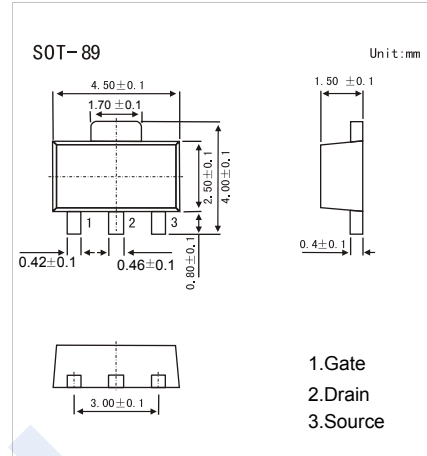
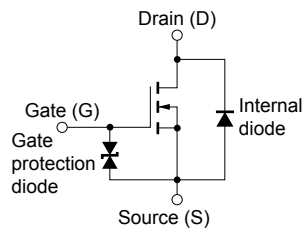


## N-Channel MOSFET

### 2SK1959

#### ■ Features

- $V_{DS}$  (V) = 16V
- $I_D$  = 2A
- $R_{DS(ON)} < 3.2 \Omega$  ( $V_{GS} = 1.5V$ )
- $R_{DS(ON)} < 0.5 \Omega$  ( $V_{GS} = 4V$ )



#### ■ 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	$I_D$	2	A
Pulsed Drain Current (Note.1)	$I_{DM}$	4	
Power Dissipation	$P_D$	2	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

