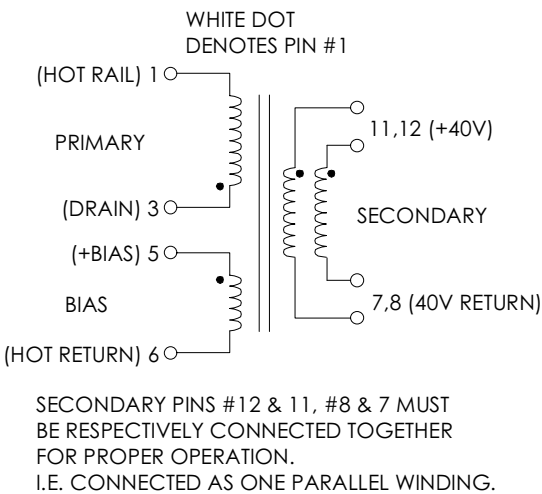


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
PWR-TOP227Y. REFER TO APPLICATION CIRCUITS OF FIGURE 3.

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (3-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	450	500	550	μHY
TURN RATIO'S: SEC (11,12-7,8) : PRIMARY (3-1) BIAS (5-6) : PRIMARY (3-1)	-----	1: 3.14 1:11.00	-----	± 4% ± 4%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-----	-----	30.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	----- -----	----- -----	Vrms Vrms
FIGURE 3 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 ----- 0.10 ----- ----- ----- -----	----- 40.0 ----- ----- 0.20 0.20 50.0	265 ----- 2.00 2.25 ----- ----- -----	Vac Vdc Amps Amps ±% ±% ±mV

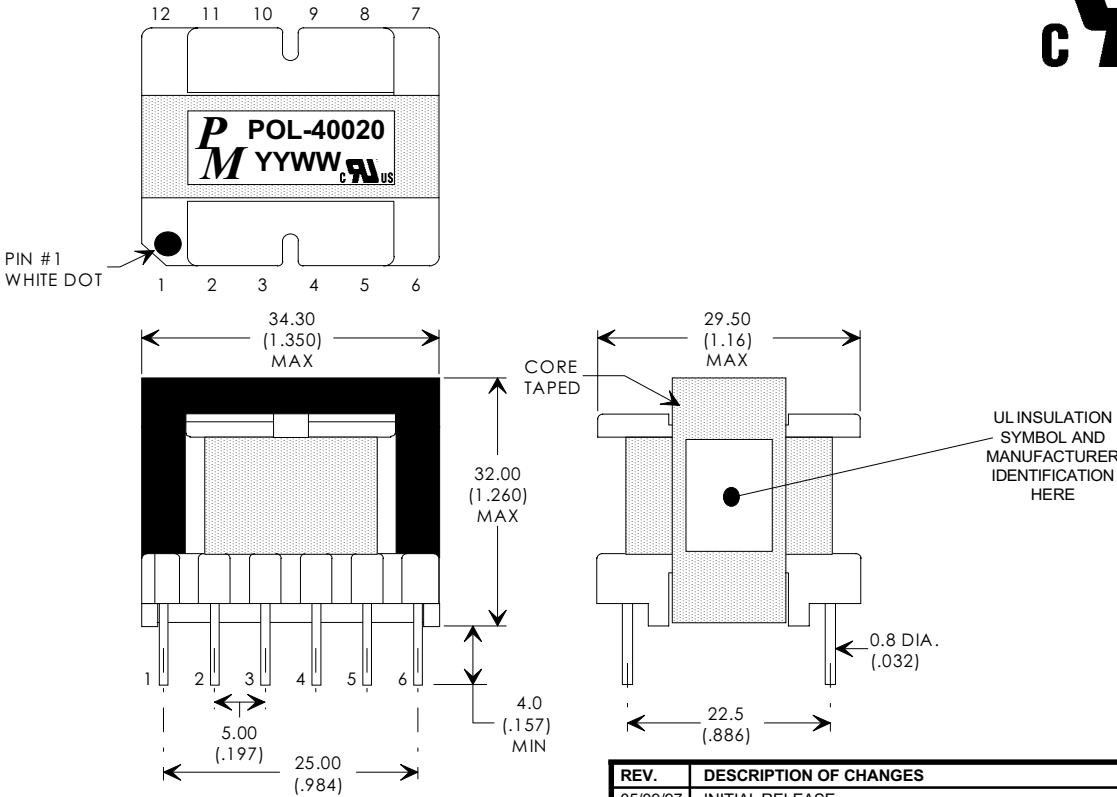
(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

FIGURE 1: SCHEMATIC DIAGRAM



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

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



EI33/29/13 -OR- EI33, 12-PIN VERTICAL BOBBIN

REV.	DESCRIPTION OF CHANGES	BY
05/09/97	INITIAL RELEASE	AS
06/10/98	UPDATED RELEASE	AS
05/11/99	UPDATE TO UL CLASS (B) 130 INSULATION SYSTEM	MD

TRANSFORMER CONTROL DRAWING	
PREMIER P/N: POL-40020	REVISION: 05/11/99
ENGR: AL SANTOS	REF: PWR-TOP227Y
APPD: TOM O'NEIL	SHEET: 1 OF 6

