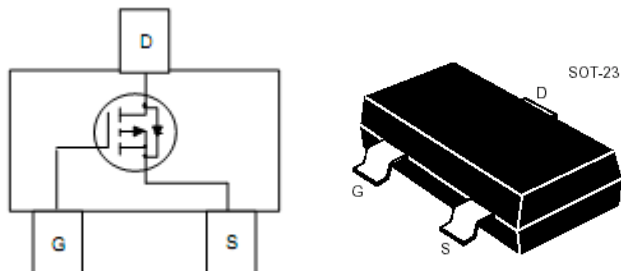


SOT-23 場效應晶體管(SOT-23 Field Effect Transistors)



## 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	$BV_{DSS}$	-30	V
Gate- Source Voltage 柵極-源極電壓	$V_{GS}$	$\pm 20$	V
Drain Current (continuous) 漏極電流-連續	$I_D$	-4.1	A
Drain Current (pulsed) 漏極電流-脉冲	$I_{DM}$	-16	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$	$P_D$	1400	mW
Junction 結溫	$T_J$	150	$^\circ\text{C}$
Storage Temperature 儲存溫度	$T_{stg}$	-55to+150	$^\circ\text{C}$

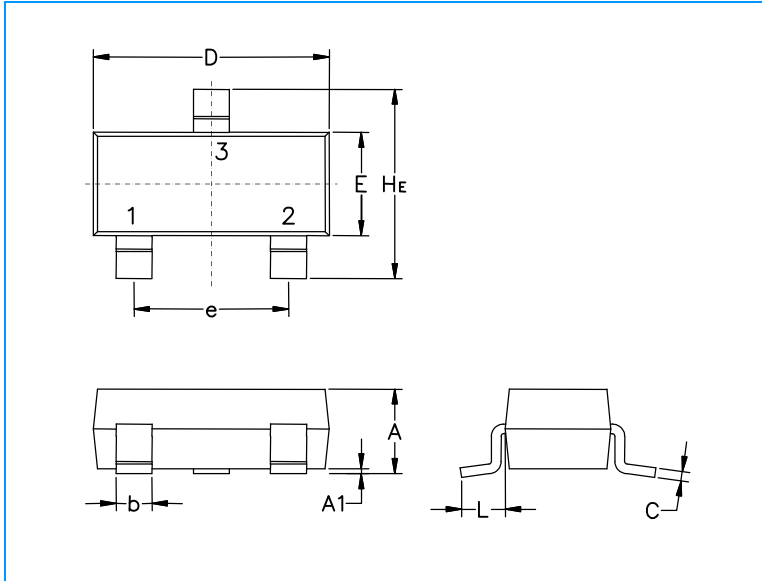
## ■ ELECTRICAL CHARACTERISTICS 電特性

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

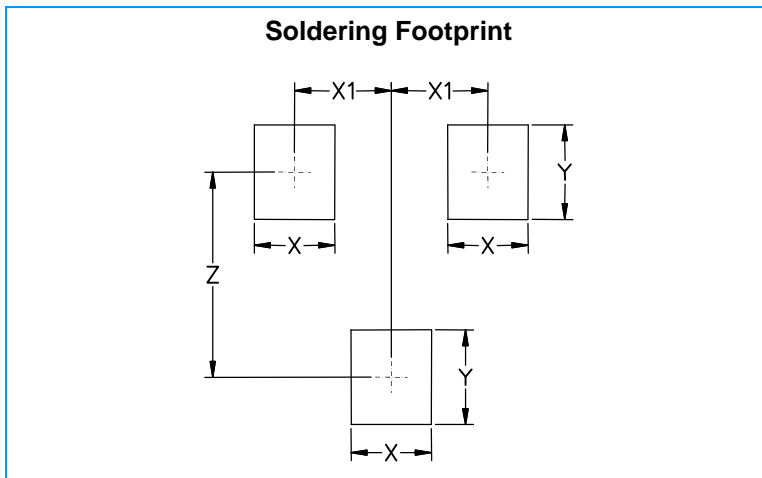
Characteristic 特性參數	Symbol 符號	Min 最小值	Typ 典型值	Max 最大值	Unit 單位
Drain-Source Breakdown Voltage 漏極-源極擊穿電壓( $I_D = -250\mu\text{A}, V_{GS}=0\text{V}$ )	$BV_{DSS}$	-30	—	—	V
Gate Threshold Voltage 柵極開啓電壓( $I_D = -250\mu\text{A}, V_{GS} = V_{DS}$ )	$V_{GS(th)}$	-1	—	-2	V
Diode Forward Voltage Drop 內附二極管正向壓降( $I_S = -1\text{A}, V_{GS}=0\text{V}$ )	$V_{SD}$	—	—	-1	V
Zero Gate Voltage Drain Current 零柵壓漏極電流( $V_{GS}=0\text{V}, V_{DS} = -24\text{V}$ ) ( $V_{GS}=0\text{V}, V_{DS} = -24\text{V}, T_A=55^{\circ}\text{C}$ )	$I_{DSS}$	—	—	-1 -5	$\mu\text{A}$
Gate Body Leakage 柵極漏電流( $V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$ )	$I_{GSS}$	—	—	$\pm 100$	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻( $I_D = -4.1\text{A}, V_{GS} = -10\text{V}$ )	$R_{DS(ON)}$	—	55	65	$\text{m}\Omega$
Static Drain-Source On-State Resistance 靜態漏源導通電阻( $I_D = -2\text{A}, V_{GS} = -4.5\text{V}$ )	$R_{DS(ON)}$	—	75	95	$\text{m}\Omega$
Input Capacitance 輸入電容 ( $V_{GS}=0\text{V}, V_{DS} = -15\text{V}, f=1\text{MHz}$ )	$C_{ISS}$	—	260	—	pF
Output Capacitance 輸出電容 ( $V_{GS}=0\text{V}, V_{DS} = -15\text{V}, f=1\text{MHz}$ )	$C_{OSS}$	—	37	—	pF
Turn-ON Time 開啓時間 ( $V_{DS} = -15\text{V}, V_{GS} = -10\text{V}, R_{GEN}=6\Omega$ )	$t_{(on)}$	—	6	—	ns
Turn-OFF Time 關斷時間 ( $V_{DS} = -15\text{V}, V_{GS} = -10\text{V}, R_{GEN}=6\Omega$ )	$t_{(off)}$	—	20	—	ns

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

## SOT-23 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	0.89	1.00	1.11	0.035	0.040	0.044
<b>A1</b>	0.01	0.06	0.10	0.001	0.002	0.004
<b>b</b>	0.37	0.44	0.50	0.15	0.18	0.020
<b>c</b>	0.09	0.13	0.18	0.003	0.005	0.007
<b>D</b>	2.80	2.90	3.04	0.110	0.114	0.120
<b>E</b>	1.20	1.30	1.40	0.047	0.051	0.055
<b>e</b>	1.78	1.90	2.04	0.070	0.075	0.081
<b>L</b>	0.35	0.54	0.69	0.014	0.021	0.029
<b>He</b>	2.10	2.40	2.64	0.083	0.094	0.104



Symbol	Millimeters	Inches
<b>X</b>	0.80	0.031
<b>X1</b>	0.95	0.037
<b>Y</b>	0.90	0.035
<b>Z</b>	2.00	0.079