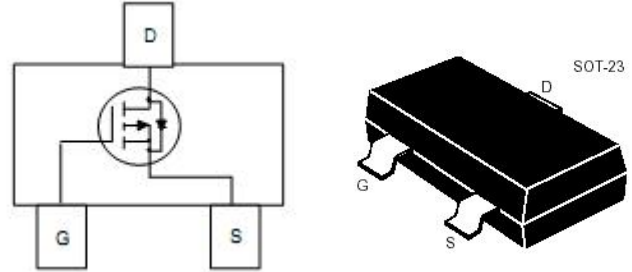




GM6385

SOT-23 場效應晶體管(SOT-23 Field Effect Transistors)



P-Channel Enhancement-Mode MOS FETs

P 溝道增強型 MOS 場效應管

■MAXIMUM RATINGS 最大額定值

| Characteristic 特性參數 | Symbol 符號 | Rate 額定值 | Unit 單位 |
|--|--------------|-------------|------------------|
| Drain-Source Voltage 漏極-源極電壓 | BV_{DSS} | -60 | V |
| Gate- Source Voltage 柵極-源極電壓 | V_{GS} | ± 20 | V |
| Drain Current (continuous) 漏極電流-連續 | I_D | -3.5 | A |
| Drain Current (pulsed) 漏極電流-脈沖 | I_{DM} | -10 | A |
| Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 25°C | P_D | 1400 | mW |
| Junction 結溫 | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature 儲存溫度 | T_{stg} | -55to+150 | $^\circ\text{C}$ |

■DEVICE MARKING 打標

GM6385=6385

GM6385

■ELECTRICAL CHARACTERISTICS 電特性

($T_A=25^{\circ}\text{C}$ unless otherwise noted 如無特殊說明，溫度為 25°C)

| Characteristic 特性參數 | Symbol 符號 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 單位 |
|---|--------------|------------|------------|------------|------------------|
| Drain-Source Breakdown Voltage 漏極-源極擊穿電壓($I_D = -250\mu\text{A}, V_{GS}=0\text{V}$) | BV_{DSS} | -55 | -60 | — | V |
| Gate Threshold Voltage 柵極開啓電壓($I_D = -250\mu\text{A}, V_{GS} = V_{DS}$) | $V_{GS(th)}$ | -1 | — | -3 | V |
| Diode Forward Voltage Drop 內附二極管正向壓降($I_S = -2\text{A}, V_{GS}=0\text{V}$) | V_{SD} | — | — | -1.2 | V |
| Zero Gate Voltage Drain Current 零柵壓漏極電流($V_{GS}=0\text{V}, V_{DS} = -60\text{V}$) | I_{DSS} | — | — | -1 | μA |
| Gate Body Leakage 柵極漏電流($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$) | I_{GSS} | — | — | ± 100 | nA |
| Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D = -3\text{A}, V_{GS} = -10\text{V}$) | $R_{DS(ON)}$ | — | 70 | 85 | $\text{m}\Omega$ |
| Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D = -2\text{A}, V_{GS} = -4.5\text{V}$) | $R_{DS(ON)}$ | — | 80 | 120 | $\text{m}\Omega$ |
| Input Capacitance 輸入電容 ($V_{GS}=0\text{V}, V_{DS} = -15\text{V}, f=1\text{MHz}$) | C_{ISS} | — | 960 | — | pF |
| Output Capacitance 輸出電容 ($V_{GS}=0\text{V}, V_{DS} = -15\text{V}, f=1\text{MHz}$) | C_{OSS} | — | 100 | — | pF |
| Reverse Transfer Capacitance 反向傳輸電容 ($V_{GS}=0\text{V}, V_{DS} = -15\text{V}, f=1\text{MHz}$) | C_{RSS} | — | 33 | — | pF |
| Total Gate Charge 總柵極電荷密度 ($V_{DS} = -30\text{V}, I_D = -4\text{A}, V_{GS} = -10\text{V}$) | Q_g | — | 23 | — | nC |
| Gate Source Charge 柵源電荷密度 ($V_{DS} = -30\text{V}, I_D = -4\text{A}, V_{GS} = -10\text{V}$) | Q_{gs} | — | 5 | — | nC |
| Gate Drain Charge 柵漏電荷密度 ($V_{DS} = -30\text{V}, I_D = -4\text{A}, V_{GS} = -10\text{V}$) | Q_{gd} | — | 6 | — | nC |
| Turn-On Delay Time 開啓延遲時間 ($V_{DS} = -30\text{V}, I_D = -1\text{A}, R_{GEN} = 3\Omega, V_{GS} = -10\text{V}$) | $t_{d(on)}$ | — | 38 | — | ns |
| Turn-On Rise Time 開啓上升時間 ($V_{DS} = -30\text{V}, I_D = -1\text{A}, R_{GEN} = 3\Omega, V_{GS} = -10\text{V}$) | t_r | — | 18 | — | ns |
| Turn-Off Delay Time 關斷延遲時間 ($V_{DS} = -30\text{V}, I_D = -1\text{A}, R_{GEN} = 3\Omega, V_{GS} = -10\text{V}$) | $t_{d(off)}$ | — | 51 | — | ns |
| Turn-On Fall Time 開啓下降時間 ($V_{DS} = -30\text{V}, I_D = -1\text{A}, R_{GEN} = 3\Omega, V_{GS} = -10\text{V}$) | t_f | — | 6 | — | ns |

