SAY-9231144017-10-S1

W-Band Cassegrain Antenna, 92 to 114 GHz, 6”, 40 dBi Gain

SAY-9231144017-10-S1 is a W-band Cassegrain antenna that offers a nominal gain of 40 dBi and a typical half power beamwidth of 1.3 degrees from 92 to 114 GHz. The aluminum reflector offers a lightweight and rugged mechanical structure and is treated with a chem film conversion coating for corrosion resistance. A corrugated scalar feed horn is used to provide optimal feed efficiency, low side lobes, high cross-pol rejection, and uniform illumination. The antenna port is a WR-10 waveguide with UG-387/U-M anti-cocking flange and can support linear polarized waveforms. Other port configurations, such as circular waveguide port, are available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	92 GHz		114 GHz
Gain		40 dBi	
3 dB Beamwidth		1.3°	
Sidelobes		-17 dB	
Return Loss		15 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-10 Waveguide with UG 387/U-M Anti-Cocking Flange
Reflector Diameter	6”
Reflector Material	Aluminum
Finish	Chem Film
Outline	AY-RW39-06-A

ECCN

EAR99

FEATURES

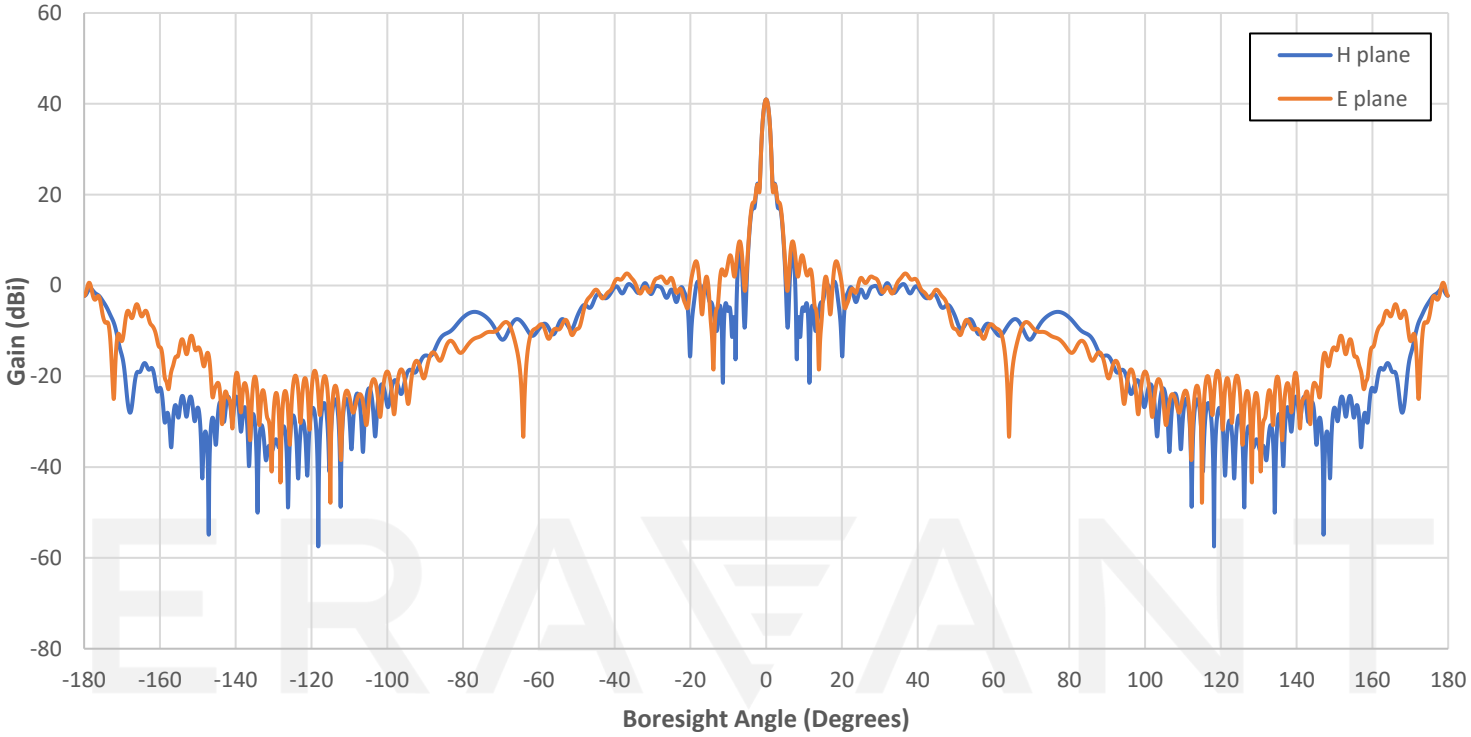
- Linear Polarization
- Low Side Lobe Levels
- High Cross-Polarization

