



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

### Description:

**Model SAM-3533532005-28-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 standard WR-28 waveguide with a UG-599/U flange. A female 2.92 mm connector version is offered under model number SAM-3533532005-KF-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	

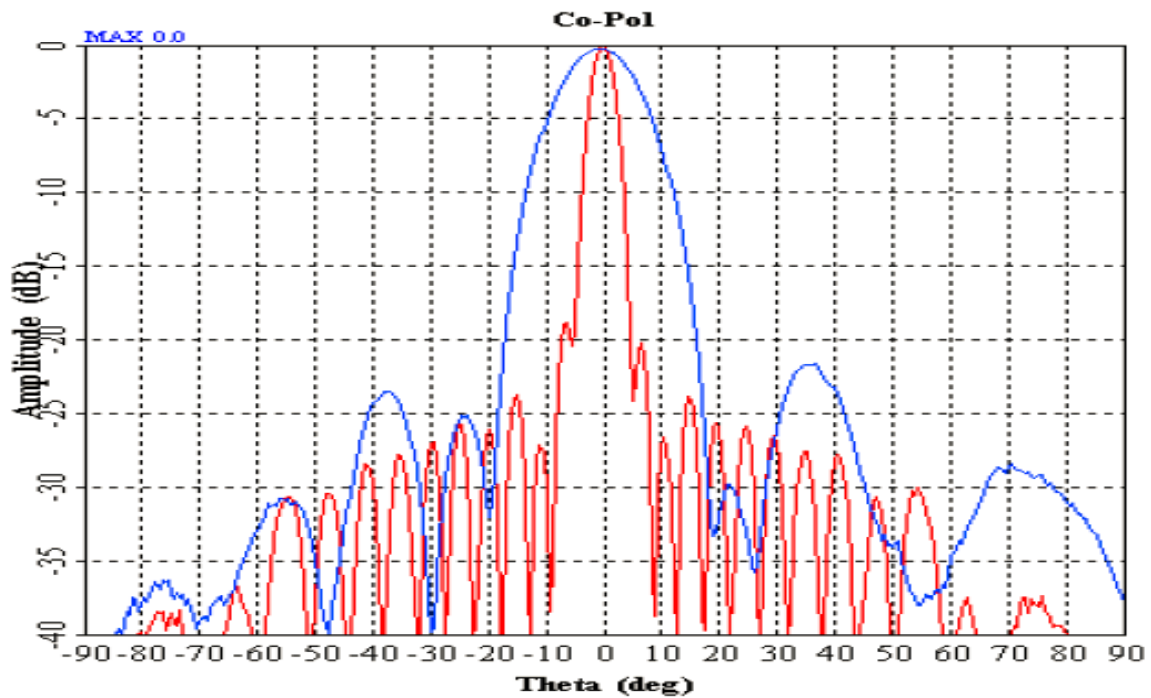
### Mechanical Specifications:

Parameter	Connector
Antenna Port	WR-28 Waveguide
Flange Type	UG-599/U Threaded Flange
Number of Elements	18 (H) x 6 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Size	5.00" (L) x 1.70" (H) x 0.39" (W)
Weight	2.0 Oz
Outline	AM-RA-0515

