




# 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° C<sup>7</sup>

Pulse <sup>6</sup> THT Part Number	Pulse <sup>5,6</sup> SMT Part Number	National Part Number	In Circuit Operating Parameters <sup>1</sup>			Nominal DCR (Ω)	Package		
			Nominal Inductance (μH)	Rated Current (A <sub>DC</sub> )	Max <sup>2</sup> E <sub>TOP</sub> (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 <sup>3</sup>	0.02	KM-3.0	—	.035

#### NOTES:

1. Inductance values may vary ±20%.
2. E<sub>TOP</sub> rated at 150kHz except where designated.
3. E<sub>TOP</sub> rated at 100kHz.
4. SIMPLE SWITCHER™ is a trademark of National Semiconductor Corp.
5. 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.
6. 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.
7. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

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

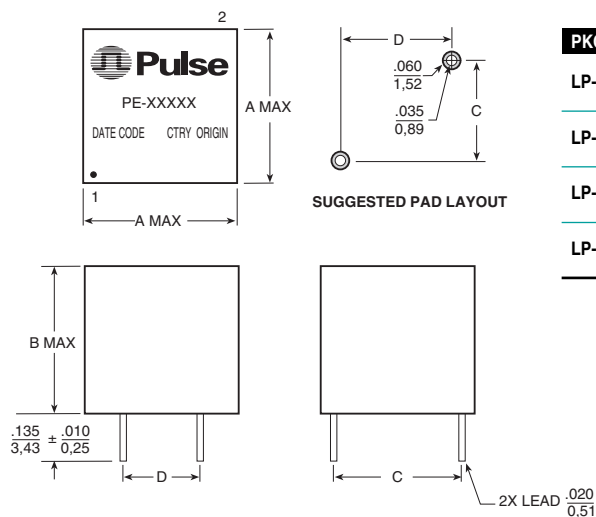
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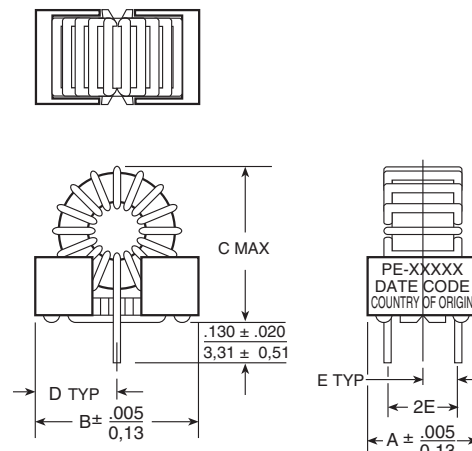
### Mechanicals

#### LP Series



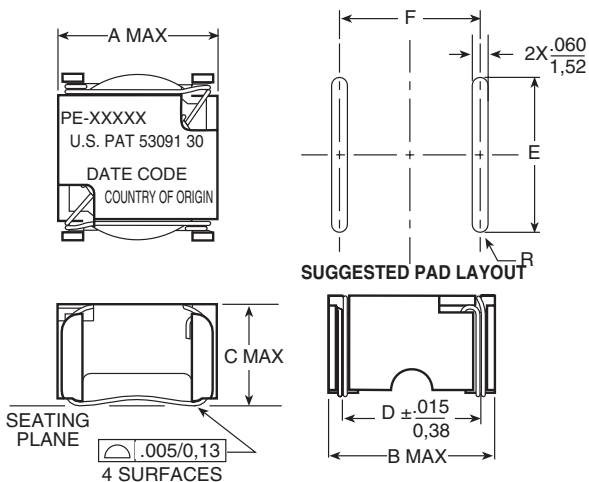
PKG	A	B	C	D
LP-25	$\frac{.360}{9,14}$	$\frac{.310}{7,87}$	$\frac{.250}{6,35}$	$\frac{.250}{6,35}$
LP-30	$\frac{.400}{10,16}$	$\frac{.300}{7,62}$	$\frac{.300}{7,62}$	$\frac{.300}{7,62}$
LP-37	$\frac{.495}{12,57}$	$\frac{.375}{9,52}$	$\frac{.375}{9,52}$	$\frac{.375}{9,52}$
LP-44	$\frac{.635}{16,13}$	$\frac{.365}{9,27}$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

#### KM Series



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

#### LCI Series

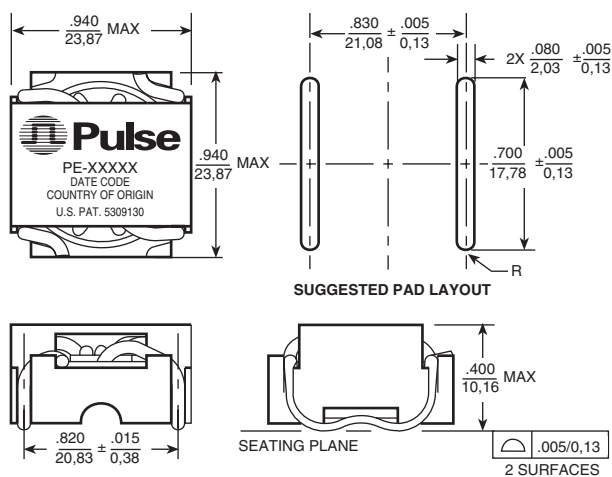


#### Notes:

1. Dimension "D" is measured across terminal blocks only.
2. Coil must clear seating plane by  $\frac{.010}{0,25}$  MIN.

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

#### HCI-68



#### Note:

Coil must clear seating plane by  $\frac{.010}{0,25}$  MIN

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

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