

SAV-1834031920-KF-S1-QR

Quad-Ridged, Dual Polarized Horn Antenna, 18 to 40 GHz

SAV-1834031920-KF-S1-QR is a quad-ridged horn antenna that operates from 18 to 40 GHz. The antenna offers a typical gain of 19 dBi and a nominal 3 dB beamwidth of 20° for the E-plane and 15° for the H-plane. The antenna supports both circular and linear polarized waveforms. The antenna also includes a 3D printed mounting fixture with a thru ¼-20 holes for convenient tripod mounting and 4 thru ¼-20 thru holes for non-tripod mounting. The antenna ports are two female K connectors.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		40 GHz
Gain		19 dBi	
Polarization		Linear and Circular	
E-Plane 3 dB Beamwidth		20°	
H-Plane 3 dB Beamwidth		15°	
Port Isolation		20 dB	
Port Return Loss		8 dB	
Power Handling			25 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Ports	2x K(F) Coax Connectors
Body Material	Aluminum
Lens Material	HDPE
Finish	Black Paint
Fixture Material	PLA
Outline	AV-C19-QR

ECCN

EAR99

FEATURES

- Coaxial Connector for RF Input
- Broadband Coverage
- Circular and Linear Polarization
- Good Impedance Match

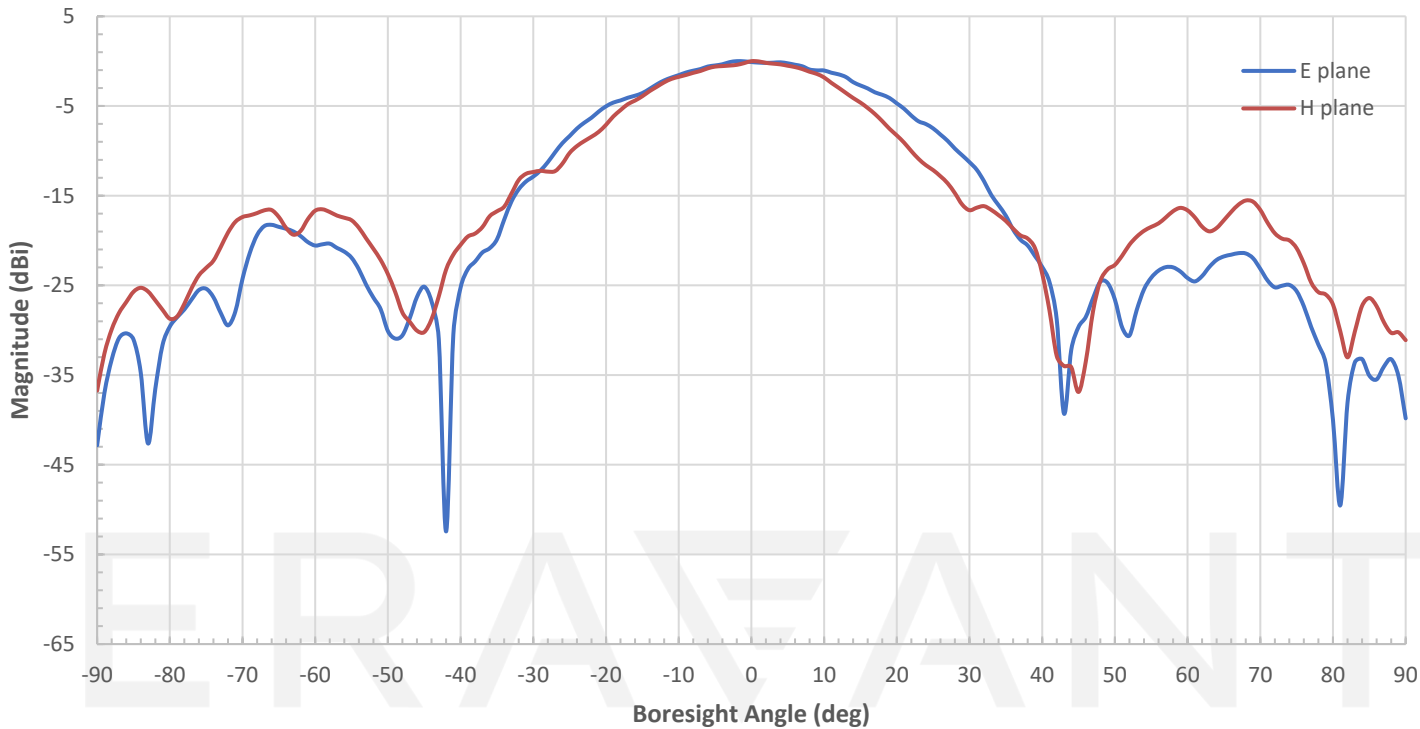
APPLICATION

- Antenna Ranges
- Antenna Gain Measurements
