

## High-side driver with CurrentSense analog feedback for automotive applications

Data brief



### Features

Max transient supply voltage	V <sub>CC</sub>	40 V
Operating voltage range	V <sub>CC</sub>	4 to 28 V
Typ. on-state resistance (per Ch)	R <sub>ON</sub>	8.5 mΩ
Current limitation (typ)	I <sub>LIMH</sub>	96 A
Standby current (max)	I <sub>STBY</sub>	0.5 μA

- Automotive qualified
- General
  - Single channel smart high side driver with CS analog feedback
  - Very low standby current
  - Compatible with 3 V and 5 V CMOS outputs
- CS diagnostic functions
  - Analog feedback of: load current with high precision proportional current mirror
  - Overload and short to ground (power limitation) indication
  - Thermal shutdown indication
  - OFF-state open-load detection
  - Output short to V<sub>CC</sub> detection
  - Sense enable/ disable
- Protections
  - Undervoltage shutdown
  - Overvoltage clamp

- Load current limitation
- Self limiting of fast thermal transients
- Configurable latch-off on overtemperature or power limitation with dedicated fault reset pin
- Loss of ground and loss of V<sub>CC</sub>
- Reverse battery with external components
- Electrostatic discharge protection

### Applications

- All types of Automotive resistive, inductive and capacitive loads
- Specially intended for Automotive Headlamps

### Description

The device is a single channel high-side driver manufactured using ST proprietary VIPower<sup>®</sup> technology and housed in PowerSSO-16 package. The device is designed to drive 12 V automotive grounded loads through a 3 V and 5 V CMOS-compatible interface, and to provide protection and diagnostics.

The device integrates advanced protective functions such as load current limitation, overload active management by power limitation and overtemperature shutdown with configurable latch-off.

A FaultRST pin unlatches the output in case of fault or disables the latch-off functionality.

A sense enable pin allows OFF-state diagnosis to be disabled during the module low-power mode as well as external sense resistor sharing among similar devices.

# 1 Order codes

**Table 1: Device summary**

Package	Order codes
	Tape and reel
PowerSSO-16	VN7008AJTR

## 2 Revision history

Table 2: Document revision history

Date	Revision	Changes
22-Dec-2015	1	Initial release

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