

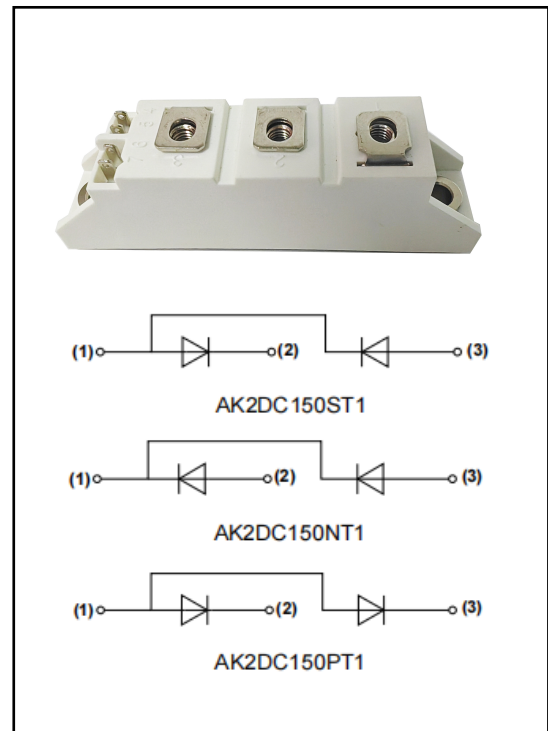
## Diode Module

### 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, $T_{CASE}=25^{\circ}C$ )

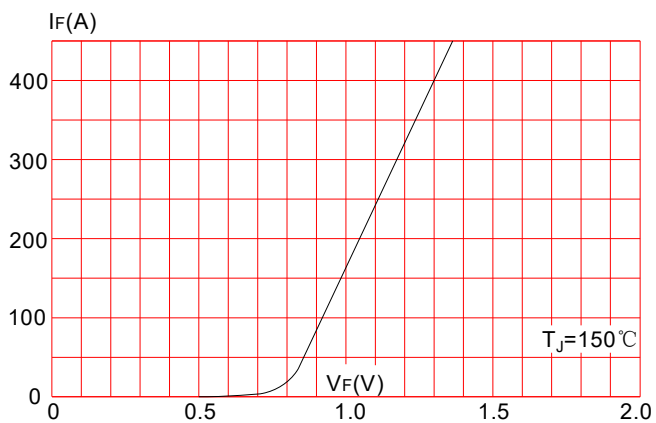
Parameter	Test Conditions	Symbol	Values				Unit
			12	16	18	20	
Operating junction temperature range		$T_j$	-40-150				$^{\circ}C$
Storage temperature range		$T_{stg}$	-40-125				$^{\circ}C$
Repetitive peak reverse voltage	$T_j=25^{\circ}C$	$V_{RRM}$	1200	1600	1800	2000	V
Non-repetitive peak reverse voltage	$T_j=25^{\circ}C$	$V_{RSM}$	1300	1700	1900	2100	V
Average on-state current	$T_c=100^{\circ}C$	$I_{F(AV)}$	150				A
Peak on-state surge current	$t_p=10ms, \sin 180^{\circ}$ ,	$I_{FSM}$	4200				A
$I^2t$ value for fusing	$T_j=25^{\circ}C$	$I^2t$	88200				$A^2s$
Insulation voltage	A.C 50Hz(1s/1min)	$V_{ISO}$	3600/3000				V

