SAC-0432431235-SF-S4-DP-QR

Quad Ridge Dual Polarized Conical Horn Antenna, 4 to 24 GHz

SAC-0432431235-SF-S4-DP-QR is a quad ridge dual polarized conical horn antenna that operates from 4 to 24 GHz. The antenna offers a 12 dBi nominal gain, a typical half power beamwidth of 40 degrees on the E plane and 30 degrees on the H plane at the center frequency of 14 GHz. The nominal sidelobe levels are -12 dB or lower. The horn antenna is equipped with SMA (F) connectors to support both linear and circular polarized waveforms vertically and horizontally. Other antenna ports such as 2.92 mm (K) or 2.4 mm connectors are available under a different model numbers. The main application of the horn is being used as a feed horn for large reflector antennas.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	4 GHz		24 GHz
Gain		12 dBi	
3 dB Beamwidth, E-Plane		40°	
3 dB Beamwidth, H-Plane		30°	
Sidelobes, E-Plane		-12 dB	
Sidelobes, H-Plane		-12 dB	
Vertical and Horizontal Isolation		30 dB	
Return Loss		10 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Ports	SMA Female Connectors
Material	Aluminum
Finish	Gold Chem Film
Weight	20 Oz
Size	2.44” (L) X 5.04” (Ø)
Outline	AC-TC12-DP-QR

ECCN

EAR99

FEATURES

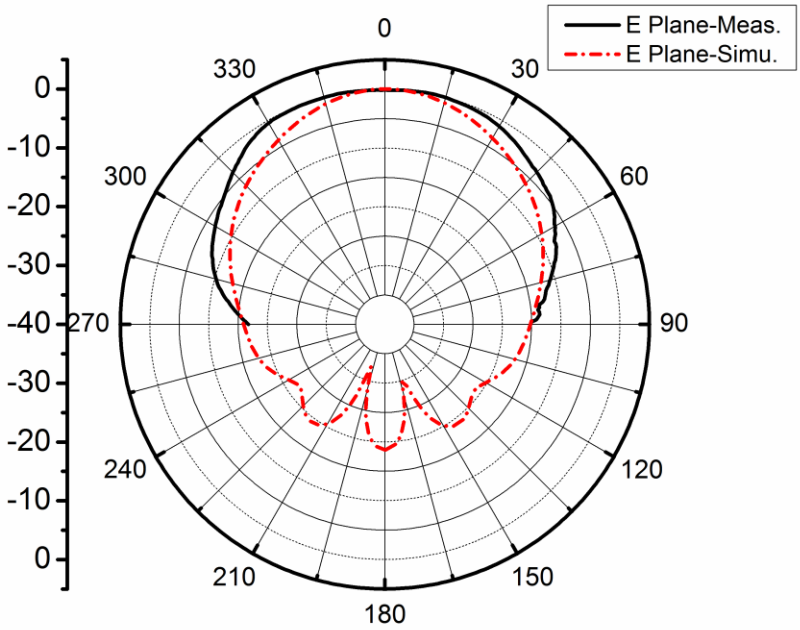
- Broad Band Operation
- Low Sidelobe Level
- High Return Loss
- Linear and Circular Polarization

APPLICATIONS

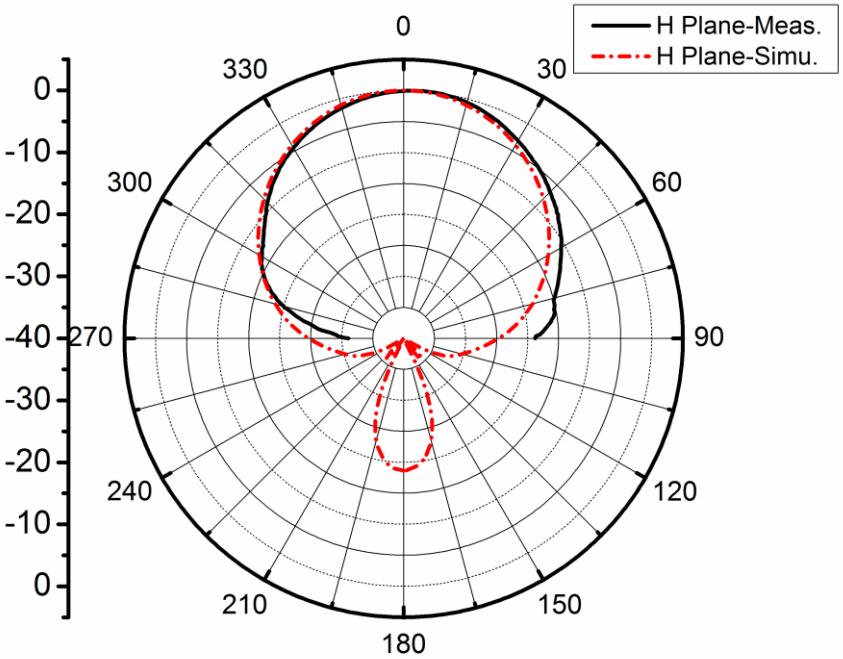
- Feed Horn for Reflector Antennas
- Rapid System Setups
- Engineering Setups

