

SAR-2013-28-S2

WR-28 Pyramidal Horn Antenna, 20 dBi Gain

SAR-2013-28-S2 is a Ka-band pyramidal horn antenna that operates from 26.5 GHz to 40 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 16 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-28 waveguide with UG-599/U flange.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	26.5 GHz		40 GHz
Gain	18.5 dBi	20 dBi	21 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		16°	
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	0.6 Oz
Size	2.30" (L) X 1.67" (W) X 1.32"(H)
Outline	AR-A1

ECCN

EAR99

FEATURES

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

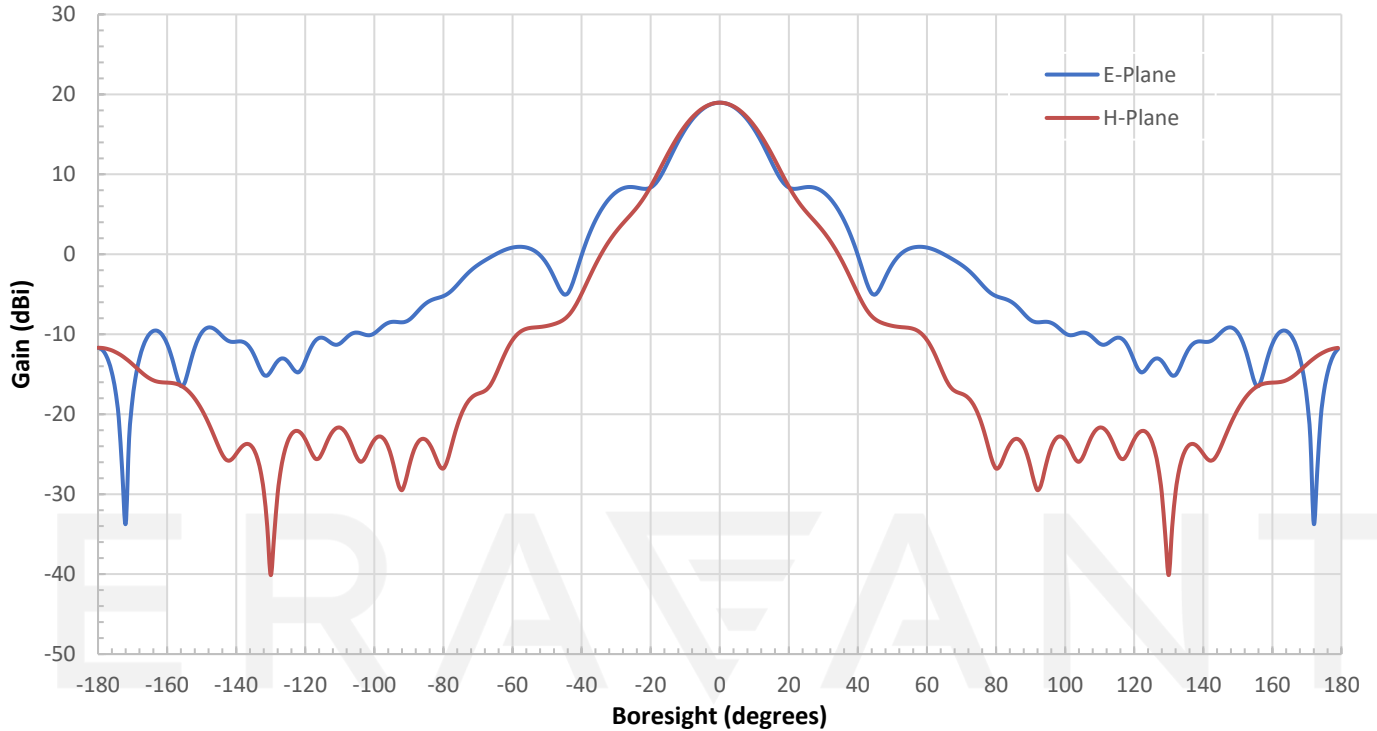
APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

