SAV-1431141429-1F-S1

Dual-Ridged Horn Antenna, 14 to 110 GHz

SAV-1431141429-1F-S1 is a is a dual-ridged broadband horn antenna that operates from 14 to 110 GHz. The antenna offers a typical gain of 14 dBi and a typical 3 dB beamwidth of 29˚ on both the E-plane and H-plane, respectively. The antenna supports linear polarized waveforms. The antenna includes a mounting plate with a 1/4-20 threaded hole and various other mounting holes for flexible mounting capacity. The RF port is equipped with a female 1 mm connector.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	14 GHz		110 GHz
Gain		14 dBi	
Polarization		Linear	
E-Plane 3 dB Beamwidth		29°	
H-Plane 3 dB Beamwidth		29°	
E-Plane Sidelobe Levels		-10 dB	
H-Plane Sidelobe Levels		-10 dB	
Return Loss		10 dB	
Cross Polarization		28 dB	
Power Handling			4 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	1 mm (F)
Mounting	Mounting Plate with ¼-20 threaded hole
Material	Aluminum
Antenna Finish	Gold Plated
Outline	TBD

ECCN

EAR99

FEATURES

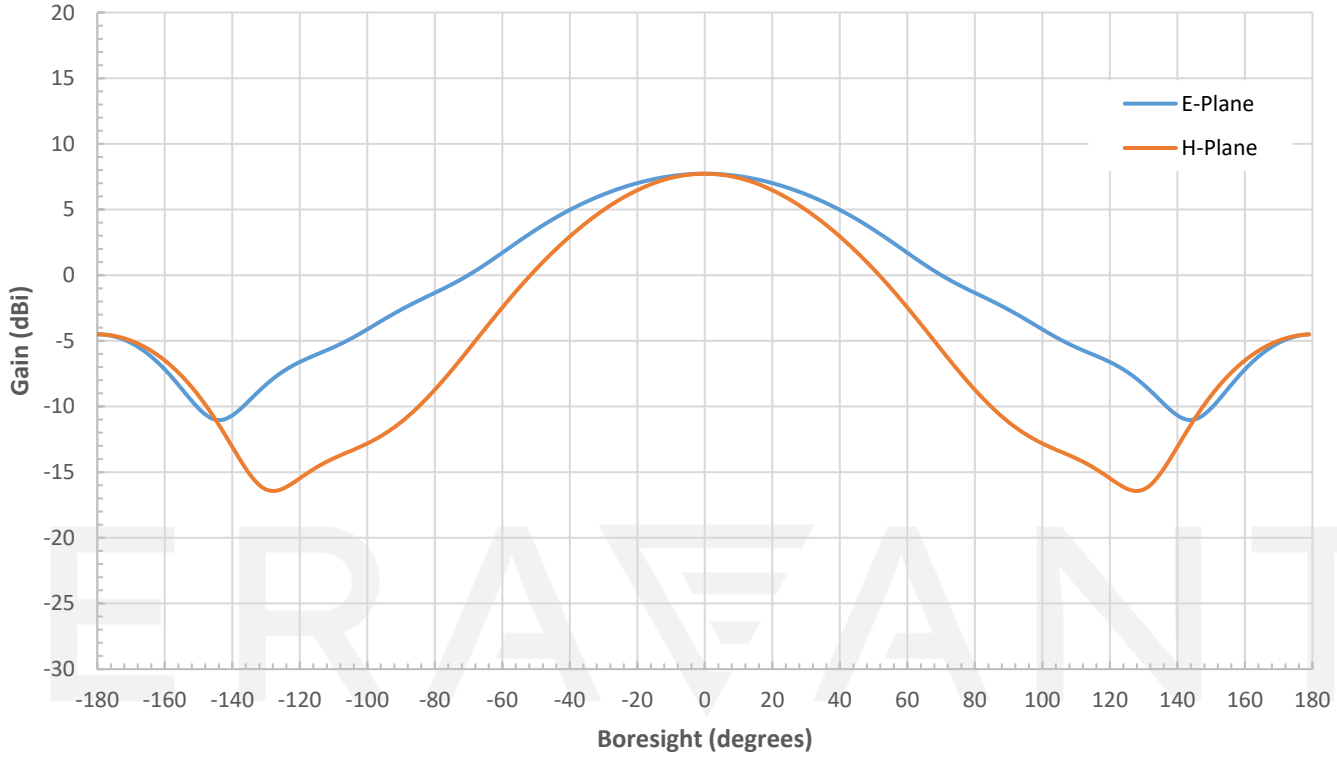
- Broadband Operation
- Coaxial Connector for RF Input
- Linear Polarization
- Good Impedance Match

