

Product brief

PROFET™+ 12 V – BTS5200-1ENA

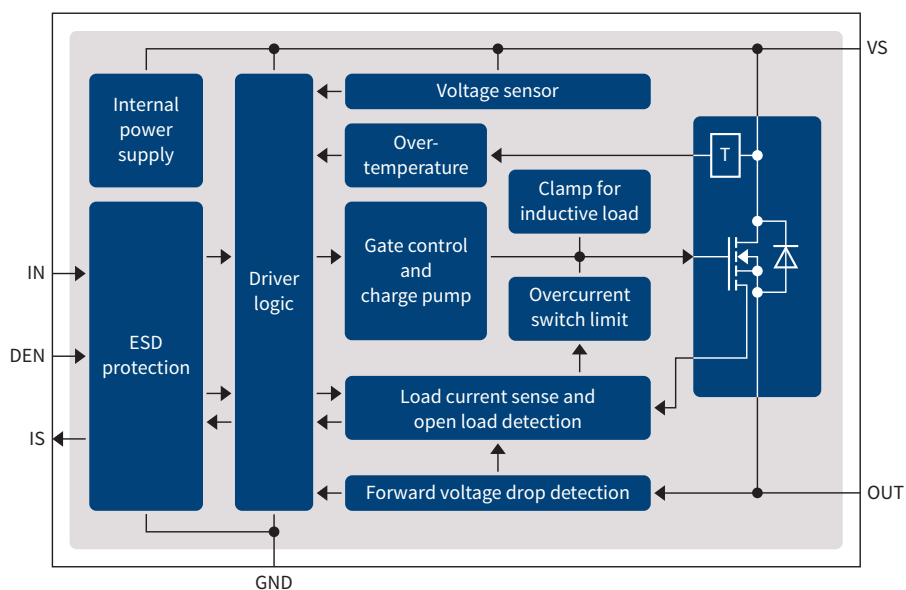
1-channel high-side driver up to 1.5 A nominal load current

The BTS5200-1ENA is the new single-channel 200 mΩ device in the PROFET™+ family and replaces the BTS5200-1EJA. Compared to the other PROFET™+ devices, the BTS5200-1ENA comes in the TDSO-8 exposed pad package, which is pin compatible to the PROFET™+ 12 V and PROFET™+ 24 V families. Based on this compatible footprint, maximum design flexibility is secured to change loads and devices without major modification of the board layout.

The new single-channel high side driver BTS5200-1ENA offers comprehensive protective functions such as overtemperature protection with restart, overvoltage protection with external components or enhanced short circuit operation. The device has also diagnostic functions like overtemperature switch off detection and stable diagnostic signal during short circuit.

The power transistor is built by an N-channel vertical power MOSFET with charge pump and is using the Smart6 technology. The BTS5200-1ENA is specially designed to drive capacitive, inductive and resistive loads in the harsh automotive environment.

Block diagram



Key features

- > Operating Voltage 5 ... 28 V
- > PWM capability up to 200-300 Hz
- > State of the art SC robustness
- > Open load detection and diagnosis in ON and OFF state
- > Improved kILIS accuracy
- > Thermal shutdown with auto restart
- > Current Sense Diagnostic

Key benefits

- > 100 percent pin compatibility across the devices of the PROFET™+ 12 V and PROFET™+ 24 V family
- > Maximum design flexibility

Key applications

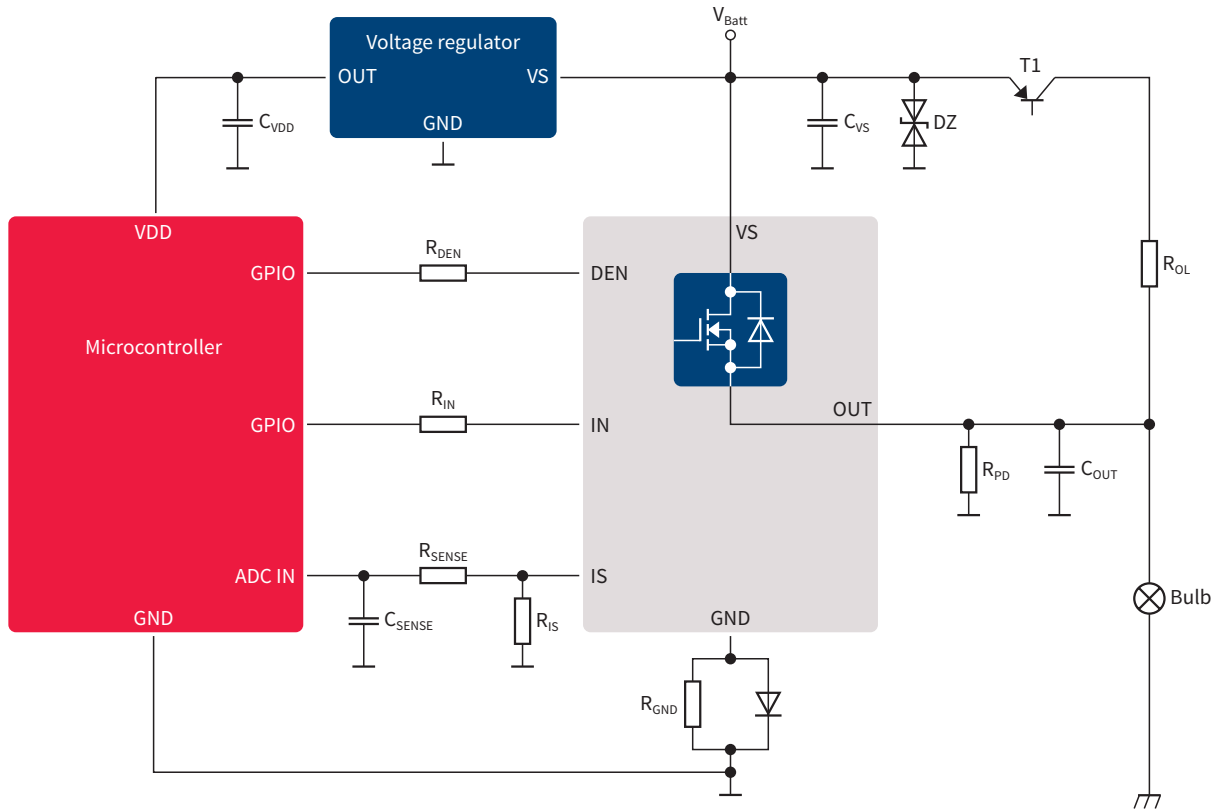
- > 12 V high side grounded loads
- > Drive LEDs & bulbs up to 10 W
- > Electromechanical relay, fuse and discrete circuits replacement



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1-channel high-side driver up to 1.5 A nominal load current

Application diagram



Product table

Part number	Package	Channels	Diagnostics	$R_{DS(on)}$ @ $T_j = 25^\circ\text{C}$ [mΩ]	$R_{DS(on)}$ max @ $T_j = 150^\circ\text{C}$ [mΩ]	Operating range [V]	OPN
BTS5200-1ENA	TDSO-8	1	Sense	200	400	5 ... 28	BTS52001ENAXUMA1

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