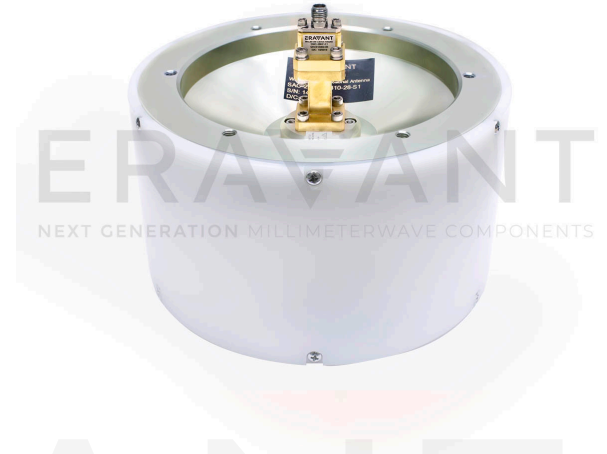


SAO-2434230810-KF-S1

Ka-Band Omidirectional Antenna, 10 Degree, 7.5 dBi Gain

SAO-2434230810-KF-S1 is a full band, WR-28 omidirectional antenna that operates between 24 to 42 GHz. This vertically polarized antenna offers 360 degrees azimuth coverage with a 7.5 dBi typical gain and ± 1 dB nominal gain flatness. The antenna features a half power beamwidth of 10 degrees in its vertical direction. The RF port of the antenna is equipped with 2.92 mm (K) female coaxial connector. The version with WR-28 waveguide interface is offered under model number, **SAO-2434230810-28-S1**.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	24 GHz		42 GHz
Gain		7.5 dBi	
Azimuth Gain Variation		± 1 dBi	
Azimuth Beamwidth		360°	
3 dB Vertical Beamwidth		10°	
Return Loss		9 dB	
Power Handling		50 W	75 W
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Port	2.92 mm (K) Female Coaxial Connector
Body Material	Aluminum
Radome Material	HDPE
Finish	Clear Chem Film
Dimension	3.88" (H) x 5.66" (Ø)
Outline	AO-AC08-010-E

ECCN

EAR99

FEATURES

- 360° Azimuth Coverage
- 10° Vertical 3 dB Beamwidth
- Vertically Polarized
- Full Band Operation

