

## MOS Field Effect Transistor

### 2SK1585

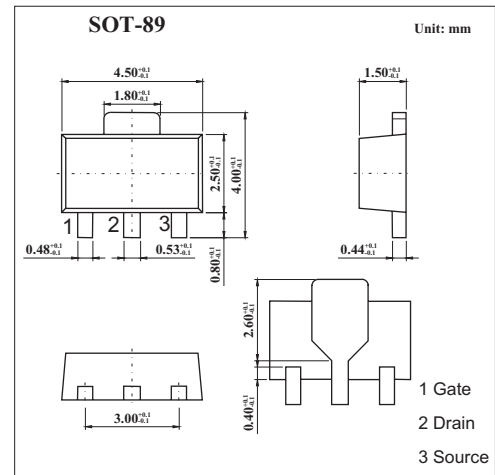
#### ■ Features

- Directly driven by ICs having a 3V power supply.

- Has low on-state resistance

$R_{DS(on)}=1.2\ \Omega$  MAX. @  $V_{GS}=2.5V, I_D=0.5A$

$R_{DS(on)}=1.0\ \Omega$  MAX. @  $V_{GS}=4.0V, I_D=0.5A$



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DS}$	16	V
Gate to source voltage	$V_{GS}$	$\pm 16$	V
Drain current (DC)	$I_D$	$\pm 1.0$	A
Drain current(pulse) *	$I_D$	$\pm 2.0$	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	$I_{DSS}$	$V_{DS}=16V, V_{GS}=0$			10	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 16V, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=5V, I_D=1\text{mA}$	0.8	1.2	1.6	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=5.0V, I_D=0.5A$	0.4	1.0		s
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=2.5V, I_D=0.5A$		0.6	1.2	$\Omega$
		$V_{GS}=4.0V, I_D=0.5A$		0.3	1.0	$\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=3.0V, V_{GS}=0, f=1\text{MHz}$		116		pF
Output capacitance	$C_{oss}$			107		pF
Reverse transfer capacitance	$C_{rss}$			27		pF
Turn-on delay time	$t_{d(on)}$				80	
Rise time	$t_r$	$I_D=0.5A, V_{GS(on)}=3V, R_L=6\ \Omega, V_{DD}=10V, R_G=10\ \Omega$		260		ns
Turn-off delay time	$t_{d(off)}$			145		ns
Fall time	$t_f$			110		ns

#### ■ Marking

Marking	NE
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