APPLICATIONS

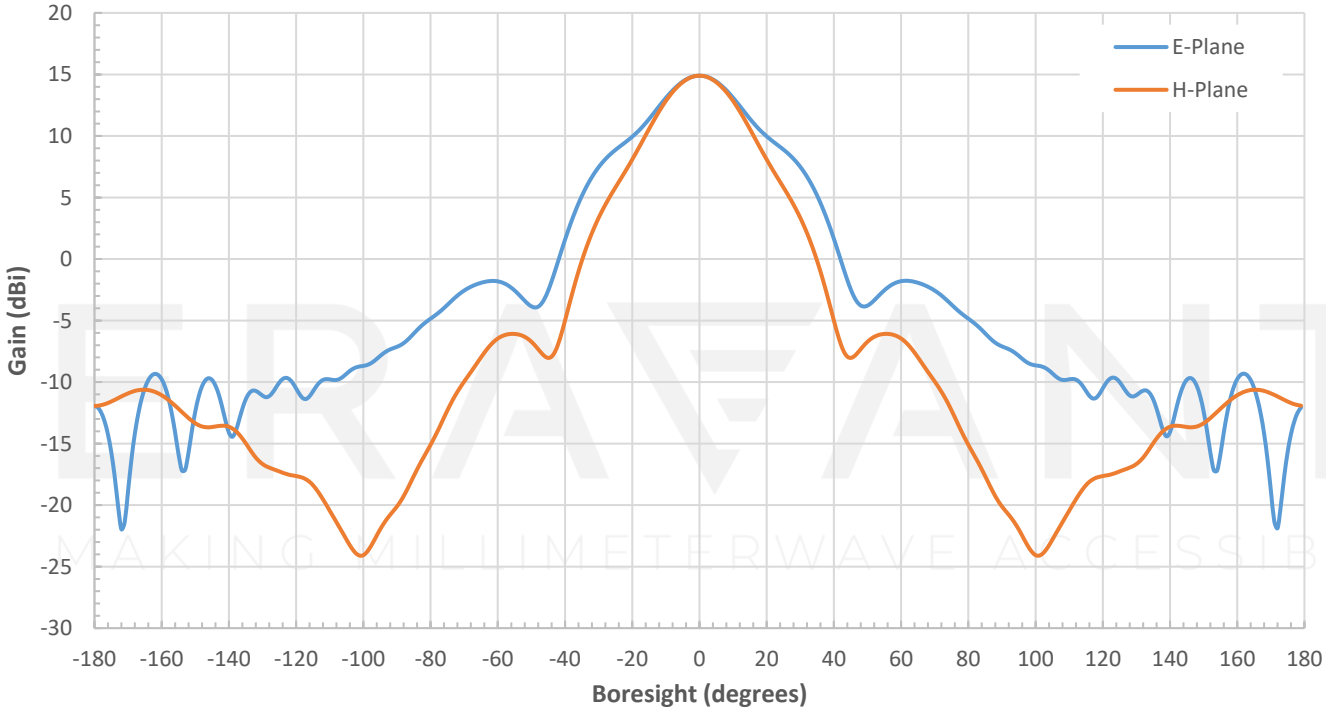
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

