

## SAM-2432432212-42-L1

### K Band Microstrip Patch Array Antenna, 12° x 12°

**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.



### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	24.025 GHz	24.125 GHz	24.225 GHz
Gain		22 dBi	
3 dB Beamwidth, E-Plane		12°	
3 dB Beamwidth, H-Plane		12°	
Sidelobes, E-Plane		-20 dB	
Sidelobes, H-Plane		-20 dB	
Polarization		Linear	
Return Loss	6 dB	8 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

### Mechanical Specifications:

Item	Specification
Antenna Port	WR-42 Waveguide with UG-595/U Threaded Flange
Number of Elements	8 (H-Plane) x 8 (E-Plane)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Weight	2.2 Oz
Outline	AM-RK-1212

### ECCN

EAR99

### FEATURES

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

### APPLICATIONS

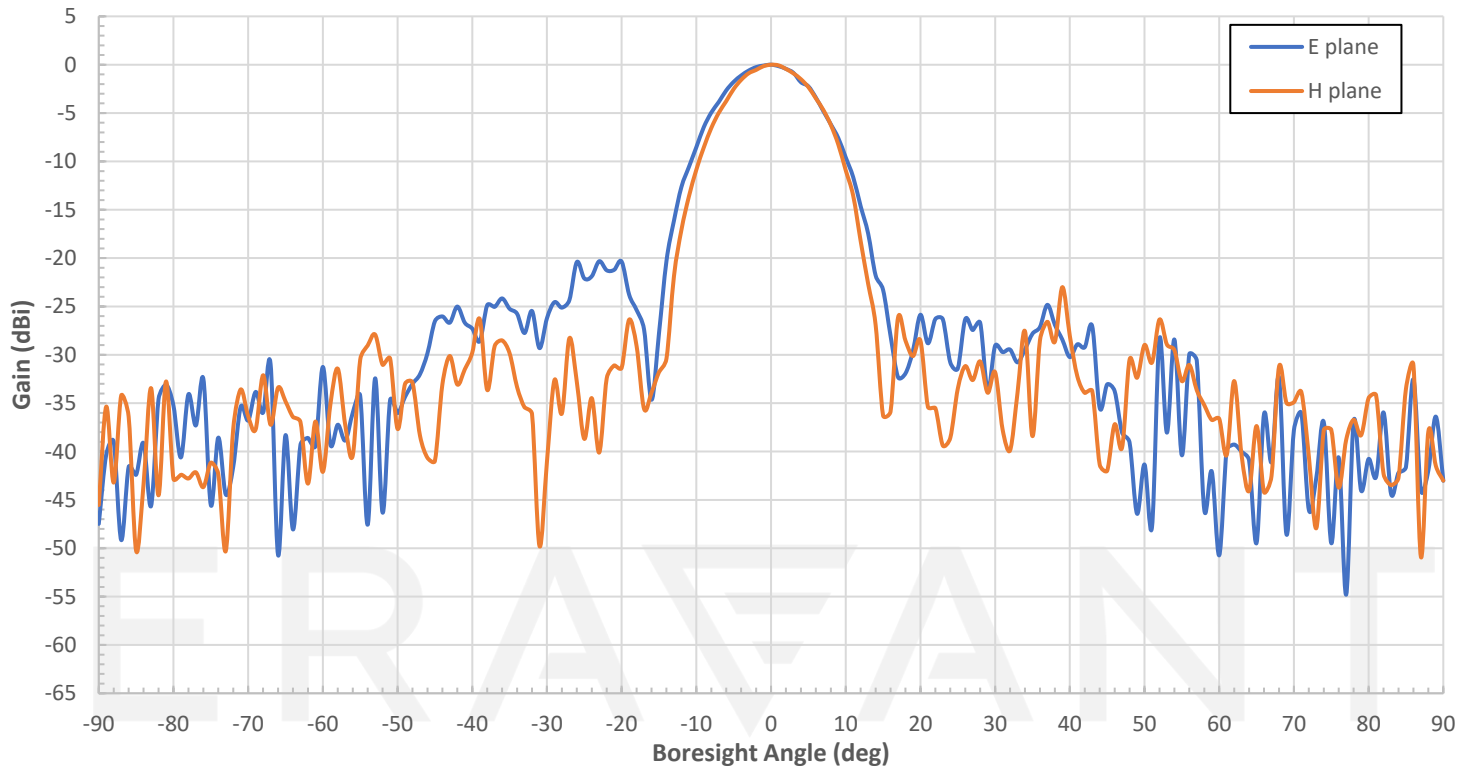
- Radar Systems
- Communication Systems
- Sensor Heads