APPLICATIONS

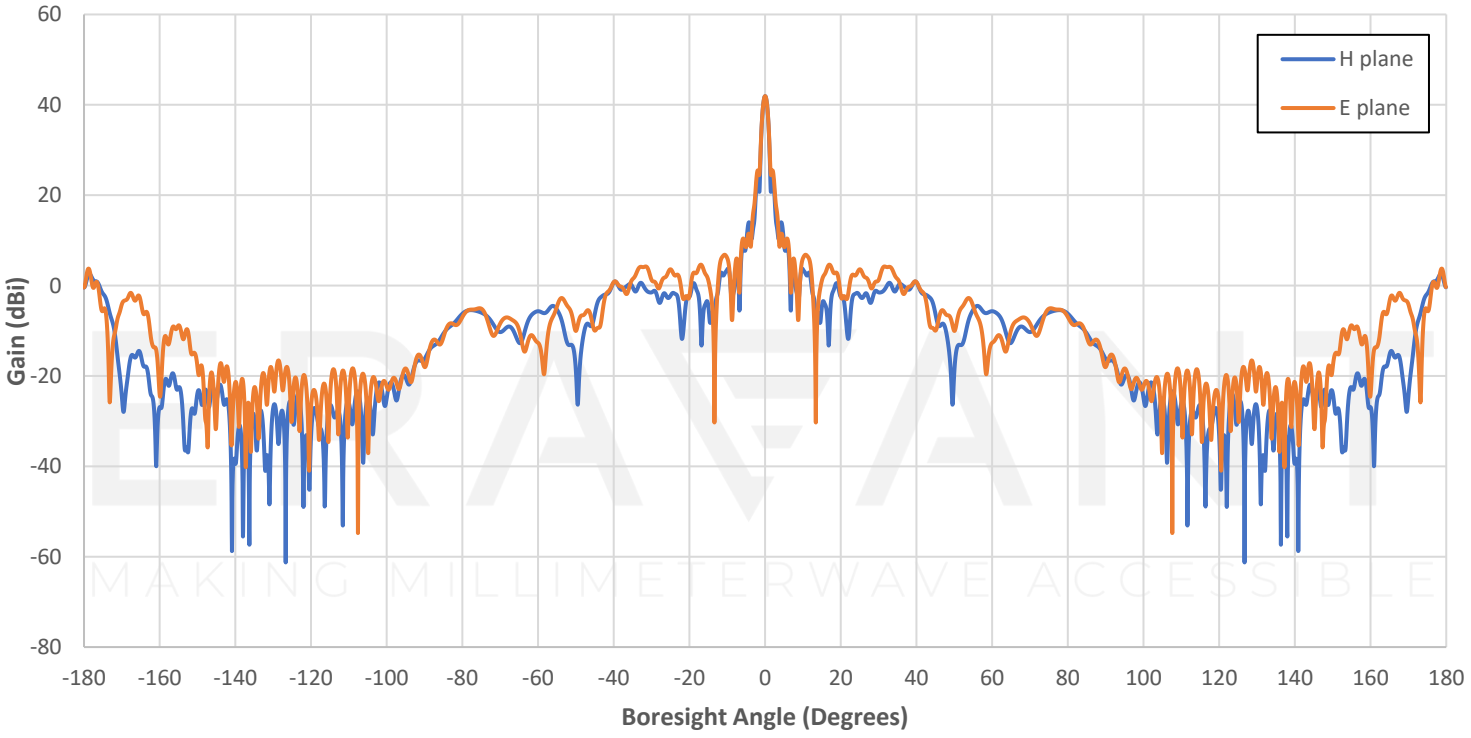
- Radar Communication System
- EW Systems

