

Diode Module Rev.0.1 Nov.25 2022

Preliminary

JSKD390

Description

1) A package of series of two diodes.

2) Precision metal pressure contacts for high reliability.

Typical Application

AC converter, inverter and DC motor.

Absolute Maximum Ratings (Packaged into modules, unless otherwise specified, TCASE=25 °C)

Parameter	Test Conditions	Symbol	Values			
			18	20	22	Unit
Operating junction temperature range		Tj		-40-150		°C
Storage temperature range		T _{stg}		-40-125		°C
Repetitive peak reverse voltage	Tj=25℃	V _{RRM}	1800	2000	2200	V
Non-repetitive peak reverse voltage	Tj =25 ℃	V _{RSM}	1900	2100	2300	V
Average forward current	Tc=100℃	I _{F(AV)}	380			А
Peak forward surge current	t _P =10ms, sin180°,	I _{FSM}	20400			А
l ² t value for fusing	T j =25 ℃	l ² t	2080800			A ² s
Insulation voltage	A.C 50Hz(1s/1min)	V _{ISO}	3600/3000			V

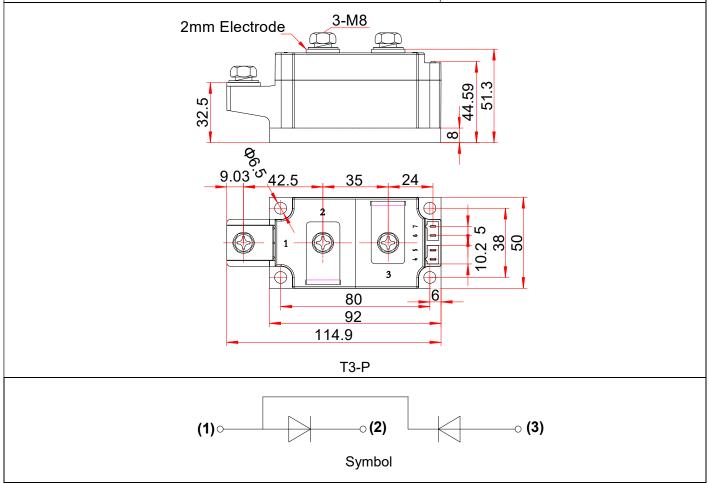
Electrical Characteristics (Packaged into modules, unless otherwise specified, T_{CASE}=25°C)

Parameter	Test Conditions	Symbol	Values	Unit
Peak forward voltage	l _F =990A, t _P =380µs	V _{FM}	≤1.6	V
Threshold voltage	Tj=150℃	V _{TO}	≤0.75	V
Dynamic resistance	Tj=150℃	R _d	≤0.32	mΩ
	Vr=Vrrm			
Repetitive peak reverse current	T _j =25 ℃	I _{RRM1}	≤200	μA
	T _j =150℃	I _{RRM2}	≤200	mA
Thermal resistance(Per chip)	Junction to case	R _{th(j-c)}	0.12	°C /W
	Case to heatsink	R _{th(c-s)}	0.05	



Mechanical Characteristics

Module size	114.9mm×50mm
Module height	51.3mm
Terminal distance of (1) /(2) /(3)	42.5mm/35mm/24mm
Mounting torque(M5)	5±15%Nm
Terminal torque(M8)	9±15%Nm





Instructions and Precautions

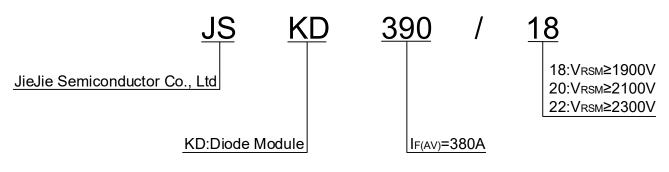
1) There is no severe vibration and shock in operating environment, and there should be no impurity and atmosphere which may corrode metal and damage the insulation in the air-dielectric.

2) The operating condition of the product can't out of range of the above parameters.

3) When the product is installed on the radiator, the radiator's surface should be confirmed flat, smooth, wipe clean with alcohol, and coated evenly with a layer of thermal grease which thickness is moderate on the contact surface between product and radiator. When the module is fastened on the surface of the radiator, the M5 or M6 screws and spring washers are used and fastened with 5NM torque. After the module is operated 1 hour, all screws must be refastened.

4) The connection with the main electrode of module can use copper, welding, socket and so on. The contact surface should be smooth and flat, which make good contact. While the connection with the control electrode of module is installed, attention should be paid to the corresponding connection of each pin. After the completion of the connection, do not plug and pull out the lead of the control electrode freely.

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