Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


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# SMT POWER INDUCTORS
## Toroid - Military/Aerospace SLED Series

PulseR
Ruggedized Solutions

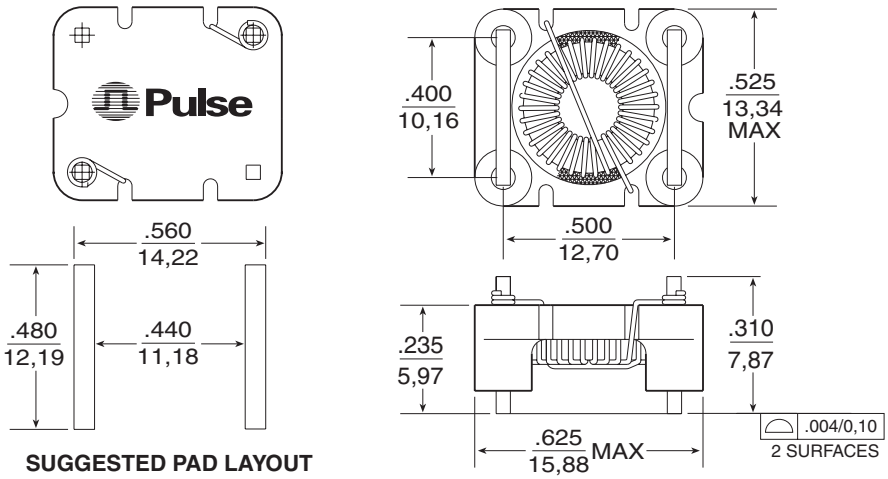

- Ruggedized header with SLED rails for secure board mounting
- **Current Rating:** up to 3.8ADC
- **Inductance Range:** 9.4µH to 439µH

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

| Part [9] Number | Inductance @ Irated (µH) | Irated (A ) | DCR (mΩ) TYP | DCR (mΩ) MAX | ET (V-µsec) | Inductance @ 0ADC (µH ±10%) | 100 Gauss ET100 (V-µsec) | 1 Amp DC H1 (Orsted) |
|---|---|---|---|---|---|---|---|---|
| **SLED 25** | | | | | | | | |
| **PL8500** | 9.4 | 3.80 | 27 | 32 | 15.2 | 10.4 | 2.65 | 11.95 |
| **PL8501** | 13.3 | 3.20 | 40 | 46 | 18.8 | 14.6 | 3.13 | 14.12 |
| **PL8502** | 23 | 2.40 | 65 | 74 | 24.3 | 25 | 4.10 | 18.46 |
| **PL8503** | 50 | 1.60 | 121 | 135 | 37.0 | 56 | 6.15 | 27.69 |
| **PL8504** | 75 | 1.30 | 181 | 220 | 44.3 | 83 | 7.47 | 33.67 |
| **PL8505** | 90 | 1.20 | 246 | 285 | 49.2 | 100 | 8.19 | 36.93 |
| **PL8506** | 137 | 1.00 | 387 | 425 | 59.4 | 152 | 10.12 | 45.61 |
| **PL8507** | 200 | 0.82 | 585 | 673 | 71.3 | 220 | 12.17 | 54.85 |
| **PL8508** | 305 | 0.66 | 845 | 972 | 85.8 | 331 | 14.94 | 67.34 |
| **PL8509** | 439 | 0.56 | 1322 | 1520 | 99.6 | 472 | 17.83 | 80.37 |

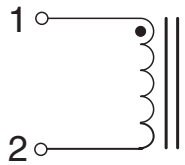
**NOTES:**
1. The reference inductance at rated DC current is a typical value.
2. Temperature rise is 50°C in typical buck or boost circuits at 250kHz and with the reference ET applied to the inductor.
3. Total loss in the inductor is 380mW for 50°C temperature rise above ambient.
4. To estimate temperature rise in a given application, determine copper and core losses, divide by 380 and multiply by 50.
5. For the copper loss, calculate $I_{DC}^2 \times R_N$.
6. For core loss, using frequency (f) and operating flux density (B), calculate $6.11 \times 10^{-18} \times B^{2.7} \times f^{2.04}$.
7. For flux density (B), calculate ET (V-µsec) for the application, divide by $ET_{100}$ from the table, and multiply by 100.
8. Limit the DC bias (H) to 46 orsteds. Calculate H by multiplying $H_1$ from the table by $I_{DC}$ of the application.
9. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. PL8500 becomes PL8500**T**). Pulse complies to industry standard tape and reel specification EIA481.

## Mechanical




SUGGESTED PAD LAYOUT

## Schematic




**Pan & Tube** . . . . . .35/tube
**Tape & Reel** . . . . . .300/reel
**MSL** . . . . . .3

**Dimensions:** Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

## For More Information: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