



## X-Band Lens Corrected Antenna, 10.475 to 10.575 GHz

### Description:

**Model SAK-AL103113-90-C1** is a custom built X-band lens corrected antenna. At center frequency, the antenna delivers a typical gain of 15 dBi and a half power beam width of 40 degrees vertically and 20 degrees horizontally. The cross polarization isolation of the antenna is 30 dB or better across the operation range of 10.475 to 10.575 GHz and the typical return loss is 10 dB. This antenna is equipped with a WR-90 rectangular waveguide and UG-39/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	10.475 GHz	10.525 GHz	10.575 GHz
Gain		15 dBi	
3 dB Beamwidth, Vertical		40°	
3 dB Beamwidth, Horizontal		20°	
Sidelobe Level, Vertical		-15 dB	
Sidelobe Level, Horizontal		-25 dB	
Polarization		Linear	
Cross-Polarization Isolation		30 dB	
Return Loss		10 dB	
Specification Temperature		+20 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

Item	Specification
Antenna Port	WR-90 Rectangular Waveguide with UG-39/U Flange
Dimensions	3.15" (W) x 2.17" (H) x 3.94" (L)
Weight	0.50 lbs
Material	Aluminum
Inner Finish	Silver Plated
Outer Finish	Black Paint
Outline	AK-AL-RX16-UT1

