



High-end Power Semiconductor Manufacturer

## ZP900A 6600-7200V 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		$I_{FAV}$	950 A	
Repetitive peak reverse voltage		$V_{RRM}$	6600 – 7200 V	
$V_{RRM}$ , V	6600	6800	7000	7200
Voltage code	66	68	70	72
$T_j$ , °C	-40 – 160			

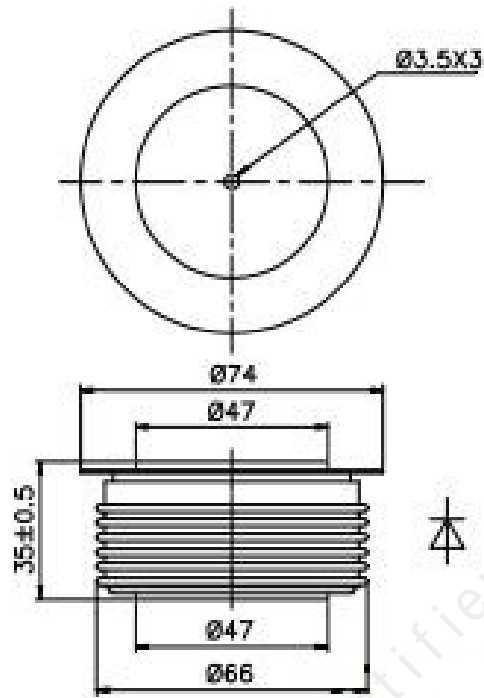
### MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions
<b>ON-STATE</b>				
$I_{FAV}$	Average forward current	A	950	$T_c=100\text{ }^\circ\text{C}$ ; Double side cooled; 180° half-sine wave; 50 Hz
$I_{FRMS}$	RMS forward current	A	1492	$T_c=100\text{ }^\circ\text{C}$
$I_{FSM}$	Surge forward current	kA	16.5	$T_j=T_{j\max}$ 180° half-sine wave; ( $t_p=10\text{ ms}$ ); $V_R=0\text{ V}$ ;
$I^2t$	Safety factor	$A^2s \cdot 10^4$	136	$T_j=T_{j\max}$ 180° half-sine wave; ( $t_p=10\text{ ms}$ )
<b>BLOCKING</b>				
$V_{RRM}$	Repetitive peak reverse voltages	V	6600-7200	$T_{j\min} < T_j < T_{j\max}$ ; 180° half-sine wave
$V_{RSM}$	Non-repetitive peak reverse voltages	V	7100-7700	$T_j=25, 150^\circ\text{C}$ ; $I_{RRM} \leq 150\text{mA}$ ; $V_R=V_{RRM}$ ; $t_p=10\text{ms}$
<b>THERMAL</b>				
$T_{stg}$	Storage temperature	°C	-40-160	
$T_j$	Operating junction temperature	°C	-40-150	
<b>MECHANICAL</b>				
F	Mounting force	kN	22.0	

## CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions
<b>ON-STATE</b>				
$V_{FM}$	Peak forward voltage, max	V	1.80	$T_j=25\text{ }^\circ\text{C}; I_{TM}=1500\text{ A}$
$V_{F(TO)}$	Forward threshold voltage, max	V	1.20	$T_j=T_{j\text{ max}}$
$r_T$	Forward slope resistance, max	m $\Omega$	0.500	
<b>BLOCKING</b>				
$I_{RRM}$	Repetitive peak reverse current, max	mA	150	$T_j=T_{j\text{ max}};$ $V_R=V_{RRM}$
<b>THERMAL</b>				
$R_{thjc}$	Thermal resistance, junction to case, max	$^\circ\text{C/W}$	0.020	
$R_{thck}$	Thermal resistance, case to heatsink, max	$^\circ\text{C/W}$	0.005	
<b>MECHANICAL</b>				
w	Weight, typ	g	600	

