



High-end Power Semiconductor Manufacturer

ZP1500A 5600-6500V Standard Rectifier Diode

- High power cycling capability
- Low on-state and switching losses
- Optimized for line frequency rectifiers
- Designed for traction and industrial applications



Average forward current			I_{FAV}	1510 A		
Repetitive peak reverse voltage			V_{RRM}	5600-6500 V		
V_{RRM} , V	5600	5800	6000	6200	6400	6500
Voltage code	56	58	60	62	64	65
T_j , °C	-60 - 150					

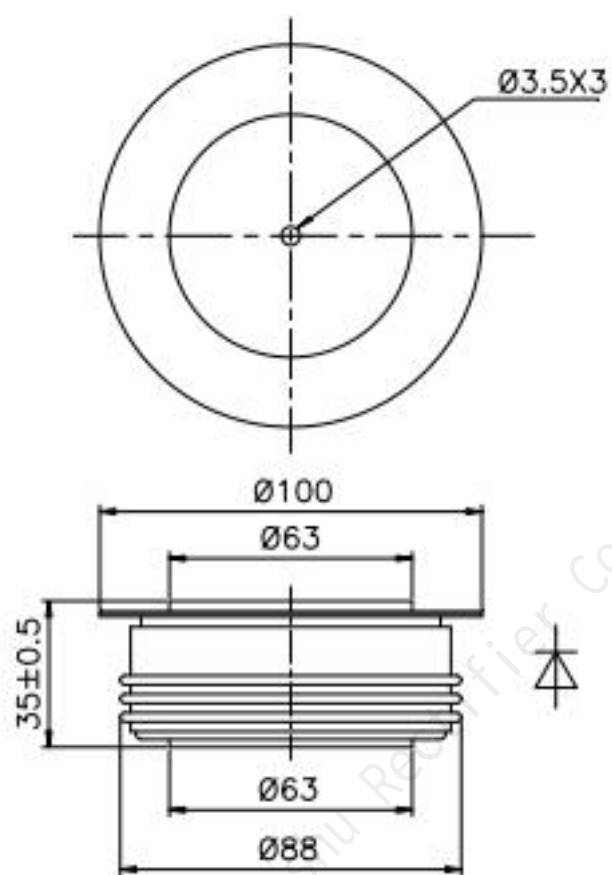
MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions	
ON-STATE					
I_{FAV}	Average forward current	A	1510	$T_c=100\text{ }^{\circ}\text{C}$; Double side cooled; 180° half-sine wave; 50 Hz	
I_{FSM}	Surge forward current	kA	26.0	$T_j=T_{j\text{ max}}$	180° half-sine wave; ($t_p=10\text{ ms}$); $V_R=0.6V_{RRM}$
I^2t	Safety factor	$A^2s\cdot10^3$	3380	$T_j=T_{j\text{ max}}$	180° half-sine wave; ($t_p=10\text{ ms}$); $V_R=0.6V_{RRM}$
BLOCKING					
V_{RRM}	Repetitive peak reverse voltages	V	5600-6500	$t_p=10\text{ ms}$; $T_j=T_{j\text{ max}}$	
THERMAL					
T_{stg}	Storage temperature	$^{\circ}\text{C}$	-40-160		
T_j	Operating junction temperature	$^{\circ}\text{C}$	-60-150		
MECHANICAL					
F	Mounting force	kN	27-34		

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions
ON-STATE				
V _{FM}	Peak forward voltage, max	V	1.85	T _j =25 °C; I _{FM} =3000 A; F=34kN
V _{F(TO)}	Forward threshold voltage, max	V	0.92	T _j =T _{j max} ;
r _T	Forward slope resistance, max	mΩ	0.39	
BLOCKING				
I _{RRM}	Repetitive peak reverse current, max	mA	150	T _j =T _{j max} ; V _R =V _{RRM}
THERMAL				
R _{thjc}	Thermal resistance, junction to case, max	°C/W	0.014	At 180° sine; double side cooled Clamping force 34.0kN
R _{thck}	Thermal resistance, case to heatsink, max	°C/W	0.0035	
MECHANICAL				
w	Weight, typ	g	1000	

