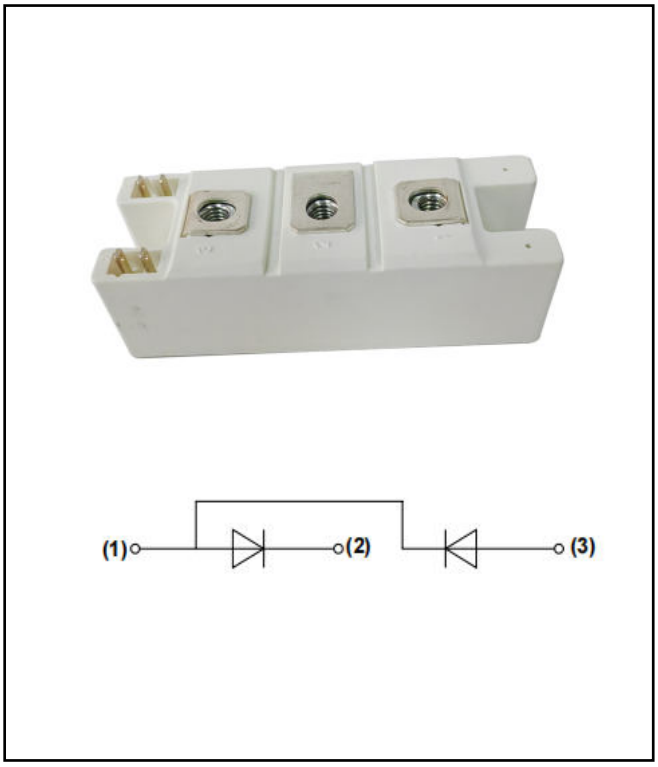
Diode Module



Description

1) A package of series of two diodes.
2) Heat transfer through alumina ceramic and metal substrate.
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 on-state current	T_C=100℃	$I_{F(AV)}$	130				A
Peak on-state surge current	T_j =25℃, t_P=10ms, sin 180°	I_{FSM}	3640				A
I^2t value for fusing		I^2t	66200				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 on-state voltage	I_F=390A t_P=380μs	V_F	≤1.6	V
Threshold voltage	T_j=150℃	V_{TO}	≤0.85	V
Dynamic resistance	T_j=150℃	R_d	≤1.5	mΩ
Repetitive peak reverse current	V_R=V_{RRM} T_j=25℃ T_j =150℃	 I_{RRM1} I_{RRM2}	 ≤100 ≤50	 μA mA
Thermal resistance	Junction to case Case to heatsink	$R_{th(j-c)}$ $R_{th(c-s)}$	0.22 0.12	℃/W

Performance Curves

FIG.1: Forward characteristics(per diode)

