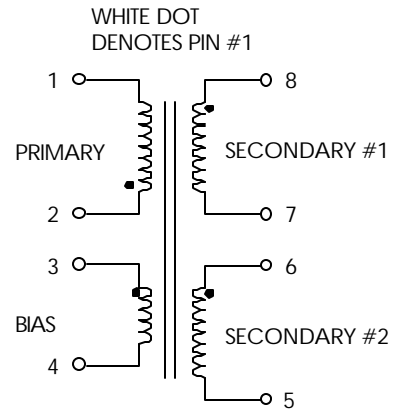


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 PWR-TOP202YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100KHZ	450	500	550	μHY
TURN RATIO'S: SEC #1 (8-7) : PRIMARY (2-1) SEC #2 (6-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-----	1: 3.375 ----- 1: 13.50 ----- 1: 6.750	-----	± 3% ----- ± 3% ----- ± 3%
PRILEAKAGE IND. (SEC'SSHORT) 0.250Vrms @ 100KHz	-----	-----	45.0	μHY
HIPOT: PRIMARY & BIAS TO SECONDARY'S SECONDARY #1 TO SECONDARY #2	3000 1500	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400Hz SEC #1 OUTPUT VOLTAGE SEC #1 OUTPUT mA CONTINUOUS SEC #2 OUTPUT VOLTAGE SEC #2 OUTPUT mA CONTINUOUS LINE REGULATION (85 TO 265Vac) RIPPLE EACH OUTPUT TRANSFORMER TEMPERATURE RISE	85 ----- 20 ----- 200 ----- ----- ----- -----	----- 24.0 ----- 5.0 ----- 0.20 ----- 100.0 ----- 35.0	265 ----- 500 ----- 1000 ----- ----- ----- -----	Vac Vdc mA Vdc mA ± % ± mV °C

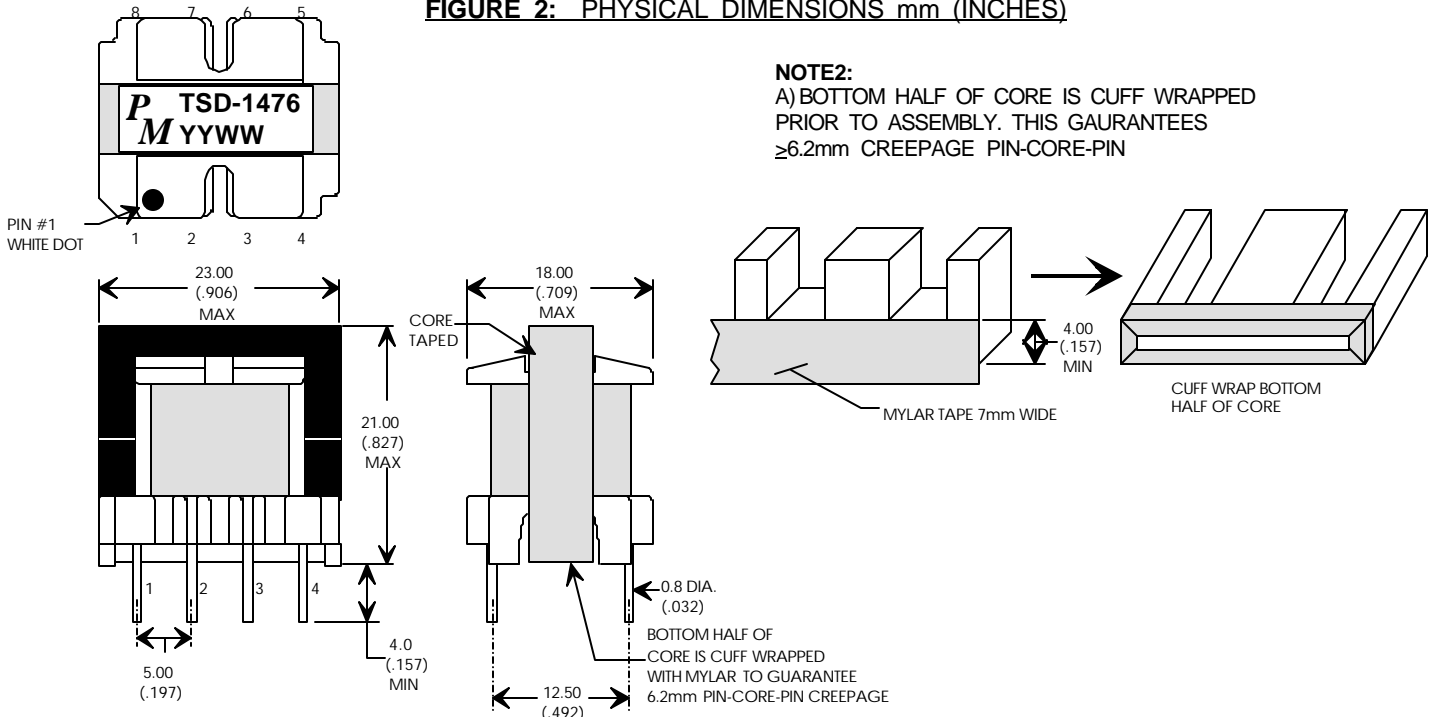
(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
 A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
 B) DESIGNED TO MEET ≥6.2mm CREEPAGE REQUIREMENTS.
 C) VARNISH FINISHED ASSEMBLY.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



