

SAR-2309-28-S2

WR-28 Pyramidal Horn Antenna, 23 dBi Gain

SAR-2309-28-S2 is a Ka-band pyramidal horn antenna that operates from 26.5 GHz to 40 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 10 degrees on the E-plane and 11 degrees on the H-plane, respectively. The antenna supports linear polarized waveforms. The input of this antenna is a WR-28 waveguide with UG-599/U flange. Other antennas with different gain and antenna port are offered under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	26.5 GHz		40 GHz
Gain	21.5 dBi	23 dBi	24 dBi
Polarization	Linear		
3 dB Beamwidth, E-Plane	10°		
3 dB Beamwidth, H-Plane	11°		
Sidelobes, E-Plane	-14 dB		
Sidelobes, H-Plane	-30 dB		
Return Loss	23 dB		
Specification Temperature	+25°C		
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-28 Waveguide
Flange Type	UG-599/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	4.40" (L) X 2.30" (W) X 1.86" (H)
Outline	AR-A2

ECCN

EAR99

FEATURES

- Rectangular Waveguide Interface
- Precisely Machined and Gold Plated
- Linear Polarization
- High Return Loss

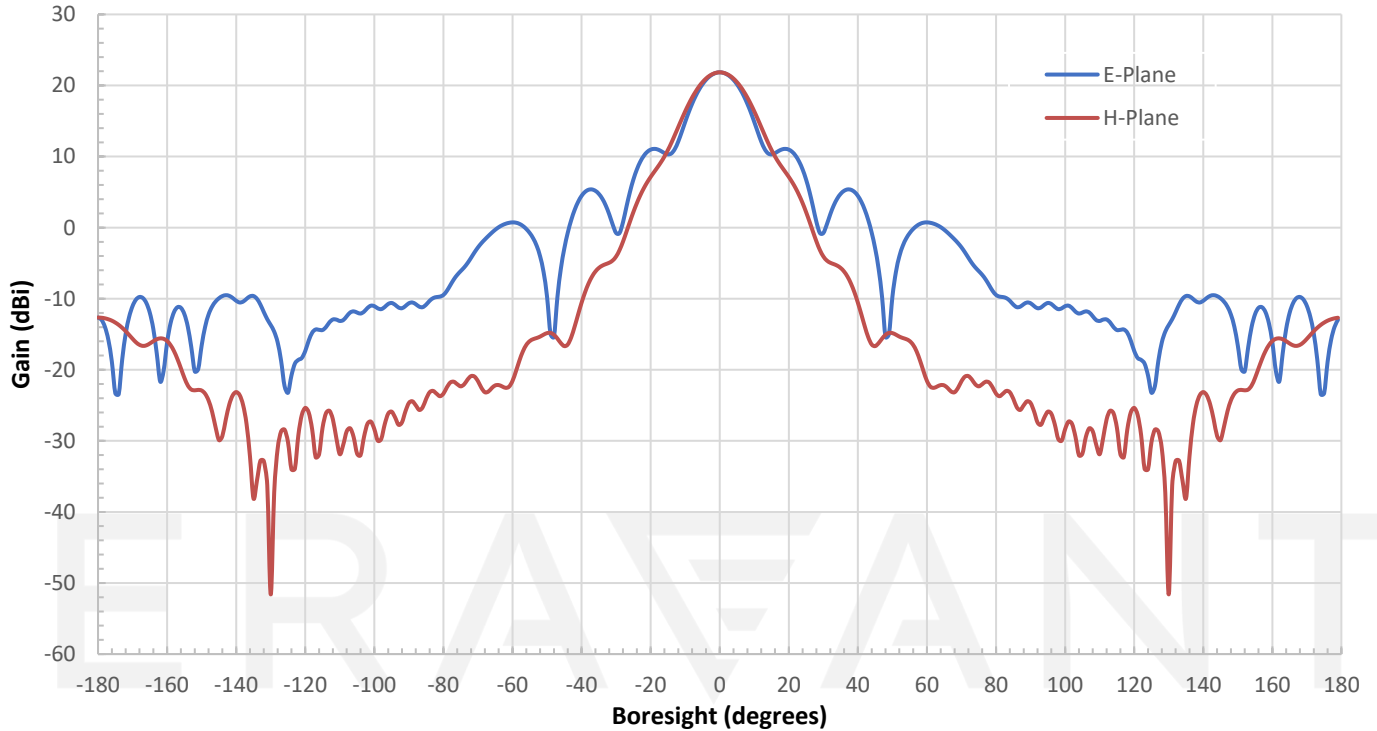
APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

