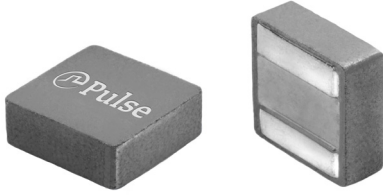


# SMT Power Inductor

High Current Molded Power Inductor - PA5001.XXXNLT Series



- Height:** 2.1mm Max
- Footprint:** 4.3mm x 4.3mm Max
- Current Rating:** up to 38Apk
- Inductance Range:** 0.10uH to 1.8uH
- High current, low DCR, and high efficiency
- High reliability
- Minimized acoustic noise and minimized leakage flux noise

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

| Part Number   | Inductance<br>100KHz, 0.1V<br><br>uH±20% | Rated Current<br><br>A | DC Resistance |       | Saturation Current<br>(25C)<br><br>A |
|---------------|------------------------------------------|------------------------|---------------|-------|--------------------------------------|
|               |                                          |                        | TYP.          | MAX.  |                                      |
|               |                                          |                        | mΩ            | mΩ    |                                      |
| PA5001.101NLT | 0.10                                     | 18.00                  | 2.20          | 2.42  | 38.00                                |
| PA5001.221NLT | 0.22                                     | 16.80                  | 4.10          | 4.60  | 19.5                                 |
| PA5001.361NLT | 0.36                                     | 14.50                  | 5.60          | 6.30  | 17.00                                |
| PA5001.401NLT | 0.40                                     | 14.00                  | 6.90          | 7.73  | 15.50                                |
| PA5001.561NLT | 0.56                                     | 12.00                  | 8.40          | 9.30  | 14.00                                |
| PA5001.721NLT | 0.72                                     | 10.50                  | 10.40         | 11.60 | 12.00                                |
| PA5001.102NLT | 1.00                                     | 9.60                   | 13.30         | 14.60 | 9.6                                  |
| PA5001.122NLT | 1.20                                     | 9.00                   | 16.20         | 17.90 | 9.0                                  |
| PA5001.152NLT | 1.50                                     | 7.60                   | 21.00         | 23.50 | 8.0                                  |
| PA5001.182NLT | 1.80                                     | 7.00                   | 25.00         | 28.00 | 7.5                                  |

## Notes:

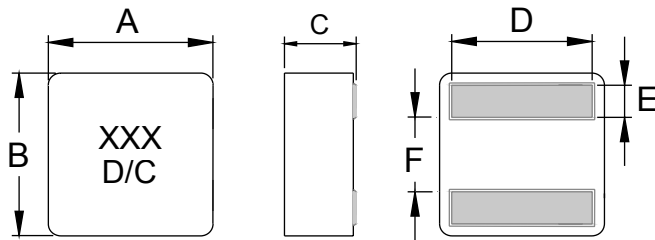
- Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
- The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effect) to the component.
- The rated 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.
- The part temperature (ambient+temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

# SMT Power Inductor

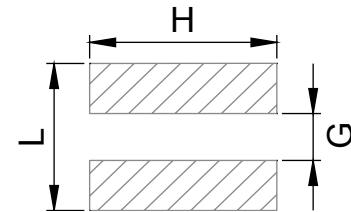
High Current Molded Power Inductor - PA5001.XXXNLT Series

