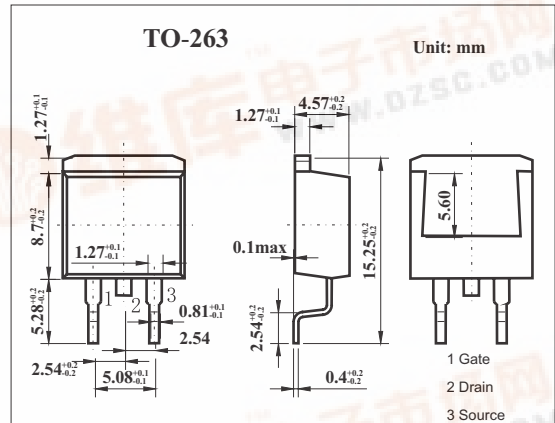


SMD Type MOSFET

MOS Field Effect Transistor
2SK3404

Features

- 4.5-V drive available
- Low on-state resistance
 $R_{DS(on)1} = 14\text{ m}\Omega\text{ MAX. (}V_{GS} = 10\text{ V, }I_D = 20\text{ A)}$
- Low gate charge
 $Q_G = 25\text{ nC TYP. (}I_D = 40\text{ A, }V_{DD} = 24\text{ V, }V_{GS} = 10\text{ V)}$
- Built-in gate protection diode
- Surface mount device 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}	± 20	V
Drain current	I_D	± 40	A
	I_{dp}^*	± 160	A
Power dissipation	PD	$T_c=25^\circ\text{C}$	40
		$T_a=25^\circ\text{C}$	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}	$V_{GS} = \pm 20\text{V, }V_{DS}=0$			± 10	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} $	$V_{DS}=10\text{V, }I_D=20\text{A}$	8.0			S
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V, }I_D=20\text{A}$		11	14	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS}=4.5\text{V, }I_D=20\text{A}$		15	21	$\text{m}\Omega$
Input capacitance	C_{iss}	$V_{DS}=10\text{V, }V_{GS}=0, f=1\text{MHz}$		1400		pF
Output capacitance	C_{oss}				410	pF
Reverse transfer capacitance	C_{rss}				180	pF
Turn-on delay time	t_{on}	$I_D=20\text{A, }V_{GS(on)}=10\text{V, }R_G=10\ \Omega, V_{DD}=15\text{V}$		20		ns
Rise time	t_r			9		ns
Turn-off delay time	t_{off}			50		ns
Fall time	t_f			14		ns
Total Gate Charge	Q_G				25	
Gate to Source Charge	Q_{GS}	$I_D = 40\text{A, }V_{DD} = 24\text{ V, }V_{GS} = 10\text{ V}$		5.0		nC
Gate to Drain Charge	Q_{GD}			7.0		nC

