



JMD300KD18T3W

Features

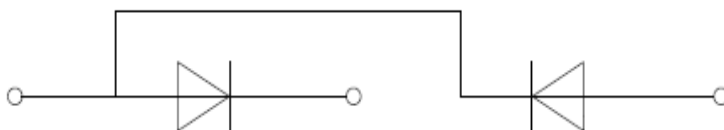
- A package of series of two diodes
- With high thermal conductivity DBC as the Insulation
- Welding by vacuum welding technology, which provide high reliability

Applications

- AC converter
- Inverter
- DC motor

Product Summary

V_{RRM}	1800	V
$I_{F(AV)}(@ T_C = 100^\circ C)$	300	A
$I_{FSM}(@ t_p = 10ms)$	11000	A
$V_F(Max)$	1.60	V



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	$T_C = 100^\circ C$	$I_{F(AV)}$	300	A
Forward surge current	1/2 cycle, Sine wave, 50Hz $T_{vj} = 25$	I_{FSM}	11000	A
I^2t value for fusing		I^2t	605000	A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000	V

Junction temperature range

T_J

-40 ~ +150

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

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak forward voltage	$I_F=900\text{A}$, $t_P=380\mu\text{s}$	V_F			1.60	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25$	I_{RRM}			100	μA
	$V_R = V_{RRM}$, $T_{vj} = 150$				90	mA
Threshold voltage	$T_{vj} = 150$, for power loss calculation only	V_{TO}			0.8	V
Dynamic resistance		r_T			0.75	m

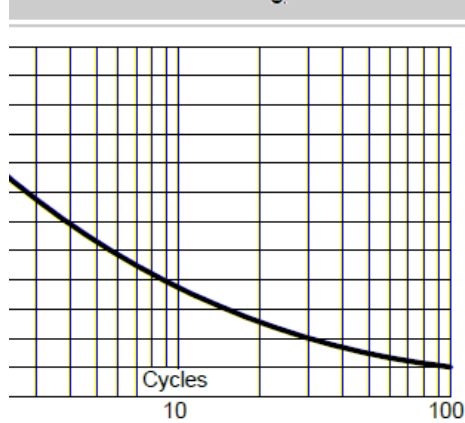
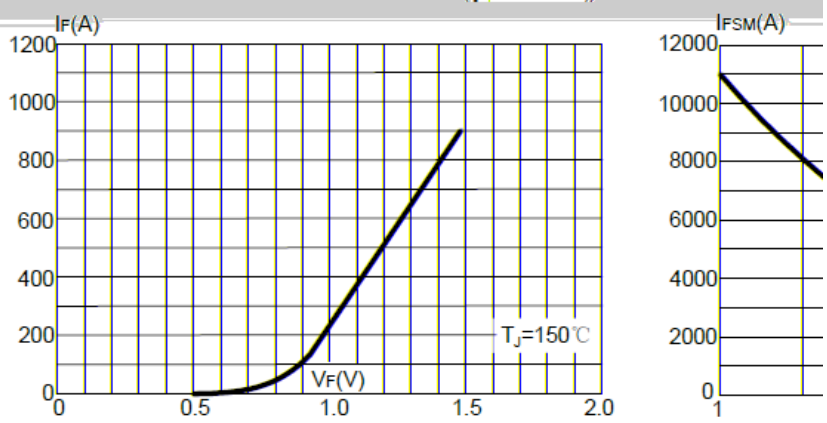
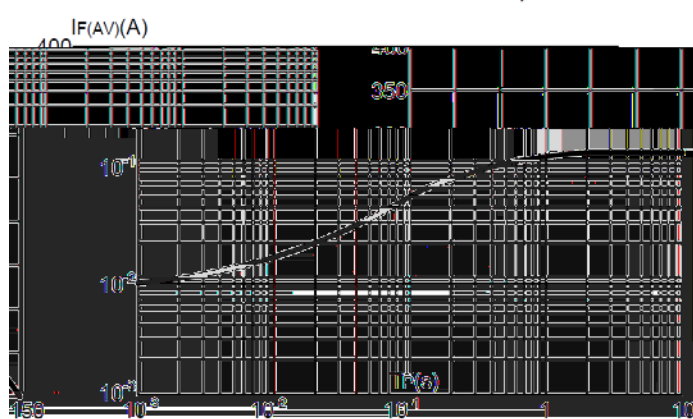
Thermal Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal resistance, junction to case	per diode	$R_{th(j-c)}$		0.12		/W
Thermal resistance, case to heatsink	per diode	$R_{th(c-s)}$		0.05		/W
Mounting torque	Module and heatsink fixed torque M5	M	4.25		5.75	N·m
	Electrode connection torque M8		7.65		10.34	N·m

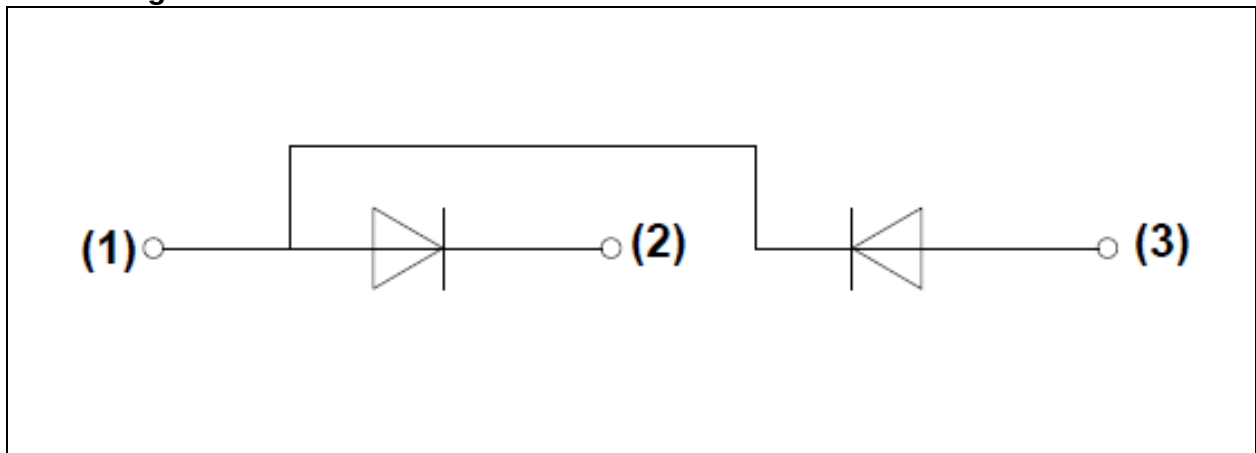
Ordering Information

Device	Marking	Package	Weight	Inner Box	Pre Carton
JMD300KD18T3W	JMD300KD18T3W	T3	$355 \pm 5\text{g/PCS}$	3 PCS	27 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)



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