OVERALL DIMENSIONS



ZT70DT

All dimensions in millimeters

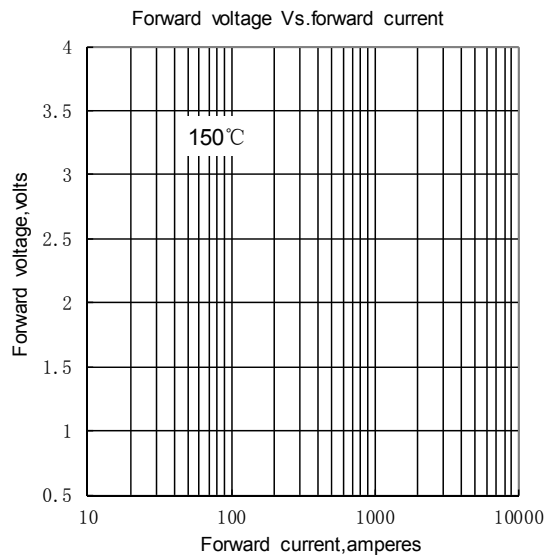


Fig.1

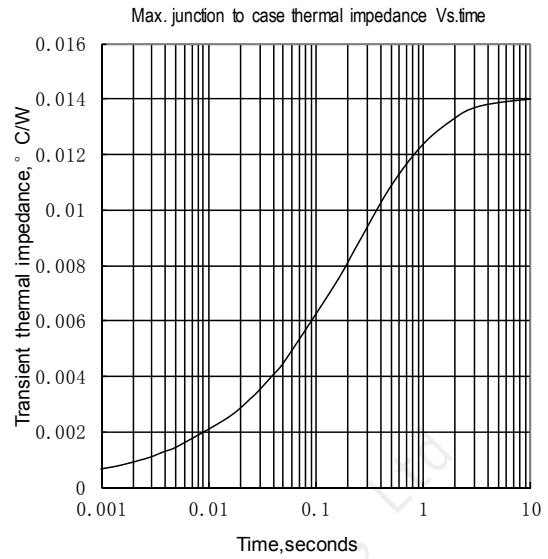


Fig.2

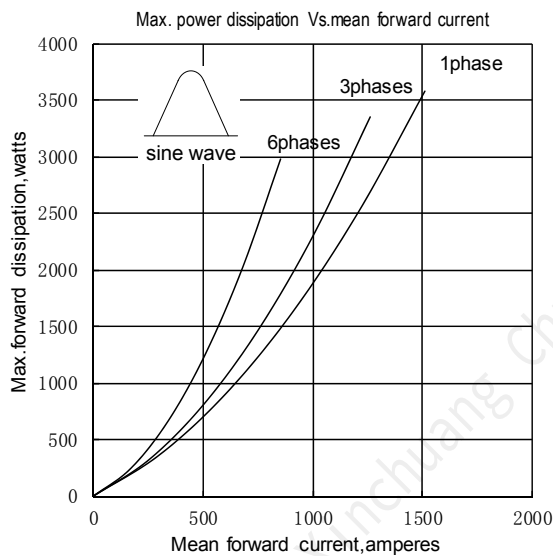


Fig.3