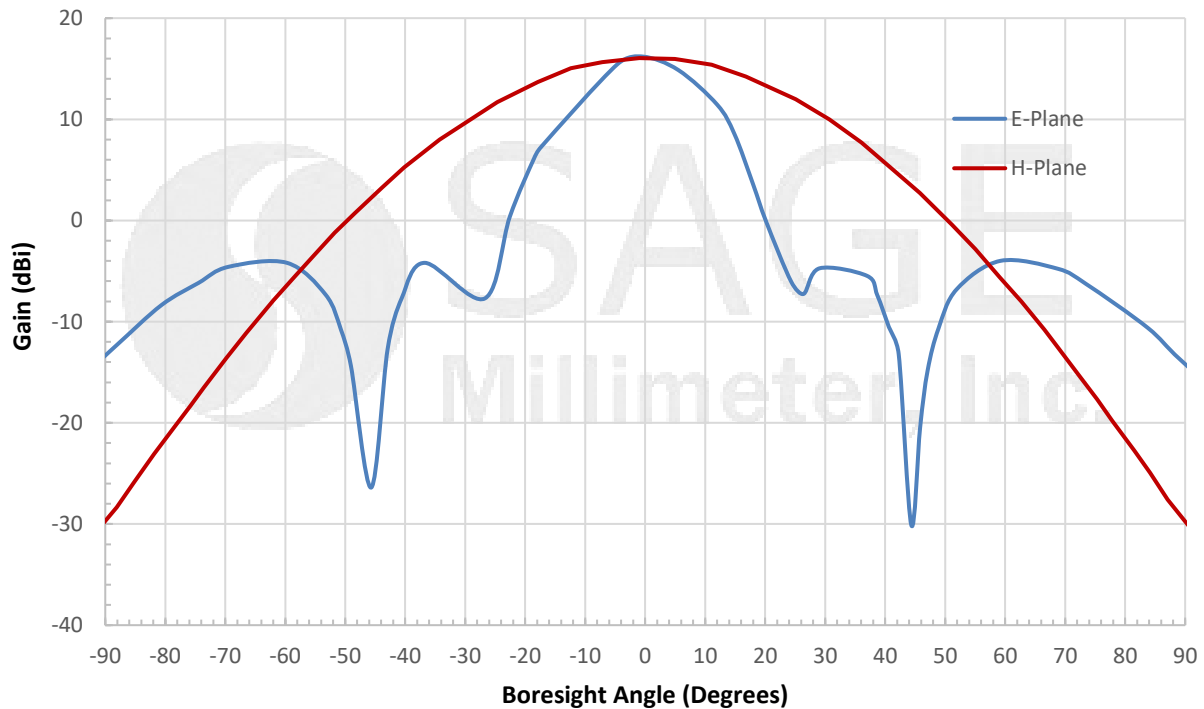


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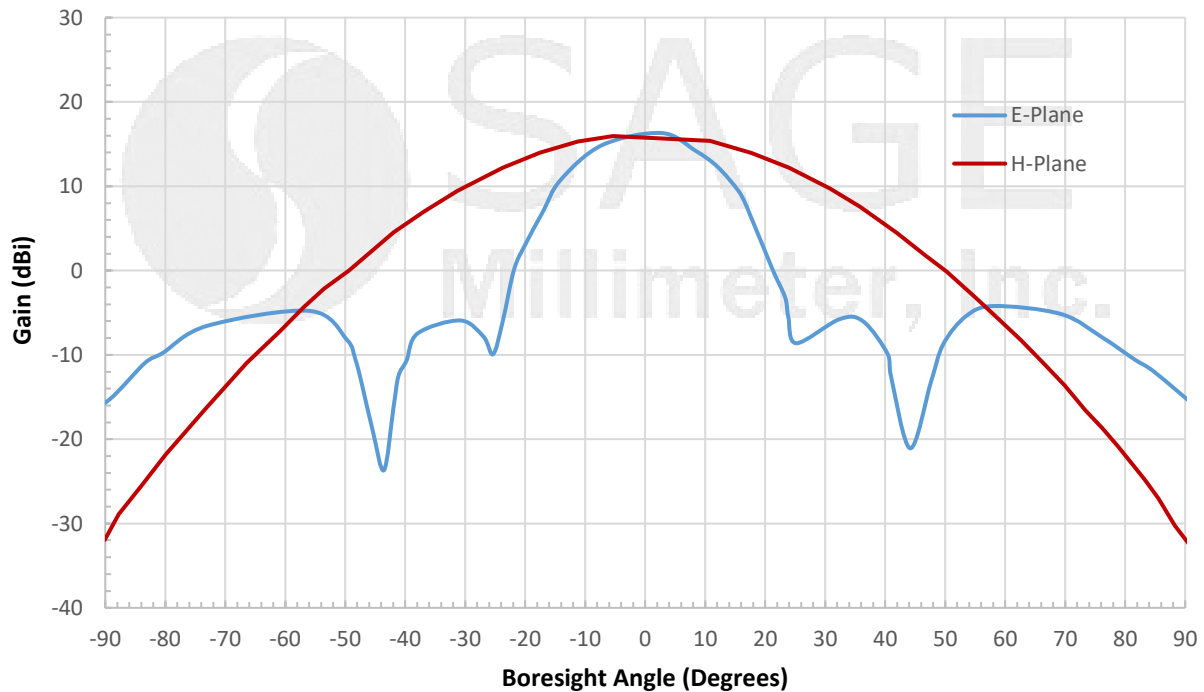


