



SSC8132GS9

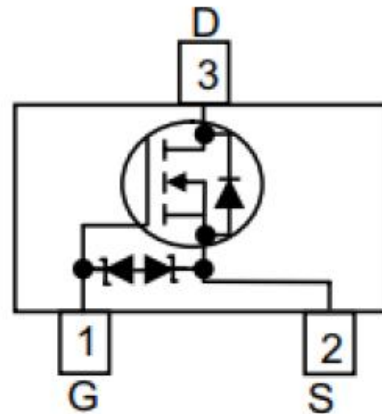
N-Channel Enhancement Mode MOSFET with ESD Protection

➤ Features

| VDS | VGS | RDSON Typ | ID |
|-----|------|------------|------|
| 30V | ±20V | 550mΩ@5V0 | 0.5A |
| | | 680mΩ@2V75 | |

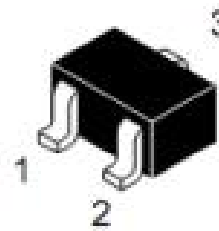
➤ Pin configuration

Top view



➤ Description

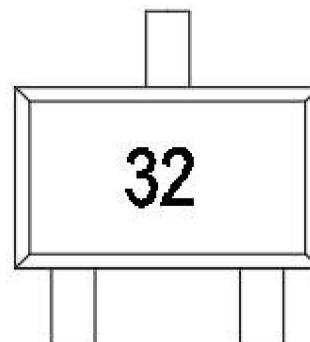
This device is a N-Channel enhancement mode MOSFET which is produced with high cell density and DMOS trench technology. This device particularly suits low voltage applications, especially for battery powered circuits, the tiny and thin outline saves PCB consumption.



SOT723

➤ Applications

- Replace Digital Transistor
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching cell Phones



Marking

➤ Ordering Information

| Device | Package | Shipping |
|------------|---------|-----------|
| SSC8132GS9 | SOT723 | 8000/Reel |



➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Ratings | Unit |
|-----------|---------------------------------------|----------------------------------|--------------------|
| V_{DSS} | Drain-to-Source Voltage | 30 | V |
| V_{GSS} | Gate-to-Source Voltage | ± 20 | V |
| I_D | Continuous Drain Current ^a | 0.5 | A |
| I_{DM} | Pulsed Drain Current ^b | 2 | A |
| P_D | Power Dissipation ^a | TC= 25°C 0.25 | W |
| T_J | Operation junction temperature | -55 to 150 | $^{\circ}\text{C}$ |
| T_{STG} | Storage temperature range | -55 to 150 | $^{\circ}\text{C}$ |

➤ **Thermal Resistance Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Typical | Maximum | Unit |
|-----------------|---|---------|---------|-----------------------------|
| $R_{\theta JA}$ | Junction-to-Ambient Thermal Resistance ^a | | 416 | $^{\circ}\text{C}/\text{W}$ |

Note:

- The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 2oz.copper,in a still air environment with $T_A=25^{\circ}\text{C}$.The value in any given application depends on the user is specific board design. The current rating is based on the $t \leq 10\text{s}$ thermal resistance rating.
- Repetitive rating, pulse width limited by junction temperature.

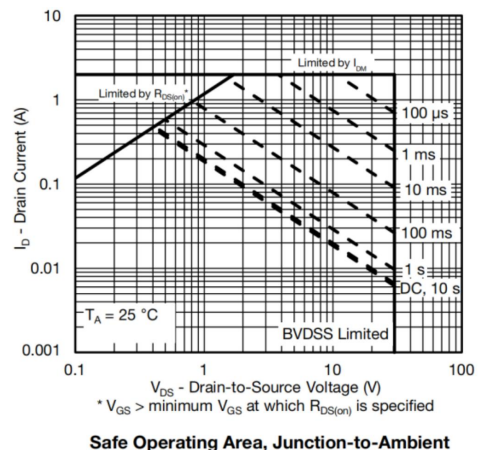
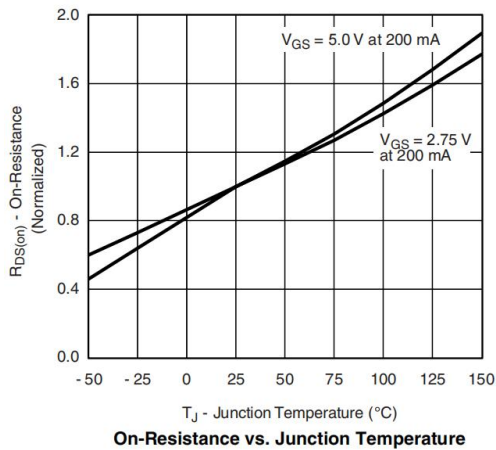
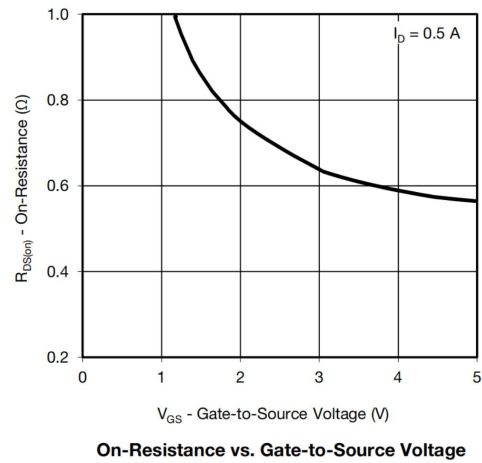
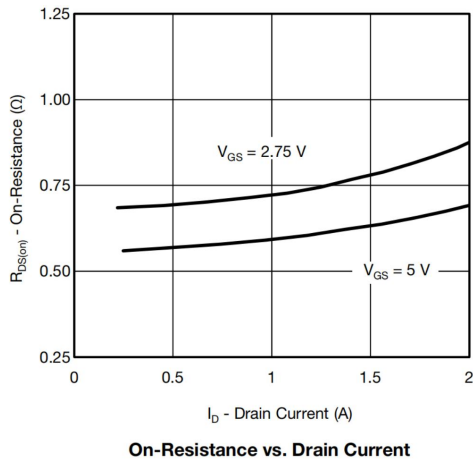
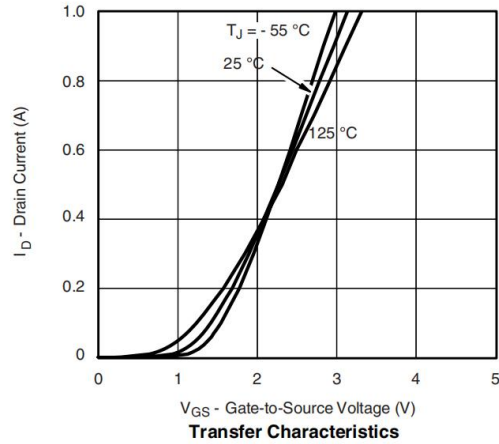
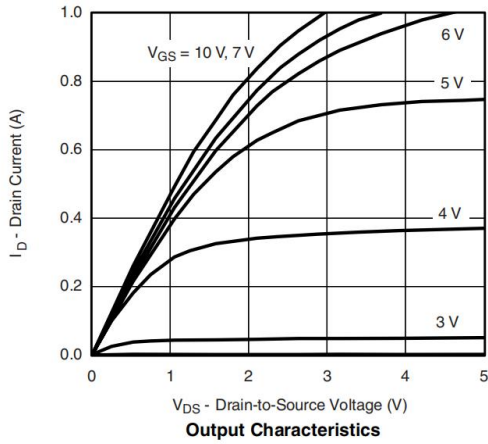


