SAH-6039031060-141-S1-122-DP

WR-12 Dual Polarized Choke Flange Feed Horn Antenna, 60 to 90 GHz, 10 dBi Gain

SAH-6039031060-141-S1-122-DP is a dual polarized, WR-12 choke flange feed horn antenna assembly that operates from 60 to 90 GHz. The assembly features an integrated orthomode transducer (OMT) that provides high port isolation and a broad band scalar horn that provides low sidelobe levels. The OMT enables the antenna to separate a circular or elliptical polarized waveform into two linear, orthogonal waveforms or vice versa. The dual polarized horn also supports either vertical or horizontal polarized waveguide forms with 40 dB typical isolation between the V and H ports. At center frequency, the horn antenna exhibits 10 dBi nominal gain, typical half power beamwidth of 60 degrees and typical sidelobe levels of -30 dB. The horizontal and vertical ports are WR-12 waveguides with UG-387/U anti-cocking flanges. Coaxial port configurations are also available under different model numbers. The orthomode transducer **(Model SAT-FE-12212-S1),** compact square to circular transition **(Model SWT-122141-SB-C-QC),** and choke flange feed horn antenna **(Model SAH-6039031060-141-S1)** can be purchased separately.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	60 GHz		90 GHz
Gain		10 dBi	
3dB Beamwidth, E-Plane @ 75 GHz		60°	
3dB Beamwidth, H-Plane @ 75 GHz		60°	
Sidelobe Levels		-30 dB	
V and H Port Isolation		40 dB	
Port Return Loss		15 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
RF Ports	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Material	Aluminum, Brass
Finish	Gold Plated
Weight	3.0 Oz
Outline	AH-RE10-141-122-A-DP

ECCN

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FEATURES

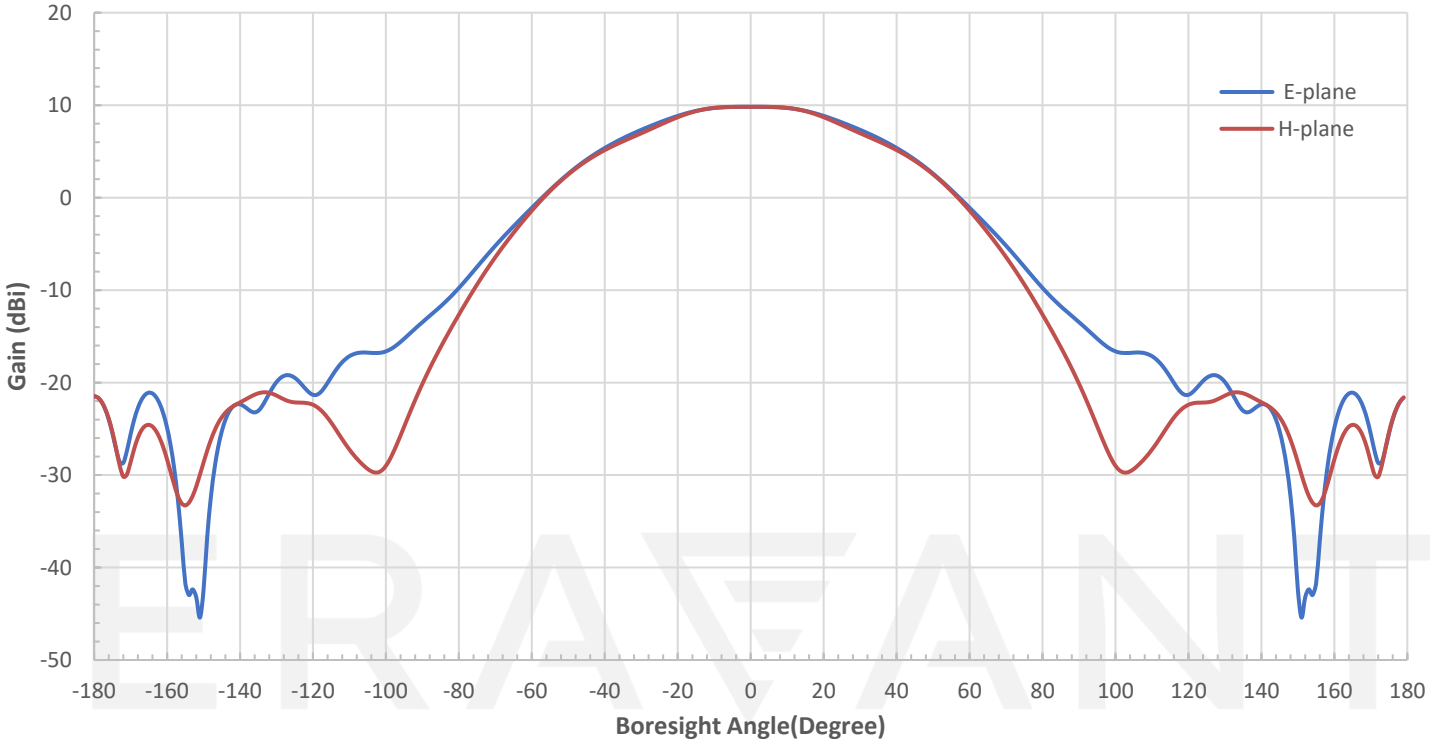
- Full Band Coverage
- Circular Waveguide Interface
- High Port Isolation

