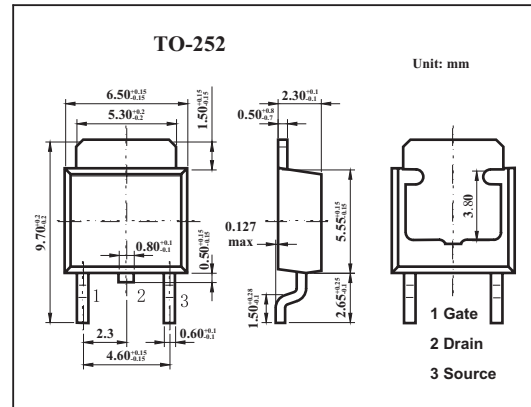
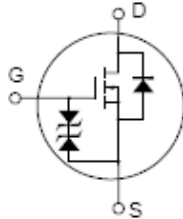


## Silicon N-Channel MOSFET

### 2SK1152S

#### Features

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



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DS}$	500	V
Gate to source voltage	$V_{GS}$	$\pm 30$	V
Drain current (DC)	$I_D$	1.5	A
Drain current(pulse) *	$I_D$	6	A
Power dissipation	$P_D$	20	W
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	Testconditions	Min	Typ	Max	Unit
Drain to source breakdown voltage	$V_{BSS}$	$I_D=10\text{mA}, V_{GS}=0$	500			V
Gate to source breakdown voltage	$V_{GSS}$	$I_D=\pm 100 \mu\text{A}, V_{DS}=0$	$\pm 30$			V
Drain cut-off current	$I_{DSS}$	$V_{DS}=400\text{V}, V_{GS}=0$			100	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 25\text{V}, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	2.0		3.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=20\text{V}, I_D=1\text{A}$	0.6	1.1		s
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=1\text{A}$		4.0	6.0	$\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		160		pF
Output capacitance	$C_{oss}$			45		pF
Reverse transfer capacitance	$C_{rss}$			5		pF
Turn-on delay time	$t_{d(on)}$	$I_D=1\text{A}, V_{GS(on)}=0, R_L=30 \Omega$		5		ns
Rise time	$t_r$			10		ns
Turn-off delay time	$t_{d(off)}$			20		ns
Fall time	$t_f$			10		ns