






# SMT Power Inductor

Shielded Drum Core - PA4331.XXXNLT Series



-  **Height:** 1.2mm Max
-  **Footprint:** 3.2mm x 3.2mm Max
-  **Current Rating:** up to 4.2A
-  **Inductance Range:** 0.33uH to 10uH
-  Shielded magnetic circuit reduces leakage flux, Fe base metal core enables high saturation and metalized core termination results in excellent shock resistance.

## Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

| Part Number   | Inductance<br>1MHz, 1V<br>uH ±20% | Rated<br>Current<br>A | Min.<br>Self-Resonant<br>Frequency<br>MHz | DC<br>Resistance |      | Saturation<br>Current<br>(20°C)<br>A | Heating<br>Current |
|---------------|-----------------------------------|-----------------------|---|------------------|------|--------------------------------------|--------------------|
|               |                                   |                       |   | MAX.             | TYP. |                                      | Δ T ≈ 40°C         |
|               |                                   |                       |   | mΩ               | mΩ   |                                      | A                  |
| PA4331.331NLT | 0.33                              | 4.20                  | 107                                       | 27               | 23   | 7.20                                 | 4.20               |
| PA4331.471NLT | 0.47                              | 3.90                  | 86  | 33               | 28   | 6.80                                 | 3.90               |
| PA4331.681NLT | 0.68                              | 3.40                  | 63  | 42               | 35   | 5.80                                 | 3.40               |
| PA4331.102NLT | 1.0                               | 2.70                  | 51  | 54               | 45   | 4.20                                 | 2.70               |
| PA4331.152NLT | 1.5                               | 2.50                  | 37  | 74               | 64   | 3.40                                 | 2.50               |
| PA4331.222NLT | 2.2                               | 2.05                  | 28  | 108              | 90   | 2.80                                 | 2.05               |
| PA4331.332NLT | 3.3                               | 1.70                  | 25  | 155              | 129  | 2.20                                 | 1.70               |
| PA4331.472NLT | 4.7                               | 1.30                  | 20  | 235              | 196  | 2.00                                 | 1.30               |
| PA4331.682NLT | 6.8                               | 1.10                  | 16  | 340              | 290  | 1.60                                 | 1.10               |
| PA4331.103NLT | 10                                | 1.00                  | 12  | 474              | 395  | 1.20                                 | 1.00               |

### Notes:

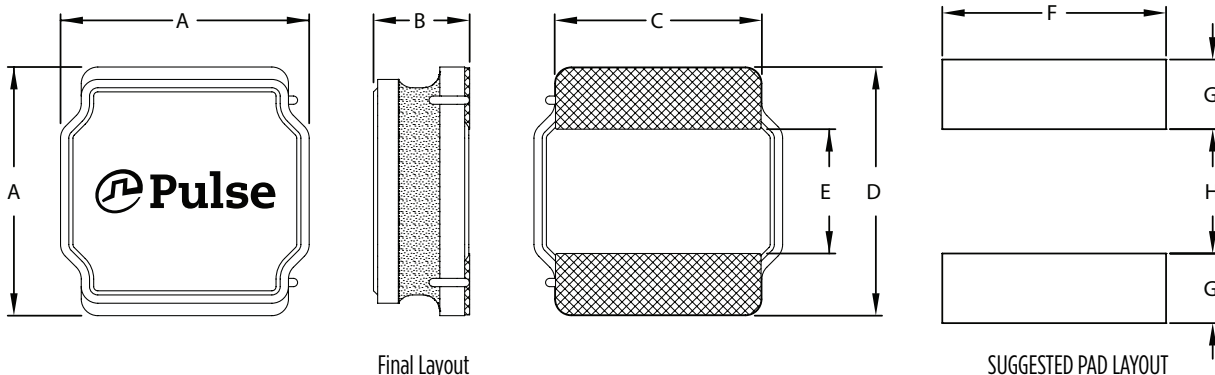
- Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- The rated current as listed is either the saturation current (@ 20°C) or the heating current (Δ T ≈ 40°C) depending on which value is lower.
- The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effect) to the component.
- The heating current is the DC current required to raise the component temperature by approximately 40°C. Take note that the components' performance varies depending on the system condition. It is suggested that the component be tested at the system level, to verify the temperature rise of the component during system operation.
- Maximum voltage across terminals to be limited to <40Vdc

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## Mechanical

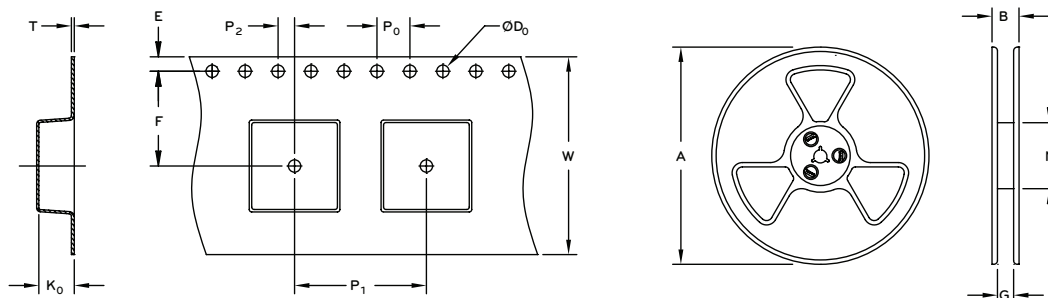
PA4331.XXXNLT



| Series        | A       | B       | C     | D     | E     | F     | G     | H     |
|---------------|---------|---------|-------|-------|-------|-------|-------|-------|
| PA4331.XXXNLT | 3.2 MAX | 1.2 MAX | (2.6) | (3.0) | (1.5) | (3.2) | (0.8) | (1.5) |

All Dimensions in mm.

## TAPE & REEL INFO



## SURFACE MOUNTING TYPE, REEL/TAPE LIST

|               | REEL SIZE (mm) |      |     |    | TAPE SIZE (mm) |     |                |                |                |                |   |      |                | QTY      |
|---------------|----------------|------|-----|----|----------------|-----|----------------|----------------|----------------|----------------|---|------|----------------|----------|
|               | A              | B    | G   | N  | E              | F   | D <sub>0</sub> | P <sub>1</sub> | P <sub>0</sub> | P <sub>2</sub> | W | T    | K <sub>0</sub> | PCS/REEL |
| PA4331.XXXNLT | Ø178           | 14.4 | 8.4 | 58 | 1.75           | 3.5 | 1.5            | 4              | 4              | 2              | 8 | 0.25 | 1.2            | 2000     |

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