ChunZheng

High-end Power Semiconductor Manufacturer

ZP900A 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}	970 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					

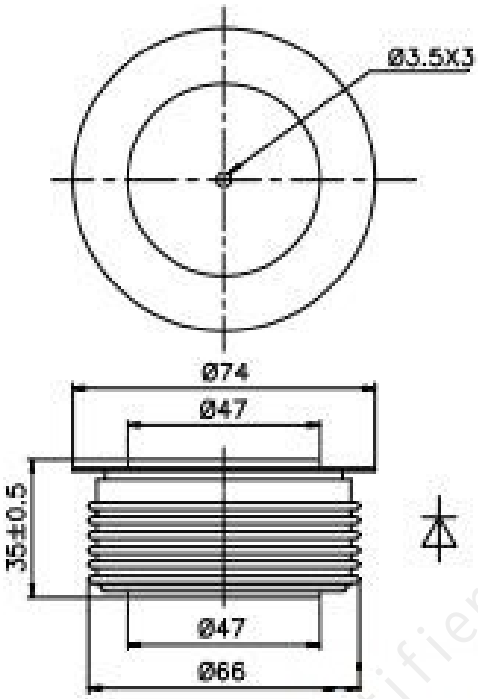
MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions	
ON-STATE					
I_{FAV}	Average forward current	A	970	T_c=100 °C; Double side cooled; 180° half-sine wave; 50 Hz	
I_{FSM}	Surge forward current	kA	16.5	T_j=$T_{j\,max}$	180° half-sine wave; (t_p=10 ms); V_R=0.6V_{RRM}
I^2t	Safety factor	$A^2s{\cdot}10^3$	1361	T_j=$T_{j\,max}$	180° half-sine wave; (t_p=10 ms); V_R=0.6V_{RRM}
BLOCKING					
V_{RRM}	Repetitive peak reverse voltages	V	5600-6500	t_p=10 ms; T_j=$T_{j\,max}$	
THERMAL					
T_{stg}	Storage temperature	°C	-40-160		
T_j	Operating junction temperature	°C	-60-150		
MECHANICAL					
F	Mounting force	kN	19-26		

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions
ON-STATE				
V_{FM}	Peak forward voltage, max	V	2.15	T_j=25 °C; I_{FM}=1500 A; F=26kN
$V_{F(TO)}$	Forward threshold voltage, max	V	0.91	$T_j=T_{j\,max}$;
r_T	Forward slope resistance, max	mΩ	0.60	
BLOCKING				
I_{RRM}	Repetitive peak reverse current, max	mA	100	$T_j=T_{j\,max}$; $V_R=V_{RRM}$
THERMAL				
R_{thjc}	Thermal resistance, junction to case, max	°C/W	0.022	At 180° sine; double side cooled Clamping force 26.0kN
R_{thck}	Thermal resistance, case to heatsink, max	°C/W	0.005	
MECHANICAL				
w	Weight, typ	g	440	

