



## AVALANCHE DIODE DA161-200

<ul style="list-style-type: none"> <li>◆ <math>V_{RRM} = \mathbf{400 - 1800\ V}</math></li> <li>◆ <math>I_{F(AV)} = \mathbf{210\ A}</math> (<math>T_C = 115\ ^\circ\text{C}</math>)</li> <li>◆ <math>I_{FSM} = \mathbf{7,5\ kA}</math> (<math>T_j = 150\ ^\circ\text{C}</math>)</li> </ul>		
<ul style="list-style-type: none"> <li>◆ Hermetic metal cases with ceramic insulators</li> <li>◆ Pressure contact design</li> <li>◆ Threaded studs of ISO</li> <li>◆ Low dispersion <math>Q_{rr}</math> and <math>V_{FM}</math> for series and parallel connections</li> <li>◆ Guaranteed maximal power dissipation in avalanche breakdown mode</li> </ul>		

### MAXIMUM RATED VALUES

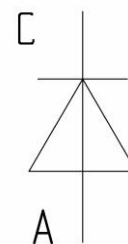
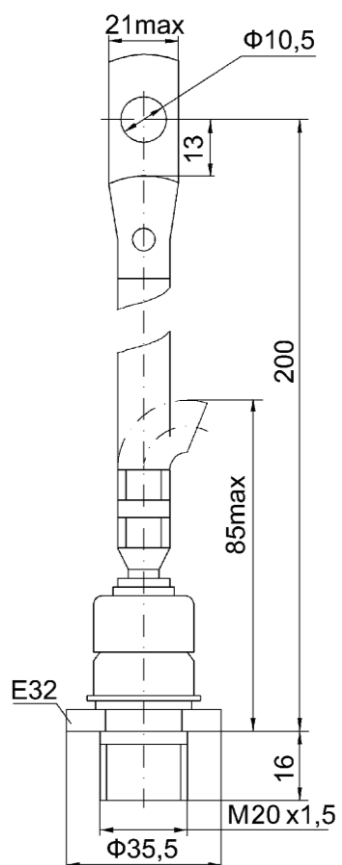
Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots + 150\ ^\circ\text{C}$	$V_{RRM}$	400-1800	V
Non- repetitive peak reverse voltage, $T_j = -60 \dots + 150\ ^\circ\text{C}$	$V_{RSM}$	500-1900	
Repetitive peak reverse current, $T_j = 150\ ^\circ\text{C}, V_R = V_{RRM}$	$I_{RRM}$	25	mA
Maximum average forward current, $f = 50\ \text{Hz}$ , double side cooling, $T_C = 115\ ^\circ\text{C}$	$I_{F(AV)}$	210	A
RMS forward current, $f = 50\ \text{Hz}, T_C = 115\ ^\circ\text{C}$	$I_{FRMS}$	330	
Surge non-repetitive current, $T_j = 150\ ^\circ\text{C}, V_R = 0, t_p = 10\ \text{ms}$	$I_{FSM}$	7,5	kA
Safety factor	$I^2t$	$0,28 \cdot 10^6$	$\text{A}^2\text{s}$
Rated reverse power dissipation, $T_j = 150\ ^\circ\text{C}, t_p = 100\ \mu\text{s}$	$P_{RSM}$	16	kW
Operation junction temperature range	$T_j$	$-60 \dots + 150$	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	$-60 \dots + 50$	$^\circ\text{C}$

**DA161-200**

<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$ , $I_F = 628\text{ A}$	$V_{FM}$	-	-	1,40	V
On-state threshold voltage, $T_j = 150\text{ °C}$ , $I_F = 300 - 1000\text{ A}$	$V_{F(TO)}$	-	-	0,92	
On-state slope resistance, $T_j = 150\text{ °C}$ , $I_F = 300 - 1000\text{ A}$	$r_T$	-	-	0,68	mΩ
Recovery charge, $T_j = 150\text{ °C}$ , $I_F = 200\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$Q_{rr}$	-	-	1000	μAs
Recovery current, $T_j = 150\text{ °C}$ , $I_F = 200\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$I_{rr}$	-	-	80	A
<b>THERMAL PARAMETERS</b>					
Thermal resistance junction to case	$R_{th(j-c)}$	-	-	0,13	°C/W
Thermal resistance case to heatsink	$R_{th(c-h)}$	-	-	0,05	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,265	-	kg
Mounting torque	$M_d$	20	-	30	Nm
Maximum acceleration (at nominal mounting torque)	a	-	-	50	m/s <sup>2</sup>
Cathode-anode distance on insulator surface	$D_s$	-	18,8	-	mm



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C – Cathode, A – Anode

**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 Internet: www.elvpr.ru