



N-channel 200V, 2A, TO-252 Power MOSFET 功率場效應管

■ **Features 特點**

Fast switching 快速開關

Improved dv/dt Capability 優化電壓變率能力

■ **Applications 應用**

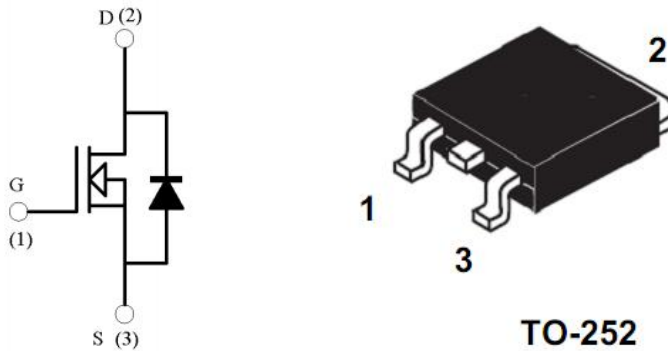
Switch mode power supplies 開關電源

DC-DC converters and UPS 直流直流變換和不間斷電源

PWM motor controls 脈寬調製電機控制

Power Factor Correction 功率因數校正

■ **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}	200	V
Gate- Source Voltage 柵極-源極電壓	V_{GS}	± 30	V
Drain Current (continuous)漏極電流-連續	I_D (at $T_C = 25^\circ C$)	2	A
Drain Current (pulsed)漏極電流-脈沖	I_{DM}	8	A
Total Device Dissipation 總耗散功率	P_{TOT} (at $T_C = 25^\circ C$)	10	W
Thermal Resistance Junction-Case 熱阻	$R_{\theta JC}$	13	$^\circ C/W$
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°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}	200	—	—	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	3	V
Zero Gate Voltage Drain Current 零柵壓漏極電流($V_{GS}=0\text{V}, V_{DS}=200\text{V}$)	I_{DSS}	—	—	1	μA
Gate Body Leakage 柵極漏電流($V_{GS}=\pm 30\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance 静态漏源導通電阻($I_D=1\text{A}, V_{GS}=10\text{V}$)	$R_{DS(ON)}$	—	1.65	1.9	Ω
Source Drain Current 源極-漏極電流	I_{SD}	—	—	2	A
Diode Forward Voltage Drop 內附二極管正向壓降($I_{SD}=2\text{A}, V_{GS}=0\text{V}$)	V_{SD}	—	—	1.4	V
Input Capacitance 輸入電容 ($V_{GS}=0\text{V}, V_{DS}=25\text{V}, f=1\text{MHz}$)	C_{ISS}	—	500	—	pF
Common Source Output Capacitance 共源輸出電容($V_{GS}=0\text{V}, V_{DS}=25\text{V}, f=1\text{MHz}$)	C_{OSS}	—	100	—	pF
Reverse Transfer Capacitance 反向傳輸電容($V_{GS}=0\text{V}, V_{DS}=25\text{V}, f=1\text{MHz}$)	C_{RSS}	—	20	—	pF
Total Gate Charge 柵極電荷密度 ($V_{DS}=160\text{V}, I_D=1\text{A}, V_{GS}=10\text{V}$)	Q_g	—	13.5	—	nC
Gate Source Charge 柵源電荷密度 ($V_{DS}=160\text{V}, I_D=1\text{A}, V_{GS}=10\text{V}$)	Q_{gs}	—	2	—	nC
Gate Drain Charge 柵漏電荷密度 ($V_{DS}=160\text{V}, I_D=1\text{A}, V_{GS}=10\text{V}$)	Q_{gd}	—	6	—	nC
Turn-On Delay Time 開啓延遲時間 ($V_{DS}=100\text{V}, I_D=1\text{A}, R_{GEN}=25\Omega, V_{GS}=10\text{V}$)	$t_{d(on)}$	—	9	—	ns
Turn-On Rise Time 開啓上升時間 ($V_{DS}=100\text{V}, I_D=1\text{A}, R_{GEN}=25\Omega, V_{GS}=10\text{V}$)	t_r	—	22	—	ns
Turn-Off Delay Time 關斷延遲時間 ($V_{DS}=100\text{V}, I_D=1\text{A}, R_{GEN}=25\Omega, V_{GS}=10\text{V}$)	$t_{d(off)}$	—	39	—	ns
Turn-On Fall Time 開啓下降時間 ($V_{DS}=100\text{V}, I_D=1\text{A}, R_{GEN}=25\Omega, V_{GS}=10\text{V}$)	t_f	—	20	—	ns



■DIMENSION 外形封裝尺寸

UNIT:mm

