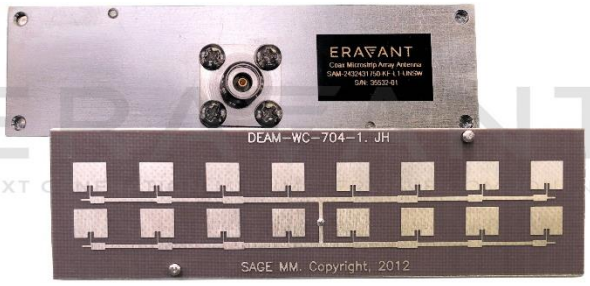
SAM-2432431750-KF-L1

K Band Microstrip Patch Array Antenna, 50° x 12°

SAM-2432431750-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 17 dBi and a beamwidth of 50° vertically and 12° horizontally, with a -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 2.92 mm connector. A standard WR-42 waveguide version with a UG-595/U flange is offered under model number SAM-2432431750-42-L1.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	24.025 GHz	24.125 GHz	24.225 GHz
Gain		17 dBi	
3 dB Beamwidth, E-Plane		50°	
3 dB Beamwidth, H-Plane		12°	
Sidelobes		-20 dB	
Polarization		Linear	
Return Loss		8 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	K(F) connector
Number of Elements	8 (H-Plane) × 2 (E-Plane)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Weight	0.04 lbs.
Outline	AM-KK-1250-UNSW

ECCN

EAR99

FEATURES

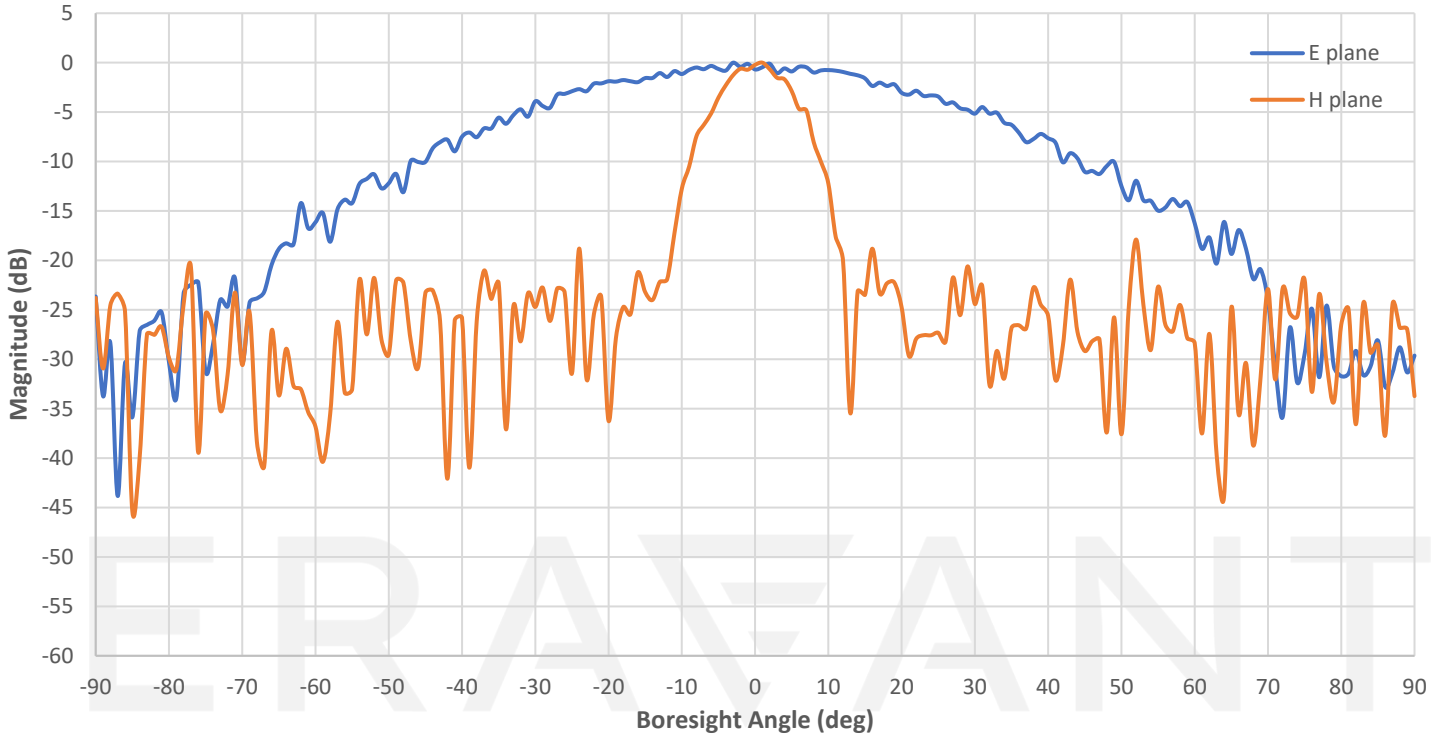
- Compact Size and Center Fed
- Low Sidelobes
- Low Cost in Volume

