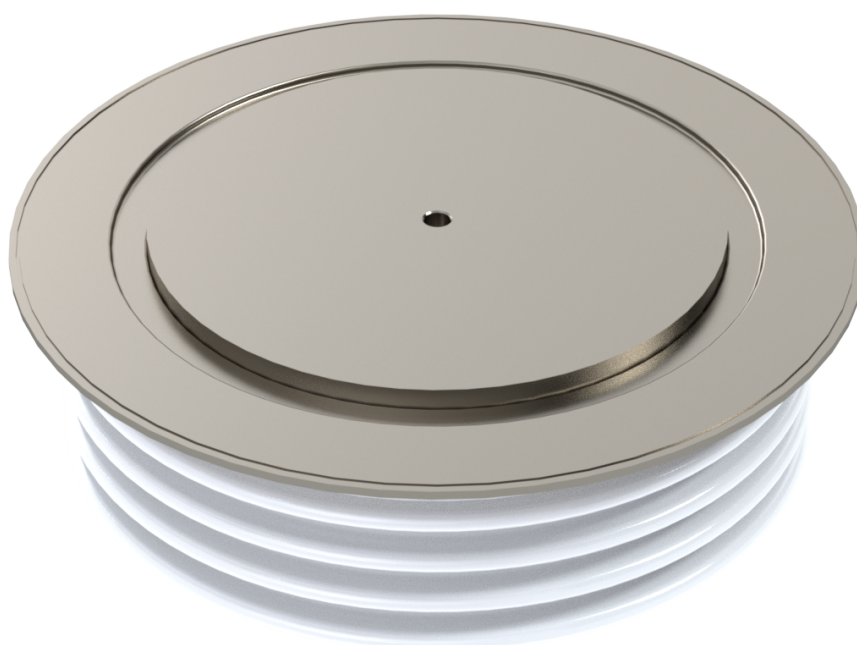


# Rectifier Diode Type SA24MG5092J0

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Date: April, 2020  
Data Sheet Issue: 1



## ORDERING INFORMATION

(Please quote 12 to 15 digit code as below)

SA	24	MG	5092	J	0	
MP = standard capsule						
-	Voltage Code	MG = rupture rated capsule	Current code	Type code	Special code	Optional code
ML = extended rupture rated capsule						

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## Absolute Maximum Ratings

VOLTAGE RATINGS		MAXIMUM LIMITS	UNITS
$V_{RRM}$	Repetitive peak reverse voltage, (note 1)	2400	V
$V_{RSM}$	Non-repetitive peak reverse voltage, (note 1)	2500	V
$V_{RDC}$	Maximum reverse D.C. Voltage, (note 1)	1400	V
note 1)	De-Rating factor of 0.13% per °C is applicable for $T_j$ below 25°C		

