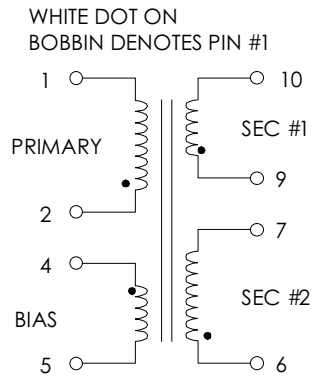
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP201YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	630	700	770	µHY
TURNS RATIO'S: SEC1 (9-10) : PRIMARY (2-1) SEC2 (6-7) : PRIMARY (2-1) BIAS (4-5) : PRIMARY (2-1)	-------- -------- --------	1:8.83 1:17.67 1:7.57	-------- -------- --------	± 3% ± 3% ± 3%
HIPOT: PRIMARY TO SECONDARIES BIAS TO SECONDARIES	3500 3500	-------- --------	-------- --------	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE-SEC #2 (2) OUTPUT CURRENT-SEC #2 OUTPUT VOLTAGE-SEC #1 (3) OUTPUT CURRENT-SEC #1) LINE REGULATION (85 TO 135Vac) LOAD REGULATION 0-100% RIPPLE	 85 0.60 0.020 -------- -------- --------	 -------- +5.0 -------- +5.0 -------- 0.50 0.50 50.0	 265 1.20 0.080 -------- -------- --------	 Vac Vdc Amps Vdc Amps ±% ±% ±mV

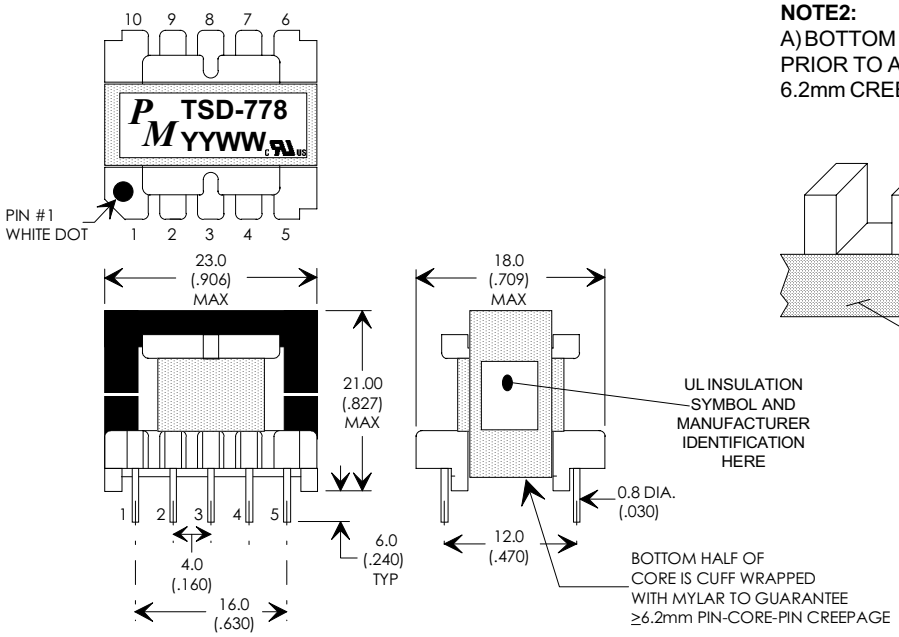
(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.
(2) SECONDARY #2 IS THE MAIN FEEDBACK CONTROL WINDING.
(3) SECONDARY VOLTAGE #1 IS OBTAINED VIA A LINEAR REGULATOR.

FIGURE 1: SCHEMATIC DIAGRAM

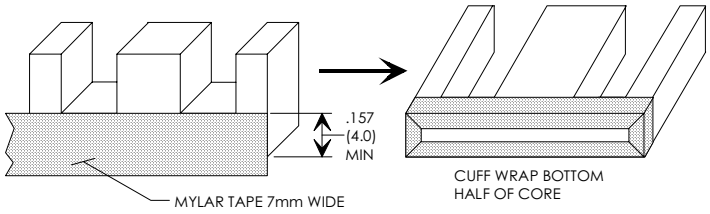


NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
B) TRIPLE BASIC INSULATED SECONDARY.
C) DESIGNED TO MEET ≥6.2mm CREEPAGE REQUIREMENTS.
D) VARNISH FINISHED ASSEMBLY.
E) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
F) UL CLASS (B) 130 INSULATION SYSTEM PM130-R1, PM130-H1, PM130-H1A (UL FILE #E177139) OR ANY UL AUTHORIZED CLASS (B) INSULATION SYSTEM.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



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



REV.	DESCRIPTION OF CHANGES	BY
10/20/95	UPDATED RELEASE	TO
12/28/95	CUSTOMER REQUESTED CHANGES, REMOVED WINDING	TO
05/13/99	UPDATED TO UL CLASS(B) 130 INSULATION SYSTEM	MD

