Omnidirectional Antennas, SAO Series

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FEATURES:

- Frequency coverage: 23 to 100 GHz
- Coaxial and rectangular WG interfaces
- 360° azimuth coverage
- Vertically polarized
- Various vertical beamwidth

APPLICATIONS:

- Communication links
- Electronic Warfare (EW) systems
- Indoor local area networks
- Monitoring and surveillance systems

DESCRIPTION:

SAO series omnidirectional antennas are offered with either a coaxial or rectangular waveguide interface. Omnidirectional antennas provide a complete azimuth coverage of 360° with ±1.0 dB angular gain flatness. These omnidirectional antennas cover a bandwidth of 10% and up to full waveguide band with unnoticeable performance degradation towards the higher and lower ends of the frequency range. They are also constructed with precisely machined housings and a protective radome to ensure a rugged mechanical configuration.

The below standard offering covers the frequency range of 23 to 100 GHz, but custom frequencies can be requested. The listed models are only offered with a waveguide interface. While most models offer a fixed vertical beamwidth of 30° typical, custom models with a vertical beamwidth from 10 to 30° are also available. Check the website for more models.

CATALOG MODELS:

Band	Model Number	Frequency Range	Vertical Beamwidth	Gain	VSWR	Note
K	SAO-2332530330-42-S1	23.0 to 25.0 GHz	30°	3.0 dB	2:1	Coax Connector Interface Available
Ka	SAO-2734030810-28-S1	26.5 to 40.0 GHz	10°	8.0 dB	2:1	Coax Connector Interface Available
Ka	SAO-3034030330-28-S1	30.0 to 40.0 GHz	30°	3.0 dB	2:1	Coax Connector Interface Available
Q	SAO-3834630330-22-S1	38.0 to 46.0 GHz	30°	2.5 dB	2:1	Coax Connector Interface Available
U	SAO-4034430330-19-S1	40.0 to 44.0 GHz	30°	2.5 dB	2:1	Coax Connector Interface Available
V	SAO-5836230230-15-S1	58.0 to 62.0 GHz	30°	2.0 dB	2:1	Coax Connector Interface Available
E	SAO-7138630230-12-S1	71.0 to 86.0 GHz	30°	2.0 dB	2:1	Coax Connector Interface Available
W	SAO-9031040230-10-S1	90.0 to 100.0 GHz	30°	2.0 dB	2:1	Coax Connector Interface Available

CUSTOM MODELS:

SAGE Millimeter's omnidirectional antenna model numbers are configured per the following format. Customers may refer to the format and specify their own model numbers accordingly when placing an order.

SAO - F1N F2N GG BW - CO - XY

F1N is the start frequency in MHz x 10N. For example: 26.0 GHz = 263
F2N is the stop frequency in MHz x 10N. For example: 28.0 GHz = 283
GG is the linear gain in dB. For example: 5 dB = 05
BW is the 3 dB beamwidth in degrees. For example: 18 degrees = 18
CO is the input connector type.
X is for antenna type. “S” is for a standard package and finish and “C” is for a custom design.
Y is for factory reserve.

Example: SAO-2833030610-28-S1 is an omnidirectional antenna with a frequency range of 28 to 30 GHz, a gain of 6 dB and a 3 dB vertical beamwidth of 10 degrees. The antenna has a WR-28 waveguide at the input port and a standard package and finish. “1” is a factory assigned number.