APPLICATIONS

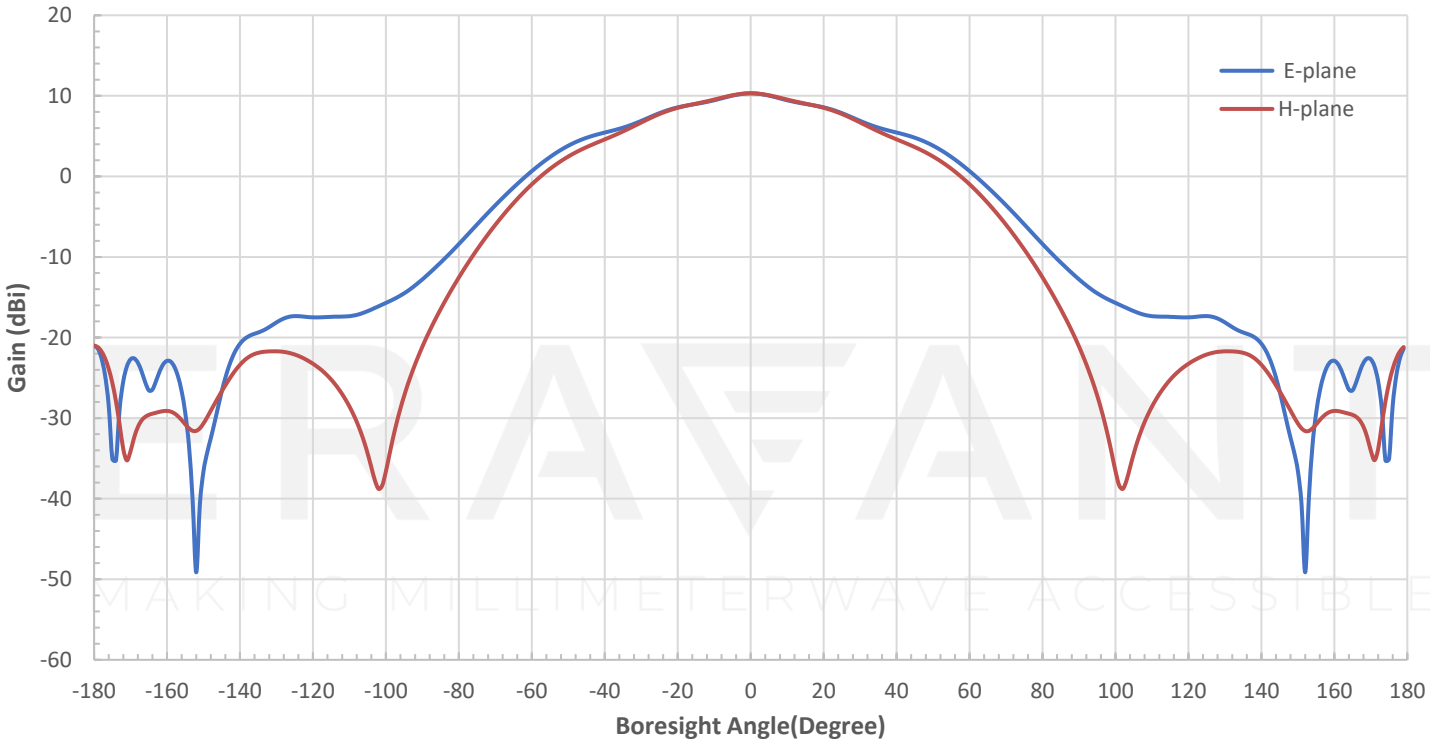
- Radar System
- Communication System
- Circular and Linear Waveform Separation and Combination

