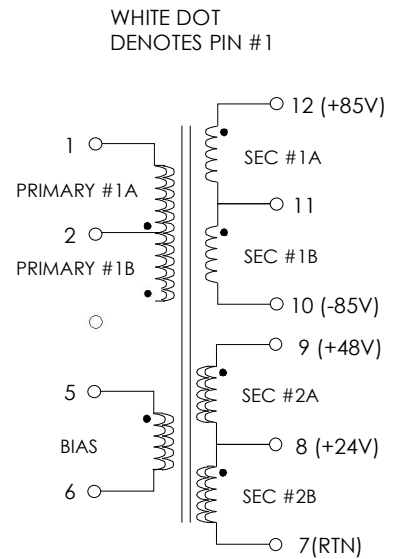


**TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C**

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (3-1) 0.250Vrms @ 100 KHZ	450	500	550	μHY
TURNS RATIO'S: BIAS (5-6) : PRIMARY (3-1) SEC #1A (12-11) : PRIMARY (3-1) SEC #1B (11-10) : PRIMARY (3-1) SEC #2A (9-8) : PRIMARY (3-1) SEC #2B (8-7) : PRIMARY (3-1)	-----	1: 7.33 1: 1.05 1: 1.05 1: 3.67 1: 3.67	-----	± 4% ± 4% ± 4% ± 4% ± 4%
PRIMARY LEAKAGE INDUCTANCE ALL SECONDARIES SHORTED 0.250Vrms @ 100 KHZ	-----	-----	10	μHY
HI-POT: PRIMARY & BIAS TO SECONDARIES BETWEEN SECONDARIES	3000 500	----- -----	----- -----	Vrms Vrms
DESIGN PARAMETERS: SWITCHING FREQUENCY MAXIMUM DUTY CYCLE SEC #1 OUTPUT VOLTAGE SEC #1 OUTPUT CURRENT SEC #2 OUTPUT VOLTAGE SEC #2 OUTPUT CURRENT	----- ----- ----- ----- ----- -----	100 ----- +/-85 ----- 48 -----	----- 50 ----- 175 ----- 1300	KHz % V mA V mA

TOTAL POWER 95W MAXIMUM WHEN ALL SEC'S LOAD

**FIGURE 1: SCHEMATIC DIAGRAM**

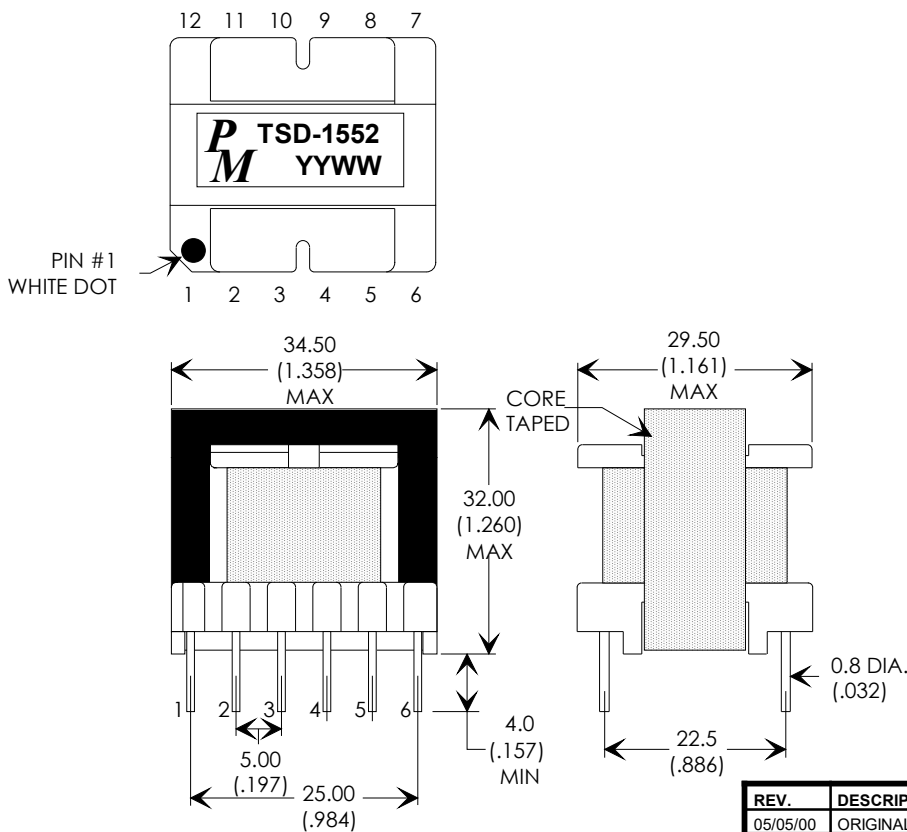


**MAXIMUM POWER WHEN ALL SECONDARY LOAD = 95W**

**NOTE1:**

- A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
- B) ALL MATERIAL RATED 130°C OR BETTER.
- C) VARNISH FINISHED ASSEMBLY.

**FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)**



**RoHS**

REV.	DESCRIPTION OF CHANGES	BY
05/05/00	ORIGINAL RELEASE	PP



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-1552	REVISION: 05/05/00
ENGR: PETER PHAM	REF:
SCALE: NONE	SHEET: 1 OF 2

# APPLICATION NOTES

Premier Magnetics' TSD-1552 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP227YA1 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 265Vac) input high precision 95 watt (maximum when all secondary load) a application circuit utilizing Power Integrations PWR-TOP227 switching regulator. . 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 33mH EMI/RFI CMC

T1 = TSD-1552 MAIN SWITCHING TRANSFORMER

L2, L3 = VTP-01001 10uH, 1.0Amp INDUCTOR

L4, L5 = VTP-01002 10uH, 1.0Amp INDUCTOR

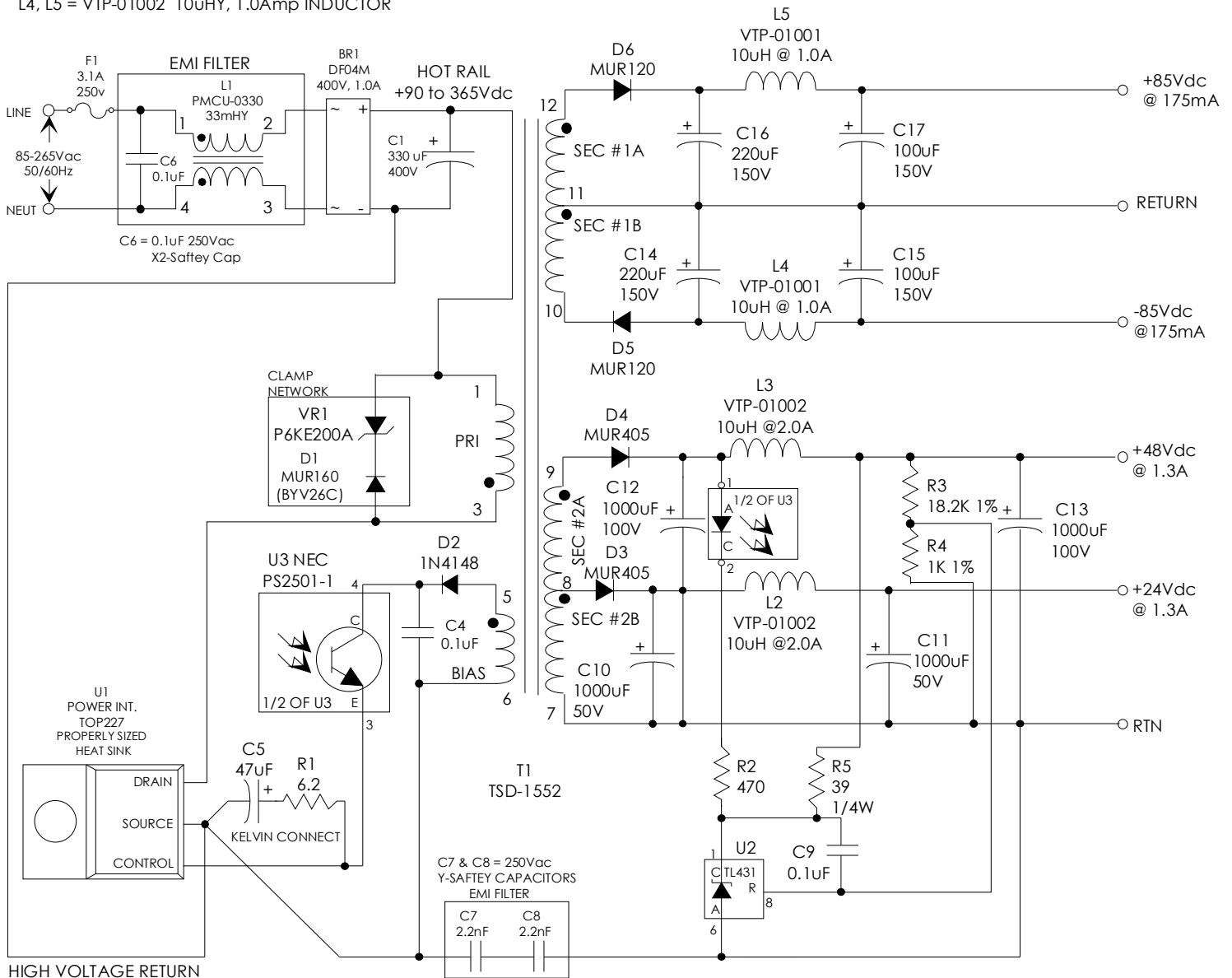
**ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:**

+/-85V OUTPUT: C14, C15, C16 & C17 ≥V150V,

Ripple Rated ≥ 200mA @ 100KHz @ Max. Op. Temp.

+48V OUTPUT: C12 & C13 ≥100V, Ripple Rated ≥ 1000mA @ 100KHz @ Max. Op. Temp.

+24V OUTPUT: C10 & C11 ≥50V, Ripple Rated ≥ 1000mA @ 100KHz @ Max. Op. Temp.



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-1552	REVISION: 05/05/00
ENGR: PETER PHAM	REF:
SCALE: NONE	SHEET: 2 OF 2