



High-end Power Semiconductor Manufacturer

ZP5200A 5100-6500V 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}		5250 A			
Repetitive peak reverse voltage				V_{RRM}		5100-6500 V			
V_{RRM} , V	5100	5200	5400	5600	5800	6000	6200	6400	6500
Voltage code	51	52	54	56	58	60	62	64	65
T_j , °C	-60 - 150								

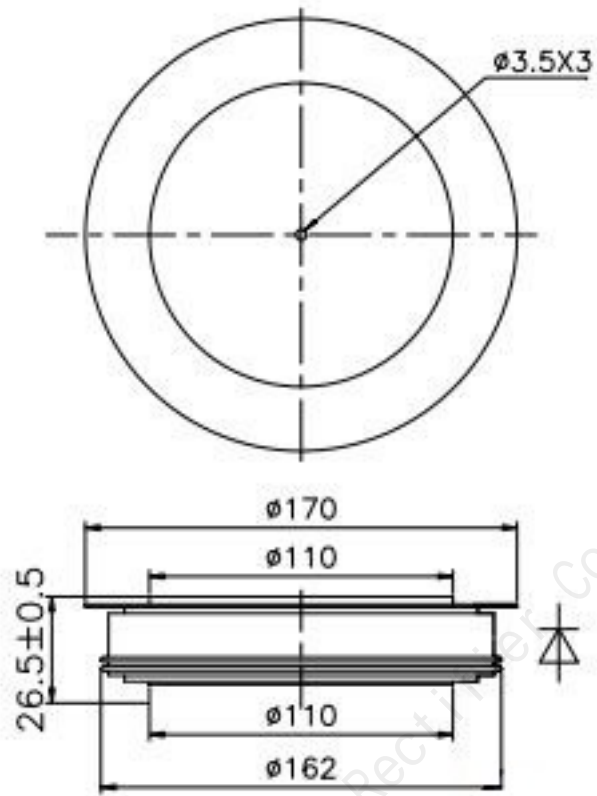
MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions
ON-STATE				
I_{FAV}	Average forward current	A	5250	$T_c=100\text{ }^\circ\text{C}$; Double side cooled; 180° half-sine wave; 50 Hz
I_{FSM}	Surge forward current	kA	84.0	$T_j=T_{j\text{ max}}$ 180° half-sine wave; ($t_p=10\text{ ms}$); $V_R=0.6V_{RRM}$
I^2t	Safety factor	$A^2s\cdot 10^4$	35280	$T_j=T_{j\text{ max}}$ 180° half-sine wave; ($t_p=10\text{ ms}$); $V_R=0.6V_{RRM}$
BLOCKING				
V_{RRM}	Repetitive peak reverse voltages	V	5100-6500	$t_p=10\text{ ms}$; $T_j=T_{j\text{ max}}$
THERMAL				
T_{stg}	Storage temperature	°C	-40-160	
T_j	Operating junction temperature	°C	-60-150	
MECHANICAL				
F	Mounting force	kN	110-140	

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions
ON-STATE				
V_{FM}	Peak forward voltage, max	V	1.65	$T_j=25\text{ }^\circ\text{C}; I_{FM}=5000\text{ A}; F=140\text{kN}$
$V_{F(TO)}$	Forward threshold voltage, max	V	0.81	$T_j=T_{j\text{max}};$
r_T	Forward slope resistance, max	$\text{m}\Omega$	0.12	
BLOCKING				
I_{RRM}	Repetitive peak reverse current, max	mA	400	$T_j=T_{j\text{max}};$ $V_R=V_{RRM}$
THERMAL				
R_{thjc}	Thermal resistance, junction to case, max	$^\circ\text{C}/\text{W}$	0.004	At 180° sine; double side cooled Clamping force 140kN
R_{thck}	Thermal resistance, case to heatsink, max	$^\circ\text{C}/\text{W}$	0.001	
MECHANICAL				
w	Weight, typ	g	3420	

