






# LOW COST INDUCTORS

## Electrical Information



-  Available in vertical, low profile and *KlipMount™*
-  SMPS averaging filter
-  Characterized for general purpose use and ripple filters
-  Single-layer designs
-  Can be used as differential mode inductors in EMI filters<sup>3</sup>

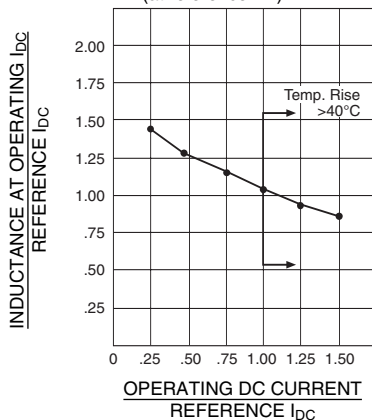
### Electrical Specifications @ 25°C — Operating Temperature -30°C to 130°C

| REFERENCE OPERATING VALUES |                         |                                      |                        |                            |                                  | DESIGN CONTROL VALUES       |                                   |                          |                |                     |                          |
|----------------------------|-------------------------|--------------------------------------|------------------------|----------------------------|----------------------------------|-----------------------------|-----------------------------------|--------------------------|----------------|---------------------|--------------------------|
| Vertical Part Number       | Low Profile Part Number | Inductance Typical (μH) <sup>1</sup> | I <sub>DC</sub> (AMPS) | ET <sub>TOP</sub> (V-μSec) | Energy Storage (μJ) <sup>4</sup> | Inductance No DC (μHy) ±20% | 20 KHz Test mV No DC <sup>2</sup> | DCR (Ω MAX) <sup>5</sup> | Coil Size Code | Klip Mount Package* | Lead Diameter (In) ±.003 |
| PE-51591                   | —                       | 20                                   | 2.0                    | 52                         | 40                               | 32.8                        | 33                                | .060                     | H              | —                   | .020                     |
| PE-92100                   | —                       | 25                                   | 2.6                    | 30                         | 85                               | 20.7                        | 22                                | .043                     | A              | KM1                 | .020                     |
| PE-92101                   | PE-92401                | 50                                   | 2.6                    | 50                         | 169                              | 45.7                        | 45                                | .071                     | B              | KM2                 | .020                     |
| PE-92102                   | PE-92402                | 100                                  | 2.6                    | 90                         | 338                              | 94.1                        | 90                                | .100                     | C              | KM3                 | .020                     |
| PE-92103                   | —                       | 35                                   | 2.6                    | 55                         | 118                              | 28.4                        | 36                                | .037                     | B              | KM2                 | .025                     |
| PE-92104                   | PE-92404                | 70                                   | 3.0                    | 85                         | 315                              | 61.0                        | 73                                | .052                     | C              | KM3                 | .025                     |
| PE-92105                   | PE-92405                | 145                                  | 3.0                    | 140                        | 653                              | 141.8                       | 140                               | .087                     | D              | KM4                 | .025                     |
| PE-92106                   | —                       | 285                                  | 3.0                    | 300                        | 1283                             | 264.1                       | 340                               | .140                     | E              | KM5                 | .025                     |
| PE-92107                   | —                       | 450                                  | 3.0                    | 425                        | 2025                             | 436.3                       | 500                               | .200                     | F              | —                   | .025                     |
| PE-92108                   | PE-92408                | 67                                   | 3.6                    | 130                        | 648                              | 90.7                        | 110                               | .045                     | D              | KM4                 | .032                     |
| PE-92109                   | —                       | 165                                  | 4.0                    | 240                        | 1320                             | 152.0                       | 260                               | .070                     | E              | KM5                 | .032                     |
| PE-92110                   | —                       | 270                                  | 4.0                    | 350                        | 2160                             | 263.9                       | 400                               | .100                     | F              | —                   | .032                     |
| PE-92111                   | —                       | 40                                   | 4.0                    | 70                         | 320                              | 37.9                        | 57                                | .027                     | C              | KM3                 | .032                     |
| PE-51590                   | —                       | 22                                   | 5.0                    | 44                         | 275                              | 20.3                        | 37                                | .020                     | G              | —                   | .032                     |
| PE-92112                   | PE-92412                | 100                                  | 5.0                    | 200                        | 1250                             | 90.7                        | 180                               | .034                     | E              | KM5                 | .042                     |
| PE-92113                   | —                       | 170                                  | 5.0                    | 300                        | 2125                             | 159.7                       | 310                               | .050                     | F              | —                   | .042                     |
| PE-92114                   | PE-92414                | 55                                   | 5.0                    | 100                        | 688                              | 54.9                        | 88                                | .023                     | D              | KM4                 | .042                     |
| PE-92115                   | —                       | 95                                   | 7.0                    | 225                        | 2328                             | 96.0                        | 200                               | .025                     | F              | —                   | .051                     |
| PE-92116                   | PE-92416                | 55                                   | 7.0                    | 150                        | 1348                             | 49.1                        | 100                               | .017                     | E              | KM5                 | .051                     |
| PE-92117                   | —                       | 55                                   | 10.0                   | 175                        | 2750                             | 55.9                        | 120                               | .013                     | F              | —                   | .064                     |

