

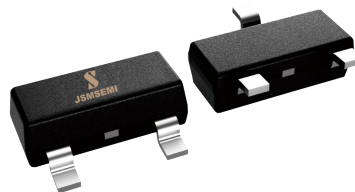
Feature

-20V/-3A, $R_{DS(ON)} = 100m\Omega(MAX)$ @ $V_{GS} = -4.5V$
 $R_{DS(ON)} = 120m\Omega(MAX)$ @ $V_{GS} = -2.5V$

Super High dense cell design for extremely low $R_{DS(ON)}$

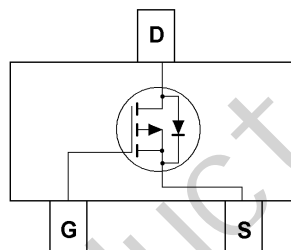
Reliable and Rugged

SOT-23 for Surface Mount Package



Applications

- Power Management
- Portable Equipment and Battery Powered Systems.



Absolute Maximum Ratings

$T_A = 25^\circ C$ Unless Otherwise noted

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	-20	V	
Gate-Source Voltage	V_{GS}	± 8		
Continuous Drain Current	I_D	$T_a = 25^\circ C$	-3	A
		$T_a = 70^\circ C$	-2	
Pulsed Drain Current	I_{DM}	-10		
Power Dissipation	P_D	$T_a = 25^\circ C$	1.5	W
		$T_a = 70^\circ C$	1.25	
Thermal Resistance.Junction- to-Ambient *1	R_{thJA}		100	$^\circ C/W$
Thermal Resistance.Junction- to-Ambient *3			166	
Junction Temperature	T_J	150	$^\circ C$	
Storage Temperature Range	T_{stg}	-55 to 150		

Electrical Characteristics

$T_A = 25^\circ C$ Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = -250 \mu A, V_{GS} = 0V$	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1	μA
		$V_{DS} = -20V, V_{GS} = 0V, T_J = 55^\circ C$			-10	
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250 \mu A$	-0.45		-1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -2.8A$		105	110	m Ω
		$V_{GS} = -2.5V, I_D = -2.0A$		115	120	
On state drain current	$I_{D(ON)}$	$V_{GS} = -4.5V, V_{DS} \leq -5V$	-6			A
		$V_{GS} = -2.5V, V_{DS} \leq -5V$	-3			
Forward Transconductance	g_{FS}	$V_{DS} = -5V, I_D = -2.8A$		6.5		S

■ Marking

Marking	215
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Typical Characteristics

