SAF-3334031820-28-S1-WR-ML

Ka Band Scalar Feed Horn Antenna, Weather Resistant, Military Grade, 33 to 40 GHz, 18 dBi

SAF-3334031820-28-S1-WR-ML is a military grade Ka-band, weather resistant, scalar feed horn antenna that operates from 33 to 40 GHz. The antenna offers a 18 dBi nominal gain and 20 degree typical half power beamwidth. The nominal side lobe levels are -25 dB or lower. The scalar feed horn is equipped with a WR-28 waveguide with UG-599/U-M grooved flange that supports linear polarized waveforms. The mechanical configuration is designed for weather resistance, with features such as an integrated radome and grooved waveguide flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	33 GHz		40 GHz
Gain		18 dBi	
3 dB Beamwidth, E-Plane		20°	
3 dB Beamwidth, H-Plane		20°	
Side Lobes, E-Plane		-25 dB	
Side Lobes, H-Plane		-25 dB	
Return Loss		18 dB	
Polarization		Linear	
Power Handling			200 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-55°C		+85°C
Non-Condensing Relative Humidity		85% to 95%	

Mechanical Specifications:

Item	Specification
Antenna Port	WR-28 Waveguide with UG-599/U-M Anti-Cocking Flange
Body Material	Aluminum 6061-T6
Radome Material	PTFE
Body Finish	Chem Film with Gray Paint
Weight	7 oz.
Outline	AF-RA18-250-WR

ECCN

EAR99

FEATURES

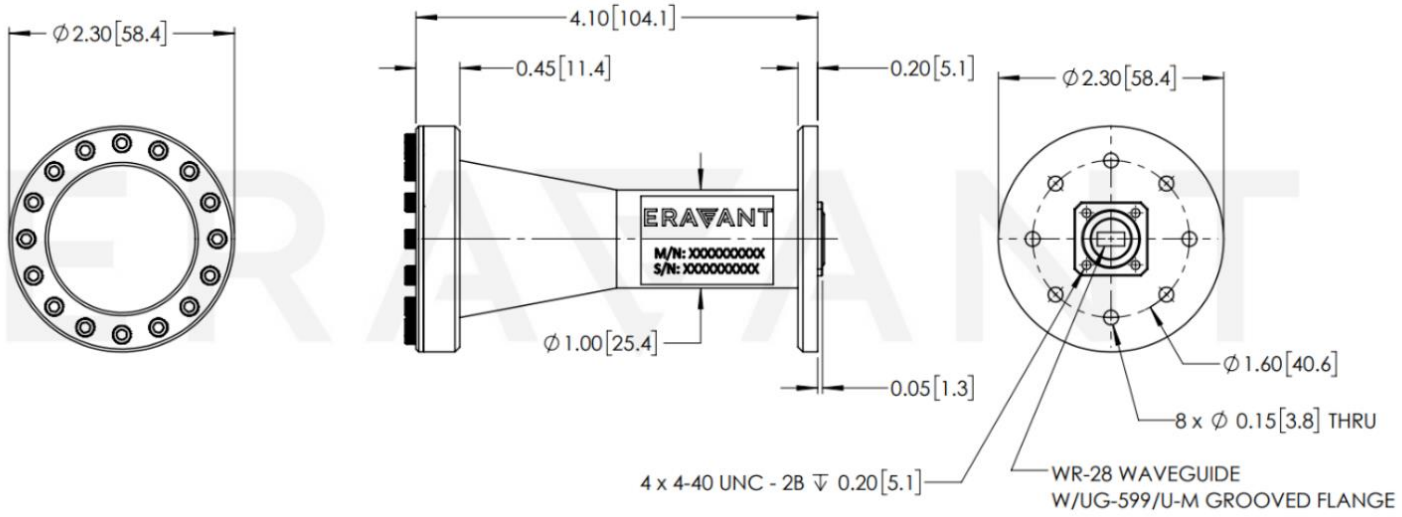
- Weather Resistant
- Low Sidelobe Levels
- Linear Polarization

APPLICATIONS

- Feed Horn for Cassegrain Antennas
- Feed Horn for Gaussian Lens Antenna
- Rapid System Setups
- Antenna Range Setups

