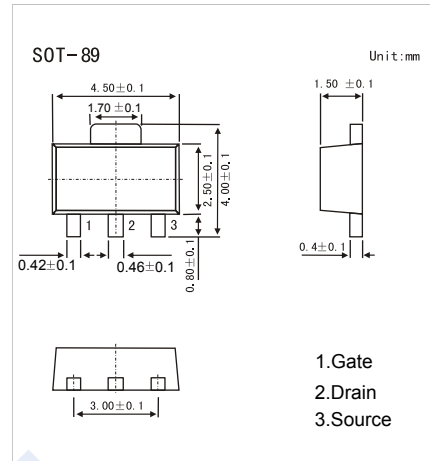
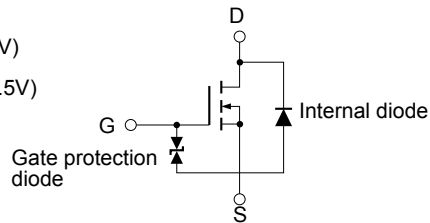


N-Channel MOSFET

2SK2159

Features

- $V_{DS} = 60V$
- $I_D = 2A$
- $R_{DS(ON)} < 0.3\ \Omega$ ($V_{GS} = 4V$)
- $R_{DS(ON)} < 0.5\ \Omega$ ($V_{GS} = 2.5V$)



Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 14	
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	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{BSS}	$I_D = 250\ \mu A$, $V_{GS} = 0V$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60V$, $V_{GS} = 0V$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V$, $V_{GS} = \pm 14V$			± 10	μA
Gate Cutt-off Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	0.5		1.1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 4V$, $I_D = 1A$			0.3	Ω
		$V_{GS} = 2.5V$, $I_D = 1A$			0.5	
		$V_{GS} = 1.5V$, $I_D = 0.1A$			0.7	
Forward Transconductance	g_{FS}	$V_{DS} = 10V$, $I_D = 1A$	0.4			S
Input Capacitance	C_{iss}	$V_{GS} = 0V$, $V_{DS} = 10V$, $f = 1MHz$		319		pF
Output Capacitance	C_{oss}			109		
Reverse Transfer Capacitance	C_{rss}			22		
Turn-On DelayTime	$t_{d(on)}$				38	
Turn-On Rise Time	t_r	$V_{GS(on)} = 3V$, $V_{DS} = 25V$, $I_D = 1A$, $R_L = 25\ \Omega$, $R_G = 10\ \Omega$		128		
Turn-Off DelayTime	$t_{d(off)}$			237		
Turn-Off Fall Time	t_f			130		

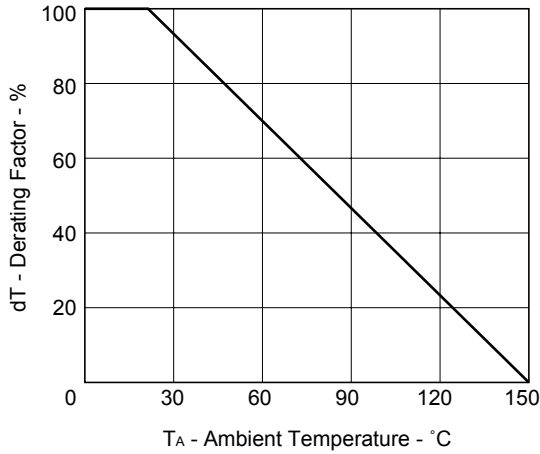
Marking

Marking	NW
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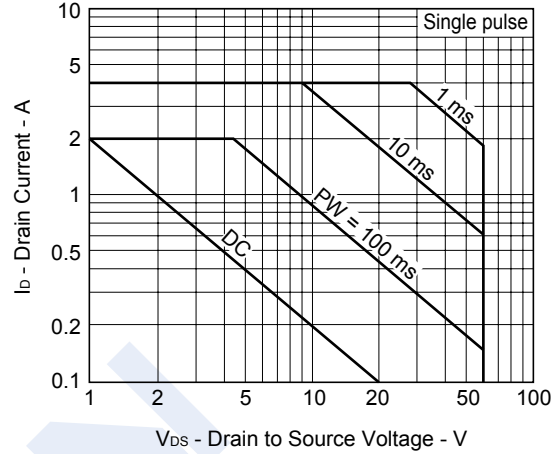
N-Channel MOSFET 2SK2159

