SAM-3533532005-KF-L1

Ka Band Microstrip Patch Array Antenna, 15° x 4.8°

SAM-3533532005-KF-L1 is a linear polarized, 35 GHz microstrip patch array antenna. The antenna implements a series-fed power distribution to achieve low sidelobe levels. The antenna has a gain of 20 dBi and a beamwidth of 15° vertically and 4.8° horizontally, with a -20 dB vertical sidelobe and -10 dB horizontal 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-35335319050-28-L1.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	34.85 GHz	35 GHz	35.15 GHz
Gain		20 dBi	
3 dB Beamwidth, E-Plane		15°	
3 dB Beamwidth, H-Plane		4.8°	
Sidelobes, E-Plane		-20 dB	
Sidelobes, H-Plane		-10 dB	
Polarization		Linear	
Return Loss		10 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	K(F) connector
Number of Elements	18 (H-Plane) × 6 (E-Plane)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Weight	2.5 Oz
Outline	AM-KA-0515

ECCN

EAR99

FEATURES

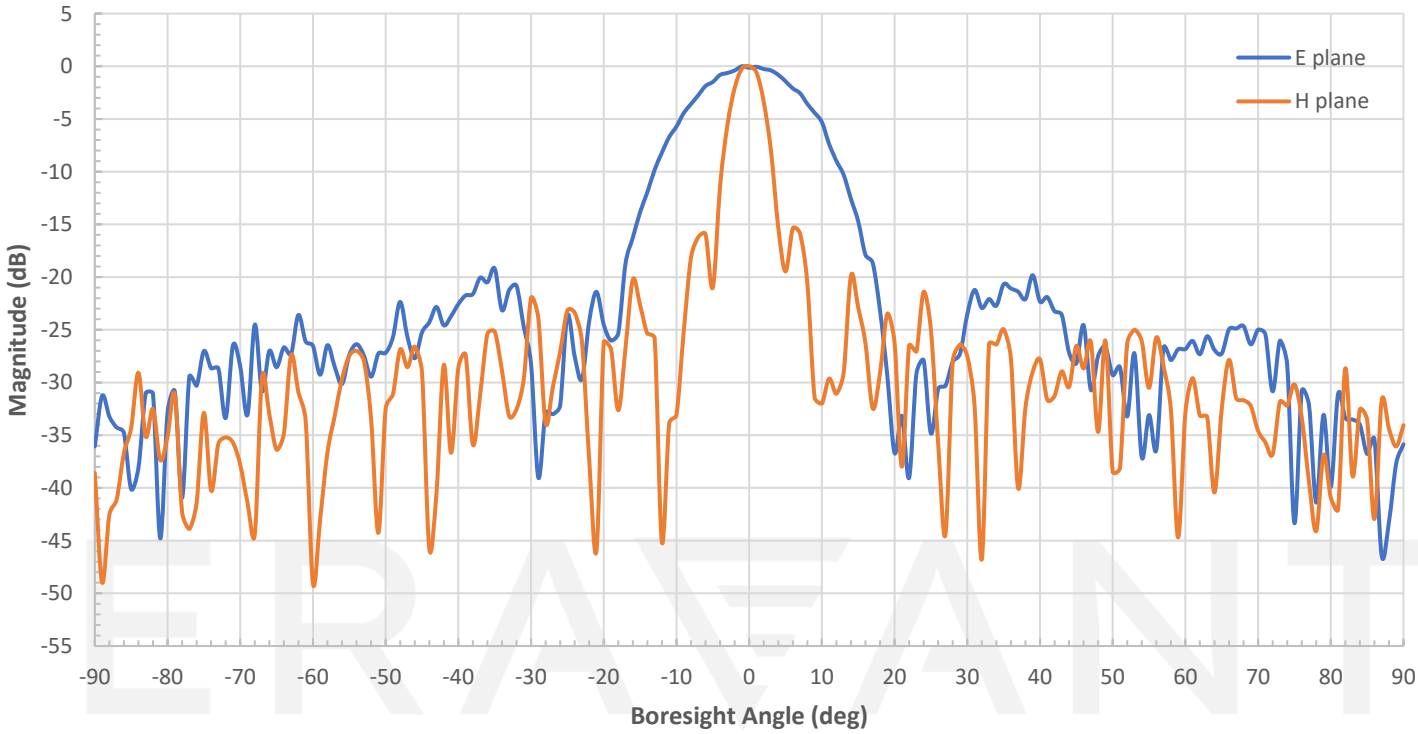
- Compact Size and Center Fed
- Low Sidelobes
- Low Cost in Volume

