

JSD175

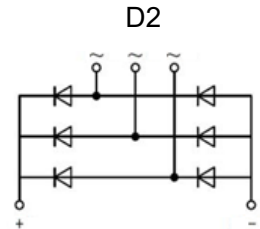
Description

- 1) Low forward voltage and leakage current
- 2) Low inductance package
- 3) High surge current capability



Typical Application

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



symbol

Absolute Maximum Ratings (Packaged into D2, unless otherwise specified, T_{CASE}=25°C)

Parameter	Test Conditions	Symbol	Values				Unit
			12	16	18	20	
Junction temperature range		T _J	-40~+150				°C
Storage temperature range		T _{STG}	-40~+125				°C
Repetitive peak reverse voltage		V _{RRM}	1200	1600	1800	2000	V
Non-repetitive peak reverse voltage		V _{RSM}	1300	1700	1900	2100	V
Output current	T _C =95°C	I _D	175				A
Forward surge current	1/2 cycle, Sine wave 50Hz, T _J =25°C	I _{FSM}	1750				A
Value for fusing		I ² t	15300				A ² s
RMS isolation voltage	A.C 50Hz(1s/1min)	V _{isol}	3600/3000				V



Three Phase Rectifier Bridge Module

Electrical Characteristics (Packaged into D2, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	$I_F=175A, T_J=25^{\circ}C$	V_{FM}	-	-	1.35	V
Reverse leakage current	$V_R=V_{RRM}, T_J=25^{\circ}C$	I_{RRM}	-	-	0.5	mA
	$V_R=V_{RRM}, T_J=150^{\circ}C$		-	-	10	mA
Threshold voltage	$T_J=150^{\circ}C$, for power loss calculation only	V_{TO}	-	-	0.85	V
Slope resistance		r_T	-	-	3.5	m Ω

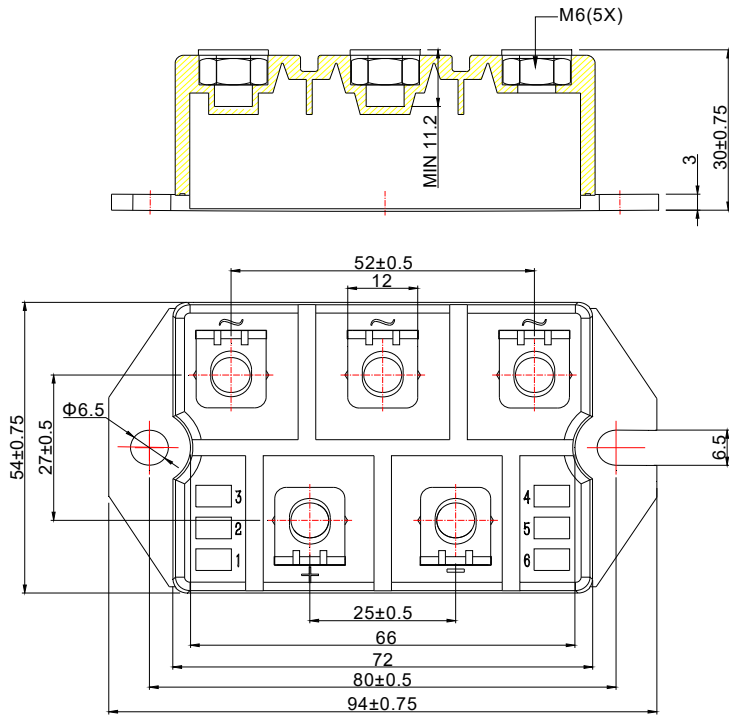
Thermal Characteristics (Packaged into D2, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal impedance (junction to case)	Per diode	$R_{th(j-c)}$	-	-	0.65	$^{\circ}C/W$
Mounting torque	Module and heatsink fixed torque, screw M5	M	4.25	-	5.75	Nm
	Electrode connection torque, screw M5		4.25	-	5.75	Nm
Weight			270			g
Case style			D2			

