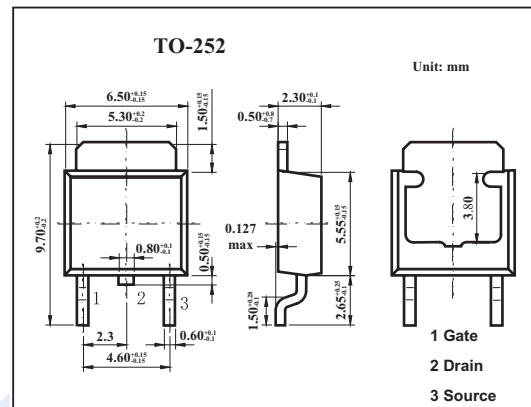
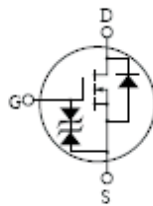


Silicon N-Channel Power F-MOSFET

2SK3025

■ Features

- Avalanche energy capacity guaranteed
- High-speed switching
- Low ON-resistance
- No secondary breakdown
- Low-voltage drive
- High electrostatic breakdown voltage



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

Parameter	Symbol	Rating	Unit	
Drain to source voltage	V_{DS}	60	V	
Gate to source voltage	V_{GS}	± 20	V	
Drain current	I_D	± 30	A	
	I_{DP}^*	± 60	A	
Power dissipation	P_D	$T_c=25^\circ\text{C}$	20	W
		$T_A=25^\circ\text{C}$	1	
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 to source breakdown voltage	V_{DS}	$I_D=1\text{mA}, V_{GS}=0$	60			V
Drain cut-off current	I_{DSS}	$V_{DS}=50\text{V}, V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			± 10	μA
Gate threshold voltage	V_{th}	$V_{DS}=10\text{V}, I_D=1\text{mA}$	1		2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=15\text{A}$	9	18		S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=15\text{A}$		25	40	$\text{m}\Omega$
		$V_{GS}=4\text{V}, I_D=15\text{A}$		35	55	$\text{m}\Omega$
Input capacitance	C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		1200		pF
Output capacitance	C_{oss}			400		pF
Reverse transfer capacitance	C_{rss}			200		pF
Turn-on delay time	t_{on}	$I_D=15\text{A}, V_{GS(on)}=10\text{V}, R_L=2\Omega, V_{DD}=30\text{V}$		10		ns
Rise time	t_r			20		ns
Turn-off delay time	t_{off}			350		ns
Fall time	t_f			140		ns