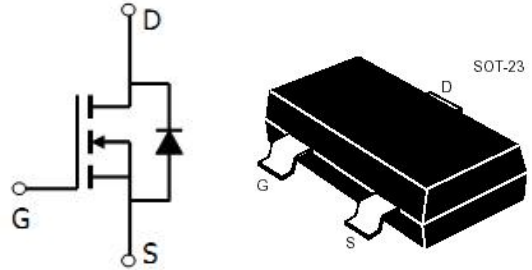




GM2302

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



**N-Channel Enhancement-Mode MOS FETs**

N 溝道增強型 MOS 場效應管

■ **MAXIMUM RATINGS 最大額定值**

| Characteristic<br>特性參數   | Symbol<br>符號 | Rat<br>額定值 | Unit<br>單位       |
|--|--------------|------------|------------------|
| Drain-Source Voltage<br>漏極-源極電壓  | $BV_{DSS}$   | 20         | V                |
| Gate- Source Voltage<br>柵極-源極電壓  | $V_{GS}$     | $\pm 10$   | V                |
| Drain Current (continuous)<br>漏極電流-連續  | $I_D$        | 3.5        | A                |
| Drain Current (pulsed)<br>漏極電流-脈沖  | $I_{DM}$     | 11         | A                |
| Total Device Dissipation<br>總耗散功率<br>$T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$ | $P_D$        | 1000       | mW               |
| Junction<br>結溫   | $T_J$        | 150        | $^\circ\text{C}$ |
| Storage Temperature<br>儲存溫度  | $T_{stg}$    | -55to+150  | $^\circ\text{C}$ |

■ **DEVICE MARKING 打標**

**GM2302=A2**

GM2302

■ELECTRICAL CHARACTERISTICS 電特性

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

| Characteristic<br>特性參數   | Symbol<br>符號 | Min<br>最小值 | Typ<br>典型值 | Max<br>最大值 | Unit<br>單位       |
|--|--------------|------------|------------|------------|------------------|
| Drain-Source Breakdown Voltage<br>漏極-源極擊穿電壓( $I_D = 250\mu\text{A}, V_{GS}=0\text{V}$ )  | $BV_{DSS}$   | 20         | —          | —          | V                |
| Gate Threshold Voltage<br>柵極開啓電壓( $I_D = 250\mu\text{A}, V_{GS} = V_{DS}$ )  | $V_{GS(th)}$ | 0.5        | —          | 1.5        | V                |
| Diode Forward Voltage Drop<br>內附二極管正向壓降( $I_S = 0.75\text{A}, V_{GS}=0\text{V}$ )  | $V_{SD}$     | —          | —          | 1.5        | V                |
| Zero Gate Voltage Drain Current<br>零柵壓漏極電流( $V_{GS}=0\text{V}, V_{DS}= 16\text{V}$ )<br>( $V_{GS}=0\text{V}, V_{DS}= 16\text{V}, T_A=55^{\circ}\text{C}$ ) | $I_{DSS}$    | —          | —          | 1<br>10    | $\mu\text{A}$    |
| Gate Body Leakage<br>柵極漏電流( $V_{GS}=\pm 10\text{V}, V_{DS}=0\text{V}$ )  | $I_{GSS}$    | —          | —          | $\pm 100$  | nA               |
| Static Drain-Source On-State Resistance<br>靜態漏源導通電阻( $I_D=2.8\text{A}, V_{GS}=4.5\text{V}$ )<br>( $I_D=2\text{A}, V_{GS}=2.5\text{V}$ )                    | $R_{DS(ON)}$ | —          | —          | 60<br>80   | $\text{m}\Omega$ |
| Input Capacitance 輸入電容<br>( $V_{GS}=0\text{V}, V_{DS}= 10\text{V}, f=1\text{MHz}$ )  | $C_{ISS}$    | —          | —          | 800        | pF               |
| Common Source Output Capacitance<br>共源輸出電容( $V_{GS}=0\text{V}, V_{DS}= 10\text{V}, f=1\text{MHz}$ )  | $C_{OSS}$    | —          | —          | 200        | pF               |
| Turn-ON Time 開啓時間<br>( $V_{DS}= 10\text{V}, I_D= 3.5\text{A}, R_{GEN}=10\Omega$ )  | $t_{(on)}$   | —          | —          | 20         | ns               |
| Turn-OFF Time 關斷時間<br>( $V_{DS}= 10\text{V}, I_D= 3.5\text{A}, R_{GEN}=10\Omega$ )   | $t_{(off)}$  | —          | —          | 80         | ns               |

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