

2SK3277

Silicon N-channel power MOSFET

■ Features

- Avalanche energy capability guaranteed
- High-speed switching
- No secondary breakdown

■ Applications

- Non-contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching mode regulator

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

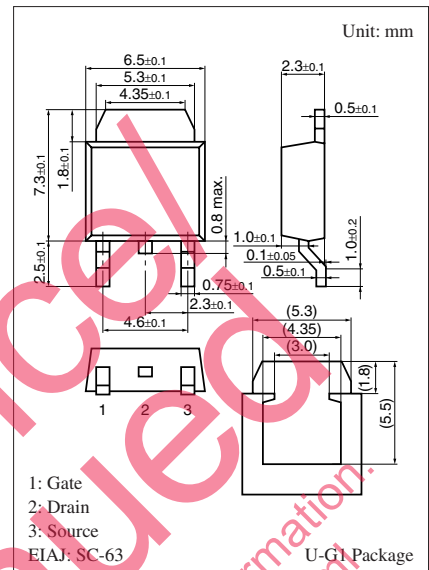
Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V_{DSS}	200	V
Gate-source surrender voltage	V_{GSS}	± 20	V
Drain current	I_D	± 2.5	A
Peak drain current	I_{DP}	± 5	A
Avalanche energy capability *	EAS	15	mJ
Power dissipation	P_D	10	W
	$T_a = 25^\circ\text{C}$	1	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: $L = 5\text{ mH}$, $I_L = 2.5\text{ A}$, 1 pulse

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

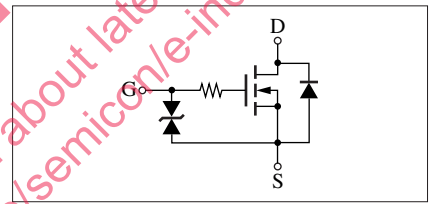
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	$I_D = 1\text{ mA}$, $V_{GS} = 0$	200			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 160\text{ V}$, $V_{GS} = 0$			10	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 20\text{ V}$, $V_{DS} = 0$			± 10	μA
Gate threshold voltage	V_{th}	$V_{DS} = 25\text{ V}$, $I_D = 1\text{ mA}$	2.0		4.0	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{ V}$, $I_D = 1.25\text{ A}$		1.2	1.7	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 25\text{ V}$, $I_D = 1.25\text{ A}$	0.7	1.3		S
Diode forward voltage	V_{DF}	$I_{DR} = 2.5\text{ A}$, $V_{GS} = 0$			-1.4	V
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = 20\text{ V}$, $V_{GS} = 0$, $f = 1\text{ MHz}$		170		pF
Short-circuit output capacitance (Common source)	C_{oss}			25		pF
Reverse transfer capacitance (Common source)	C_{rss}			15		pF
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 100\text{ V}$, $I_D = 1\text{ A}$, $R_L = 100\ \Omega$		18		ns
Rise time	t_r	$V_{GS} = 10\text{ V}$		35		ns
Turn-off delay time	$t_{d(off)}$			200		ns
Fall time	t_f			60		ns
Thermal resistance (ch-c)	$R_{th(ch-c)}$				12.5	$^\circ\text{C/W}$
Thermal resistance (ch-a)	$R_{th(ch-a)}$				125	$^\circ\text{C/W}$

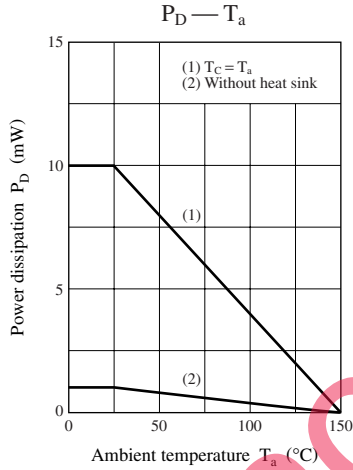
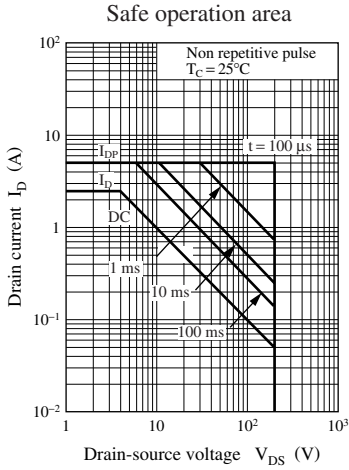
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



Marking Symbol: K3277

Internal Connection





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