

MOS Field Effect Transistor

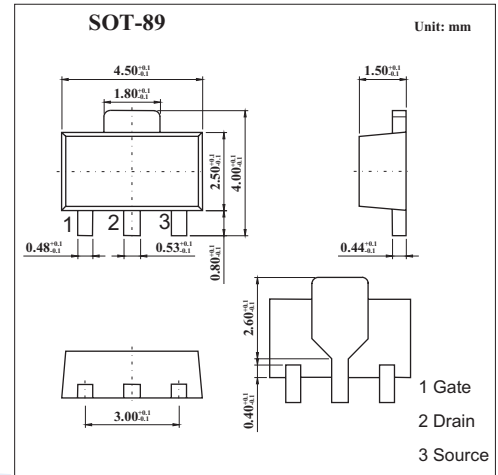
2SK1583

■ Features

- Can be driven by lcs having a3V single power supply.
- Has low on-state resistance

$R_{DS(on)}=2.0\ \Omega$ MAX.@ $V_{GS}=2.5V, I_D=0.3A$

$R_{DS(on)}=1.5\ \Omega$ MAX.@ $V_{GS}=4.0V, I_D=0.3A$



■ 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}	± 16	V
Drain current (DC)	I_D	± 0.5	A
Drain current(pulse) *	I_D	± 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	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=16V, V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0$			± 10	μA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=5.0V, I_D=10\text{mA}$	0.9	1.2	1.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=5.0V, I_D=0.3A$	20	60		ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=2.5V, I_D=0.3A$		1.8	2.0	Ω
		$V_{GS}=4.0V, I_D=0.3A$		0.8	1.5	Ω
Input capacitance	C_{iss}	$V_{DS}=5.0V, V_{GS}=0, f=1\text{MHz}$		60		pF
Output capacitance	C_{oss}			70		pF
Reverse transfer capacitance	C_{rss}			15		pF
Turn-on delay time	$t_{d(on)}$				95	
Rise time	t_r	$I_D=0.3A, V_{GS(on)}=3V, R_L=33\ \Omega, V_{DD}=10V, R_G=10\ \Omega$		360		ns
Turn-off delay time	$t_{d(off)}$			160		ns
Fall time	t_f			150		ns

■ Marking

Marking	ND
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