- Systems Setups

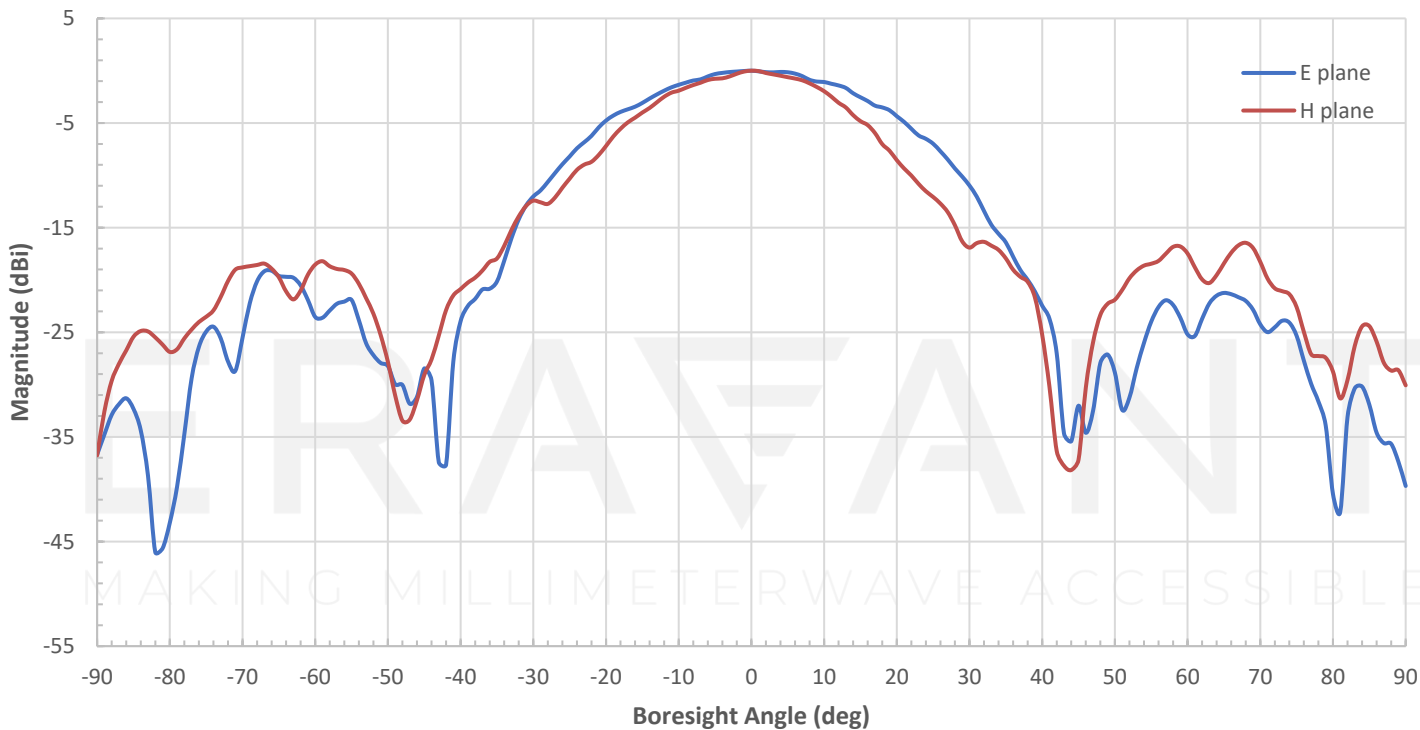
SUPPLEMENTAL DETAILS



Measured Antenna Patterns @ 18 GHz, Port 1

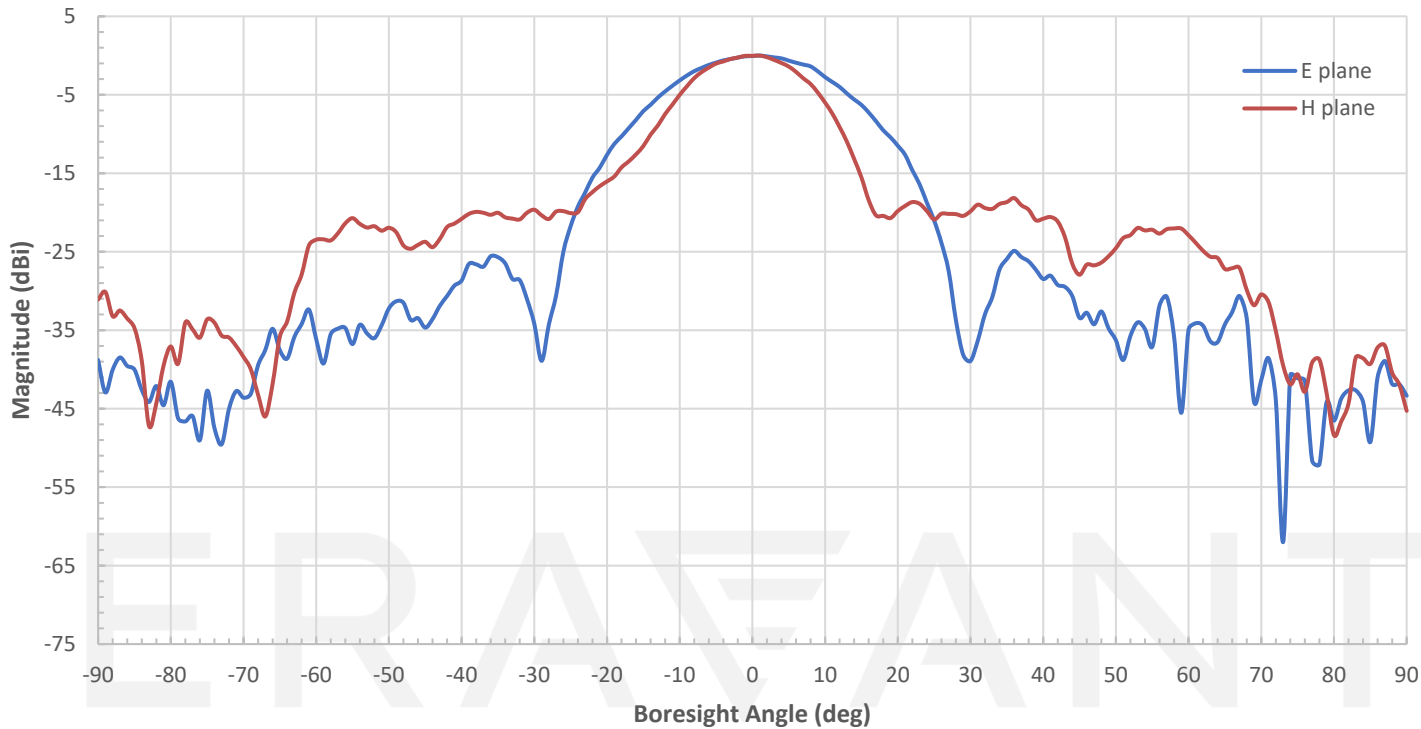


Measured Antenna Patterns @ 18 GHz, Port 2

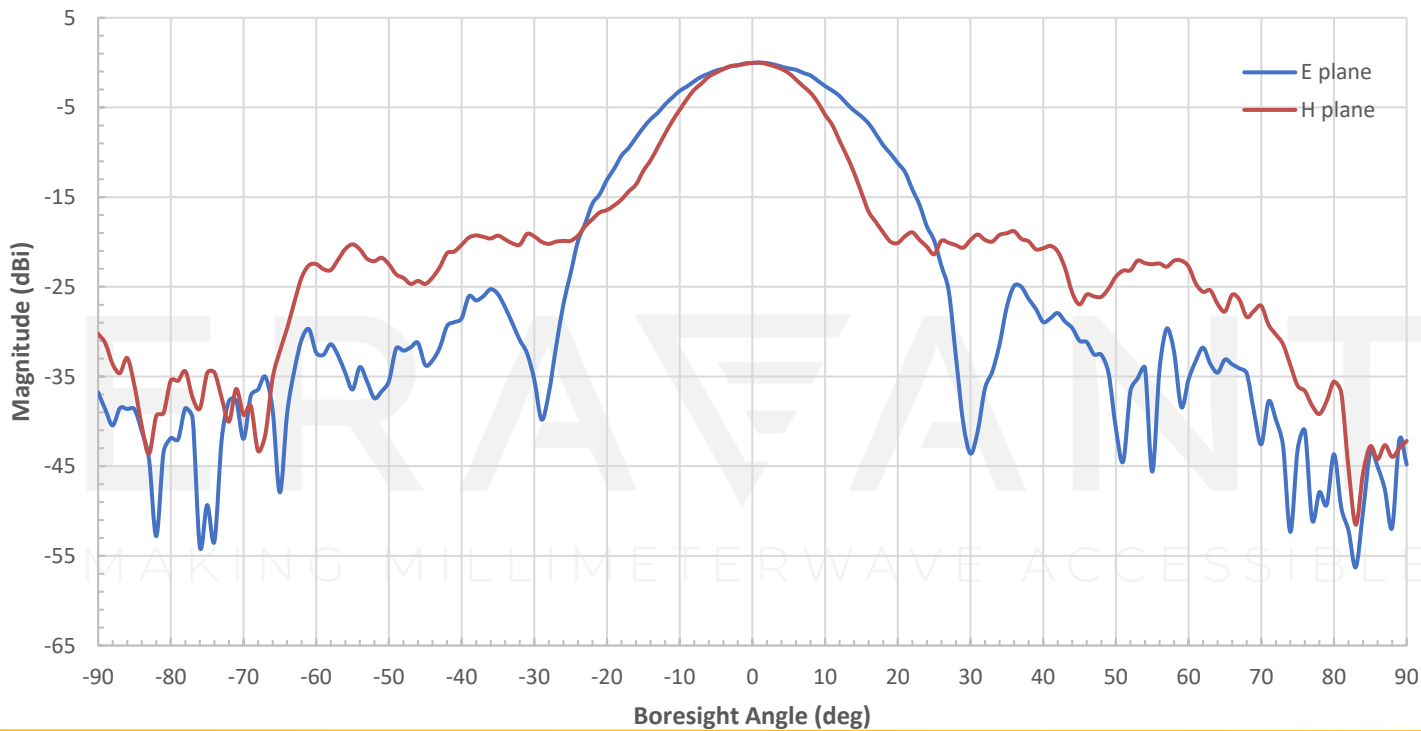


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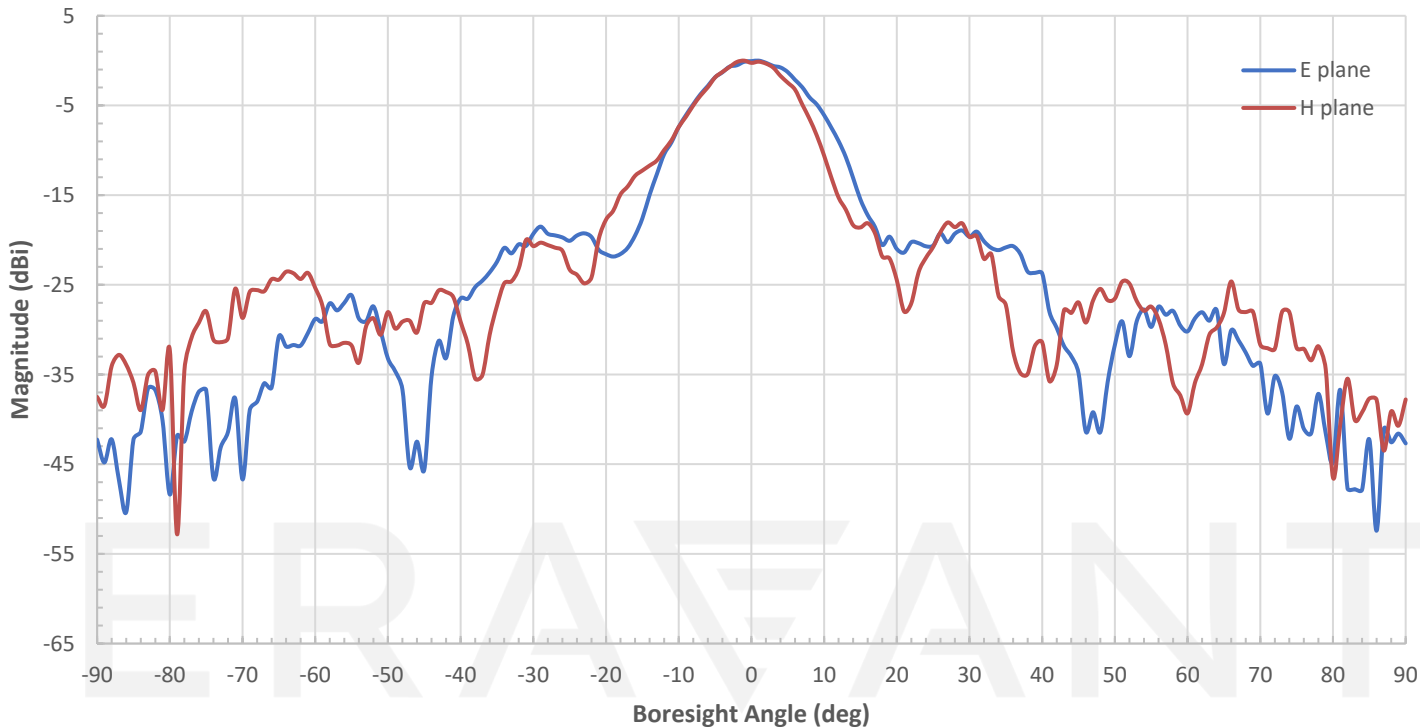
Measured Antenna Patterns @ 29 GHz, Port 1