### SUPPLEMENTAL DETAILS

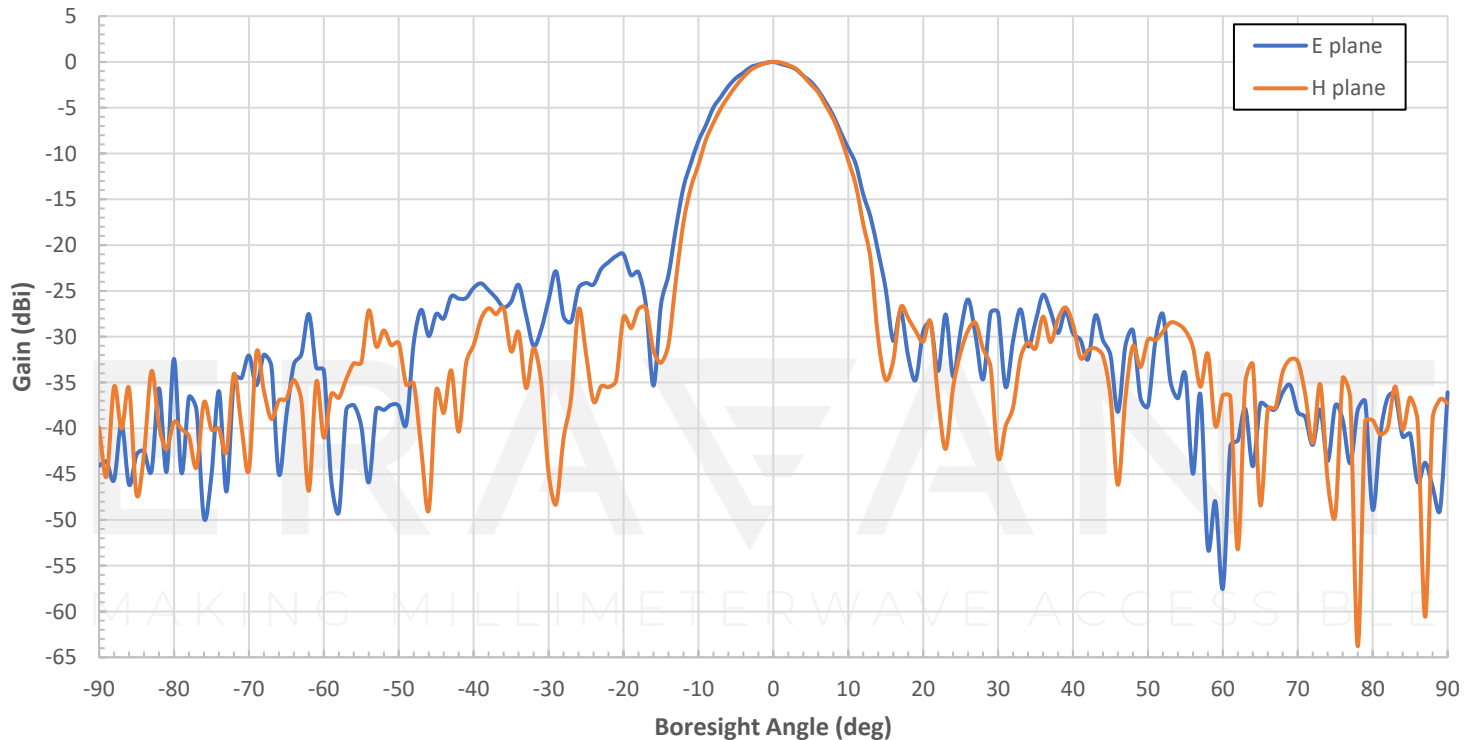


## SAM-2432432212-42-L1

### Measured Antenna Patterns @ 24.025 GHz

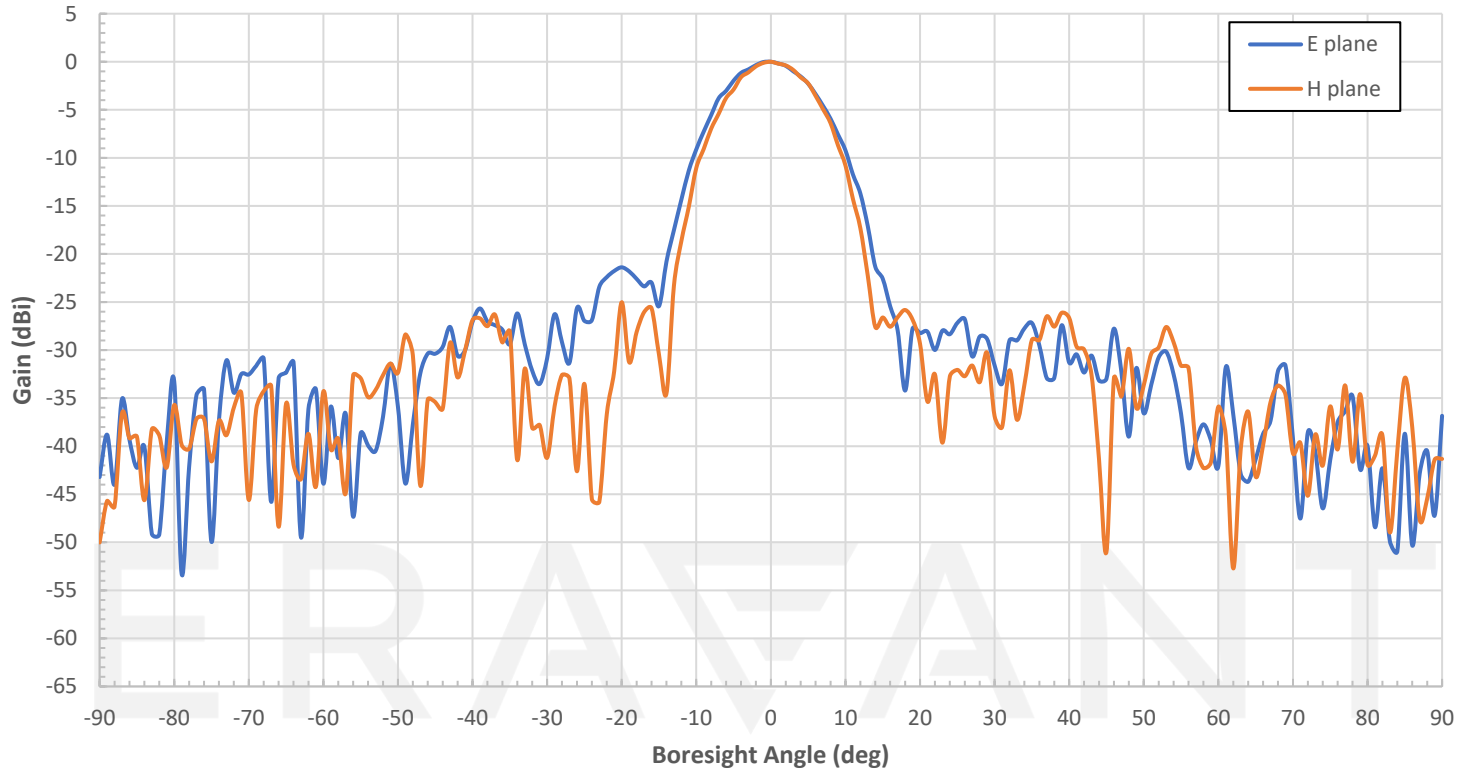


