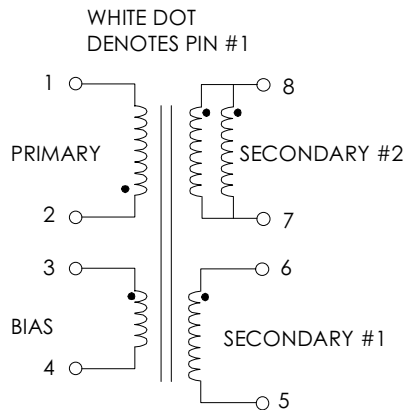


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP214YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	486	540	594	μHY
TURN RATIO'S: SEC #1 (6-5) : PRIMARY (2-1) SEC #2 (8-7) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-----	1: 2.17 1:14.29 1: 6.25	-----	± 3% ± 3% ± 3%
PRI LEAKAGE IND. (SEC'S SHORT) 0.250Vrms @ 100KHz	-----	15.0	25.0	μHY
HIPOT: PRIMARY & BIAS TO SECONDARY'S SECONDARY #1 TO SECONDARY #2	3000 1500	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: ⁽¹⁾ AC LINE VOLTAGE 47/400 Hz SEC #1 OUTPUT VOLTAGE SEC #1 OUTPUT mA CONTINUOUS SEC #1 LOAD REGULATION 10-100% SEC #2 OUTPUT VOLTAGE ⁽²⁾ SEC #2 OUTPUT mA CONTINUOUS SEC #2 LOAD REGULATION 10-100% LINE REGULATION (85 TO 265Vac) RIPPLE EACH OUTPUT TRANSFORMER TEMPERATURE RISE	85 28.0 20 ----- ----- 200 ----- ----- ----- ----- -----	----- 30.0 ----- 8.0 ⁽³⁾ 5.0 ----- 0.50 0.20 100.0 20.0	265 ----- 500 ----- 1000 ----- ----- ----- -----	Vac Vdc mA ±% Vdc mA ±% ±% ±mV °C

FIGURE 1: SCHEMATIC DIAGRAM

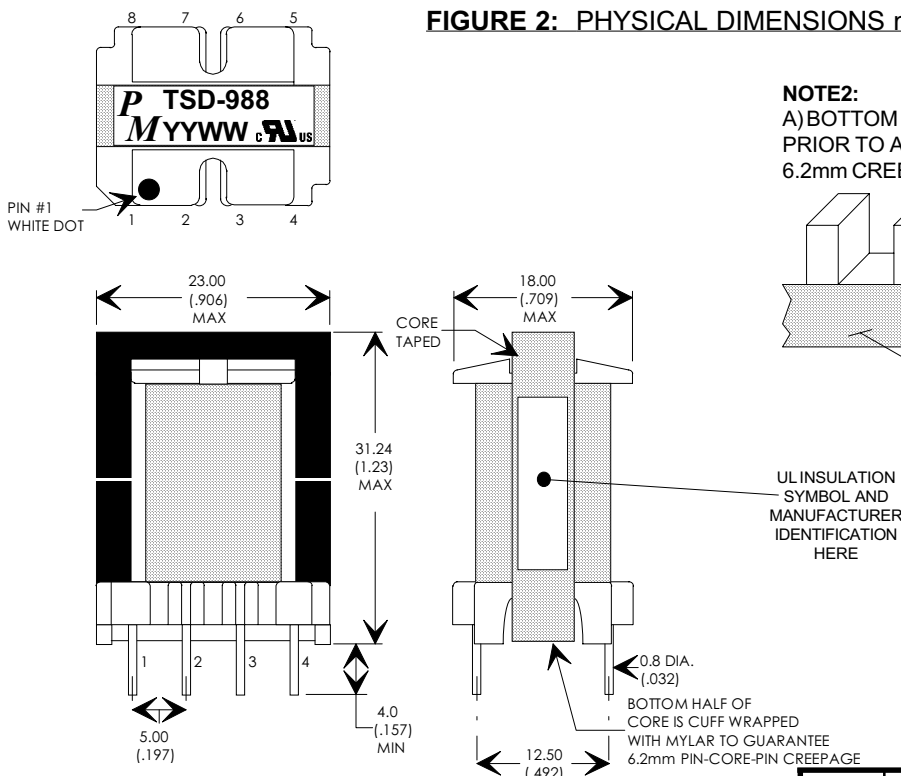


NOTE1:
DESIGNED TO MEET UL1950, IEC950, & CSA-950 REQUIREMENTS

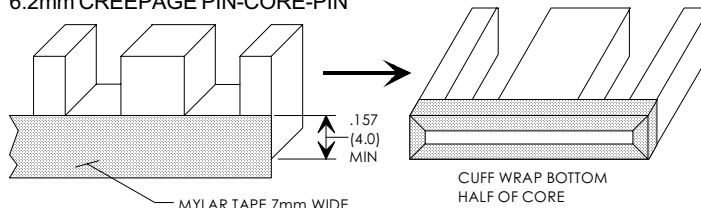
- A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
- B) MARGIN WOUND FOR ≥6.2mm CREEPAGE REQUIREMENTS.
- C) VARNISH FINISHED ASSEMBLY.
- D) 130 (B) INSULATION SYSTEM PM130-N1, PM130-P1, TABLE II (UL #E177139)

- (1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.
- (2) SEC #2 IS REGULATED OUTPUT.
- (3) SEC #1 IS INTENDED TO FEED A 24V LINEAR REGULATOR

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



NOTE2:
A) BOTTOM HALF OF CORE IS CUFF WRAPPED PRIOR TO ASSEMBLY. THIS GUARANTEES 6.2mm CREEPAGE PIN-CORE-PIN



REV.	DESCRIPTION OF CHANGES	TO
02/11/98	COMPLETLEY REVISED TO MAXIMIZE PRIMARY IND. IN TOP226 APP.	TO
03/17/98	INCREASED TURNS SEC #1 (+3T) & BIAS +2T	TO
03/24/98	INCREASE SEC#1 TURNS	TO
04/26/99	UPDATE TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EE22/29/6, 8-PIN VERTICAL BOBBIN



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM DIMENSIONAL TOLERANCES ARE: DECIMALS ANGLES
.X ± .25 ±0° 30'
.XX ± .15
DO NOT SCALE DRAWING

FLYBACK TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-988	REVISION: 04/26/99
DRAWN BY: TOM O'NEIL	REF: TOP214/TOP226
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetic's TSD-988 Switch Mode Transformer was designed for use with Power Integrations, Inc. TOP214Y or TOP226Y 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 TSD-983 transformer has been optimized to provide maximum power throughput.

The PWR-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 Dual Output 19 watt application circuit utilizing Power Integrations PWR-TOP214YA1 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. The 27.5V output is intended to feed a 24V linear regulator.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

