SAY-7138634212-10-S1-WR

W-Band Cassegrain Antenna, 71 to 86 GHz, 9” Dish, 42 dBi Gain, Weather Resistant

SAY-7138634212-10-S1-WR is a W-band Cassegrain antenna that offers a nominal gain of 42 dBi and a typical half power beamwidth of 1.3 degrees from 71 to 86 GHz. The aluminum reflector offers a light-weight and rugged mechanical structure. The antenna body is treated with a chem film conversion coating for corrosion resistance, while an integrated radome provides dust and weather protection. A corrugated scalar feed horn is used to provide optimal feed efficiency, low side lobes, high cross-pol rejection, and uniform illumination. The antenna supports only linear polarized waveforms and is designed and manufactured for indoor and outdoor applications. The antenna port is a WR-10 waveguide with UG-387/U-M anti-cocking flange. Other port configurations, such as a Ø0.110” circular or WR-12 waveguide port, are available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	71 GHz		86 GHz
Gain		42 dBi	
3 dB Beamwidth		1.3°	
Sidelobes		-18 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	9”
Radome Material	HDPE
Reflector Material	Aluminum
Finish	Chem Film
Weight	3.5 lbs.
Outline	AY-RW40-09-A-WR

ECCN

EAR99

FEATURES

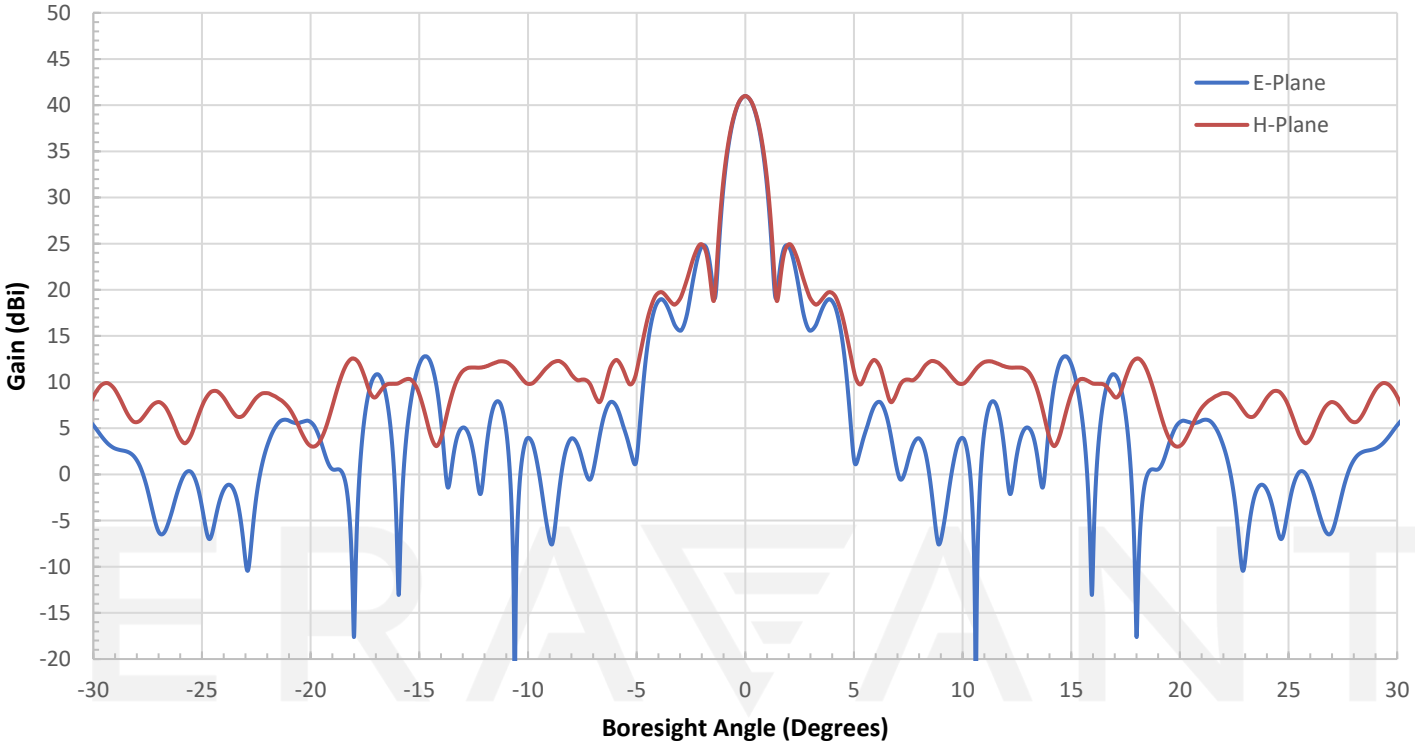
- Radome for Dust and Weather Protection
- Linear Polarization
- Low Side Lobe Levels
- High Cross-polarization Rejection

