

SAL-9031443005-08-S1

F-Band Lens Corrected Antenna, 90 to 140 GHz, 30 dBi Gain

SAL-9031443005-08-S1 is an F-band lens corrected antenna that operates from 90 to 140 GHz. At a center frequency of 115 GHz, the antenna delivers 30 dBi nominal gain, 4.3 degrees typical half power beamwidth on the E-plane, and 5.3 degrees typical half power beamwidth on the H-plane. The antenna employs a low loss lens to offer excellent aperture efficiency and low sidelobe levels. The lens corrected antenna is equipped with a standard WR-08 waveguide and UG-387/U-M anti-cocking flange as its input port. It supports linear polarized waveforms.

**Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency Range	90 GHz	115 GHz	140 GHz
Gain		30 dBi	
3 dB Beamwidth, E-Plane		4.3°	
3 dB Beamwidth, H-Plane		5.3°	
Sidelobes, E-Plane		-17 dB	
Sidelobes, H-Plane		-25 dB	
Polarization		Linear	
Return Loss		25 dB	
Specification Temperature		+25°	
Operating Temperature	-45°		+85°

ECCN

EAR99

FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

APPLICATIONS

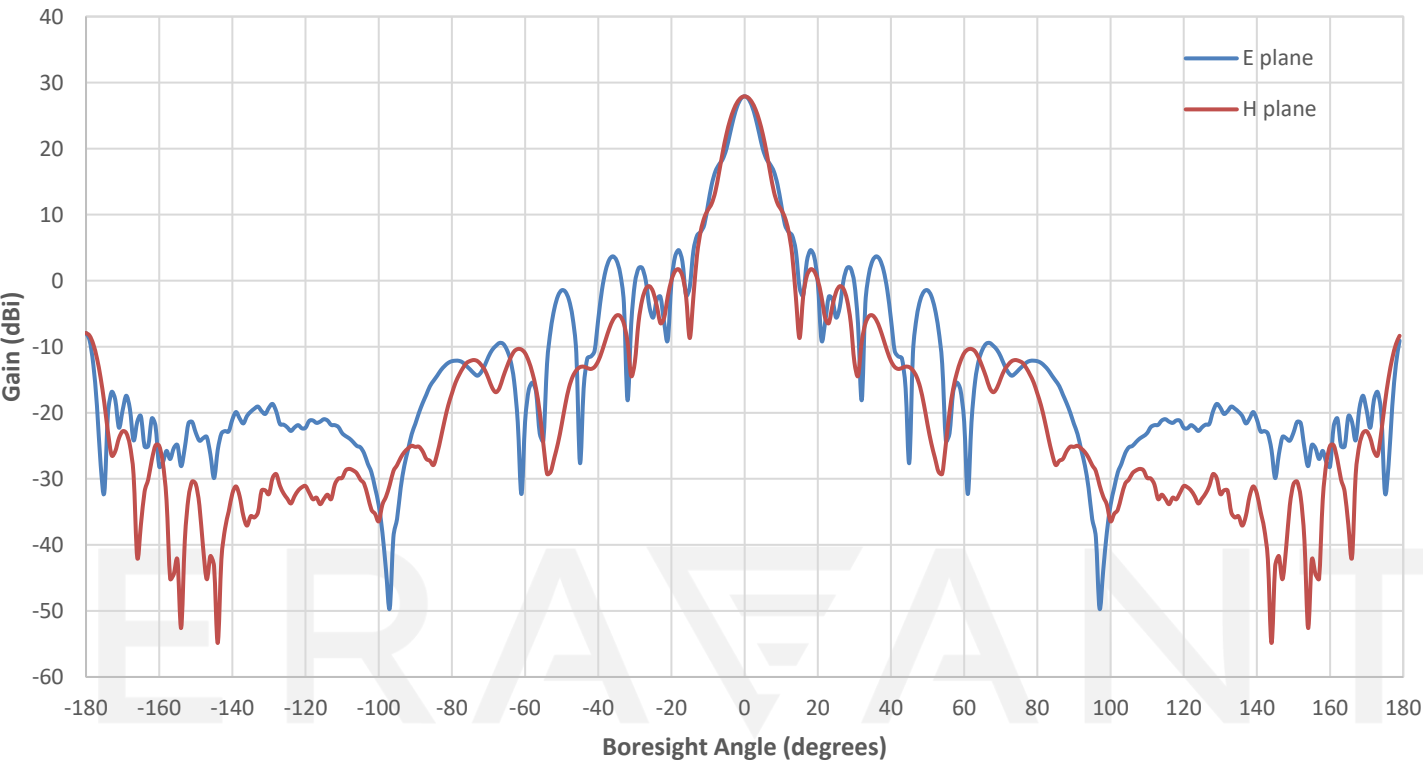
- Radar Systems
- Communication Systems
- Sensor Systems

