



**Dual P-channel 30V, SOP-8 MOSFET 雙 P-溝道場效應管**

**■ Features 特點**

Low on-resistance and maximum DC current capability 低導通電阻和最大直流電流能力

Super high density cell design 超高元胞密度設計

-30V/-5A,  $R_{DS(ON)}=50m\Omega(\text{Type})@V_{GS}=-10V$

-30V/-4A,  $R_{DS(ON)}=70m\Omega(\text{Type})@V_{GS}=-4.5V$

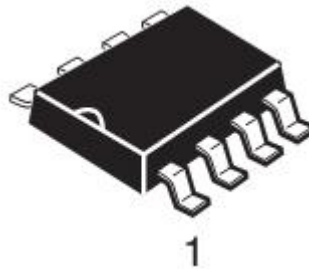
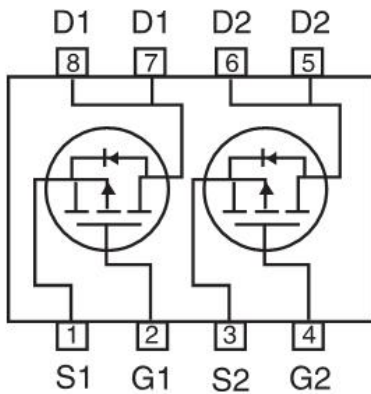
**■ Applications 應用**

Power Management in Note book 筆記本電源管理

Power Management in cellular phone 手机電源管理

Battery Powered System 電池電源系統

**■ Internal Schematic Diagram 內部結構**



**■ Absolute 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	$BV_{DSS}$	-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	$I_D$ (at $T_C = 25^\circ C$ )	-5	A
Drain Current (pulsed)漏極電流-脈沖	$I_{DM}$	-20	A
Total Device Dissipation 總耗散功率	$P_{TOT}$ (at $T_C = 25^\circ C$ )	2.0	W
Thermal Resistance Junction-Case 熱阻	$R_{\theta JC}$	30	$^\circ C/W$
Thermal Resistance Junction-Ambient 熱阻	$R_{\theta JA}$	63	$^\circ C/W$
Junction/Storage Temperature 結溫/儲存溫度	$T_J, T_{stg}$	-55~150	$^\circ C$



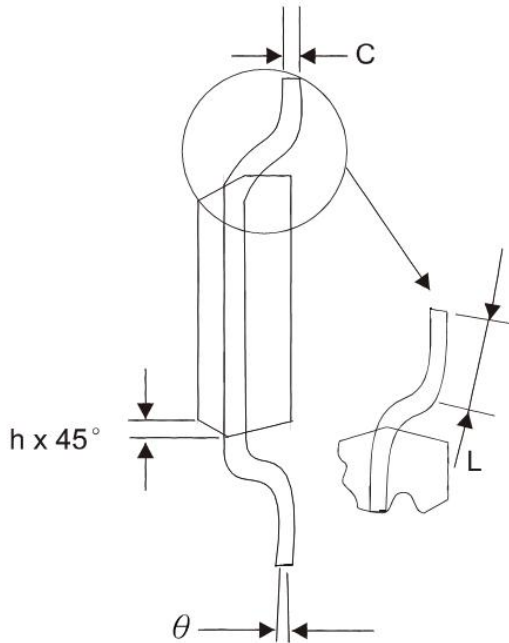
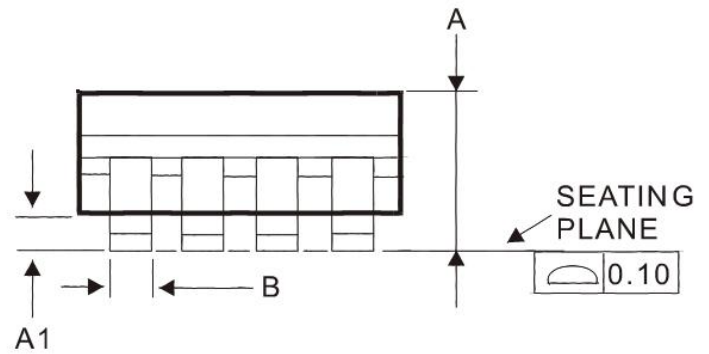
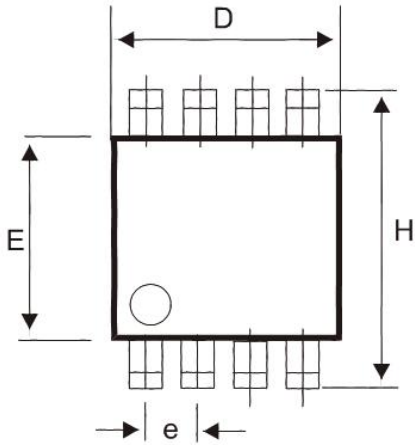
■ Electrical Characteristics 電特性

