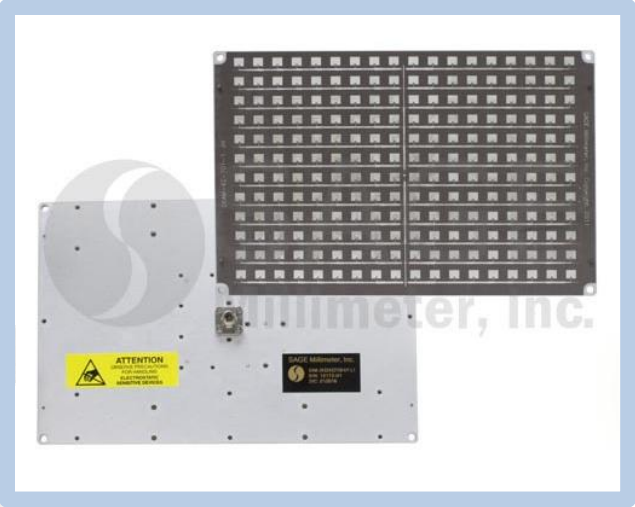
SAM-2432432505-42-L1

Rev. 1.3

K Band Microstrip Patch Array Antenna, 6.8° x 4.6°

Description:



Model SAM-2432432505-42-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 25 dBi and a beamwidth of 6.8 degrees vertically and 4.6 degrees horizontally, with a better than -18 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 standard WR-42 waveguide with a UG-595/U flange. A female 2.92 mm connector version is offered under model number SAM-2432432705-KF-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		25 dBi	
3 dB Beamwidth	6.8° (Vertical, E Plane) x 4.6° (Horizontal, H Plane)		
Sidelobe Level	-18 dB	-20 dB	
Polarization	Linear		
Return Loss	7 dB	10 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Parameter	Connector
Antenna Port	WR-42 Waveguide
Flange Type	UG-595/U Threaded Flange
Number of Elements	18 (H) x 12 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Size	6.90” (L) x 4.53” (H) x 0.38” (W)
Weight	6.6 Oz
Outline	AM-RK-0507

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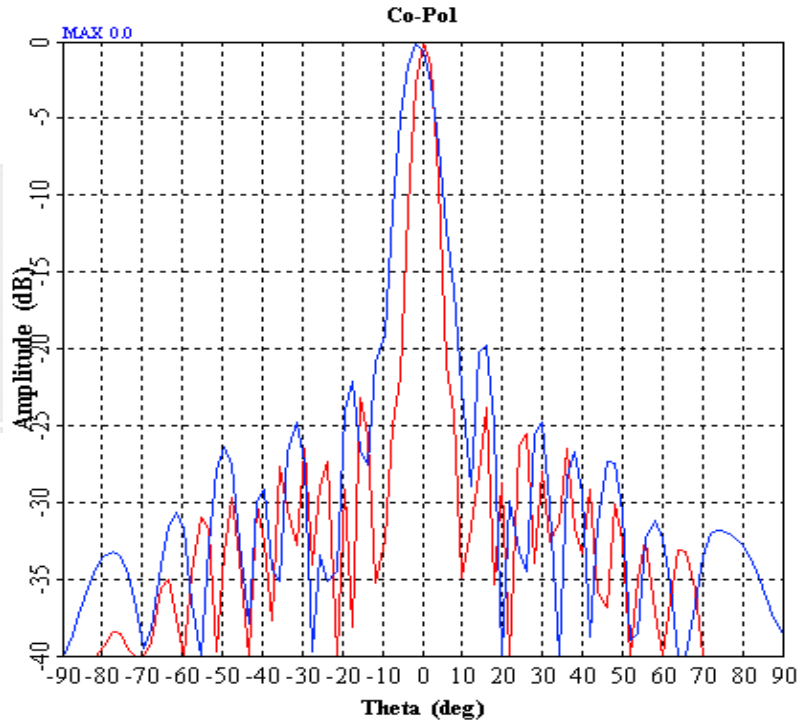
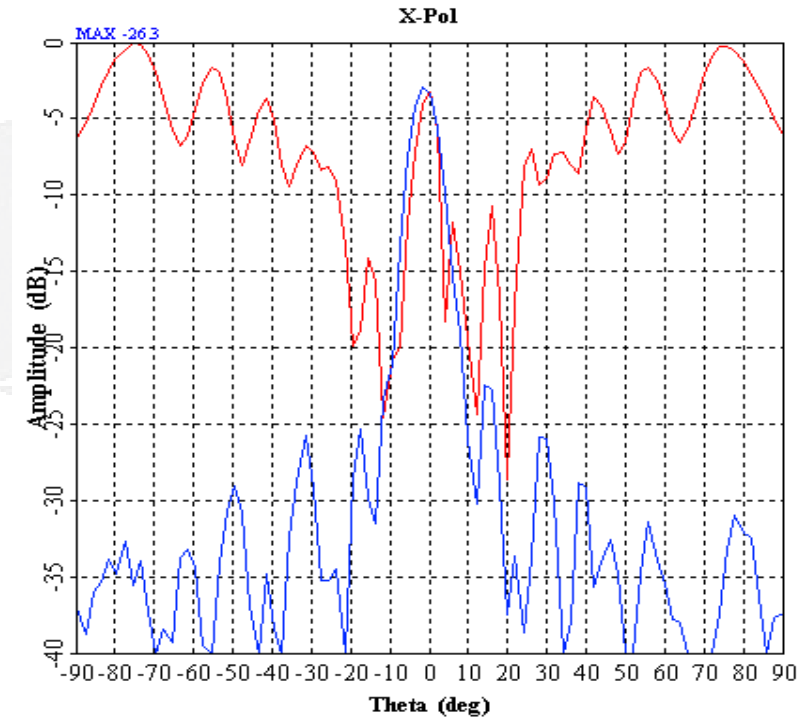
K Band Microstrip Patch Array Antenna, 6.8° x 4.6°

