



Ka-Band Sector Rectangular Lens Antenna, 27 to 31 GHz

Description:

Model SAK-AL273313-28-C1 is a custom built, Ka-band sector rectangular lens antenna that delivers nominal half-power beam width of 32 degrees vertically and 7 degrees horizontally and 22 dBi nominal gain at a center frequency of 29 GHz. The sidelobe level of the antenna is -15 dB or better across the frequency range of 27 to 31 GHz and the typical return loss is 12 dB. The standard model is equipped with a WR-28 rectangular waveguide and a UG-599/U flange as its input port.



Features:

- Low Sidelobes
- High Aperture Efficiency
- High Cross-Pol Isolation
- Light Weight

Applications:

- Airborne Radar Systems
- Communication Systems
- Sensor Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	27.0 GHz	29.0 GHz	31.0 GHz
Gain	21.0 dB	22.0 dBi	22.5 dB
3 dB Beamwidth, Vertical		32°	
3 dB Beamwidth, Horizontal		7°	
Sidelobe Level, Vertical		15 dB	
Sidelobe Level, Horizontal		20 dB	
Polarization		Linear	
Cross Polarization		30 dB	
Return Loss		12.0 dB	
Operating Temperature	-40 °C		+ 85 °C

Mechanical Specifications:

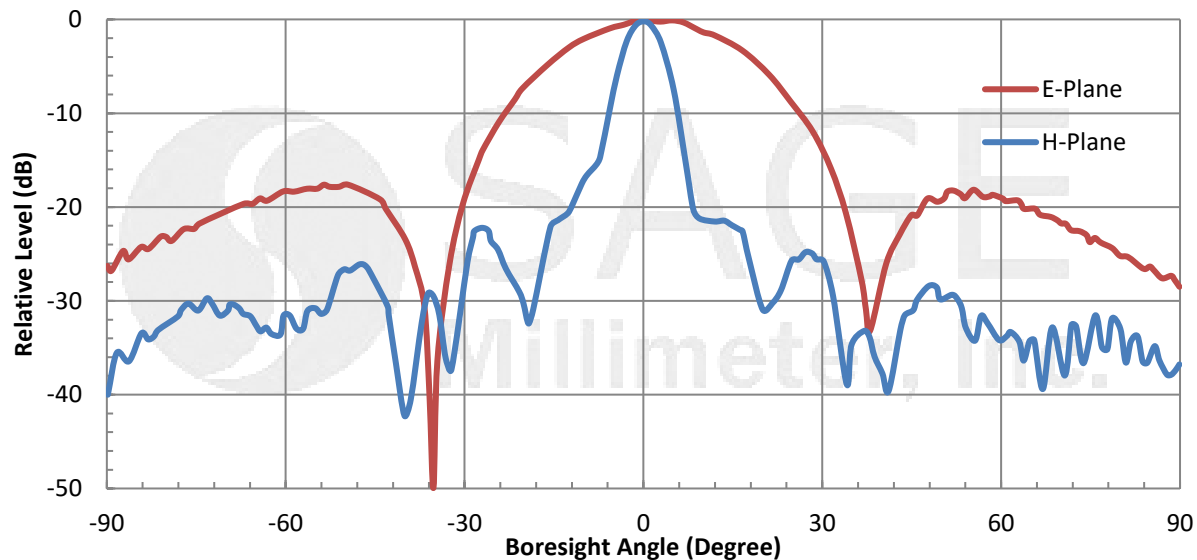
Item	Specification
Antenna Port	WR-28 Rectangular Waveguide with UG-599/U Flange
Housing Material	Aluminum
Inner Finish	Silver Plated
Outer Finish	Black Paint
Weight	4.6 Oz
Dimensions	4.90" (W) x 0.75" (H) x 6.00" (L)
Outline	AK-RA22-C1



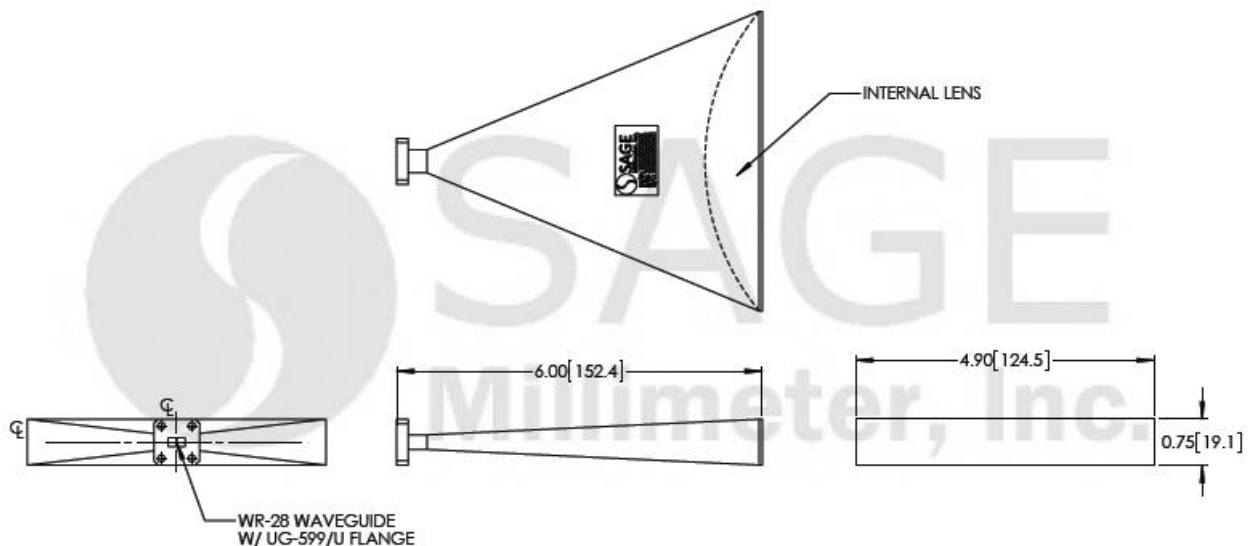


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Typical Antenna Patterns @ 29 GHz



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



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25°C room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.



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