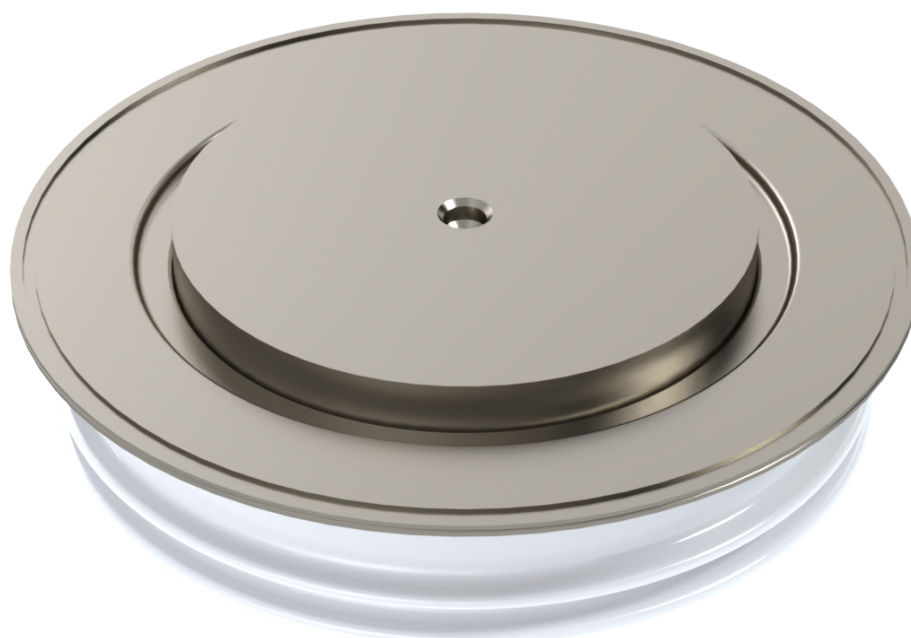


**Rectifier
Diode
Type SA04AQ4534J0**

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Date: April, 2020
Data Sheet Issue: 1



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(Please quote 12 to 15 digit code as below)

SA	04	AQ	4534	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)	400	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	500	V
V_{RDC}	Maximum reverse D.C. Voltage, (note 1)	260	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, $T_{sink} = 55^{\circ}C$, (note 1)	4543	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$, (note 1)	3400	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$, (note 2)	1999	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^{\circ}C$ (note 1)	8200	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^{\circ}C$ (note 3)	6727	A
I_{FSM}	Peak non-repetitive surge current $t_p = 10ms$, $V_{RM} = 60\%V_{RRM}$, (note 4)	40	kA
I_{FSM2}	Peak non-repetitive surge current $t_p = 10ms$, $V_{RM} \leq 10V$, (note 4)	44	kA
I^2t	I^2t capacity for fusing $t_p = 10ms$, $V_{RM} = 60\%V_{RRM}$, (note 4)	$8.00 \cdot 10^6$	A^2s
I^2t	I^2t capacity for fusing $t_p = 10ms$, $V_{RM} \leq 10V$, (note 4)	$9.68 \cdot 10^6$	A^2s
T_{jop}	Operating temperature range	-40 to +190	°C
T_{stg}	Storage temperature range	-40 to +190	°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, 190°C T_j initial.		

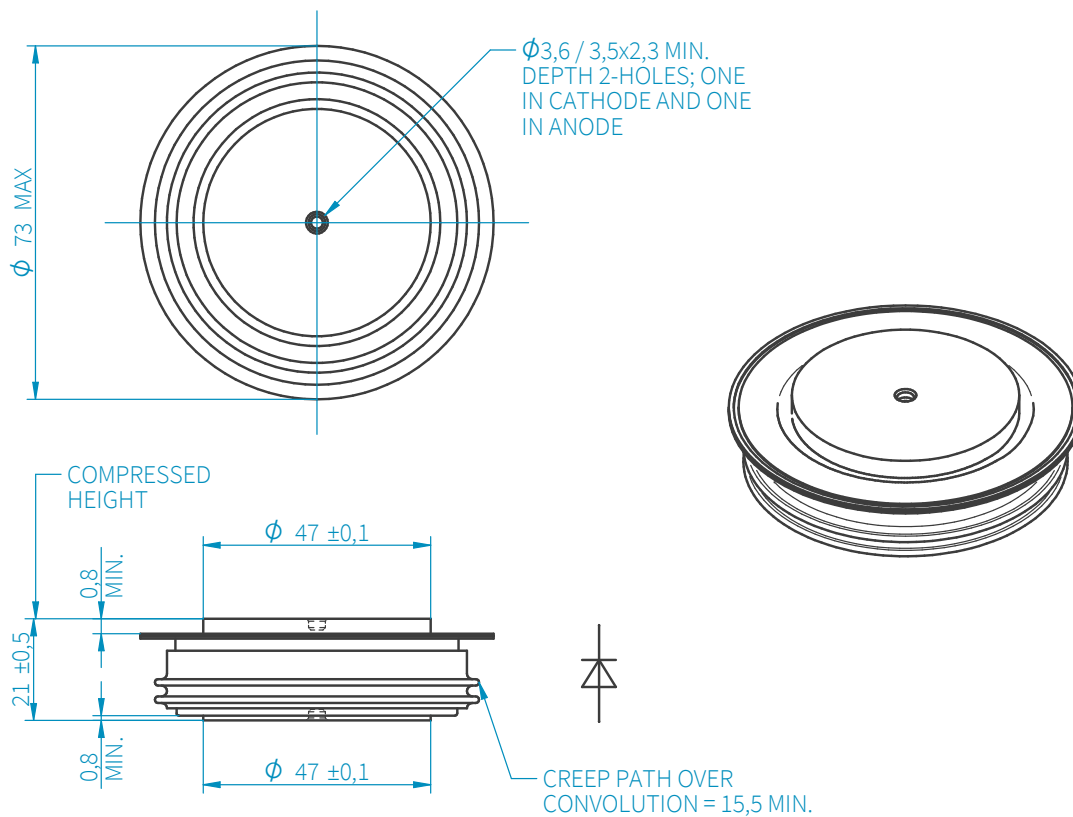
Characteristics

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V _{FM}	Maximum peak forward voltage	I _{FM} =6400A	-	-	1.10	V
		I _{FM} =13630A	-	-	1.38	V
V _{T0}	Threshold Voltage		-	-	0.765	V
r _T	Slope resistance		-	-	0.052	mΩ
I _{RRM}	Peak reverse current	Rated V _{RRM}	-	-	50	mA
Q _{rr}	Recovered charge		-	1010	-	μC
Q _{ra}	Recovered charge, 50% Chord	I _{FM} = 2000A, t _p = 1000μs, di/dt = 10A/μs, V _R = 50V	-	880	900	μC
I _{rm}	Reverse recovery current		-	110	-	A
t _{rr}	Reverse recovery time, 50% Chord		-	16	-	μs
R _{thJK}	Thermal resistance, junction to heatsink	Double side cooled	-	-	0.022	K/W
		Single side cooled	-	-	0.044	K/W
F	Mounting force	note 2)	19	-	26	kN
note 1)	Unless otherwise indicated T _j = 190°C					
note 2)	For other clamp forces consult factory					

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