

# TOP252-262 TOPSwitch<sup>®</sup>-HX Family



Enhanced EcoSmart<sup>®</sup>, Integrated Off-Line Switcher with  
Advanced Feature Set and Extended Power Range

## Product Highlights

### Lower System Cost, Higher Design Flexibility

- Multi-mode operation maximizes efficiency at all loads
- New eSIP-7F and eSIP-7C packages
  - Low thermal impedance junction-to-case (2 °C per watt)
  - Low height is ideal for adapters where space is limited
  - Simple mounting using a clip to aid low cost manufacturing
  - Horizontal eSIP-7F package ideal for ultra low height adapter and monitor applications
- Extended package creepage distance from DRAIN pin to adjacent pin and to heat sink
- No heatsink required up to 35 W using P, G and M packages with universal input voltage and up to 48 W at 230 VAC
- Output overvoltage protection (OVP) is user programmable for latching/non-latching shutdown with fast AC reset
  - Allows both primary and secondary sensing
- Line undervoltage (UV) detection prevents turn-off glitches
- Line overvoltage (OV) shutdown extends line surge limit
- Accurate programmable current limit
- Optimized line feed-forward for line ripple rejection
- 132 kHz frequency (254Y-258Y and all E/L packages) reduces transformer and power supply size
  - Half frequency option for video applications
- Frequency jittering reduces EMI filter cost

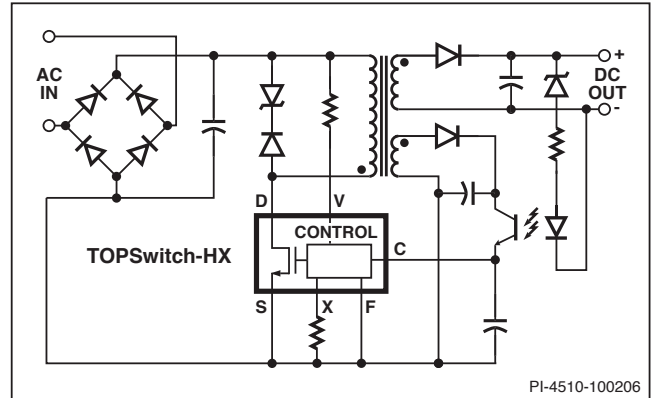


Figure 1. Typical Flyback Application.

- Heatsink is connected to SOURCE for low EMI
- Improved auto-restart delivers <3% of maximum power in short circuit and open loop fault conditions
- Accurate hysteretic thermal shutdown function automatically recovers without requiring a reset
- Fully integrated soft-start for minimum start-up stress
- Extended creepage between DRAIN and all other pins improves field reliability

## Output Power Table

Product <sup>5</sup>	230 VAC ±15% <sup>4</sup>			85-265 VAC			Product <sup>5</sup>	230 VAC ±15%		85-265 VAC	
	Adapter <sup>1</sup>	Open Frame <sup>2</sup>	Peak <sup>3</sup>	Adapter <sup>1</sup>	Open Frame <sup>2</sup>	Peak <sup>3</sup>		Adapter <sup>1</sup>	Open Frame <sup>2</sup>	Adapter <sup>1</sup>	Open Frame <sup>2</sup>
TOP252PN/GN	9 W	15 W	21 W	6 W	10 W	13 W	TOP252EN	10 W	21 W	6 W	13 W
TOP252MNN			21 W			13 W	TOP253EN	21 W	43 W	13 W	29 W
TOP253PN/GN	15 W	25 W	38 W	9 W	15 W	25 W	TOP254EN/YN	30 W	62 W	20 W	43 W
TOP253MNN			43 W			29 W	TOP255EN/YN	40 W	81 W	26 W	57 W
TOP254PN/GN	16 W	28 W	47 W	11 W	20 W	30 W	TOP255LN	40 W	81 W	26 W	57 W
TOP254MNN			62 W			40 W	TOP256EN/YN <sup>7</sup>	60 W	119 W	40 W	86 W
TOP255PN/GN	19 W	30 W	54 W	13 W	22 W	35 W	TOP256LN	60 W	88 W	40 W	64 W
TOP255MNN			81 W			52 W	TOP257EN/YN	85 W	157 W	55 W	119 W
TOP256PN/GN	21 W	34 W	63 W	15 W	26 W	40 W	TOP257LN	85 W	105 W	55 W	78 W
TOP256MNN			98 W			64 W	TOP258EN/YN	105 W	195 W	70 W	148 W
TOP257PN/GN	25 W	41 W	70 W	19 W	30 W	45 W	TOP258LN	105 W	122 W	70 W	92 W
TOP257MNN			119 W			78 W	TOP259EN/YN	128 W	238 W	80 W	171 W
TOP258PN/GN	29 W	48 W	77 W	22 W	35 W	50 W	TOP259LN	128 W	162 W	80 W	120 W
TOP258MNN			140 W			92 W	TOP260EN/YN	147 W	275 W	93 W	200 W
							TOP260LN	147 W	190 W	93 W	140 W
							TOP261EN/YN	177 W	333 W	118 W	254 W
							TOP261LN	177 W	244 W	118 W	177 W
							TOP262EN <sup>6</sup>	177 W	333 W	118 W	254 W
							TOP262LN <sup>6</sup>	177 W	244 W	118 W	177 W

Table 1. Output Power Table. (for notes see page 2).