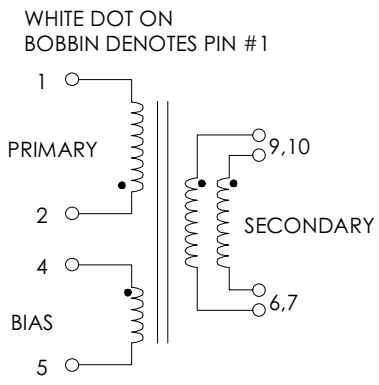
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP204YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.
PFC FRONT END.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	990	1100	1210	µHY
TURN RATIO'S: SEC (9,10-6,7) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-------- --------	1:14.67 1:8.80	-------- --------	± 3% ± 3%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	--------	22.0	25.0	µHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	-------- --------	-------- --------	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) DC INPUT VOLTAGE OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	 300 0.0 -------- -------- -------- --------	 -------- 8.5 -------- -------- 0.20 0.20 50.0	 375 4.0 4.5 -------- -------- --------	 Vac Vdc Amps Amps ±% ±% ±mV

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

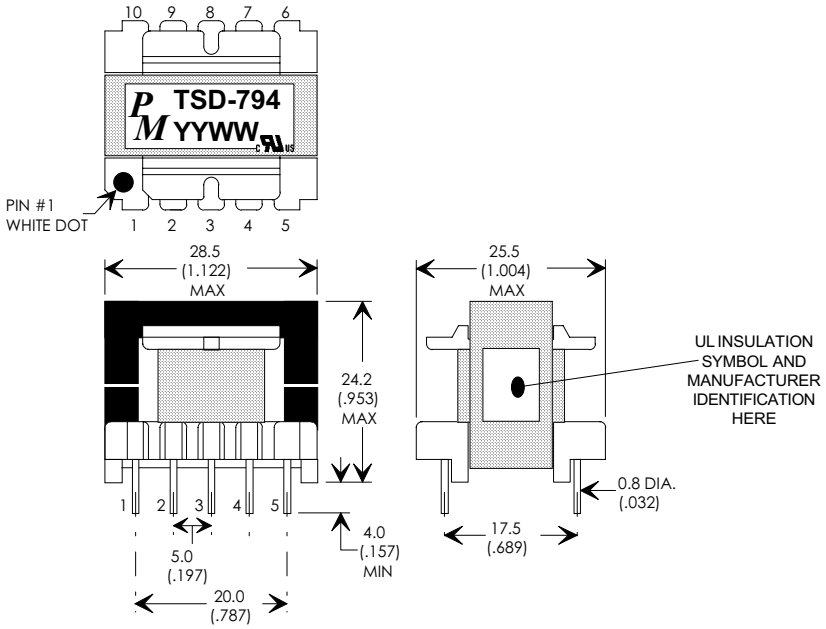
FIGURE 1: SCHEMATIC DIAGRAM



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 ≥6.2mm CREEPAGE REQUIREMENTS.
D) VARNISH FINISHED ASSEMBLY.
E) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
F) UL CLASS (B) 130 INSULATION SYSTEM PM130-R1, PM130-H1, PM130-H1A (UL FILE #E177139) OR ANY UL AUTHORIZED CLASS (B) INSULATION SYSTEM.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



REV.	DESCRIPTION OF CHANGES	BY
12/06/95	ORIGINAL RELEASE	TO
01/18/96	INCREASED PRIMARY INDUCTANCE	TO
05/14/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EE, EI28/11, 10-PIN VERTICAL BOBBIN

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-794	REVISION: 05/14/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP204YAI
SCALE: NONE	SHEET: 1 OF 6