Mechanical Specifications:

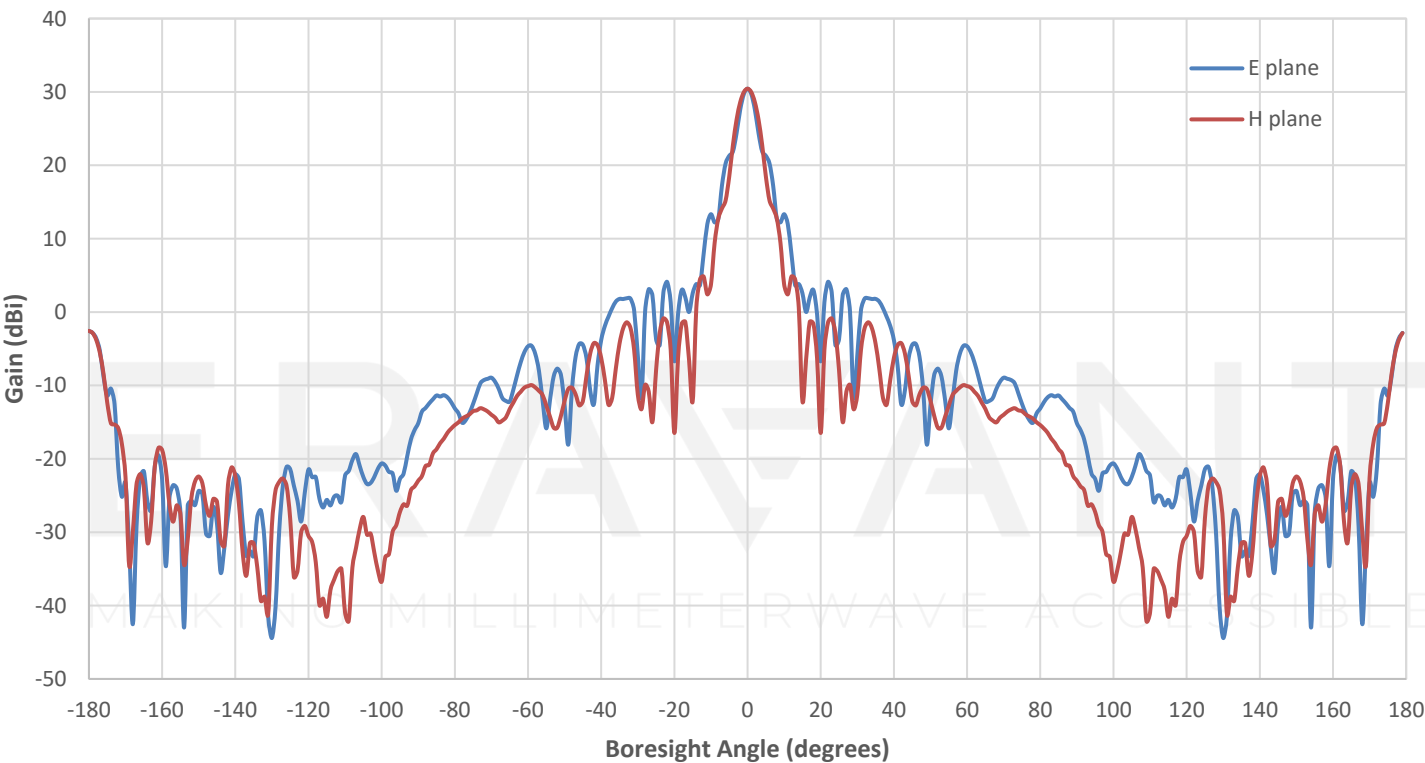
Item	Specification
Antenna Port	WR-08 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	2.26 oz
Outline	AL-RF30-A



