SAL-7531142805-10-S1-WP

W-Band Lens Corrected Antenna

SAL-7531142805-10-S1-WP is a W-Band lens corrected antenna that operates from 75 to 110 GHz. At a center frequency of 94 GHz, the antenna delivers 28 dBi nominal gain, 5.3 degrees typical half power beamwidth on the E-plane, and 6.5 degrees typical half power beamwidth on the H-plane. The antenna employs a low loss lens to offer excellent aperture efficiency and low sidelobes levels. The lens corrected antenna is equipped with a standard WR-10 waveguide with UG-387/U-M flange as its input port. It supports linear polarized waveforms.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz	94 GHz	110 GHz
Gain		28 dBi	
3 dB Beamwidth, E-Plane		5.3°	
3 dB Beamwidth, H-Plane		6.5°	
Sidelobes, E-Plane		-17 dB	
Sidelobes, H-Plane		-25 dB	
Polarization		Linear	
Return Loss		25 dB	
Specification Temperature		+25 °C	
Operating Temperature	-45 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-10 Waveguide with UG-387/U-M Flange
Lens Diameter	1.54”
Dimensions	1.64” (Ø) x 2.83” (L)
Horn Material	Aluminum
Finish	Gold Plated
Weight	2.3 Oz
Outline	AL-RW28

ECCN

EAR99

FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

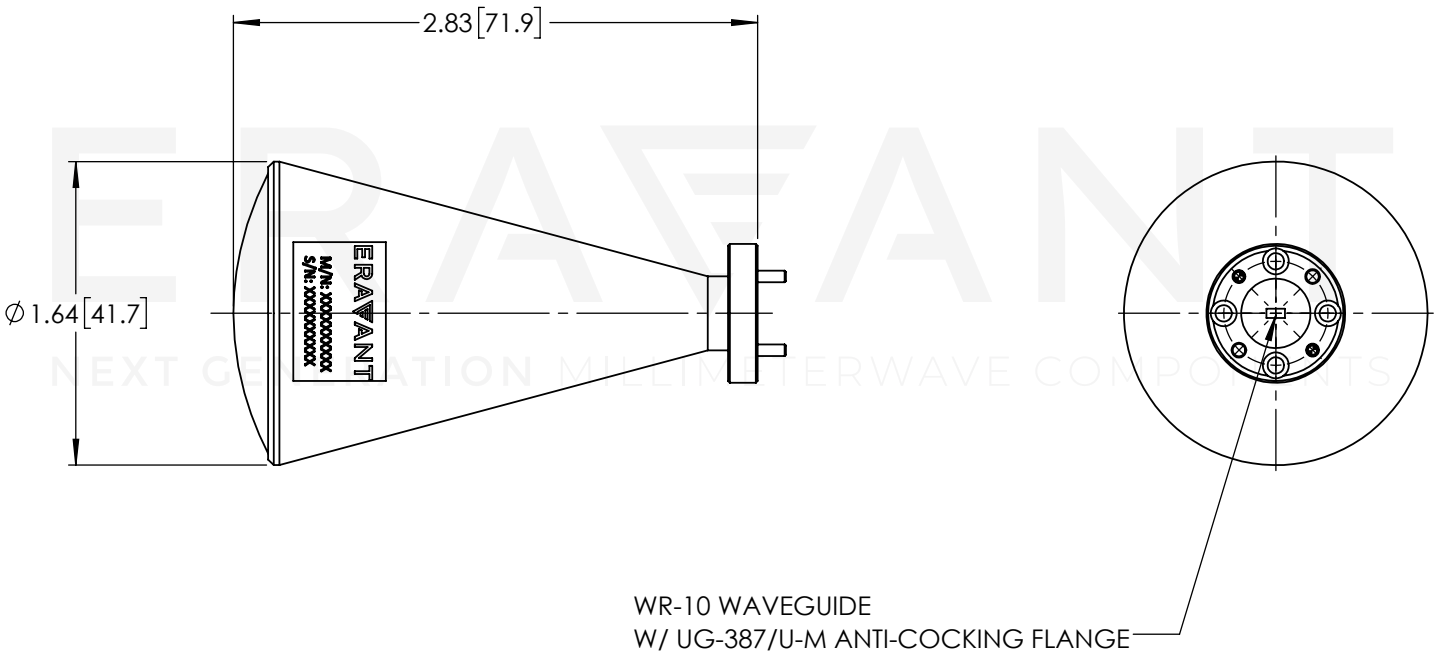
APPLICATIONS

- Radar Systems
- Communication Systems
- Sensor Systems

SUPPLEMENTAL DETAILS

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters])