Note.1:  $PW \leq 10\text{ms}$ , Duty Cycle  $\leq 50\%$

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

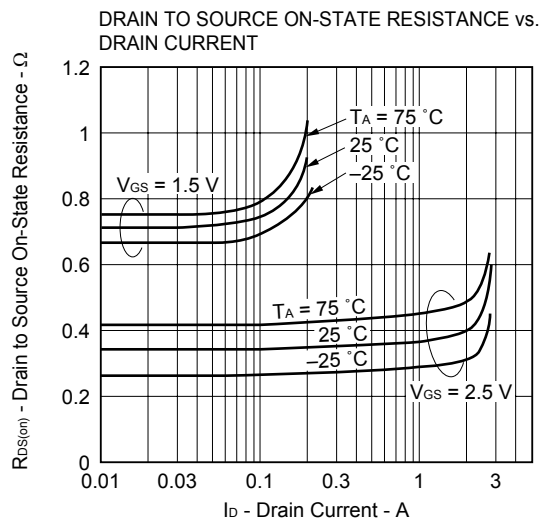
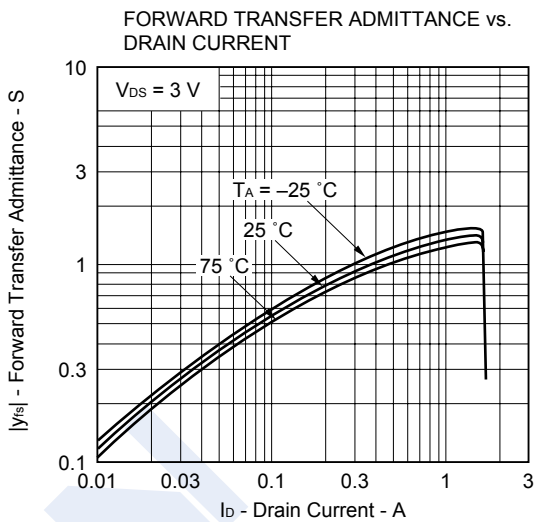
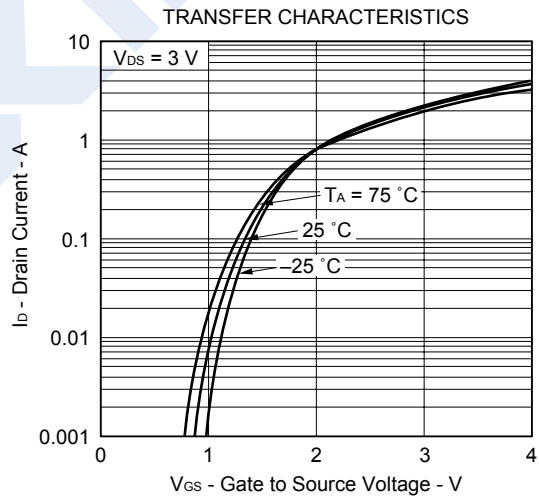
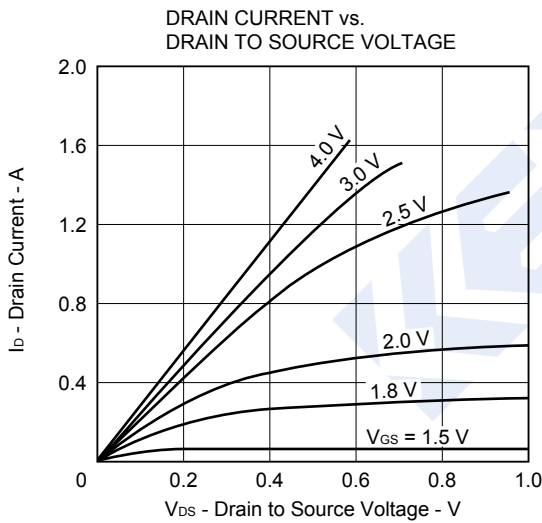
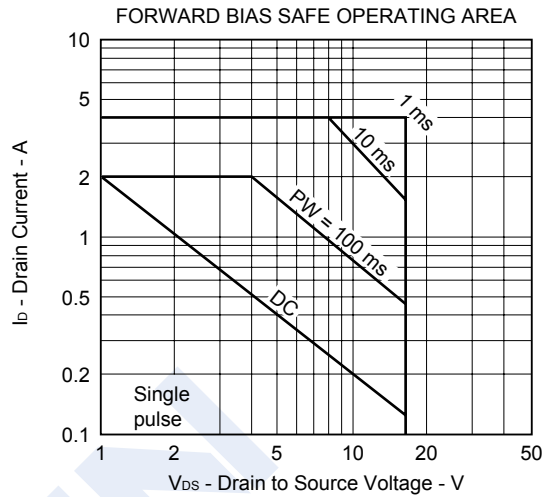
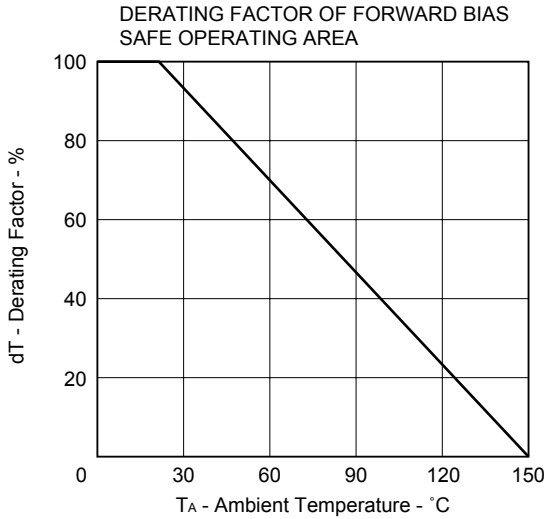
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D=250 \mu\text{A}$ , $V_{GS}=0\text{V}$	16			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=16\text{V}$ , $V_{GS}=0\text{V}$			1	$\mu\text{A}$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0\text{V}$ , $V_{GS}=\pm 7\text{V}$			$\pm 3$	$\mu\text{A}$
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS}=3\text{V}$ , $I_D=100\mu\text{A}$	0.5		1.1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=1.5\text{V}$ , $I_D=50\text{mA}$			3.2	$\Omega$
		$V_{GS}=2.5\text{V}$ , $I_D=500\text{mA}$			0.6	
		$V_{GS}=4\text{V}$ , $I_D=1\text{A}$			0.5	
Forward Transconductance	$g_{FS}$	$V_{DS}=3\text{V}$ , $I_D=1\text{A}$	1			S
Input Capacitance	$C_{iss}$	$V_{GS}=0\text{V}$ , $V_{DS}=3\text{V}$ , $f=1\text{MHz}$		160		pF
Output Capacitance	$C_{oss}$			150		
Reverse Transfer Capacitance	$C_{rss}$			50		
Turn-On DelayTime	$t_{d(on)}$			45		
Turn-On Rise Time	$t_r$	$V_{GS(on)}=3\text{V}$ , $V_{DS}=3\text{V}$ , $I_D=0.5\text{A}$ , $R_L=6 \Omega$ , $R_G=10 \Omega$		190		
Turn-Off DelayTime	$t_{d(off)}$			180		
Turn-Off Fall Time	$t_f$			210		

#### ■ Marking

Marking	NQ
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## N-Channel MOSFET 2SK1959

■ Typical Characteristics



## N-Channel MOSFET 2SK1959

■ Typical Characteristics

