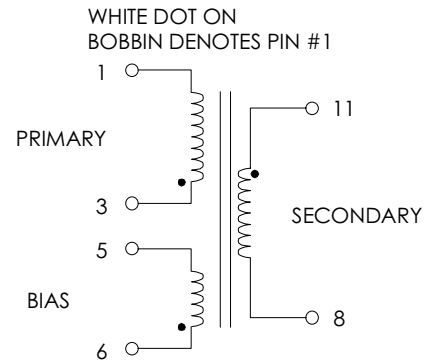


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 TOP226Y OR TOP204Y. REFER TO APPLICATION CIRCUIT OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (3-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	493	548	603	μHY
TURN RATIO'S: SEC (11-8) : PRIMARY (3-1) BIAS (6-5) : PRIMARY (3-1)	-----	1: 3.60 1: 7.20	-----	± 4% ± 4%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	20.0	25.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	----- -----	----- -----	Vrms Vrms
APP CIRCUIT PARAMETERS: (1) AC LINE VOLTAGE 47/400 Hz OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS OUTPUT CURRENT PEAK LINE REGULATION (85 TO 265Vac) LOAD REGULATION 10-100% RIPPLE	85 ----- 0.100 ----- ----- ----- ----- -----	----- 28.0 ----- ----- 0.20 0.20 50.0	265 ----- 2.20 2.50 ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

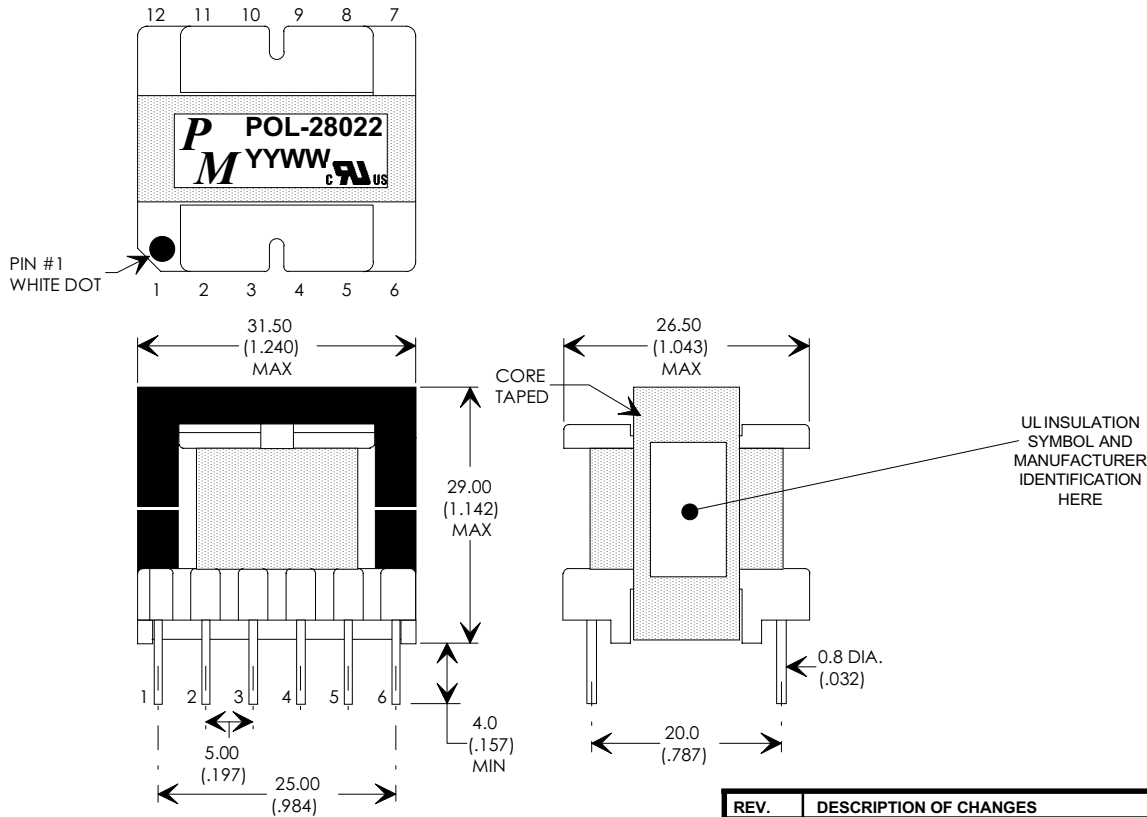
FIGURE 1: SCHEMATIC DIAGRAM



NOTE 1:
REINFORCED INSULATION SYSTEM, UL 1950, 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) VARNISH FINISHED ASSEMBLY.
 E) UL 1950 & CSA-950 CERTIFIED: FILE #E162344.
 F) 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)



EE30 (FEE30A) -OR- EI30 (FEI30), 12-PIN VERTICAL BOBBIN



UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN MM
 DIMENSIONAL TOLERANCES ARE:
 DECIMALS ANGLES
 .X ± .25 ±0° 30'
 .XX ± .15
 DO NOT SCALE DRAWING

REV.	DESCRIPTION OF CHANGES	BY
03/12/97	UPDATED RELEASE	TO
11/10/98	UPDATED TO ADD UL 1950 & CE-950 APPROVAL & MARKING	AS
05/03/99	UPDATE TO UL CLASS (B) 130 INSULATION SYSTEM	MD

