

ANTENNA MODEL 3117-PB



MODEL 3117-PB

- 1 GHz to 18 GHz Frequency Range
- Maintains Single Lobe Radiation
- Fitted with Pre-Amplifier for Increased Sensitivity
- Extremely Low AF
- Flexible Mounting
- Not intended for RSE Testing of Intentional Radiators

ETS-Lindgren's Model 3117-PB is a special version of our popular Model 3117 Double-Ridged Waveguide Horn Antenna, fitted with an updated pre-amplifier package and calibrated as a single unit. By doing this, any possible mismatches between antenna and pre-amplifier are taken into account in the antenna factor (AF), which is provided with this unit. The antenna is ideal as a receive antenna for emissions testing above 1 GHz. Please note, the 3117-PB is not intended for RSE testing of intentional radiators.

Frequency Range

This antenna covers the 1 GHz to 18 GHz range, making it ideal as a receive antenna for any emissions testing above 1 GHz.

Maintains Single Lobe Radiation

Like the model 3117, the model 3117-PB maintains a single main lobe pattern in the direction of the horn axis over its frequency range. This characteristic is essential for even distribution of electromagnetic energy on a target surface and accurate measurement of gain and emissions. The model 3117's unique design suppresses the propagation of high order modes. The result is an antenna with a well-defined single lobe radiation pattern that outperforms other antennas in its class.

Fitted Amplifier

The pre-amplifier attached to the antenna has a frequency range of 1 GHz to 18 GHz and a typical gain of 28 dB. The gain flatness across the range is 2.5 dB. The pre-amplifier has a maximum noise figure of 4 dB maximum with the typical noise figure being 3 dB. The power output is +17 dB 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.

Low Antenna Factor

The result of matching the model 3117 with the pre-amplifier is an antenna that is calibrated as a system. This results in a low AF for the entire frequency range.

Technical Specifications

Electrical	
Frequency Minimum	1 GHz
Frequency Maximum	18 GHz
Connectors	SMA (Female)
Impedance (Nominal)	50
Maximum Continuous Power	N/A (Rx Only)
VSWR (Average)	N/A (Rx Only)
Physical	
Height	24.3 cm (9.57 in)
Length	33.0 cm (13.03 in)
Width	17.7 cm (6.99 in)
Weight	1.4 kg (3.09 lb)