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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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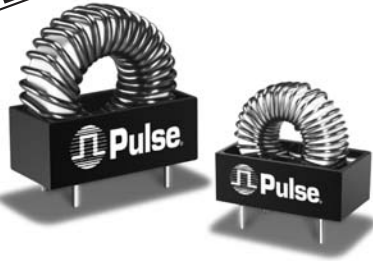
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# TOROIDAL INDUCTORS

## High Current



- Cost-effective designs
- Semi-encapsulated construction
- Maximum operation temperature of 130°C (Ambient + Rise)
- A 2:1 inductance swing from zero to maximum current

### Electrical Specifications @ 25°C

| Part Number | REFERENCE OPERATING VALUES           |                        |  |       |                                      | DESIGN CONTROL VALUES        |                                  |             |           |                          |
|-------------|--------------------------------------|------------------------|--|-------|--------------------------------------|------------------------------|----------------------------------|-------------|-----------|--------------------------|
|             | Inductance Typical (μH) <sup>2</sup> | I <sub>DC</sub> (AMPS) | ET <sub>OP</sub> <sup>1</sup> (V-μSec) |       | Energy Storage (μJ MIN) <sup>3</sup> | Inductance No DC (μH) (±20%) | 50kHz Test mV No DC <sup>5</sup> | DCR (Ω MAX) | Size Code | Lead Diameter (in ±.003) |
|             |                                      |                        | 20kHz                                  | 40kHz |                                      |                              |                                  |             |           |                          |
| PE-51506    | 17.0                                 | 17.0                   | 190                                    | 130   | 2460                                 | 40.0                         | 140                              | 0.0065      | 3         | 0.081                    |
| PE-51507    | 32.0                                 | 16.0                   | 290                                    | 200   | 4100                                 | 70.7                         | 270                              | 0.0092      | 4         | 0.081                    |
| PE-51508    | 60.0                                 | 16.0                   | 390                                    | 270   | 7700                                 | 120.0                        | 470                              | 0.012       | 5         | 0.081                    |
| PE-51509    | 14.0                                 | 10.0                   | 135                                    | 95    | 700                                  | 28.5                         | 73                               | 0.009       | 1         | 0.057                    |
| PE-51510    | 23.0                                 | 11.0                   | 170                                    | 120   | 1400                                 | 43.5                         | 130                              | 0.012       | 2         | 0.057                    |
| PE-51511    | 43.0                                 | 10.0                   | 280                                    | 195   | 2150                                 | 85.5                         | 210                              | 0.018       | 3         | 0.057                    |
| PE-51512    | 90.0                                 | 10.0                   | 430                                    | 300   | 4500                                 | 158.0                        | 420                              | 0.028       | 4         | 0.057                    |
| PE-51513    | 144.0                                | 10.0                   | 570                                    | 400   | 7200                                 | 262.0                        | 700                              | 0.032       | 5         | 0.057                    |
| PE-51514    | 32.0                                 | 6.6                    | 200                                    | 140   | 700                                  | 60.5                         | 110                              | 0.025       | 1         | 0.040                    |
| PE-51515    | 52.0                                 | 7.0                    | 230                                    | 160   | 1275                                 | 92.0                         | 190                              | 0.032       | 2         | 0.040                    |
| PE-51516    | 98.0                                 | 6.0                    | 400                                    | 280   | 1765                                 | 188.0                        | 310                              | 0.048       | 3         | 0.040                    |
| PE-51517    | 175.0                                | 6.0                    | 620                                    | 425   | 3150                                 | 315.0                        | 560                              | 0.068       | 4         | 0.040                    |
| PE-51518    | 335.0                                | 6.0                    | 840                                    | 580   | 6030                                 | 571.0                        | 1000                             | 0.095       | 5         | 0.040                    |
| PE-51520    | 400                                  | 3.6                    | 600                                    | 420   | 2700                                 | 688.0                        | 640                              | 0.130       | 3         | 0.036                    |

#### NOTES:

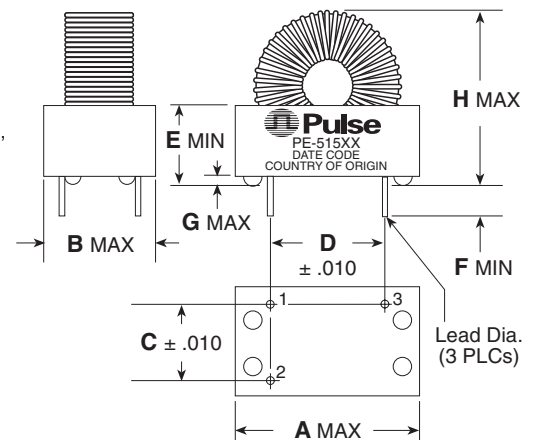
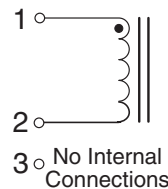
- To prevent excessive temperature rise, limit ET<sub>OP</sub> to the rated ET<sub>OP</sub> specified. This is not a saturation limit. Temperature rise of inductors is 40°C MAX at MAX current and rated ET<sub>OP</sub>.
- A 2:1 nominal inductance swing from no I<sub>DC</sub> to operating I<sub>DC</sub> gives improved protection against current discontinuities at light loading. Inductance increases with greater ET<sub>OP</sub>. Reference values occur at I<sub>DC</sub> and low flux density.
- $\frac{LI^2}{2}$  rating is the ability of the inductor to store energy.
- Design control test voltage is critical. Inductance increases with voltage.
- RoHS compliant parts are available. Order RoHS compliant parts by adding the suffix "NL" to the part number (i.e. PE-51506 becomes PE-51506NL).

| Size Code | 1          | 2          | 3          | 4          | 5          |
|-----------|------------|------------|------------|------------|------------|
| A         | 1.20/30,48 | 1.44/36,57 | 1.60/40,64 | 1.95/49,53 | 2.30/58,42 |
| B         | 0.60/15,24 | 0.80/20,32 | 0.80/20,32 | 0.91/23,11 | 1.11/28,19 |
| C         | 0.40/10,16 | 0.60/15,24 | 0.60/15,24 | 0.70/17,78 | 0.90/22,85 |
| D         | 0.80/20,32 | 0.90/22,86 | 0.90/22,86 | 1.20/30,48 | 1.50/38,10 |
| E         | 0.45/11,43 | 0.70/17,78 | 0.70/17,78 | 0.90/22,86 | 1.00/25,40 |
| F         | 0.20/5,08  | 0.20/5,08  | 0.20/5,08  | 0.20/5,08  | 0.20/5,08  |
| G         | .015/0,381 | 0.03/0,76  | 0.03/0,76  | 0.03/0,76  | 0.03/0,76  |
| H         | 1.20/30,48 | 1.44/36,57 | 1.72/43,68 | 2.00/50,80 | 2.30/58,42 |

### Mechanical

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  $\pm .010$  /  $0,25$

### Schematic



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