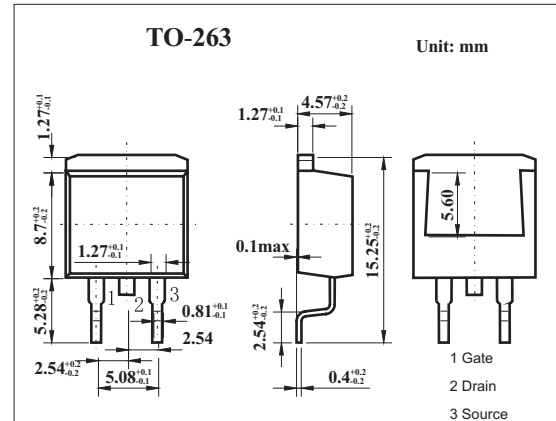
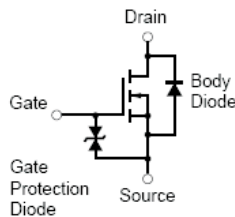


MOS Field Effect Transistor 2SK3109

■ Features

- Gate voltage rating ± 30 V
- Low on-state resistance
 $R_{DS(on)} = 0.4 \Omega$ MAX. ($V_{GS} = 10$ V, $I_D = 5.0$ A)
- Low input capacitance
 $C_{iss} = 400$ pF TYP. ($V_{DS} = 10$ V, $V_{GS} = 0$ V)
- Avalanche capability rated
- 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}	200	V
Gate to source voltage	V_{GS}	± 30	V
Drain current	I_D	± 10	A
	I_{DP}^*	± 30	A
Power dissipation	P_D	$T_C=25^\circ\text{C}$	50
		$T_A=25^\circ\text{C}$	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	Test conditions	Min	Typ	Max	Unit	
Drain cut-off current	I_{DSS}	$V_{DS}=200\text{V}, V_{GS}=0$			100	μA	
Gate leakage current	I_{GSS}	$V_{GS} = \pm 30\text{V}, V_{DS}=0$			± 10	μA	
Gate to source cut off voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	2.5		4.5	V	
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=5.0\text{A}$	1.5			S	
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=5.0\text{A}$		0.32	0.4	Ω	
Input capacitance	C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		400		pF	
Output capacitance	C_{oss}				110		pF
Reverse transfer capacitance	C_{rss}				55		pF
Turn-on delay time	t_{on}				12		ns
Rise time	t_r	$I_D=5.0\text{A}, V_{GS(on)}=10\text{V}, V_{DD}=100\text{V}, R_G=10\Omega$		34		ns	
Turn-off delay time	t_{off}				40		ns
Fall time	t_f				20		ns