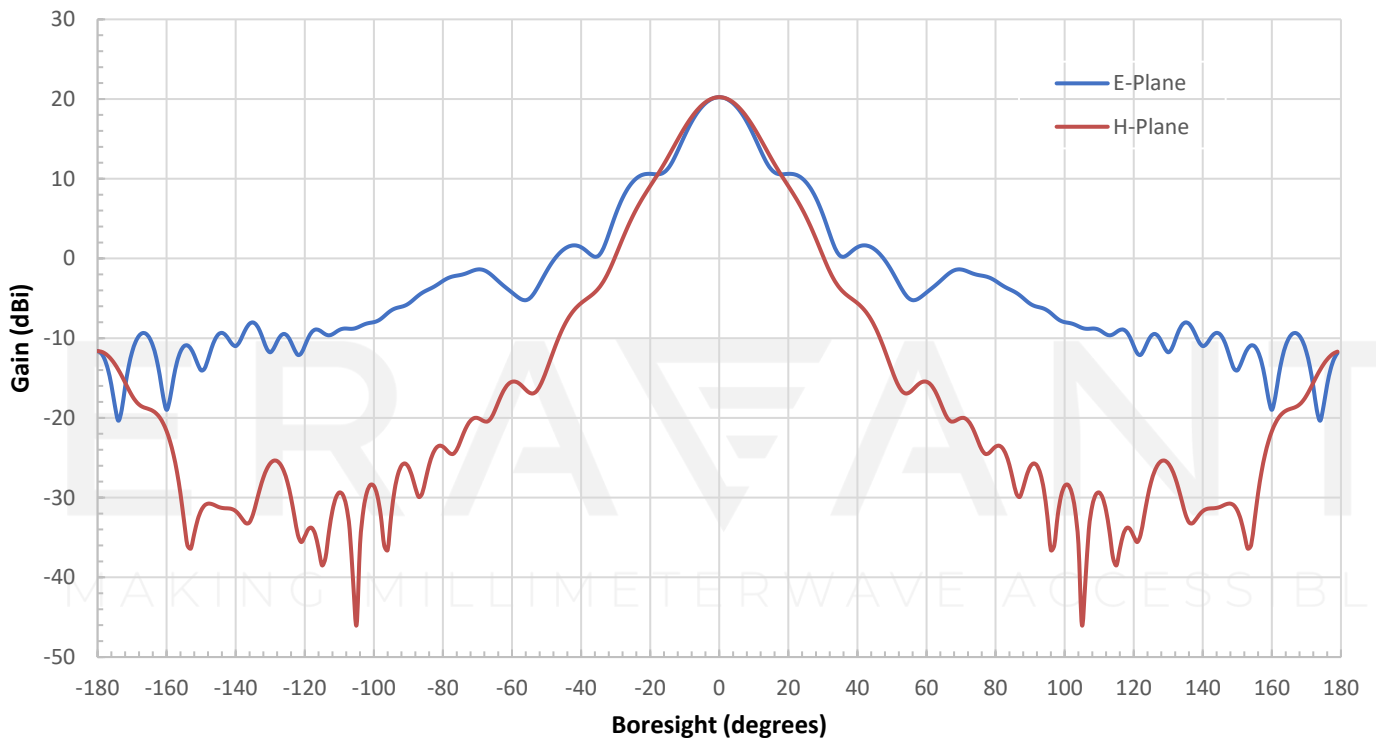
SUPPLEMENTAL DETAILS



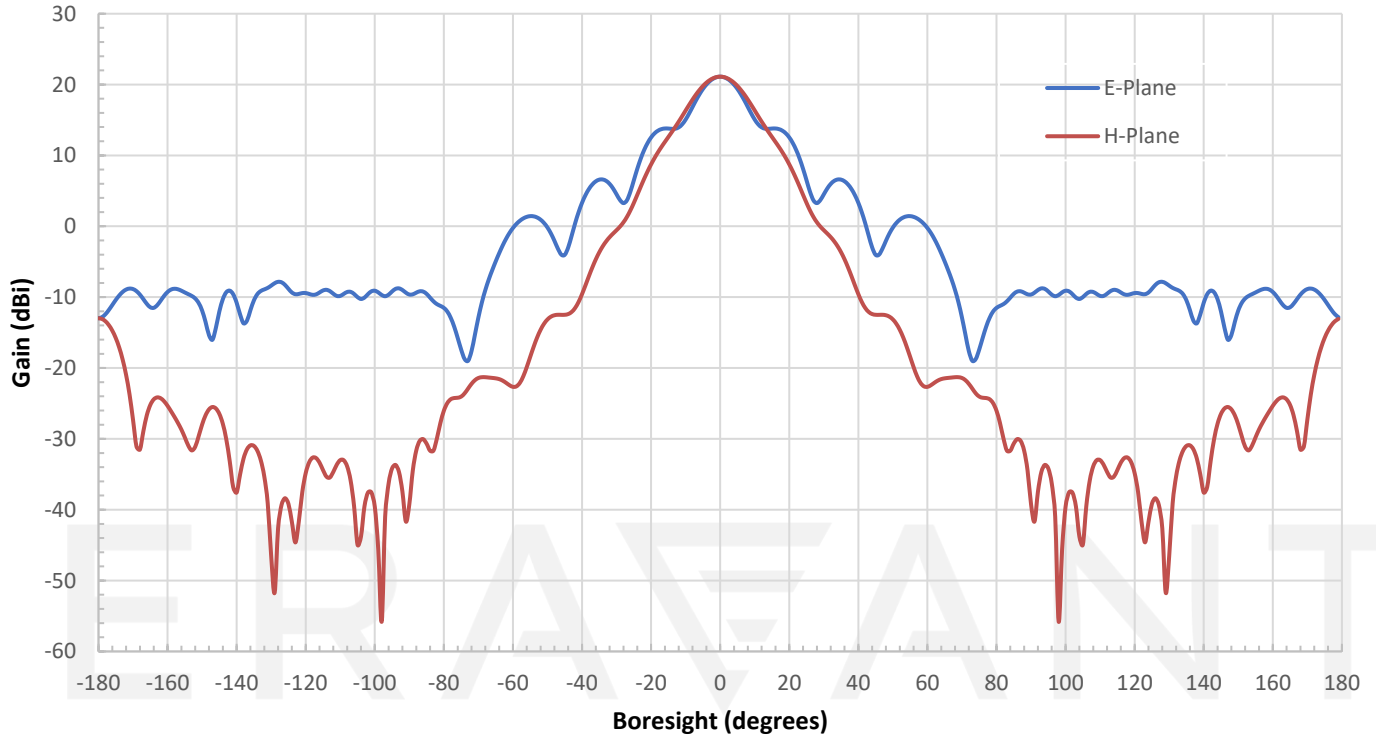
Simulated Antenna Patterns @ 26.5 GHz