APPLICATION NOTES

Premier Magnetics POL-40020 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP204YA1 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-40020 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 high precision 80 watt application circuit utilizing Power Integrations PWR-TOP227 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. Properly sized heat sinks for the TOP227Y & D3 are required for efficient and reliable operation.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:

(REQUEST DATA SHEETS BY PART#)

L1 = PMCE-0160 16mHy 1.5A EMI/RFI CMC

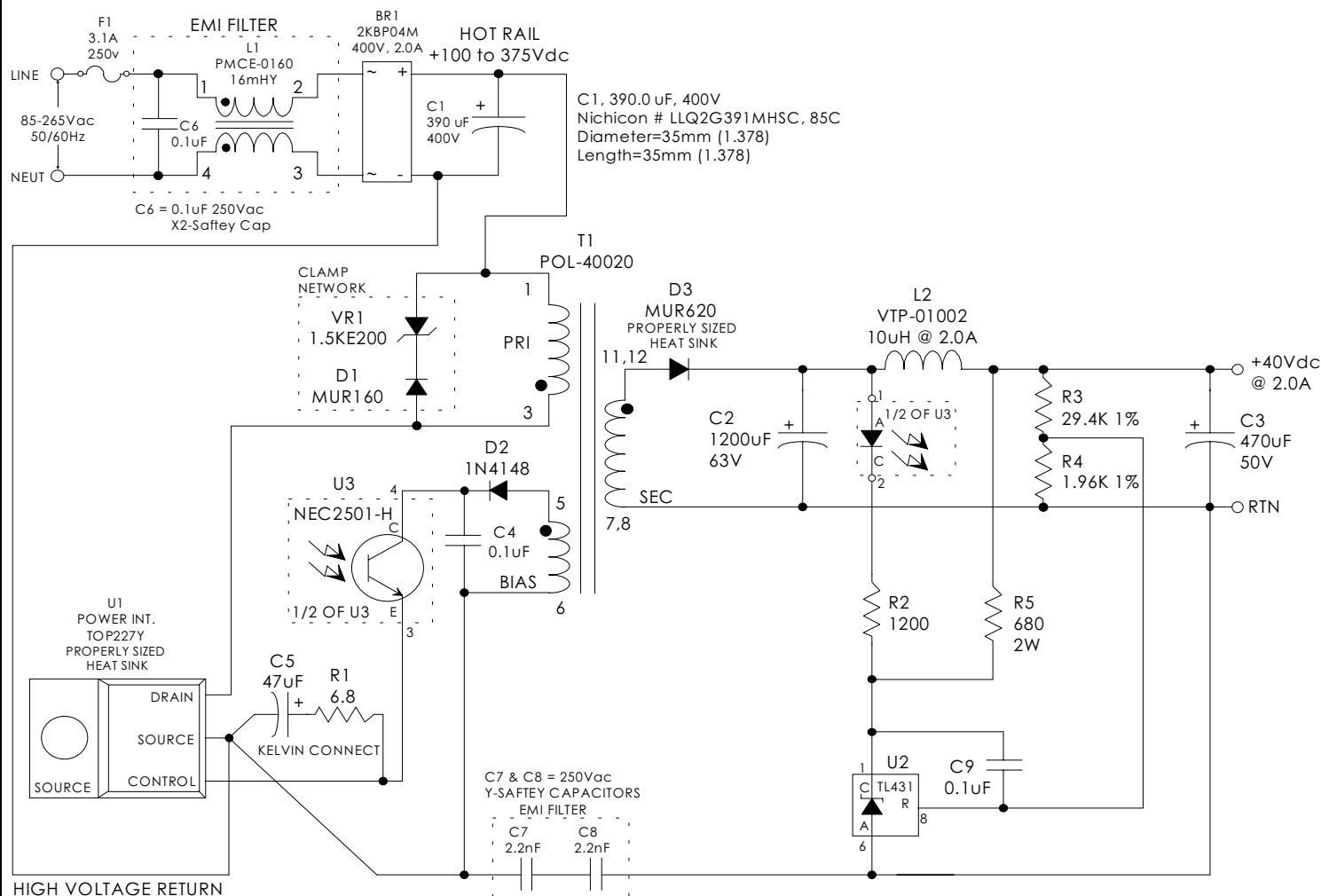
T1 = POL-30030 MAIN SWITCHING TRANSFORMER

L2 = VTP-01002 8uHy@4.0A (10uHy@2.0A) INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

C1: $\geq 400V$, Ripple Rated $\geq 720mA$ @ 120Hz @ Max. Operating Temp.
(Nichicon P/N LLQ2G391MHSC, 85C)

C2: $\geq 63V$, Ripple Rated $\geq 2350mA$ @ 100KHz @ Max. Op. Temp.
(Panasonic P/N EEUFA1J122L, 105C)



**Premier
Magnetics Inc.**
"INNOVATORS IN MAGNETICS TECHNOLOGY"

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MM
DIMENSIONAL TOLERANCES ARE:
DECIMALS ANGLES
.X $\pm .25$ $\pm 0^\circ 30'$
.XX $\pm .15$
DO NOT SCALE DRAWING

TRANSFORMER CONTROL DRAWING

PREMIER P/N: POL-40020	REVISION: 05/11/99
ENGR: AL SANTOS	REF: PWR-TOP227Y
APPD: TOM O'NEIL	SHEET: 2 OF 6