**OVERALL DIMENSIONS**



ZT55DT

All dimensions in millimeters

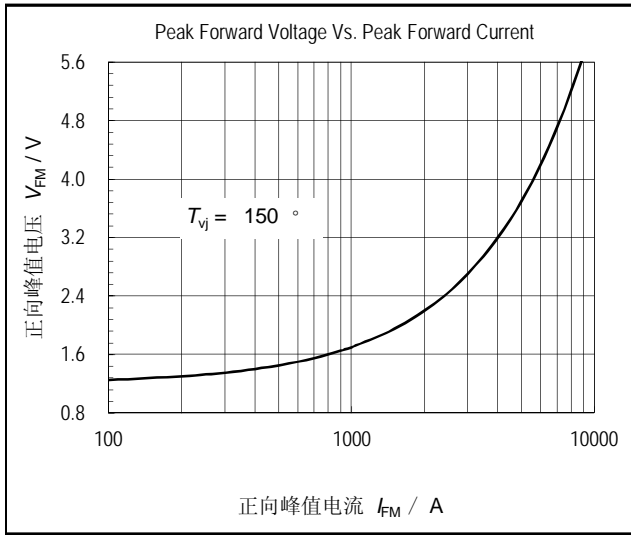


图1. 正向伏安特性曲线

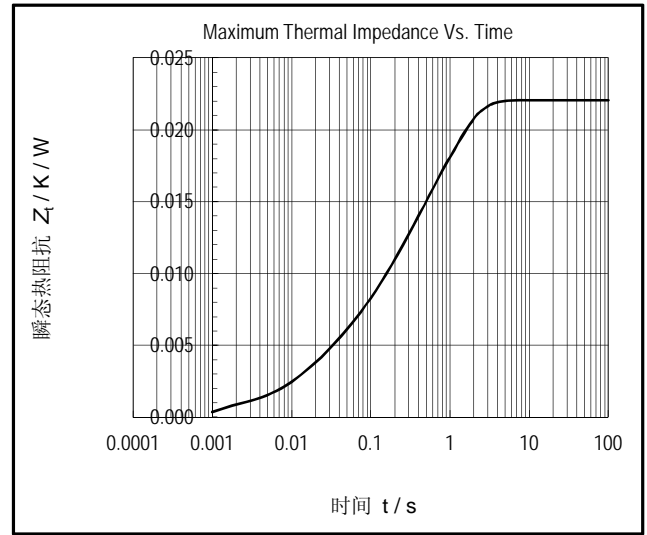


图2. 瞬态热阻抗曲线

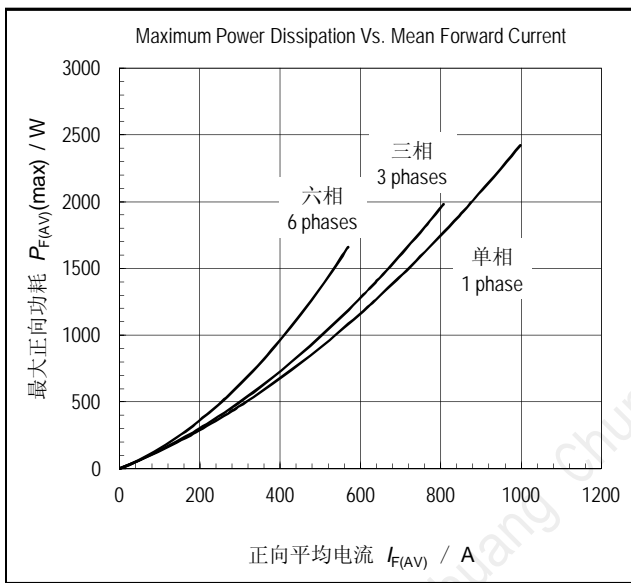


