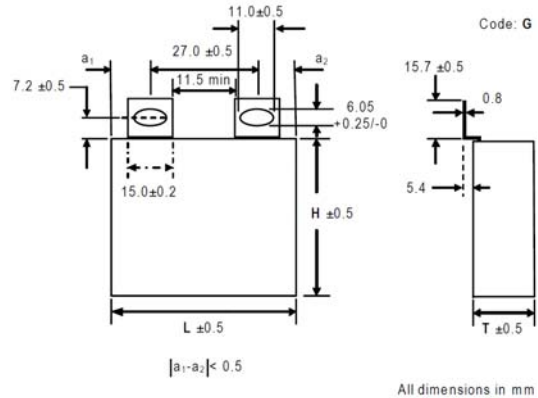




flexiBrute IGBT Snubbers



Introduction

IGBTs or other semiconductors are the heart of a solid state Tesla or DRSSTC system. Snubbers are circuits which are placed across these switching devices for both protection and performance improvement. Snubbers can do many things to your power circuit:

- Reduce or eliminate voltage / current spikes
- Limit dI/dt or dV/dt
- Shape the load line to keep it within SOA
- Transfer power dissipation from switch
- Reduce switching losses
- Reduce EMI by damping voltage / current ringing



Snubber mounted to CM300 IGBT

Physical Dimensions:

- L = 57.0mm
- T = 29.0mm
- H = 44.0mm

See mechanical diagram on top left.

Aerovox IGBT Snubber Capacitor

The snubber which is most commonly used for CM300 or CM600 type IGBT devices is the Aerovox IGBT Snubber capacitor. Through our own extensive testing, we have found this particular snubber to be extremely effective for its low-cost and we recommend its use in any high power IGBT based solid state Tesla Coil or DRSSTC system.

Features:

- Aerovox RBPS20591KR6GNZ
- Rated 2.00uF @ 1kV
- Peak Current: 854A
- Ripple Current: 37A rms
- High dV/dT (427V/us) and low ESR
- CE Certified to IEC-61071
- Plastic case construction
- Mounts directly to CM300 / CM600 IGBTs
- RoHS Compliant
- Operating case temp. of -40°C to +85°C

Typical Application

The schematic block diagram below shows how these snubbers are utilized within a half-bridge IGBT circuit. A snubber should be placed across each IGBT device or module in the bridge circuit.

