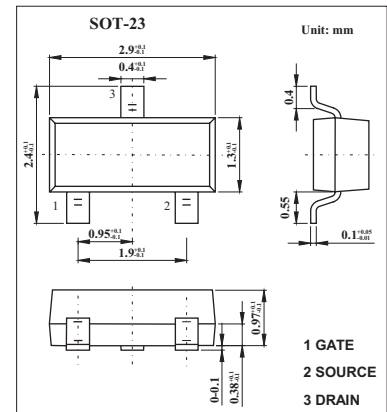


MOS Field Effect Transistor

2SK1590

■ Features

- Directly driven by Ics having a 5V power supply.
- Not necessary to consider driving current because of its high input impedance.



■ 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}	± 20	V
Drain current (DC)	I_D	± 200	mA
Drain current(pulse) *	I_D	± 400	mA
Power dissipation	P_D	200	mW
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}	$V_{DS}=60\text{V}, V_{GS}=0$			1.0	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			± 1.0	μA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=5\text{V}, I_D=1\mu\text{A}$	0.8	1.2	1.8	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=5.0\text{V}, I_D=10\text{mA}$	20	65		ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=4.0\text{V}, I_D=10\text{mA}$		3.2	6.0	Ω
		$V_{GS}=10\text{V}, I_D=10\text{mA}$		2.4	3.0	Ω
Input capacitance	C_{iss}	$V_{DS}=5.0\text{V}, V_{GS}=0, f=1\text{MHz}$		26		pF
Output capacitance	C_{oss}			20		pF
Reverse transfer capacitance	C_{rss}			4		pF
Turn-on delay time	$t_{d(on)}$	$I_D=10\text{mA}, V_{GS(on)}=5.0\text{V}, R_L=500\Omega, V_{DD}=5\text{V}, R_G=10\Omega$		50		ns
Rise time	t_r			140		ns
Turn-off delay time	$t_{d(off)}$			200		ns
Fall time	t_f			190		ns

■ Marking

Marking	G16
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