



JMD700KD18T5

Diode Module

Features

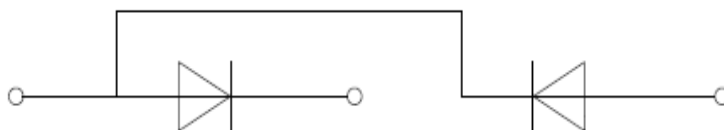
- A package of series of two diodes
- With high thermal conductivity DBC as the Insulation
- Welding by vacuum welding technology, which provide high reliability

Product Summary

Parameter	Value	Unit
V_{RRM}	1800	V
$I_{F(AV)}(@ T_C = 100^{\circ}\text{C})$	700	A
$I_{FSM}(@ t_p = 10\text{ms})$	26000	A
$V_F(\text{Max})$	1.60	V

Applications

- AC converter
- Inverter
- DC motor



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

Parameter	Conditions	Symbol	Values	Unit
Repetitive peak reverse voltage	$T_v = 25^{\circ}\text{C}$	V_{RRM}	1800	V
Non-repetitive peak reverse voltage	$T_v = 25^{\circ}\text{C}$	V_{RSM}	1900	V
Average forward current	$T_C = 100^{\circ}\text{C}$	$I_{F(AV)}$	700	A
Forward surge current	1/2 cycle, Sine wave, 50Hz $T_v = 25^{\circ}\text{C}$	I_{FSM}	26000	A
I^2t value for fusing		I^2t	3380×10^3	A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000	V
Junction temperature range		T_J	$-40 \sim +150$	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	$-40 \sim +125$	$^{\circ}\text{C}$

