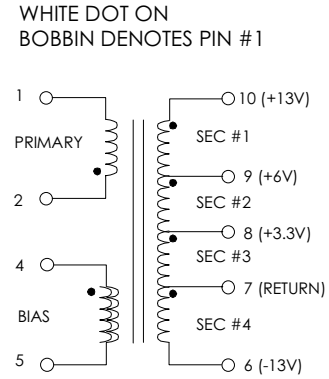


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 PWR-TOP222YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	1400	1500	1600	μHY
PRI LEAKAGE INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ SECONDARIES SHORTED	-----	-----	40	μHY
URNS RATIO'S: SEC (10-6) : PRIMARY (2-1) SEC (9-6) : PRIMARY (2-1) SEC (8-6) : PRIMARY (2-1) SEC (7-6) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-----	1: 3.6 1: 4.8 1: 5.54 1: 7.2 1: 7.2	-----	± 4% ± 4% ± 4% ± 4% ± 4%
HIPOT: PRIMARY, BIAS TO SEC'S PRIMARY TO BIAS	3000 600	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE - SEC #1 & #4 OUTPUT CURRENT - SEC #1 & #4 OUTPUT VOLTAGE - SEC #2 OUTPUT CURRENT - SEC #2 OUTPUT VOLTAGE - SEC #3 OUTPUT CURRENT - SEC #3 LINE REGULATION (85 TO 135Vac) LOAD REGULATION 0-100% RIPPLE	85 0.01 0.01 0.05 ----- ----- -----	----- +/-13 ----- +3.3 ----- 0.50 ----- 50.0	265 .100 .200 1.50 ----- ----- -----	Vac Vdc Amps Amps Vdc Amps ±% ±% ±mV

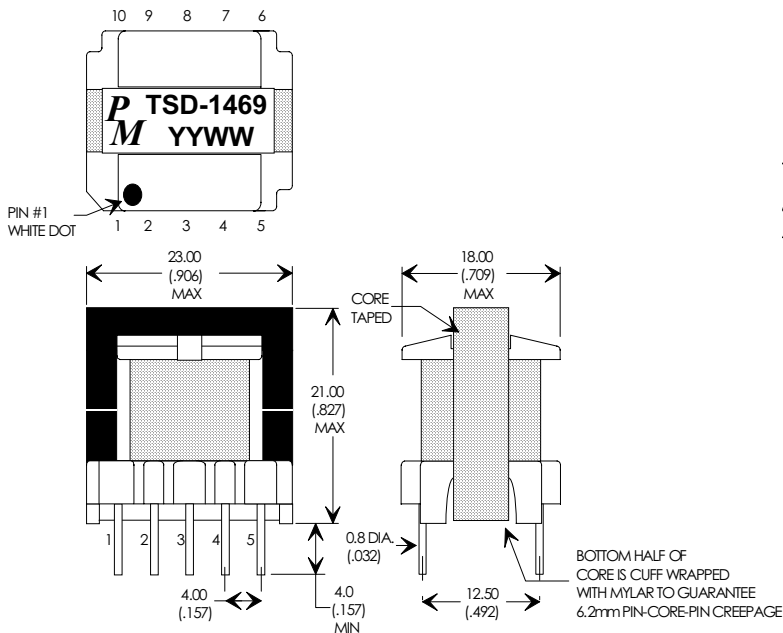
FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
 A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS.
 B) TRIPLE BASIC INSULATED SECONDARY.
 C) DESIGNED TO MEET >6.2mm CREEPAGE REQUIREMENTS.
 D) ALL MATERIAL RATED 130 °C OR BETTER.
 F) VARNISH FINISHED ASSEMBLY.

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



EE22/19/6, 10-PIN VERTICAL BOBBIN

REV.	DESCRIPTION OF CHANGES	BY
09/16/99	ORIGINAL RELEASE	PP
10/26/99	UPDATE RELEASE	PP
02/17/00	CHANGED # TURNS ON PRI, BIAS & SEC'S	PP



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-1469	REVISION: 02/17/00
ENGR: PETER PHAM	REF: PWR-TOP222
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1469 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP222YA1 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 132Vac) input high precision 9 watt application circuit utilizing Power Integrations PWR-TOP222 switching regulator. The component values listed are intended for reference purposes only.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:
 C1= 33uF 400V, NICHICON 85°C: #UVX2G330MHA

