



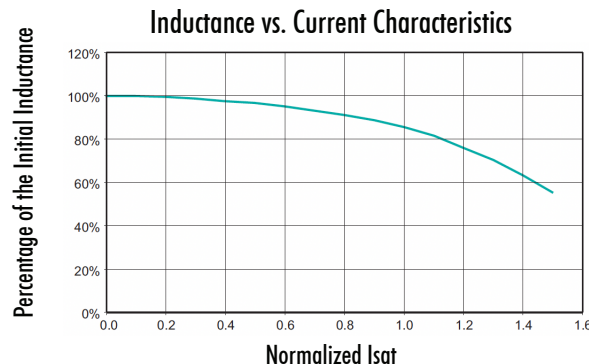
- ⊙ Height: 4mm MAX
- ⊙ Footprint: 10.5mm x 10.5mm MAX
- ⊙ Current Rating: up to 7.6A
- ⊙ Inductance Range: 0.62μH to 278μH
- ⊙ Operating Temperature: -55°C to +130°C
- ⊙ Lead Finish: Sn63/Pb37
- ⊙ Moisture Sensitivity Level: 1

Electrical Specifications @ 25°C

| Part Number | Inductance @ Rated TYP (μH) | Rated ⁴ (A) | DCR (mΩ) | | Inductance @ 0 ADC (μH) | Saturation Current ⁵ @ 25°C (A) | Heating Current ⁶ (A) |
|---------------------|-----------------------------|------------------------|----------|------|-------------------------|--|----------------------------------|
| | | | TYP | MAX | | | |
| PL9301 ³ | 0.62 | 7.6 | 4.2 | 5.5 | 0.68 | 10 | 7.6 |
| PL9302 ³ | 1.2 | 7.1 | 5.6 | 7.3 | 1.3 | 8 | 7.1 |
| PL9303 ³ | 1.9 | 5.8 | 8.4 | 10.9 | 2.2 | 6.15 | 5.8 |
| PL9304 ³ | 2.8 | 5.2 | 10.2 | 13.3 | 3.3 | 5.8 | 5.2 |
| PL9305 ³ | 4.0 | 4.7 | 15.1 | 19.6 | 4.7 | 5.4 | 4.7 |
| PL9306 ³ | 5.4 | 3.7 | 20.8 | 27.0 | 6.0 | 4.5 | 3.7 |
| PL9307 ³ | 6.9 | 3.5 | 23.7 | 30.8 | 7.6 | 4.0 | 3.5 |
| PL9308 | 8.0 | 3.4 | 26.5 | 33.2 | 10 | 3.8 | 3.4 |
| PL9309 | 11 | 3.0 | 36.1 | 45.2 | 12 | 3.4 | 3.0 |
| PL9310 | 12 | 2.8 | 39.5 | 49.4 | 15 | 3.1 | 2.8 |
| PL9311 | 19 | 2.3 | 62 | 77 | 22 | 2.8 | 2.3 |
| PL9312 | 25 | 2.1 | 71 | 89 | 27 | 2.3 | 2.1 |
| PL9313 | 38 | 1.65 | 113 | 142 | 47 | 2.1 | 1.65 |
| PL9314 | 55 | 1.32 | 170 | 212 | 68 | 1.5 | 1.32 |
| PL9315 | 83 | 1.10 | 262 | 328 | 100 | 1.35 | 1.10 |
| PL9316 | 123 | 0.88 | 400 | 500 | 150 | 1.15 | 0.88 |
| PL9317 | 178 | 0.73 | 591 | 739 | 220 | 0.92 | 0.73 |
| PL9318 | 278 | 0.60 | 906 | 1133 | 330 | 0.70 | 0.60 |

NOTES:

1. Add suffix "NL" for RoHS compliant version; i.e. PL9301 becomes **PL9301NL**. NL parts have 100% SN Lead Finish (MSL:4)
2. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. **PL9301T**.
3. Inductance at OADC tolerance on indicated part numbers is ±25%; tolerance is ±20% on all other parts.
4. Temperature of the component (ambient plus temperature rise) must be within specified operating temperature range.
5. The rated current as listed is either the saturation current or the heating current depending on which value is lower.
6. The saturation current is the current which causes the inductance to drop to 75% of its initial inductance at zero bias. This current is determined by placing the component at room ambient (25°C), and applying a short duration pulse current (to eliminate self-heating effects) to the component.
7. The heating current is the DC current, which causes the temperature of the part to increase by approximately 40°C. This current is determined by extending the terminals of the component with 30mm length 28 gauge buss wires and applying the current to the device for 30 minutes. The temperature is measured by placing the thermo-couple between the winding and the shield.
8. In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. In order to determine the approximate total loss (or temperature rise) for a given application, both copper losses and core losses should be taken into account.