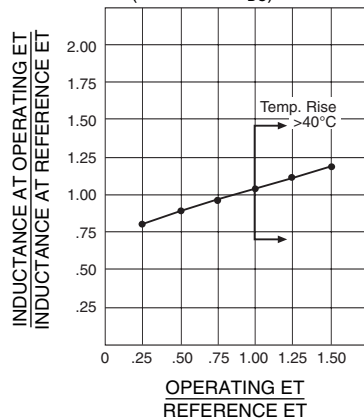
\*Parts available with *KlipMount* option can be ordered by adding a "K" suffix to the part number (i.e. PE-92100K).

### Relationships Between Reference and Operating Conditions

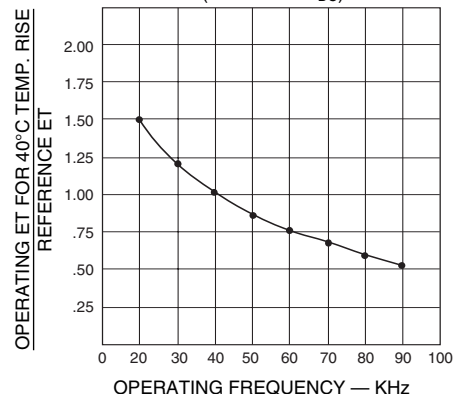
Inductance vs. DC Current  
(at reference ET)



Inductance vs. Operating ET  
(at reference I<sub>DC</sub>)



Max. Operating ET vs. Frequency  
(at reference I<sub>DC</sub>)



# LOW COST INDUCTORS

## Mechanical Information



### Mechanicals

- Base material meets flammability requirements of UL 94V-0
- Mechanically rigid mount
- PC board — automatic insertability
- Lowest cost

