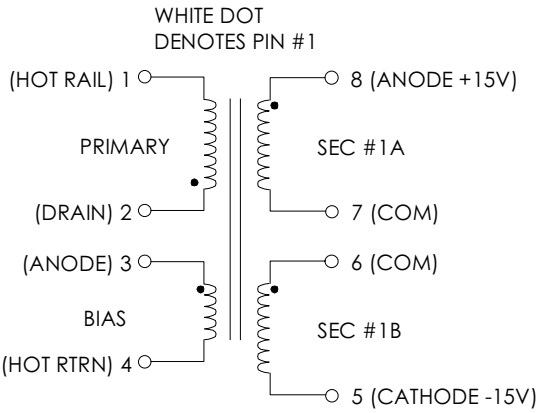
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP202YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	567	630	693	µHY
TURN RATIO'S: SEC 1A (8-7) : PRIMARY (2-1) SEC 1B (6-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	 -------- -------- --------	 1:7.00 1:7.00 1:4.67	 -------- -------- --------	 ±4% ±4% ±4%
PRI LEAKAGE INDUCTANCE VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	--------	--------	35.0	µHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	 3000 3000	 -------- --------	 -------- --------	 Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC INPUT VOLTAGE OUTPUT VOLTAGE CONTINUOUS OUTPUT POWER LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	 85 -------- -------- -------- --------	 -------- 18 -------- 5.00 3.00 100.0	 265 14.4 -------- -------- --------	 Vdc ±Vdc Watts ±% ±% ±mV

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

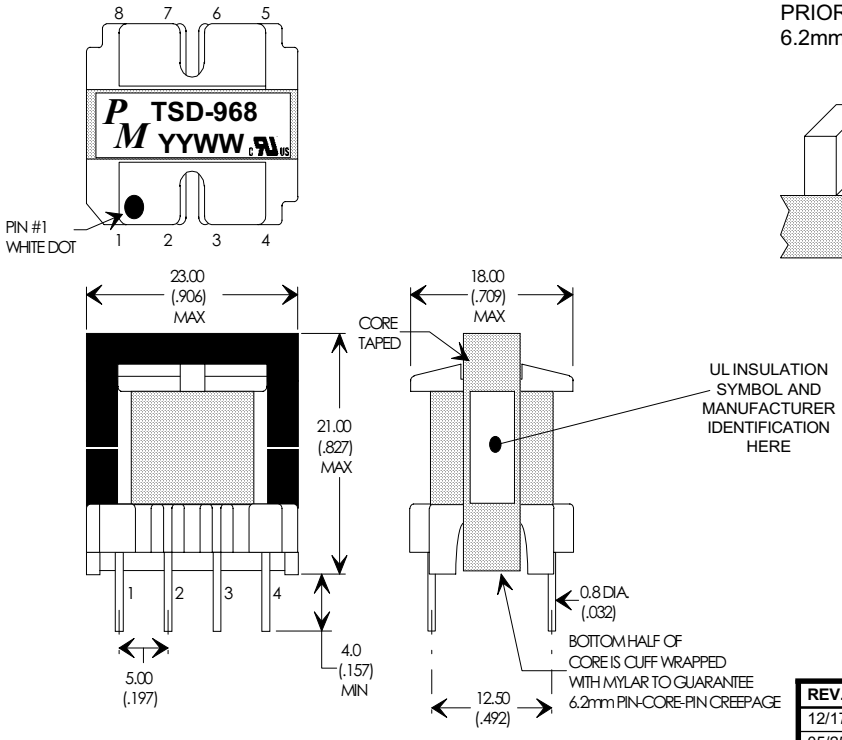
FIGURE 1: SCHEMATIC DIAGRAM

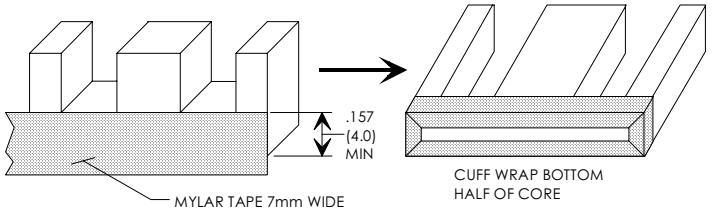


NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
B) TRIPLE BASIC INSULATED SECONDARY.
C) DESIGNED TO MEET ≥6.2mm CREEPAGE REQUIREMENTS.
D) VARNISH FINISHED ASSEMBLY.
E) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
F) UL CLASS (B) 130 INSULATION 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
12/17/96	ORIGINAL RELEASE	TO
05/25/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EI22/19/6, 8-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-968	REVISION: 05/25/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP202YAI
SCALE: NONE	SHEET: 1 OF 6

APPLICATION NOTES

Premier Magnetic's TSD-968 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP202YAI 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-968 transformer has been optimized to provide maximum power throughput.

