

EMC ANTENNAS MODEL 3142E-PB



MODEL 3142E-PB

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

ETS-Lindgren's Model 3142E-PB BiConiLog™ is a hybrid antenna that combines innovative design, compact size, and excellent performance with an updated 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-PB is not intended for RSE testing of intentional radiators.

Frequency Range

The model 3142E-PB 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 30 dB. The gain flatness is 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: 1 maximum. The operating temperature ranges from -20C to +75C (-4F to +167F).

Emissions Antenna

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

Flexible Mounting

The model 3142E-PBs mounting bracket accepts either a 1/4 in x 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-PB includes two brackets to mount the pre-amplifier module to the carrier of any motorized mast. This allows the antenna to be scanned from 1 m to 4 m.

Technical Specifications

Electrical	
Frequency Minimum	30 MHz
Frequency Maximum	6 GHz
VSWR (Average)	N/A (Rx Only)
Maximum Continuous Power	N/A (Rx Only)
Impedance (Nominal)	50
Connectors (Amplifier Output)	SMA (Female)

EMC ANTENNAS MODEL 3142E-PB

Physical Specifications				
Model	Height	Height	Height	Height
3142-PA (Antenna)	76.2 cm (30.0 in)	133.9 cm (52.7 in)	139.2 cm (54.8 in)	5.7 kg (12.5 lb)
Pre-Amplifier Box	3.9 cm (1.5 in)	8.9 cm (3.5 in)	8.9 cm (3.5 in)	0.5 kg (1.0 lb)