Measured Co-pol E and H Plane Patterns



Measured Cross-pol E and H Plane Patterns



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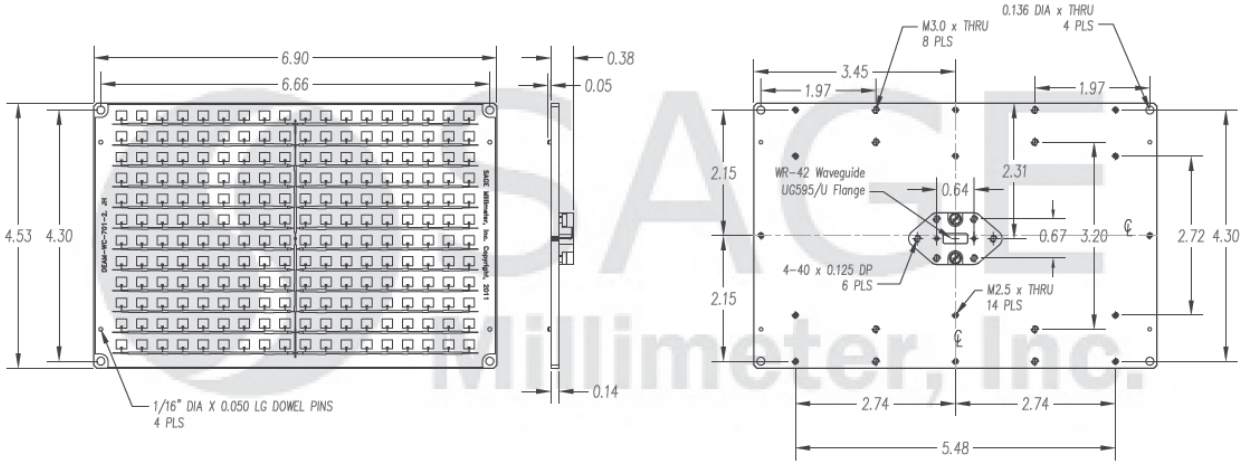
K Band Microstrip Patch Array Antenna, 6.8° x 4.6°

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



Note:

- All data presented is collected from a 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:

- Laying patch array substrate against the hard surface may damage the feed joint.

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