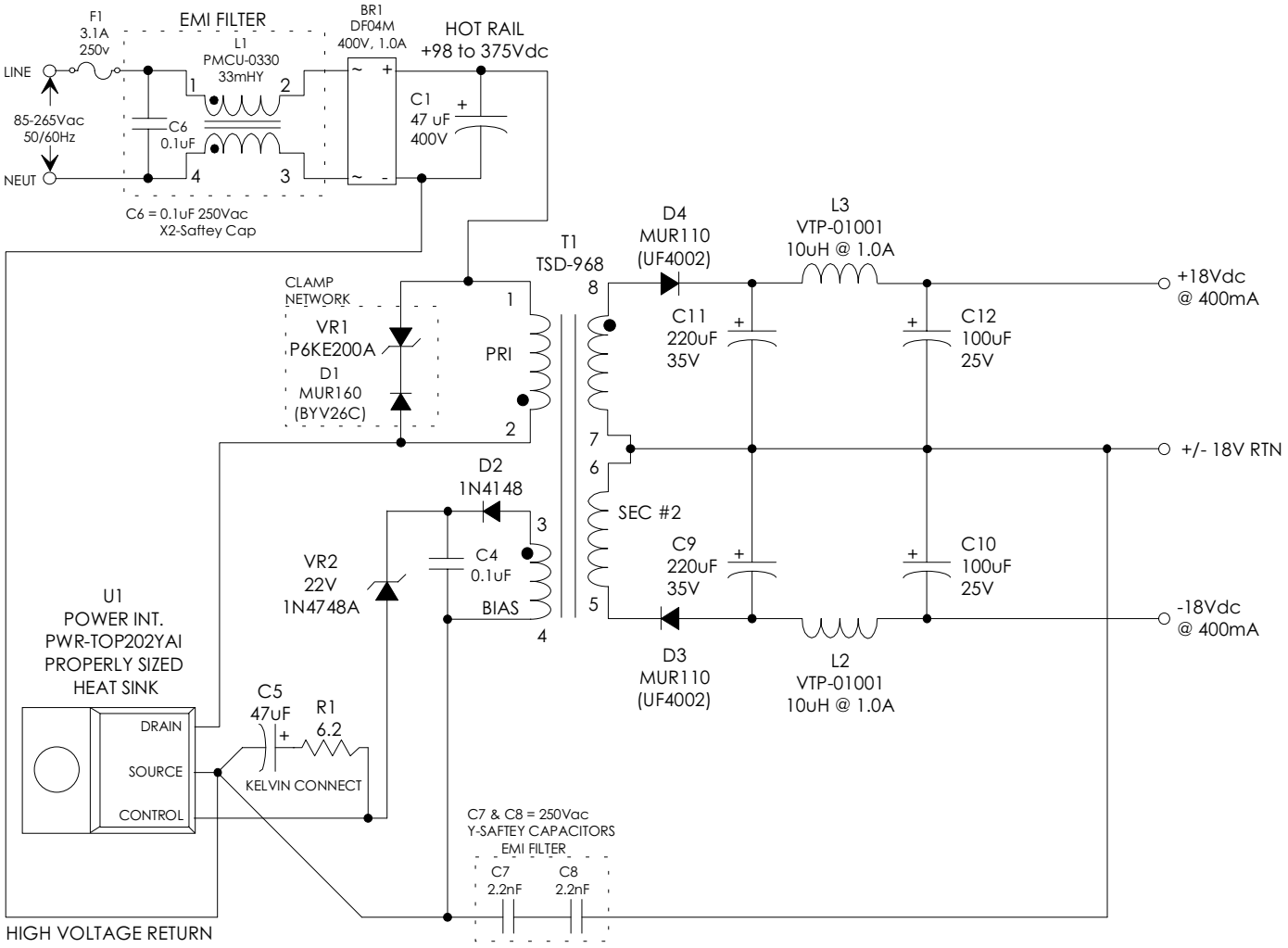
The PWR-TOPXXX series from Power Integrations, Inc. are self contained 100KHz three terminal voltage controlled PWM switching regulators. This series contains all necessary functions for an off-line switched mode control DC power source. These switching regulators provide a very simple solution to off-line 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 universal input 14 watt application circuit utilizing Power Integrations PWR-TOP202 switching regulator in the flyback buck-boost configuration. This circuit represents the lowest cost implementation and utilizes the bias winding for feedback control. As such the line & load regulation are worse than that which could be achieved by utilizing an opto-coupler to sense the actual outputs. The component values listed are intended for reference purposes only.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
(REQUEST DATA SHEETS BY PART#)
L1 = PMCU-0330 33mHy EMI/RFI CMC
T1 = TSD-968 MAIN SWITCHING TRANSFORMER
L2, L3 = VTP-01001 10uHy, 1.0Amp INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:
±18V OUTPUT: C9 & C11 ≥25V, Ripple Rated ≥ 470mA @ 100KHz @ Max. Op. Temp.
PANASONIC SU GENERAL PURPOSE SERIES:
C9, C11 = 220uF, 35V = PANASONIC ECEA1EU221
C10, C12 = 100uF, 25V = PANASONIC ECEA1EU101



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-968 — REVISION: 05/25/99
		DRAWN BY: TOM O'NEIL — REF: PWR-TOP202YAI
		SCALE: NONE — SHEET: 2 OF 6