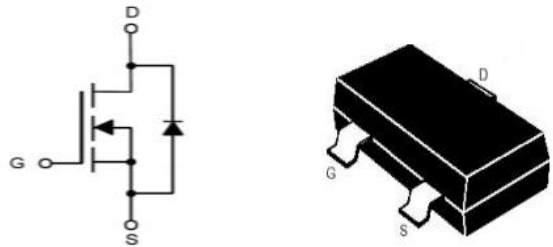


**SOT-323 50V N Channel Enhancement 沟道增强型
MOS Field Effect Transistor 场效应管**



■ Absolute Maximum Ratings 最大额定值

| Characteristic 特性参数 | Symbol 符号 | Rat 额定值 | Unit 单位 |
|--|--------------------------------|----------|--------------|
| Drain-Source Voltage 漏极-源极电压 | BV_{DSS} | 50 | V |
| Gate- Source Voltage 栅极-源极电压 | V_{GS} | ± 20 | V |
| Drain Current (continuous)漏极电流-连续 | I_D (at $T_A = 25^\circ C$) | 200 | mA |
| Drain Current (pulsed)漏极电流-脉冲 | I_{DM} | 1 | A |
| Total Device Dissipation 总耗散功率 | P_D (at $T_A = 25^\circ C$) | 300 | mW |
| Thermal Resistance Junction-Ambient 热阻 | $R_{\theta JA}$ | 417 | $^\circ C/W$ |
| Junction/Storage Temperature 结温/储存温度 | T_J, T_{stg} | -55~150 | $^\circ C$ |

■ **Electrical Characteristics 电特性**

($T_A=25^\circ\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

| Characteristic 特性参数 | Symbol 符号 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 单位 |
|---|--------------|------------|------------|------------|---------------|
| Drain-Source Breakdown Voltage 漏极-源极击穿电压($I_D=250\mu\text{A}, V_{GS}=0\text{V}$) | BV_{DSS} | 50 | — | — | V |
| Gate Threshold Voltage 栅极开启电压($I_D=250\mu\text{A}, V_{GS}=V_{DS}$) | $V_{GS(th)}$ | 0.5 | 1.0 | 1.5 | V |
| Zero Gate Voltage Drain Current 零栅压漏极电流($V_{GS}=0\text{V}, V_{DS}=50\text{V}$) | I_{DSS} | — | — | 0.5 | μA |
| Gate Body Leakage 栅极漏电流($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$) | I_{GSS} | — | — | ± 100 | nA |
| Static Drain-Source On-State Resistance 静态漏源导通电阻($I_D=200\text{mA}, V_{GS}=10\text{V}$) | $R_{DS(ON)}$ | — | — | 3.5 | Ω |
| Input Capacitance 输入电容 ($V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1\text{MHz}$) | C_{ISS} | — | 30 | — | pF |
| Common Source Output Capacitance 共源输出电容($V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1\text{MHz}$) | C_{OSS} | — | 8 | — | pF |
| Reverse Transfer Capacitance 反馈电容($V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1\text{MHz}$) | C_{RSS} | — | 3 | — | pF |
| Total Gate Charge 栅极电荷密度 ($V_{DS}=25\text{V}, I_D=200\text{mA}, V_{GS}=10\text{V}$) | Q_g | — | 1.7 | — | nC |
| Gate Source Charge 栅源电荷密度 ($V_{DS}=25\text{V}, I_D=200\text{mA}, V_{GS}=10\text{V}$) | Q_{gs} | — | 0.47 | — | nC |
| Gate Drain Charge 栅漏电荷密度 ($V_{DS}=25\text{V}, I_D=200\text{mA}, V_{GS}=10\text{V}$) | Q_{gd} | — | 0.25 | — | nC |
| Turn-ON Delay Time 开启延迟时间 ($V_{DS}=25\text{V}, I_D=200\text{mA}, R_{GEN}=6\Omega, V_{GS}=10\text{V}$) | $t_{d(on)}$ | — | 2.6 | — | ns |
| Turn-ON Rise Time 开启上升时间 ($V_{DS}=25\text{V}, I_D=200\text{mA}, R_{GEN}=6\Omega, V_{GS}=10\text{V}$) | t_r | — | 19 | — | ns |
| Turn-OFF Delay Time 关断延迟时间 ($V_{DS}=25\text{V}, I_D=200\text{mA}, R_{GEN}=6\Omega, V_{GS}=10\text{V}$) | $t_{d(off)}$ | — | 9.6 | — | ns |
| Turn-OFF Fall Time 关断下降时间 ($V_{DS}=25\text{V}, I_D=200\text{mA}, R_{GEN}=6\Omega, V_{GS}=10\text{V}$) | t_f | — | 49 | — | ns |