SUPPLEMENTAL DETAILS

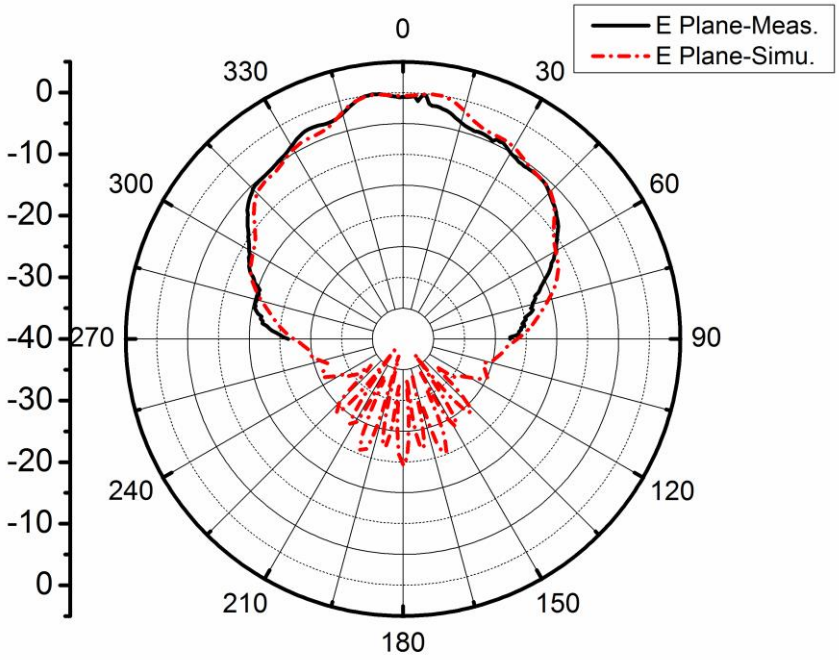
Typical Antenna Pattern @ 4 GHz- E Plane



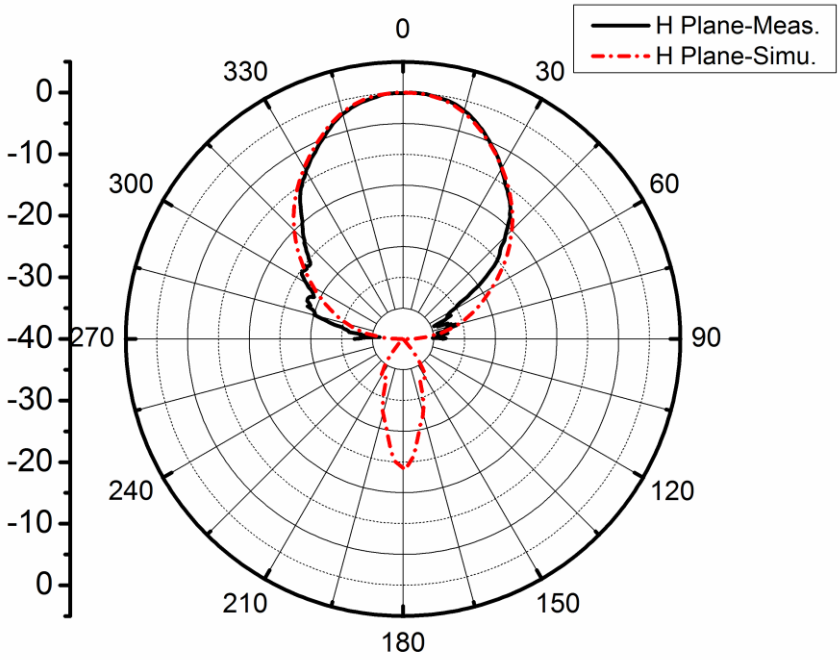
Typical Antenna Pattern @ 4 GHz- H Plane



