



## PRESS - PACK RECTIFIER DIODE D163-4000

<ul style="list-style-type: none"> <li>◆ <math>V_{RRM} = \underline{200-1000 V}</math></li> <li>◆ <math>I_{F(AV)} = \underline{4700 A}</math> (<math>T_C = 85^\circ C</math>)</li> <li>◆ <math>I_{FSM} = \underline{55 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>			
<b>MAXIMUM RATED VALUES</b>			
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, $T_j = 175^\circ C, V_R = V_{RRM}$	$I_{RRM}$	150	mA
Maximum average forward current, $T_C = 85^\circ C, f = 50 Hz$	$I_{F(AV)}$	4700	A
RMS forward current, $T_C = 85^\circ C, f = 50 Hz$	$I_{FRMS}$	7380	
Surge non-repetitive current, $T_j = 175^\circ C, V_R = 0, t_p = 10 ms$	$I_{FSM}$	55	kA
Safety factor	$I^2t$	$15125 \cdot 10^3$	$A^2s$
Operation junction temperature range	$T_j$	-60 ... +175	°C
Storage temperature range	$T_{stg}$	-60 ... +50	

**D163-4000**

<b>ELECTRICAL CHARACTERISTICS</b>					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$ , $I_F = 12560\text{ A}$	$V_{FM}$	-	-	1,30	V
On-state threshold voltage, $T_j = 175\text{ °C}$ , $I_F = 6280 - 18840\text{ A}$	$V_{TO}$	-	-	0,73	
On-state slope resistance, $T_j = 175\text{ °C}$ , $I_F = 6280 - 18840\text{ A}$	$r_T$	-	-	0,040	mΩ
Recovery charge, $T_j = 175\text{ °C}$ , $I_F = 4000\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$Q_{RR}$	-	-		μAs
Recovery current, $T_j = 175\text{ °C}$ , $I_F = 4000\text{ A}$ , $di_F/dt = -5\text{ A}/\mu\text{s}$ , $V_R \geq 100\text{ V}$	$I_{RR}$	-	-		A
<b>THERMAL PARAMETERS</b>					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	0,015 0,030 0,030	°C/W
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	0,004 0,008	
<b>MECHANICAL PARAMETERS</b>					
Weight	w	-	0,71	-	kg
Mounting force	F	27	-	33	kN
Maximum acceleration (at nominal mounting force)	a	-	-	100	m/s <sup>2</sup>



## D163-4000

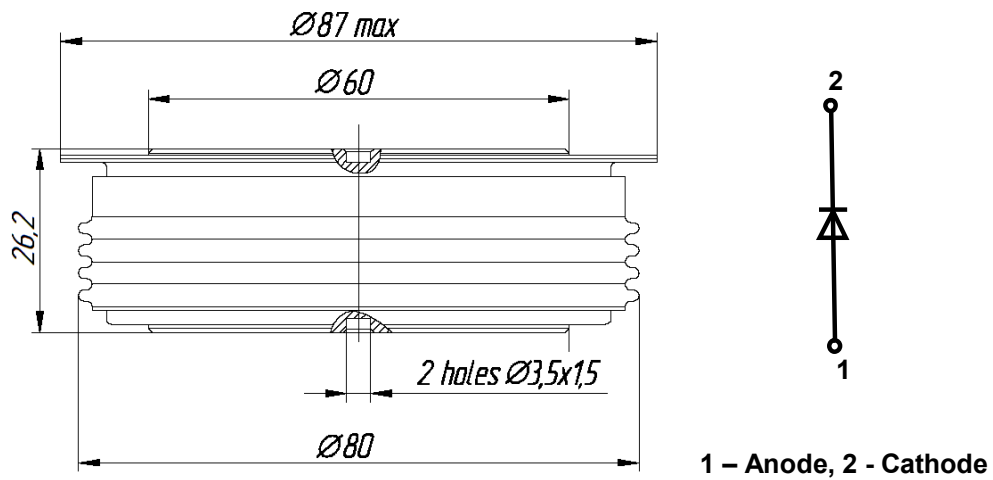


Fig. 1. Device Outline Drawing  
(dimensions in mm)



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