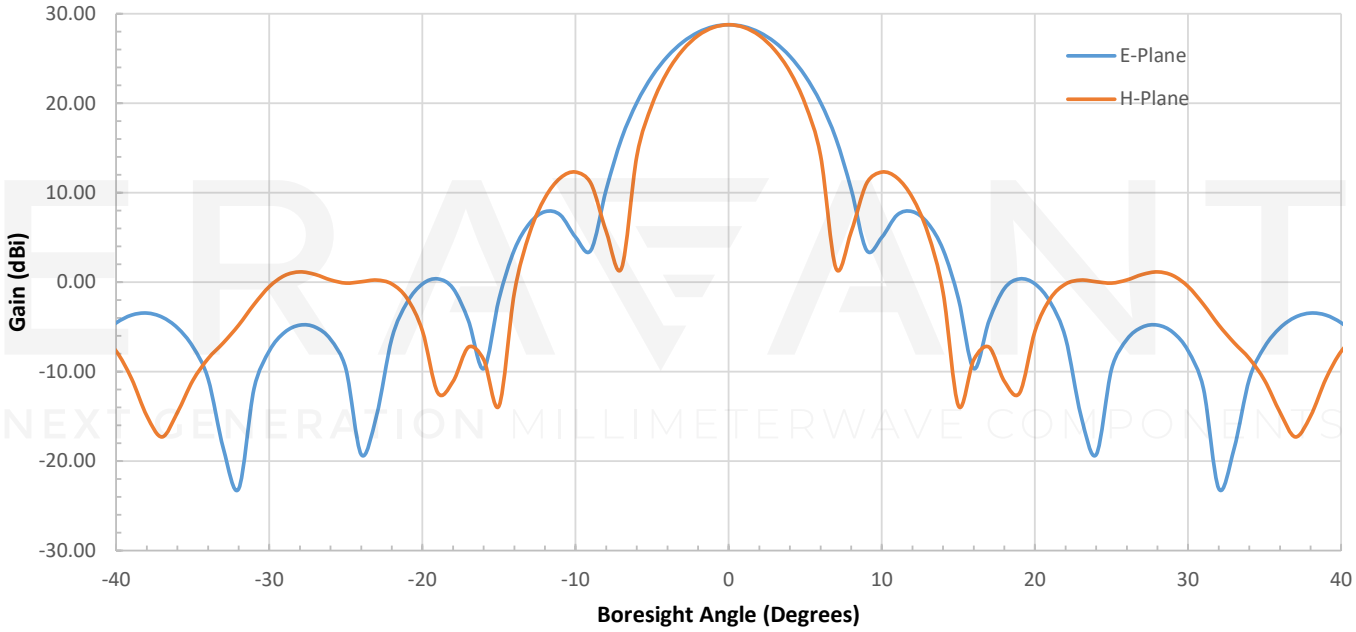
NOTE:

- 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.