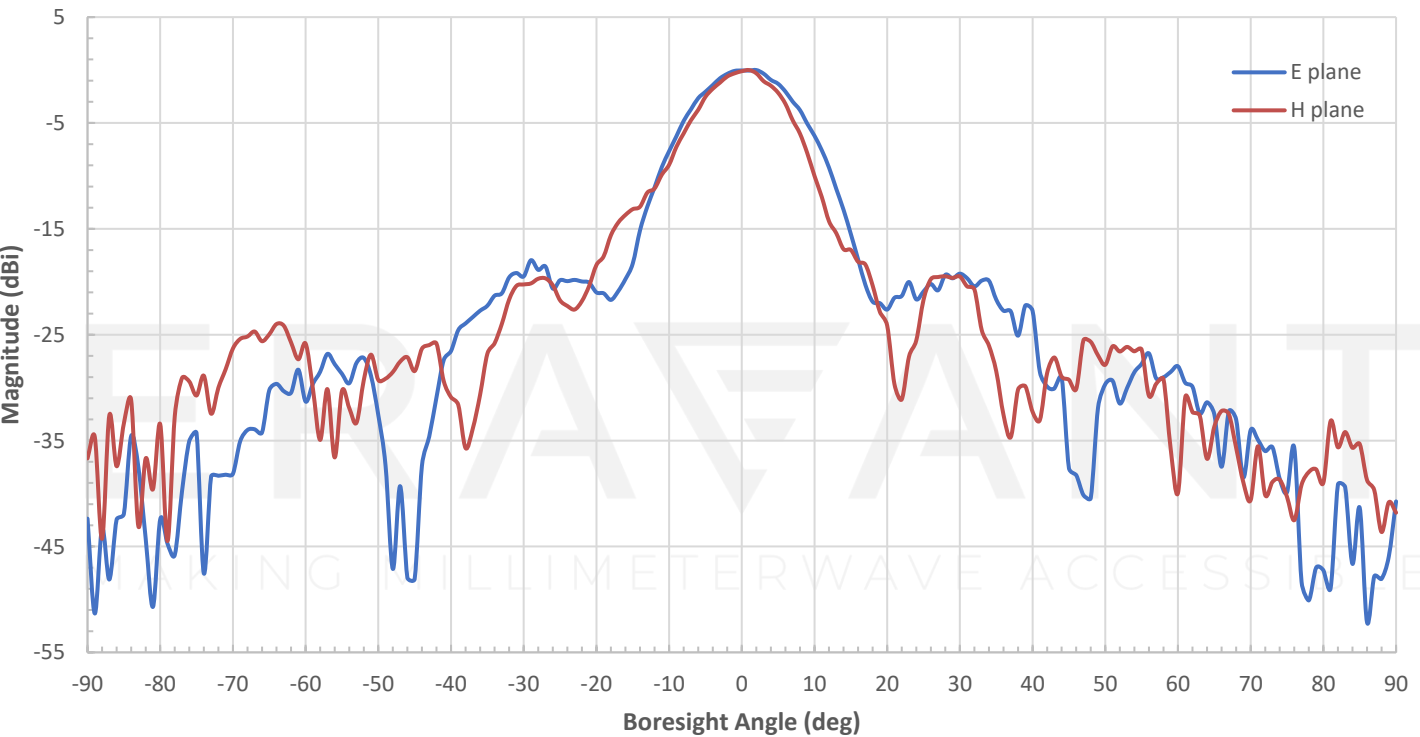
Measured Antenna Patterns @ 29 GHz, Port 2



