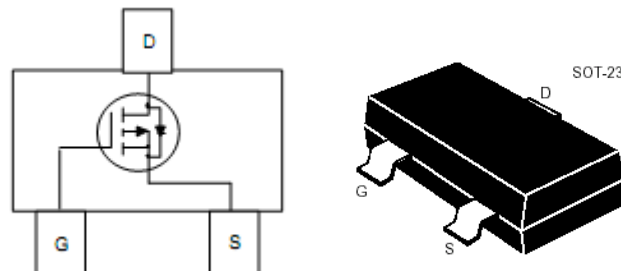


SOT-23 場效應晶體管 (SOT-23 Field Effect Transistors)



## 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	$BV_{DSS}$	-60	V
Gate- Source Voltage 柵極-源極電壓	$V_{GS}$	$\pm 20$	V
Drain Current (continuous) 漏極電流-連續	$I_D$	-1.6	A
Drain Current (pulsed) 漏極電流-脈沖	$I_{DM}$	-6	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$	PD	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

**LM2309=E11**

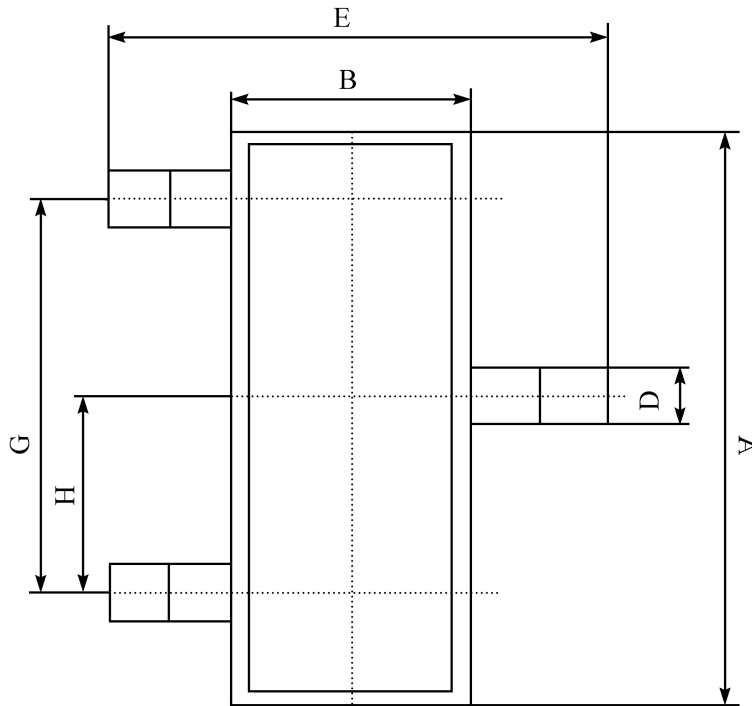
**■ELECTRICAL CHARACTERISTICS 電特性**(T<sub>A</sub>=25°C unless otherwise noted 如無特殊說明，溫度為 25°C)

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>	-60	—	—	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>	-1	—	-3	V
Diode Forward Voltage Drop 內附二極管正向壓降(I <sub>S</sub> = -1.2A, V <sub>GS</sub> =0V)	V <sub>SD</sub>	—	—	-1.2	V
Zero Gate Voltage Drain Current 零柵壓漏極電流(V <sub>GS</sub> =0V, V <sub>DS</sub> = -60V)	I <sub>DSS</sub>	—	—	-10	uA
Gate Body Leakage 柵極漏電流(V <sub>GS</sub> =±20V, 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> = -1.8A, V <sub>GS</sub> = -10V)	R <sub>DS(ON)</sub>	—	200	250	mΩ
Static Drain-Source On-State Resistance 靜態漏源導通電阻(I <sub>D</sub> = -1.4A, V <sub>GS</sub> = -4.5V)	R <sub>DS(ON)</sub>	—	240	300	mΩ
Input Capacitance 輸入電容 (V <sub>GS</sub> =0V, V <sub>DS</sub> = -25V, f=1MHz)	C <sub>ISS</sub>	—	364	—	pF
Output Capacitance 輸出電容 (V <sub>GS</sub> =0V, V <sub>DS</sub> = -25V, f=1MHz)	C <sub>OSS</sub>	—	41	—	pF
Turn-ON Time 開啓時間 (V <sub>DS</sub> = -30V, I <sub>D</sub> = -1A, R <sub>GEN</sub> =3.3Ω)	t <sub>(on)</sub>	—	20	—	ns
Turn-OFF Time 關斷時間 (V <sub>DS</sub> = -30V, I <sub>D</sub> = -1A, R <sub>GEN</sub> =3.3Ω)	t <sub>(off)</sub>	—	5.2	—	ns

Pulse Width ≤ 300 μs; Duty Cycle ≤ 2.0%

■DIMENSION 外形封裝尺寸

單位(UNIT): mm



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	$7 \pm 2^\circ$