## Mechanical

PA5001.XXXNLT



FINAL LAYOUT

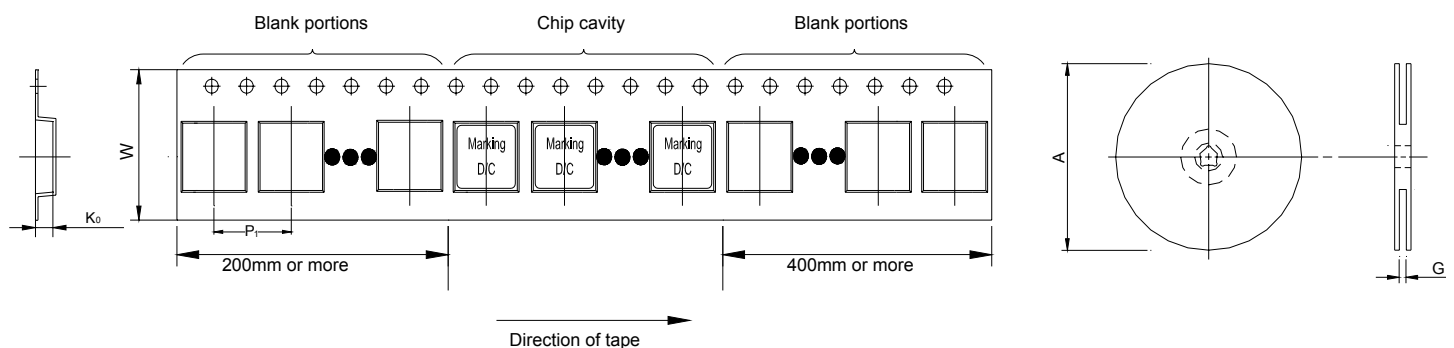


SUGGESTED PAD LAYOUT

| Series        | Mechanical | A       | B       | C       | D       | E        | F        | L         | G         | H         |
|---------------|------------|---------|---------|---------|---------|----------|----------|-----------|-----------|-----------|
| PA5001.XXXNLT | N/A        | 4.1±0.2 | 4.1±0.2 | 1.9±0.2 | 3.4±0.3 | 0.88±0.2 | 1.6±0.25 | 3.4 (REF) | 1.4 (REF) | 3.8 (REF) |

