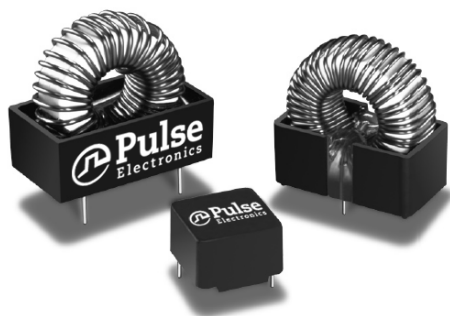
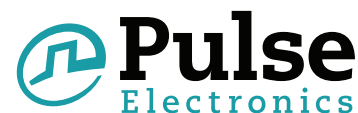


# Inductors Designed for National's 50 kHz Simple Switcher™



- Designed for use with National's device numbers LM2574/LM2575/LM2576
- Base material meets flammability requirements of UL 94V-0
- Performance verified by National Semiconductor

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

| Part Identification |               | Reference Operating Values <sup>1</sup> |                        |                           | Design Control Values                    |             |               |               |
|---------------------|---------------|---|------------------------|---------------------------|--|-------------|---------------|---------------|
| Part Number         | Inductor Code | Inductance Typical (μH)                 | I <sub>dc</sub> (Amps) | E <sub>Top</sub> (V-μSec) | Inductance No DC <sup>2</sup> (μH ± 20%) | DCR (Ω MAX) | Package Style | Lead Diameter |
| PE-53112NL          | L47           | 47                                      | 3.0                    | 90                        | 38                                       | 0.05        | KM-2.0        | .025          |
| PE-92114KNL         | L68           | 36                                      | 5.0                    | 90                        | 56                                       | 0.02        | KM-4.0        | .040          |
| PE-92108KNL         | L100          | 100                                     | 3.0                    | 90                        | 91                                       | 0.04        | KM-4.0        | .032          |
| PE-53113NL          | L150          | 150                                     | 2.0                    | 90                        | 130                                      | 0.10        | KM-4.0        | .025          |
| PE-52626NL          | L220          | 220                                     | 1.4                    | 90                        | 230                                      | 0.38        | Low Profile   | .025 SQ.      |
| PE-53145NL          | L220          | 220                                     | 1.4                    | 90                        | 176                                      | 0.14        | KM-3.0        | .020          |
| PE-52627NL          | L330          | 330                                     | 0.9                    | 90                        | 302                                      | 0.74        | Low Profile   | .025 SQ.      |
| PE-53146NL          | L330          | 330                                     | 0.9                    | 90                        | 267                                      | 0.18        | KM-3.0        | .020          |
| PE-53114NL          | L470          | 470                                     | 0.64                   | 90                        | 426                                      | 0.16        | KM-4.0        | .025          |
| PE-52629NL          | L680          | 680                                     | .85                    | 90                        | 657                                      | 1.25        | Low Profile   | .025 SQ.      |
| PE-53115NL          | H150          | 150                                     | 3.0                    | 200                       | 136                                      | 0.10        | KM-4.0        | .025          |
| PE-53116NL          | H220          | 220                                     | 3.0                    | 200                       | 167                                      | 0.07        | KM-5.0        | .032          |
| PE-53117NL          | H330          | 330                                     | 3.0                    | 200                       | 292                                      | 0.15        | KM-5.0        | .025          |
| PE-53118NL          | H470          | 470                                     | 2.0                    | 200                       | 369                                      | 0.17        | KM-5.0        | .025          |
| PE-53119NL          | H680          | 680                                     | 1.3                    | 200                       | 562                                      | 0.20        | KM-5.0        | .025          |
| PE-53120NL          | H1000         | 1000                                    | 0.95                   | 200                       | 762                                      | 0.24        | KM-5.0        | .025          |
| PE-53121NL          | H1500         | 1500                                    | 0.62                   | 200                       | 1150                                     | 1.00        | Case          | .032          |
| PE-53122NL          | H220          | 2200                                    | 0.42                   | 200                       | 1886                                     | 1.80        | Case          | .032          |

### NOTES:

- Typical inductance occurs at the I<sub>dc</sub> and E<sub>Top</sub> values shown.
- The control value of inductance is measured at B<sub>op</sub> equal to or less than 10 gauss without DC current.
- Inductance decreases with higher values of DC current and increases with lower values of DC current.
- Inductance increases with increase in B<sub>op</sub> or E<sub>Top</sub>.
- SIMPLE SWITCHER™ is a trademark of National Semiconductor Corporation.

