



BTS723GW

Smart High-Side Power Switch for 24V Applications, Two Channels 100mΩ

The BTS723GW is a two channel high-side power switch (two times 100mΩ) in PG-DSO-14 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 with a charge pump which boosts the battery voltage. The inputs are ground referenced CMOS compatible.

Applications

- Resistive loads such as heating systems
- Inductive loads such as valves , relays on
 - Heavy duty trucks
 - Construction vehicles
 - Agricultural tractors
- Replaces electromechanical relays, fuses and discrete circuits

Diagnostic Functions

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



Basic Functions

- CMOS compatible
- Improved electromagnetic compatibility (EMC)
- Fast demagnetization of inductive loads
- Stable behaviour at undervoltage
- Logic ground independent from load ground
- Wide operating voltage range
- Optimized inverse current capability

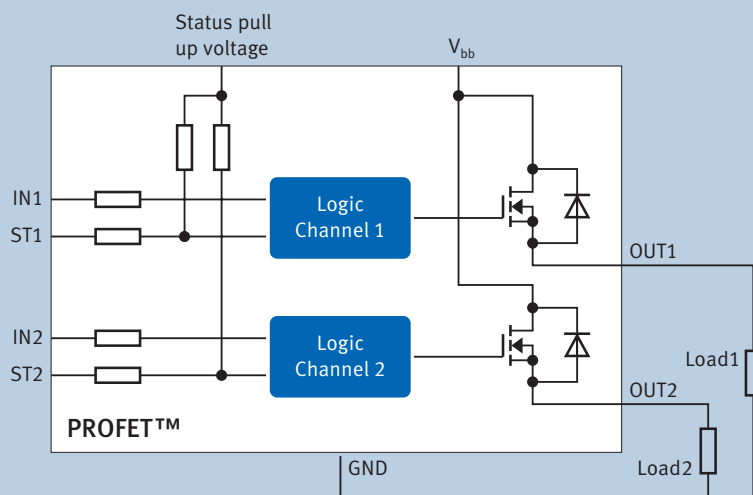
Protection Functions

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

BTS723GW

Smart High-Side Power Switch for 24V Applications, Two Channels 100mΩ

Block Diagram



Product Summary

Type	Description	Package
BTS723GW	2x 100mΩ	PG-DSO-14
Parameter	Value	Unit
Operating voltage	$V_{BAT(ON)}$	7.0V ... 58.0V
Operating current (all channels active)	I_{GND}	3.0mA
Over voltage protection	$V_{BB(AZ)}$	69.0V
ON-state resistance	$R_{DS(ON)}$	100mΩ
Nominal load current	$I_{L(NOM)}$	4.2A
Current limitation	$I_{L(SCF)}$	8.0A
Slew rate (on/off)	dV/dt	5V/μs
Output clamp (inductive load switch off)	$V_{ON(CL)}$	70.0V

Published by
Infineon Technologies AG
85579 Neubiberg, Germany

© 2011 Infineon Technologies AG.
All Rights Reserved.

Visit us:
www.infineon.com

Order Number: B127-H9612-X-X-7600
Date: 08 / 2011

ATTENTION PLEASE!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

INFORMATION

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

WARNINGS

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office. Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.