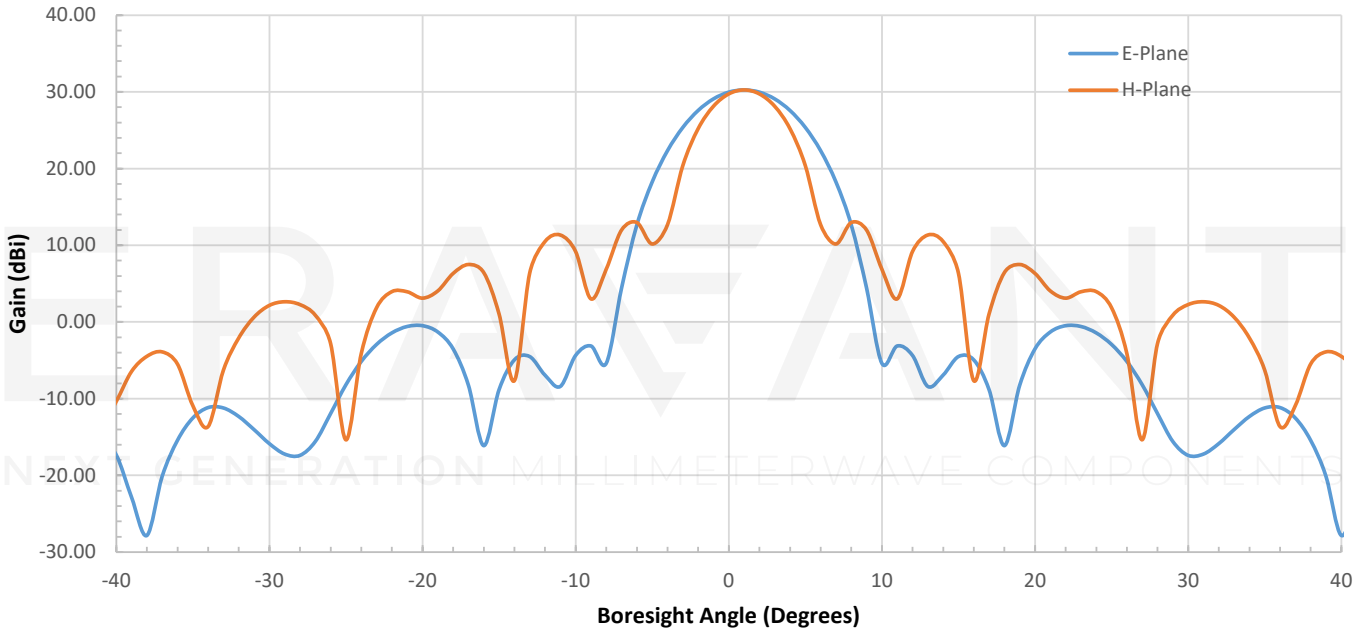
CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- 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.

