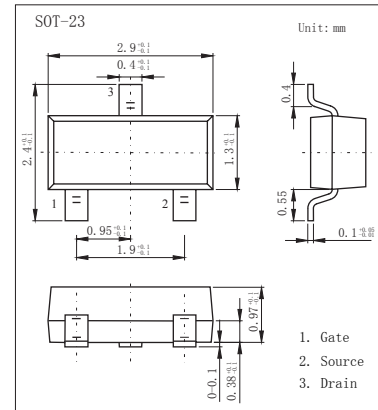
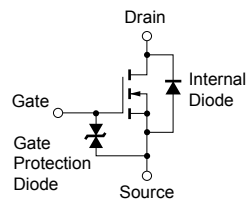


N-Channel MOSFET

2SK1399

■ Features

- Can be driven by a 3.0-V power source
- Not necessary to consider driving current because of its high input impedance
- Possible to reduce the number of parts by omitting the bias resistor
- Complements the 2SJ185



■ 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 $T_a = 25^\circ\text{C}$	P_D	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Operating Temperature	T_{opt}	-55 to 80	
Storage Temperature Range	T_{stg}	-55 to 150	

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

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

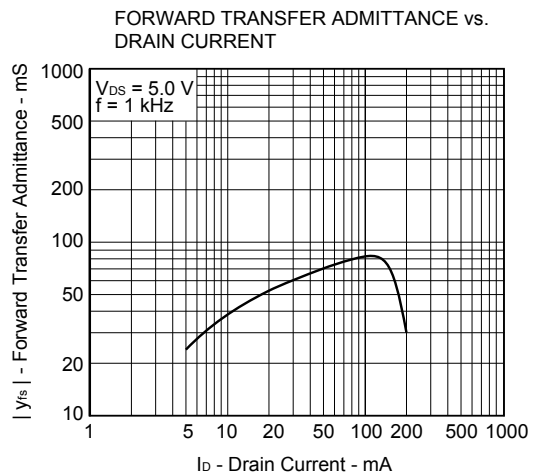
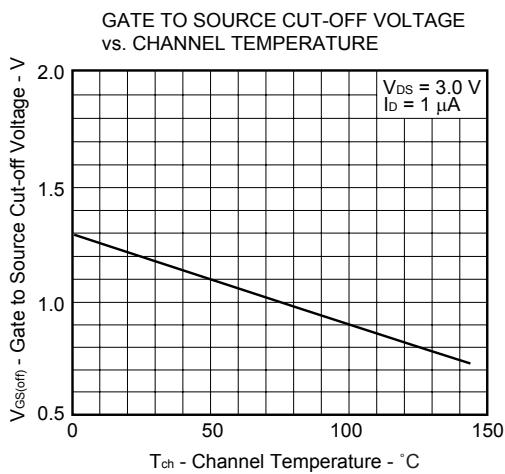
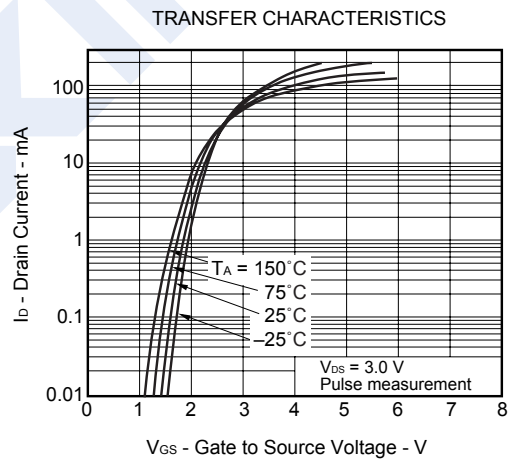
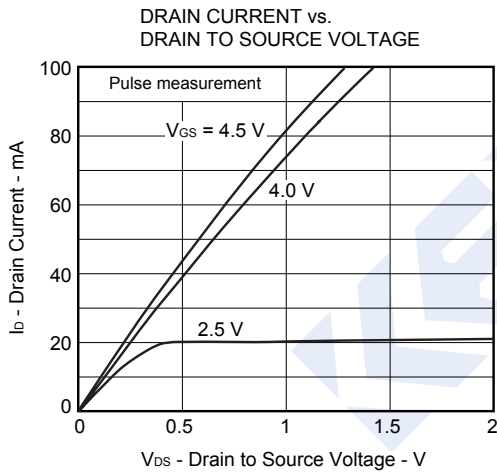
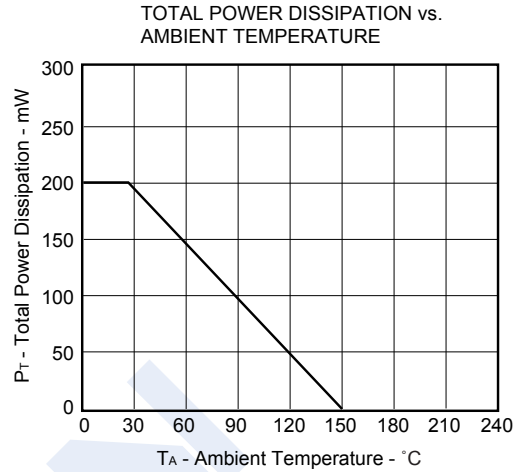
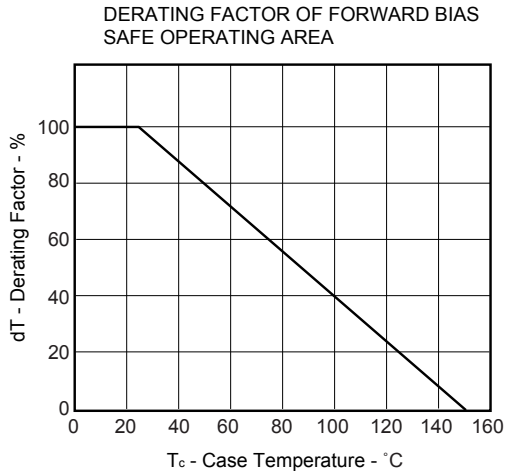
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=250\ \mu\text{A}$, $V_{GS}=0\text{V}$	50			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=50\text{V}$, $V_{GS}=0\text{V}$			10	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 7\text{V}$			± 5	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS}=3\text{V}$, $I_D=1\ \mu\text{A}$	0.9		1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=2.5\text{V}$, $I_D=10\text{mA}$			40	Ω
		$V_{GS}=4\text{V}$, $I_D=10\text{mA}$			20	
Forward Transconductance	g_{FS}	$V_{DS}=3\text{V}$, $I_D=10\text{mA}$	20	38		ms
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$, $V_{DS}=3\text{V}$, $f=1\text{MHz}$		8		μF
Output Capacitance	C_{oss}			7		
Reverse Transfer Capacitance	C_{rss}			3		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=3\text{V}$, $V_{DS}=3\text{V}$, $I_D=20\text{mA}$, $R_L=150\ \Omega$, $R_G=10\ \Omega$		15		ns
Turn-On Rise Time	t_r			100		
Turn-Off DelayTime	$t_{d(off)}$			30		
Turn-Off Fall Time	t_f			35		

■ Marking

Marking	G12

N-Channel MOSFET 2SK1399

Typical Characteristics



N-Channel MOSFET 2SK1399

■ Typical Characteristics