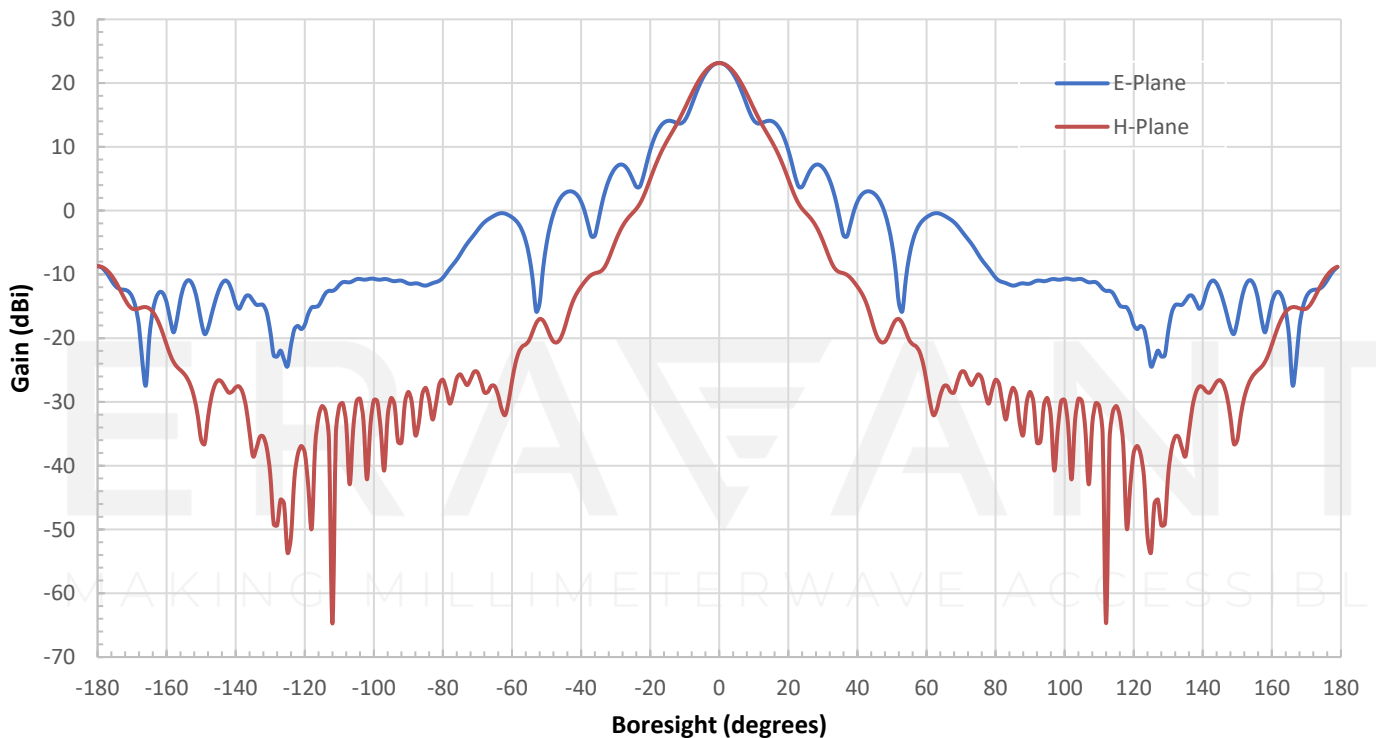
SUPPLEMENTAL DETAILS



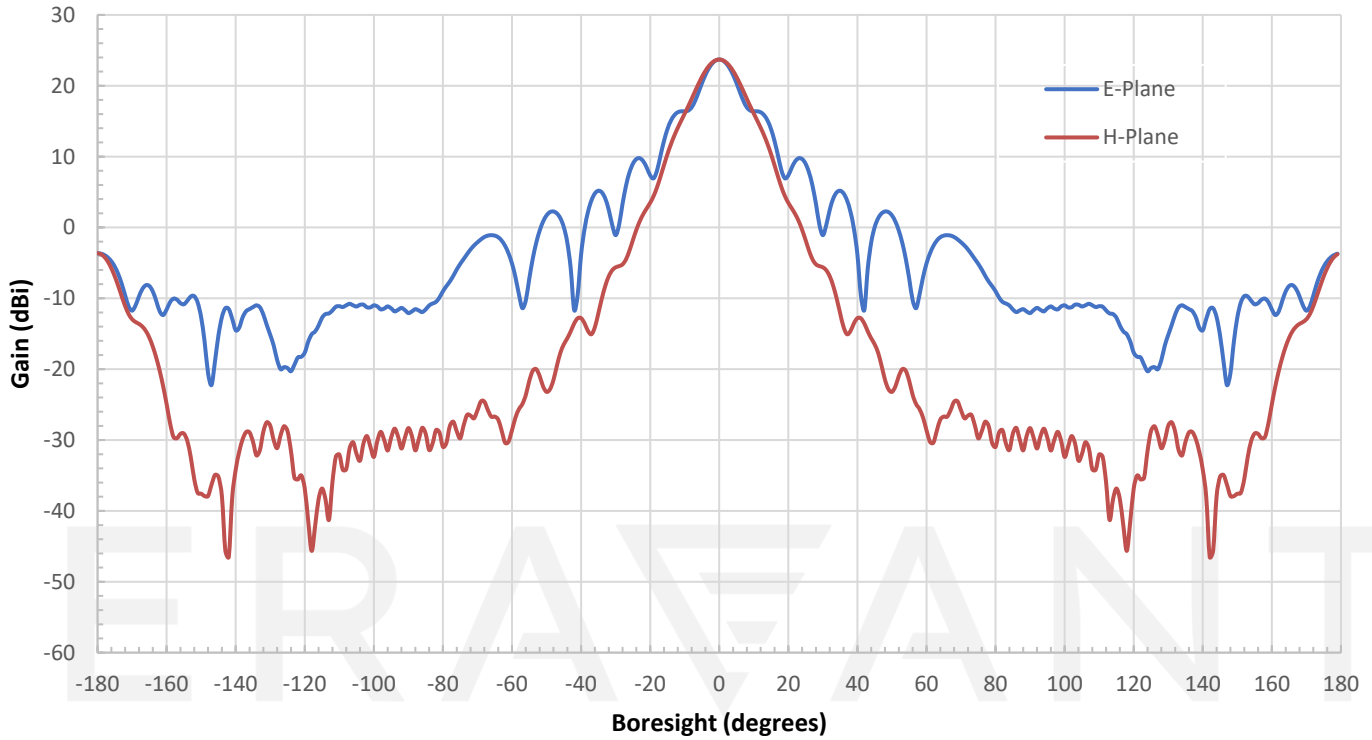
Simulated Antenna Patterns @ 26.5 GHz



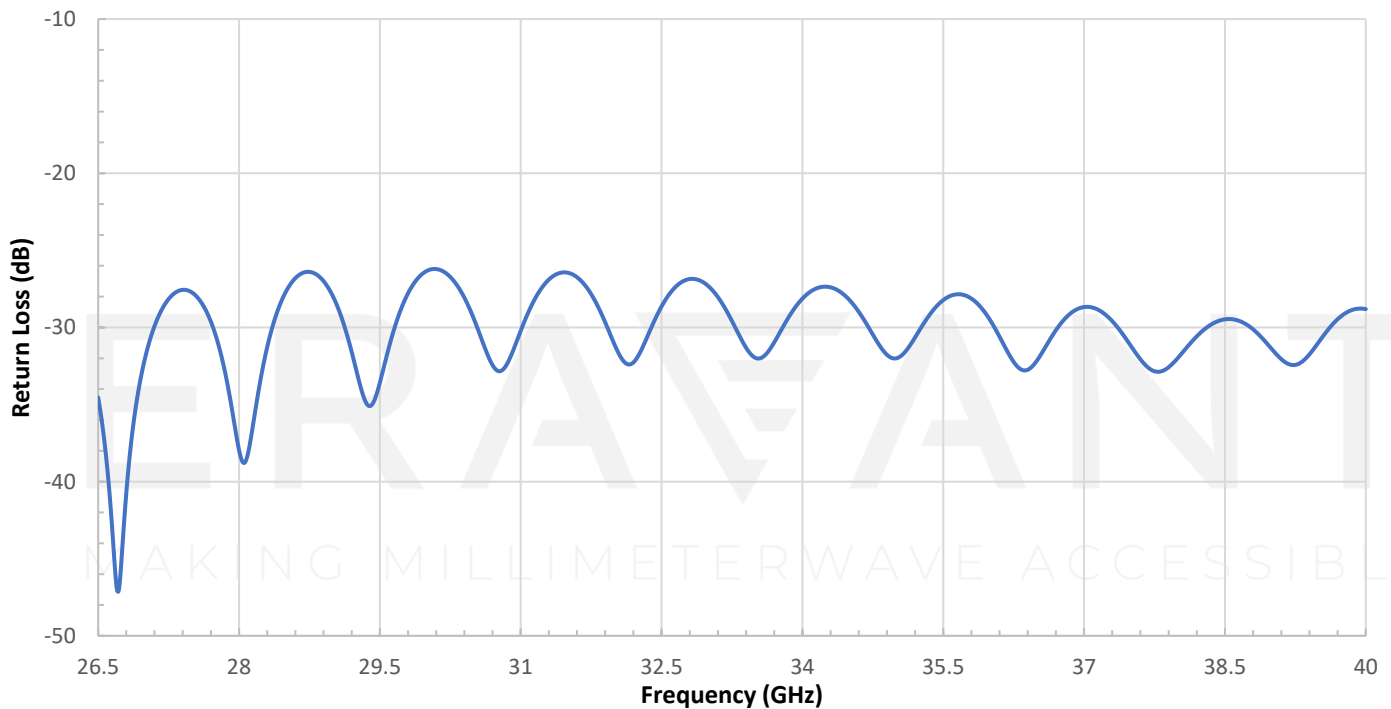
Simulated Antenna Patterns @ 33.5 GHz



