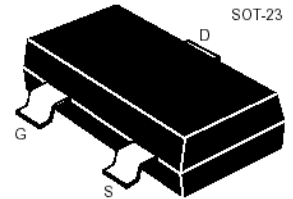


SI2301

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



### P-Channel Enhancement-Mode MOS FETs

P 沟道增强型 MOS 场效应管

#### ■ MAXIMUM RATINGS 最大額定值

Characteristic 特性參數	Symbol 符號	Max 最大值	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	$V_{GS}$	$\pm 8$	V
Drain Current (continuous) 漏極電流-連續	$I_D$	-2.3	A
Drain Current (pulsed) 漏極電流-脉冲	$I_{DM}$	-10	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$	$P_D$	450	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

SI2301=A2HB



SI2301

**■ ELECTRICAL CHARACTERISTICS 電特性**

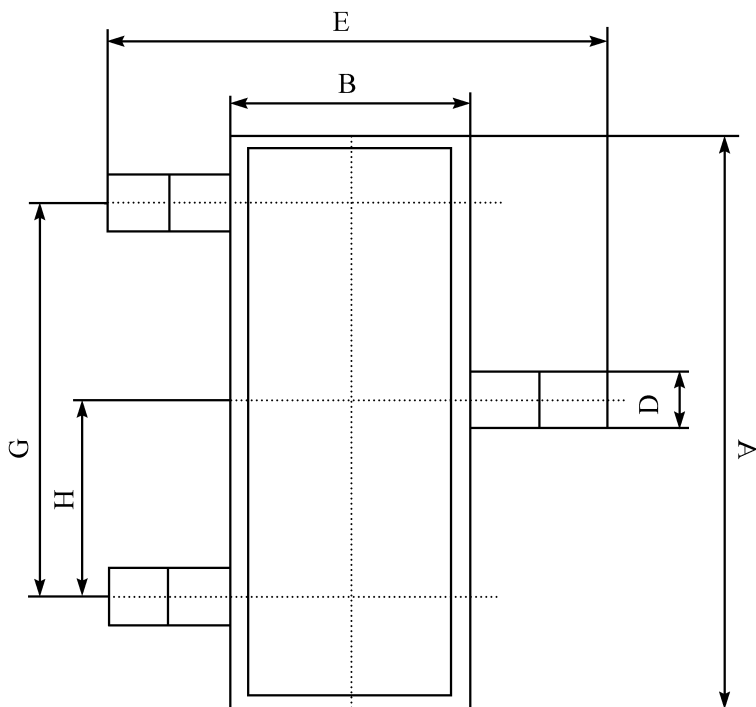
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如無特殊說明，溫度為  $25^{\circ}\text{C}$ )

Characteristic 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( $I_D = -250\mu\text{A}, V_{GS}=0\text{V}$ )	$BV_{DSS}$	-20	—	—	V
Gate Threshold Voltage 柵極開啓電壓( $I_D = -250\mu\text{A}, V_{GS}=V_{DS}$ )	$V_{GS(th)}$	-0.5	—	-1.5	V
Drain-Source On Voltage 漏極-源極導通電壓( $I_D = -50\text{mA}, V_{GS} = -5\text{V}$ ) ( $I_D = -500\text{mA}, V_{GS} = -10\text{V}$ )	$V_{DS(ON)}$	—	—	-0.375 -3.75	V
Diode Forward Voltage Drop 內附二極管正向壓降( $I_S = -0.75\text{A}, V_{GS}=0\text{V}$ )	$V_{SD}$	—	—	-1.2	V
Zero Gate Voltage Drain Current 零柵壓漏極電流( $V_{GS}=0\text{V}, V_{DS} = -16\text{V}$ ) ( $V_{GS}=0\text{V}, V_{DS} = -16\text{V}, T_A=55^{\circ}\text{C}$ )	$I_{DSS}$	—	—	-1 -10	$\mu\text{A}$
Gate Body Leakage 柵極漏電流( $V_{GS}=\pm 8\text{V}, V_{DS}=0\text{V}$ )	$I_{GSS}$	—	—	$\pm 100$	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻( $I_D=2.6\text{A}, V_{GS}=4.5\text{V}$ ) ( $I_D=1\text{A}, V_{GS}=2.5\text{V}$ )	$R_{DS(ON)}$	—	—	0.15 0.22	$\Omega$
Input Capacitance 輸入電容 ( $V_{GS}=0\text{V}, V_{DS} = -6\text{V}, f=1\text{MHz}$ )	$C_{ISS}$	—	—	880	pF
Common Source Output Capacitance 共源輸出電容( $V_{GS}=0\text{V}, V_{DS} = -6\text{V}, f=1\text{MHz}$ )	$C_{OSS}$	—	—	270	pF
Turn-ON Time 開啓時間 ( $V_{DS} = -6\text{V}, I_D = -1\text{A}, R_{GEN}=6\Omega$ )	$t_{(on)}$	—	—	20	ns
Turn-OFF Time 關斷時間 ( $V_{DS} = -6\text{V}, I_D = -1\text{A}, R_{GEN}=6\Omega$ )	$t_{(off)}$	—	—	65	ns

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

SI2301

■DIMENSION 外形封装尺寸



序號	數值及公差
A	$2.90 \pm 0.10$
B	$1.30 \pm 0.10$
C	$1.00 \pm 0.10$
D	$0.40 \pm 0.10$
E	$2.40 \pm 0.20$
G	$1.90 \pm 0.10$
H	$0.95 \pm 0.05$
J	$0.13 \pm 0.05$
K	$0.00 - 0.10$
M	$\geq 0.2$
N	$0.60 \pm 0.10$
P	$7 \pm 2^\circ$

