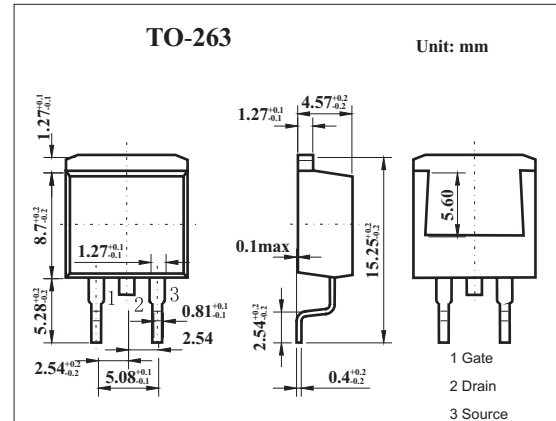


MOS Field Effect Transistor 2SK3456

■ Features

- Low gate charge
 $Q_G = 30 \text{ nC TYP. (} V_{DD} = 400 \text{ V, } V_{GS} = 10 \text{ V, } I_D = 12 \text{ A)}$
- Gate voltage rating $\pm 30 \text{ V}$
- Low on-state resistance
 $R_{DS(on)} = 0.60 \ \Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 6.0 \text{ A)}$
- Avalanche capability ratings
- Surface mount package available



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	500	V
Gate to source voltage	V_{GSS}	± 30	V
Drain current	I_D	± 12	A
	I_{dp}^*	± 36	A
Power dissipation	P_D	$T_c=25^\circ\text{C}$	100
		$T_a=25^\circ\text{C}$	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}	$V_{DS}=500\text{V, } V_{GS}=0$			10	μA	
Gate leakage current	I_{GSS}	$V_{GS}=\pm 30\text{V, } V_{DS}=0$			± 100	μA	
Gate cutoff voltage	$V_{GS(off)}$	$V_{DS}=10\text{V, } I_D=1\text{mA}$	2.5		3.5	V	
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V, } I_D=6.0\text{A}$	2.0			S	
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V, } I_D=6.0\text{A}$		0.48	0.60	Ω	
Input capacitance	C_{iss}	$V_{DS}=10\text{V, } V_{GS}=0, f=1\text{MHz}$		1620		pF	
Output capacitance	C_{oss}				250		pF
Reverse transfer capacitance	C_{rss}				10		pF
Turn-on delay time	t_{on}	$I_D=6.0\text{A, } V_{GS(on)}=10\text{V, } R_G=10 \ \Omega, V_{DD}=150\text{V}$		24		ns	
Rise time	t_r				18		ns
Turn-off delay time	t_{off}				50		ns
Fall time	t_f				15		ns
Total Gate Charge	Q_G		$I_D=12\text{A, } V_{DD}=400\text{V, } V_{GS}=10 \text{ V}$		30		nC
Gate to Source Charge	Q_{GS}				9		nC
Gate to Drain Charge	Q_{GD}				11		nC