



SLS SEMICONDUCTOR (SHENZHEN) CO.,LTD.

SOT-23 封装半导体场效应管/SOT-23 Plastic-Encapsulate MOSFETS

**SLS3400** (N-Channel Enhancement mode Field Effect Transistor)

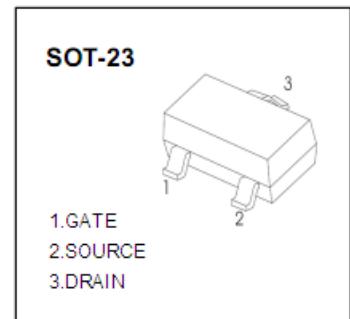
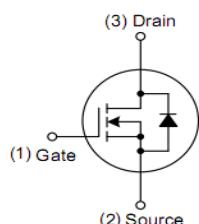
## 印章/MARKING: A09T

### 特点/Features :

- 1、 电流能力强；
- 2、 导通电阻低；

### 用途/Applications :

用于一般开关和低压电源电路。



### 极限参数/Absolute maximum ratings( $T_a=25^{\circ}\text{C}$ )

| 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  | $^{\circ}\text{C}$           |



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| 参数   | 符号            | 测试条件  | 最小值 | 典型值 | 最大值       | 单位         |
|--|---------------|---|-----|-----|-----------|------------|
| 静态/Static Characteristics                          |               |   |     |     |           |            |
| 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          |
| 动态/Dynamic Characteristics                         |               |   |     |     |           |            |
| 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       | $\Omega$   |
| 开关参数/Switching Characteristics                     |               |   |     |     |           |            |
| 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         |
| 漏极-源极二极管参数/Drain-source Body Diode Characteristics |               |   |     |     |           |            |
| 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≤300μS, 占空比≤2%;

② 这些参数未通过验证;

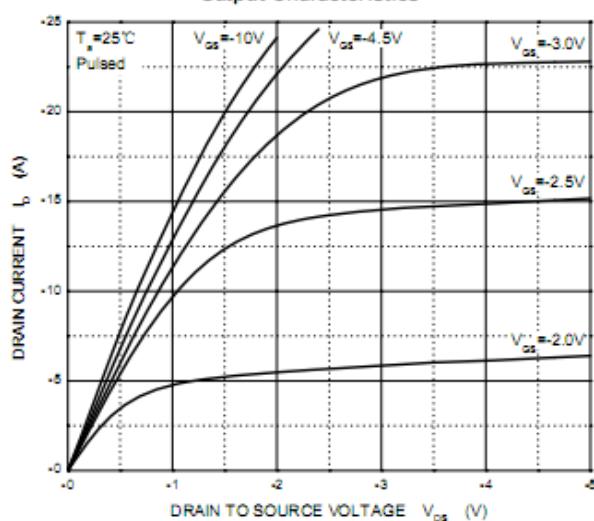


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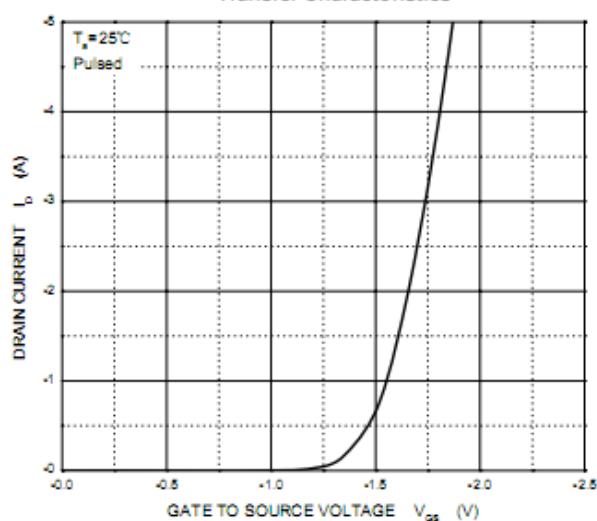
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## 典型特性曲线图/Typical Characteristics

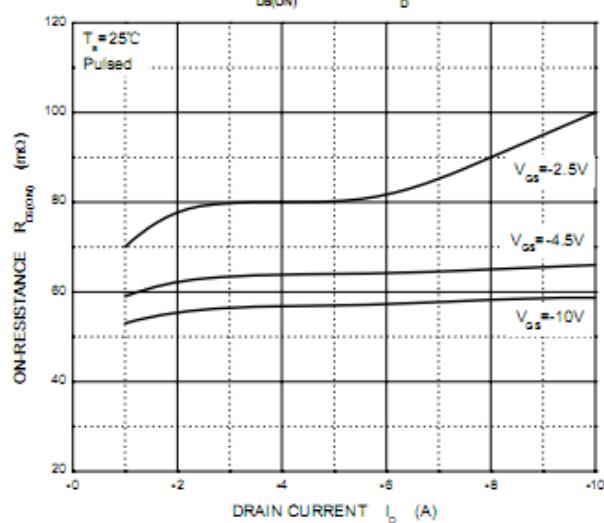
Output Characteristics



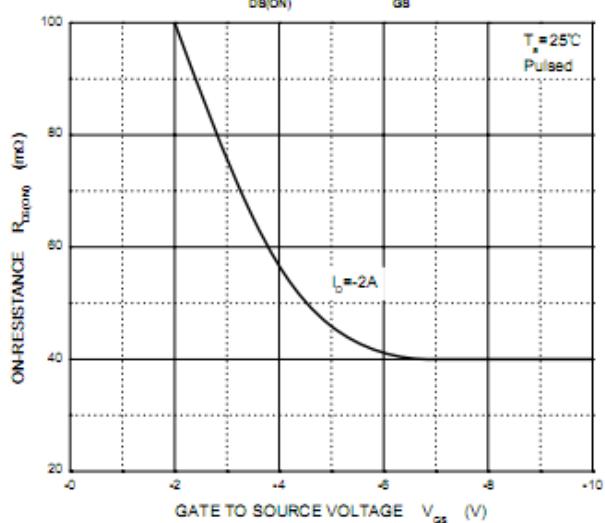
Transfer Characteristics



$R_{DS(ON)}$  —  $I_d$



$R_{DS(ON)}$  —  $V_{gs}$



$I_s$  —  $V_{sd}$

