

主要特性/Features

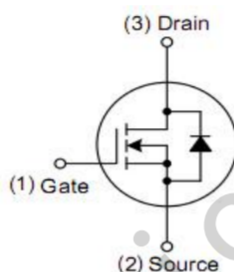
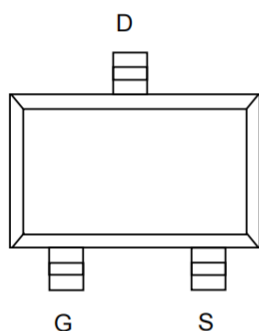
电流能力强 Strong current capacity

导通电阻低 Low on resistance

应用/Application

用于一般开关和低压电源电路 For general switch and low voltage power circuits

等效电路/Equivalent Circuit



极限参数/Absolute Maximum Ratings(TA=25°C unless otherwise noted)

参数/Parameter	符号/ Symbol	数值/Value	单位/Unit
漏极-源极电压/Drain-Source Voltage	V_{DS}	30	V
栅极-源极电压/Gate-Source Voltage	V_{GS}	± 12	V
漏极电流 (持续) /Continuous Drain Current	I_D	5.8	A
耗散功率/Power Dissipation	P_D	0.35	W
热阻/ Thermal Resistance Junction to Ambient	$R_{\theta JA}$	350	$^{\circ}\text{C}/\text{mW}$
结温/Junction Temperature	T_j	150	$^{\circ}\text{C}$
储存温度/Storage Temperature	T_{stg}	-55 ~ 150	$^{\circ}\text{C}$

