

## N-Channel Enhancement MOSFET

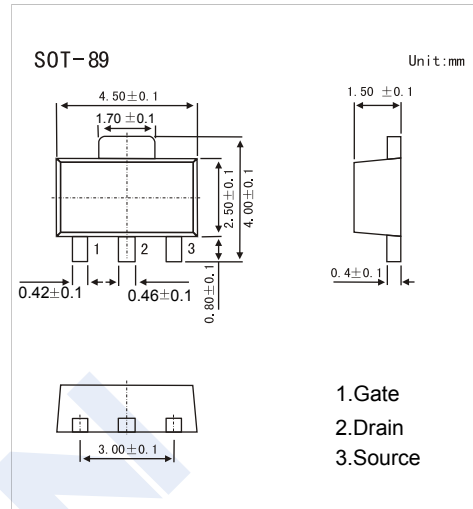
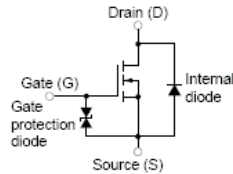
### 2SK1960

#### ■ Features

- Gate can be driven by 1.5V
- Low ON resistance

$R_{DS(on)}=0.8\ \Omega$  MAX. @ $V_{GS}=1.5V, I_D=0.1A$

$R_{DS(on)}=0.2\ \Omega$  MAX. @ $V_{GS}=4.0V, I_D=1.5A$



1. Gate
2. Drain
3. Source

#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	16	V
Gate-Source Voltage	$V_{GS}$	$\pm 7$	
Continuous Drain Current	$I_D$	$\pm 3$	A
Pulsed Drain Current	$I_{DM}$	$\pm 6$	
Power Dissipation	$P_D$	2	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

