

2SK3636

Silicon N-channel power MOSFET

For high-speed switching

■ Features

- Avalanche energy capacity guaranteed: $EAS > 20$ mJ
- Gate-source surrender voltage $V_{GSS} = \pm 30$ V guaranteed
- High-speed switching: $t_f = 50$ ns
- No secondary breakdown

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

Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V _{DSS}	800	V
Gate-source surrender voltage	V _{GSS}	±30	V
Drain current	I _D	±3	A
Peak drain current	I _{DP}	±6	A
Avalanche energy capability *	EAS	20	mJ
Power dissipation	P _D	35	W
		2.0	
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	−55 to +150	°C

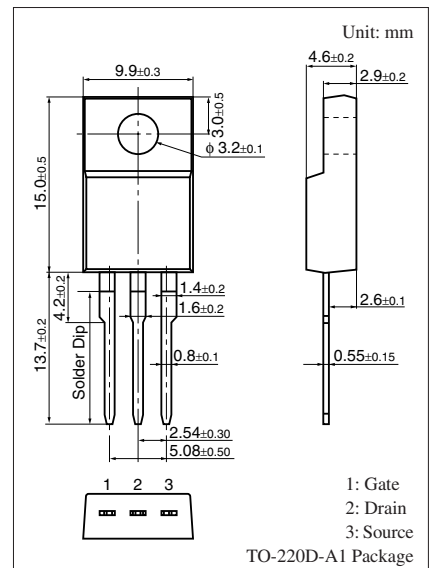
Note) *: $L = 5$ mH, $I_L = 3$ A, 1 pulse

■ 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, $V_{GS} = 0$	800			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 640$ V, $V_{GS} = 0$			100	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 30$ V, $V_{DS} = 0$			± 1	μA
Gate threshold voltage	V_{th}	$V_{DS} = 25$ V, $I_D = 1$ mA	2.0		5.0	V
Forward transfer admittance *	$ Y_{fs} $	$V_{DS} = 25$ V, $I_D = 2$ mA	1.5	2.4		V
Drain-source ON resistance *	$R_{DS(on)}$	$V_{GS} = 10$ V, $I_D = 2$ mA		3.2	4.0	Ω
Diode forward voltage *	V_{DSF}	$I_{DR} = 3$ A, $V_{GS} = 0$			-1.6	V
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1$ MHz		730		pF
Short-circuit output capacitance (Common source)	C_{oss}			90		pF
Reverse transfer capacitance (Common source)	C_{rss}			40		pF
Turn-on delay time	$t_{d(on)}$			35		ns
Rise time	t_r	$V_{DD} = 200$ V, $I_D = 2$ A, $R_L = 100$ Ω $V_{GS} = 10$ V		60		ns
Fall time	t_f			50		ns
Turn-off delay time	$t_{d(off)}$			160		ns
Thermal resistance (ch-c)	$R_{th(ch-c)}$				3.6	$^\circ\text{C/W}$
Thermal resistance (ch-a)	$R_{th(ch-a)}$				62.5	$^\circ\text{C/W}$

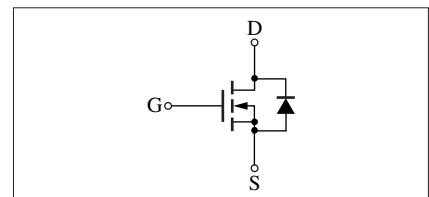
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement



Marking Symbol: K3636

Internal Connection



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