APPLICATIONS

- 5G Systems
- Communication Links
- EW Systems
- Indoor Local Area Networks

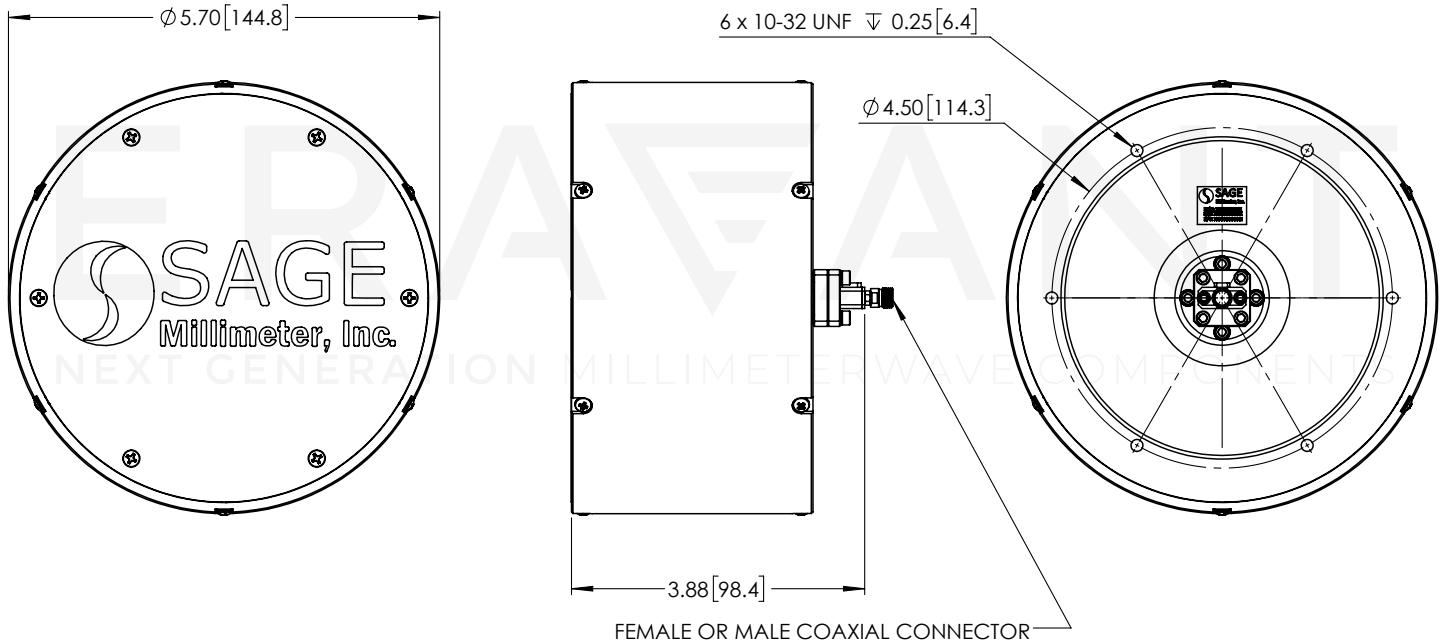
SUPPLEMENTAL DETAILS



SAO-2434230810-KF-S1

Mechanical Outline:

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



NOTE:

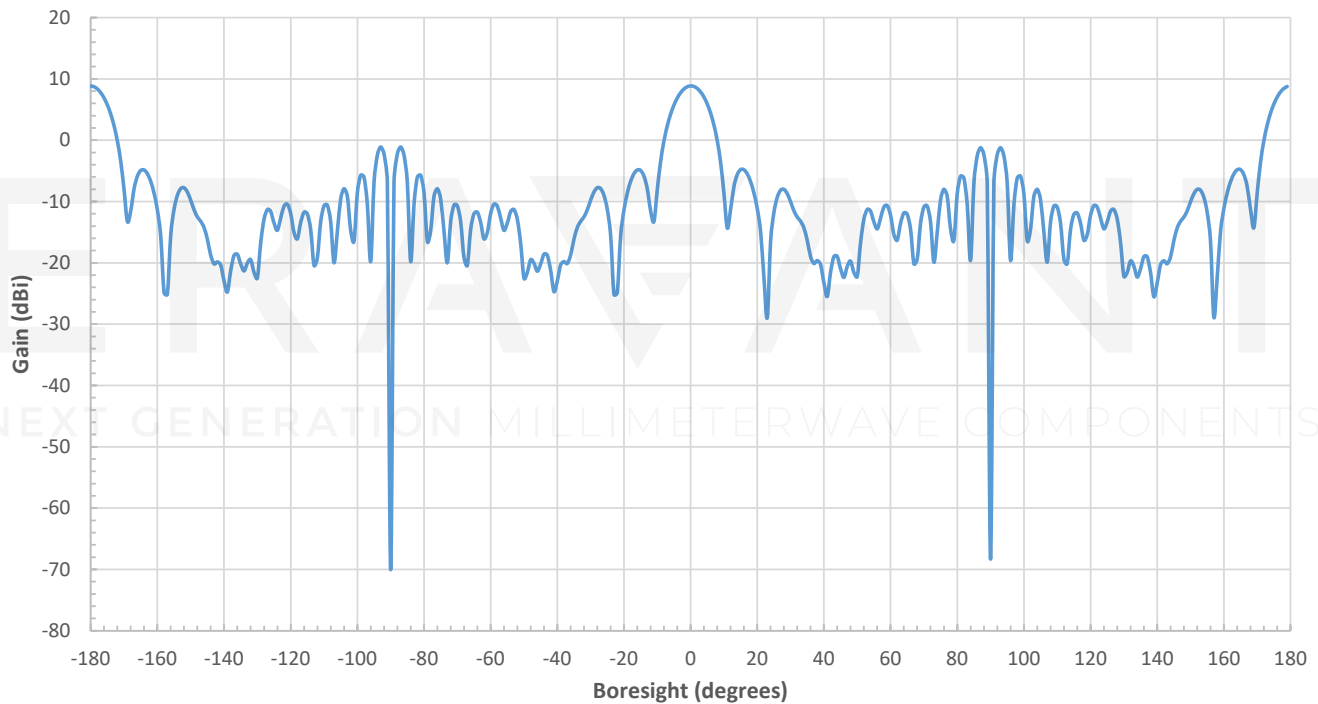
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right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

