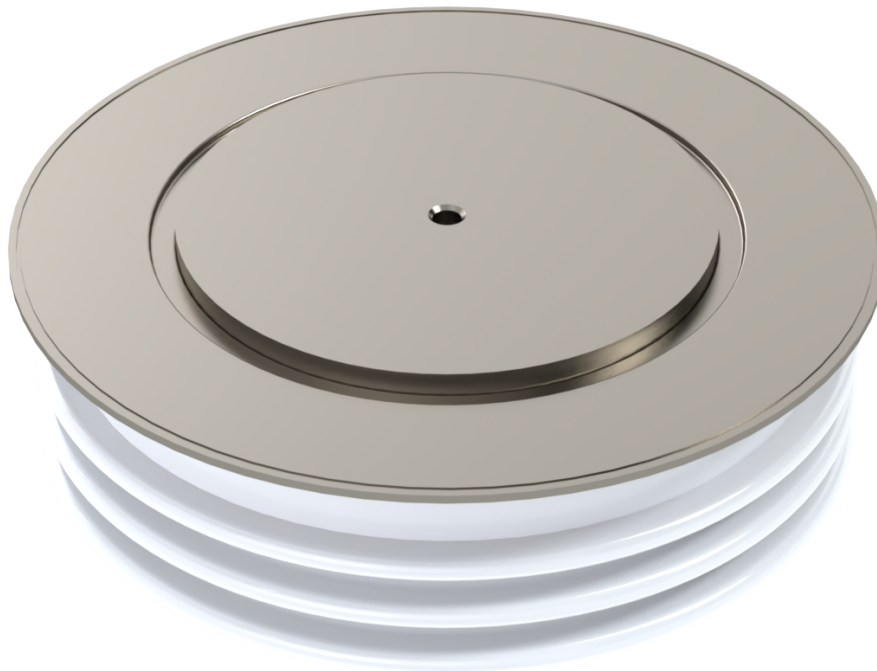


Rectifier Diode Type SA40IG3128J0

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Date: March, 2020
Data Sheet Issue: 1



ORDERING INFORMATION

(Please quote 12 to 15 digit code as below)

SA	40	IG	3128	J	0	
-	Voltage Code	IP = standard capsule IG = rupture rated capsule	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)	4000	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	4100	V
V_{RDC}	Maximum reverse D.C. Voltage, (note 1)	2400	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)	3218	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^\circ\text{C}$, (note 1)	2174	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^\circ\text{C}$, (note 2)	1340	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^\circ\text{C}$ (note 1)	5750	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^\circ\text{C}$ (note 3)	5046	A
I_{FSM}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 4)	30	kA
I_{FSM2}	Peak non-repetitive surge current $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 4)	33	kA
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} = 60\%V_{RRM}$, (note 4)	$4.50 \cdot 10^6$	A^2s
I^2t	I^2t capacity for fusing $t_p = 10\text{ms}$, $V_{RM} \leq 10\text{V}$, (note 4)	$5.45 \cdot 10^6$	A^2s
T_{jop}	Operating temperature range	-55 to +160	°C
T_{stg}	Storage temperature range	-55 to +200	°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.		