E22, 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

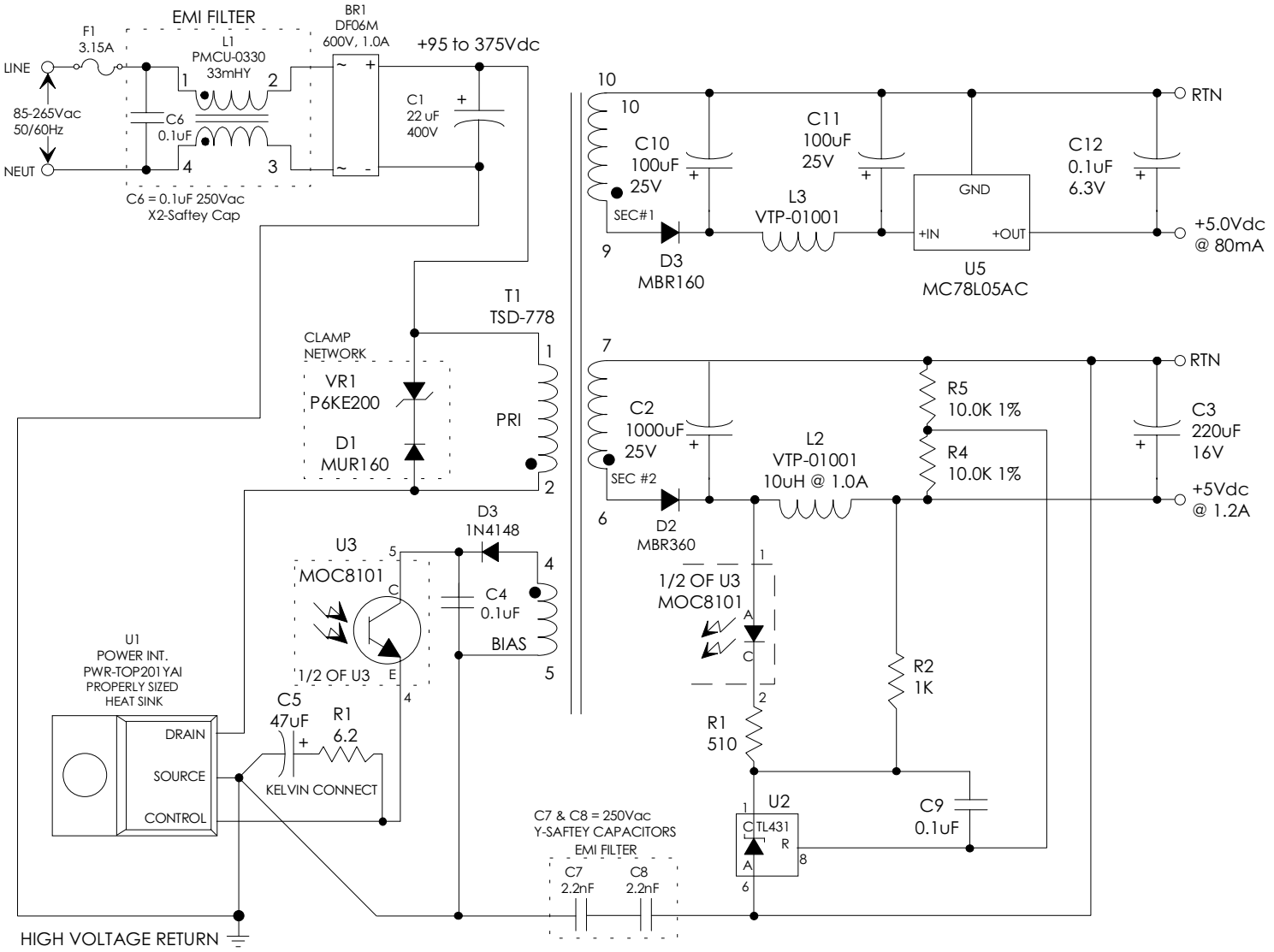
PREMIER P/N: TSD-778	REVISION: 05/13/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP201
SCALE: NONE	SHEET: 1 OF 6

APPLICATION NOTES

Premier Magnetics' TSD-778 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP201YAI three terminal off-line PWM switching regulator in the Flyback Buck-Boost circuit configuration. 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 (85Vac to 265Vac) input high precision 7 watt application circuit utilizing Power Integrations PWR-TOP201 switching regulator. This circuit provides three precision outputs. The "MAIN" output of secondary #2 is optically fed back to the PWR-TOP201 controller to close the voltage feedback loop. Secondary #1 is fed into a linear regulator to provide an additional high precision output. The component values listed are intended for reference purposes only.

FIGURE 3: TYPICAL APPLICATION CIRCUIT



Premier Magnetics Inc.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM DIMENSIONAL TOLERANCES ARE: DECIMALS .X ± .25 .XX ± .15 ANGLES ±0° 30' DO NOT SCALE DRAWING	**TRANSFORMER CONTROL DRAWING**
		PREMIER P/N: TSD-778 / REVISION: 05/13/99
		DRAWN BY: TOM O'NEIL / REF: PWR-TOP201
		SCALE: NONE / SHEET: 2 OF 6