■ Typical Characteristics

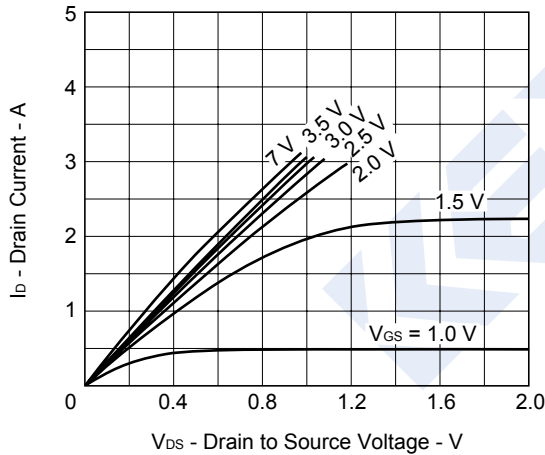
DERATING FACTOR OF FORWARD BIAS
SAFE OPERATING AREA



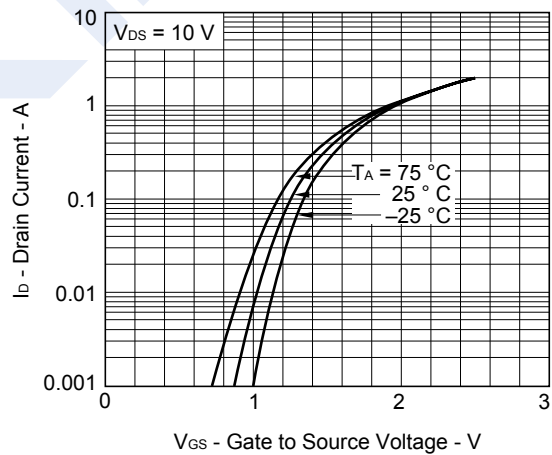
FORWARD BIAS SAFE OPERATING AREA



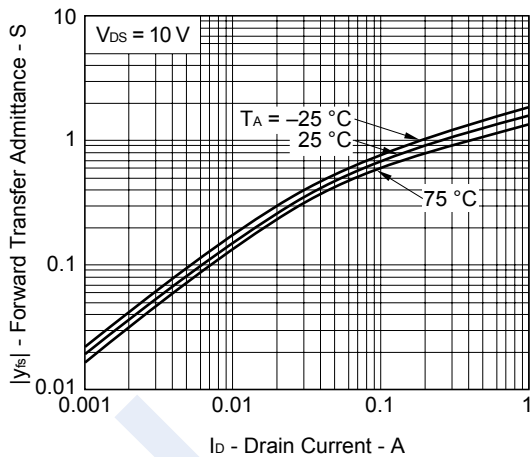
DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



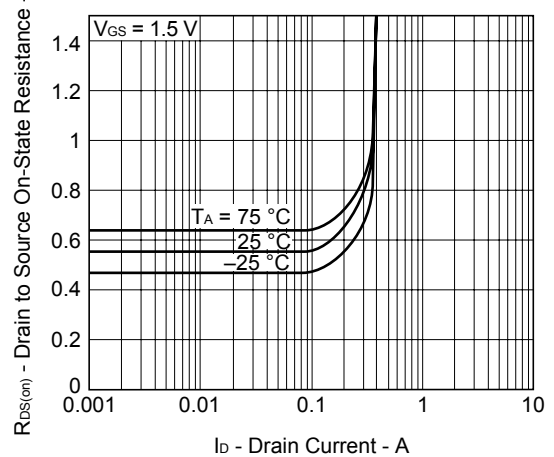
TRANSFER CHARACTERISTICS



FORWARD TRANSFER ADMITTANCE vs.
DRAIN CURRENT



DRAIN TO SOURCE ON-STATE RESISTANCE
vs. DRAIN CURRENT



N-Channel MOSFET 2SK2159

■ Typical Characteristics

