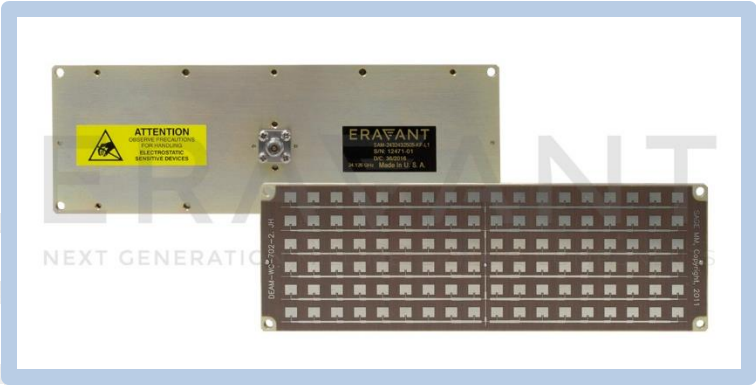
SAM-2432432205-KF-L1

Rev. 1.3

K-Band Microstrip Patch Array Antenna, 14.6° x 4.6°

Description:



Model SAM-2432432205-KF-L1 is a linear polarized, 24 GHz microstrip patch array antenna. The antenna implements a series-fed power distribution to achieve low sidelobe levels. The antenna has a gain of 22 dBi and a beamwidth of 14.6 degrees vertically and 4.6 degrees horizontally, with a better than -22 dB sidelobe 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 WR-42 waveguide version with a UG-595/U flange is available under model number **SAM-2432432205-42-L1**.

Features:

- Compact Size and Center Fed
- Low Sidelobes
- Low Cost in Volume

Applications:

- Radar Systems
- Communication Systems
- Sensor Heads

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	24.025 GHz	24.125 GHz	24.225 GHz
Gain		22 dBi	
3 dB Beamwidth	14.6° (Vertical, E Plane) x 4.6° (Horizontal, H Plane)		
Sidelobe Level	-22 dB	-24 dB	
Polarization	Linear		
Return Loss	6 dB	8 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Parameter	Connector
Antenna Port	K(F)
Number of Elements	18 (H) x 6 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Size	6.90” (L) x 2.30” (H) x 0.51” (W)
Weight	3.5 Oz
Outline	AM-KK-0515

