



HV9124
HV9127

Objective

High-Voltage Current-Mode PWM Controller

Ordering Information

Max Duty Cycle	Package Options			
	16 Pin Plastic DIP	16 Pin Ceramic DIP	16 Pin Plastic PLCC	DICE
49%	HV9124P	HV9124C	HV9124PJ	HV9124X
99%	HV9127P	HV9127C	HV9127PJ	HP9127X

Standard temperature range for all parts is industrial (-40° to +85°C).

For military temperature range parts (-55° to +125°C) contact factory.

Features

- ☐ Self-starting on inputs from 12V to 450V
- ☐ Extremely wide dynamic range
- ☐ Current mode control
- ☐ Leading edge spike suppression
- ☐ Practical operation to and above 1MHz
- ☐ High current totem-pole output (750mA peak)
- ☐ Wide bandwidth error amplifier
- ☐ Easy synchronization
- ☐ Accurate clock
- ☐ Programmable soft start
- ☐ Latching remote shutdown
- ☐ 1% accurate trimmed bandgap reference
- ☐ 1V typical undervoltage hysteresis
- ☐ Low operating supply current

Applications

- ☐ General-purpose controller for single-switch power supplies to 150W
- ☐ Low-volume high-efficiency power supplies
- ☐ Very high efficiency low-wattage power supplies
- ☐ Very compact power supplies
- ☐ Universal input power supplies

General Description

The Supertex HV9124 and HV9127 are high-performance, high-voltage BiCMOS PWM ICs designed for use in next-generation single-switch off-line and DC to DC power converters using current-mode regulation. They contain a loadable 1% trimmed bandgap reference; a wide bandwidth, low output impedance, error amplifier; a clock oscillator capable of running at well over 1MHz; a high speed current sensing comparator with leading-edge spike blanking; fully latching logic; and a large output buffer intended to drive an N-channel MOSFET.

Additional utility features include an input undervoltage lockout circuit with hysteresis, a TTL-compatible latching shutdown circuit, a programmable soft-start circuit, a system capable of achieving tri-state synchronization, and a separate ground terminal for the output (in some packages).

These parts have been designed to have a low quiescent current and an operating current of less than 3mA when running at 500KHz. They are available in plastic and ceramic dual-in-line packages and plastic surface-mount packages.

Functional Block Diagram

SUPERTEX INC

