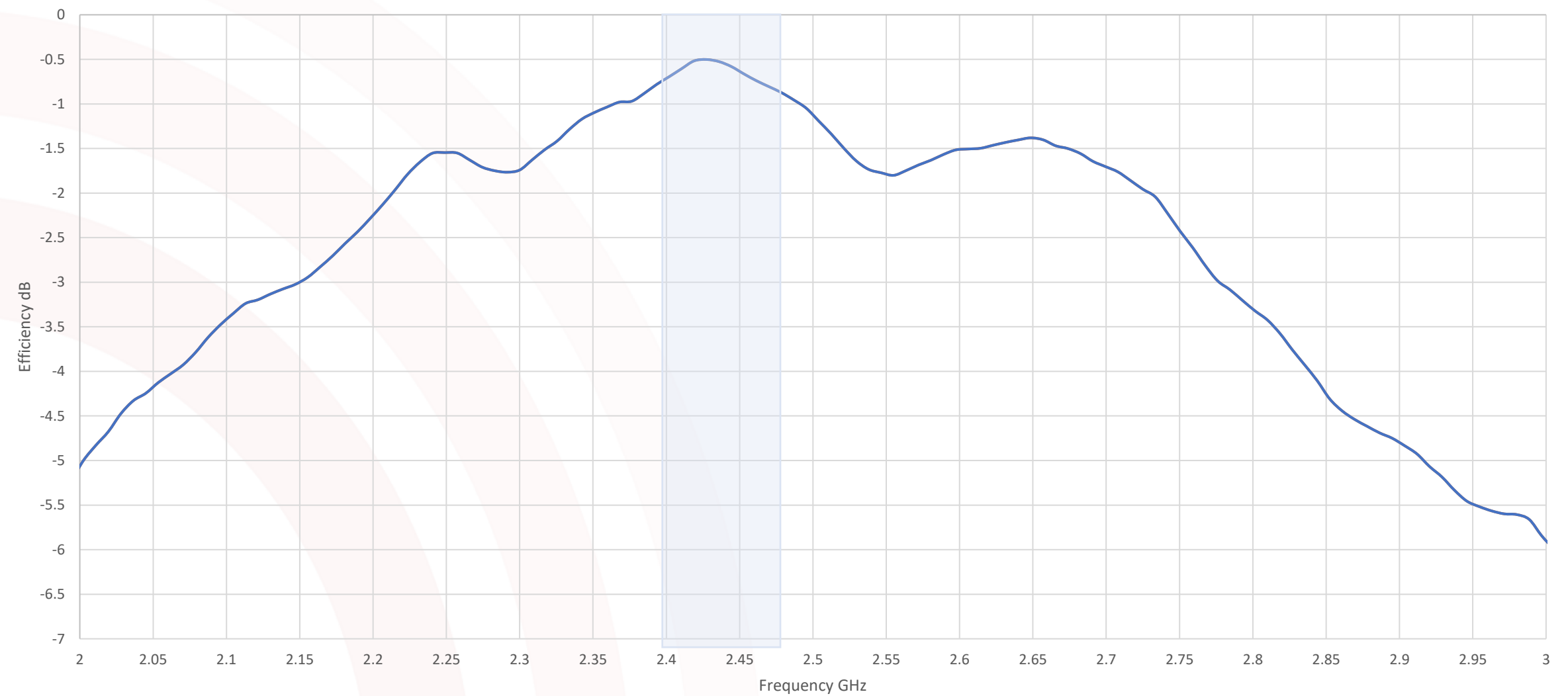
S-parameter [0-10 GHz]

Wi-Fi Antenna [DVT]



