

Product Overview

NCP3101: Synchronous Buck Regulator, PWM, 6.0 A

For complete documentation, see the data sheet.

The NCP3101 is a high efficiency, wide input, high output current, synchronous Pulse Width Modulation (PWM) buck regulator designed to operate from a 2.7 V to 18 V supply. The device is capable of producing an output voltage as low as 0.8 V. The NCP3101 can continuously output 6 A through MOSFET switches driven by an internally set 275 kHz oscillator. The 40-pin device provides an optimal level of integration to reduce size and cost of the power supply. The NCP3101 also incorporates an externally compensated transconductance error amplifier and a capacitor programmable soft-start function. Protection features include programmable short circuit protection and under voltage lockout (UVLO). The NCP3101 is available in a 40-pin QFN package. Also available in a 10A version NCP3102. NCP3101 will be replaced by NCP3101C per PCN#16498

Features

- Integrated 6A Switching Regulator
- 0.8 V +/- 1% internal reference
- Resistor programmable current limit
- 275 kHz fixed frequency operation
- 6x6 mm QFN Package
- Capacitor programmable soft-start
- 18 mohm Internal HS and LS FET
- 2.7 V to 18 V supply

Benefits

- Increased power density, easy system level integration
- Improved system level accuracy
- Optimize system protection for application
- High efficiency (>92% efficiency)
- Reduced PCB footprint and board space required to implement
- External capacitor for adjustability of soft-start time
- High efficiency operation
- Wide input voltage range

Applications

- High Power Density dc-dc
- Embedded Systems
- Distributed Point-of-Load

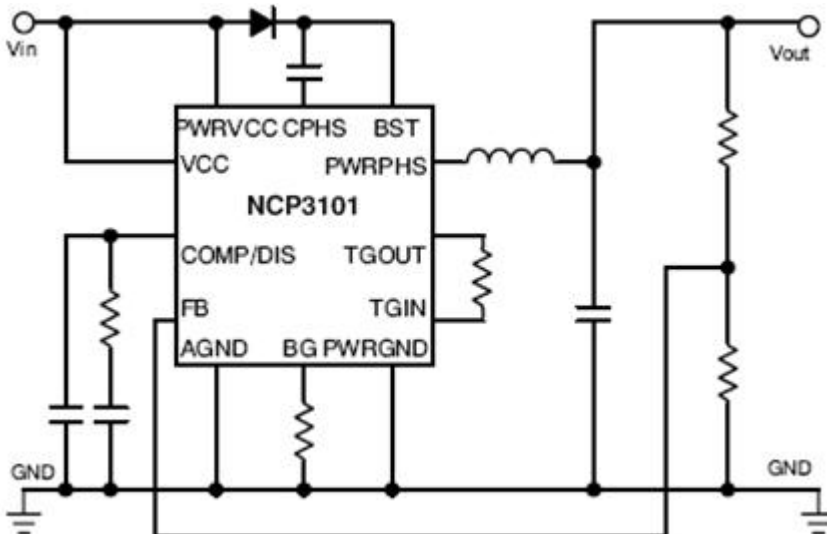
End Products

- High density server
- Basestation

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	V _O Typ (V)	I _O Typ (A)	Efficiency (%)	f _{sw} Typ (kHz)	Package Type
NCP3101CMNTXG	1.6	Pb-free Halide free non AEC-Q and PPAP	Active	Step-Down	Voltage Mode	2.7	13.2 18 5.5	0.8 to 5.0	6	90	275	QFN-40

Application Diagram



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

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