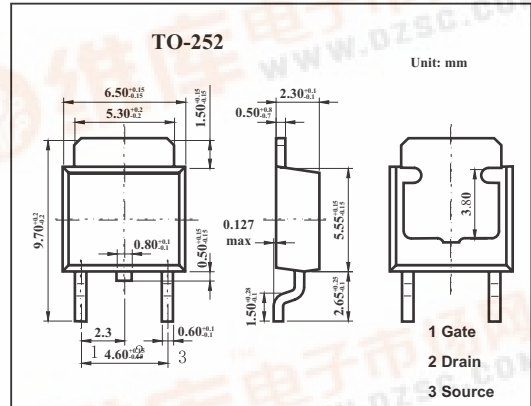


SMD Type MOSFET

MOS Field Effect Transistor
2SK3507

Features

- 4.5 V drive available
- Low on-state resistance
 $R_{DS(on)1} = 45\text{ m}\Omega\text{ MAX. (}V_{GS} = 10\text{ V, }I_D = 11\text{ A)}$
- Low gate charge
 $Q_G = 8.5\text{ nC TYP. (}V_{DD} = 24\text{ V, }V_{GS} = 10\text{ V, }I_D = 22\text{ A)}$
- Built-in G-S protection diode
- Surface mount package available



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	30	V
Gate to source voltage	V_{GS}	± 16	V
Drain current	I_D	± 22	A
	I_{DP}^*	± 45	A
Power dissipation	P_D	$T_C=25^\circ\text{C}$	20
		$T_A=25^\circ\text{C}$	1.5
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 cut-off current	I_{DSS}	$V_{DS}=30\text{V, }V_{GS}=0$			10	μA	
Gate leakage current	I_{GSS}	$V_{GS}=\pm 16\text{V, }V_{DS}=0$			± 1	μA	
Gate cutoff voltage	$V_{GS(off)}$	$V_{DS}=10\text{V, }I_D=1\text{mA}$	1.5		2.5	V	
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=4.0\text{V, }I_D=11\text{A}$	6			S	
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V, }I_D=11\text{A}$		28	45	$\text{m}\Omega$	
	$R_{DS(on)2}$	$V_{GS}=4.5\text{V, }I_D=11\text{A}$		46	76	$\text{m}\Omega$	
Input capacitance	C_{iss}	$V_{DS}=10\text{V, }V_{GS}=0, f=1\text{MHz}$		360		pF	
Output capacitance	C_{oss}			125		pF	
Reverse transfer capacitance	C_{rss}			65		pF	
Turn-on delay time	t_{on}				6.6		ns
Rise time	t_r	$I_D=11\text{A, }V_{GS(on)}=10\text{V, }R_L=10\ \Omega, V_{DD}=15\text{V}$		3.6		ns	
Turn-off delay time	t_{off}			16		ns	
Fall time	t_f				5.3		ns
Total Gate Charge	Q_G				8.5		nC
Gate to Source Charge	Q_{GS}	$I_D=22\text{A, }V_{DD}=24\text{V, }V_{GS}=10\text{V}$		2		nC	
Gate to Drain Charge	Q_{GD}			2.1		nC	