CAUTION:

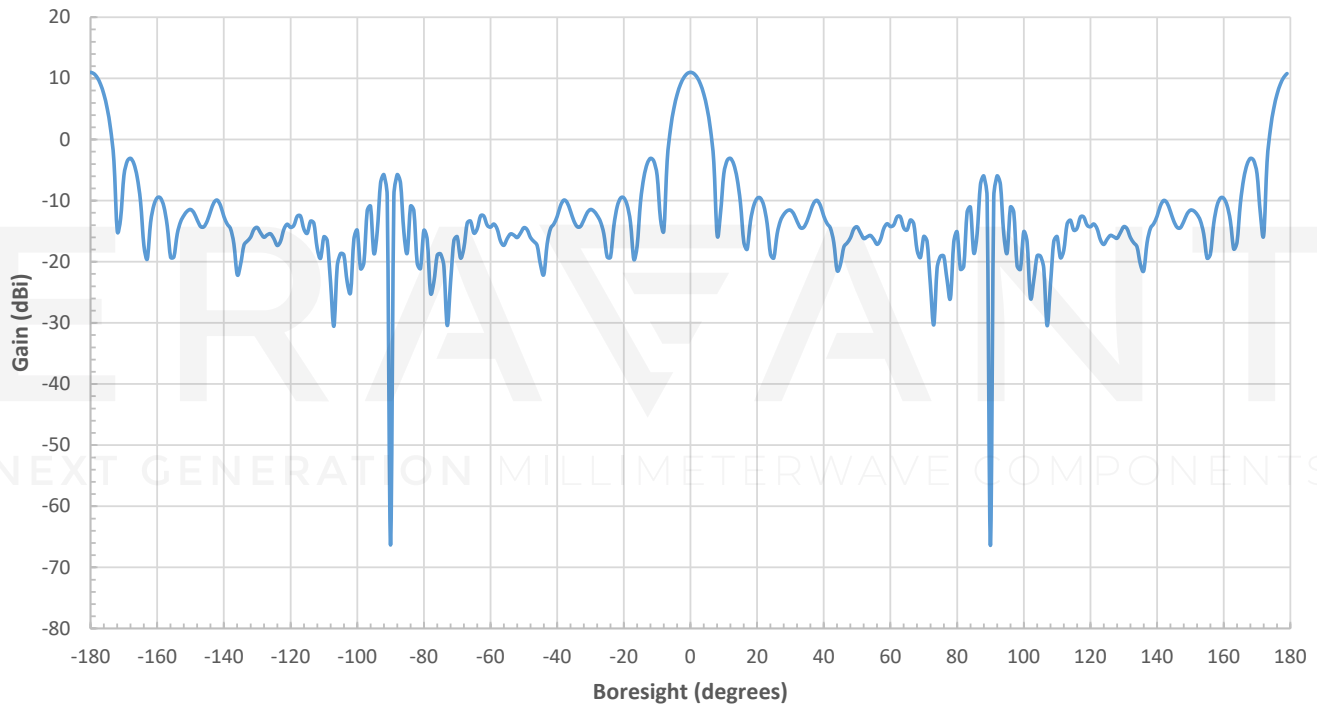
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 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.

