

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)
1000	1100

V_{RRM} = Repetitive peak reverse voltage

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

Notes:

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

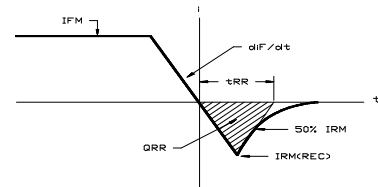
(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to $+180^\circ\text{C}$.

(2) 10 msec. max. pulse width

(3) Maximum value for $T_j = 180^\circ\text{C}$.

(4) See parameter definition below :

Repetitive peak reverse leakage	I_{RRM}	7 mA 75 mA
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REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		4655		A	Sinewave, 180° conduction, $T_c = 55^\circ\text{C}$
RMS value of on-state current	$I_{F(RMS)M}$		-		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		44.8		kA	$T_j = 25^\circ\text{C}$, $V_R = 0,8V_{RRM}$, $t_p = 10\text{ms}$
I square t	I^2t		10×10^3		kA^2s	10 msec
Peak on-state voltage	V_{FM}		1.16		V	$I_{FM} = 4500\text{ A}$; $T_j = 25^\circ\text{C}$
Threshold voltage	V_{F0}		0.75		V	$T_j = T_j \text{ Max}$
Slope resistance	r_f		0.055		$\text{m}\Omega$	$T_j = T_j \text{ Max}$
Reverse Recovery Charge (4)	Q_{rr}		-		μC	
Reverse Recovery Time (4)	t_{RR}		-		μs	

* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS

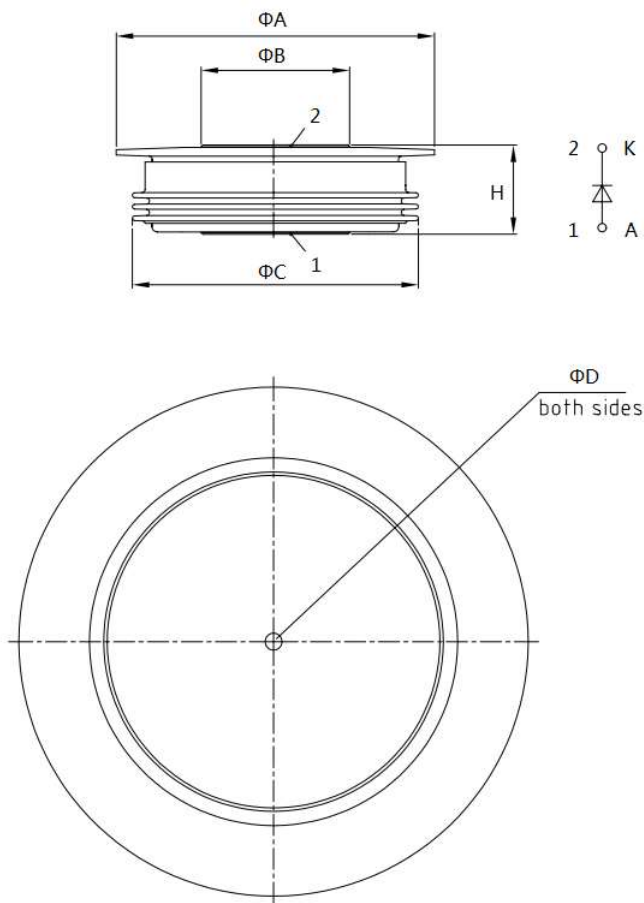
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+180		$^\circ\text{C}$	
Storage temperature	T_{stg}	-40	+180		$^\circ\text{C}$	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		-		$^\circ\text{C}/\text{kW}$	Double side cooled Single sided cooled
Thermal resistance - case to sink	$R_{\theta(c-s)}$		6		$^\circ\text{C}/\text{kW}$	Double side cooled Single sided cooled
Thermal resistance - junction to sink	$R_{\theta(j-s)}$		24		$^\circ\text{C}/\text{kW}$	Double side cooled Single sided cooled
Mounting force	P	22	24.5		kN	
Weight	W			-	Kg	about

Standard Rectifier

PST-AR3001 S10

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



Sym	A	B	C	D	H
mm	75	47	66	3.5×3	26±1