

# 2SK1030, 2SK1030A

## Silicon N-channel Power F-MOS FET

### ■ Features

- Low ON resistance  $R_{DS(on)}$  :  $R_{DS(on)} = 3.0\Omega$  (typ.)
- High switching rate :  $t_f = 40\text{ns}$  (typ.)
- No secondary breakdown
- High breakdown voltage

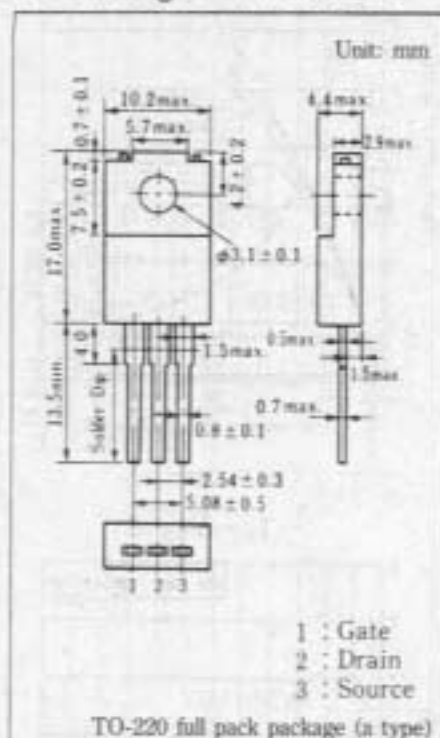
### ■ Application

- No contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching power source

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

Item	Symbol	Value	Unit
Drain-source voltage	$V_{DS}$	800	V
		900	
Gate-source voltage	$V_{GS}$	$\pm 25$	V
Drain current	DC	3	A
	Peak-to-peak value	6	
Power dissipation	Tc=25°C	50	W
	Ta=25°C	2.0	
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 ~ +150	°C

### ■ Package Dimensions



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

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain current	$I_{DSS}$	$V_{DS} = 640\text{V}$ , $V_{GS} = 0$			0.1	mA
Gate-source current	$I_{GSS}$	$V_{GS} = \pm 25\text{V}$ , $V_{DS} = 0$			$\pm 1$	$\mu\text{A}$
Drain-source voltage	$V_{DSS}$	$I_D = 1\text{mA}$ , $V_{GS} = 0$	800			V
			900			
Gate threshold voltage	$V_{th}$	$V_{DS} = 25\text{V}$ , $I_D = 1\text{mA}$	1		5	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$ , $I_D = 2\text{A}$		3.0	5.0	$\Omega$
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 25\text{V}$ , $I_D = 2\text{A}$	0.7	1.7		S
Input capacitance	$C_{iss}$	$V_{DS} = 20\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$		600		pF
Output capacitance	$C_{oss}$				110	pF
Reverse transfer capacitance	$C_{rss}$				50	pF
Turn-on time	$t_{on}$	$V_{GS} = 10\text{V}$ , $I_D = 2\text{A}$ $V_{DS} = 200\text{V}$ , $R_L = 100\Omega$		55		ns
Fall time	$t_f$				40	ns
Delay time	$t_d(\text{off})$				110	ns