SAO-2434230810-KF-S1

Simulated E-Plane Antenna Pattern @ 24 GHz

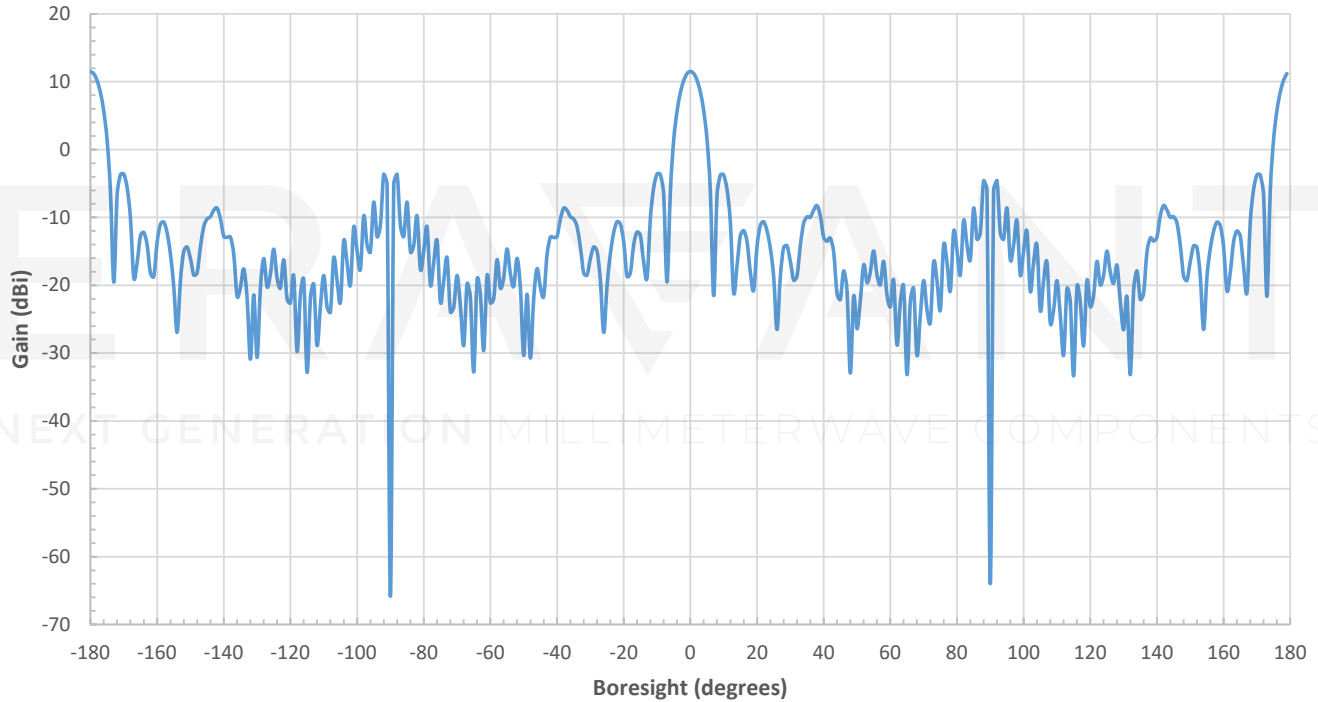


Simulated E-Plane Antenna Pattern @ 33 GHz