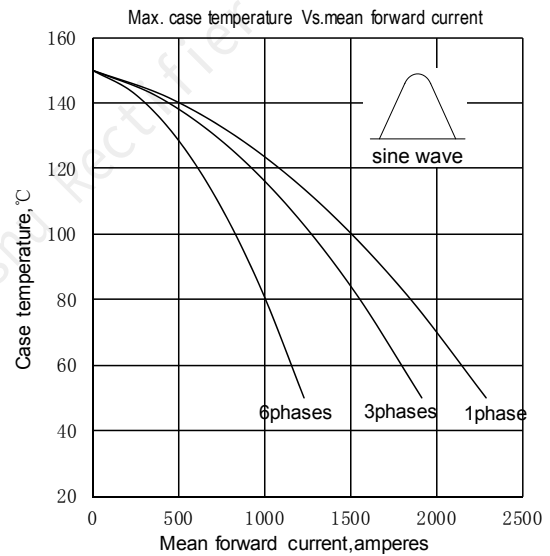
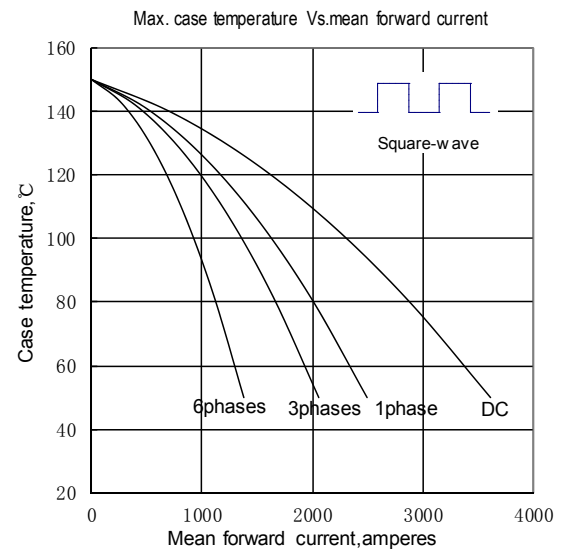
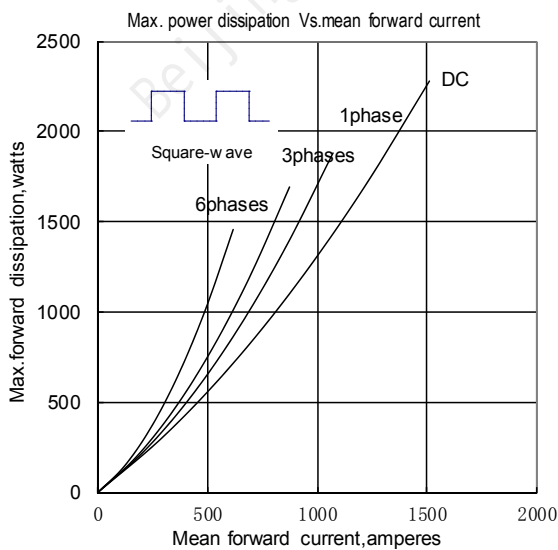


Fig.4



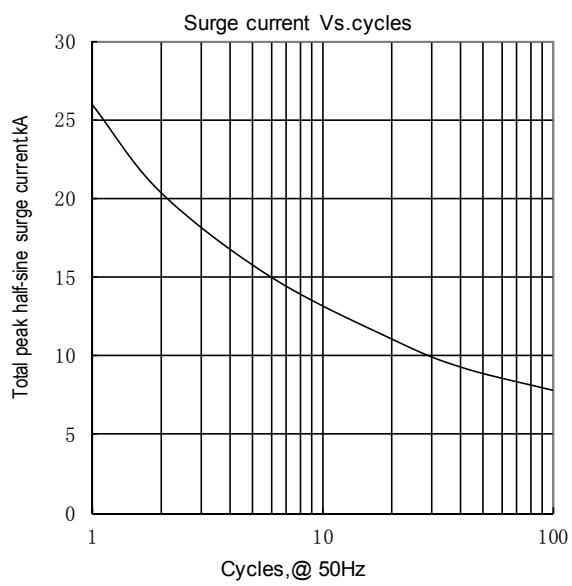


Fig.7

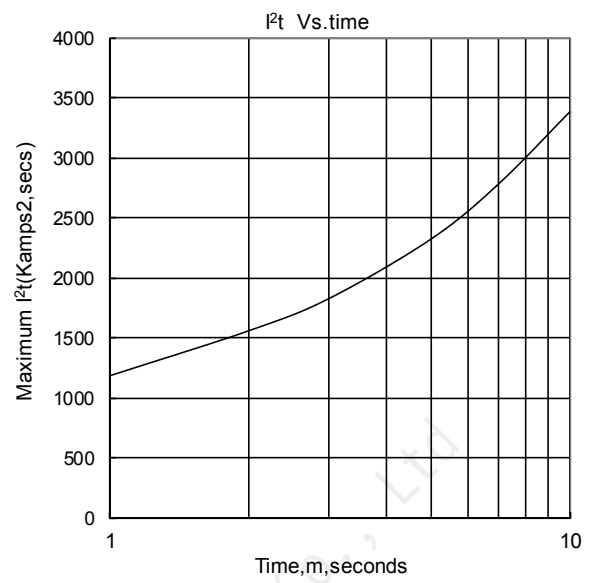


Fig.8