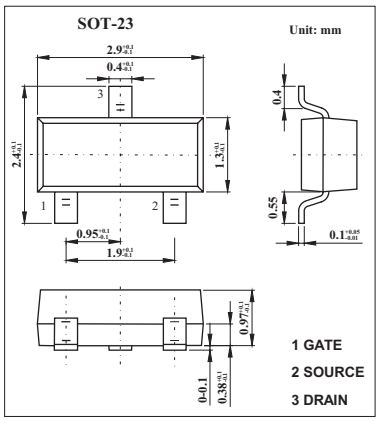
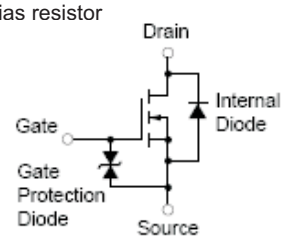
MOS Field Effect Transistor

2SK1399



■ Features

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



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	50	V
Gate to source voltage	V_{GSS}	±7.0	V
Drain current (DC)	I_D	±100	mA
Drain current(pulse) *	I_D	±200	mA
Power dissipation	P_D	200	m W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤ 10ms, duty cycle ≤ 5%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=50V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±7.0V,V_{DS}=0			±5.0	μA
Gate to source cutoff voltage	$V_{GS(off)}$	V_{DS}=3.0V,I_D=1μA	0.9	1.2	1.5	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=3.0V,I_D=10mA	20	38		ms
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=2.5V,I_D=10mA		22	40	Ω
		V_{GS}=4.0V,I_D=10mA		14	20	Ω
Input capacitance	C_{iss}	V_{DS}=3.0V,V_{GS}=0,f=1MHZ		8		pF
Output capacitance	C_{oss}			7		pF
Reverse transfer capacitance	C_{rss}			3		pF
Turn-on delay time	$t_{d(on)}$	I_D=20mA,$V_{GS(on)}$=3V,R_L=150Ω,V_{DD}=3.0V,R_G=10Ω		15		ns
Rise time	t_r			100		ns
Turn-off delay time	$t_{d(off)}$			30		ns
Fall time	t_f			35		ns

■ Marking

Marking	G12