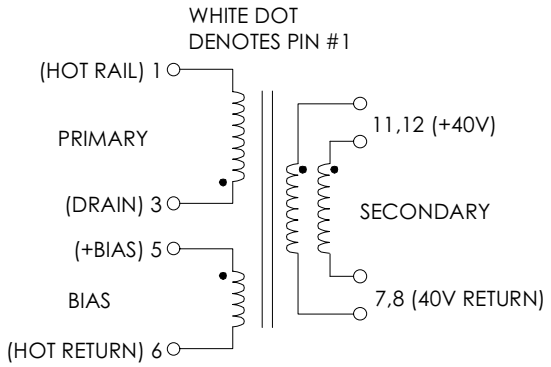
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP227Y. REFER TO APPLICATION CIRCUITS OF FIGURE 3.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
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.

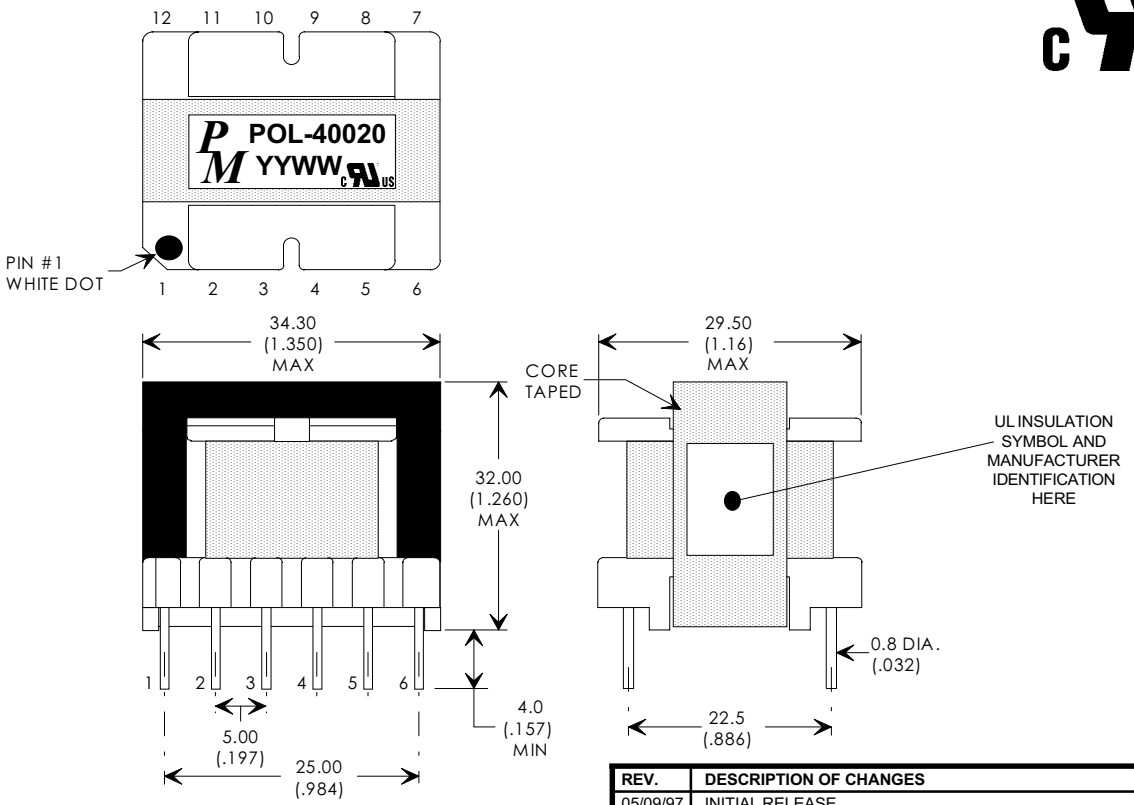
FIGURE 1: SCHEMATIC DIAGRAM



SECONDARY PINS #12 & 11, #8 & 7 MUST BE RESPECTIVELY CONNECTED TOGETHER FOR PROPER OPERATION.
I.E. CONNECTED AS ONE PARALLEL WINDING.

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)



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

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

Premier Magnetics Inc.
"INNOVATORS IN MAGNETICS TECHNOLOGY"

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: 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-TOP204YAI 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%. Premiers POL-40020 transformer has been optimized to provide maximum power throughput.