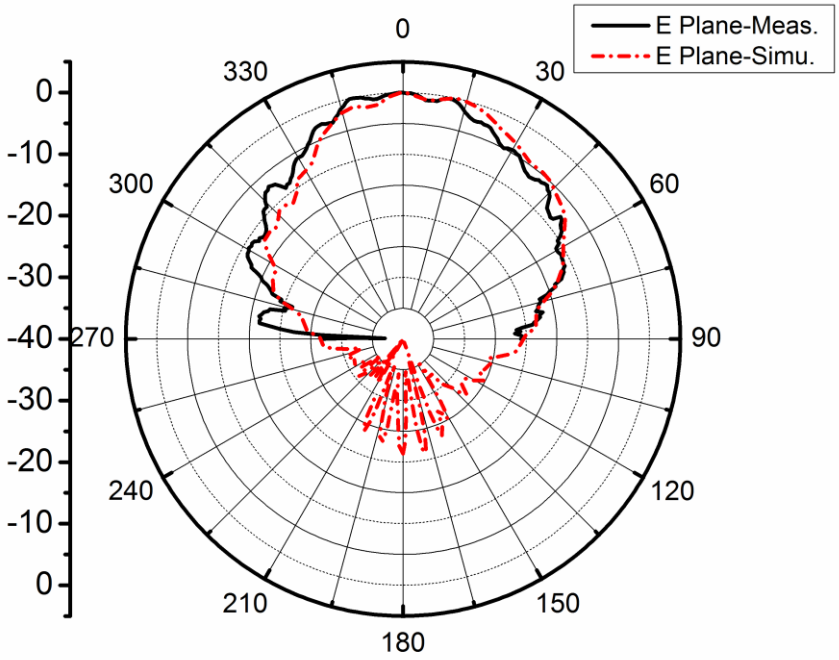
Typical Antenna Pattern @ 14 GHz- E Plane



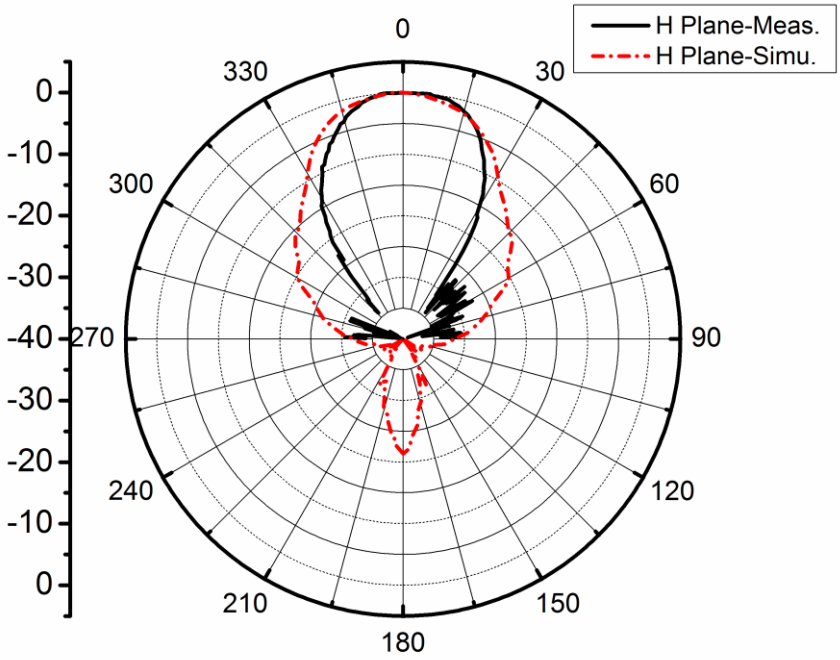
Typical Antenna Pattern @ 14 GHz- H Plane



