

MOS Field Effect Transistor 2SK3467

■ Features

- 4.5 V drive available
- Low on-state resistance
 $R_{DS(on)1} = 6.0 \text{ m}\Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 40 \text{ A)}$
- Low gate charge
 $Q_G = 55 \text{ nC TYP. (} I_D = 80 \text{ A, } V_{DD} = 16 \text{ V, } V_{GS} = 10 \text{ V)}$
- Built-in gate protection diode
- Surface mount device available



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

Parameter	Symbol	Rating	Unit	
Drain to source voltage	V_{DS}	20	V	
Gate to source voltage	V_{GS}	± 20	V	
Drain current	I_D	± 80	A	
	I_{dp}^*	± 320	A	
Power dissipation	P_D	$T_C=25^\circ\text{C}$	76	W
		$T_A=25^\circ\text{C}$	1.5	
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}	$V_{DS}=20\text{V, } V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 20\text{V, } V_{DS}=0$			± 10	μA
Gate cutoff voltage	$V_{GS(off)}$	$V_{DS}=10\text{V, } I_D=1\text{mA}$	1.5		2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V, } I_D=40\text{A}$	20			S
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V, } I_D=40\text{A}$		4.8	6.0	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS}=4.5\text{V, } I_D=40\text{A}$		6.7	9.5	$\text{m}\Omega$
Input capacitance	C_{iss}	$V_{DS}=10\text{V, } V_{GS}=0, f=1\text{MHz}$		2800		pF
Output capacitance	C_{oss}			1200		pF
Reverse transfer capacitance	C_{rss}			600		pF
Turn-on delay time	t_{on}			16		ns
Rise time	t_r	$I_D=40\text{A, } V_{GS(on)}=10\text{V, } R_G=10\Omega, V_{DD}=10\text{V}$		23		ns
Turn-off delay time	t_{off}			74		ns
Fall time	t_f			31		ns
Total Gate Charge	Q_G				55	
Gate to Source Charge	Q_{GS}	$I_D=80\text{A, } V_{DD}=16\text{V, } V_{GS}=10\text{V}$		9		nC
Gate to Drain Charge	Q_{GD}			17		nC