



JMD120KA20T1A

Diode Module

Features

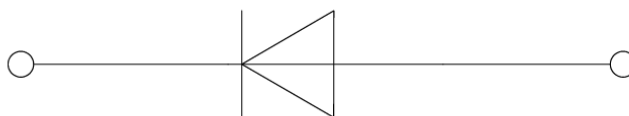
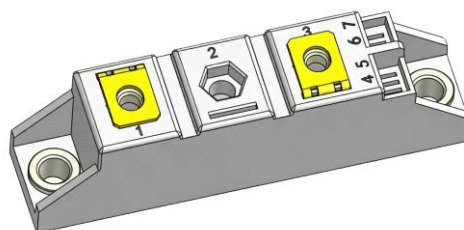
- A package of series of one diode
- Heat transfer through alumina ceramic and metal substrate
- Welding by vacuum welding technology, which provide high reliability

Product Summary

Parameter	Value	Unit
V_{RRM}	2000	V
$I_{F(AV)}(@ T_C = 100^{\circ}C)$	120	A
$I_{FSM}(@ t_p = 10ms)$	3300	A
$V_F(Max)$	1.60	V

Applications

- AC converter
- Inverter
- DC motor



Absolute Maximum Ratings (@ $T_C = 25^{\circ}C$ unless otherwise specified)

Parameter	Conditions	Symbol	Values	Unit
Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}C$	V_{RRM}	2000	V
Non-repetitive peak reverse voltage	$T_{vj} = 25^{\circ}C$	V_{RSM}	2100	V
Average forward current	$T_C = 100^{\circ}C$	$I_{F(AV)}$	120	A
Forward surge current	1/2 cycle, Sine wave, 50Hz	I_{FSM}	3300	A
I^2t value for fusing	$T_{vj} = 25^{\circ}C$	I^2t	54450	A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000	V
Junction temperature range		T_J	-40 ~ +150	$^{\circ}C$
Storage temperature range		T_{stg}	-40 ~ +125	$^{\circ}C$

**Electrical Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)**

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak forward voltage	$I_F=360\text{A}$, $t_P=380\mu\text{s}$	V_F			1.60	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25^\circ\text{C}$	I_{RRM}			100	μA
	$V_R = V_{RRM}$, $T_{vj} = 150^\circ\text{C}$				40	mA
Threshold voltage	$T_{vj} = 150^\circ\text{C}$, for power loss calculation only	V_{TO}			0.81	V
Dynamic resistance		r_T			1.4	$\text{m}\Omega$

