SAO-2943040345-03-S1

WR-03 Omnidirectional Antenna, 360 Degrees, 3 dBi Gain

SAO-2943040345-03-S1 is a WR-03 omnidirectional antenna that operates between 297 and 303 GHz. This vertically polarized antenna offers 360 degrees azimuth coverage with a 3 dBi typical gain and ±2 dBi angular gain flatness. The antenna features a half power beamwidth of 45 degrees in the vertical direction. The input port of the antenna is equipped with a WR-03 waveguide with UG-387/U-M anti-cocking flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	297 GHz		303 GHz
Gain		3 dBi	
Gain Variation		±2 dB	
Azimuth Beamwidth		360˚	
3 dB Beamwidth, Vertical		45˚	
Return Loss		10 dB	
Power Handling		20 W (CW)	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-03 Waveguide with UG-387/U-M Anti-Cocking Flange
Body Material	Aluminum
Radome Material	HDPE
Finish	Gold Plated
Outline	AO-0304-030-A

ECCN

EAR99

FEATURES

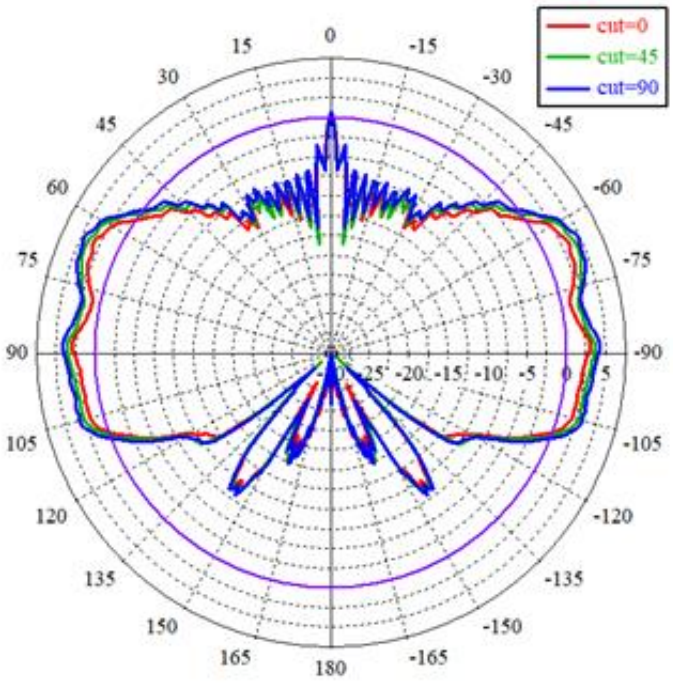
- Full Band Coverage
- Compact Size
- High Resolution Micrometer
- Low Insertion Loss

APPLICATIONS

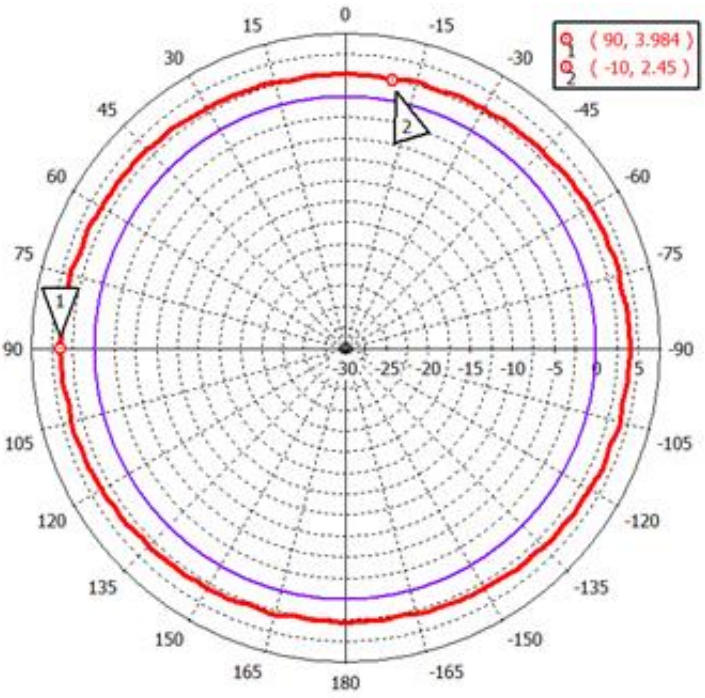
- Test Lab
- Instrumentations
- System Integration

