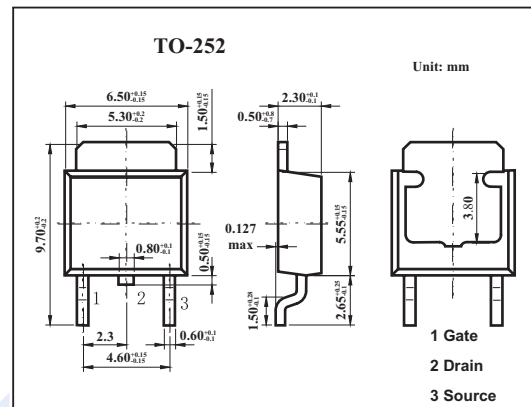


## Silicon N-Channel MOSFET

### 2SK2504

#### ■ 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 <sub>DSS</sub>	100	V
Gate to source voltage	V <sub>GSS</sub>	±20	V
Drain current	I <sub>D</sub>	5	A
	I <sub>DP</sub> *	20	A
Power dissipation	P <sub>D</sub>	20	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 10 μs, Duty Cycle ≤ 1%

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain source breakdown voltage	V <sub>DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0V	100			V
Drain cut-off current	I <sub>DSS</sub>	V <sub>Ds</sub> =100V, V <sub>GS</sub> =0			10	μA
Gate leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>Ds</sub> =0			±100	nA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>Ds</sub> =10V, I <sub>D</sub> =1mA	1.0		2.5	V
Forward transfer admittance	Y <sub>fs</sub>	V <sub>Ds</sub> =10V, I <sub>D</sub> =2.5A	4.0			S
Drain to source on-state resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =2.5A		0.18	0.22	Ω
		V <sub>GS</sub> =4V, I <sub>D</sub> =2.5A		0.25	0.28	Ω
Input capacitance	C <sub>iss</sub>	V <sub>Ds</sub> =10V, V <sub>GS</sub> =0, f=1MHZ		520		pF
Output capacitance	C <sub>oss</sub>			175		pF
Reverse transfer capacitance	C <sub>rss</sub>			60		pF
Turn-on delay time	t <sub>on</sub>				5	
Rise time	t <sub>r</sub>	I <sub>D</sub> =2.5A, V <sub>GS(on)</sub> =10V, R <sub>G</sub> =10Ω, R <sub>L</sub> =20Ω, V <sub>DD</sub> =50V		20		ns
Turn-off delay time	t <sub>off</sub>			50		ns
Fall time	t <sub>f</sub>			20		ns