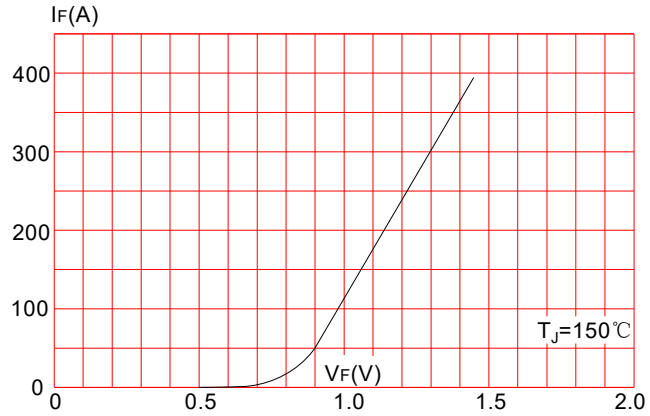


FIG.2: Peak on-state surge current

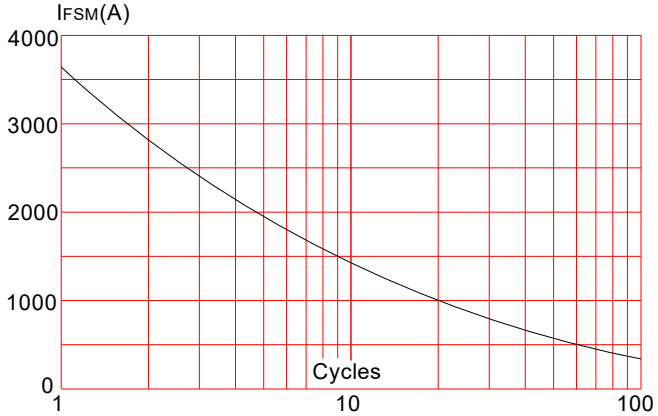


FIG.3: Forward current vs. case temperature

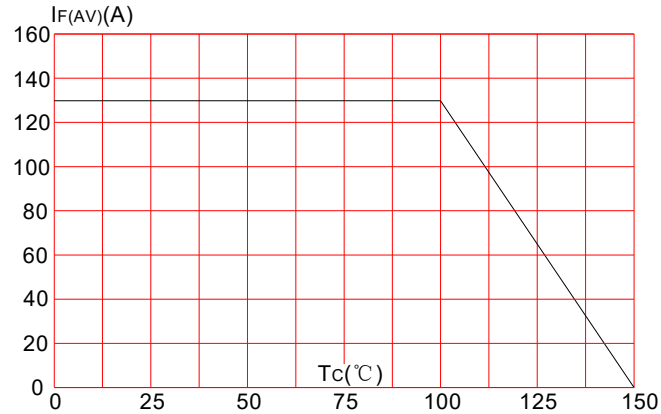
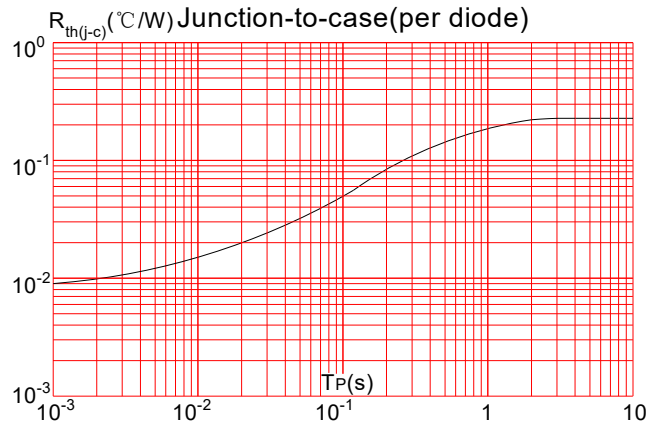
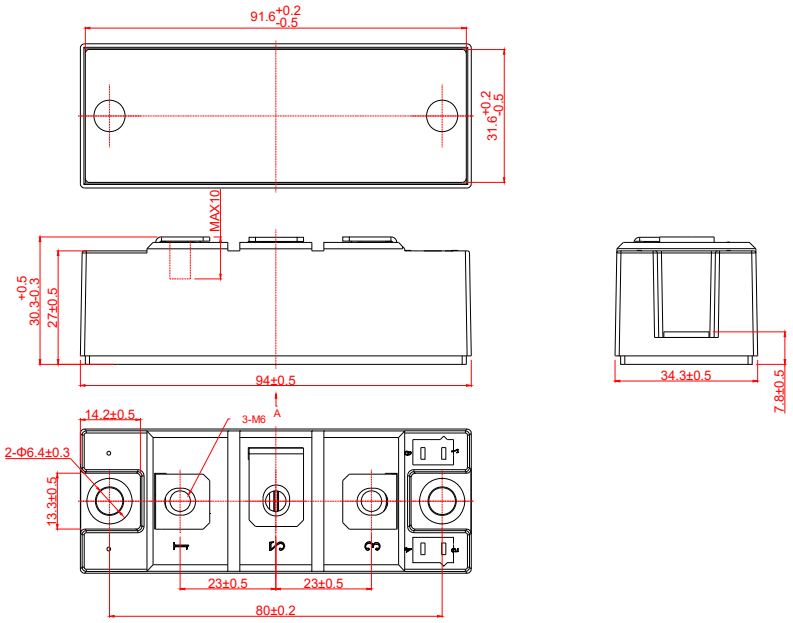


FIG.4: Maximum transient thermal impedance

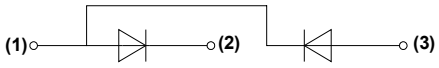


Mechanical Characteristics

Module size	94mm×34.3mm
Module height	30.3mm
Terminal distance of (1) /(2) /(3)	23mm
Mounting torque(M5)	5±15%Nm
Terminal torque(M6)	5±15%Nm



T2



symbol