## X-Band Lens Corrected Antenna, 10.475 to 10.575 GHz

### Typical Antenna Patterns @ 10.475 GHz



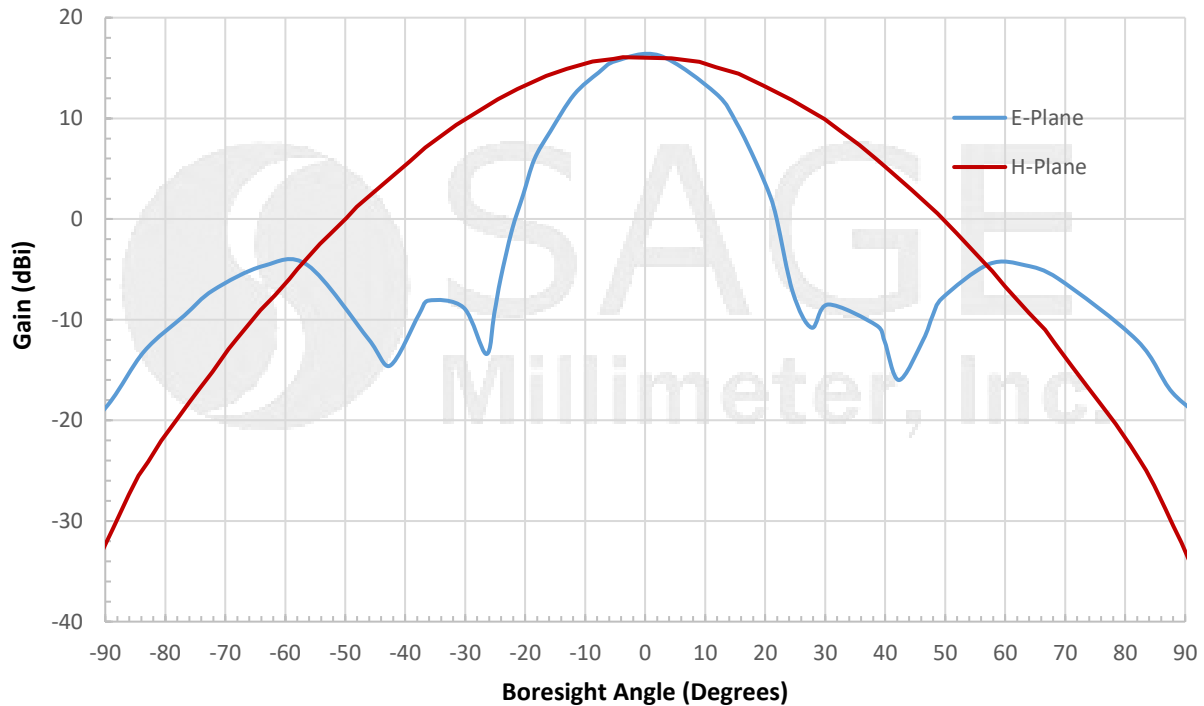
### Typical Antenna Patterns @ 10.525 GHz



