



## AVALANCHE RECTIFIER DIODE DA243-630

<ul style="list-style-type: none"> <li>◆ <math>V_{RRM} = \underline{3600 - 4400 V}</math></li> <li>◆ <math>I_{F(AV)} = \underline{760 A}</math> (<math>T_C = 110\text{ }^\circ\text{C}</math>)</li> <li>◆ <math>I_{FSM} = \underline{9 kA}</math> (<math>t_p = 10\text{ms}</math>)</li> </ul>		
<ul style="list-style-type: none"> <li>◆ High reability</li> <li>◆ Guaranteed maximum avalanche power dissipation</li> <li>◆ Press-pack design</li> </ul>		

### MAXIMUM RATED VALUES

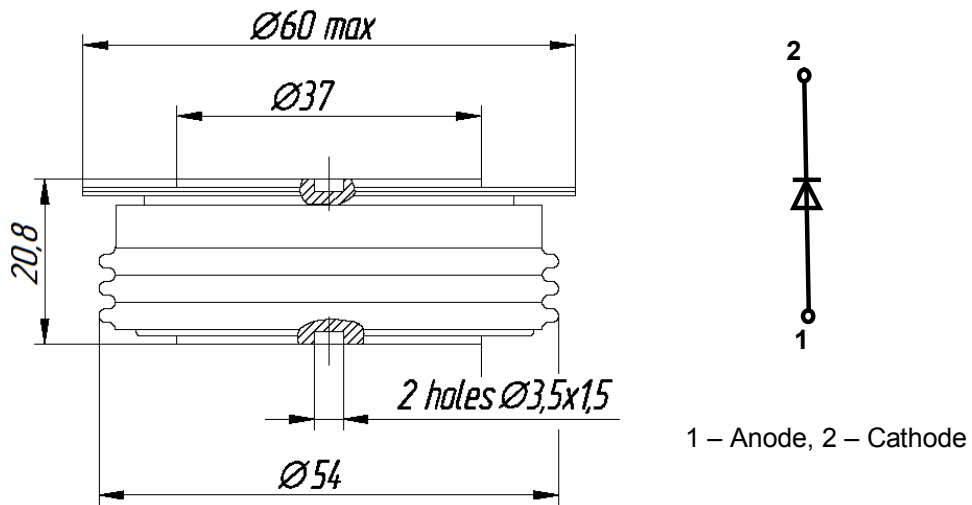
Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots +160\text{ }^\circ\text{C}$	$V_{RRM}$	3600-4400	V
Avalanche breakdown voltage, $T_j = -60 \dots +160\text{ }^\circ\text{C}$	$V_{BR}$	4000-4900	
Repetitive peak reverse current, $T_j = 160\text{ }^\circ\text{C}$ , $V_R = V_{RRM}$	$I_{RRM}$	70	mA
Maximum average forward current, $T_C = 110\text{ }^\circ\text{C}$ , $f = 50\text{ Hz}$	$I_{F(AV)}$	760	A
RMS forward current, $T_C = 110\text{ }^\circ\text{C}$ , $f = 50\text{ Hz}$	$I_{FRMS}$	1190	
Surge non-repetitive current, $T_j = 160\text{ }^\circ\text{C}$ , $V_R = 0$ , $t_p = 10\text{ ms}$	$I_{FSM}$	9	kA
Safety factor	$I^2t$	$405 \cdot 10^3$	$A^2s$
Operation junction temperature range	$T_j$	-60 ... +160	°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, $T_j = 25\text{ °C}$ , $I_F = 1980\text{ A}$	$V_{FM}$	-	-	2,2	V
On-state threshold voltage, $T_j = 160\text{ °C}$ , $I_F = 990- 2970\text{ A}$	$V_{TO}$	-	-	1,10	
On-state slope resistance, $T_j = 160\text{ °C}$ , $I_F = 990 - 2970\text{ A}$	$r_T$	-	-	0,70	mΩ
Rated reverse power dissipation, $T_j = 160\text{ °C}$ , $t_p = 100\text{ мкс}$	$P_{RSM}$	-	-	16,0	kW
<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	$R_{th(c-h)}$	-	-	0,010 0,020	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,24	-	kg
Clamping force	F	13,5	-	16,5	kN
Maximum acceleration (at nominal mounting torque)	a	-	-	100	m/s <sup>2</sup>



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



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