### Measured Antenna Patterns @ 24.125 GHz

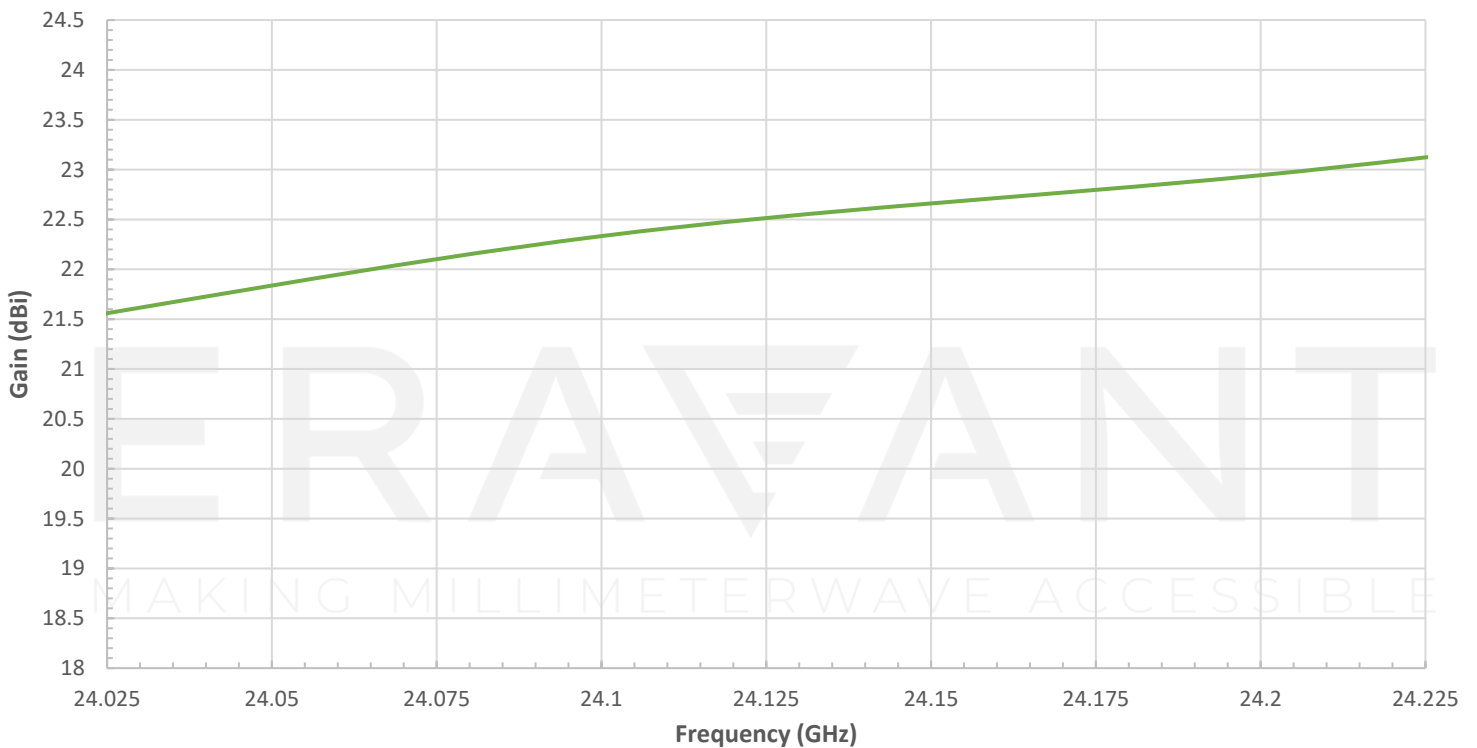


## SAM-2432432212-42-L1

### Measured Antenna Patterns @ 24.225 GHz

