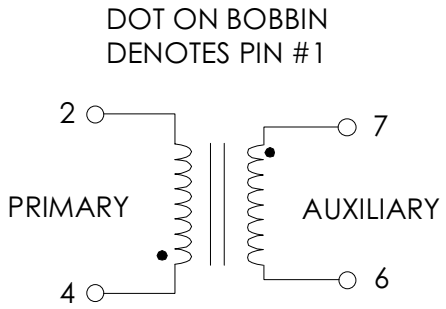
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS PWR-TOP210PFI OR TOP221P REFER TO APPLICATION CIRCUITS OF FIGURE 4.

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (4-2) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	1.80	2.00	2.20	mHY
TURN RATIO'S: AUXILIARY (7-6) : PRIMARY (4-2)	-------	1:4.51	-------	± 4%
PRI LEAKAGE IND. (7-6 SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	-------	-------	80.0	µHY
HIPOT: 1.5kV IMPULSE (1.2/50µS) PRIMARY TO AUXILIARY	1500	-------	-------	Vrms
FIGURE 4A CIRCUIT PARAMETERS:(1)				
DC HOT RAIL VOLTAGE	80	-------	500	Vdc
AUX OUTPUT VOLTAGE		17.0		Vdc
AUX OUTPUT CURRENT CONTINUOUS	0.0	-------	200	mA
AUX OUTPUT CURRENT PEAK	-------	-------	220	mA
LINE REGULATION	-------	1.50	-------	±%
LOAD REGULATION 10-100%	-------	0.50	-------	±%
RIPPLE	-------	50.0	-------	±mV

(1) REFER TO APPLICATION CIRCUIT OF FIGURE 4.

FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
B) VARNISH FINISHED ASSEMBLY.
C) 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 INCHES (mm)

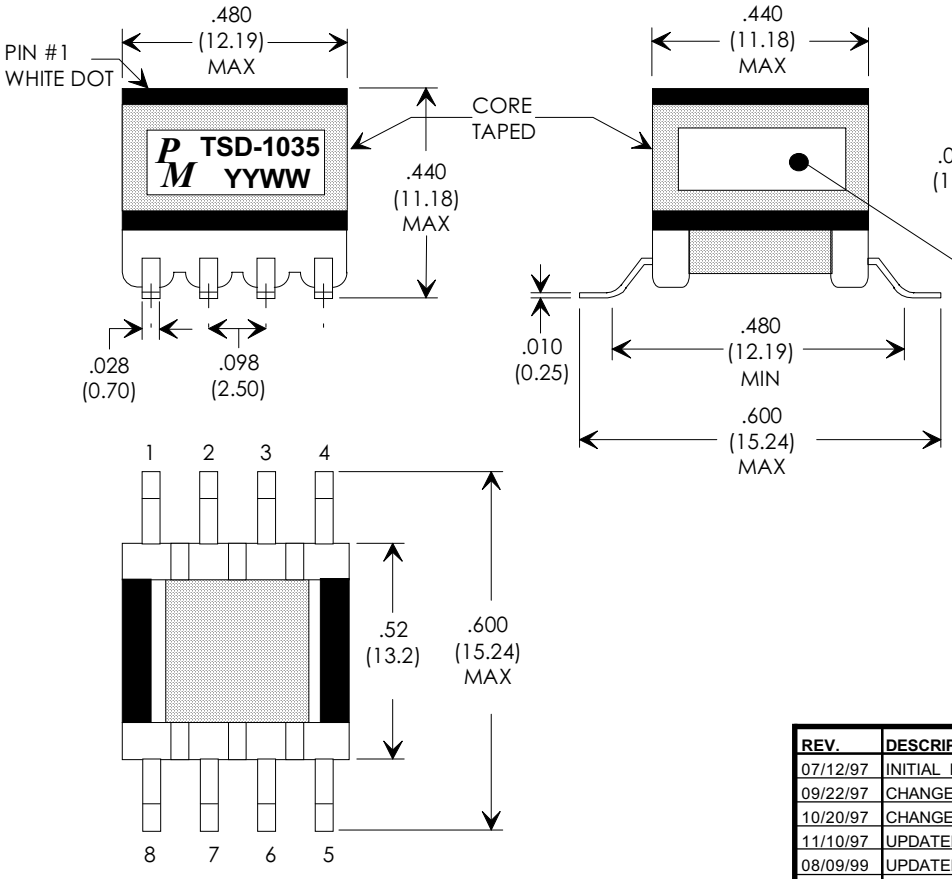
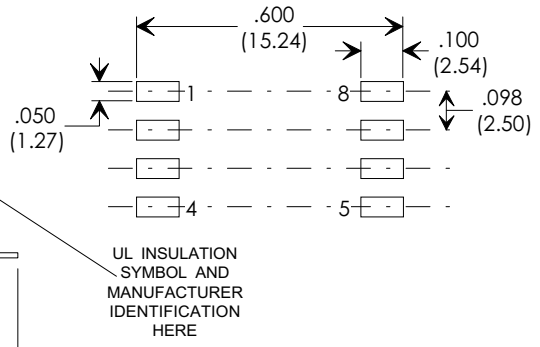


FIGURE 3: RECOMMENDED PCB LAYOUT

DIMENSIONS IN INCHES (mm)



REV.	DESCRIPTION OF CHANGES	BY
07/12/97	INITIAL RELEASE	TO
09/22/97	CHANGED VR1 TO 110V TO MEET 150V MAX CLAMP VOLTAGE	TO
10/20/97	CHANGED PRIMARY PIN-OUT FROM 4-1 TO 4-2	TO
11/10/97	UPDATED HI-POT SPEC., NO CONSTRUCTION CHANGES NEEDED	TO
08/09/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EP10, 8-PIN SMD

Premier Magnetics Inc.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DIMENSIONAL TOLERANCES ARE:
DECIMALS ANGLES
.XX ± .20 ±0° 30'
.XXX ± .10
DO NOT SCALE DRAWING

TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-1035	REVISION: 08/09/99
DRAWN BY: TOM O'NEIL	REF: TOP210/221
SCALE: NONE	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1035 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP210PFI OR TOP221 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' TSD-1035 transformer has been optimized to provide maximum power throughput.