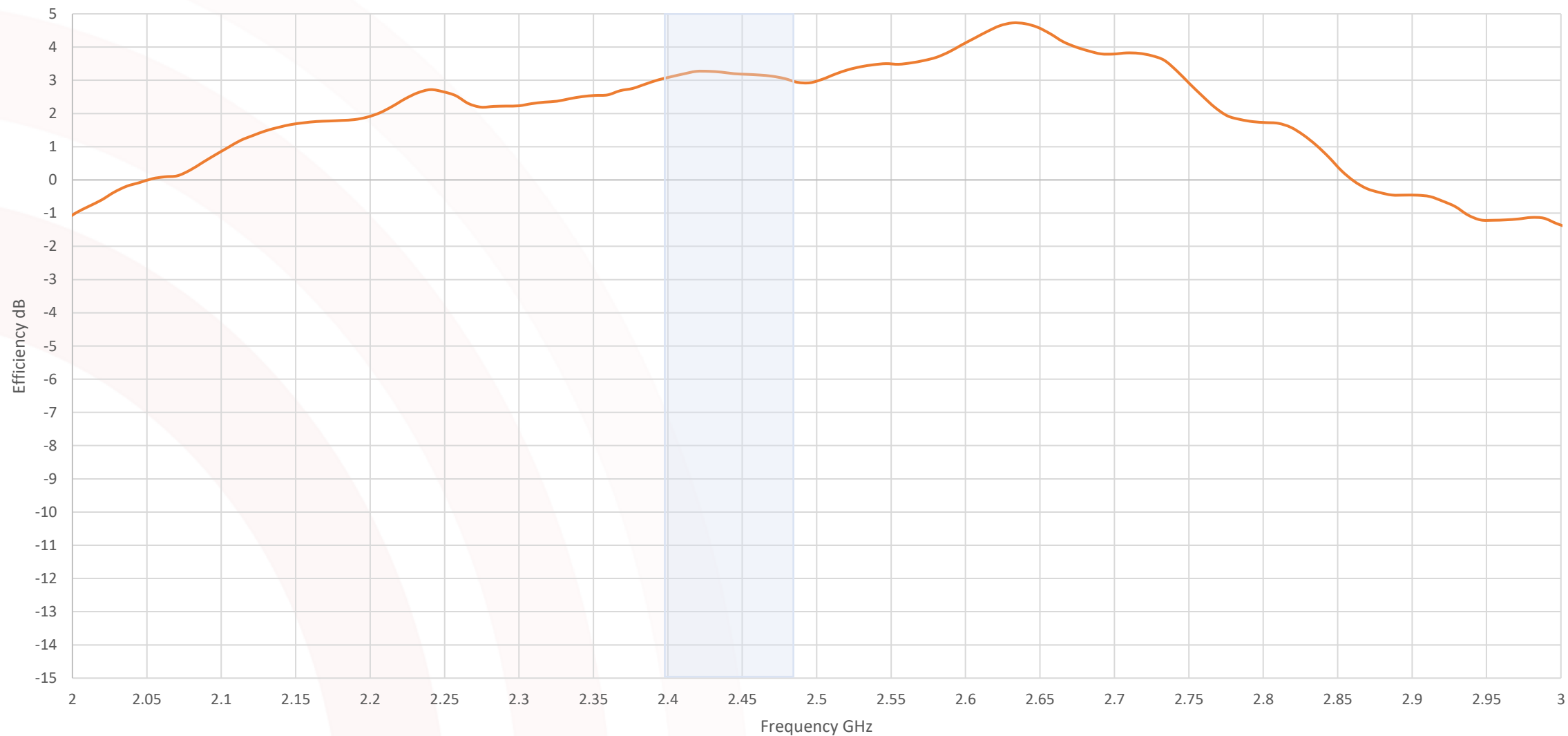
Passive Efficiency

Wi-Fi Antenna [DVT]



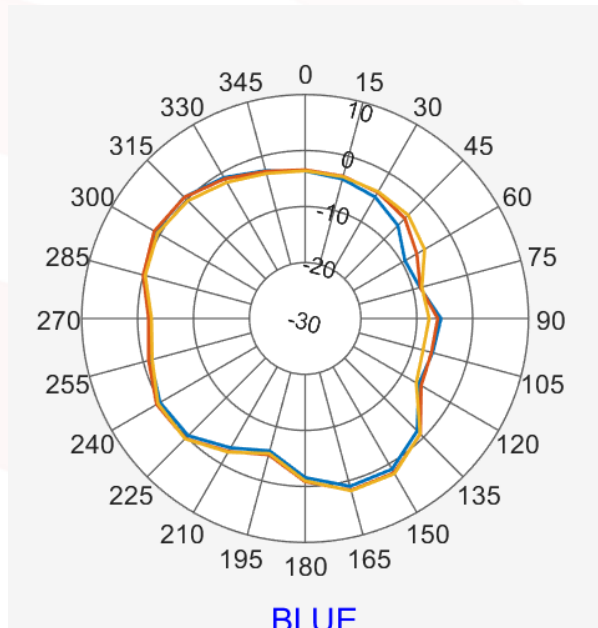
Peak Gain

Wi-Fi Antenna [DVT]