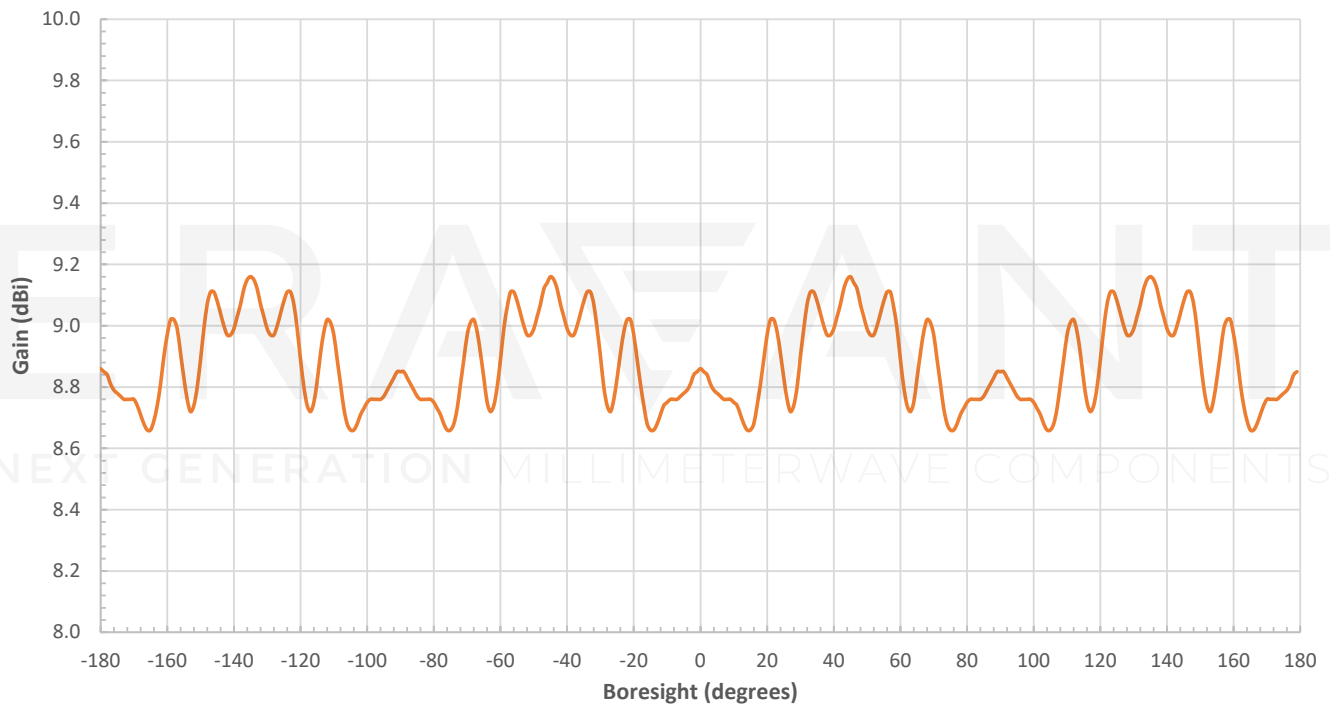


SAO-2434230810-KF-S1

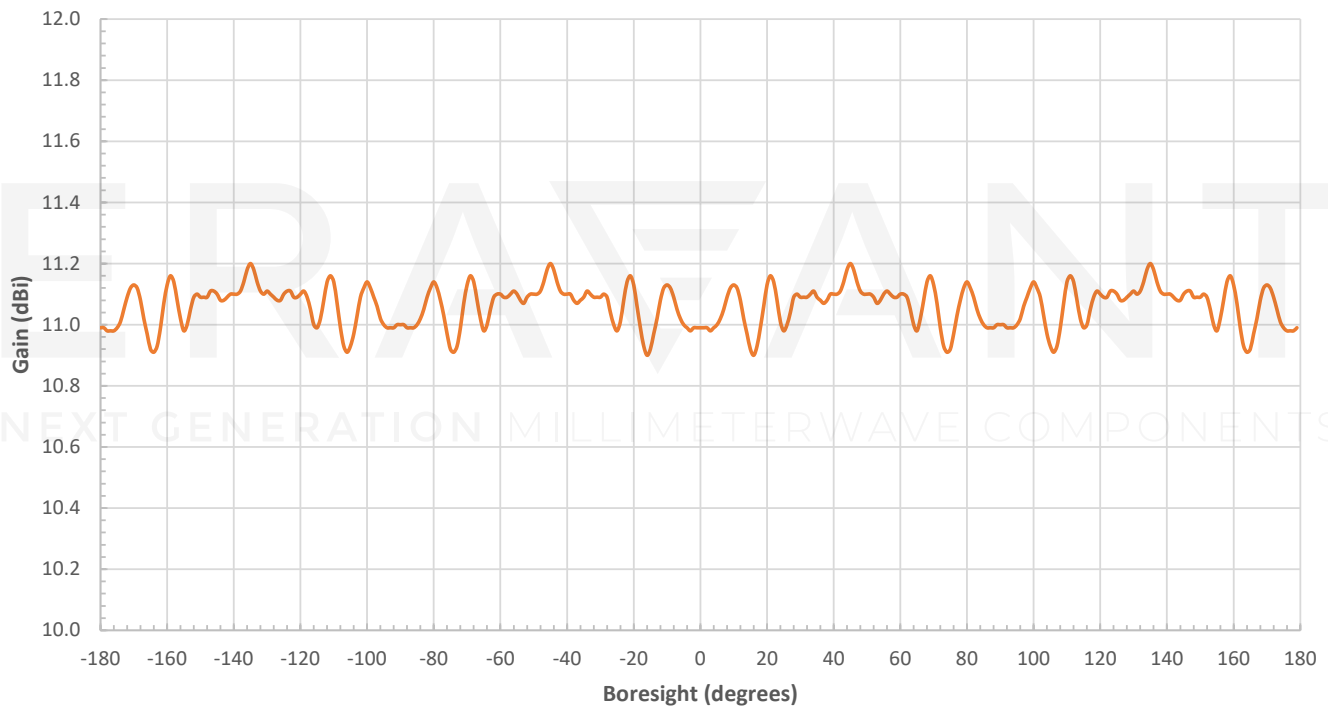
Simulated E-Plane Antenna Pattern @ 42 GHz



