

SAZ-2434432410-28-S1

WR-28 Standard Gain Horn Antenna, 24 dBi Gain

SAZ-2434432410-28-S1 is a Ka-band standard gain horn antenna that operates from 24 GHz to 44 GHz. The antenna offers 24 dBi nominal gain, a typical half power beamwidth of 9.4 degrees on the E-plane and 10.8 degrees on the H-plane at the center frequency, respectively. The antenna supports linear polarized waveforms. The input of this antenna is a WR-28 waveguide with UG-599/U flange. The standard gain horn is offered for antenna range calibration purpose mainly, but it can be also used for general purpose system set ups.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	24 GHz		44 GHz
Gain		24 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane @ 34 GHz		9.4°	
3 dB Beamwidth, H-Plane @ 34 GHz		10.8°	
Sidelobes, E-Plane		-13 dB	
Sidelobes, H-Plane		-36 dB	
Return Loss		20 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-28 Waveguide with UG-599/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	3.7 Oz
Size	5.61" (L) X 2.58" (W) X 2.08" (H)
Outline	AZ-A24

ECCN

EAR99

FEATURES

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

APPLICATIONS

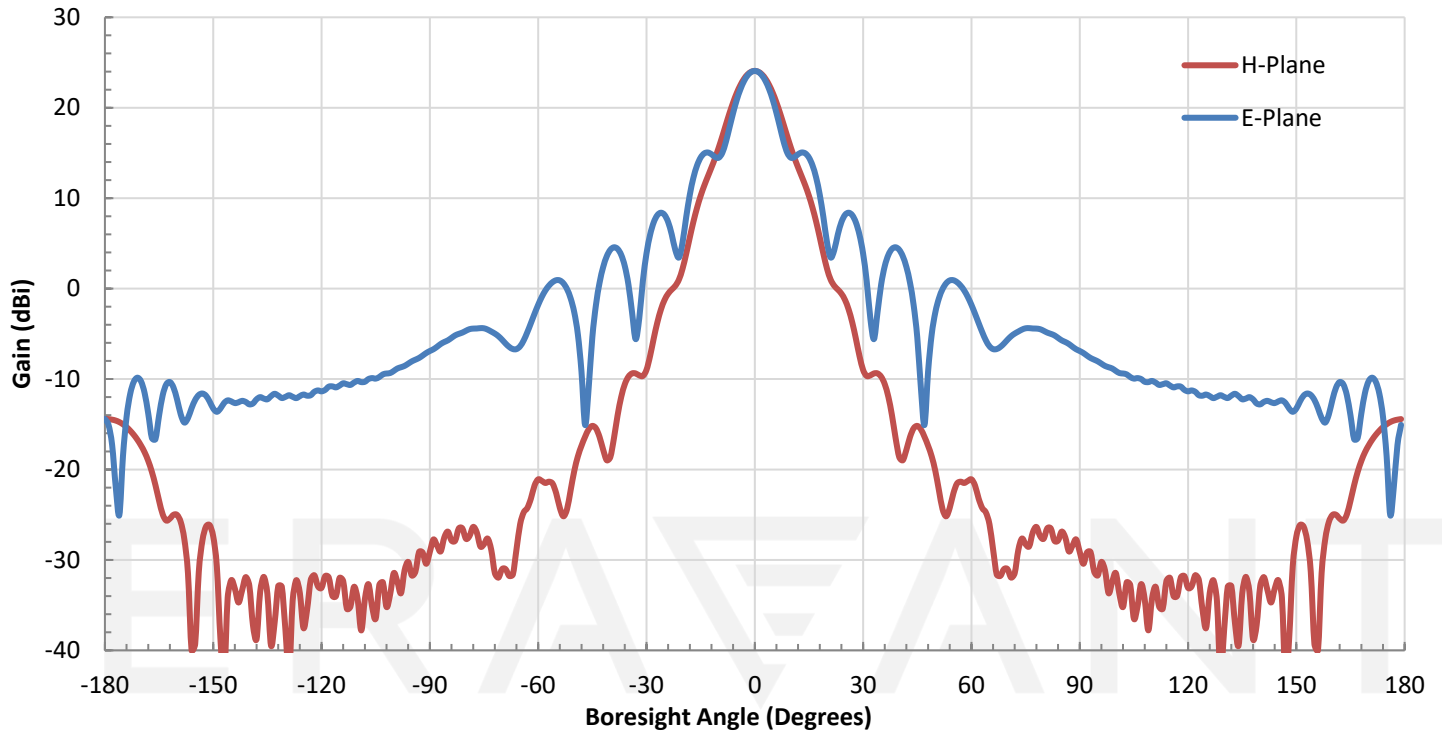
- Antenna Range
- Antenna Gain Measurements
- General System Setups
- Radar/Communication Setups