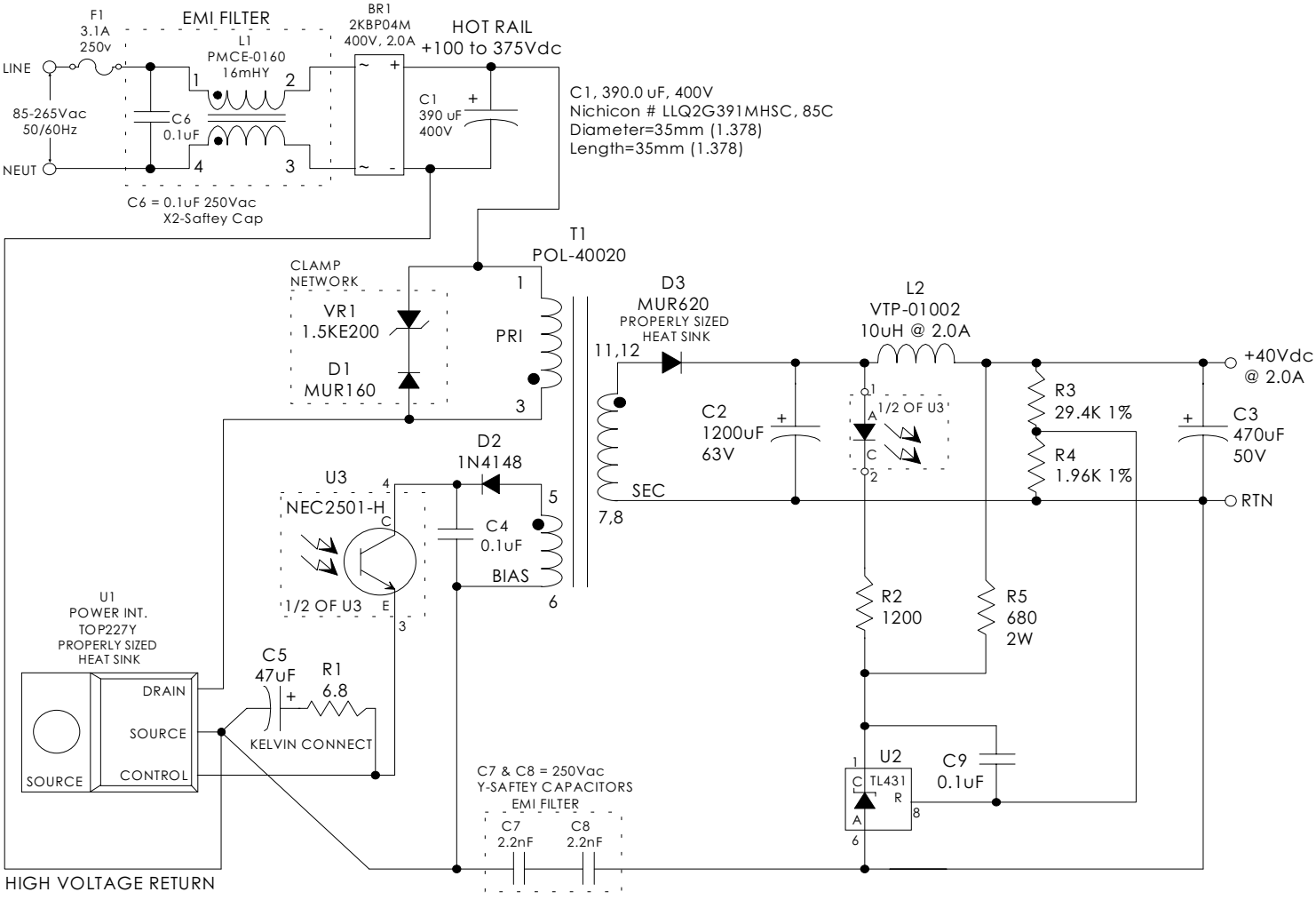
The PWR-TOPXXX series from Power Integrations, Inc. are self contained 100KHz three terminal voltage controlled PWM switching regulators. This series contains all necessary functions for an off-line switched mode control DC power source. These switching regulators provide a very simple solution to off-line 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: ≥ 400V, Ripple Rated ≥ 720mA @ 120Hz @ Max. Operating Temp.
(Nichicon P/N LLQ2G391MHSC, 85C)
C2: ≥ 63V, Ripple Rated ≥ 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 .X ± .25 .XX ± .15 ANGLES ±0° 30' 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