图3. 最大正向功耗与正向平均电流的关系曲线

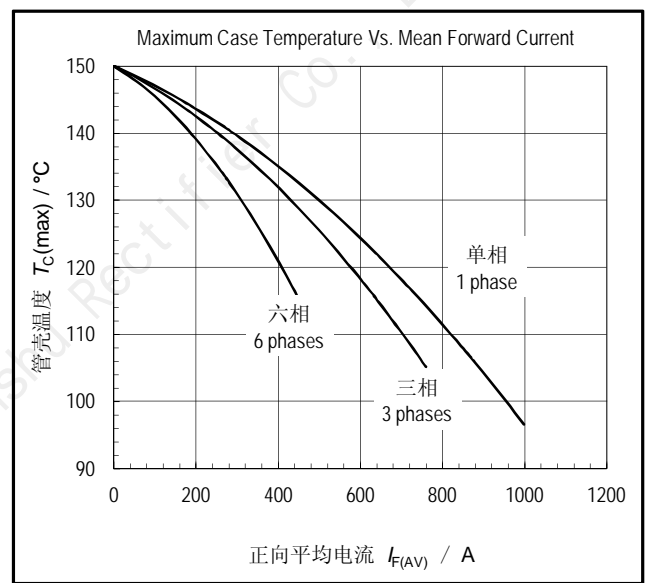


图4. 管壳温度与正向平均电流的关系曲线

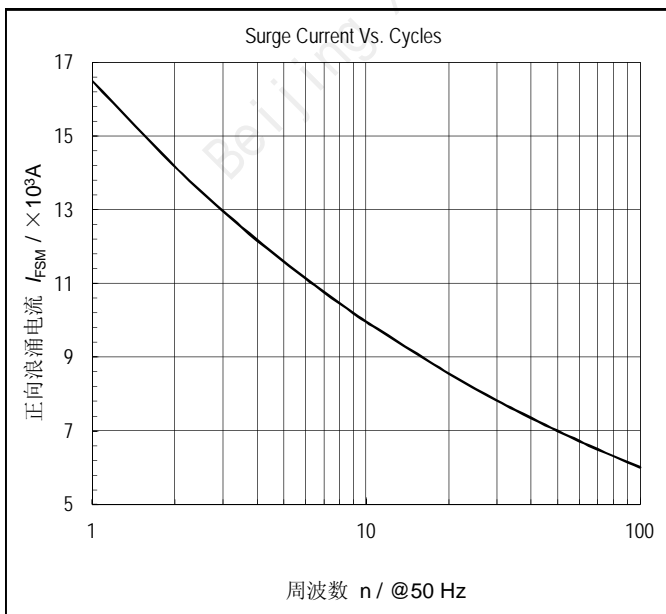


图5. 正向浪涌电流与周波数的关系曲线

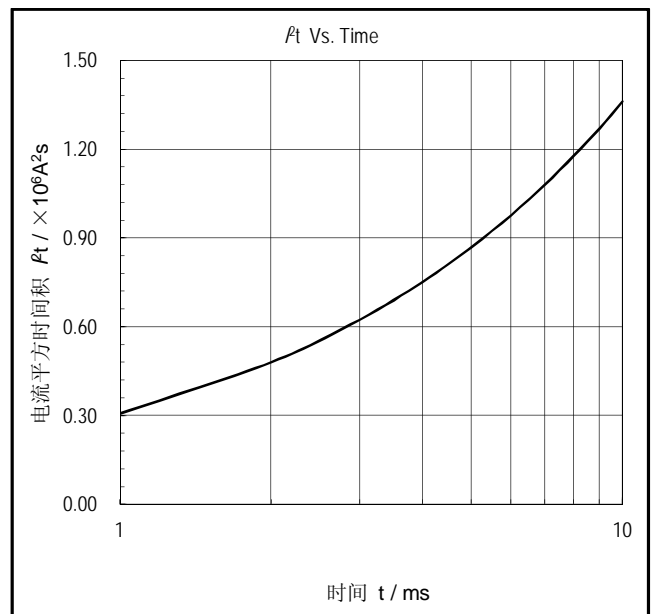


图6.  $I^2t$  特性曲线