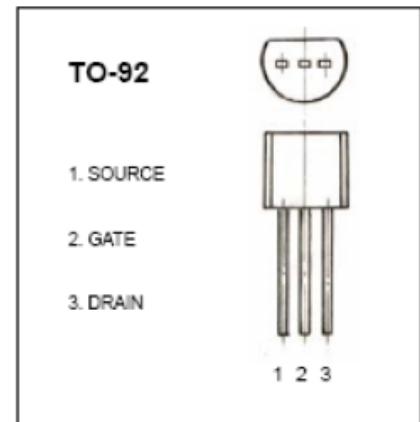
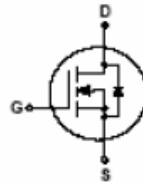




## MOSFET (N-Channel)

### FEATURES

- High density cell design for low  $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability



### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{DS}$	Drain-Source voltage	60	V
$I_D$	Drain Current	200	mA
$P_D$	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	357	$^\circ\text{C}/\text{W}$
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0\text{ V}, I_D=10\mu\text{A}$	60			V
Gate-Threshold Voltage*	$V_{th(GS)}$	$V_{DS}=V_{GS}, I_D=1\text{mA}$	0.8			
Gate-body Leakage	$I_{GSS}$	$V_{DS}=0\text{ V}, V_{GS}=\pm 15\text{ V}$			$\pm 10$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60\text{ V}, V_{GS}=0\text{ V}$			1	$\mu\text{A}$
On-state Drain Current	$I_{D(ON)}$	$V_{GS}=4.5\text{ V}, V_{DS}=10\text{ V}$	75			mA
Drain-Source On-Resistance*	$r_{DS(ON)}$	$V_{GS}=4.5\text{ V}, I_D=75\text{mA}$			6	$\Omega$
		$V_{GS}=10\text{ V}, I_D=500\text{mA}$			5	
Forward Trans conductance*	$g_{fs}$	$V_{DS}=10\text{ V}, I_D=200\text{mA}$	100			ms
Drain-source on-voltage*	$V_{DS(on)}$	$V_{GS}=10\text{ V}, I_D=500\text{mA}$			2.5	V
		$V_{GS}=4.5\text{ V}, I_D=75\text{mA}$			0.45	V
Input Capacitance	$C_{iss}$	$V_{DS}=25\text{ V}, V_{GS}=0\text{ V}, f=1\text{MHz}$			60	pF
Output Capacitance	$C_{oss}$				25	
Reverse Transfer Capacitance	$C_{rss}$				5	

\* pulse test.

### SWITCHING TIME

Turn-on Time	$t_{d(on)}$	$V_{DD}=15\text{ V}, R_L=30\Omega$			10	ns
Turn-off Time	$t_{d(off)}$	$I_D=500\text{mA}, V_{GEN}=10\text{ V}$ $R_G=25\Omega$			10	



