NCL30059

LED Driver, High-Voltage Half-Bridge Controller

Product Overview

For complete documentation, see the data sheet.

The NCL30059B is a self-oscillating high voltage MOSFET driver primarily tailored for LED driver applications using half-bridge topology. LLC and LCC configurations are supported with optimized wide range control offered by the latter for Constant Current (CC) applications. Due to its proprietary 600 V technology, the driver is useful for bulk voltages utilized in 277 VAC lighting applications.

Features

- Wide operating frequency range from 25 kHz to 250 kHz
- Minimum frequency adjust accuracy 3 %
- 100 ms PFC delay timer
- Adjustable Brown-out
- Dead Time - 0.6 µs
- Internal 600 V Half bridge gate driver
- PSR current regulation ± 2%

Benefits

- Wide Input and output driving range
- Keeps the converter in the right region & simplifies design
- Allows PFC bulk voltage to stabilize before device operation
- Simple PFC association, design flexibility
- Prevents shoot-through currents and allows body diode to discharge
- High Input voltage operating capability - 277/ 305 VAC
- Uniform luminous intensity with low eBOM

Applications

- LED Electronic Control Gear
- LED Driver Power Supplies
- Power Supplies for LED Signage
- AC-DC Low Ripple LED Drivers

End Products

- LED Luminaires

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Topology	V_I Min (V)	V_I Max (V)	V_O Max (V)	I_O Max (mA)	f_{SW} Typ (kHz)	Package Type
NCL30059BDR2G	0.3577	Pb H	Active	Half-Bridge	12 V_{DC}	580 V_{DC}	16 V $M_{upper/lower}$	1 A/ 0.5 A - $I_{Sink/Source}$	245	SOIC-8