

JSKD/JSMD/JSND380

Description

- 1) A package of series of two diodes.
- 2) With high thermal conductivity DBC as the insulation.
- 3) Welding by vacuum welding technology, which provide high reliability.



Typical Application

AC converter, inverter and DC motor.

Absolute Maximum Ratings (Packaged into modules, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

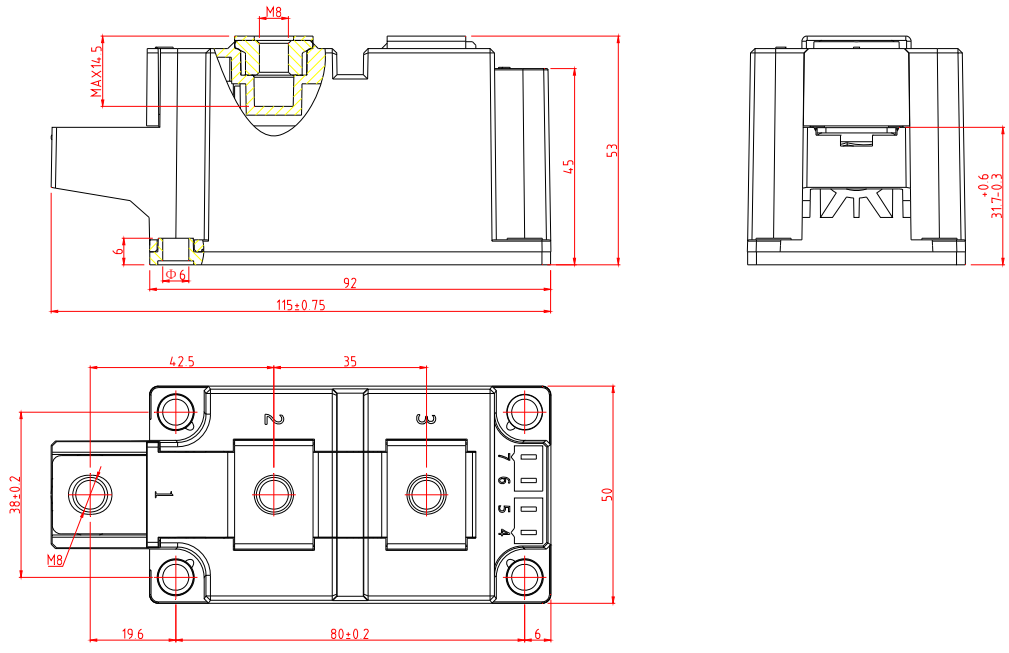
Parameter	Test Conditions	Symbol	Values				Unit
			12	16	18	20	
Operating junction temperature range		T_J	-40-150				$^{\circ}C$
Storage temperature range		T_{STG}	-40-125				$^{\circ}C$
Repetitive peak reverse voltage	$T_J=25^{\circ}C$	V_{RRM}	1200	1600	1800	2000	V
Non-repetitive peak reverse voltage	$T_J=25^{\circ}C$	V_{RSM}	1300	1700	1900	2100	V
Average forward current	$T_C=100^{\circ}C$	$I_{F(AV)}$	380				A
Peak forward surge current	$t_p=10ms, \sin 180^{\circ}$,	I_{FSM}	10640				A
I^2t value for fusing	$T_J=25^{\circ}C$	I^2t	566000				A^2s
Insulation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000				V

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

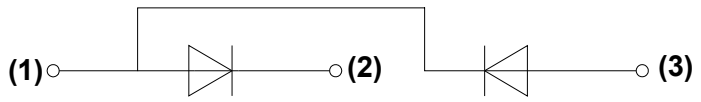
Parameter	Test Conditions	Symbol	Values	Unit
Peak forward voltage	$I_F=1140A, t_p=380\mu s$	V_{FM}	≤ 1.6	V
Threshold voltage	$T_J=150^{\circ}C$	V_{TO}	≤ 0.81	V
Dynamic resistance	$T_J=150^{\circ}C$	R_d	≤ 0.6	$m\Omega$
Repetitive peak reverse current	$V_R=V_{RRM}$ $T_J=25^{\circ}C$	I_{RRM1}	≤ 100	μA
	$T_J=150^{\circ}C$	I_{RRM2}	≤ 100	mA
Thermal resistance(Per chip)	Junction to case	$R_{th(j-c)}$	0.12	$^{\circ}C/W$
	Case to heatsink	$R_{th(c-s)}$	0.045	

Mechanical Characteristics

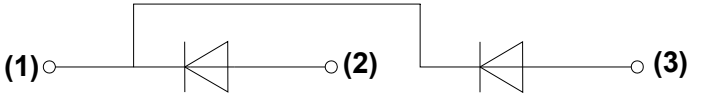
Module size	115mm×50mm
Module height	53mm
Terminal distance of (1)/(2)/(3)	42.5mm/35mm
Mounting torque(M5)	5±15%Nm
Terminal torque(M8)	9±15%Nm



