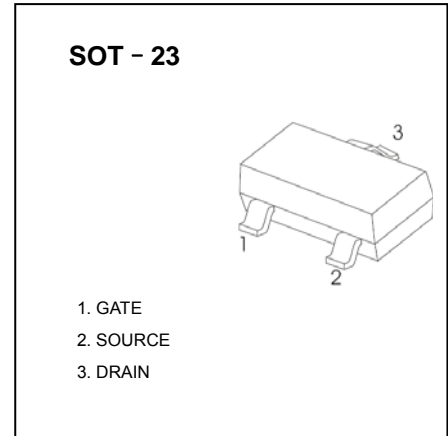
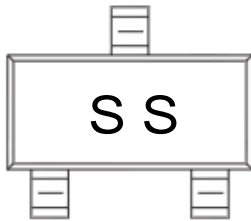


■ Features

- $V_{DS} (V) = 50V$
- $I_D = 300\text{ mA} (V_{GS} = 10V)$
- $R_{DS(ON)} < 2.5\ \Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 3.5\ \Omega (V_{GS} = 2.5V)$
- Low On-Resistance
- ESD Rating: 1.5KV HBM

MARKING



■ Absolute Maximum Ratings  $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	50	V
Drain-Gate Voltage $R_{GS} \leq 20K\Omega$	$V_{DG}$	50	
Gate-Source Voltage	$V_{GS}$	$\pm 20$	
Continuous Drain Current	$I_D$	300	mA
Power Dissipation	$P_D$	300	mW
Thermal Resistance.Junction- to-Ambient	$R_{thJA}$	417	$^\circ C/W$
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 to 150	

■ Electrical Characteristics  $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D = 250\ \mu A, V_{GS} = 0V$	50			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 50V, V_{GS} = 0V$			0.5	$\mu A$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 10$	$\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\ \mu A$	0.7		1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 500mA$			2.5	$\Omega$
		$V_{GS} = 2.5V, I_D = 500mA$			3.5	
Forward Transconductance	$g_{FS}$	$V_{DS} = 25V, I_D = 0.3A, f = 1KHz$	100			mS
Input Capacitance	$C_{iss}$	$V_{GS} = 0V, V_{DS} = 10V, f = 1MHz$			50	pF
Output Capacitance	$C_{oss}$				25	
Reverse Transfer Capacitance	$C_{rss}$				8	
Turn-On DelayTime	$t_{d(on)}$	$V_{DS} = 30V, I_D = 0.3A, R_G = 50\ \Omega$			20	ns
Turn-Off DelayTime	$t_{d(off)}$				20	

