SAF-2434031535-358-S1-280-DP

WR-28 Dual Polarized Scalar Feed Horn Antenna, 24 to 40 GHz, 15 dBi Gain

SAF-2434031535-358-S1-280-DP is a dual polarized, WR-28 scalar feed horn antenna assembly that covers several popular 5G bands in the frequency range of 24 to 40 GHz. The antenna 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. At center frequency, the horn antenna exhibits 15 dBi nominal gain and a typical half power beamwidth of 35 degrees and -25 dB sidelobe levels, respectively. The antenna exhibits 35 dB typical port isolation between the horizontal and vertical ports. The horizontal and vertical ports are WR-28 waveguides with UG-599/U flanges and 4-40 threaded holes.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	24 GHz		40 GHz
Gain		15 dBi	
3 dB Beamwidth, E-plane		35°	
3 dB Beamwidth, H-plane		35°	
Sidelobes Levels		-25 dB	
V and H Port Isolation		35 dB	
Return Loss		15 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Horizontal and Vertical Ports	WR-28 Waveguide with UG-599/U Threaded Flange
Material	Aluminum, Brass
Finish	Gold Plated, Black Paint
Weight	5.6 Oz
Outline	AF-CA15-358-280-DP

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FEATURES

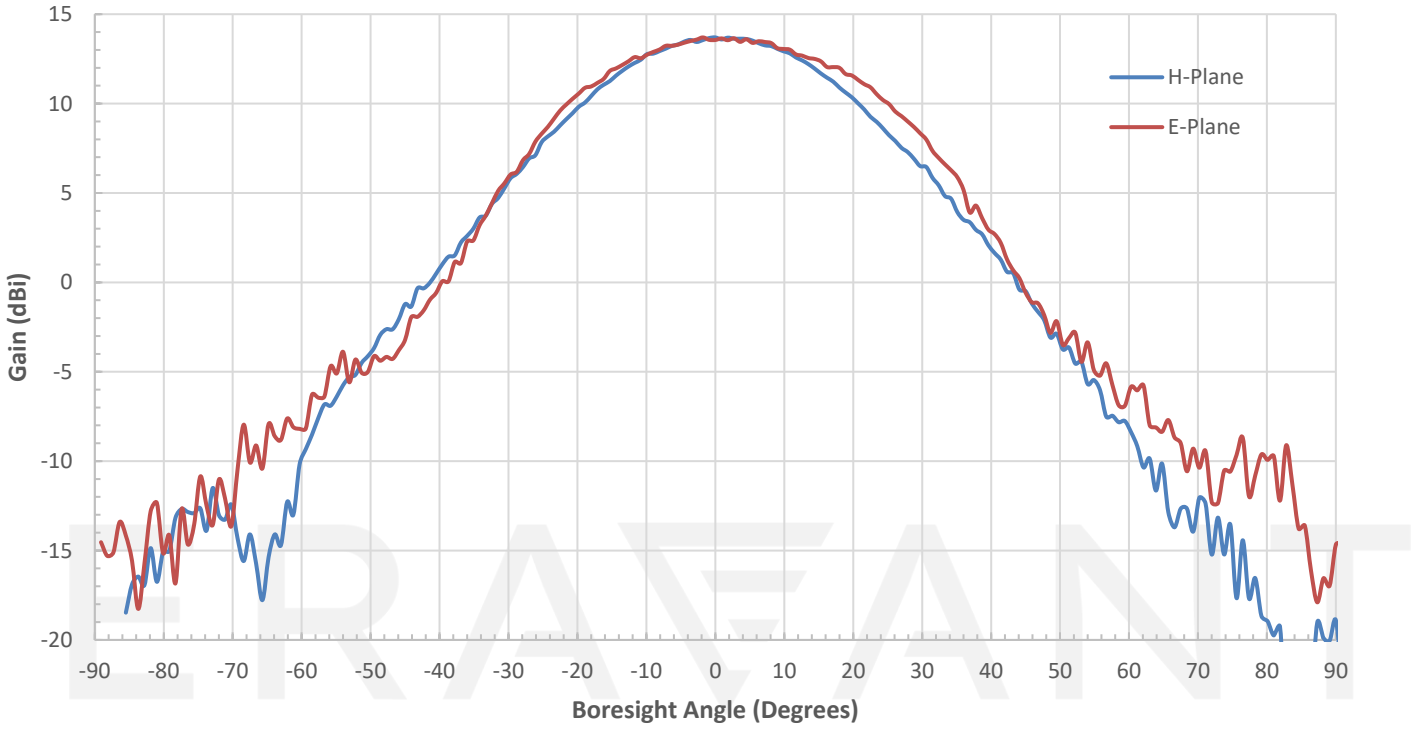
- 110 to 170 GHz Operations
- Linear and Circular Polarizations
- High Port Isolation

