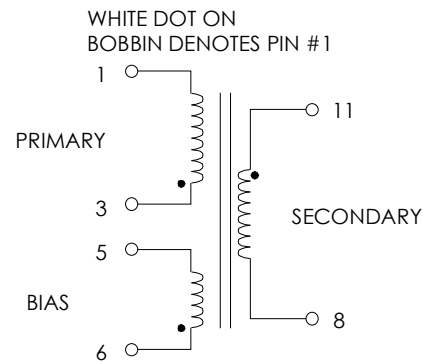


**TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C**

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS TOP226Y OR TOP204Y. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (3-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	493	548	603	μHY
TURN RATIO'S: SEC (11-8) : PRIMARY (3-1) BIAS (6-5) : PRIMARY (3-1)	-----	1: 3.60 1: 7.20	-----	± 4% ± 4%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	20.0	25.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	85  0.100  ----- ----- ----- -----	----- 28.0 ----- ----- 0.20 0.20 50.0	265  2.20 2.50 ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

**FIGURE 1: SCHEMATIC DIAGRAM****NOTE1:**

**REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:**

A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS  
B) TRIPLE BASIC INSULATED SECONDARY.

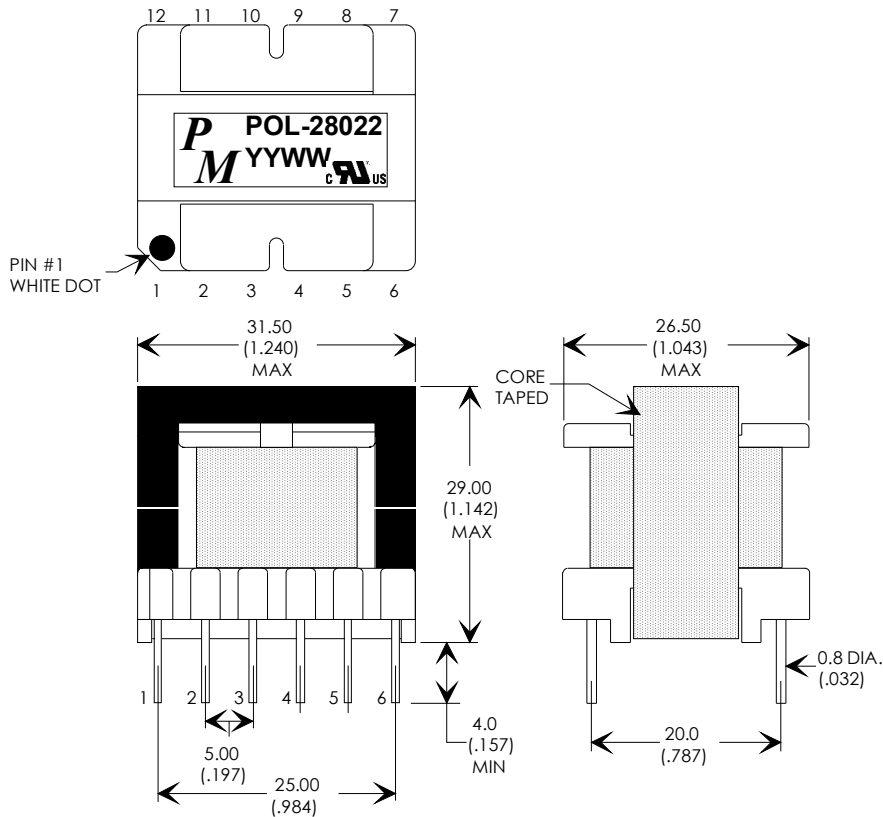
C) DESIGNED TO MEET ≥6.2mm CREEPAGE REQUIREMENTS.

D) VARNISH FINISHED ASSEMBLY.

E) UL 1950 & CSA-950 CERTIFIED: FILE #E162344.

F) UL CLASS (B) 130 INSULATION SYSTEM PM130-## UL FILE #E177139).

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

**FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)****RoHS****TRANSFORMER CONTROL DRAWING**

PREMIER P/N: POL-28022	REVISION: 04/27/20
ENGR: TOM O'NEIL	REF: TOP226/204
SCALE: NONE	SHEET: 1 OF 2

## APPLICATION NOTES

Premier Magnetics' POL-28022 Switch Mode Transformer was designed for use with Power Integrations, Inc. TOP226 or TOP204Y three terminal off-line PWM switching regulator in the Flyback Buck-Boost circuit configuration. This conversion topology can provide isolated multiple outputs with efficiencies up to 90%. Premier's POL-28022 transformer has been optimized to provide maximum power throughput.

The TOPXXX series from Power Integrations, Inc. are self contained 100KHz three terminal voltage controlled PWM switching regulators. This series contains all necessary functions for an off-line switched mode control DC power source. These switching regulators provide a very simple solution to off-line designs. The inductors and transformer used with the PWR-TOPXXX are critical to the performance of the circuit. They define the overall efficiency, output power and overall physical size.

Below is a universal input high precision 62 watt application circuit utilizing Power Integrations TOP226 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. A properly sized heat sink for the TOP226 is required for efficient and reliable operation. The use of the VTK-01002 (Sendust type) output inductor will provide maximum efficiency -vs- the lower cost VTP-01002 (-52 powdered iron). Soft start capacitor C<sub>ss</sub> is optional and application dependent.

**FIGURE 3: TYPICAL APPLICATION CIRCUIT**