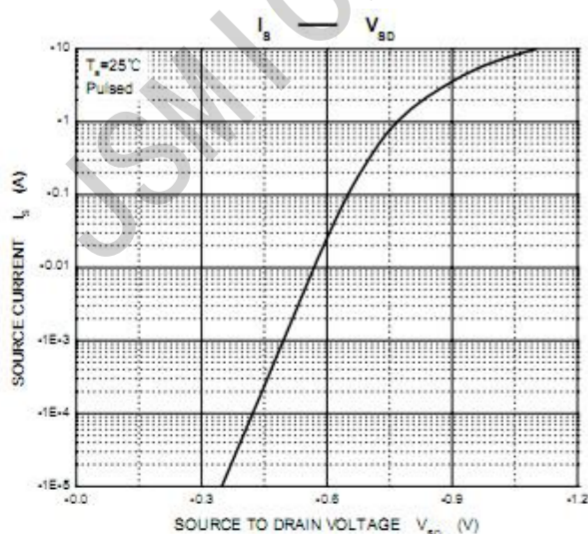
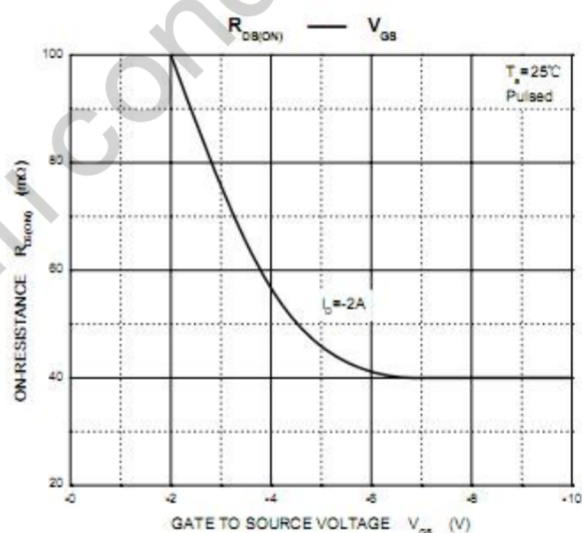
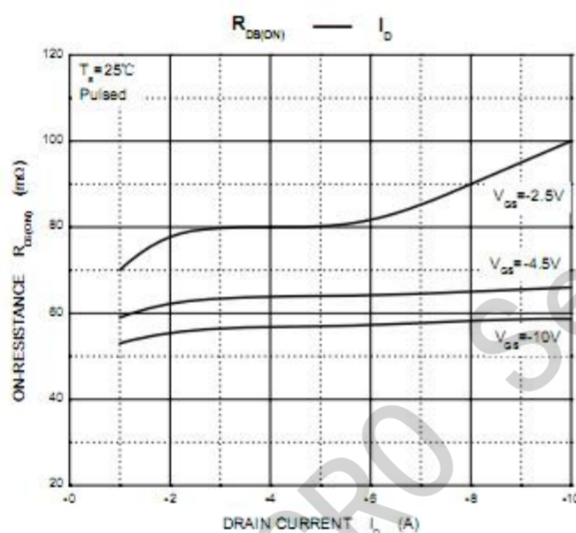
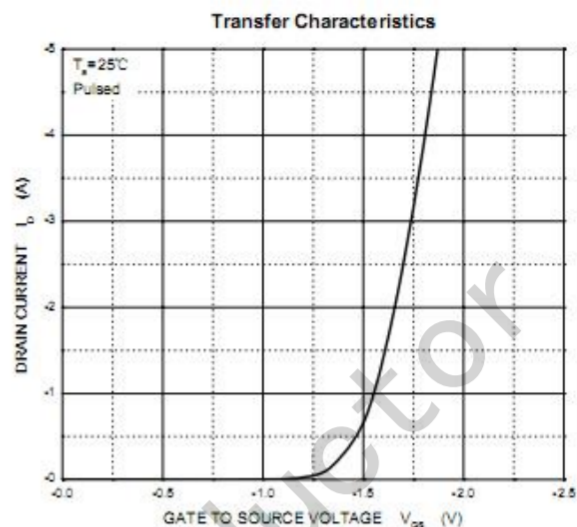
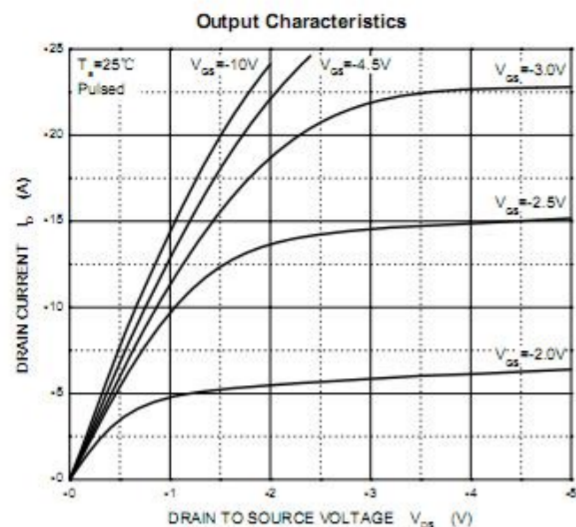
电性能参数/Electrical Characteristics (TA=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
静态/Static Characteristics						
源极-漏极击穿电压	$V_{BR(DSS)}$	$V_{GS}=0V, I_D=250\mu A$	30			V
栅极开启电压	$V_{GS(th)}$	$I_D=250\mu A, V_{GS}=V_{DS}$	0.7		1.4	V
栅极漏电流	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$			± 100	nA
零栅压漏极电流	I_{DSS}	$V_{GS}=0V, V_{DS}=24V$			1	μA
漏极源极导通电阻 ^③	$R_{DS(ON)}$	$V_{GS}=10V, I_D=5.8A$			35	mΩ
		$V_{GS}=4.5V, I_D=5A$			40	
		$V_{GS}=2.5V, I_D=4A$			52	
正向跨导 ^①	g_{fs}	$V_{DS}=5V, I_D=5A$	8			S
动态/Dynamic Characteristics						
输入电容 ^②	C_{iss}	$V_{DS}=15V, V_{GS}=0V, f=1MHz$			1050	pF
输出电容 ^②	C_{oss}			99		
反向传输电容 ^②	C_{rss}			77		
栅极电阻	R_g	$V_{DS}=0V, V_{GS}=0V, f=1MHz$			3.6	Ω
开关参数/Switching Characteristics						
开启延时 ^②	$t_{d(on)}$	$V_{DS}=15V, V_{GS}=10V,$ $R_{GEN}=3\Omega, R_L=2.7\Omega$			5	ns
上升时间 ^②	t_r				7	ns
关闭延时 ^②	$t_{d(off)}$				40	ns
下降延时 ^②	t_f				6	ns
漏极-源极二极管参数/Drain-source Body Diode Characteristics						
二极管正向压降 ^①	V_{SD}	$I_S=1A, V_{GS}=0V$			1	V