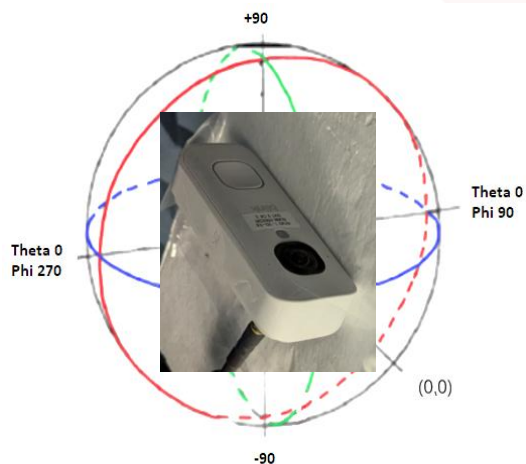
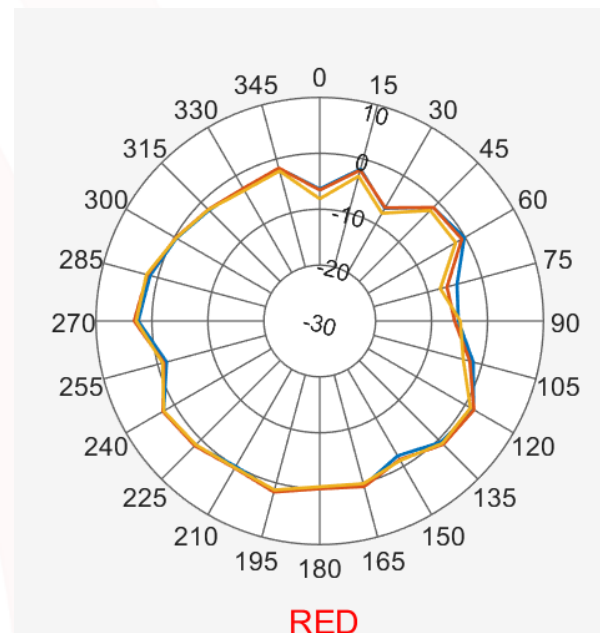
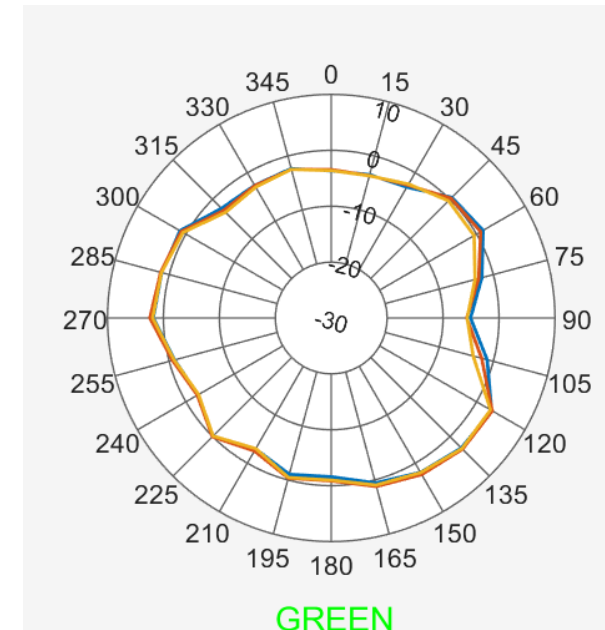


1D Radiation Patterns

Wi-Fi Antenna [DVT]



