

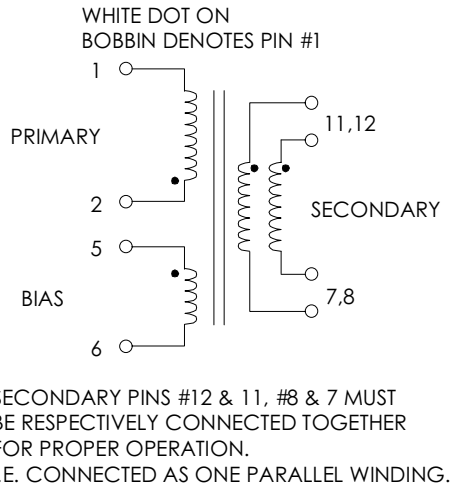
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP104YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	268	298	328	μHY
TURN RATIO'S: SEC (11,12-7,8) : PRIMARY (2-1) BIAS (5-6) : PRIMARY (2-1)	-----	1:3.88	-----	± 3%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	9.00	12.00	μHY
HIPOT: 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 135Vac) LOAD REGULATION 0-100% RIPPLE	85 ----- 0.0 ----- ----- ----- ----- -----	----- 12.0 ----- ----- 0.20 0.20 50.0	135 ----- 5.0 5.2 ----- ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

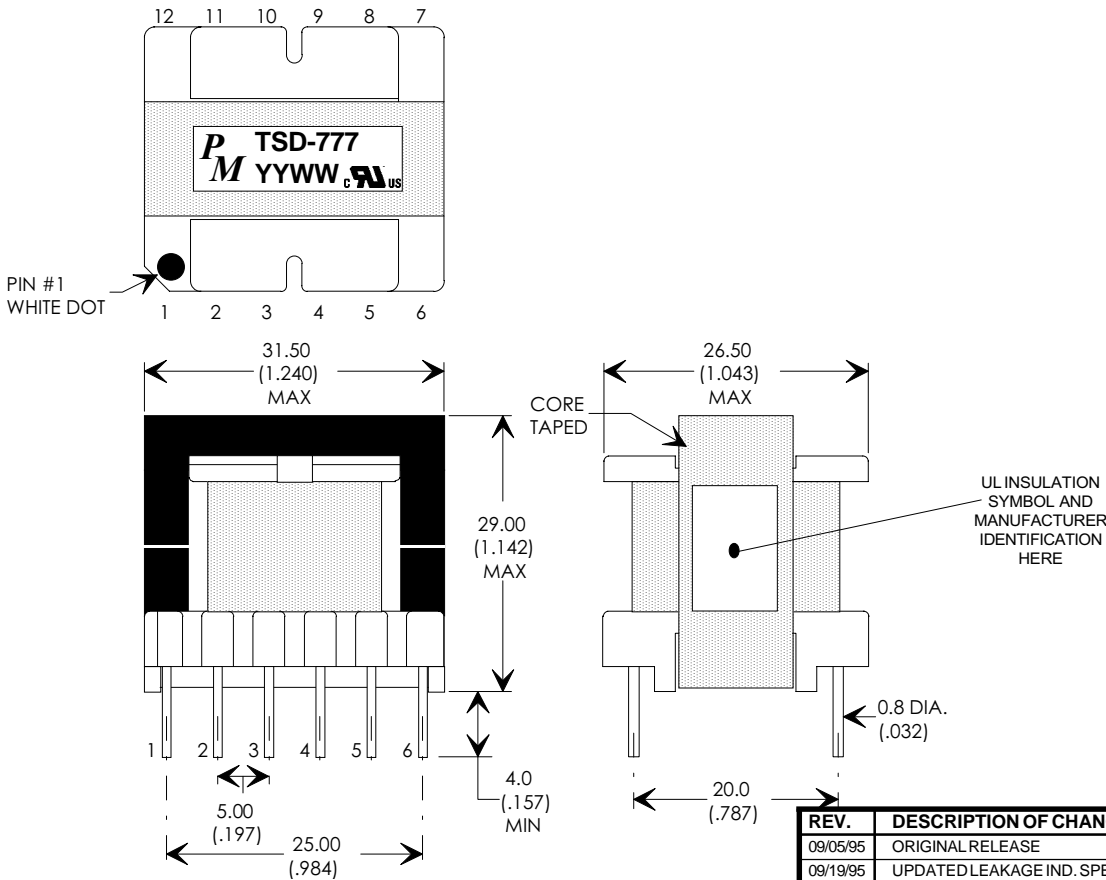
FIGURE 1: SCHEMATIC DIAGRAM



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 ≥2.5mm 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)



EE30 (FEE30A) -OR- EI30(FEI30), 12-PIN VERTICAL BOBBIN

REV.	DESCRIPTION OF CHANGES	BY
09/05/95	ORIGINAL RELEASE	TO
09/19/95	UPDATED LEAKAGE IND. SPECS.	TO
05/13/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD