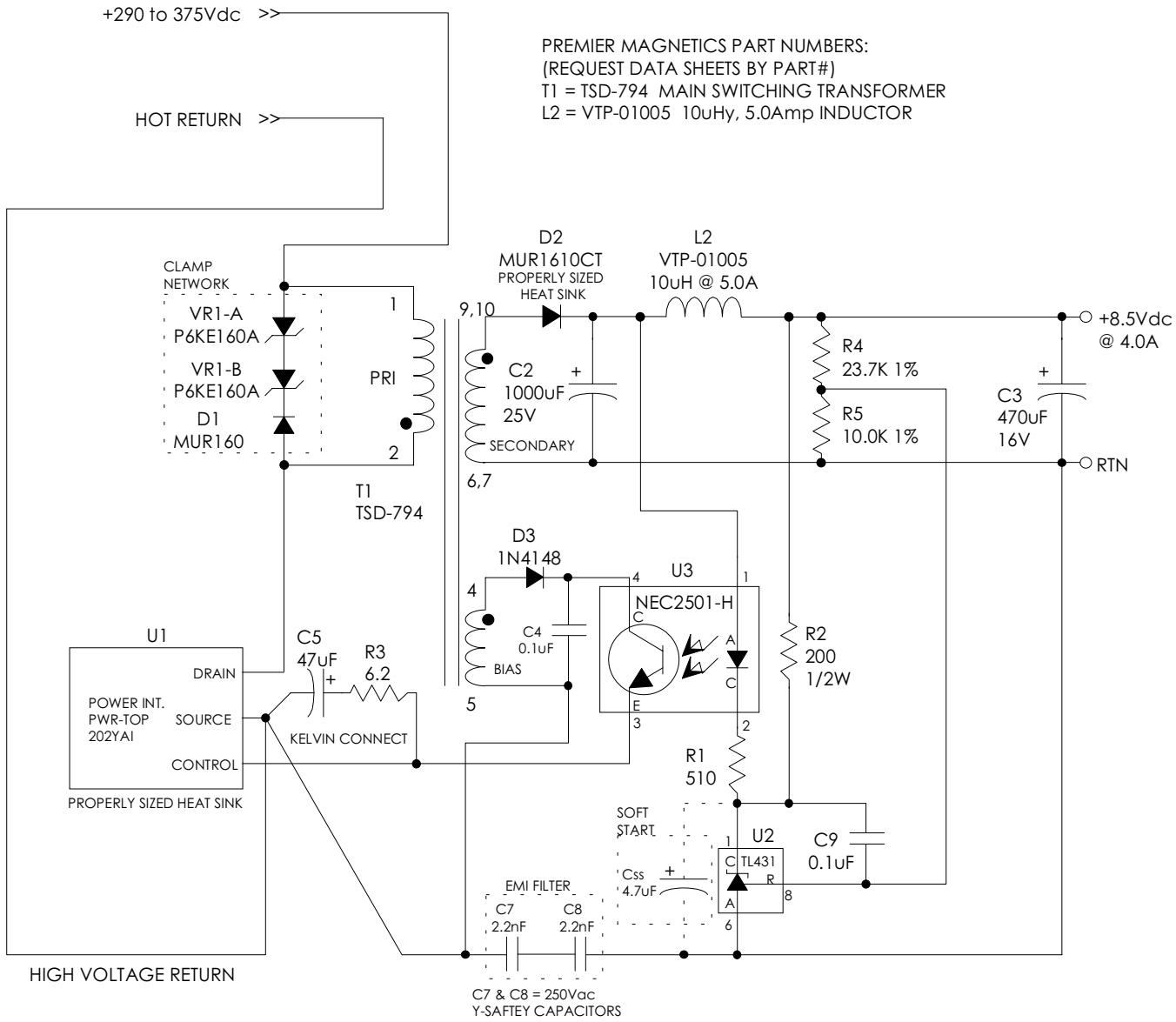
APPLICATION NOTES

Premier Magnetics' TSD-794 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP204YAI 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%. Premiers' TSD-794 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 high precision 35 watt application circuit utilizing Power Integrations PWR-TOP204 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. The soft start capacitor Css is optional depending on the specific application. Simpler topology is possible depending on the line/load regulation required.

FIGURE 3: TYPICAL APPLICATION CIRCUIT



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-794 — REVISION: 05/14/99
		DRAWN BY: TOM O'NEIL — REF: PWR-TOP204YAI
		SCALE: NONE — SHEET: 2 OF 6