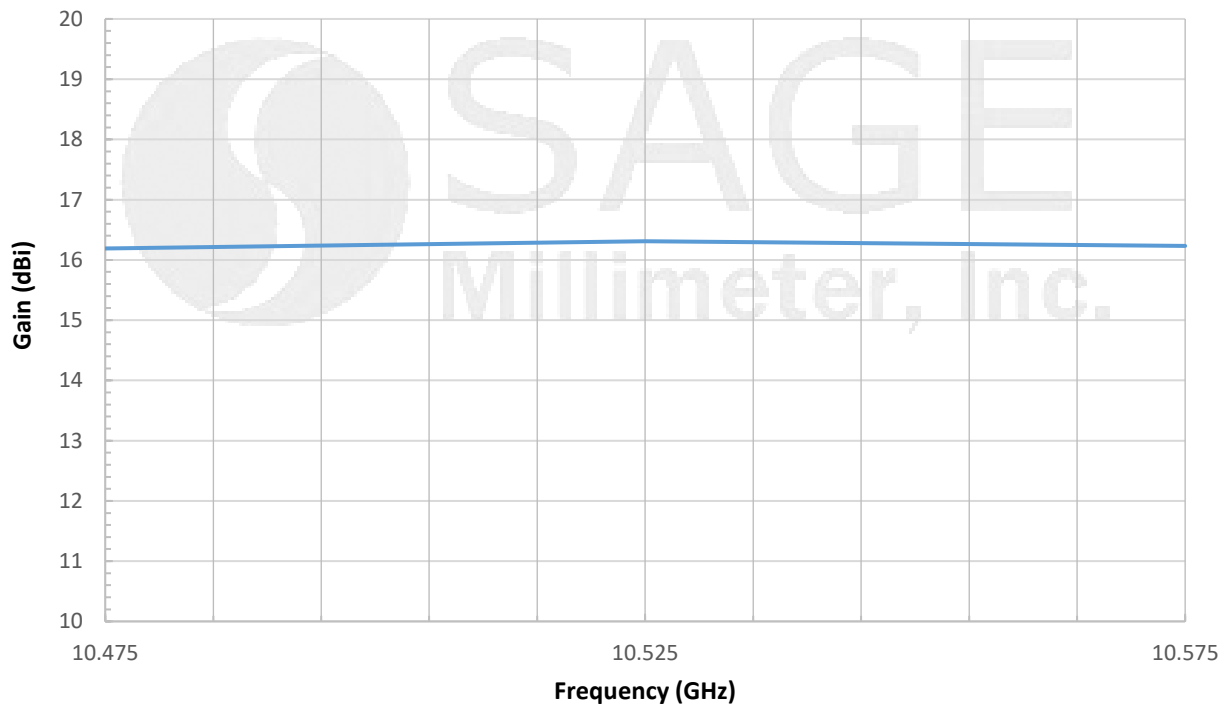


## X-Band Lens Corrected Antenna, 10.475 to 10.575 GHz

### Typical Antenna Patterns @ 10.575 GHz



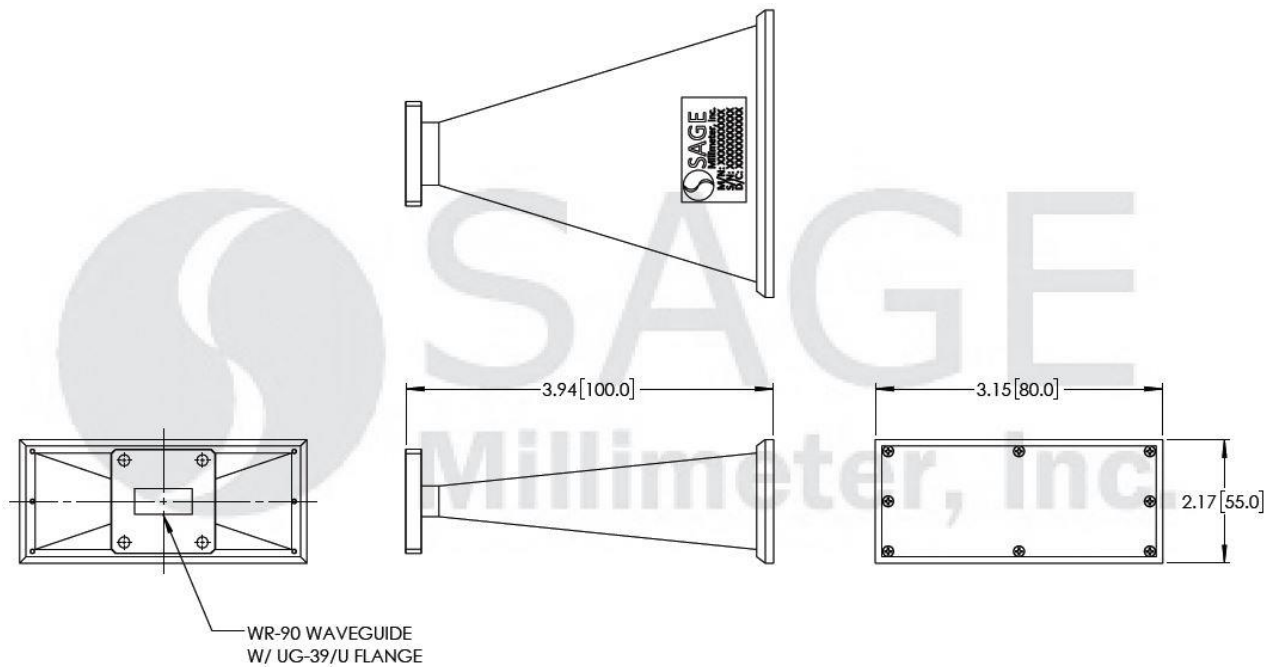
### Typical Gain vs. Frequency





## X-Band Lens Corrected Antenna, 10.475 to 10.575 GHz

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



**Note:**

- All data presented is simulated. Actual data may vary slightly.
- 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.

