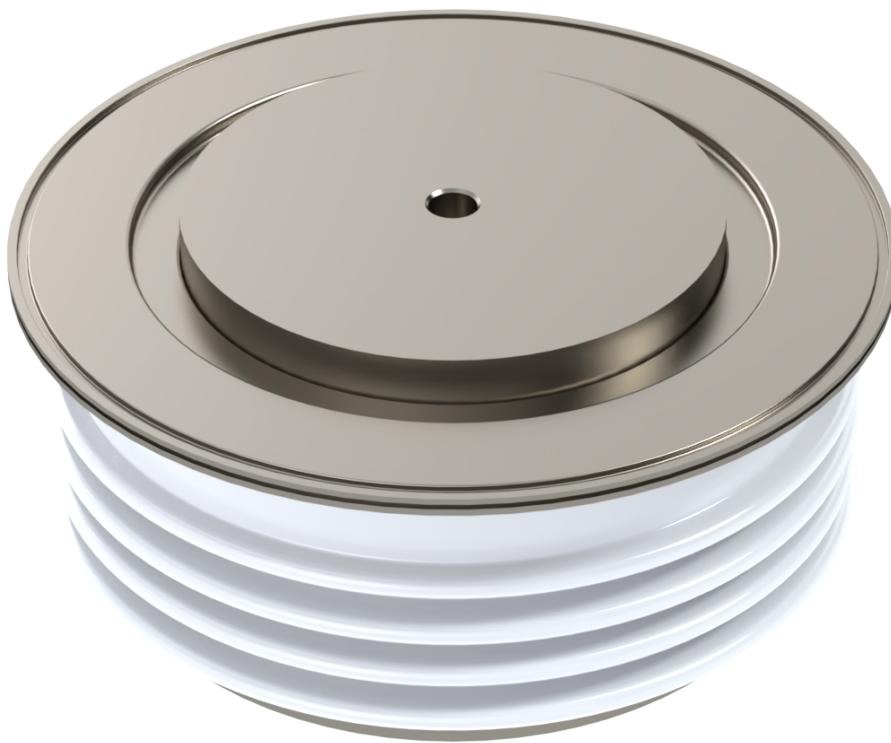


**Rectifier
Diode
Type SA45YP1185J0**

Contact us!

Date: March, 2020
Data Sheet Issue: 1



ORDERING INFORMATION						(Please quote 12 to 15 digit code as below)
SA	45	YP	1185	J	0	
-	Voltage Code	Outline Code	Current code	Type code	Special code	Optional code

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Absolute Maximum Ratings

VOLTAGE RATINGS		MAXIMUM LIMITS	UNITS
V_{RRM}	Repetitive peak reverse voltage, (note 1)	4500	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	4600	V
V_{RDC}	Maximum reverse D.C. Voltage, (note 1)	2120	V
note 1)	De-Rating factor of 0.13% per °C is applicable for T_j below 25°C		

OTHER RATINGS		MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 55^\circ\text{C}$, (note 1)	1185	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^\circ\text{C}$, (note 1)	833	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^\circ\text{C}$ (note 1)	2171	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^\circ\text{C}$ (note 2)	1936	A
I_{FSM}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 3)	9.2	kA
I_{FSM2}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 3)	10.58	kA
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 3)	$423 \cdot 10^3$	A^2s
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 3)	$559 \cdot 10^3$	A^2s
T_{jop}	Operating temperature range	-55 to +160	°C
T_{stg}	Storage temperature range	-55 to +185	°C
note 1)	Double-side cooled, single phase, 50Hz, 180° half-sinewave.		
note 2)	Double-side cooled.		
note 3)	Half-sinewave, 160°C T_j initial.		

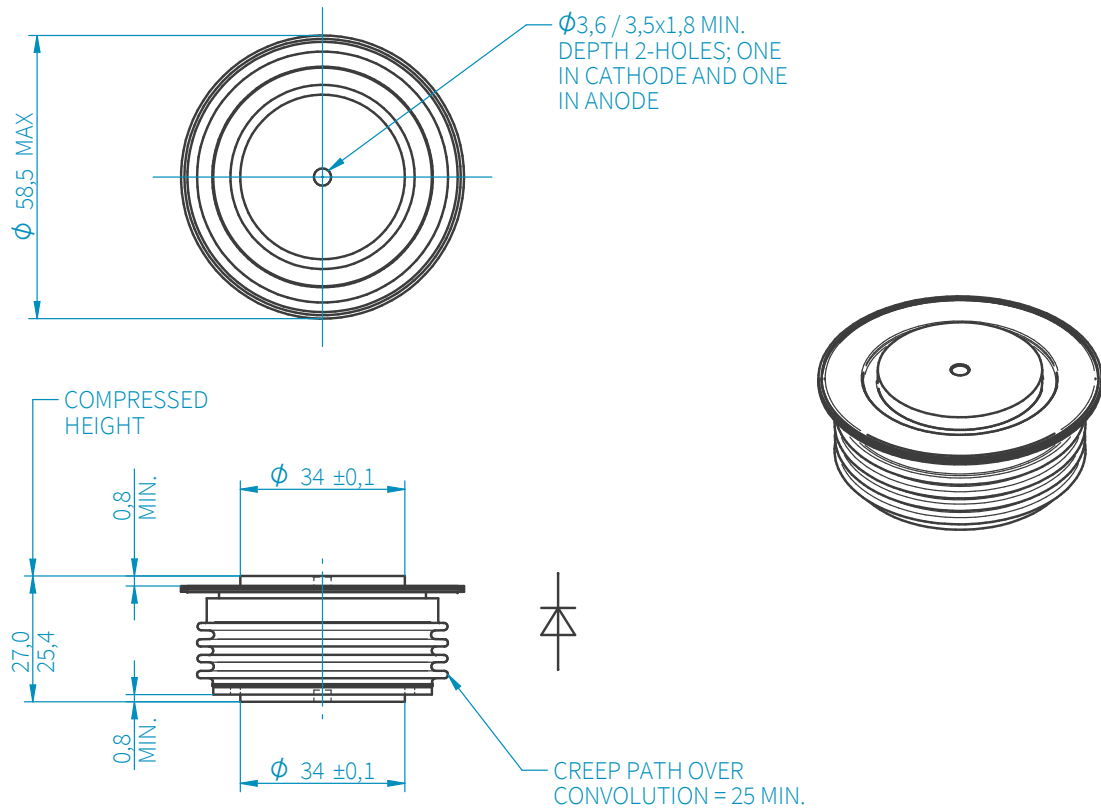
Characteristics

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V _{FM}	Maximum peak forward voltage	I _{FM} =2420A	-	-	2.40	V
V _{T0}	Threshold Voltage		-	-	1.00	V
r _T	Slope resistance		-	-	0.575	mΩ
I _{RRM}	Peak reverse current	Rated V _{RRM}	-	-	30	mA
R _{thJK}	Thermal resistance, junction to heatsink	Double side cooled	-	-	0.033	K/W
		Single side cooled	-	-	0.065	K/W
F	Mounting force	note 2)	10	-	20	kN
W _t	Weight		-	340	-	g
note 1)	Unless otherwise indicated T _j = 160°C					
note 2)	For other clamp forces consult factory					

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SANCONA GmbH

An der Hebemärchte 26
D-04316 Leipzig

// ☎ +49 341 652355-0
 ☎ +49 341 652355-99
 ✉ info@sancona.com
 🌐 www.sancona.com

// Registry Court: Leipzig HRB 32946
 VAT Reg No.: DE308741810
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