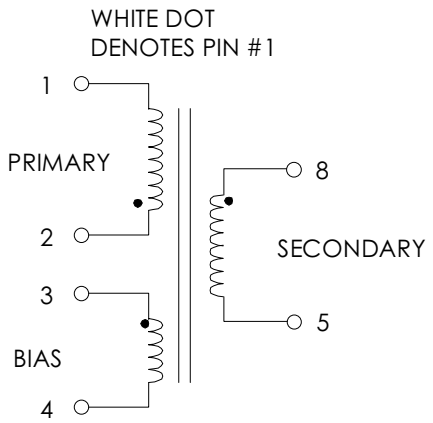
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP210PFI REFER TO APPLICATION CIRCUIT OF FIGURE 3

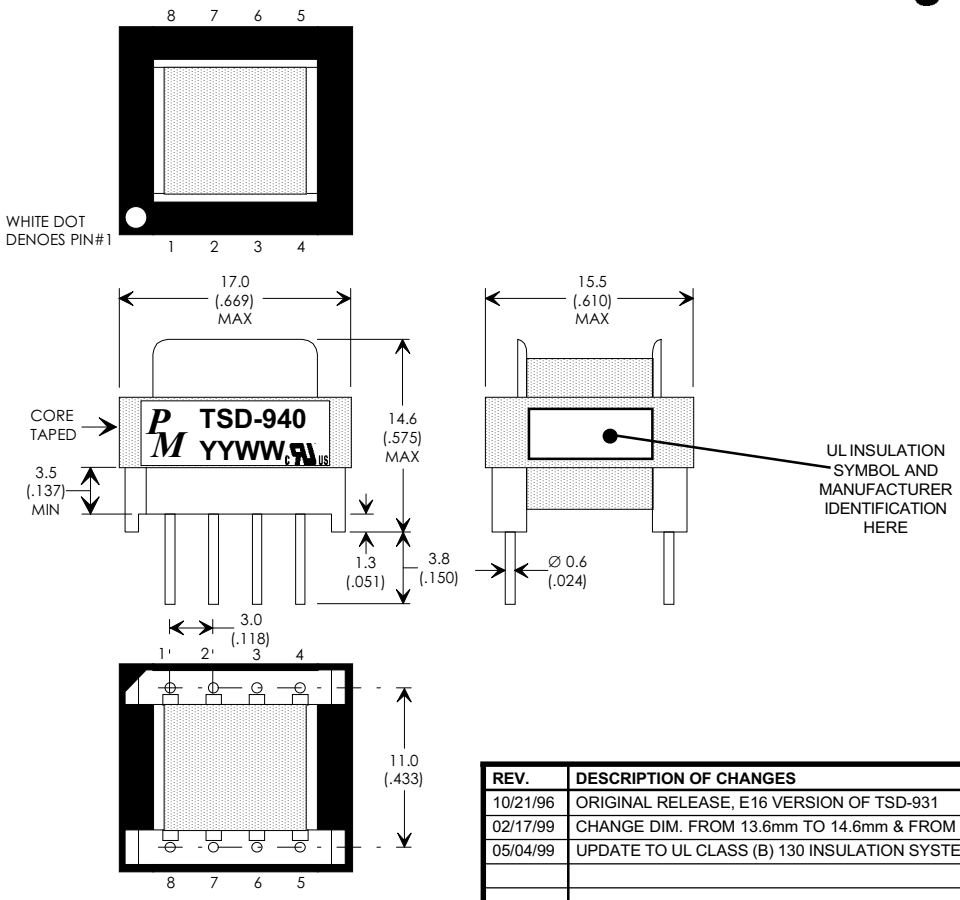
PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	4.07	4.52	4.97	mHY
TURN RATIO'S: SEC (8-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-------- --------	1:20.11 1:12.07	-------- --------	± 3% ± 3%
PRI LEAKAGE IND. (SEC'S SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	--------	--------	250.0	µHY
HIPOT: PRIMARY TO SECONDARY'S BIAS TO SECONDARY'S	1500 1500	------- -------	------- -------	Vrms Vrms
APP CIRCUIT PARAMETERS: AC LINE VOLTAGE 47/400 Hz SEC OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS LINE REGULATION (85 TO 265Vac) RIPPLE	 96 ------- 0.010 ------- -------	 ------- 6.50 ------- 0.20 50.0	 288 ------- 800 ------- -------	 Vac Vdc mA ±% ±mV

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

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



EE16/EI16, 8-PIN HORIZONTAL

REV.	DESCRIPTION OF CHANGES	
10/21/96	ORIGINAL RELEASE, E16 VERSION OF TSD-931	TO
02/17/99	CHANGE DIM. FROM 13.6mm TO 14.6mm & FROM 16.8mm TO 17.0mm	MD
05/04/99	UPDATE 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-940	REVISION: 05/04/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP210PFI
SCALE: NONE	SHEET: 1 OF 5

APPLICATION NOTES

Premier Magnetics' TSD-940 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP210PFI 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-940 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.

