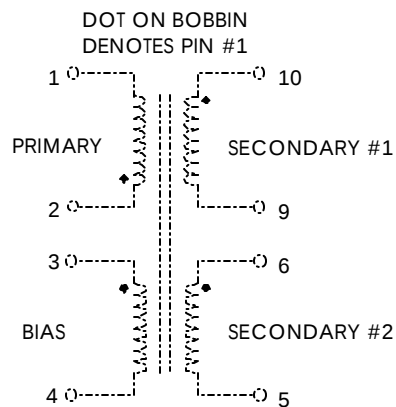


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
SWITCHING TRANSFORMER DESIGNED FOR USE WITH TOP 222
REFER TO APPLICATION CIRCUIT OF FIGURE 3

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) FREQ. = 100 KHZ @ 0.250Vrms	1400	1500	1600	μHY
TURN RATIO'S: SEC#1 (10-9) : PRIMARY (2-1)	-----	1:3.28	-----	± 3%
SEC#2 (6-5) : PRIMARY (2-1)	-----	1:9.83	-----	± 3%
PRIMARY (2-1) : BIAS (3-4)	-----	1:6.21	-----	± 3%
PRI LEAKAGE IND. (SEC'S SHORTED) FREQ. = 100 KHZ @ 0.250Vrms	-----	-----	75	μHY
HIPOT: PRIMARY TO SEC'S	3000	-----	-----	Vrms
BIAS TO SEC'S	3000	-----	-----	Vrms
APP CIRCUIT PARAMETERS: DC HOT RAIL VOLTAGE	-----	115	-----	Vdc
OUTPUT VOLTAGE (6-5)	-----	7.5	-----	Vdc
OUTPUT CURRENT CONTINUOUS	0.0	-----	265	mA
OUTPUT VOLTAGE (10-9)	-----	24.0	-----	Vdc
OUTPUT CURRENT CONTINUOUS	0.0	-----	200	mA
LOAD REGULATION 10-100%	-----	10	-----	±%
RIPPLE	-----	50.0	-----	±mV

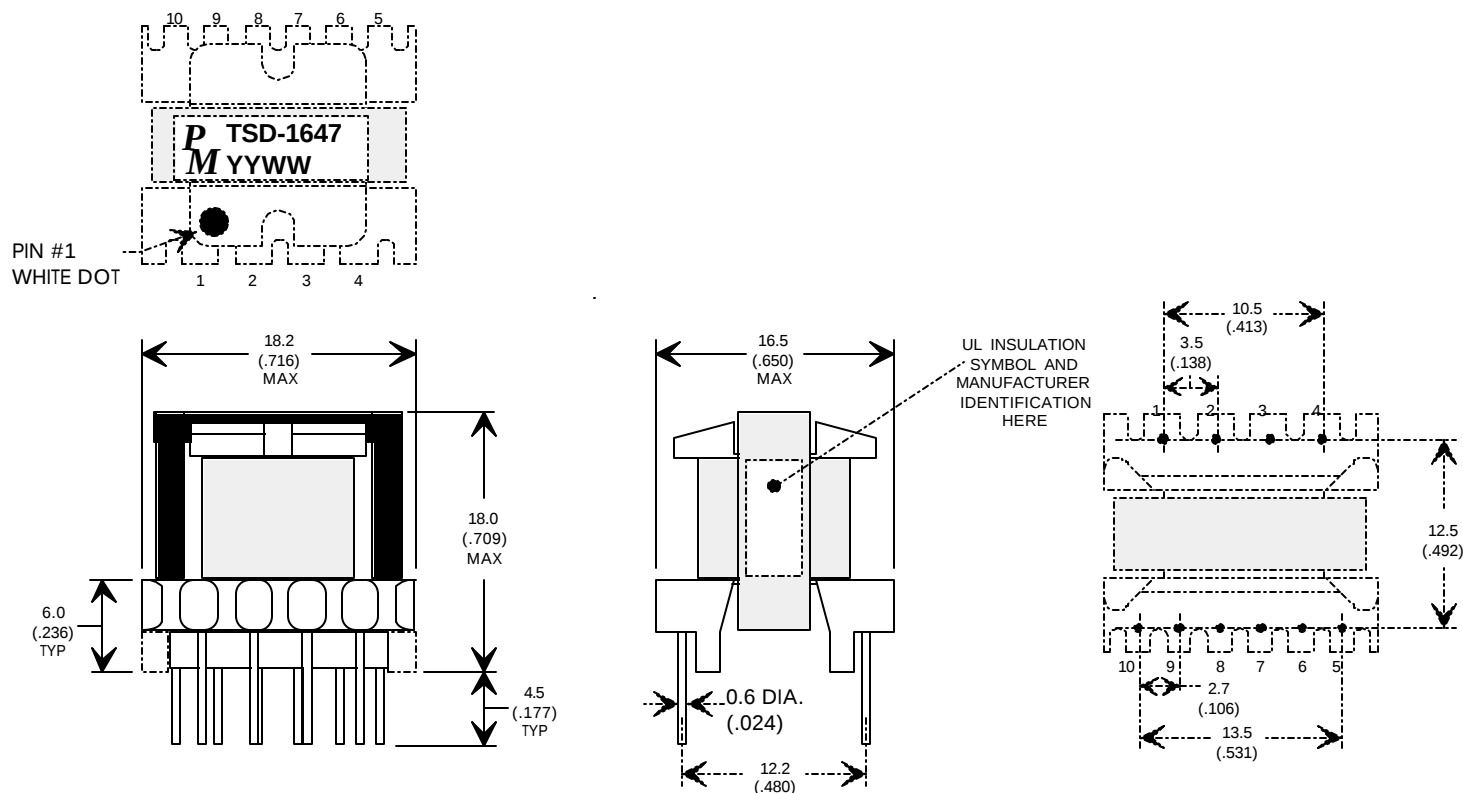
FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:

- A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
- B) TRIPLE BASIC INSULATED SECONDARY.
- C) DESIGNED TO MEET ≥6.2mm CREEPAGE REQUIREMENTS.
- D) VARNISH FINISHED ASSEMBLY.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



EE16/EI16, 10-PIN VERTICAL

REV.	DESCRIPTION OF CHANGES	BY
03/20/01	ORIGINAL RELEASE	PP
07/13/01	CORRECTED POLARITY ON SCHEMATIC	MP
TRANSFORMER CONTROL DRAWING		
PREMIER P/N: TSD-1647		REVISION: 07/13/01
ENGR: PETER PHAM		REF:
SCALE: NONE		SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1647 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP222 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 7 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

PREMIER MAGNETICS PART NUMBERS:

(REQUEST DATA SHEETS BY PART#)

T1 = TSD-1647 MAIN SWITCHING TRANSFORMER

L1 = PMCE-0330

L2, L3 = VTP-01001, 10uH @1A

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

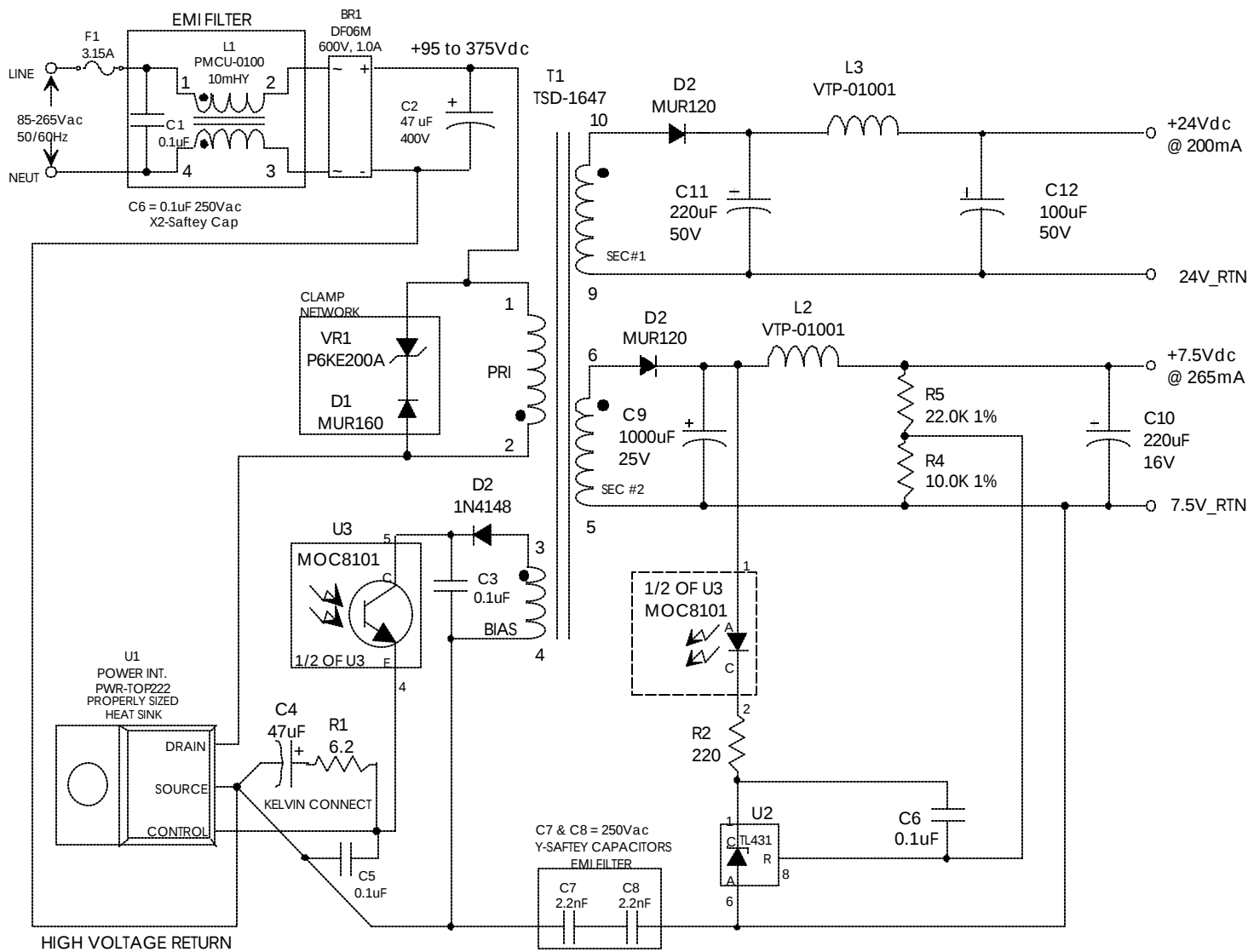
C9 : > 25V, 1000uF, Ripple Rated > 980mA @ Max. Op. Temp.

(Panasonic P/N ECA1EFG102, 105C)

C10 : > 16V, 220uF

C11,12 : >50V, 220uF, Ripple Rated > 500mA @ Max. Op. Temp.

(Panasonic P/N ECA1HFG221, 105C)



***Premier
Magnetics Inc.***

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-1647

REVISION: 07/13/01

ENGR: PETER PHAM

REF:

SCALE: NONE

SHEET: 2 OF 4