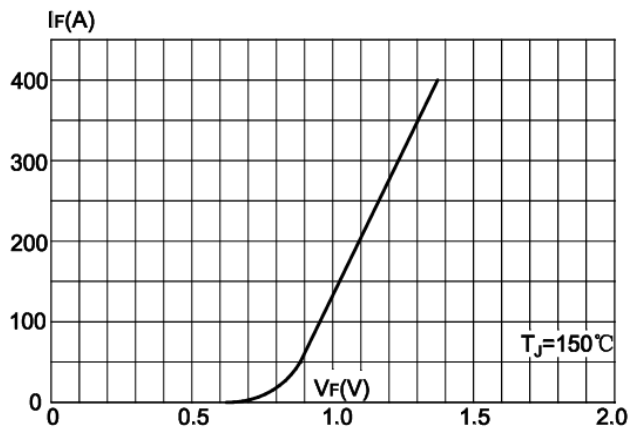
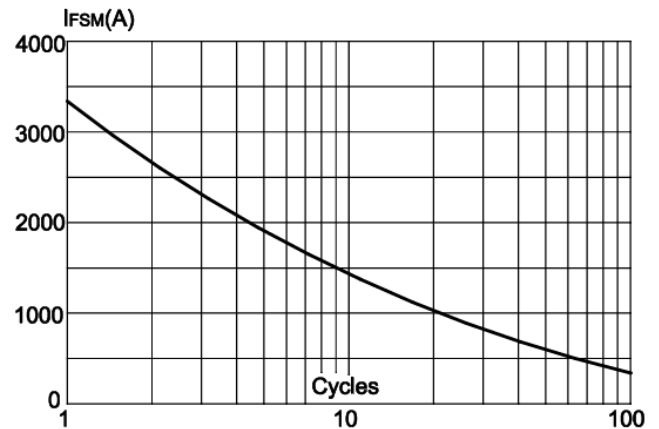
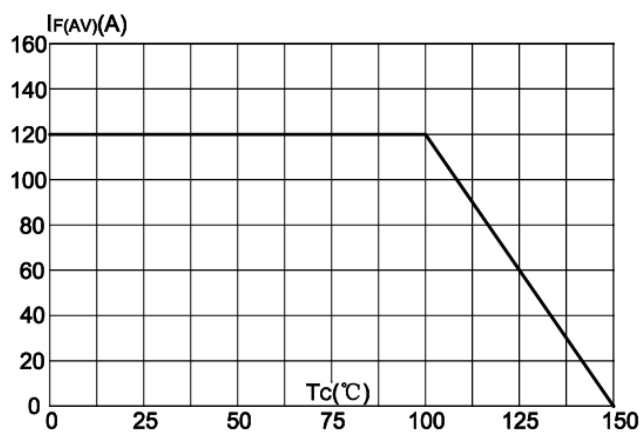
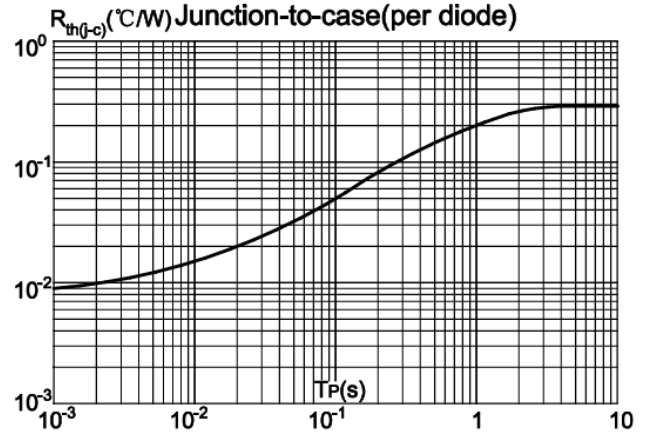
Thermal Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal resistance, junction to case	per diode	$R_{th(j-c)}$		0.20		K/W
Thermal resistance, case to heatsink	per module	$R_{th(c-s)}$		0.12		K/W
Mounting torque	Module and heatsink fixed torque M5	M	4.25		5.75	N·m
	Electrode connection torque M5		2.55		3.45	N·m

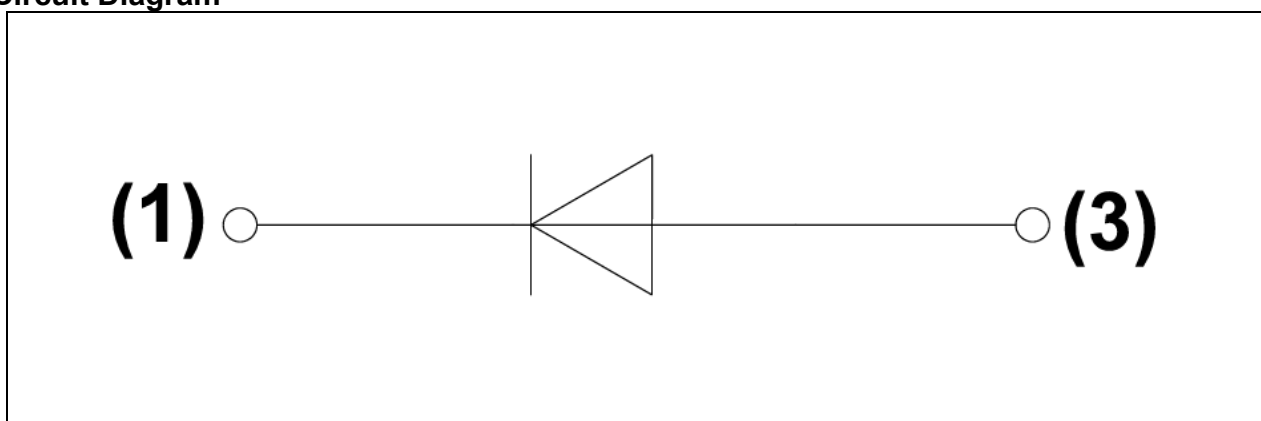
Ordering Information

Device	Marking	Package	Weight	Inner Box	Per Carton
JMD120KA20T1A	JMD120KA20T1A	T1A	100±5g/PCS	10 PCS	120 PCS