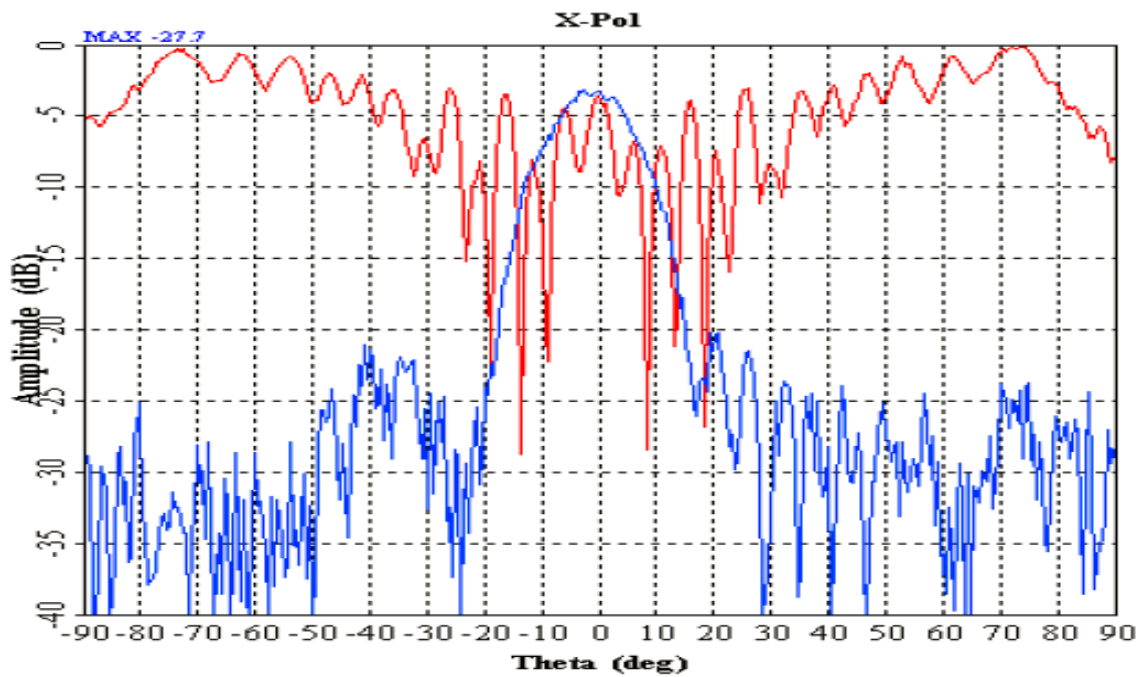


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### Measured Co-pol E and H Plane Patterns

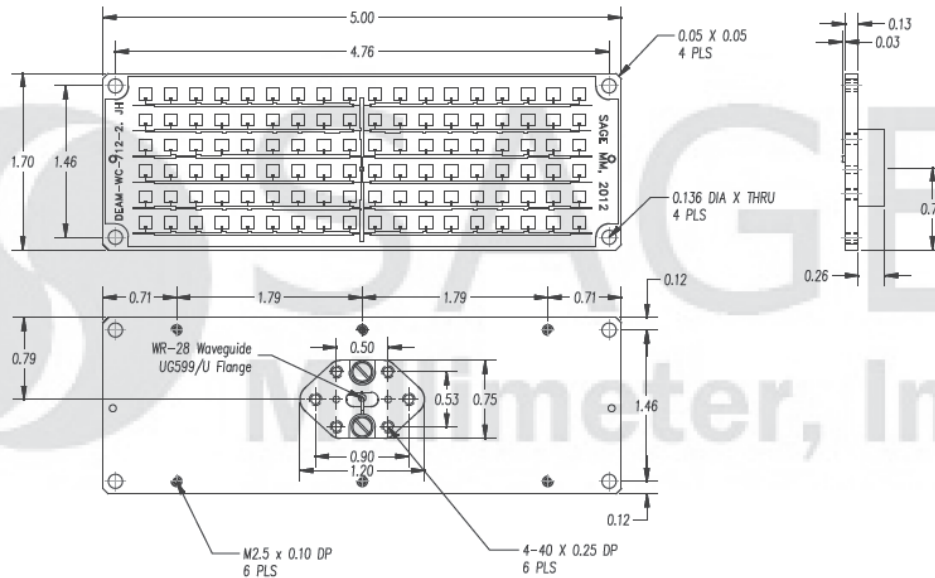


### Measured Cross-pol E and H Plane Patterns



## 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 waveguide will affect device performance and may damage the antenna.