■ Typical Characteristics

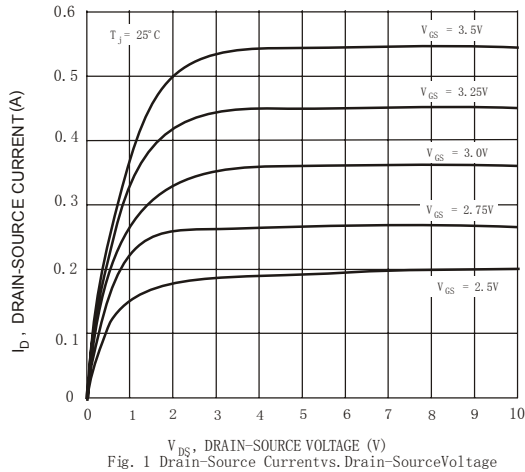


Fig. 1 Drain-Source Current vs. Drain-Source Voltage

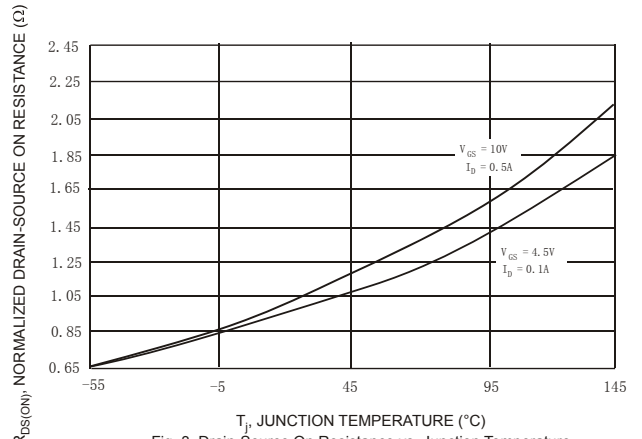


Fig. 3 Drain-Source On Resistance vs. Junction Temperature

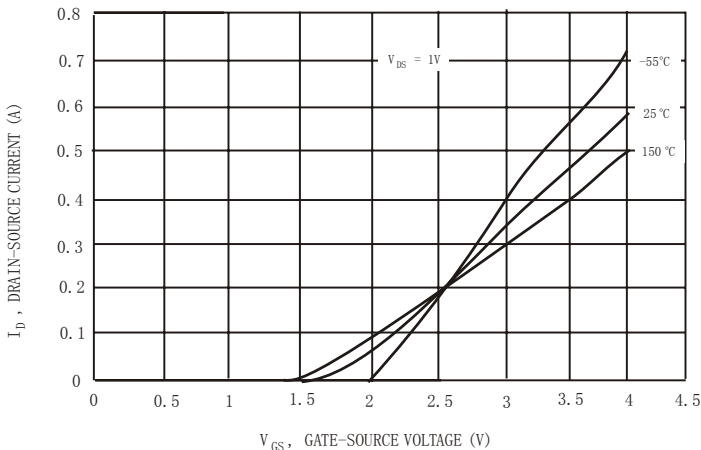


Fig. 2 Transfer Characteristics

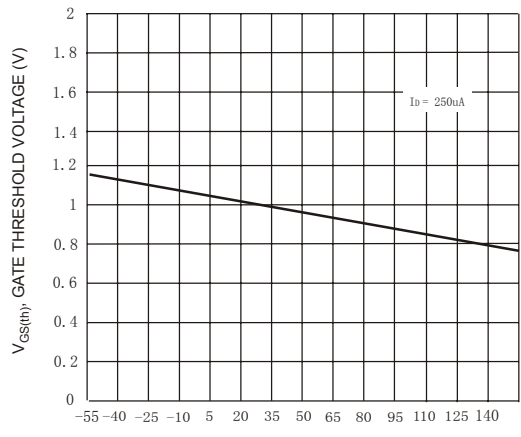


Fig. 4 Gate Threshold Voltage vs. Junction Temperature

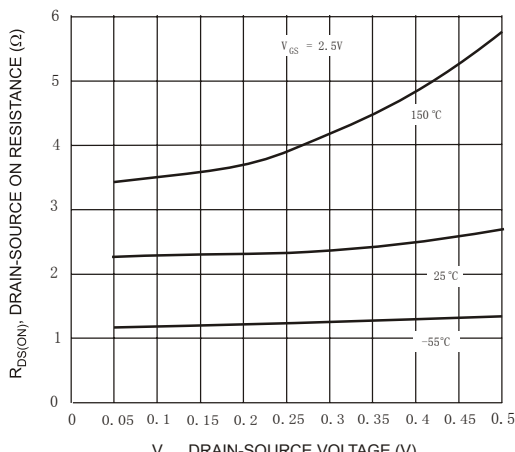


Fig. 5 Drain-Source On Resistance vs. Drain Current

