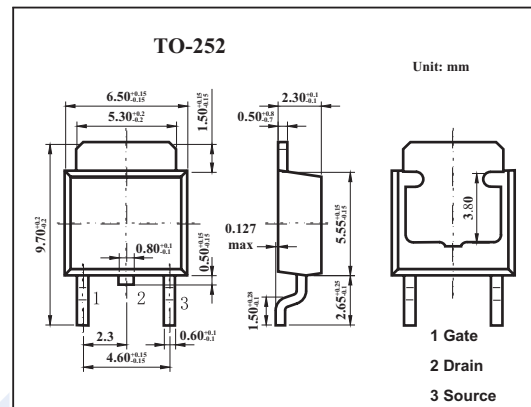
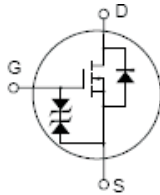


Silicon N-Channel MOSFET

2SK1838S

■ Features

- Low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator, DC-DC converter



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	250	V
Gate to source voltage	V_{GS}	± 30	V
Drain current	I_D	1	A
Power dissipation	P_D	10	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	Test conditions	Min	Typ	Max	Unit
Drain source breakdown voltage	V_{DS}	$I_D=10\text{mA}, V_{GS}=0$	250			V
Gate to source breakdown voltage	V_{GS}	$I_D = \pm 100 \mu\text{A}, V_{DS}=0$	± 30			V
Drain cut-off current	I_{DSS}	$V_{DS}=200\text{V}, V_{GS}=0$			100	μA
Gate leakage current	I_{GSS}	$V_{GS} = \pm 25\text{V}, V_{DS}=0$			± 10	μA
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=0.5\text{A}$	0.3	0.5		S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=0.5\text{A}$		5.5	8.0	Ω
Input capacitance	C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		60		pF
Output capacitance	C_{oss}			30		pF
Reverse transfer capacitance	C_{rss}			5		pF
Turn-on delay time	$t_{d(on)}$	$I_D=0.5\text{A}, V_{GS(on)}=10\text{V}, R_L=60 \Omega$		5		ns
Rise time	t_r			6		ns
Turn-off delay time	$t_{d(off)}$			10		ns
Fall time	t_f			4.5		ns