Pulse Width $\leq 300 \mu\text{s}$; Duty Cycle $\leq 2.0\%$

■ TYPICAL CHARACTERISTIC CURVE

典型特性曲線

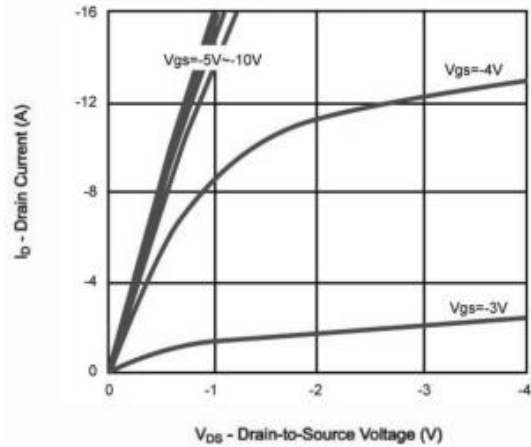


Figure 1: Output Characteristics

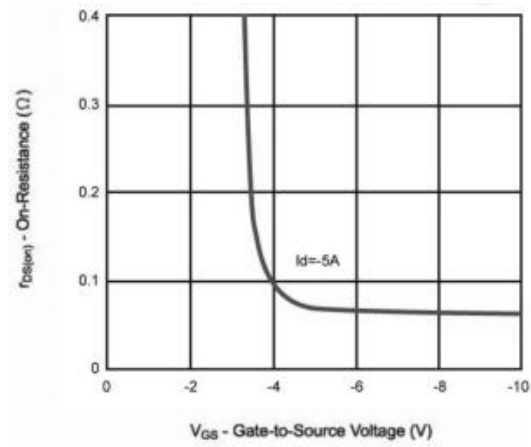


Figure 2: Rdson - VGS

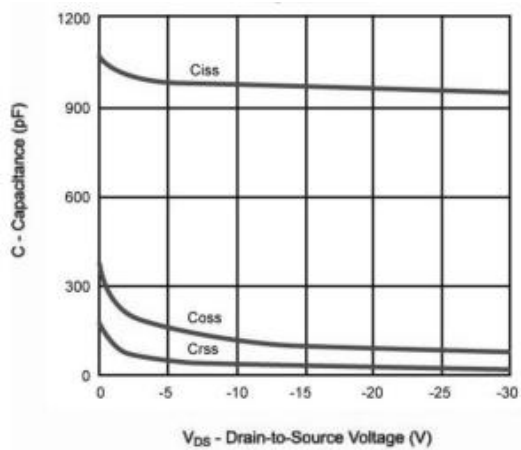


Figure 3: Capacitance

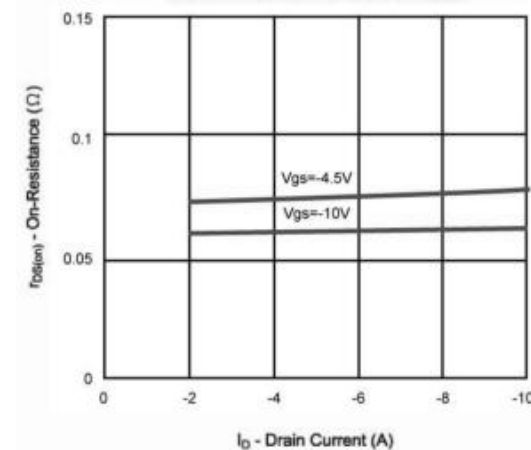


Figure 4: Rdson - ID

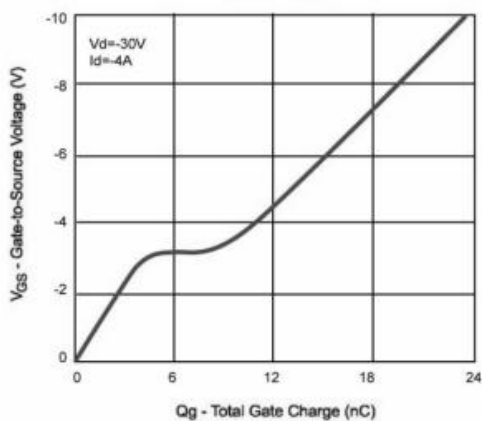


Figure 5: Gate-Charge Characteristics

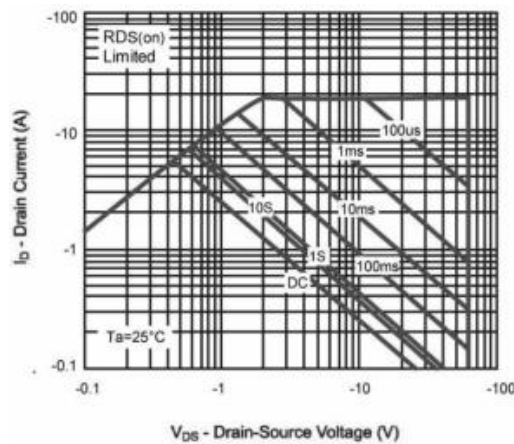


Figure 6: Safe Operating Area