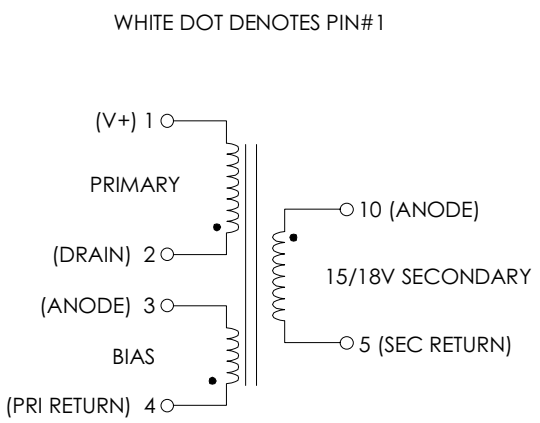
TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

PARAMETER	SPEC LIMITS MIN.	TYP.	MAX.	UNITS
PRIMARY INDUCTANCE (2-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	2.12	2.35	2.59	mHY
TURN RATIO'S: BIAS : PRIMARY (4-3 : 2-1) SEC#1 : PRIMARY (10-5 : 2-1)	-------- --------	1:7.67 1:7.67	-------- --------	± 4% ± 4%
PRI LEAKAGE INDUCTANCE VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	--------	--------	80.0	µHY
HIPOT PRIMARY & BIAS TO SECONDARY	3000	--------	--------	Vrms
APP CIRCUIT PARAMETERS: (1)				
AC LINE VOLTAGE 47/400 Hz	85	--------	265	Vac
OUTPUT VOLTAGE	--------	15	18	Vdc
OUTPUT CURRENT CONTINUOUS				
FOR 15V OUTPUT	230	--------	350	mA
FOR 18V OUTPUT	200	--------	300	mA
OUTPUT CURRENT PEAK				
FOR 15V OUTPUT	--------	--------	500	mA
FOR 18V OUTPUT	--------	--------	424	mA
LINE REGULATION (85 TO 265Vac)	--------	115	--------	±%
LOAD REGULATION 10-100%	--------	115	--------	±%
RIPPLE	--------	50.0	--------	±mV

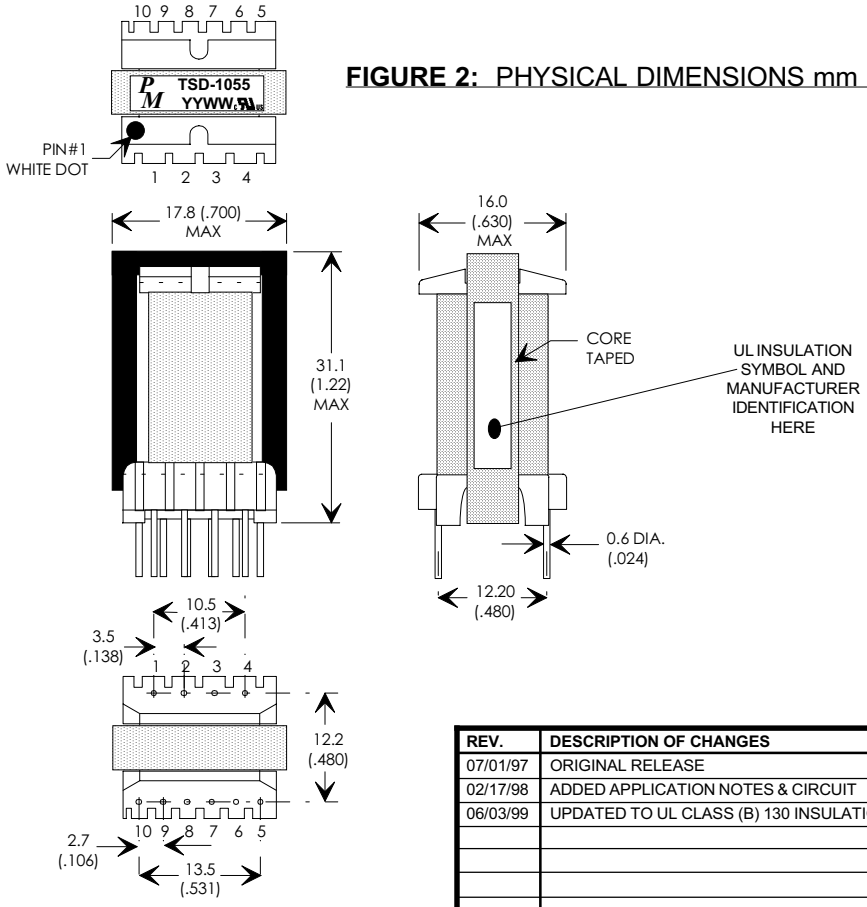
(1) REFER TO APPLICATION CIRCUIT OF FIGURE 3.

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-H1A (UL FILE #E177139) OR ANY UL AUTHORIZED CLASS (B) INSULATION SYSTEM.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



REV.	DESCRIPTION OF CHANGES	BY
07/01/97	ORIGINAL RELEASE	AS
02/17/98	ADDED APPLICATION NOTES & CIRCUIT	AS
06/03/99	UPDATED TO UL CLASS (B) 130 INSULATION SYSTEM	MD

EEL-16, 10-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: TSD-1055	REVISION: 06/03/99
ENGR: A. SANTOS	REF:
APPD: T. O'NEIL	SHEET: 1 OF 4

APPLICATION NOTES

Premier Magnetics' TSD-1055 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP210P 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-1055 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, 3.5 watt application circuit utilizing Power Integrations PWR-TOP210 switching regulator in the flyback buck-boost configuration. This circuit provides +15 Vdc or +18 Vdc at 230 mA (for 15V) or 200 mA (for 18V) continuous and is capable of >350 mA (for 15V) or >300 mA (for 18V) peak for short periods of time. This circuit represents the lowest cost implementation and utilizes the bias winding for feedback control. As such the line & load regulation are worse than that which could be achieved by utilizing an opto-coupler to sense the actual outputs. Please consult our application department for assistance on the opto-coupler version. The component values listed are intended for reference purposes only. Resistor R1 may be adjusted up to 100 Ohms MAX. and down to 11 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 output clamp resistor R2 is necessary to prevent destructive output runaway under a no-load condition, and has been sized to clamp the output to approximately 10 Vdc under a no-load condition.

FIGURE 3: TYPICAL APPLICATION CIRCUIT