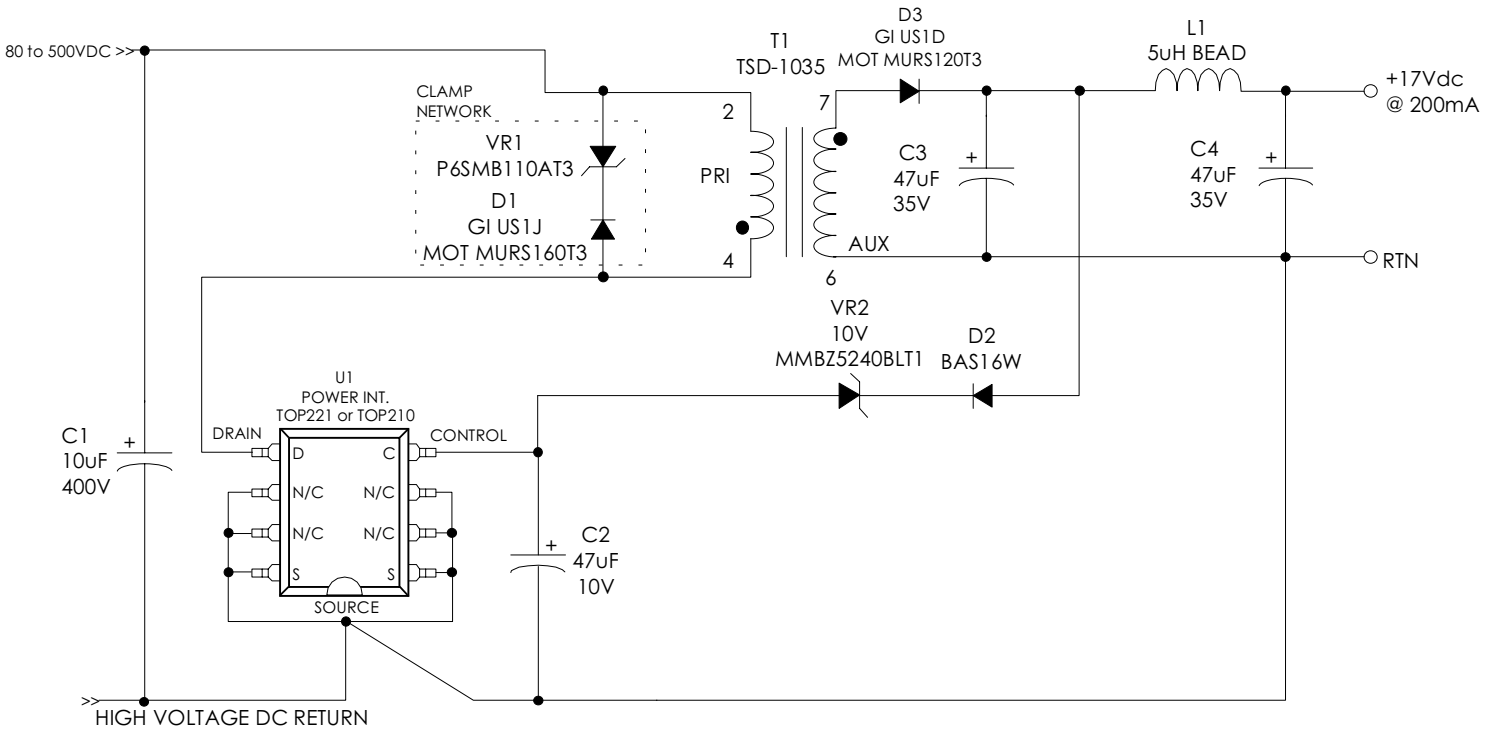
The PWR-TOPXXX series from Power Integrations, Inc. are self contained 100KHz three terminal voltage controlled PWM switching regulators. This series contains all necessary functions for an off-line switched mode control DC power source. These switching regulators provide a very simple solution to off-line 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 3.4 watt application circuit utilizing Power Integrations PWR-TOP210 OR 221 switching regulator in the NON-ISOLATED flyback buck-boost configuration. This circuit provides +17Vdc at 200mA continuous and is capable of >225mA peak for short periods of time. This circuit represents the lowest cost implementation and utilizes the secondary winding for direct feedback control. The component values listed are intended for reference purposes only.

FIGURE 4: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:
T1 = TSD-1035 MAIN SWITCHING TRANSFORMER

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:
C3, C4: ≥ 25V, Ripple Rated ≥ 205mA @ 100KHz @ Max. Op. Temp.
(Panasonic P/N ECA1VFG470, 35V, 105C)



Premier Magnetics Inc.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONAL TOLERANCES ARE: DECIMALS ANGLES .XX ± .20 ±0° 30' .XXX ± .10 DO NOT SCALE DRAWING	**TRANSFORMER CONTROL DRAWING**
		PREMIER P/N: TSD-1035 / REVISION: 08/09/99
		DRAWN BY: TOM O'NEIL / REF: TOP210/221
		SCALE: NONE / SHEET: 2 OF 4