

## MOS Field Effect Transistor

### 2SK3367

#### ■ Features

- Low on-resistance  
 $R_{DS(on)1} = 9.0 \text{ m}\Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 18 \text{ A)}$   
 $R_{DS(on)2} = 12.0 \text{ m}\Omega \text{ MAX. (} V_{GS} = 4.5 \text{ V, } I_D = 18 \text{ A)}$   
 $R_{DS(on)3} = 14.0 \text{ m}\Omega \text{ MAX. (} V_{GS} = 4.0 \text{ V, } I_D = 18 \text{ A)}$
- Low  $C_{iss}$  :  $C_{iss} = 2800 \text{ pF TYP.}$
- Built-in gate protection diode

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

Parameter	Symbol	Rating	Unit
Drain to source voltage	$V_{DS}$	30	V
Gate to source voltage	$V_{GS}$	$\pm 20$	V
Drain current	$I_D$	$\pm 36$	A
	$I_{dp}^*$	$\pm 144$	A
Power dissipation	$P_D$	$T_c=25^\circ\text{C}$	40
		$T_a=25^\circ\text{C}$	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	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS}=30\text{V}, V_{GS}=0$			10	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			$\pm 10$	$\mu\text{A}$
Gat cutoff voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	1.5	2.0	2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V}, I_D=18\text{A}$	13	26		S
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V}, I_D=18\text{A}$		7.3	9.0	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS}=4.5\text{V}, I_D=18\text{A}$		9.0	12.0	$\text{m}\Omega$
	$R_{DS(on)3}$	$V_{GS}=4.0\text{V}, I_D=18\text{A}$		9.7	14.0	$\text{m}\Omega$
Input capacitance	$C_{iss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHZ}$		2800		pF
Output capacitance	$C_{oss}$			880		pF
Reverse transfer capacitance	$C_{rss}$			400		pF
Turn-on delay time	$t_{on}$			75		ns
Rise time	$t_r$	$I_D=18\text{A}, V_{GS(on)}=10\text{V}, R_G=10\Omega, V_{DD}=15\text{V}$		1130		ns
Turn-off delay time	$t_{off}$			165		ns
Fall time	$t_f$			210		ns
Total Gate Charge	$Q_G$			49		nC
Gate to Source Charge	$Q_{GS}$	$I_D = 36 \text{ A, } V_{DD} = 24 \text{ V, } V_{GS} = 10 \text{ V}$		10		nC
Gate to Drain Charge	$Q_{GD}$			14		nC

