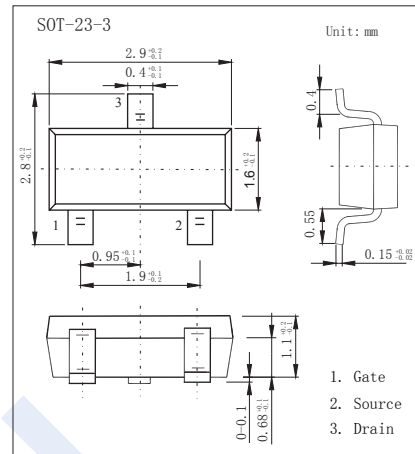
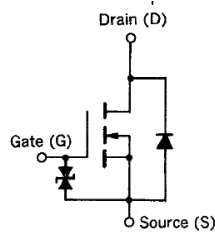


## N-Channel MOSFET

### 2SK1581

#### Features

- $V_{DS} = 16V$
- $I_D = 0.2 A$
- $R_{DS(ON)} < 5 \Omega$  ( $V_{GS} = 2.5V$ )
- $R_{DS(ON)} < 3 \Omega$  ( $V_{GS} = 4V$ )



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	16	V
Gate-Source Voltage	$V_{GS}$	$\pm 16$	
Continuous Drain Current	$I_D$	200	mA
Pulsed Drain Current (Note.1)	$I_{DM}$	400	
Power Dissipation $T_a = 25^\circ C$	$P_D$	200	mW
Junction Temperature	$T_J$	150	$^\circ C$
Operating Temperature	$T_{opt}$	-55 to 80	
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	$V_{DSS}$	$I_D = 250 \mu A$ , $V_{GS} = 0V$	16			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 16V$ , $V_{GS} = 0V$			1	$\mu A$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS} = 0V$ , $V_{GS} = \pm 3V$			$\pm 5$	$\mu A$
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 3V$ , $I_D = 10 \mu A$	0.8		1.6	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 2.5V$ , $I_D = 1m A$			5	$\Omega$
		$V_{GS} = 4V$ , $I_D = 1m A$			3	
Forward Transconductance	$g_{FS}$	$V_{DS} = 3V$ , $I_D = 10m A$	20	70		mS
Input Capacitance	$C_{iss}$	$V_{GS} = 0V$ , $V_{DS} = 3V$ , $f = 1MHz$		27		pF
Output Capacitance	$C_{oss}$			37		
Reverse Transfer Capacitance	$C_{rss}$			8		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS(on)} = 3V$ , $V_{DS} = 3V$ , $I_D = 10mA$ , $R_L = 300 \Omega$ , $R_G = 10 \Omega$		100		ns
Turn-On Rise Time	$t_r$			300		
Turn-Off DelayTime	$t_{d(off)}$			210		
Turn-Off Fall Time	$t_f$			240		