SUPPLEMENTAL DETAILS

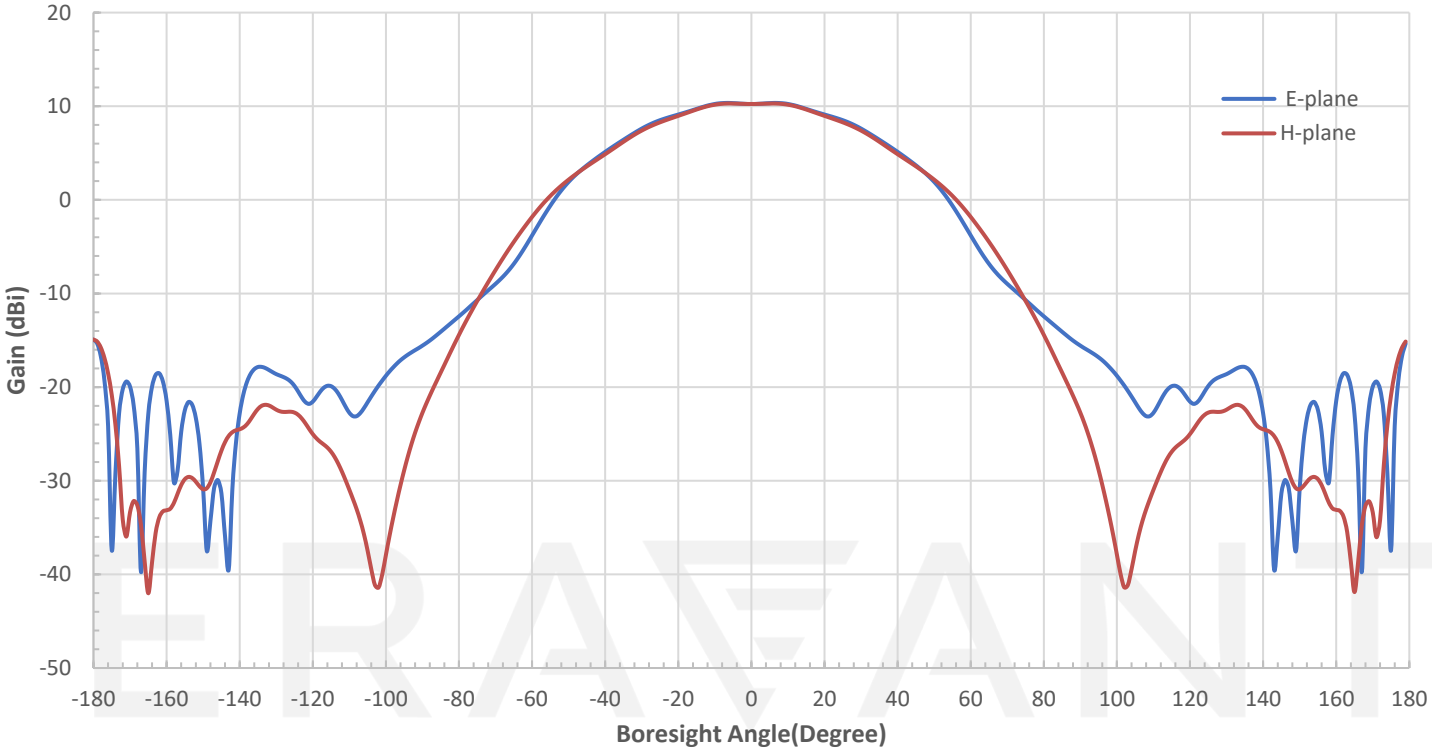
Simulated Pattern @ 60 GHz



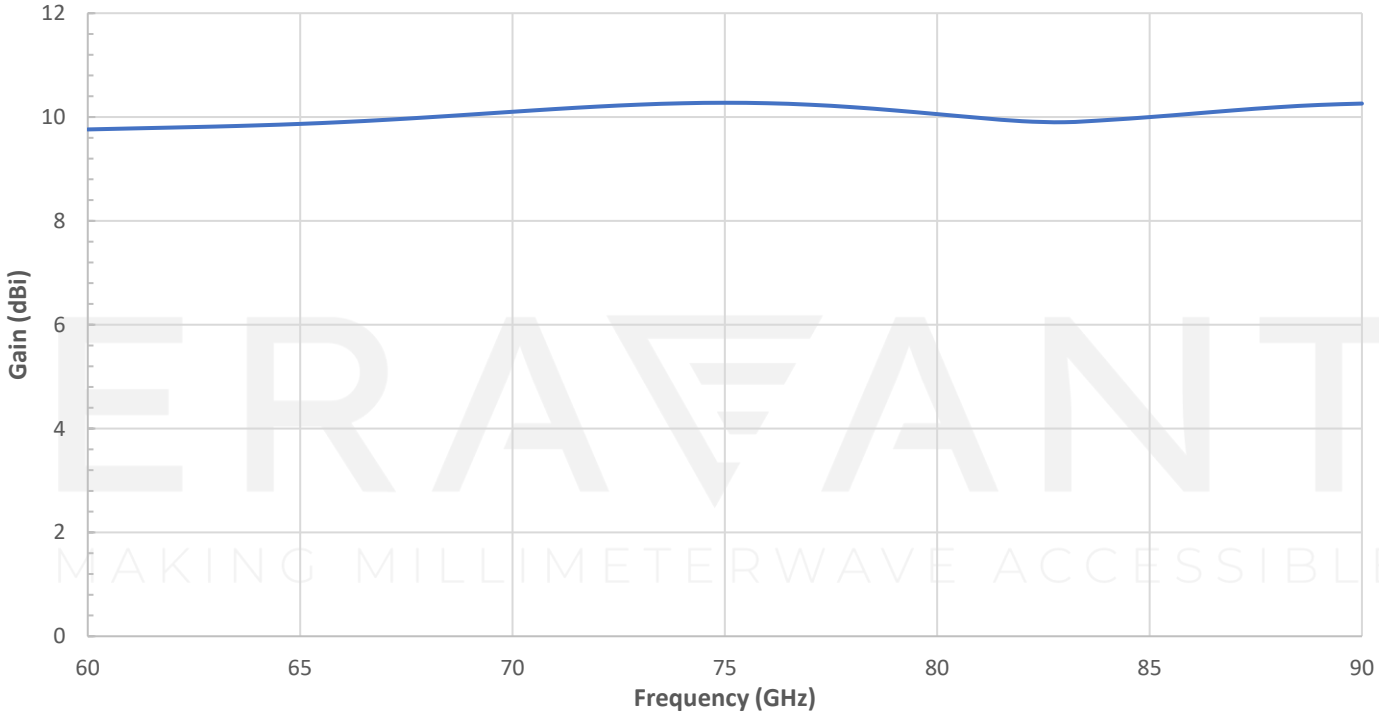
