



New Product Announcement

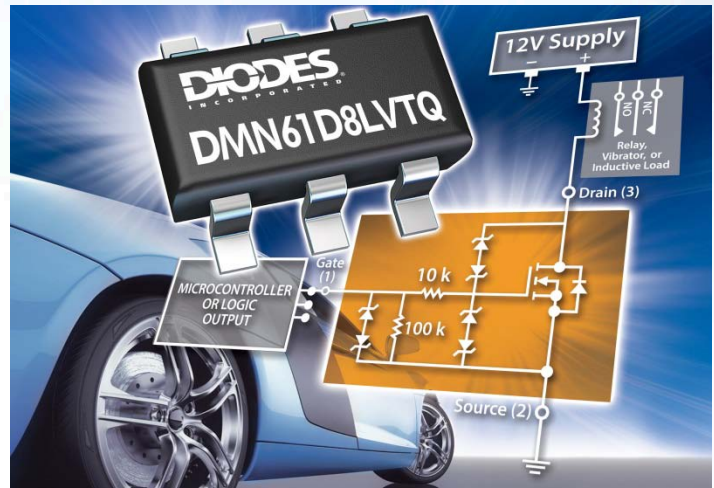
DMN61D8LVTQ

Integrated Inductive Automotive Load-Driver Reduces Space and Cost

The DMN61D8LVTQ inductive load-driver introduced by Diodes Incorporated is designed for automotive inductive load-switching applications, such as window, door, latch and antenna relays, solenoids and small DC motors. The on-chip integrated Zener diode and bias resistor eliminates the need for several external components, saving cost and reducing the PCB footprint.

Inductive load switching normally requires a freewheeling diode to suppress the voltage spike that typically results when the switch is opened. The DMN61D8LVTQ inductive load driver avoid this requirement by using a low-side circuit configuration that employs back-to-back Zener diodes to provide an active overvoltage drain clamp of the internal MOSFET. The MOSFET is also protected from potentially destructive transient voltages by ensuring that this clamp voltage is set below the MOSFET's avalanche breakdown voltage.

The input features ESD protection provided by further Zener stacks. The MOSFET is rated with a drain-source voltage (V_{DS}) of 60V and a maximum gate-source voltage (V_{GS}) of +/-12V. The DMN61D8LVTQ inductive load driver is available in the TSOT26 package.



The Diodes' Advantage

■ Integrated Solution

- Replaces 3 to 4 discrete components
- Small form factor package reduces PCB area

■ Integrated Active Clamp

Eliminates the need for external freewheeling diodes

■ Automotive Grade

- Qualified to AEC-Q101
- PPAP capable for full traceability

■ Robust Design

- Interface between sensitive logic and DC relay coils
- Capable of supplying 150mA to 12V, 24V and 48V coils

Circuit Function

- Inductive load driving – relays, solenoids and small DC motors

Target Markets

- Automotive



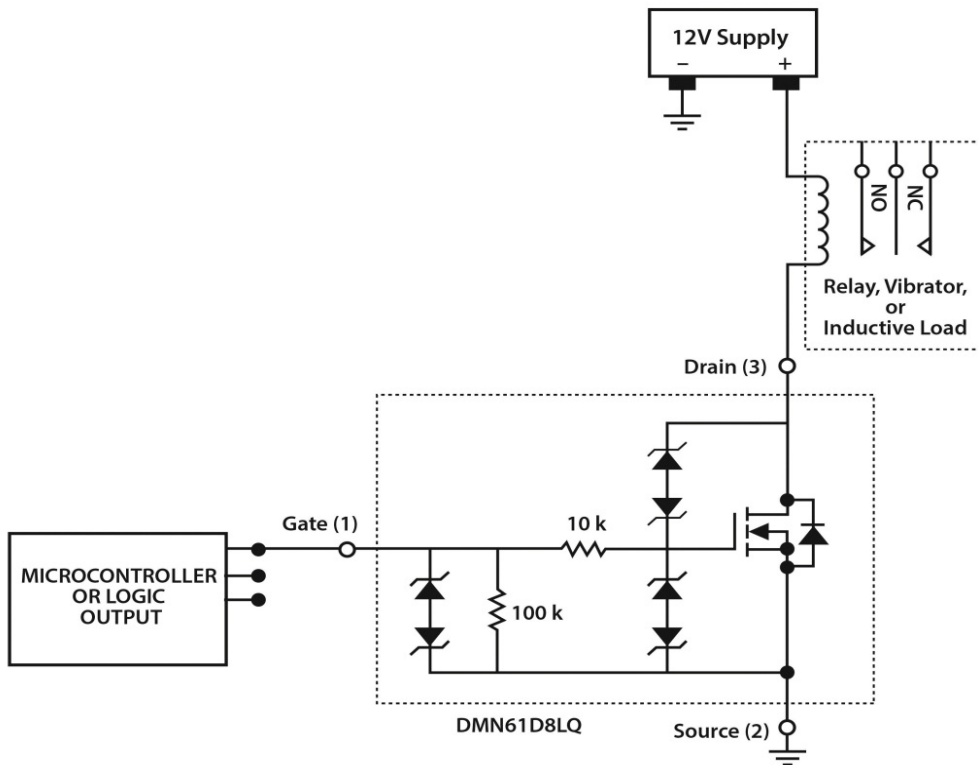
New Product Announcement

DMN61D8LVTQ

Product Table

Part	V _{DS} (V)	V _{GS} (±V)	I _{DS} @ T _A = +25°C (A)	R _{DS(ON)} Max (mΩ) @ V _{GS} 5V	C _{iss} Typ (pF)	Q _G Typ @ V _{GS} = 5V (nc)	ESD (HBM)	E _Z (mJ)	Package
DMN61D8LVTQ	60	12	0.47	1800	12.9	0.74	4kV	200	SOT26

Circuit Diagram



Cross Reference

Diodes Part Number	Competitor Part Number	Competitor
DMN61D8LVTQ	NUD3160DMT1G	ON Semi