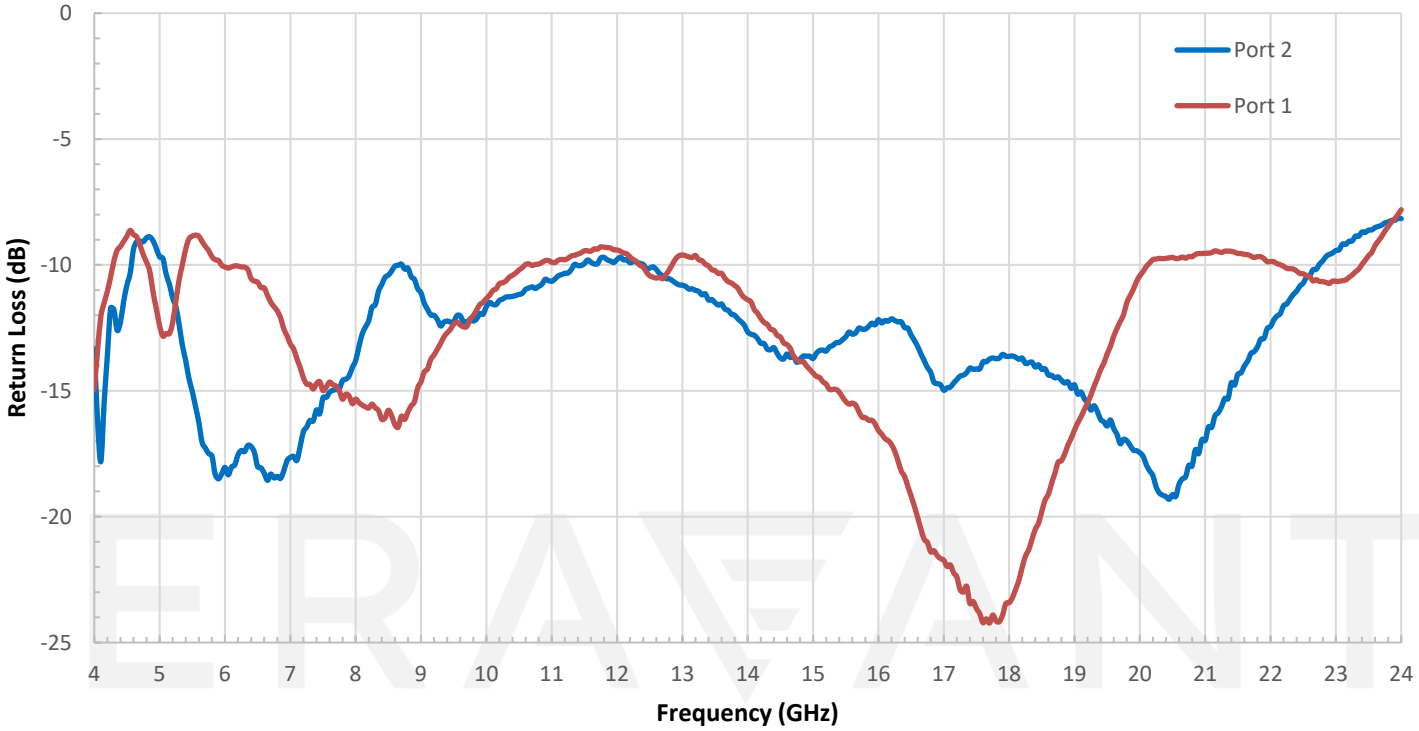
Typical Antenna Pattern @ 24 GHz- E Plane



