

Features

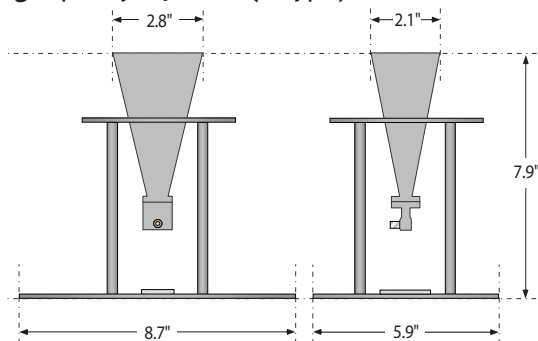
- **Frequency Range**
18 GHz to 40 GHz
- **Transmit & Receive Capabilities**
emissions/immunity applications
- **Individual Calibration Included**
per ANSI C63.5 with NIST traceability
- **Three-year Standard Warranty**

Description

The AH-840 is a broadband, linearly polarized Double Ridge Horn Antenna, operating over the frequency range of 18 GHz to 40 GHz. The horn antenna and its precision waveguide to coaxial adapter are meticulously tuned as a set for optimum VSWR performance and impedance matching.

Construction

The AH-840 is designed to be extremely durable, making it an ideal choice for daily use in laboratory environments, both indoors and outdoors, and even under continuous exposure to extreme weather conditions. The antenna is constructed using high grade, corrosion resistant aluminum. The outer surface is also painted to provide additional protection. The antenna is fitted with a high quality 2.92 mm (K-type) coaxial connector.



Calibration

Each antenna is individually calibrated per ANSI C63.5 with NIST traceability. The calibration data and certificate is provided. Recognized ISO 17025 accredited calibration is also available upon request.



Application

The AH-840 Double Ridge Horn Antenna is suitable for use as an EMI test antenna for qualification-level regulatory compliance measurements (FCC, CE, Mil-Std, RTCA DO-160, FDA, SAE Automotive, etc.).

The AH-840 is equally suitable for use transmitting antenna for establishing radiated RF fields for product immunity tests, and is capable of handling power levels up to 10 Watts, with the waveguide to coaxial adapter in place. By removing the adapter, and connecting directly, or with a length of flexible waveguide, to your amplifier's waveguide output, field strengths over 1,000 V/m (at 1 meter) can be achieved with 200 Watts input power.

Another common application for the AH-840 is to use it as a "substitution antenna" for determining the Effective Radiated Power (ERP) and/or Effective Isotropic Radiated Power (EIRP) of intentional radiators (RF transmitters). These tests are typically applicable for products operating within licensed frequency bands requiring FCC/TCB Certification, and also for European acceptance tests per ETSI standards for radio equipment.

Notwithstanding the above applications, the AH-840 can also be used for test site comparisons, shielding effectiveness tests of large enclosures, field monitoring, site surveys, etc.

Mounting

The AH-840 can easily be secured onto any tripod or mast via its standard 1/4-inch x 20 mounting hole located in the center of the antenna's base plate.

Specifications

Product Name	Double Ridge Horn Antenna
Frequency Range	18 GHz to 40 GHz
Polarization	Linear
Nominal Impedance	50Ω
Power Handling (CW)	10/200 Watts [with/without] waveguide to coaxial adapter)
Connector	2.92 mm [K-type] (female)
-3 dB Beamwidth	[see graph below]
Antenna Factor	[see graph below]
Isotropic Gain	[see graph below]
VSWR/Return Loss	[see graphs below]
Radiated Field Strength	[see graph below]
Specifications	FCC, CISPR, EN, ETSI, FAA, Mil-Std, Automotive, etc.
Dimensions (L x W x H)	8.7" x 5.9" x 7.9" [22 x 15 x 20 cm]
Weight	1 lb. [0.5 kg]

All specifications are subject to change without notice.
All values are typical, unless specified.

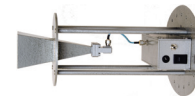
Accessories available from Com-Power:



PAM-840A Preamplifier (18-40 GHz)



AT-812 Antenna Tripod

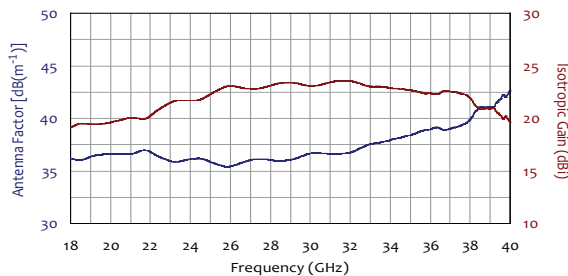


AHA-840 Active Horn Antenna (18-40 GHz)

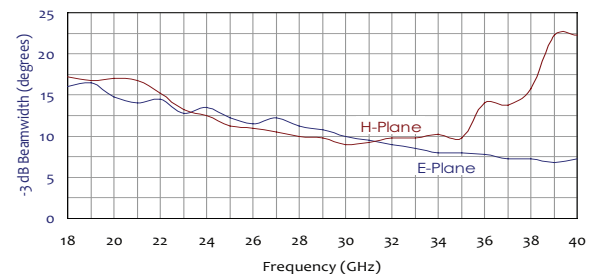
Also Available:

- AH-826 Horn Antenna (18-26.5 GHz)
- AHA-118 Active Horn Antenna (1-18 GHz)
- AL-100, ALC-100, ALP-100 Log Periodic Antennas

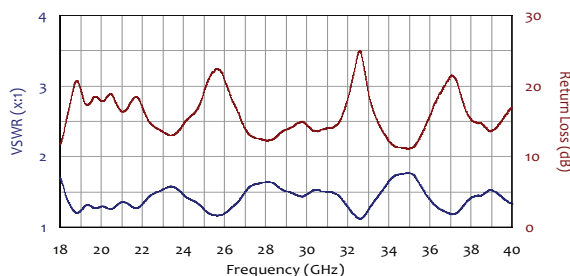
Antenna Factors / Isotropic Gain



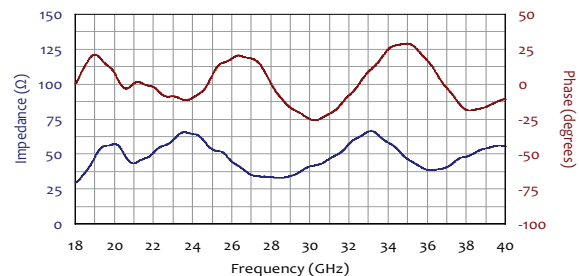
-3 dB Beamwidth



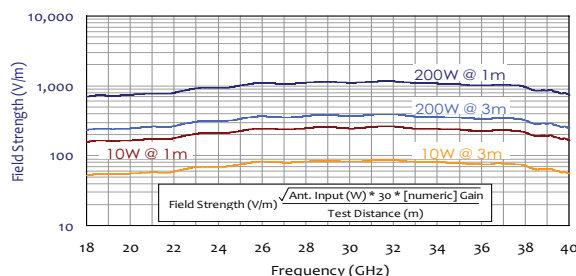
VSWR/Return Loss Characteristics



Impedance/Phase Characteristics



Field Strength with 10/200W Input Power



Forward Power Levels vs Field Strength

