

## RECTIFIER DIODE D151-125

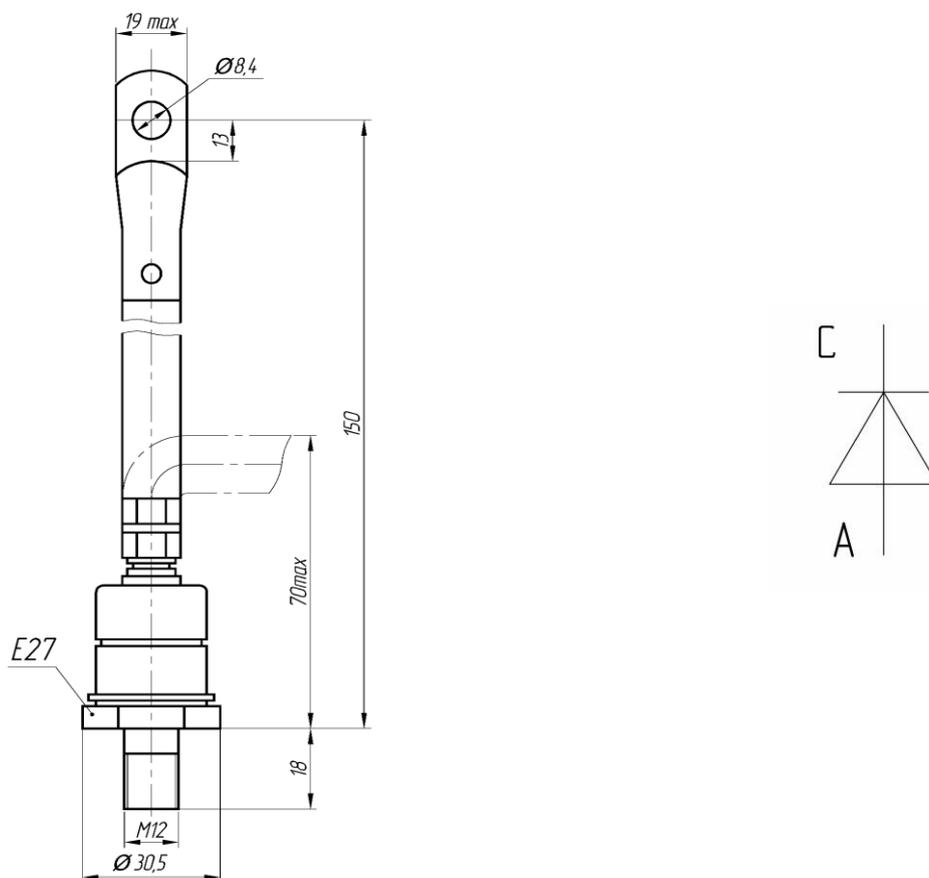
<ul style="list-style-type: none"> <li>◆ <math>V_{RRM} = \mathbf{300 - 1600\ V}</math></li> <li>◆ <math>I_{F(AV)} = \mathbf{125\ A}</math> (<math>T_C = 140\ ^\circ\text{C}</math>)</li> <li>◆ <math>I_{FSM} = \mathbf{3,0\ kA}</math> (<math>T_j = 190\ ^\circ\text{C}</math>)</li> </ul>			
<ul style="list-style-type: 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> </ul>			
<b>MAXIMUM RATED VALUES</b>			
Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots + 190\ ^\circ\text{C}$	$V_{RRM}$	300-1600	V
Non- repetitive peak reverse voltage, $T_j = -60 \dots + 190\ ^\circ\text{C}$	$V_{RSM}$	400-1700	
Repetitive peak reverse current, $T_j = 190\ ^\circ\text{C}$ , $V_R = V_{RRM}$	$I_{RRM}$	20	mA
Maximum average forward current, $f = 50\ \text{Hz}$ , double side cooling, $T_C = 140\ ^\circ\text{C}$	$I_{F(AV)}$	125	A
RMS forward current, $f = 50\ \text{Hz}$ , $T_C = 140\ ^\circ\text{C}$	$I_{FRMS}$	196	
Surge non-repetitive current, $T_j = 190\ ^\circ\text{C}$ , $V_R = 0$ , $t_p = 10\ \text{ms}$	$I_{FSM}$	3,0	kA
Safety factor	$I^2t$	$0,045 \cdot 10^6$	$\text{A}^2\text{s}$
Operation junction temperature range	$T_j$	-60...+ 190	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-60...+ 50	$^\circ\text{C}$

**D151-125**

<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ	max	
Maximum peak forward voltage, $T_j = 25\text{ }^\circ\text{C}$ , $I_F = 392\text{ A}$	$V_{FM}$	-	-	1,35	V
On-state threshold voltage, $T_j = 190\text{ }^\circ\text{C}$ , $I_F = 200 - 600\text{ A}$	$V_{F(TO)}$	-	-	0,90	
On-state slope resistance, $T_j = 190\text{ }^\circ\text{C}$ , $I_F = 200 - 600\text{ A}$	$r_T$	-	-	1,3	m $\Omega$
Recovery charge, $T_j = 190\text{ }^\circ\text{C}$ , $I_F = 125\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$Q_{rr}$	-	-	450	$\mu\text{As}$
Recovery current, $T_j = 190\text{ }^\circ\text{C}$ , $I_F = 125\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$I_{rr}$	-	-	56	A
<b>THERMAL PARAMETERS</b>					
Thermal resistance junction to case	$R_{th(j-c)}$	-	-	0,30	$^\circ\text{C}/\text{W}$
Thermal resistance case to heatsink	$R_{th(c-h)}$	-	-	0,08	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,165	-	kg
Mounting torque	$M_d$	10	-	20	Nm
Maximum acceleration (at nominal mounting torque)	a	-	-	50	$\text{m}/\text{s}^2$
Cathode-anode distance on insulator surface	$D_s$	-	15,4	-	mm



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C – Cathode, A – Anode

### Device Outline Drawing

(dimensions in mm)



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