

3164-11 Open Boundary Quad-ridged Horn



ETS-Lindgren's Model 3164-11 Open Boundary Quad-ridged Horn is the latest in a series of quad-ridged horns from ETS-Lindgren. The open boundary design with its absence of side plates makes this antenna unique in both appearance and performance. Numerically modeled, the Model 3164-11 is a super open boundary quad-ridged horn where the feed cavity is not enclosed. This gives wider frequency range and reduces the weight of the horn.

Key Features

- 1 GHz to 18 GHz Frequency Range
- Flat Gain For Upper 80% of Range
- Dual Linearly Polarized Compact Design
- Flexible Mounting Schemes
 - Flange for Wall Mounting
 - Bracket for Tripod Mounting

Product Features

Frequency Range

The 3164-11 antenna has a range that covers 1 GHz to 18 GHz, making it ideal for antenna measurement applications and as an EMC antenna for measuring emissions above 1 GHz.

Flat Gain

Like other open boundary quad-ridged horns, the 3164-11 exhibits a very flat gain as it changes less than 2 dB for over 80% of the upper part of the frequency range.

Dual Linear Polarization

The 3164-11 is a dual linearly polarized horn. Two orthogonally located input ports feed two set of ridge structures, these allows the horn to measure two orthogonal fields simultaneously without the need for physically rotating the horn. The isolation between the ports is better than 25 dB across the frequency range.

Compact Design

This antenna has a smaller, lighter design in relation to other single polarized ridged horns, while exhibiting equivalent performance with the added bonus of dual polarization.

Specifications

Physical Specifications

Length: 19.0 cm + 8.7 cm Mounting Bracket (7.5 in + 3.4 in Mounting Bracket)

Width 17.6 cm (6.93 in)

Height 17.6 cm (6.93 in)

Weight 1.0 kg (2.20 lb)

Electrical Specifications

Frequency Minimum: 1 GHz

Frequency Maximum: 18 GHz

VSWR: 3:25:1 (Maximum) <2:1 (Average)

Maximum Continuous Power: 20W

Peak Power: 40W

Impedance (Nominal): 50

Connector: SMA (Female)

Polarization: Dual Linear

Pattern Type: Directional

Product Options

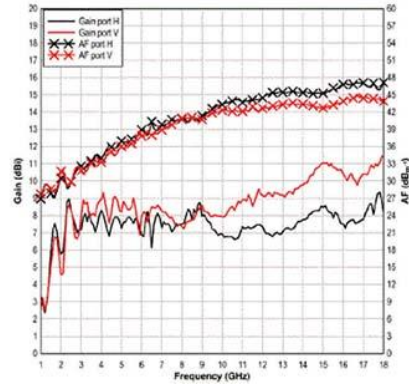
- Custom Carrying Case

Product Configuration

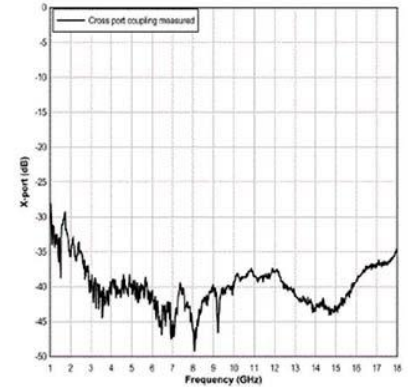
- Antenna Assembly
- Mounting Fixture for x 20 Thread
- Individually calibrated per ANSI C63.5
- Manual

Charts

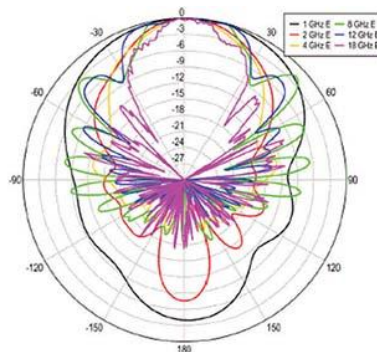
Model 3164-11
Open Boundary Quad-Ridged Horn
Antenna Factors and Gain



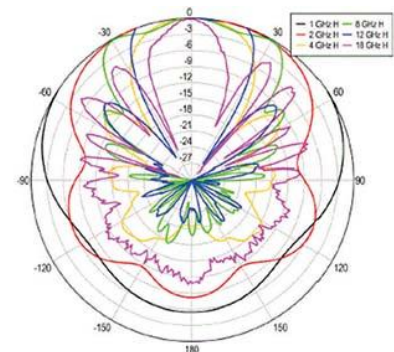
Model 3164-11
Open Boundary Quad-Ridged Horn
Typical Radiation Patterns
Cross Port Coupling



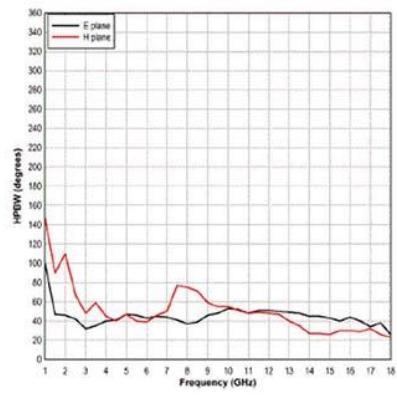
Model 3164-11
Open Boundary Quad-Ridged Horn
Typical Radiation Patterns
E Plane



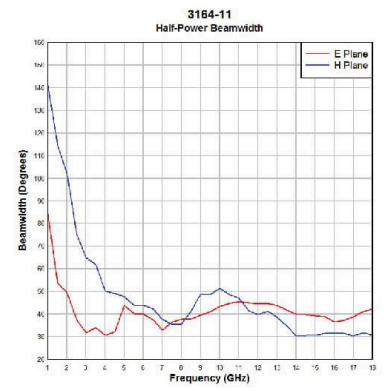
Model 3164-11
Open Boundary Quad-Ridged Horn
Typical Radiation Patterns
H Plane



Model 3164-11
Open Boundary Quad-Ridged Horn
Half Power Beamwidth



Model 3164-11
Open Boundary Quad-Ridged Horn
Half-Power Beamwidth



Model 3164-11
Open Boundary Quad-Ridged Horn
VSWR