SUPPLEMENTAL DETAILS

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



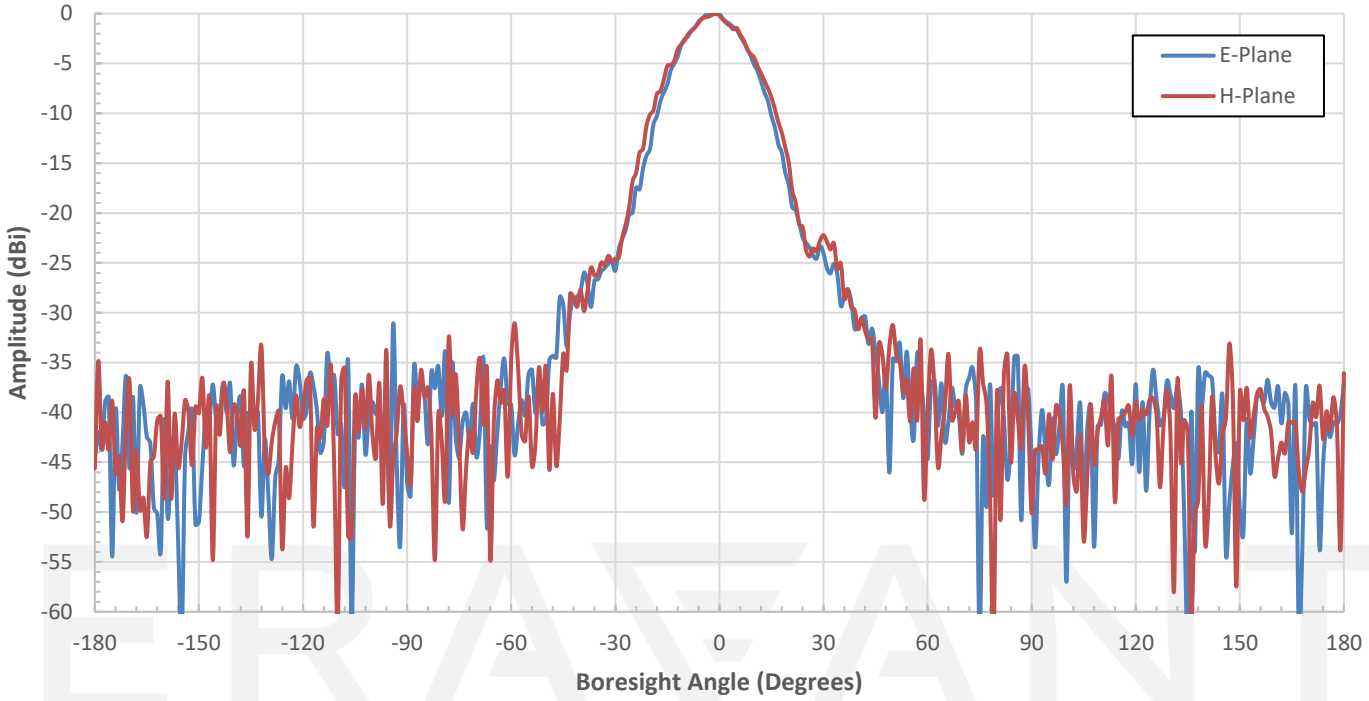
NOTE:

- 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.
- Unit cost does not include environmental qualification. Environmental testing can be provided using third party services for an additional fee.
- Eravant reserves the right to change the information presented without notice.

