Half bridge Gate Driver (SCS-GDH-5004)

SCS Power
www.scspower.in

Description:

Our SCS-GDH-5004 is a compact yet powerful half bridge (two channels) gate driver for IGBT/MOSFET power switches; in this both channels have several protection features with on board isolated supplies that ensure reliability and efficient switching performance.

Specifications:

High power IGBT/MOSFET gate driver
+15/-8 volts drive
3.3 and 5 volts pulse support
Up to 50 kHz switching frequency
Half-bridge drive
Inbuilt dead band
Shoot through and short circuit protection
Fault output
Buffered inputs for low noise
Under voltage protection
Power and fault indication LED
Up to 1000 volts DC link
3000Vrms isolation

Application:

This gate driver is suitable for any application for switching frequency up to 50kHz. Some of targeted applications are:
Motor & traction drives
PFC converters
DAB converters
Multi-level converters
Industrial automation & testing

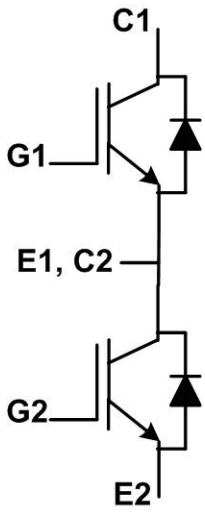
Input Connections:

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 below 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 below 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, +12Vdc nominal.

Output Connections:

Symbol	Description
A/C1	First switch collector.
B/G1	First switch gate.
C/E1	First switch emitter.
D/C2	Second switch collector.
E/G2	Second switch gate.
F/E2	Second switch emitter.

Block diagram:



Max. operating switching frequency calculations:

Fsmax = 0.035/Qg (where, Qg is switch gate charge value. If this value is greater than 50kHZ than considered 50kHZ only as max switching frequency)

Indications:

Green LED: Power ON

Red LED: Fault Condition