Simulated Pattern @ 75 GHz



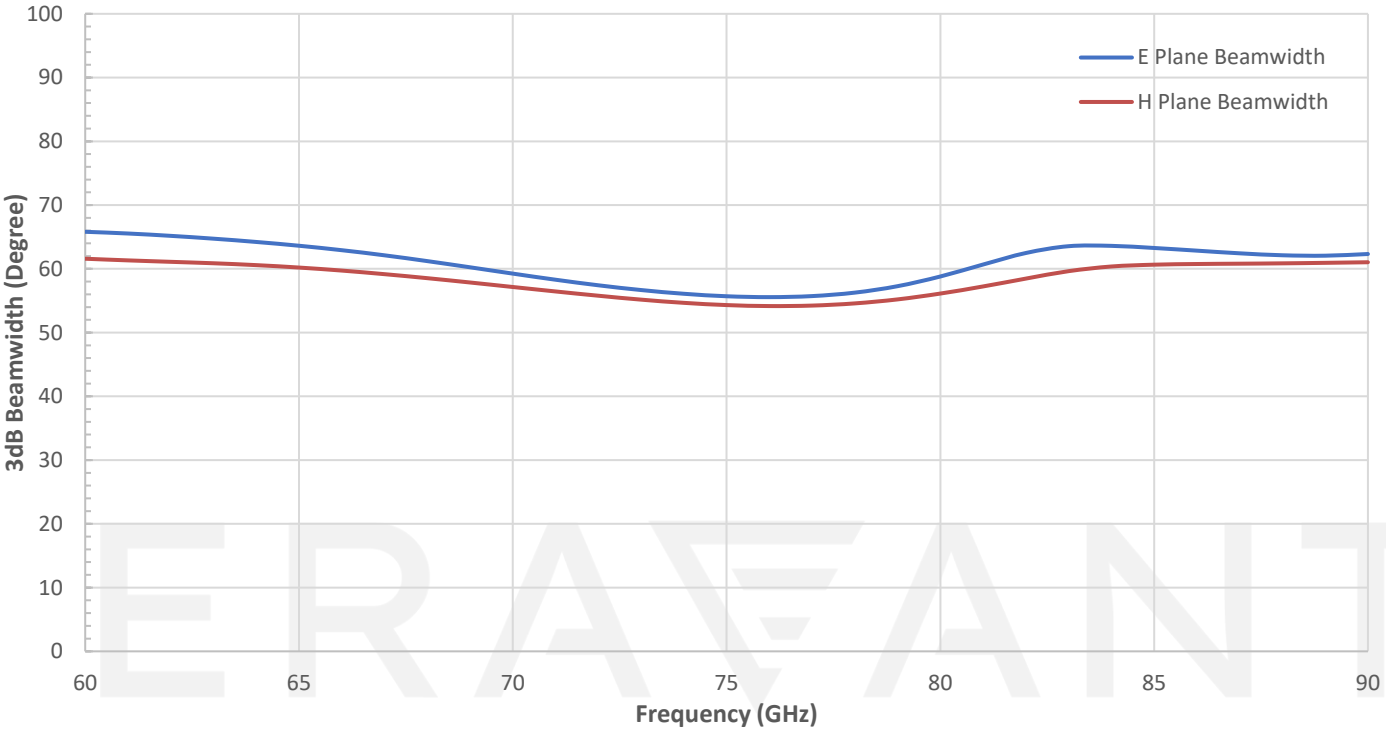
Simulated Pattern @ 90 GHz



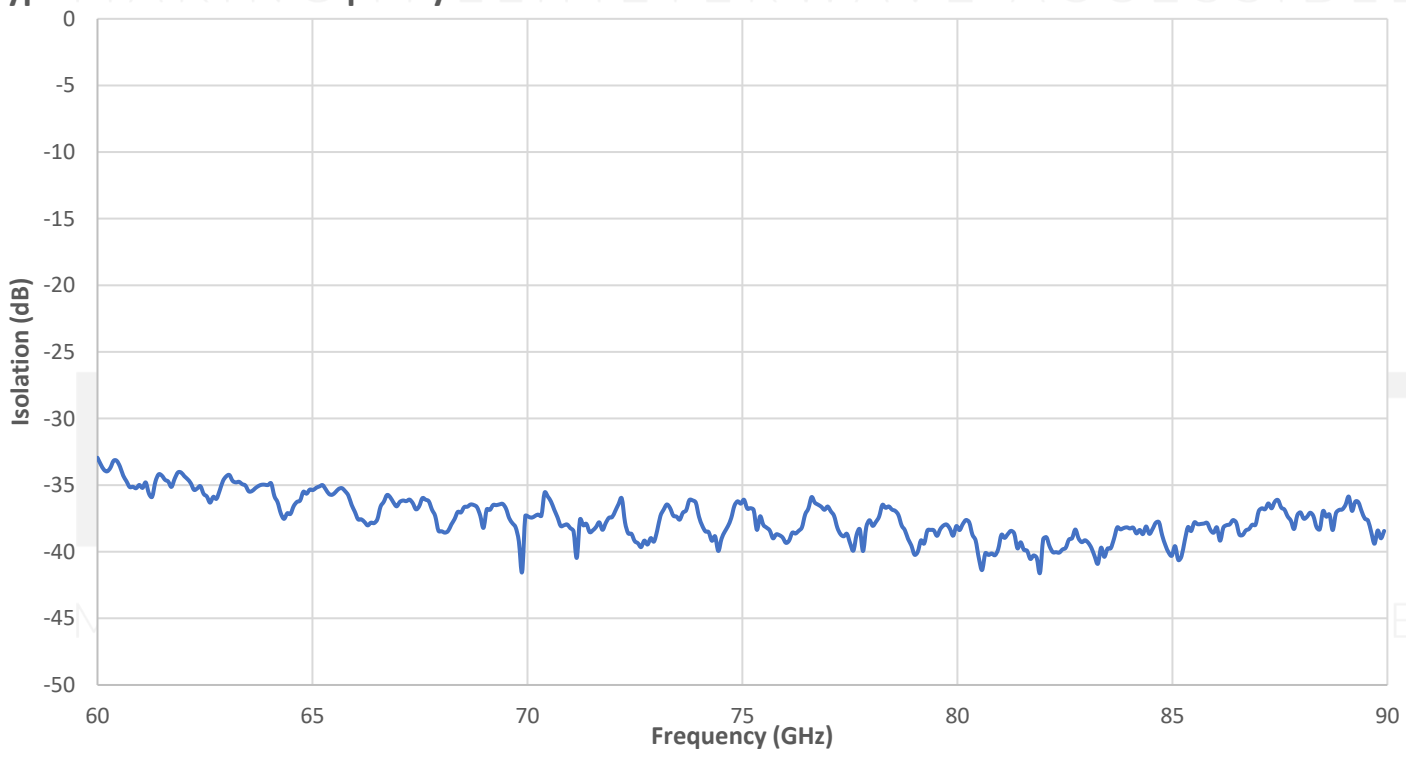