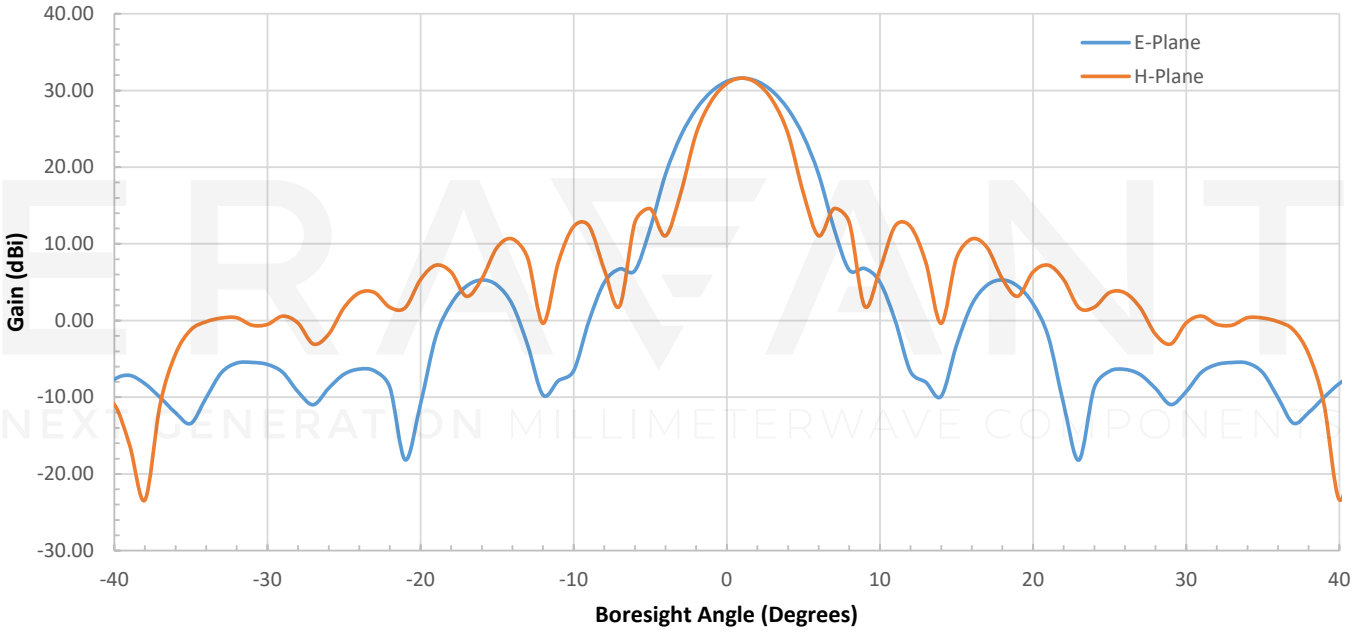
Simulated Antenna Pattern @ 75 GHz



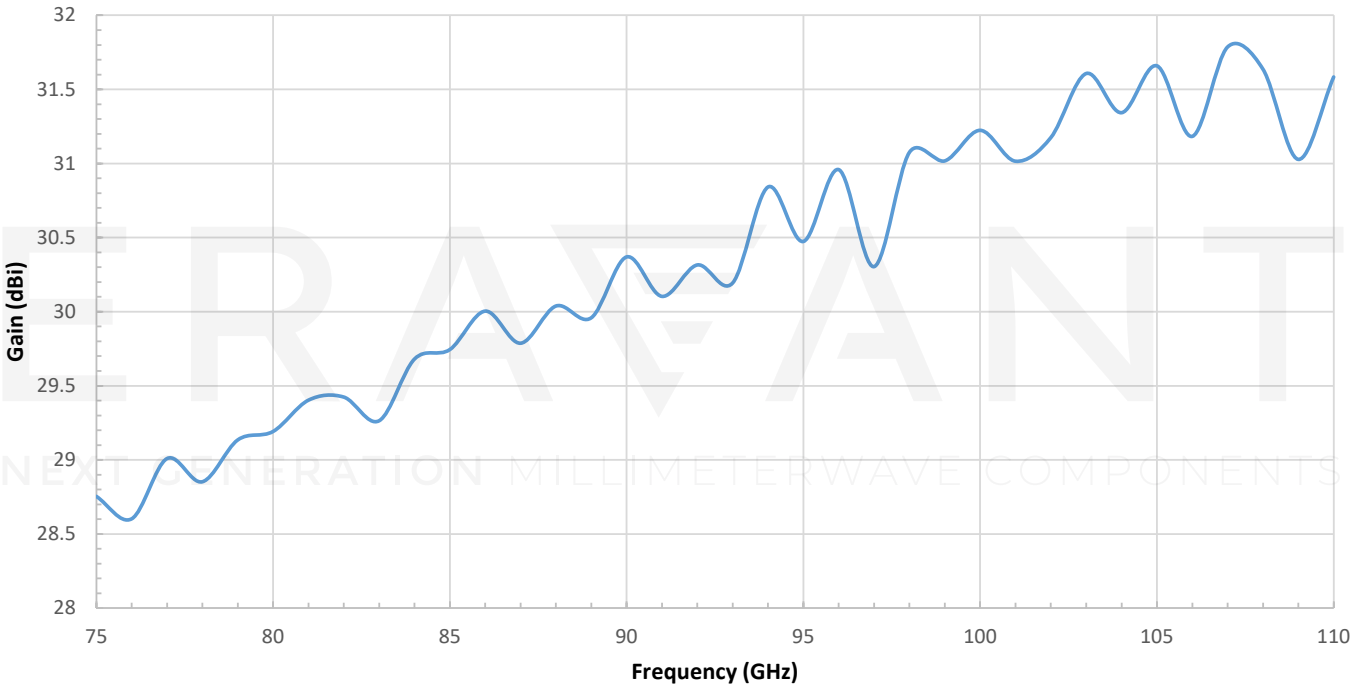
Simulated Antenna Pattern @ 93 GHz



Simulated Antenna Pattern @ 110 GHz



Simulated Gain vs. Frequency



Typical Return Loss vs. Frequency