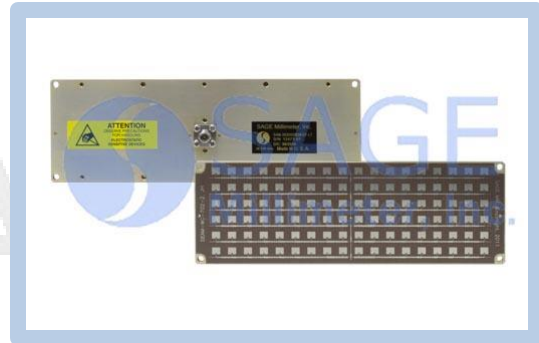


Ka Band Microstrip Patch Array Antenna, 15.0° x 4.8°

Description:

Model SAM-3533532005-KF-L1 is a linear polarized, 35 GHz microstrip patch array antenna. The antenna implements a series-fed power distribution to achieve low side lobe levels. The antenna has a gain of 20 dBi and a beamwidth of 15 degrees vertically and 4.8 degrees horizontally, with a better than 18 dB side lobe suppression level. The antenna is constructed with a high performing, low loss soft microwave substrate to achieve the best performance in the class. The RF interface is a female 2.92 mm connector. A standard WR-28 waveguide version with a UG-599/U flange is offered under model number SAM-3533532005-28-L1.



Features:

- Compact Size and Center Fed
- Low Side Lobes
- Low Cost in Volume

Applications:

- Radar Systems
- Communication Systems
- Sensor Heads

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	34.55 GHz	34.70 GHz	34.85 GHz
Gain		20.0 dB	
3 dB Beamwidth	15.0° (Vertical, E Plane) x 4.8° (Horizontal, H Plane)		
Side Lobe Level	18 dB	20 dB	
Polarization	Linear		
Return Loss	8 dB	10 dB	

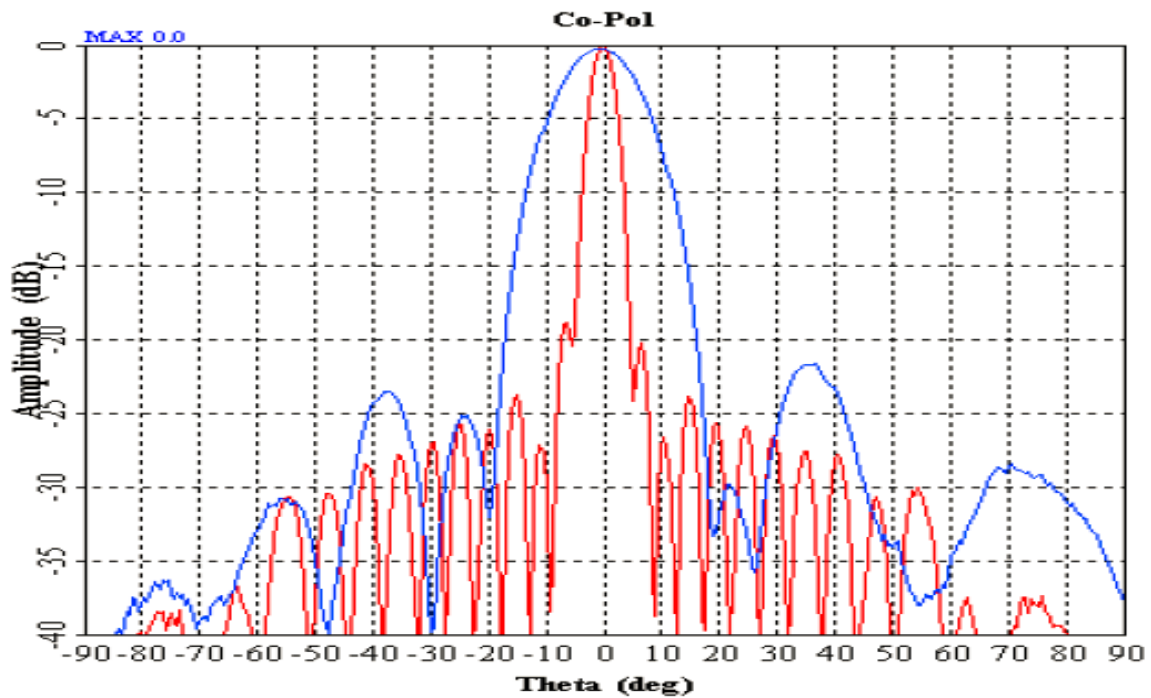
Mechanical Specifications:

Item	Specifications
Antenna Port	K(F)
Number of Elements	18 (H) x 6 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Size	5.00" (L) x 1.70" (H) x 0.51" (W)
Weight	2.5 Oz
Outline	AM-KA-0515

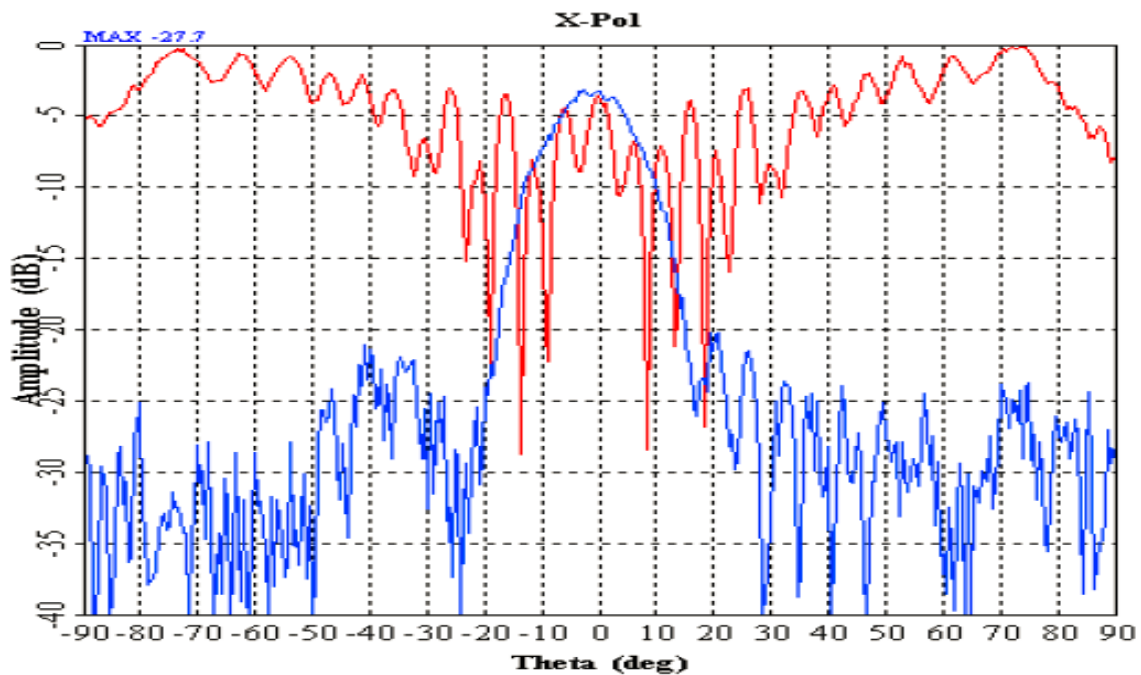


Ka Band Microstrip Patch Array Antenna, 15.0° x 4.8°

Measured Co-pol E and H Plane Patterns



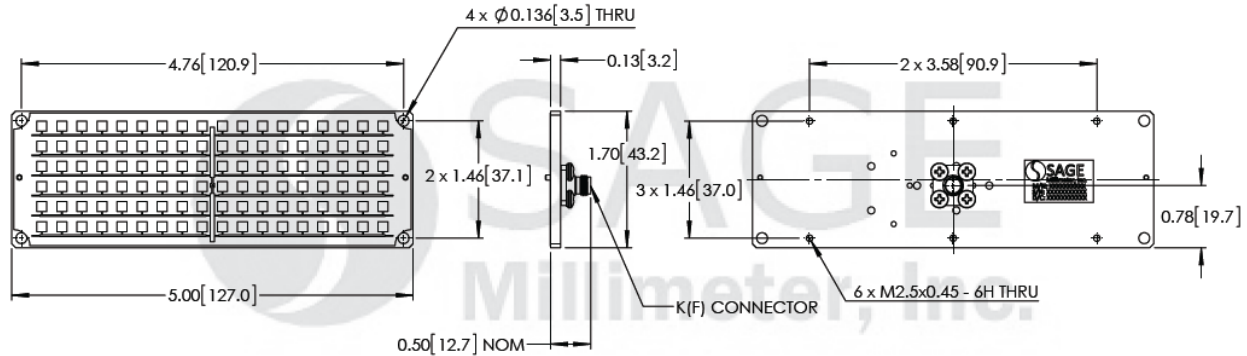
Measured Cross-pol E and H Plane Patterns





Ka Band Microstrip Patch Array Antenna, 15.0° x 4.8°

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



Note:

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

Caution:

- Foreign objects in the connector will affect device performance and may damage the antenna.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