## Typical Characteristics

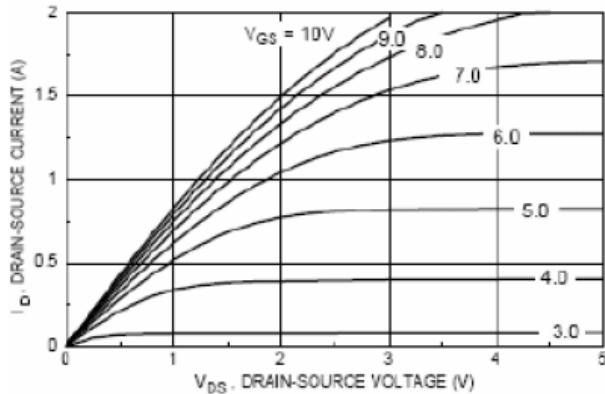


Figure 1. On-Region Characteristics

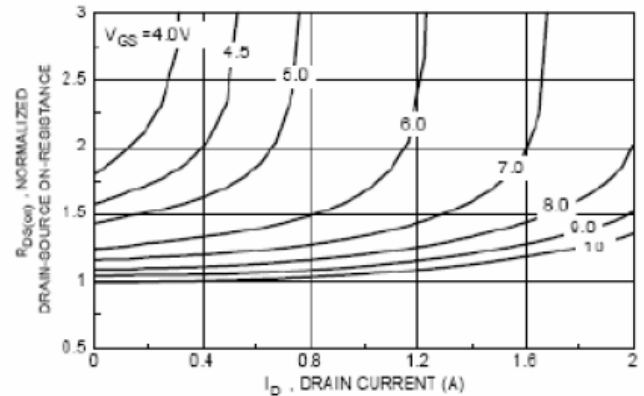


Figure 2. On-Resistance Variation with Gate Voltage and Drain Current

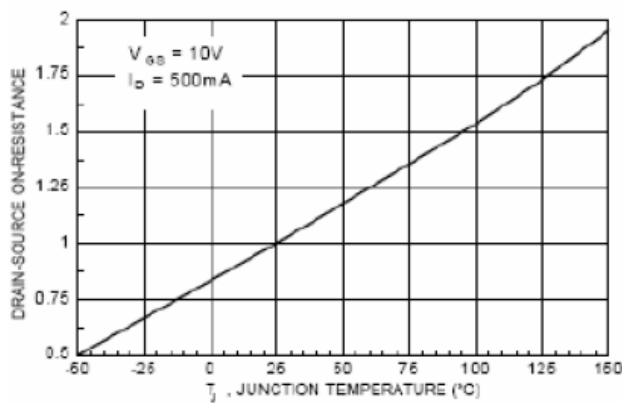


Figure 3. On-Resistance Variation with Temperature

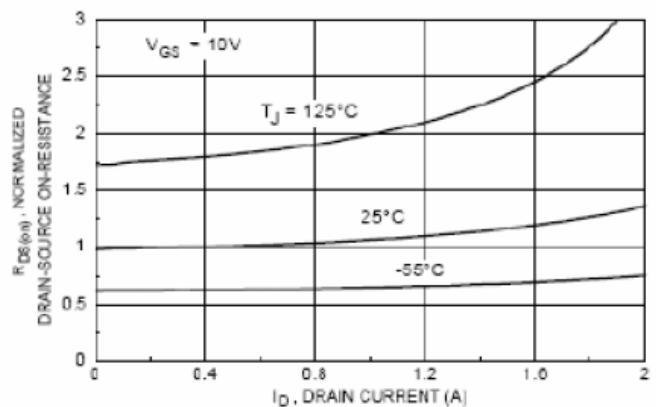


Figure 4. On-Resistance Variation with Drain Current and Temperature

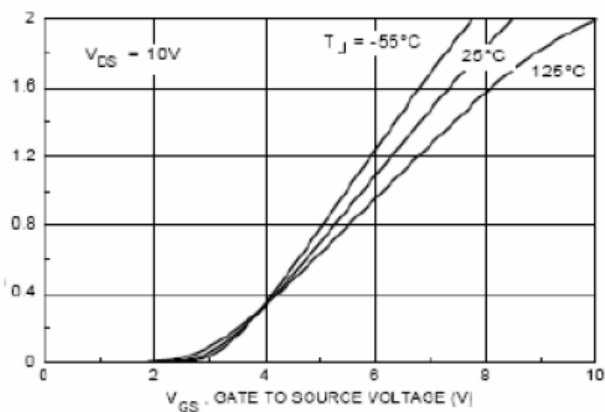


Figure 5. Transfer Characteristics