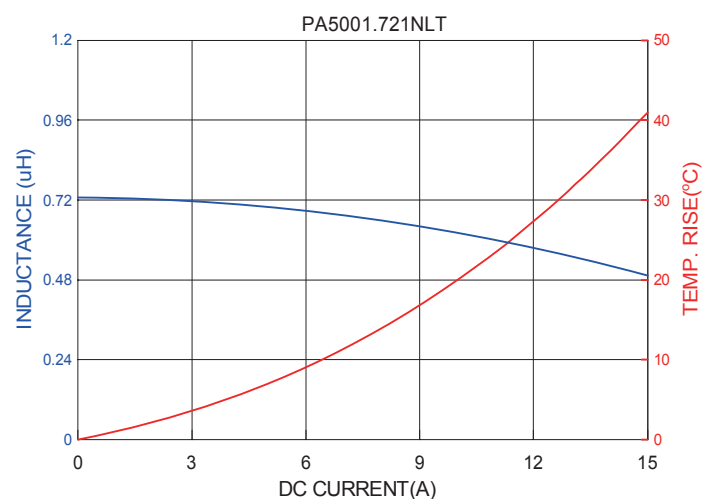
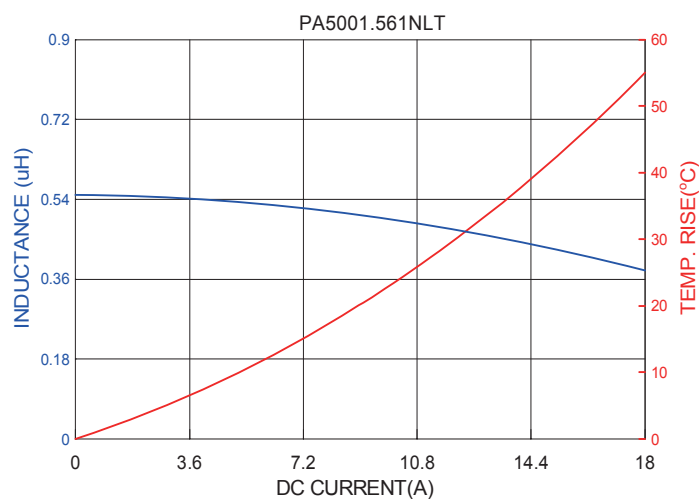
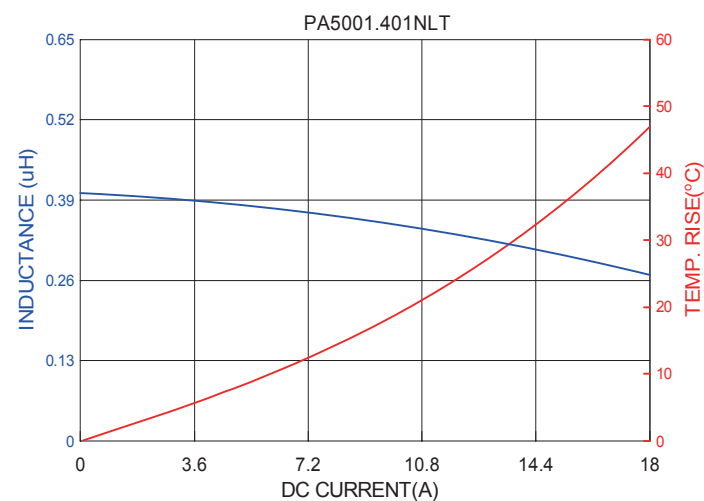
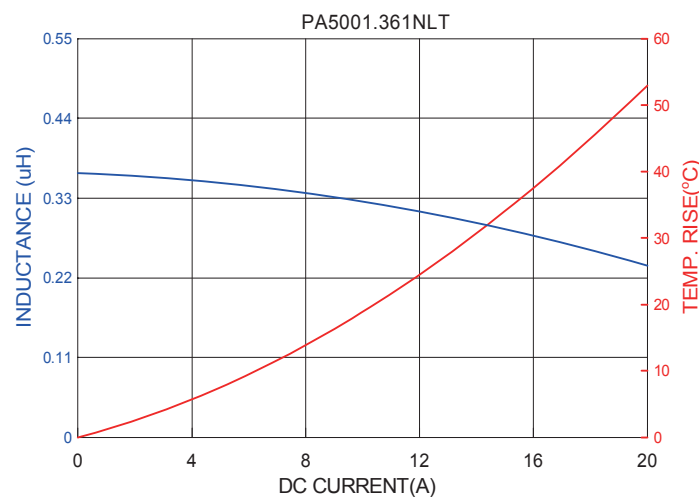
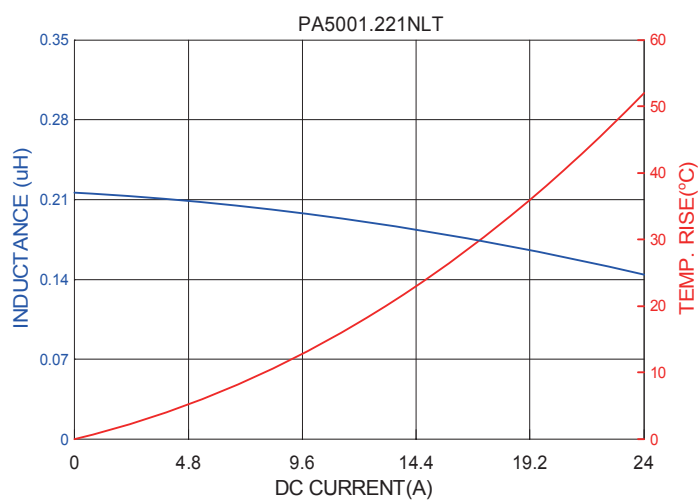
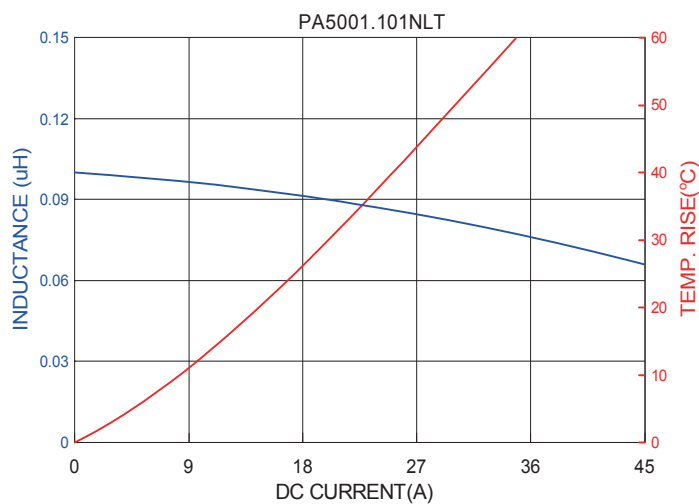
All Dimensions in mm.

