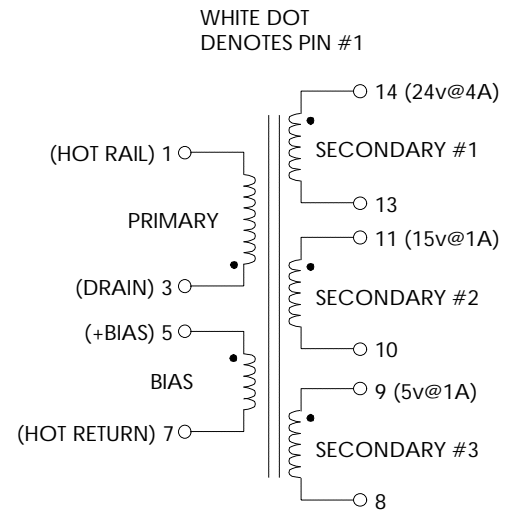


TABLE 1: ELECTRICAL SPECIFICATIONS AT 25 °C

PARAMETER	SPEC LIMITS			UNITS
	MIN.	TYP.	MAX.	
PRIMARY INDUCTANCE (3-1) VOLTAGE = 0.250Vrms FREQUENCY = 100 KHZ	135	150	165	μHY
TURN RATIO'S: SEC #1 (14-13) : PRIMARY (3-1) SEC #2 (11-10) : PRIMARY (3-1) SEC #3 (9-8) : PRIMARY (3-1) BIAS (5-7) : PRIMARY (3-1)	-----	1 : 4.40 1 : 7.33 1 : 22.0 1 : 7.33	-----	± 4% ± 4% ± 4% ± 4%
PRI LEAKAGE IND. (SEC SHORTED) 0.250Vrms @ 100 KHZ	-----	-----	TDB	μHY
HIPOT: PRIMARY TO SECONDARIES BIAS TO SECONDARIES	3000 3000	----- -----	----- -----	Vrms Vrms

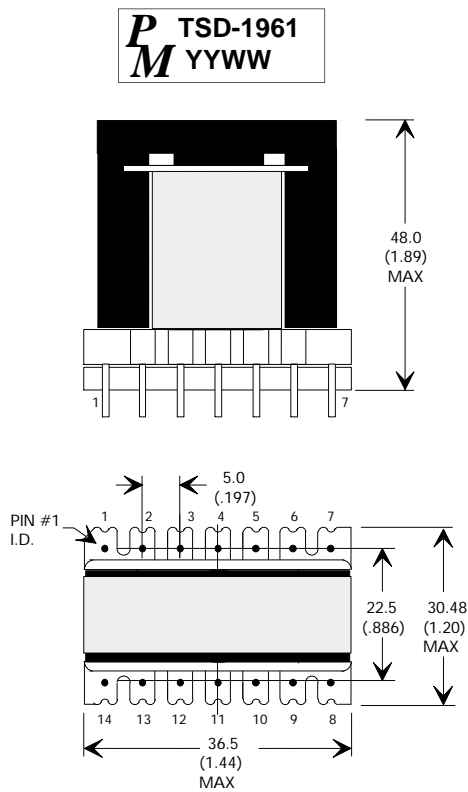
FIGURE 1: SCHEMATIC DIAGRAM



NOTE1:

- A) ALL MATERIALS MEET "UL", "CSA" & "IEC" REQUIREMENTS
- B) ALL MATERIAL RATED 130C OR BETTER.
- C) MARGIN TAPE TO MEET ≥6.4mm CREEPAGE REQUIREMENTS.
- D) VARNISH FINISHED ASSEMBLY.

FIGURE 2: PHYSICAL DIMENSIONS mm (INCHES)



REV.	DESCRIPTION OF CHANGES	BY
03/01/04	ORIGINAL RELEASE.	PP



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MM
DIMENSIONAL TOLERANCES ARE:
DECIMALS ANGLES
.X ± .25 ±0° 30'
.XX ± .15
DO NOT SCALE DRAWING

FLYBACK TRANSFORMER CONTROL DRAWING

PREMIER P/N: TSD-1961	REVISION: 03/01/04
DRAWN BY: PETER PHAM	REF: TOP-249
SCALE: NONE	SHEET: 1 OF 3

APPLICATION NOTES

Premier Magnetics TSD-1961 Switch Mode Transformer was designed for use with Power Integrations, Inc. PWR-TOP249Y This conversion topology can provide isolated multiple outputs with efficiencies up to 90%. Premier's TSD-1961 transformer has been optimized to provide maximum power throughput.

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 116 watt application circuit utilizing Power Integrations PWR-TOP249 switching regulator in the flyback buck-boost configuration. The component values listed are intended for reference purposes only. Properly sized heat sinks for the TOP249Y & D3 as well as proper thermal management & board layout are critical requirements for efficient and reliable operation.

