

# ZP2000A/5400V

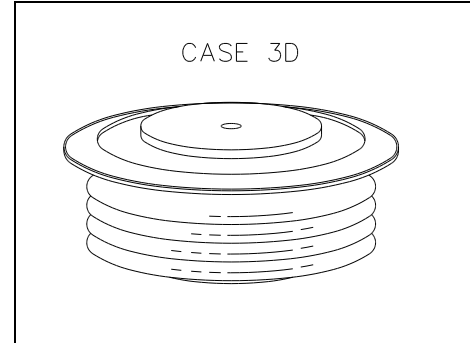
(YZPSTRA205420XX)

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## GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

### Features:

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



## ELECTRICAL CHARACTERISTICS AND RATINGS

### Reverse Blocking

Device Type	V <sub>R</sub> RM (1)	V <sub>R</sub> SM (1)
ZP2000A	5400	5500

V<sub>RRM</sub> = Repetitive peak reverse voltage

V<sub>RSM</sub> = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	I <sub>RRM</sub>	10 mA 150 mA (3)
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### Notes:

All ratings are specified for T<sub>j</sub>=25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +175 °C.

(2) 10 msec. max. pulse width

(3) Maximum value for T<sub>j</sub> = 175 °C.

(4) See parameter definition below :

### Conducting - on state

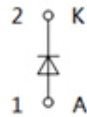
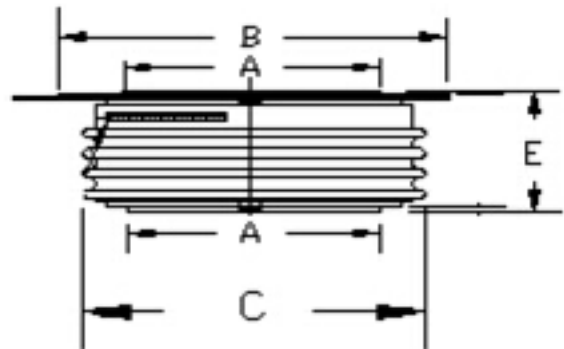
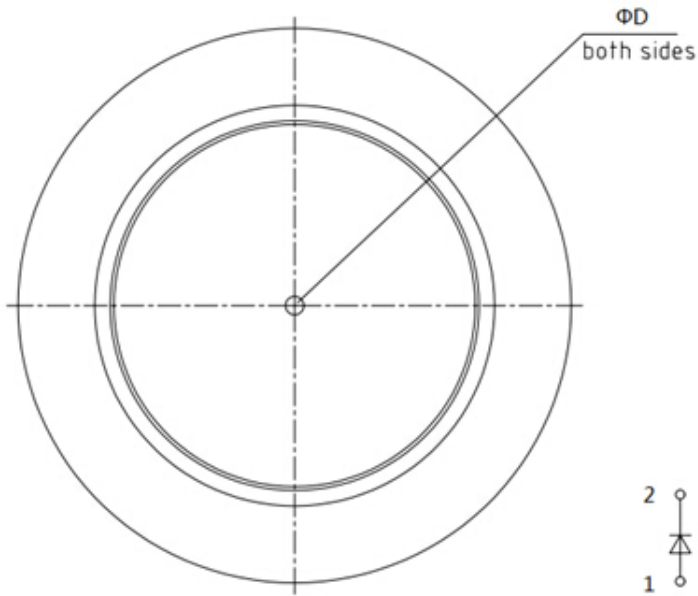
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	I <sub>F(AV)</sub>		2000		A	Sinewave, 180° conduction, T <sub>c</sub> = 90°C
RMS value of on-state current	I <sub>FRMS</sub>		4700		A	Nominal value
Peak one cycle surge (non repetitive) current	I <sub>FSM</sub>		26000 24000		A A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 175 °C 10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 175 °C
Peak on-state voltage	V <sub>FM</sub>		1.45		V	I <sub>FM</sub> = 3000 A;
Reverse Recovery Current (4)	I <sub>RM(REC)</sub>		*		A	
Reverse Recovery Charge (4)	Q <sub>rr</sub>		*		μC	
Reverse Recovery Time (4)	t <sub>RR</sub>		*		μs	
I square t	I <sup>2</sup> t		20.8x10 <sup>6</sup>		A <sup>2</sup> s	10.0 msec

● For guaranteed maximum values, contact factory

Parameter	Symb ol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	$T_j$	-40	+175		°C	
Storage temperature	$T_{stg}$	-40	+185		°C	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$		0.040 0.080		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to sink	$R_{\Theta(c-s)}$		.015 .030		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	7000	9000		lb.	

\* Mounting surfaces smooth, flat and greased

**CASE OUTLINE AND DIMENSIONS.**



- A: 63 mm
- B: 98 mm
- C: 88 mm
- E: 32 mm