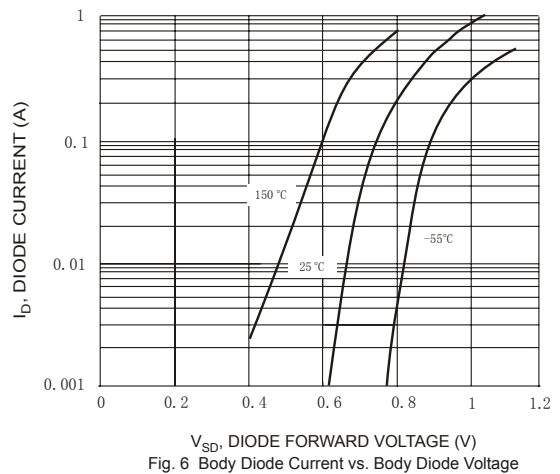


Fig. 6 Body Diode Current vs. Body Diode Voltage

■ Typical Characteristics

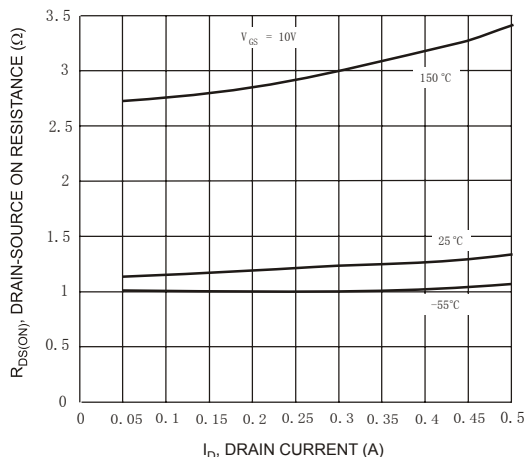


Fig. 7 Drain-Source On Resistance vs. Drain Current

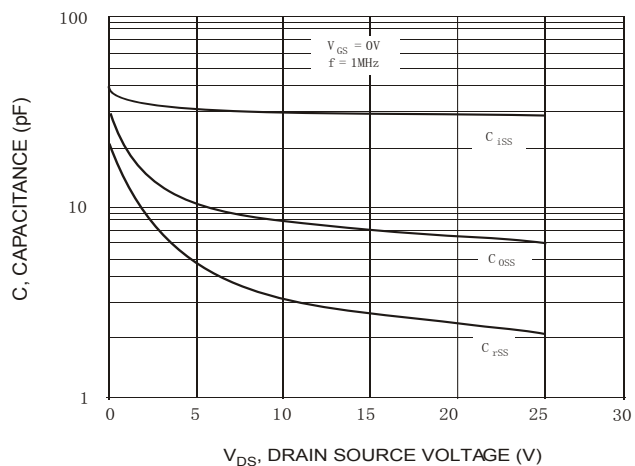
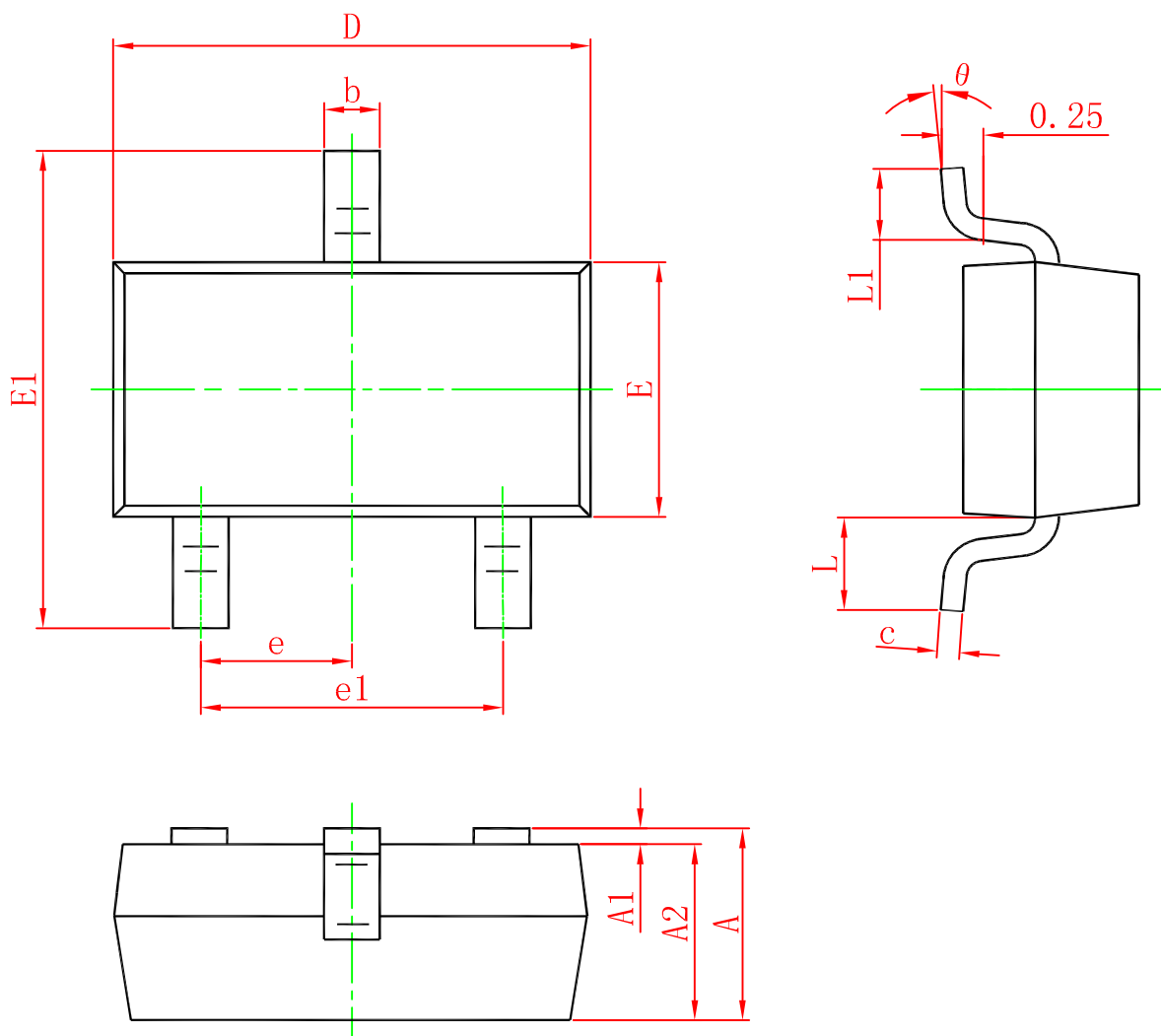


Fig. 8 Capacitance vs. Drain Source Voltage

SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		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	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°