APPLICATIONS

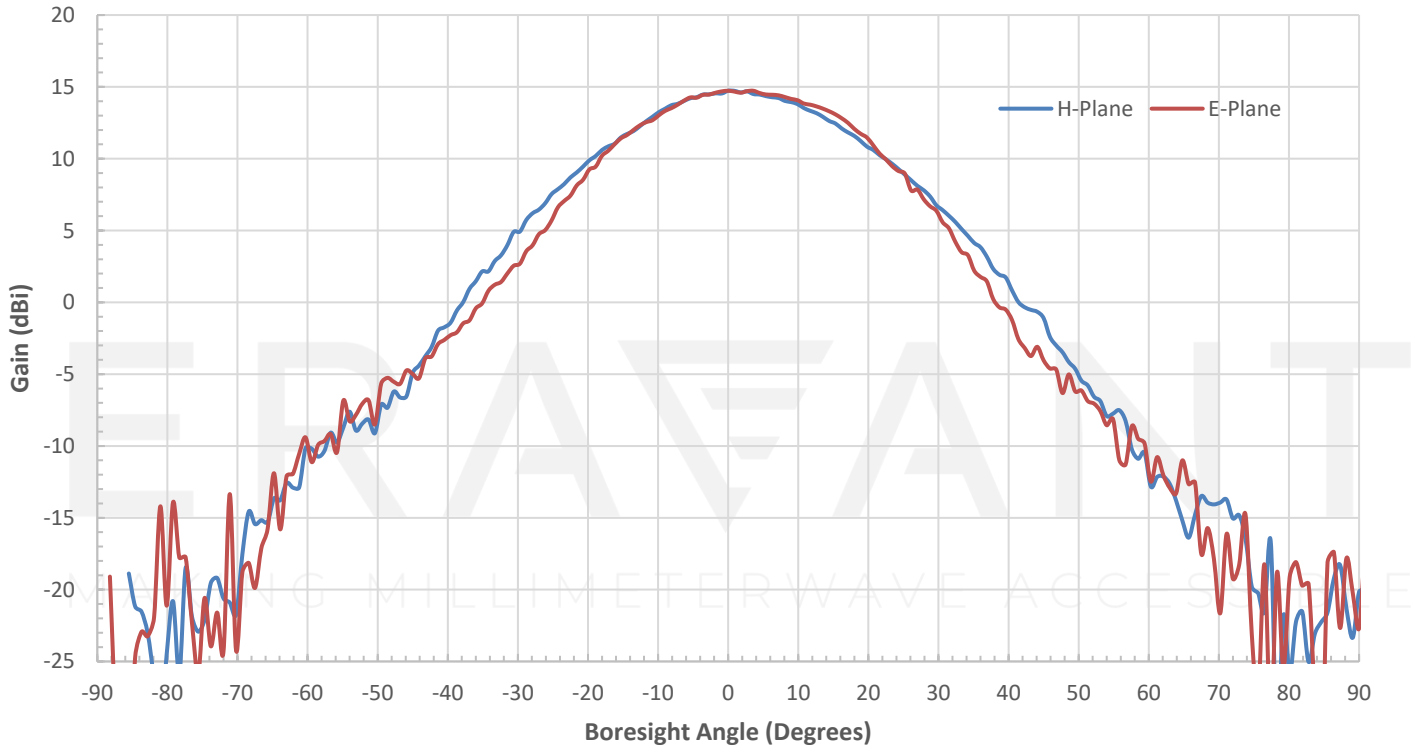
- Radar Systems
- Communication Systems
- Circular and Linear Waveform Separation and Combination

