

EMC Antennas
**Open Boundary
Quad-ridged Horn**

Model 3164-11

FEATURES:

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



*ETS-Lindgren's Model 3164-11 Open Boundary
Quad-ridged Horn Antenna*

**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.

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.

Flexible Mounting

The 3164-11 includes a mounting bracket that can be attached to any tripod or mast with a ¼ 20 thread screw. In addition to the bracket, the 3164-11 has a mounting flange that allows it to be mounted to the shield of a chamber.

Individually Calibrated

This antenna is individually calibrated at 3m per the SAE ARP 958 standard.

STANDARD CONFIGURATION

- Antenna Assembly
- Mounting Bracket for ¼ 20 Threads
- Signed Calibration Certificate for Factors and Gain at 3m per SAE ARP 958
- Manual

OPTIONS

- 4-TR Tripod
- 7-TR Tripod

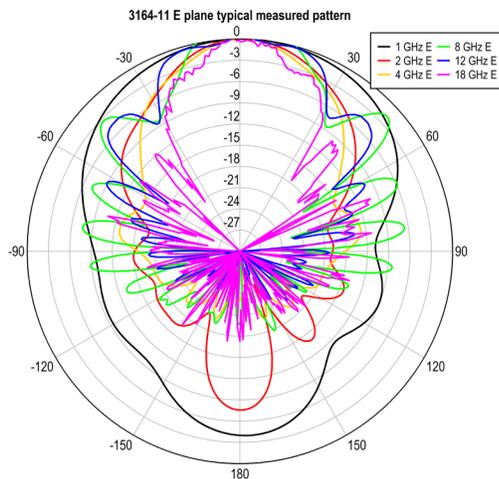
Electrical Specifications

MODEL	FREQUENCY RANGE	VSWR	MAXIMUM CONTINUOUS POWER	PEAK POWER	IMPEDANCE (NOMINAL)	CONNECTOR TYPE
3164-11	1 GHz to 18 GHz	3:25:1 (maximum) <2:1 (average)	20W	40W	50 Ω	SMA (Female)

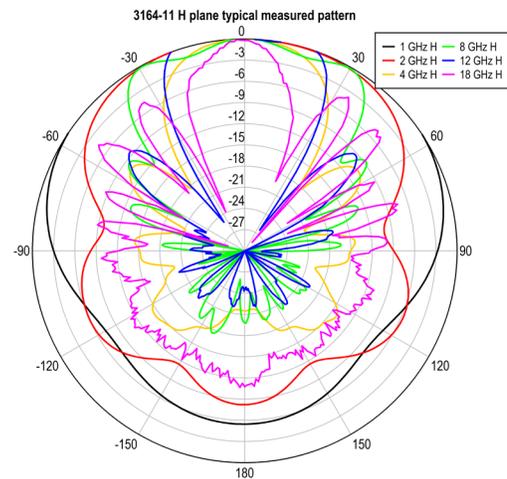
Physical Specifications

MODEL	LENGTH	WIDTH	HEIGHT	WEIGHT
3164-11	19.0 cm (+8.7 cm mounting bracket) 7.5 in (+3.4 in mounting bracket)	17.6 cm 6.9 in	17.6 cm 6.9 in	1.0 kg 2.2 lb

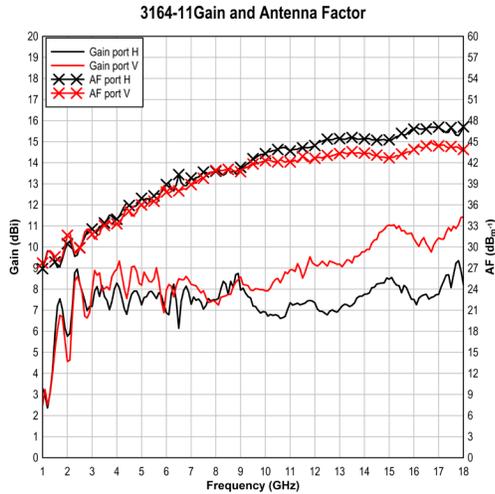
Model 3164-11 Typical E Plane Patterns



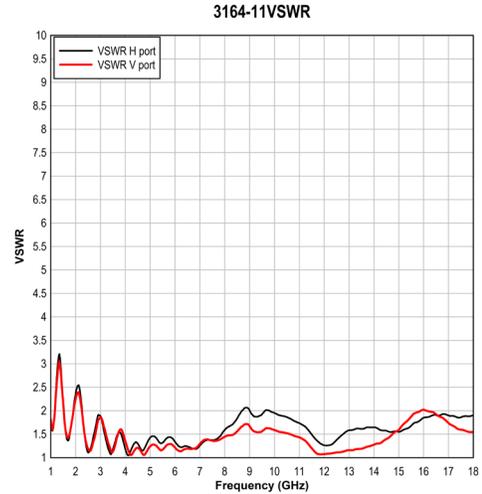
Model 3164-11 Typical H Plane Patterns



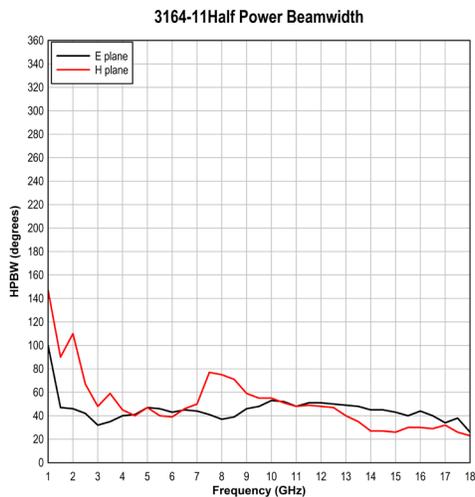
Model 3164-11 Typical Gain and Antenna Factor



Model 3164-11 Typical VSWR



Model 3164-11 Typical Half Power Beamwidth



Model 3164-11 Typical Cross Port Coupling

