MOS Field Effect Transistor
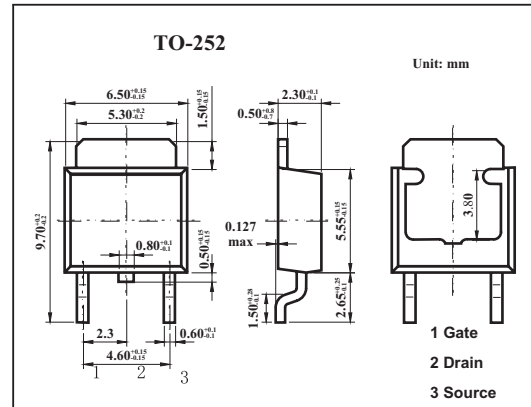## 2SK3377

■ Features

● Low on-resistance

$R_{DS(on)1}$ = 44 mΩ MAX. (V_{GS} = 10 V, I_D = 10 A)

$R_{DS(on)2}$ = 78 mΩ MAX. (V_{GS} = 4.0 V, I_D = 10 A)

● Low C_{iss} : C_{iss} = 760 pF TYP.

● Built-in gate protection diode

TO-252

Unit: mm

1 Gate
2 Drain
3 Source

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	$\pm$20	V
Drain current	I_D	$\pm$20	A
	I_{dp} *	$\pm$50	A
Power dissipation T_C=25℃ T_A=25℃	P_D	30 1.0	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤10μs,Duty Cycle≤1%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=60V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=$\pm$20V,V_{DS}=0			$\pm$10	μA
Gat cutoff voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	1.5	2.0	2.5	V
Forward transfer admittance	$\lvert Y_{fs} \rvert$	V_{DS}=10V,I_D=10A	5	10		S
Drain to source on-state resistance	$R_{DS(on)1}$	V_{GS}=10V,I_D=10A		35	44	mΩ
	$R_{DS(on)2}$	V_{GS}=4.0V,I_D=10A		54	78	mΩ
Input capacitance	C_{iss}			760		pF
Output capacitance	C_{oss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		150		pF
Reverse transfer capacitance	C_{rss}			71		pF
Turn-on delay time	t_{on}			13		ns
Rise time	t_r			170		ns
Turn-off delay time	t_{off}	I_D=10A,$V_{GS(on)}$=10V,R_G=10Ω,V_{DD}=30V		43		ns
Fall time	t_f			34		ns
Total Gate Charge	Q_G			17		nC
Gate to Source Charge	Q_{GS}	I_D =20 A, V_{DD} = 48 V, V_{GS} = 10 V		3.0		nC
Gate to Drain Charge	Q_{GD}			4.7		nC