**Premier
Magnetics Inc.**

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-777	REVISION: 05/13/99
DRAWN BY: TOM O'NEIL	REF: XA-PROTO-60W
SCALE: NONE	SHEET: 1 OF 4

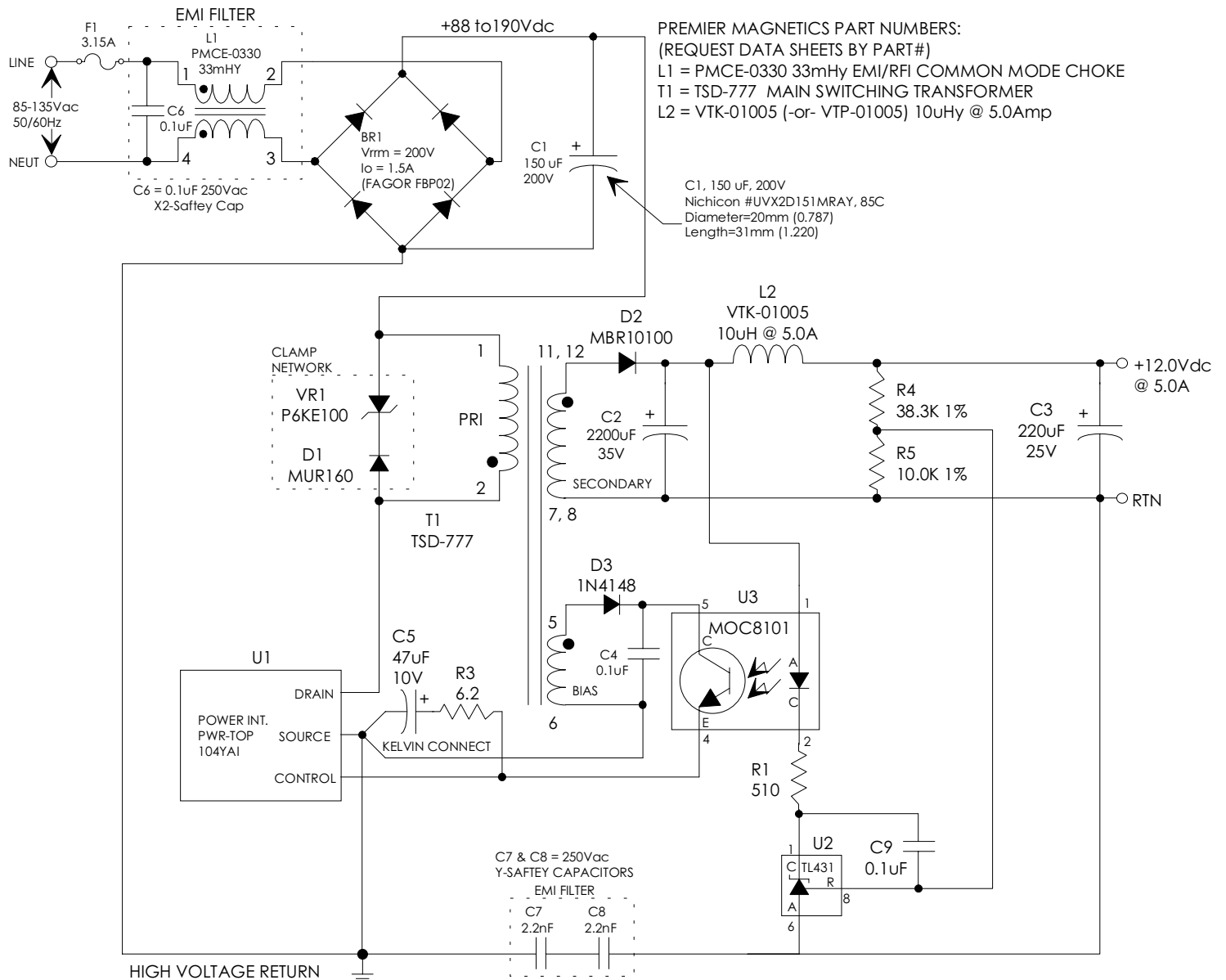
APPLICATION NOTES

Premier Magnetics' TSD-777 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP104YA1 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-777 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 60 watt application circuit utilizing Power Integrations PWR-TOP104 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. The soft start capacitor C_{SS} is optional depending on the specific application. Simpler topology is possible depending on the line/load regulation required.

FIGURE 3: TYPICAL APPLICATION CIRCUIT



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TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-777	REVISION: 05/13/99
DRAWN BY: TOM O'NEIL	REF: XA-PROTO-60W
SCALE: NONE	SHEET: 2 OF 4