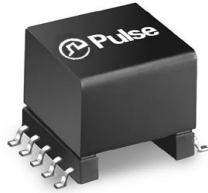


High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



- Industry standard footprint, 30% more power handling
- Power Range:** Up to 70W
- Height:** 14.0mm Max
- Footprint:** 17.7mm x 14.5mm Max
- Topology:** Forward and Flyback

| Part Number | Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹ | | | Schematic | |
|--------------|---|------------------------------------|--------------|----------------------------|--------|
| PA3855.001NL | Pri. Inductance | (1-3) | 54uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.67uH Max | | |
| | DCR | (1-3) | 62 | | mΩ Max |
| | | (9-6) | 6.5 | | |
| | | (10-7) | 6.5 | | |
| | | (4-5) | 120 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 1125.0 | | | | |
| PA3855.002NL | Pri. Inductance | (1-3) | 48uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.67uH Max | | |
| | DCR | (1-3) | 62 | | mΩ Max |
| | | (9-6) | 10 | | |
| | | (10-7) | 10 | | |
| | | (4-5) | 120 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 1000.0 | | | | |
| PA3855.003NL | Pri. Inductance | (1-3) | 41uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.67uH Max | | |
| | DCR | (1-3) | 62 | | mΩ Max |
| | | (9-6) | 20 | | |
| | | (10-7) | 23 | | |
| | | (4-5) | 120 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 854.2 | | | | |
| PA3855.004NL | Pri. Inductance | (1-3) | 21uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.3uH Max | | |
| | DCR | (1-3) | 31 | | mΩ Max |
| | | (9-6) | 10 | | |
| | | (10-7) | 10 | | |
| | | (4-5) | 180 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 538.5 | | | | |

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| Part Number | Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹ | | | Schematic | |
|--------------|---|------------------------------------|----------------|----------------------------|--------|
| PA3855.005NL | Pri. Inductance | (1-3) | 21uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.3uH Max | | |
| | DCR | (1-3) | 31 | | mΩ Max |
| | | (9-6) | 14 | | |
| | | (10-7) | 14 | | |
| | | (4-5) | 180 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 583.3 | | | | |
| PA3855.006NL | Pri. Inductance | (1-3) | 21uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.3uH Max | | |
| | DCR | (1-3) | 31 | | mΩ Max |
| | | (9-6) | 58 | | |
| | | (10-7) | 58 | | |
| | | (4-5) | 180 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 583.3 | | | | |
| PA3855.008NL | Pri. Inductance | (6-9) | 2.5uH +/- 10% | <p>Flyback Transformer</p> | |
| | Lk. Inductance | (6-9) w/ (1,2,3,5) shorted | 0.2uH Max | | |
| | DCR | (1-2) | 80 | | mΩ Max |
| | | (3-5) | 100 | | |
| | | (6,7-9,10) | 9 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 208.3 | | | | |
| PA3856.001NL | Pri. Inductance | (1-3) | 100 uH +/- 15% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.4uH Max | | |
| | DCR | (1-3) | 29.4 | | mΩ Max |
| | | (9-6) | 6.5 | | |
| | | (10-7) | 6.5 | | |
| | | (4-5) | 120 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 27.8 | | | | |
| PA3856.002N | Pri. Inductance | (1-3) | 100uH +/- 15% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.4uH Max | | |
| | DCR | (1-3) | 29.4 | | mΩ Max |
| | | (9-6) | 10 | | |
| | | (10-7) | 10 | | |
| | | (4-5) | 120 | | |
| Hi-Pot | Pri-Sec | 2250 | Vdc | | |
| K1 Factor | 27.8 | | | | |

High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNL



| Part Number | Electrical Specifications @25°C – Operating Temperature -40°C to 130°C ¹ | | | Schematic | |
|--------------|---|------------------------------------|---------------|----------------------------|--------|
| PA3856.003NL | Pri. Inductance | (1-3) | 100uH +/- 15% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.4uH Max | | |
| | DCR | (1-3) | 29.4 | | mΩ Max |
| | | (9-6) | 31.6 | | |
| | | (10-7) | 36 | | |
| | | (4-5) | 120 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 27.8 | | | | |
| PA3856.004NL | Pri. Inductance | (1-3) | 128uH +/- 25% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.15uH Max | | |
| | DCR | (1-3) | 17.6 | | mΩ Max |
| | | (9-6) | 14.4 | | |
| | | (10-7) | 17 | | |
| | | (4-5) | 410 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 41.7 | | | | |
| PA3856.005NL | Pri. Inductance | (1-3) | 128uH +/- 15% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.15uH Max | | |
| | DCR | (1-3) | 17.6 | | mΩ Max |
| | | (9-6) | 31.6 | | |
| | | (10-7) | 36 | | |
| | | (4-5) | 410 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 41.7 | | | | |
| PA3856.006NL | Pri. Inductance | (1-3) | 128uH +/- 15% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-3) w/ (10,9,6,7,4,5) shorted | 0.15uH Max | | |
| | DCR | (1-3) | 17.6 | | mΩ Max |
| | | (9-6) | 105.6 | | |
| | | (10-7) | 122 | | |
| | | (4-5) | 426 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 41.7 | | | | |
| PA3856.007NL | Pri. Inductance | (1-2) | 200uH +/- 25% | <p>Forward Transformer</p> | |
| | Lk. Inductance | (1-2) w/ (7,8,9,10) shorted | 0.36uH Max | | |
| | DCR | (1-2) | 60 | | mΩ Max |
| | | (3-4) | 75 | | |
| | | (8-7) | 90 | | |
| | | (10-9) | 90 | | |
| | Hi-Pot | Pri-Sec | 2250 | | Vdc |
| K1 Factor | 33.3 | | | | |