Simulated Gain vs Frequency



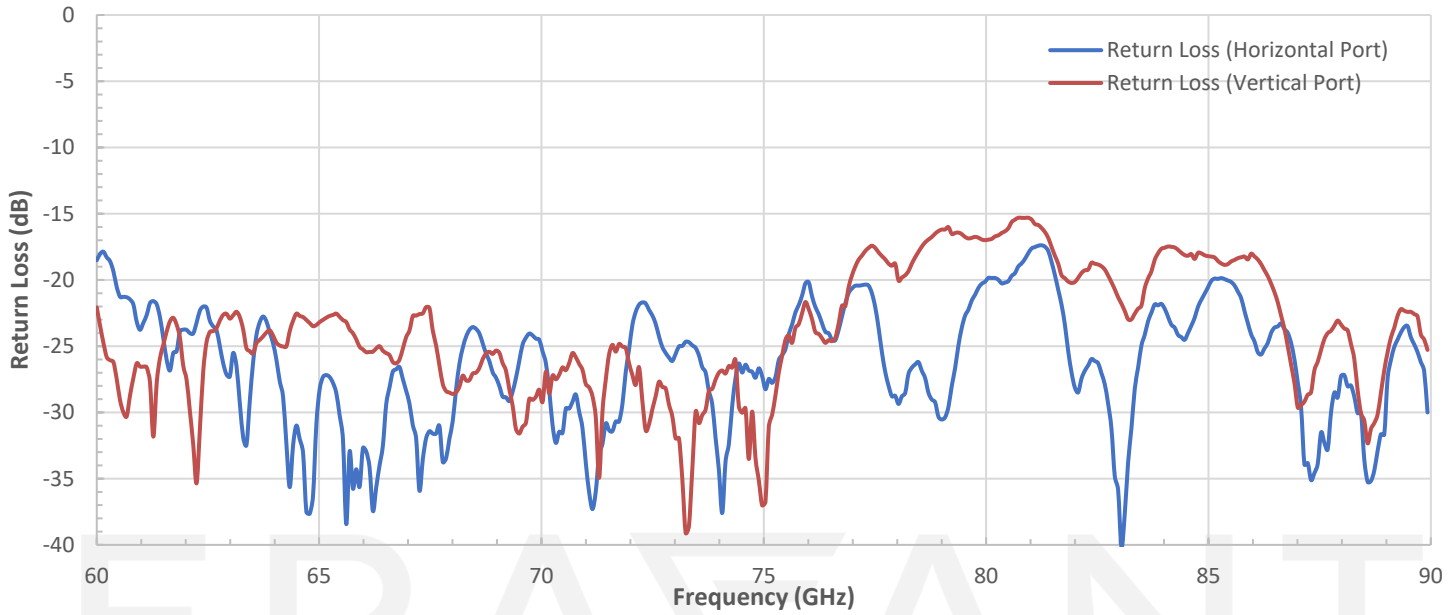
Simulated 3dB Beamwidth vs Frequency



