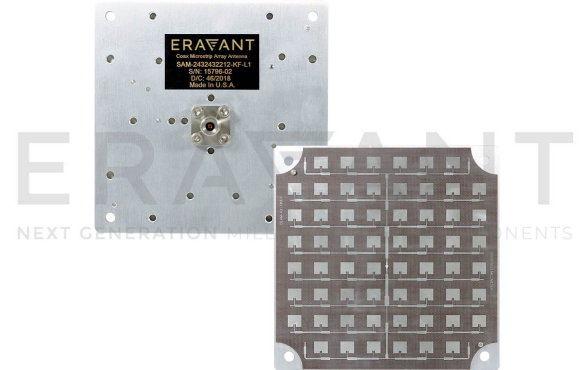


SAM-2432432212-KF-L1

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

SAM-2432432212-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 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 K (F) connector. A standard WR-42 waveguide version with a UG-595/U flange is offered under model number SAM-2432432212-42-L1.



Electrical Specifications:

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

Mechanical Specifications:

Item	Specification
Antenna Port	K (F)
Number of Elements	8 (H) x 8 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Dimensions	2.95" (L) x 2.95" (H) x 0.51" (W)
Weight	2.2 Oz
Outline	AM-KK-1212

ECCN

EAR99

FEATURES

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

APPLICATIONS

- Radar Systems
- Communication Systems
- Sensor Heads

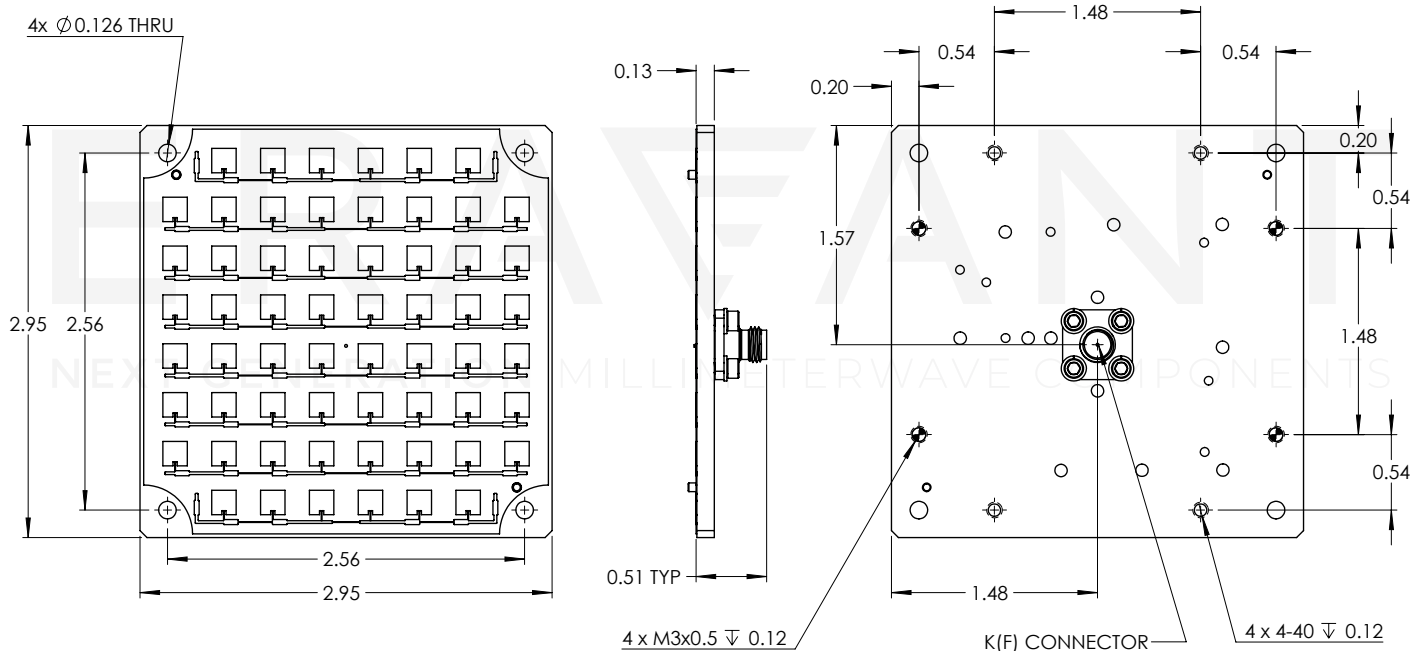
SUPPLEMENTAL DETAILS



SAM-2432432212-KF-L1

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



NOTE:

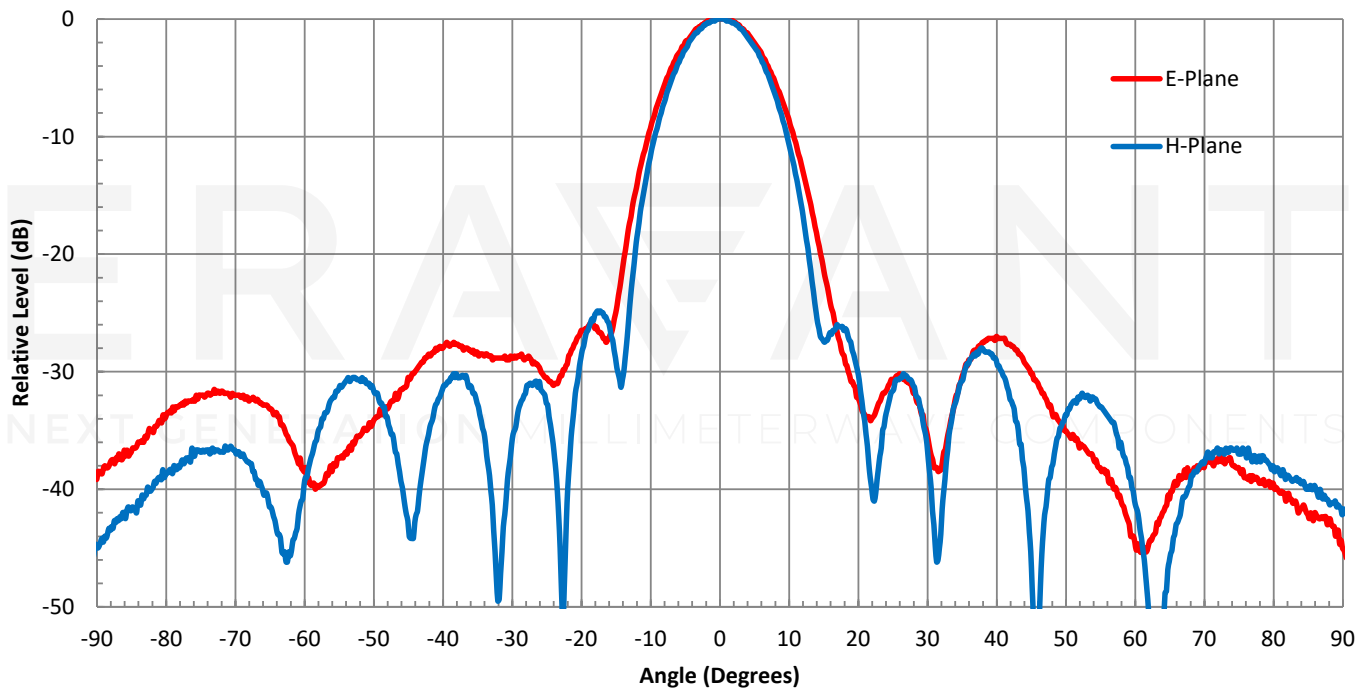
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model [SCH-06004-S1](#) is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.

SAM-2432432212-KF-L1

Typical Measured Co-pol E and H Plane Patterns @ 24.125 GHz



Typical Return Loss vs Frequency

