

# NCP1568

## AC-DC Active Clamp Flyback PWM Controller

### Product Overview

For complete documentation, see the data sheet.

The NCP1568 is a highly integrated Ac-Dc PWM controller designed to implement an active clamp flyback topology. NCP1568 employs a proprietary variable frequency algorithm to enables zero voltage switching (ZVS) of the MOSFETs across line & load conditions. The ZVS feature allows high frequency operation increasing power density of a power converter while achieving high efficiency. A HV startup circuit, a strong low side driver, and a 5V logic level driver for active clamp FET, including SJ FETs and GaN FETs, are integrated. The NCP1568 is suitable for a variety of applications including Ac-Dc adapters, industrial, telecom, lighting and other applications where power density is an important requirement.

### Features

- Active Clamp Flyback Topology
- Multi-mode Operation
- Programmable Control Scheme
- Quiet Skip
- Programmable Frequency

### Benefits

- ZVS and high frequency operation
- Enhanced light load efficiency
- Operation with Silicon or GaN FETs
- Eliminates audible noise
- 100 kHz to 1 MHz operation

### Applications

- AC-DC Power Conversion
- USB Power Delivery
- Qualcomm Quick Charge

### End Products

- High Density Notebook & Mobile Adapters
- USB Type C Power Delivery
- Server Auxiliary Power
- Industrial Power Supplies

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	f <sub>sw</sub> Typ (kHz)	Stand-by Mode	UVLO (V)	Short Circuit Protection	Latch	Soft Start	V <sub>cc</sub> Max (V)	Drive Cap. (mA)	Package Type
NCP1568G03DBR2G	0.83		Active	Flyback	Current Mode	100 kHz to 1 MHz	Yes	9	Yes	No	Yes	27	850 / 1500	TSSOP16 MINUS PINS 2,3,14 & 15
NCP1568G04DBR2G	0.83		Active	Flyback	Current Mode	100 kHz to 1 MHz	Yes	9	Yes	No	Yes	27	850 / 1500	TSSOP16 MINUS PINS 2,3,14 & 15
NCP1568S02DBR2G	0.913		Active	Flyback	Current Mode	100 kHz to 1 MHz	Yes	9	Yes		Yes	27	850 / 1500	TSSOP16 MINUS PINS 2,3,14 & 15