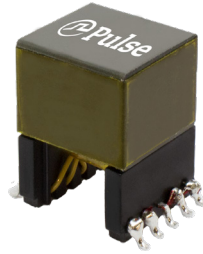


High Frequency Wire Wound Transformers

EP13 Reinforced Insulation - PA5000.XXXNL, PA5111.XXXNL, PA5112.XXXNL



- Industry standard footprint with reinforced insulation
- Power Range:** Up to 24W
- Height:** 16.5mm Max
- Footprint:** 17.7mm x 13.5mm Max
- Topology:** Forward and Flyback
- >8.0mm creepage, 5.0kVrms Isolation

| Pulse PN | Electrical Specifications @25°C – Operating Temperature -40°C to 130°C † | | | | Schematic |
|--------------|--|------------------------------------|-----|------------|----------------------------|
| PA5000.001NL | Pri. Inductance | (1-3) | 100 | uH +/- 10% | <p>Forward Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 1.0 | uH Max | |
| | DCR | (1-3) | 130 | mΩ Max | |
| | | (10-9) | 9.0 | | |
| | | (7-6) | 9.0 | | |
| | | (4-5) | 500 | | |
| Hi-Pot | Pri-Sec | 5000 | Vac | | |
| K1 Factor | 32.9 | | | | |
| PA5000.002NL | Pri. Inductance | (1-3) | 100 | uH +/- 10% | <p>Forward Transformer</p> |
| | Lk. Inductance | (10-9) | 1.0 | uH Max | |
| | DCR | (1-3) | 130 | mΩ Max | |
| | | (10-9) | 18 | | |
| | | (7-6) | 18 | | |
| | | (4-5) | 500 | | |
| Hi-Pot | Pri-Sec | 5000 | Vac | | |
| K1 Factor | 32.9 | | | | |
| PA5000.003NL | Pri. Inductance | (1-3) | 100 | uH +/- 10% | <p>Forward Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 1.0 | uH Max | |
| | DCR | (1-3) | 130 | mΩ Max | |
| | | (10-9) | 50 | | |
| | | (7-6) | 50 | | |
| | | (4-5) | 500 | | |
| Hi-Pot | Pri-Sec | 5000 | Vac | | |
| K1 Factor | 32.9 | | | | |
| PA5111.001NL | Pri. Inductance | (1-3) | 80 | uH +/- 10% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 1.5 | uH Max | |
| | DCR | (1-3) | 180 | mΩ Max | |
| | | (10-9) | 9.0 | | |
| | | (7-6) | 9.0 | | |
| | | (4-5) | 500 | | |
| Hi-Pot | Pri-Sec | 5000 | Vac | | |
| K1 Factor | 1913 | | | | |

High Frequency Wire Wound Transformers

EP13 Reinforced Insulation - PA5000.XXXNL, PA5111.XXXNL, PA5112.XXXNL



| Pulse PN | Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹ | | | | Schematic |
|--------------|---|------------------------------------|------|------------|----------------------------|
| PA5111.002NL | Pri. Inductance | (1-3) | 80 | uH +/- 10% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 1.5 | uH Max | |
| | DCR | (1-3) | 180 | mΩ Max | |
| | | (10-9) | 18 | | |
| | | (7-6) | 18 | | |
| | | (4-5) | 500 | | |
| | Hi-Pot | Pri-Sec | 5000 | Vac | |
| K1 Factor | 1913 | | | | |
| PA5111.003NL | Pri. Inductance | (1-3) | 80 | uH +/- 10% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 1.5 | uH Max | |
| | DCR | (1-3) | 180 | mΩ Max | |
| | | (10-9) | 18 | | |
| | | (7-6) | 18 | | |
| | | (4-5) | 500 | | |
| | Hi-Pot | Pri-Sec | 5000 | Vac | |
| K1 Factor | 1913 | | | | |
| PA5112.001NL | Pri. Inductance | (1-3) | 173 | uH +/- 15% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 3.5 | uH Max | |
| | DCR | (1-3) | 475 | mΩ Max | |
| | | (10-9) | 8 | | |
| | | (7-6) | 6.5 | | |
| | | (4-5) | 185 | | |
| | Hi-Pot | Pri-Sec | 5000 | Vac | |
| K1 Factor | 2579 | | | | |
| PA5112.002NL | Pri. Inductance | (1-3) | 160 | uH +/- 15% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 3.5 | uH Max | |
| | DCR | (1-3) | 690 | mΩ Max | |
| | | (10-9) | 15 | | |
| | | (7-6) | 15 | | |
| | | (4-5) | 210 | | |
| | Hi-Pot | Pri-Sec | 5000 | Vac | |
| K1 Factor | 2355 | | | | |
| PA5112.003NL | Pri. Inductance | (1-3) | 155 | uH +/- 15% | <p>Flyback Transformer</p> |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 3.5 | uH Max | |
| | DCR | (1-3) | 510 | mΩ Max | |
| | | (10-9) | 52 | | |
| | | (7-6) | 52 | | |
| | | (4-5) | 175 | | |
| | Hi-Pot | Pri-Sec | 5000 | Vac | |
| K1 Factor | 2305 | | | | |

