

## 主要特性/Features

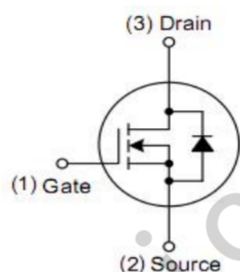
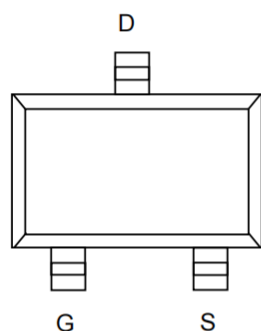
电流能力强 Strong current capacity

导通电阻低 Low on resistance

## 应用/Application

用于一般开关和低压电源电路 For general switch and low voltage power circuits

## 等效电路/Equivalent Circuit



## 极限参数/Absolute Maximum Ratings(TA=25°C unless otherwise noted)

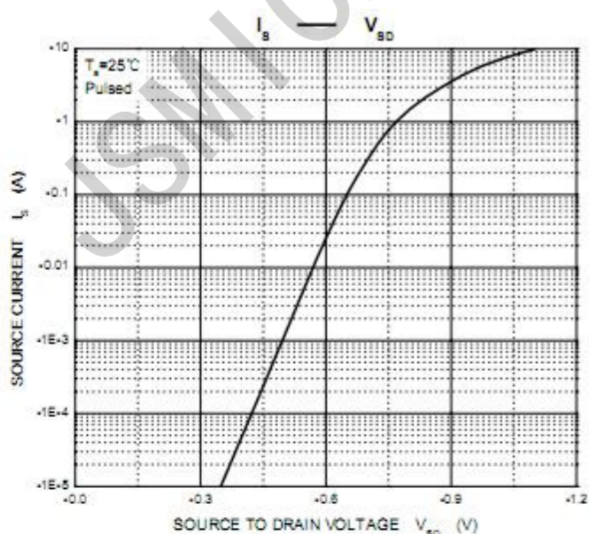
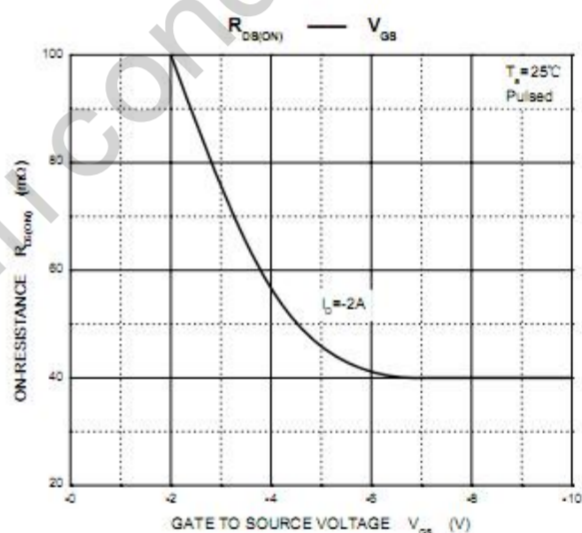
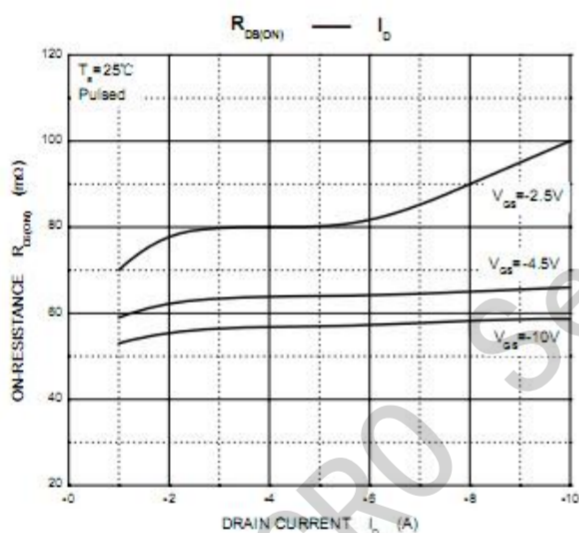
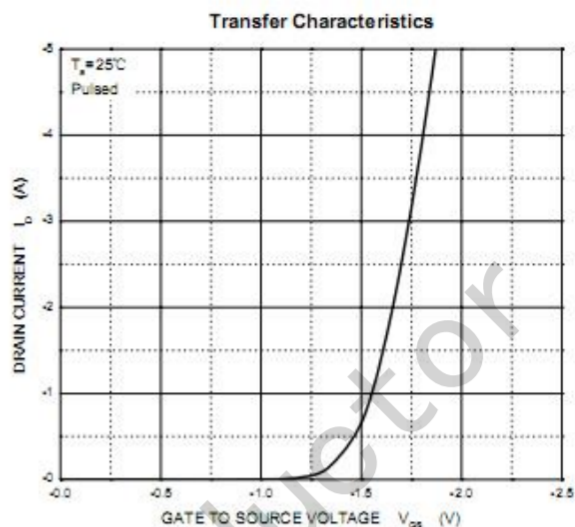
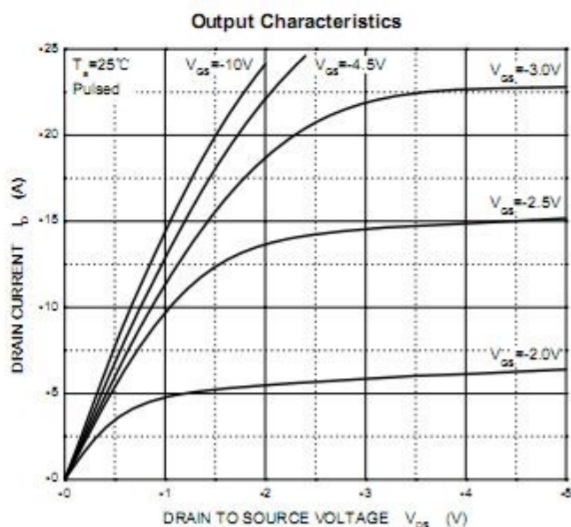
| 参数/Parameter                               | 符号/ Symbol      | 数值/Value  | 单位/Unit                      |
|--|-----------------|-----------|------------------------------|
| 漏极-源极电压/Drain-Source Voltage               | $V_{DS}$        | 30        | V                            |
| 栅极-源极电压/Gate-Source Voltage                | $V_{GS}$        | $\pm 12$  | V                            |
| 漏极电流 (持续) /Continuous Drain Current        | $I_D$           | 5.8       | A                            |
| 耗散功率/Power Dissipation                     | $P_D$           | 0.35      | W                            |
| 热阻/ Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 350       | $^{\circ}\text{C}/\text{mW}$ |
| 结温/Junction Temperature                    | $T_j$           | 150       | $^{\circ}\text{C}$           |
| 储存温度/Storage Temperature                   | $T_{stg}$       | -55 ~ 150 | $^{\circ}\text{C}$           |