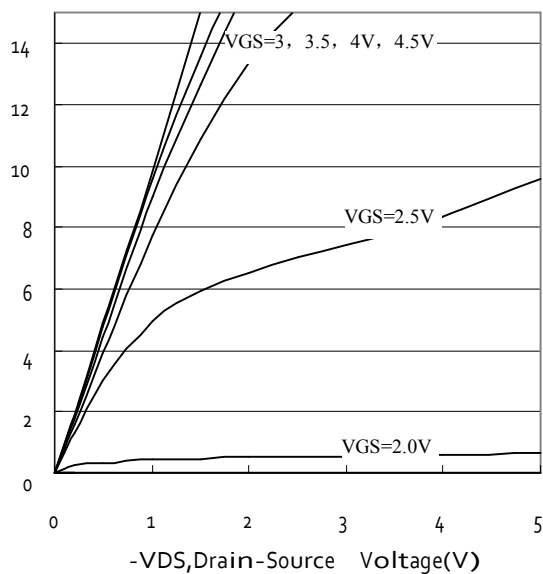


Figure 1. Output Characteristics

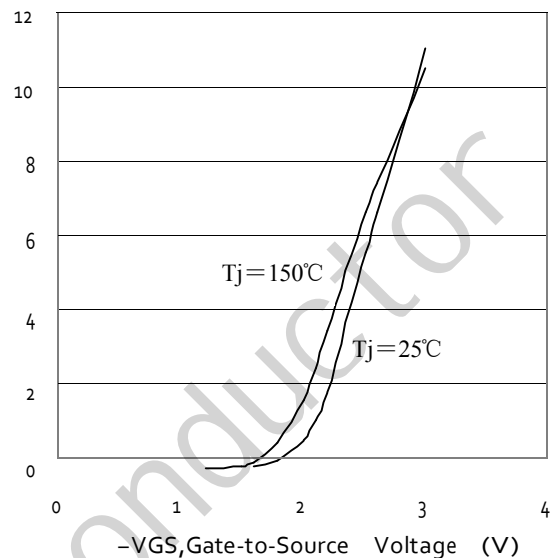


Figure 2. Transfer Characteristics

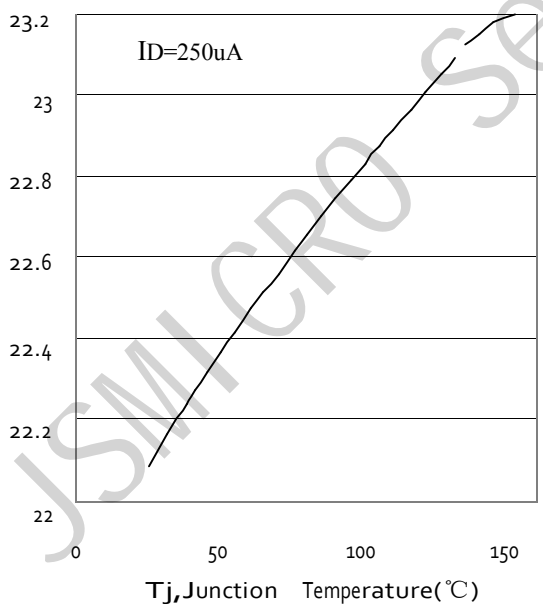


Figure 3. Breakdown Voltage Variation with Temperature

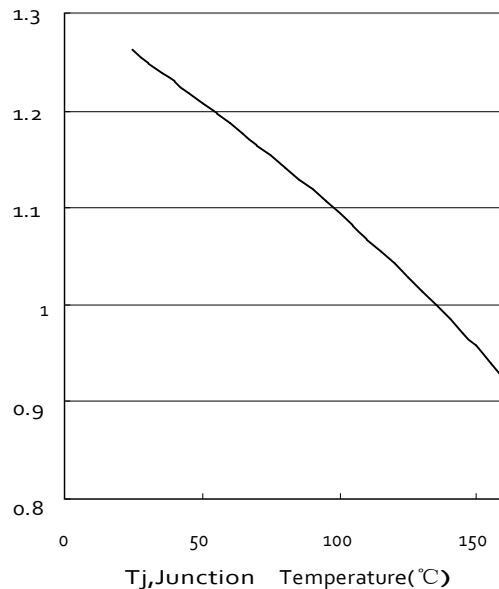


Figure 4. Gate Threshold Variation with Temperature

Typical Characteristics

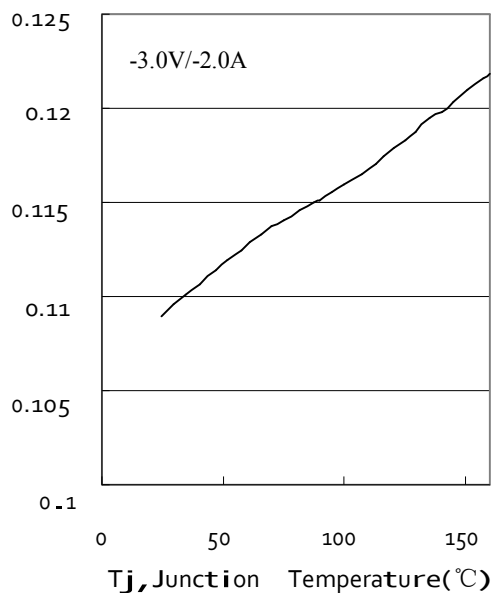


Figure 5. On-Resistance Variation with Temperature