SUPPLEMENTAL DETAILS

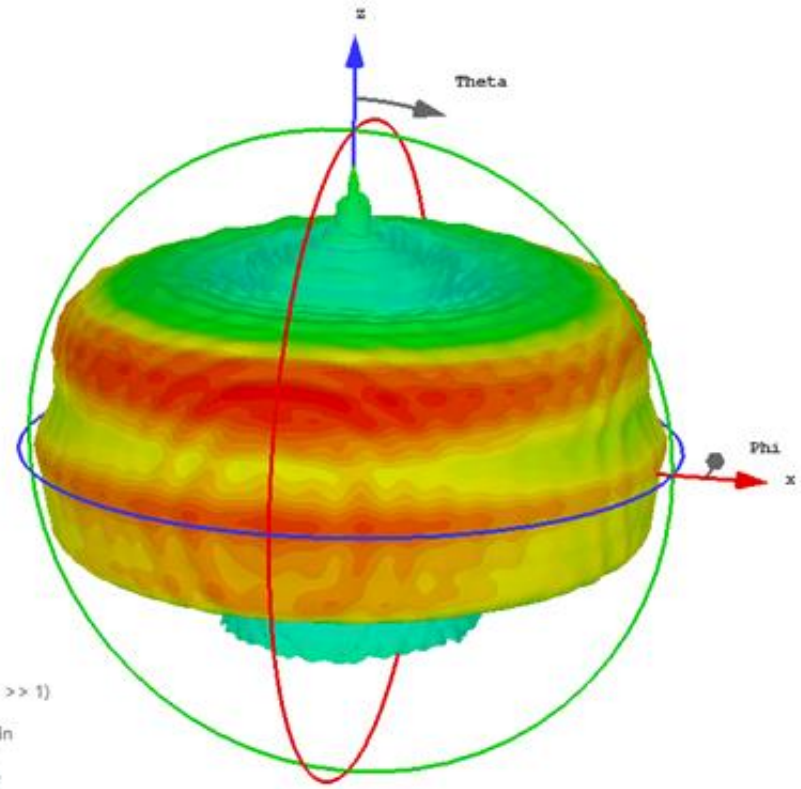
Simulated Pattern at 297 GHz



Theta / Degree vs. dBi



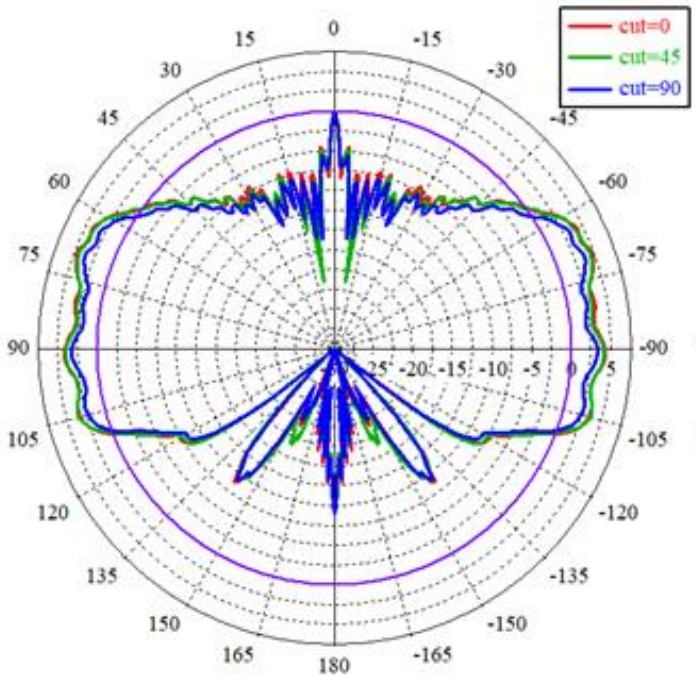
Phi / Degree vs. dBi



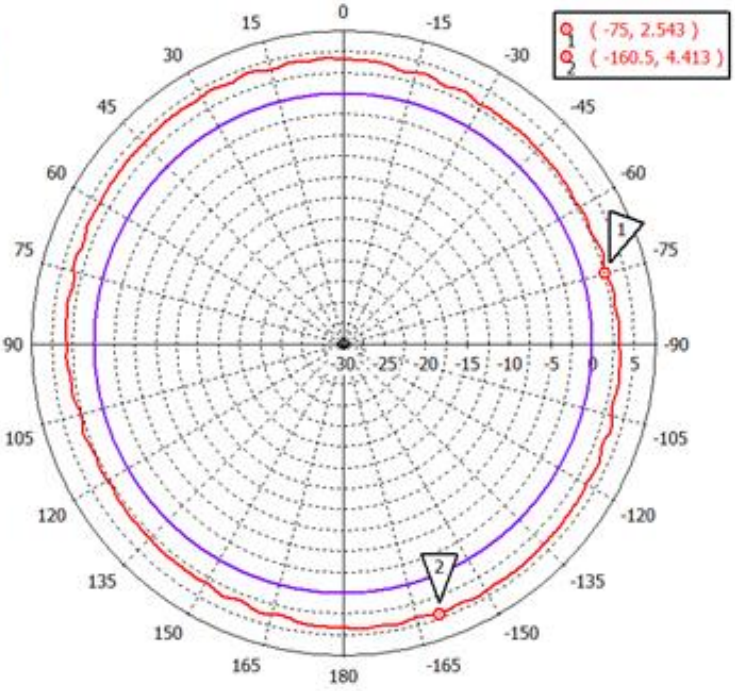
farfield (f=297) [1]

Type	Farfield
Approximation	enabled (kR >> 1)
Component	Abs
Output	Realized Gain
Frequency	297 GHz
Rad. Effic.	-0.09294 dB
Tot. Effic.	-0.09955 dB
Rlzd. Gain	4.808 dBi

