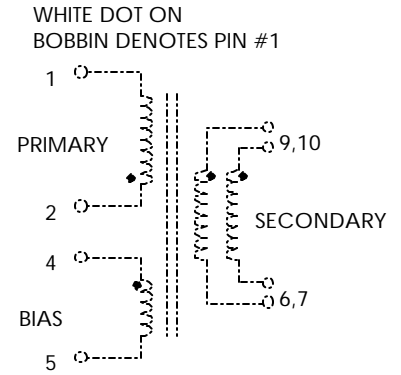


**TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C**  
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS  
 PWR-TOP103YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100KHZ	257	286	315	μHY
TURN RATIO'S: SEC (9,10-6,7) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-----	1:4.00	-----	± 3%
PRILEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100KHZ	-----	-----	14.0	μHY
HIPO T: PRIMARY TO SECONDARY BIAS TO SECONDARY	1500 1500	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 135 Vac) LOAD REGULATION 0-100% RIPPLE	85 ----- 0.0 ----- ----- ----- -----	----- 12.0 ----- ----- 0.20 ----- 0.20 -----	135 ----- 3.4 4.0 ----- ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

**FIGURE 1: SCHEMATIC DIAGRAM**

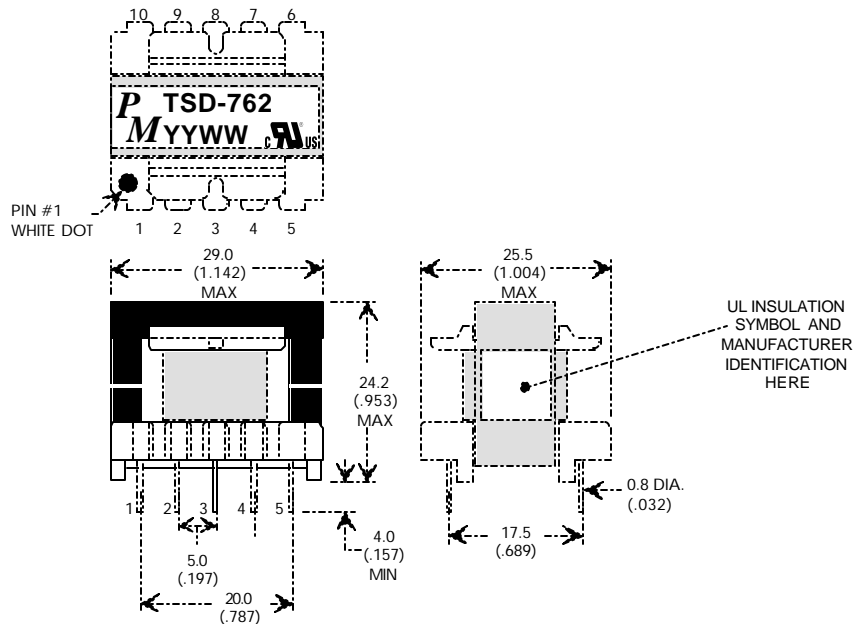


SECONDARY PINS #9 & 10, #6 & 7 MUST BE RESPECTIVELY CONNECTED TOGETHER FOR PROPER OPERATION.  
 I.E. CONNECTED AS ONE PARALLEL WINDING.

**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 ≥3.0mm CREEPAGE REQUIREMENTS.
- D) VARNISH FINISHED ASSEMBLY.
- E) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
- F) UL CLASS (B) 130 INSULATION SYSTEM PM130-H1A (UL FILE #E177139) OR ANY UL AUTHORIZED CLASS (B) INSULATION SYSTEM.

**FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)**



REV.	DESCRIPTION OF CHANGES	BY
07/31/95	ORIGINAL RELEASE	TO
09/01/95	UPDATED & CORRECTED APPLICATION CIRCUIT	TO
05/10/99	UPDATE TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EE28/11, 10-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-762	REVISION: 05/10/99
DRAWN BY: TOM O'NEIL	REF:
SCALE: NONE	SHEET: 1 OF 4