SUPPLEMENTAL DETAILS

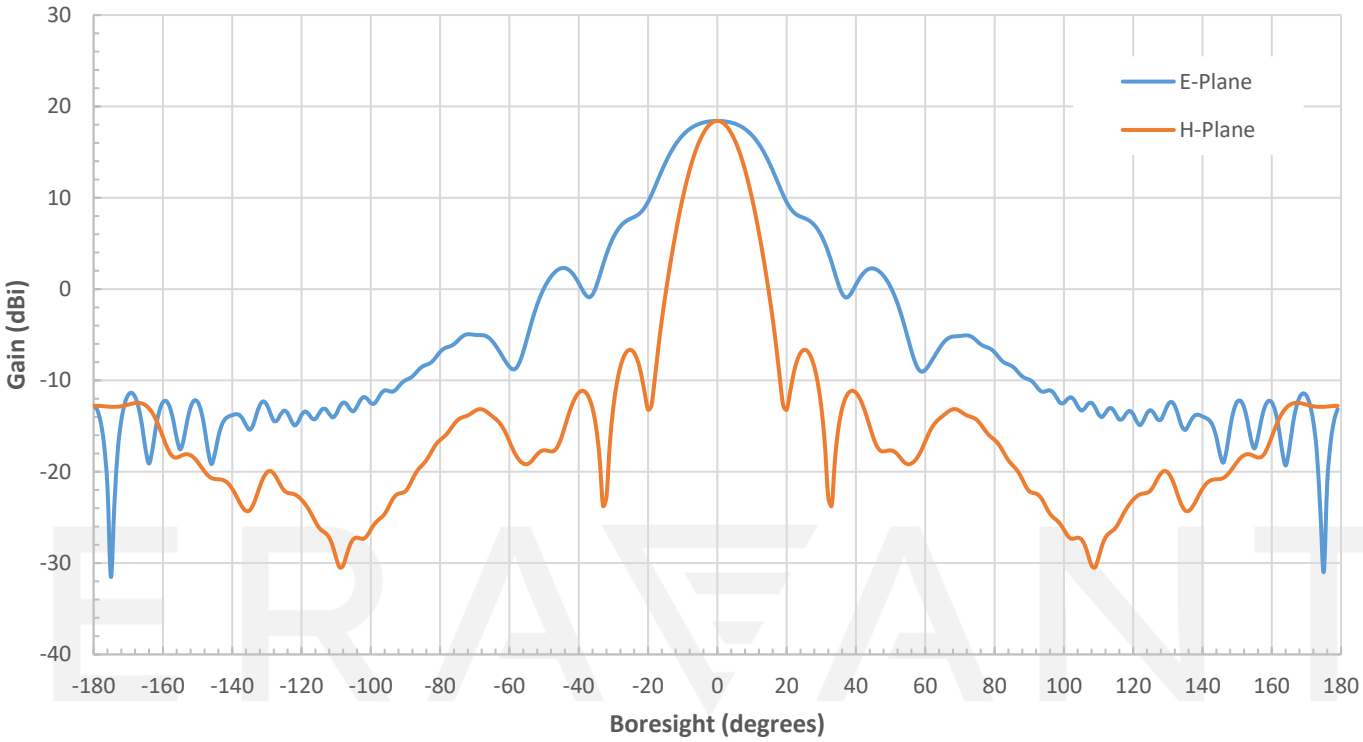
Simulated Antenna Patterns @ 14 GHz



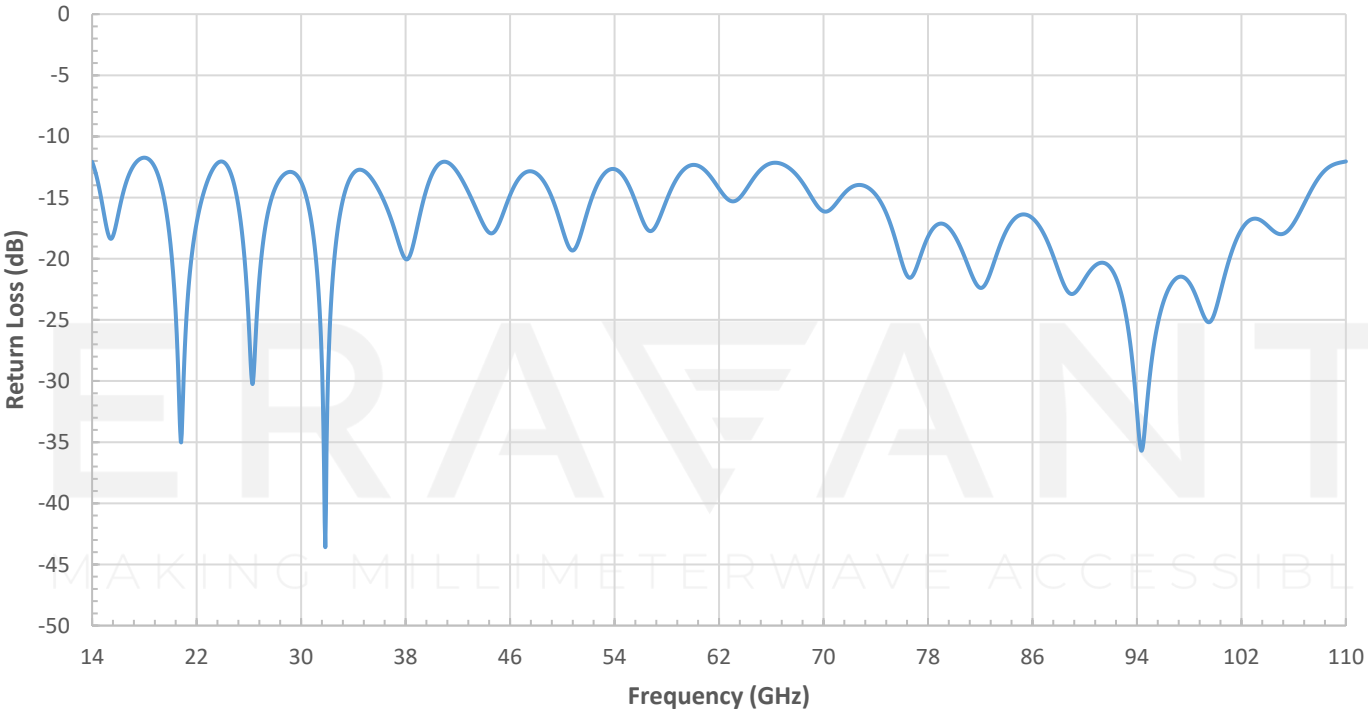
Simulated Antenna Patterns @ 62 GHz



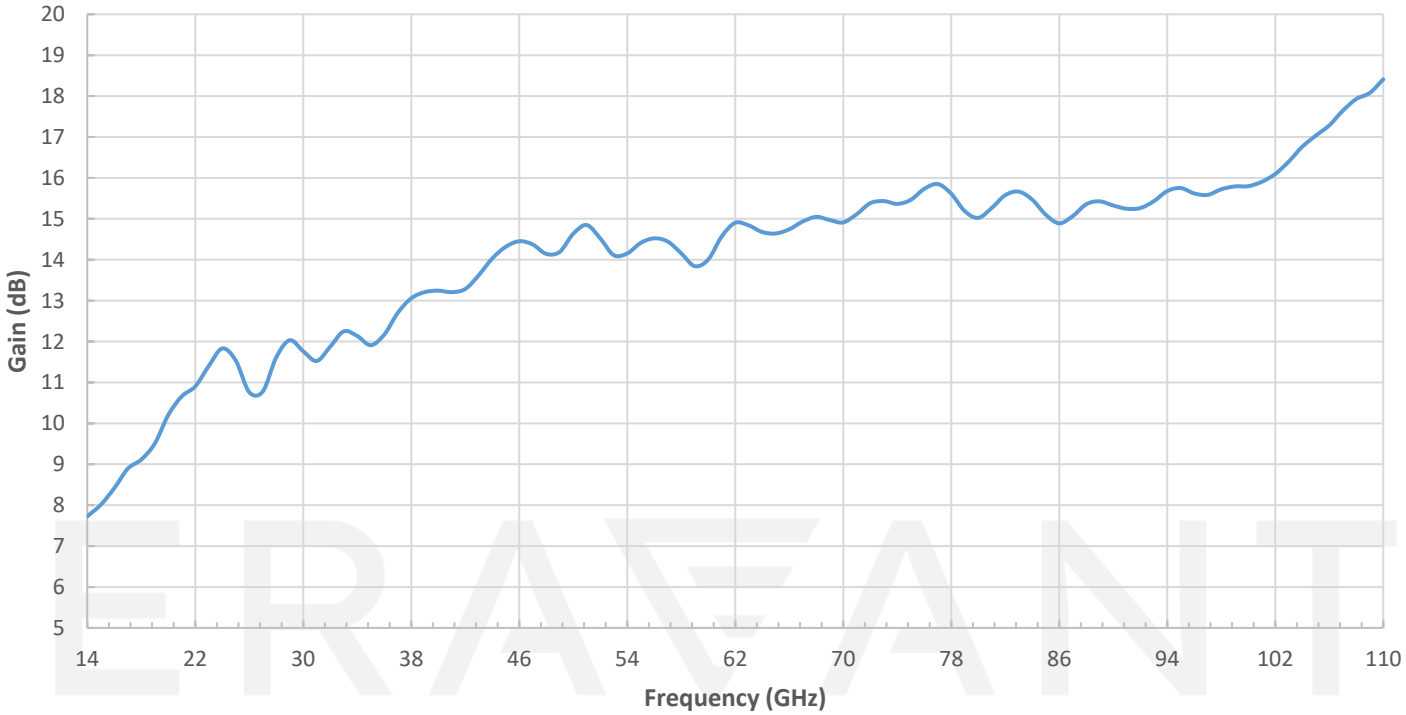