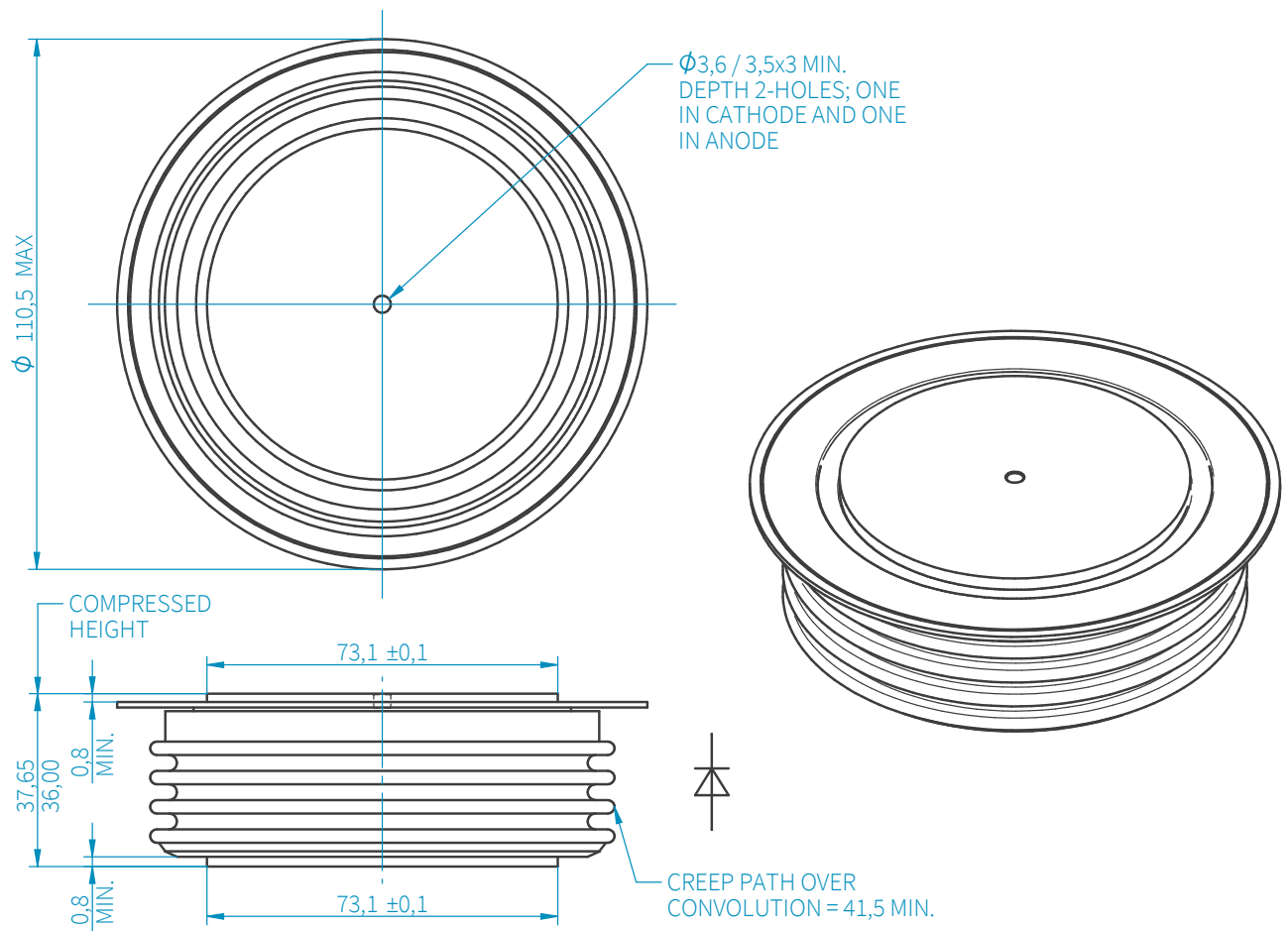
OTHER RATINGS		MAXIMUM LIMITS	UNITS
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 55^{\circ}\text{C}$ , (note 1)	5092	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}\text{C}$ , (note 1)	3494	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}\text{C}$ , (note 2)	2114	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^{\circ}\text{C}$ (note 1)	9405	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^{\circ}\text{C}$ (note 3)	6765	A
$I_{FSM}$	Peak non-repetitive surge current $t_p = 10\text{ms}$ , $V_{RM} = 60\%V_{RRM}$ , (note 4)	58.0	kA
$I_{FSM2}$	Peak non-repetitive surge current $t_p = 10\text{ms}$ , $V_{RM} \leq 10\text{V}$ , (note 4)	63.8	kA
$I^2t$	$I^2t$ capacity for fusing $t_p = 10\text{ms}$ , $V_{RM} = 60\%V_{RRM}$ , (note 4)	$16.8 \cdot 10^6$	$\text{A}^2\text{s}$
$I^2t$	$I^2t$ capacity for fusing $t_p = 10\text{ms}$ , $V_{RM} \leq 10\text{V}$ , (note 4)	$20.4 \cdot 10^6$	$\text{A}^2\text{s}$
$T_{jop}$	Operating temperature range	-40 to +160	°C
$T_{stg}$	Storage temperature range	-40 to +160	°C
note 1)	Double-side cooled, single phase, 50Hz, 180° half-sinewave.		
note 2)	Single-side cooled, single phase, 50Hz, 180° half-sinewave.		
note 3)	Double-side cooled.		
note 4)	Half-sinewave, 160°C $T_j$ initial.		

**Characteristics**

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNITS
V <sub>FM</sub>	Maximum peak forward voltage	I <sub>FM</sub> =6000A	-	-	1.35	V
		I <sub>FM</sub> =15300A	-	-	1.97	V
V <sub>T0</sub>	Threshold Voltage		-	-	0.874	V
r <sub>T</sub>	Slope resistance		-	-	0.0794	mΩ
I <sub>RRM</sub>	Peak reverse current	Rated V <sub>RRM</sub>	-	-	150	mA
		Rated V <sub>RRM</sub> , T <sub>j</sub> = 25°C	-	-	150	mA
R <sub>thJK</sub>	Thermal resistance, junction to heatsink	Double side cooled	-	-	0.011	K/W
		Single side cooled	-	-	0.022	K/W
F	Mounting force	note 2)	27	-	47	kN
W <sub>t</sub>	Weight		-	1700	-	g
note 1)	Unless otherwise indicated T <sub>j</sub> = 160°C					
note 2)	For other clamp forces consult factory					

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## Outline Drawing



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