3109 Biconical Antenna All Info

Frequency Range: 20 MHz - 300 MHz. *The Model 3109 Biconical antenna is ideal for IEC 1000-4-3 testing. It provides both a broad frequency and high input power.*

Key Features

- *Power Handling Capability Up to 3 kW*
- *Unique Element Design Improves Performance*
- *Compact Size for Use in Limited Space*
- *Improved Balun Design for Increased Efficiency*
- *Quality Construction for Trouble-Free Service*

Description

The 3109 Biconical antenna uses a modified Guanella balun for impedance transformation and matching, and it is constructed of much heavier materials so that maximum continuous input power can reach 2 kW. While this antenna typically has a high VSWR at frequencies below 70 MHz, it is still capable of generating a high field strength with acceptable input power in this region of the band. The optional extended elements markedly improve its performance in this region.

ETS-Lindgren is the only manufacturer to offer optional extended elements. These elements are twice as long as standard elements and enable users to generate high fields at low frequencies with less than 25% of the power usually required.

Standard Configuration

- *Base*
- *Antenna Elements*
- *Balun. Acts as a base and is drilled accepts an ETS-Lindgren tripod or most other tripods.*
- *Individually Calibrated at 1 m per SAE ARP 958 Actual antenna factors and a signed Certificate of Calibration Conformance provided.*

Options

- *Extended Portable Elements (PX) (Part # 103032B)*
- *Portable Elements (P) (Part # 101946B)Elements attach to the balun using screw mounts.*
- *Custom Carrying Case*
- *ETS-Lindgren Tripod. Several nonmetallic, non-reflective tripods for use at EMC test sites.*
- *Support Rod Antenna mount with insert drilled to accept ETS-Lindgren or other tripod with standard 1/4 in x 20 threads.*

Electrical Specifications

Frequency Minimum	*20 MHz*
Frequency Maximum	*300 MHz*
Connectors	*Type N (f)*
Impedance (Nominal)	*50 Ω*
Maximum Continuous Power	*2 kW*
Pattern Type	*omnidirectional*
Peak Power	*3 kW*
Polarization	*linear*
VSWR	*1.9:1*

Physical Specifications

Weight	*3.2 kg (7.05 lb)*
Width	*133 cm (52.36 inches)*

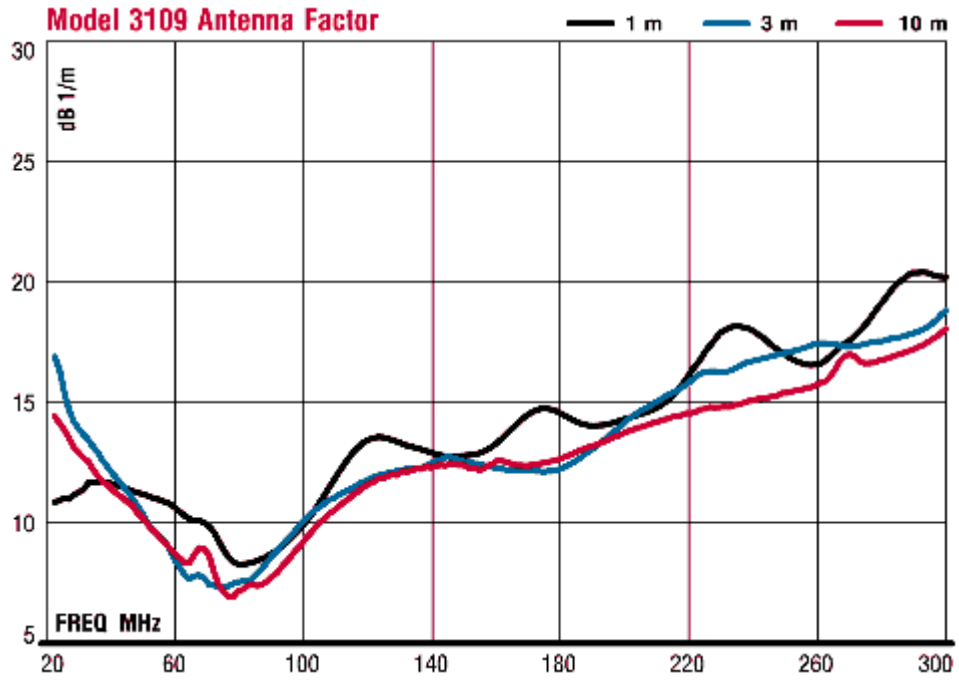
Specifications

Expanded Uncertainty Values for Antenna Factors: ANSI C63.5 10M	*20-30 MHz +/- 1.0 dB* *30-200 MHz +/ 0.9 dB*
Expanded Uncertainty Values for Antenna Factors: ANSI C63.5 3M	*20-30 MHz +/- 0.9 dB* *30-200 MHz +/ 0.9 dB*
Expanded Uncertainty	*200-300 MHz+/- 2.0 dB*

