

This half-bridge assembly can be used with both SOT-227 based IGBTs and MOSFETs.



flexiBrute Half-Bridge Assembly 1.0

Typical Applications:

- Low-to-mid power DRSSCTCs
- SSTCs
- Audio Modulated SSTCs
- Induction Heating
- Power supplies / inverters

Introduction

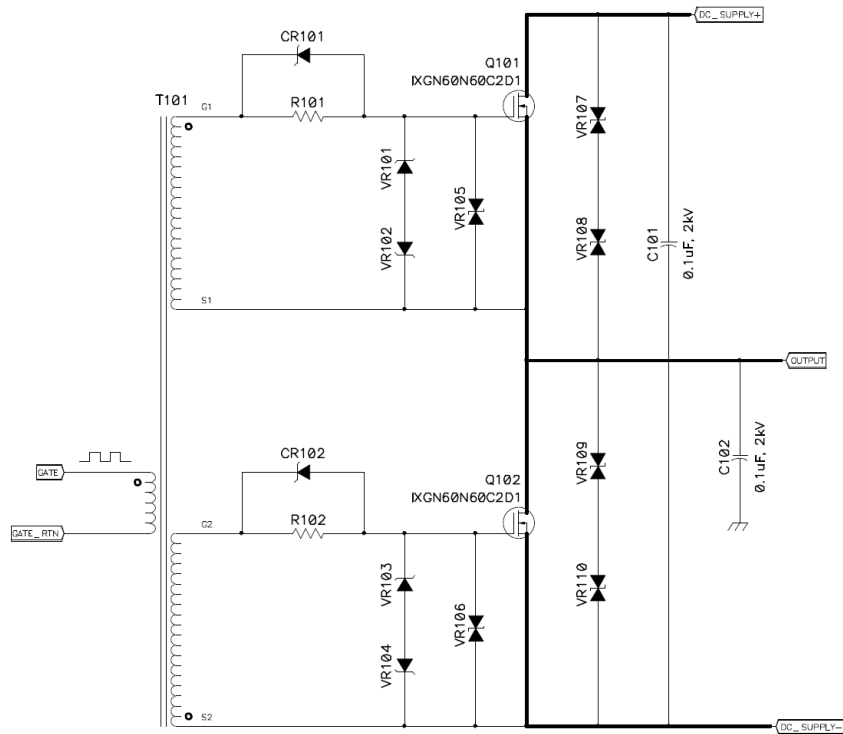
The flexiBrute Half-Bridge Assembly 1.0 provides a mid-power, high current switching half-bridge for low-to-mid power DRSSCTCs and other power equipment, including SSTCs, induction heaters, and power supplies. The assembly includes two (2) IXYS IXGN60N60C2D1 IGBTs, gate drive circuitry, transient voltage protection devices on both the gate drive circuit and across the IGBTs, as well as 0.1uF, 2kV snubber capacitors for protection. A 0.1uF, 2kV shunt capacitor from output to chassis ground provides excellent protection against secondary to primary coil strikes.

A gate transformer is also provided. The entire half-bridge assembly is mounted directly onto an extruded aluminum heatsink.

Electrical Properties

IGBT Devices	IXYS IXGN60N60C2D1
Max. Current (peak)	> 500A peak
Max. Bus Voltage	400V 600V (see note)
Switching Frequency	> 350kHz
Gate Transformer	flexiBrute Core 77-1
Max. Output Voltage	+/- 200V (w/ 400V bus)

Note: 600V is allowable with updated transient protection devices. TVS as sold with kit will clamp at 440V.



Schematic Diagram

Reference Design – Half-Bridge DRSSTC System

