

# Standard Rectifier-----ZP3500A/4200V~5000V

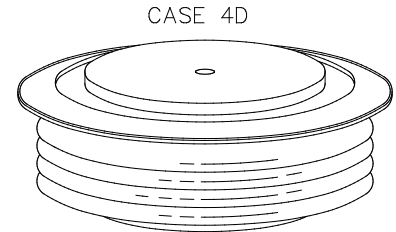
## GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

### Features:

- . All Diffused Structure
- . High Surge rating
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

### Typical Applications:

- . Rectifier for Drives Applications
- . Medium voltage converters
- . Pulsed power applications
- . Crowbar Applications



## ELECTRICAL CHARACTERISTICS AND RATINGS

### Reverse Blocking

$V_{RRM}$ (1)	$V_{RSM}$ (1)
4200~5000	4300~5100

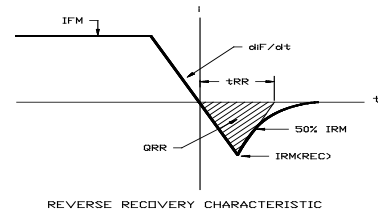
$V_{RRM}$  = Repetitive peak reverse voltage

$V_{RSM}$  = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	$I_{RRM}$	15 mA 300 mA
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### Notes:

All ratings are specified for  $T_j=25^\circ\text{C}$  unless otherwise stated.



REVERSE RECOVERY CHARACTERISTIC

### Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		3500		A	Sinewave, 180° conduction, $T_c=100^\circ\text{C}$
RMS value of on-state current	$I_{FRMS}$		54700		A	Nominal value
Peak one cycle surge (non repetitive) current	$I_{FSM}$		46		kA	$T_j=160^\circ\text{C}$ , $V_R=0,8V_{RRM}$ , $t_p=10\text{ms}$
I square t	$I^2t$		$10.6 \times 10^3$		$\text{kA}^2\text{s}$	10 msec
Peak on-state voltage	$V_{FM}$		1.65		V	$I_{FM} = 5000 \text{ A}$ ; $T_j = 25^\circ\text{C}$
Reverse Recovery Current (4)	$I_{RM(REC)}$		360		A	$I_{FM} = 1000 \text{ A}$ ; $dI_F/dt = 10 \text{ A}/\mu\text{s}$ , $T_j = 160^\circ\text{C}$
Reverse Recovery Charge (4)	$Q_{rr}$		-		$\mu\text{C}$	
Reverse Recovery Time (4)	$t_{RR}$		-		$\mu\text{s}$	

\* For guaranteed maximum values, contact factory

## THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	$T_j$	-30	+170		$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-30	+170		$^\circ\text{C}$	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		12		$^\circ\text{C}/\text{kW}$	Double sided cooled

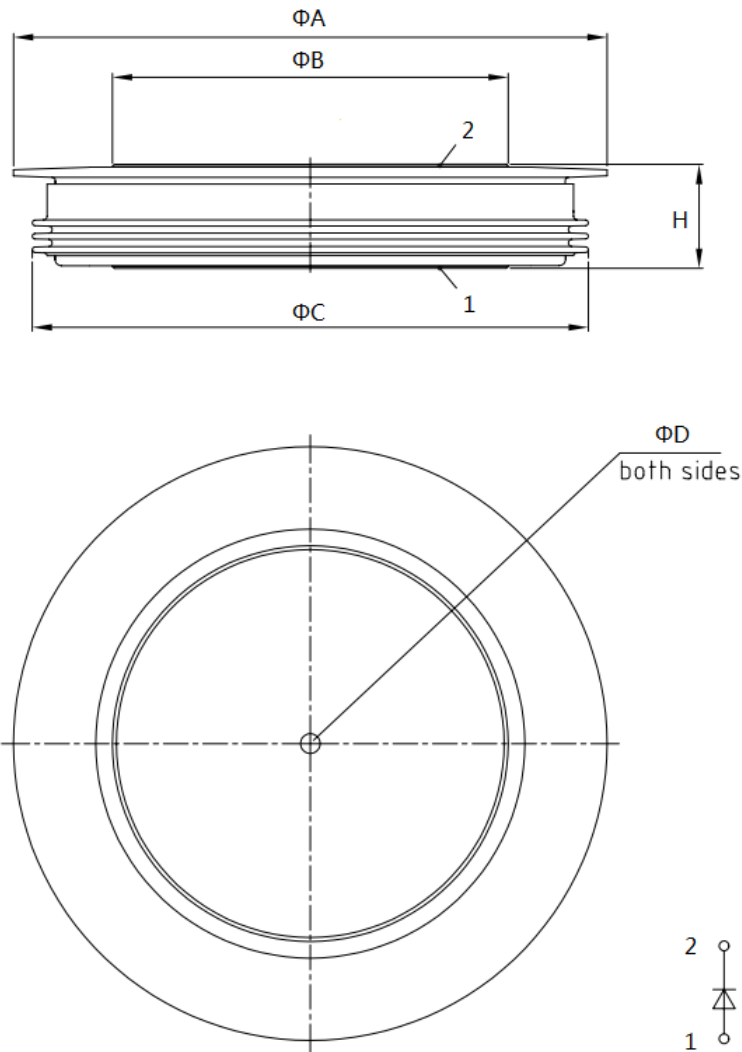


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			24			Single sided cooled
Thermal resistance - case to sink	$R_{\Theta(c-s)}$		2 4		°C/kW	Double sided cooled Single sided cooled
Mounting force	P	31	40	-	kN	
Weight	W			1.6	kg	About

\* Mounting surfaces smooth, flat and greased

**CASE OUTLINE AND DIMENSIONS**



Sym	A	B	C	D	H
mm	109	73	98	3.5x3	35±1