Simulated Antenna Patterns @ 40 GHz

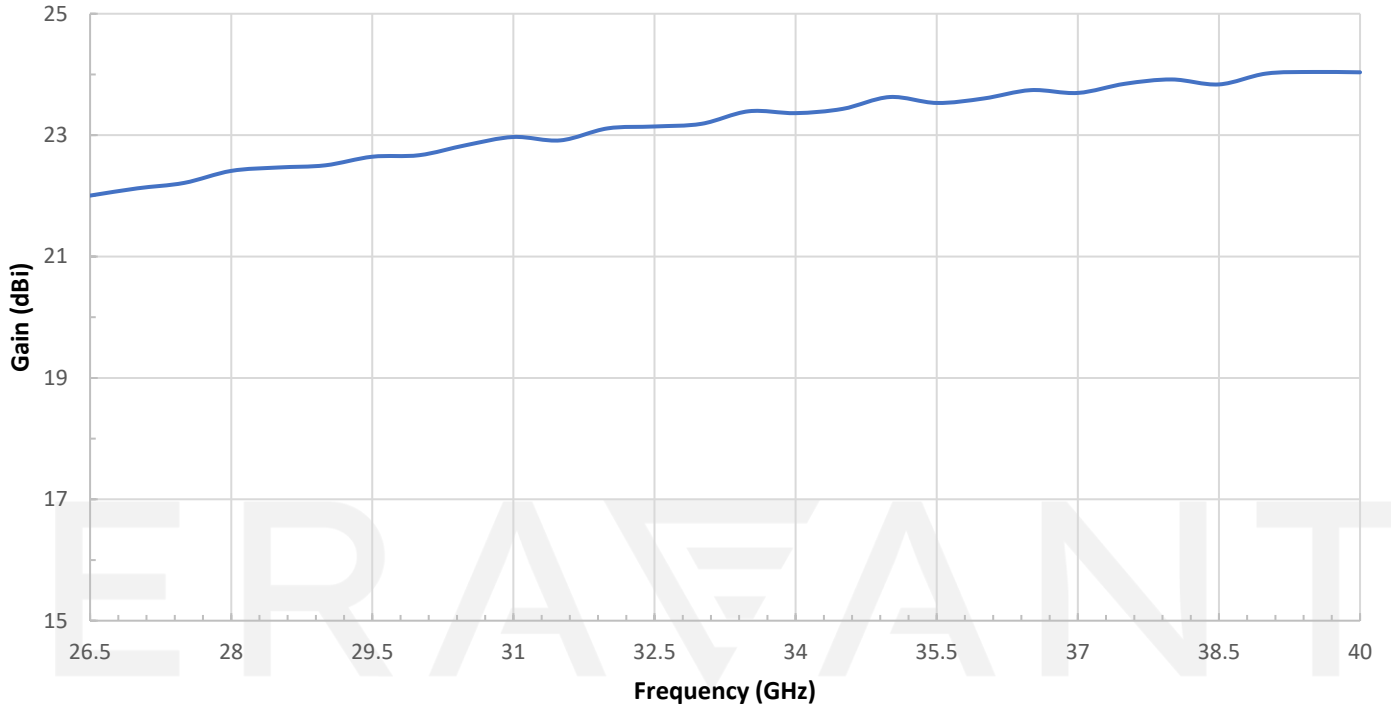


Simulated Return Loss vs. Frequency

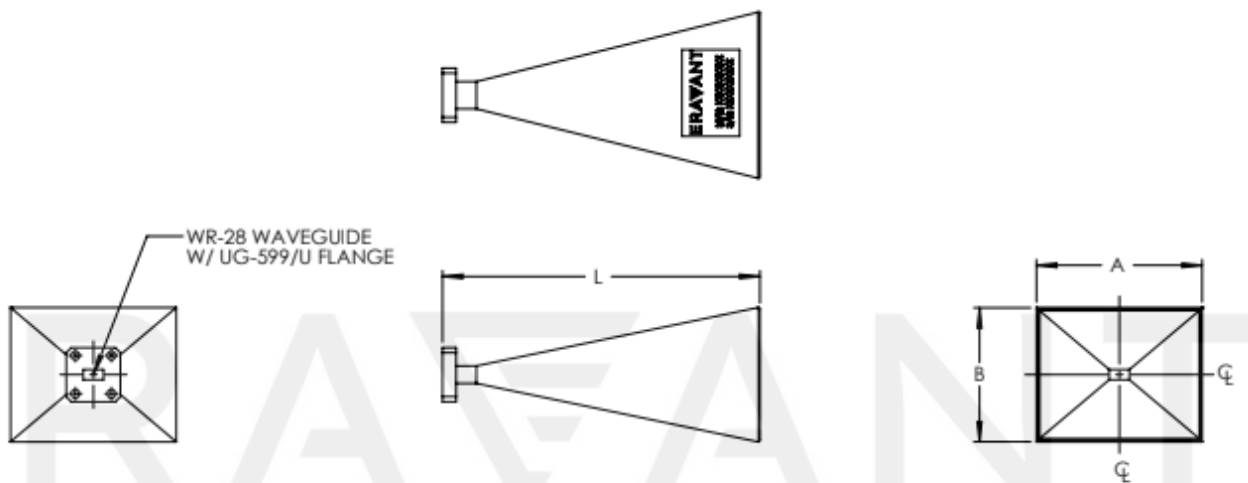


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Simulated Gain vs. Frequency



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



PART NO.	DWG NO.	A	B	L	GAIN
SAR-2013-28-S2	AR-A1	1.69[42.9]	1.34[34.0]	2.30[58.4]	20 dBi
SAR-2309-28-S2	AR-A2	2.31[58.7]	1.87[47.5]	4.40[111.8]	23 dBi
SAR-2507-28-S2	AR-A3	2.89[73.4]	2.33[59.2]	6.90[175.3]	25 dBi

NOTE:

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- 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.

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