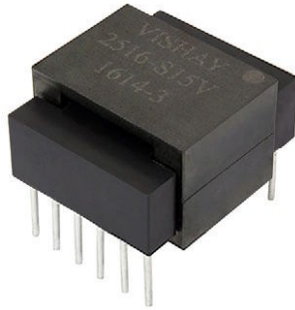


## Versatile Through-Hole Planar Transformers



### 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 <sub>AC</sub>
	Sec - sec; 5 s	500	V <sub>AC</sub>
Total power dissipation <sup>(1)</sup>	T <sub>A</sub> = 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

<sup>(1)</sup> Derate per the graph for temperatures above 105 °C

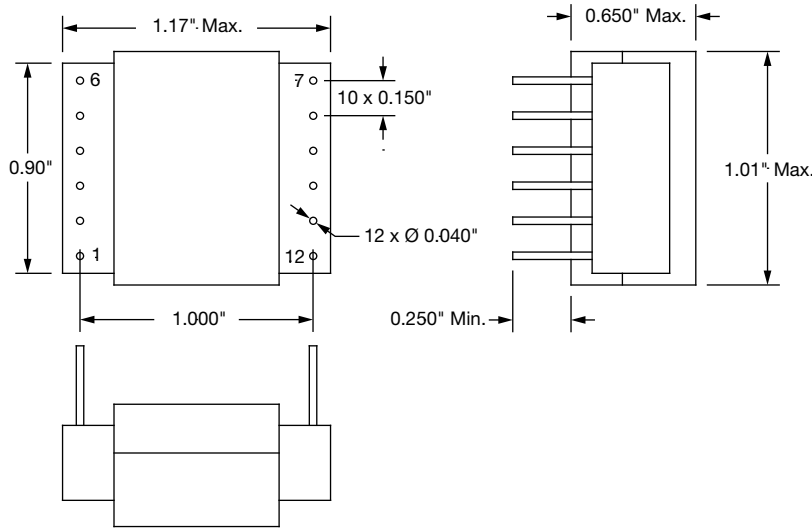
STANDARD ELECTRICAL SPECIFICATIONS									
PART NUMBER	OUTPUT VOLTAGE (V)	MAGNETIZING INDUCTANCE MIN. (μH) <sup>(1)</sup>	LEAKAGE INDUCTANCE MAX. (μH) <sup>(2)</sup>	INTERWINDING CAPACITANCE MAX. (pF)	TRANSFER RATIO PRI : SEC	DCR (mΩ) <sup>(3)</sup>			RATED CURRENT (A) <sup>(4)</sup>
						2.3 to 4.5	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

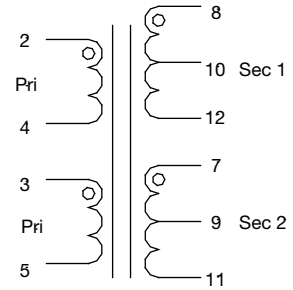
- <sup>(1)</sup> 100 mV at 100 kHz, across 2.3 to 4.5  
<sup>(2)</sup> 100 mV at 100 kHz across 2.3 to 4.5, short 7 through 12  
<sup>(3)</sup> T<sub>A</sub> = 25 °C  
<sup>(4)</sup> Current rated for 40 °C temperature rise, secondaries in parallel



## DIMENSIONS in inches

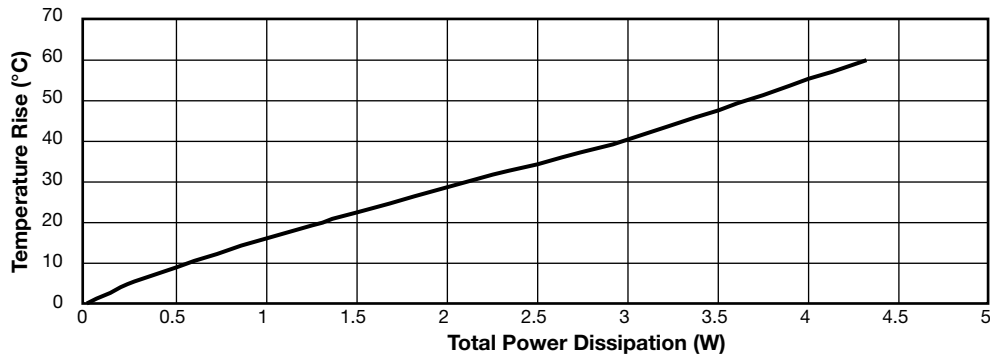


### Schematic



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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