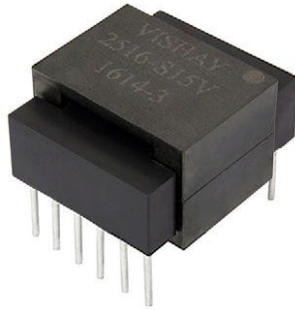


Versatile Through-Hole Planar Transformers



FEATURES

- Higher power density levels versus traditional planar designs
- Designed to meet MIL-PRF-27 requirements
- Minimal board area footprint
- Easily customized to meet design-specific requirements
- Operating frequencies from 100 kHz to 500 kHz
- Split primary design to allow for efficient 120 V or 380 V operation
- Overmolded windings for ruggedized applications
- Minimal parasitic variation
- Operating temperature range -55 °C to +130 °C, power derating above 105 °C
- Patent pending

APPLICATIONS

- Off-line and PFC-derived switchmode power supplies
- Full-bridge / half-bridge converters from 150 W to 300 W
- Industrial control, and alternative energy applications
- Markets include avionics, industrial, military, and medical

| ABSOLUTE MAXIMUM RATINGS | | | |
|--|-------------------------|--------------|-----------------|
| PARAMETER | CONDITIONS | LIMITS | UNITS |
| Dielectric withstand voltage | Pri - sec; 5 s | 1500 | V _{AC} |
| | Sec - sec; 5 s | 500 | V _{AC} |
| Total power dissipation ⁽¹⁾ | T _A = 105 °C | 3 | W |
| Power | | 150 to 300 | W |
| Operating temperature | Continuous | -55 to +130 | °C |
| Storage temperature | Continuous | -65 to +155 | °C |
| Frequency | | 100 to 500 | kHz |
| Size (L x W x H) | | 30 x 26 x 17 | mm |
| Terminals | Through hole | | |

Note

⁽¹⁾ Derate per the graph for temperatures above 105 °C

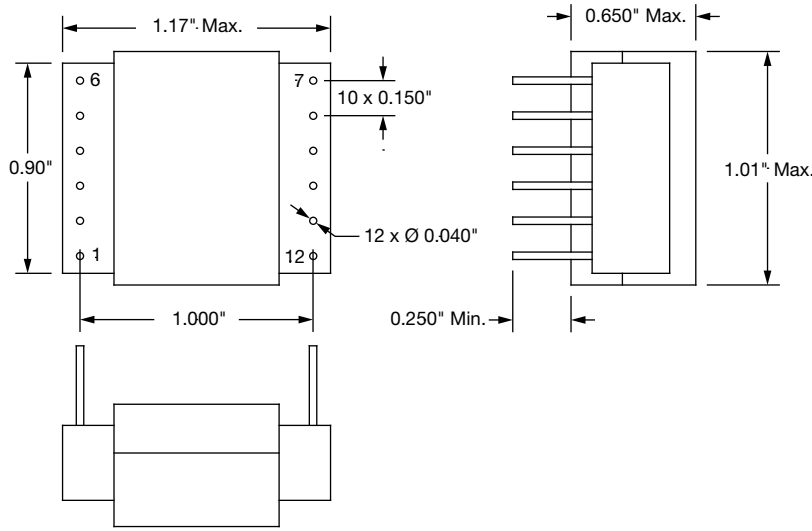
| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | | | |
|------------------------------------|--------------------|---|---|------------------------------------|--------------------------|-------------------------|---------|---------|----------------------------------|
| PART NUMBER | OUTPUT VOLTAGE (V) | MAGNETIZING INDUCTANCE MIN. (μH) ⁽¹⁾ | LEAKAGE INDUCTANCE MAX. (μH) ⁽²⁾ | INTERWINDING CAPACITANCE MAX. (pF) | TRANSFER RATIO PRI : SEC | DCR (mΩ) ⁽³⁾ | | | RATED CURRENT (A) ⁽⁴⁾ |
| | | | | | | 2.3 to 4.5 | 12 to 8 | 11 to 7 | |
| MTPL-2516-S12V | 12 | 450 | 1.70 | 120 | 0.176 | 23.0 | 8 | 8 | 22.0 |
| MTPL-2516-S15V | 15 | 450 | 2.00 | 120 | 0.214 | 28.0 | 12 | 12 | 16.25 |
| MTPL-2516-S24V | 24 | 450 | 1.30 | 120 | 0.333 | 23.0 | 25 | 25 | 12.5 |

Notes

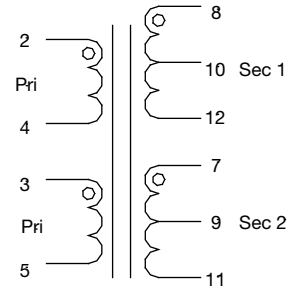
- ⁽¹⁾ 100 mV at 100 kHz, across 2.3 to 4.5
⁽²⁾ 100 mV at 100 kHz across 2.3 to 4.5, short 7 through 12
⁽³⁾ T_A = 25 °C
⁽⁴⁾ Current rated for 40 °C temperature rise, secondaries in parallel



DIMENSIONS in inches



Schematic



For 90 V to 270 V operation tie 2,3 and 4,5.
For 380 V operation tie 3,4.

TEMPERATURE RISE VS. POWER DISSIPATION (W)





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