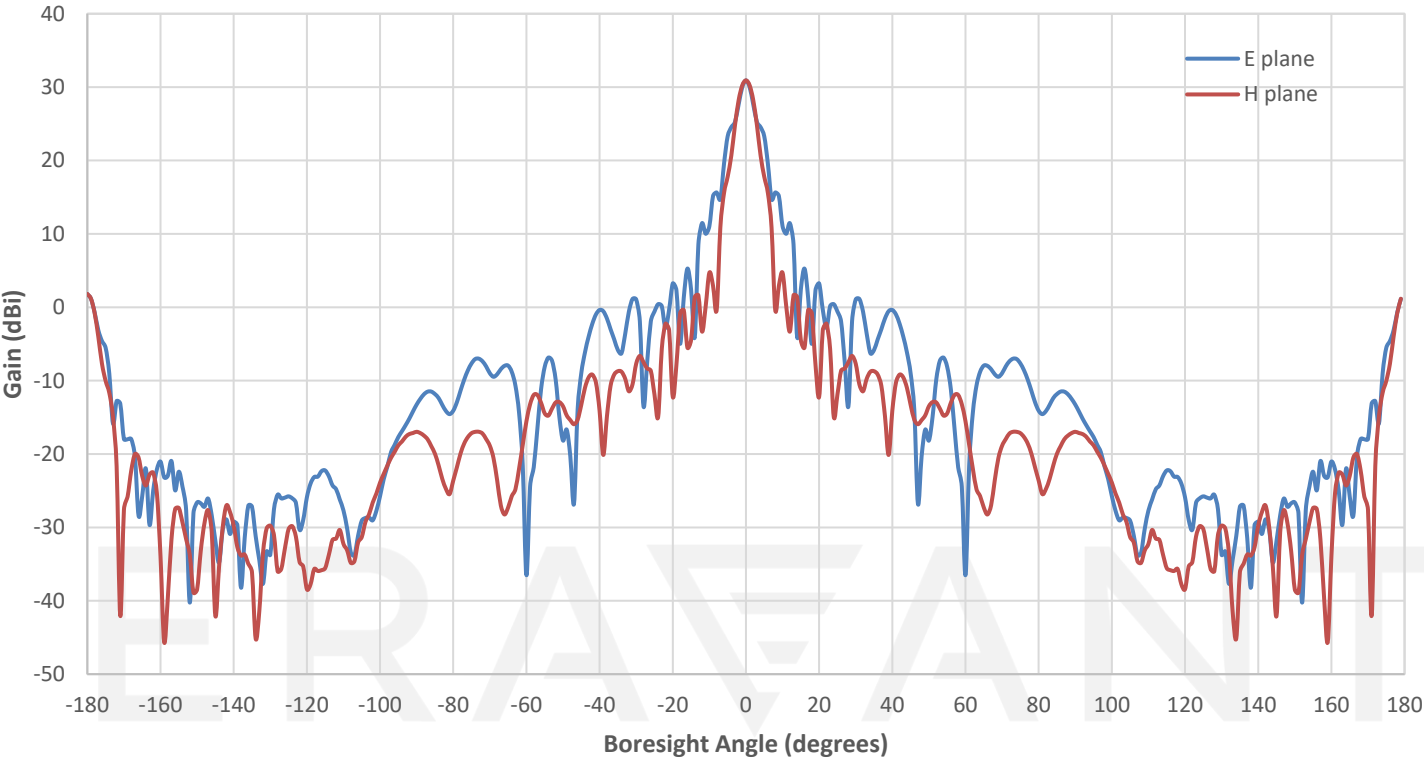
Simulated Antenna Patterns at 90 GHz



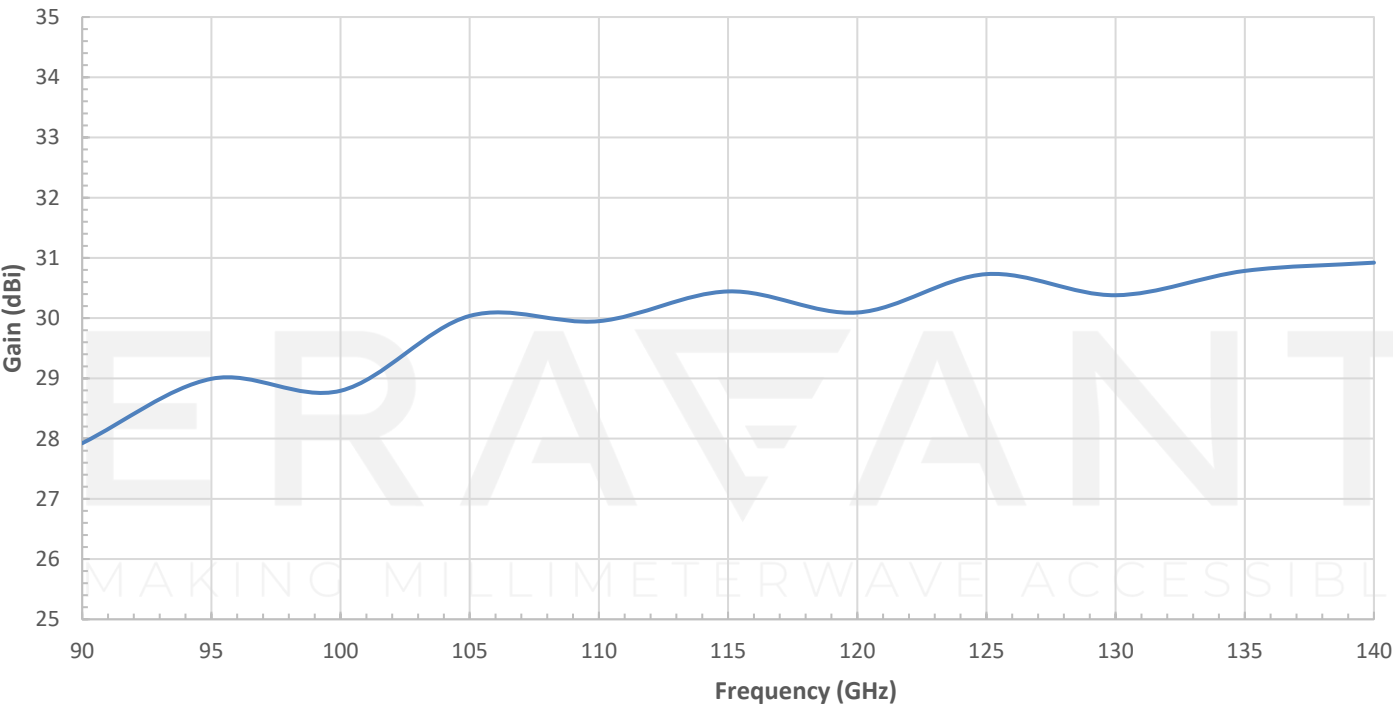
Simulated Antenna Patterns at 115 GHz



