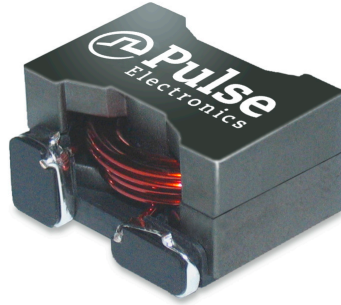


# SMT POWER INDUCTORS

Wire Wound - PA2729.XXXNL Series



- Height:** 12.2mm Max
- Footprint:** 22.2 x 19.1mm Max
- Current Rating:** Over 20A<sub>pk</sub>
- Inductance Range:** 4.7μH to 60μH
- Higher Efficiency Version of PA2050.XXXNL Series in same footprint**

## Electrical Specifications @ 25°C - Operating Temperature -55°C to +130°C

| Part <sup>6</sup><br>Number | Inductance<br>@ 0A <sub>dc</sub><br>(μH +/-15%) | Inductance<br>@ I <sub>rated</sub><br>(μH TYP) | I <sub>rated</sub> <sup>1</sup><br>(A <sub>dc</sub> ) | DCR<br>(mΩ±10%) | Saturation<br>Current I <sub>sat</sub><br>(A TYP) |       | Heating <sup>3</sup><br>Current I <sub>dc</sub><br>(A TYP) | Core Loss<br>Factor<br>K <sub>2</sub> |
|-----------------------------|---|--|---|-----------------|---|-------|--|---------------------------------------|
|                             |   |  |   |                 | 25°C  | 100°C |  |                                       |
| PA2729.502NL                | 4.9   | 4.7  | 16.4  | 3.4             | 20.9  | 17.1  | 16.4   | 158                                   |
| PA2729.602NL                | 6.0   | 5.7  | 14.4  | 4.4             | 19.6  | 16.1  | 14.4   | 155                                   |
| PA2729.802NL                | 8.3   | 7.9  | 13.3  | 5.1             | 16.8  | 13.8  | 13.3   | 181                                   |
| PA2729.113NL                | 10.9  | 10.5   | 12.5  | 5.8             | 14.7  | 12.1  | 12.5   | 206                                   |
| PA2729.173NL                | 17.1  | 16.8   | 9.9   | 9.1             | 11.7  | 9.6   | 9.9  | 258                                   |
| PA2729.203NL                | 20.7  | 20.1   | 8.5   | 12.0            | 10.7  | 8.8   | 8.5  | 284                                   |
| PA2729.243NL                | 24.5  | 23.0   | 8.1   | 12.5            | 9.8   | 8.0   | 8.1  | 310                                   |
| PA2729.283NL                | 28.1  | 27.8   | 7.8   | 14.0            | 9.0   | 7.4   | 7.8  | 335                                   |
| PA2729.333NL                | 32.9  | 31.5   | 6.7   | 18.5            | 8.4   | 6.9   | 6.7  | 361                                   |
| PA2729.383NL                | 38.3  | 37.2   | 6.5   | 19.7            | 7.8   | 6.4   | 6.5  | 387                                   |
| PA2729.443NL                | 44.0  | 42.0   | 6.2   | 21.5            | 7.3   | 6.6   | 6.2  | 413                                   |
| PA2729.603NL                | 60.3  | 57.5   | 5.1   | 31.5            | 6.2   | 6.1   | 5.1  | 490                                   |

### Notes:

- The rated current as listed is either the saturation current or the heating current depending on which value is lower.
- The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C and 100°C). This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
- The heating current is the DC current which causes the part temperature to increase by approximately 40°C.
- 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. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise formula can be used:  

$$\Delta B \text{ (Gauss)} = K_2 * \Delta I$$

$$\text{Core Loss (W)} = 1.5E-13 * (\text{Freq\_kHz})^{1.63} * \Delta B^{2.62}$$
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

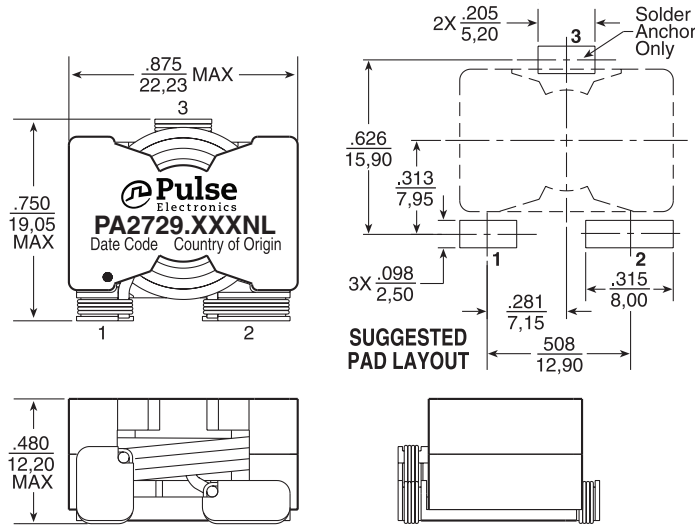
# SMT POWER INDUCTORS

Wire Wound - PA2729.XXXNL Series

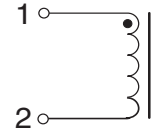
## Mechanicals

## Schematics

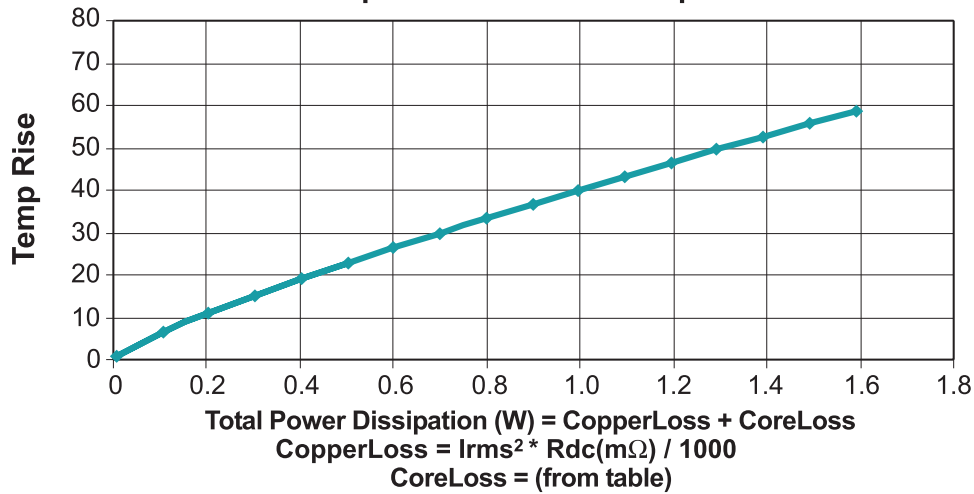
PA2729.XXXNL



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$



## Temp Rise vs Power Dissipation



## For More Information

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