

Power PROFET™ : BTS50015-1TAD

DESCRIPTION:

Power PROFET™ is a benchmark family of ultra-low ohmic protected high-side switches (1.0 mΩ to 2.5 mΩ) with integrated protection functions and diagnostics for automotive and 12 V industrial markets. The devices are especially designed to drive high current loads of 20 to 40 A DC and to replace high current relays and fuses in a wide range of applications such as power distribution (e.g. module main switches and trailer node supply) and heating (e.g. PTC heaters and rear defoggers). Power PROFET™ switches are based on a new benchmark technology offering very high energy capability and are therefore an ideal driving solution for an increasing number of applications with high switching cycle requirements, e.g. starter relays in “start-stop” systems and electric brake vacuum pumps.

FEATURES:

- High-side switches with protection and diagnostic features
- Ultra-low RDS(on) down to 1.0 mΩ
- Benchmark energy capability up to 3000 mJ at INom
- Analog current sensing
- Benchmark short-circuit performance specified in datasheet

APPLICATION:

- Suitable for automotive and industrial applications based on 12 V high-side loads up to 40 A DC
- Replaces electromechanical relays, fuses and discrete circuits

BENEFITS:

- Turn-key solution reducing time to market
- Reduces power losses up to factor 7 compared to relays
- Saves cost on system level by removing the need for freewheeling diode for many applications
- Improved load monitoring and protection with current sense
- Resettable device: no maintenance required as with a fuse

