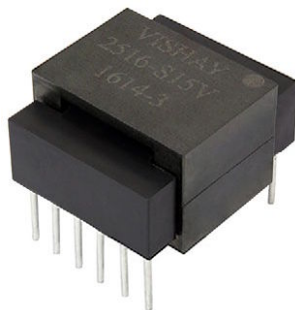


Versatile Through-Hole Planar Transformers



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
- MTPL design; PATENT(S): www.vishay.com/patents

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

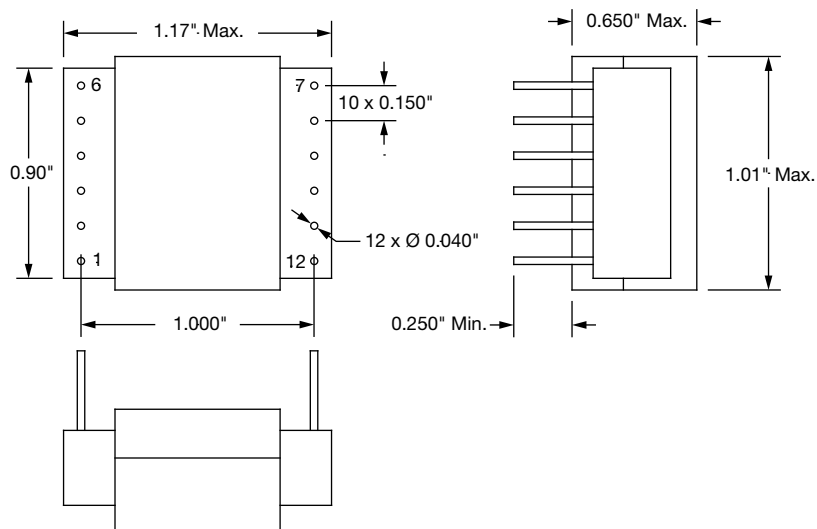
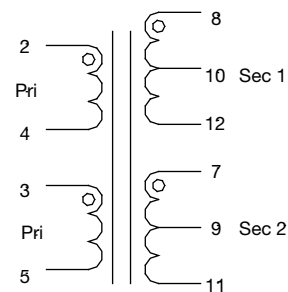
Notes

⁽¹⁾ 100 mV at 100 kHz, across 2.3 to 4.5

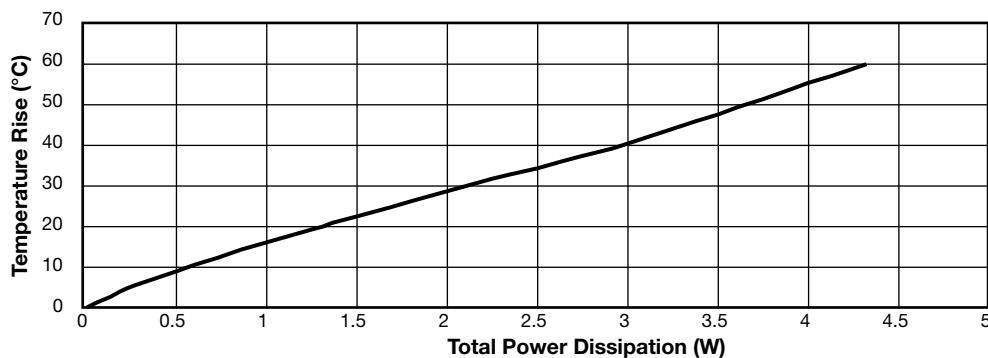
⁽²⁾ 100 mV at 100 kHz across 2.3 to 4.5, short 7 through 12

⁽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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