



## Product Brief

# PROFET™+2

## High-side switches for energy efficiency and miniaturization

The PROFET™+2 family of protected high-side power switches (8 mΩ to 200 mΩ) in TSDSO-14 exposed pad package provides state of the art diagnostics and protection features. The family offers benchmark form factor, the lowest  $R_{DS(ON)}$  (2x 8 mΩ) and smallest package (TSDSO-14) pin pitch of 0.65 mm.

The whole family is compatible with the most severe reverse battery requirement on the market due to incorporating Reversave™ functionality for the 1<sup>st</sup> time in the market on a single chip product. The family offers outstanding energy efficiency with reduced current consumption, state of the art current sense accuracy ( $k_{ILIS}$ ), benchmark low cranking voltage capability and faster switching/slew rate with no impact on EMC.

### Key features

- > Operating voltage range 3.1–28 V with 3.3 V and 5 V compatible logic input
- > Protection: current tripping, over-temperature, overvoltage, load dump, reverse polarity, short-circuit
- > Diagnosis: load current sense output

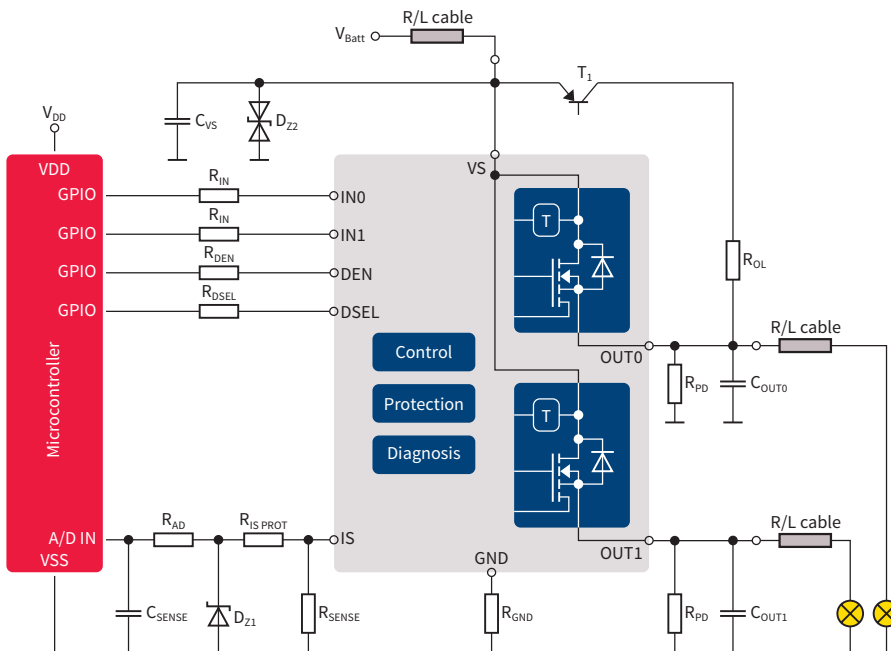
### Key benefits

- > 50% reduced internal operating current consumption
- > Simplified & cost efficient ground network
- > Outstanding current sense accuracy ( $k_{ILIS} \leq 5\%$  @ nominal load current)
- > Benchmark cranking voltage capability able to work down to 3.1 V
- > Smaller package size for area savings
- > Optimized for design flexibility across the family by pin to pin compatibility
- > Very low output leakage current ( $\leq 0.5 \mu A$  up to 85°C)

### Key applications

- > Automotive 12 V lighting load applications capacitive loads e.g. halogen bulbs and LED modules
- > Resistive loads e.g. small seat heating applications requiring below 8A nominal currents

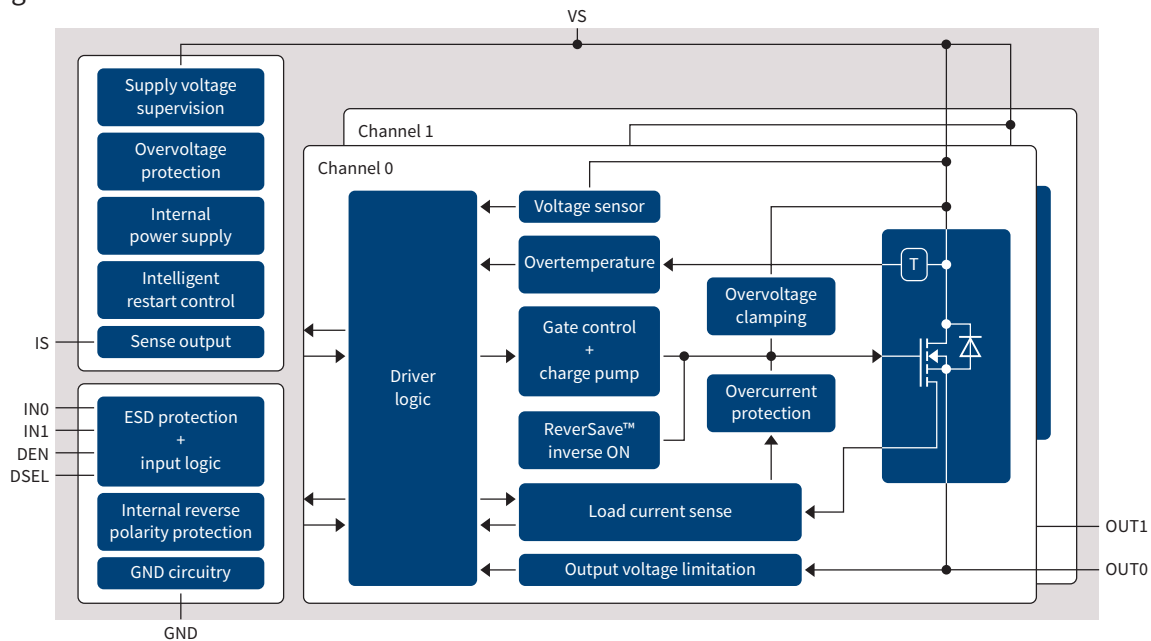
### Application diagram



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### Block diagram



### Product table

Type	Load driving capability	ReverSave™ or integrated ground diode	Channels	Package	Planned SOP
BTS7008-1EPA	1x 65 W	ReverSave™	1	TSDSO-14 EP	Q1/2019
BTS7008-2EPA	2x 65 W	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7010-1EPA	1x 55 W (H7)	ReverSave™	1	TSDSO-14 EP	Q1/2019
BTS7010-2EPA	2x 55 W (H7)	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7012-1EPA	1x 55 W (H1/4)	ReverSave™	1	TSDSO-14 EP	Q1/2019
BTS7012-2EPA	2x 55 W (H1/4)	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7020-2EPA	2x (2x 27 W + 5 W)	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7030-2EPA	2x (2x 21 W)	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7040-1EPA	1x (27 W + 5 W)	ReverSave™	1	TSDSO-14 EP	Q1/2019
BTS7040-2EPA	2x (27 W + 5 W)	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7080-2EPA	2x 21 W	ReverSave™	2	TSDSO-14 EP	Available now!
BTS7120-2EPA	2x 10 W	Integrated ground diode	2	TSDSO-14 EP	Q4/2019
BTS7200-2EPA	2x Relay, LED, 5W	Integrated ground diode	2	TSDSO-14 EP	Q4/2019
BTS7200-4EPA	2x Relay, LED, 5W	Integrated ground diode	4	TSDSO-14 EP	Q1/2020

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