**电性能参数/Electrical Characteristics (TA=25°C unless otherwise noted)**

| Parameter   | Symbol        | Test Conditions   | Min | Typ | Max       | Unit       |
|---|---------------|---|-----|-----|-----------|------------|
| <b>静态/Static Characteristics</b>                          |               |   |     |     |           |            |
| 源极-漏极击穿电压   | $V_{BR(DSS)}$ | $V_{GS}=0V, I_D=250\mu A$                                     | 30  |     |           | V          |
| 栅极开启电压  | $V_{GS(th)}$  | $I_D=250\mu A, V_{GS}=V_{DS}$                                 | 0.7 |     | 1.4       | V          |
| 栅极漏电流   | $I_{GSS}$     | $V_{GS}=\pm 12V, V_{DS}=0V$                                   |     |     | $\pm 100$ | nA         |
| 零栅压漏极电流   | $I_{DSS}$     | $V_{GS}=0V, V_{DS}=24V$                                       |     |     | 1         | $\mu A$    |
| 漏极源极导通电阻 <sup>③</sup>                                     | $R_{DS(ON)}$  | $V_{GS}=10V, I_D=5.8A$  |     |     | 35        | m $\Omega$ |
|   |               | $V_{GS}=4.5V, I_D=5A$   |     |     | 40        |            |
|   |               | $V_{GS}=2.5V, I_D=4A$   |     |     | 52        |            |
| 正向跨导 <sup>①</sup>   | $g_{fs}$      | $V_{DS}=5V, I_D=5A$   | 8   |     |           | S          |
| <b>动态/Dynamic Characteristics</b>                         |               |   |     |     |           |            |
| 输入电容 <sup>②</sup>   | $C_{iss}$     | $V_{DS}=15V, V_{GS}=0V, f=1MHz$                               |     |     | 1050      | pF         |
| 输出电容 <sup>②</sup>   | $C_{oss}$     |   |     | 99  |           |            |
| 反向传输电容 <sup>②</sup>                                       | $C_{rss}$     |   |     | 77  |           |            |
| 栅极电阻  | $R_g$         | $V_{DS}=0V, V_{GS}=0V, f=1MHz$                                |     |     | 3.6       | $\Omega$   |
| <b>开关参数/Switching Characteristics</b>                     |               |   |     |     |           |            |
| 开启延时 <sup>②</sup>   | $t_{d(on)}$   | $V_{DS}=15V, V_{GS}=10V,$<br>$R_{GEN}=3\Omega, R_L=2.7\Omega$ |     |     | 5         | ns         |
| 上升时间 <sup>②</sup>   | $t_r$         |   |     |     | 7         | ns         |
| 关闭延时 <sup>②</sup>   | $t_{d(off)}$  |   |     |     | 40        | ns         |
| 下降延时 <sup>②</sup>   | $t_f$         |   |     |     | 6         | ns         |
| <b>漏极-源极二极管参数/Drain-source Body Diode Characteristics</b> |               |   |     |     |           |            |
| 二极管正向压降 <sup>①</sup>                                      | $V_{SD}$      | $I_S=1A, V_{GS}=0V$   |     |     | 1         | V          |