Simulated Antenna Patterns @ 110 GHz



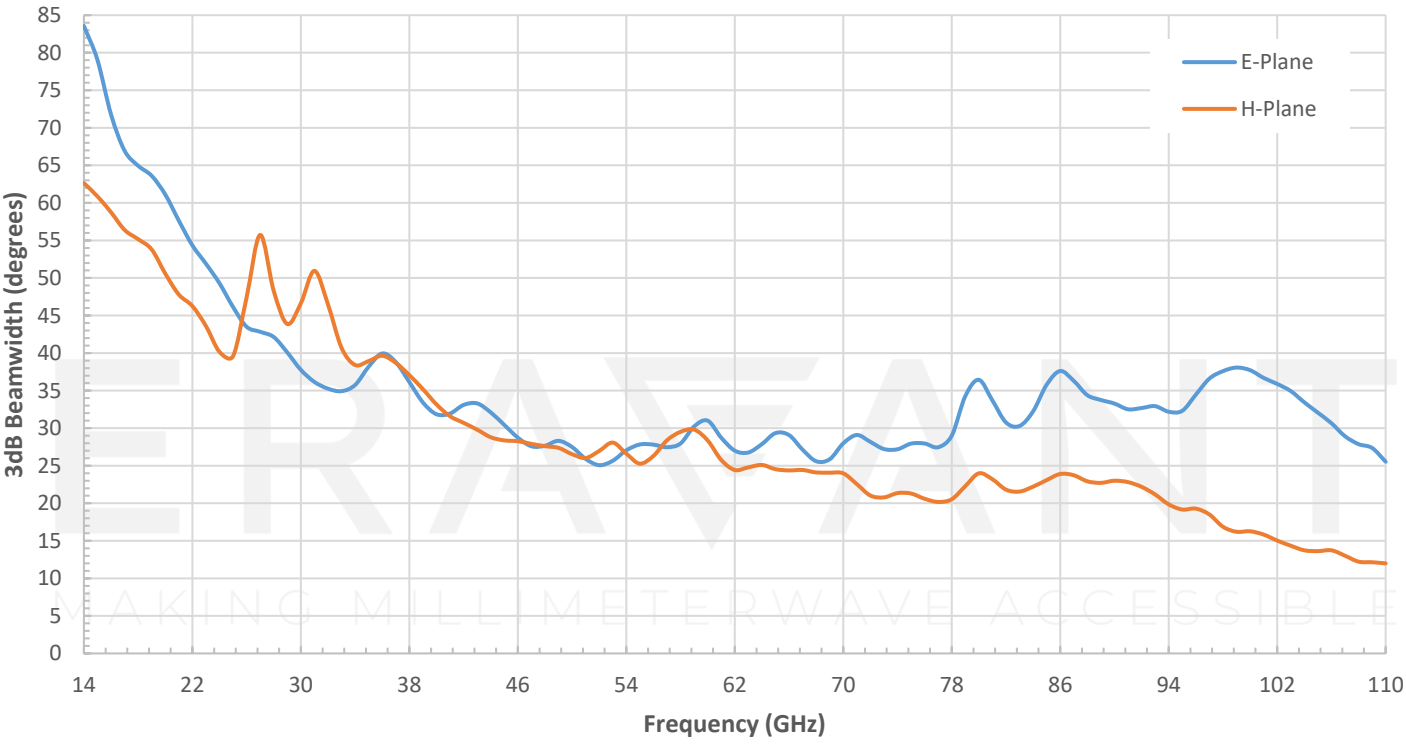
Simulated Return Loss vs. Frequency



Simulated Gain vs. Frequency



Simulated 3 dB Beamwidth vs. Frequency



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.
- Electrical and mechanical specs are preliminary and mat change when the design is finalized.
- 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.

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