APPLICATIONS

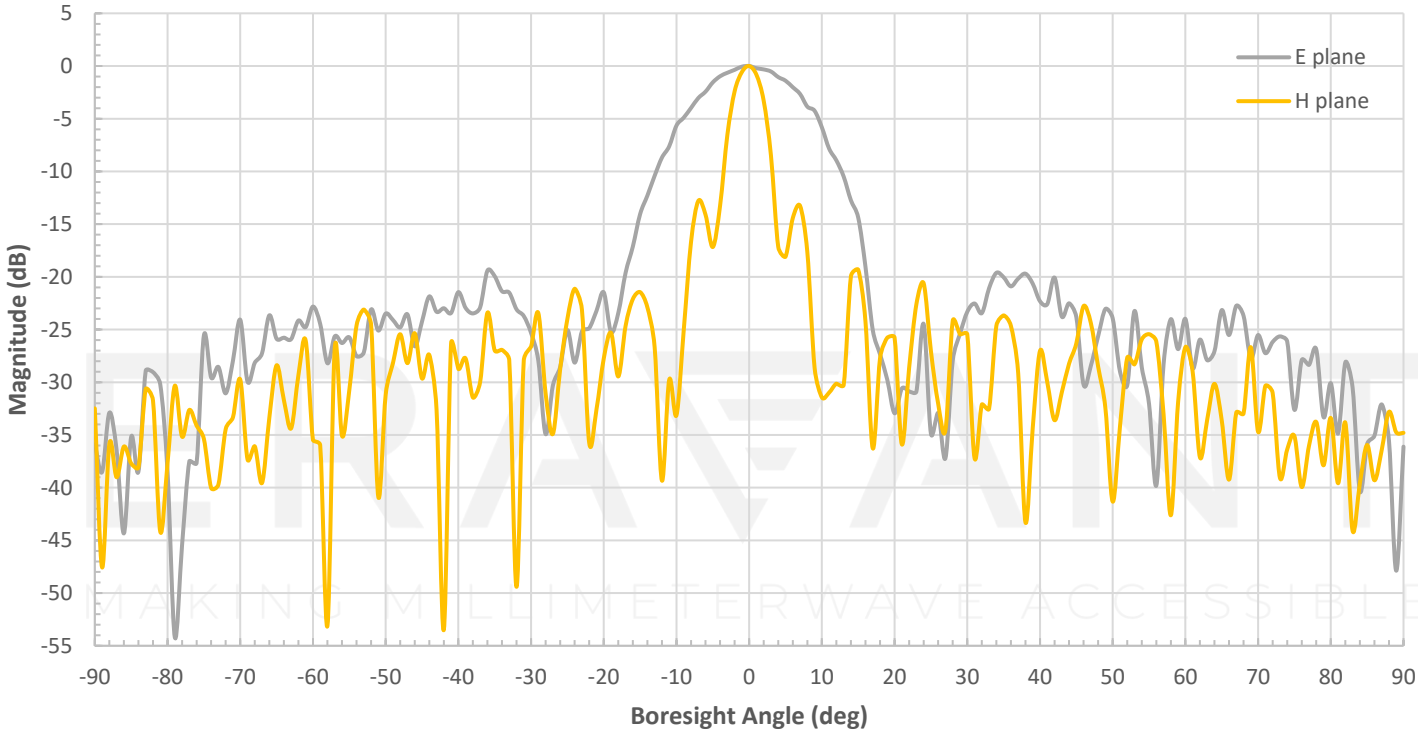
- Radar Systems
- Communication Systems
- Sensor Heads

