

# 2SK1266

## Silicon N-channel Power F-MOS FET

### ■ Features

- Low ON resistance  $R_{DS(on)}$  :  $R_{DS(on)1} = 0.08\Omega$  (typ.)
- High switching rate :  $t_f = 180\text{ns}$  (typ.)
- No secondary breakdown
- For low voltage driving ( $V_{GS} = 4\text{V}$ )

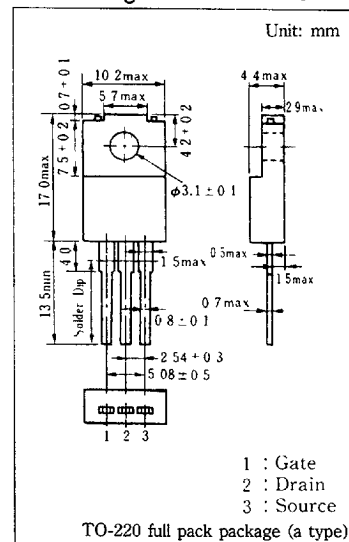
### ■ Application

- DC-DC converter
- No contact relay
- Solenoid drive
- Motor drive

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

Item	Symbol	Value	Unit
Drain-source voltage	$V_{DSs}$	150	V
Gate-source voltage	$V_{GSs}$	$\pm 20$	V
Drain current	DC	$I_D$	20
	Peak-to-peak value	$I_{DP}$	40
Power dissipation	$T_c = 25^\circ\text{C}$	$P_D$	45
	$T_a = 25^\circ\text{C}$		2.0
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-55 \sim +150$	$^\circ\text{C}$

### ■ Package Dimensions



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

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain current	$I_{DS}$	$V_{DS} = 130\text{V}, V_{GS} = 0$			10	$\mu\text{A}$
Gate-source current	$I_{GS}$	$V_{GS} = \pm 20\text{V}, V_{DS} = 0$			$\pm 1$	$\mu\text{A}$
Drain-source voltage	$V_{DS}$	$I_D = 1\text{mA}, V_{GS} = 0$	150			V
Gate threshold voltage	$V_{th}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1		2.5	V
Drain-source ON resistance	$R_{DS(on)1}$	$V_{GS} = 10\text{V}, I_D = 10\text{A}$		0.08	0.12	$\Omega$
Drain-source ON resistance	$R_{DS(on)2}$	$V_{GS} = 4\text{V}, I_D = 10\text{A}$		0.09	0.135	$\Omega$
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, I_D = 10\text{A}$	10	20		S
Input capacitance	$C_{iss}$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$		3450		pF
Output capacitance	$C_{oss}$				600	pF
Reverse transfer capacitance	$C_{rss}$				150	pF
Turn-on time	$t_{on}$	$V_{GS} = 10\text{V}, I_D = 10\text{A}$		90		ns
Fall time	$t_f$				180	ns
Delay time	$t_d(\text{off})$	$V_{DD} = 100\text{V}, R_L = 10\Omega$		770		ns

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