N-Channel 50V MOSFET

Electrical Characteristics (T_A =25℃ Unless Otherwise Specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static(1)						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V,I_D=250μA	50	--	--	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS},I_D=1mA	0.5	--	1.5	V
I_{GSS}	Gate-Body Leakage	V_{DS} =0V,V_{GS}=±20V	--	--	±10	uA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} =25V,V_{GS}=0V	--	--	0.1	μA
		V_{DS} =50V,V_{GS}=0V	--	--	0.5	
$R_{DS(ON)}$	Drain-Source On-Resistance	V_{GS}=2.75V, I_D=200mA	--	--	10	Ω
		V_{GS}=5.0V, I_D=200mA	--	--	3.5	Ω
g_{FS}	Forward Transconductance	I_D=200mA, V_{DS}=25V	100	--	--	mmhos
Dynamic(2)						
C_{iss}	Input Capacitance	V_{DS}=25V, V_{GS}=0V, f=1.0MHz	--	40	50	pF
C_{oss}	Output Capacitance		--	12	25	
C_{rss}	Reverse Transfer Capacitance		--	3.5	5.0	
$t_{d(on)}$	Turn-On Delay Time	V_{DS}=30V, I_D =0.2A	--	5	20	nSs
$t_{d(off)}$	Turn-Off Delay Time		--	5	20	

Note：

(1) Pulse test: pulse width<= 300us, duty cycle<=2%

(2) Switching characterisitics are independent of operating junction temperature.

