

## Product Overview

### NCP1236: Controller, Fixed Frequency, Current Mode, for Flyback Converters

For complete documentation, see the data sheet.



The NCP1236 is a new fixed-frequency current-mode controller featuring Dynamic Self-Supply (DSS). This device is pin-to-pin compatible with the previous NCP12xx families. The DSS function greatly simplifies the design of the auxiliary supply and the VCC capacitor by activating the internal startup current source to supply the controller during transients. Due to frequency foldback, the controller exhibits excellent efficiency in light load condition while still achieving very low standby power consumption. Internal frequency jittering, ramp compensation, and a versatile latch input make this controller an excellent candidate for converters where component cost is the key constraint. In addition, the controller includes a new high voltage circuitry that combines a startup current source and a brown-out detector able to sense the input voltage either from the rectified ac line or the dc filtered bulk voltage. The high voltage sensing circuitry is used for the overpower protection purposes as well. Overpower protection, overload protection, and other protective features increase the safety and reliability of the final application.

### Features

- Frequency Foldback then Skip Mode in light load and standby conditions
- High voltage current source with brown-out detection and dynamic self-supply
- Frequency Jittering
- 4.0 ms Soft-Start
- Adjustable Overpower Compensation
- Latched / Autorecovery Timer-Based Overload Protection

### Benefits

- High efficiency in light and no load conditions
- Directly powered from the high voltage rail with integrated brown-out sensing to detect low input voltage.
- Helps pass EMI requirements by spreading out the energy content of frequency peaks
- Minimizes the stress on power components
- Monitors the input voltage to limit the amount of power being delivered by the converter
- Protects against overcurrent

### Applications

- AC-DC Adapters
- Consumer Electronics Power Supplies
- Auxiliary/Housekeeping power supplies

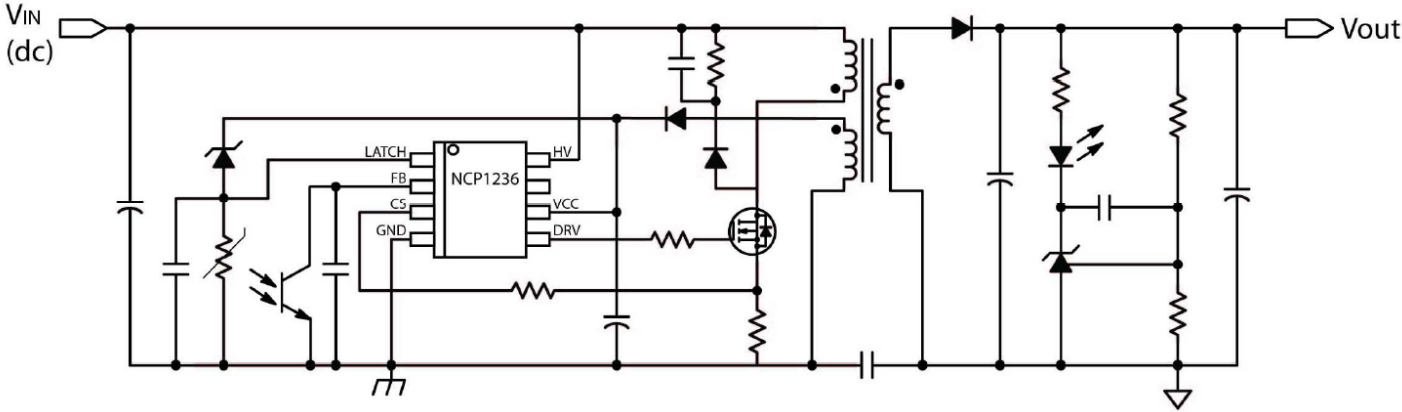
### End Products

- Notebooks
- LCD TVs
- Printers

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	$f_{sw}$ Typ (kHz)	Stand-by Mode	UVLO (V)	Short Circuit Protection	Latch	Soft Start	$V_{CC}$ Max (V)	Drive Cap. (mA)	Package Type
NCP1236AD100R2G	0.3373	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Current Mode	100	Yes	9.5	Yes	Yes	Yes	28	500 / 500	SOIC-7
NCP1236AD65R2G	0.3373	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Current Mode	65	Yes	9.5	Yes	Yes	Yes	28	500 / 500	SOIC-7
NCP1236BD100R2G	0.3373	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Current Mode	100	Yes	9.5	Yes	Yes	Yes	28	500 / 500	SOIC-7
NCP1236BD65R2G	0.3373	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Current Mode	65	Yes	9.5	Yes	Yes	Yes	28	500 / 500	SOIC-7
NCP1236DD65R2G	0.3373	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Current Mode	65	Yes	9.5	Yes	Yes	Yes	28	500 / 500	SOIC-7

# Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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