2SK3318

Silicon N-channel power MOSFET

For switching

■ Features

- Avalanche energy capability guaranteed
- High-speed switching
- Low ON resistance Ron
- No secondary breakdown

Channel-case heat resistance

Channel-atmosphere heat resistance

■ Absolute Maximum Ratings $T_C = 25$ °C

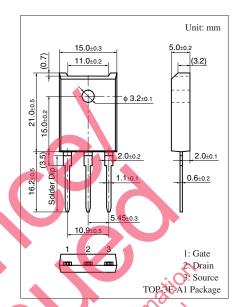
Parameter		Symbol	Rating	Unit	
Drain-source surrender voltage		V_{DSS}	600	V	
Gate-source surrender voltage		V_{GSS}	±30	V	
Drain current		I_D	±15	A	
Peak drain current		I_{DP}	±60	A	
Avalanche energy capability *		EAS	112,5	mJ	
Power		P_{D}	100	W	
dissipation	_a = 25°C		3		
Channel temperature		T _{ch}	150	°C	
Storage temperature		T_{stg}	-55 to +150	°C	

Storage temperature	-55	to +150 °C	¥CG∘		—				
Note) *: L = 1 mH, I _L = 15 A, 1 pulse									
Storage temperature T_{sig} -55 to $+150$ °C Note) *: L = 1 mH, I_L = 15 A, 1 pulse Electrical Characteristics $T_C = 25^{\circ}C \pm 3^{\circ}C$									
Parameter	Symbol	Conditions	Min	Тур	Max	Unit			
Gate-drain surrender voltage	V _{DSS}	$I_D = 1 \text{ mA}, V_{GS} = 0$	600			V			
Diode forward voltage	V _{DSF}	$I_{DR} = 15 \text{ A}, V_{GS} = 0$			-1.5	V			
Gate threshold voltage	V _{th}	$V_{DS} = 25 \text{ V}$ $I_D = 1 \text{ mA}$	2		4	V			
Drain-source cutoff current	I_{DSS}	$V_{DS} = 480 \text{ V}, V_{GS} = 0$			10	μΑ			
Gate-source cutoff currentt	I_{GSS}	$V_{GS} = \pm 30 \text{ V} \cdot V_{DS} = 0$			±1	μΑ			
Drain-source on resistance	R _{DS(on)}	$V_{GS} = 10 \text{ V}, 1_D = 7.5 \text{ A}$		0.33	0.46	Ω			
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 25 \text{ V}, I_D = 7.5 \text{ A}$	6	10		S			
Short-circuit forward transfer capacitance (Common-source)	e Ciss	$V_{BS} = 20 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$		3 500		pF			
Short-circuit output capacitance (Common-source)	Coss			340		pF			
Reverse transfer capacitance (Common-source)	C _{rss}			50		pF			
Turn-on delay time	t _{d(on)}	$V_{DD} = 150 \text{ V}, I_D = 7.5 \text{ A}$		40		ns			
Rise time	t _r	$R_{L} = 20 \Omega, V_{GS} = 10 V$		55		ns			
Turn-off delay time	t _{d(off)}			310		ns			
Fall time	t _f			70		ns			

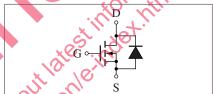
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

 $R_{th(ch-c)}$

 $R_{th\underline{(ch\text{-}a)}}$



Internal Connection

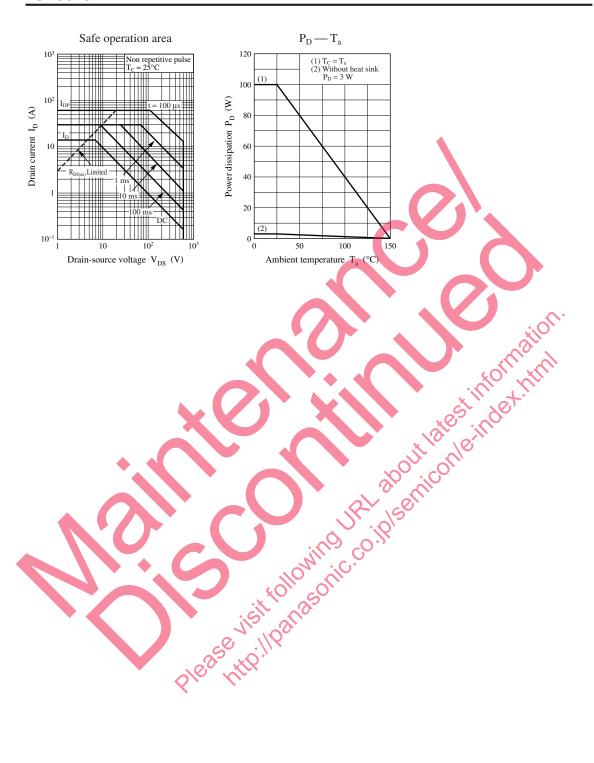


1.25

41.7

°C/W

°C/W



2 SJG00040AED

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