— 2.402 GHz (A)
— 2.436 GHz
— 2.4785 GHz

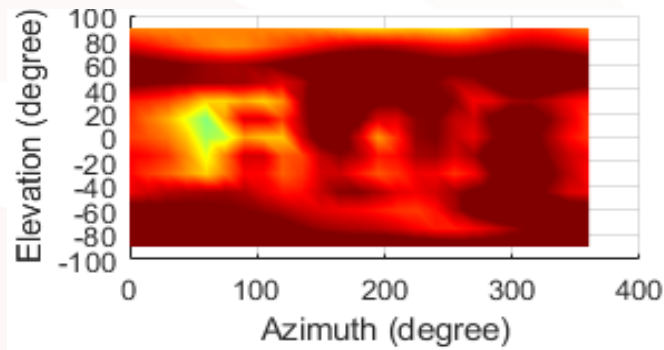


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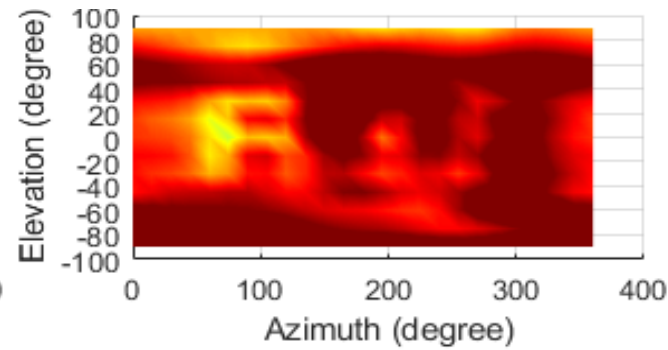
2D Heat Map & 3D Spherical

Wi-Fi Antenna [DVT]

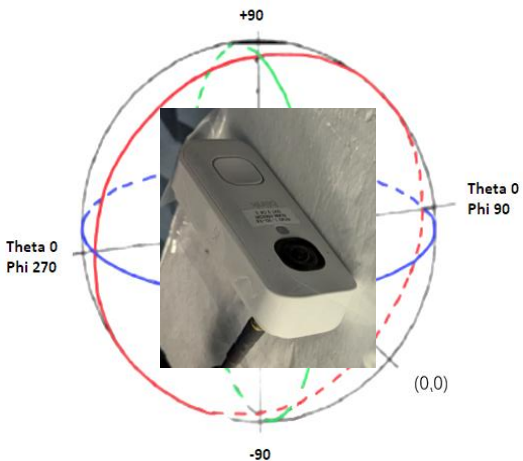
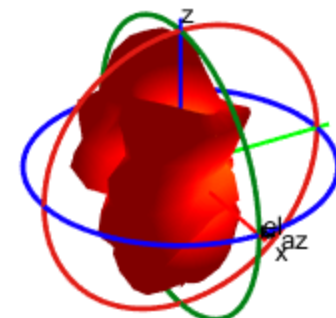
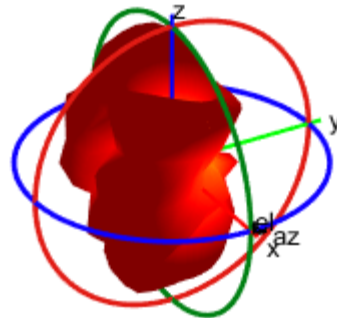
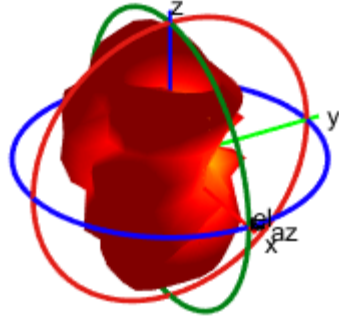
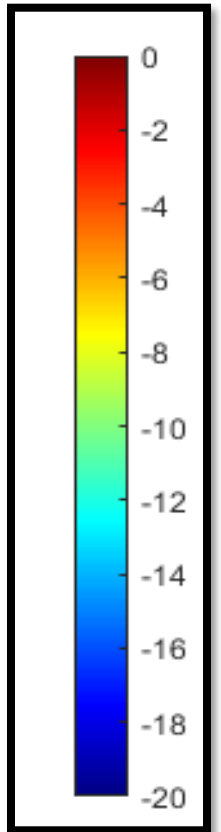
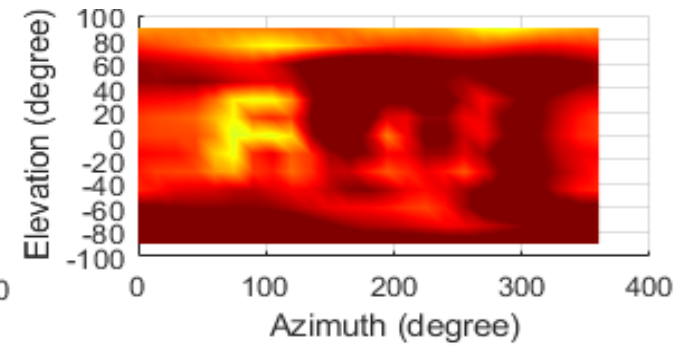
2.4 GHz



