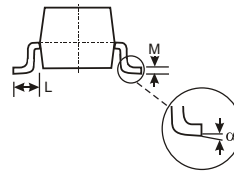
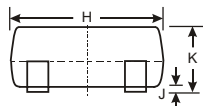
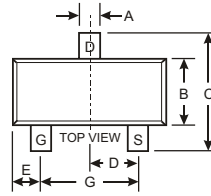
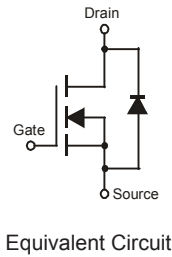




N-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

Features

- Low On-Resistance.
- Low Gate Threshold Voltage.
- Low Input Capacitance.
- Fast Switching Speed.
- Low Input/Output Leakage.
- Marking Code:SS



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	50	V
Continuous Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current	I_D	0.22	A
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating Temperaturea	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

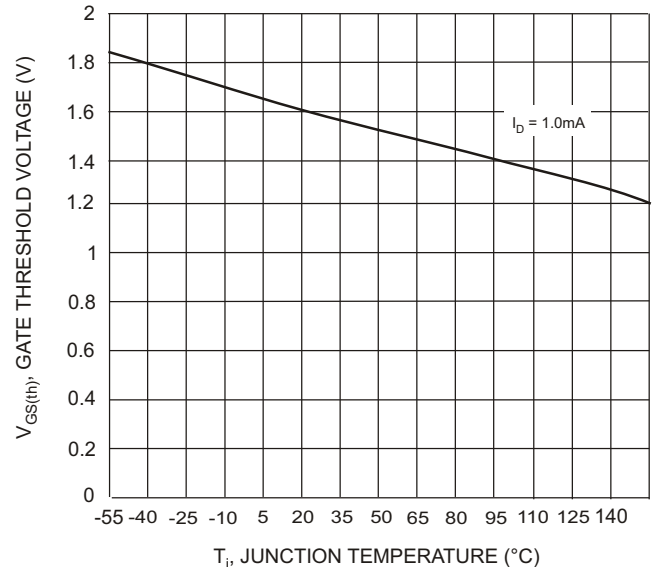
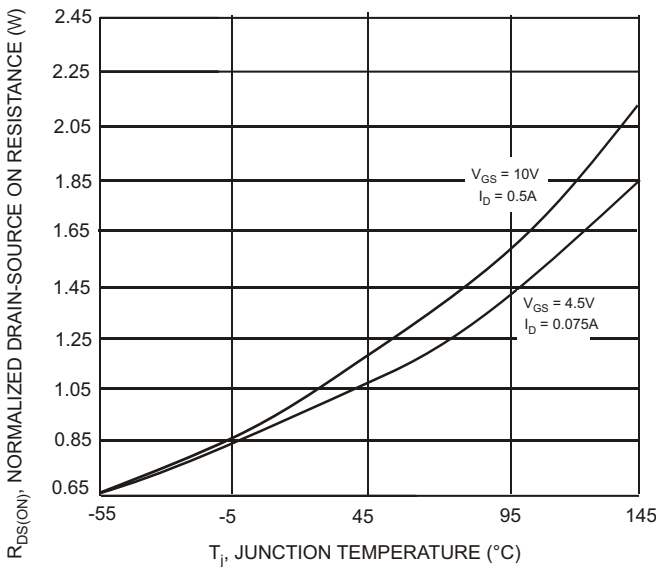
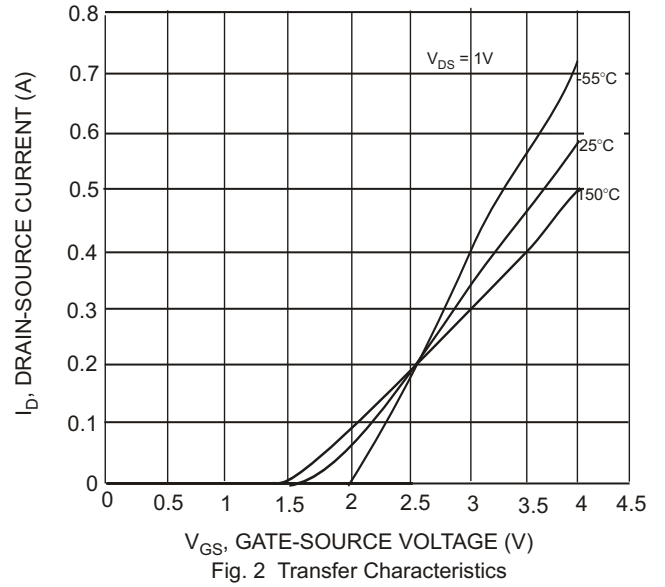
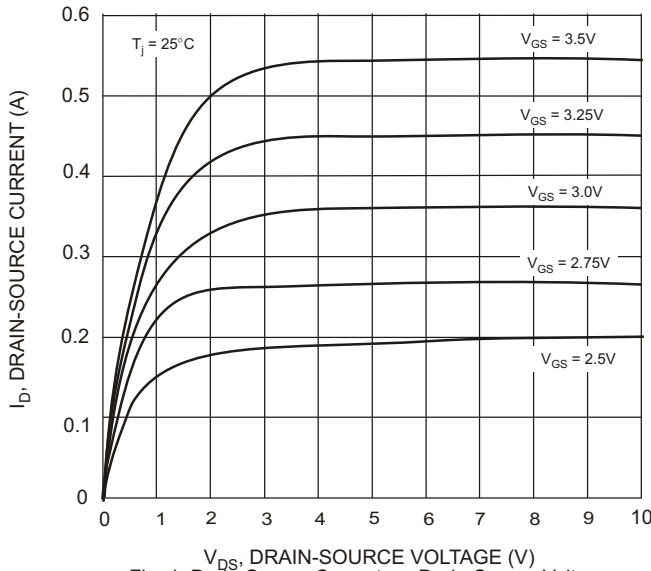
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu\text{A}$	50			V
Gate-body leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 50V, V_{GS} = 0V$			0.5	μA
		$V_{DS} = 30V, V_{GS} = 0V$			100	nA
On characteristics						
Gate-threshold voltage (note 1)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 1\text{mA}$	0.80		1.50	V
Static drain-source on-resistance (note 1)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 0.22\text{A}$			3.50	Ω
		$V_{GS} = 4.5V, I_D = 0.22\text{A}$			6	
Forward transconductance (note 1)	g_{FS}	$V_{DS} = 10V, I_D = 0.22\text{A}$	0.12			S
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V, f = 1\text{MHz}$		27		pF
Output capacitance	C_{oss}		13			
Reverse transfer capacitance	C_{rss}		6			
Switching characteristics						
Turn-on delay time (note 1,2)	$t_{d(on)}$	$V_{DD} = 30V, V_{DS} = 10V, I_D = 0.29\text{A}, R_{GEN} = 6\Omega$			5	ns
Rise time (note 1,2)	t_r		18			
Turn-off delay time (note 1,2)	$t_{d(off)}$		36			
Fall time (note 1,2)	t_f		14			
Drain-source body diode characteristics						
Body diode forward voltage (note 1)	V_{SD}	$I_S = 0.44\text{A}, V_{GS} = 0V$			1.4	V

