

THT/SMT POWER INDUCTORS

Toroid - Designed for National's 150kHz Simple Switcher™



Tested and recommended by National Semiconductor



Base material meets flammability requirements of UL 94V-0



Available in surface mount and through hole versions

Electrical Specifications @ 25°C— Operating Temperature -40° to +130° C⁷

| Pulse ⁶ THT Part Number | Pulse ^{5,6} SMT Part Number | National Part Number | In Circuit Operating Parameters ¹ | | | Nominal DCR (Ω) | Package | | |
|--|--|----------------------------|--|--|--|-----------------------|-----------------|------------------|------------------|
| | | | Nominal Inductance (μH) | Rated Current (A _{DC}) | Max ² E _{TOP} (V-μSec) | | Through Hole | Surface Mount | Lead Diameter |
| PE-53801NL | PE-53801SNL | LM259X-L1 | 259 | 0.13 | 23.1 | 3.4 | LP-25 | LCI-20 | — |
| PE-53802NL | PE-53802SNL | LM259X-L2 | 178 | 0.16 | 16.5 | 2.8 | LP-25 | LCI-20 | — |
| PE-53803NL | PE-53803SNL | LM259X-L3 | 118 | 0.2 | 13.2 | 1.8 | LP-25 | LCI-20 | — |
| PE-53804NL | PE-53804SNL | LM259X-L4 | 79 | 0.25 | 9.9 | 1.5 | LP-25 | LCI-20 | — |
| PE-53805NL | PE-53805SNL | LM259X-L5 | 55 | 0.3 | 6.6 | 1.0 | LP-25 | LCI-20 | — |
| PE-53806NL | PE-53806SNL | LM259X-L6 | 39 | 0.34 | 6.6 | .80 | LP-25 | LCI-20 | — |
| PE-53807NL | PE-53807SNL | LM259X-L7 | 26 | 0.45 | 6.6 | .62 | LP-25 | LCI-20 | — |
| PE-53808NL | PE-53808SNL | LM259X-L8 | 374 | 0.2 | 75.9 | 2.7 | LP-30 | LCI-30 | — |
| PE-53809NL | PE-53809SNL | LM259X-L9 | 256 | 0.25 | 33 | 2.2 | LP-30 | LCI-30 | — |
| PE-53810NL | PE-53810SNL | LM259X-L10 | 176 | 0.3 | 26.4 | 1.4 | LP-30 | LCI-30 | — |
| PE-53811NL | PE-53811SNL | LM259X-L11 | 118 | 0.38 | 19.8 | 1.2 | LP-30 | LCI-30 | — |
| PE-53812NL | PE-53812SNL | LM259X-L12 | 78 | 0.46 | 16.5 | 0.8 | LP-30 | LCI-30 | — |
| PE-53813NL | PE-53813SNL | LM259X-L13 | 55 | 0.56 | 13.2 | 0.5 | LP-30 | LCI-30 | — |
| PE-53814NL | PE-53814SNL | LM259X-L14 | 39 | 0.68 | 9.9 | 0.3 | LP-30 | LCI-30 | — |
| PE-53815NL | PE-53815SNL | LM259X-L15 | 26 | 0.84 | 6.6 | 0.2 | LP-30 | LCI-30 | — |
| PE-53816NL | PE-53816SNL | LM259X-L16 | 17 | 1.02 | 6.6 | 0.1 | LP-30 | LCI-30 | — |
| PE-53817NL | PE-53817SNL | LM259X-L17 | 375 | 0.36 | 75.9 | 1.3 | LP-37 | LCI-37 | — |
| PE-53818NL | PE-53818SNL | LM259X-L18 | 252 | 0.44 | 49.5 | 0.9 | LP-37 | LCI-37 | — |
