

MDK2000

Features:

- High thermal conductivity aluminum substrate
- Good thermal fatigue performance
- High surge current capability
- International standard package

Applications:

- Contact-less switcher
- Uninterrupted Power Supply
- Field supply for DC motors
- Power converter

Maximum rating $T_C=25^{\circ}\text{C}$

Symbol	Definition	Test Conditions	Max Ratings	Unit
V_{RRM}	Repetitive peak voltage	$I_{RRM}=0.5\text{mA}$	600	V
$I_{F(AV)}$	Mean on-state current	$T_C=70^{\circ}\text{C}$	2000	A
I_{FSM}	Surge on-state current	1/2cycling, 50Hz,sin	49000	A
I^2t	Value for fusing	1/2cycling, 50Hz,sin	12005	$10^3\text{A}^2\text{S}$
T_J	Virtual junction temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage temperature		-40 to +150	$^{\circ}\text{C}$
V_{ISO}	Insulation voltage	AC 1min	2500	V

Electrical and thermal characteristics

Symbol	Definition	Test Conditions	Min	Type	Max	Unit
I_{RRM}	Repetitive peak current	at VR $T_J=150^{\circ}\text{C}$	...	...	120	mA
V_{FM}	Peak on-state voltage	IFM=3000A, $T_C=25^{\circ}\text{C}$	...	...	0.99	V
$R_{th(c-h)}$	Thermal resistance case to heatsink	per module	...	...	0.03	$^{\circ}\text{C}/\text{W}$
$R_{th(j-c)}$	Thermal resistance Junction to case	per module	...	...	0.021	$^{\circ}\text{C}/\text{W}$
		per chip	...	...	0.042	$^{\circ}\text{C}/\text{W}$

Mechanical installation rating

Symbol	Definition	Test Conditions	Min	Type	Max	Unit
	Mounting torque	M8	8	9	10	N.m
	Terminal connection torque	M14	12	14	16	N.m

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Outline (mm)

W100

