



High Speed Gate Driver (SCSHSHGD2508)

SCS

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Description:

Our SCSHSHGD2508 is a compact yet powerful half bridge (two output channels) gate driver for all types of power semiconductor switches and can work up to 250 kHz switching frequency, preferable for new generation SiC and GaN power switches for high speed operation.

It has several protection features with on board isolated supplies that ensure reliability and efficient switching performance.

Compatible with our half bridge switch power modules.

Features

- Up to 250 kHz switching frequency
- Standard +15/-5 volts drive (can be provided with other preferable options)
- Direct 3.3v and 5v pulse support, no need of additional interfacing circuit
- 8A peak current drive capability
- On board isolated supplies
- Half-bridge drive with inbuilt dead band option available
- Buffered inputs for low noise
- Under voltage lock out protection
- Short-circuit protection using V_{CESAT} and Fault feedback
- Up to 1000 volts DC link support
- Power and fault indication LED

Application

This gate driver is suitable for any application for switching frequency up to 250kHz. Some of targeted applications are:

- Motor & traction drives
- PFC converters
- DAB converters
- Multi-level converters
- Industrial automation & testing

Input Pins:

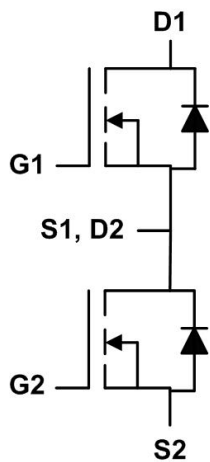
Symbol	Description
G	Ground.
NC	No Connection.
F2	Active low fault output for switch 2. In condition of fault pin voltage would be zero. Please connect the semiconductor switch as shown in fig-1 otherwise gate driver will consider it as open circuit and fault indication will be ON.
F1	Active low fault output for switch 1. In condition of fault pin voltage would be zero. Please connect the semiconductor switch as shown in fig-1 otherwise gate driver will consider it as open circuit and fault indication will be ON.
P1	Input pulse from microcontroller or DSP for switch 1.
P2	Input pulse from microcontroller or DSP for switch 2.
Vs	Power supply, +15Vdc nominal.



Output Pins:

Symbol	Description
A/D1	First switch drain/collector.
B/G1	First switch gate.
C/S1	First switch source/emitter.
D/D2	Second switch drain/collector.
E/G2	Second switch gate.
F/S2	Second switch source/emitter.

Connection Schematic:



(Fig.1 connection of gate driver points with semiconductor switch)

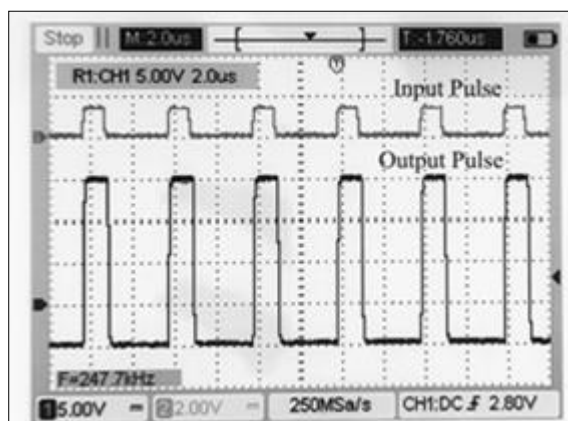
Indications:

Green LED: Power ON

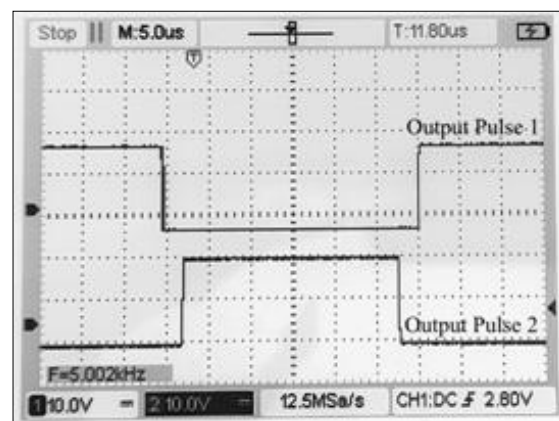
Red LED: Fault Condition

Typical Characteristics:

a) Operation around 250kHz

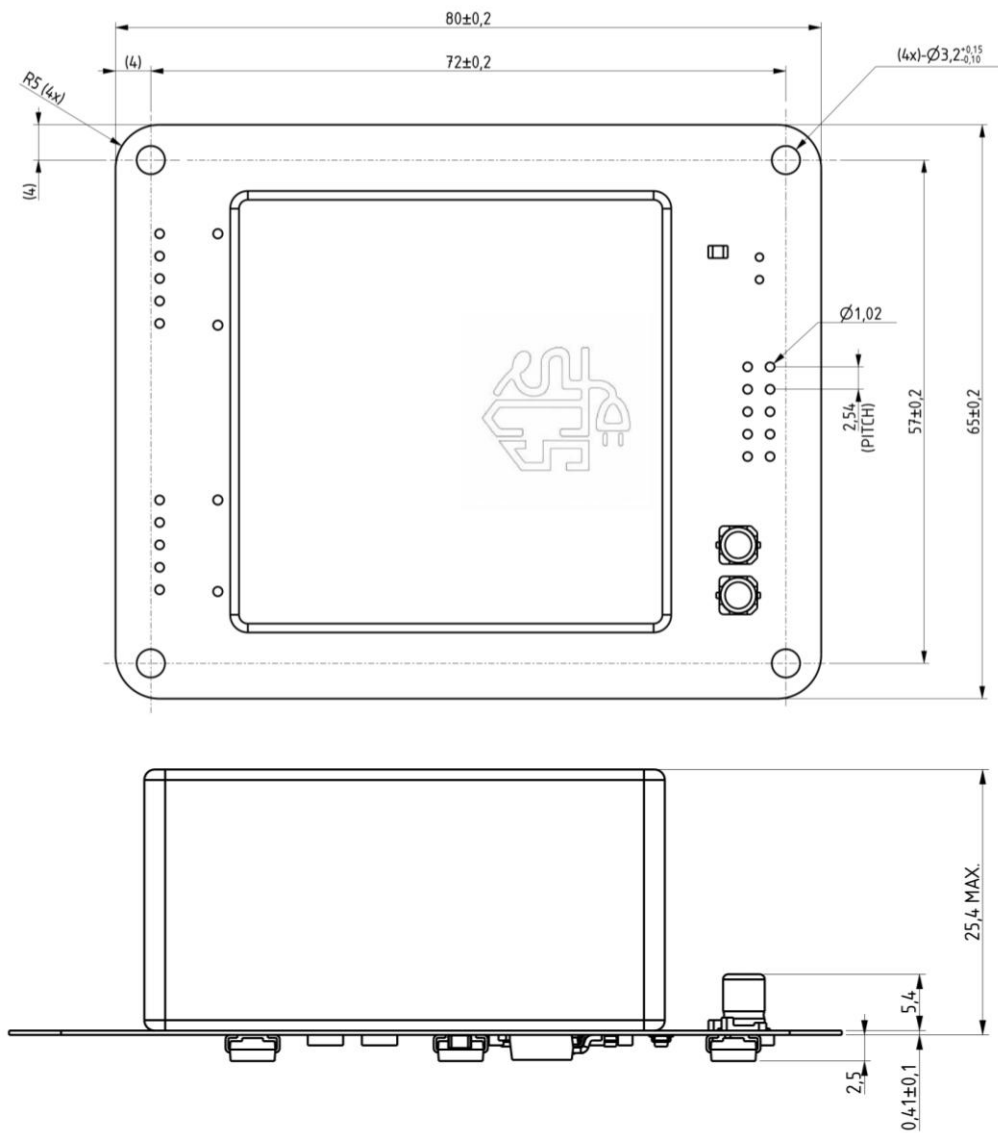


b) Deadband between two pulses





Mechanical Dimensions:



Note: All dimensions are in mm.