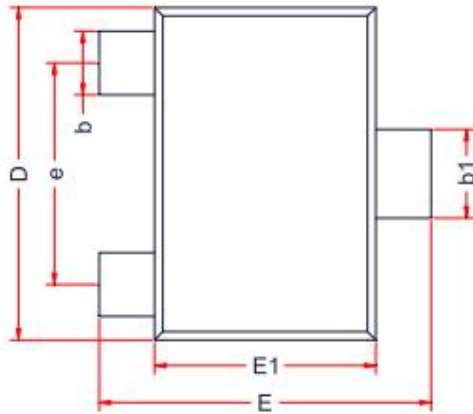
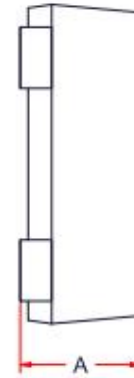
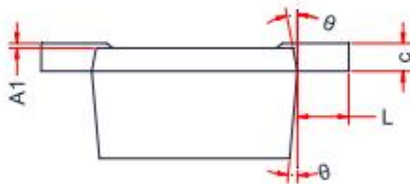
➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Test Conditions | Min | Typ. | Max | Unit |
|---------------|------------------------------------|--|-----|------|-----|------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}=0V, I_D=250\mu A$ | 30 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}, I_D=250\mu A$ | 0.5 | 1.0 | 1.5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=5.0V, I_D=0.5A$ | | 560 | 650 | mΩ |
| | | $V_{GS}=2.75V, I_D=0.3A$ | | 680 | 750 | |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=30V, V_{GS}=0V$ | | | 1 | μA |
| I_{GSS} | Gate-Source leak current | $V_{GS}=\pm 20V, V_{DS}=0V$ | | | ±10 | μA |
| G_{FS} | Transconductance | $V_{DS}=25V, I_D=0.2A,$ $f=1.0\text{kHz}$ | 100 | | | mS |
| V_{SD} | Forward Voltage | $V_{GS}=0V, I_S=0.2A$ | | 0.8 | 1.4 | V |
| C_{iss} | Input Capacitance | $V_{DS}=15V, V_{GS}=0V,$ $f=1\text{MHz}$ | | 45 | | pF |
| C_{oss} | Output Capacitance | | | 12.8 | | |
| C_{rss} | Reverse Transfer Capacitance | | | 4.5 | | |
| Q_g | Total Gate charge | $V_{DS}=25V, V_{GS}=5V, I_D=0.2A$ | | 0.8 | | nC |
| Q_{gs} | Gate to Source charge | | | 0.1 | | |
| Q_{gd} | Gate to Drain charge | | | 0.53 | | |
| $T_{D(ON)}$ | Turn-on delay time | $V_{GEN}=5.0V,$ $V_{DS}=30V, R_G=3\Omega, I_D=0.2A$ | | | 20 | ns |
| $T_{D(OFF)}$ | Turn-off delay time | | | | 20 | |



➤ **Typical Characteristics**($T_A=25^\circ\text{C}$ unless otherwise noted)



➤ Package Information
SOT-723

TOP VIEW

SIDE VIEW

SIDE VIEW

| Symbol | Dimensions in Millimeters | | |
|----------|---------------------------|------|------|
| | Min. | Typ. | Max. |
| A | 0.43 | - | 0.55 |
| A1 | 0.00 | - | 0.05 |
| c | 0.08 | 0.13 | 0.18 |
| b1 | 0.27 | - | 0.37 |
| b | 0.17 | - | 0.27 |
| L1 | 0.15 | 0.20 | 0.25 |
| D | 1.15 | 1.20 | 1.25 |
| E | 1.15 | 1.20 | 1.25 |
| E1 | 0.75 | 0.80 | 0.85 |
| e | 0.80 Ref. | | |
| θ | 7 ° Ref. | | |



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