

MOS Field Effect Transistor

2SK1587

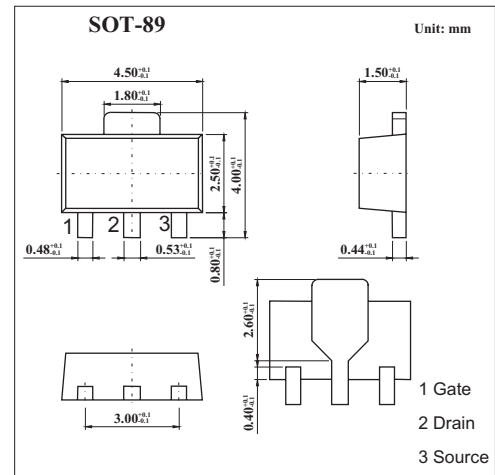
■ Features

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

- Has low on-state resistance

$R_{DS(on)} = 0.8 \Omega \text{ MAX. @ } V_{GS} = 2.5V, I_D = 0.5A$

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



■ 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	± 2.0	A
Drain current(pulse) *	I_D	± 4.0	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	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1\text{mA}$	0.8	1.2	1.6	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 5.0V, I_D = 1.0A$	0.4			s
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS} = 2.5V, I_D = 0.5A$		0.5	0.8	Ω
		$V_{GS} = 4.0V, I_D = 1.0A$		0.3	0.5	Ω
Input capacitance	C_{iss}	$V_{DS} = 5.0V, V_{GS} = 0, f = 1\text{MHz}$		180		pF
Output capacitance	C_{oss}			160		pF
Reverse transfer capacitance	C_{rss}			55		pF
Turn-on delay time	$t_{d(on)}$	$I_D = 1.0A, V_{GS(on)} = 3.0V, R_L = 10 \Omega, V_{DD} = 10V, R_G = 10 \Omega$		100		ns
Rise time	t_r			700		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	t_f			200		ns

■ Marking

Marking	NF
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