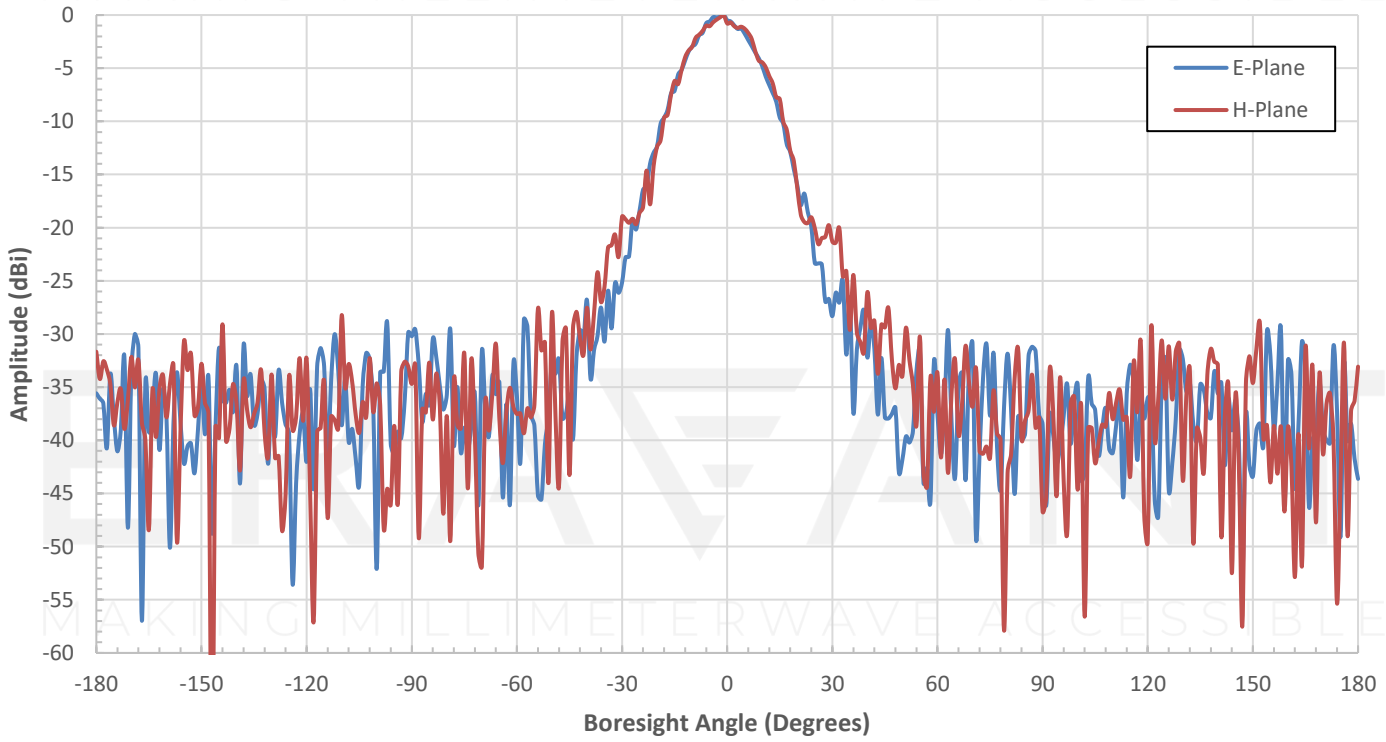
CAUTION:

- 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

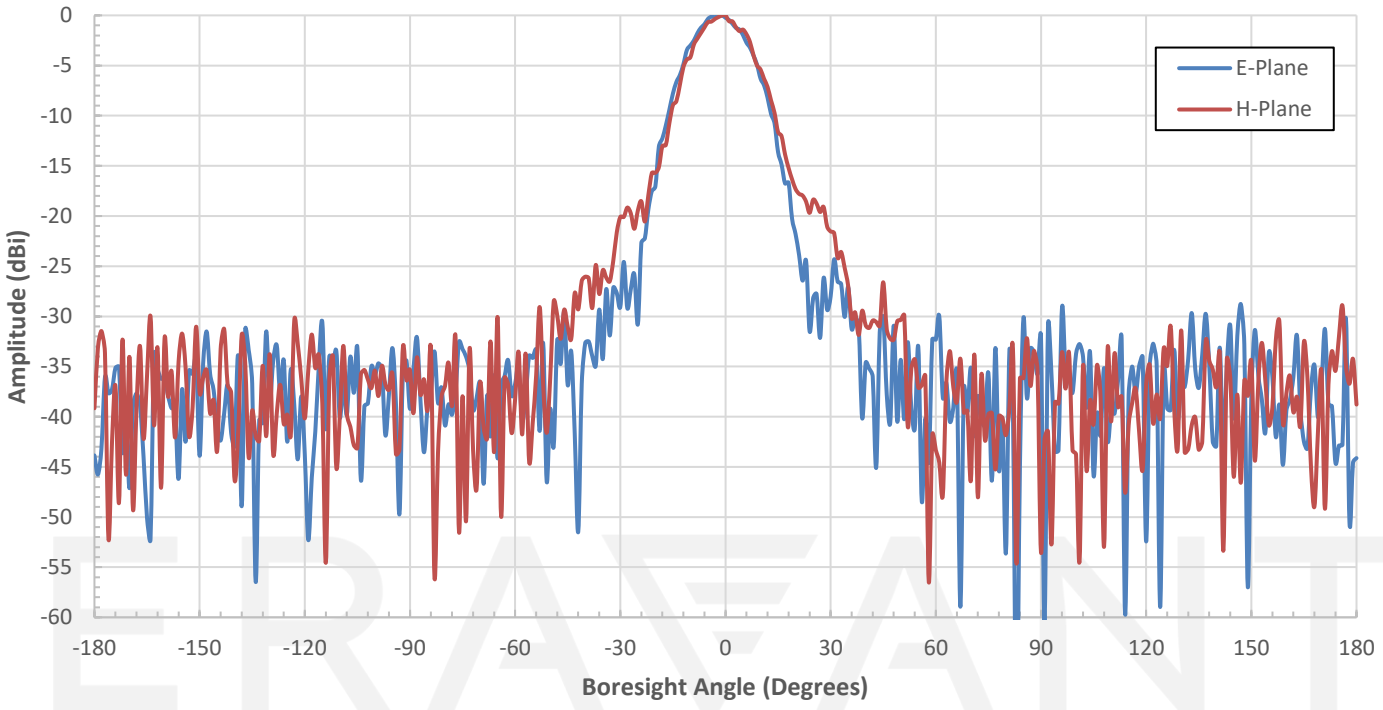
Typical Measured Antenna Patterns @ 33 GHz



