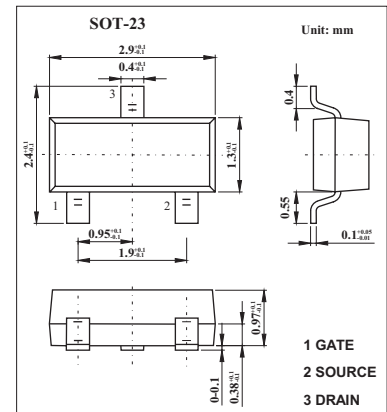
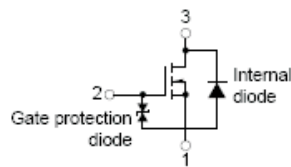


MOS Field Effect Transistor

2SK2158

■ Features

- Capable of drive gate with 1.5 V
- Because of high input impedance, there is no need to consider driving current.
- Bias resistance can be omitted, enabling reduction in total number of parts.



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	50	V
Gate to source voltage	V_{GS}	± 7.0	V
Drain current	I_D	± 0.1	A
	I_{DP}^*	± 0.2	A
Power dissipation	P_D	200	mW
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10 \mu\text{s}$, 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}	$V_{DS}=50\text{V}, V_{GS}=0$			1.0	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 7.0\text{V}, V_{DS}=0$			± 3.0	μA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=3\text{V}, I_D=10 \mu\text{A}$	0.5	0.7	1.1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3\text{V}, I_D=10\text{mA}$	20			ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=1.5\text{V}, I_D=1.0\text{mA}$		32	50	Ω
		$V_{GS}=2.5\text{V}, I_D=10\text{mA}$		16	20	Ω
		$V_{GS}=4.0\text{V}, I_D=1.0\text{mA}$		12	15	Ω
Input capacitance	C_{iss}	$V_{DS}=3\text{V}, V_{GS}=0, f=1\text{MHz}$		6		pF
Output capacitance	C_{oss}			8		pF
Reverse transfer capacitance	C_{rss}			1		pF
Turn-on delay time	$t_{d(on)}$	$I_D=20\text{mA}, V_{GS(on)}=3\text{V}, R_L=150 \Omega, R_G=10 \Omega, V_{DD}=3\text{V}$		9		ns
Rise time	t_r			48		ns
Turn-off delay time	$t_{d(off)}$			21		ns
Fall time	t_f			31		ns

■ Marking

Marking	G23
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