
2SK2118

Silicon N-Channel MOS FET

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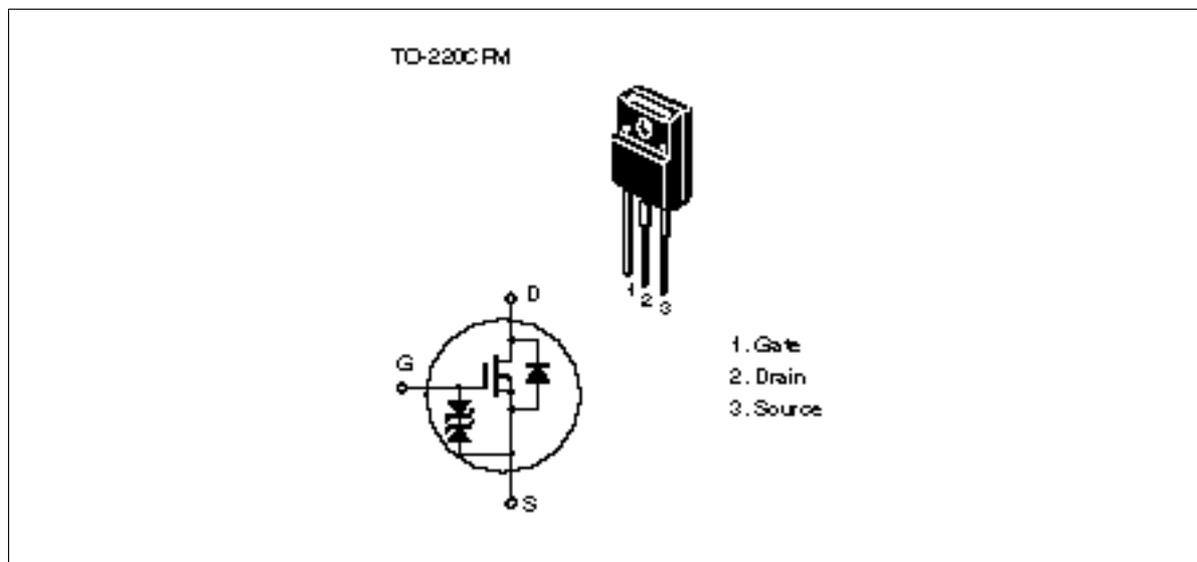
Application

High speed power switching

Features

- Low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for Switching regulator, DC-DC converter, Motor Control

Outline



2SK2118

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	600	V
Gate to source voltage	V _{GSS}	±30	V
Drain current	I _D	5	A
Drain peak current	I _{D(pulse)} *1	20	A
Body to drain diode reverse drain current	I _{DR}	5	A
Channel dissipation	P _{ch} *2	35	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Notes 1. PW 10 μs, duty cycle 1 %
2. Value at Tc = 25 °C

Electrical Characteristics (Ta = 25°C)

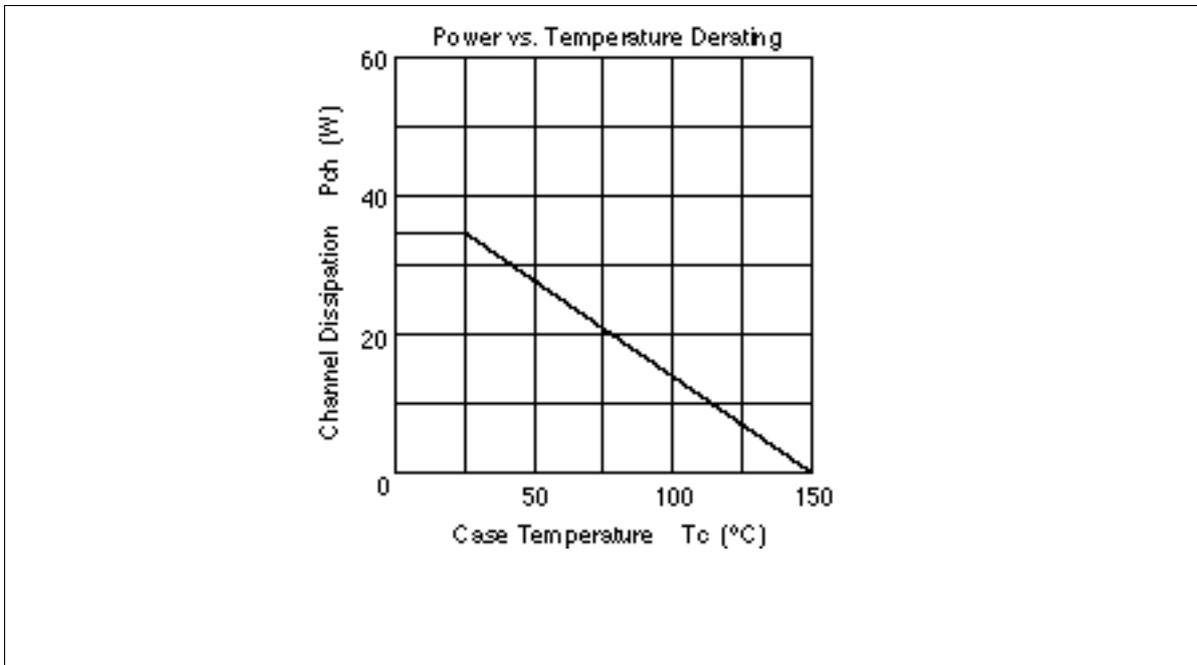
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	V _{(BR)DSS}	600	—	—	V	I _D = 10 mA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR)GSS}	±30	—	—	V	I _G = ±100 μA, V _{DS} = 0
Gate to source leak current	I _{GSS}	—	—	±10	μA	V _{GS} = ±25 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	250	μA	V _{DS} = 500 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS(off)}	2.0	—	3.0	V	I _D = 1 mA, V _{DS} = 10 V
Static drain to source on state resistance	R _{DS(on)}	—	1.1	1.5		I _D = 2.5 A V _{GS} = 10 V*1
Forward transfer admittance	y _{fs}	3.0	5.0	—	S	I _D = 2.5 A V _{DS} = 10 V*1
Input capacitance	C _{iss}	—	1000	—	pF	V _{DS} = 10 V
Output capacitance	C _{oss}	—	250	—	pF	V _{GS} = 0
Reverse transfer capacitance	C _{rss}	—	45	—	pF	f = 1 MHz
Turn-on delay time	t _{d(on)}	—	12	—	ns	I _D = 2.5 A
Rise time	t _r	—	45	—	ns	V _{GS} = 10 V
Turn-off delay time	t _{d(off)}	—	105	—	ns	R _L = 12
Fall time	t _f	—	55	—	ns	
Body to drain diode forward voltage	V _{DF}	—	0.9	—	V	I _F = 5 A, V _{GS} = 0
Body to drain diode reverse recovery time	t _{rr}	—	500	—	ns	I _F = 5 A, V _{GS} = 0, di _F / dt = 100 A / μs

Note 1. Pulse Test

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See characteristic curve of 2SK1404.

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