NOTE2:
 A) BOTTOM HALF OF CORE IS CUFF WRAPPED
 PRIOR TO ASSEMBLY. THIS GAURANTEES
 ≥6.2mm CREEPAGE PIN-CORE-PIN

EI22/19/6, 8-PIN VERTICAL BOBBIN



UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 DIMENSIONAL TOLERANCES ARE:
 DECIMALS ANGLES
 .XX ± .05 ± 0° 30'
 .XXX ± .010
 DO NOT SCALE DRAWING

REV.	DESCRIPTION OF CHANGES	BY
09/15/99	CUSTOMER REQUESTED INCREASE IN SEC#2 OUTPUT VOLTAGE	PP
02/01/02	UPDATED LEAKAGE IND. TEST LIMIT	MP

HDSL TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-1476	REVISION: 02/01/02
DRAWN BY: PETER PHAM	REF: PWR-TOP202YAI
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetic's TSD-1476 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP202YA1 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%. Premier's TSD-1476 transformer has been optimized to provide maximum power throughput.

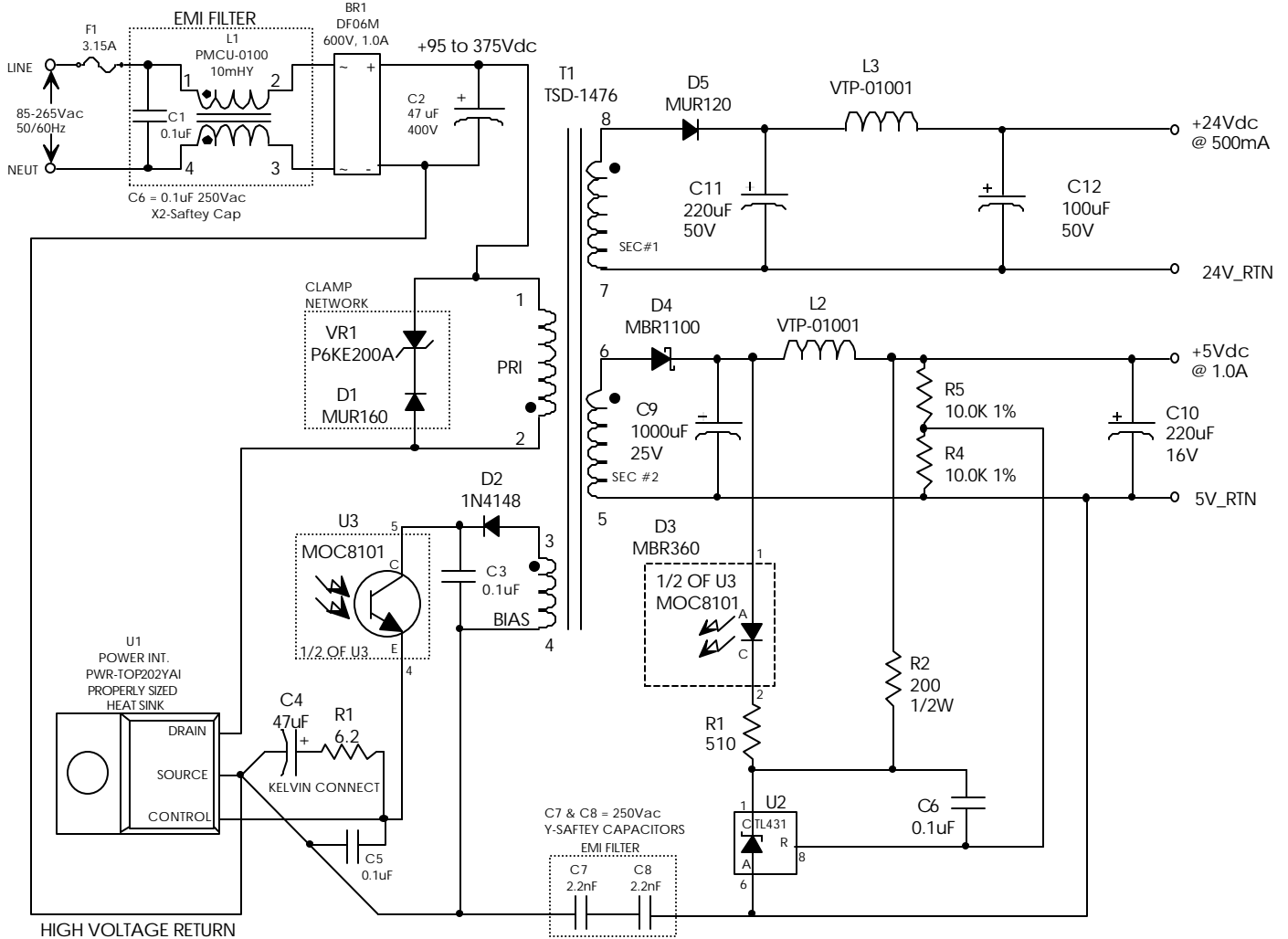
The PWR-TOPXXX series from Power Integrations, Inc. are self contained 100KHz three terminal voltage controlled PWM switching regulators. This series contains all necessary functions for an off-line switched mode control DC power source. These switching regulators provide a very simple solution to off-line 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 Dual Output 17 watt application circuit utilizing Power Integrations PWR-TOP202 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
 (REQUEST DATA SHEETS BY PART#)
 T1 = TSD-1476 MAIN SWITCHING TRANSFORMER
 L2, L3 = VTP-01001, 10uH @1A

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:
 C9 : $\geq 25V$, 1000uF, Ripple Rated $\geq 980mA$ @ Max. Op. Temp.
 (Panasonic P/N ECA1EFG102, 105C)
 C10 : $\geq 16V$, 220uF
 C11,12 : $\geq 50V$, 220uF, Ripple Rated $\geq 500mA$ @ Max. Op. Temp.
 (Panasonic P/N ECA1HFG221, 105C)



UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 DIMENSIONAL TOLERANCES ARE:
 DECIMALS ANGLES
 .XX ± .05 ± 0° 30'
 .XXX ± .010
 DO NOT SCALE DRAWING

HDSL TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-1476	REVISION: 02/01/02
DRAWN BY: PETER PHAM	REF: PWR-TOP202YA1
SCALE: NONE	SHEET: 2 OF 4