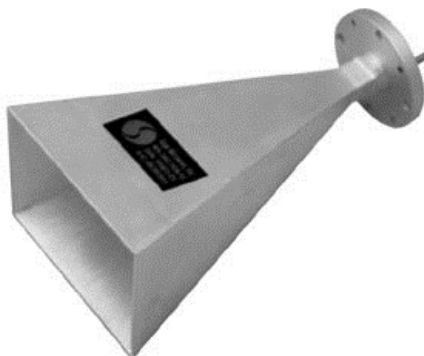


Pyramidal Horn Antennas, SAR Series

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FEATURES:

- ◆ Frequency coverage: 8.2 to 170 GHz
- ◆ Rectangular waveguide interface
- ◆ Precise machined and gold plated
- ◆ Low return loss

APPLICATIONS:

- ◆ Antenna ranges
- ◆ Antenna gain measurements
- ◆ Rapid system setups
- ◆ Engineering setups

DESCRIPTION:

SAR series pyramidal gain horns or rectangular gain horns are offered in both standard and custom build models with rectangular waveguide interface. The pyramidal gain horns only support linear polarization. Once the calibrated gain charts of these horns are offered, these horns can be often used to measure gain for other antennas by comparing the signal level of these gain horn. Therefore, these horns are also called standard gain horns.

The standard models offer 23 dB nominal gain, 9 degrees half power beamwidth and 15 dB typical sidelobe level at center frequency of the band. These horns operate full waveguide bandwidth and cover the frequency range of 8.2 to 170 GHz. In addition to the standard models listed, other frequency or gain value are available as custom models.

CATALOG MODELS:

Band	Model Number	Frequency Range (GHz)	Gain (dB)	3 dB Beamwidth (°)	Side Lobes (dB)	VSWR	Outline
X	SAR-2309-90-S2	8.2 to 12.4	23	9.0	-15	1.2:1	AR-X2
Ku	SAR-2309-62-S2	12.0 to 18.0	23	9.0	-15	1.2:1	AR-62
K	SAR-2309-42-S2	18.0 to 26.5	23	9.0	-15	1.2:1	AR-K2
Ka	SAR-2309-28-S2	26.5 to 40.0	23	9.0	-15	1.2:1	AR-A2
Q	SAR-2309-22-S2	33.0 to 50.0	23	9.0	-15	1.2:1	AR-Q2
U	SAR-2309-19-S2	40.0 to 60.0	23	9.0	-15	1.2:1	AR-U2
V	SAR-2309-15-S2	50.0 to 75.0	23	9.0	-15	1.2:1	AR-V2
E	SAR-2309-12-S2	60.0 to 90.0	23	9.0	-15	1.2:1	AR-E2
W	SAR-2309-10-S2	75.0 to 110	23	9.0	-15	1.2:1	AR-W2
F	SAR-2309-08-S2	90.0 to 140	23	9.0	-15	1.2:1	AR-F2
D	SAR-2309-06-S2	110.0 to 170	23	9.0	-15	1.2:1	AR-D1

CUSTOM DESIGNED MODELS:

Sage Millimeter's pyramidal gain horn model numbers are configured per following format. Customers may refer to the format and specify their own model numbers accordingly when placing the order.

SAR- GG BW - WG - XY

GG is the linear gain in dB. For example: 25 dB = 25

BW is the 3dB beamwidth in degrees. For example: 12 degrees = 12

WG is the waveguide band designator for rectangular waveguide

X is for antenna type. "S" is for standard and "C" is for custom designed.

Y is for factory reserve.

Example: SAR-2112-22-C1 is a custom designed pyramidal gain horn with frequency range of 33.0 to 50 GHz, nominal gain 21 dB and 3 dB beamwidth 12 degrees. The input connector is WR-22 waveguide. "1" is a factory assigned sequential number.