

MOS Field Effect Transistor

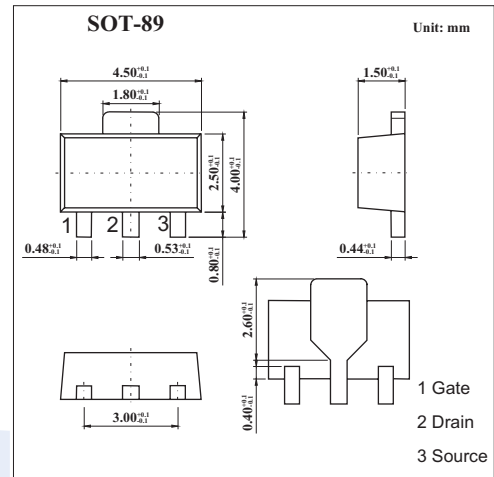
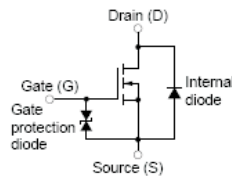
2SK1960

■ Features

- Gate can be driven by 1.5V
- Low ON resistance

$R_{DS(on)}=0.8\ \Omega$ MAX.@ $V_{GS}=1.5V, I_D=0.1A$

$R_{DS(on)}=0.2\ \Omega$ 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}	± 7	V
Drain current	I_D	± 3.0	A
	I_{DP}	± 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	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=16V, V_{GS}=0$			100	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 7V, V_{DS}=0$			± 3.0	μA
Gate to Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=3V, I_D=1\text{mA}$	0.5	0.8	1.1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3V, I_D=1.5A$	2.0			S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=1.5V, I_D=0.1A$		0.35	0.8	Ω
		$V_{GS}=2.5V, I_D=1.5A$		0.17	0.3	Ω
		$V_{GS}=4.0V, I_D=1.5A$		0.12	0.2	Ω
Input capacitance	C_{iss}	$V_{DS}=3V, V_{GS}=0, f=1\text{MHZ}$		370		pF
Output capacitance	C_{oss}			320		pF
Reverse transfer capacitance	C_{rss}			115		pF
Turn-on delay time	$t_{d(on)}$	$I_D=1.5A, V_{GS(on)}=3V, R_L=2\ \Omega, V_{DD}=3V, R_G=10\ \Omega$		70		ns
Rise time	t_r			200		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	t_f			200		ns