SUPPLEMENTAL DETAILS

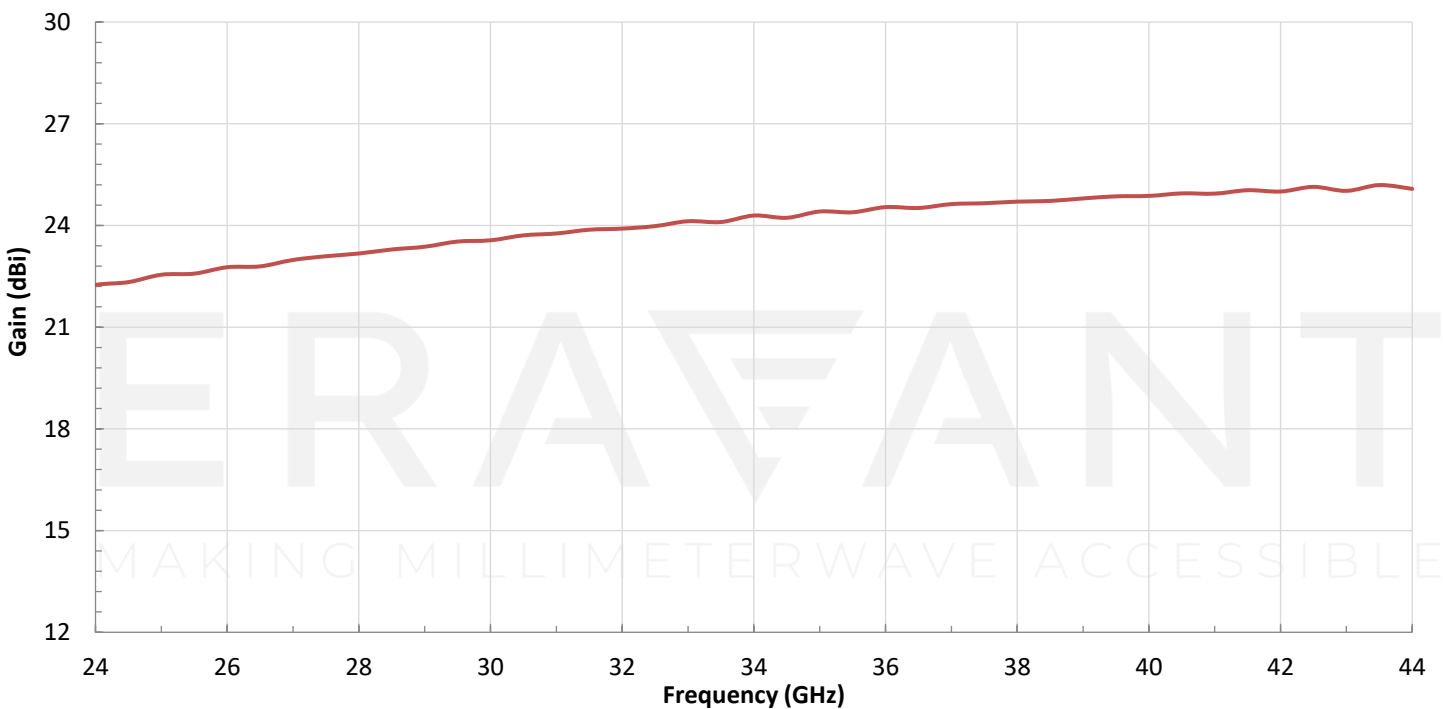


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Simulated Antenna Patterns @ 33 GHz



Simulated Gain vs. Frequency



Simulated Gain vs. Frequency in Tabular Format

Frequency (GHz)	Gain (dBi)	Frequency (GHz)	Gain (dBi)
24	22.2	34.5	24.2
24.5	22.3	35	24.4
25	22.5	35.5	24.4
25.5	22.6	36	24.5
26	22.8	36.5	24.5
26.5	22.8	37	24.6
27	23.0	37.5	24.7
27.5	23.1	38	24.7
28	23.2	38.5	24.7
28.5	23.3	39	24.8
29	23.4	39.5	24.9
29.5	23.5	40	24.9
30	23.6	40.5	24.9
30.5	23.7	41	24.9
31	23.8	41.5	25.0
31.5	23.9	42	25.0
32	23.9	42.5	25.1
32.5	24.0	43	25.0
33	24.1	43.5	25.2
33.5	24.1	44	25.1
34	24.3		



Simulated Half Power Beamwidth (E-Plane) vs. Frequency in Tabular Format

Frequency (GHz)	Beamwidth (Degrees)	Frequency (GHz)	Beamwidth (Degrees)
24	13.0	34.5	9.4
24.5	12.6	35	9.2
25	12.4	35.5	9.1
25.5	12.2	36	9.0
26	12.0	36.5	8.9
26.5	11.8	37	8.9
27	11.7	37.5	8.6
27.5	11.3	38	8.7
28	11.2	38.5	8.5
28.5	11.0	39	8.5
29	10.9	39.5	8.4
29.5	10.7	40	8.4
30	10.5	40.5	8.2
30.5	10.4	41	8.2
31	10.2	41.5	8.1
31.5	10.1	42	8.1
32	9.9	42.5	7.9
32.5	10.0	43	8.0
33	9.6	43.5	7.9
33.5	9.7	44	7.8
34	9.4		