SUPPLEMENTAL DETAILS

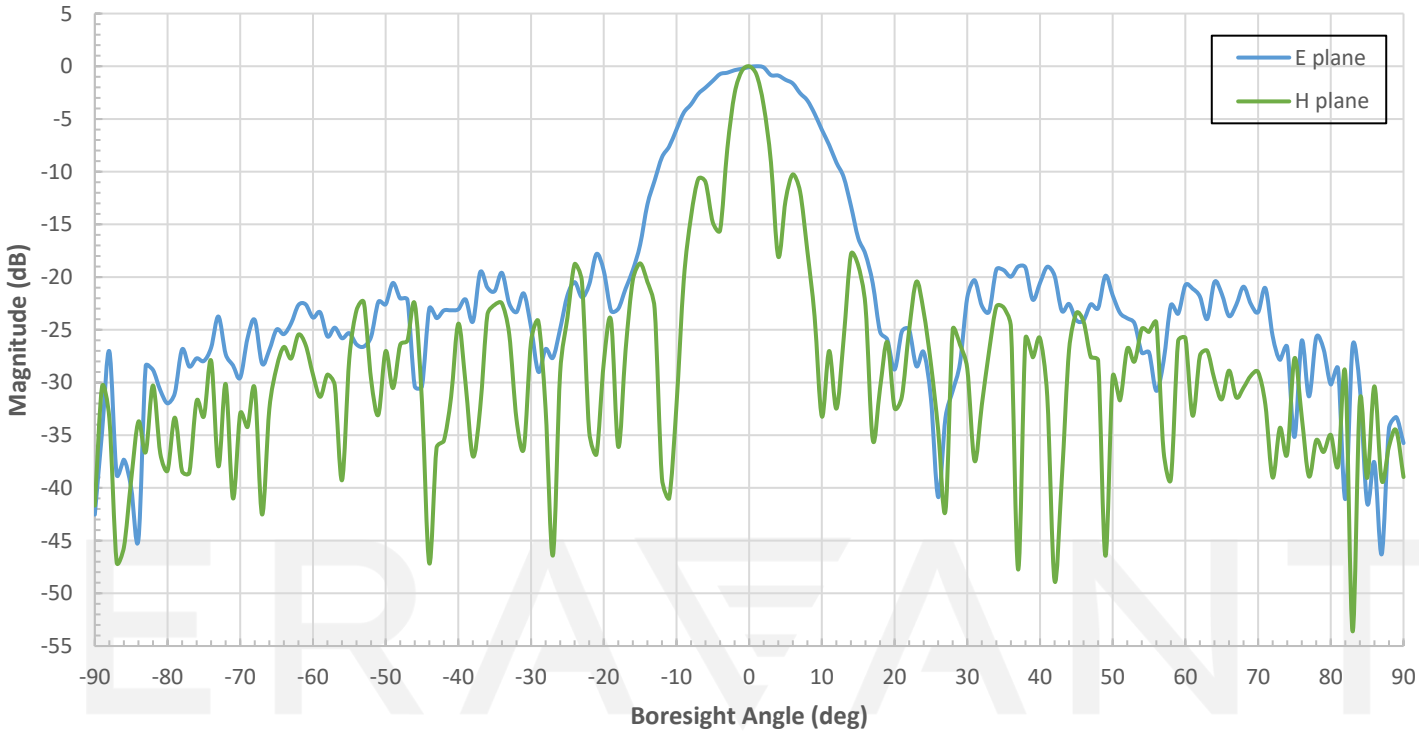
Measured Antenna Patterns @ 34.85 GHz



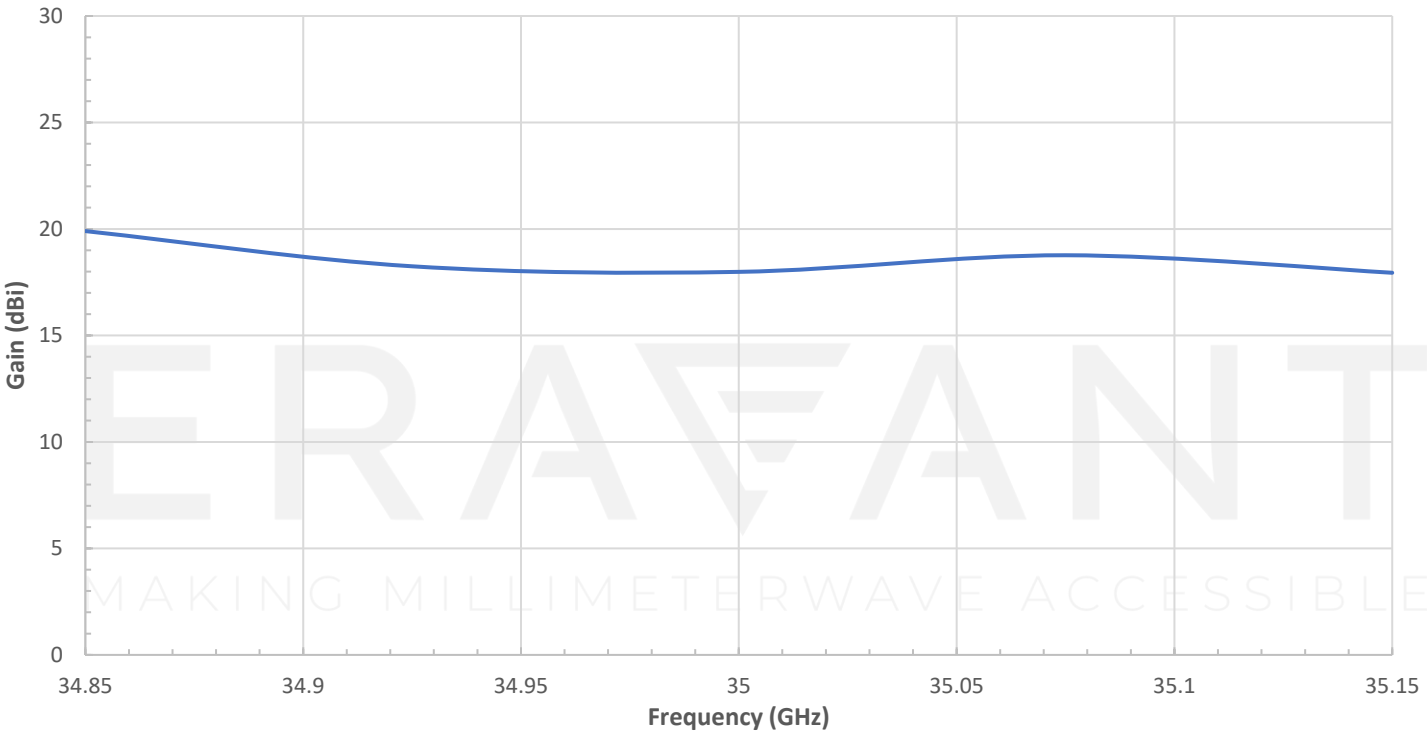
Measured Antenna Patterns @ 35 GHz