N-Channel 50V MOSFET

TYPICAL ELECTRICAL CHARACTERISTICS

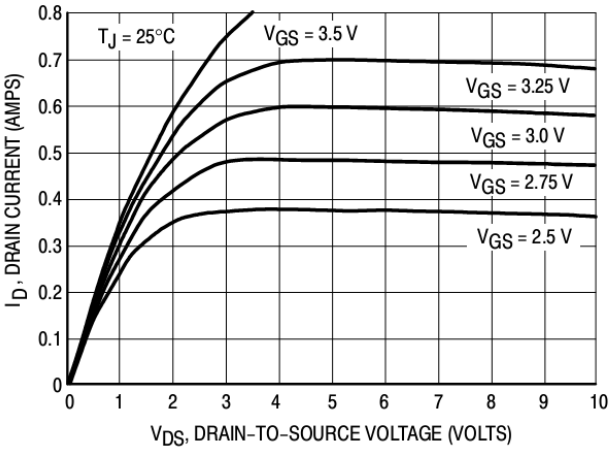

Figure 1. On–Region Characteristics

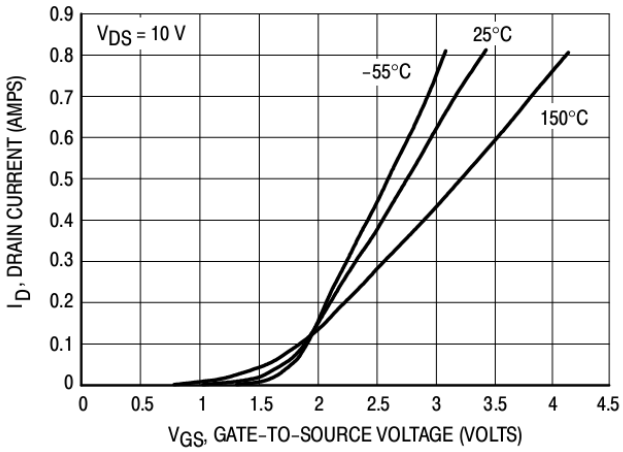

Figure 2. Transfer Characteristics

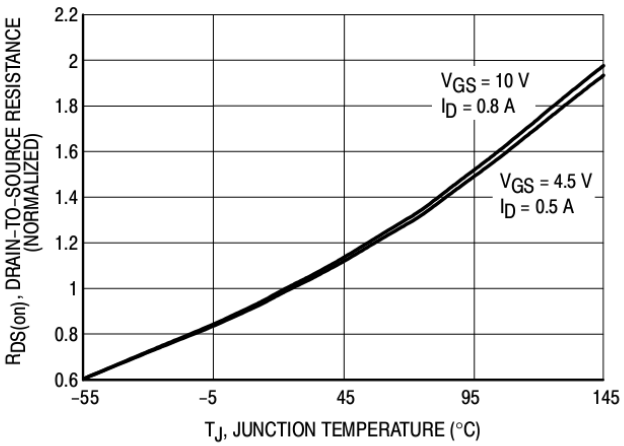

Figure 3. On–Resistance Variation with Temperature

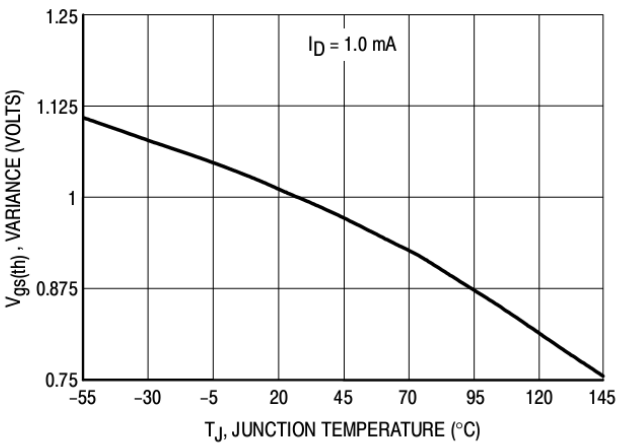

Figure 4. Threshold Voltage Variation with Temperature

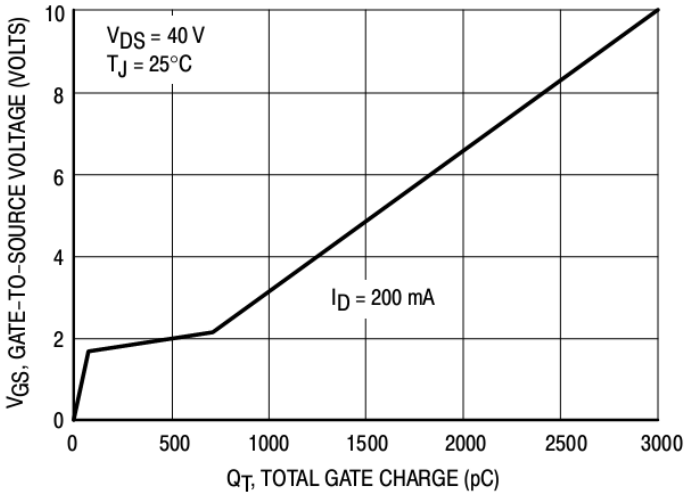

Figure 5. Gate Charge

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TYPICAL ELECTRICAL CHARACTERISTICS