■ Typical Characteristic Curve 典型特性曲线

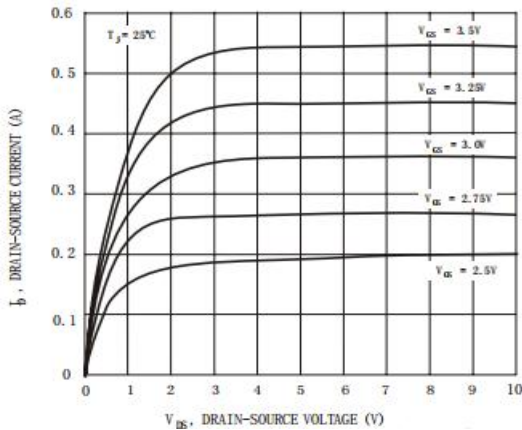


Figure 1: Output Characteristics

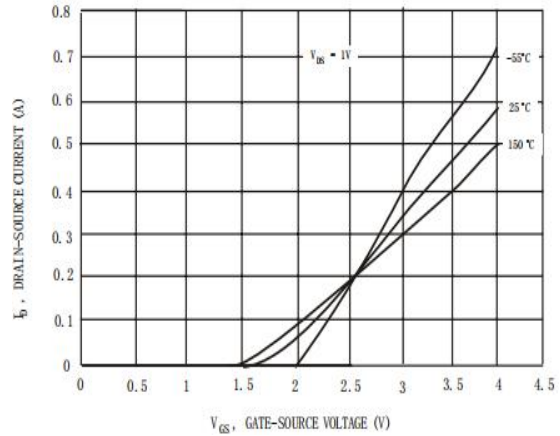


Figure 2: Transfer Characteristics

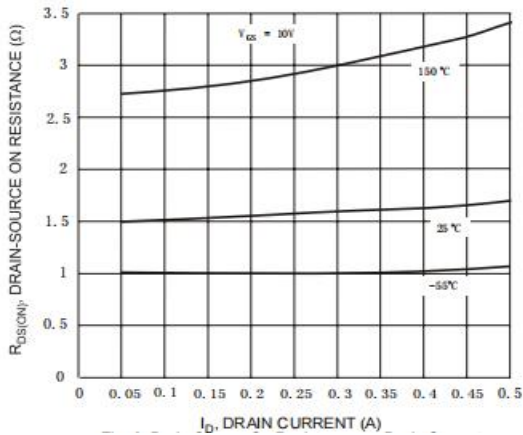


Figure 3: On-Resistance vs. Drain Current

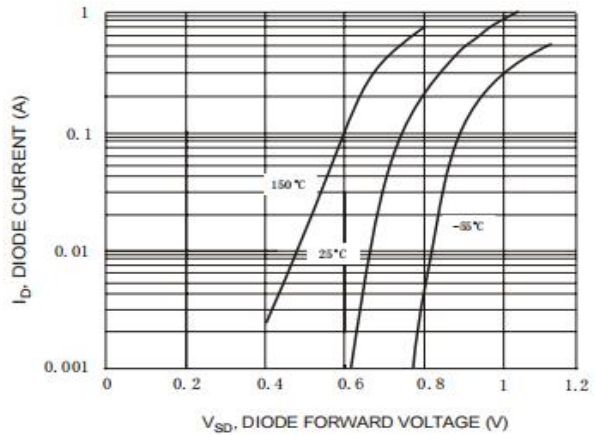


Figure 4: Diode Characteristics

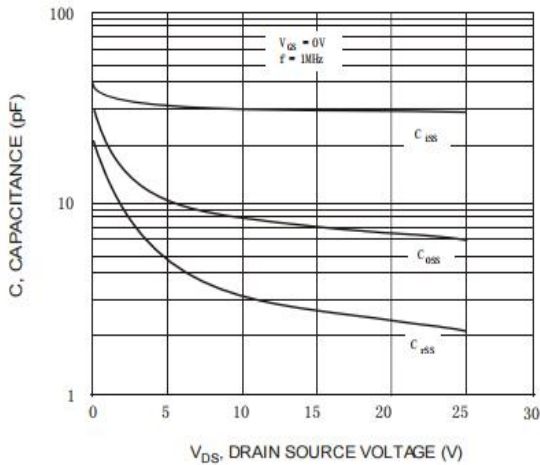


Figure 5: Capacitance Characteristics

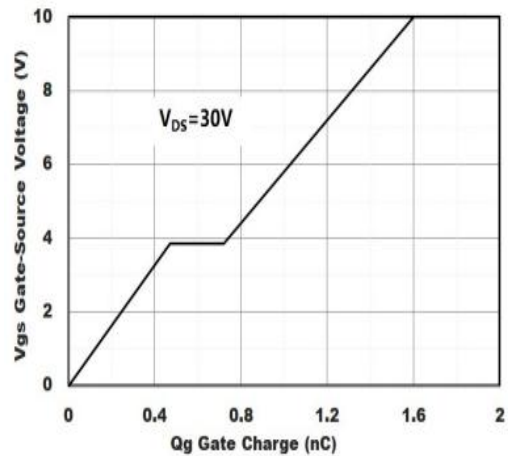
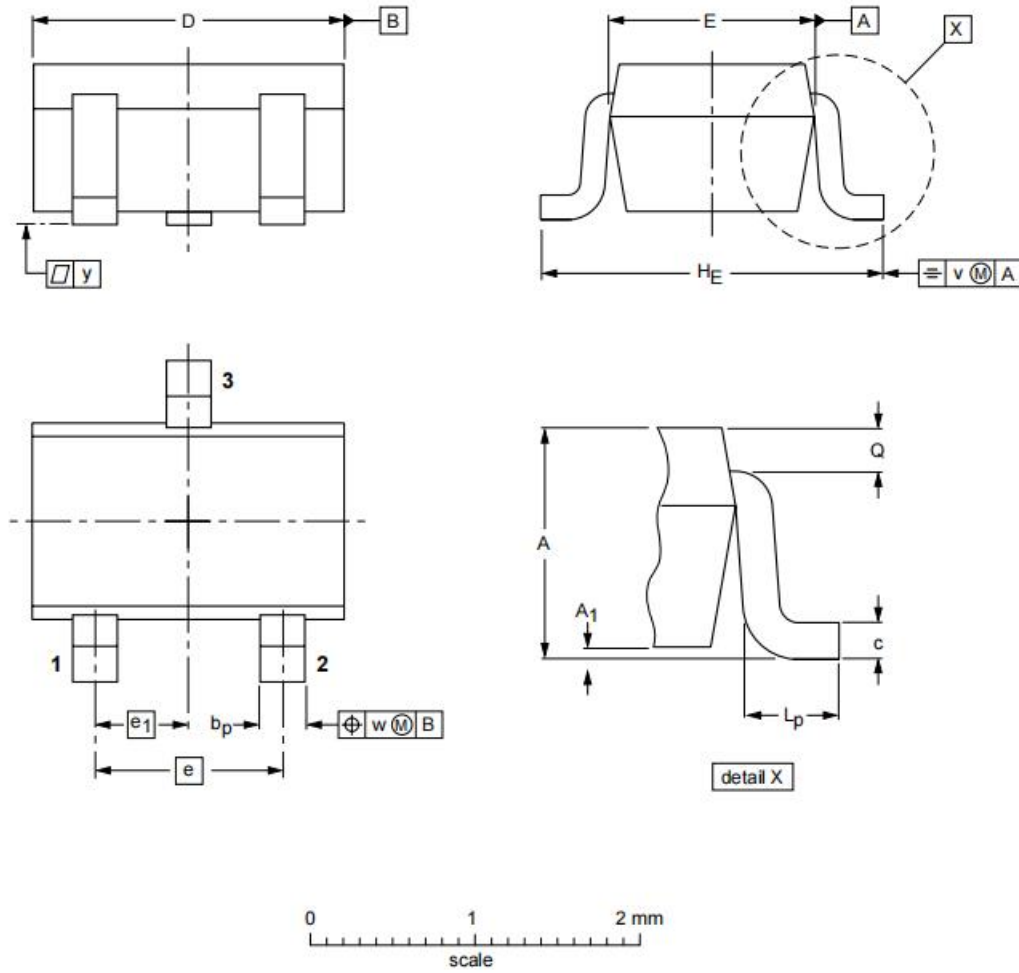


Figure 6: Gate-Charge Characteristics

■ Dimension 外形封装尺寸



DIMENSIONS (mm are the original dimensions)

| UNIT | A | A ₁ max | b _p | c | D | E | e | e ₁ | H _E | L _p | Q | v | w |
|------|------------|-----------------------|----------------|--------------|------------|--------------|-----|----------------|----------------|----------------|--------------|-----|-----|
| mm | 1.1 0.8 | 0.1 | 0.4 0.3 | 0.25 0.10 | 2.2 1.8 | 1.35 1.15 | 1.3 | 0.65 | 2.2 2.0 | 0.45 0.15 | 0.23 0.13 | 0.2 | 0.2 |