

Standard Rectifier-----D4709N

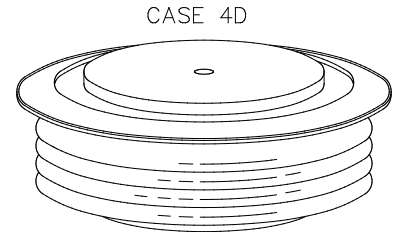
GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

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)
2000~2800	2100~2900

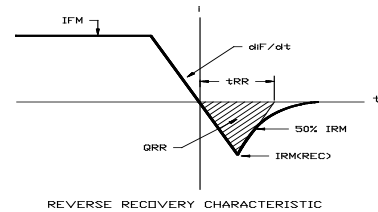
V_{RRM} = Repetitive peak reverse voltage

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

Repetitive peak reverse leakage	I_{RRM}	15 mA 100 mA
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Notes:

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



Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		4700		A	Sinewave, 180° conduction, $T_c=100^\circ\text{C}$
RMS value of on-state current	I_{FRMS}		8400		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		60		kA	$T_j=160^\circ\text{C}$, $V_R=0,8V_{RRM}$, $t_p=10\text{ms}$
I square t	I^2t		18×10^3		kA^2s	10 msec
Peak on-state voltage	V_{FM}		1.15		V	$I_{FM} = 3000 \text{ A}$; $T_j = 160^\circ\text{C}$
Reverse Recovery Current (4)	$I_{RM(REC)}$		310		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}		-		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	+175		$^\circ\text{C}$	
Storage temperature	T_{stg}	-40	+175		$^\circ\text{C}$	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		12		$^\circ\text{C}/\text{kW}$	Double sided cooled

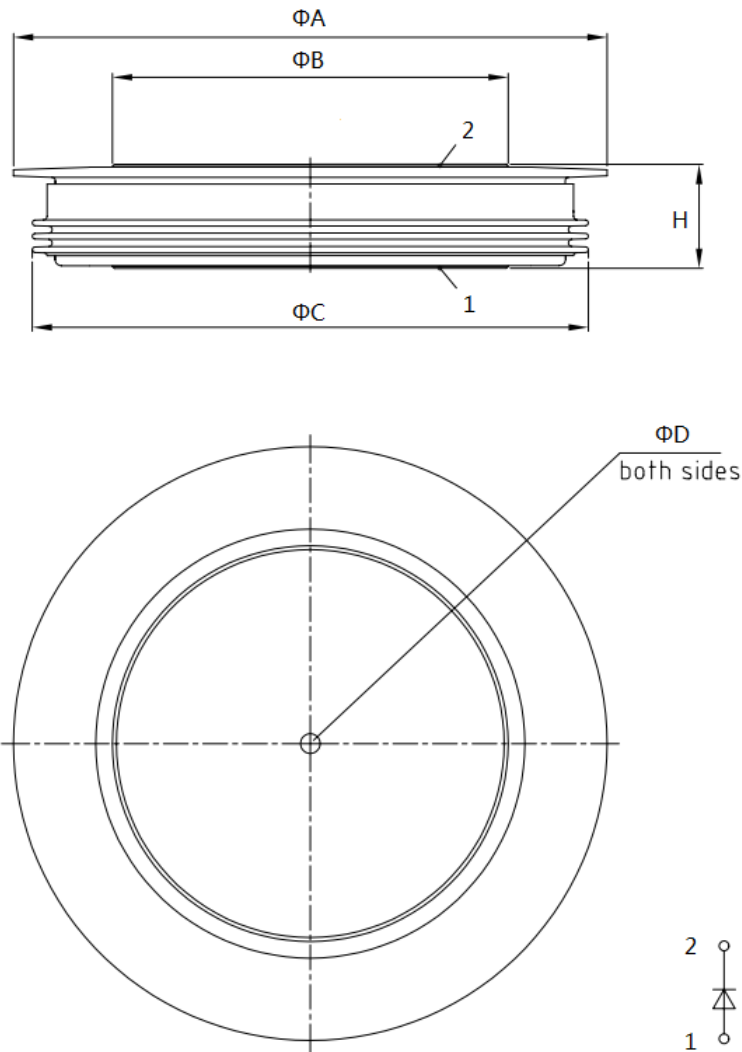


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			24			Single sided cooled
Thermal resistance - case to sink	$R_{\Theta (c-s)}$		2 4		$^{\circ}\text{C}/\text{kW}$	Double sided cooled Single sided cooled
Mounting force	P	31	40	-	kN	
Weight	W			1.6	kg	About

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



Sym	A	B	C	D	H
mm	109	73	98	3.5x3	35±1