## TAPE & REEL INFO



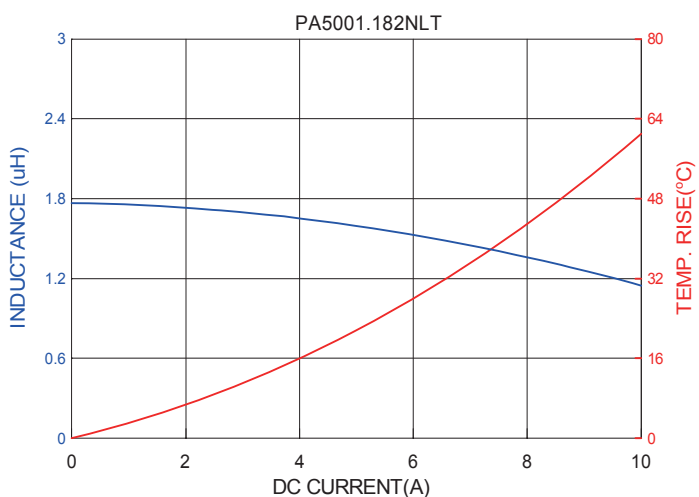
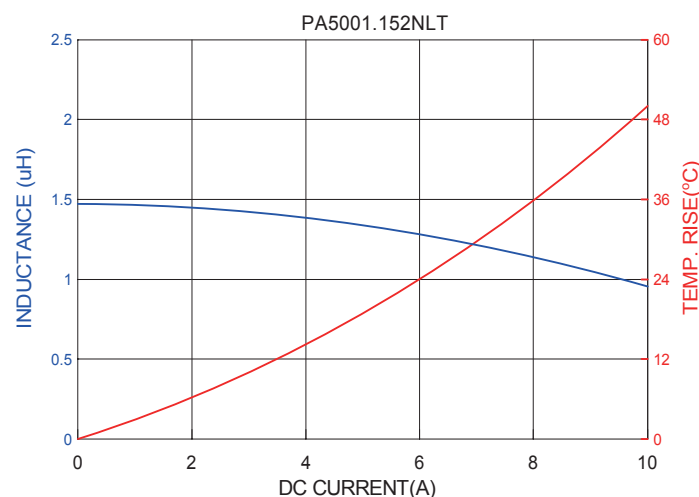
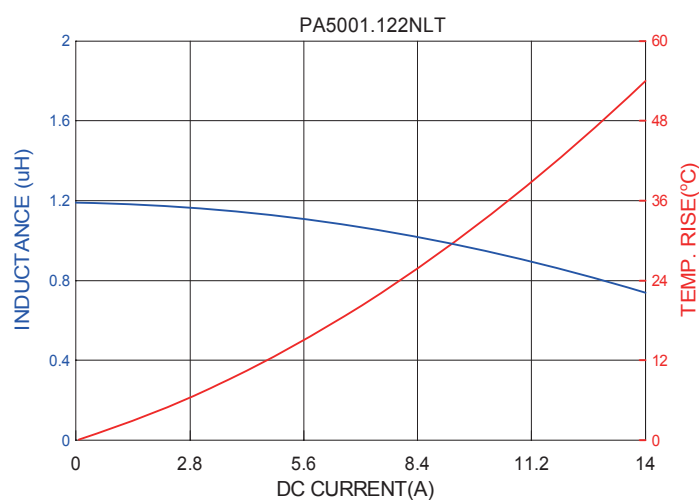
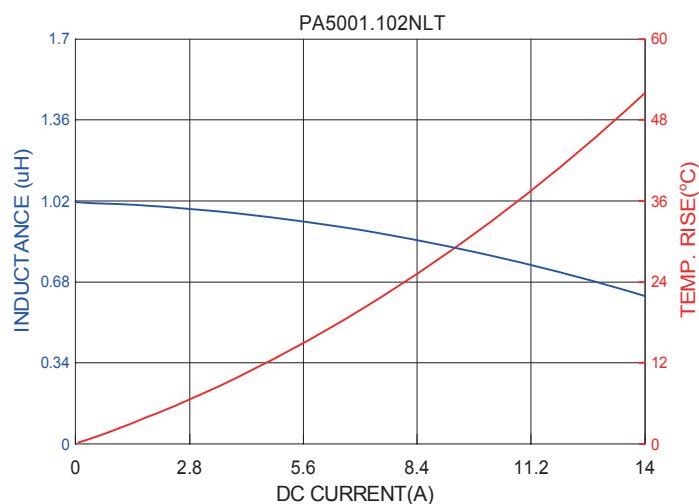
| SURFACE MOUNTING TYPE, REEL/TAPE LIST |                |      |                |    |                |          |
|---------------------------------------|----------------|------|----------------|----|----------------|----------|
|                                       | REEL SIZE (mm) |      | TAPE SIZE (mm) |    |                | QTY      |
|                                       | A              | G    | P <sub>1</sub> | W  | K <sub>0</sub> | PCS/REEL |
| PA5001.XXXNLT                         | Ø330           | 12.4 | 8              | 12 | 2.3            | 3000     |

## Typical Performance Curves



# SMT Power Inductor

High Current Molded Power Inductor - PA5001.XXXNLT Series



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