SUPPLEMENTAL DETAILS

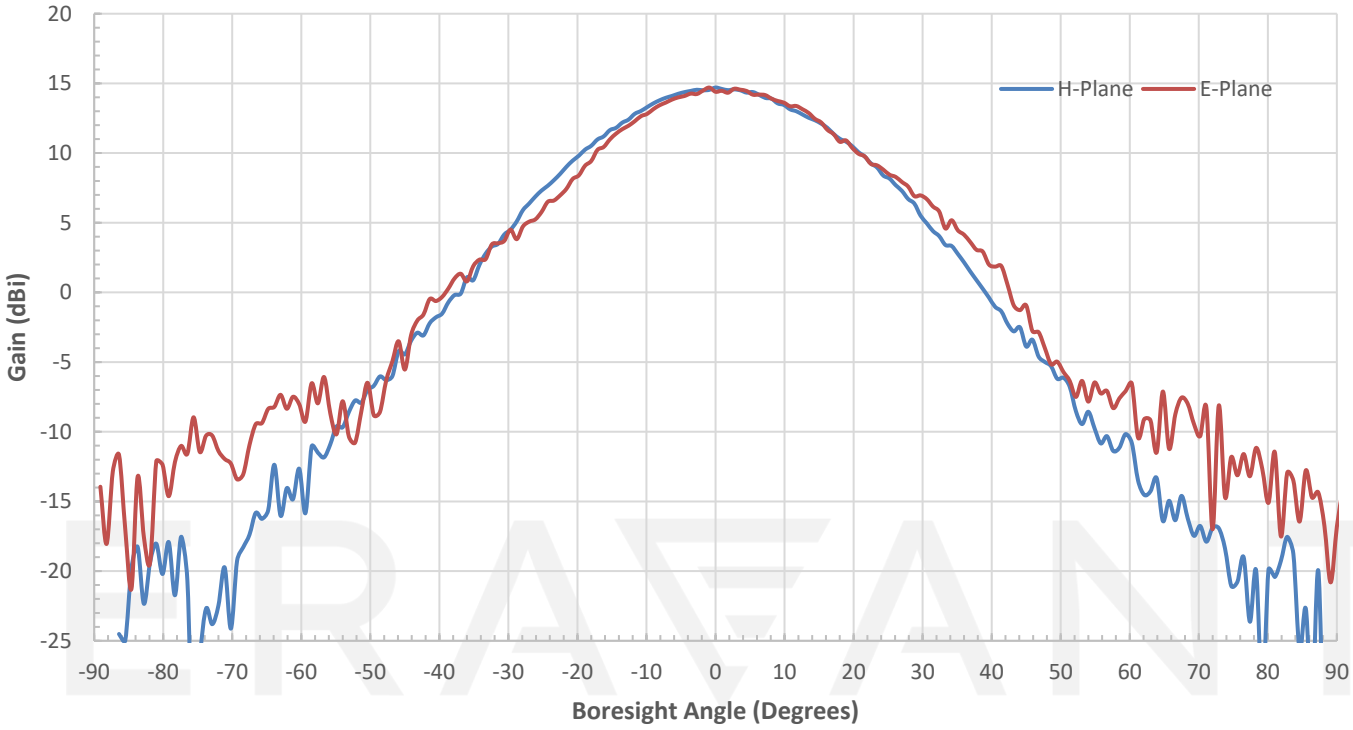
Typical Antenna Pattern @ 24 GHz



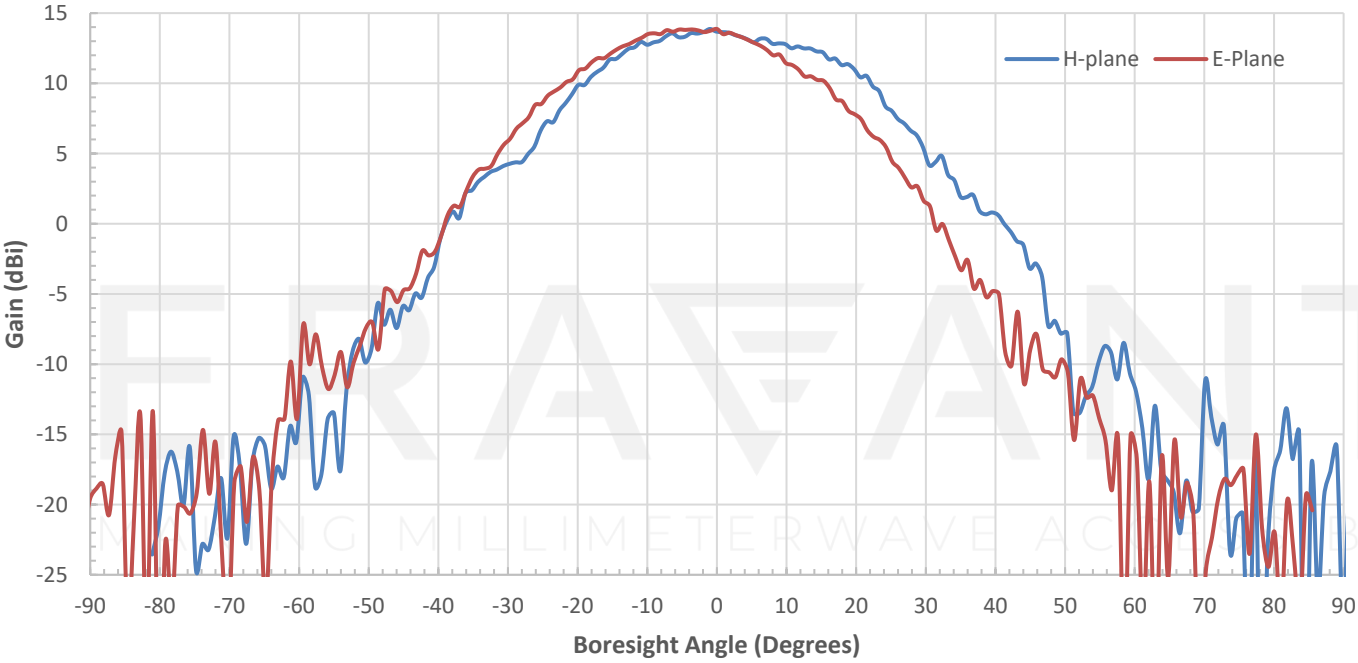
Typical Antenna Pattern @ 30 GHz