( $T_A=25^{\circ}\text{C}$  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	-1.5	-2.5	V
Zero Gate Voltage Drain Current 零柵壓漏極電流( $V_{GS}=0\text{V}, V_{DS}=-30\text{V}$ )	$I_{DSS}$	—	—	-1	$\mu\text{A}$
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 静态漏源導通電阻( $I_D=-5\text{A}, V_{GS}=-10\text{V}$ ) ( $I_D=-4\text{A}, V_{GS}=-4.5\text{V}$ )	$R_{DS(ON)}$	—	50 70	70 90	$\text{m}\Omega$
Source Drain Current 源極-漏極電流	$I_{SD}$	—	—	-1.7	A
Diode Forward Voltage Drop 內附二極管正向壓降( $I_{SD}=-1.7\text{A}, V_{GS}=0\text{V}$ )	$V_{SD}$	—	—	-1.2	V
Input Capacitance 輸入電容 ( $V_{GS}=0\text{V}, V_{DS}=-15\text{V}, f=1\text{MHz}$ )	$C_{ISS}$	—	690	—	pF
Common Source Output Capacitance 共源輸出電容( $V_{GS}=0\text{V}, V_{DS}=-15\text{V}, f=1\text{MHz}$ )	$C_{OSS}$	—	145	—	pF
Reverse Transfer Capacitance 反向傳輸電容 ( $V_{GS}=0\text{V}, V_{DS}=-15\text{V}, f=1\text{MHz}$ )	$C_{RSS}$	—	70	—	pF
Gate Source Charge 柵源電荷密度 ( $V_{DS}=-24\text{V}, I_D=-5\text{A}, V_{GS}=-10\text{V}$ )	$Q_{gs}$	—	3	—	nC
Gate Drain Charge 柵漏電荷密度 ( $V_{DS}=-24\text{V}, I_D=-5\text{A}, V_{GS}=-10\text{V}$ )	$Q_{gd}$	—	4	—	nC
Turn-On Delay Time 開啓延遲時間 ( $V_{DS}=-15\text{V}, I_D=-1\text{A}, R_{GEN}=6\Omega, V_{GS}=-10\text{V}$ )	$t_{d(on)}$	—	8	—	ns
Turn-On Rise Time 開啓上升時間 ( $V_{DS}=-15\text{V}, I_D=-1\text{A}, R_{GEN}=6\Omega, V_{GS}=-10\text{V}$ )	$t_r$	—	12	—	ns
Turn-Off Delay Time 關斷延遲時間 ( $V_{DS}=-15\text{V}, I_D=-1\text{A}, R_{GEN}=6\Omega, V_{GS}=-10\text{V}$ )	$t_{d(off)}$	—	23	—	ns
Turn-On Fall Time 開啓下降時間 ( $V_{DS}=-15\text{V}, I_D=-1\text{A}, R_{GEN}=6\Omega, V_{GS}=-10\text{V}$ )	$t_f$	—	14	—	ns



■DIMENSION 外形封裝尺寸



DIM	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
C	0.18	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
h	0.25	0.50
L	0.40	1.25
θ	0°	7°