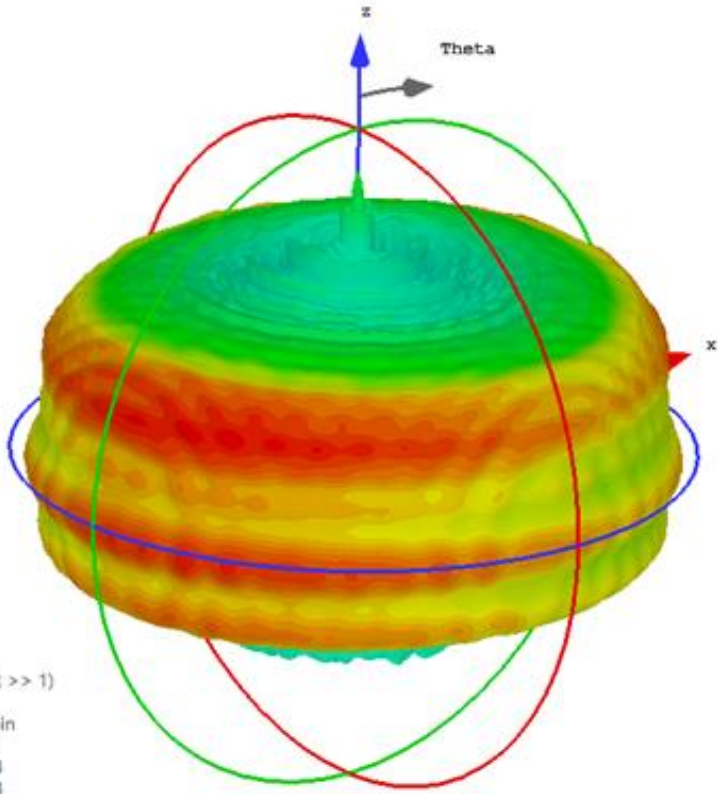
Simulated Pattern at 300 GHz



Theta / Degree vs. dBi



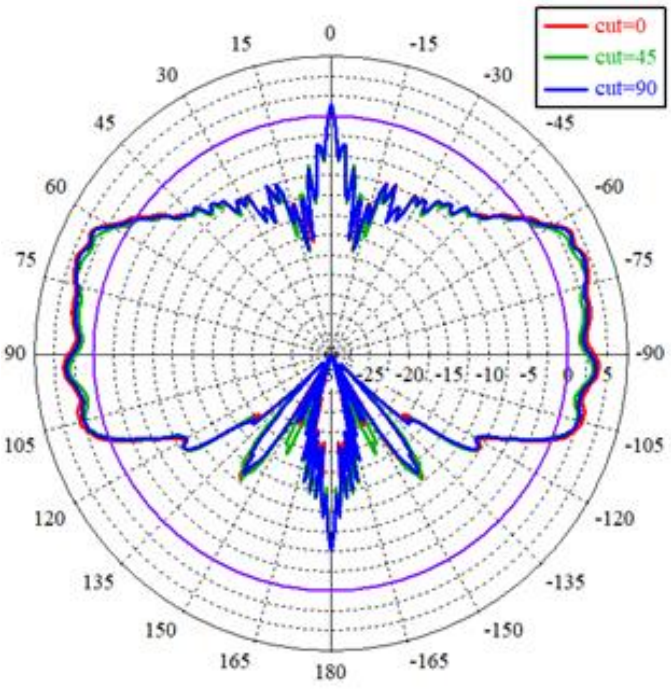
Phi / Degree vs. dBi

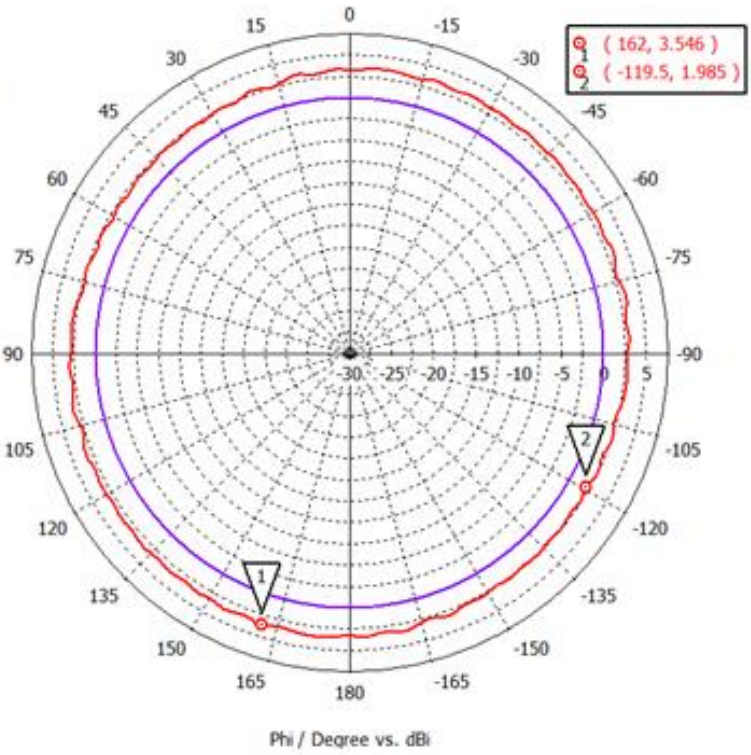