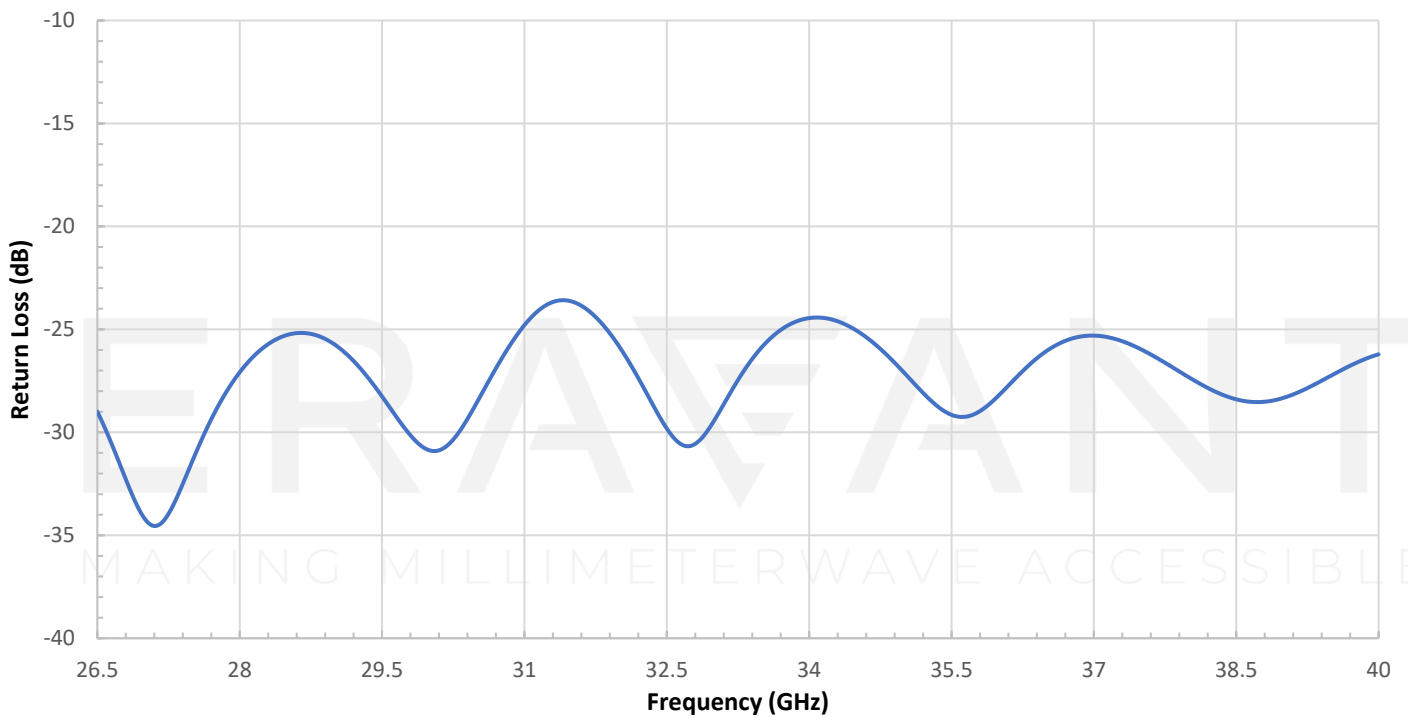
Simulated Antenna Patterns @ 33.25 GHz



Simulated Antenna Patterns @ 40.0 GHz

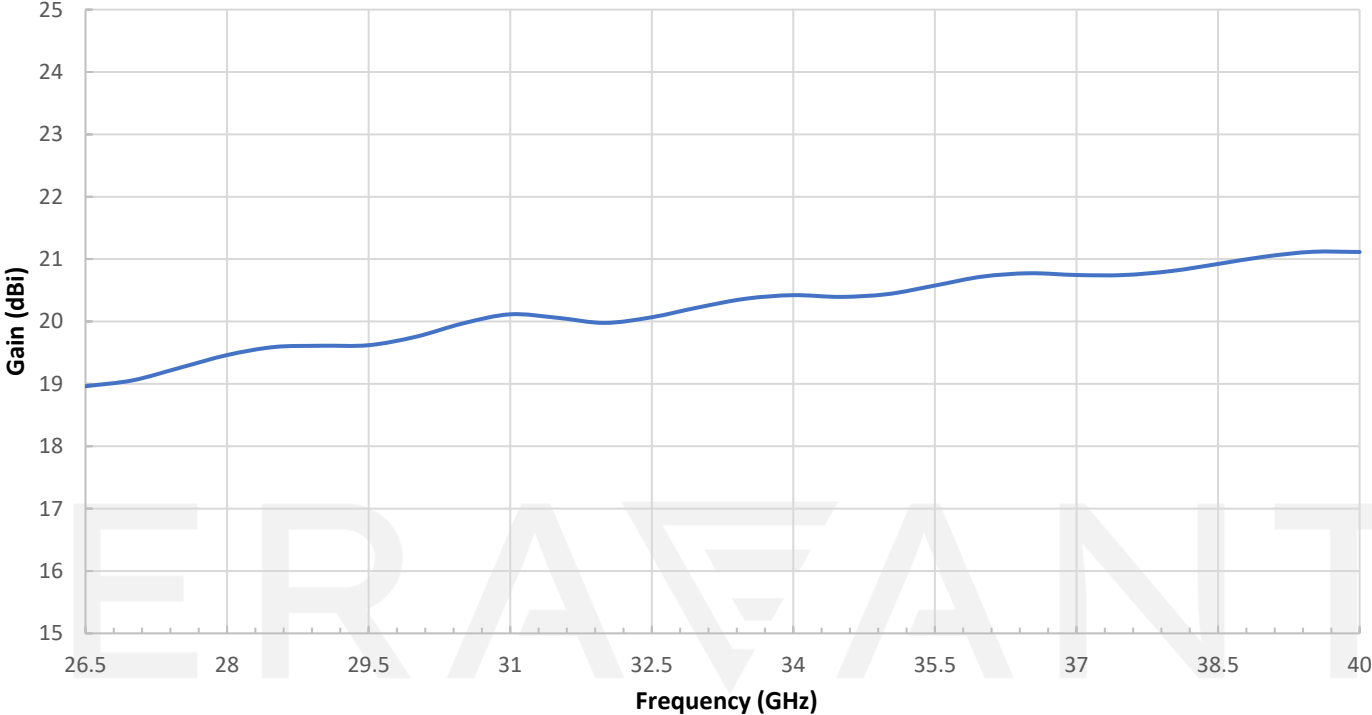