SUPPLEMENTAL DETAILS

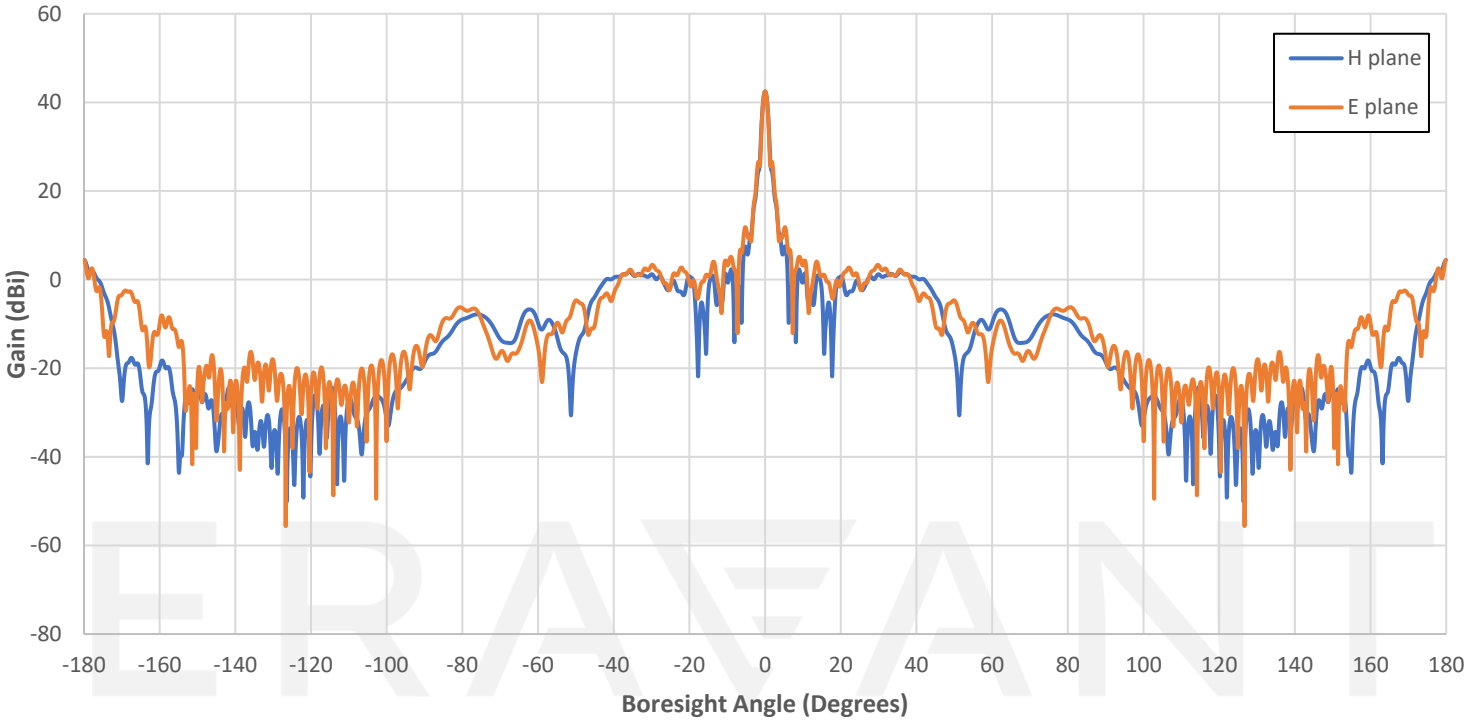
Simulated Patterns at 92 GHz



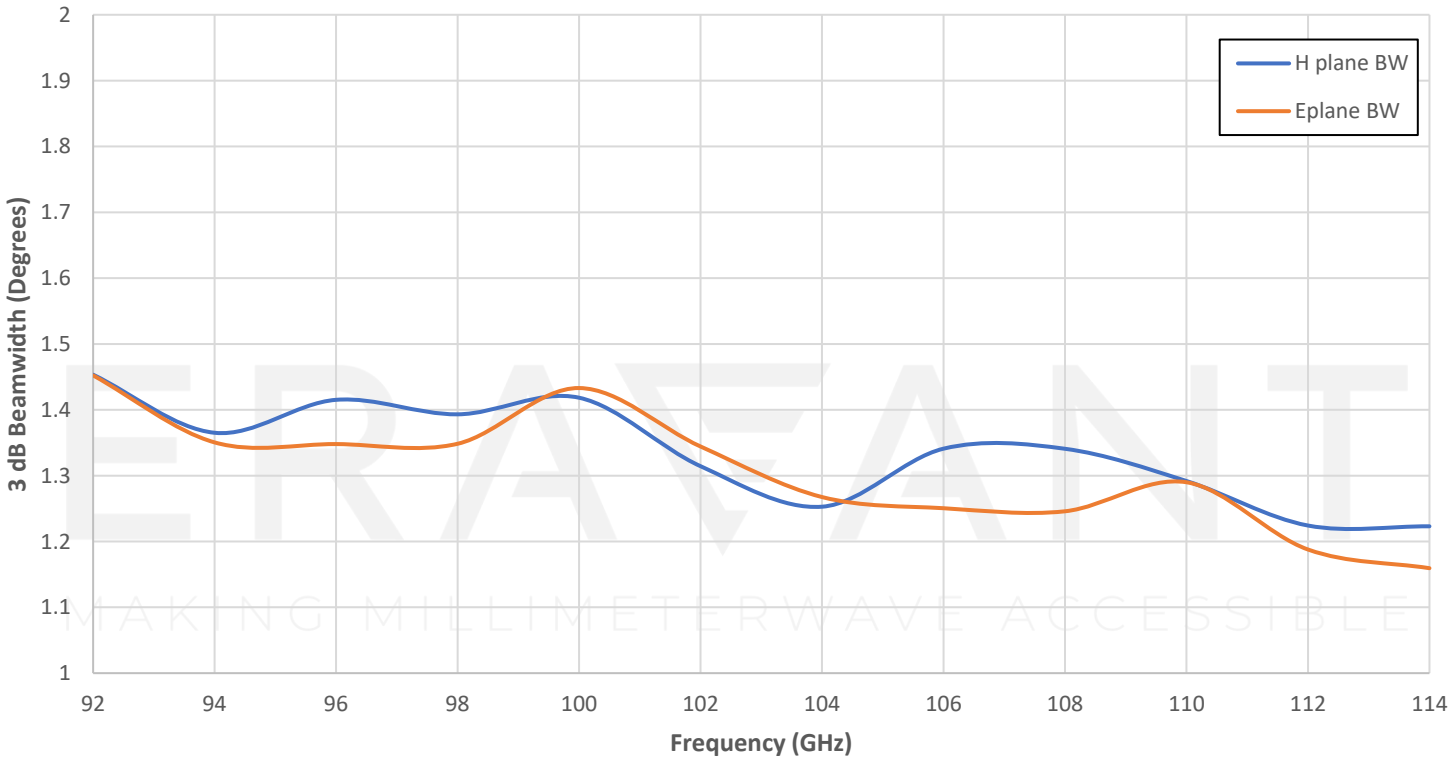
Simulated Patterns at 104 GHz



