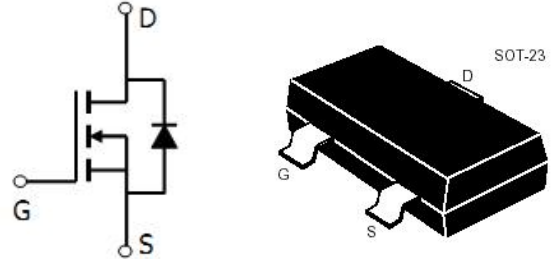




GM2304

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}	30	V
Gate- Source Voltage 柵極-源極電壓	V_{GS}	± 20	V
Drain Current (continuous) 漏極電流-連續	I_D	3.3	A
Drain Current (pulsed) 漏極電流-脈沖	I_{DM}	15	A
Total Device Dissipation 總耗散功率 $T_A=25^\circ\text{C}$ 環境溫度為 25°C	P_D	350	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

GM2304=S4

GM2304

■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($I_D=250\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	1	—	2.2	V
Diode Forward Voltage Drop 內附二極管正向壓降($I_S=1\text{A}, V_{GS}=0\text{V}$)	V_{SD}	—	0.7	1	V
Zero Gate Voltage Drain Current 零柵壓漏極電流($V_{GS}=0\text{V}, V_{DS}=30\text{V}$)	I_{DSS}	—	—	1	μA
Gate Body Leakage 柵極漏電流($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=3.2\text{A}, V_{GS}=10\text{V}$)	$R_{DS(ON)}$	—	—	60	$\text{m}\Omega$
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=2.8\text{A}, V_{GS}=4.5\text{V}$)	$R_{DS(ON)}$	—	—	75	$\text{m}\Omega$
Input Capacitance 輸入電容 ($V_{GS}=0\text{V}, V_{DS}=15\text{V}, f=1\text{MHz}$)	C_{ISS}	—	—	235	pF
Output Capacitance 輸出電容 ($V_{GS}=0\text{V}, V_{DS}=15\text{V}, f=1\text{MHz}$)	C_{OSS}	—	—	45	pF
Gate Drain Charge 柵漏電荷密度 ($V_{DS}=15\text{V}, I_D=3.4\text{A}, V_{GS}=4.5\text{V}$)	Q_{gd}	—	2	—	nC
Turn-ON Time 開啓時間 ($V_{DS}=15\text{V}, V_{GS}=10\text{V}, R_{GEN}=5.6\Omega$)	$t_{(on)}$	—	5	—	ns
Turn-OFF Time 關斷時間 ($V_{DS}=15\text{V}, V_{GS}=10\text{V}, R_{GEN}=5.6\Omega$)	$t_{(off)}$	—	10	—	ns

Pulse Width $\leq 300\mu\text{s}$; Duty Cycle $\leq 0.5\%$



GM2304

■ TYPICAL CHARACTERISTIC CURVE

典型特性曲線

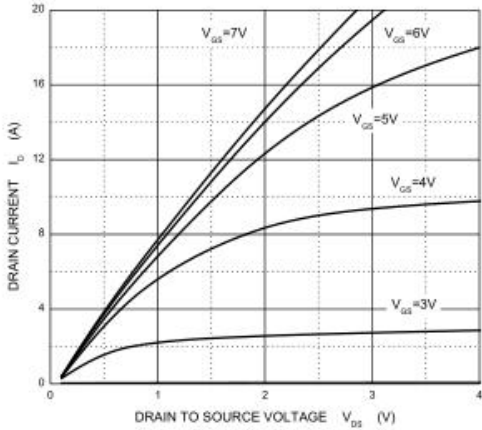


Fig 1: Output Characteristics

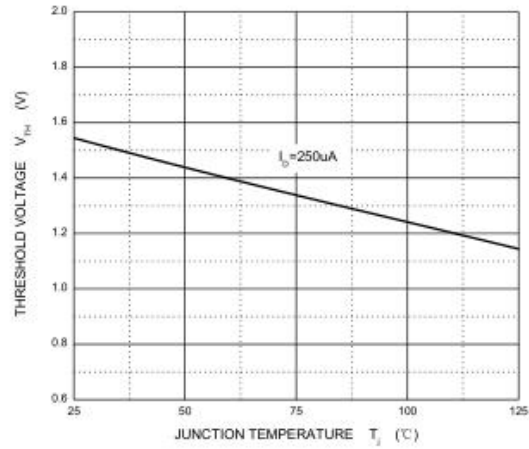


Figure 2: Threshold Voltage

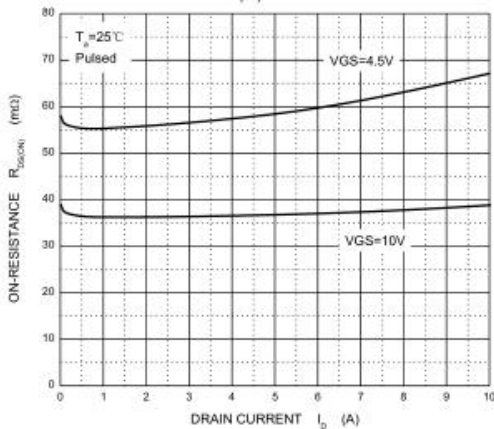


Figure 3: On-Resistance vs. Drain Current

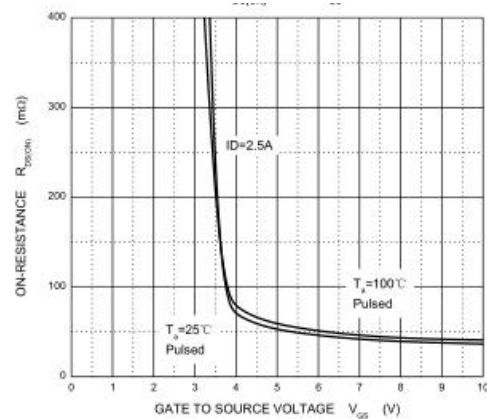


Figure 4: On-Resistance vs. Gate-Source Voltage

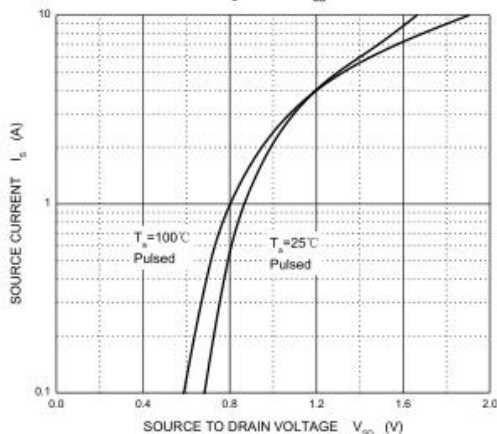


Figure 5: Body-Diode Characteristics

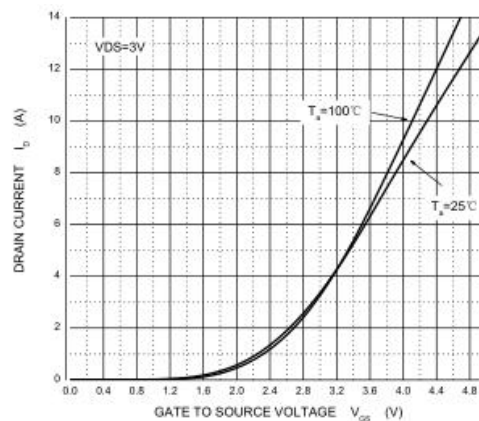


Figure 6: Transfer Characteristics