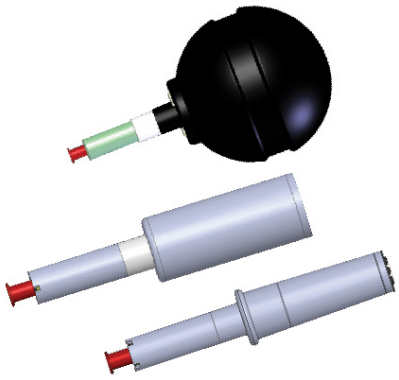
3127 MAGNETIC DIPOLE ANTENNA

ETS-Lindgren's Series 3127 Resonant Loops are designed to meet the Cellular Telecommunication and Internet Association's (CTIA) ± 0.1 dB symmetry requirement for ripple test measurements at the labeled center frequency.



ETS-Lindgren's Series 3127 Resonant Loops are designed to meet the Cellular Telecommunication and Internet Association's (CTIA) ± 0.1 dB symmetry requirement for ripple test measurements at the labeled center frequency. These omnidirectional antennas have a magnetic dipole pattern approaching that of a half-wave resonant electric dipole. The pattern produced has the same peak and null orientation as that of a sleeve dipole oriented along the same axis, but with the directions of the electric and magnetic fields reversed. That is, the electric field vector along the azimuth is perpendicular to the axis and the magnetic field vector is parallel to the axis. The loop design allows the antenna to be end-fed to avoid cable and feedpoint interactions that interfere with the symmetry of the antenna. Integral quarter-wave chokes and/or ferrite loading (depending on frequency range) also help to reduce cable interaction. This design also provides exceptional symmetry to meet the CTIA criteria for ripple test antennas.

All 3127 resonant loops are designed with better than +/- 0.1 dB symmetry (0.2 dB peak-to-null) in at least a +/- 5 MHz band around the labeled center frequency. VSWR is less than 5:1 at the resonant frequency, which is slightly higher than the labeled symmetry frequency. For reference purposes, gain and symmetry values are provided for a 200-300 MHz band (depending on model) centered about the labeled frequency. The loops have a nominal 50 Ω impedance, a maximum continuous transmit power of one watt, and are equipped with a female SMA connector.

The loops are calibrated using an A2LA accredited process with a typical measurement uncertainty on the order of +/- 1.0 dB at the center frequency. 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, in a +/- 5 MHz band around the labeled center frequency. Maximum ripple, VSWR, and approximate gain values are provided with each calibration. Note that the gain values provided with this calibration is for diagnostic reference purposes only. For accurate gain values to perform range calibration, the ETS-Lindgren Model 3126 Precision Reference Sleeve Dipoles are recommended.

Key Features

- Range of Frequencies to Cover Wireless Device Bands
- Designed for CTIA Ripple Test
- Meets CTIA +/- 0.1 dB Symmetry Requirement

Specifications

Electrical Specifications

Connector Type (All Models): SMA Female
Impedance (Nominal; All Models): 50 Ω
Maximum Continuous Power (All Models): 1W
VSWR (All Models): <5:1 Typical

Model Frequency Range

Model	Frequency Range
3127-450	440 MHz to 460 MHz
3127-617	607 MHz to 627 MHz
3127-700	690 MHz to 710 MHz
3127-850	840 MHz to 860 MHz
3127-880	870 MHz to 890 MHz
3127-920	910 MHz to 930 MHz
3127-1575	1565 MHz to 1585 MHz
3127-1732	1722 MHz to 1742 MHz
3127-1747	1737 MHz to 1757 MHz
3127-1768	1758 MHz to 1778 MHz
3127-1790	1780 MHz to 1800 MHz
3127-1800	1870 MHz to 1890 MHz
3127-1862	1858 MHz to 1878 MHz
3127-1880	1870 MHz to 1890 MHz
3127-1950	1940 MHz to 1960 MHz
3127-2100	2090 MHz to 2110 MHz
3127-2132	2122 MHz to 2142 MHz
3127-2140	2130 MHZ to 2150 MHz
3127-2150	2140 MHz to 2160 MHz
3127-2450	2440 MHz to 2460 MHz
3127-2535	2525 MHz to 2545 MHz
3127-2600	2590 MHz to 2610 MHz
3127-2655	2645 MHz to 2665 MHz
3127-3600	3590 MHz to 3610 MHz
3127-5500	5490 MHz to 5510 MHz

Physical Specifications

Model	Mounting Diameter	Loop Housing Diameter	Overall Length
3127-3600	1.9cm (0.75in)	3.7cm (1.46in)	16.3cm(6.5in)
3127-5500	1.9cm (0.75in)	2.8cm (1.1in)	16.3cm (6.5in)
All Other 3127 Models	1.9cm (0.75in)	12.7cm (5.0in)	21.6cm (8.5in)