



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 POGO Series



- Ruggedized header with POGO pins for secure board mounting
- Current Rating:** up to 14.4ADC
- Inductance Range:** 1.5μH to 139μH

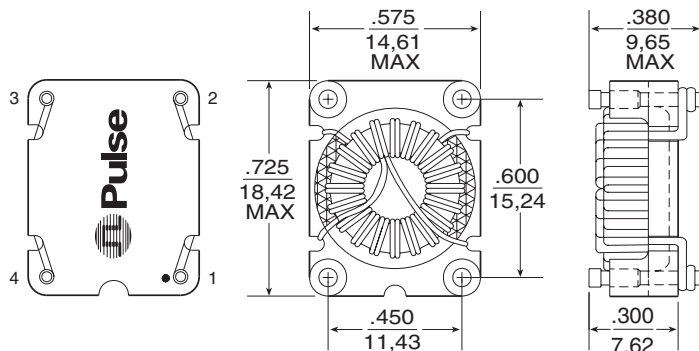
Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C

| Part Number | Inductance @ I _{rated} (μH) | I _{rated} (A) | DCR (TYP) (mΩ) | ET (V-μsec) | Storage Capacity (μJoules) | Inductance @ 0ADC (μH ±20%) | 100 Gauss ET ₁₀₀ (V-μsec) | 1 Amp DC H ₁ (Orsted) | Connection |
|----------------|--------------------------------------|------------------------|----------------|-------------|----------------------------|-----------------------------|--------------------------------------|----------------------------------|------------|
| POGO 40 | | | | | | | | | |
| PL8700 | 1.5 | 14.40 | 4.41 | 4.80 | 159.01 | 2.2 | 1.71 | 3.77 | Parallel |
| PL8701 | 2.4 | 9.40 | 6.54 | 6.00 | 152.83 | 3.5 | 2.14 | 4.71 | Parallel |
| PL8702 | 4.2 | 8.10 | 10.47 | 7.85 | 142.57 | 5.9 | 2.78 | 6.12 | Parallel |
| PL8703 | 5.8 | 6.80 | 14.94 | 9.05 | 133.80 | 7.9 | 3.21 | 7.06 | Parallel |
| PL8700 | 6.1 | 7.20 | 17.60 | 9.60 | 159.01 | 9.0 | 3.42 | 7.53 | Series |
| PL8704 | 7.6 | 5.70 | 20.99 | 10.25 | 124.18 | 10.1 | 3.64 | 8.00 | Parallel |
| PL8701 | 9.7 | 5.60 | 26.20 | 12.00 | 152.83 | 14.0 | 4.28 | 9.42 | Series |
| PL8705 | 12.1 | 5.20 | 23.24 | 13.85 | 176.62 | 18.5 | 4.92 | 10.83 | Parallel |
| PL8702 | 17.0 | 4.10 | 41.90 | 15.70 | 142.57 | 23.7 | 5.56 | 12.24 | Series |
| PL8706 | 18.0 | 4.20 | 38.15 | 16.50 | 174.26 | 27.4 | 5.99 | 13.18 | Parallel |
| PL8703 | 23.1 | 3.40 | 59.70 | 18.10 | 133.80 | 31.5 | 6.42 | 14.12 | Series |
| PL8707 | 27.0 | 3.30 | 53.21 | 20.50 | 169.14 | 40.5 | 7.27 | 16.01 | Parallel |
| PL8704 | 30.6 | 2.85 | 84.00 | 20.50 | 124.18 | 40.5 | 7.27 | 16.01 | Series |
| PL8708 | 34.8 | 2.30 | 73.89 | 22.50 | 156.47 | 50.5 | 8.13 | 17.89 | Parallel |
| PL8705 | 48.5 | 2.70 | 93.00 | 27.70 | 176.62 | 74.1 | 9.84 | 21.66 | Series |
| PL8706 | 72.0 | 2.20 | 152.60 | 33.00 | 174.26 | 109.8 | 11.98 | 26.36 | Series |
| PL8708 | 139.1 | 1.50 | 295.60 | 45.00 | 156.47 | 202.2 | 16.26 | 35.78 | Series |
| PL8707 | 108.0 | 1.77 | 212.80 | 41.00 | 169.14 | 161.8 | 14.55 | 32.01 | Series |

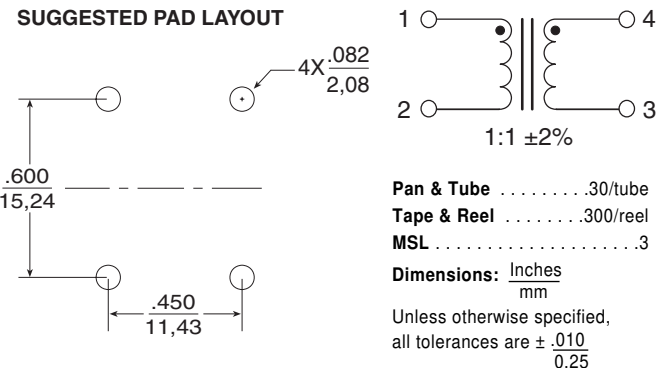
NOTES:

- The reference inductance is a typical value at the AC and DC excitation listed.
- Temperature rise is 55°C in typical buck or boost circuits at 100kHz and with the reference ET applied to the inductor.
- Total loss in the inductor is 634mWatts for a 55°C temperature rise above ambient.
- To estimate temperature rise in a given application, determine copper and core losses, divide by 634 and multiply by 50.
- For the copper loss, calculate $I_{bc}^2 X R_n$.
- For core loss (mW), using frequency (f in Hertz) and operating flux density (B in Gauss), calculate $2.24 \times 10^{-10} \times B^{2.11} \times f^{1.26}$.
- For flux density (B), calculate ET (V-μsec) for the application, divide by ET₁₀₀ from the table, and multiply by 100.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PL8700 becomes PL8700T). Pulse complies to industry standard tape and reel specification EIA481.

Mechanical



Schematic



For More Information:

| | | | | | | |
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