注：① 脉冲测试脉冲宽度 $\leq 300\mu s$, 占空比 $\leq 2\%$;

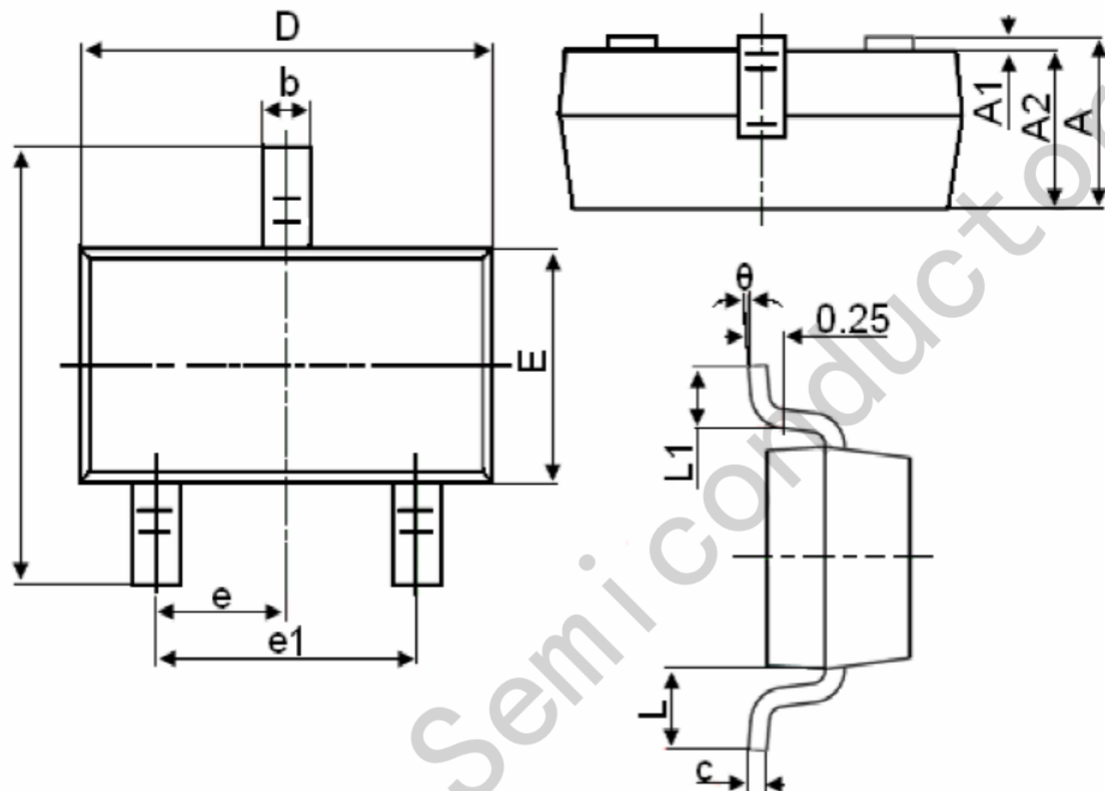
② 这些参数未通过验证;

典型特性曲线图/Typical Characteristics



Package Information

SOT-23



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°