

## SMD Type

## MOSFET

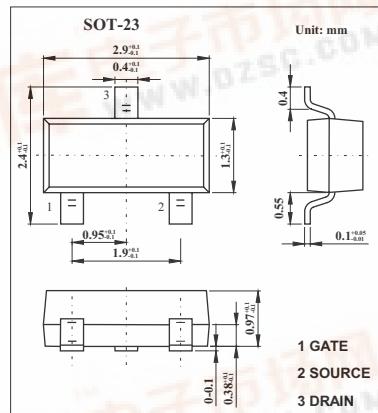
# MOS Field Effect Transistor

## 2SJ209



### ■ Features

- Directly driven by  $I_{GS}$  having a 5V power supply.
- Not necessary to consider driving current because of its high input impedance.
- Possible to reduce the number of parts by omitting the biasresistor.



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

Parameter	Symbol	Rating	Unit
Drain to source voltage $V_{GS}=0$	$V_{DSS}$	-100	V
Gate to source voltage $V_{DS}=0$	$V_{GSS}$	$\pm 16$	V
Drain current (DC)	$I_D$	$\pm 100$	$\text{mA}$
Drain current(pulse) *	$I_D$	$\pm 200$	$\text{mA}$
Power dissipation	$P_D$	200	$\text{mW}$
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\* PW  $\leq 10 \text{ ms}$ ; d  $\leq 50\%$ .

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS}=-100\text{V}, V_{GS}=0$			-10	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 16\text{V}, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gate cut-off voltage	$V_{GS(off)}$	$V_{DS}=-5.0\text{V}, I_D=-1\text{ mA}$	-1.5	-2.0	-2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=-5.0\text{V}, I_D=-10\text{mA}$	15	22		ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=-4.0\text{V}, I_D=-10\text{mA}$		60	100	$\Omega$
		$V_{GS}=-10\text{V}, I_D=-10\text{mA}$		37	60	$\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=-5.0\text{V}, V_{GS}=0, f=1\text{MHz}$		17		pF
Output capacitance	$C_{oss}$			9		pF
Reverse transfer capacitance	$C_{rss}$			1		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS(on)}=-4\text{V}, R_G=10\Omega, V_{DD}=-5\text{V}, I_D=-10\text{mA}, R_L=500\Omega$		45		ns
Rise time	$t_r$			75		ns
Turn-off delay time	$t_{d(off)}$			25		ns
Fall time	$t_f$			80		ns

### ■ Marking

Marking

H17