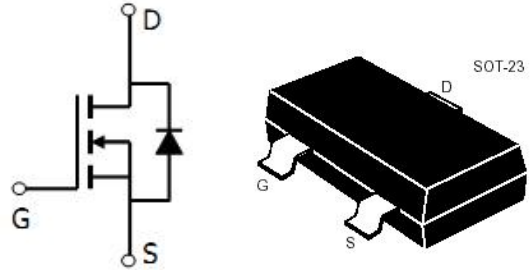




GM3A01N

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



**N-Channel Enhancement-Mode MOS FETs**

N 溝道增強型 MOS 場效應管

■ **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	$BV_{DSS}$	20	V
Gate- Source Voltage 柵極-源極電壓	$V_{GS}$	$\pm 8$	V
Drain Current (continuous) 漏極電流-連續	$I_D$	3.2	A
Drain Current (pulsed) 漏極電流-脈沖	$I_{DM}$	10	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 $25^\circ\text{C}$	$P_D$	550	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**

GM3A01N=A01N

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■ELECTRICAL CHARACTERISTICS 電特性

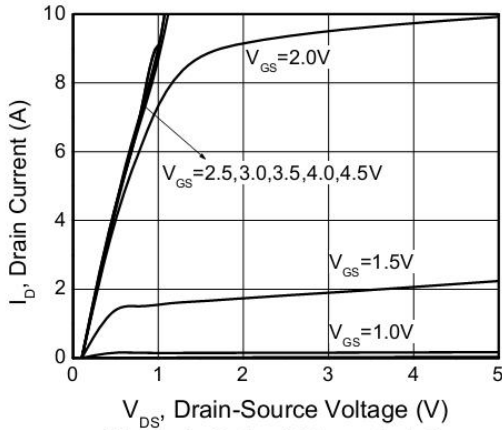
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如無特殊說明，溫度為  $25^{\circ}\text{C}$ )

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( $I_D = 250\mu\text{A}, V_{GS}=0\text{V}$ )	$BV_{DSS}$	20	—	—	V
Gate Threshold Voltage 柵極開啓電壓( $I_D = 250\mu\text{A}, V_{GS} = V_{DS}$ )	$V_{GS(th)}$	0.4	—	1.2	V
Diode Forward Voltage Drop 內附二極管正向壓降( $I_S = 1.1\text{A}, V_{GS}=0\text{V}$ )	$V_{SD}$	—	—	1.15	V
Zero Gate Voltage Drain Current 零柵壓漏極電流( $V_{GS}=0\text{V}, V_{DS}= 20\text{V}$ )	$I_{DSS}$	—	—	1	$\mu\text{A}$
Gate Body Leakage 柵極漏電流( $V_{GS}=\pm 8\text{V}, V_{DS}=0\text{V}$ )	$I_{GSS}$	—	—	$\pm 100$	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻( $I_D=3.6\text{A}, V_{GS}=4.5\text{V}$ ) ( $I_D=3.1\text{A}, V_{GS}=2.5\text{V}$ )	$R_{DS(ON)}$	—	50 65	85 115	$\text{m}\Omega$
Input Capacitance 輸入電容 ( $V_{GS}=0\text{V}, V_{DS}= 10\text{V}, f=1\text{MHz}$ )	$C_{ISS}$	—	450	—	pF
Common Source Output Capacitance 共源輸出電容( $V_{GS}=0\text{V}, V_{DS}= 10\text{V}, f=1\text{MHz}$ )	$C_{OSS}$	—	70	—	pF
Reverse Transfer Capacitance 回饋電容 ( $V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1\text{MHz}$ )	$C_{RSS}$	—	50	—	pF
Turn-ON Time 開啓時間 ( $V_{DS}= 5\text{V}, I_D= 3.6\text{A}, R_{GEN}=6\Omega$ )	$t_{(on)}$	—	—	15	ns
Turn-OFF Time 關斷時間 ( $V_{DS}= 5\text{V}, I_D= 3.6\text{A}, R_{GEN}=6\Omega$ )	$t_{(off)}$	—	—	60	ns