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

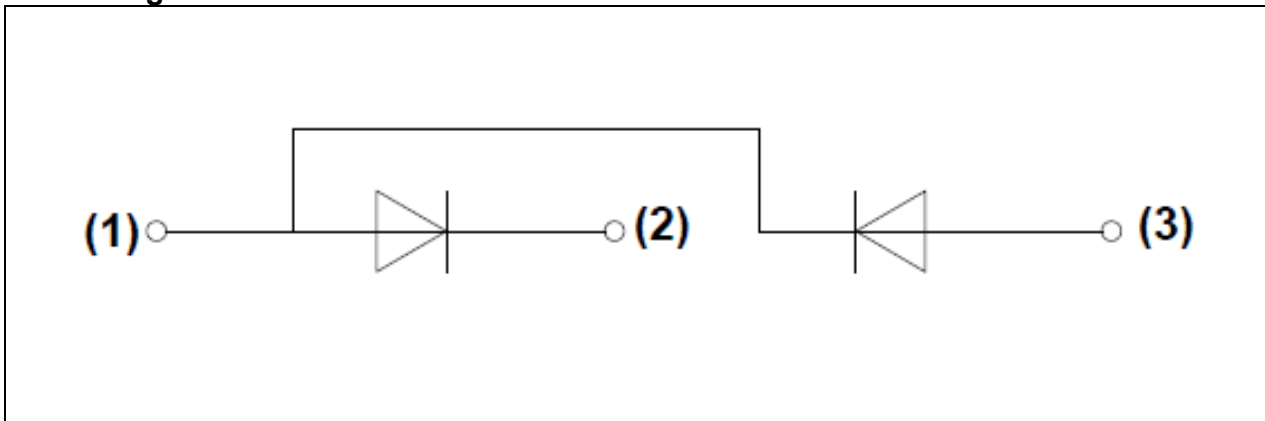
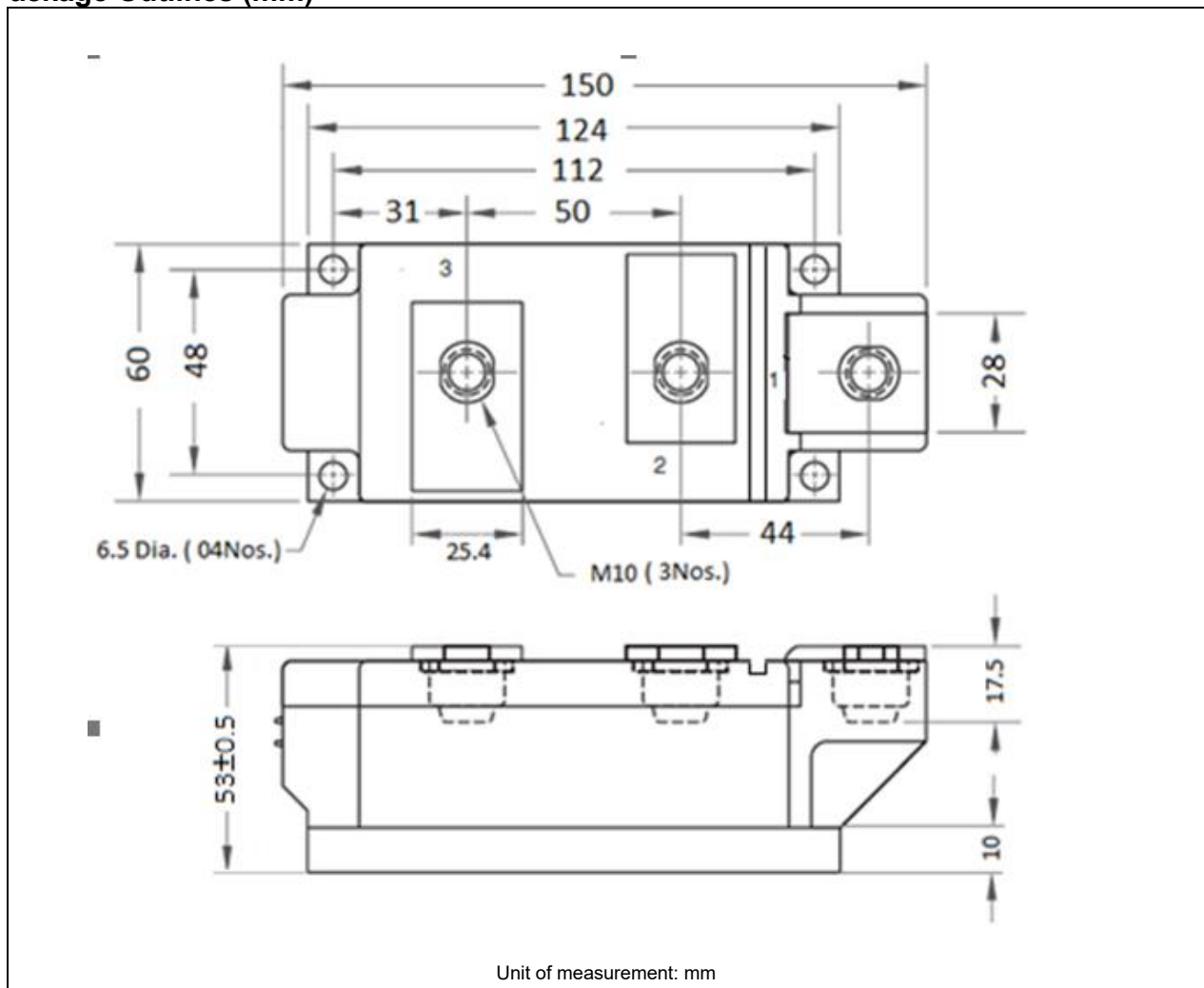
Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak forward voltage	$I_F=2200\text{A}$, $t_P=380\mu\text{s}$	V_F		1.30	1.60	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25^\circ\text{C}$	I_{RRM}			100	μA
	$V_R = V_{RRM}$, $T_{vj} = 150^\circ\text{C}$				40	mA
Threshold voltage	$T_{vj} = 150^\circ\text{C}$, for power loss calculation only	V_{TO}			0.75	V
Dynamic resistance		r_T			0.145	$\text{m}\Omega$

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	$R_{th(j-c)}$		0.069		$^\circ\text{C/W}$
Thermal resistance, case to heatsink	per diode	$R_{th(c-s)}$		0.03		$^\circ\text{C/W}$
Mounting torque	Module and heatsink fixed torque	M	5.1		6.9	N·m
	Electrode connection torque		10.8		13.2	N·m

Ordering Information

Device	Marking	Package	Weight	Inner Box	Per Carton
JMD700KD18T5	JMD700KD18T5	T5	1480g/PCS	3 PCS	27 PCS

Circuit Diagram

Package Outlines (mm)




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