High Frequency Wire Wound Transformers

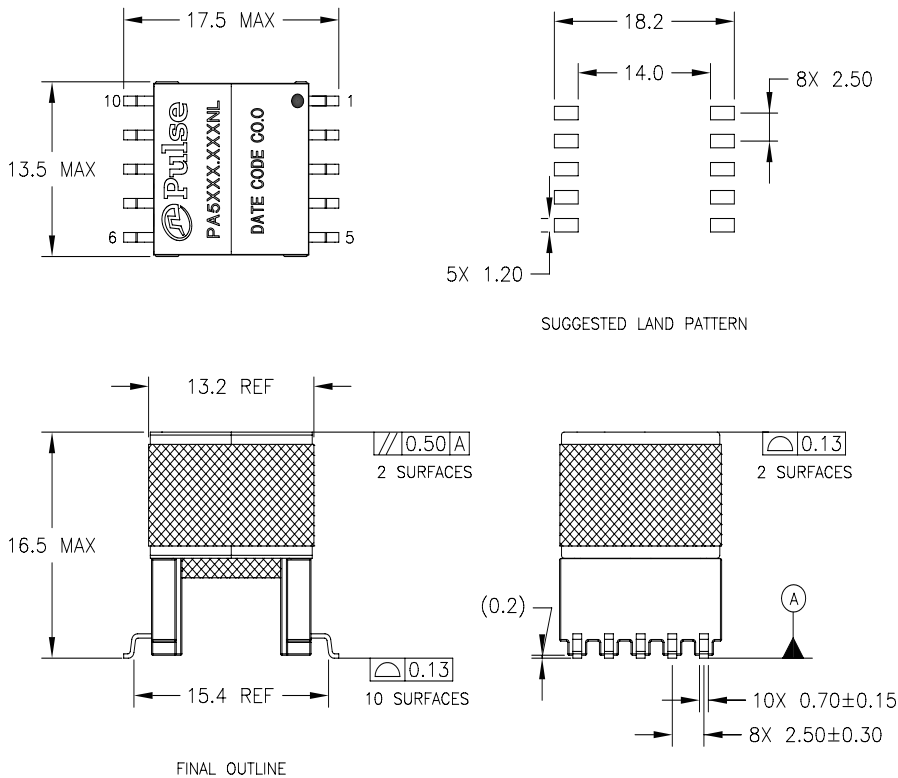
EP13 Reinforced Insulation - PA5000.XXXNL, PA5111.XXXNL, PA5112.XXXNL



- Notes:**
1. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
 2. For flyback topology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 3250 Gauss. To calculate the peak flux density use the following formula:
 $B_{pk} \text{ (Gauss)} = K1_Factor * I_{pk}(A)$
 3. In high volt- μ sec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:
 $CoreLoss \text{ (W)} = 3.84E-14 * (Freq_kHz)^{1.63} * (\square B_Gauss)^{2.63}$
 where $\square B$ can be calculated as:
 For Flyback Topology: $\square B = K1_Factor * \square I(A)$
 For Forward Topology: $\square B = K1_Factor * Volt\text{-}\mu\text{sec}$
 4. The standard pin-numbering for this package is indicated in the below mechanical drawing showing pin 1 on the lower right corner and the numbers proceeding clockwise to pin 10 on the upper right corner.
 5. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. PA5000.001NL becomes PA5000.001NLT). Pulse complies with industry standard tape and reel specification EIA481. The tape and reel for this product has a width (W=32mm), pitch (Po=24mm) and depth (Ko=13.2mm).

Mechanical

PA5000.XXNL / PA5111.XXNL / PA5112.XXXNL



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