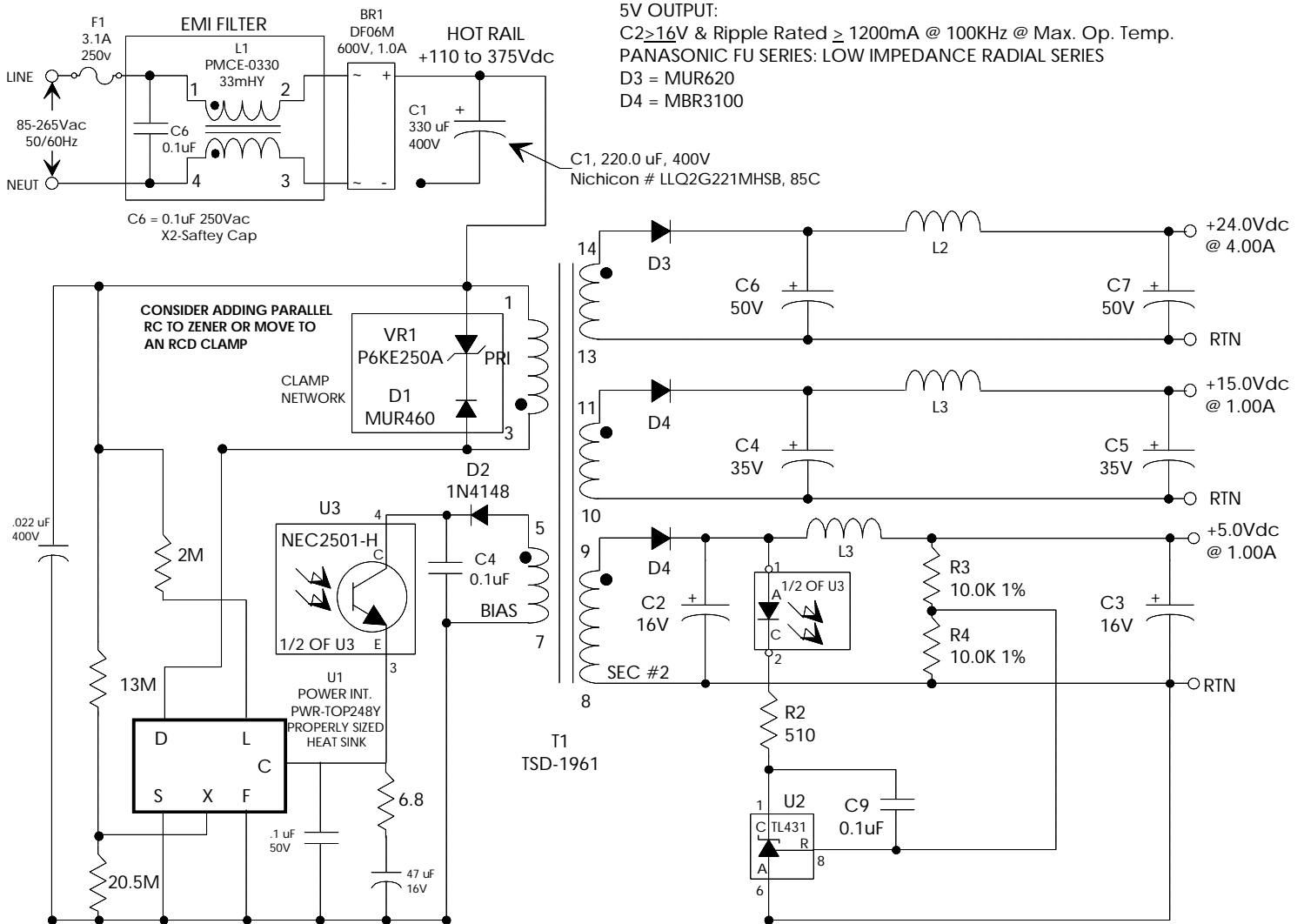
FIGURE 3: TYPICAL APPLICATION CIRCUIT

PREMIER MAGNETICS PART NUMBERS:

- (REQUEST DATA SHEETS BY PART#)
 T1 = TSD-1961 MAIN SWITCHING TRANSFORMER
 L1 = PMCE-0330 33mHy EMI/RFI CMC
 L2 = VTP-01005 10uHy, 5.0Amp INDUCTOR
 L3 = VTP-01001 10uHy, 1.0Amp INDUCTOR

ALUMINUM ELECTROLYTIC FILTER CAPACITOR RATINGS:

- +24V OUTPUT:
 C6 ≥ 50V & Ripple Rated ≥ 4610mA @ 100KHz @ Max. Op. Temp.
 PANASONIC FU SERIES: LOW IMPEDANCE RADIAL SERIES
 15V OUTPUT:
 C4 ≥ 35V & Ripple Rated ≥ 1200mA @ 100KHz @ Max. Op. Temp.
 PANASONIC FU SERIES: LOW IMPEDANCE RADIAL SERIES
 5V OUTPUT:
 C2 ≥ 16V & Ripple Rated ≥ 1200mA @ 100KHz @ Max. Op. Temp.
 PANASONIC FU SERIES: LOW IMPEDANCE RADIAL SERIES
 D3 = MUR620
 D4 = MBR3100



UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN MM
 DIMENSIONAL TOLERANCES ARE:
 DECIMALS ANGLES
 .X ± .25 ±0° 30'
 .XX ± .15
 DO NOT SCALE DRAWING

FLYBACK TRANSFORMER CONTROL DRAWING	
PREMIER P/N: TSD-1961	REVISION: 03/01/04
DRAWN BY: PETER PHAM	REF: TOP-249
SCALE: NONE	SHEET: 2 OF 3