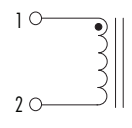
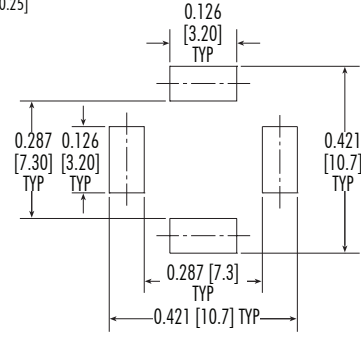
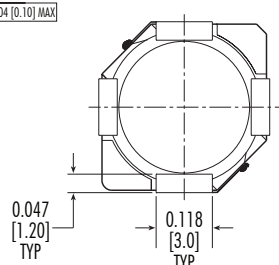
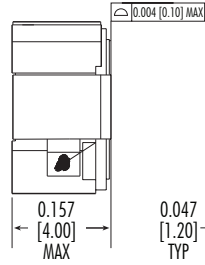
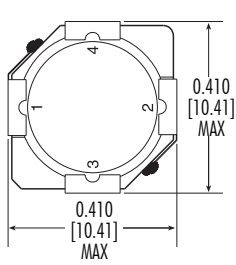


Mechanicals

Electrical Schematics

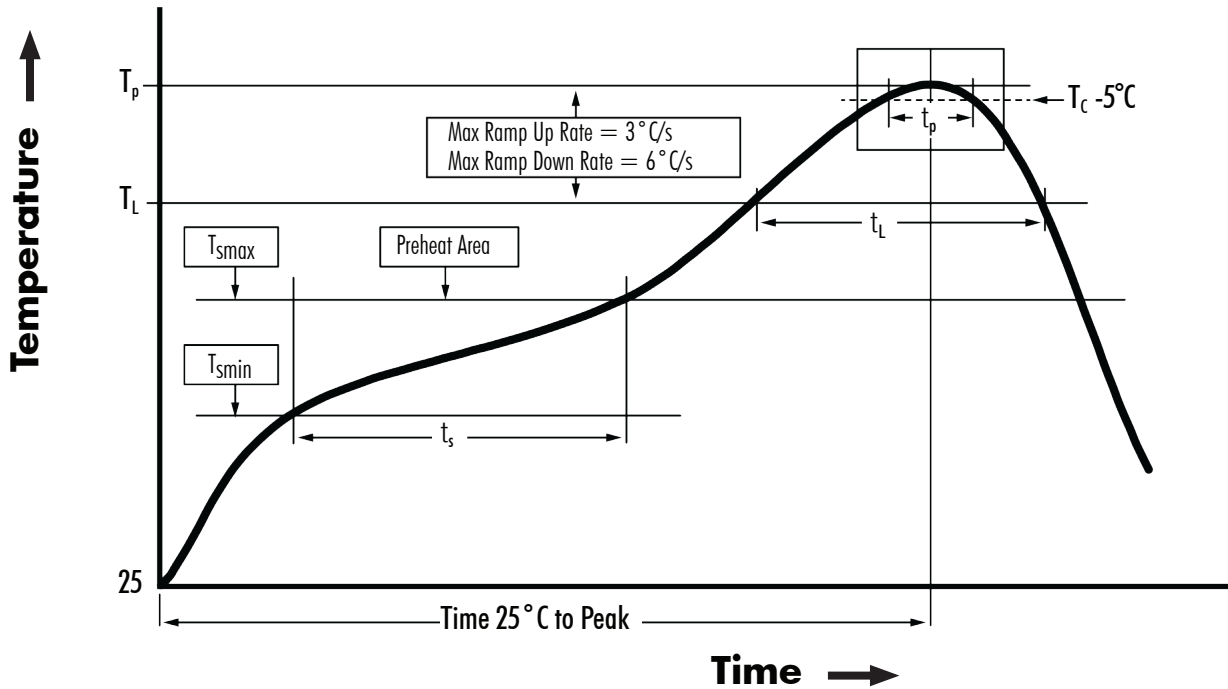
PL93XX

Dimensions: inch [mm]
 Tolerance (unless otherwise specified): ±0.010 [0.25]



NOTE: Pin 3 and Pin 4 are for mechanical connection only.

Recommended Reflow Profile (Based on J-STD-020D)



| T_{SMIN} (°C) | T_{SMAX} (°C) | T_L (°C) | T_P (°C MAX) | t_s (s) | t_L (s) | t_p (s MAX) | Ramp-up rate (T_L to T_P) | Ramp-down rate (T_P to T_L) | Time 25°C to peak temperature (s MAX) |
|-----------------|-----------------|------------|----------------|-----------|-----------|---------------|---------------------------------|-----------------------------------|---------------------------------------|
| 100 | 150 | 183 | 235 | 60 - 120 | 60 - 150 | 20 | 3°C/s MAX | 6°C/s MAX | 360 |

NOTES:

1. All temperatures measured on the package leads.
2. Maximum number of reflow cycles not to exceed 2.



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M120.E (26MAR24)

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