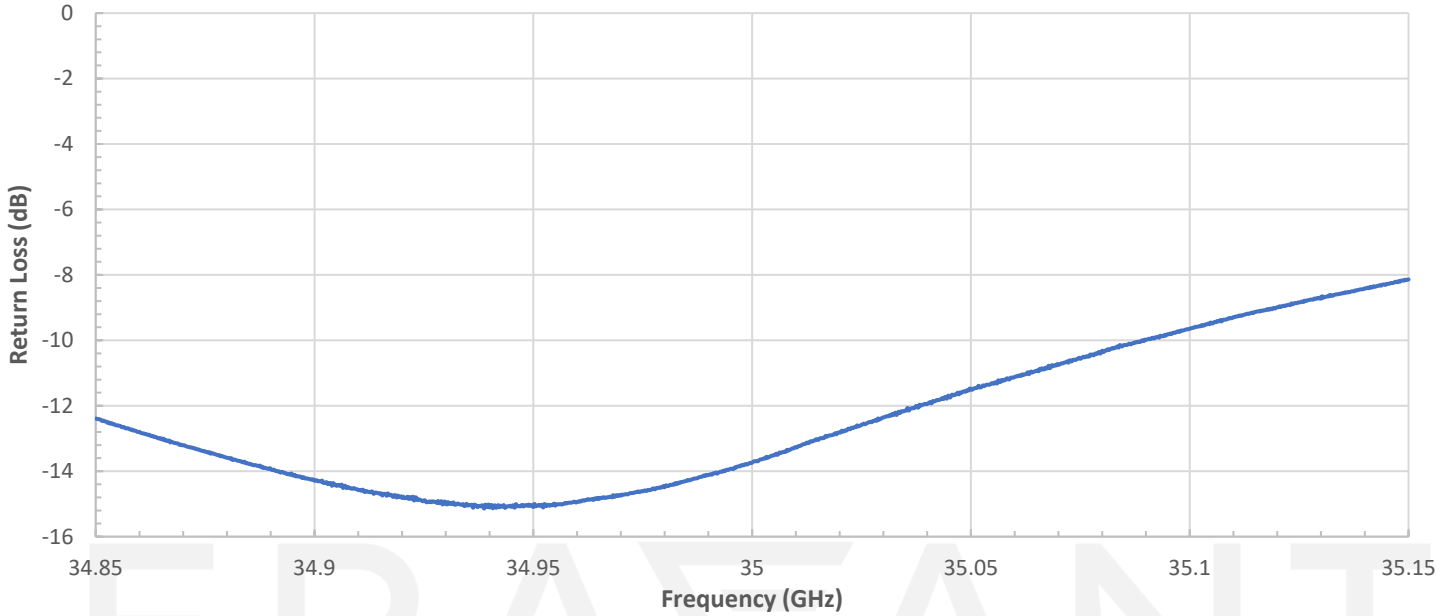
Measured Antenna Patterns @ 35.15 GHz



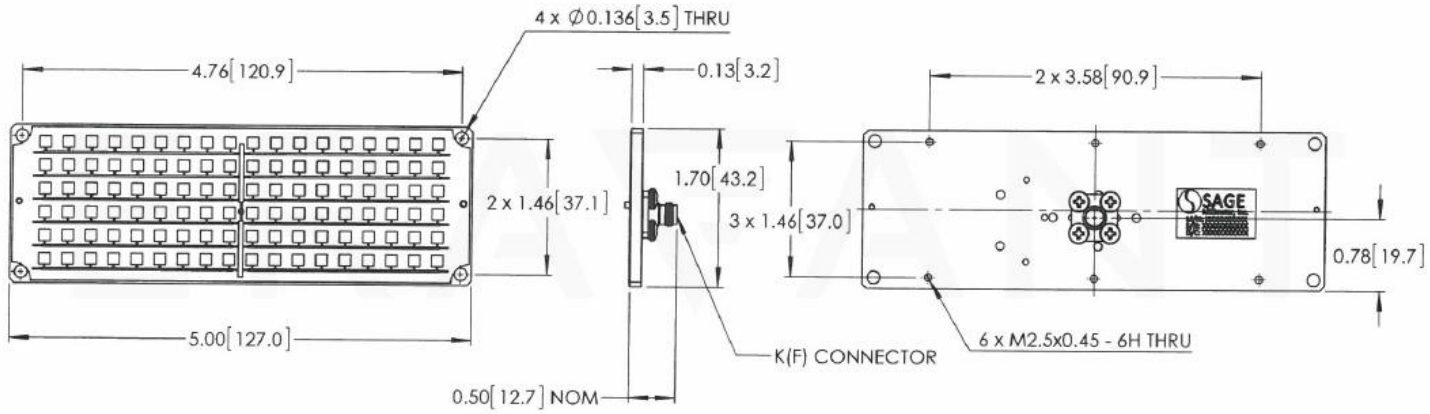
Measured Gain vs Frequency



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.
- Proper torque, 8.0±0.15 in-lbs (0.92±0.05 Nm), should be applied. Eravant torque wrench, **model SCH-08008-S1**, is highly recommended.