

2SK1308, 2SK1308A

Silicon N-Channel Power F-MOS FET

■ Features

- Low $R_{DS(on)} = 0.9\Omega$ (typ.)
- High speed switching $t_f = 50\text{ns}$ (typ.)
- No secondary breakdown
- High breakdown voltage

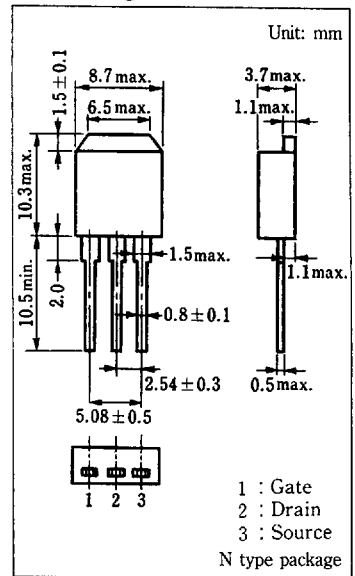
■ Use

- Non-contact relay.
- Motor control.
- Measuring Equipment.
- Switching regulator.
- Solenoid drive.

■ Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Drain-source voltage	V_{DS}	400	V
		450	
Gate-source voltage	V_{GS}	± 20	V
Drain current	DC I_D	5	A
	Peak-to-peak value I_{DP}	10	
Power dissipation	$T_c = 25^\circ\text{C}$ P_D	40	W
	$T_a = 25^\circ\text{C}$	1.3	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Package Dimensions



*Surface-mount type is also available.
(Refer to p.82.)

■ Electrical Characteristics ($T_c = 25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain current	I_{DS}	$V_{DS} = 320\text{V}$, $V_{GS} = 0$			0.1	mA
Gate-source current	I_{GSS}	$V_{GS} = \pm 20\text{V}$, $V_{DS} = 0$			± 1	μA
Drain-source voltage	V_{DS}	$I_D = 1\text{mA}$, $V_{GS} = 0$	400			V
			450			
Gate threshold voltage	V_{th}	$V_{DS} = 25\text{V}$, $I_D = 1\text{mA}$	1		5	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$, $I_D = 3\text{A}$		0.9	1.4	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 25\text{V}$, $I_D = 3\text{A}$	1.8	3.0		S
Input capacitance	C_{iss}	$V_{DS} = 20\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$		600		pF
Output capacitance	C_{oss}			140		pF
Reverse transfer capacitance	C_{rss}			60		pF
Turn-on time	t_{on}			40		ns
Fall time	t_f	$V_{GS} = 10\text{V}$, $I_D = 3\text{A}$ $V_{DS} = 150\text{V}$, $R_L = 50\Omega$		50		ns
Delay time	$t_d(\text{off})$			120		ns