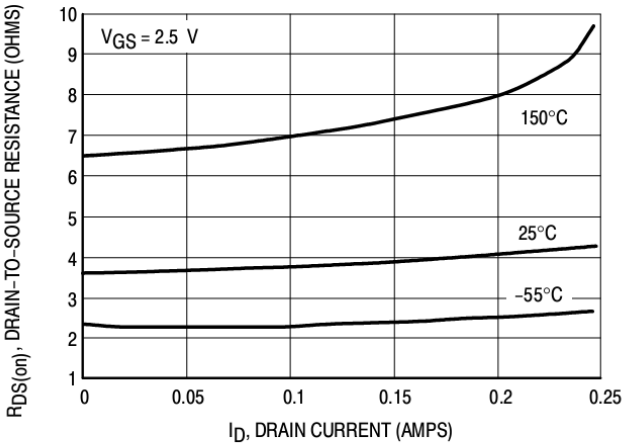

Figure 6. On–Resistance versus Drain Current

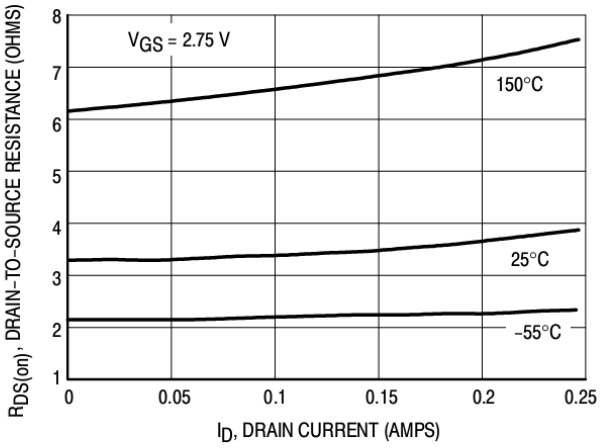

Figure 7. On–Resistance versus Drain Current

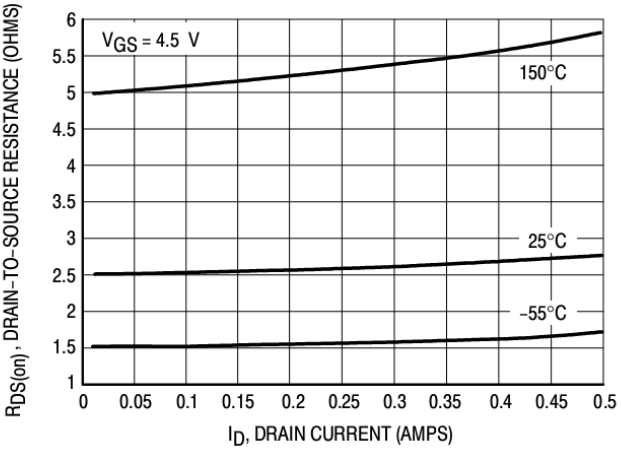

Figure 8. On–Resistance versus Drain Current

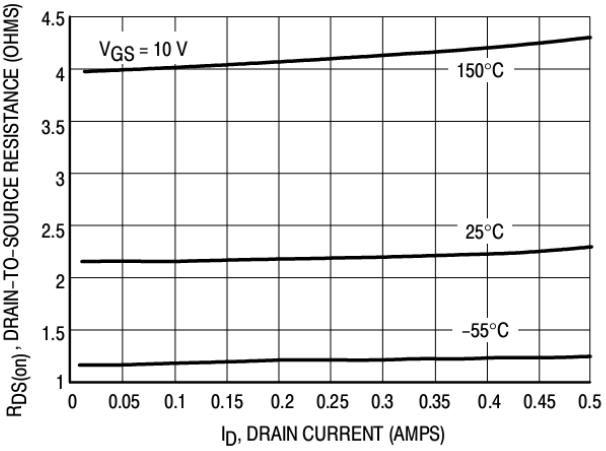

Figure 9. On–Resistance versus Drain Current

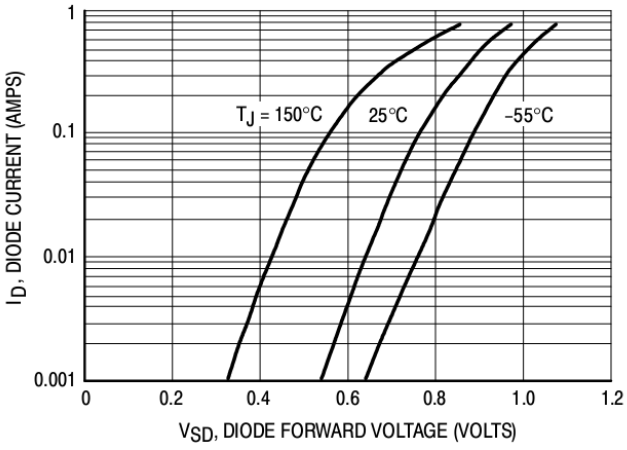

Figure 10. Body Diode Forward Voltage

