

## BTS716GB

Smart High-Side Power Switch with Cranking Capability Four Channels 140mΩ

The BTS716GB is a four channel high-side power switch in PG-DSO-20 power package providing embedded protection functions. The device is monolithically integrated in Smart SiPMOS technology. The power transistor is built by N-channel-planar power MOSFET. The inputs are ground referenced CMOS compatible.

### Applications:

- Inductive loads such as relays
- Capacitive loads such as lamps
- Resistive loads such as LEDs
- Fits for automotive applications in the temperature range of -30°C to 150°C.



### Performance BTS716GB

#### Diagnostic functions:

- Diagnostic feedback with open drain output
- Open load detection in OFF-state with external resistor
- Feedback of thermal shutdown in ON-state

#### Basic functions:

- Withstand low Cranking Voltage
- Very low standby-by current
- CMOS compatible input
- Optimized Electromagnetic Compatibility
- Logic ground independent from load ground
- Very low leakage current from OUT to the load in OFF state
- Wide operating voltage range

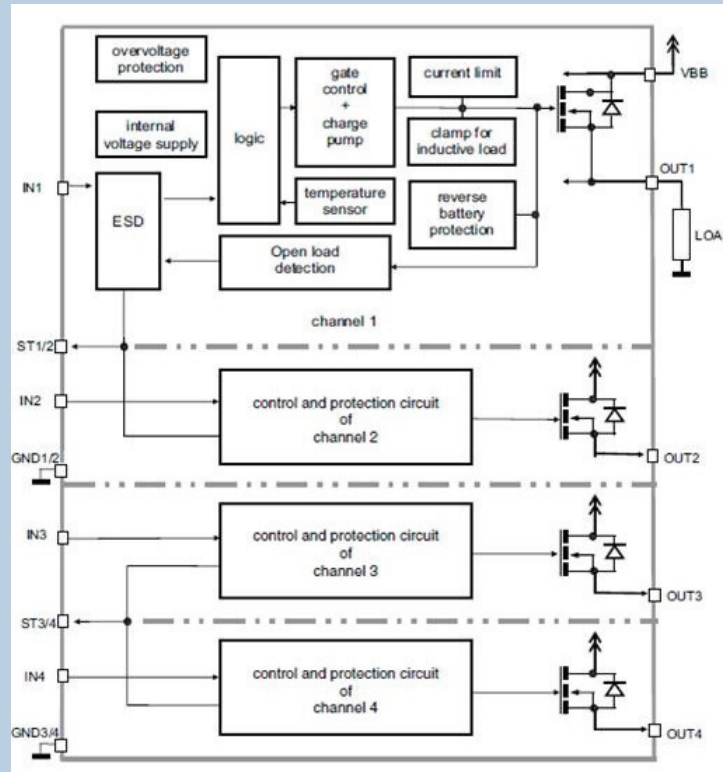
#### Protection functions:

- Short circuit protection
- Overload protection
- Current limitation
- Thermal shutdown
- Overvoltage protection
- Loss of ground and loss of VS protection
- Reverse battery protection with external resistor
- Electrostatic discharge protection (ESD)

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Block Diagram:



Product Summary:

Type	Description	Package
BTS716GB	4x140mOhm	PG-DSO-20
Parameter	Value	Unit
Operating voltage	$V_{bb(OH)}$	5.5V...40.09V
Supply voltage	$V_{bb}$	43.0V
Undervoltage switch off	$V_{bb(u so)}$	3.2V
Oversvoltage protection	$V_{bb(AZ)}$	52.0V
Operating current ( $V_{IN}=5.0V$ ) [All channels on]	$I_{GND}$	3.3mA
Nominal load current (four parallel)	$I_{L(NOM)}$	5.3A
Current limitation	$I_{L(SCR)}$	6.5A

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