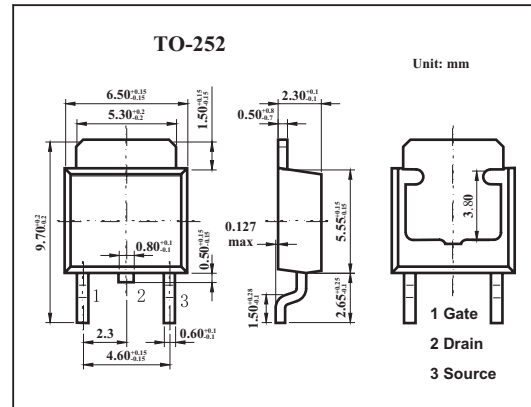
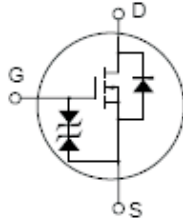


Silicon N-Channel MOSFET

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}	± 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}	$I_D=\pm 100 \mu\text{A}, V_{DS}=0$	± 30			V
Drain cut-off current	I_{DSS}	$V_{DS}=400\text{V}, V_{GS}=0$			100	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 25\text{V}, V_{DS}=0$			± 10	μA
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	Ω
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