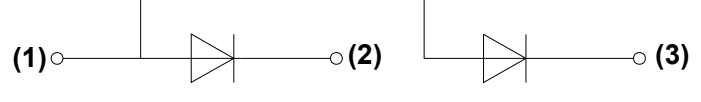
T3



JSKD symbol



JSMD symbol

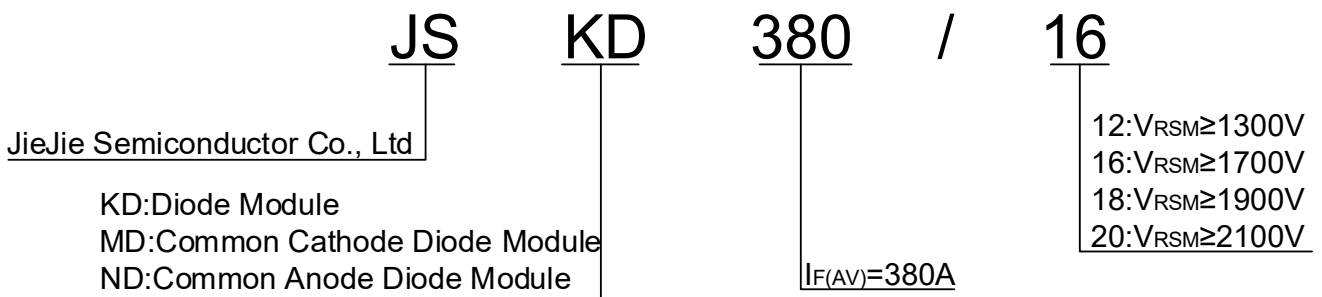


JSND symbol

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.

Ordering Information



Performance Curves

FIG.1: Forward characteristics(per diode)

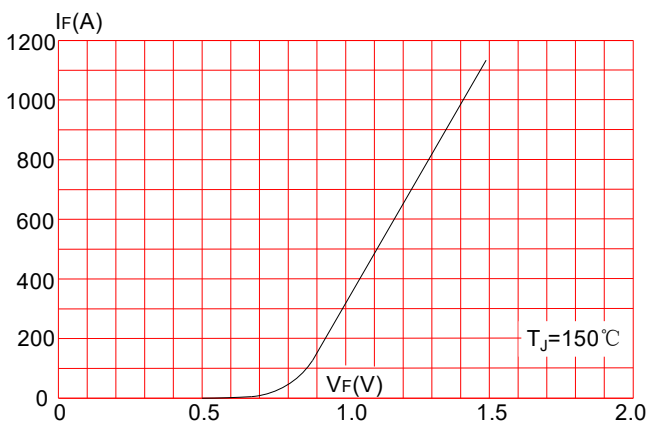


FIG.2: Peak on-state surge current

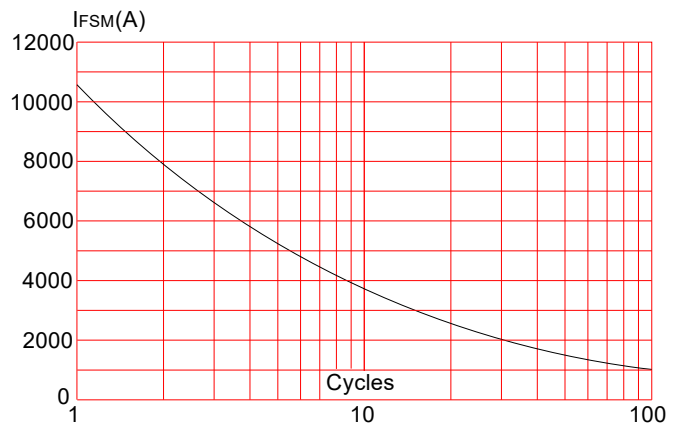


FIG.3: Forward current vs. case temperature

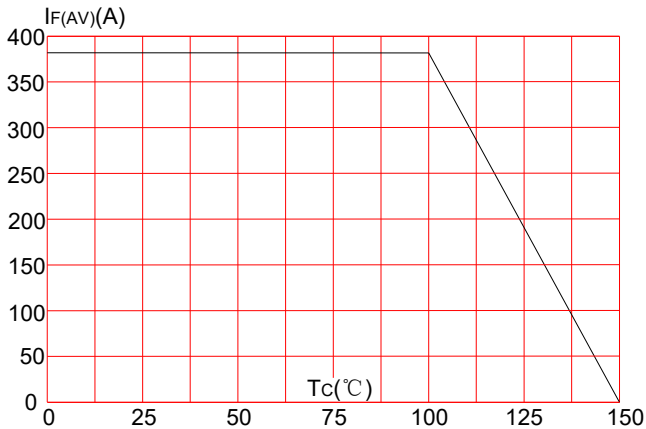
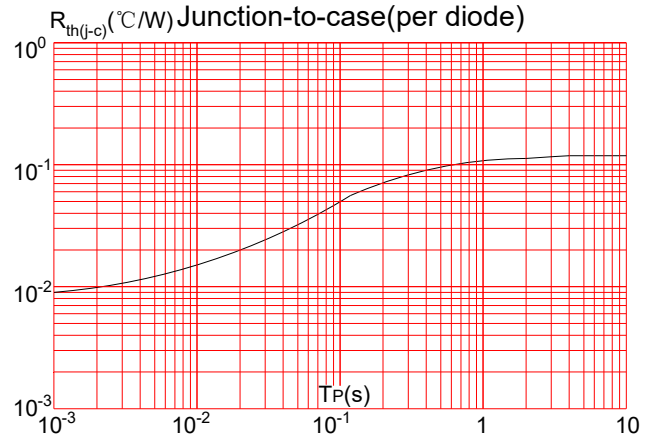


FIG.4: Maximum transient thermal impedance




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