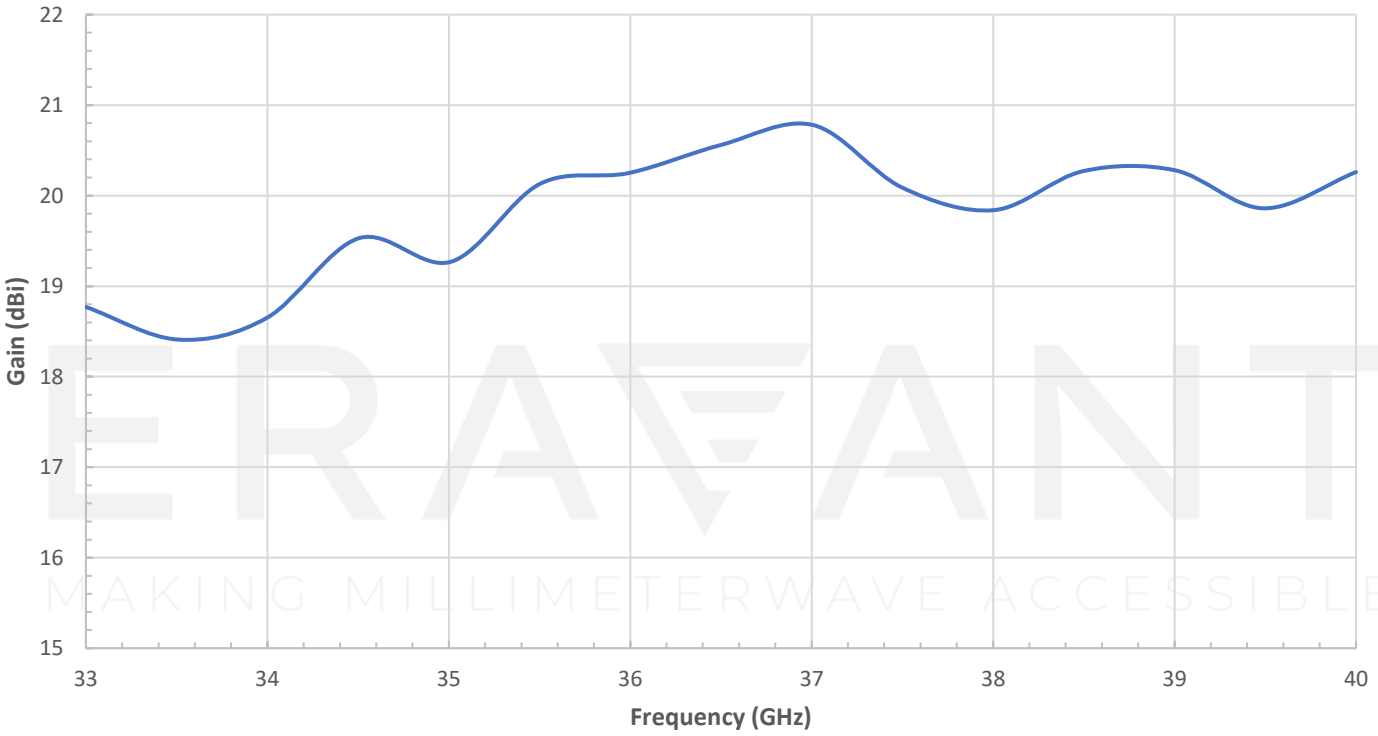
Typical Measured Antenna Patterns @ 36 GHz