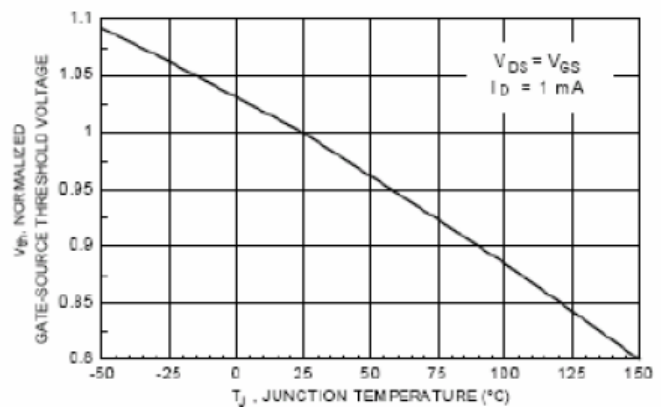


Figure 6. Gate Threshold Variation with Temperature



## Typical Characteristics

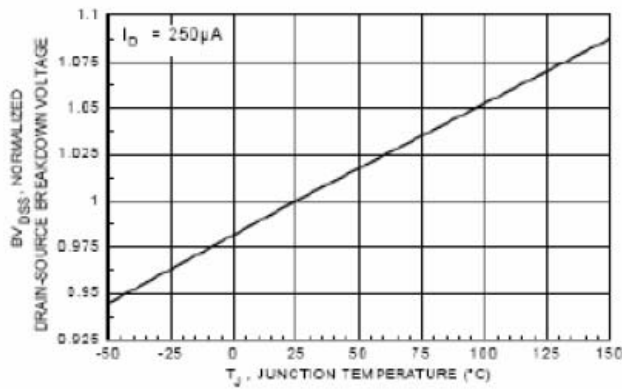


Figure 7. Breakdown Voltage Variation with Temperature

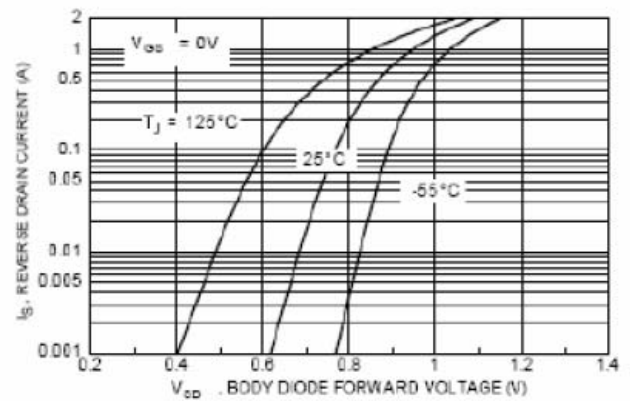


Figure 8. Body Diode Forward Voltage Variation with Temperature

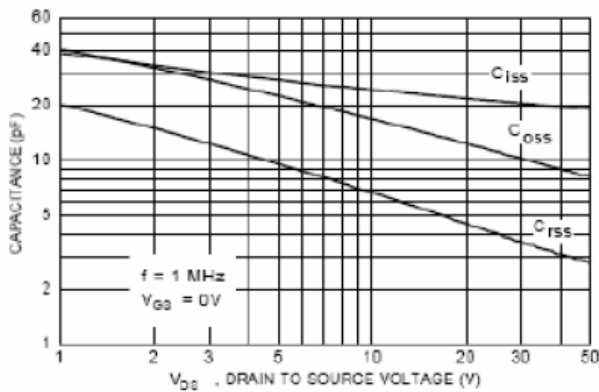


Figure 9. Capacitance Characteristics

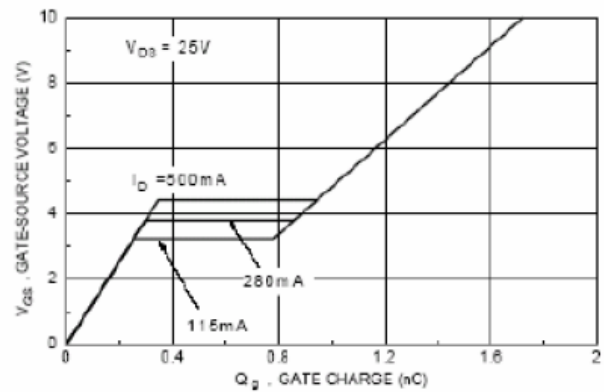


Figure 10. Gate Charge Characteristics