

## Product Overview

### NCP1126: High Voltage Switching Regulator for Offline SMPS

For complete documentation, see the data sheet.

The NCP1126 products integrates a fixed-frequency peak current mode controller with a low on-resistance high voltage, 650 V MOSFET. Available in a PDIP-7 package, the NCP1126 offers a high level of integration, including soft-start, frequency-jittering, short-circuit protection, thermal shutdown protection, frequency foldback mode and skip-cycle to reduce power consumption in light load condition, peak current mode control with adjustable internal ramp compensation and adjustable peak current set point. During nominal load operation, the part switches at one of the available frequencies (65 or 100 kHz). When the output power demand diminishes, the IC automatically enters frequency foldback mode and provides excellent efficiency at light loads. When the power demand reduces further, it enters into a skip mode to reduce the standby consumption down to no load condition. Protection features include: a timer to detect an overload or a short-circuit event with auto-recovery or latch protection, and a built-in VCC overvoltage protection.

The switcher also provides a jittered 65 kHz or 100 kHz switching frequency to improve the EMI.

#### Features

- 650 V Avalanche Rated MOSFET
- Fixed Frequency 65 or 100 kHz Current Mode Control Operation
- Frequency Foldback Down to 26 kHz and Skip Cycle in Light Load Conditions
- Adjustable Current Limit with External Resistor
- 50 ms Timer-Based Auto-Recovery Short-Circuit Protection
- Frequency Jittering in Normal and Frequency Foldback Modes
- Option for Auto-Recovery or Latched Short-Circuit Protection
- Less than 100 mW Standby Power at High Line

#### Benefits

- Rugged MOSFET for robust design
- Ability to scale for efficiency or size
- Eliminate acoustic noise and improved efficiency at light loads
- Scale for various designs 5W~20W
- Provides more robust protection without worrying about the coupling of the aux winding
- Improved efficiency at light load / Improved EMI over the entire load
- Flexible protection options
- EPS 2.0 Compliant

#### Applications

- Power Supply

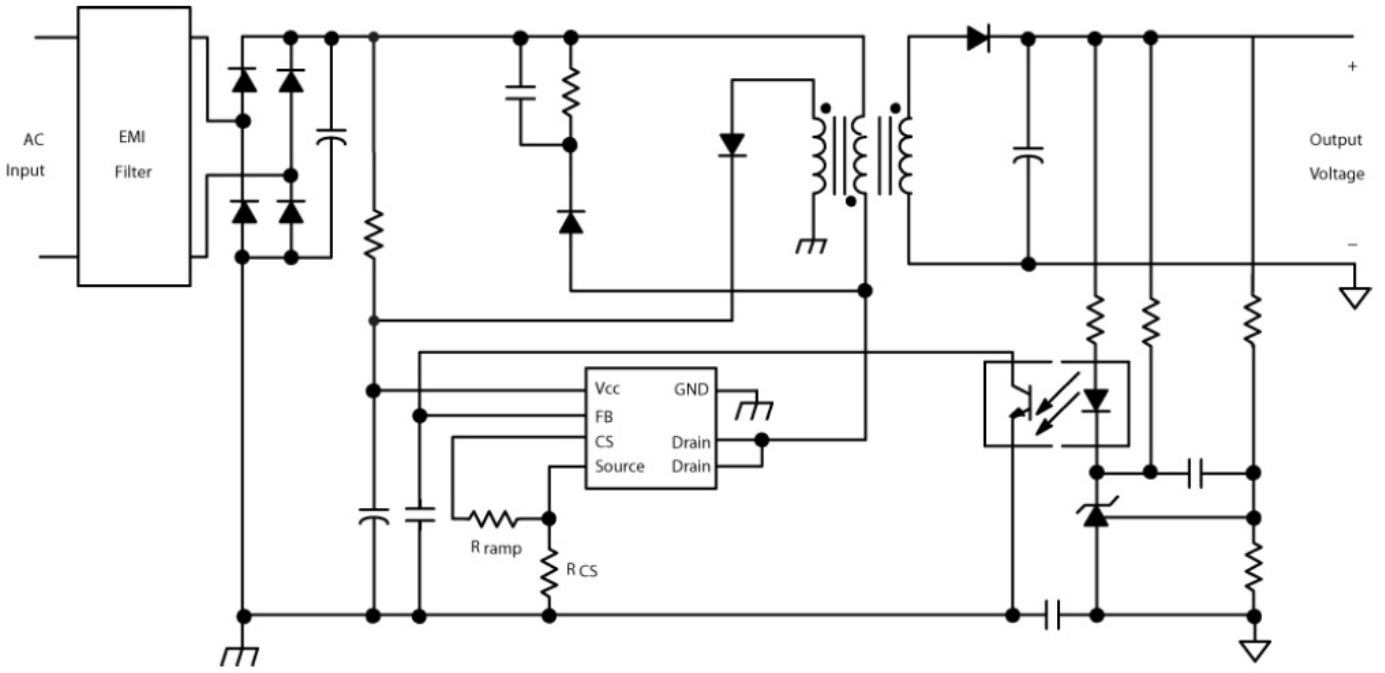
#### End Products

- Power supply for DVD, STB, CD-Player
- Aux supply for TV, USB, Appliance

### Part Electrical Specifications

Product	Compliance	Status	Control Mode	$f_{sw}$ Typ (kHz)	$f_{jitter}$ Typ (%)	Stand-by Mode	$R_{DS(O)}$ Typ ( $\Omega$ )	$V_{PSS}$ Max (V)	$I_{Peak}$ (mA)	HV Start-up Min (V)	DSS (mA)	UVLO	Short Circuit Protection	Over Power Compensation	Brown-out	Latch	Package Type
NCP1126AP100G	Pb-free Halide free	Active	Current Mode	100	+/- 5% of FSW	Yes	6	650	0	Yes	0	8.8	Yes	No	No	Yes	PDIP-8
NCP1126AP65G	Pb-free Halide free	Active	Current Mode	65	+/- 5% of FSW	Yes	6	650	0	Yes	0	8.8	Yes	No	No	Yes	PDIP-8
NCP1126BP100G	Pb-free Halide free	Active	Current Mode	100	+/- 5% of FSW	Yes	6	650	0	Yes	0	8.8	Yes	No	No	No	PDIP-8
NCP1126BP65G	Pb-free Halide free	Active	Current Mode	65	+/- 5% of FSW	Yes	6	650	0	Yes	0	8.8	Yes	No	No	No	PDIP-8

# Application Diagram



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

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