Ordering Information

<p>JieJie Semiconductor Co., Ltd</p>	<p>JS</p> <p>Diode module</p>	<p>D</p>	<p>175</p> <p>$I_D=175A$</p>	<p>/18</p> <p>12: $V_{RSM} \geq 1300V$ 16: $V_{RSM} \geq 1700V$ 18: $V_{RSM} \geq 1900V$ 20: $V_{RSM} \geq 2100V$</p>
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Mechanical Characteristics(mm)



Performance Curves

FIG.1: Forward characteristics(per diode)

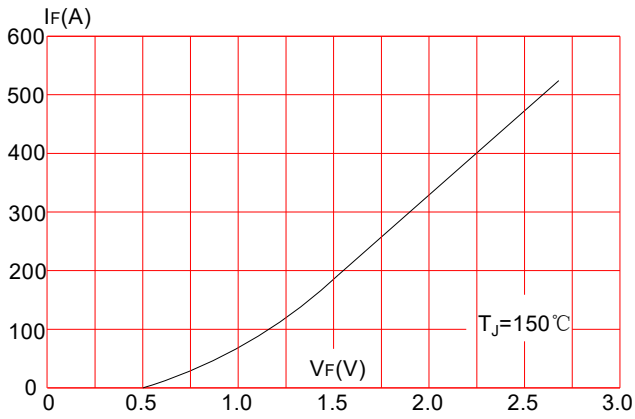


FIG.2: Peak on-state surge current

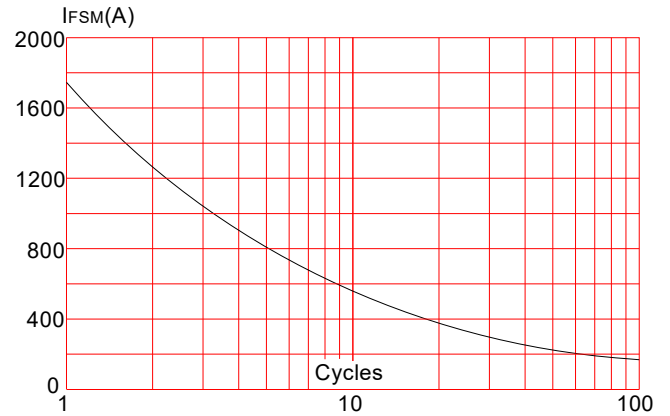


FIG.3: Forward current vs. case temperature

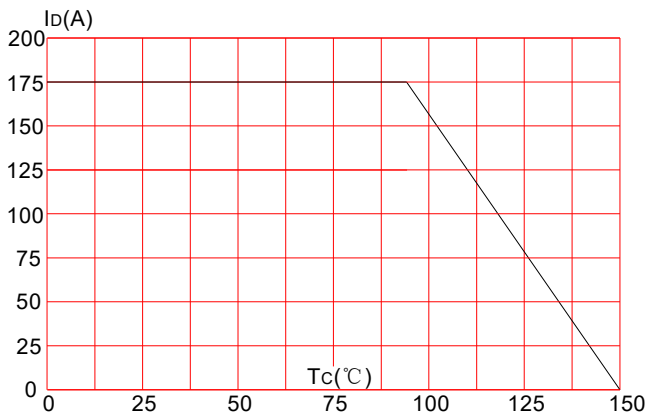
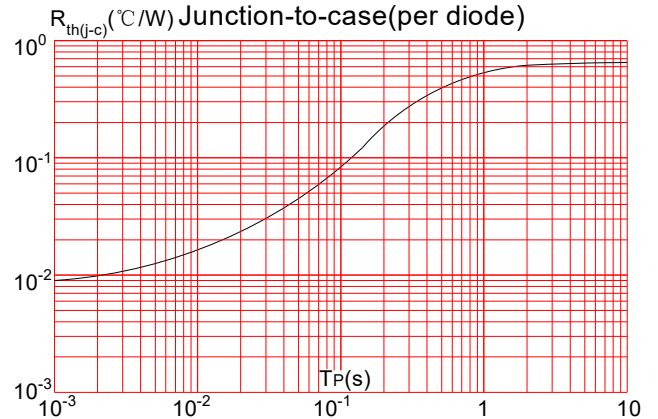


FIG.4: Maximum transient thermal impedance






Three Phase Rectifier Bridge Module

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