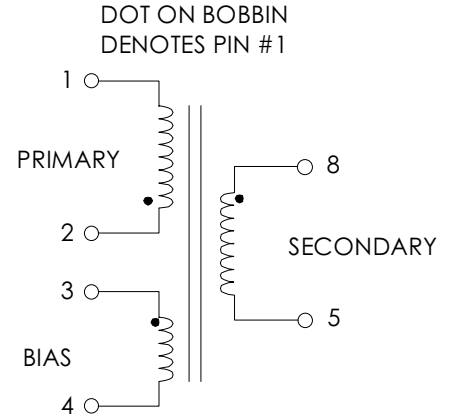


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C
 SWITCHING TRANSFORMER DESIGNED FOR USE WITH POWER INTEGRATIONS
 PWR-TOP200YAI REFER TO APPLICATION CIRCUIT OF FIGURE 3

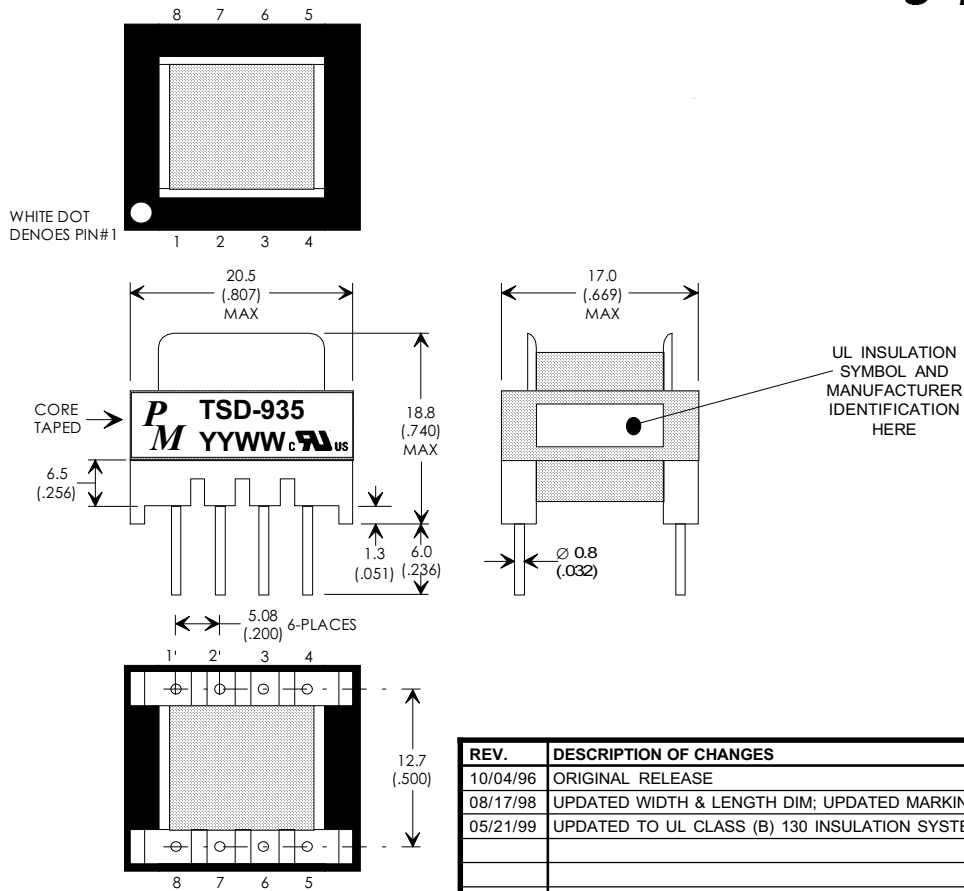
PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	1152	1280	1408	μHY
TURNRATIO'S: SEC (8-5) : PRIMARY (2-1) BIAS (3-4) : PRIMARY (2-1)	---	1: 7.27 1: 13.33	---	± 3% ± 3%
PRI LEAKAGE IND. (SEC SHORTED) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	---	28.0	38.0	μHY
HIPOT: PRIMARY TO SECONDARY BIAS TO SECONDARY	3000 3000	---	---	Vrms Vrms
APP CIRCUIT PARAMETERS: AC LINE VOLTAGE 47/400 Hz SEC#1 OUTPUT VOLTAGE OUTPUT CURRENT CONTINUOUS LINE REGULATION (85 TO 265Vac) LOAD REGULATION (10-100%) RIPPLE	85 ---	---	265 ---	Vac Vdc
	0.020	---	510	mA
	---	4.00	---	±%
	---	5.00	---	±%
	---	---	50.0	±mV

FIGURE 1: SCHEMATIC DIAGRAM

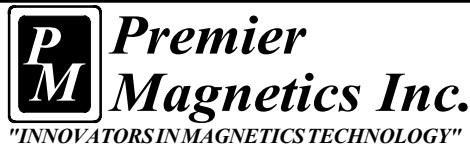


NOTE1:
REINFORCED INSULATION SYSTEM, UL1950, IEC950, CSA-950:
 A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
 B) TRIPLE BASIC INSULATED SECONDARY.
 C) VARNISH FINISHED ASSEMBLY.
 D) UL1950 & CSA-950 CERTIFIED: FILE #E162344.
 E) UL CLASS (B) 130 INSULATION SYSTEM PM130-R1,
 PM130-H1, PM130-H1A (UL FILE #E177139) OR ANY UL
 AUTHORIZED CLASS (B) INSULATION SYSTEM.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



EE19 (E187), 8-PIN HORIZONTAL



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
10/04/96	ORIGINAL RELEASE	TO
08/17/98	UPDATED WIDTH & LENGTH DIM; UPDATED MARKING TO UL	AS
05/21/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD

TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-935	REVISION: 05/21/99
DRAWN BY: TOM O'NEIL	REF: PWR-TOP200YAI
SCALE: NONE	SHEET: 1 OF 6

APPLICATION NOTES

Premier Magnetics' TSD-935 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP200YA1 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 TSD-935 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 6W watt application circuit utilizing Power Integrations PWR-TOP200YA1 switching regulator in the flyback buck-boost configuration. If the 12V output is to be run unload a clamp resistor (R3) should be added to prevent possible destructive voltage runaway. Resistor R1 may be adjusted up to 50 Ohms MAX. and down to 10 Ohms MIN. As R1 increases in value the output voltages will increase, and vice-versa, thus allowing some fine adjustment on the initial output voltage. The component values listed are intended for reference purposes only.

FIGURE 3: TYPICAL APPLICATION CIRCUIT