TRANSFORMER CONTROL DRAWING

PREMIER P/N: POL-28022	REVISION: 05/03/99
ENGR: TOM O'NEIL	REF: TOP226/204
SCALE: NONE	SHEET: 1 OF 6

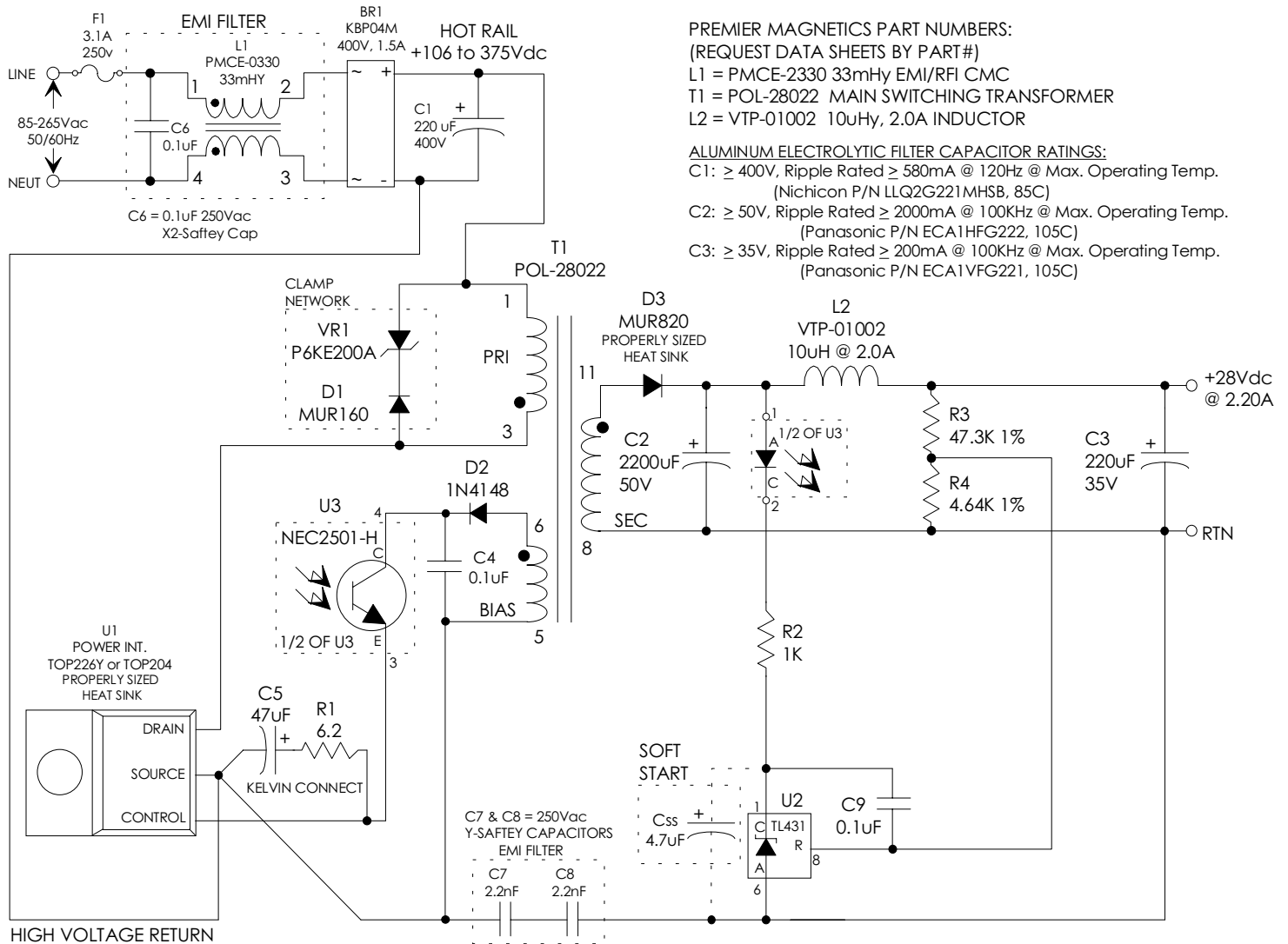
APPLICATION NOTES

Premier Magnetics' POL-28022 Switch Mode Transformer was designed for use with Power Integrations, Inc. TOP226 or TOP204Y 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 POL-28022 transformer has been optimized to provide maximum power throughput.

The 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 62 watt application circuit utilizing Power Integrations TOP226 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. A properly sized heat sink for the TOP226 is required for efficient and reliable operation. The use of the VTK-01002 (Sendust type) output inductor will provide maximum efficiency -vs- the lower cost VTP-01002 (-52 powdered iron). Soft start capacitor C_{ss} is optional and application dependent.

FIGURE 3: TYPICAL APPLICATION CIRCUIT



PREMIER MAGNETICS PART NUMBERS:

(REQUEST DATA SHEETS BY PART#)

L1 = PMCE-2330 33mHy EMI/RFI CMC

T1 = POL-28022 MAIN SWITCHING TRANSFORMER

L2 = VTP-01002 10uHy, 2.0A INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

C1: ≥ 400V, Ripple Rated ≥ 580mA @ 120Hz @ Max. Operating Temp. (Nichicon P/N LLG2G221MHSB, 85C)

C2: ≥ 50V, Ripple Rated ≥ 2000mA @ 100KHz @ Max. Operating Temp. (Panasonic P/N ECA1HFG222, 105C)

C3: ≥ 35V, Ripple Rated ≥ 200mA @ 100KHz @ Max. Operating Temp. (Panasonic P/N ECA1VFG221, 105C)

TRANSFORMER CONTROL DRAWING

PREMIER P/N: POL-28022	REVISION: 05/03/99
ENGR: TOM O'NEIL	REF: TOP226/204
SCALE: NONE	SHEET: 2 OF 6