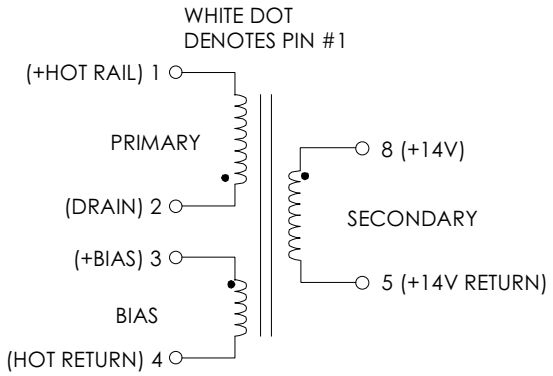
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

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

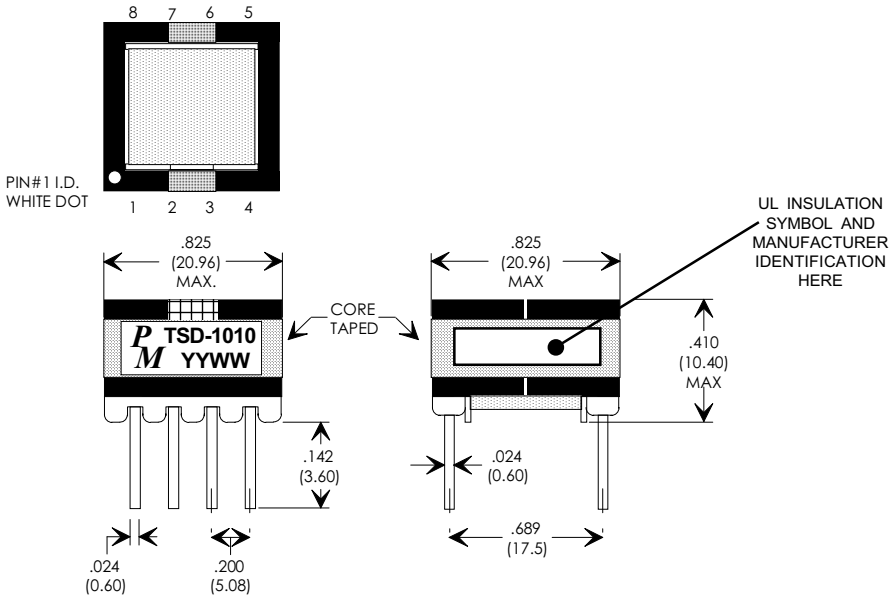
PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 10 KHZ	4.50	5.00	5.50	mHY
TURN RATIO'S: SEC (8-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	------ ------	1: 9.57 1:11.17	------ ------	± 4% ± 4%
PRI LEAKAGE IND. (SEC'S SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	------	------	75	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	85 ------ 25 ------ ------	------ 14.00 ------ 0.20 50.0	275 ------ 430 ------ ------	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) VARNISH FINISHED ASSEMBLY.
C) 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
03/31/98	ORIGINAL RELEASE	TO
12/16/98	CHANGE LEAKAGE IND FROM TBD TO 75 UH	PP
08/09/99	UPDATE TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EFD20, 8-PIN

Premier Magnetics Inc.
"INNOVATORS IN MAGNETICS TECHNOLOGY"

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DIMENSIONAL TOLERANCES ARE:
DECIMALS ANGLES
.XX ± 0.04 ±0° 30'
.XXX ± 0.020
DO NOT SCALE DRAWING

FLYBACK TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-1010	REVISION: 08/09/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP210
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1010 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-1010 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.

