NCP1618

High-Voltage, Multimode (CrM-CCM) Power Factor Controller

Product Overview

For complete documentation, see the data sheet.

The NCP1618 is an innovative multimode power factor controller. The circuit naturally transitions from Critical Conduction Mode (CrM) to Continuous Conduction Mode (CCM) operation mode and vice versa depending on the switching period duration, so that the efficiency is optimized over the line/load range. In very-light-load conditions, the circuit can enter the soft-SKIP mode for minimized losses. Housed in a SO-9 package, the circuit further incorporates the features necessary for robust and compact PFC stages, with few external components.

Features

- Multi-Mode Operation (CrM-CCM)
- Frequency Foldback / Soft-SKIP mode
- pfcOK Signal
- Jittering in CCM
- Complete protection features: OCP, OVP, BO, BUV, Inrush detect...
- Integrated EMI Filter Capacitor (X2) Discharge Circuitry

Benefits

- Optimized Performance Over a Wide Load Range
- Optimized Light Load Efficiency
- Simple Enabling/Disabling of Downstream Converter
- Ease of EMI Filtering
- Minimized External Components, Enhanced Robustness
- Improved Light Load Efficiency and Elimination of Safety Discharging Resistors

Applications

- All Off Line Appliances Requiring Power Factor Correction

End Products

- High Power AC/DC Adapter
- Industrial and Medical Power Supply
- Lighting Power Supply
- LED and OLED TV
- Computing Power Supply

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	PFC Mode	Frequency Operation	Control Mode	Topology	f_{SW} Typ (kHz)	V_{CC} Max (V)	Drive Cap. (mA)	UVLO (V)	Latch	UVP	Inhibition	Package Type
NCP1618CDR2G	0.5611	Pb H	Active	MM	Variable	Current/Voltage Mode	Step-Up	65 / Variable	35	500 / 800	17	Yes	Yes	No	SOIC-9 NB
NCP1618DDR2G	0.437	Pb H	Active	MM	Variable	Current/Voltage Mode	Step-Up	65 / Variable	35	500 / 800	17	Yes	Yes	No	SOIC-9 NB