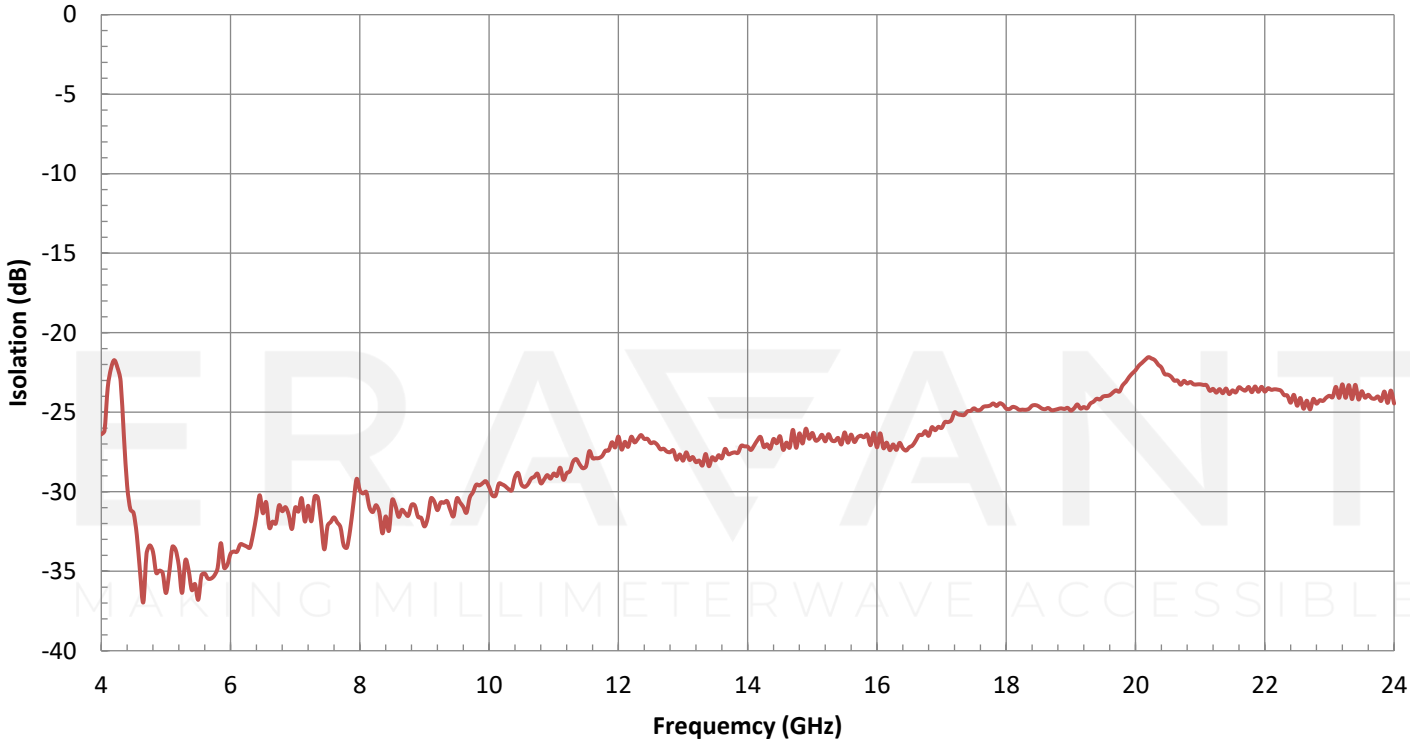
Typical Antenna Pattern @ 24 GHz- H Plane



