



Diode Modules

Features

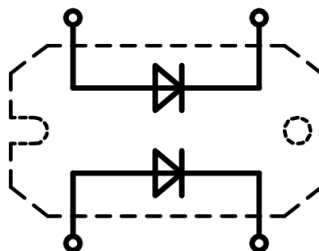
- Low forward voltage drop
- Fully insulated package
- Easy to use and parallel
- Industry standard outline
- Designed and qualified for industrial level

Product Summary

Parameter	Value	Unit
V_{RRM}	2000	V
$I_{F(AV)}$	70	A
$I_{FSM}(@ t_p = 10ms)$	840	A
$V_F(Max)$	1.25	V

Applications

- Welding
- SMPS



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

Parameter	Conditions	Symbol	Values	Unit
Repetitive peak reverse voltage	$T_{vj} = 25^\circ\text{C}$	V_{RRM}	2000	V
Non-repetitive peak reverse voltage	$T_{vj} = 25^\circ\text{C}$	V_{RSM}	2100	V
Average on-state current	$T_C = 50^\circ\text{C}$, per diode	$I_{F(AV)}$	70	A
Forward surge current	1/2 cycle, Sine wave, 50Hz $T_{vj} = 25^\circ\text{C}$	I_{FSM}	840	A
I^2t Value for fusing		I^2t	3500	A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3000/2500	V
Junction temperature range		T_J	-40 - 150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-40 - 125	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	$I_F = 70\text{A}$, $T_{vj} = 25^\circ\text{C}$	V_F		1.05	1.25	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25^\circ\text{C}$	I_R			5	μA
	$V_R = V_{RRM}$, $T_{vj} = 150^\circ\text{C}$				1.5	mA

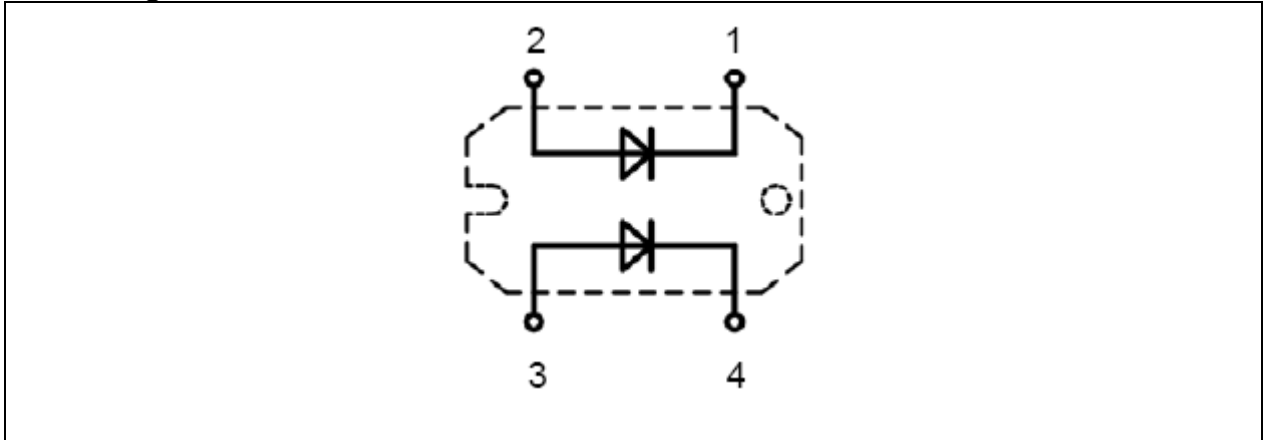
Thermal Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal resistance, junction to case	per diode	$R_{th(j-c)}$			0.56	$^\circ\text{C}/\text{W}$
Thermal resistance, case to heatsink	per diode	$R_{th(c-s)}$		0.10		$^\circ\text{C}/\text{W}$
Mounting torque	Base plate to heatsink screw M4	M	1.0		1.5	N·m
	Electrode to terminal screw M4		1.0		1.3	N·m

