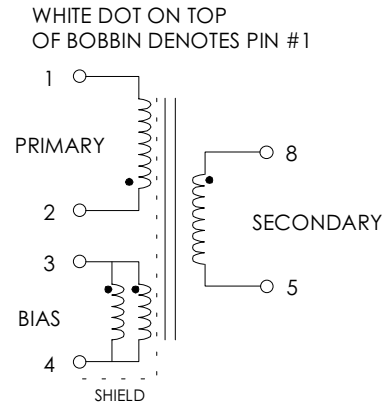


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 PWR-TOP202YAI. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	558	620	682	μHY
TURN RATIO'S: SECONDARY (8-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	-----	1: 6.00 1:10.80	-----	± 4% ± 4%
PRI LEAKAGE IND. (8-5 SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	-----	28.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLATGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	85 ----- 0.0 ----- ----- ----- -----	----- 22.0 ----- ----- 0.20 0.20 50.0	265 ----- 700 850 ----- ----- -----	Vac Vdc mA mA ±% ±% ±mV

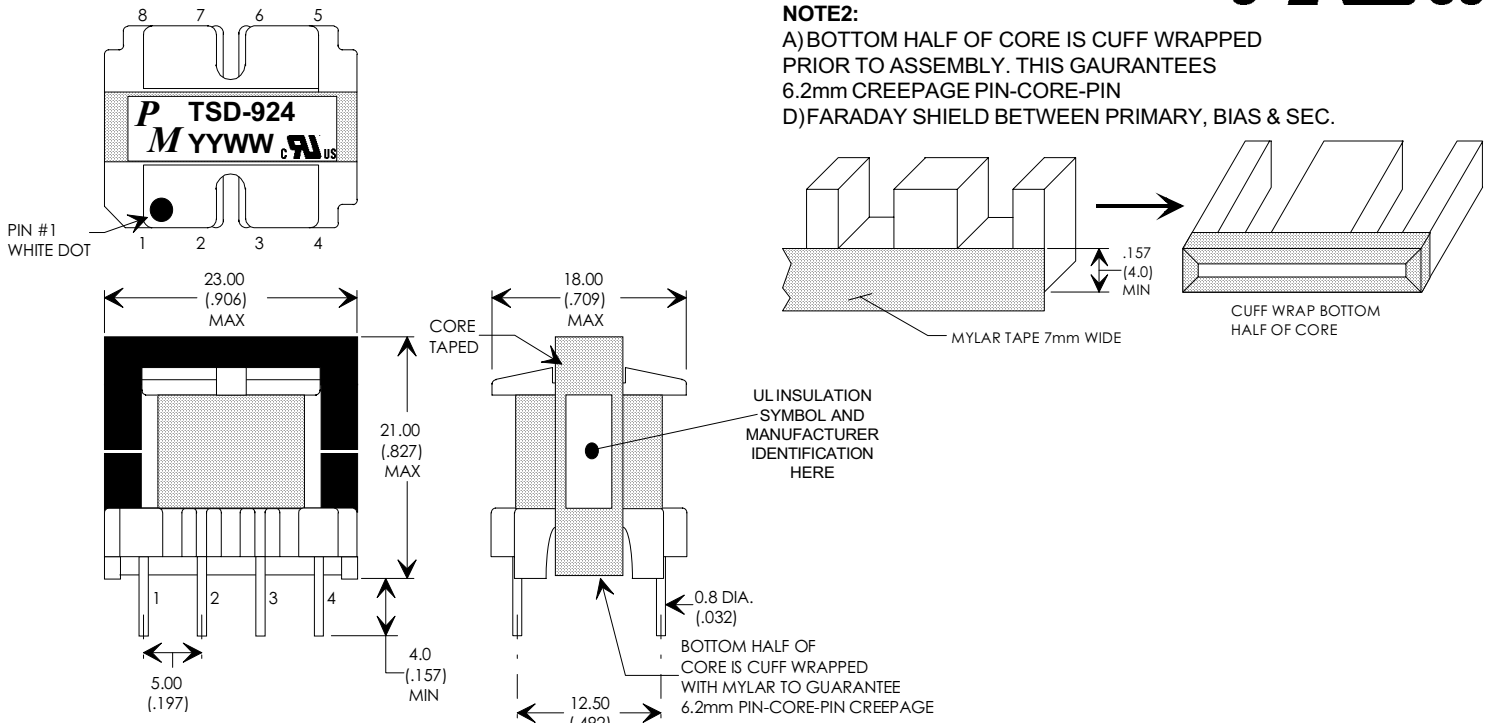
FIGURE 1: SCHEMATIC DIAGRAM



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) FARADAY SHIELD BETWEEN PRIMARY, BIAS & SEC.
 E) VARNISH FINISHED ASSEMBLY.
 F) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
 G) UL CLASS (B) 130 INSULATION SYSTEM PM130-R1,
 PM130-H1, PM130-H1A (UL FILE #E177139) OR ANY UL
 AUTHORIZED CLASS (B) INSULATION SYSTEM.

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

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
 D) FARADAY SHIELD BETWEEN PRIMARY, BIAS & SEC.

