

Antennas Fore Shortened LPDA and Dual LPDA Array

Models 3151 and 3152

Features:

MODEL 3151

- 20 MHz to 220 MHz Frequency Range
- Ideal for Immunity Testing Per 2004/144/EC
- 5 kW Input Power Capability
- Pneumatically Driven Polarization

MODEL 3152

- 200 MHz to 1000 MHz Frequency Range
- Ideal for Immunity Testing Per 2004/144/EC and ISO-11451-2
- 1 kW Input Power Capability
- Pneumatically Driven Polarization



Model 3151 Fore Shortened LPDA Array Antenna

The ETS-Lindgren Model 3151 is a linearly polarized fore shortened log periodic array (FSLPDA) with a 20 MHz to 200MHz frequency range. The antenna features a convenient space-saving design with the use of top hat-loaded, low-frequency elements. This reduced-sized design has optimized impedance loading to simulate the moderate gain of a full-size LPDA.

Without size reduction, the longest dipole element length would be approximately 7.5 m (24.6 ft). Instead, the Model 3151's entire width is only 4m (14 ft). To enhance measurement repeatability, the Model 3151's longest elements are supported with nylon straps to ensure consistent element positioning.

The ETS-Lindgren Model 3152 is a dual array of LPDA antennas based on the successful ETS-Lindgren Model 3148 with a 200 MHz to 1000 MHz frequency range. The array arrangement provides an additional gain improvement of 3dB across the range, and a convenient space-saving design with the use of top hat-loaded, low-frequency elements.

Air Polarization

Both the 3151 and 3152 feature a convenient air polarization capability that reduces test time. Polarization occurs in a 90 degree arc at the rate of approximately 30 degrees per second. A customer supplied external source of compressed air at 410 - 550 kPa (4.1 bar - 5.5 bar or 60 psi - 80 psi) is required.



Model 3152 with Custom Positioner

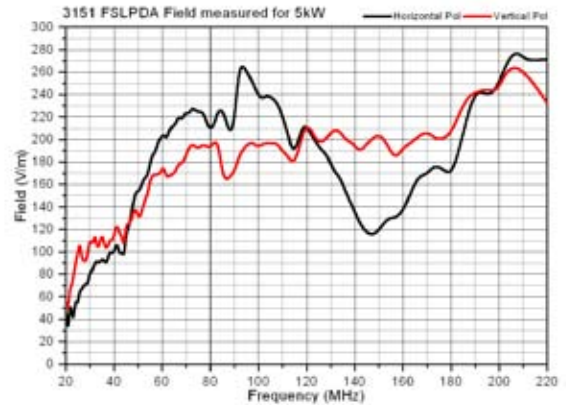
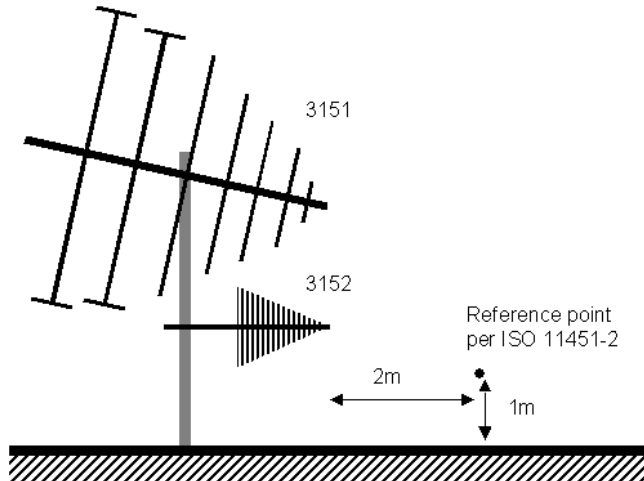
Standard Configuration

- Antenna
- Pedestal
- Air Polarization

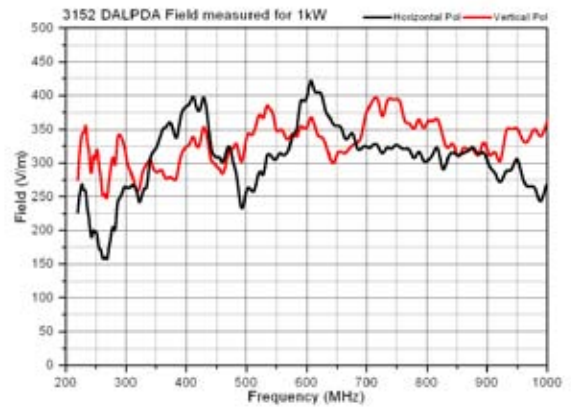
Options

- Model 2090 Positioning Controller
- Custom Positioner

Measured in Chamber Performance



3151 Typical Performance



3152 Typical Performance

Electrical Specifications

MODEL #	FREQUENCY RANGE	INPUT IMPEDANCE	SWR	MAXIMUM RF INPUT POWER	RF CONNECTOR
3151	20 MHz - 220 MHz	50 Ω	1.5:1 average, 6:1 maximum	5 kW	1 5/8 flange or SC connector
3152	200 MHz - 1000 MHz	50 Ω	1.5:1 average, 2:1 maximum	1 kW	N Type

Physical Specifications

MODEL #	LENGTH (OVERALL)	WIDTH (OVERALL)	HEIGHT (OVERALL)
3151	5.3 m 13.4 ft.	5.3 m 13.4 ft.	4.6 m 11.7 ft.
3152	3.6 m 9.2 ft.	1.0 m 2.5 ft.	1.0 m 2.5 ft.