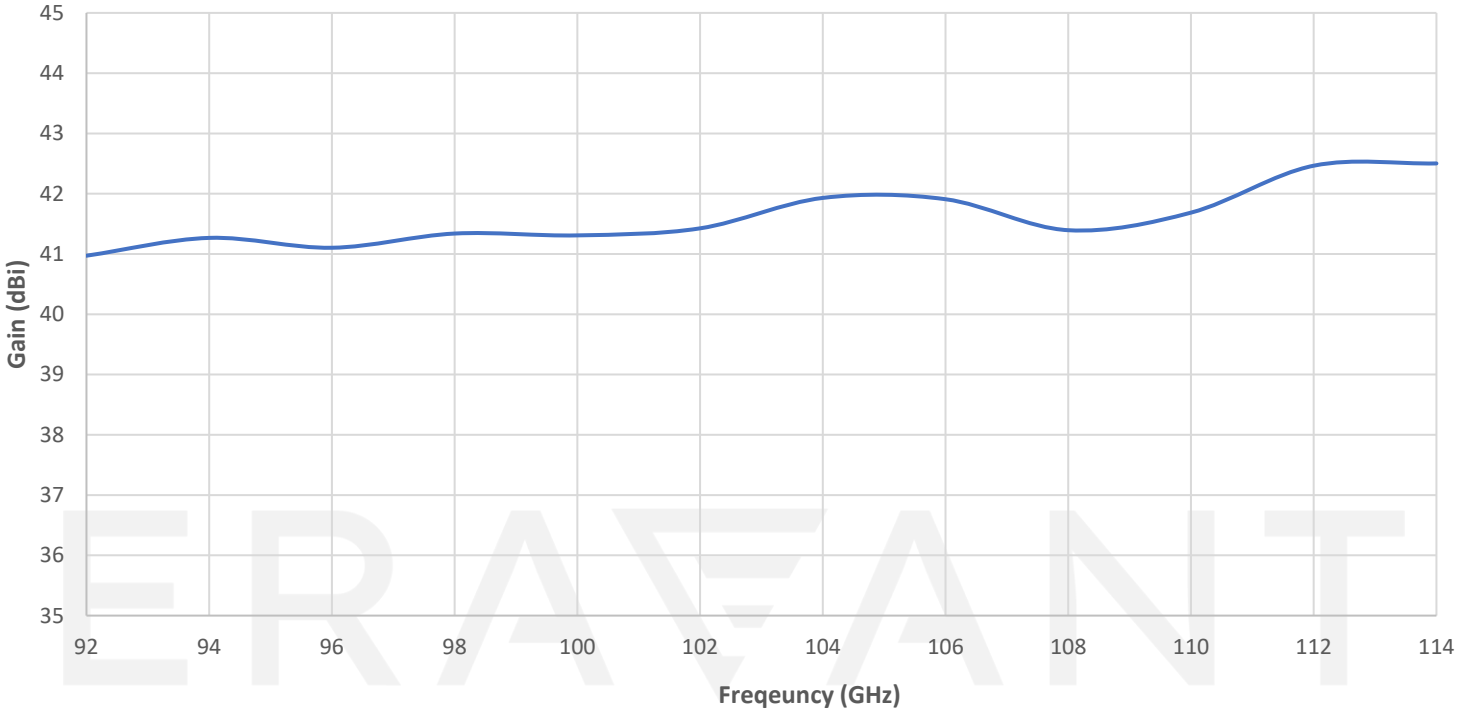
Simulated Patterns at 114 GHz



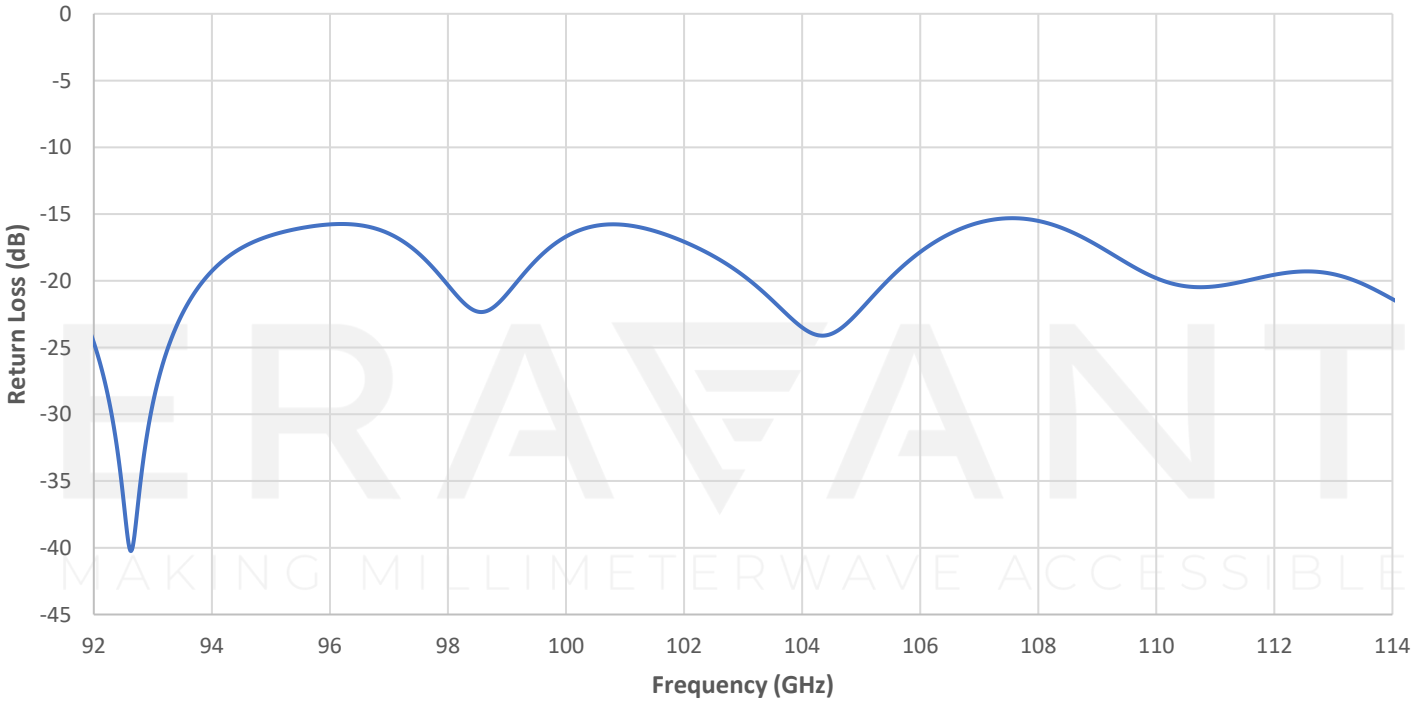
Simulated 3dB Beamwidth vs Frequency