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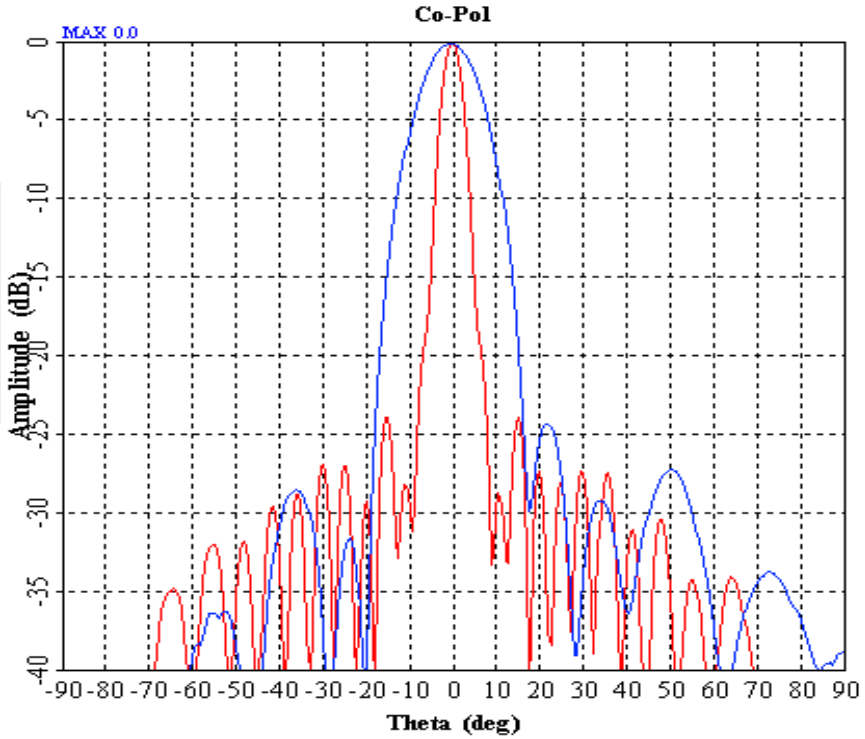
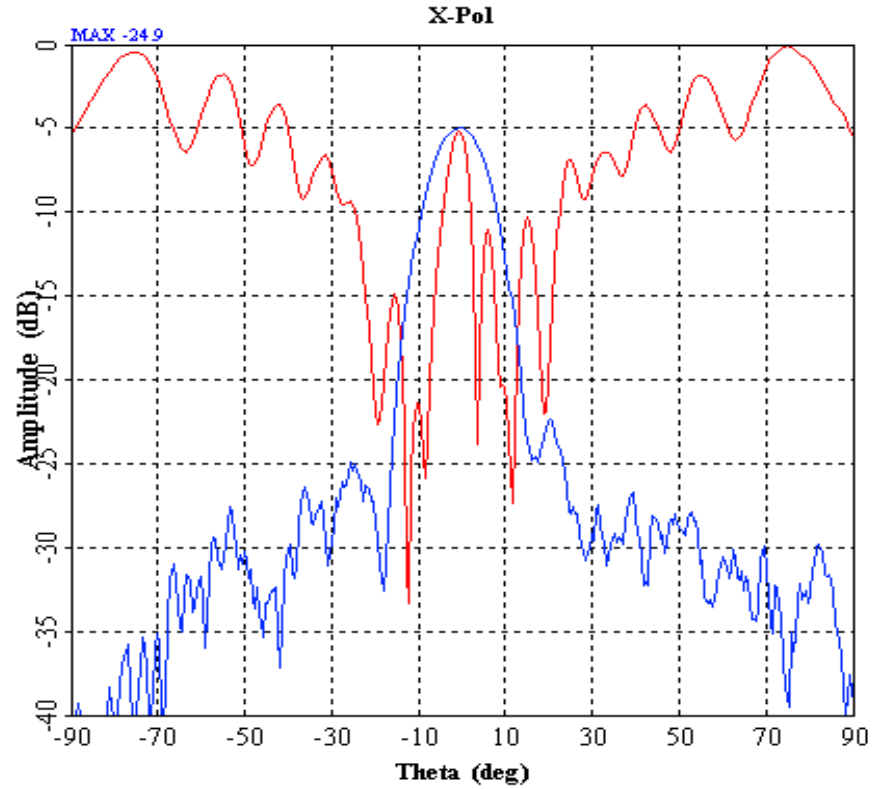
K-Band Microstrip Patch Array Antenna, 14.6° x 4.6°