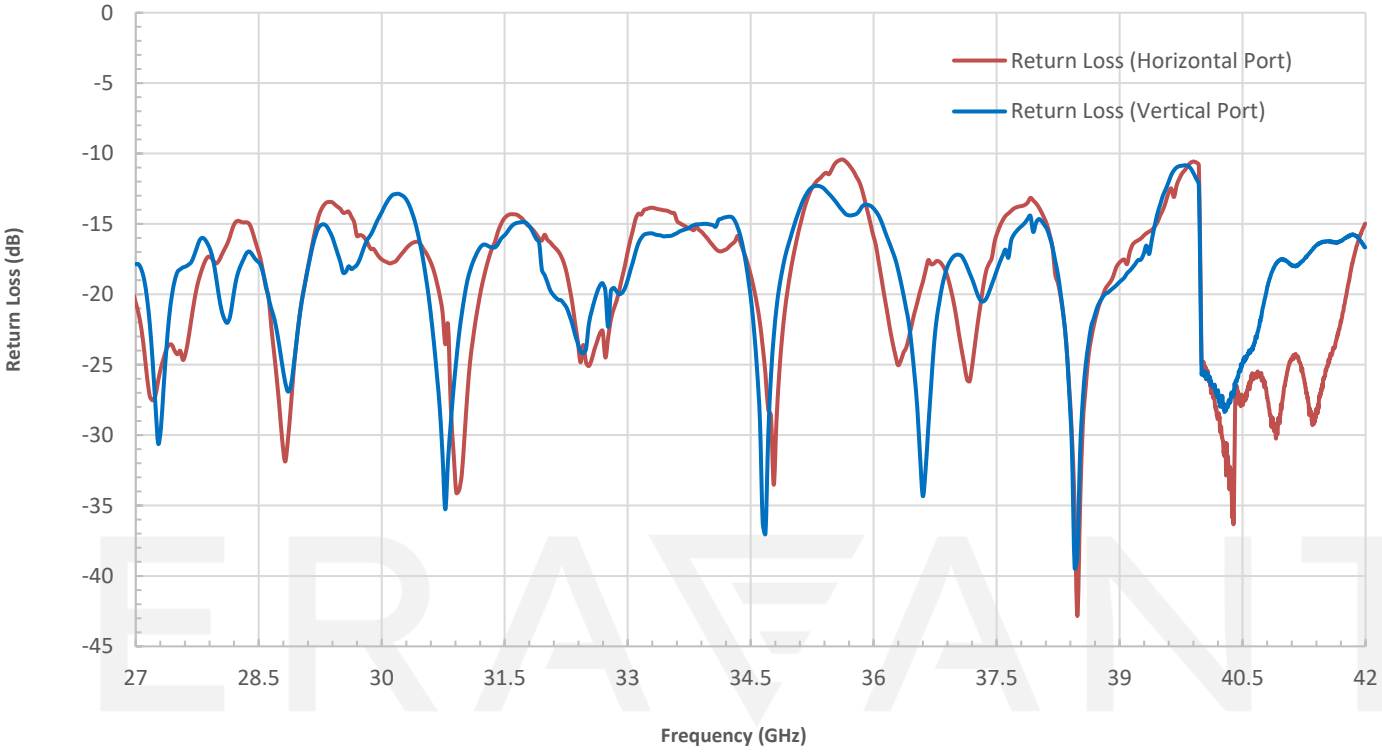
Typical Antenna Pattern @ 36 GHz



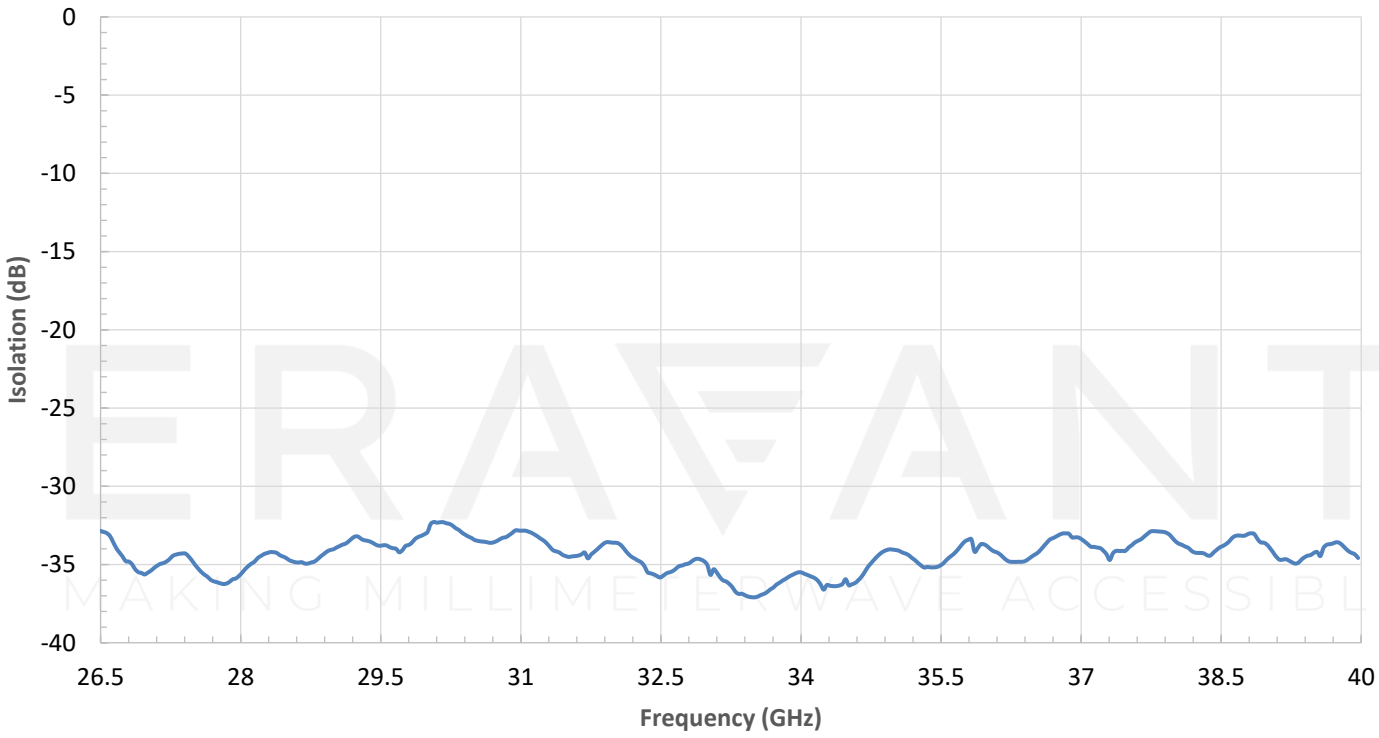
Typical Antenna Pattern @ 40 GHz



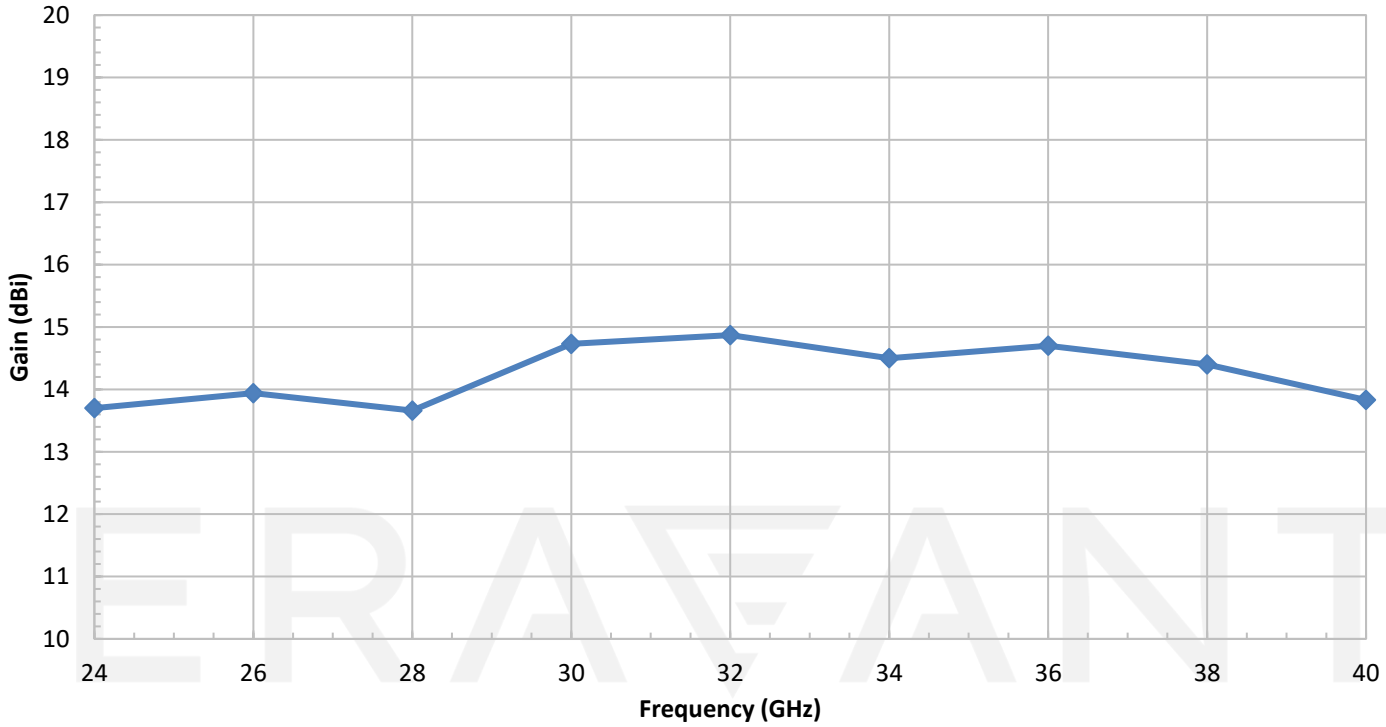