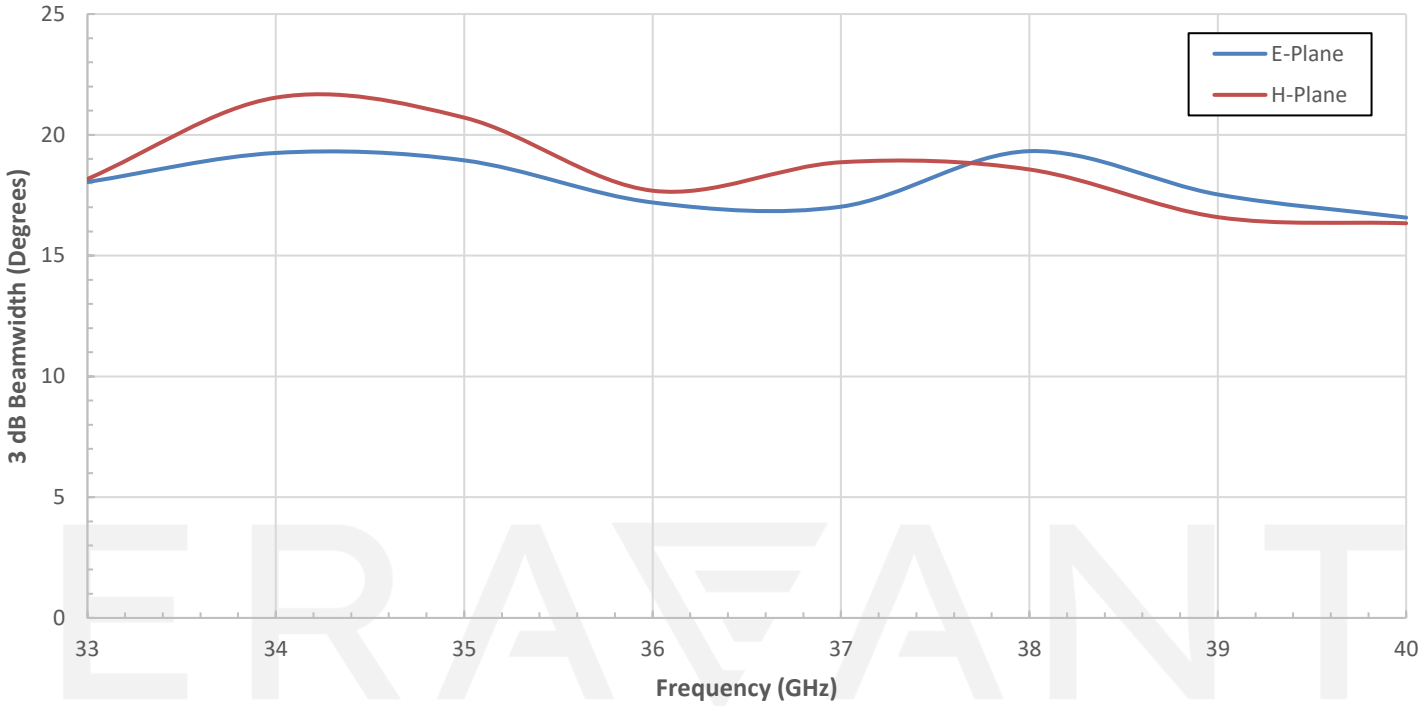
Typical Measured Antenna Patterns @ 40 GHz



Typical Measured Gain vs Frequency



Typical 3 dB Beamwidth vs Frequency



Typical Measured Return Loss vs Frequency