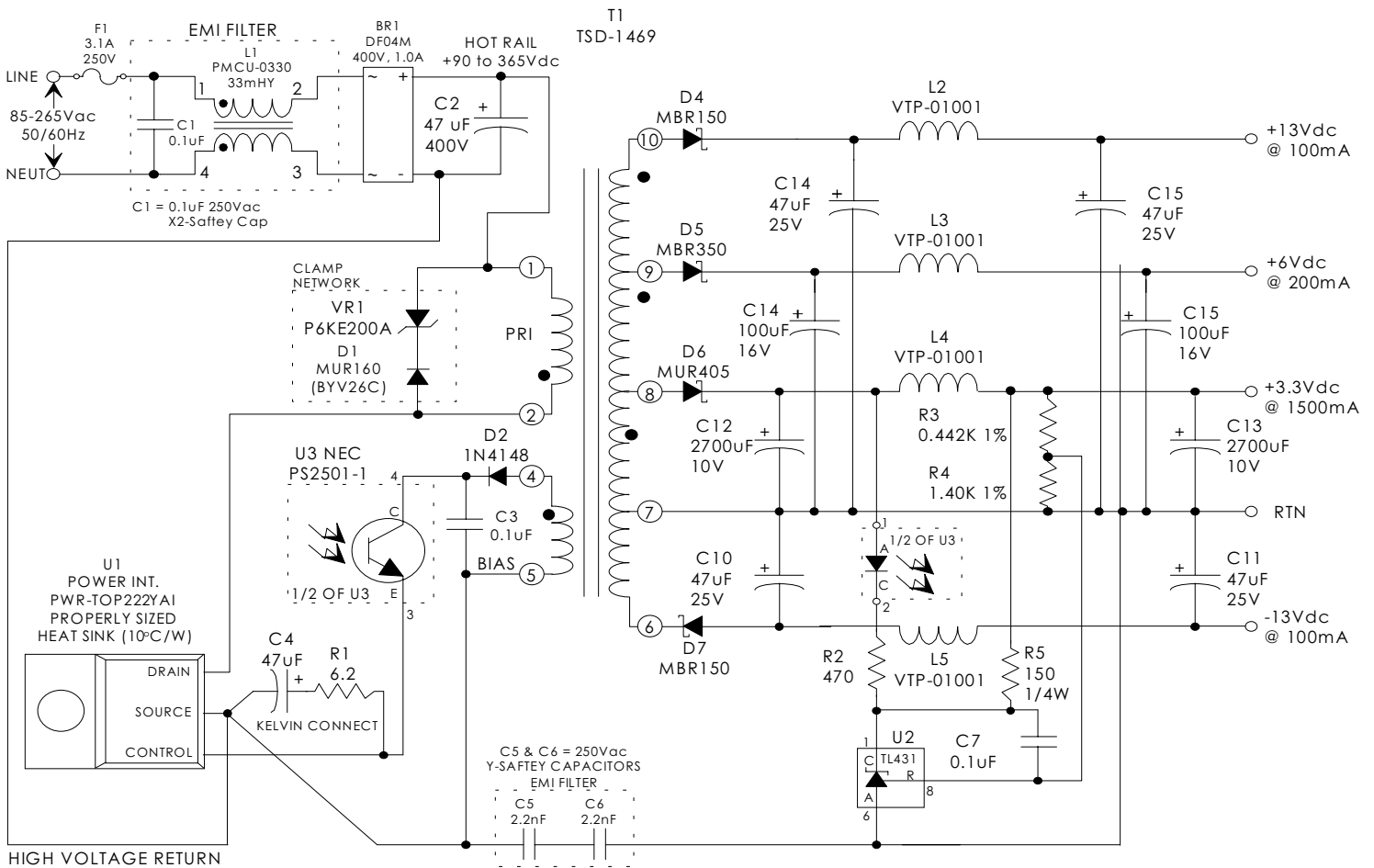
+13V OUTPUT: C8, C9, C14, C15 = 47 uF ≥25V,
 Ripple Rated ≥ 122mA @ 100KHz @ Max. Op. Temp.
 PANASONIC 105°C: ECA1EFG470

+6V OUTPUT: C12, C13 = 100uF ≥ 16V,
 Ripple Rated ≥ 245mA @ 100KHz @ Max. Op. Temp.
 PANASONIC 105°C: ECA1CFG101

+3.3V OUTPUT: C10, C11 = 2700uF ≥10V,
 Ripple Rated ≥ 1840mA @ 100KHz @ Max. Op. Temp.
 PANASONIC 105°C: EEUFA1A272

PREMIER MAGNETICS PART NUMBERS:

(REQUEST DATA SHEETS BY PART#)
 L1 = PMCU-0330 33mHy EMI/RFI CMC
 T1 = TSD-1469 MAIN SWITCHING TRANSFORMER
 L2-L5 = VTP-01001 10uHy, 1.0 AMP INDUCTOR



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-1469	REVISION:02/17/00
ENGR: PETER PHAM	REF: PWR-TOP222
SCALE: NONE	SHEET: 2 OF 4