APPLICATIONS

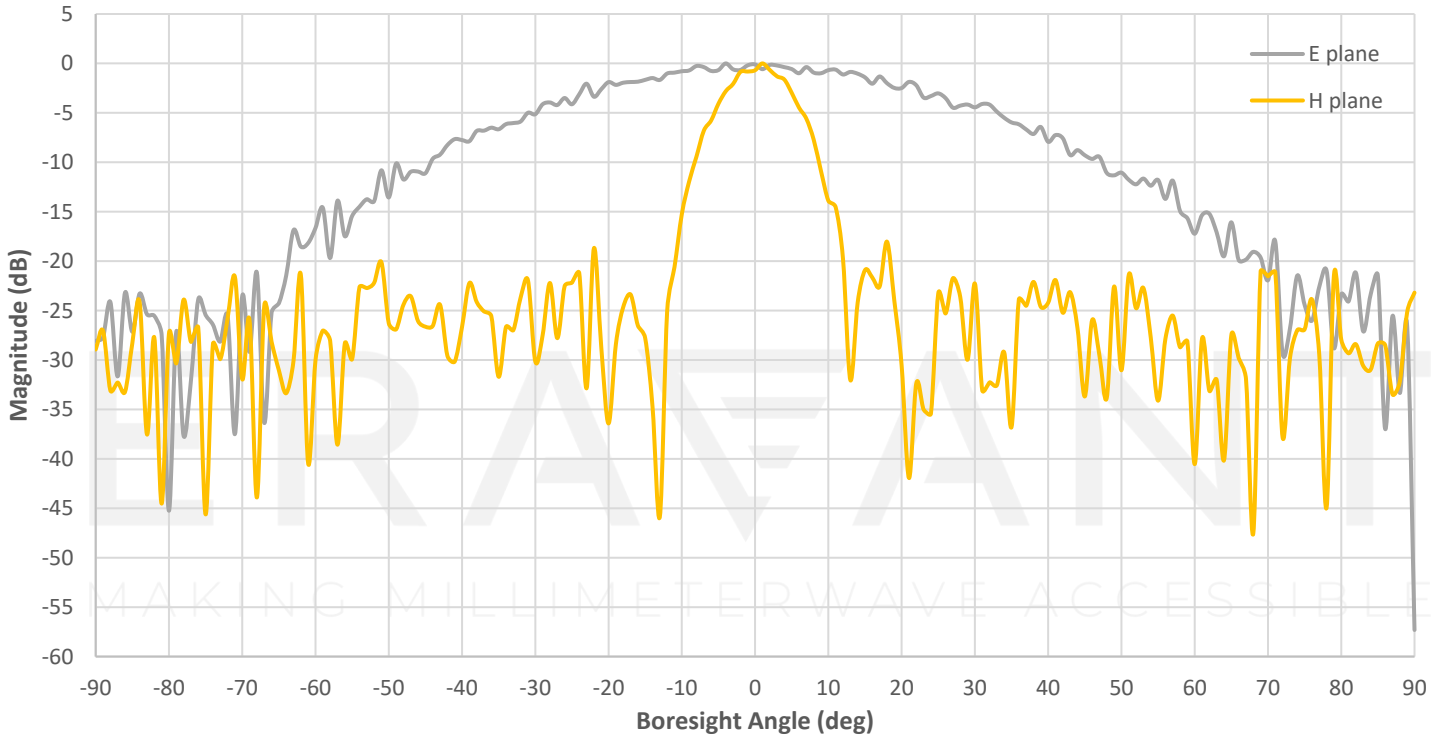
- Radar Systems
- Communication Systems
- Sensor Heads