OVERALL DIMENSIONS



ZT55DT

All dimensions in millimeters

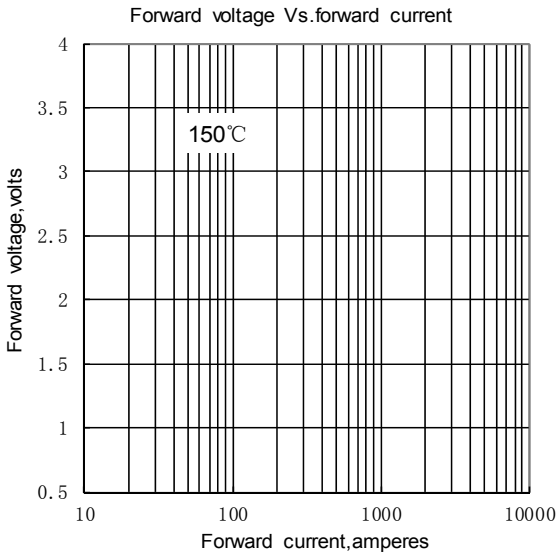


Fig.1

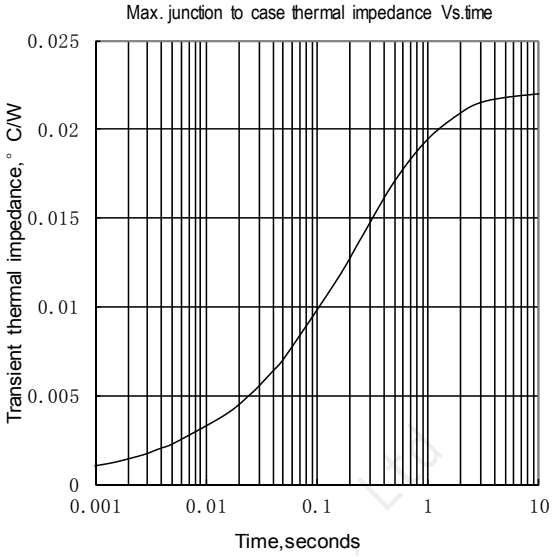


Fig.2

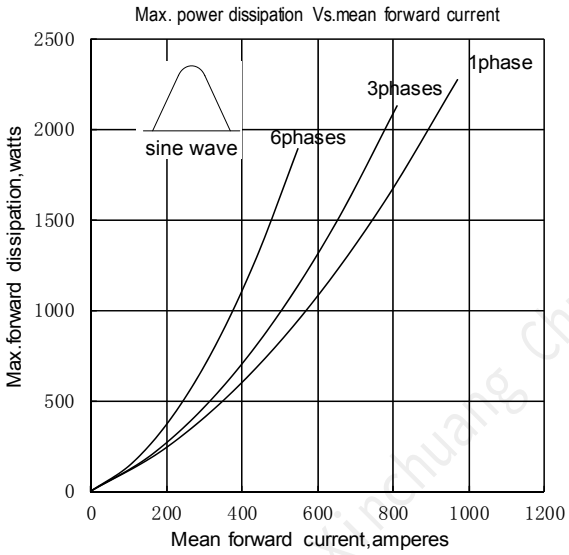


Fig.3

