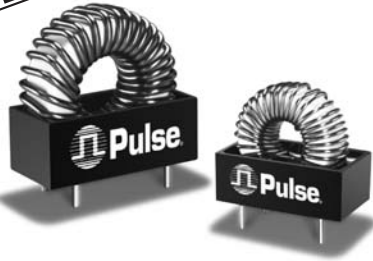


# TOROIDAL INDUCTORS

## 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:

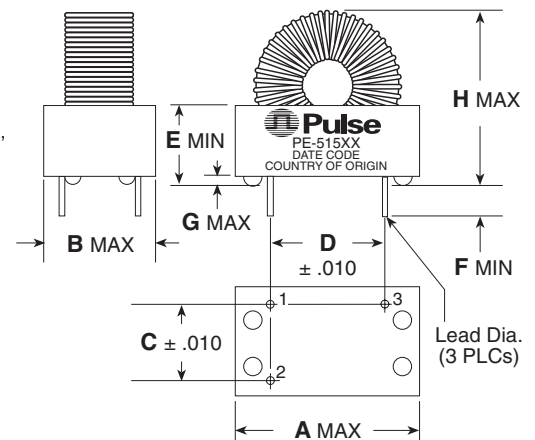
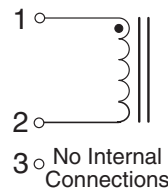
- To prevent excessive temperature rise, limit ET<sub>OP</sub> to the rated ET<sub>OP</sub> specified. This is not a saturation limit. Temperature rise of inductors is 40°C MAX at MAX current and rated ET<sub>OP</sub>.
- A 2:1 nominal inductance swing from no I<sub>DC</sub> to operating I<sub>DC</sub> 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  $\pm \frac{.010}{0,25}$

### Schematic



### For More Information:

#### Pulse Worldwide Headquarters

12220 World Trade Dr.  
 San Diego, CA 92128  
 U.S.A.

[www.pulseeng.com](http://www.pulseeng.com)  
 TEL: 858 674 8100  
 FAX: 858 674 8262

#### Pulse Europe

Einsteinstrasse 1  
 D-71083 Herrenberg  
 Germany

Tel: 49 7032 7806 116  
 Fax: 49 7032 7806 135

#### Pulse China Headquarters

No. 1  
 Industrial District  
 Changan, Dongguan  
 China

Tel: 86 769 85538070  
 Fax: 86 769 85538870

#### Pulse North China

Room 1503  
 XinYin Building  
 No. 888 YiShan Rd.  
 Shanghai 200233  
 China

Tel: 86 21 54643211/2  
 Fax: 86 21 54643210

#### Pulse South Asia

150 Kampong Ampat  
 #07-01/02  
 KA Centre  
 Singapore 368324

Tel: 65 6287 8998  
 Fax: 65 6280 0080

#### Pulse North Asia

No. 26  
 Kao Ching Rd.  
 Yang Mei Chen  
 Taoyuan Hsien  
 Taiwan, R. O. C.

Tel: 886 3 4641811  
 Fax: 886 3 4641911

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

© Copyright, 2006. Pulse Engineering, Inc. All rights reserved.

[www.pulseeng.com](http://www.pulseeng.com)

P589.B (11/06)