





## PRESS-PACK RECTIFIER DIODE D143-2000

<ul style="list-style-type: none"><li>◆ <math>V_{RRM} = \underline{200-1000 V}</math></li><li>◆ <math>I_{F(AV)} = \underline{2400 A}</math> (<math>T_C = 85^\circ C</math>)</li><li>◆ <math>I_{FSM} = \underline{24 kA}</math> (<math>t_p = 10ms</math>)</li></ul>		
<ul style="list-style-type: none"><li>◆ Low forward losses</li><li>◆ Low dispersion <math>Q_{RR}</math> and <math>V_{FM}</math> for series and parallel connections</li><li>◆ Press-pack design</li></ul>		

### MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots +175^\circ C$	$V_{RRM}$	200-1000	V
Non-repetitive peak reverse voltage, $T_j = -60 \dots +175^\circ C$	$V_{RSM}$	300-1100	
Repetitive peak reverse current, $T_j = 175^\circ C, V_R = V_{RRM}$	$I_{RRM}$	70	mA
Maximum average forward current, $T_C = 85^\circ C, f = 50 Hz$	$I_{F(AV)}$	2400	A
RMS forward current, $T_C = 85^\circ C, f = 50 Hz$	$I_{FRMS}$	3760	
Surge non-repetitive current, $T_j = 175^\circ C, V_R = 0, t_p = 10 ms$	$I_{FSM}$	24	kA
Safety factor	$I^2t$	$2880 \cdot 10^3$	$A^2s$
Operation junction temperature range	$T_j$	-60 ... +175	$^\circ C$
Storage temperature range	$T_{stg}$	-60 ... +50	

**D143-2000**

<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$ , $I_F = 6280\text{ A}$	$V_{FM}$	-	-	1,40	V
On-state threshold voltage, $T_j = 175\text{ °C}$ , $I_F = 3140 - 9420\text{ A}$	$V_{T0}$	-	-	0,73	
On-state slope resistance, $T_j = 175\text{ °C}$ , $I_F = 3140 - 9420\text{ A}$	$r_T$	-	-	0,11	mΩ
Recovery charge, $T_j = 175\text{ °C}$ , $I_F = 2000\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$Q_{RR}$	-	-		μAs
Recovery current, $T_j = 175\text{ °C}$ , $I_F = 2000\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$I_{RR}$	-	-		A
<b>THERMAL PARAMETERS</b>					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	0,027 0,054 0,054	°C/W
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	0,01 0,02	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,16	-	kg
Mounting force	F	13,5		16,5	kN
Maximum acceleration (at nominal mounting force)	a	-	-	100	m/s <sup>2</sup>



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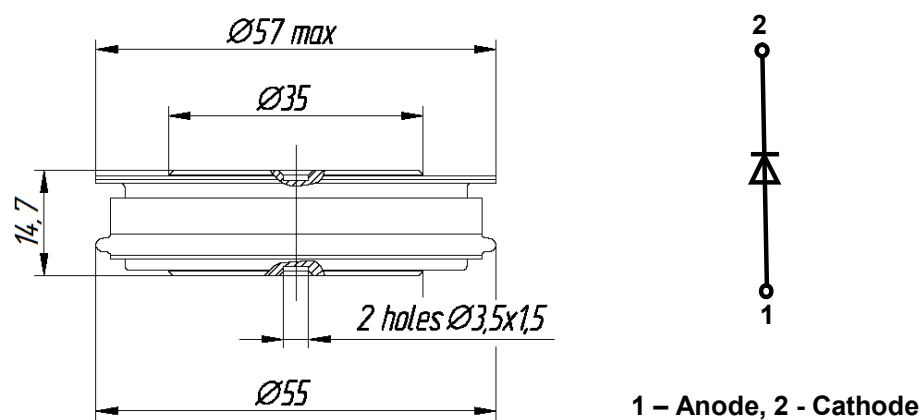


Fig. 1. Device Outline Drawing  
(dimensions in mm)



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