High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



Notes:

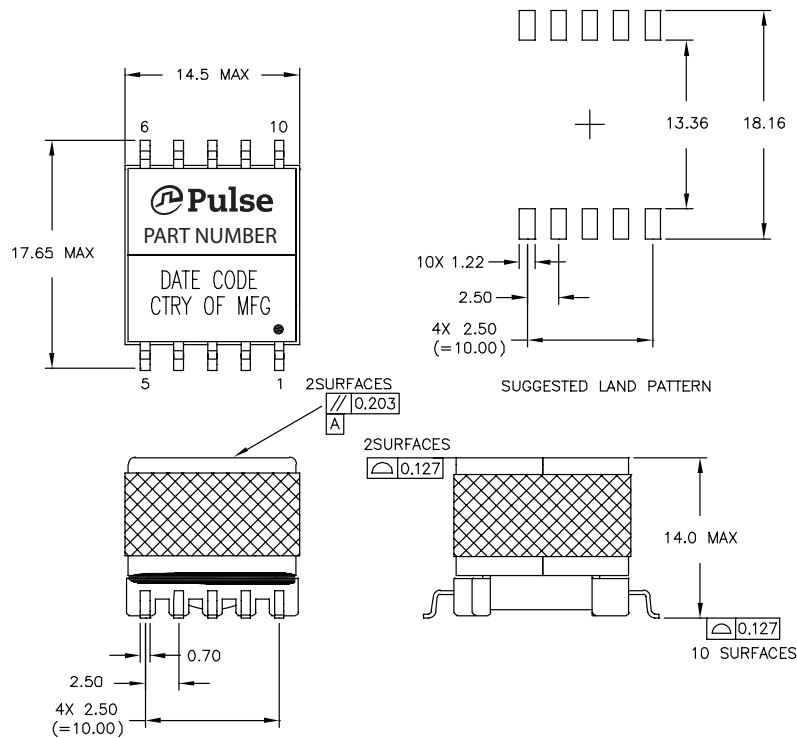
1. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
2. For flyback topology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 2700Gauss. 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:

$$CoreLoss \text{ (W)} = 3.84E-14 * (Freq_kHz)^{1.65} * (\Delta B_Gauss)^{2.65}$$
 where ΔB can be calculated as:
 For Flyback Topology: $\Delta B = K1_Factor * \Delta I(A)$
 For Forward Topology: $\Delta B = K1_Factor * Volt-\mu sec$
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. PA2160.001NL becomes PA2160.001NLT). Pulse complies with industry standard tape and reel specification EIA481.

Mechanical

PM2160.XXXNL

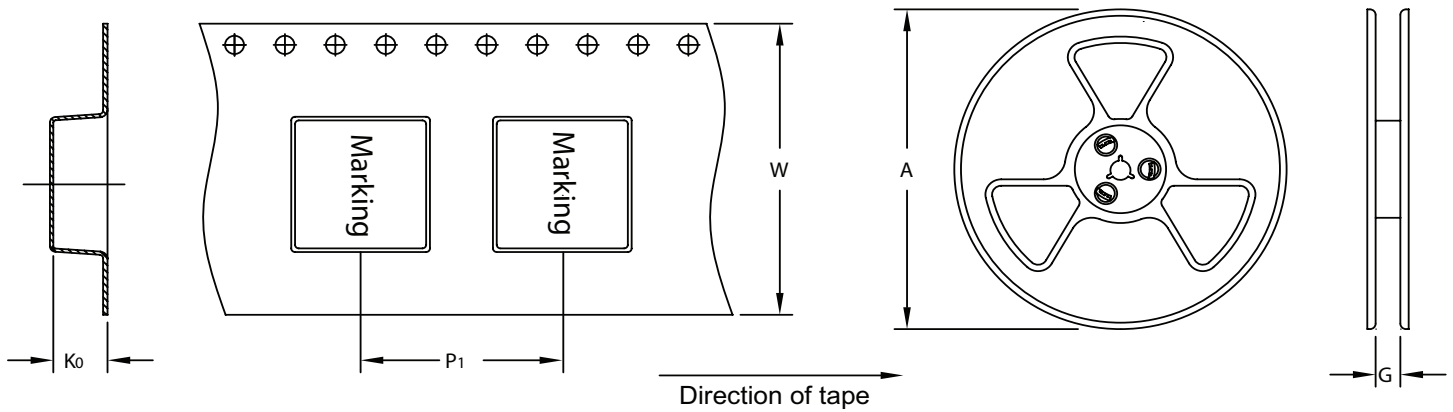


High Frequency Wire Wound Transformers

EP13Plus Platforms - SMT PA3855/56.XXXNLT



TAPE & REEL INFO



| SURFACE MOUNTING TYPE, REEL/TAPE LIST | | | | | | |
|---------------------------------------|----------------|------|----------------|----|----------------|----------|
| PART NUMBER | REEL SIZE (mm) | | TAPE SIZE (mm) | | | QTY |
| | A | G | P ₁ | W | K ₀ | PCS/REEL |
| PA3855/56.XXXNLT | Ø330 | 32.4 | 24 | 32 | 13.2 | 130 |

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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