OVERALL DIMENSIONS



ZT130

All dimensions in millimeters

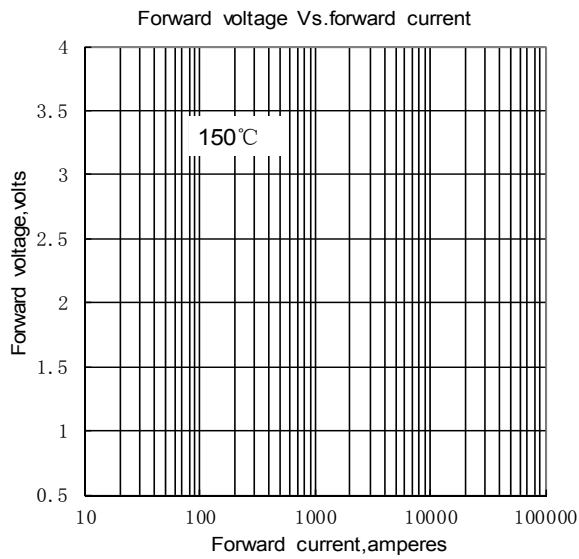


Fig.1

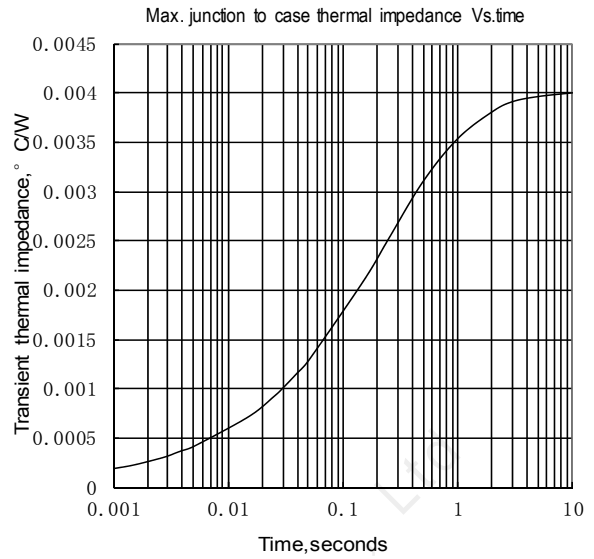


Fig.2

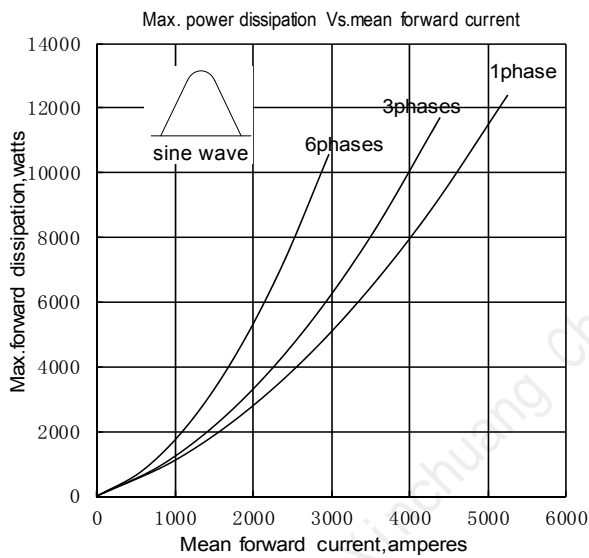


Fig.3

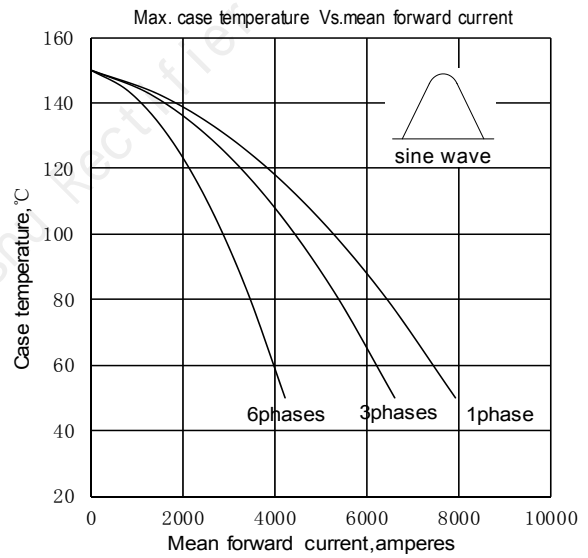
