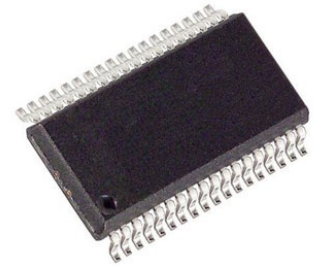


## H-Bridge Motor Driver Automotive 36-Pin PowerSSO EP Tube



Images are for reference only

[Inquiry](#)

**Manufacturer:** [STMicroelectronics, Inc](#)

**Package/Case:** HSSOP36

**Product Type:** Driver ICs

**Lifecycle:** Active

### General Description

The VNH5180A-E is a full bridge motor driver intended for a wide range of automotive applications. The device incorporates a dual monolithic high-side driver and two low-side switches. Both switches are designed using STMicroelectronics' well known and proven proprietary VIPower®M0 technology that allows to efficiently integrate on the same die a true Power MOSFET with an intelligent signal/protection circuitry. The three dies are assembled in PowerSSO-36 TP package on electrically isolated leadframes. This package, specifically designed for the harsh automotive environment offers improved thermal performance thanks to exposed die pads. Moreover, its fully symmetrical mechanical design allows superior manufacturability at board level. The input signals INA and INB can directly interface to the microcontroller to select the motor direction and the brake condition. The DIAGA/ENA or DIAGB/ENB, when connected to an external pull-up resistor, enables one leg of the bridge. Each DIAGA/ENA provides a feedback digital diagnostic signal as well. The normal operating condition is explained in the truth table. The CS pin allows to monitor the motor current by delivering a current proportional to its value when CS\_DIS pin is driven low or left open. When CS\_DIS is driven high, CS pin is in high impedance condition. The PWM, up to 20 KHz, allows to control the speed of the motor in all possible conditions. In all cases, a low level state on the PWM pin turns off both the LSA and LSB switches.

## Key Features

Output current: 8 A

3 V CMOS compatible inputs

Undervoltage shutdown

Overvoltage clamp

Thermal shutdown

Cross-conduction protection

Current and power limitation

Very low standby power consumption

PWM operation up to 20 KHz

Protection against loss of ground and loss of VCC

Current sense output proportional to motor current

Output protected against short to ground and short to VCC

Package: ECOPACK®

## Recommended For You

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### VN5050JTR-E

STMicroelectronics, Inc

HSSOP12

### VNLD5160TR-E

STMicroelectronics, Inc

SOP8

### VND5T050AKTR-E

STMicroelectronics, Inc

SSOP24

### VNS3NV04PTR-E

STMicroelectronics, Inc

SOP8

### VN7003ALHIR

STMicroelectronics, Inc

Octapak-7

### VND7140AJ12TR

STMicroelectronics, Inc

HSSOP12

### VN330SP-E

STMicroelectronics, Inc

HSOP10

### VNL5050N3TR-E

STMicroelectronics, Inc

SOT-223

### VNB35NV04TR-E

STMicroelectronics, Inc

TO-263

### VN7007AHIR

STMicroelectronics, Inc

TO252-7

### VNV35N07

STMicroelectronics, Inc

HSOP10

### VND5050AJTR-E

STMicroelectronics, Inc

HSSOP12

**VND5E160AJTR-E**

STMicroelectronics, Inc

HSSOP12

**VNN7NV04PTR-E**

STMicroelectronics, Inc

SOT223

**VN7004CLHTR**

STMicroelectronics, Inc

TO-252