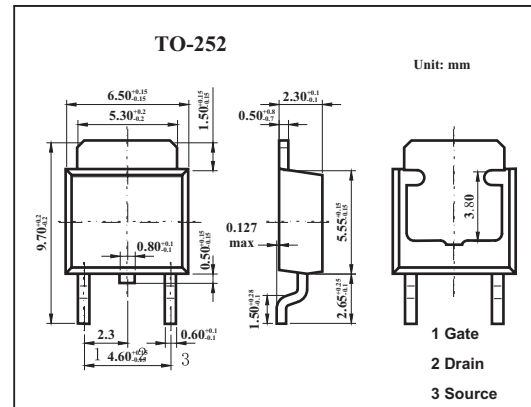


## MOS Field Effect Transistor

### 2SK3634

#### ■ Features

- High voltage:  $V_{BSS} = 200\text{ V}$
- Gate voltage rating:  $\pm 30\text{ V}$   
 $R_{DS(on)} = 0.60\ \Omega\ \text{MAX.}$  ( $V_{GS} = 10\text{ V}$ ,  $I_D = 3.0\text{ A}$ )
- Low  $C_{ISS}$ :  $C_{ISS} = 270\text{ pF TYP.}$  ( $V_{DS} = 10\text{ V}$ ,  $V_{GS} = 0\text{ V}$ )
- Built-in gate protection diode



#### ■ 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	$V_{GS}$	$\pm 30$	V
Drain current	$I_D$	$\pm 6.0$	A
	$I_{DP}^*$	$\pm 18$	A
Power dissipation	$P_D$	$T_c=25^\circ\text{C}$	20
		$T_a=25^\circ\text{C}$	1.0
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	$I_{DSS}$	$V_{DS}=200\text{V}, V_{GS}=0$			10	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS} = \pm 30\text{V}, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gate cut off voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	2.5	3.5	4.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=3.0\text{A}$	2	4		S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=3.0\text{A}$		0.47	0.60	$\Omega$
Input capacitance	$C_{ISS}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		270		pF
Output capacitance	$C_{OSS}$			75		pF
Reverse transfer capacitance	$C_{RSS}$			33		pF
Turn-on delay time	$t_{on}$	$I_D=3.0\text{A}, V_{GS(on)}=10\text{V}, R_G=0\ \Omega, V_{DD}=100\text{V}$		4		ns
Rise time	$t_r$			8		ns
Turn-off delay time	$t_{off}$			14		ns
Fall time	$t_f$			6		ns
Total Gate Charge	$Q_G$		$V_{DD} = 160\text{V}$		9	
Gate to Source Charge	$Q_{GS}$	$V_{GS} = 10\text{V}$		1.5		nC
Gate to Drain Charge	$Q_{GD}$	$I_D = 6.0\text{A}$		4.5		nC