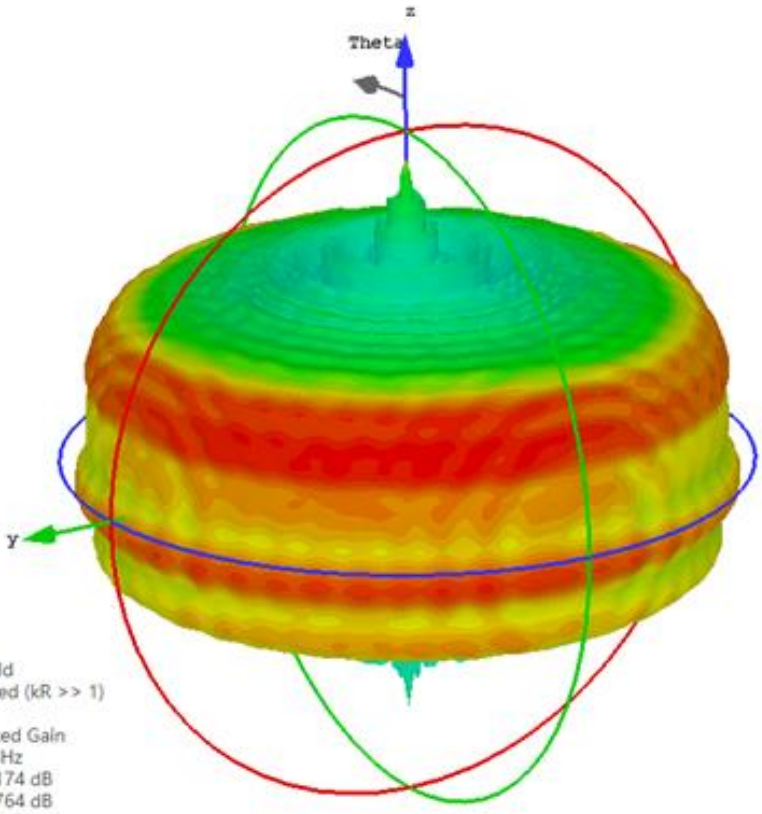
farfield (f=300) [1]

Type	Farfield
Approximation	enabled (kR >> 1)
Component	Abs
Output	Realized Gain
Frequency	300 GHz
Rad. Effic.	-0.06068 dB
Tot. Effic.	-0.06886 dB
Rlzd. Gain	4.923 dBi