Simulated Return Loss vs. Frequency

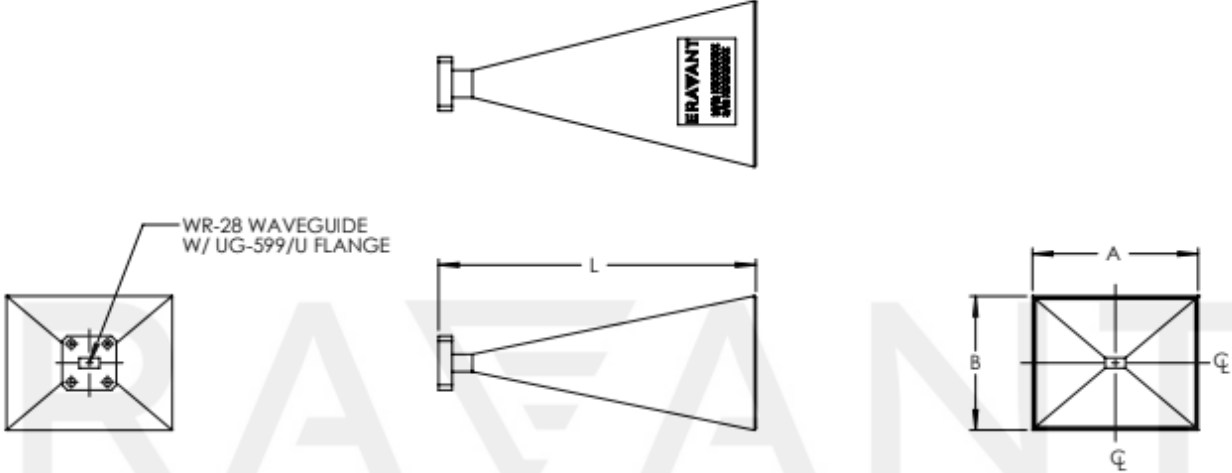


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Simulated Gain vs. Frequency



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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