EI22/19/6, 8-PIN VERTICAL BOBBIN

REV.	DESCRIPTION OF CHANGES	BY
9/10/96	ORIGINAL RELEASE, SHIELDED VERSION OF POL-22007	TO
05/20/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD



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-924	REVISION: 05/20/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP202YAI
SCALE: NONE	SHEET: 1 OF 6

APPLICATION NOTES

Premier Magnetics' TSD-924 is a Faraday Shielded version of our POL-22007 Switch Mode Transformer and is designed for use with Power Integrations, Inc. PWR-TOP202YAI 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-924 & POL-22007 transformers have 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 15 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. The soft start capacitor C_{ss} is optional depending on the specific application.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:

(REQUEST DATA SHEETS BY PART#)

L1 = PMCU-0330 33mHy EMI/RFI CMC

T1 = TSD-924 MAIN SWITCHING TRANSFORMER

L2 = VTP-01001 10uHy, 1.0Amp INDUCTOR

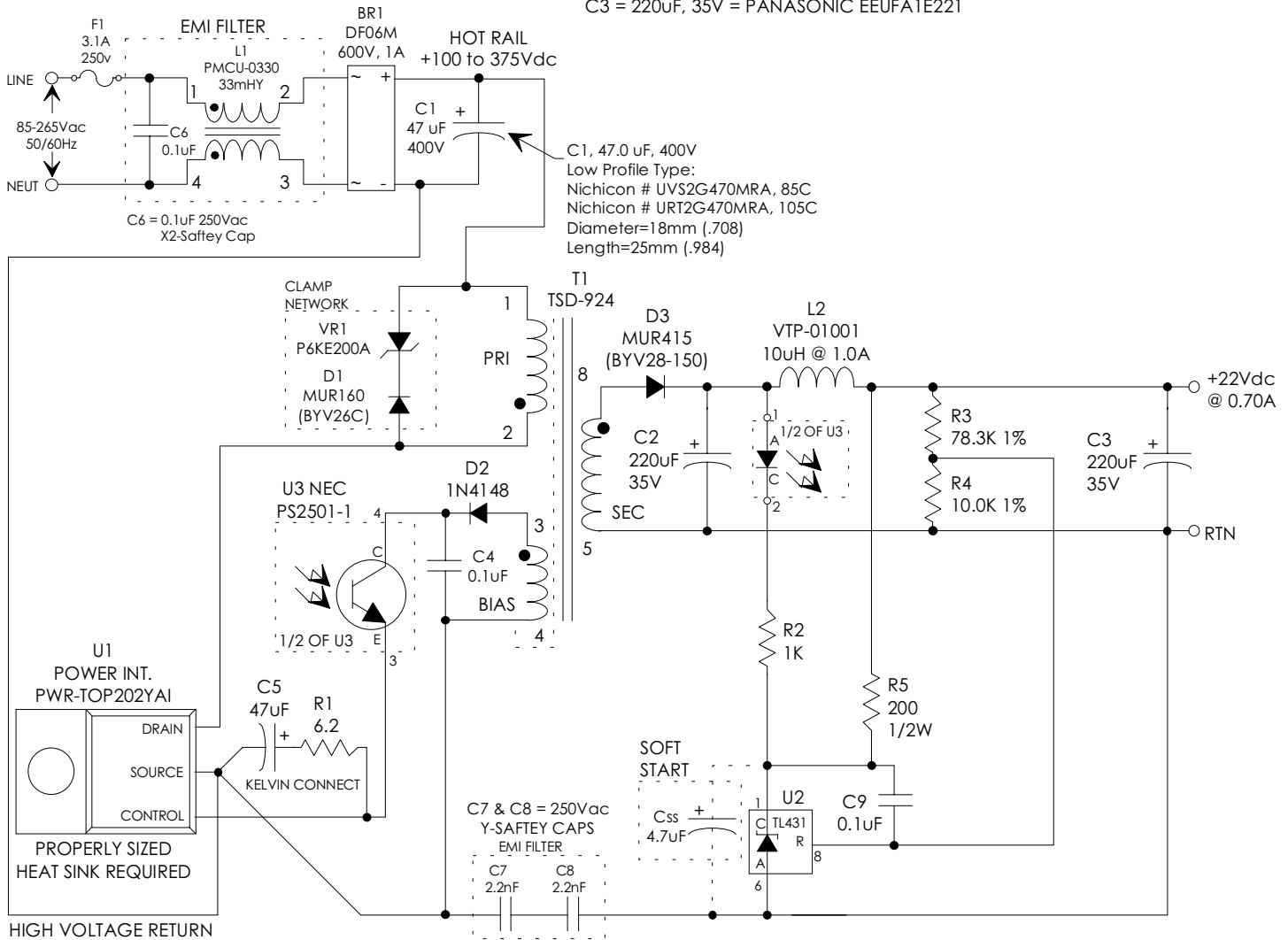
ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

+22V OUTPUT: C₂ ≥35V, Ripple Rated ≥ 800mA @ 100KHz @ Max. Op. Temp.

PANASONIC FA SERIES: LOW IMPEDANCE LONG LIFE RADIAL SERIES

C₂ = 220uF, 35V = PANASONIC EEUFA1E221

C₃ = 220uF, 35V = PANASONIC EEUFA1E221



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-924	REVISION: 05/20/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP202YAI
SCALE: NONE	SHEET: 2 OF 6