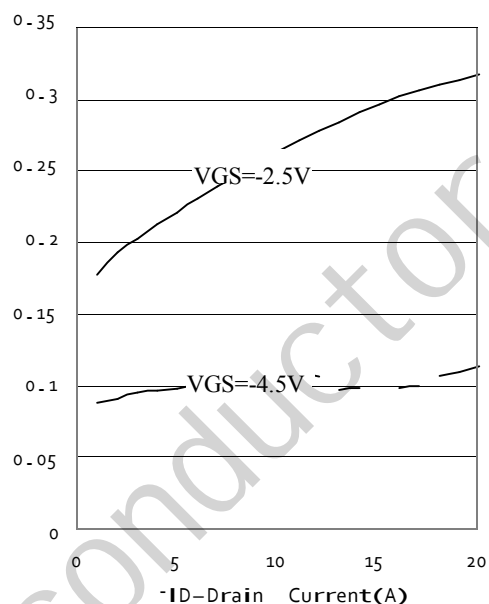


Figure 6. On-Resistance vs. Drain Current

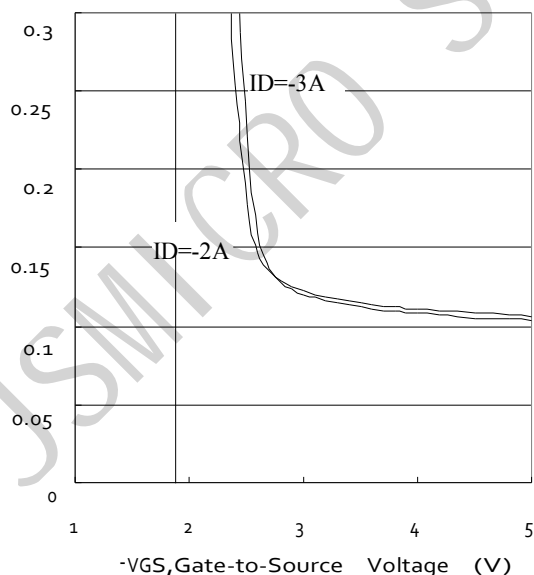


Figure 7. On-Resistance vs. Gate-to-Source Voltage

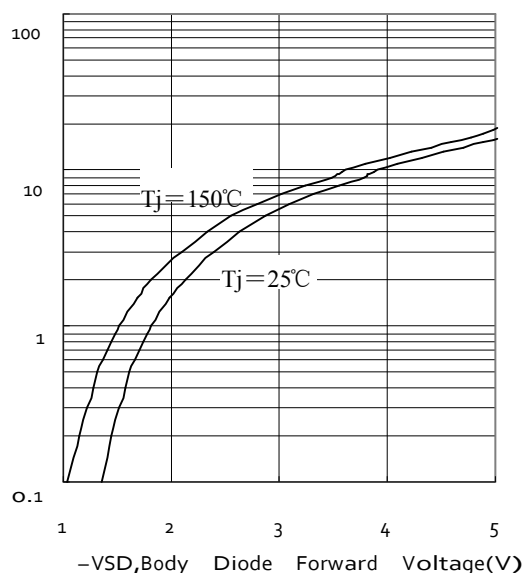
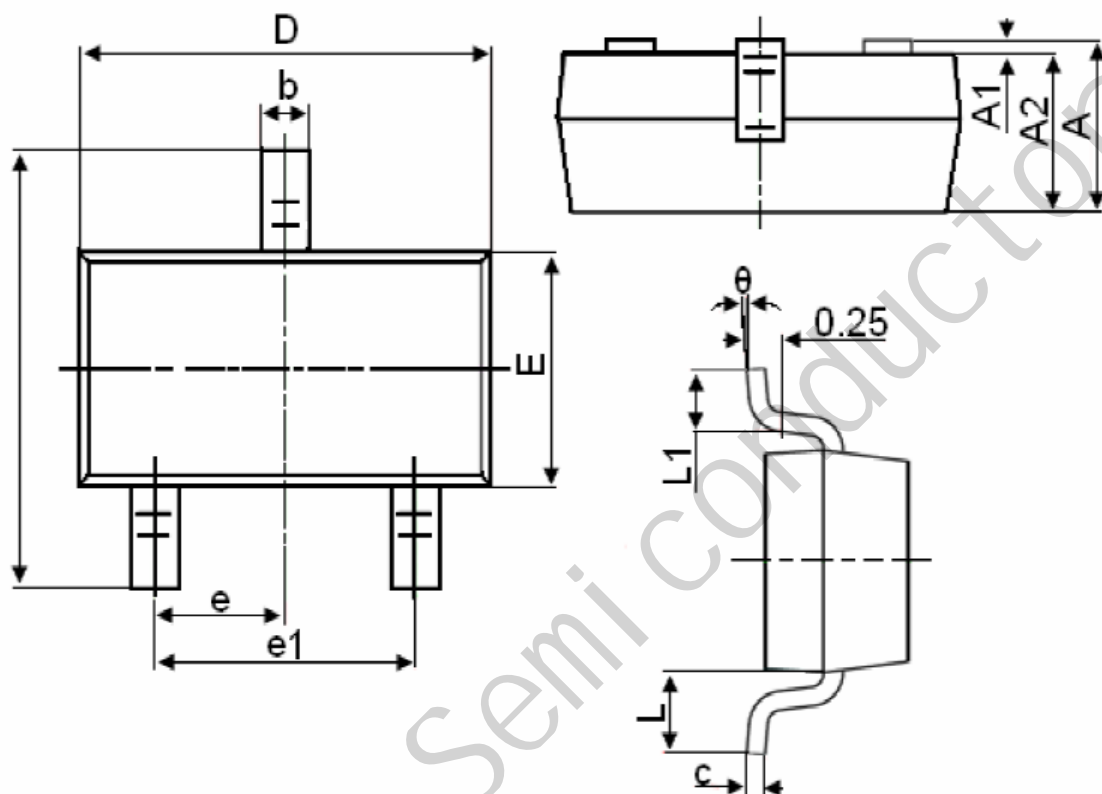


Figure 8. Source-Drain Diode Forward Voltage

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°

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