APPLICATIONS

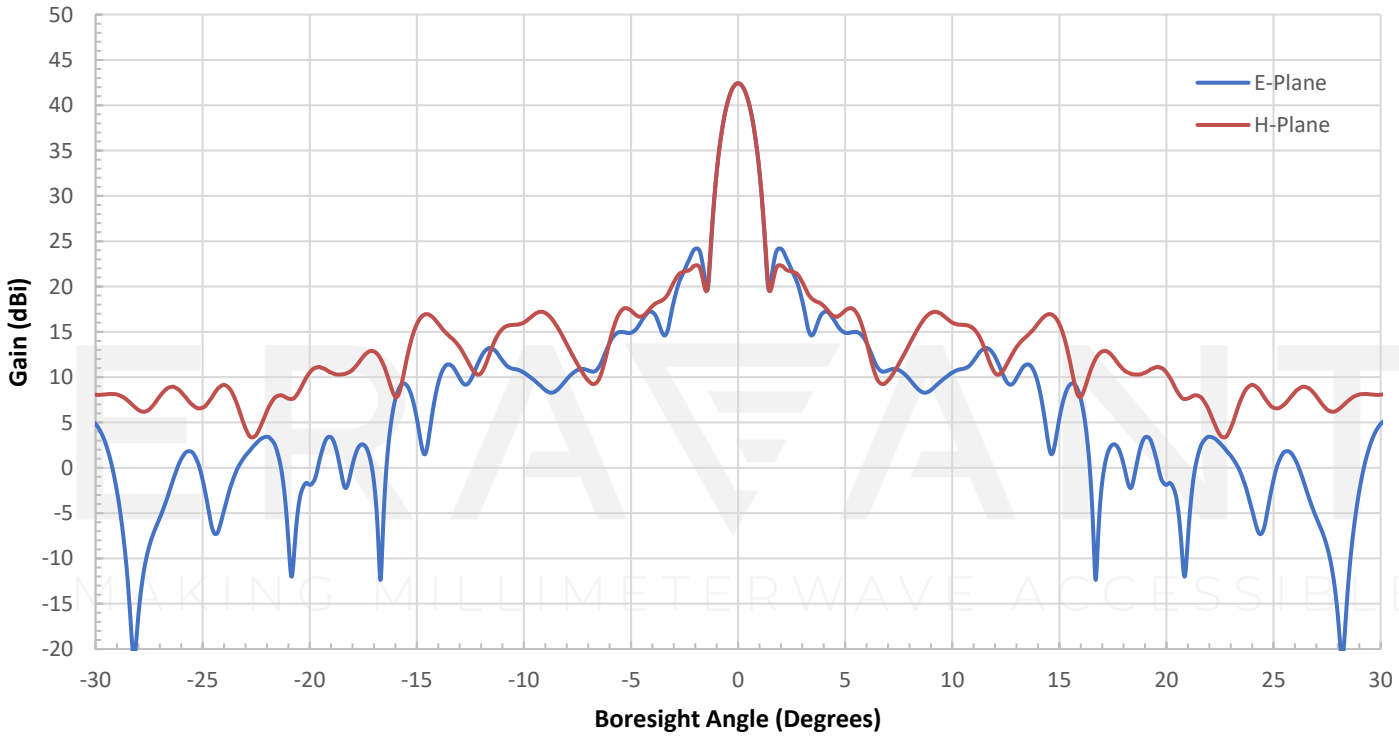
- Radar and Communication Systems
- EW Systems

