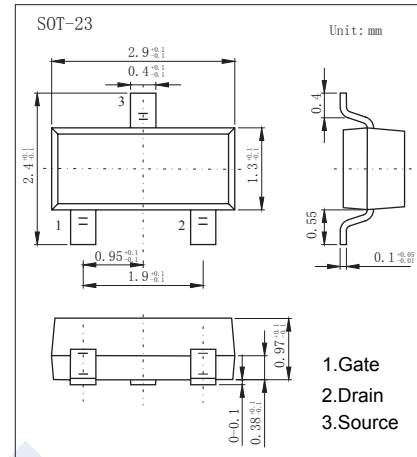
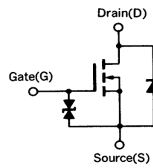


N-Channel MOSFET

2SK1133

■ Features

- $V_{DS} (V) = 50V$
- $I_D = 100\text{ mA}$
- $R_{DS(ON)} < 50\ \Omega$ ($V_{GS} = 4V$)
- Compliments the 2SJ166



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	50	V
Gate-Source Voltage	V_{GS}	± 7	
Continuous Drain Current	I_D	100	mA
Pulsed Drain Current (Note.1)	I_{DM}	200	
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Channel Temperature	T_{ch}	150	
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}	$I_D = 250\ \mu\text{A}$, $V_{GS} = 0V$	50			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 50V$, $V_{GS} = 0V$			10	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V$, $V_{GS} = \pm 7V$			± 10	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 5V$, $I_D = 1\ \mu\text{A}$	1		2	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 4V$, $I_D = 20\text{mA}$			50	Ω
Forward Transconductance	g_{FS}	$V_{DS} = 5V$, $I_D = 20\text{mA}$	20	40		ms
Input Capacitance	C_{iss}	$V_{GS} = 0V$, $V_{DS} = 5V$, $f = 1\text{MHz}$		7		pF
Output Capacitance	C_{oss}			6		
Reverse Transfer Capacitance	C_{rss}			2		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS} = 5V$, $V_{DS} = 5V$, $I_D = 20\text{mA}$, $R_L = 250\ \Omega$, $R_G = 10\ \Omega$		6		ns
Turn-On Rise Time	t_r			25		
Turn-Off DelayTime	$t_{d(off)}$			36		
Turn-Off Fall Time	t_f			35		

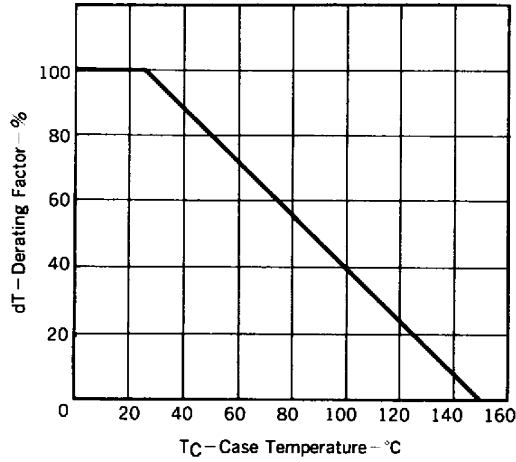
■ Marking

Marking	G11
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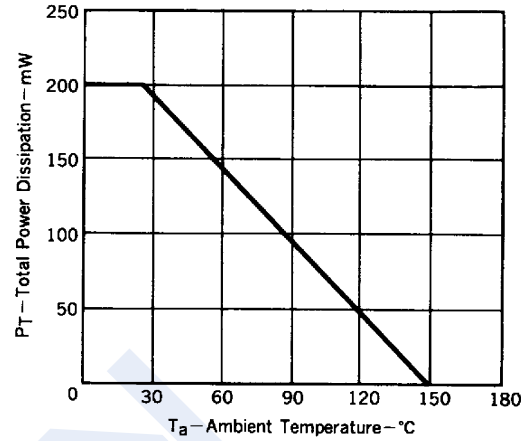
N-Channel MOSFET 2SK1133

