## THT Integrated Common Mode and Differential Mode Choke

PA4040.XXXNL





- Common Mode and Differential Mode Choke intergrated into a single component reducing overall losses and reducing footprint
- Dielectric Strength: 1500Vrms
- Common Mode Inductance: 4.5mH (1Arms) to 0.28mH (3.5Arms)
- Differential Mode Inductance: 685uH (1.33Apk) to 55uH (4.6Apk)
- **B** Size (LxWxH): 31.0mm x 24.9mm x 16.5 mm Max
- Safety Spacing: 3.0mm creepage and clearance between windings, 1.5mm between windings and core

| Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C |  |   |                    |                     |   |                              |   |
|--|--|---|--------------------|---------------------|---|------------------------------|---|
| Pulse PN   | Common Mode<br>Inductance<br>(mH Min)<br>(1-2)=(4-3) | Differential Mode<br>Inductance<br>(uH Min)<br>(1-4 with 2,3 shorted) | <b>Irms</b><br>(A) | <b>ipeak</b><br>(A) | <b>DCR/winding</b><br>(mΩ Max)<br>(1-2)=(4-3) | <b>SRF</b><br>(MHz, typical) | <b>Impedance at SRF</b><br>(kΩ typical) |
| PA4040.001NL   | 4.5  | 685   | 1.0                | 1.33                | 245   | 0.5                          | 140                                     |
| PA4040.002NL   | 1.25   | 320   | 1.5                | 2                   | 120   | 0.7                          | 47                                      |
| PA4040.003NL   | 0.41   | 96  | 2.5                | 3.33                | 46  | 1.45                         | 8.5                                     |
| PA4040.004NL   | 0.28   | 55  | 3.5                | 4.6                 | 32  | 1.75                         | 5.3                                     |

### Notes:

- 1. The current rating (Irms) is based upon the temperature rise of the component and represents the rms current which will cause a typical temperature rise of 40°C.
- 2. The peak current is the current which will typically cause a 20% drop in the differential mode inductance. The peak current should not be exceeded in the application as it will reduce the CM and DM rejection of the component.
- 3. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- 4. The PA4040.XXXNL is designed to provide 3.0mm of safety spacing (creepage and clearance distance) between windings and 1.5mm of safety spacing (creepage and clearance distance) between both windings and core.

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|-------------|--------|---------|------------------|------------------------|-------------------------|-----------------------|----------------------|
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**Schematic** 





### For More Information

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