Simulated Pattern at 303 GHz



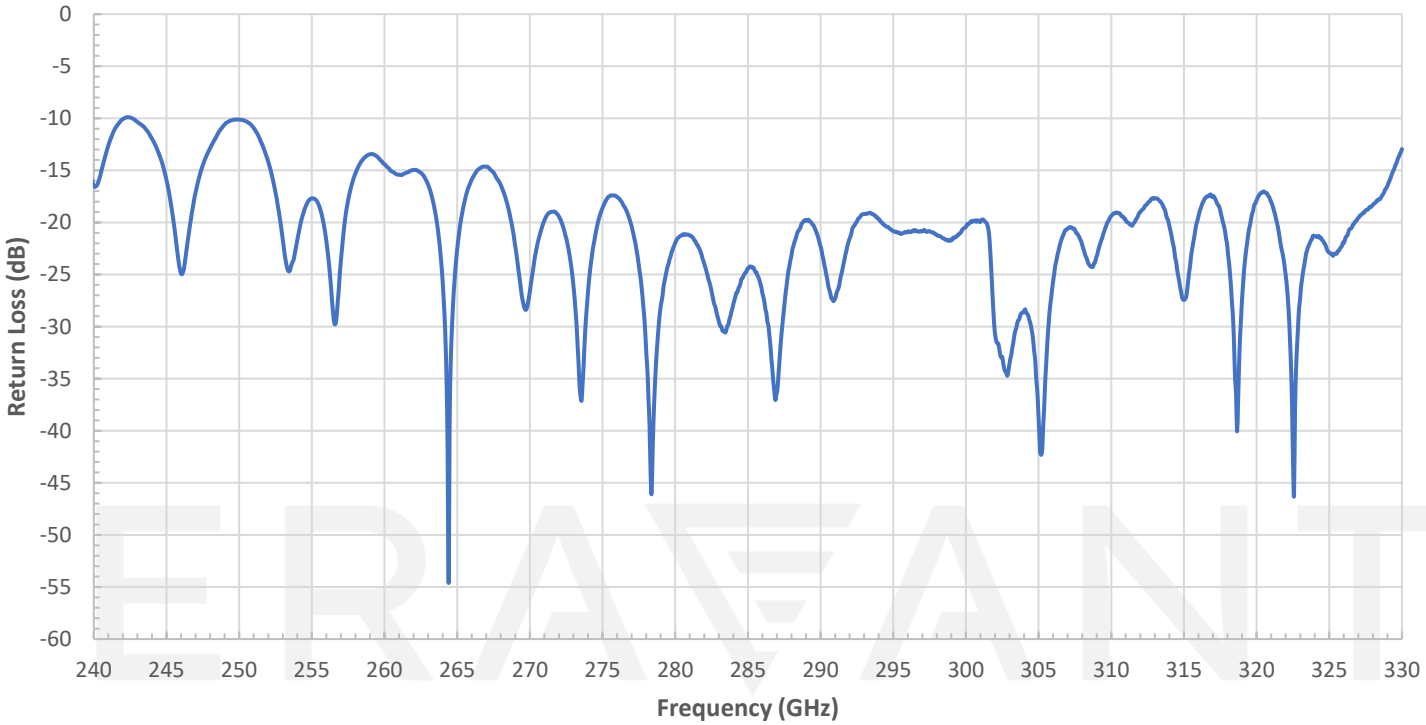




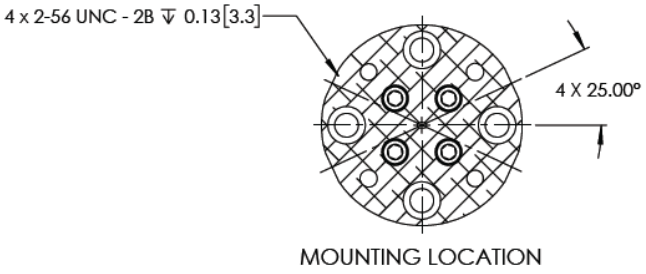
farfield (f=303) [1]

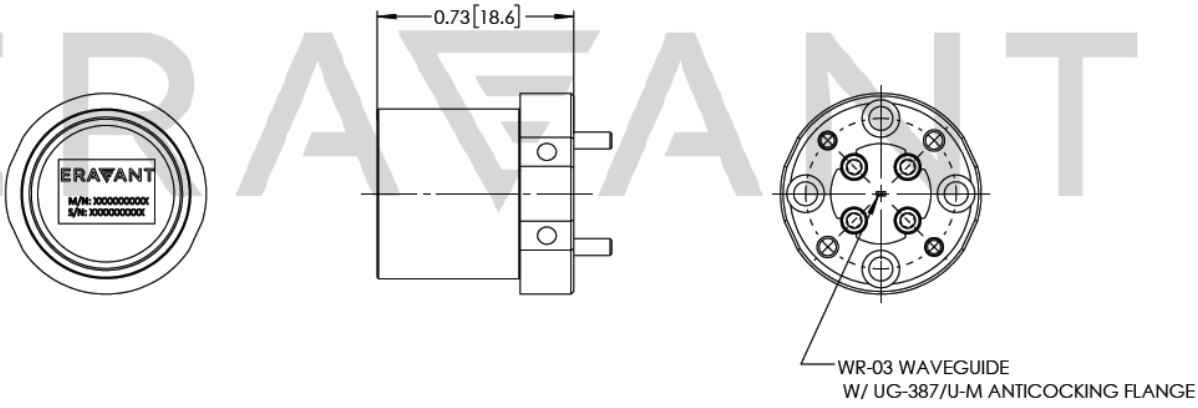
Type	Farfield
Approximation	enabled (kR >> 1)
Component	Abs
Output	Realized Gain
Frequency	303 GHz
Rad. Effic.	-0.04174 dB
Tot. Effic.	-0.04764 dB
Rlzd. Gain	4.740 dBi

Measured Return Loss vs Frequency



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





NOTE:

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Antenna pattern presented is simulated. Actual pattern to vary slightly.
- 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.

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