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 MAKING MILLIMETERWAVE ACCESSIBLE

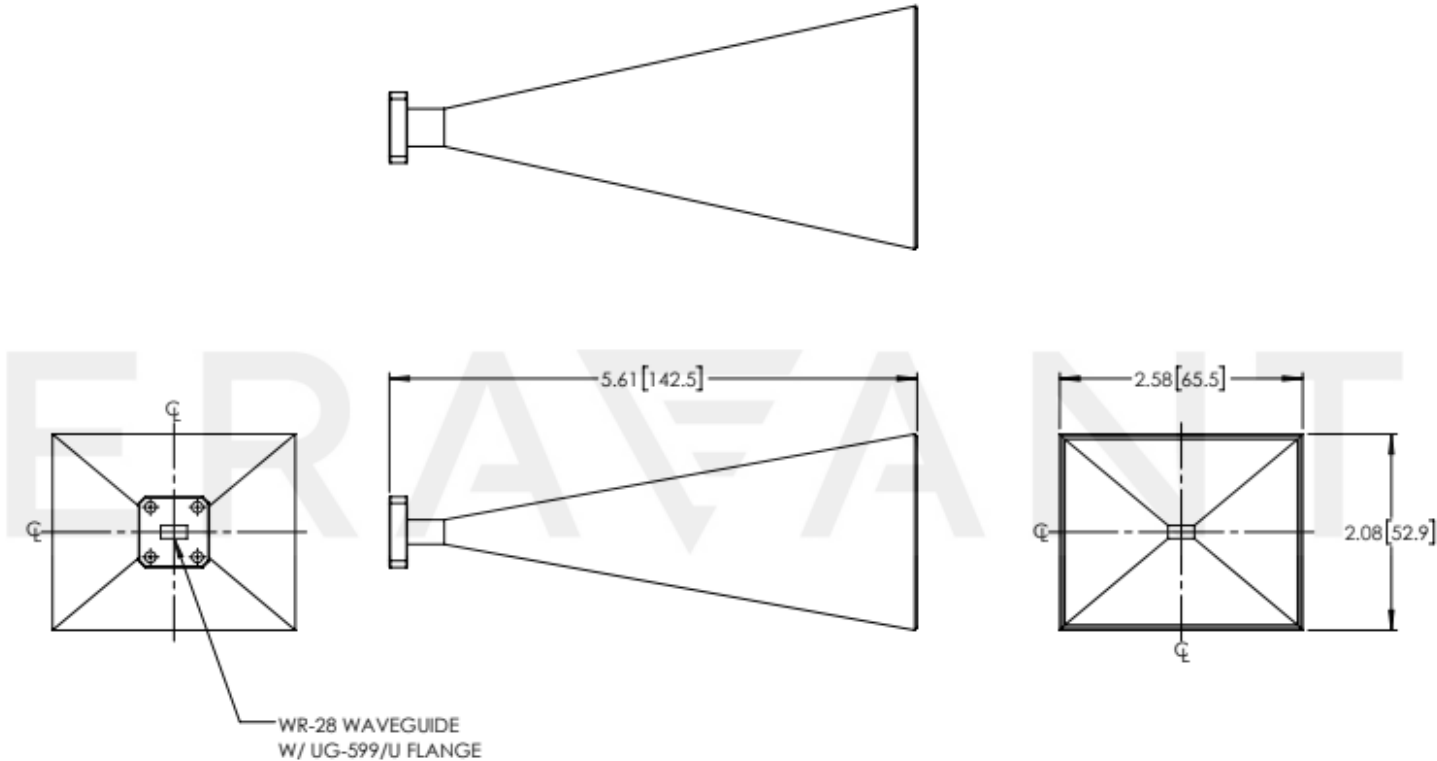
Simulated Half Power Beamwidth (H-Plane) vs. Frequency in Tabular Format

Frequency (GHz)	Beamwidth (Degrees)	Frequency (GHz)	Beamwidth (Degrees)
24	14.2	34.5	10.8
24.5	14.1	35	10.6
25	13.7	35.5	10.6
25.5	13.7	36	10.5
26	13.3	36.5	10.4
26.5	13.2	37	10.3
27	12.9	37.5	10.2
27.5	12.8	38	10.2
28	12.5	38.5	10.1
28.5	12.5	39	10.0
29	12.2	39.5	9.9
29.5	12.1	40	9.9
30	11.9	40.5	9.8
30.5	11.8	41	9.8
31	11.6	41.5	9.7
31.5	11.5	42	9.7
32	11.3	42.5	9.5
32.5	11.3	43	9.6
33	11.0	43.5	9.5
33.5	11.0	44	9.6
34	10.8		

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



NOTE:

- All data presented is simulated by a full EM simulator. Eravant recommends using simulated data over measured for standard gain horn antenna for accuracy. See Blog [here](#) for further information.
- The antenna electrical performance is guaranteed through accurate mechanical tolerance control. Each antenna is examined by CMM (coordinate Measuring Machine) inspection and measurement process.
- A calibration certificate can be issued with a fee under part number FTA-0150-S1-SAZ.
- 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.