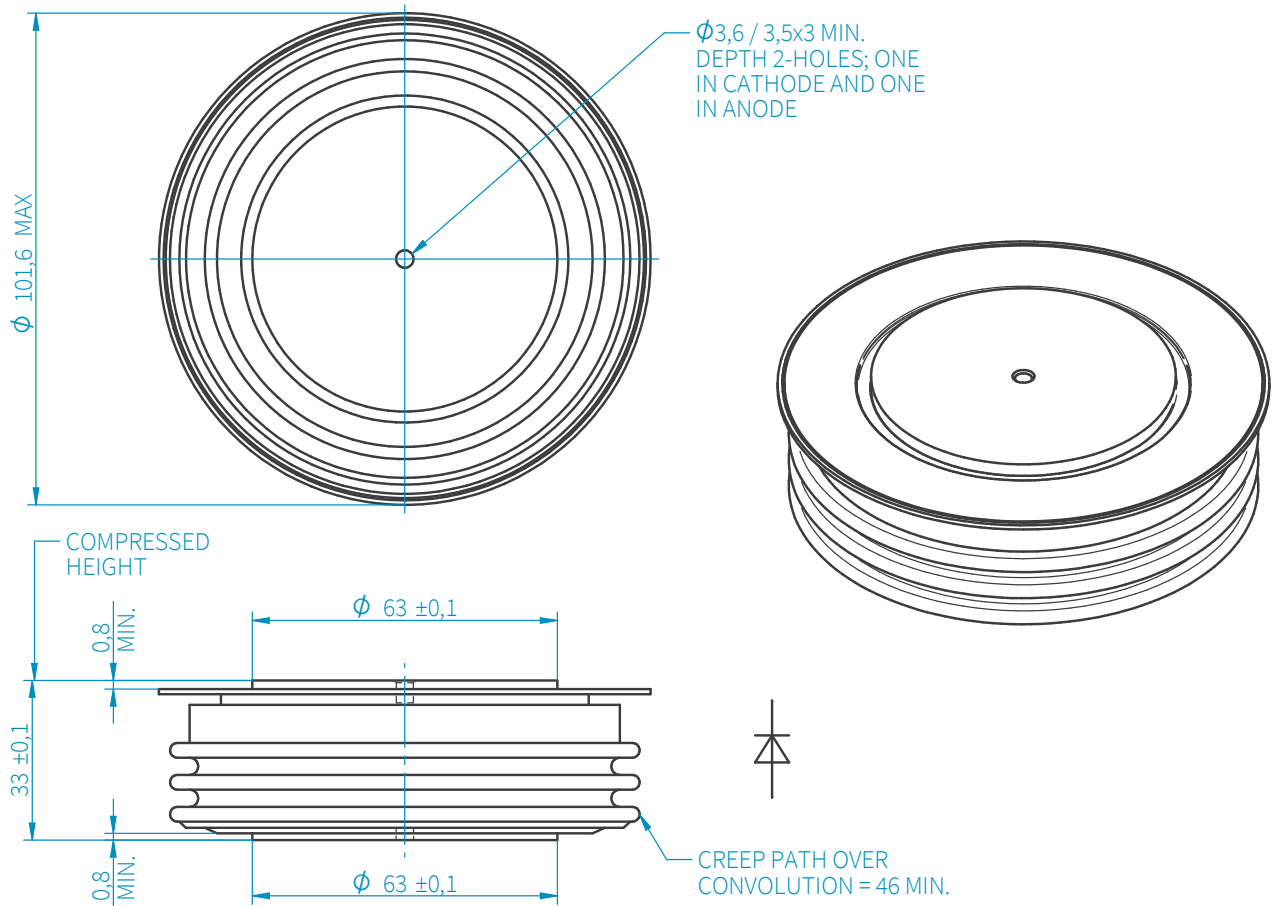
Characteristics

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS		
V _{FM}	Maximum peak forward voltage	-	-	1.95	V		
		-	-	2.35	V		
V _{T0}	Threshold Voltage	-	-	0.875	V		
r _T	Slope resistance	-	-	0.158	mΩ		
I _{RRM}	Peak reverse current	Rated V _{RRM}		60	mA		
Q _{rr}	Recovered charge	-	7000	-	μC		
Q _{ra}	Recovered charge, 50% Chord	-	4200	5000	μC		
I _{rm}	Reverse recovery current	I _{FM} = 1000A, t _p = 1000μs, di/dt = 10A/μs, V _R = 50V		-	A		
t _{rr}	Reverse recovery time, 50% Chord	-	40	-	μs		
R _{thJK}	Thermal resistance, junction to heatsink	Double side cooled		-	0.016	K/W	
		Single side cooled		-	0.032	K/W	
F	Mounting force	note 2)		27	-	34	kN
W _t	Weight	-	1000	-	g		
note 1)	Unless otherwise indicated T _j = 160°C						
note 2)	For other clamp forces consult factory						

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