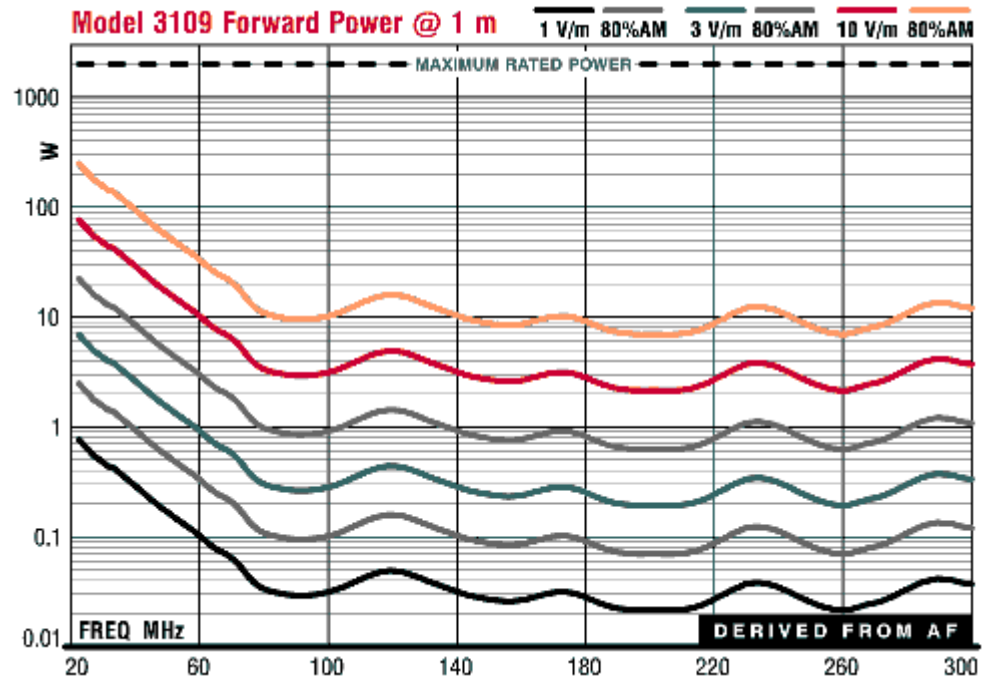
Values for Antenna Factors: SAE, ARP 958 1M	*20-30 MHz +/- 1.0 dB* *30-200 MHz +/ 1.4 dB*