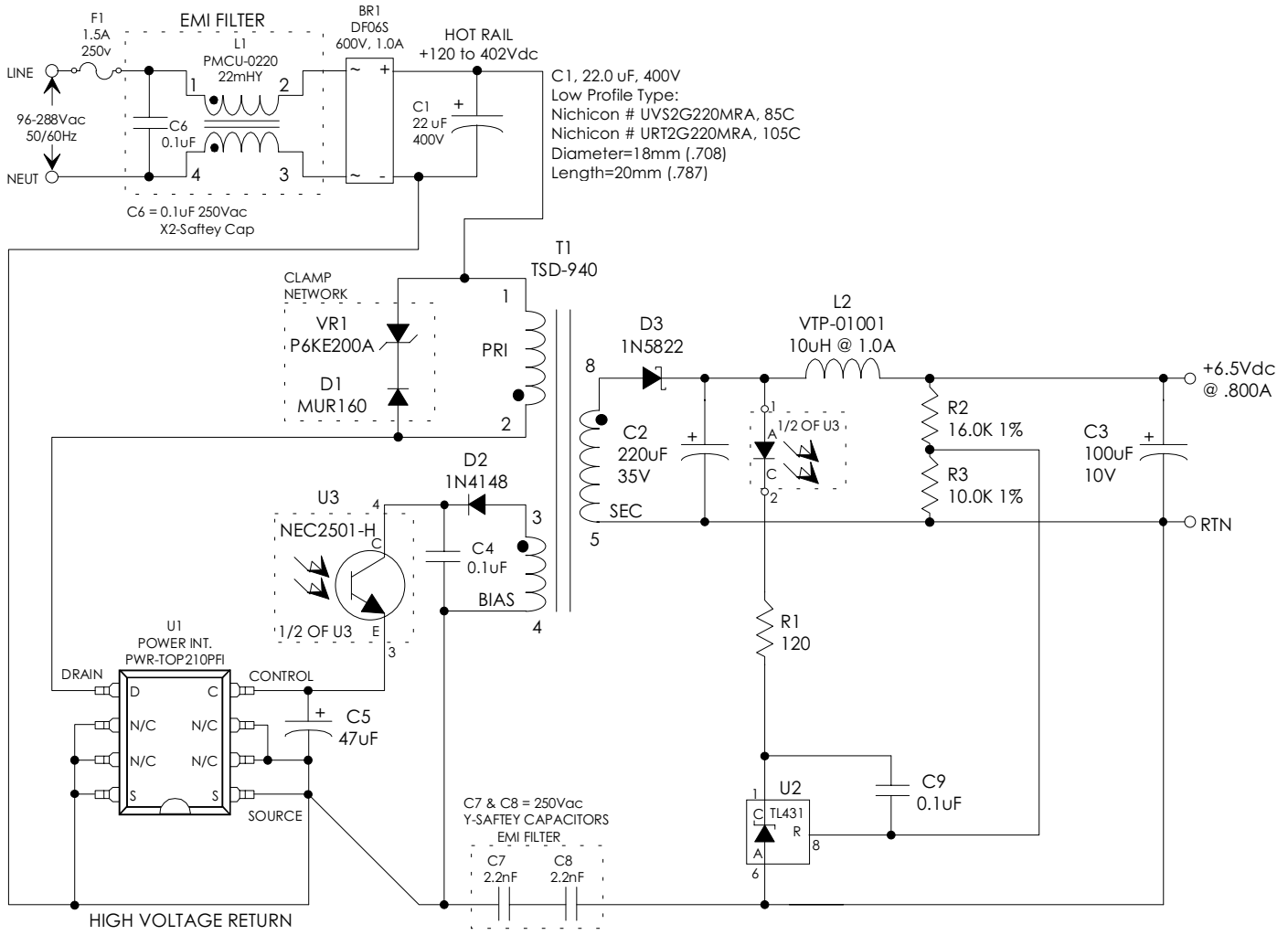
Below is a modified universal input high precision 5W watt application circuit utilizing Power Integrations PWR-TOP210PFI switching regulator in the flyback buck-boost configuration. The EMI/RFI capacitors C7 & C8 are shown for reference but may not be needed to meet EMI/RFI emission specifications, careful EMI/RFI testing is recommended before removing these components.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
(REQUEST DATA SHEETS BY PART#)
L1 = PMCU-0220 22mHy EMI/RFI CMC
T1 = TSD-940 MAIN SWITCHING TRANSFORMER
L2 = VTP-01001 10uHy, 1.0Amp INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

+6.5V OUTPUT: C2 ≥16V, Ripple Rated ≥ 900mA @ 100KHz @ Max. Op. Temp.
PANASONIC FA SERIES: LOW IMPEDANCE LONG LIFE RADIAL SERIES
C2 = 220uF, 35V = PANASONIC EEUFA1E221
C3 = 100uF, 10V = PANASONIC ECA1AFG101



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-940 — REVISION: 05/04/99
		DRAWN BY: TOM O'NEIL — REF: PWR-TOP210PFI
		SCALE: NONE — SHEET: 2 OF 5