**BTS 3207N**

**HITFET®**

*Smart Low-Side Power Switch*

*One Channel 500 mΩ*

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**Product Brief**

**The BTS 3207N** is a one channel low-side power switch. It has an on resistance of 500 mΩ.

**BTS 3207N** and **BSP 75N** are both in the 500 mΩ area. **BTS 3207N** is specially for cost driven applications and fits especially to relay applications.

**The device** was developed to fulfill automotive requirements. Therefore the **BTS 3207N** is equipped with the proven HITFET protection functions.

**The device is protected against:**

- **Short circuit:** to protect the device and circuitry during short of the load.
- **Overtemperature:** for handling overload situations and bad cooling conditions.
- **Overvoltage:** for switching inductive loads and to protect against load dump.
- **ESD:** for easier handling during production and maintenance.

**The device** also has embedded status feedback functionality. In the case of overtemperature or short circuit switch off the input pin sinks increased current. The increased current can be measured by a micro controller and action can be taken.

**In addition** the **BTS 3207N** allows high inrush currents leading to no application limitations due to low current limitation.

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**Basic Functions**

- Current limitation
- Low input current
- Analog driving possible
- Pin compatible to standard Power MOSFET

**Protective Functions**

- Short circuit protection
- Thermal shutdown with latch
- Active clamp over voltage protection
- Electrostatic discharge protection (ESD)

**Fault Information**

- Short circuit
- Thermal shutdown

**Applications**

- Especially suitable for driving relays
- All types of resistive, inductive and capacitive loads

**Benefits**

- Very low quiescent current
- High inrush current possible
- EMC optimized switching
- All application relevant protection included in the device

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**www.infineon.com/hitfet**

**Automotive Power**

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**Never stop thinking.**
**Product Brief**

**Block Diagram**

**Product Summary**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Code</td>
<td></td>
<td>Please contact Infineon Sales</td>
</tr>
<tr>
<td>Package</td>
<td></td>
<td>SOT223</td>
</tr>
<tr>
<td>Drain Voltage Internal Clamped</td>
<td>$V_{DS}$</td>
<td>42 V</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>$V_{IN,max}$</td>
<td>10 V</td>
</tr>
<tr>
<td>ON-State Resistance</td>
<td>$R_{DS(ON,max)}@25°C$</td>
<td>500 mΩ</td>
</tr>
<tr>
<td>Nominal Load Current</td>
<td>$I_{Dnom}$</td>
<td>0.64 A</td>
</tr>
<tr>
<td>Drain Current Internal Limited</td>
<td>$I_{Dlim,min}$</td>
<td>5 A</td>
</tr>
<tr>
<td>Clamping Energy</td>
<td>$E_{<a href="mailto:AS@1.4A">AS@1.4A</a>}$</td>
<td>150 mJ</td>
</tr>
<tr>
<td>Leakage Current MOSFET</td>
<td>$I_{DSS}$</td>
<td>10 µA</td>
</tr>
</tbody>
</table>

**Application Example**

**Relay Driving**

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