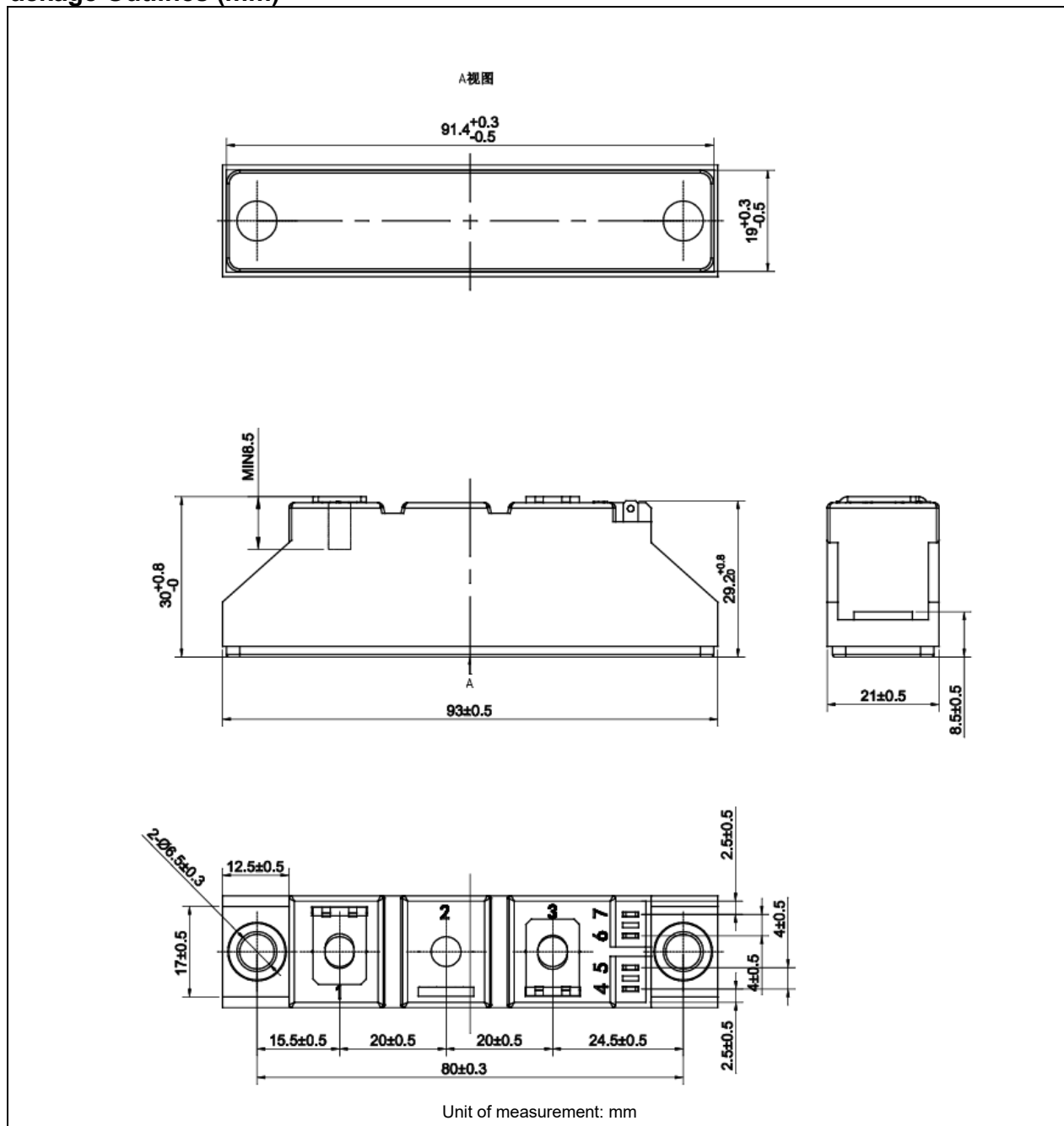
Typical Electrical & Thermal Characteristics

FIG.1: Forward characteristics(per diode)

FIG.2: Peak on-state surge current

FIG.3: Forward current vs. case temperature

FIG.4: Maximum transient thermal impedance


Circuit Diagram



Package Outlines (mm)





Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Semiconductor Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. This information in this document is subject to change without prior notice. Notwithstanding this, Jiangsu JieJie will fully comply with the terms outlined in a signed agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document is the initial release, dated 17 August 2026. This document supersedes and replaces all information previously supplied.

 is registered trademark of Jiangsu JieJie Semiconductor Co., Lt ©2026 Jiangsu JieJie Semiconductor Co., Ltd. All rights reserved.