



PRESS - PACK RECTIFIER DIODE

D153-1250

<ul style="list-style-type: none"> ◆ $V_{RRM} = \mathbf{4400-5200\ V}$ ◆ $I_{F(AV)} = \mathbf{1650\ A}$ ($T_C = 85^\circ\text{C}$) ◆ $I_{FSM} = \mathbf{25\ kA}$ ($t_p = 10\text{ms}$) 		
<ul style="list-style-type: none"> ◆ Low forward losses ◆ Low dispersion Q_{RR} and V_{FM} for series and parallel connections ◆ Press-pack design 		

MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots +150\ ^\circ\text{C}$	V_{RRM}	4400-5200	V
Non- repetitive peak reverse voltage, $T_j = -60 \dots +150\ ^\circ\text{C}$	V_{RSM}	4500-5300	
Repetitive peak reverse current, $T_j = 150\ ^\circ\text{C}$, $V_R = V_{RRM}$	I_{RRM}	100	mA
Maximum average forward current, $T_C = 85\ ^\circ\text{C}$, $f = 50\ \text{Hz}$	$I_{F(AV)}$	1650	A
RMS forward current, $T_C = 85\ ^\circ\text{C}$, $f = 50\ \text{Hz}$	I_{FRMS}	2590	
Surge non-repetitive current, $T_j = 150\ ^\circ\text{C}$, $V_R = 0$, $t_p = 10\ \text{ms}$	I_{FSM}	25	kA
Safety factor	I^2t	$3125 \cdot 10^3$	A^2s
Operation junction temperature range	T_j	-60 ... +150	°C
Storage temperature range	T_{stg}	-60 ... +50	

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ELECTRICAL CHARACTERISTICS					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$, $I_F = 3925\text{ A}$	V_{FM}	-	-	1,95	V
On-state threshold voltage, $T_j = 150\text{ °C}$, $I_F = 1960 - 5890\text{ A}$	V_{TO}	-	-	0,92	
On-state slope resistance, $T_j = 150\text{ °C}$, $I_F = 3000 - 5890\text{ A}$	r_T	-	-	0,310	mΩ
Recovery charge, $T_j = 150\text{ °C}$, $I_F = 1250\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	Q_{RR}	-	-		μAs
Recovery current, $T_j = 150\text{ °C}$, $I_F = 1250\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	I_{RR}				A
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	0,018 0,036 0,036	°C/W
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	0,005 0,010	
MECHANICAL PARAMETERS					
Weight	w	-	0,55	-	kg
Clamping force	F	24	-	28	kN
Maximum acceleration (at nominal mounting torque)	a	-	-	100	m/s ²



D153-1250

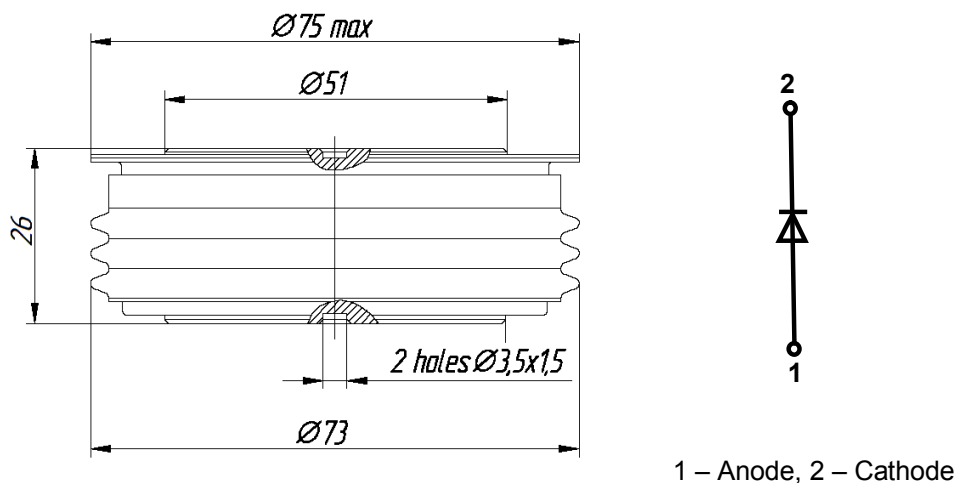


Fig. 1. Device Outline Drawing
(dimensions in mm)



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