- Notes:**
1. Pulse Test; Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.
 2. These parameters have no way to verify.



TYPICAL TRANSIENT CHARACTERISTICS



TYPICAL TRANSIENT CHARACTERISTICS

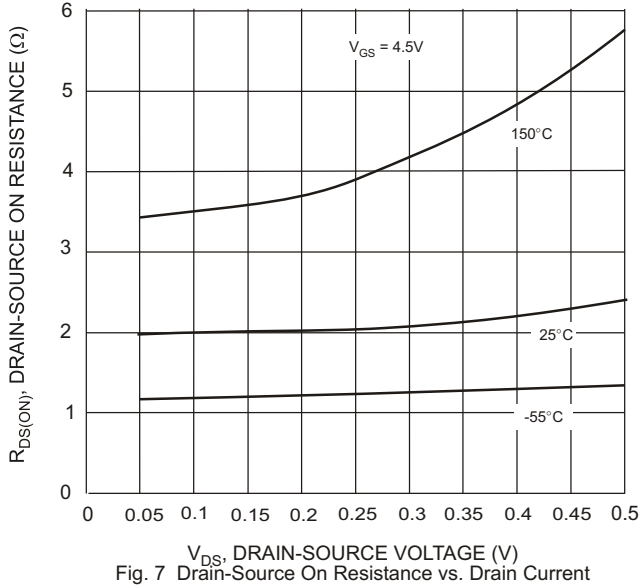


Fig. 7 Drain-Source On Resistance vs. Drain Current

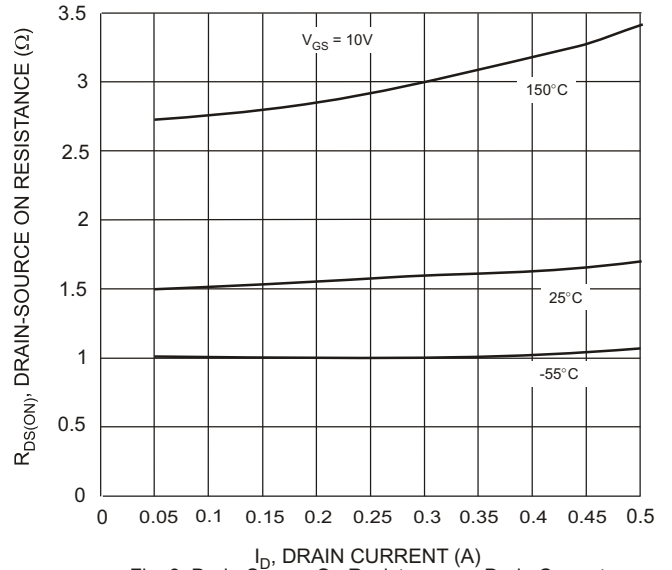


Fig. 8 Drain-Source On Resistance vs. Drain Current

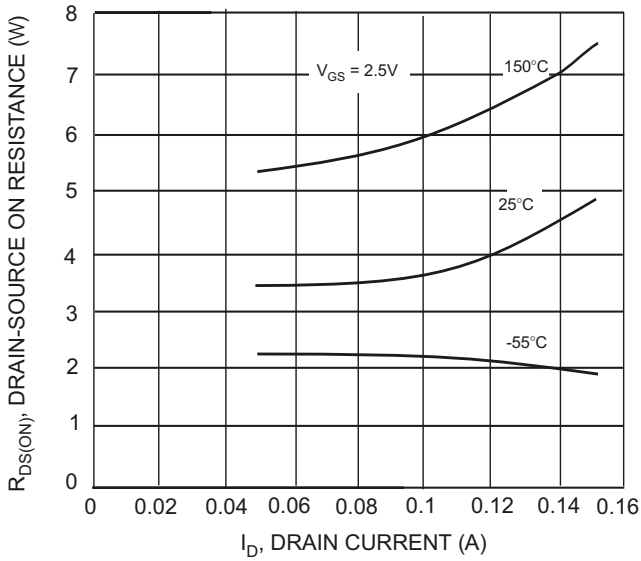


Fig. 5 Drain-Source On Resistance vs. Drain Current

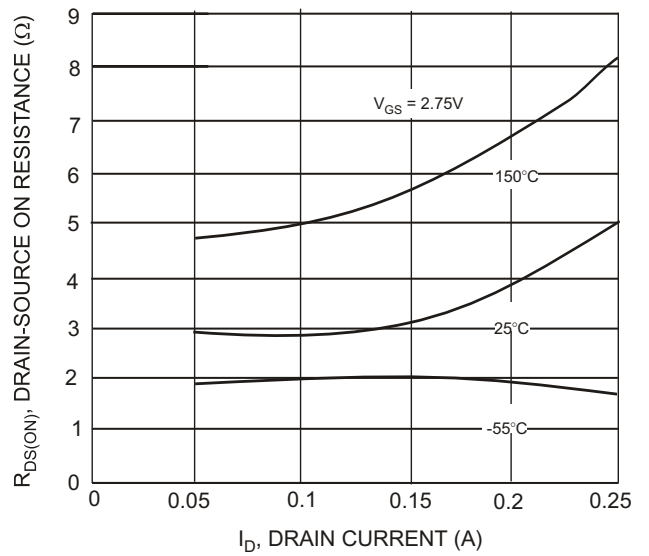


Fig. 6 Drain-Source On Resistance vs. Drain Current

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