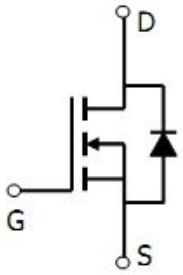
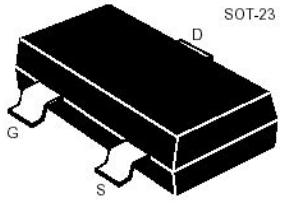
GM3A01N

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





N-Channel Enhancement-Mode MOS FETs

N 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}	20	V
Gate- Source Voltage 柵極-源極電壓	V_{GS}	±8	V
Drain Current (continuous) 漏極電流-連續	I_D	3.2	A
Drain Current (pulsed) 漏極電流-脉冲	I_{DM}	10	A
Total Device Dissipation 總耗散功率 T_A=25℃環境溫度爲 25℃	P_D	550	mW
Junction 結溫	T_J	150	℃
Storage Temperature 儲存溫度	T_{stg}	-55to+150	℃

■DEVICE MARKING 打標

GM3A01N=A01N

GM3A01N

■ELECTRICAL CHARACTERISTICS 電特性

(T_A=25℃ unless otherwise noted 如無特殊說明，溫度爲 25℃)

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 = 250uA,V_{GS}=0V)	BV_{DSS}	20	—	—	V
Gate Threshold Voltage 柵極開启電壓(I_D = 250uA,V_{GS}= V_{DS})	$V_{GS(th)}$	0.4	—	1.2	V
Diode Forward Voltage Drop 内附二極管正向壓降(I_S= 1.1A,V_{GS}=0V)	V_{SD}	—	—	1.15	V
Zero Gate Voltage Drain Current 零柵壓漏極電流(V_{GS}=0V, V_{DS}= 20V)	I_{DSS}	—	—	1	uA
Gate Body Leakage 柵極漏電流(V_{GS}=±8V, V_{DS}=0V)	I_{GSS}	—	—	±100	nA
Static Drain-Source On-State Resistance 靜态漏源導通電阻(I_D=3.6A,V_{GS}=4.5V) (I_D=3.1A,V_{GS}=2.5V)	$R_{DS(ON)}$	—	50 65	85 115	mΩ
Input Capacitance 輸入電容 (V_{GS}=0V, V_{DS}= 10V,f=1MHz)	C_{ISS}	—	450	—	pF
Common Source Output Capacitance 共源輸出電容(V_{GS}=0V, V_{DS}= 10V,f=1MHz)	C_{OSS}	—	70	—	pF
Turn-ON Time 开启時間 (V_{DS}= 5V, I_D= 3.6A, R_{GEN}=6Ω)	$t_{(on)}$	—	—	15	ns
Turn-OFF Time 关断時間 (V_{DS}= 5V, I_D= 3.6A, R_{GEN}=6Ω)	$t_{(off)}$	—	—	60	ns