SUPPLEMENTAL DETAILS

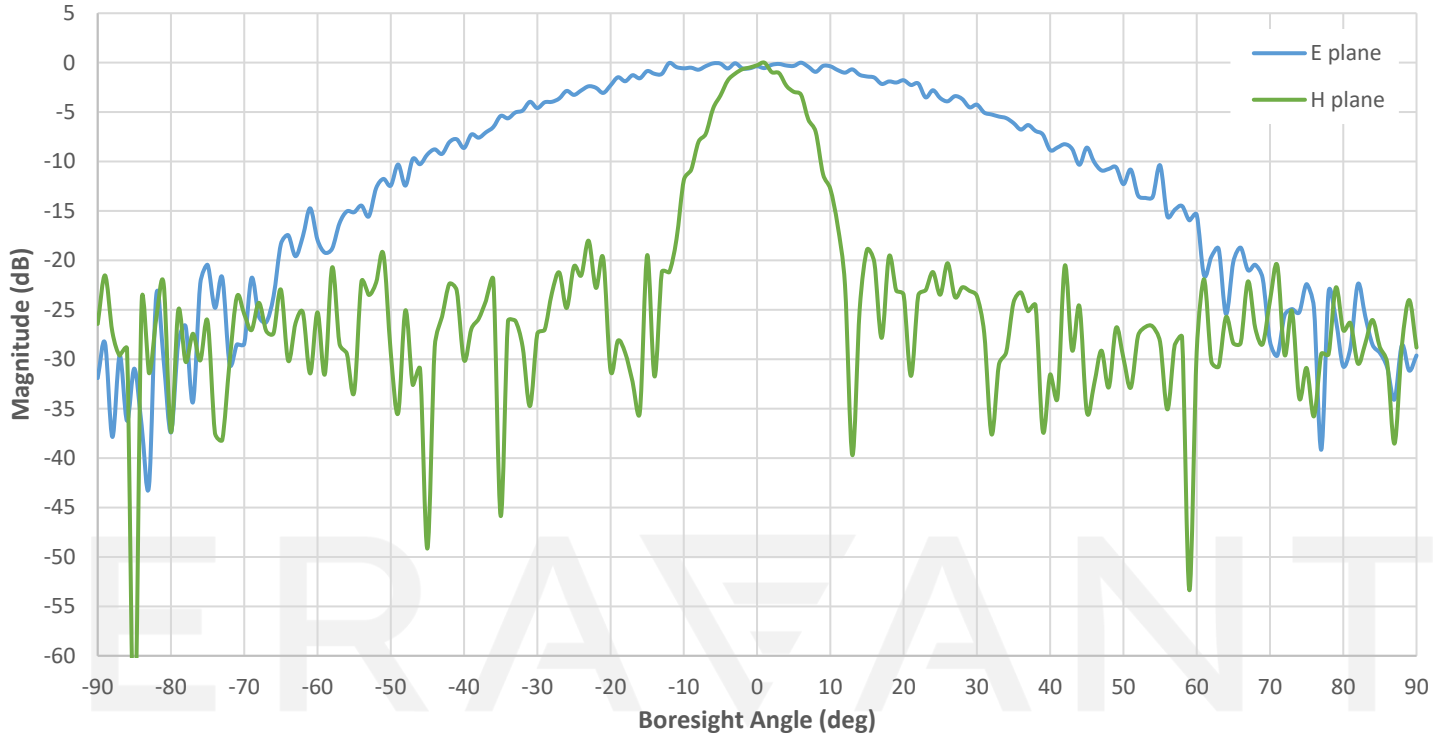
Measured Antenna Patterns @ 24.025 GHz



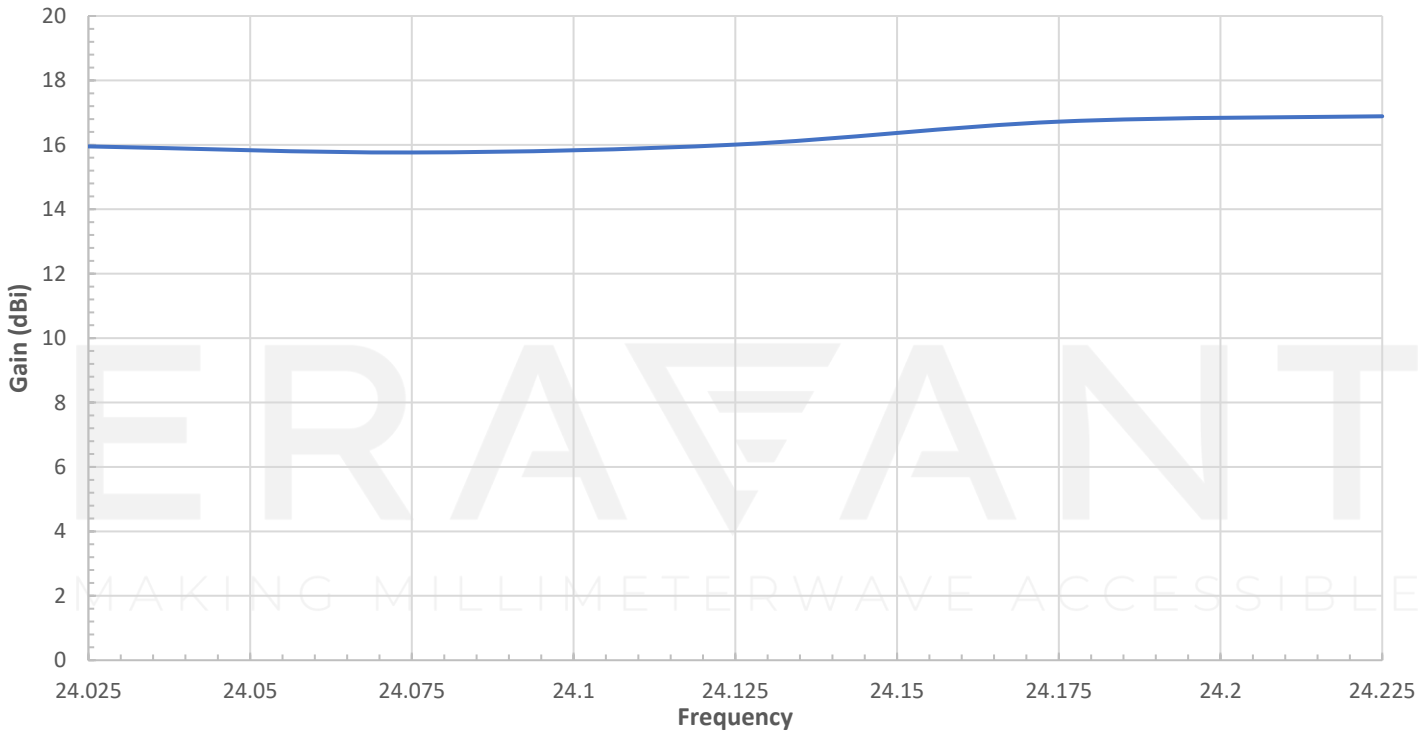
Measured Antenna Patterns @ 24.125 GHz