Measured Co-pol E and H Plane Patterns



Measured Cross-pol E and H Plane Patterns



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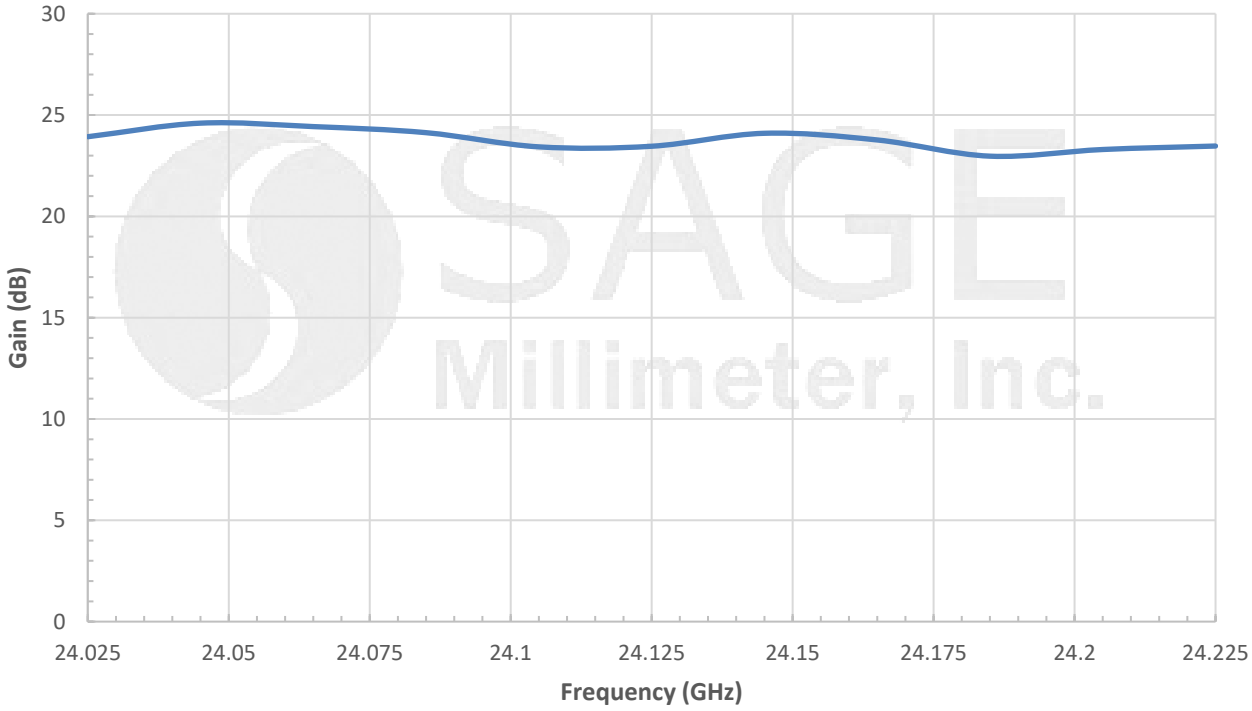
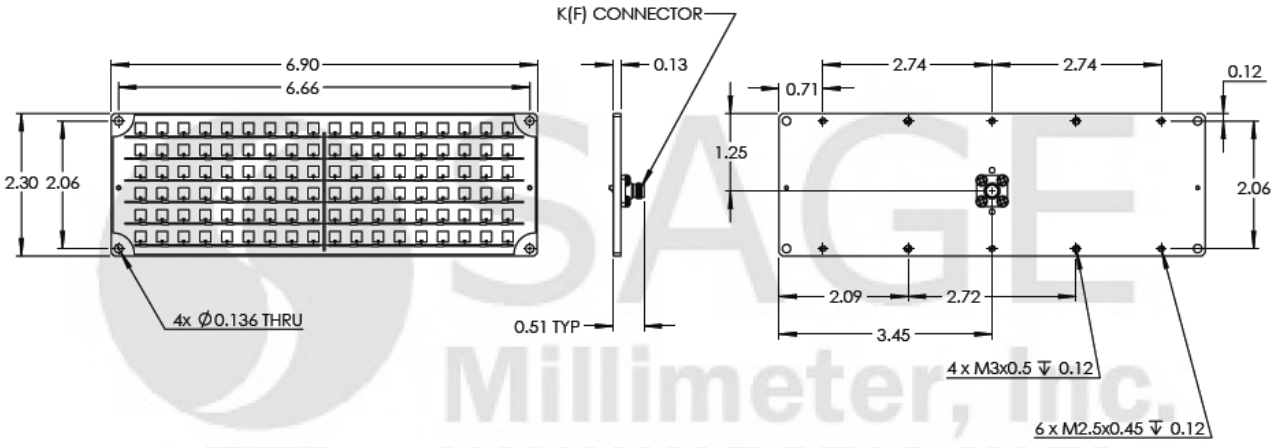
K-Band Microstrip Patch Array Antenna, 14.6° x 4.6°

Typical Measured Gain vs Frequency



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



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 or on the antenna patches will affect device performance and may damage the antenna.

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