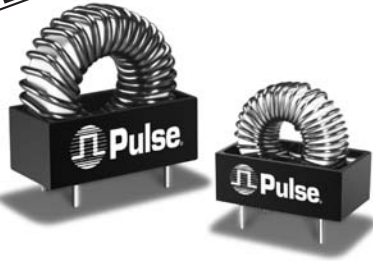


TOROIDAL INDUCTORS

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) ² | I _{DC} (AMPS) | ET _{OP} ¹ (V-μSec) | | Energy Storage (μJ MIN) ³ | Inductance No DC (μH) (±20%) | 50kHz Test mV No DC ⁵ | 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:

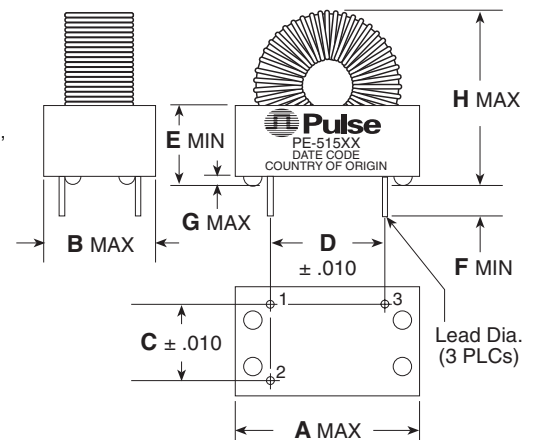
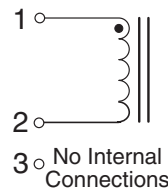
- To prevent excessive temperature rise, limit ET_{OP} to the rated ET_{OP} specified. This is not a saturation limit. Temperature rise of inductors is 40°C MAX at MAX current and rated ET_{OP}.
- A 2:1 nominal inductance swing from no I_{DC} to operating I_{DC} gives improved protection against current discontinuities at light loading. Inductance increases with greater ET_{OP}. Reference values occur at I_{DC} 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 $\pm \frac{.010}{0,25}$

Schematic



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