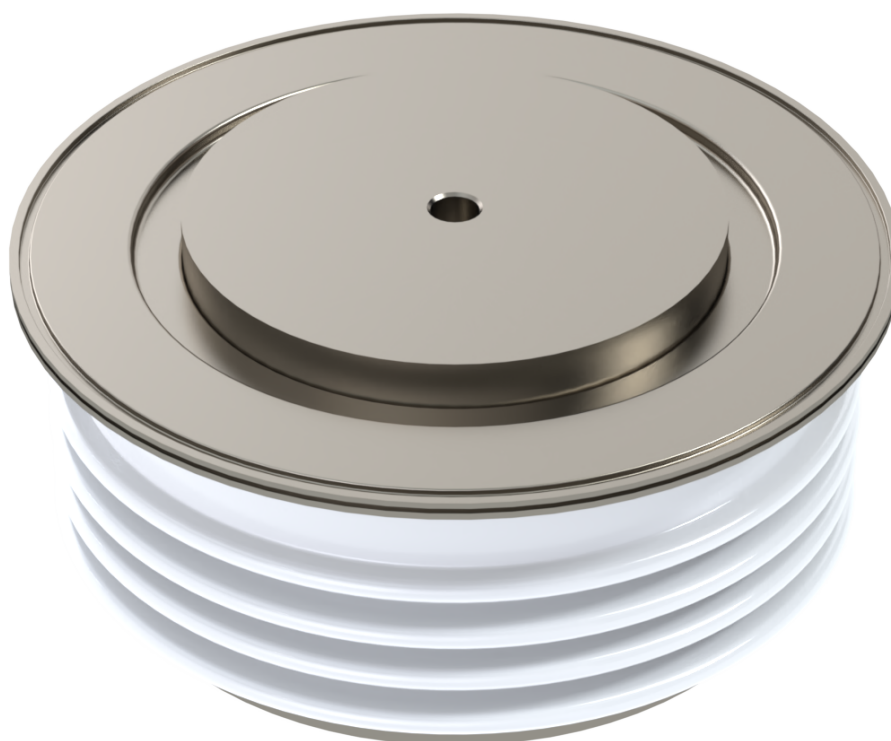


**Rectifier
Diode
Type SA22YP1748J0**

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Date: March, 2020
Data Sheet Issue: 1



ORDERING INFORMATION

(Please quote 12 to 15 digit code as below)

SA	22	YP	1748	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)	2200	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	2300	V
V_{RDC}	Maximum reverse D.C. Voltage, (note 1)	1350	V
note 1)	De-Rating factor of 0.13% per °C is applicable for T_j below 25°C		

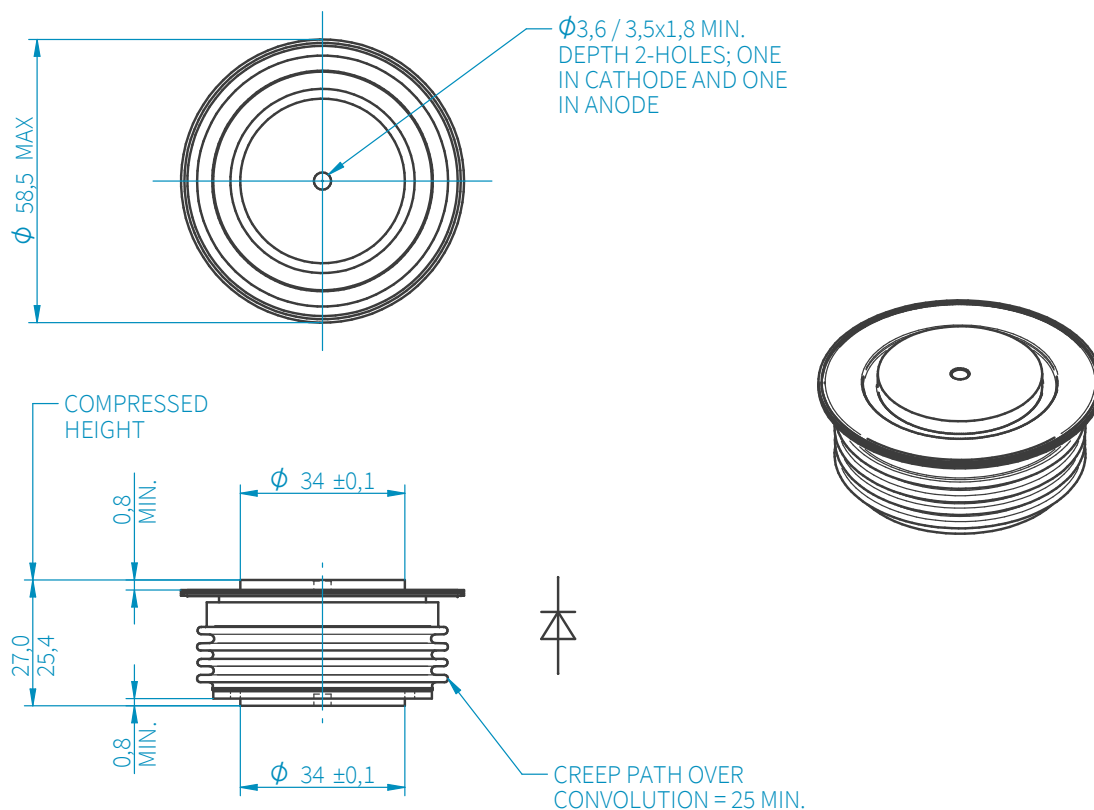
OTHER RATINGS		MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 55^{\circ}\text{C}$, (note 1)	1748	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}\text{C}$, (note 1)	1288	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^{\circ}\text{C}$ (note 1)	3157	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^{\circ}\text{C}$ (note 2)	2371	A
I_{FSM}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 3)	15.4	kA
I_{FSM2}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 3)	17.7	kA
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 3)	$1.18 \cdot 10^6$	A^2s
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 3)	$1.56 \cdot 10^6$	A^2s
T_{jop}	Operating temperature range	-40 to +175	°C
T_{stg}	Storage temperature range	-40 to +200	°C
note 1)	Double-side cooled, single phase, 50Hz, 180° half-sinewave.		
note 2)	Double-side cooled.		
note 3)	Half-sinewave, 175°C T_j initial.		

Characteristics

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V _{FM}	Maximum peak forward voltage	I _{FM} =3770A	-	-	1.93	V
V _{T0}	Threshold Voltage		-	-	0.87	V
r _T	Slope resistance		-	-	0.28	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 = 175°C					
note 2)	For other clamp forces consult factory					

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Outline Drawing



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