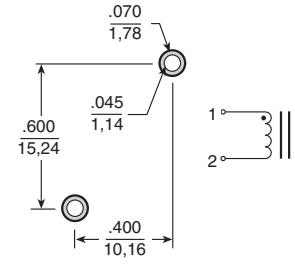
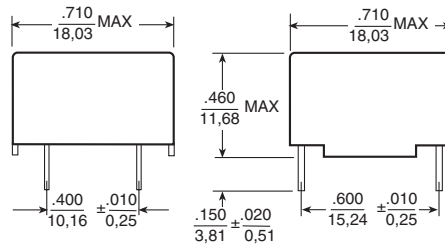
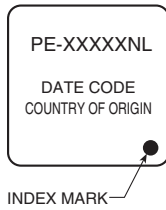
# Inductors Designed for National's 50 kHz Simple Switcher™



## Mechanicals

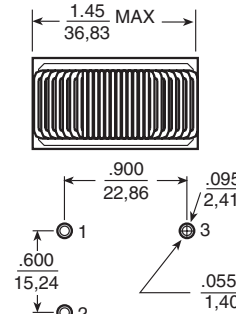
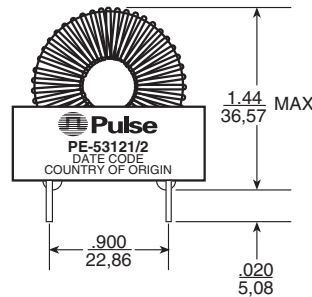
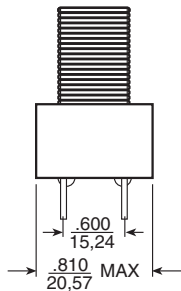
## Schematics

### Low Profile Series

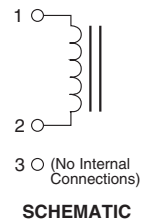


SUGGESTED PAD LAYOUT

### Case Series



SUGGESTED PAD LAYOUT

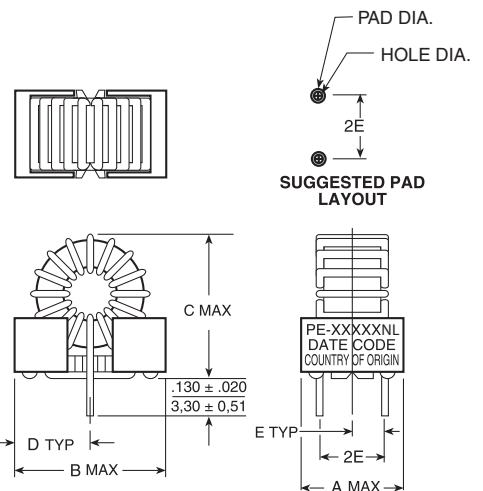


SCHEMATIC

### KlipMount Series

| PKG    | A     | B     | C     | D     | E    |
|--------|-------|-------|-------|-------|------|
| KM-2.0 | .450  | .650  | .700  | .325  | .150 |
|        | 11,43 | 16,51 | 17,78 | 8,26  | 3,81 |
| KM-3.0 | .450  | .850  | .950  | .415  | .150 |
|        | 11,43 | 21,59 | 24,13 | 10,54 | 3,81 |
| KM-4.0 | .610  | .970  | 1.10  | .475  | .225 |
|        | 15,50 | 24,64 | 27,94 | 12,07 | 5,72 |
| KM-5.0 | .710  | 1.30  | 1.40  | .625  | .250 |
|        | 18,03 | 33,02 | 35,56 | 15,88 | 6,35 |

| LEAD DIA. | HOLE DIA. | PAD DIA. |
|-----------|-----------|----------|
| .025      | .035      | .060     |
| .025 SQ.  | .048      | .074     |
| .032      | .045      | .070     |
| .040      | .056      | .080     |



Dimensions: Inches  
mm  
Unless otherwise specified,  
all tolerances are ±.010  
0,25

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