■ Typical Characteristics

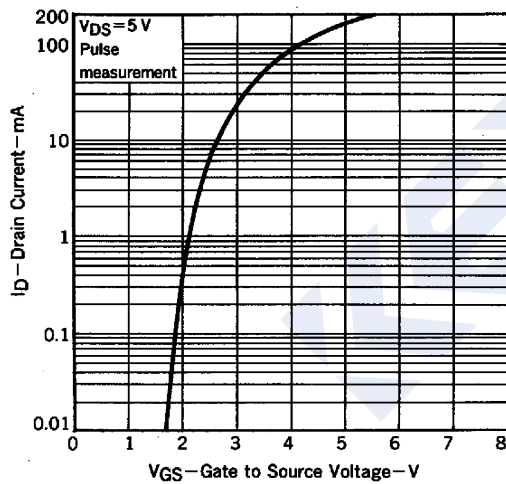
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



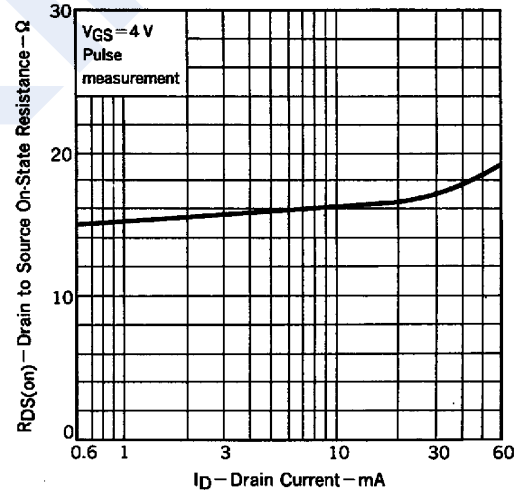
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



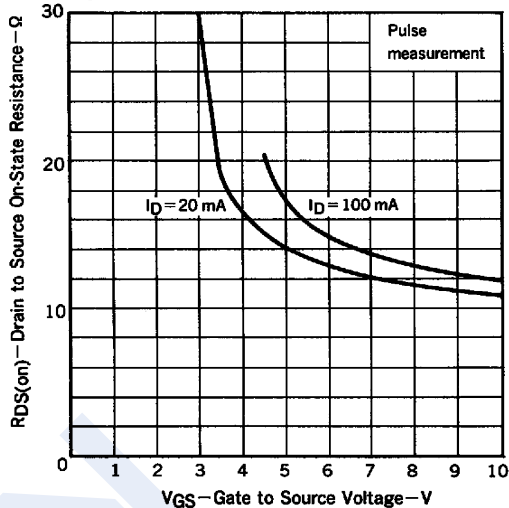
TRANSFER CHARACTERISTICS



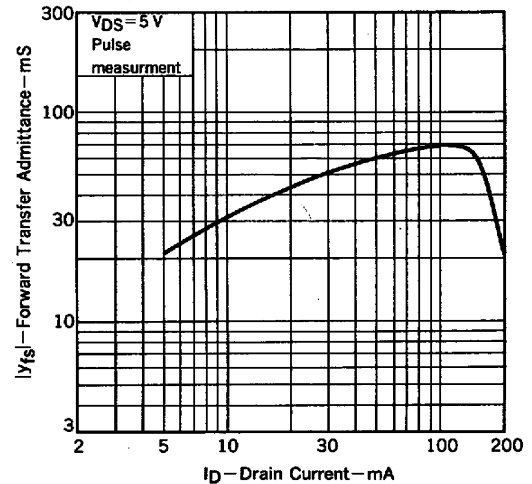
DRAIN TO SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



DRAIN TO SOURCE ON-STATE RESISTANCE vs. GATE TO SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



N-Channel MOSFET

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Typical Characteristics

