

Product Overview

NCP1361: Low Power Offline Constant Current PWM Current-Mode Controller

For complete documentation, see the data sheet.

The NCP1361 offers a new solution targeting output power levels from a few watts up to 20 W in a universal-mains flyback application. Thanks to a novel method this new controller saves the secondary feedback circuitry for constant current regulation while achieving excellent line and load regulation with traditional opto coupler and TL431 voltage reference. The NCP1361 operates in valley lockout quasi-resonant peak current mode control mode at high load to provide high efficiency. When the power on the secondary side starts to diminish, the controller automatically adjusts the duty-cycle then at lower load the controller enters in pulse frequency modulation at fixed peak current with a valley switching detection. This technique allows keeping the output regulation with tiny dummy load. Valley lockout at the first 4 valleys prevent valley jumping operation and then a valley switching at lower load provides high efficiency.

Features

- No frequency clamp, 80 or 110 kHz Maximum Switching Frequency
 - Quasi-Resonant with Valley Switching Operation
 - Fixed Peak Current & Deep frequency foldback @ light load operation
 - Wide Operation VCC range (up to 28 V)
 - Cycle by Cycle peak current limit
 - CS & Vs/ZCD pin Short and Open Protection
 - Internal Temperature Shutdown
 - Constant Current Primary-side feedback eliminates secondary controller
 - $\pm 10\%$ Current Regulation
 - Clamped Gate-drive Output for Mosfet
- For more features, see the data sheet

Benefits

- Prevent high frequency interference with a touchscreen
- QR architecture offers high efficiency operation
- Low light load consumption
- Design flexibility
- Safe operation
- Safe operation
- Safe operation

Applications

- AC-DC USB Charging

End Products

- Cell Phones
- Tablets
- Portable Devices

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
NCP1361AABAYSNT1G	0.24	Pb-free Halide free	Active	Flyback	Current Mode	Variable	Yes	6.5	Yes	Yes	Yes	28	2000 / 1000	TSOP-6
NCP1361BABAYSNT1G	0.24	Pb-free Halide free	Active	Flyback	Current Mode	Variable	Yes	6.5	Yes	No	Yes	28	2000 / 1000	TSOP-6
NCP1361EABAYSNT1G	0.24	Pb-free Halide free	Active	Flyback	Current Mode	Variable	Yes	6.5	Yes	No	Yes	28	2000 / 1000	TSOP-6

For more information please contact your local sales support at www.onsemi.com.

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