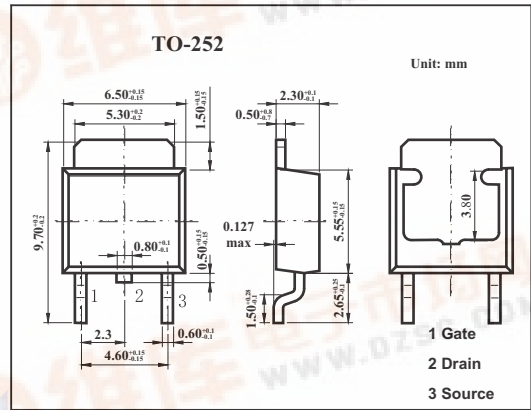


SMD Type MOSFET

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	Testconditons	Min	Typ	Max	Unit	
Drain source breakdown voltage	V <sub>BSS</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		ns
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