Technical Charts

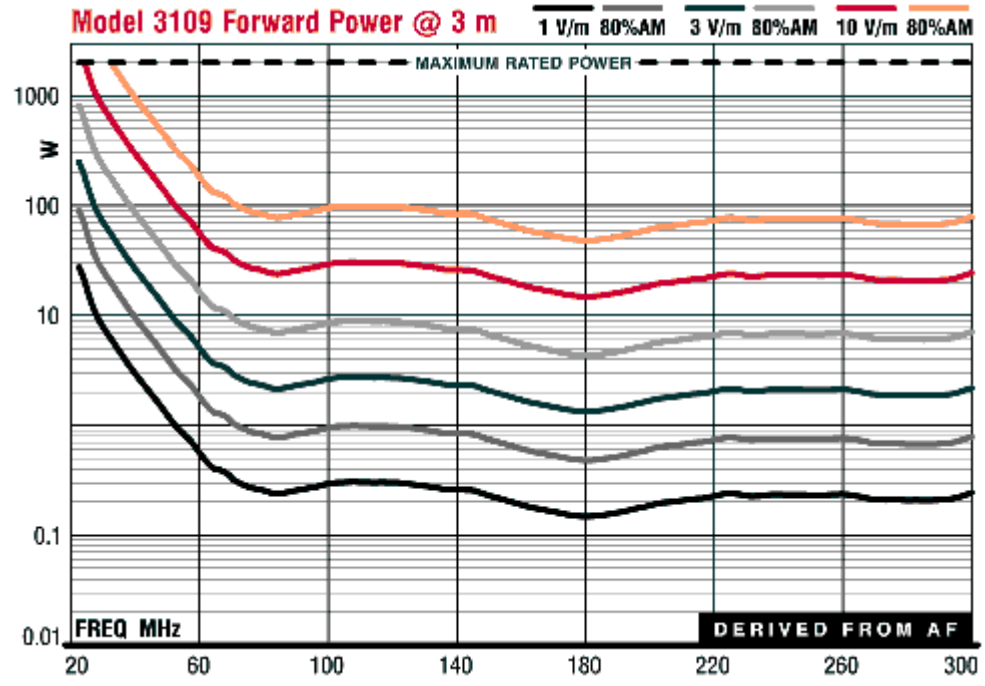
3109 Biconical Antenna Antenna Factor



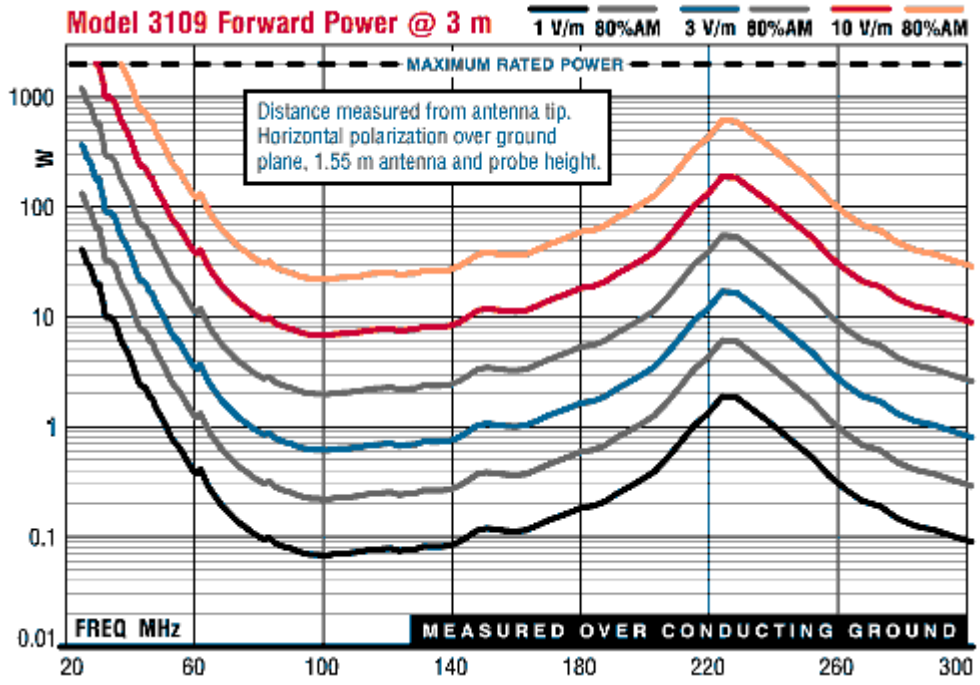
3109 Biconical Antenna Forward Power @ 1m



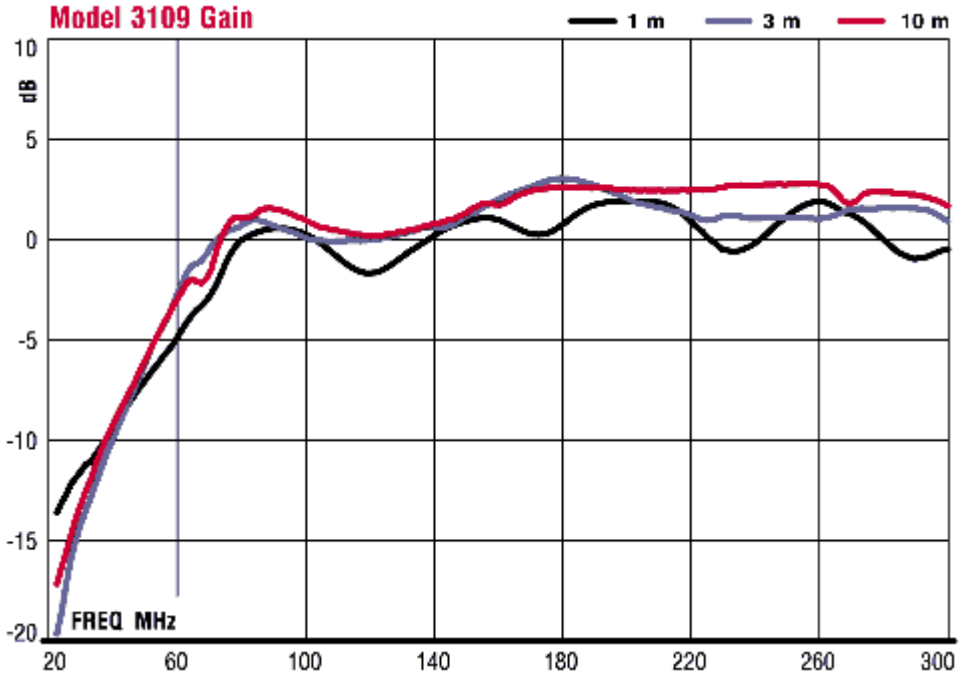
3109 Biconical Antenna Forward Power @ 3m



