PRESS-PACK RECTIFIER DIODE

D123-320

- V_{RRM} = **3400-4200 V**
- $I_{F(AV)}$ = **410 A**(T_C = 85°C)
- I_{FSM} = **4,2 kA**(t_p=10ms)

- Low forward losses
- Low dispersion Q_{RR} and V_{FM} for series and parallel connections
- Press-pack design

MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, T_j = -60 …+ 150 °C	V_{RRM}	3400-4200	V
Non- repetitive peak reverse voltage, T_j = -60 …+ 150 °C	V_{RSM}	3500-4300	
Repetitive peak reverse current, T_j = 150 °C, $V_R = V_{RRM}$	I_{RRM}	35	mA
Maximum average forward current, T_C = 85 °C, f = 50 Hz	$I_{F(AV)}$	410	A
RMS forward current, T_C = 85 °C, f = 50 Hz	I_{FRMS}	644	
Surge non-repetitive current, T_j = 150 °C, V_R = 0, t_p = 10 ms	I_{FSM}	4,2	kA
Safety factor	I^2t	$88 \cdot 10^3$	A^2s
Operation junction temperature range	T_j	-60 … +150	°C
Storage temperature range	T_{stg}	-60 … +50	

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ELECTRICAL CHARACTERISTICS					
Parameter and conditions	**Symbol**	**Values**			**Units**
		min	**typ.**	**max**	
Maximum peak forward voltage, T_j = 25 °C, I_F = 1000 A	V_{FM}	-	-	2,05	V
On-state threshold voltage, T_j = 150 °C, I_F = 500 - 1500 A	V_{TO}	-	-	0,87	
On-state slope resistance, T_j = 150 °C, I_F = 500 - 1500 A	r_T	-	-	1,370	mΩ
Recovery charge, T_j = 150 °C, I_F = 320 A, di_F/dt= -5 A/µs, V_R≥ 100 V	Q_{RR}	-	-		µAs
Recovery current, T_j = 150 °C, I_F = 320 A, di_F/dt= -5 A/µs, V_R≥ 100 V	I_{RR}	-	-		A
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	 0,08 0,16 0,16	°C/W
Thermal resistance case to heatsink, double side cooled single side cooled	R_{thch}	-	-	 0,02 0,04	
MECHANICAL PARAMETERS					
Weight	w	-	0,091	-	kg
Mounting force	F	5		7	kN
Maximum acceleration (at nominal mounting force)	a	-	-	100	m/s^2

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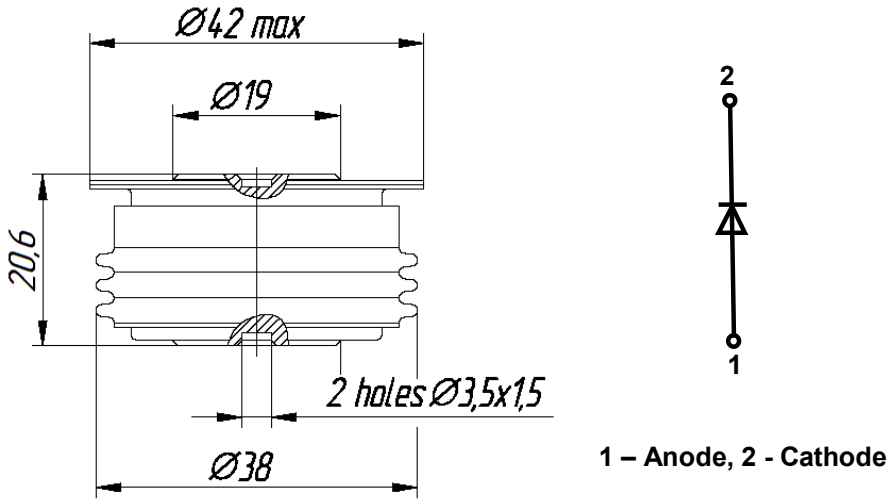

Fig. 1. Device Outline Drawing
(dimensions in mm)

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