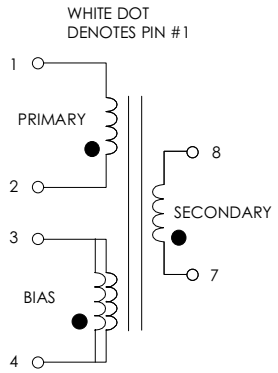
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS TOP222Y. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	1962	2179	2196	µHY
TURN RATIO'S: SEC (7-8) : PRIMARY (2-1) BIAS (4-3) : PRIMARY (2-1)	-------- --------	1: 2.5 1: 10.0	-------- --------	± 4% ± 4%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	--------	--------	44.0	µHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	-------- --------	-------- --------	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	 85 0.0 -------- -------- -------- --------	 -------- 48.0 -------- -------- 0.20 0.20 50.0	 265 .250 .330 -------- -------- --------	 Vac Vdc Amps Amps ±% ±% ±mV

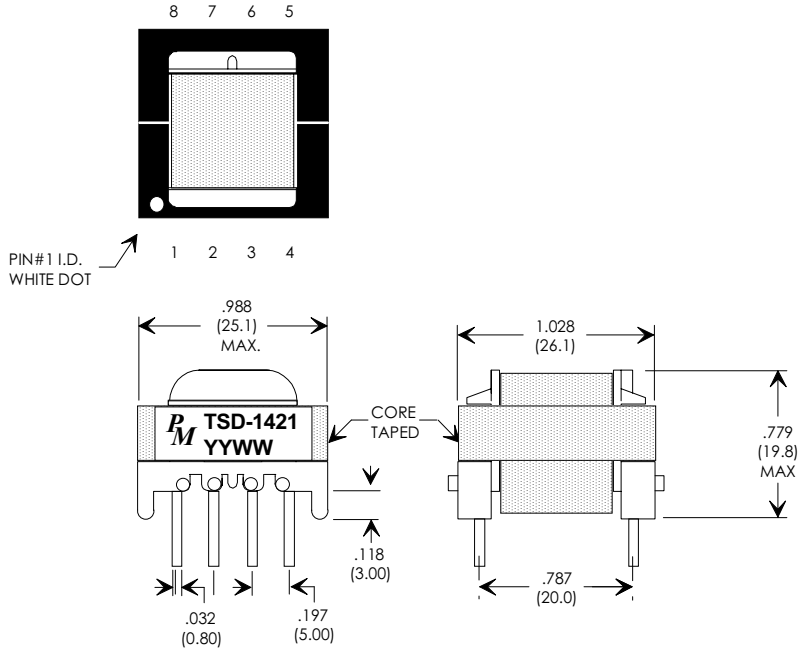
(1) REFER TO RD5 APPLICATION CIRCUIT OF FIGURE 3.

FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:
REINFORCED INSULATION, UL1950, IEC950, CSA-950:
A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
B) ALL MATERIALS RATED 130 °C (CLASS B) OR BETTER.
C) DESIGNED FOR >6.2mm CREEPAGE REQUIREMENTS.
D) VARNISH FINISHED ASSEMBLY.

FIGURE 2: PHYSICAL DIMENSIONS INCHES (mm)



REV.	DESCRIPTION OF CHANGES	BY
05/17/99	ORIGINAL RELEASE	PP

EF25 8-PINS HORZ BOBBIN

Premier Magnetics Inc.
"INNOVATORS IN MAGNETICS TECHNOLOGY"

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MM
DIMENSIONAL TOLERANCES ARE:
DECIMALS ANGLES
.X ± .25 ±0 ° 30'
.XX ± .15
DO NOT SCALE DRAWING

FLYBACK TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-1421	REVISION: 05/17/99
ENGR: PETER PHAM	REF: TOP222Y
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1421 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP222Y 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-1421 transformer has been optimized to provide maximum power throughput.

The TOPSwitch-II 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 TOPXXX are critical to the performance of the circuit. They define the overall efficiency, output power and overall physical size.

