





## FAST RECTIFIER DIODE DF323-200

<ul style="list-style-type: none"><li>◆ <math>V_{RRM} = \underline{3000-4600\text{ V}}</math></li><li>◆ <math>I_{F(AV)} = \underline{230\text{ A}}</math> (<math>T_C = 85^\circ\text{C}</math>)</li><li>◆ <math>I_{FSM} = \underline{3,0\text{ kA}}</math> (<math>t_p = 10\text{ms}</math>)</li></ul>		
<ul style="list-style-type: none"><li>◆ Small recovered time and charge</li><li>◆ Acceptable for series and parallel connections (low dispersion <math>Q_{rr}</math>, <math>V_{FM}</math>, <math>I_{RRM}</math>)</li><li>◆ Press-pack design</li></ul>		

### MAXIMUM RATED VALUES

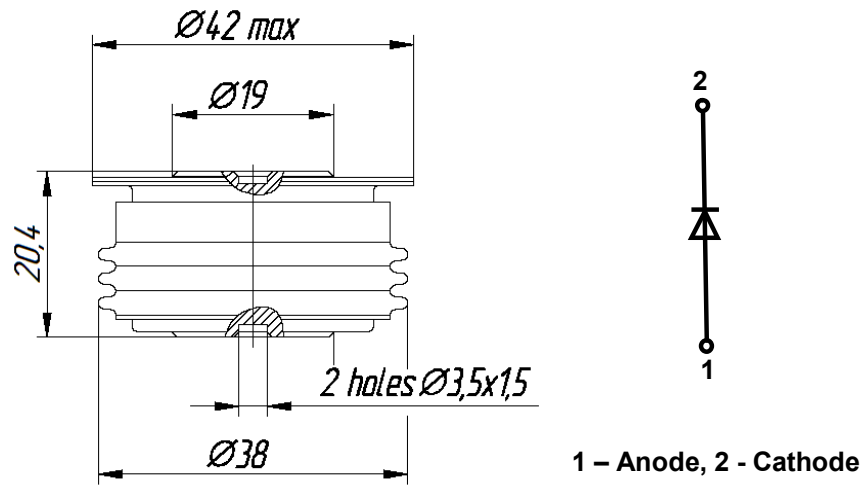
Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots +140\text{ }^\circ\text{C}$	$V_{RRM}$	3000-4600	V
Non-repetitive peak reverse voltage, $T_j = -60 \dots +140\text{ }^\circ\text{C}$	$V_{RSM}$	3100-4700	
Repetitive peak reverse current, $T_j = 140\text{ }^\circ\text{C}$ , $V_R = V_{RRM}$	$I_{RRM}$	50	mA
Maximum average forward current, $T_C = 85\text{ }^\circ\text{C}$ , $f = 50\text{ Hz}$	$I_{F(AV)}$	230	A
RMS forward current, $T_C = 85\text{ }^\circ\text{C}$ , $f = 50\text{ Hz}$	$I_{FRMS}$	360	
Surge non-repetitive current, $T_j = 140\text{ }^\circ\text{C}$ , $V_R = 0$ , $t_p = 10\text{ ms}$	$I_{FSM}$	3,0	kA
Safety factor	$I^2t$	$45 \cdot 10^3$	$\text{A}^2\text{s}$
Operation junction temperature range	$T_j$	-60 ... +140	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-60 ... +50	

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<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$ , $I_F = 628\text{ A}$	$V_{FM}$	-	-	3,2	V
On-state threshold voltage, $T_j = 140\text{ °C}$ , $I_F = 314 - 940\text{ A}$	$V_{TO}$	-	-	1,4	
On-state slope resistance, $T_j = 140\text{ °C}$ , $I_F = 314 - 940\text{ A}$	$r_T$	-	-	2,7	mΩ
Reverse recovery time $T_j = 140\text{ °C}$ , $I_F = 200\text{ A}$ , $di_F/dt = -100\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$t_{rr}$	-	-	5	μs
<b>THERMAL PARAMETERS</b>					
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	$R_{th(c-h)}$	-	-	0,02 0,04	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,091	-	kg
Mounting force	F	4		5	kN m/s <sup>2</sup>
Maximum acceleration (at nominal mounting force)	a	-	-	100	



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



126, Proletarskaya str.,  
430001, Saransk, Republic Mordovia, Russia  
Tel: +7(8342) 47-04-30  
Tel/Fax: +7 (8342) 47-15-01  
E-mail: vpruvs@elvpr.ru  
Internet: www.elvpr.ru