SMT POWER INDUCTORS
Toroid - Tomcat Series



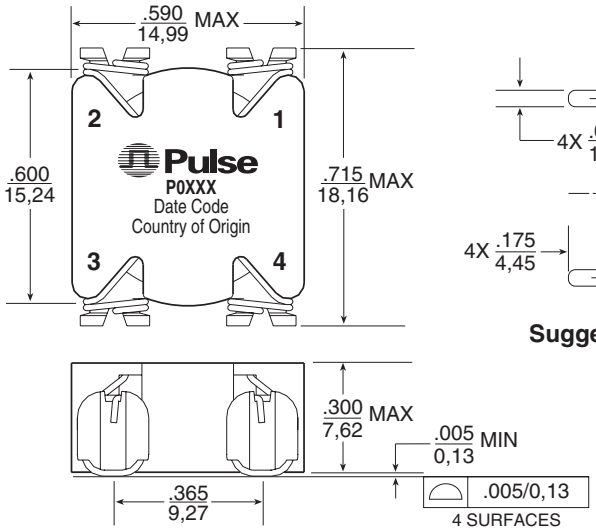
- **Height:** 7.6mm Max
- **Footprint:** 18.2mm x 15.0mm Max
- **Current Rating:** up to 14.4A
- **Inductance Range:** 1.5µH to 139µH

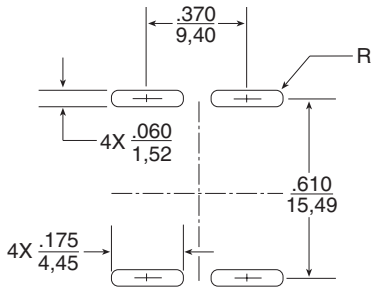
Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C [10]

Part [8,9] Number	Inductance @ Irated (µH)	Irated (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
P0395	1.5	14.40	4.41	4.80	159.01	2.2	1.71	3.77	Parallel
P0396	2.4	11.20	6.54	6.00	152.83	3.5	2.14	4.71	Parallel
P0397	4.2	8.20	10.47	7.85	142.57	5.9	2.78	6.12	Parallel
P0398	5.8	6.80	14.94	9.05	133.80	7.9	3.21	7.06	Parallel
P0395	6.1	7.20	17.60	9.60	159.01	9.0	3.42	7.53	Series
P0399	7.6	5.70	20.99	10.25	124.18	10.1	3.64	8.00	Parallel
P0396	9.7	5.60	26.20	12.00	152.83	14.0	4.28	9.42	Series
P0400	12.1	5.40	23.24	13.85	176.62	18.5	4.92	10.83	Parallel
P0397	17.0	4.10	41.90	15.70	142.57	23.7	5.56	12.24	Series
P0401	18.0	4.40	38.15	16.50	174.26	27.4	5.99	13.18	Parallel
P0398	23.1	3.40	59.70	18.10	133.80	31.5	6.42	14.12	Series
P0402	27.0	3.54	53.21	20.50	169.14	40.5	7.27	16.01	Parallel
P0399	30.6	2.85	84.00	20.50	124.18	40.5	7.27	16.01	Series
P0403	34.8	3.00	73.89	22.50	156.47	50.5	8.13	17.89	Parallel
P0400	48.5	2.70	93.00	27.70	176.62	74.1	9.84	21.66	Series
P0401	72.0	2.20	152.60	33.00	174.26	109.8	11.98	26.36	Series
P0403	139.1	1.50	295.60	45.00	156.47	202.2	16.26	35.78	Series
P0402	108.0	1.77	212.80	41.00	169.14	161.8	14.55	32.01	Series

NOTES:
1. The reference inductance is a typical value at the AC and DC excitation listed.
2. Temperature rise is 55°C in typical buck or boost circuits at 100kHz and with the reference ET applied to the inductor.
3. Total loss in the inductor is 634mW for a 55°C temperature rise above ambient.
4. To estimate temperature rise in a given application, determine copper and core losses, divide by 634 and multiply by 50.
5. For the copper loss (mW), calculate $I_{DC}{}^2 X R_N$.
6. For core loss (mW), using frequency (f in Hertz) and operating flux density (B in Gauss), calculate $2.24 \times 10^{-10} \times B^{2.11} \times f^{1.26}$.
7. For flux density (B in Gauss), calculate ET (V-µsec) for the application, divide by ET_{100} from the table, and multiply by 100.
8. Optional Tape & Reel packaging can be ordered by adding a "**T**" suffix to the part number (i.e. P0395 becomes P0395**T**). Pulse complies to industry standard tape and reel specification EIA481.
9. To order RoHS compliant part, add the suffix "**NL**" to the part number (i.e. P0395 becomes P0395**NL** and P0395T becomes P0395**NL**T).
10. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

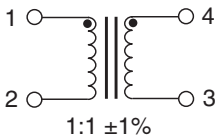
Mechanical





Suggested Pad Layout

Schematic



Weight . . . . . 4.2 grams
Tape & Reel 300/reel
Tube 35/tube

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