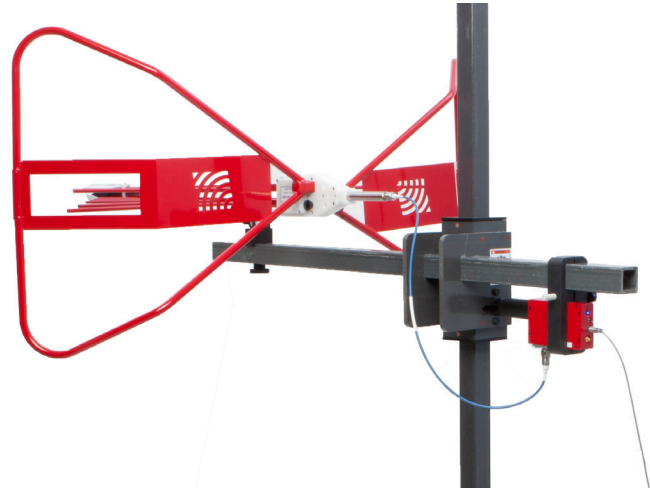


*EMC Antennas*  
**BiConiLog with  
Pre-Amplifier**

Model 3142E-PA

**FEATURES:**

- 30 MHz to 6 GHz Frequency Range
- Pre-Amplifier Module
- Designed for Emissions Testing
- Flexible Mounting
- Individually Calibrated



*Model 3142E-PA BiConiLog with Pre-Amplifier*

**ETS-LINDGREN'S MODEL 3142E-PA BICONILOG** is a hybrid antenna that combines innovative design, compact size, and excellent performance with a pre-amplifier module. 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. The antenna and pre-amplifier module are calibrated together including the cable section that connects the module to the antenna port. Any possible mismatch between the pre-amplifier and the antenna is taken into account in the antenna factor. Please note, the 3142E-PA is not intended for RSE testing of intentional radiators.

**FEATURES**

**Frequency Range**

The Model 3142E-PA covers the entire range of the 3142E antenna from 30 MHz to 6 GHz.

**Pre-amplifier Module**

The pre-amplifier attached to the antenna has a frequency range of 30 MHz to 6 GHz and a minimum typical gain of 55 dB. The gain flatness is  $\pm 2.5$  dB and the noise figure is 3 dB above 200 MHz and 5 dB typical below 200 MHz. The power output is +20 dBm minimum at the 1 dB point.

The input and output characteristics of the pre-amplifier are an input and output VSWR of 2.0:1 maximum. The operating temperature ranges from -20°C to +75°C (-4°F to +167°F).

**Emissions Antenna**

The 3142E-PA is an emissions only antenna, with the pre-amplifier increasing the signal level received by the antenna. By placing the pre-amplifier close to the antenna the signal to noise ratio is preserved in the amplified signal.

**Flexible Mounting**

The Model 3142E-PA's mounting bracket accepts either a 1/4 20 thread screw or rear stinger mount. The pre-amplifier module attaches to the antenna via a flexible coaxial cable, so that the antenna can be supported by the stinger. The 3142E-PA includes two brackets to mount the pre-amplifier module to the carrier of any motorized mast. This allows the antenna to be scanned from 1m to 4m, as required by the standard.

**Individually Calibrated**

The 3142E-PA is individually calibrated at 10m H pol. per ANSI C63.5.

**STANDARD CONFIGURATION**

- Antenna and Pre-amplifier
- Antenna Mounting Bracket for 1/4 20 Threads
- Stinger Mount
- Pre-amplifier Box Mounting Brackets
  - 2171B/2170B Antenna Masts
  - 5 cm x 5 cm (2" x 2") Booms

- AC/DC Power Supply for the Pre-amplifier Module
- Connection Cable from the Antenna to the Pre-amplifier Box
- Individually Calibrated at 10m H pol. per ANSI C63.5
- Manual

**OPTIONS**

- ETS-Lindgren Offers Several Non-metallic, Non-reflective Tripods and Masts

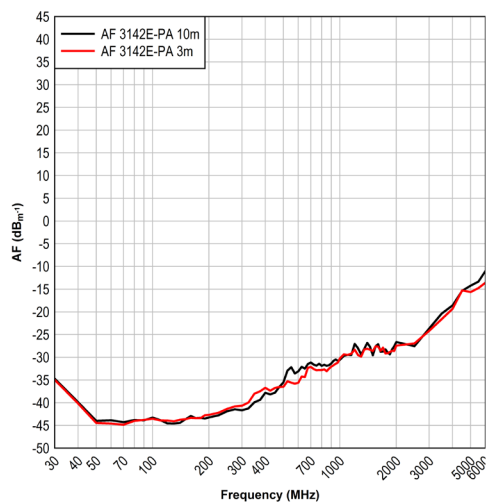
**Electrical Specifications**

MODEL	FREQUENCY RANGE	VSWR (AVG)	MAXIMUM CONTINUOUS POWER	IMPEDANCE (NOMINAL)	CONNECTOR TYPE
3142E-PA	30 MHz to 6 GHz	N/A (Rx Only)	N/A (Rx Only)	50 Ω	SMA Female

**Physical Specifications**

MODEL	LENGTH	WIDTH	HEIGHT	WEIGHT (NOMINAL)
3142-PA (Antenna)	139.2 cm 54.8 in	133.9 cm 52.7 in	76.2 cm 30.0 in	5.7 kg 12.5 lb
Pre-Amplifier (Box)	3.9 cm 3.5 in	8.9 cm 5.5 in	3.9 cm 1.5 in	.5 kg 1.0 lb

**Model 3142E-PA Typical Antenna Factor**



*The Model 3142E-PA pre-amplifier features a bright LED light, allowing for easy visual detection of pre-amplifier operation when unit is mounted onto an antenna tower.*