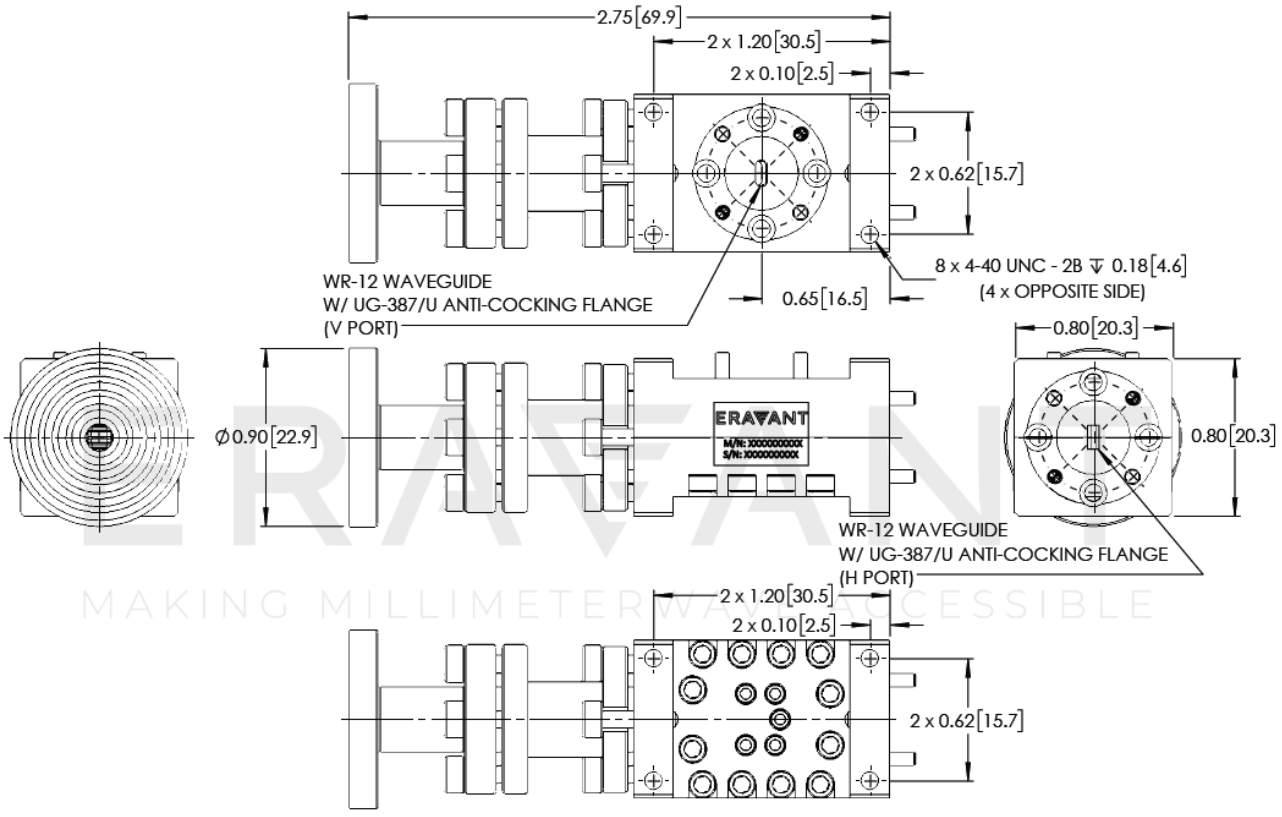
Typical Isolation vs Frequency



Typical Return Loss vs. Frequency



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



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.

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