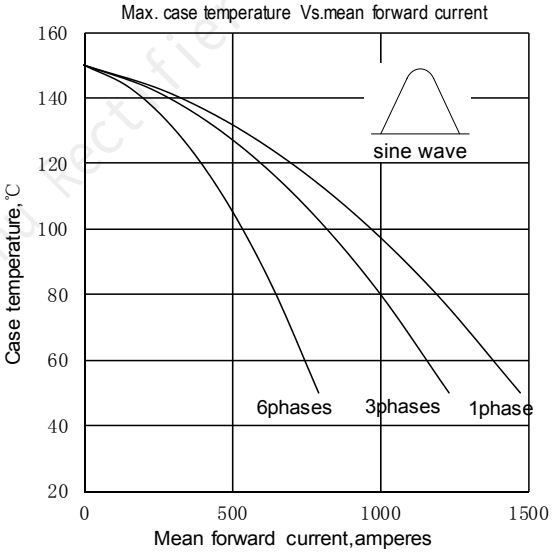


Fig.4

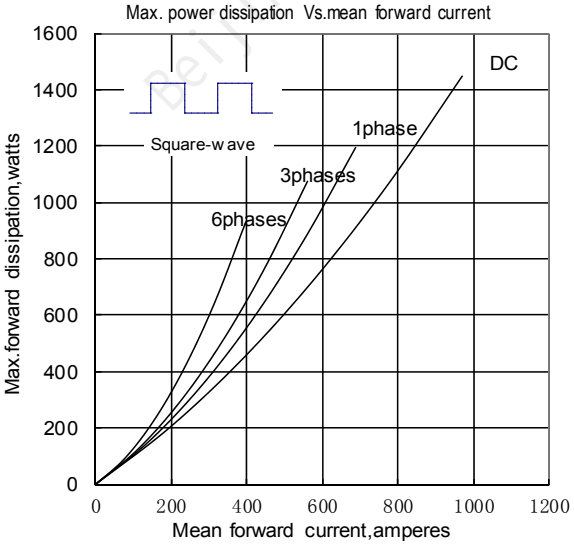


Fig.5

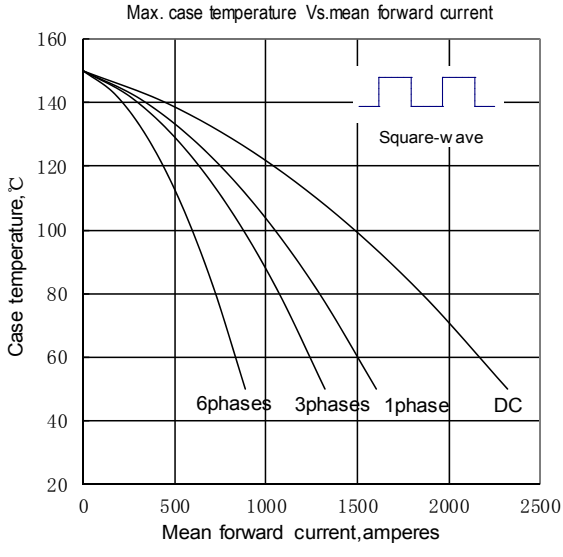


Fig.6

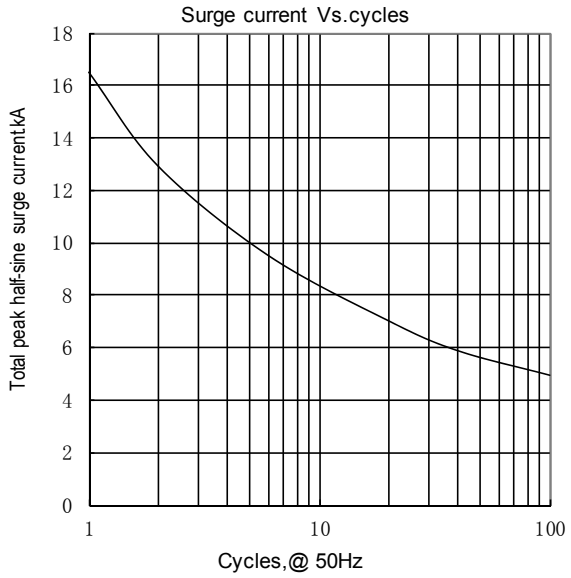


Fig.7

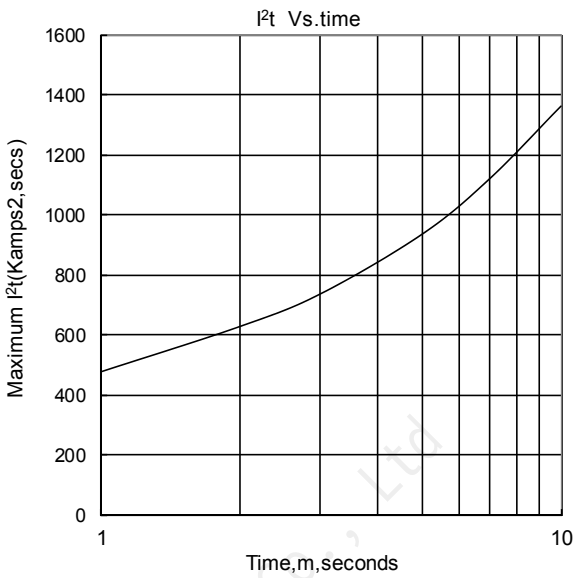


Fig.8