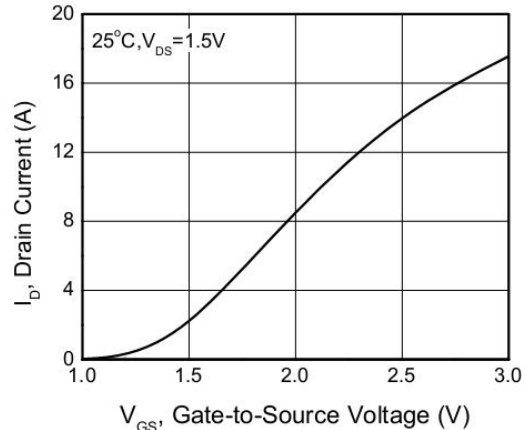
Pulse Width $\leq 300\mu\text{s}$ ; Duty Cycle $\leq 2.0\%$

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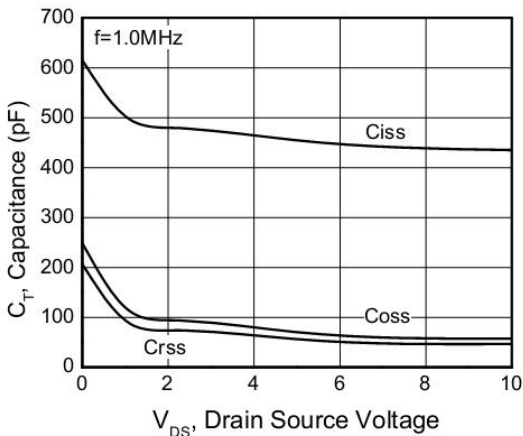
■ **TYPICAL CHARACTERISTIC CURVE 典型特性**



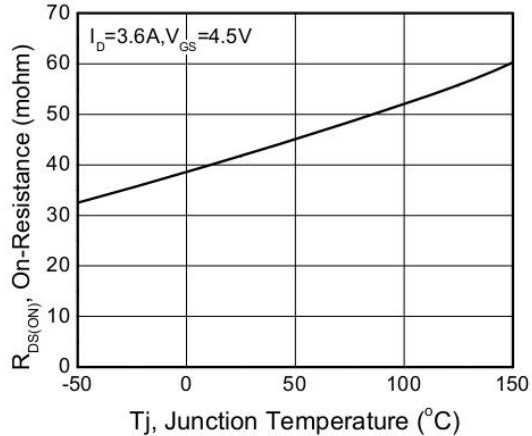
**Figure 1. Output Characteristics**



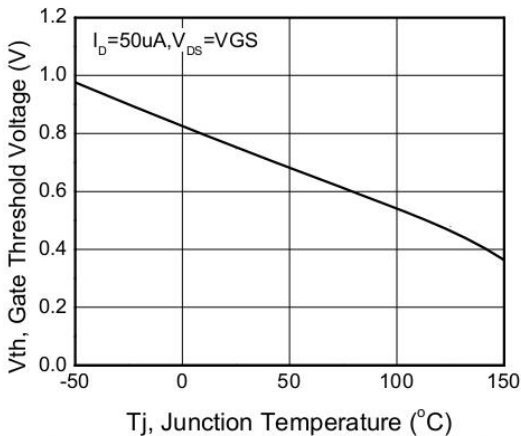
**Figure 2. Transfer Characteristics**



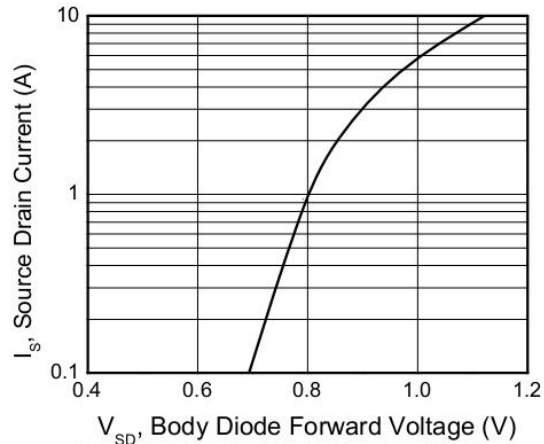
**Figure 3. Capacitance**



**Figure 4. On-Resistance vs. Temperature**



**Figure 5. Gate Threshold Vs. Temperature**



**Figure 6. Body Diode Forward Voltage vs. Source Current**