## **HIGH FREQUENCY PLANAR INDUCTORS**

Ruggedized



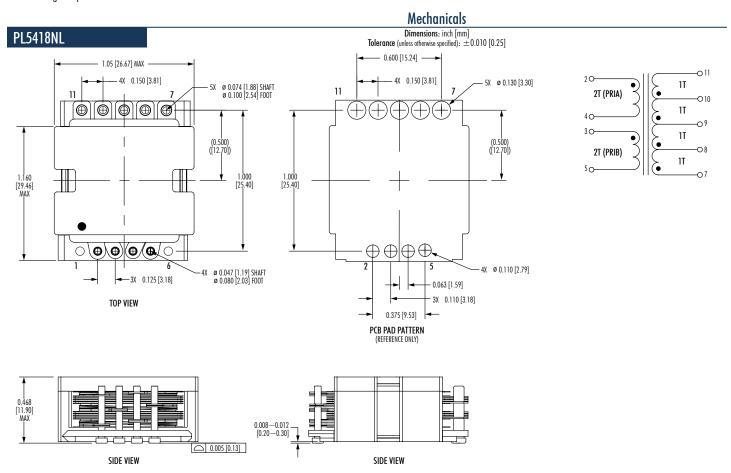


- Power Rating: up to 500W
- Input ET: 40 (V \* µsec MAX)
- I rated: 51A
- Frequency Range: 200kHz to 400kHz
- Operating Temperature:  $-40^{\circ}$ C to  $+125^{\circ}$ C
- Lead Finish: Sn100
- Moisture Sensitivity Level: 1

| Electrical Specifications @ 25°C |                        |             |   |                               |                 |       |        |  |  |  |  |  |
|----------------------------------|------------------------|-------------|---|-------------------------------|-----------------|-------|--------|--|--|--|--|--|
|                                  | Turns<br>(±:           |             | Inductance Leakage Inductance<br>100KHz, 0.10 Vrms 100KHz, 0.10 Vrms<br>(µH MIN) (µH MIN) |                               | DCR MAX<br>(mΩ) |       |        | Dielectric Withstanding Voltage<br>55 MIN<br>(VDC) |  |  |  |  |
| Part<br>Number                   | <u>(2-4)</u><br>(7-11) | (2-4) (3-5) | (2-4)   | (2-4) with other pins shorted | (2-4)           | (3-5) | (7-11) | 2, 3 to 7  |  |  |  |  |
| PL5418NL                         | 0.50                   | 1           | 11.2  | 0.30                          | 2               | 2     | 2.3    | 1750   |  |  |  |  |

## NOTES:

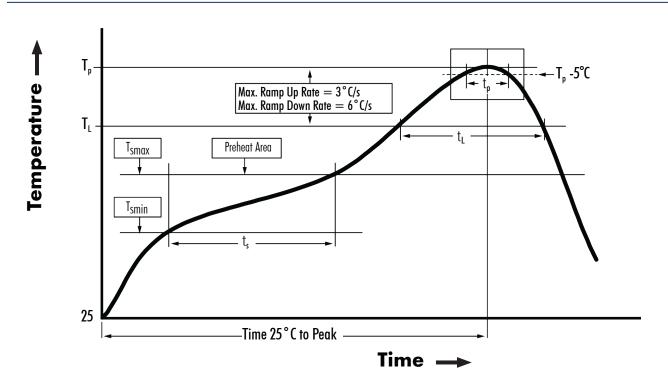
- 1. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. PL5418NLT
- 2. The current rating (I rated) is based on the temperature rise of the component and represents the rms current, which will cause a typical temperature rise of 55°C with 50LFM forced cooling or equivalent.







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



| T <sub>smin</sub><br>(°C) | T <sub>smax</sub><br>(°C) | T <sub>L</sub><br>(°C) | T <sub>P</sub><br>(°C MAX) | † <sub>s</sub><br>(s) | t <sub>L</sub><br>(s) | t <sub>P</sub><br>(s MAX) | Ramp-up rate<br>(T <sub>L</sub> to T <sub>P</sub> ) | Ramp-down rate<br>(T <sub>P</sub> to T <sub>L</sub> ) | Time<br>25°C to peak temperature<br>(s MAX) |  |
|---------------------------|---------------------------|------------------------|----------------------------|-----------------------|-----------------------|---------------------------|---|---|---|--|
| Non-Lead Profile          |                           |                        |                            |                       |                       |                           |   |   |   |  |
| 150                       | 200                       | 217                    | 245                        | 60 - 120              | 60 - 150              | 30                        | 3°C/s MAX   | 6°C/s MAX   | 480   |  |

## NOTES:

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