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

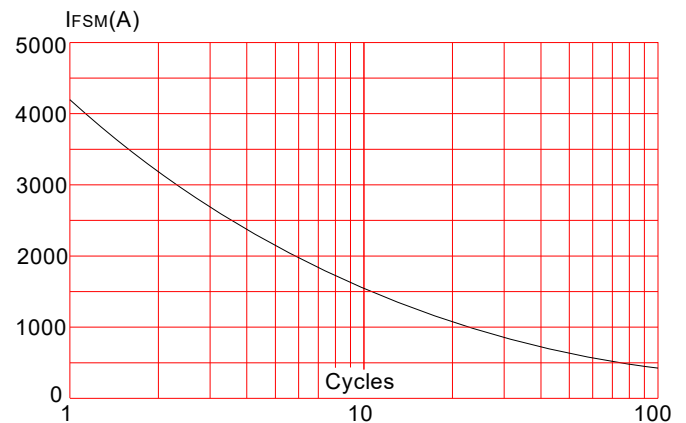
Parameter	Test Conditions	Symbol	Values	Unit
Peak on-state voltage	$I_F=450A$ $t_P=380\mu s$	$V_F$	$\leq 1.6$	V
Threshold voltage	$T_J=150^{\circ}C$	$V_{TO}$	$\leq 0.8$	V
Dynamic resistance	$T_J=150^{\circ}C$	$R_d$	$\leq 1.25$	m $\Omega$
Repetitive peak reverse current	$V_R=V_{RRM}$ $T_J=25^{\circ}C$	$I_{RRM1}$	$\leq 100$	$\mu A$
	$T_J=150^{\circ}C$	$I_{RRM2}$	$\leq 50$	mA
Thermal resistance	Junction to case	$R_{th(j-c)}$	0.25	$^{\circ}C/W$
	Case to heatsink	$R_{th(c-s)}$	0.12	

## Performance Curves

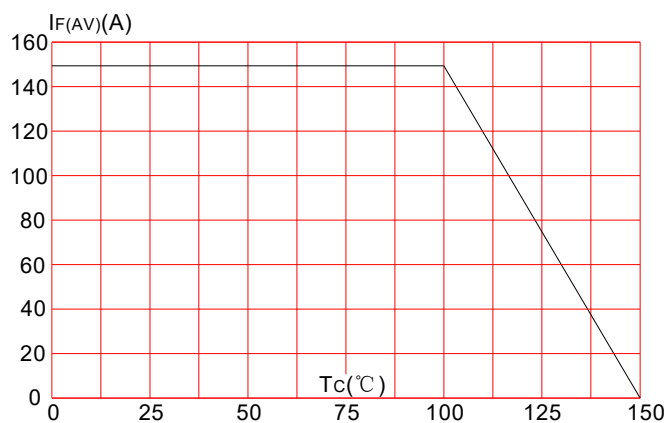
**FIG.1:** Forward characteristics(per diode)



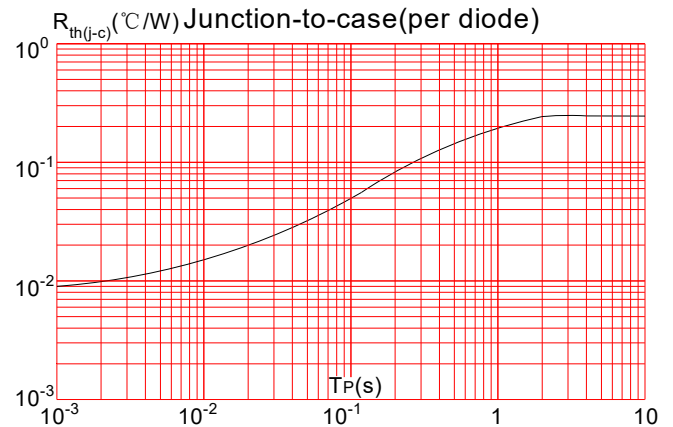
**FIG.2:** Peak on-state surge current



**FIG.3:** Forward current vs. case temperature



**FIG.4:** Maximum transient thermal impedance



## Mechanical Characteristics

Module size	93mm×21mm
Module height	30mm
Terminal distance of (1)/(2)/(3)	20mm
Mounting torque(M5)	5±15%Nm
Terminal torque(M5)	3±15%Nm
<p style="text-align: center;">T1</p>	<p style="text-align: center;">AK2DC150ST1</p> <p style="text-align: center;">AK2DC150NT1</p> <p style="text-align: center;">AK2DC150PT1</p>