2.44 GHz



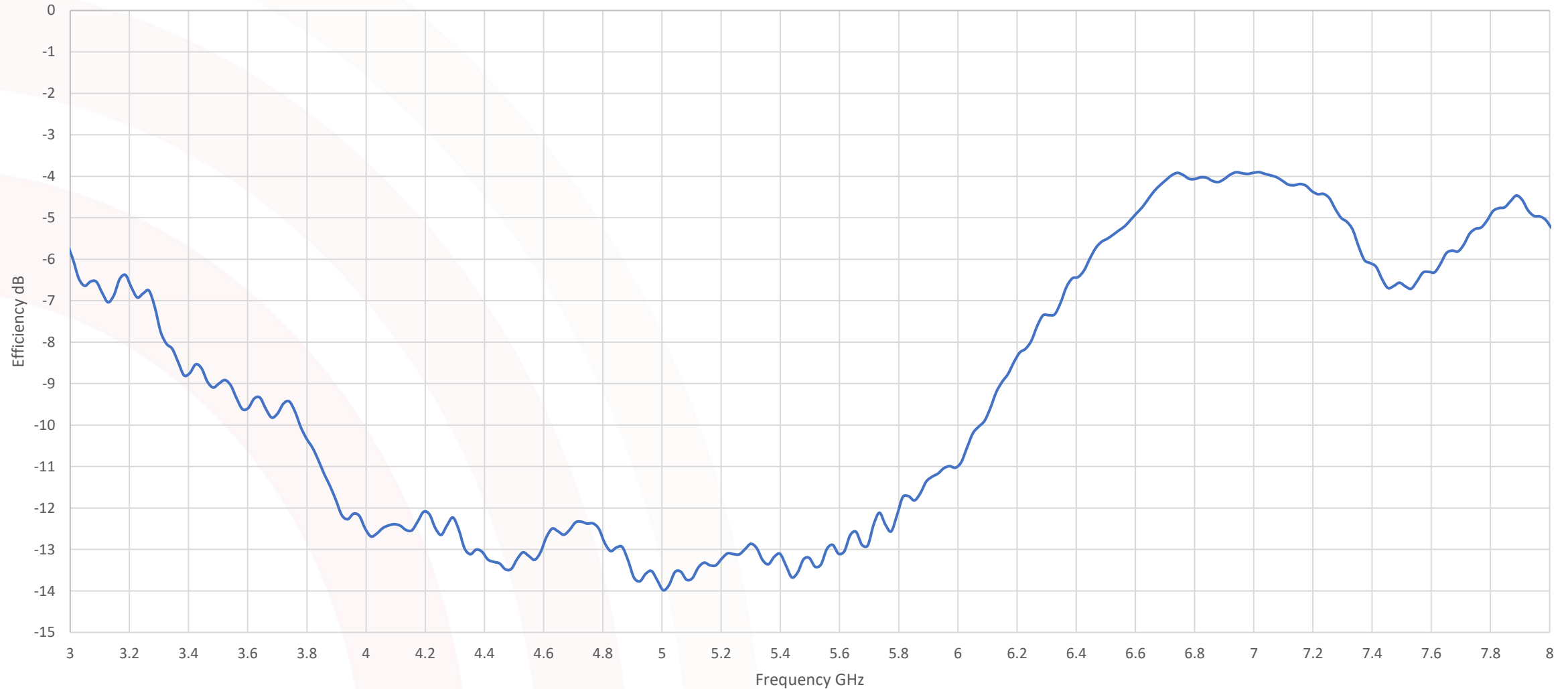
2.48 GHz



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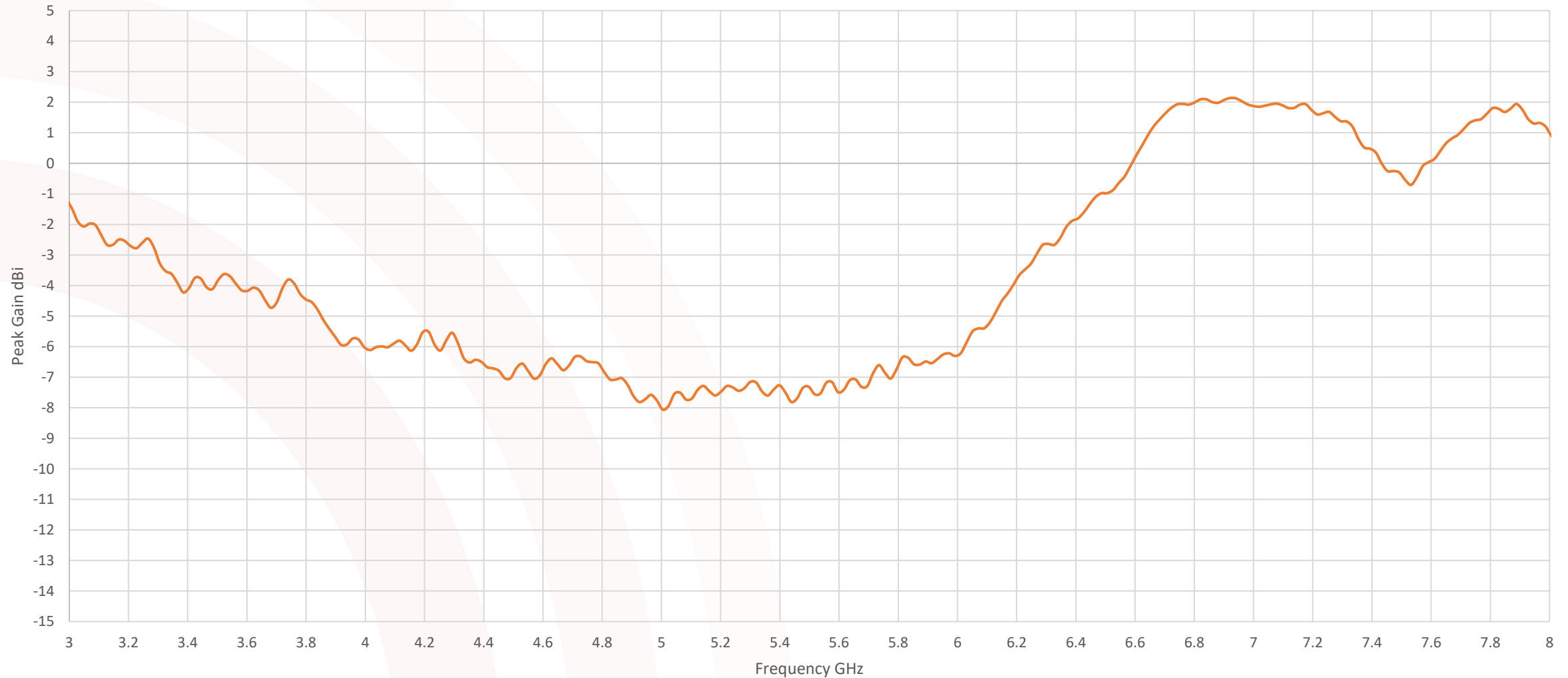
Passive Efficiency [up to 8.0 GHz]

Wi-Fi Antenna [DVT]



Peak Gain [up to 8.0 GHz]

Wi-Fi Antenna [DVT]





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Questions?

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