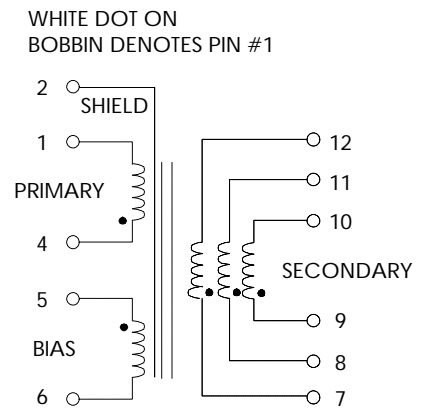


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 TOP247Y . REFER TO APPLICATION CIRCUITS OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (4-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	450	490	540	μHY
TURN RATIO'S: SEC (11,12-7,8) : PRIMARY (4-1) BIAS (5-6) : PRIMARY (4-1)	-----	1:7.333	-----	± 3%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	15.0	20.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	----- -----	----- -----	Vrms Vrms
FIGURE 3A 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 ----- 0.0 ----- ----- ----- ----- -----	----- 15.0 ----- ----- 0.20 0.20 50.0	265 ----- 3.33 3.5 ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

FIGURE 1: SCHEMATIC DIAGRAM

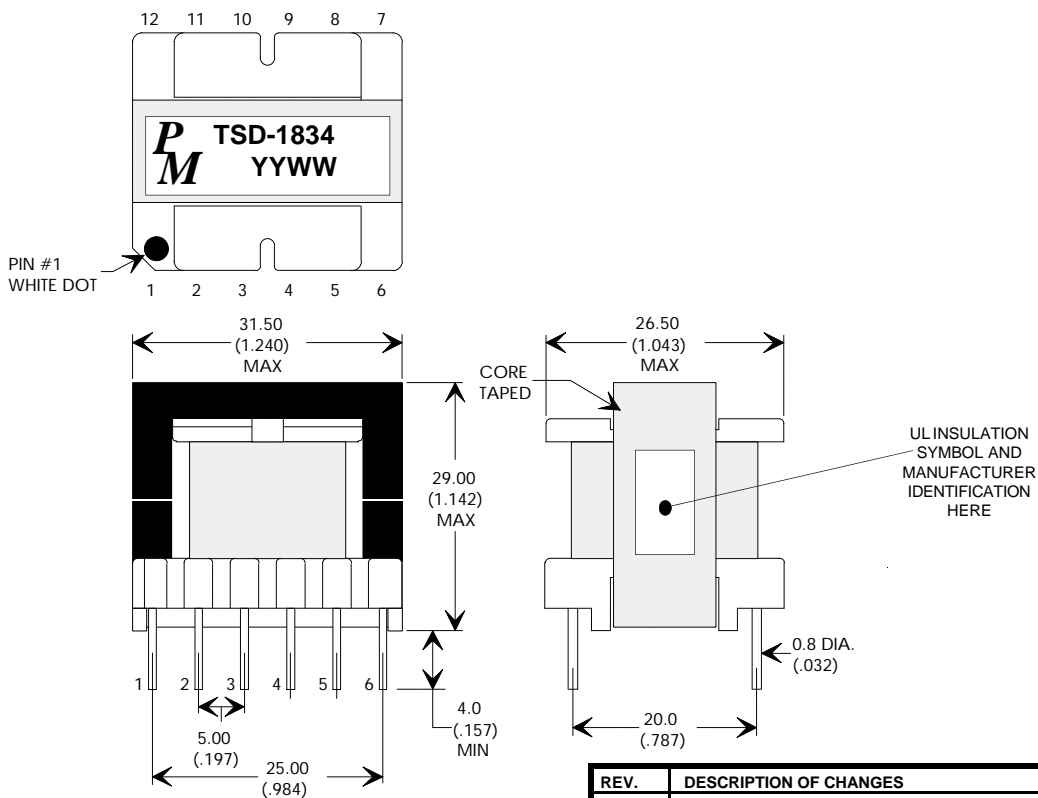


SECONDARY PINS 7,8,9 & 10,11,12 MUST BE RESPECTIVELY CONNECTED TOGETHER FOR PROPER OPERATION.

NOTE1:

- 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.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



REV.	DESCRIPTION OF CHANGES	BY
11/07/02	ORIGINAL RELEASE	TO
07/28/03	CORRECTED PRI. PARAMETER PIN#	LL



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

TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-1834	REVISION: 12/18/03
DRAWN BY: PETER PHAM	REF:TOP247Y
SCALE: NONE	SHEET: 1 OF 4