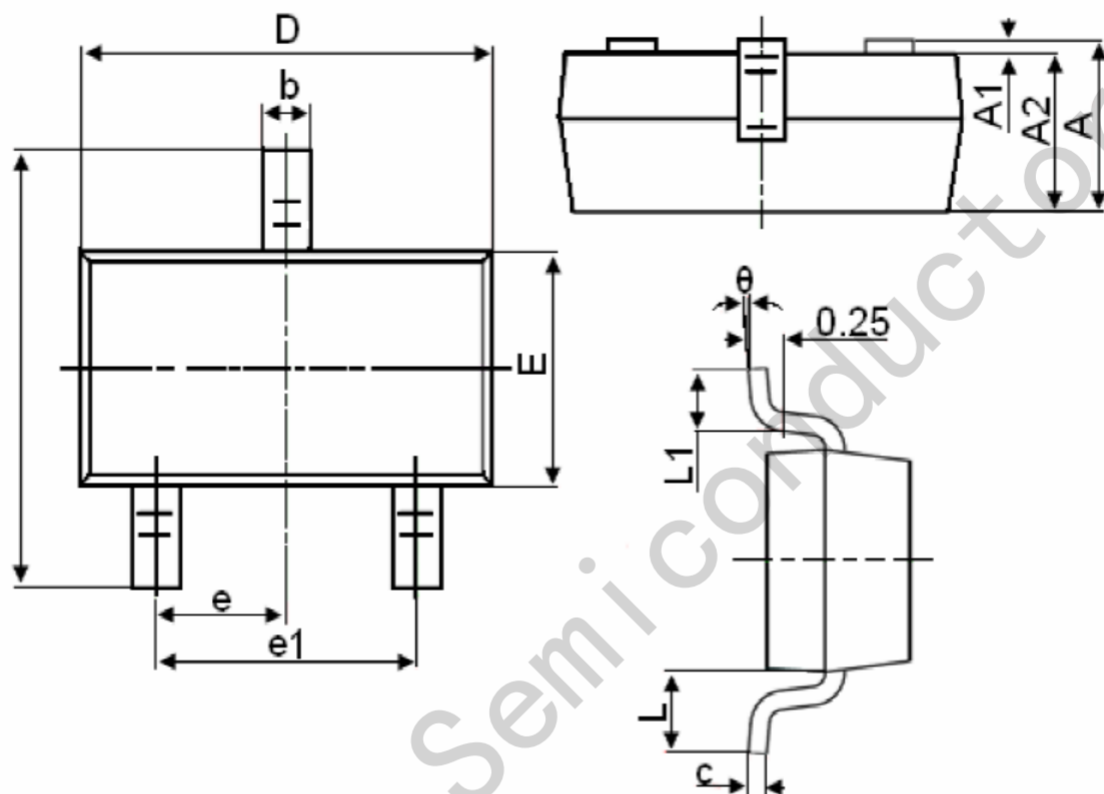
注：① 脉冲测试脉冲宽度 $\leq 300\mu s$ ，占空比 $\leq 2\%$ ；

② 这些参数未通过验证；

**典型特性曲线图/Typical Characteristics**


## Package Information

SOT-23



| Symbol | Dimensions in Millimeters (mm) |       | Dimensions in Inches |       |
|--------|--------------------------------|-------|----------------------|-------|
|        | Min                            | Max   | Min                  | Max   |
| A      | 0.900                          | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                          | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                          | 1.050 | 0.035                | 0.041 |
| b      | 0.300                          | 0.500 | 0.012                | 0.020 |
| c      | 0.080                          | 0.150 | 0.003                | 0.006 |
| D      | 2.800                          | 3.000 | 0.110                | 0.118 |
| E      | 1.200                          | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                          | 2.550 | 0.089                | 0.100 |
| e      | 0.950TYP                       |       | 0.037TYP             |       |
| e1     | 1.800                          | 2.000 | 0.071                | 0.079 |
| L      | 0.550REF                       |       | 0.022REF             |       |
| L1     | 0.300                          | 0.500 | 0.012                | 0.020 |
| theta  | 0°                             | 8°    | 0°                   | 8°    |

单击下面可查看定价，库存，交付和生命周期等信息

[>>JSMSEMI\(杰盛微\)](#)