AVALANCHE RECTIFIER DIODE

DA123-320

- V_{RRM} = **400 - 1600 V**
- $I_{F(AV)}$ = **320 A** (T_C = 113 °C)
- I_{FSM} = **5,5 kA** (t_p=10ms)

- High reability
- Guaranteed maximum avalanche power dissipation
- Press-pack design

MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, T_j = -60 …+ 150 °C	V_{RRM}	400-1600	V
Avalanche breakdown voltage, T_j = -60 …+ 150 °C	V_{BR}	600-1800	
Repetitive peak reverse current, T_j = 150 °C, $V_R = V_{RRM}$	I_{RRM}	25	mA
Maximum average forward current, T_C = 113 °C, f = 50 Hz	$I_{F(AV)}$	320	A
RMS forward current, T_C = 113 °C, f = 50 Hz	I_{FRMS}	502	
Surge non-repetitive current, T_j = 150 °C, V_R = 0, t_p = 10 ms	I_{FSM}	5,5	kA
Safety factor	I^2t	$151 \cdot 10^3$	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 °C, I_F = 1000 A	V_{FM}	-	-	1,65	V
On-state threshold voltage, T_j = 150 °C, I_F = 500- 1500 A	V_{TO}	-	-	0,90	
On-state slope resistance, T_j = 150 °C, I_F = 500 - 1500 A	r_T	-	-	0,830	mΩ
Rated reverse power dissipation, T_j = 150 °C, t_p = 100 мкс	P_{RSM}	-	-	16,0	kW
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode double side cooled anode side cooled cathode side cooled	$R_{th(j-c)}$	-	-	 0,075 0,150 0,150	°C/W
Thermal resistance case to heatsink, double side cooled single side cooled	$R_{th(c-h)}$	-	-	 0,020 0,040	
MECHANICAL PARAMETERS					
Weight	w	-	0,070	-	kg
Clamping force	F	5	-	7	kN
Maximum acceleration (at nominal mounting torque)	a	-	-	100	m/s^2

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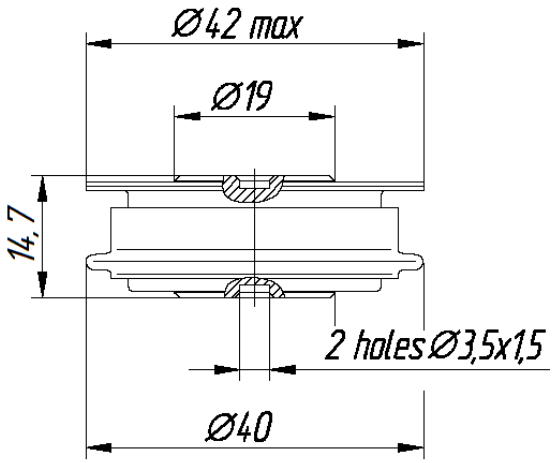

1 – Anode, 2 – Cathode

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

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