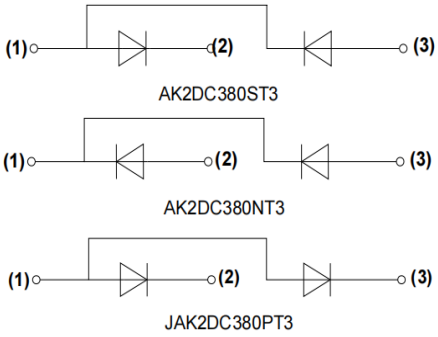


Description

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℃)

Parameter	Test Conditions	Symbol	Values				Unit
			12	16	18	20	
Operating junction temperature range		T_J	-40-150				℃
Storage temperature range		T_{STG}	-40-125				℃
Repetitive peak reverse voltage	T_J=25℃	V_{RRM}	1200	1600	1800	2000	V
Non-repetitive peak reverse voltage	T_J=25℃	V_{RSM}	1300	1700	1900	2100	V
Average forward current	T_C=100℃	$I_{F(AV)}$	380				A
Peak forward surge current	t_P=10ms, sin180°, T_J=25℃	I_{FSM}	10640				A
I^2t value for fusing		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℃)

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

Performance Curves

FIG.1: Forward characteristics(per diode)

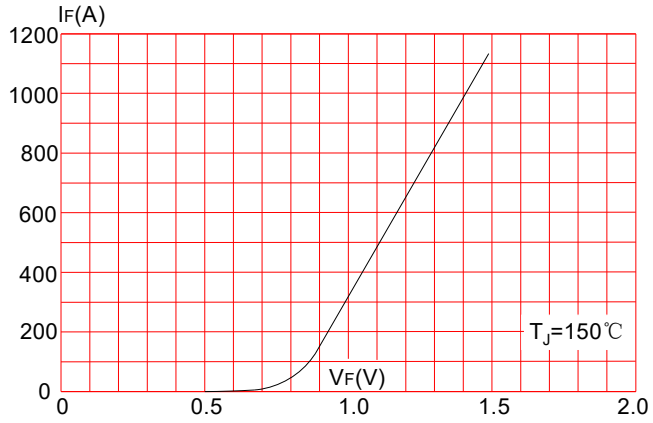


FIG.2: Peak on-state surge current

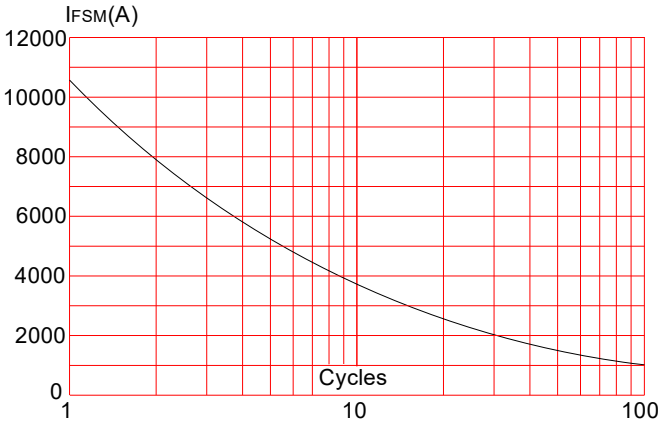


FIG.3: Forward current vs. case temperature

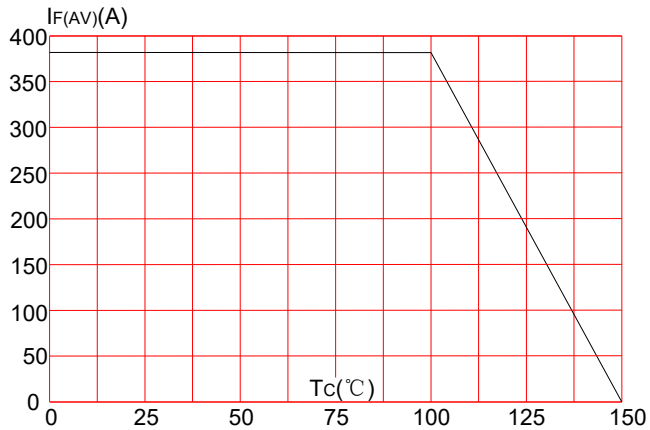
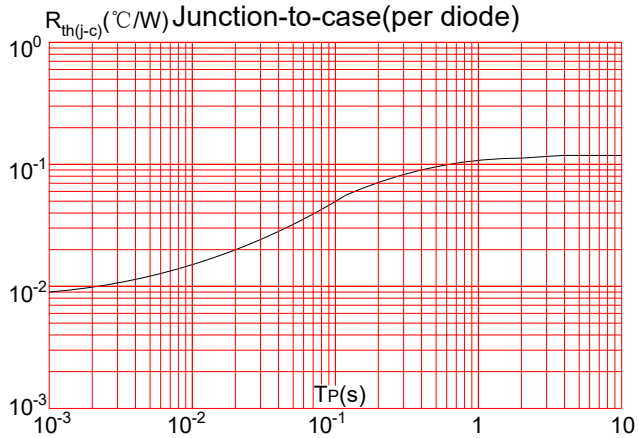
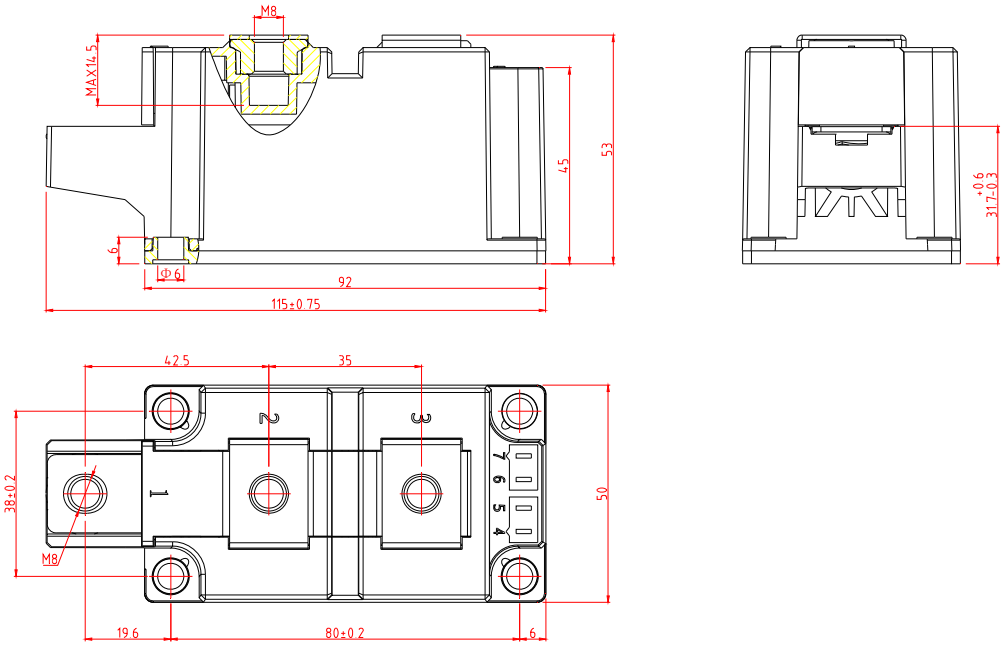


FIG.4: Maximum transient thermal impedance

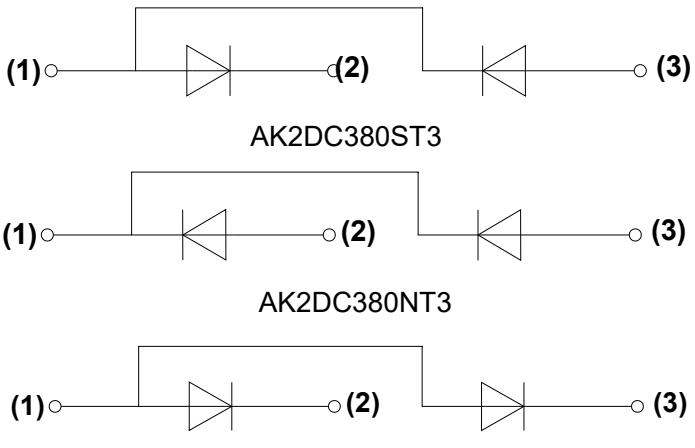


Mechanical Characteristics

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



AK2DC380ST3

AK2DC380NT3

JAK2DC380PT3