



JMD50TD18D0

Three Phase Rectifier Bridge Module

Features

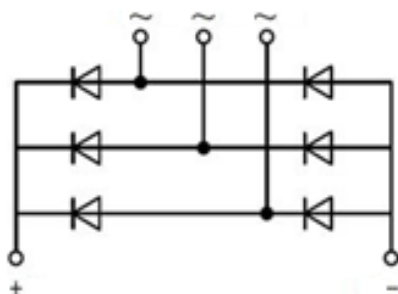
- Low forward voltage and leakage current
- Low inductance package
- High surge current capability

Product Summary

Parameter	Value	Unit
V_{RRM}	1800	V
$I_D(@T_C=100^{\circ}C)$	50	A
$I_{FSM}(@t_p=10ms)$	500	A
$V_{FM}(Max)$	1.40	V

Applications

- Field supply for DC motors
- Line rectifiers for transistorized AC motor controllers
- Non-controllable rectifiers for AC/DC converter



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}	1800	V
Non-repetitive peak reverse voltage	$T_{vj} = 25^{\circ}C$	V_{RSM}	1900	V
Average forward current	$T_C = 100^{\circ}C$	I_D	50	A
Forward surge current	1/2 cycle, Sine wave, 50Hz $T_{vj} = 25^{\circ}C$	I_{FSM}	500	A
I^2t value for fusing		I^2t	1250	A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000	V
Junction temperature range		T_{vj}	-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	$I_F=50\text{A}$, $t_P=380\mu\text{s}$	V_{FM}		1.20	1.40	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25^\circ\text{C}$	I_{RRM}			0.2	mA
	$V_R = V_{RRM}$, $T_{vj} = 150^\circ\text{C}$				3	mA
Threshold voltage	$T_{vj} = 150^\circ\text{C}$, for power loss calculation only	V_{TO}			0.95	V
Dynamic resistance		r_T			7.0	m Ω

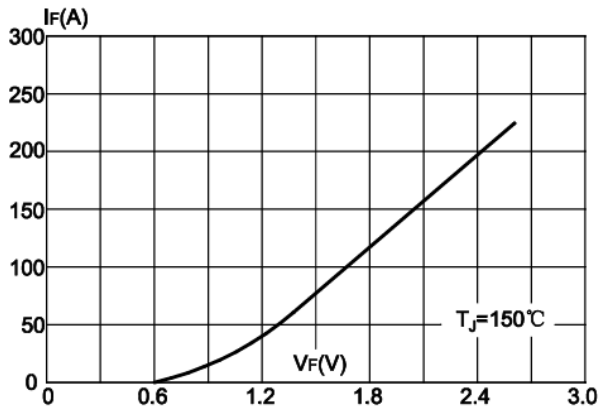
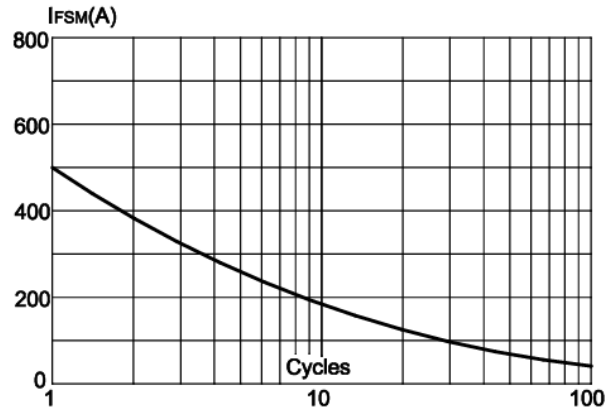
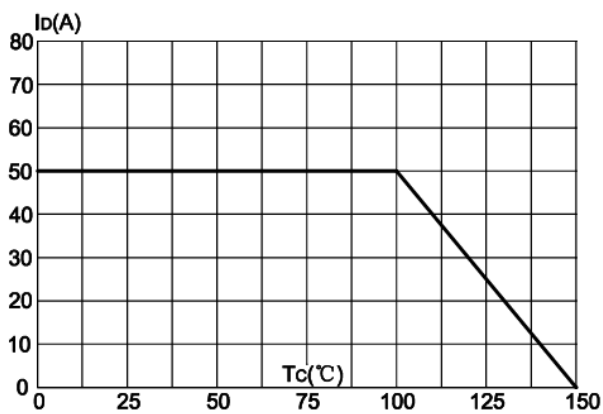
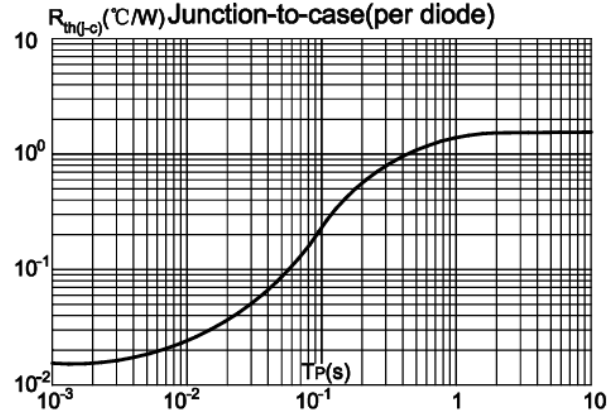
Thermal Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal resistance, junction to case	per diode	$R_{th(j-c)}$			1.5	K/W
Thermal resistance, case to heatsink	per module	$R_{th(c-s)}$			0.2	K/W
Mounting torque	Module and heatsink fixed torque	M	2.5		3.5	N·m

