

**Rectifier
Diode
Type SA22DN2840J0**

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Date: July, 2020
Data Sheet Issue: 1



ORDERING INFORMATION						(Please quote 12 to 15 digit code as below)
SA	22	DN	2840	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, $T_{sink} = 55^{\circ}C$, (note 1)	2840	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$, (note 1)	2100	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$, (note 2)	1265	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^{\circ}C$ (note 1)	5140	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^{\circ}C$ (note 3)	4360	A
I_{FSM}	Peak non-repetitive surge current $t_p = 10ms$, $V_{RM} = 60\%V_{RRM}$, (note 4)	20	kA
I_{FSM2}	Peak non-repetitive surge current $t_p = 10ms$, $V_{RM} \leq 10V$, (note 4)	22	kA
I^2t	I^2t capacity for fusing $t_p = 10ms$, $V_{RM} = 60\%V_{RRM}$, (note 4)	$2.00 \cdot 10^6$	A ² s
I^2t	I^2t capacity for fusing $t_p = 10ms$, $V_{RM} \leq 10V$, (note 4)	$2.42 \cdot 10^6$	A ² s
T_{jop}	Operating temperature range	-40 to +180	°C
T_{stg}	Storage temperature range	-55 to +180	°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, 180°C T_j initial.		

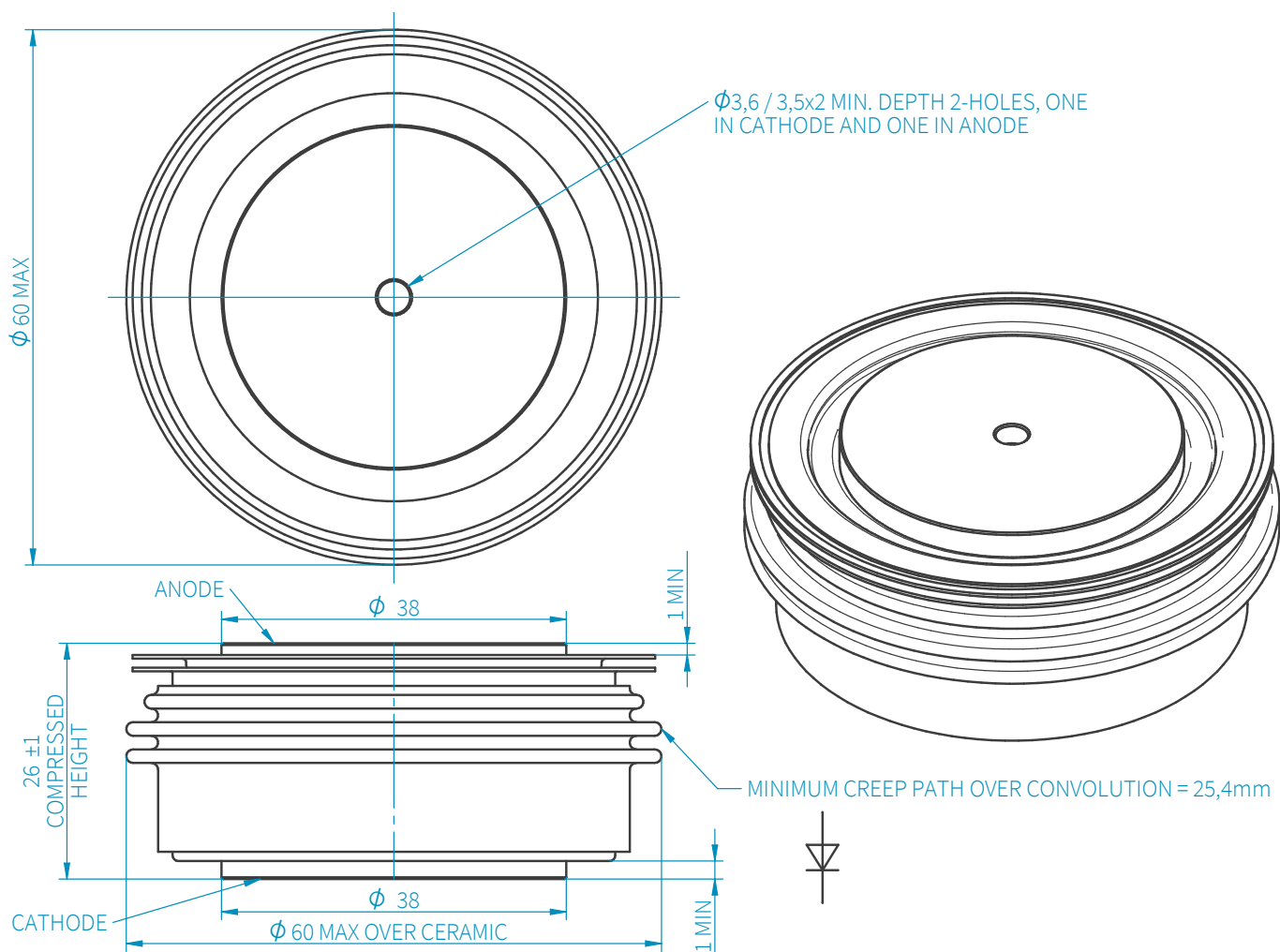
Characteristics

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V _{FM}	Maximum peak forward voltage	I _{FM} =3000A	-	-	1.35	V
		I _{FM} =10400A	-	-	2.38	V
V _{T0}	Threshold Voltage		-	-	0.940	V
r _T	Slope resistance		-	-	0.139	mΩ
I _{RRM}	Peak reverse current	Rated V _{RRM}	-	-	50	mA
Q _{rr}	Recovered charge		-	2600	-	μC
Q _{ra}	Recovered charge, 50% Chord	I _{FM} = 1000A, t _p = 1000μs, di/dt = 10A/μs, V _R = 50V	-	2000	2350	μC
I _{rm}	Reverse recovery current		-	150	-	A
t _{rr}	Reverse recovery time, 50% Chord		-	27	-	μs
R _{thJK}	Thermal resistance, junction to heatsink	Double side cooled	-	-	0.023	K/W
		Single side cooled	-	-	0.046	K/W
F	Mounting force	note 2)	16	-	20	kN
W _t	Weight		-	330	-	g
note 1)	Unless otherwise indicated T _j = 180°C					
note 2)	For other clamp forces consult factory					

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Outline Drawing



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