



PRESS - PACK RECTIFIER DIODE D133-1600

<ul style="list-style-type: none"> ◆ $V_{RRM} = \underline{200-1000 V}$ ◆ $I_{F(AV)} = \underline{1810 A}$ ($T_C = 85^\circ C$) ◆ $I_{FSM} = \underline{18,0 kA}$ ($t_p = 10ms$) 		
<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, $T_j = -60 \dots +175^\circ C$	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}	50	mA
Maximum average forward current, $T_C = 85^\circ C, f = 50 \text{ Hz}$	$I_{F(AV)}$	1810	A
RMS forward current, $T_C = 85^\circ C, f = 50 \text{ Hz}$	I_{FRMS}	2840	
Surge non-repetitive current, $T_j = 175^\circ C, V_R = 0, t_p = 10 \text{ ms}$	I_{FSM}	18,0	kA
Safety factor	I^2t	$1620 \cdot 10^3$	A^2s
Operation junction temperature range	T_j	-60 ... +175	°C
Storage temperature range	T_{stg}	-60 ... +50	

**D133-1600**

ELECTRICAL CHARACTERISTICS					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ }^\circ\text{C}$, $I_F = 5000\text{ A}$	V_{FM}	-	-	1,45	V
On-state threshold voltage, $T_j = 175\text{ }^\circ\text{C}$, $I_F = 2500 - 7500\text{ A}$	V_{TO}	-	-	0,72	
On-state slope resistance, $T_j = 175\text{ }^\circ\text{C}$, $I_F = 2500 - 7500\text{ A}$	r_T	-	-	0,147	m Ω
Recovery charge, $T_j = 175\text{ }^\circ\text{C}$, $I_F = 1600\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	Q_{RR}	-	-		μAs
Recovery current, $T_j = 175\text{ }^\circ\text{C}$, $I_F = 1600\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	I_{RR}	-	-		A
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	0,036 0,072 0,072	$^\circ\text{C/W}$
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	0,015 0,030	
MECHANICAL PARAMETERS					
Weight	w	-	0,1	-	kg
Mounting force	F	9		10	kN
Maximum acceleration (at nominal mounting force)	a	-	-	100	m/s ²



D133-1600

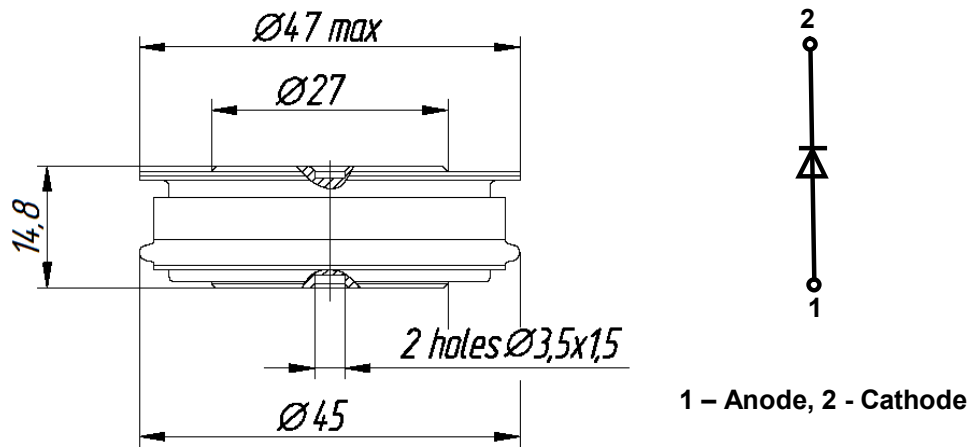


Fig. 1. Device Outline Drawing
(dimensions in mm)



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