ANTENNA MODEL 3127

MODEL 3127

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

ETS-Lindgren's 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. The loops have a nominal 50 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. For accurate gain values to perform range calibration, the ETS-Lindgren Model 3126 Precision Reference Sleeve Dipoles are recommended.

Technical Specifications

Electrical Specifications (All Models)	
Impedance (Nominal)	50
Maximum Continuous Power	1W
VSWR	<5:1 Typical
Connectors	SMA Female

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Electrical Specifications	
Model	**Frequency**
3127-450	445 MHz to 455 MHz
3127-617	612 MHz to 622 MHz
3127-700	695 MHz to 705 MHz
3127-836	831 MHz to 841 MHz
3127-850	845 MHz to 855 MHz
3127-880	875 MHz to 885 MHz
3127-920	915 MHz to 925 MHz
3127-1575	1570 MHz to 1580 MHz
3127-1732	1727 MHz to 1737 MHz
3127-1747	1742 MHz to 1752 MHz
3127-1768	1763 MHz to 1773 MHz
3127-1790	1785 MHz to 1795 MHz
3127-1800	1875 MHz to 1885 MHz
3127-1862	1863 MHz to 1873 MHz
3127-1880	1875 MHz to 1885 MHz
3127-1950	1945 MHz to 1955 MHz
3127-2100	2095 MHz to 2105 MHz
3127-2132	2127 MHz to 2137 MHz
3127-2140	2135 MHz to 2145 MHz
3127-2150	2145 MHz to 2155 MHz
3127-2450	2445 MHz to 2455 MHz
3127-2535	2530 MHz to 2540 MHz
3127-2600	2595 MHz to 2605 MHz
3127-2655	2650 MHz to 2660 MHz
3127-3600	3595 MHz to 3605 MHz
3127-5500	5495 MHz to 5505 MHz

Physical Specifications			
Model	**Diameter A**	**Diameter B**	**Overall Length**
3127-450	1.9 cm (0.75 in)	16.87 cm (6.64 in)	16.3 cm (6.43 in)
3127-3600	1.9 cm (0.75 in)	3.69 cm (1.46 in)	16.2 cm (6.36 in)
3127-5500	1.9 cm (0.76 in)	3.3 cm (0.76 in)	16.8 cm (6.62 in)
All Other 3127 Models	1.9 cm (0.75 in)	12.7 cm (5.0 in)	21.6 cm (8.5 in)

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