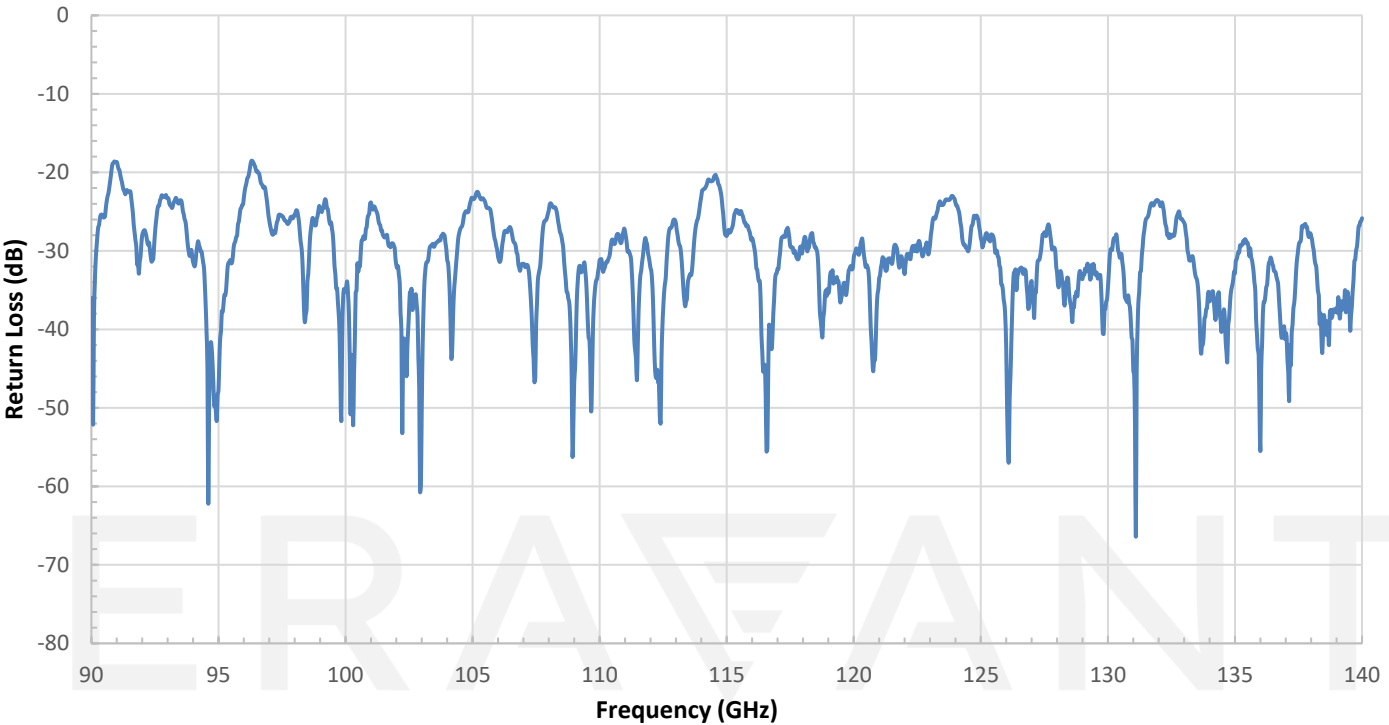
Simulated Antenna Patterns at 140 GHz



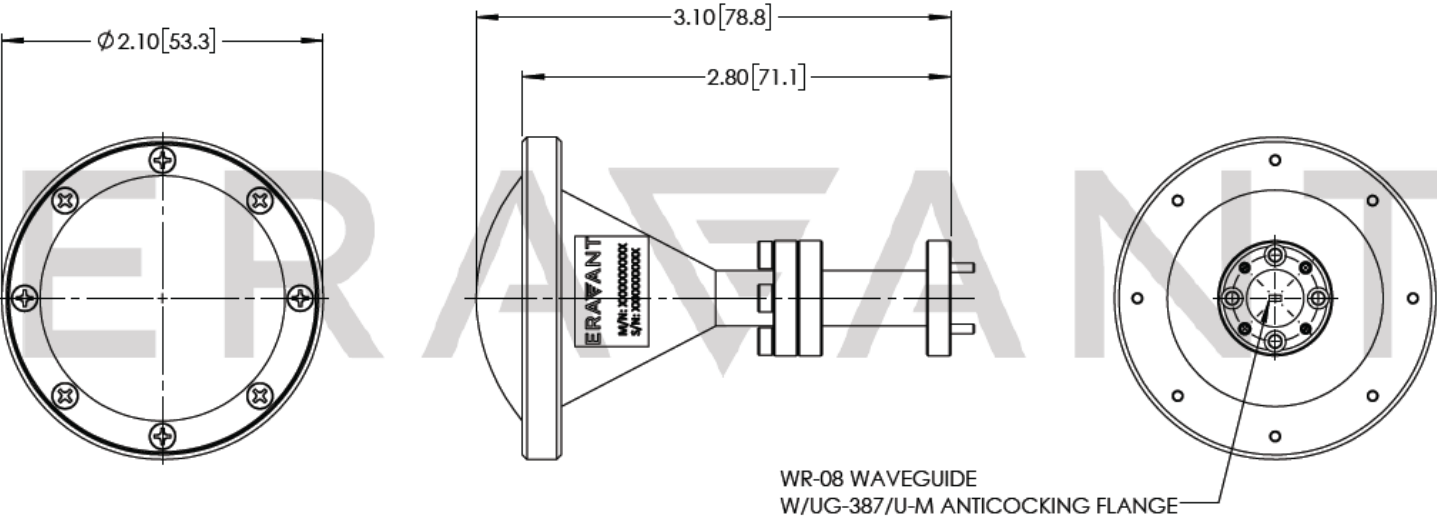
Simulated Gain vs Frequency



Measured Return Loss vs Frequency



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



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 possible device damage.

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