

2SK1308, 2SK1308A

Silicon N-Channel Power F-MOS FET

■ Features

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

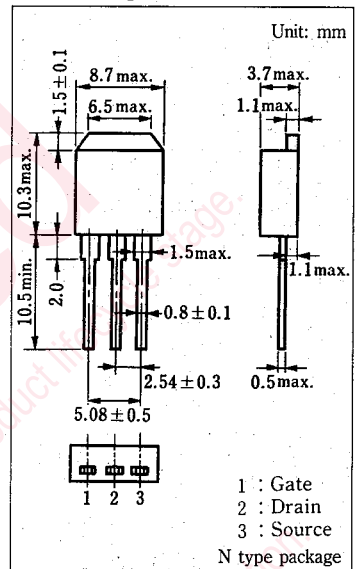
■ Use

- 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	2SK1308	400	V
	2SK1308A	450	
Gate-source voltage	V_{GSS}	± 20	V
Drain current	DC	5	A
	Peak-to-peak value	10	
Power dissipation	$T_c=25^\circ\text{C}$	40	W
	$T_a=25^\circ\text{C}$	1.3	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

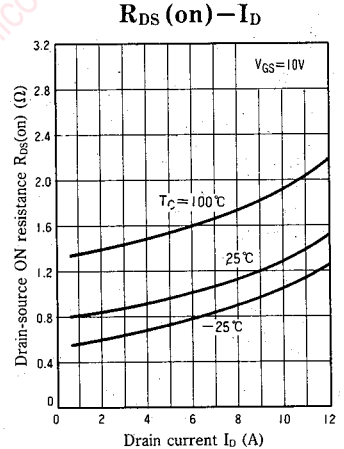
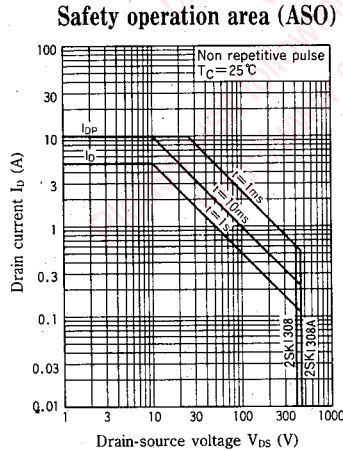
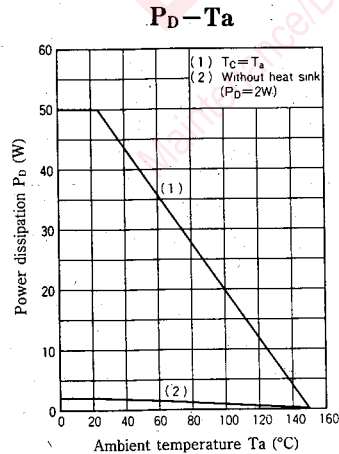
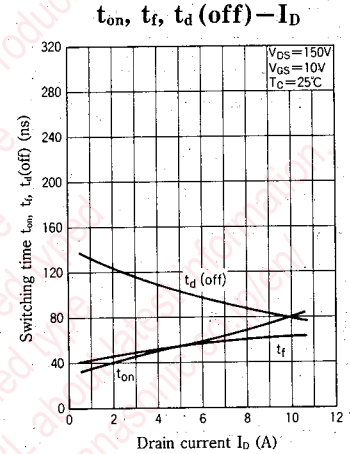
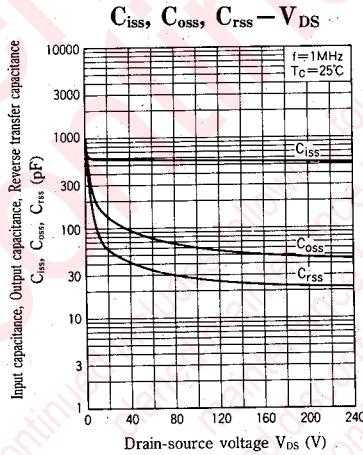
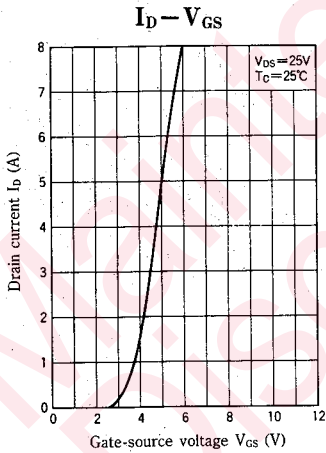
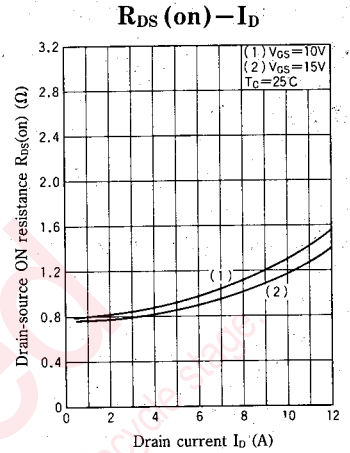
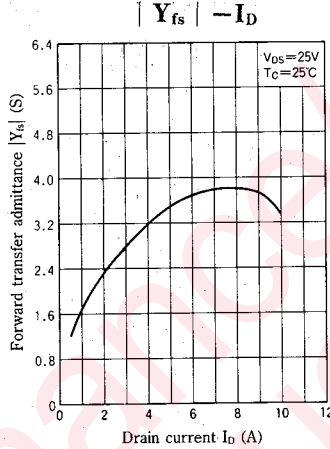
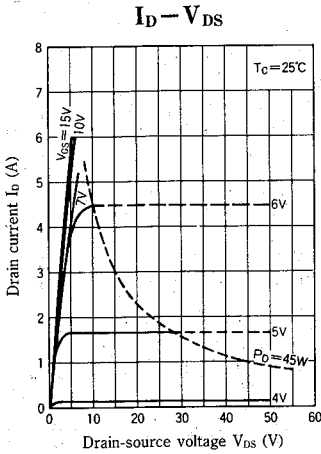
■ Package Dimensions



*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_{DSS}	$V_{DS}=320\text{V}, V_{GS}=0$			0.1	mA
Gate-source current	I_{GSS}	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			± 1	μA
Drain-source voltage	V_{DSS}	$I_D=1\text{mA}, V_{GS}=0$	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}	$V_{GS}=10\text{V}, I_D=3\text{A}$ $V_{DS}=150\text{V}, R_L=50\Omega$		40		ns
Fall time	t_f				50	ns
Delay time	$t_d(\text{off})$				120	ns



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