SUPPLEMENTAL DETAILS

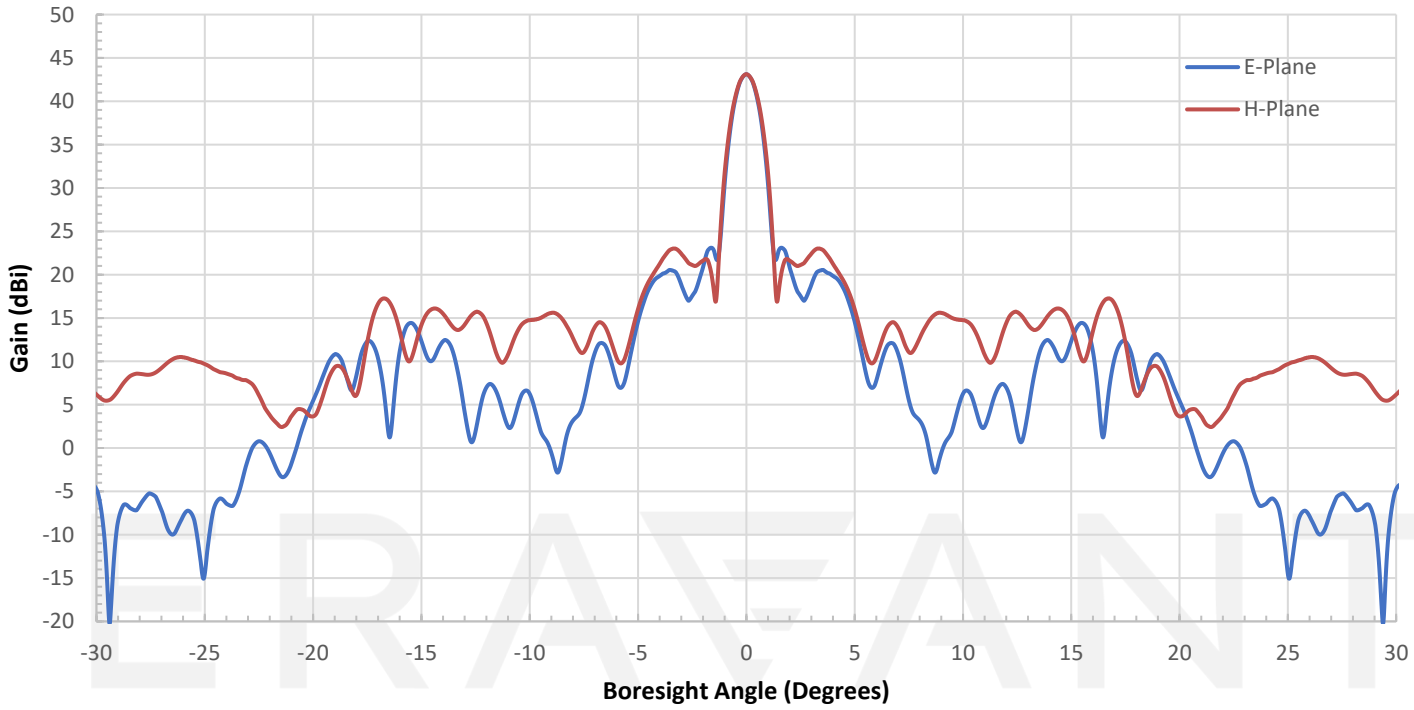
Simulated Antenna Patterns @ 71 GHz



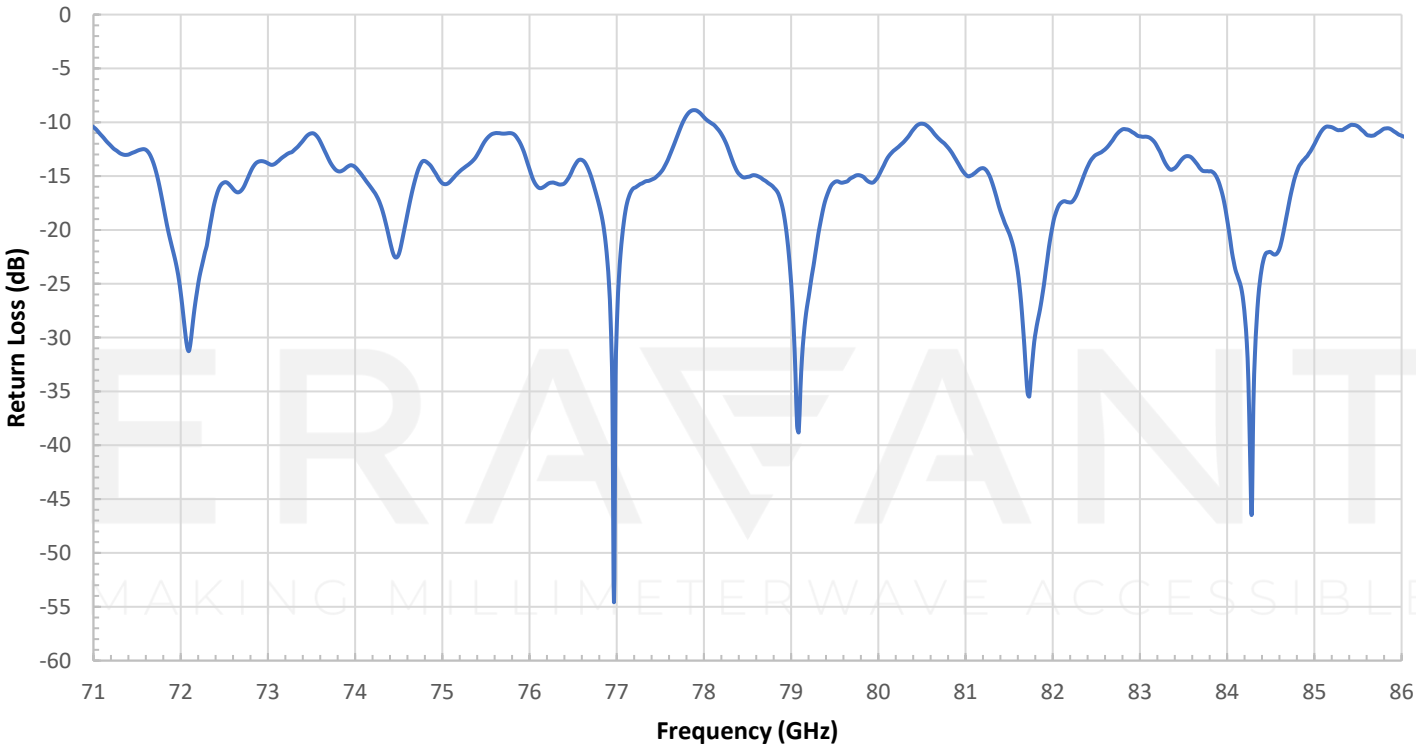
Simulated Antenna Patterns @ 78.5 GHz



