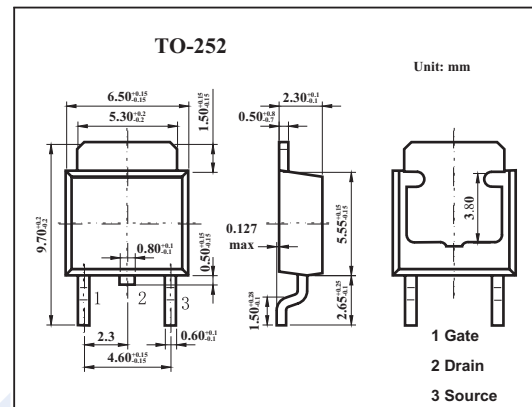


MOS Field Effect Transistor

2SK3113

■ Features

- Low on-state resistance
 $R_{DS(on)} = 4.4 \, \Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 1.0 \text{ A)}$
- Low gate charge
 $Q_G = 9 \text{ nC TYP. (} V_{DD} = 450 \text{ V, } V_{GS} = 10 \text{ V, } I_D = 2.0 \text{ A)}$
- Gate voltage rating $\pm 30 \text{ V}$
- Avalanche capability ratings



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	600	V
Gate to source voltage	V_{GS}	± 30	V
Drain current	I_D	± 2.0	A
	I_{DP}^*	± 8.0	A
Power dissipation	P_D	20	W
		1.0	W
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}	$V_{DS}=600\text{V}, V_{GS}=0$			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		3.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=1.0\text{A}$	0.5			S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=1.0\text{A}$		3.3	4.4	Ω
Input capacitance	C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		260		pF
Output capacitance	C_{oss}			60		pF
Reverse transfer capacitance	C_{rss}			5		pF
Turn-on delay time	t_{on}	$I_D=1.0\text{A}, V_{GS(on)}=10\text{V}, V_{DD}=150\text{V}, R_G=10 \, \Omega, R_L=10 \, \Omega$		7		ns
Rise time	t_r			2		ns
Turn-off delay time	t_{off}			22		ns
Fall time	t_f			9		ns