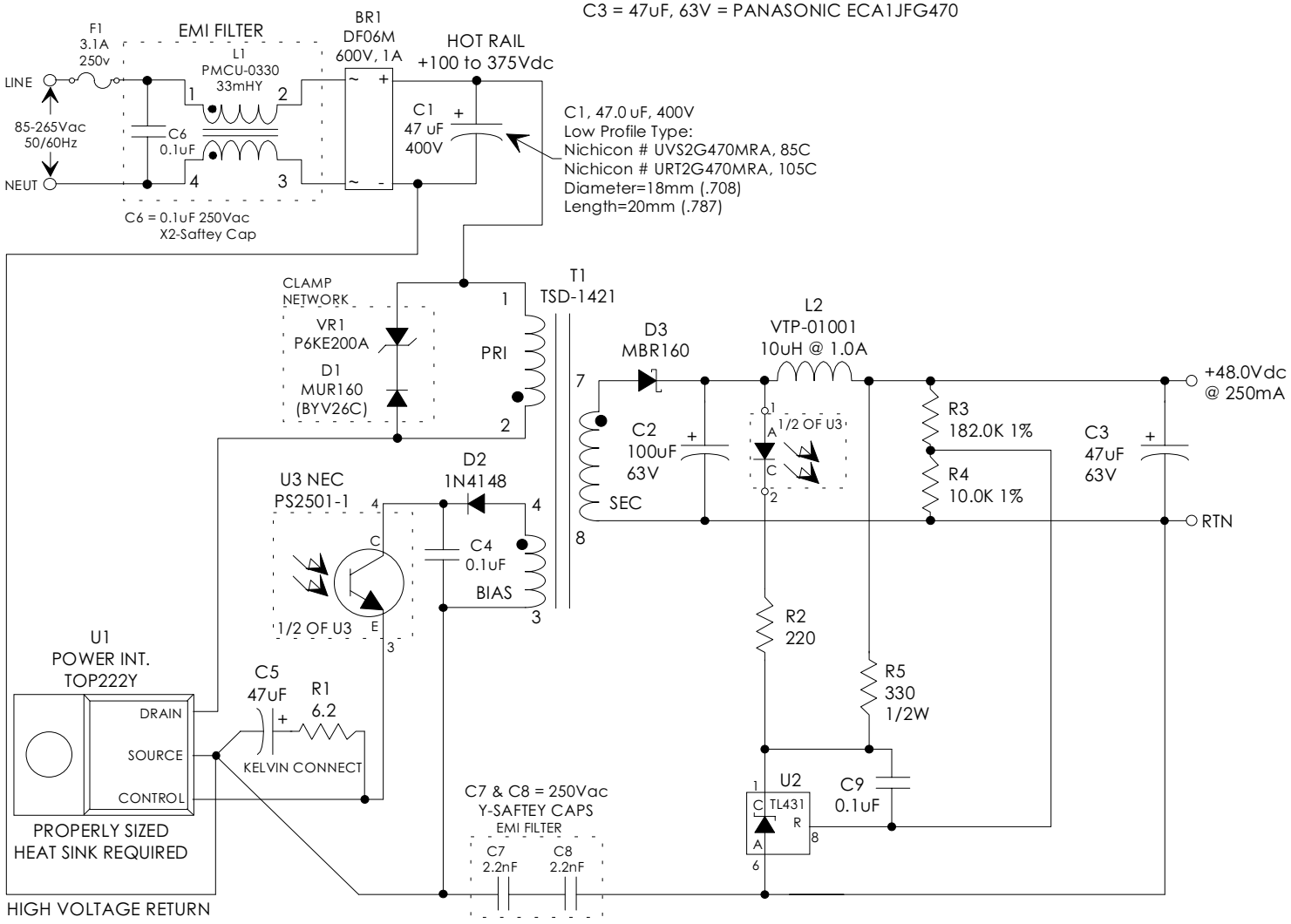
Below is a universal input high precision 12 watt application circuit utilizing Power Integrations TOP222 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. Please refer to Power Integrations application notes for the RD5 demo board for more information.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
(REQUEST DATA SHEETS BY PART#)
L1 = PMCU-0330 33mHy EMI/RFI CMC
T1 = TSD-1421 MAIN SWITCHING TRANSFORMER
L2 = VTP-01001 10uHy, 1.0Amp INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

+48V OUTPUT: C2 ≥63V, Ripple Rated ≥ 360mA @ 100KHz @ Max. Op. Temp.
PANASONIC FA SERIES: LOW IMPEDANCE LONG LIFE RADIAL SERIES
C2 = 100uF, 63V = PANASONIC ECA1JFG101
C3 = 47uF, 63V = PANASONIC ECA1JFG470



Premier Magnetics Inc. "INNOVATORS IN MAGNETICS TECHNOLOGY"	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM DIMENSIONAL TOLERANCES ARE: DECIMALS ANGLES .X ± .25 ±0° 30' .XX ± .15 DO NOT SCALE DRAWING	**FLYBACK TRANSFORMER CONTROL DRAWING**
		PREMIER P/N: TSD-1421 — REVISION: 05/17/99
		ENGR: PETER PHAM — REF: TOP222Y
		SCALE: NONE — SHEET: 2 OF 4