

BTS730

Smart High-Side Power Switch for Interior Lighting One Channel 70mΩ

The BTS730 is a one 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.

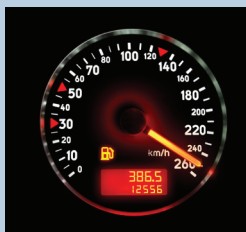
Applications:

- Dimmer switch for dashboard lighting and dome lighting
- Device allows continuous power control of:

-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 BTS 730

Key benefits:

- Self-generated PWM
- Externally adjustable PWM
- Slow slew rate of 0,02 to 0,12 V/s

Basic functions:

- Low standby current
- Automatic run generation
- Improved electromagnetic compatibility (EMC)
- Stable behaviour at undervoltage
- Logic ground independent from load ground
- Wide operating voltage range

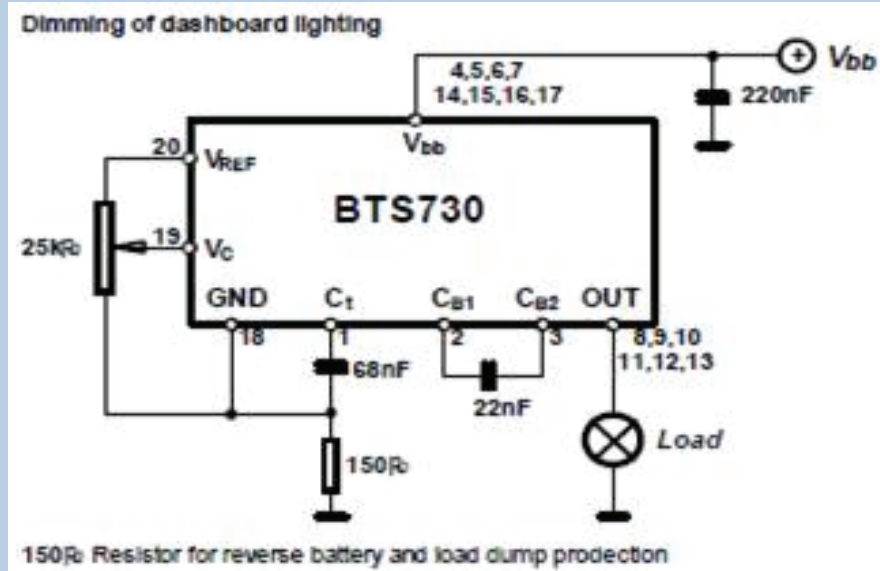
Protection functions:

- Short circuit protection
- Overload protection
- Current limitation
- Load dump protection
- Overtemperature protection
- Undervoltage and Overvoltage protection
- Loss of ground protection
- Reverse battery protection
- Electrostatic discharge protection (ESD)

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Block Diagram



Product Summary:

Type	Description	Package
BTS730	1x70mOhm	PG-DSO-20
Parameter	Value	Unit
Operating voltage	$V_{BAT(ON)}$	5.9V...16.9V
Max. output voltage	V_{RMSmax}	14.0V
Nominal current (Min.)	I_L	3.0A
Load current limit	I_{Llim}	20.0A
PWM frequency (Max.)	f_{PWM}	100Hz
Max. duty cycle factor ($I_L=3A$)	D_{imax}	98%
Min. duty cycle factor ($I_L=3A$)	D_{imin}	14%
Slew rate	du/dt	0.02...0.12V/s

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