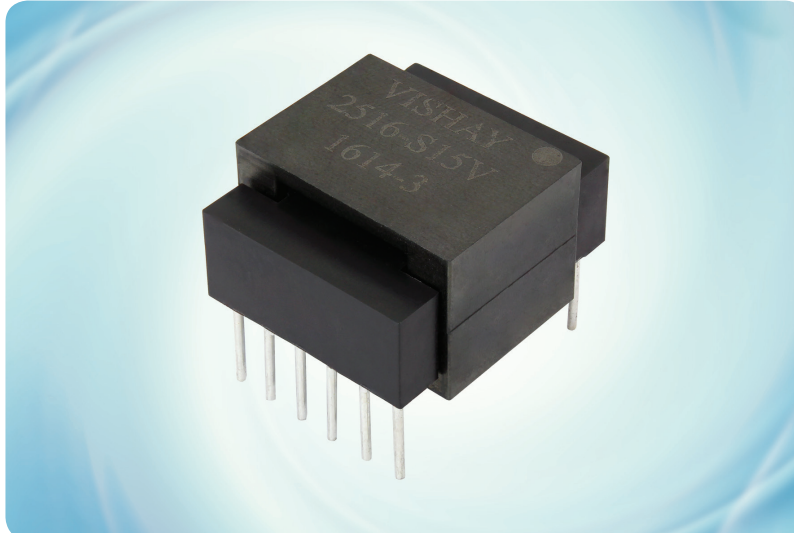


## Full-Bridge Hybrid Planar Transformer



### KEY BENEFITS

- Low profile
- Environmentally sealed to allow operation in harsh environments
- Low DCR
- 40 % better winding fill factor compared to conventional planar transformers
- Low cost

### 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

### RESOURCES

- Datasheet: MTPL-2516 - [www.vishay.com/doc?34433](http://www.vishay.com/doc?34433)
- For technical questions contact [magnetics@vishay.com](mailto:magnetics@vishay.com)

### Versatile Planar Transformer

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
Operating temperature	Continuous	-55 to +130	°C
Storage temperature	Continuous	-65 to +155	°C

**Note**

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

**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

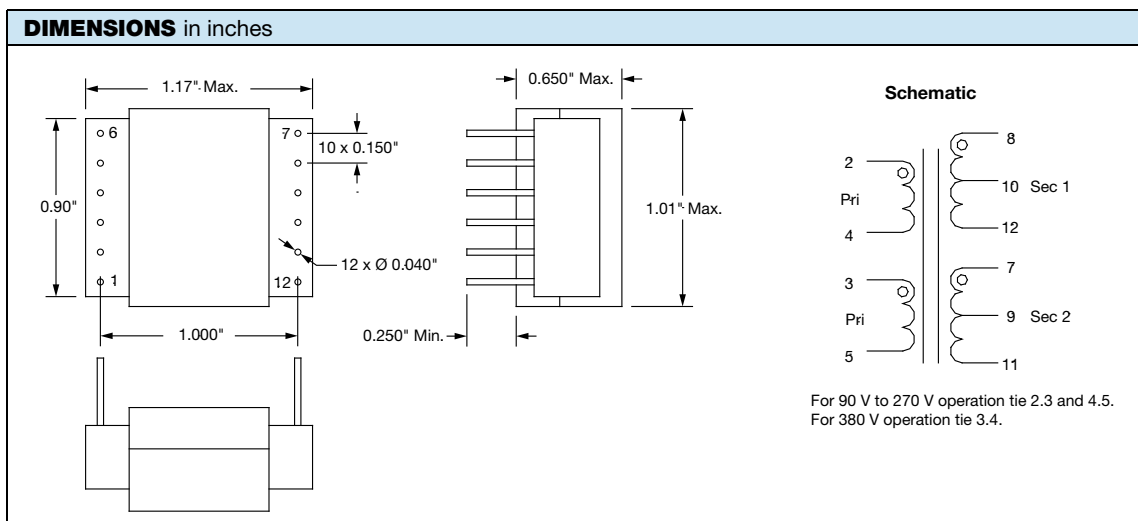
**APPLICATIONS**

- 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

MODEL SECTION TABLE									
PART NUMBER	OUTPUT VOLTAGE (V)	MAGNETIZING INDUCTANCE <sup>(1)</sup> (μH MIN.)	LEAKAGE INDUCTANCE <sup>(2)</sup> (μH MAX.)	INTERWINDING CAPACITANCE (pF MAX.)	TRANSFER RATIO PRI : SEC	DCR <sup>(3)</sup> (mΩ)			RATED CURRENT <sup>(4)</sup> (A)
						2.3 to 4.5	12 to 8	11 to 7	
TPL-2516-S12V	12	450	1.70	120	0.176	23.0	8	8	22.0
TPL-2516-S15V	15	450	2.00	120	0.214	28.0	12	12	16.25
TPL-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.



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