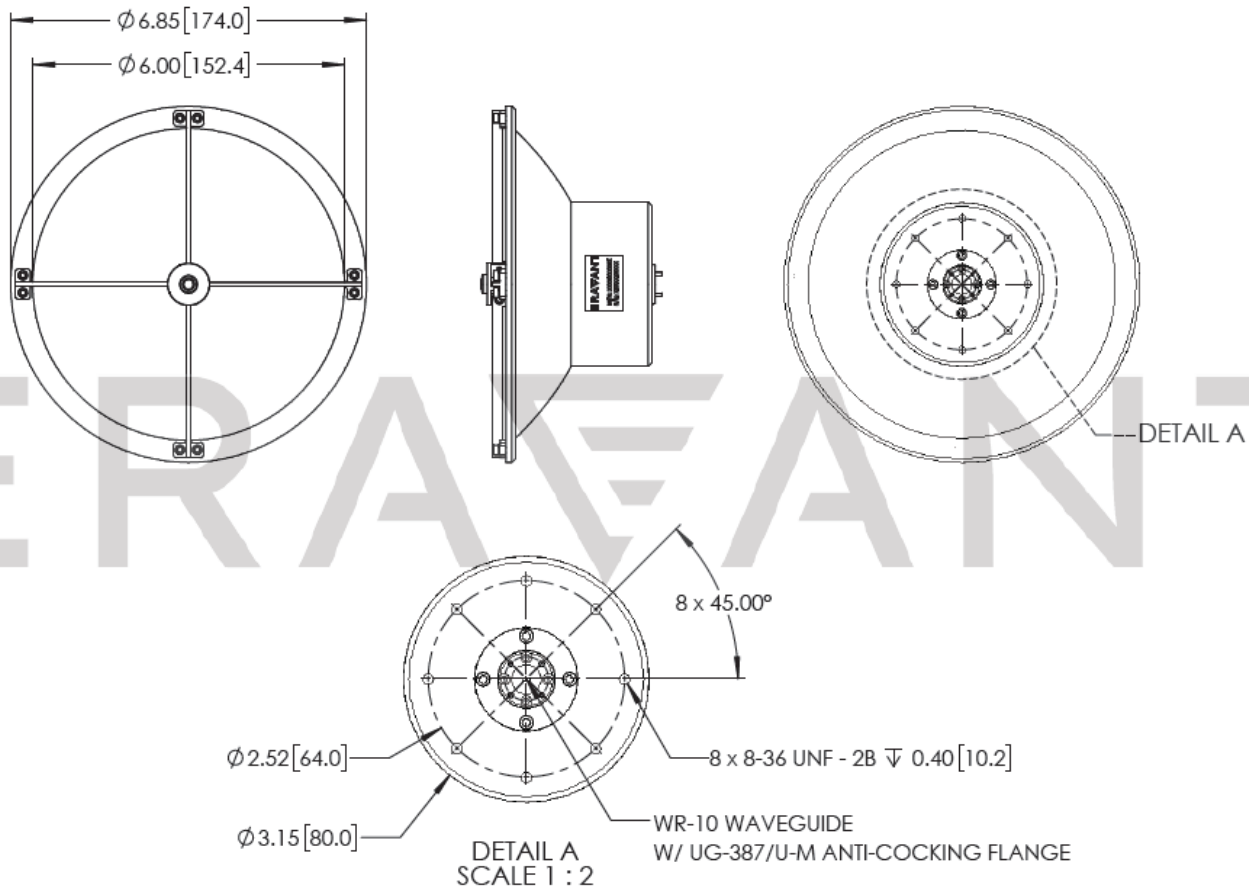
Simulated Gain vs Frequency



Simulated Return Loss vs Frequency



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



NOTE:

- Data provided is simulated, actual measured data may slightly vary.
- 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.