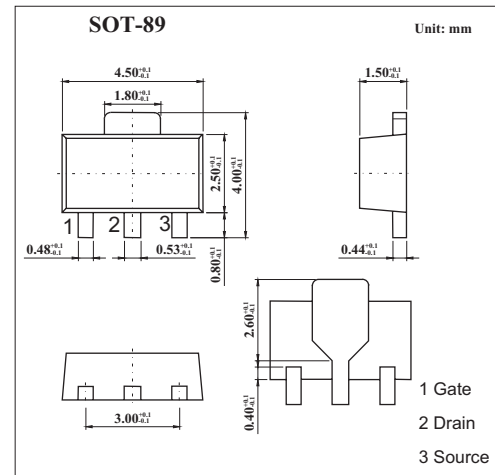
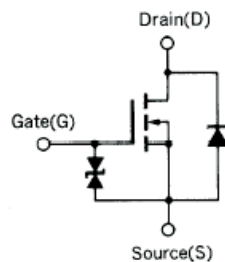


MOS Field Effect Transistor

2SK680A

■ Features

- Directly driven by lcs having a 5V power source.
- Not necessary to consider driving current because of its high input impedance.
- Has low on-state resistance
 $R_{DS(on)}=1.0\Omega\text{MAX. @}V_{GS}=4.0V, I_D=0.5A$
 $R_{DS(on)}=0.70\Omega\text{MAX. @}V_{GS}=10V, I_D=0.5A$



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	30	V
Gate to source voltage	V_{GS}	± 20	V
Drain current	I_D	± 1.0	A
	I_{DP}^*	± 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	$^\circ\text{C}$

* $PW \leq 10 \mu s$, Duty Cycle $\leq 1\%$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=30V, V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0$			± 10	μA
Gate cut off voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.0	1.6	2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=0.5A$	0.4			S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=4V, I_D=0.5A$		0.6	1.0	Ω
	$R_{DS(on)}$	$V_{GS}=10V, I_D=0.5A$		0.4	0.7	Ω
Input capacitance	C_{iss}	$V_{DS}=5.0V, V_{GS}=0, f=1MHz$		130		pF
Output capacitance	C_{oss}			70		pF
Reverse transfer capacitance	C_{rss}			30		pF
Turn-on delay time	t_{on}	$I_D=0.5A, V_{GS(on)}=10V, R_G=10\Omega, V_{DD}=25V, R_L=50\Omega$		12		ns
Rise time	t_r			44		ns
Turn-off delay time	t_{off}			310		ns
Fall time	t_f			160		ns