

NCP303151A

Integrated Driver and MOSFET with Integrated Current Monitor

Product Overview

For complete documentation, see the data sheet.

The NCP303151 integrates a MOSFET driver, high-side MOSFET and low-side MOSFET into a single package. The driver and MOSFETs have been optimized for high-current DC-DC buck power conversion applications. The NCP303151 integrated solution greatly reduces package parasitics and board space compared to a discrete component solution.

Features

- 30 V / 30 V Breakdown Voltage MOSFETs for Higher Long Term Reliability
 - Capable of Average Currents up to 50 A
 - Capable of Switching at Frequencies up to 1 MHz
 - Compatible with 3.3 V or 5 V PWM Input
 - Responds Properly to 3-level PWM Inputs
 - Precise Current Monitoring
 - Option for Zero Cross Detection with 3-level PWM
 - Undervoltage Lockout
 - Supports Intel® Power State 4
 - Internal Bootstrap Diode
- For more features, see the data sheet

Benefits

- Good breakdown margin for graphics and desktop applications design
- Higher Efficiency or Less Phase Count Required
- Smaller Inductor Feasible
- Flexible to Work with Different PWM Controllers
- H/S and L/S FETs Working Properly
- Better current balancing for safer system design
- Flexible to Select ZCD Operation on Different Applications
- For safety
- Capable of Low Power Saving
- Easier layout

Applications

- Desktop & Notebook Microprocessors
- Graphic Cards
- Routers and Switches
- Supports Intel® Power State 4

End Products

- Desktop Computer
- Add-in graphic card

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V _{CIN} (V) Typ	V _{IN} (V) Typ	PWM Level	I _O (A) Max	f _{max} (MHz)	Package Type
NCP303151AMN TWG	1.64		Active	5V	12V	0.9V~2.55V	50A	1MHz	PQFN-39