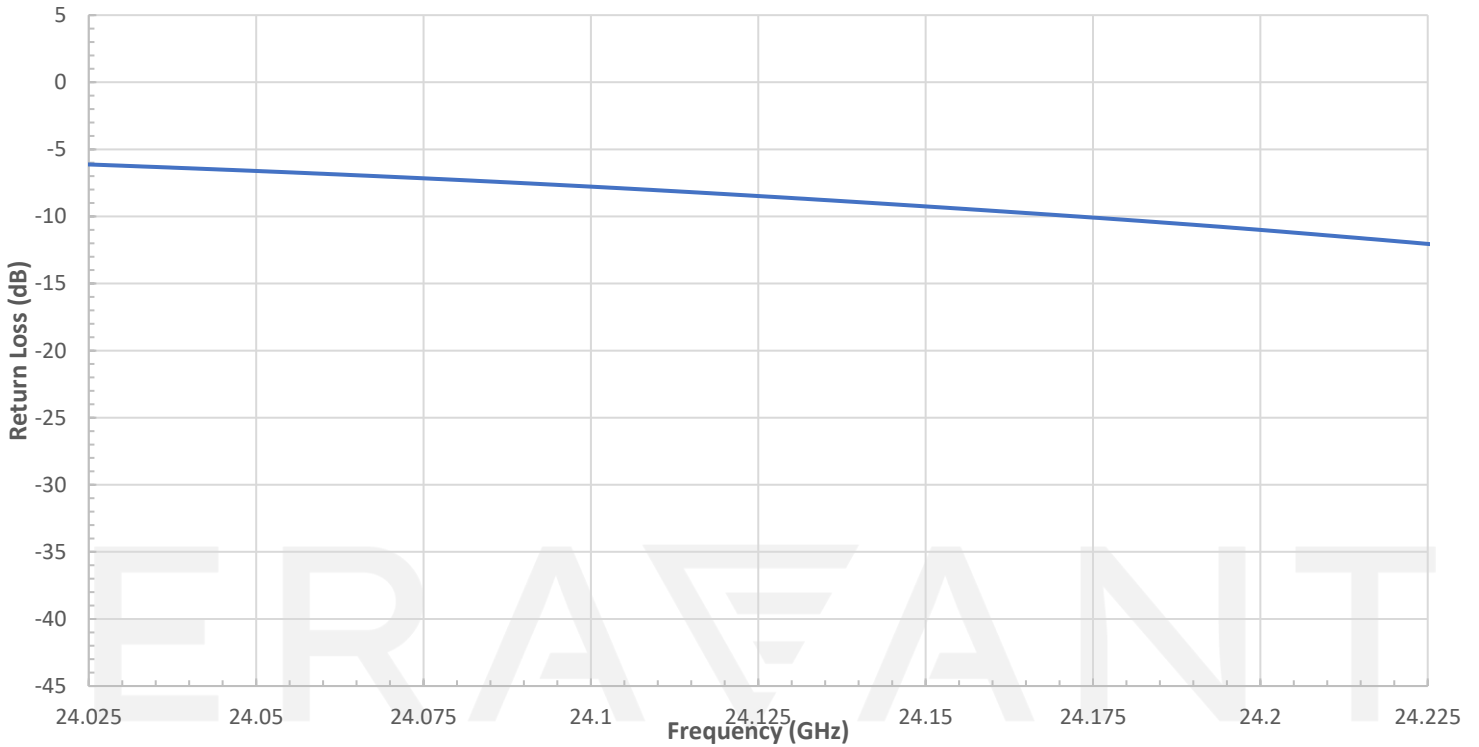


### Measured Gain vs Frequency

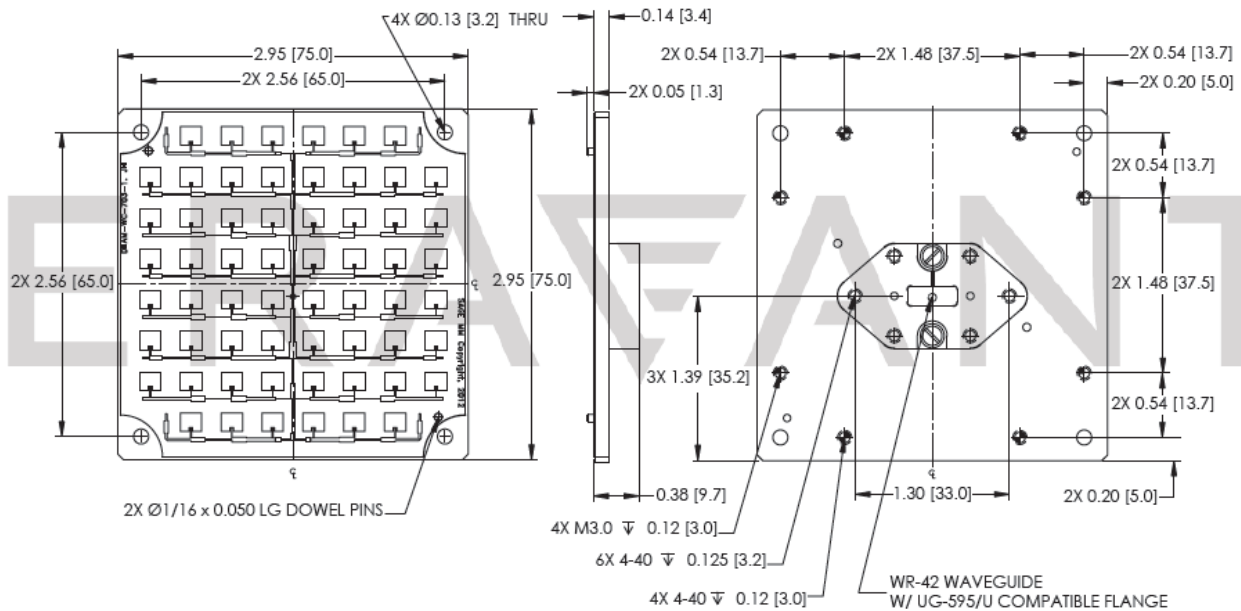


## SAM-2432432212-42-L1

### Measured Return Loss vs Frequency



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



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**NOTE:**

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