



FAST RECTIFIER DIODE

DF361-320

<ul style="list-style-type: none"> ◆ $V_{RRM} = \underline{600-1400\text{ V}}$ ◆ $I_{F(AV)} = \underline{320\text{ A}}$ ($T_C = 56^\circ\text{C}$) ◆ $I_{FSM} = \underline{5,3\text{ kA}}$ ($t_p = 10\text{ms}$) 		
<ul style="list-style-type: none"> ◆ Small recovered time and charge ◆ Acceptable for series and parallel connections (low dispersion Q_{rr}, V_{FM}, I_{RRM}) 		

MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots +140\text{ }^\circ\text{C}$	V_{RRM}	600-1400	V
Non- repetitive peak reverse voltage, $T_j = -60 \dots +140\text{ }^\circ\text{C}$	V_{RSM}	700-1500	
Repetitive peak reverse current, $T_j = 140\text{ }^\circ\text{C}$, $V_R = V_{RRM}$	I_{RRM}	30	mA
Maximum average forward current, $T_C = 56\text{ }^\circ\text{C}$, $f = 50\text{ Hz}$	$I_{F(AV)}$	320	A
RMS forward current, $T_C = 56\text{ }^\circ\text{C}$, $f = 50\text{ Hz}$	I_{FRMS}	502	
Surge non-repetitive current, $T_j = 140\text{ }^\circ\text{C}$, $V_R = 0$, $t_p = 10\text{ ms}$	I_{FSM}	5,3	kA
Safety factor	I^2t	$140,45 \cdot 10^3$	A^2s
Operation junction temperature range	T_j	$-60 \dots +140$	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-60 \dots +50$	

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ELECTRICAL CHARACTERISTICS					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ }^\circ\text{C}$, $I_F = 1000\text{ A}$	V_{FM}	-	-	2,13	V
On-state threshold voltage, $T_j = 140\text{ }^\circ\text{C}$, $I_F = 500 - 1500\text{ A}$	V_{TO}	-	-	0,80	
On-state slope resistance, $T_j = 140\text{ }^\circ\text{C}$, $I_F = 500 - 1500\text{ A}$	r_T	-	-	1,2	m Ω
Reverse recovery time $T_j = 140\text{ }^\circ\text{C}$, $I_F = 320\text{ A}$, $di_F/dt = -50\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	t_{rr}	-	-	3,2; 4,0; 5,0	μs
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	0,15 0,30 0,30	$^\circ\text{C}/\text{W}$
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	0,05 0,10	
MECHANICAL PARAMETERS					
Weight	w	-	0,265	-	kg
Torque	Md	20	-	30	N-m



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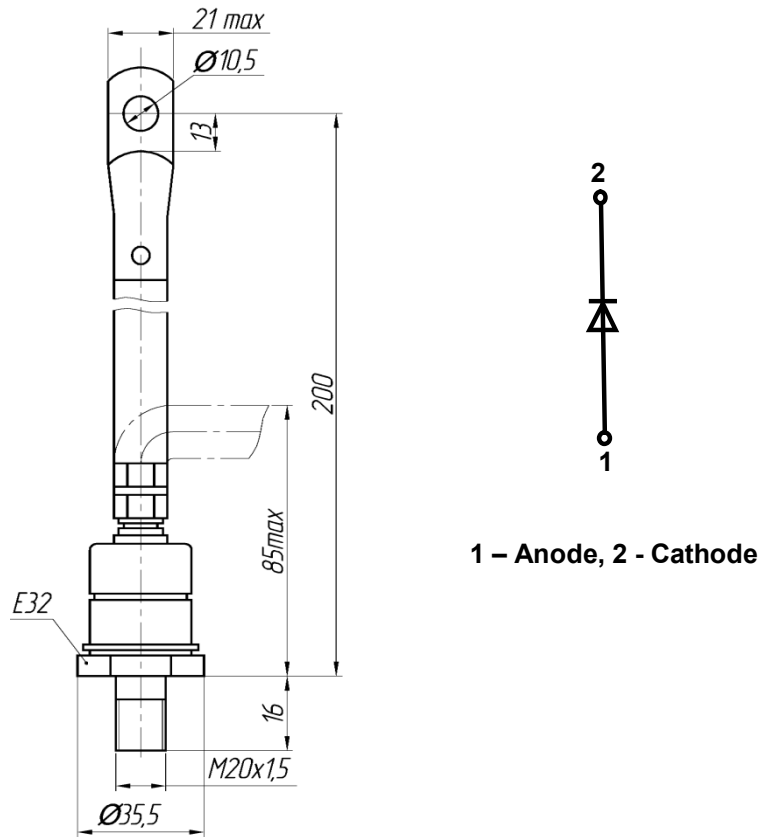


Fig. 1. Device Outline Drawing
(dimensions in mm)



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