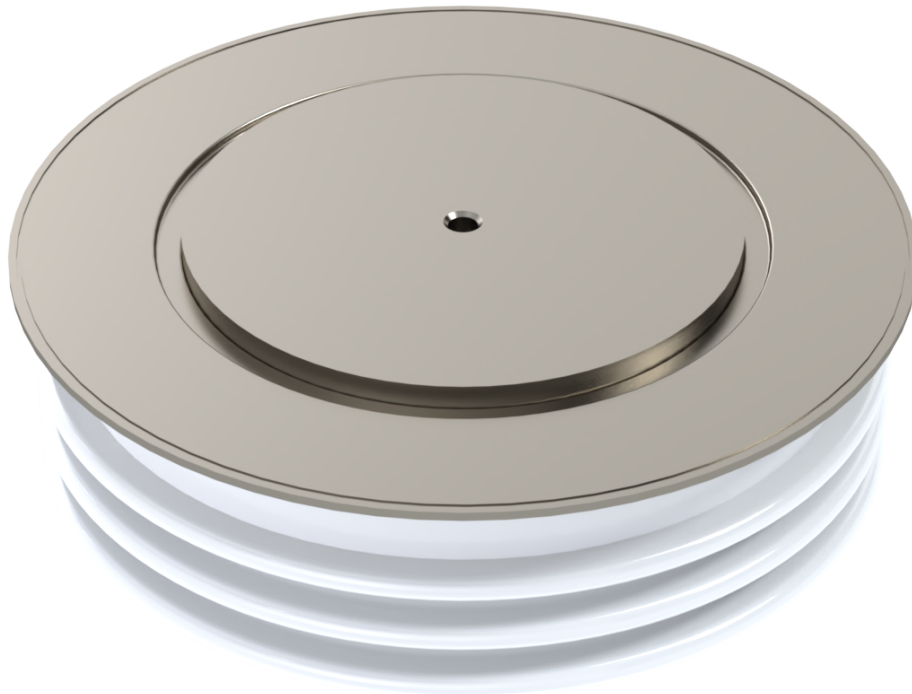


**Fast Recovery  
Diode  
Type SA22IP2837Z0**

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Date: February, 2020  
Data Sheet Issue: 1



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SA	22	IP	2837	Z	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)	2837	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$ , (note 1)	1858	A
$I_{F(AV)M}$	Maximum average forward current, $T_{sink} = 100^{\circ}C$ , (note 2)	1134	A
$I_{F(RMS)}$	Nominal RMS forward current, $T_{sink} = 25^{\circ}C$ (note 1)	5296	A
$I_{f(d.c.)}$	D.C. forward current, $T_{sink} = 25^{\circ}C$ (note 3)	4630	A
$I_{FSM}$	Peak non-repetitive surge current $t_p = 10ms$ , $V_{RM} = 60\%V_{RRM}$ , (note 4)	31.8	kA
$I_{FSM2}$	Peak non-repetitive surge current $t_p = 10ms$ , $V_{RM} \leq 10V$ , (note 4)	35.0	kA
$I^2t$	$I^2t$ capacity for fusing $t_p = 10ms$ , $V_{RM} = 60\%V_{RRM}$ , (note 4)	$5.1 \cdot 10^6$	$A^2s$
$I^2t$	$I^2t$ capacity for fusing $t_p = 10ms$ , $V_{RM} \leq 10V$ , (note 4)	$6.1 \cdot 10^6$	$A^2s$
$T_{jop}$	Operating temperature range	-40 to +150	°C
$T_{stg}$	Storage temperature range	-40 to +150	°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, 150°C $T_j$ initial.		