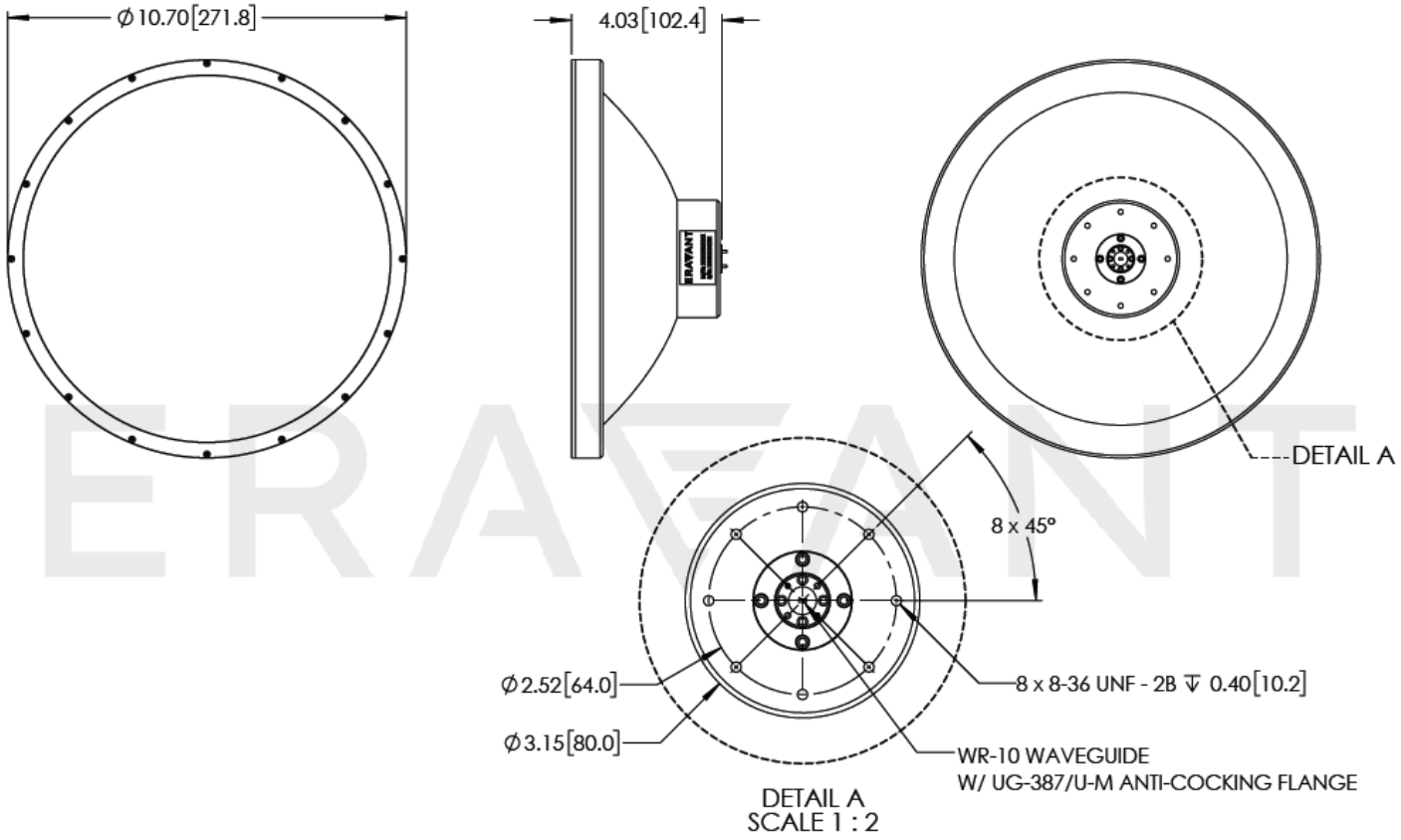
Simulated Antenna Patterns @ 86 GHz



Typical Return Loss vs Frequency



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.