

Driver 2-OUT High and Low Side Half Brdg Inv/Non-Inv Automotive 24-Pin SO W Tube



Images are for reference only

[Inquiry](#)

Manufacturer: [STMicroelectronics, Inc](#)

Package/Case: SOP24

Product Type: Drivers

RoHS: RoHS Compliant/Lead free 

Lifecycle: Obsolete

General Description

The STGAP1AS is a galvanically isolated single gate driver for N-channel MOSFETs and IGBTs with advanced protection, configuration and diagnostic features. The architecture of the STGAP1AS isolates the channel from the control and the low voltage interface circuitry through true galvanic isolation. The gate driver is characterized by 5 A capability, making the device also suitable for high power inverter applications such as motor drivers in hybrid and electric vehicles and in industrial drives. The output driver section provides a rail-to-rail output with the possibility to use a negative gate driver supply. The input to output propagation delay results contained within 100 ns, providing high PWM control accuracy. Protection functions such as the Miller clamp, desaturation detection, dedicated sense pin for overcurrent detection, output 2-level turn-off, VCE overvoltage protection, UVLO and OVLO are included to easily design high reliability systems. Open drain diagnostic outputs are present and detailed device conditions can be monitored through the SPI. Each function's parameter can be programmed via the SPI, making the device very flexible and allowing it to fit in a wide range of applications. Separate sink and source outputs provide high flexibility and bill of material reduction for external components.

Key Features

Qualified for automotive applications according to AEC-Q100

High voltage rail up to 1500 V

Driver current capability: 5 A sink/source current at 25 °C

dV/dt transient immunity ± 50 V/ns in full temperature range

Overall input/output propagation delay: 100 ns

Separate sink and source for easy gate driving configuration

Negative gate drive ability

Active Miller clamp

Desaturation detection

SENSE input

VCE active clamping

Output 2-level turn-off

Diagnostic status output

UVLO and OVLO functions

Programmable input deglitch filter

Asynchronous stop command

Programmable deadtime, with violation error

SPI interface for parameters programming

Temperature warning and shutdown protection

Self-diagnostic routines for protection features

Full effective fault protection

UL 1577 recognized

Recommended For You

ST1S14PHR

STMicroelectronics, Inc

HSOP-8

ST890CDR

STMicroelectronics, Inc

SOP-8

STWD100YNYWY3F

STMicroelectronics, Inc

SOT23-5

STC31001QT

STMicroelectronics, Inc

QFN

STM706TM6F

STMicroelectronics, Inc

SOP-8

STWD100NYWY3F

STMicroelectronics, Inc

SOT23-5

STPD01PUR

STMicroelectronics, Inc

24-QFN

STGAP2SICSNIR

STMicroelectronics, Inc

SOIC-8

STSPIN230

STMicroelectronics, Inc

VFQFPN16

STNS01PUR

STMicroelectronics, Inc

DFN-12

STWBC

STMicroelectronics, Inc

QFN32

STWBC2

STMicroelectronics, Inc

SOP

STMPS2171MIR

STMicroelectronics, Inc

SO-8

STSPIN240

STMicroelectronics, Inc

QFN16

STMPS2151MIR

STMicroelectronics, Inc

SOP8