| PE-53819NL | PE-53819SNL | LM259X-L19 | 173 | 0.54 | 36.3 | 0.6 | LP-37 | LCI-37 | — |
| PE-53820NL | PE-53820SNL | LM259X-L20 | 115 | 0.67 | 29.7 | 0.4 | LP-37 | LCI-37 | — |
| PE-53821NL | PE-53821SNL | LM259X-L21 | 78 | 0.82 | 23.1 | 0.3 | LP-37 | LCI-37 | — |
| PE-53822NL | PE-53822SNL | LM259X-L22 | 54 | 1.0 | 16.5 | 0.2 | LP-37 | LCI-37 | — |
| PE-53823NL | PE-53823SNL | LM259X-L23 | 38 | 1.2 | 13.2 | 0.1 | LP-37 | LCI-37 | — |
| PE-53824NL | PE-53824SNL | LM259X-L24 | 26 | 1.48 | 9.9 | 0.1 | LP-37 | LCI-37 | — |
| PE-53825NL | PE-53825SNL | LM259X-L25 | 18 | 1.81 | 9.9 | 0.06 | LP-37 | LCI-37 | — |
| PE-53826NL | PE-53826SNL | LM259X-L26 | 377 | 0.68 | 75.9 | 1.0 | LP-44 | LCI-44 | — |
| PE-53827NL | PE-53827SNL | LM259X-L27 | 248 | 0.83 | 72.6 | 0.6 | LP-44 | LCI-44 | — |
| PE-53828NL | PE-53828SNL | LM259X-L28 | 168 | 1.02 | 56.1 | 0.4 | LP-44 | LCI-44 | — |
| PE-53829NL | PE-53829SNL | LM259X-L29 | 112 | 1.26 | 42.9 | 0.3 | LP-44 | LCI-44 | — |
| PE-53830NL | PE-53830SNL | LM259X-L30 | 77 | 1.54 | 33 | 0.2 | LP-44 | LCI-44 | — |
| PE-53831NL | PE-53831SNL | LM259X-L31 | 53 | 1.87 | 26.4 | 0.13 | LP-44 | LCI-44 | — |
| PE-53932NL | PE-53932SNL | LM259X-L32 | 37 | 2.24 | 19.8 | 0.10 | LP-44 | LCI-44 | — |
| PE-53933NL | PE-53933SNL | LM259X-L33 | 24 | 2.74 | 16.5 | 0.07 | LP-44 | LCI-44 | — |
| PE-53934NL | PE-53934SNL | LM259X-L34 | 17 | 3.0 | 13.2 | 0.05 | KM-1.0 | LCI-44 | .023 |
| PE-53935NL | PE-53935SNL | LM259X-L35 | 250 | 1.5 | 72.6 | 0.23 | KM-3.0 | HCI-68 | .023 |
| PE-54036NL | PE-54036SNL | LM259X-L36 | 168 | 1.81 | 75.9 | 0.18 | KM-3.0 | HCI-68 | .023 |
| PE-54037NL | PE-54037SNL | LM259X-L37 | 114 | 2.22 | 62.7 | 0.10 | KM-3.0 | HCI-68 | .025 |
| PE-54038NL | PE-54038SNL | LM259X-L38 | 77 | 2.7 | 52.8 | 0.09 | KM-3.0 | HCI-68 | .025 |
| PE-54039NL | PE-54039SNL | LM259X-L39 | 53 | 3.0 | 42.9 | 0.08 | KM-3.0 | HCI-68 | .025 |
| PE-54040NL | PE-54040SNL | LM259X-L40 | 38 | 3.0 | 29.7 | 0.05 | KM-3.0 | HCI-68 | .028 |
| PE-54041NL | PE-54041SNL | LM259X-L41 | 25 | 3.0 | 19.8 | 0.04 | KM-2.0 | LCI-50 | .028 |
| PE-54042NL | — | LM259X-L42 | 167 | 2.5 | 75.9 | 0.14 | KM-4.0 | — | .028 |
| PE-54043NL | — | LM259X-L43 | 121 | 3.0 | 75.9 | 0.09 | KM-4.0 | — | .031 |
| PE-54044NL | PE-54044SNL | LM259X-L44 | 77 | 3.0 | 59.4 | 0.08 | KM-3.0 | HCI-68 | .025 |
| PE-53900NL | — | LM258X-L | 19 | 4.5 | 32 ³ | 0.02 | KM-3.0 | — | .035 |

