

## RECTIFIER DIODE D151-160

<ul style="list-style-type: none"> <li>◆ <math>V_{RRM} = \mathbf{300 - 1600\ V}</math></li> <li>◆ <math>I_{F(AV)} = \mathbf{160\ A}</math> (<math>T_C = 140\ ^\circ\text{C}</math>)</li> <li>◆ <math>I_{FSM} = \mathbf{4,5\ 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>		

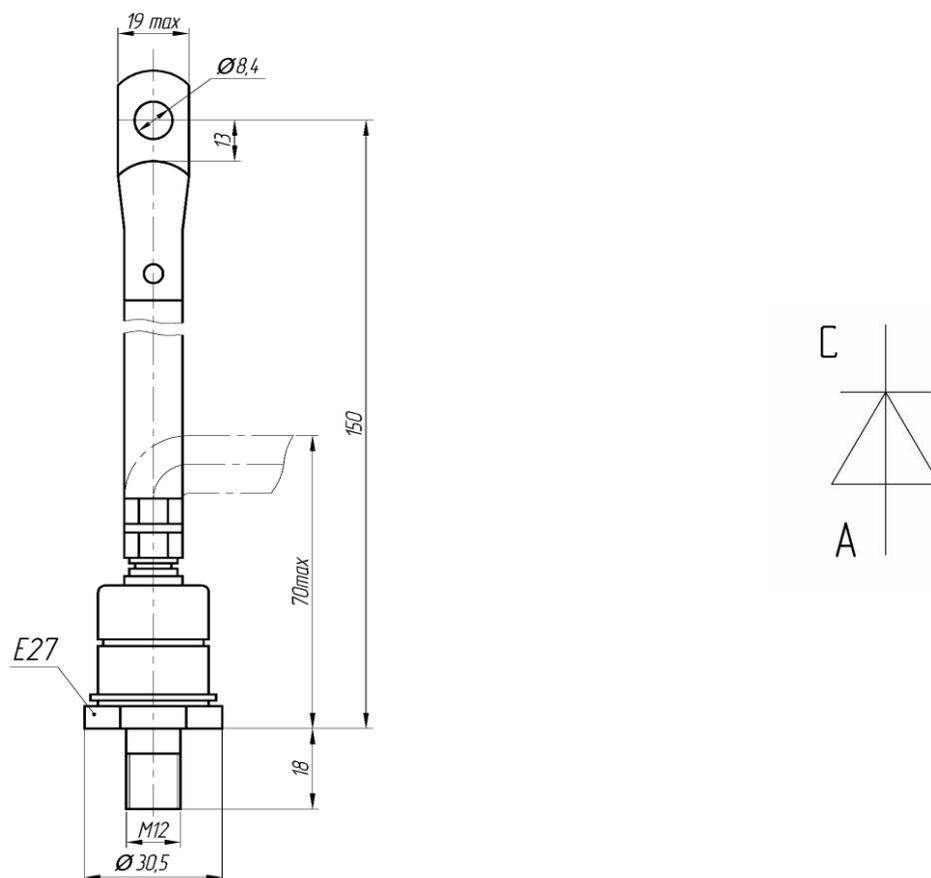
### MAXIMUM RATED VALUES

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, $T_C = 140\ ^\circ\text{C}$	$I_{F(AV)}$	160	A
RMS forward current, $f = 50\ \text{Hz}$ , $T_C = 140\ ^\circ\text{C}$	$I_{FRMS}$	251	
Surge non-repetitive current, $T_j = 190\ ^\circ\text{C}$ , $V_R = 0$ , $t_p = 10\ \text{ms}$	$I_{FSM}$	4,5	kA
Safety factor	$I^2t$	$0,101 \cdot 10^6$	$\text{A}^2\text{s}$
Operation junction temperature range	$T_j$	$-60 \dots + 190$	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	$-60 \dots + 50$	$^\circ\text{C}$

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<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}, I_F = 500\text{ A}$	$V_{FM}$	-	-	1,35	V
On-state threshold voltage, $T_j = 190\text{ °C}, I_F = 250 - 700\text{ A}$	$V_{F(TO)}$	-	-	0,90	
On-state slope resistance, $T_j = 190\text{ °C}, I_F = 250 - 700\text{ A}$	$r_T$	-	-	1,0	mΩ
Recovery charge, $T_j = 190\text{ °C}, I_F = 160\text{ A}, di_F/dt = -5\text{ A}/\mu\text{s}, V_R \geq 100\text{ V}$	$Q_{rr}$	-	-	500	μAs
Recovery current, $T_j = 190\text{ °C}, I_F = 160\text{ A}, di_F/dt = -5\text{ A}/\mu\text{s}, V_R \geq 100\text{ V}$	$I_{rr}$	-	-	59	A
<b>THERMAL PARAMETERS</b>					
Thermal resistance junction to case	$R_{th(j-c)}$	-	-	0,24	°C/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	m/s <sup>2</sup>
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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