

N-Channel Enhancement MOSFET

2SK1960

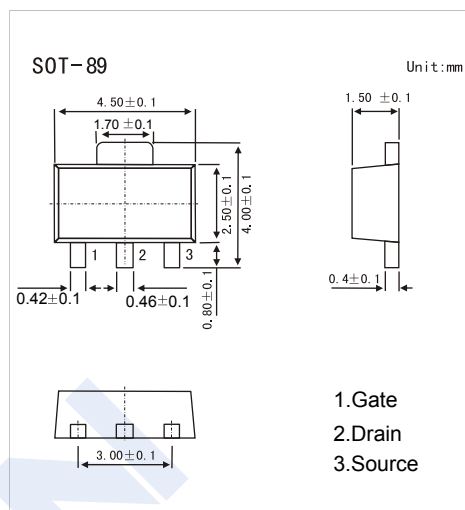
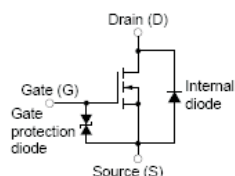
■ Features

- Gate can be driven by 1.5V

- Low ON resistance

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

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



■ 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}	± 7	V
Continuous Drain Current	I_D	± 3	A
Pulsed Drain Current $PW \leq 10\text{ms}, \text{duty cycle} \leq 50\%$	I_{DM}	± 6	A
Power Dissipation	P_D	2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ\text{C}$

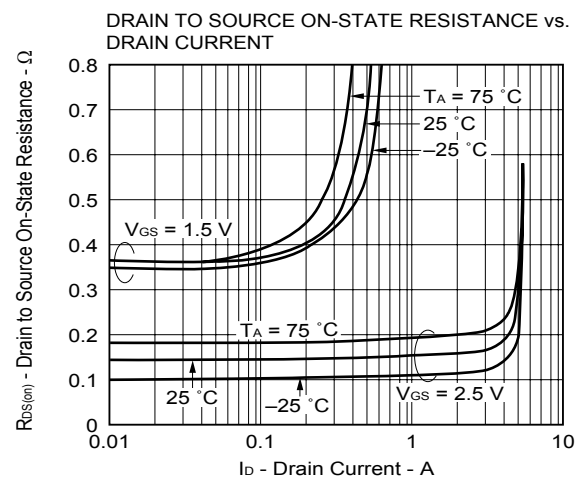
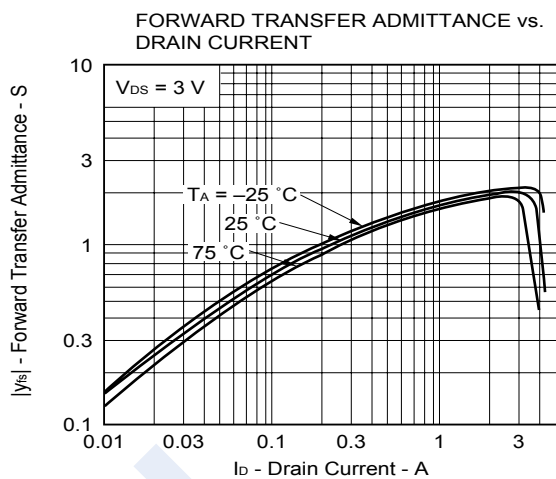
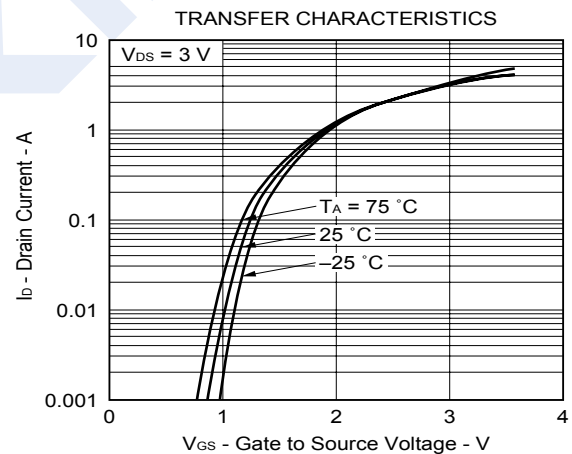
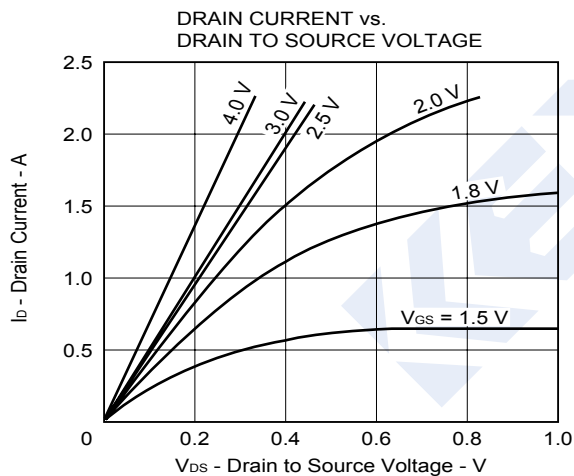
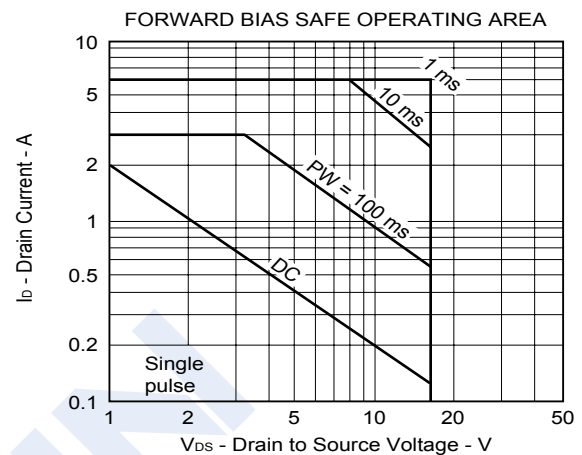
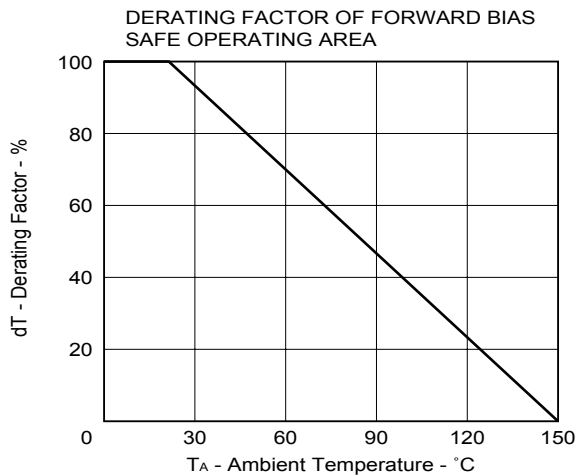
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 7V$			± 3	nA
Gate Threshold Voltage	$V_{GS(off)}$	$V_{DS}=3V, I_D=1\text{mA}$	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	Ω
	$R_{DS(on)2}$	$V_{GS}=2.5V, I_D=1.5A$		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}	$V_{GS}=0V, V_{DS}=3V, f=1\text{MHz}$		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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