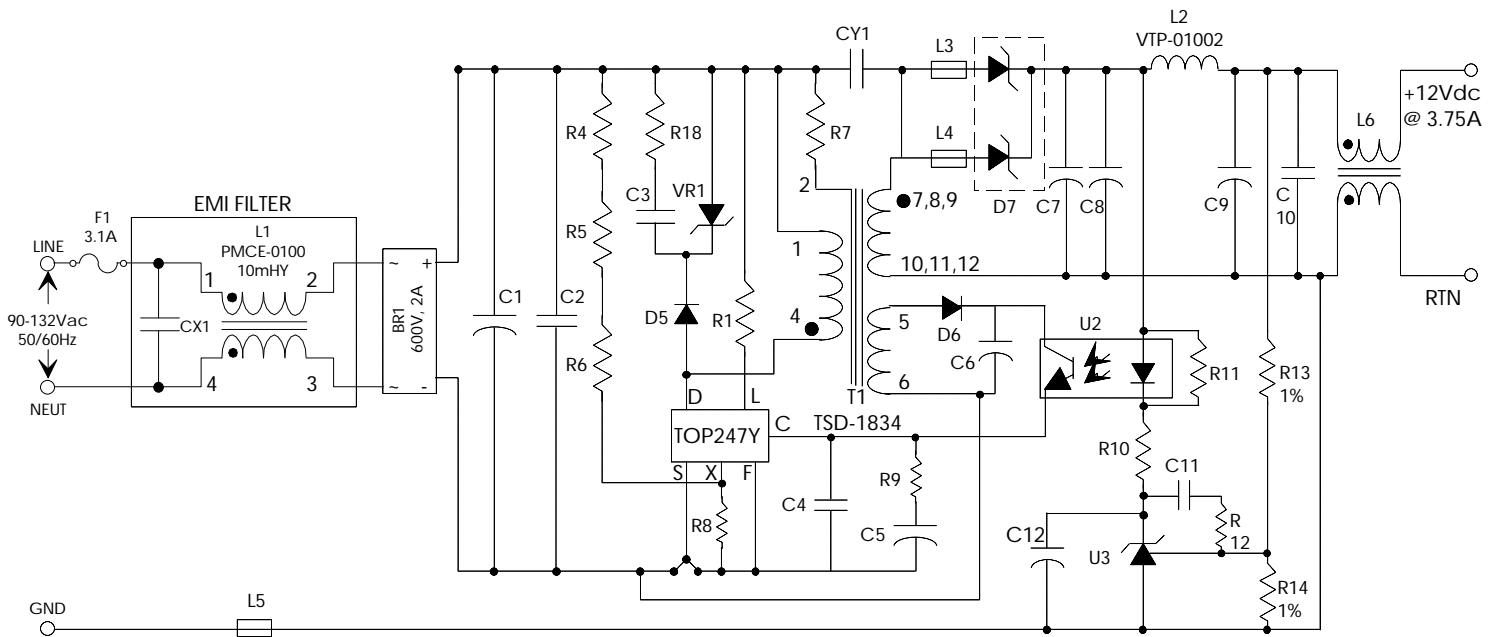
APPLICATION NOTES

Premier Magnetics' TSD-1834 Switch Mode Transformer was designed for use with Power Integrations, Inc. TOP247Y off-line PWM switching regulator in the Flyback Buck-Boost circuit configuration. This conversion topology can provide isolated multiple outputs with efficiencies up to 82%. Premier's TSD-1834 transformer has been optimized to provide maximum power.

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 high precision 45 watt application circuit utilizing Power Integrations TOP247Y switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. Properly sized heat sinks for the TOP2XX & D3 as well as proper thermal management of the clamp network are critical requirements for efficient and reliable operation.

FIGURE 3: TYPICAL APPLICATION CIRCUIT



PREMIER MAGNETICS PART NUMBERS:
(REQUEST DATA SHEETS BY PART#)

T1 = TSD-1834 MAIN SWITCHING TRANSFORMER
L1 = PMCE-0100 10mHy EMI/RFI CMC
L2 = VTP-01002 8uHy@4.0A(10uHy@2.0A) INDUCTOR

OTHER PART LIST

TOP247Y
R1 = 2M Ohm, .5W; R4, R5, R6 = 2.7M Ohm; R7 = 220 Ohm
R8 = 15 Ohm; R9 = 6.8 Ohm; R10 = 470 Ohm; R11 = 1K Ohm
R12 = 4.7K Ohm; R13 = 38.3K Ohm; R14 = 10K Ohm
C1 = 100uF, 400V; C2 = 20nF, 1KV; C3 = 4.7nF, 1KV; C4 = 100nF; C5 = 47uF, 10V
C6 = 1uF, 50V; C7 = C8 = 680uF, 50V; C9 = 220uF, 35V; C10 = 100nF
C11 = 47nF; C12 = 22uF, 25V
VR1 = P6KE200
D5 = UF4005, D6 = 1N4148, D7 = MBR20100
U2 = LTV817A, U3 = TL431
L3, L4, L5, L6 = BEAD (L3, L4, L6 = 1T, L5 = 3T)
BEADS L3 & L4 ARE PLACE ON D7 ANODE LEADS



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

TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-1834	REVISION: 12/18/03
DRAWN BY: PETER PHAM	REF: TOP247Y
SCALE: NONE	SHEET: 2 OF 4