Typical Return Loss vs. Frequency



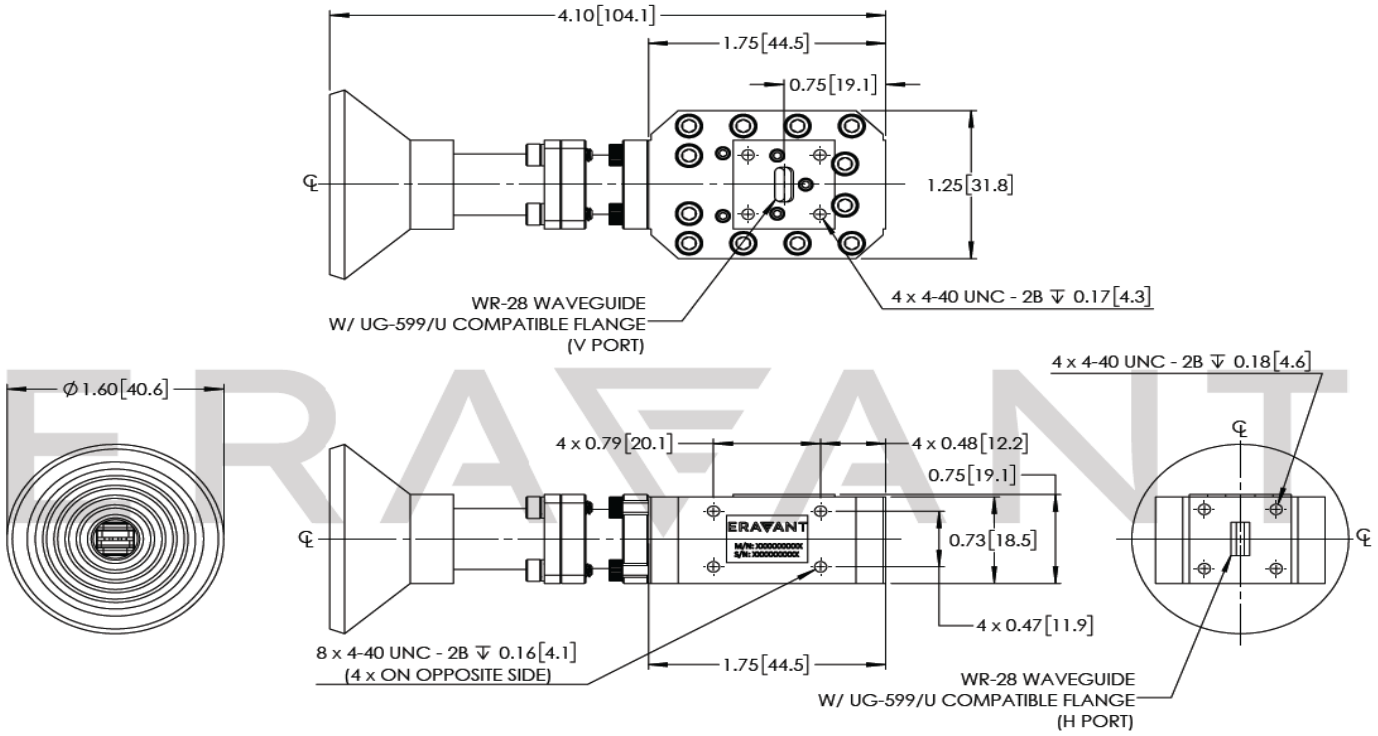
Typical Isolation vs. Frequency



Typical Gain vs. Frequency



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



Note:

- Antenna Patterns, Gain and 3 dB Beamwidth are simulated. Actual data may vary.
- Port Return Loss and Isolation data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was 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 possible device damage.

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