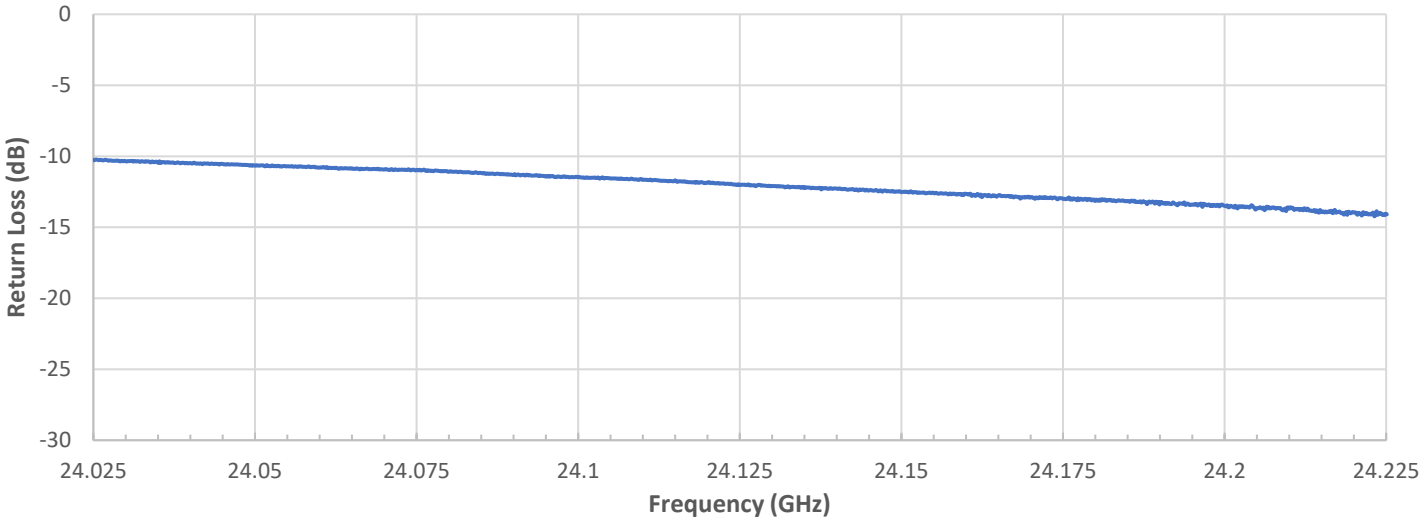
Measured Antenna Patterns @ 24.225 GHz



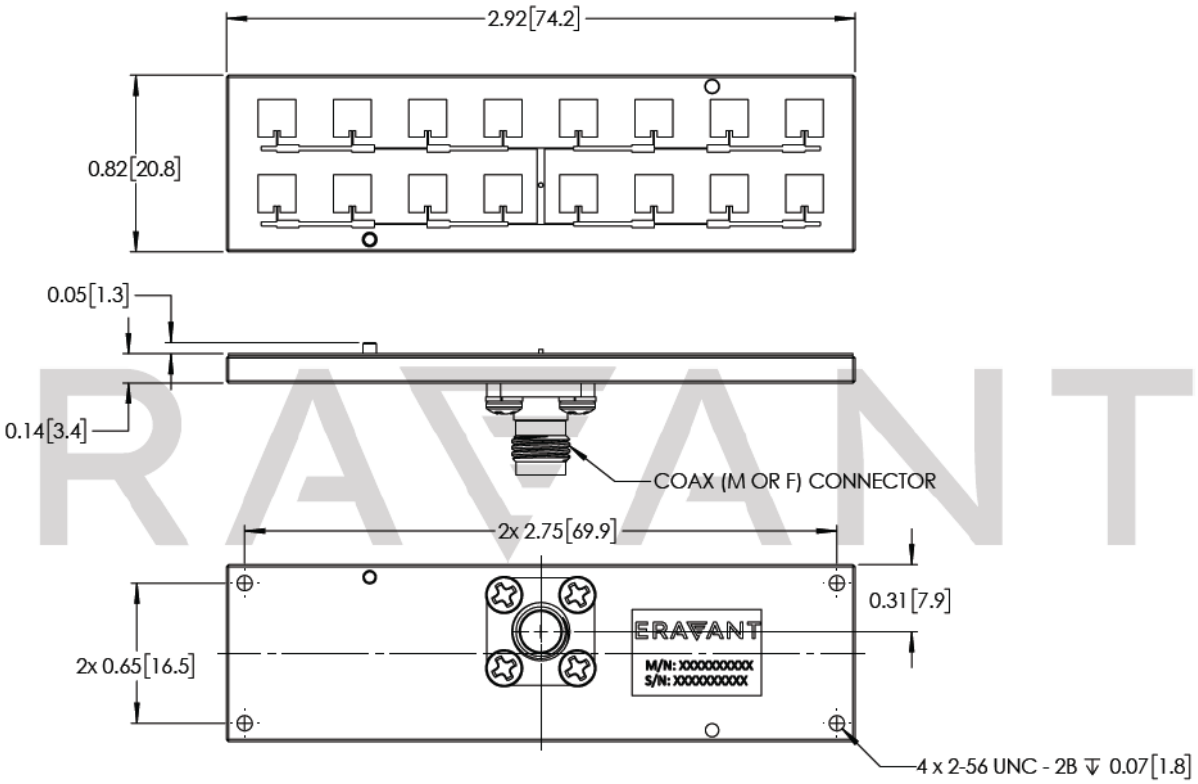
Measured Gain vs Frequency



Measured Return Loss vs Frequency



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



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:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.

MAKING MILLIMETERWAVE ACCESSIBLE