

## MOS Field Effect Transistor

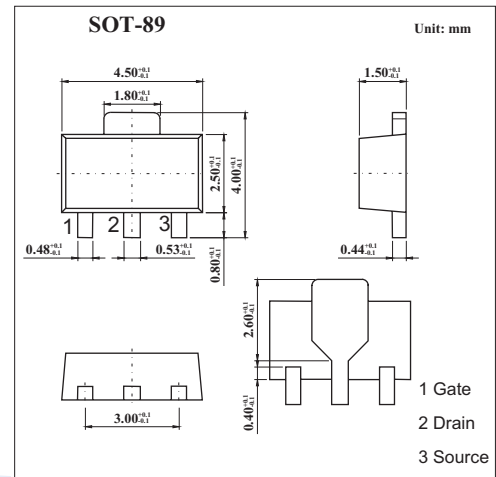
### 2SK1592

#### ■ Features

- Directly driven by Ics having a 5V power supply.
- Has low on-state resistance.

$R_{DS(on)}=2.5\ \Omega$  MAX. @ $V_{GS}=4.0V, I_D=0.3A$

$R_{DS(on)}=2.0\ \Omega$  MAX. @ $V_{GS}=10V, I_D=0.3A$



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DS}$	60	V
Gate to source voltage	$V_{GS}$	$\pm 20$	V
Drain current (DC)	$I_D$	$\pm 500$	mA
Drain current(pulse) *	$I_D$	$\pm 1.0$	A
Power dissipation	$P_D$	2.0	W
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\*  $PW \leq 10\text{ms}$ , duty cycle  $\leq 5\%$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0$			1.0	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0$			$\pm 1.0$	$\mu\text{A}$
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1\text{mA}$	0.8	1.2	2.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=0.5A$	400	570		ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=4.0V, I_D=0.3A$		1.6	2.5	$\Omega$
		$V_{GS}=10V, I_D=0.3A$		1.2	2.0	$\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1\text{MHz}$		52		pF
Output capacitance	$C_{oss}$			34		pF
Reverse transfer capacitance	$C_{rss}$			7		pF
Turn-on delay time	$t_{d(on)}$				60	
Rise time	$t_r$	$I_D=0.3A, V_{GS(on)}=4V, R_L=33\ \Omega, V_{DD}=10V, R_G=10\ \Omega$		150		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	$t_f$			100		ns

#### ■ Marking

Marking	NO
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