

MOS Field Effect Transistor

2SK1588

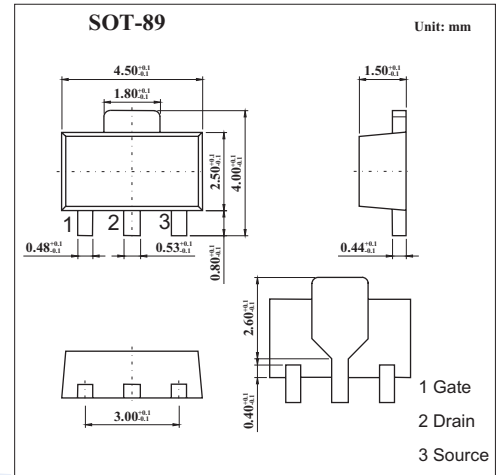
■ Features

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

- Has low on-state resistance

$R_{DS(on)}=0.5\ \Omega$ MAX. @ $V_{GS}=2.5V, I_D=1.0A$

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



■ 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}	± 16	V
Drain current (DC)	I_D	± 3.0	A
Drain current(pulse) *	I_D	± 6.0	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	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0$			± 5.0	μA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=5V, I_D=1\text{mA}$	0.8	1.0	1.6	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3V, I_D=1.0A$	0.4	3.0		s
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=2.5V, I_D=1.0A$		0.25	0.5	Ω
		$V_{GS}=4.0V, I_D=1.5A$		0.17	0.3	Ω
Input capacitance	C_{iss}	$V_{DS}=3.0V, V_{GS}=0, f=1\text{MHz}$		240		pF
Output capacitance	C_{oss}			250		pF
Reverse transfer capacitance	C_{rss}			60		pF
Turn-on delay time	$t_{d(on)}$				140	
Rise time	t_r	$I_D=1.5A, V_{GS(on)}=3.0V, R_L=2\ \Omega, V_{DD}=3V, R_G=10\ \Omega$		650		ns
Turn-off delay time	$t_{d(off)}$			120		ns
Fall time	t_f				160	

■ Marking

Marking	NG
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