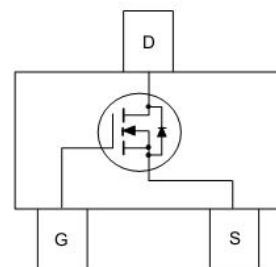


GM2306A

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


N-Channel Enhancement-Mode MOS FET N 沟道增强型 MOS 场效应管
■ 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

■ Applications 應用

Power Management in Note book 筆記本電源管理
 Portable Equipment 便攜式設備
 Battery Powered System 電池電源系統
 DC/DC Converter 直流/直流变换
 Load Switch 負載開關應用

■ 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}	± 12	V
Drain Current (continuous)漏極電流-連續	I_D	5	A
Drain Current (pulsed)漏極電流-脉冲	I_{DM}	20	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 25°C	P_D	1380	mW
Junction 結溫	T_J	150	$^\circ\text{C}$
Solder Temperature/Solder Time 焊接溫度/焊接時間	T/t	260/10	$^\circ\text{C}/\text{S}$
Storage Temperature 儲存溫度	T_{stg}	-55to+150	$^\circ\text{C}$



GM2306A

■ ELECTRICAL CHARACTERISTICS 電特性

($T_A=25^{\circ}\text{C}$ 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($I_D=250\mu\text{A}, V_{GS}=0\text{V}$)	BV_{DSS}	30	—	—	V
Gate Threshold Voltage 柵極開啓電壓($I_D=250\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	0.5	0.8	1	V
Diode Forward Voltage Drop 內附二極管正向壓降($I_S=1.25\text{A}, V_{GS}=0\text{V}$)	V_{SD}	—	—	1.2	V
Zero Gate Voltage Drain Current 零柵壓漏極電流($V_{GS}=0\text{V}, V_{DS}=30\text{V}$) ($V_{GS}=0\text{V}, V_{DS}=24\text{V}, T_A=55^{\circ}\text{C}$)	I_{DSS}	—	—	1 10	μA
Gate Body Leakage 柵極漏電流($V_{GS}=\pm 12\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=5\text{A}, V_{GS}=10\text{V}$)	$R_{DS(ON)}$	—	25	30	$\text{m}\Omega$
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=5\text{A}, V_{GS}=4.5\text{V}$)	$R_{DS(ON)}$	—	30	35	$\text{m}\Omega$
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=2.6\text{A}, V_{GS}=2.5\text{V}$)	$R_{DS(ON)}$	—	40	50	$\text{m}\Omega$
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=1\text{A}, V_{GS}=2\text{V}$)	$R_{DS(ON)}$	—	80	90	$\text{m}\Omega$
Input Capacitance 輸入電容 ($V_{GS}=10\text{V}, V_{DS}=15\text{V}, f=1\text{MHz}$)	C_{ISS}	—	820	—	pF
Output Capacitance 輸出電容 ($V_{GS}=10\text{V}, V_{DS}=15\text{V}, f=1\text{MHz}$)	C_{OSS}	—	90	—	pF
Turn-ON Time 開啓時間 ($V_{DS}=15\text{V}, V_{GS}=10\text{V}, R_{GEN}=6\Omega$)	$t_{(on)}$	—	8.5	—	ns
Turn-OFF Time 關斷時間 ($V_{DS}=15\text{V}, V_{GS}=10\text{V}, R_{GEN}=6\Omega$)	$t_{(off)}$	—	31	—	ns

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