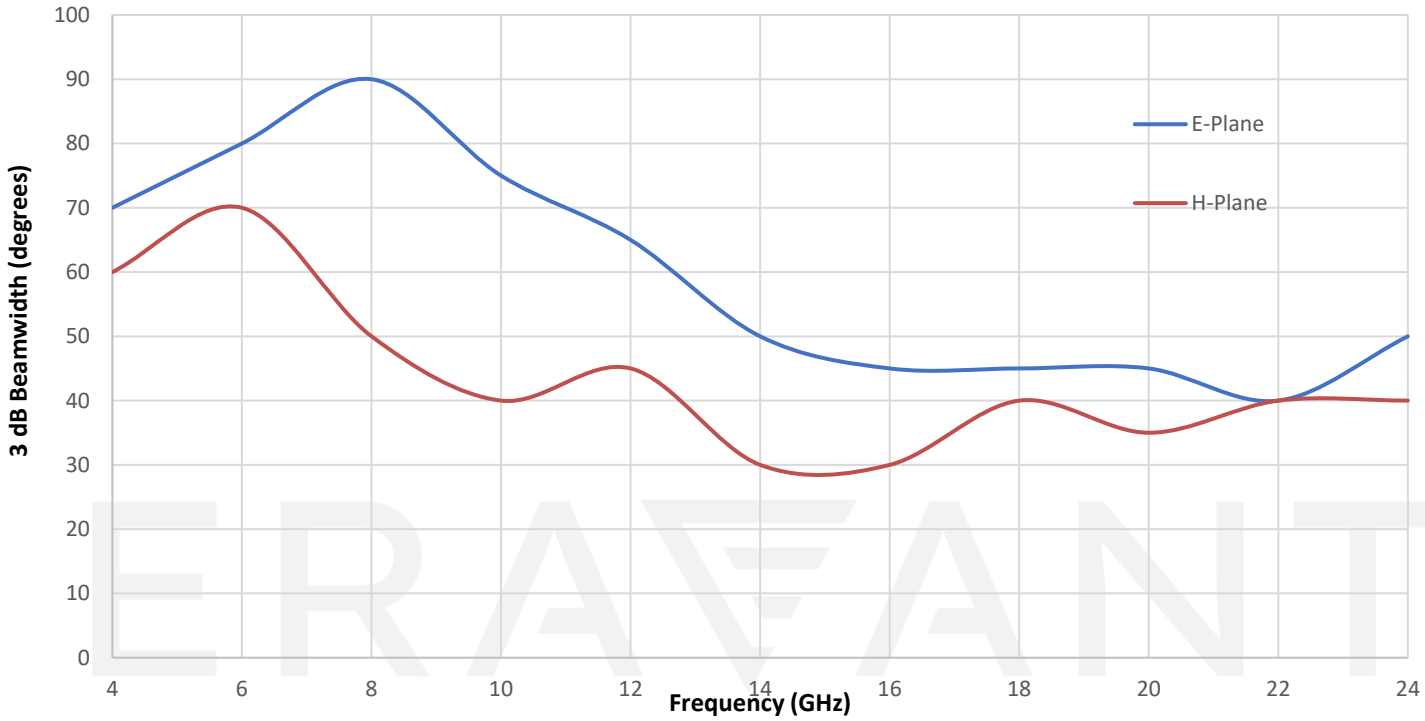
Typical Return Loss vs. Frequency



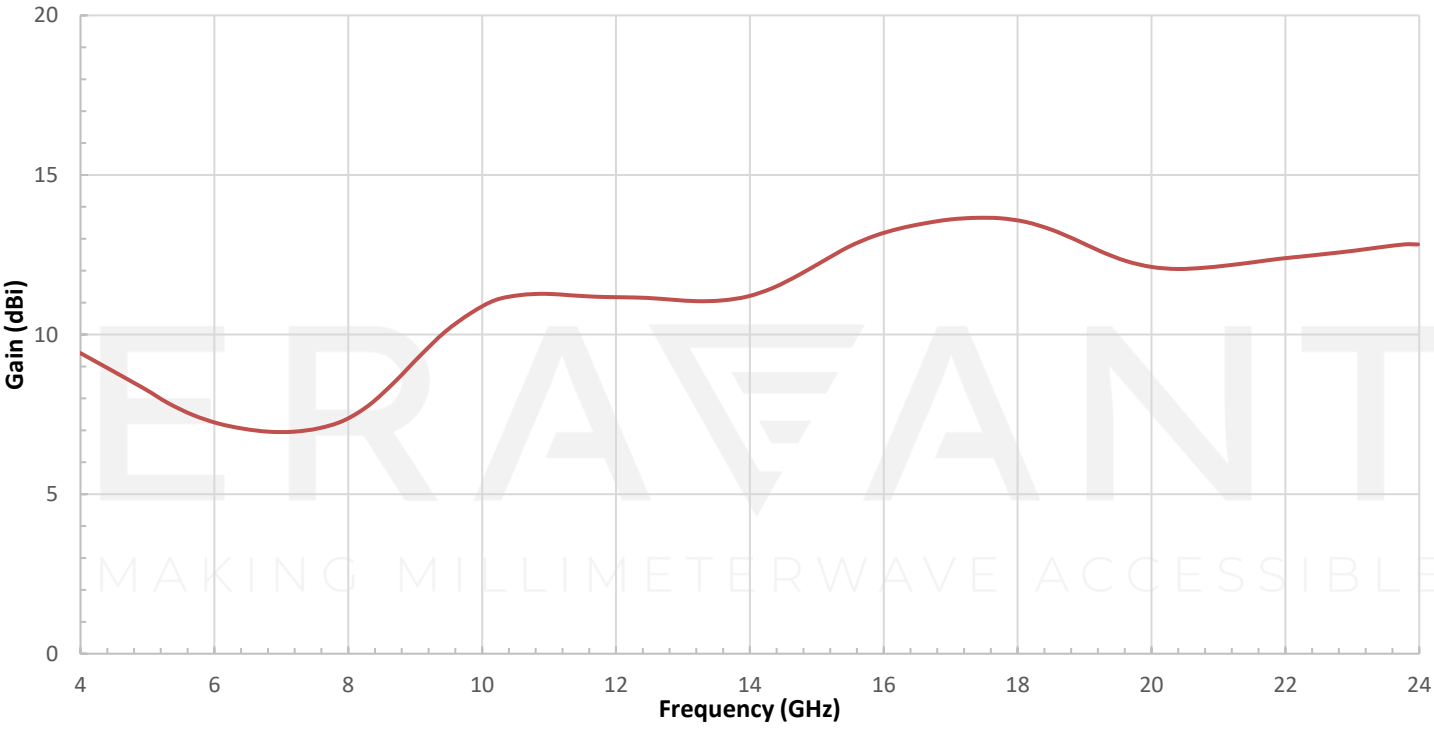
Typical Port Isolation vs. Frequency



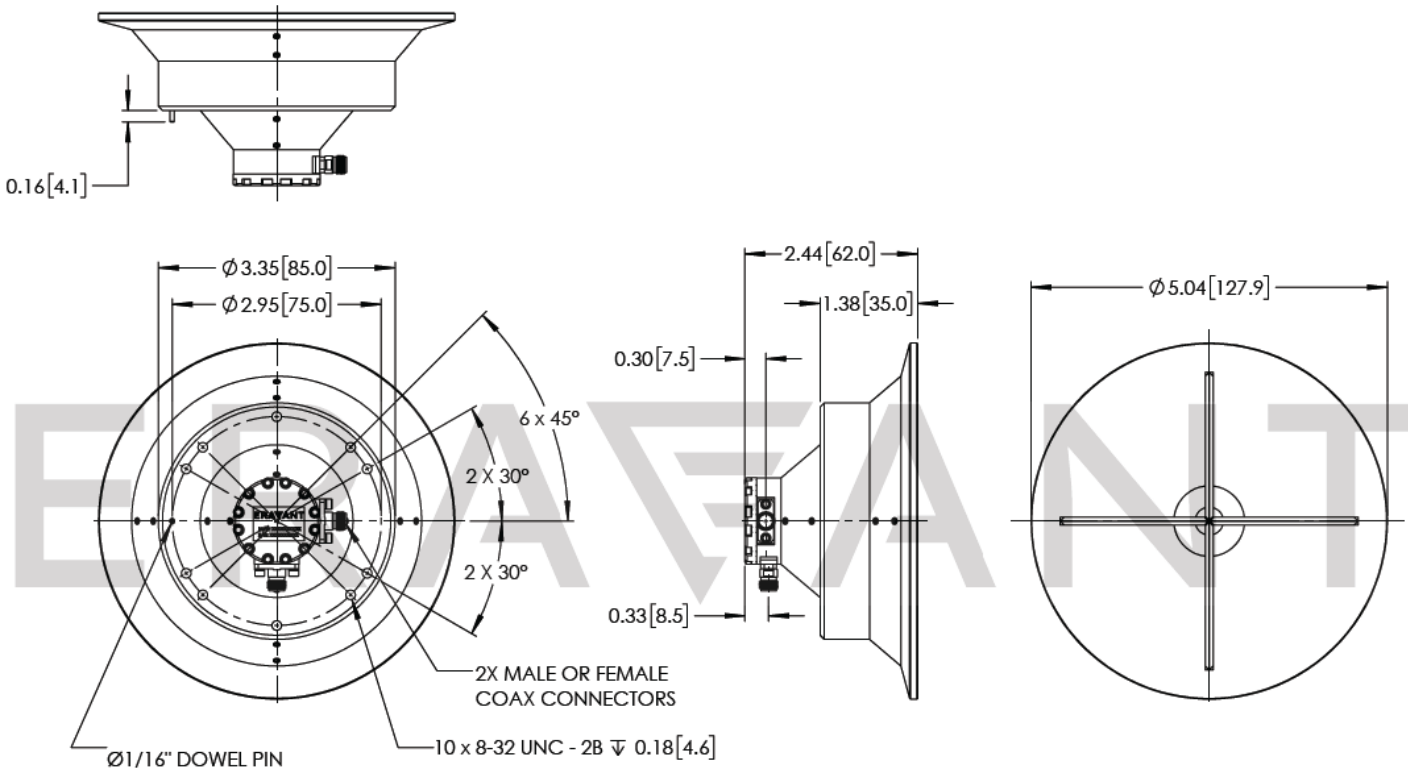
Measured 3 dB Beamwidth vs. Frequency



Typical Gain 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.
- 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.