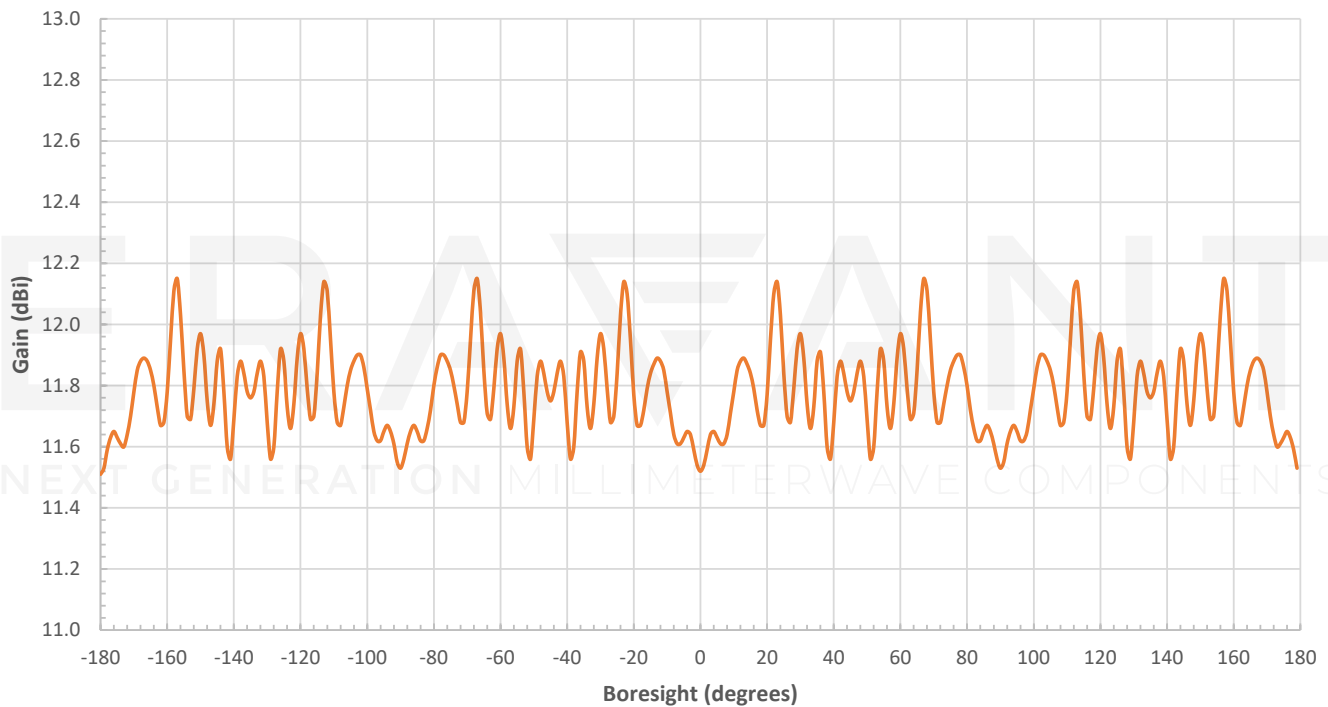
Simulated H-Plane Antenna Pattern @ 24 GHz