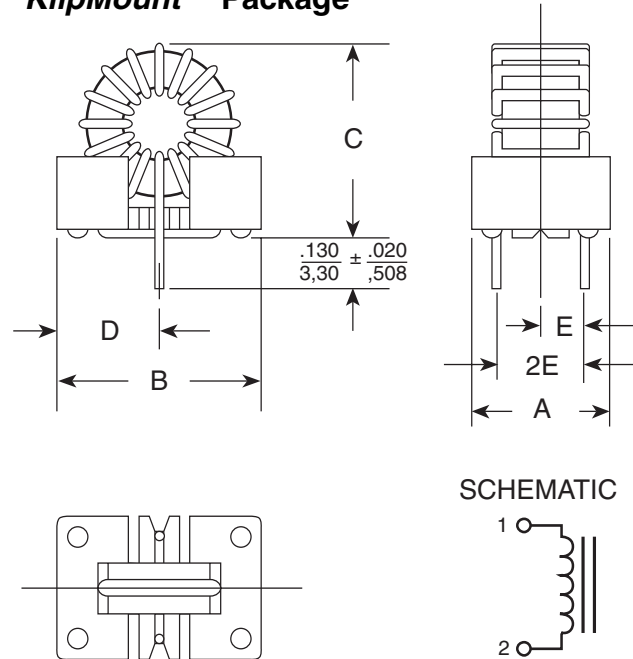
| Standard Package | A                | B             | C             | D             | E            |
|------------------|------------------|---------------|---------------|---------------|--------------|
|                  | Nom. ± .005/0,13 | Nom.          | Typical       |               |              |
| KM-1             | .340<br>8,64     | .580<br>14,73 | .650<br>16,51 | .29<br>7,37   | .110<br>2,79 |
| KM-2             | .450<br>11,43    | .650<br>16,51 | .700<br>17,78 | .325<br>8,26  | .150<br>3,81 |
| KM-3             | .450<br>11,43    | .830<br>21,08 | .950<br>24,13 | .415<br>10,54 | .150<br>3,81 |
| KM-4             | .610<br>15,50    | .970<br>24,64 | 1.10<br>27,94 | .475<br>12,07 | .225<br>5,72 |
| KM-5             | .700<br>17,78    | 1.30<br>33,02 | 1.40<br>35,56 | .625<br>15,88 | .250<br>6,35 |

**Note:** Units with large wire sizes may exceed B dimension. KLIPMOUNT™ is a trademark of Pulse Engineering, Inc.

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

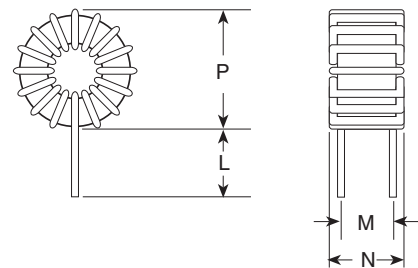
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

### KlipMount™ Package

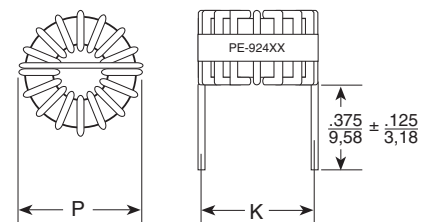


| Coil Size | P (MAX)        | N (MAX)       | L (+.125/-.025) | M             | K                            |
|-----------|----------------|---------------|-----------------|---------------|------------------------------|
| A         | .550<br>13,97  | .250<br>6,35  | .375<br>9,53    | .180<br>4,57  | —                            |
| B         | .700<br>17,78  | .380<br>9,65  | .375<br>9,53    | .280<br>7,11  | .530 ± .050<br>13,46 ± 1,27  |
| C         | .850<br>21,59  | .410<br>10,41 | .375<br>9,53    | .280<br>7,11  | .720 ± .050<br>18,29 ± 1,27  |
| D         | 1.050<br>26,67 | .550<br>13,97 | .375<br>9,53    | .400<br>10,16 | .840 ± .020<br>21,24 ± 0,51  |
| E         | 1.400<br>35,56 | .700<br>17,78 | .375<br>9,53    | .500<br>12,7  | 1.100 ± .100<br>27,94 ± 2,54 |
| F         | 1.650<br>41,91 | .700<br>17,78 | .375<br>9,53    | .500<br>12,7  | —                            |
| G         | .850<br>21,59  | .330<br>8,38  | .875<br>22,23   | .330<br>8,38  | —                            |
| H         | .640<br>16,26  | .280<br>7,11  | .875<br>22,23   | .280<br>7,11  | —                            |

### Vertical Package



### Low Profile Package



#### NOTES:

1. Typical Inductance occurs at I<sub>DC</sub> and E<sub>TOP</sub> values shown.
2. Design control test voltage critical. Inductance increases with voltage.
3. For line filter applications RMS line current is limited to specified reference DC Current.
4.  $\frac{LI^2}{2}$  rating is the ability of the inductor to store energy.
5. DCR for vertical part measured close to coil. Add 10% more for Low Profile part.