

## K Band Microstrip Patch Array Antenna, 24.125 GHz, 20 dBi, 12° x 12°

### Description:

**Model SAM-2432432212-42-L1** is a linear polarized, 24.125 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 12 degrees both vertically and horizontally, with a better than -20 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-2432432212-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		22 dBi	
3 dB Beamwidth	12° (Vertical, E Plane) x 12° (Horizontal, H Plane)		
Sidelobe Level		-20 dB	
Polarization	Linear		
Return Loss	6 dB	8 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

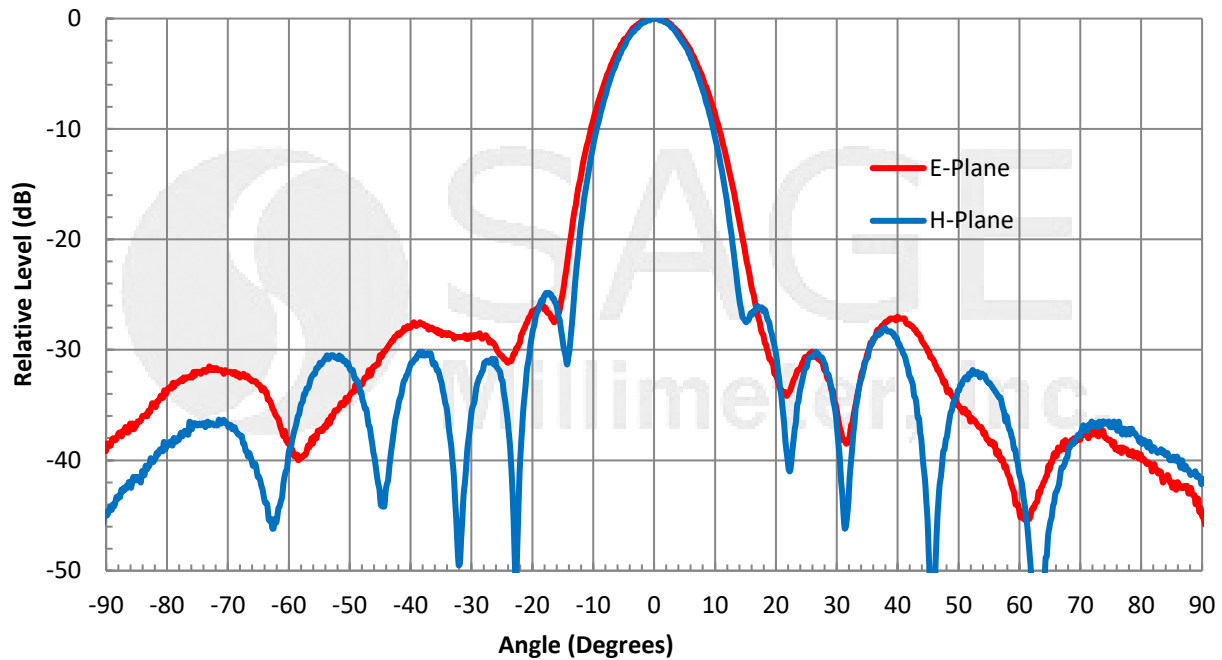
### Mechanical Specifications:

Item	Specifications
Antenna Port	WR-42 Waveguide
Flange Type	UG-595/U Threaded Flange
Number of Elements	8 (H) x 8 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Weight	2.2 Oz
Size	2.95" (L) x 2.95" (H) x 0.38" (W)
Outline	AM-RK-1212

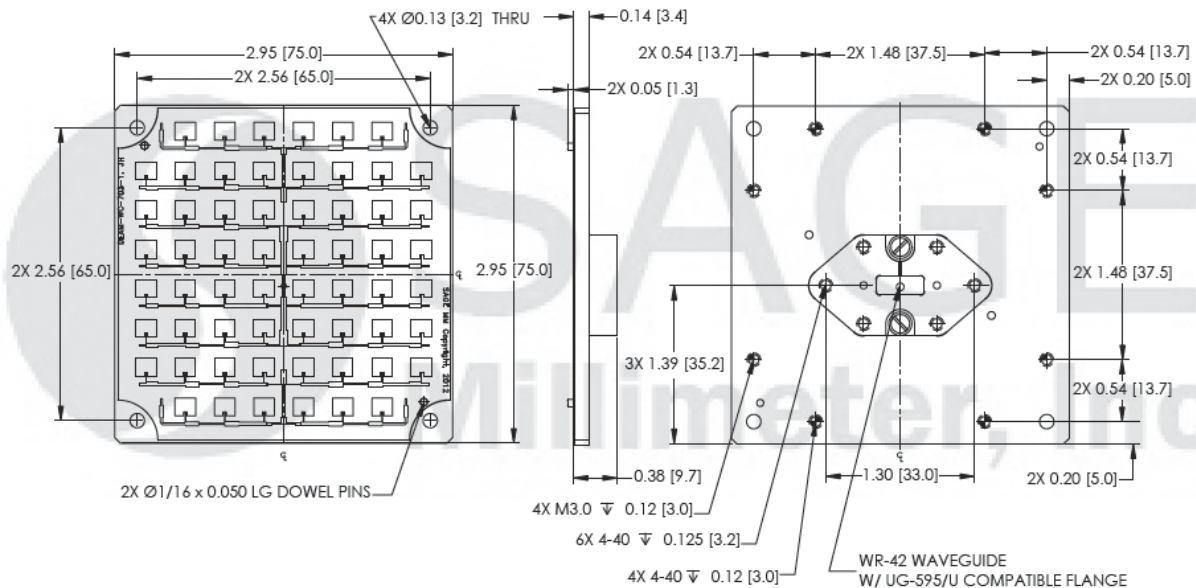


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### Typical Measured E and H Plane Patterns @ 24.125 GHz



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



#### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C room 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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