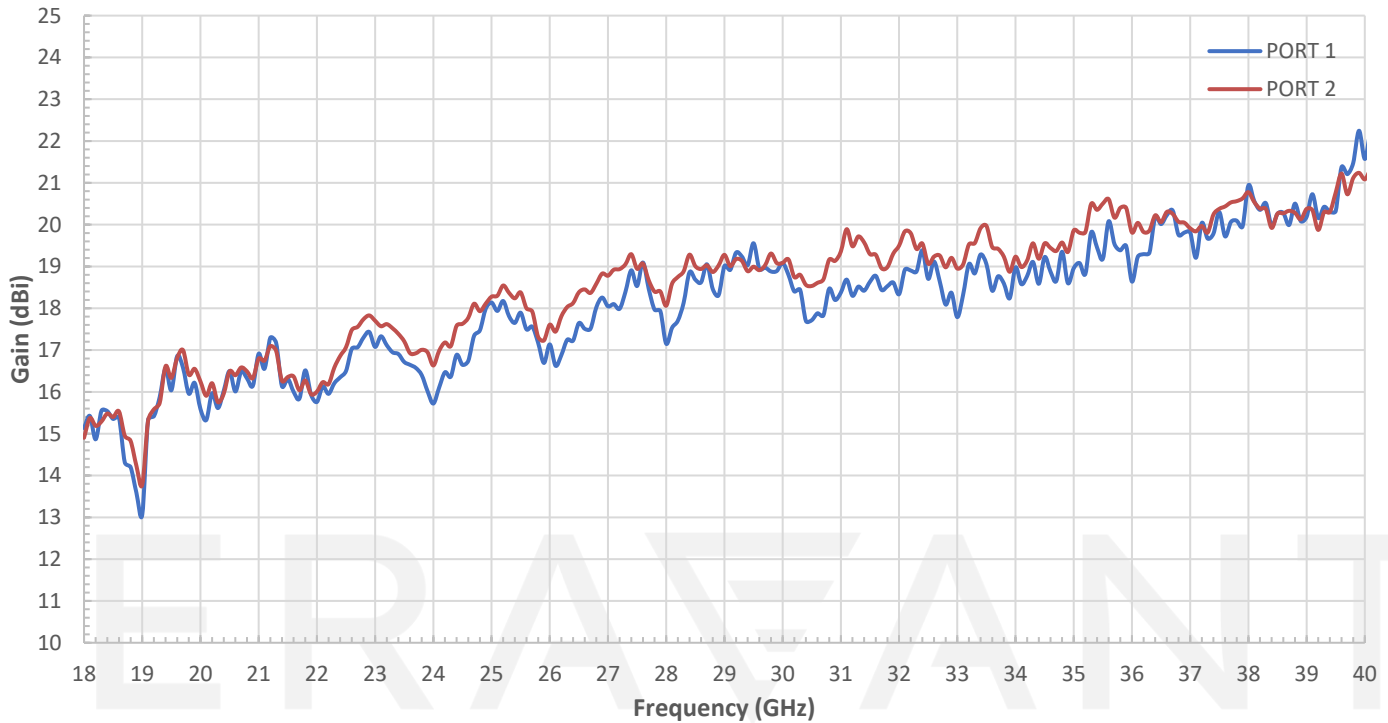
Measured Antenna Patterns @ 40 GHz, Port 1