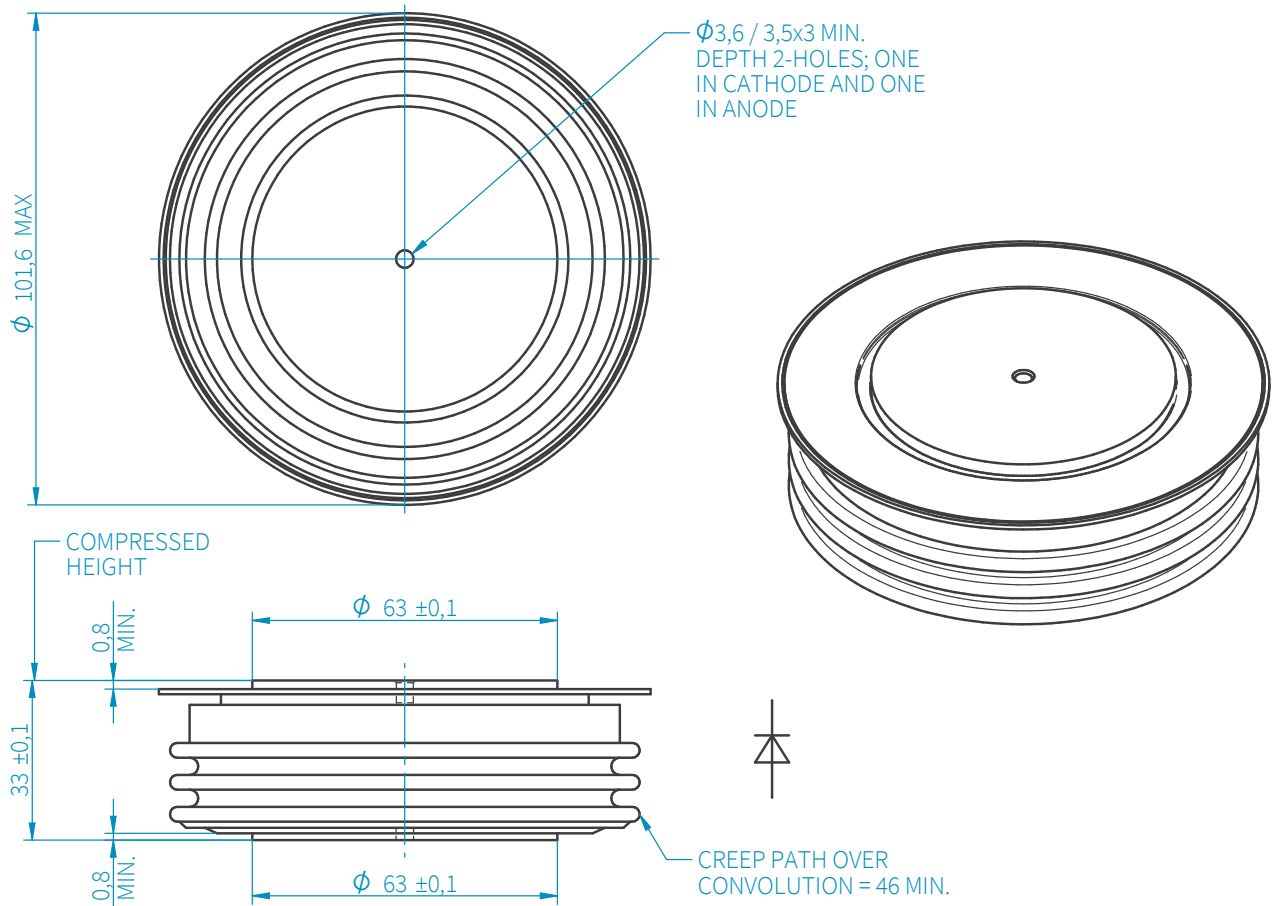
## Characteristics

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS	
V <sub>FM</sub>	Maximum peak forward voltage			1.41	V	
		I <sub>FM</sub> =3000A	-	-		
		I <sub>FM</sub> =5675A	-	-	1.8 V	
V <sub>T0</sub>	Threshold Voltage	-	-	0.9	V	
r <sub>T</sub>	Slope resistance	-	-	0.17	mΩ	
V <sub>FRM</sub>	Maximum forward recovery voltage	di/dt = 1000A/μs, T <sub>j</sub> = 25°C	-	-	15	V
		di/dt = 1000A/μs	-	-	33	V
I <sub>RRM</sub>	Peak reverse current			100	mA	
		Rated V <sub>RRM</sub>	-	-		
Q <sub>rr</sub>	Recovered charge		2100	-	μC	
Q <sub>ra</sub>	Recovered charge, 50% Chord	I <sub>FM</sub> = 1000A, t <sub>p</sub> = 1000μs, di/dt = 60A/μs, V <sub>R</sub> = 50V, 50% Chord.	-	1100	1450	μC
I <sub>rm</sub>	Reverse recovery current		310	-	A	
t <sub>rr</sub>	Reverse recovery time, 50% Chord		7	-	μs	
R <sub>thJK</sub>	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 <sub>t</sub>	Weight		-	1000	-	g
note 1)	Unless otherwise indicated T <sub>j</sub> = 150°C					
note 2)	For other clamp forces consult factory					

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## Outline Drawing



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### SANCONA GmbH

An der Hebemärchte 26  
D-04316 Leipzig

// ☎ +49 341 652355-0  
 // 📠 +49 341 652355-99  
 // ✉ [info@sancona.com](mailto:info@sancona.com)  
 // 🌐 [www.sancona.com](http://www.sancona.com)

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