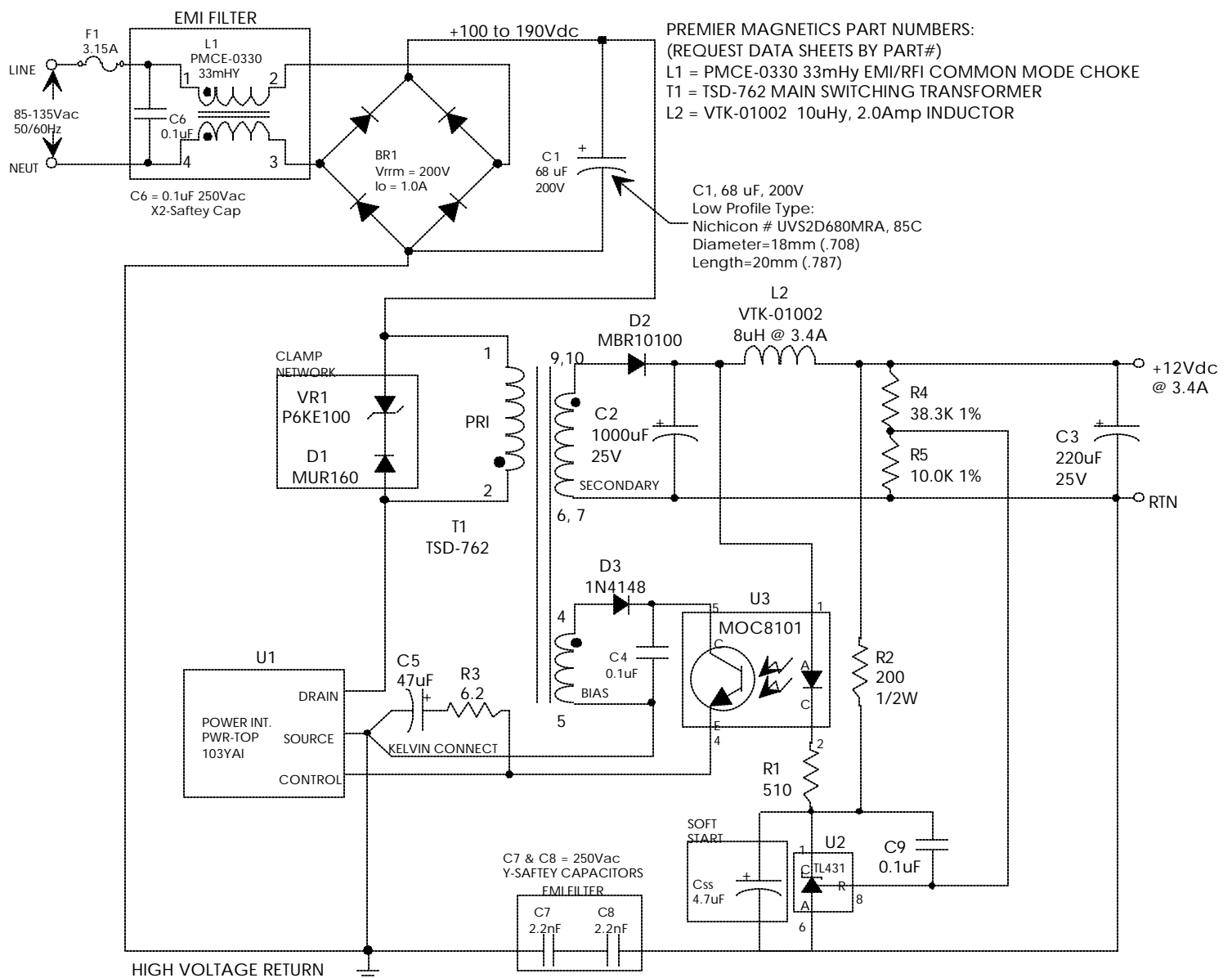
## APPLICATION NOTES

Premier Magnetics' TSD-762 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP103YAI 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-762 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 110 volt input high precision 40 watt application circuit utilizing Power Integrations PWR-TOP103 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. The soft start capacitor C<sub>ss</sub> is optional depending on the specific application. Simpler topology is possible depending on the line/load regulation required.

**FIGURE 3: TYPICAL APPLICATION CIRCUIT**



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-762	REVISION: 05/10/99
DRAWN BY: TOM O'NEIL	REF:
SCALE: NONE	SHEET: 2 OF 4