

# 2SK3269

## N-channel enhancement mode MOSFET

### ■ Features

- Low on-resistance, low  $Q_g$
- High avalanche resistance

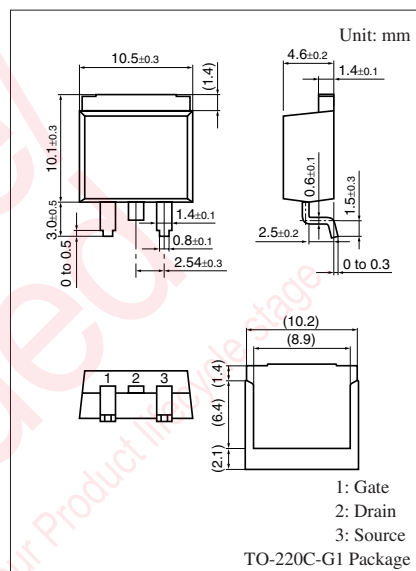
### ■ Applications

- For PDP
- For high-speed switching

### ■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

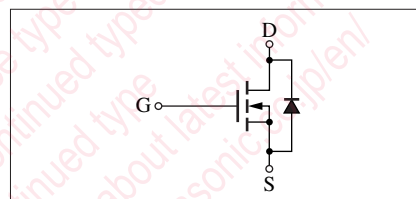
Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V <sub>DSS</sub>	100	V
Gate-source surrender voltage	V <sub>GSS</sub>	±20	V
Drain current	I <sub>D</sub>	±25	A
Peak drain current	I <sub>DP</sub>	±100	A
Avalanche energy capability *	EAS	22.5	mJ
Power dissipation	P <sub>D</sub>	40	W
		1.4	
	T <sub>a</sub> = 25°C		
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note) \*:  $L = 0.2$  mH,  $I_L = 15$  A, 1 pulse



Marking Symbol: K3269

Internal Connection



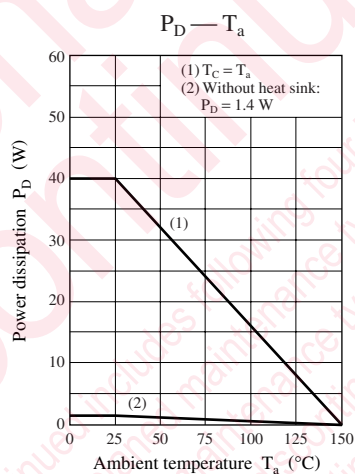
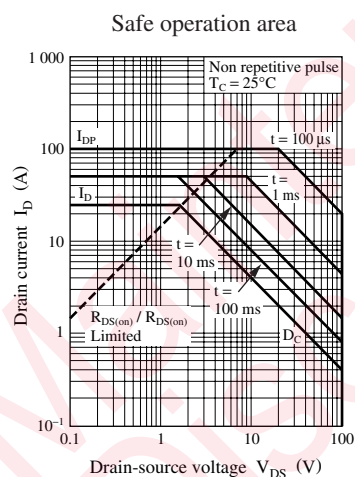
### ■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	$V_{DSS}$	$I_D = 1$ mA, $V_{GS} = 0$	100			V
Gate threshold voltage	$V_{th}$	$V_{DS} = 10$ V, $I_D = 1$ mA	2.0		4.0	V
Drain-source cutoff current	$I_{DSS}$	$V_{DS} = 80$ V, $V_{GS} = 0$			10	$\mu\text{A}$
Gate-source cutoff current	$I_{GSS}$	$V_{GS} = \pm 20$ V, $V_{DS} = 0$			$\pm 1$	$\mu\text{A}$
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10$ V, $I_D = 12$ A		70	100	m $\Omega$
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10$ V, $I_D = 12$ A	6	11		S
Short-circuit forward transfer capacitance (Common-source)	$C_{iss}$	$V_{DS} = 10$ V, $V_{GS} = 0$ , $f = 1$ MHz		960		pF
Short-circuit output capacitance (Common-source)	$C_{oss}$			285		pF
Reverse transfer capacitance (Common-source)	$C_{rss}$			85		pF
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 30$ V, $I_D = 12$ A $R_L = 2.5$ $\Omega$ , $V_{GS} = 10$ V		15		ns
Rise time	$T_r$			10		ns
Turn-off delay time	$t_{d(off)}$			65		ns
Fall time	$t_f$			35		ns

■ Electrical Characteristics (continued)  $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$ 

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Diode forward voltage	$V_{DSF}$	$I_{DR} = 15\text{ A}$ , $V_{GS} = 0$			1.4	V
Thermal resistance (ch-c)	$R_{th(ch-c)}$				3.125	$^\circ\text{C}/\text{W}$
Thermal resistance (ch-a)	$R_{th(ch-a)}$				89.3	$^\circ\text{C}/\text{W}$

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



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