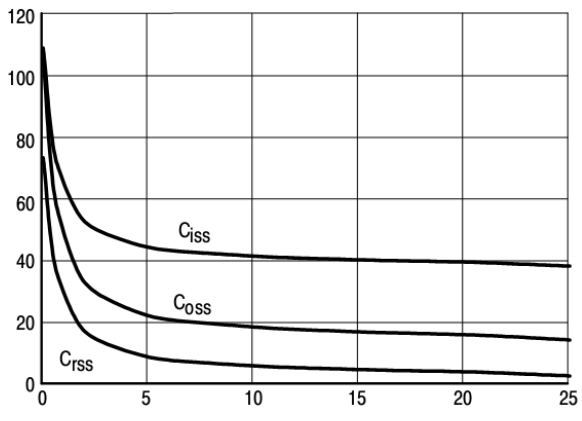

Figure 11. Capacitance

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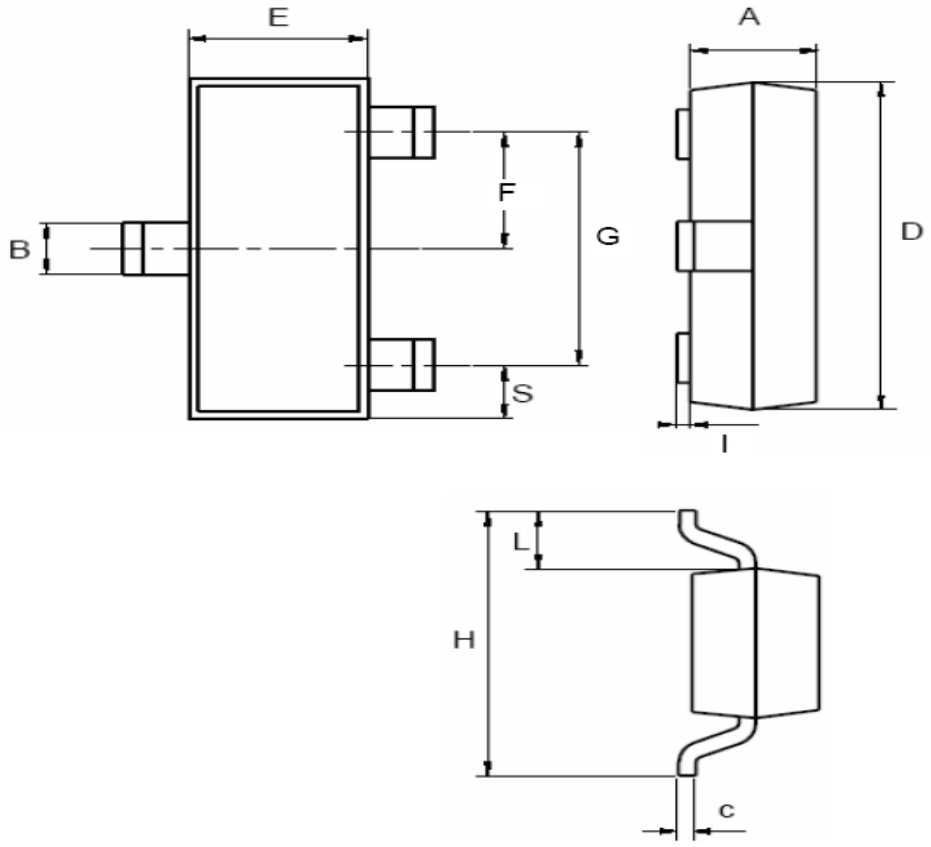

SOT-23		
DIM.	MIN.	MAX.
A	0.89	1.40
B	0.30	0.51
C	0.085	0.18
D	2.75	3.04
E	1.20	1.60
F	0.85	1.05
G	1.70	2.10
H	2.10	2.75
I	0.0	0.1
L	0.60 typ.	
S	0.35	0.65
All Dimensions in millimeter		

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