

## Product Overview

### NCP3012: Synchronous PWM Controller

For complete documentation, see the data sheet.

The NCP3012 is a PWM device designed to operate from a wide input range and is capable of producing an output voltage as low as 0.8V. The NCP3012 provides integrated gate drivers and an internally set 75kHz oscillator that has the capability to synchronous to an external frequency. The NCP3012 has an externally compensated transconductance error amplifier with an internally fixed soft start. The NCP3012 incorporates output voltage monitoring with a Power Good pin to indicate that the system is in regulation. The dual function SYNC pin synchronizes the device to a higher frequency (Slave Mode) or outputs a 180 degrees out of phase clock signal to drive another NCP3012 (Master Mode). Protection features include lossless current limit and short circuit protection, output overvoltage and undervoltage protection, and input undervoltage lockout. The NCP3012 is available in a 14-pin TSSOP package. Ideal for noise sensitive applications which require minimal interference from the power supply. (Medical, Networking, etc.)

#### Features

- Input voltage range from 4.7 V to 28 V
- 75 kHz operation
- 0.8 V +/-1% Reference Voltage
- Buffered external +1.25 V reference
- Current limit and short circuit Protection
- PowerGood output pin
- Enable/Disable pin
- Input and output voltage protection
- External synchronization

#### Benefits

- Ability to run for various input voltages
- High efficiency
- Accurate system regulation
- Additional regulated 1 mA output for additional use
- System level protection
- Power sequencing capability
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- Enhanced system level protection
- Ability to sync to a higher frequency or 180° out-of-phase

#### Applications

- Power Module

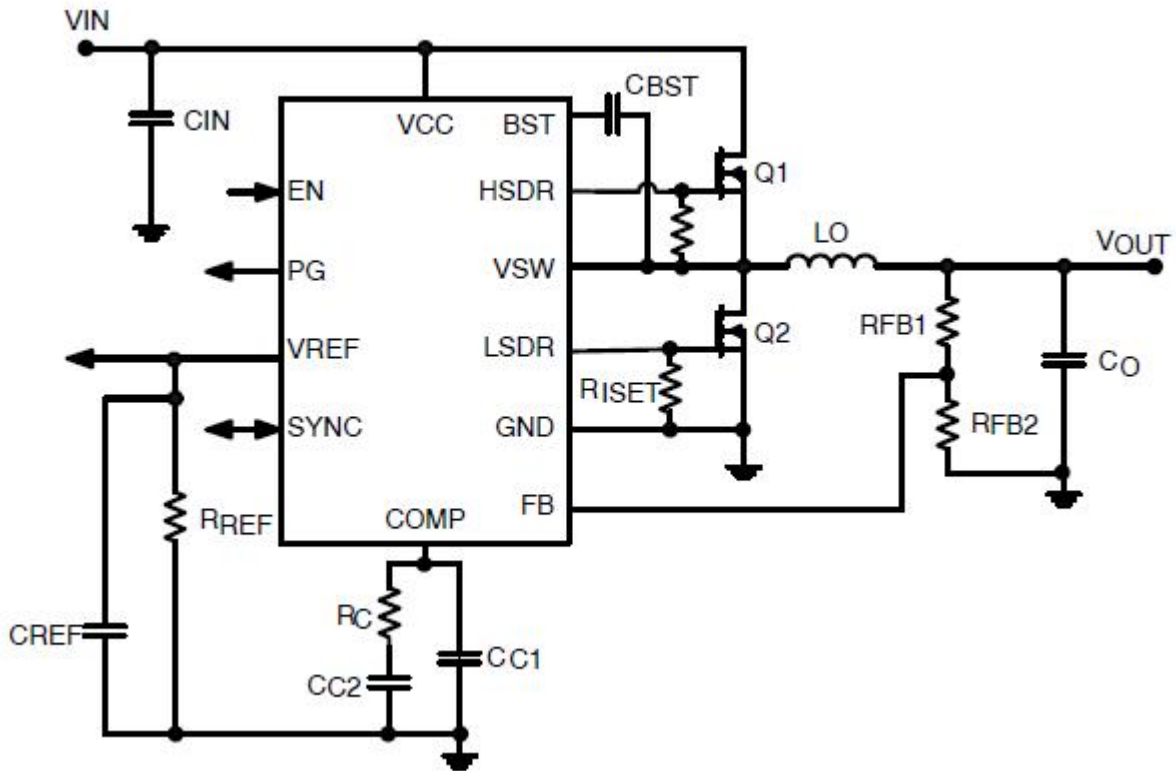
#### End Products

- Medical Device
- Networking

#### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Phases	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	f <sub>sw</sub> Typ (kHz)	Package Type
NCP3012DTBR2G	0.5067	Pb-free Halide free	Active	Step-Down	1	Voltage Mode	4.7	28	Up to 200	TSSOP-14
NCV3012DTBR2G	0.6067	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Down	1	Voltage Mode	4.7	28	Up to 200	TSSOP-14

## Application Diagram



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

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