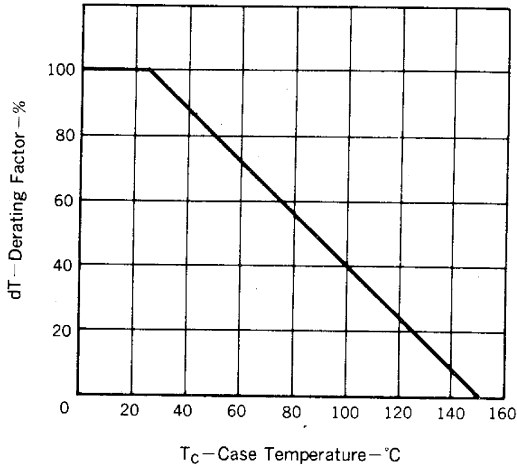
#### Marking

Marking	G14

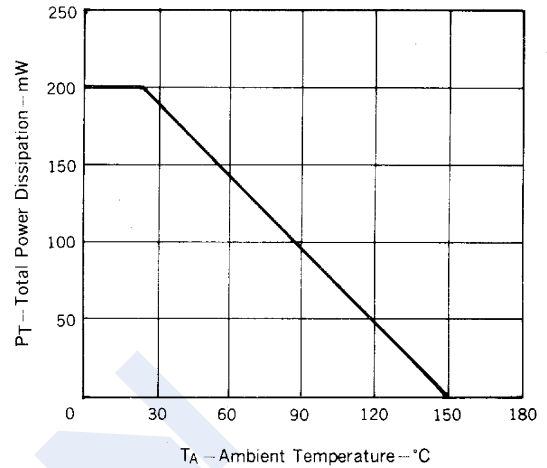
## N-Channel MOSFET 2SK1581

■ Typical Characteristics

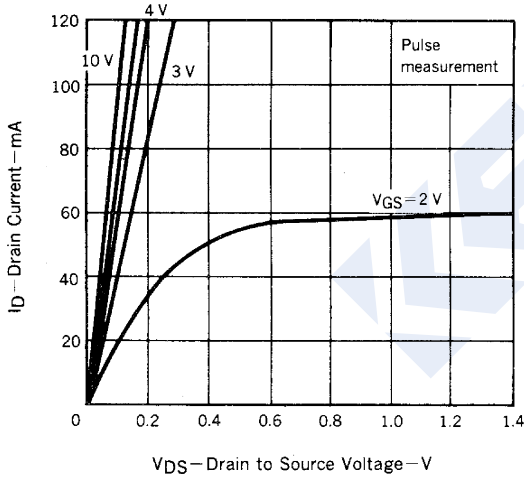
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



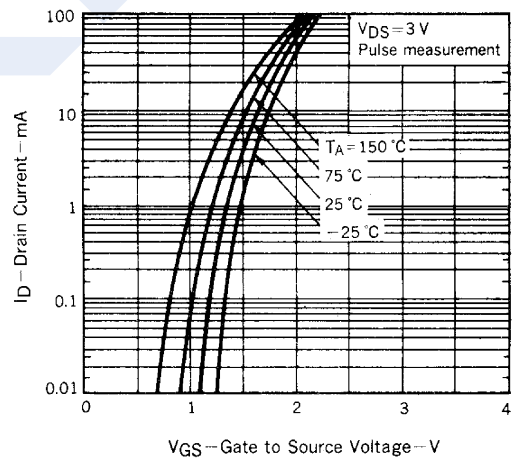
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



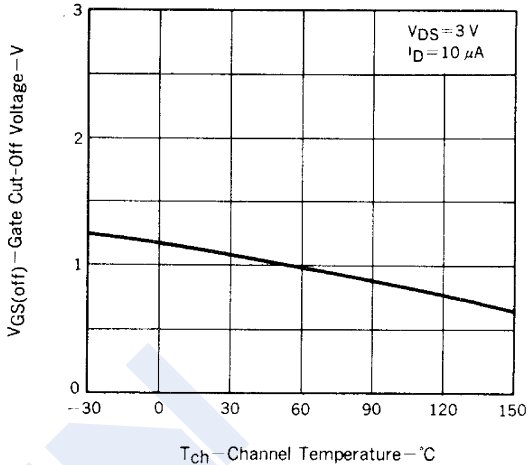
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



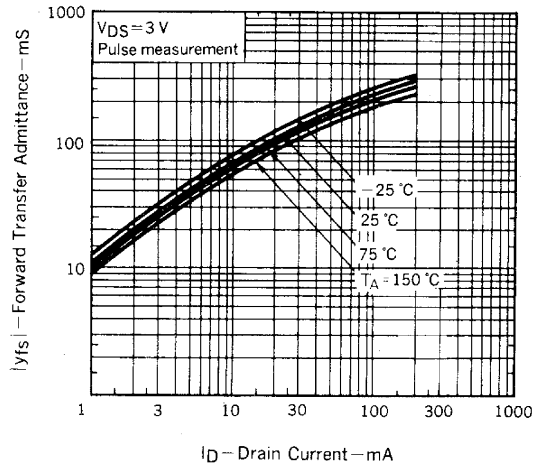
TRANSFER CHARACTERISTICS



GATE TO SOURCE CUTOFF VOLTAGE vs. CHANNEL TEMPERATURE



FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



## N-Channel MOSFET 2SK1581

### Typical Characteristics

