

产品概览

NCP51820: High Performance, 650 V Half Bridge Gate Driver for GaN Power Switches

欲看完整文档，请参阅数据表。



The NCP51820 high-speed gate driver is designed to meet the stringent requirements of driving enhancement mode (e-mode) and gate injection transistor (GIT) GaN HEMT power switches in offline, half-bridge power topologies. The NCP51820 offers short and matched propagation delays as well as -3.5 V to +650 V (typical) common mode voltage range for the high-side drive. To fully protect the gate of the GaN power transistor against excessive voltage stress, both drive stages employ a dedicated voltage regulator to accurately maintain the gate-source drive signal amplitude. The NCP51820 offers important protection functions such as independent under-voltage lockout (UVLO) and IC thermal shutdown.

特性

- 650 V, high side and low side gate driver
- Fast propagation delay of 50 ns max
- Matched propagation delay of 5 ns max
- 200 V/ns dV/dt Rating for all SW and PGND Referenced Circuitry
- Separate source and sink output pin
- Regulated 5.2 V gate driver with independent UVLO for high side and low side output stages
- QFN 4 mm x 4 mm 15 pin packaging and optimized pin out

应用

- Resonant converters
- Half bridge and full bridge converters
- Active clamp flyback converters
- Totem pole bridgeless PFC

优势

- Design margin for AC/DC design
- Suitable for high frequency operation
- Increased efficiency and allow paralleling
- Robust design for high switching frequency application
- Allow control of rise and fall time for EMI tuning
- Optimum driving of GaN power switches and simplify design
- Small PCB foot print, reduced parasitic, suitable for high frequency operation

终端产品

- Power supply for OLED TV
- High power gaming adapter
- USD PD cellphone and notebook travel adapter
- Server / Cloud Data-center Offline power
- Industrial inverter and motor drive

器件电气规格

产品	Compliance	Status	Type	Number of Drivers	V _{in} Max (V)	V _{CC} Max (V)	Drive Source/Sink Typ (mA)	Rise Time (ns)	Fall Time (ns)	t _p Max (ns)	Package Type
NCP51820AMNTWG	Pb-free Halide free	NEW	MOSFET	2	650	20	1000 / 2000	1	0.5	50	QFN-15

欲了解更多信息，请联系您当地的销售支援 www.onsemi.cn。

创建于：10/17/2019