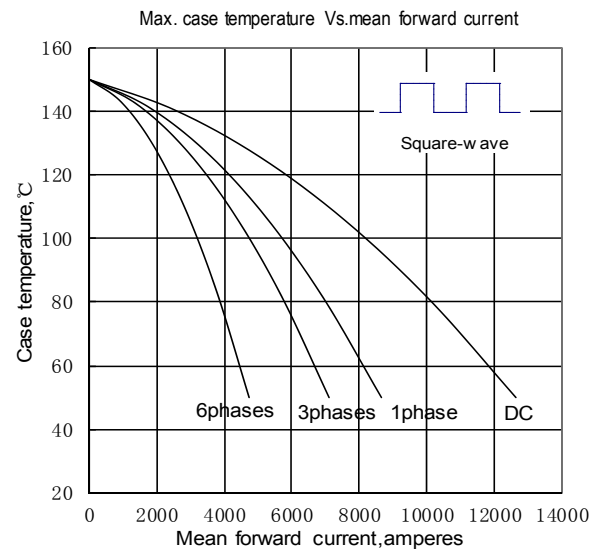
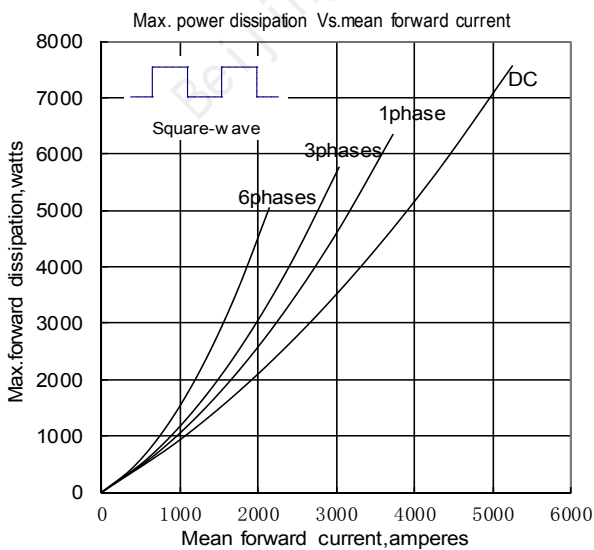


Fig.4



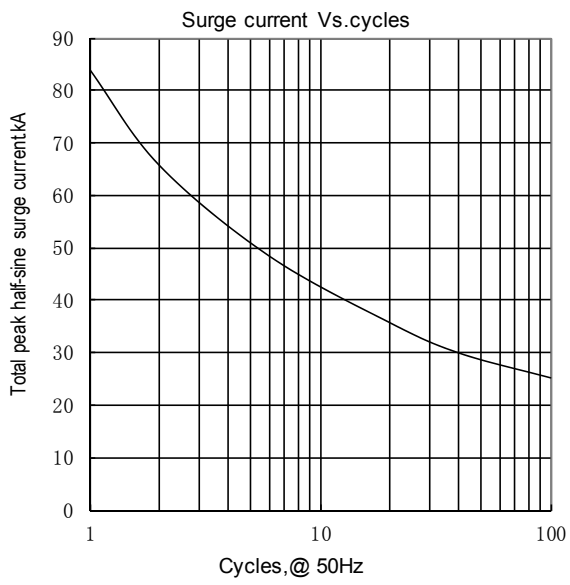


Fig.7

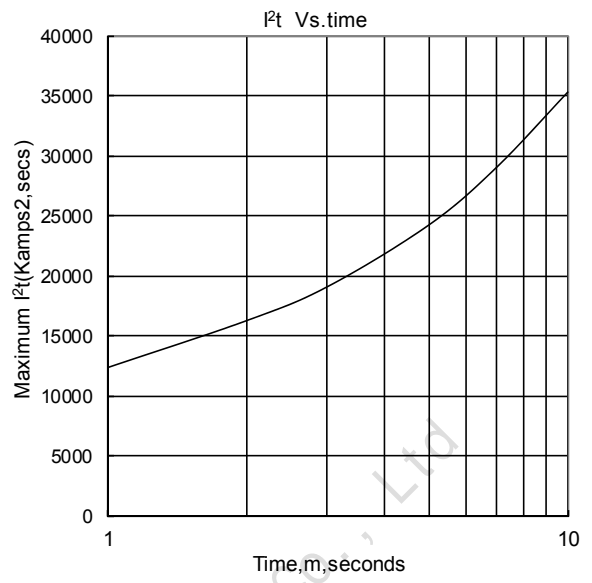


Fig.8

Beijing Xinchuang Chunshu Rectifier Co., Ltd