Pulse Width≤300 μs; Duty Cycle≤2.0%

GM3A01N

■TYPICAL CHARACTERISTIC CURVE 典型特性

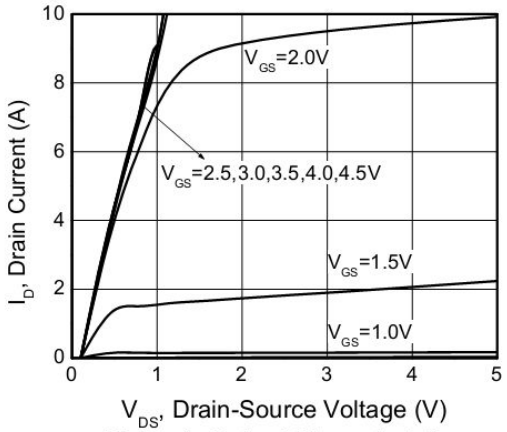


Figure 1. Output Characteristics

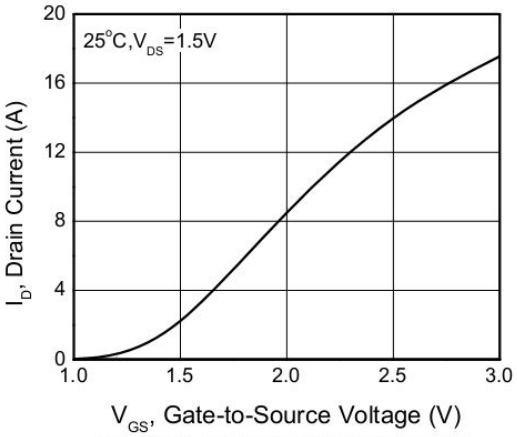


Figure 2. Transfer Characteristics

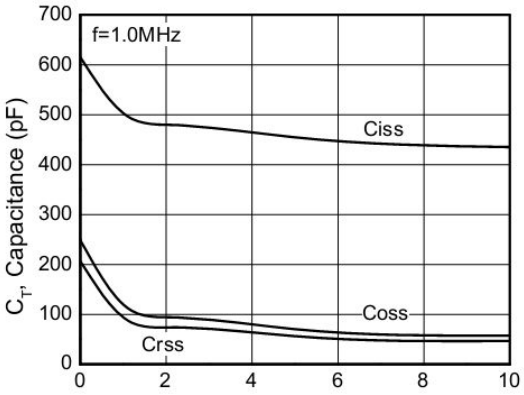


Figure 3. Capacitance

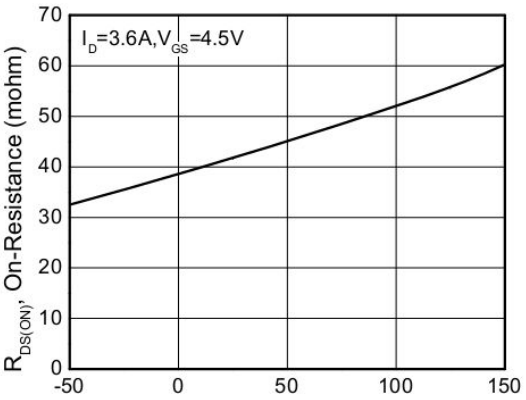


Figure 4. On-Resistance vs. Temperature

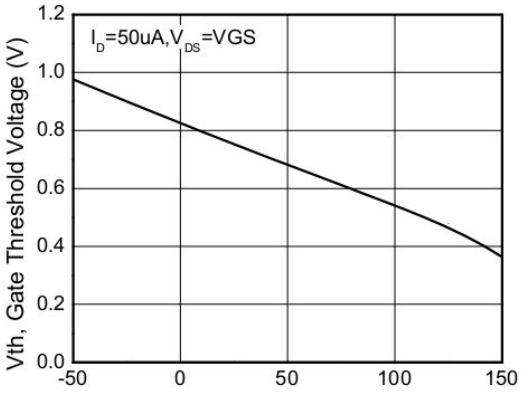


Figure 5. Gate Threshold Vs.Temperature

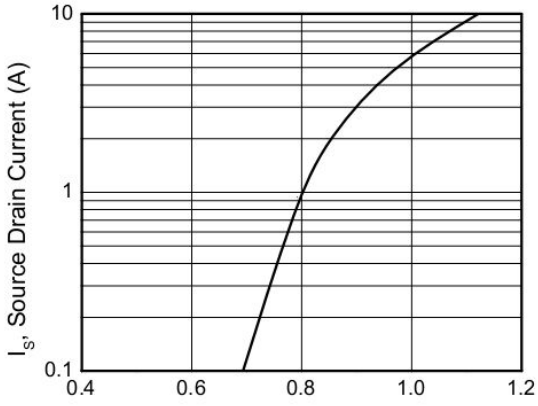


Figure 6. Body Diode Forward Voltage vs. Source Current