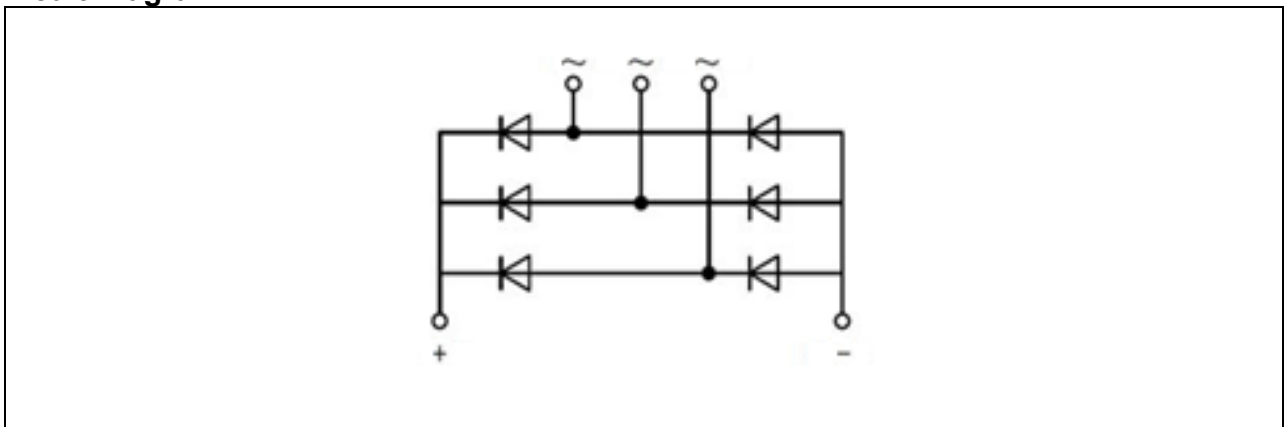
Ordering Information

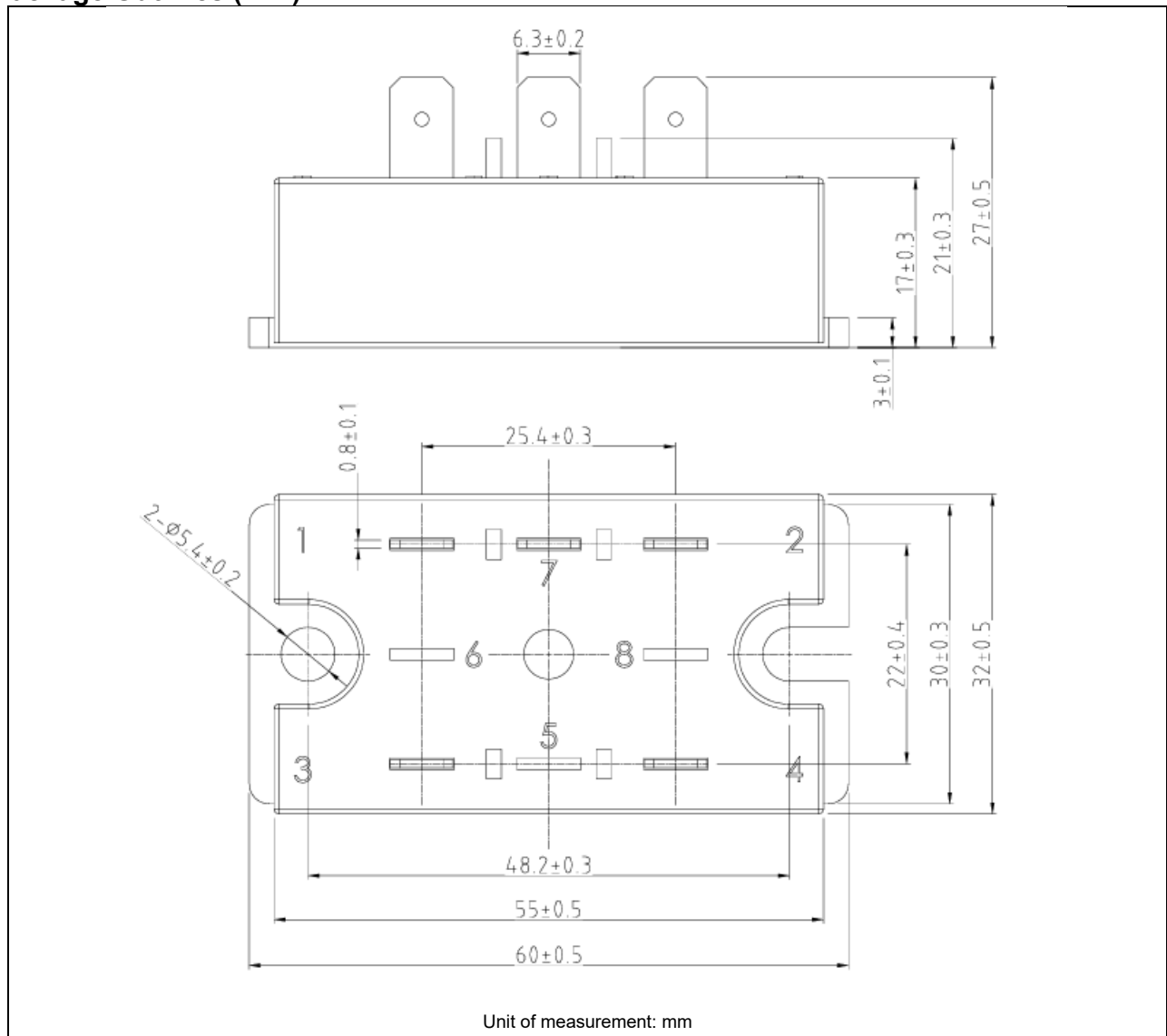
Device	Marking	Package	Weight	Inner Box	Per Carton
JMD50TD18D0	JMD50TD18D0	D0	78g/PCS	28PCS	140PCS

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 13 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.