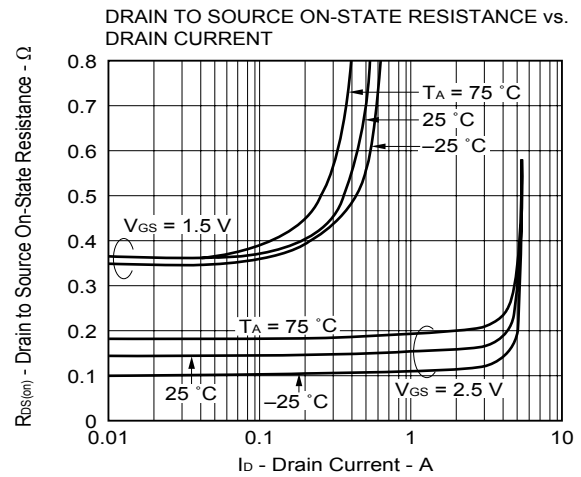
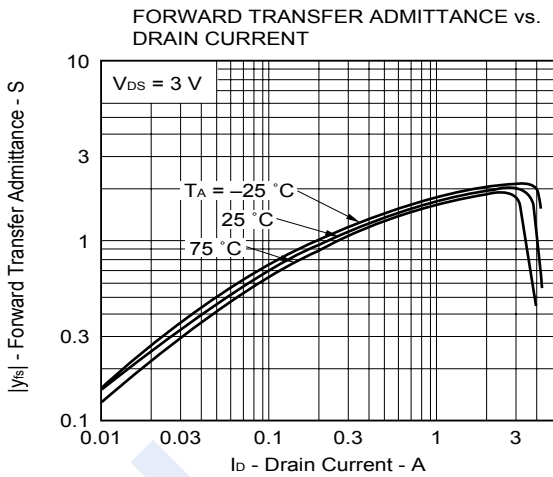
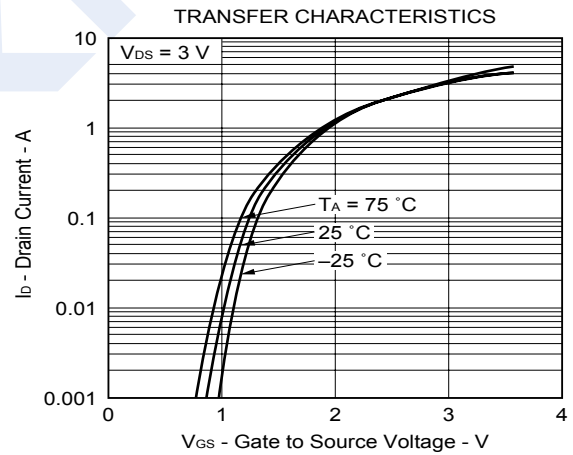
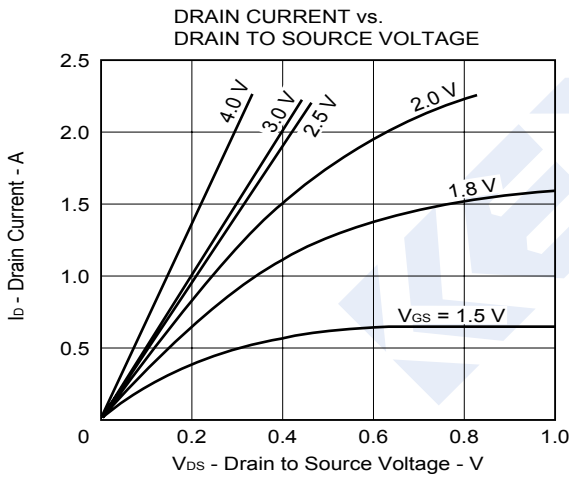
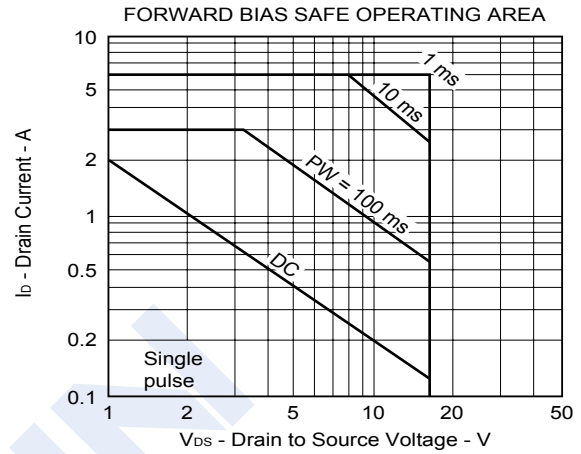
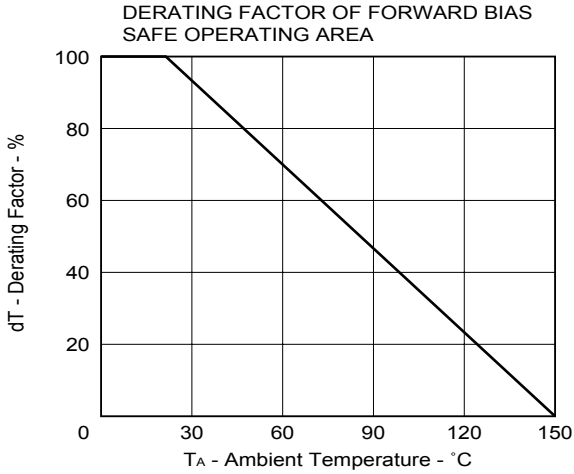
#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D=250\ \mu\text{A}, V_{GS}=0V$	16			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=16V, V_{GS}=0V$			1	$\mu\text{A}$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 7V$			$\pm 3$	nA
Gate Threshold Voltage	$V_{GS(off)}$	$V_{DS}=3V, I_D=1mA$	0.5	0.8	1.1	V
Static Drain-Source On-Resistance	$R_{DS(on)1}$	$V_{GS}=1.5V, I_D=0.1A$		0.35	0.8	$\Omega$
	$R_{DS(on)2}$	$V_{GS}=2.5V, I_D=1.5A$		0.17	0.3	
	$R_{DS(on)3}$	$V_{GS}=4V, I_D=1.5A$		0.12	0.2	
Forward Transconductance	$g_{FS}$	$V_{DS}=3V, I_D=1.5A$	2			S
Input Capacitance	$C_{iss}$	$V_{GS}=0V, V_{DS}=3V, f=1MHz$		370		pF
Output Capacitance	$C_{oss}$			320		
Reverse Transfer Capacitance	$C_{rss}$			115		
Turn-On DelayTime	$t_{d(on)}$	$I_D=1.5A, V_{DS}=3V, R_{GEN}=10\ \Omega, R_L=2\ \Omega$ $V_{GS(on)} = 3V$		70		ns
Turn-On Rise Time	$t_r$			200		
Turn-Off DelayTime	$t_{d(off)}$			150		
Turn-Off Fall Time	$t_f$			200		

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### Typical Characteristics



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