

# 2SK1331

## Silicon N-Channel Power F-MOS FET

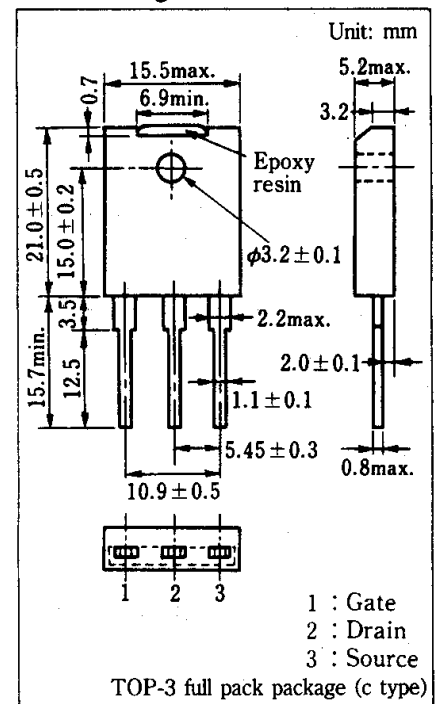
### ■ Features

- Low  $R_{RD(on)}=0.38\Omega$  (typ.)
- High speed switching  $t_f=100\text{ns}$  (typ.)
- Secondary breakdown free
- High breakdown voltage, high power

### ■ Use

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

### ■ Package Dimensions



### ■ Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Value	Unit
Drain-source voltage	$V_{DSS}$	500	V
Gate-source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	DC	$I_D$	15
	Peak-to-peak value	$I_{DP}$	30
Power dissipation	Tc = 25°C	$P_D$	100
	Ta = 25°C		3
Channel temperature	$T_{ch}$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

### ■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain current	$I_{DSS}$	$V_{DS}=400\text{V}, V_{GS}=0$			0.1	mA
Gate-source current	$I_{GSS}$	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			$\pm 1$	$\mu\text{A}$
Drain-source voltage	$V_{DSS}$	$I_D=1\text{mA}, V_{GS}=0$	500			V
Gate threshold voltage	$V_{th}$	$V_{DS}=25\text{V}, I_D=1\text{mA}$	1		5	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=8\text{A}$		0.38	0.50	$\Omega$
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=25\text{V}, I_D=8\text{A}$	5.0	8.0		S
Input capacitance	$C_{iss}$	$V_{DS}=20\text{V}, V_{GS}=0, f=1\text{MHz}$		1500		pF
Output capacitance	$C_{oss}$			300		pF
Reverse transfer capacitance	$C_{rss}$			145		pF
Turn-on time	$t_{on}$	$V_{GS}=10\text{V}, I_D=8\text{A}$ $V_{DS}=150\text{V}, R_L=19\Omega$		110		ns
Fall time	$t_f$			100		ns
Delay time	$t_d(\text{off})$			330		ns