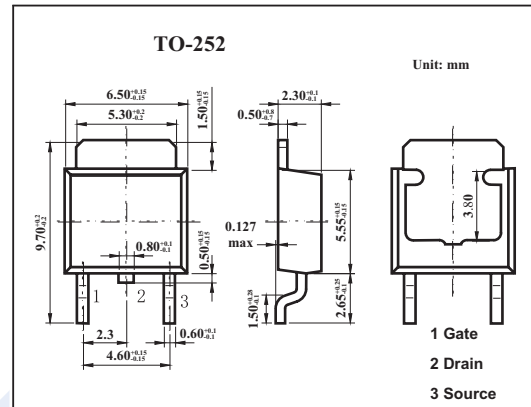


## MOS Field Effect Transistor

### 2SK3224

#### ■ Features

- Low On-State Resistance  
 $R_{DS(on)1} = 40 \text{ m}\Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 10 \text{ A)}$   
 $R_{DS(on)2} = 60 \text{ m}\Omega \text{ MAX. (} V_{GS} = 4.0 \text{ V, } I_D = 10 \text{ A)}$
- Low  $C_{iss}$  :  $C_{iss} = 790 \text{ pF TYP.}$
- Built-in Gate Protection Diode



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DSS}$	60	V
Gate to source voltage	$V_{GSS(AC)}$	$\pm 20$	V
	$V_{GSS(DC)}$	+20, -10	V
Drain current	$I_D$	$\pm 20$	A
	$I_{dp}^*$	$\pm 70$	A
Power dissipation	$P_D$	$T_c=25^\circ\text{C}$	25
		$T_A=25^\circ\text{C}$	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	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS}=60\text{V}, V_{GS}=0$			10	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS} = \pm 20\text{V}, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gate to source cut off voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	1.0	1.5	2.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=10\text{A}$	8.0	15		S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=10\text{A}$		24	40	$\text{m}\Omega$
		$V_{GS}=4\text{V}, I_D=10\text{A}$		33	60	$\text{m}\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$		790		pF
Output capacitance	$C_{oss}$			240		pF
Reverse transfer capacitance	$C_{rss}$			100		pF
Turn-on delay time	$t_{on}$				19	
Rise time	$t_r$	$I_D=10\text{A}, V_{GS(on)}=10\text{V}, R_G=10\Omega, V_{DD}=30\text{V}$		165		ns
Turn-off delay time	$t_{off}$			62		ns
Fall time	$t_f$			71		ns