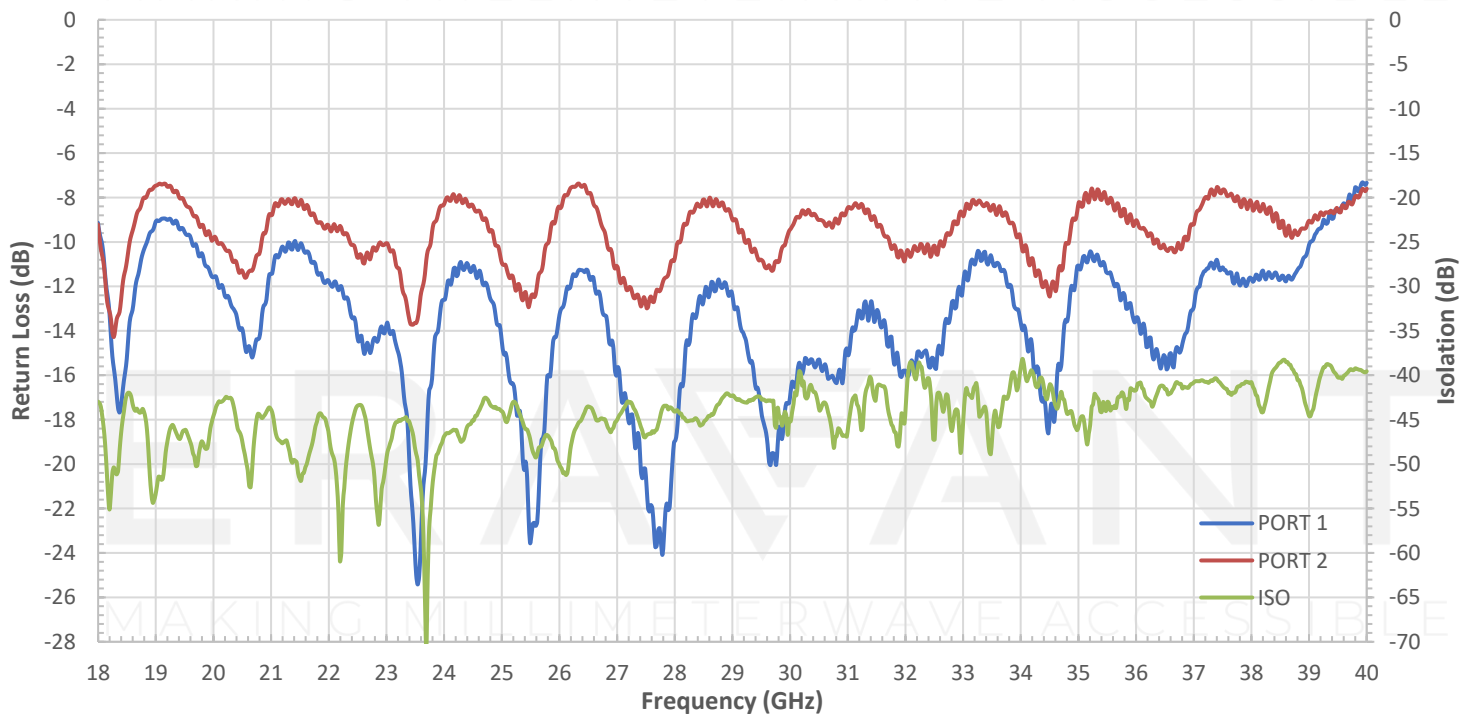
Measured Antenna Patterns @ 40 GHz, Port 2