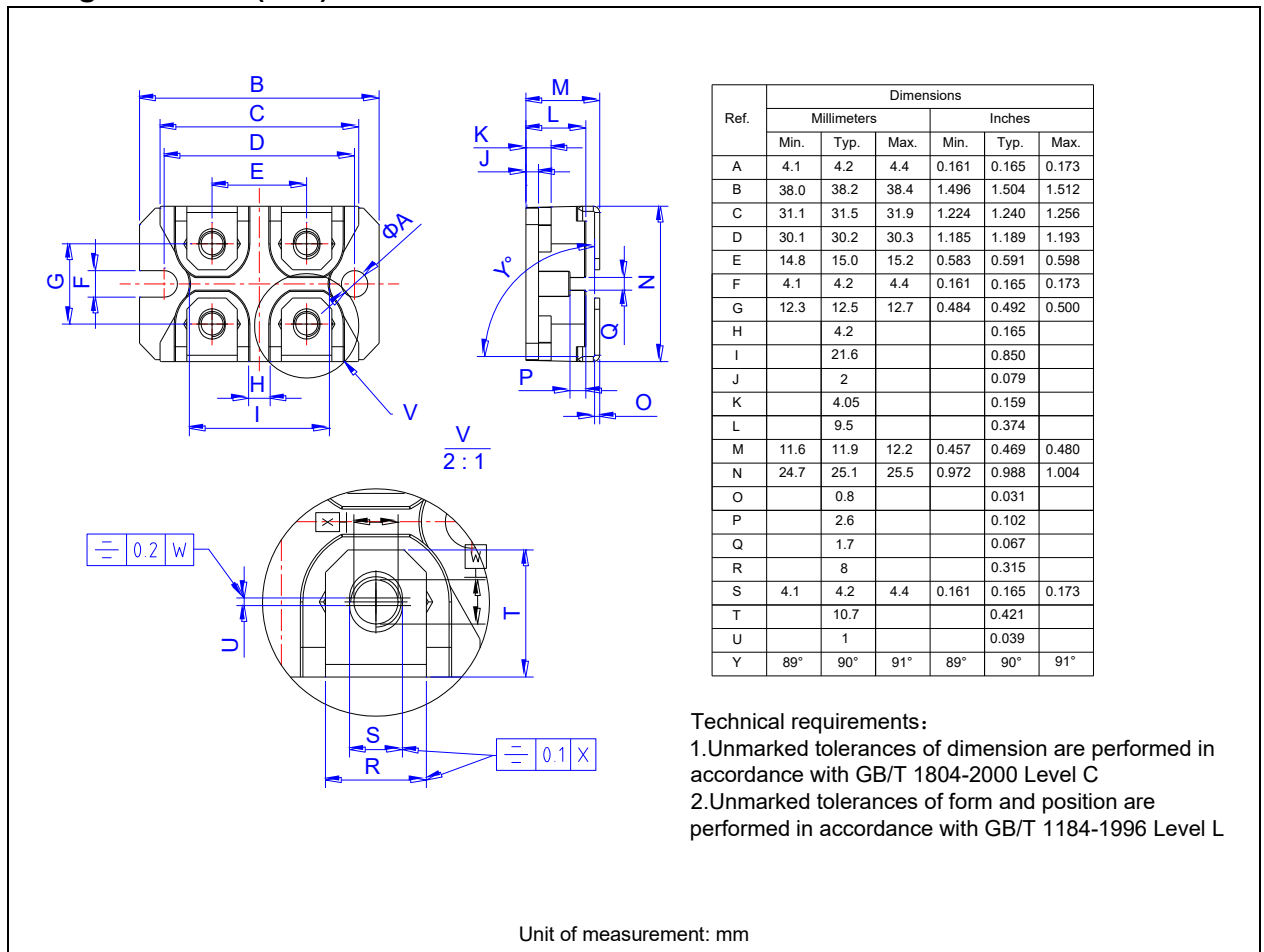
Ordering Information

Device	Marking	Package	Weight	Inner Box	Per Carton
JMD70K220ST	JMD70K220ST	SOT-227	35g/PCS	80 PCS	160 PCS

Circuit Diagram



Package Outlines (mm)





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