ETS·LINDGREN
An ESCO Technologies Company

Antennas

Precision Reference Sleeve Dipoles

Model 3126

Features:

- **Precision Gain for Range Calibration**
- **Meets CTIA ± 0.1 dB Symmetry Requirement**
- **Range of Frequencies to Cover Wireless Device Bands**

Model 3126-700
600 MHz - 800 MHz

Model 3126-836*
736 MHz - 936 MHz

Model 3126-880
780 MHz - 980 MHz

Model 3126-1575
1425 MHz - 1725 MHz

Model 3126-1880*
1730 MHz - 2030 MHz

Model 3126-2450
2300 MHz - 2600 MHz

** For Ripple Test Specified by CTIA*

ETS-Lindgren Model 3126-2450 Precision Reference Sleeve Dipole

ETS-Lindgren's Model 3126 Sleeve Dipoles are designed as precision gain references for antenna range calibration and to meet the Cellular Telecommunication and Internet Association's (CTIA) ± 0.1 dB symmetry requirement for ripple test measurements. These antennas are truly omnidirectional antennas, having an electric dipole pattern approaching that of a half-wave resonant dipole with typical gains between 1.5 and 2.0 dB. The sleeve dipole design allows the antenna to be end-fed to avoid cable and feedpoint interactions that interfere with the performance of the antenna. Integral quarterwave chokes and/or ferrite loading (depending on frequency range) also help to reduce cable interaction. This design also provides exceptional symmetry (typically better than ± 0.1 dB (0.2 dB peak-to-null)) to meet or exceed CTIA criteria for ripple test antennas.

Features

All Model 3126 sleeve dipoles are designed with a VSWR less than 1.2:1 in at least a ± 10 MHz band around the labeled center frequency. Gain values and ± 0.1 dB symmetry certification are provided for a 200 MHz - 300 MHz band (depending on model) centered about the labeled frequency. This dipole has a typical VSWR <3:1 across this entire band, and may be used for precision range calibrations across the entire band provided appropriate padding (~ 10 dB) is used to minimize possible standing wave effects on cables. The dipoles have a nominal 50Ω impedance, a maximum continuous transmit power of one watt, and are equipped with a female SMA connector.

The dipoles are calibrated using an A2LA accredited process with a typical measurement uncertainty on the order of ± 0.2 dB. During the calibration process, the dipoles are also certified to meet the ± 0.1 dB symmetry required for use in the ripple test specified in the CTIA's Over-The-Air Performance Test Plan. Gain, VSWR, max. ripple, and measurement uncertainty values are provided with each calibration.

An optional CTIA Ripple Calibration Antenna Mount Kit is available to attach the dipole to an ETS-Lindgren Multi-Axis Positioning System (MAPS) in order to perform the CTIA ripple test site validation and to perform range calibrations. The mounting kit provides all adapters necessary to position both dipole and loop antennas at each offset geometry required by the CTIA test plan.

Standard Configuration

- Sleeve Dipole Antenna
- Manual
- A2LA Accredited precision calibration and symmetry certification including signed Certificate of Calibration

Options

- CTIA Ripple Calibration Antenna Mount Kit for ETS-Lindgren MAPS systems
- CTIA Ripple Calibration Cable Kit
- Range Calibration Mount Kit
- ETS-Lindgren Model 3127 Resonant Loop Antennas

USA: Tel +1.512.531.6400 Fax +1.512.531.6500

FINLAND: Tel +358.2.8383.300 Fax +358.2.8651.233

UK: Tel +44.(0)1438.730700 Fax +44.(0)1438.730751

FRANCE: Tel +33.1.48.65.34.03 Fax +33.1.48.65.43.69

CHINA: Tel +8610.8275.5086 Fax +8610.8275.5537

JAPAN: Tel +81.3.3813.7100 Fax +81.3.3813.8068

ONLINE: info@ets-lindgren.com www.ets-lindgren.com

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Electrical Specifications

MODEL	FREQUENCY RANGE	VSWR RATIO (AVG)	MAXIMUM CONTINUOUS POWER	IMPEDANCE (NOMINAL)	CONNECTOR
3126-700	600 MHz - 800 MHz 690 MHz - 710 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female
3126-836	736 MHz - 936 MHz 826 MHz - 846 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female
3126-880	780 MHz - 980 MHz 870 MHz - 890 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female
3126-1575*	1425 MHz - 1725 MHz 1565 MHz - 1585 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female
3126-1880	1730 MHz - 2030 MHz 1870 MHz - 1890 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female
3126-2450	2300 MHz - 2600 MHz 2440 MHz - 2460 MHz	< 3:1 Typical <1.2:1 Guaranteed	1 W	50 Ω	SMA Female

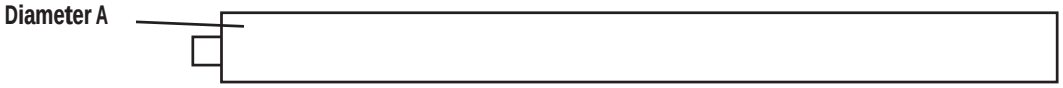
* *Civilian GPS Frequency Band*

Physical Specifications

MODEL	DIAMETER A	DIAMETER B	LENGTH
3126-700	1.90 cm 0.75 in	2.69 cm 1.06 in	24.46 cm 9.63 in
3126-836	1.90 cm 0.75 in	2.69 cm 1.06 in	24.46 cm 9.63 in
3126-880	1.90 cm 0.75 in	2.69 cm 1.06 in	24.46 cm 9.63 in
3126-1575	1.90 cm 0.75 in	N/A	21.59 cm 8.50 in
3126-1880	1.90 cm 0.75 in	N/A	19.30 cm 7.60 in
3126-2450	1.90 cm 0.75 in	N/A	18.75 cm 7.38 in

Models 3126-700, 3126-836, 3126-880

Models 3126-1575, 3126-1880, 3126-2450



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