NOTES:

- Inductance values may vary ±20%.
- E_{TOP} rated at 150kHz except where designated.
- E_{TOP} rated at 100kHz.
- SIMPLE SWITCHER™ is a trademark of National Semiconductor Corp.
- For SMT parts, optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PE-53801SNL becomes PE-53801SNLT). Pulse complies to industry standard tape and reel specification EIA481.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- The "NL" suffix indicates an RoHS-compliant part number. Non-NL suffixed parts are not necessarily RoHS compliant, but are electrically and mechanically equivalent to NL versions. If a part number does not have the "NL" suffix, but an RoHS compliant version is required, please contact Pulse for availability.

USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 54643211 / 2 • China 86 755 33966678 • Taiwan 886 3 4641811

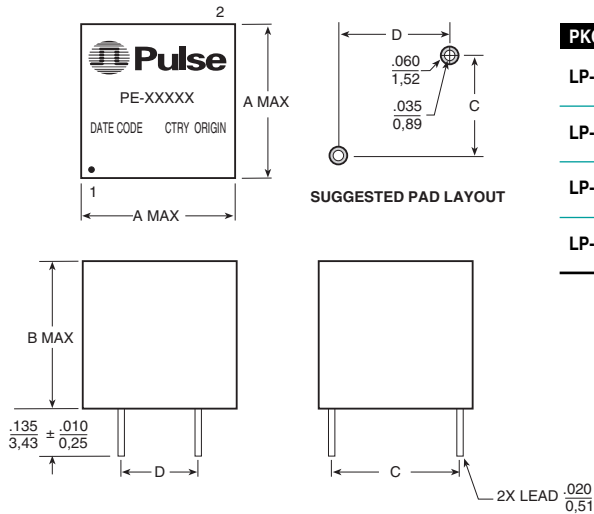
THT/SMT POWER INDUCTORS

Toroid - Designed for National's 150kHz Simple Switcher™



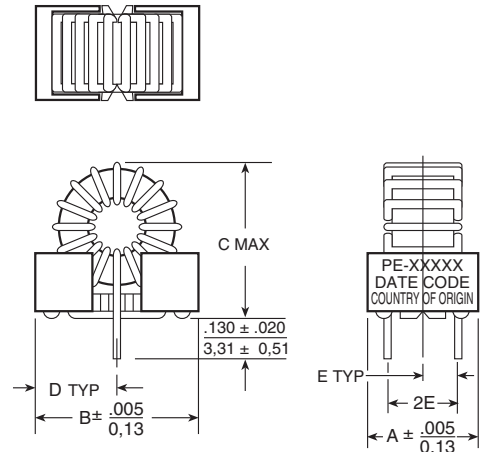
Mechanicals

LP Series



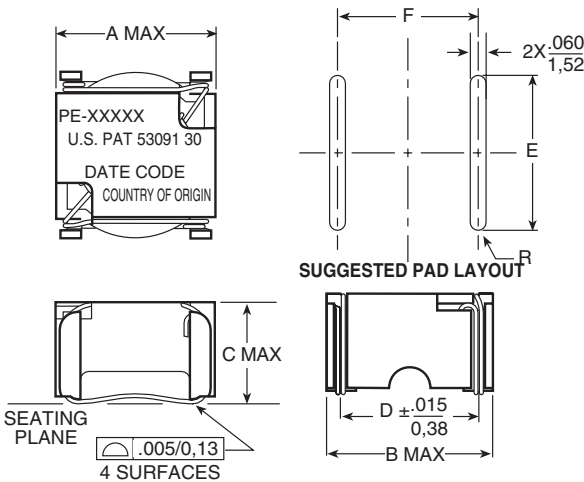
| PKG | A | B | C | D |
|-------|---------------|--------------|--------------|--------------|
| LP-25 | .360 9,14 | .310 7,87 | .250 6,35 | .250 6,35 |
| LP-30 | .400 10,16 | .300 7,62 | .300 7,62 | .300 7,62 |
| LP-37 | .495 12,57 | .375 9,52 | .375 9,52 | .375 9,52 |
| LP-44 | .635 16,13 | .365 9,27 | .500 12,7 | .300 7,62 |

KM Series



| PKG | A | B | C | D | E |
|--------|---------------|---------------|---------------|---------------|--------------|
| KM-1.0 | .340 8,64 | .580 14,73 | .650 16,51 | .290 7,37 | .110 2,79 |
| KM-2.0 | .450 11,43 | .650 16,51 | .700 17,73 | .325 8,26 | .150 3,81 |
| KM-3.0 | .450 11,43 | .830 21,08 | .950 24,13 | .415 10,54 | .150 3,81 |
| KM-4.0 | .610 15,50 | .970 24,64 | 1.10 27,94 | .475 12,07 | .225 5,72 |

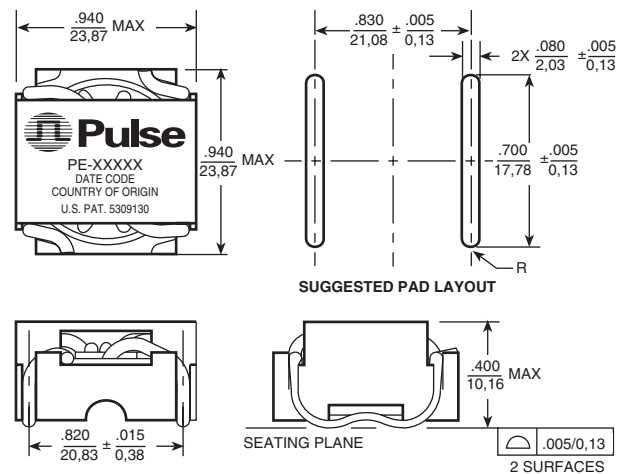
LCI Series



Notes:

1. Dimension "D" is measured across terminal blocks only.
2. Coil must clear seating plane by .010 MIN.

HCI-68



Note:

Coil must clear seating plane by .010 MIN

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

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

| PKG | A | B | C | D | E | F |
|--------|---------------|---------------|--------------|---------------|---------------|---------------|
| LCI-20 | .340 8,64 | .340 8,64 | .270 6,86 | .260 6,60 | .300 7,62 | .270 6,86 |
| LCI-30 | .435 11,05 | .440 11,18 | .360 9,14 | .350 8,89 | .400 10,16 | .360 9,14 |
| LCI-37 | .565 14,35 | .570 14,48 | .360 9,14 | .450 11,43 | .520 13,21 | .460 11,68 |
| LCI-44 | .600 15,24 | .620 15,75 | .390 9,91 | .500 12,7 | .550 13,97 | .510 12,95 |
| LCI-50 | .670 17,02 | .700 17,78 | .390 9,91 | .580 14,73 | .620 15,75 | .590 14,99 |