

NCP51561

5 kVRMS Isolated Dual Channel 4.5/9 A Gate Driver

Product Overview

For complete documentation, see the data sheet.

The NCP51561 are isolated dual-channel gate drivers with 4.5-A/9-A source and sink peak current respectively. They are designed for fast switching to drive power MOSFETs, and SiC MOSFET power switches. The NCP51561 offers short and matched propagation delays. Two independent and 5 kVRMS (UL1577 rating) galvanically isolated gate driver channels can be used in any possible configurations of two low side, two high-side switches or a half-bridge driver with programmable dead time. An enable pin shutdown both outputs simultaneously when is set low. The NCP51561 offers other important protection functions such as independent under-voltage lockout for both gate drivers and enable function.

Features

- 4.5-A Peak Source, 9-A Peak Sink Output Current Capability
- Output Supply Voltage from 6.5 V to 30 V with 5-V, 8-V, and 17-V UVLO threshold.
- Propagation Delay Typical 36 ns with 8 ns Max Delay Matching per channel
- User Programmable Input Logic for Single or Dual-input modes via ANB
- Common Mode Transient Immunity CMTI > 200 V/ns
- 5 kVRMS Galvanic Isolation from input to each output & 1200 V peak differential voltage between output channels
- User Programmable Dead-Time
- Enable or Disable pin

Benefits

- Improve efficiency and allow direct drive of high power switches
- Offer proper protections for both MOSFET's and SiC FET
- Very good signal integrity and fit with fast switching speed applications
- Offer flexibility in design and topologies
- Improved robustness in fast slew rate high voltage and high current switching applications
- Provide safety and protection in applications requiring high isolation level
- Allow full control of output behavior according to selected topologies
- Increased compatibility









Applications

- Isolated Converters in DC-DC and AC-DC Power Supply
- Server & Telecom Power supply
- Industrial Drives

End Products

- High Power DC/DC converters
- Data Servers & Telecom Power bricks
- UPS
- Motor Drives

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Power Switch	Number of Outputs	Topology	Isolation Type	V _{in} Max (V)	V _{CC} Max (V)	Rise Time (ns)	Fall Time (ns)	Drive Source Current Typ (A)	Drive Sink Current Typ (A)	Turn On Prop. Delay Typ (ns)	Turn Off Prop. Delay Typ (ns)	Delay Matching	Package Type
NCP51561BADWR2G	1.9333	 	NEW	MOSFET	2	Dual	Galvanic Isolation	1200	30	9 Typ	8 Typ	4.5	9	36	36	8	SOIC-16W
NCP51561BBDWR2G	1.9333	 	NEW	MOSFET	2	Dual	Galvanic Isolation	1200	30	9 Typ	8 Typ	4.5	9	36	36	8	SOIC-16W
NCP51561DADWR2G		 	Product Preview	SiC MOSFET	2	Dual	Galvanic Isolation	1200	30	9 Typ	8 Typ	4.5	9	36	36	8	SOIC-16W
NCP51561DBDWR2G	1.9333	 	NEW	SiC MOSFET	2	Dual	Galvanic Isolation	1200	30	9 Typ	8 Typ	4.5	9	36	36	8	SOIC-16W