

N-Channel 60V MOSFET
Electrical Characteristics ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	60	--	--	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	1	1.6	2	V
I_{GSS}	Gate-Body Leakage	$V_{DS}=0V, V_{GS}=\pm 20V$	--	--	± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=60V, V_{GS}=0V$	--	--	1	μA
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V, I_D=0.5A$	--	2.5	7.5	Ω
		$V_{GS}=5V, I_D=0.05A$	--	3	7.5	Ω
V_{SD}	Diode Forward voltage	$I_S=115mA, V_{GS}=0V$	--	--	1.5	V
g_{FS}	Forward Transconductance	$I_D=200mA, V_{DS}=2V$	80	--	--	mS
I_S	Maximum Diode Forward Current		--	--	115	mA
Dynamic						
C_{iss}	Input Capacitance	$V_{DS}=25V, V_{GS}=0V, f=1MHz$	--	17	--	pF
C_{oss}	Output Capacitance		--	15	--	
C_{rss}	Reverse Transfer Capacitance		--	5	--	
$t_{d(on)}$	Turn-On Delay Time	$V_{DS}=25V, I_D=0.5A,$ $V_{GS}=10V, R_L=50\Omega, R_{GS}=25\Omega$	--	7	--	ns
$t_{d(off)}$	Turn-Off Delay Time		--	30	--	
Q_g	Total Gate Charge	$V_{DS}=48V, I_D=0.5A, V_{GS}=10V$	--	1.22	--	nC