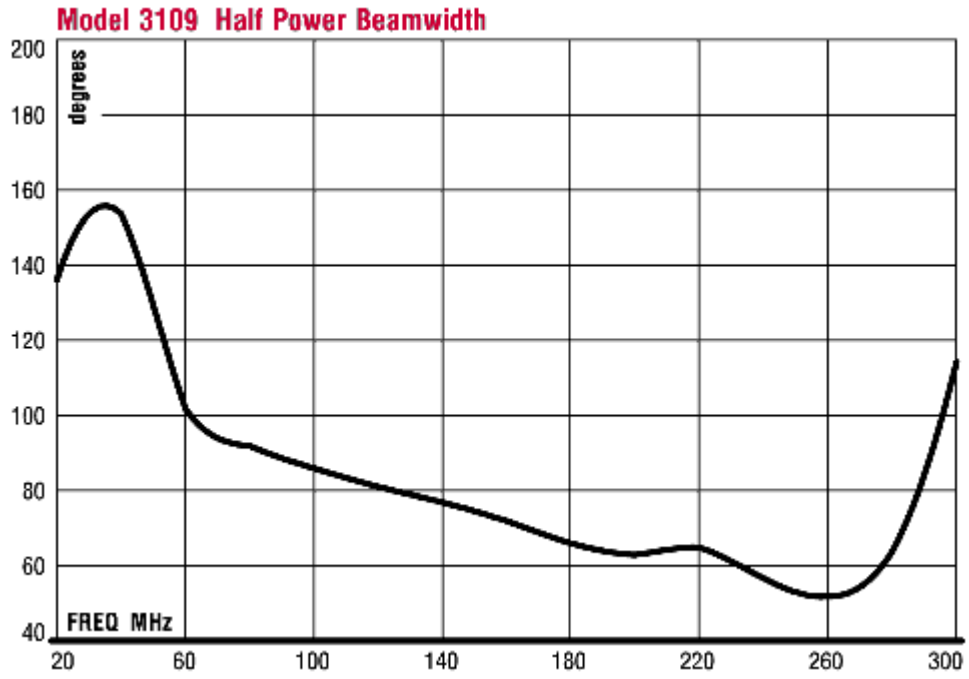
3109 Biconical Antenna Forward Power @ 3m



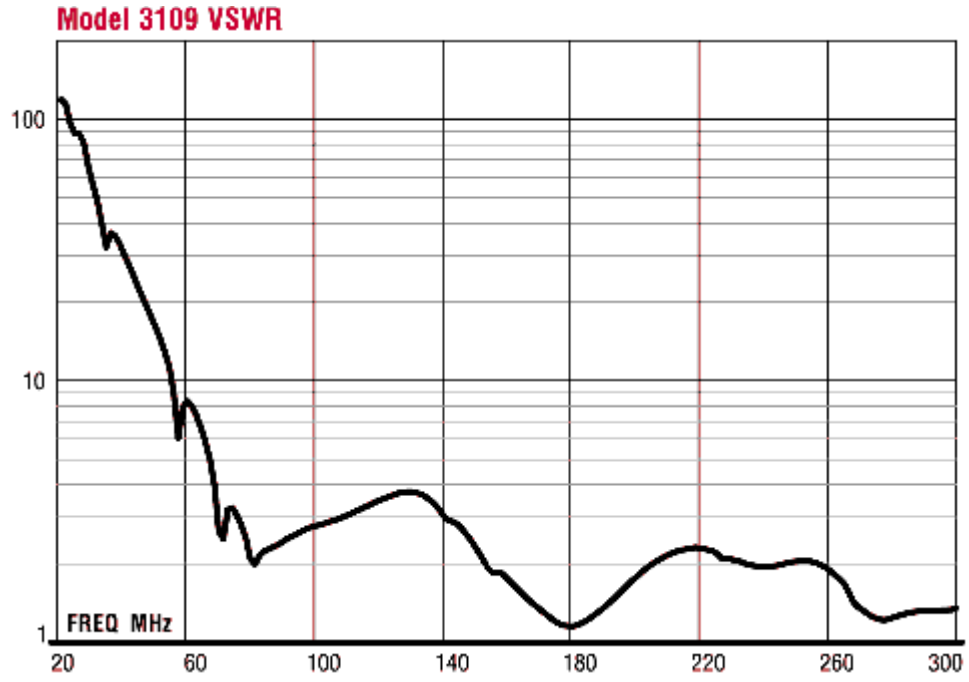
3109 Biconical Antenna Gain



3109 Biconical Antenna Half Power Beamwidth



3109 Biconical Antenna VSWR



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Information presented is subject to change as product enhancements are made. Contact ETS-Lindgren Sales Department for current specification.