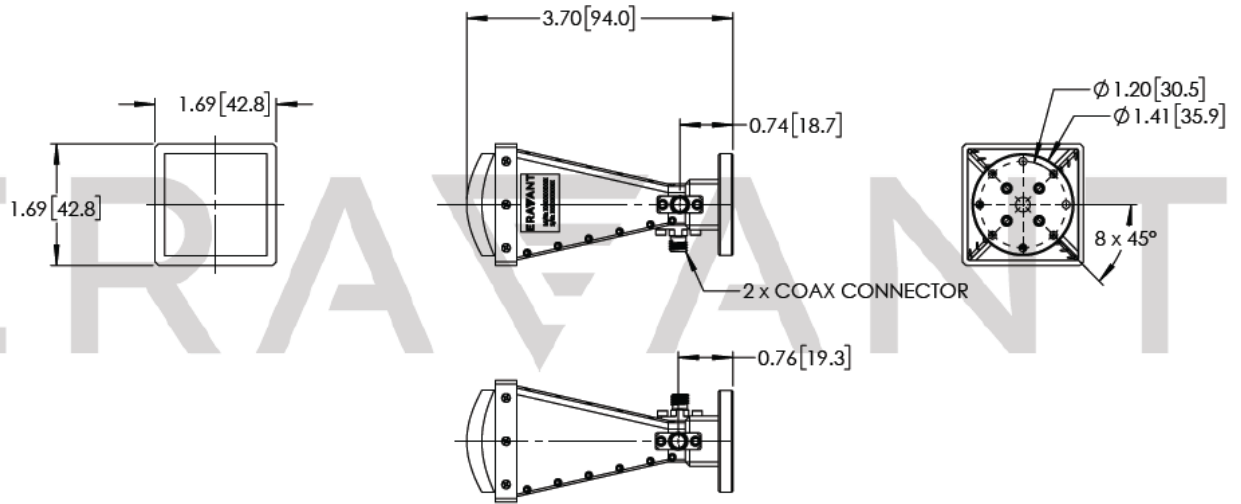
Measured Gain vs Frequency



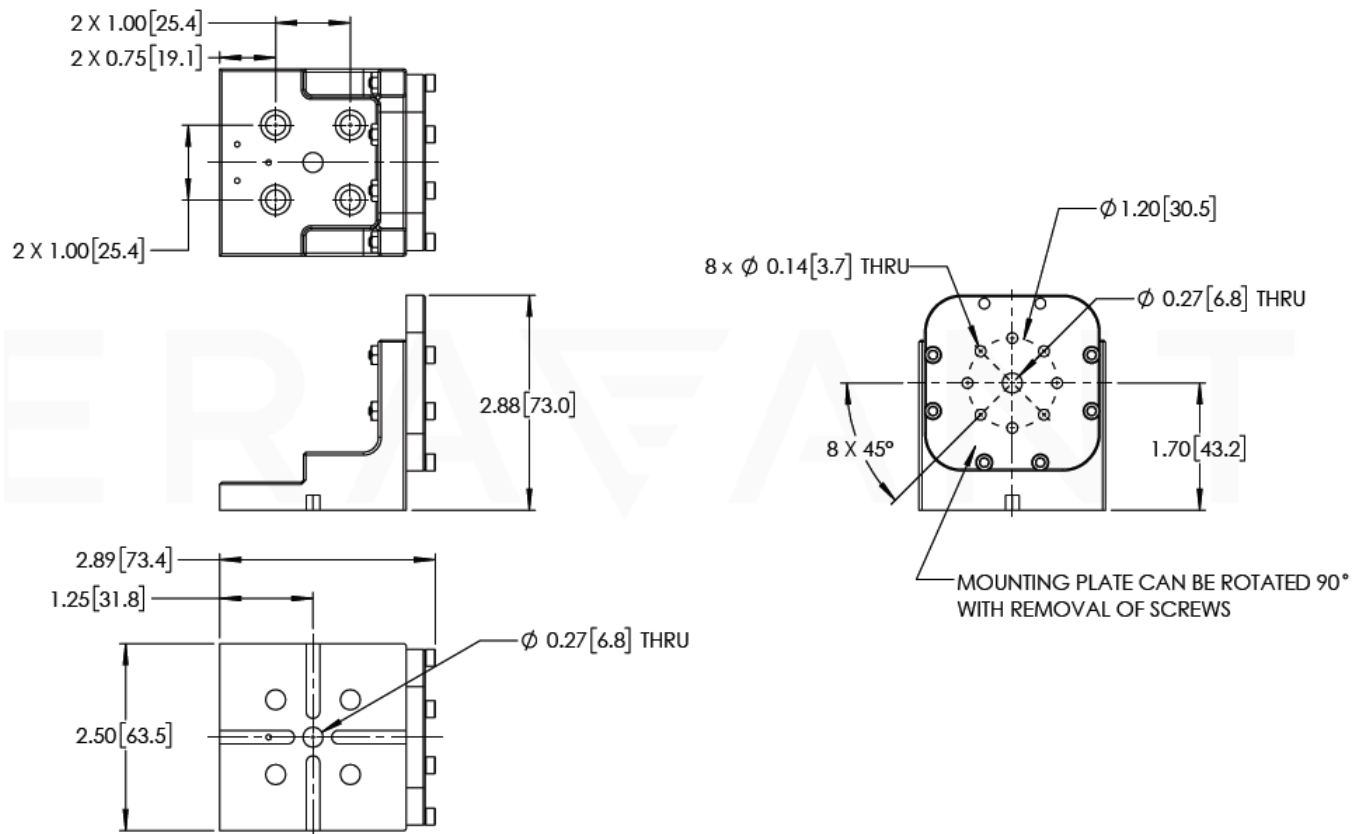
Measured Return Loss vs Frequency



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Antenna Mount Outline:



NOTE:

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the antenna will cause performance degradation and may damage or destroy the unit.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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