 Note : pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

N-Channel 60V MOSFET

TYPICAL ELECTRICAL CHARACTERISTICS

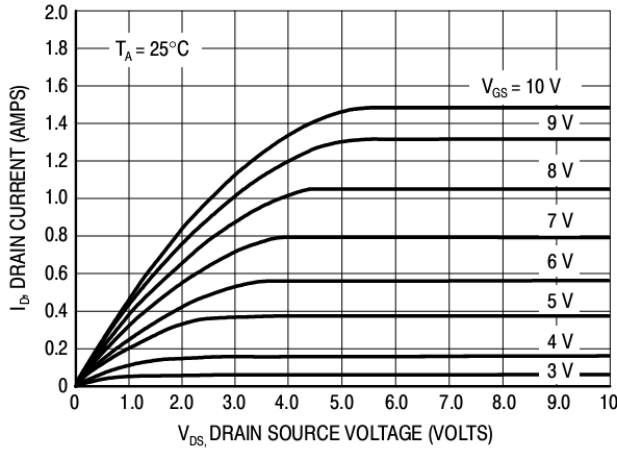


Figure 1. Ohmic Region

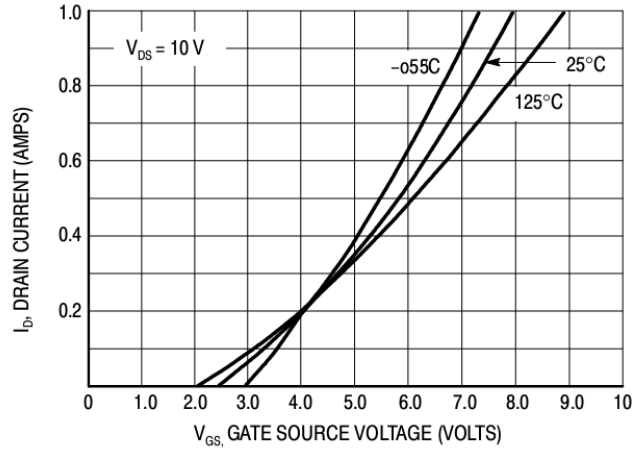


Figure 2. Transfer Characteristics

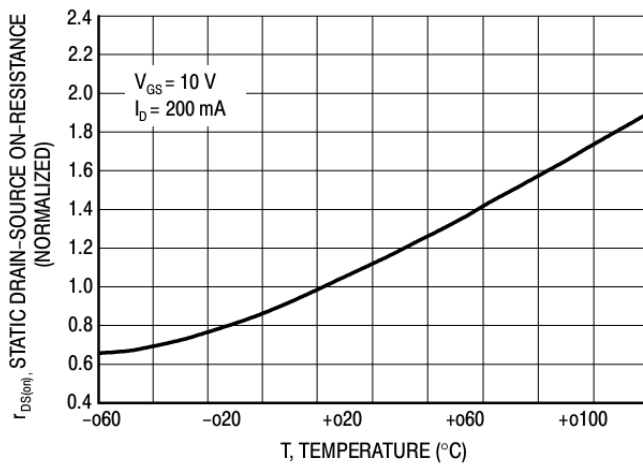


Figure 3. Temperature versus Static Drain-Source On-Resistance

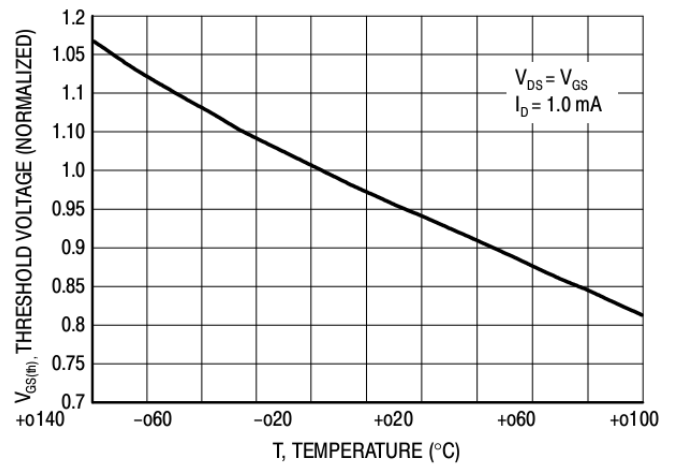
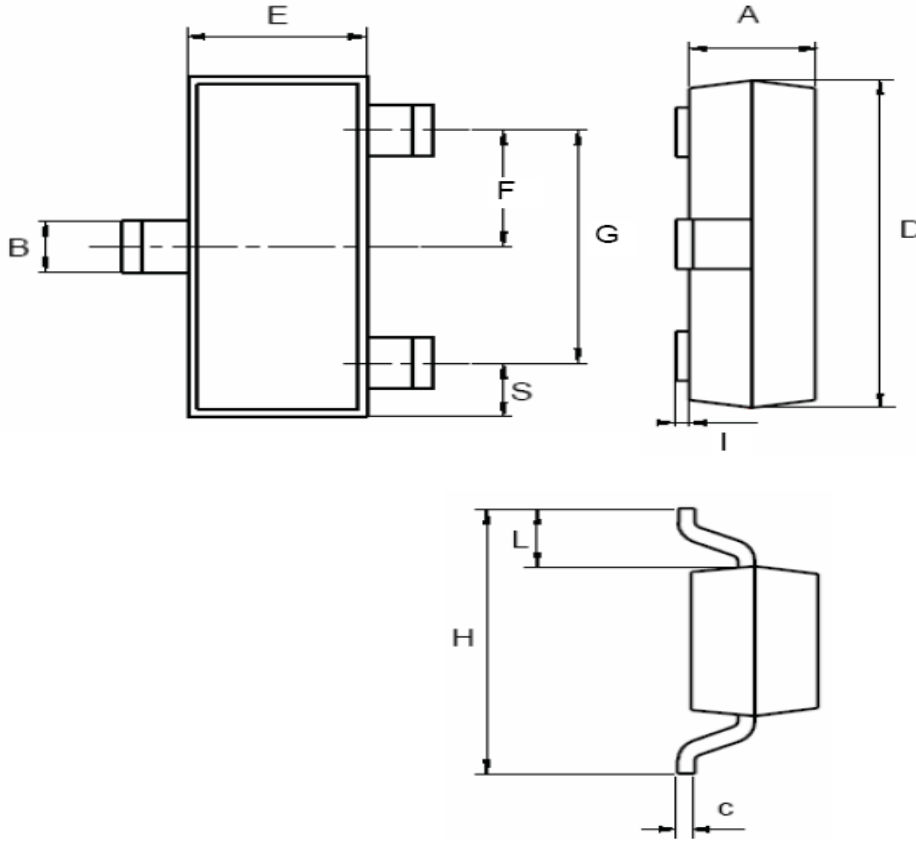


Figure 4. Temperature versus Gate Threshold Voltage

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SOT-23		
DIM.	MIN.	MAX.
A	0.89	1.40
B	0.30	0.51
C	0.085	0.18
D	2.75	3.04
E	1.20	1.60
F	0.85	1.05
G	1.70	2.10
H	2.10	2.75
I	0.0	0.1
L	0.60 typ.	
S	0.35	0.65
All Dimensions in millimeter		

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