

## Features:

- 30 MHz to 6 GHz Frequency Range
- Avg. 2:1 VSWR Above 50 MHz
- For Emissions and Immunity Testing
- Flexible Mounting
- Individually Calibrated



*ETS-Lindgren's Model 3142E BiConiLog Antenna*

**THE MODEL 3142E BICONILOG** is a hybrid antenna that combines innovative design, compact size, and excellent performance. This antenna enables users to measure a frequency range of 30 MHz to 6 GHz in one sweep, negating the need for multiple antennas and time-consuming equipment setup. Accuracy and repeatability are improved, while time and money are saved. This BiConiLog is designed as a dual-purpose antenna that can be used for both immunity and emission testing.

## FEATURES

### Frequency Range

The Model 3142E increases the upper frequency limit to accommodate the new upper limit of 6 GHz included in the IEC 61000-4-3 standard.

### VSWR Levels

The average VSWR is 2:1 above 50 MHz, an excellent level at this low frequency for an antenna this size.

### Emissions and Immunity Antenna

Emission measurements can be performed without having to change antennas.

For immunity measurements, the 3142E covers the typical 80 MHz to 6 GHz range.

### Flexible Mounting

The Model 3142E comes with a bracket that accepts either a 1/4" 20 thread screw or rear stinger mount.

### Individually Calibrated

The 3142E is individually calibrated at 10 m per ANSI C63.5 and calibrations at 1 m and 3 m per SAE ARP 958.

## STANDARD CONFIGURATION

- Antenna Assembly
- Mounting Bracket for ETS-Lindgren or Other Tripod Mounts with 1/4" x 20 Threads
- Stinger Mount
- Individually calibrated:
  - 10 m per ANSI C63.5
  - 3 m per SAE ARP 958
  - 1 m per SAE ARP 958
- Actual Antenna Factors and a Signed Certificate of Calibration Conformance Included in Manual
- Manual

## OPTIONS

- ETS-Lindgren offers several non-metallic, non-reflective tripods. For easy horizontal and vertical polarization changes, the 7-TR tripod is recommended.

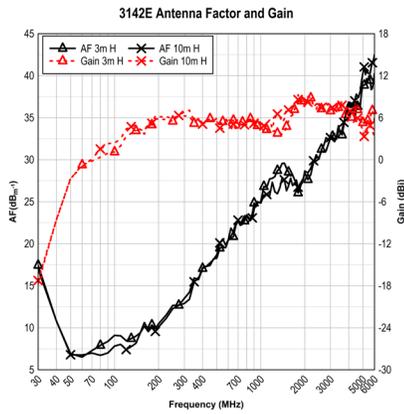
## Electrical Specifications

| MODEL | FREQUENCY RANGE   | VSWR RATIO (AVG) | MAXIMUM CONTINUOUS POWER        | PEAK POWER                        | IMPEDANCE (NOMINAL) | CONNECTORS        |
|-------|---|------------------|---------------------------------|-----------------------------------|---------------------|-------------------|
| 3142E | 30 MHz – 60 MHz<br>60 MHz – 600 MHz<br>600 MHz – 1 GHz<br>1 GHz – 6 GHz | 2:1              | 500 W<br>1 kW<br>500 W<br>200 W | 800 W<br>1.5 kW<br>800 W<br>300 W | 50 Ω                | Type N Female (1) |

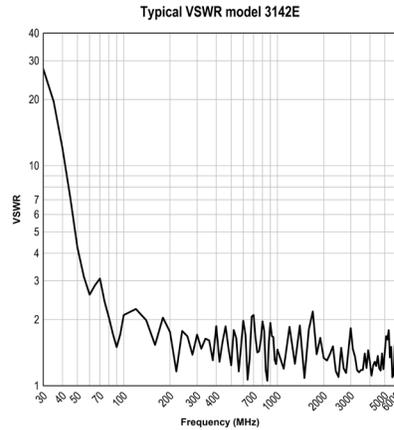
## Physical Specifications

| MODEL | WIDTH               | DEPTH               | HEIGHT             | WEIGHT            |
|-------|---------------------|---------------------|--------------------|-------------------|
| 3142E | 133.9 cm<br>52.7 in | 139.2 cm<br>54.8 in | 76.2 cm<br>30.0 in | 5.7 kg<br>12.5 lb |

## Typical Antenna Factors and Gain

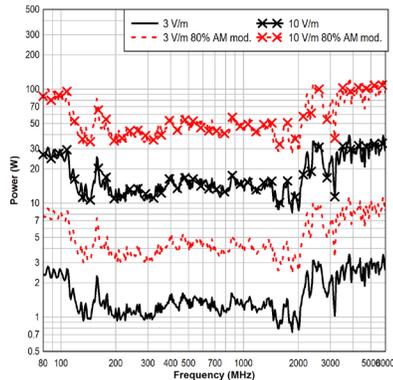


## Typical VSWR



## Typical Avg. Power Required in Horizontal Polarization

3142E power requirements in FACT™ 3 chamber with ferrite floor  
Horizontal Polarization, Scaled from Measured Data  
average of the power required for each of the 16 points on the grid



## Typical Avg. Power Required in Vertical Polarization

3142E power requirements in FACT™ 3 chamber with ferrite floor  
Vertical Polarization, Scaled from Measured Data  
average of the power required for each of the 16 points on the grid