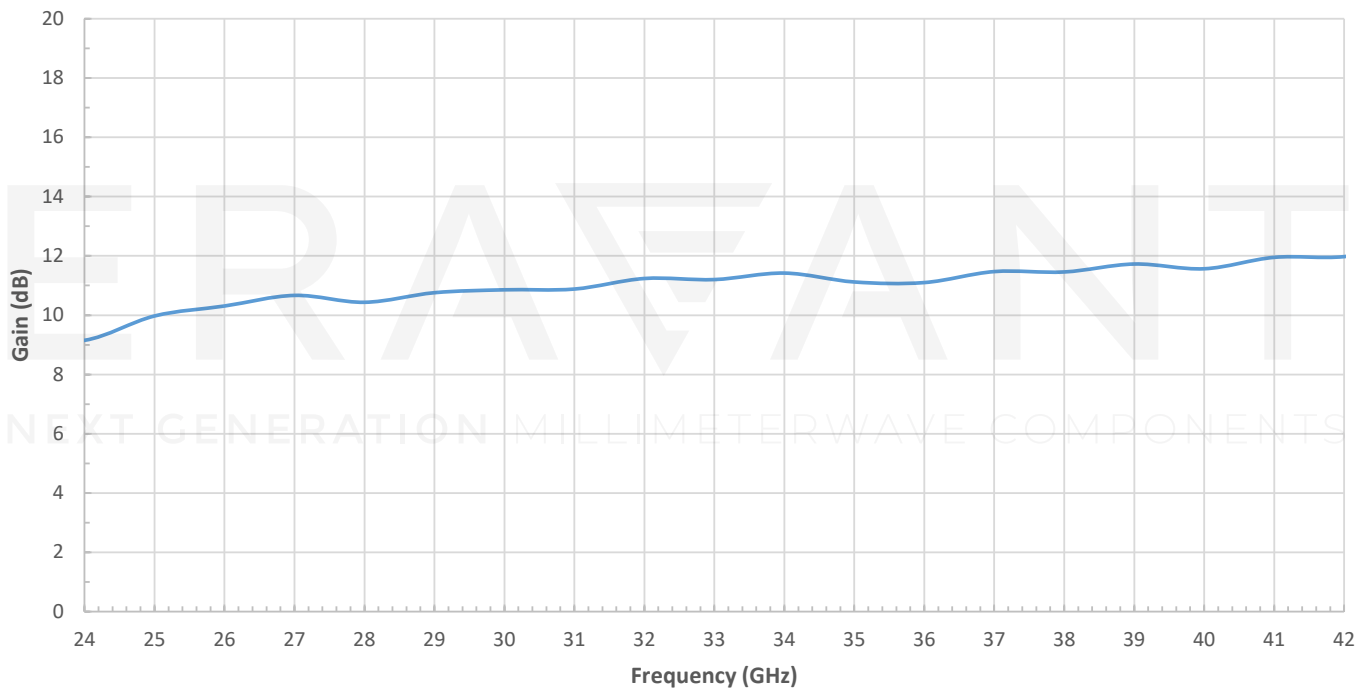
Simulated H-Plane Antenna Pattern @ 33 GHz



Simulated H-Plane Antenna Pattern @ 42 GHz



Simulated Gain vs. Frequency



Simulated Return Loss vs. Frequency