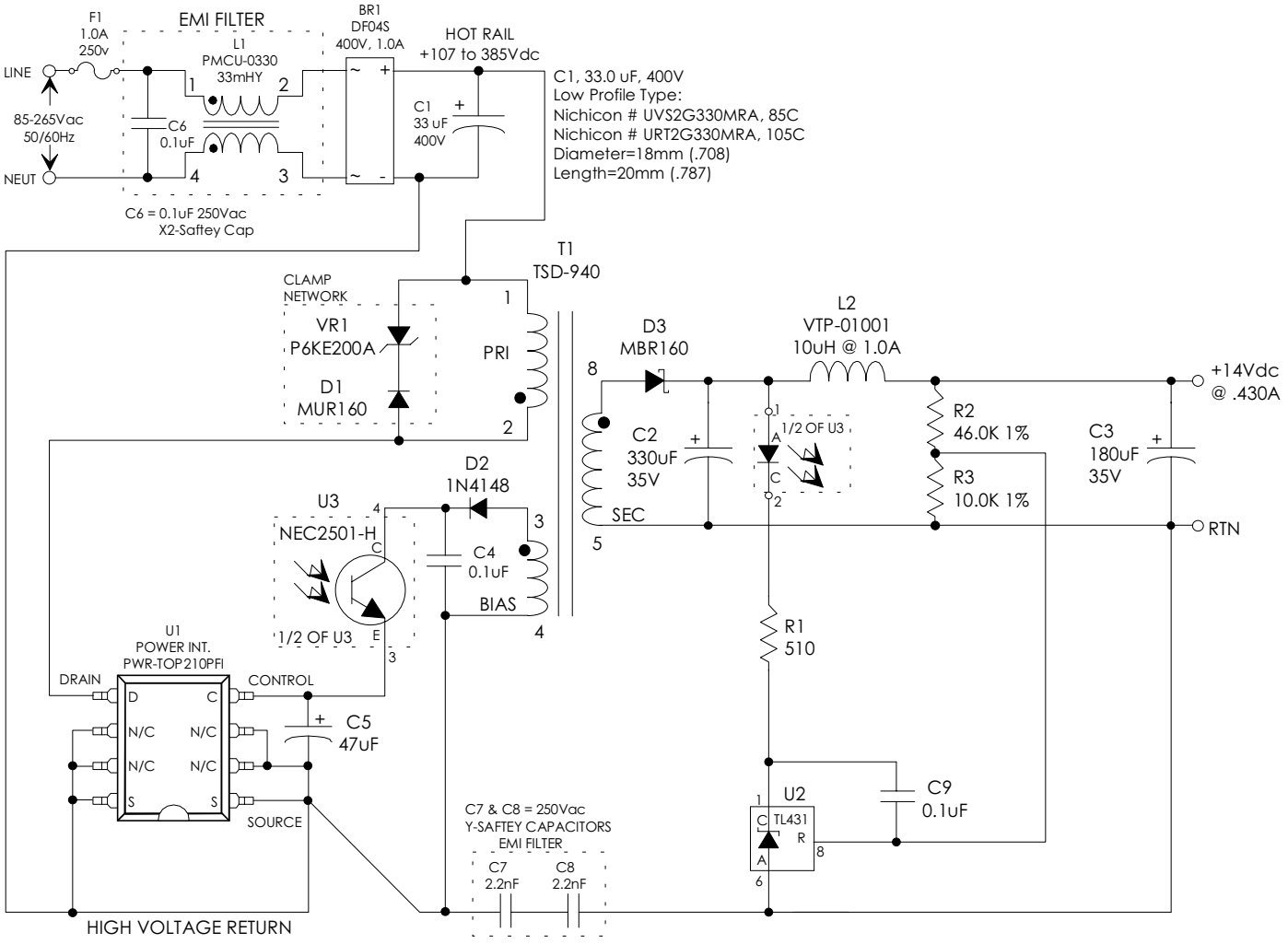
Below is a universal input high precision 6W watt application circuit utilizing Power Integrations PWR-TOP210PFI switching regulator in the flyback buck-boost configuration. The EMI/RFI capacitors C7 & C8 are shown for reference but may not be needed to meet EMI/RFI emission specifications, careful EMI/RFI testing is recommended before removing these components.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
(REQUEST DATA SHEETS BY PART#)
L1 = PMCU-0330 33mHy EMI/RFI CMC
T1 = TSD-1010 MAIN SWITCHING TRANSFORMER
L2 = VTP-01001 10uHy, 1.0Amp INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

+14V OUTPUT: C2 ≥25V, Ripple Rated ≥ 820mA @ 100KHz @ Max. Op. Temp.
PANASONIC FA SERIES: LOW IMPEDANCE LONG LIFE RADIAL SERIES
C2 = 330uF, 35V = PANASONIC EEUFA1V331
C3 = 180uF, 25V = PANASONIC EEUFA1E181



Premier Magnetics Inc. "INNOVATORS IN MAGNETICS TECHNOLOGY"	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONAL TOLERANCES ARE: DECIMALS ANGLES .XX ± 0.04 ±0° 30' .XXX ± 0.020 DO NOT SCALE DRAWING	**FLYBACK TRANSFORMER CONTROL DRAWING**
		PREMIER P/N: TSD-1010 — REVISION: 08/09/99
		DRAWN BY: TOM O'NEIL — REF: PWR-TOP210
		SCALE: NONE — SHEET: 2 OF 4