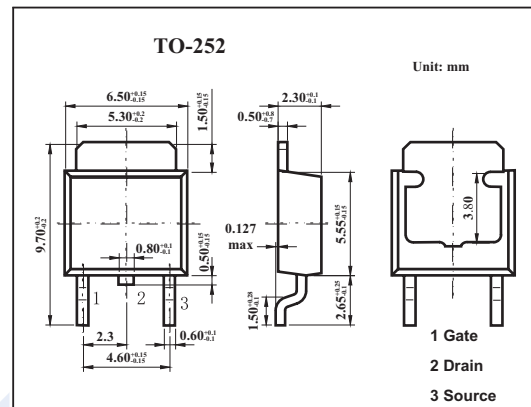


## Silicon N-Channel MOSFET

### 2SK2503

#### ■ Features

- Low on-resistance.
- Fast switching speed.
- Wide SOA (safe operating area).
- Easily designed drive circuits.
- Easy to parallel.



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DSS}$	60	V
Gate to source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	$I_D$	5	A
	$I_{dp}^*$	20	A
Power dissipation	$P_D$	20	W
Channel temperature	$T_{ch}$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

\*  $PW \leq 10 \mu s$ , Duty Cycle  $\leq 1\%$

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain source breakdown voltage	$V_{DSS}$	$I_D=1mA, V_{GS}=0V$	60			V
Drain cut-off current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0$			10	$\mu A$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=10V, I_D=1mA$	1.0		2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=2.5A$	4.0			S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=2.5A$		0.11	0.135	$\Omega$
		$V_{GS}=4V, I_D=2.5A$		0.17	0.20	$\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		520		pF
Output capacitance	$C_{oss}$			240		pF
Reverse transfer capacitance	$C_{rss}$			100		pF
Turn-on delay time	$t_{on}$				5	ns
Rise time	$t_r$	$I_D=2.5A, V_{GS(on)}=10V, R_G=10\Omega, R_L=12\Omega, V_{DD}=30V$		20		ns
Turn-off delay time	$t_{off}$				50	ns
Fall time	$t_f$				20	ns