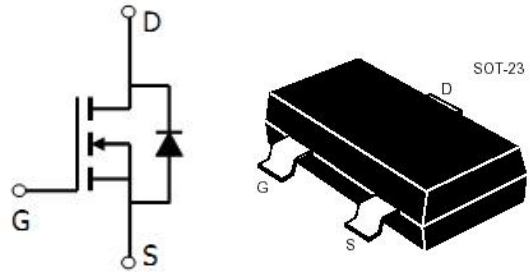


# SI2302

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 特性參數	Symbol 符號	Rat 額定值	Unit 單位
Drain-Source Voltage 漏極-源極電壓	$BV_{DSS}$	20	V
Gate- Source Voltage 柵極-源極電壓	$V_{GS}$	$\pm 10$	V
Drain Current (continuous) 漏極電流-連續	$I_D$	3.5	A
Drain Current (pulsed) 漏極電流-脈沖	$I_{DM}$	11	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$	$P_D$	1000	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

**SI2302=A2**

**■ ELECTRICAL CHARACTERISTICS 電特性**

 (T<sub>A</sub>=25°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 <sub>D</sub> = 250uA, V <sub>GS</sub> =0V)	BV <sub>DSS</sub>	20	—	—	V
Gate Threshold Voltage 柵極開啓電壓(I <sub>D</sub> = 250uA, V <sub>GS</sub> = V <sub>DS</sub> )	V <sub>GS(th)</sub>	0.5	—	1.5	V
Diode Forward Voltage Drop 內附二極管正向壓降(I <sub>S</sub> = 0.75A, V <sub>GS</sub> =0V)	V <sub>SD</sub>	—	—	1.5	V
Zero Gate Voltage Drain Current 零柵壓漏極電流(V <sub>GS</sub> =0V, V <sub>DS</sub> = 16V) (V <sub>GS</sub> =0V, V <sub>DS</sub> = 16V, T <sub>A</sub> =55°C)	I <sub>DSS</sub>	—	—	1 10	uA
Gate Body Leakage 柵極漏電流(V <sub>GS</sub> =±10V, V <sub>DS</sub> =0V)	I <sub>GSS</sub>	—	—	±100	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻(I <sub>D</sub> =2.8A, V <sub>GS</sub> =4.5V) (I <sub>D</sub> =2A, V <sub>GS</sub> =2.5V)	R <sub>DS(ON)</sub>	—	—	60 80	mΩ
Input Capacitance 輸入電容 (V <sub>GS</sub> =0V, V <sub>DS</sub> = 10V, f=1MHz)	C <sub>ISS</sub>	—	—	800	pF
Common Source Output Capacitance 共源輸出電容(V <sub>GS</sub> =0V, V <sub>DS</sub> = 10V, f=1MHz)	C <sub>OSS</sub>	—	—	200	pF
Turn-ON Time 開啓時間 (V <sub>DS</sub> = 10V, I <sub>D</sub> = 3.5A, R <sub>GEN</sub> =10Ω)	t <sub>(on)</sub>	—	—	20	ns
Turn-OFF Time 關斷時間 (V <sub>DS</sub> = 10V, I <sub>D</sub> = 3.5A, R <sub>GEN</sub> =10Ω)	t <sub>(off)</sub>	—	—	80	ns

Pulse Width ≤ 300 μs; Duty Cycle ≤ 2.0%