SAR-2507-04-S2

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WR-04 Pyramidal Horn Antenna, 25 dBi Gain

SAR-2507-04-S2 is a WR-04 pyramidal horn antenna that operates from 170 GHz to 260 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 6.25 degrees on the E-plane and 8.35 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-04 waveguide with UG-387/U-M anti-cocking flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	170 GHz		260 GHz
Gain		25 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		6.25°	
3 dB Beamwidth, H-Plane		8.35°	
Sidelobes, E-Plane		-17 dB	
Sidelobes, H-Plane		-27 dB	
Return Loss		23 dB	
Specification Temperature		+25°C	
Operation Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-04 Waveguide
Flange Type	UG-387/U-M Anti-Cocking Flange
Size	1.50" (L) X 0.75" (Ø)
Material	Brass
Finish	Gold Plated
Weight	0.5 Oz
Outline	AR-043-A

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FEATURES

- Rectangular Waveguide
 Interface
- Precisely Machined and Gold Plated
- Linear Polarization

APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

SUPPLEMENTAL DETAILS



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Simulated Antenna Patterns @ 215 GHz



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Simulated Gain vs. Frequency

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



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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.
- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog <u>here</u>.
- 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 <u>SCH-06004-S1</u> 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 <u>SCH-08008-S1</u> is highly recommended.

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