ROTOR DIODE

D105-630X

- V_{RRM} = **2000-2800 V**
- $I_{F(AV)}$ = **630 A**(T_C = 100°C)
- I_{FSM} = **15 kA**(t_p=10ms)

- Flange design (terminals – round copper flange (base plate) and copper pipe)
- By means of special arrangement centrifugal forces are applied not to silicon chip but to case, providing safe operation in large mechanical force conditions

MAXIMUM RATED VALUES

Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, T_j = -60 …+ 175 °C	V_{RRM}	2000-2800	V
Non- repetitive peak reverse voltage, T_j = -60 …+ 175 °C	V_{RSM}	2100-2900	
Repetitive peak reverse current, T_j = 175 °C, $V_R = V_{RRM}$	I_{RRM}	50	mA
Maximum average forward current, T_C = 100 °C, f = 50 Hz	$I_{F(AV)}$	630	A
RMS forward current, T_C = 100 °C, f = 50 Hz	I_{FRMS}	989	
Surge non-repetitive current, T_j = 175 °C, V_R = 0, t_p = 10 ms	I_{FSM}	15	kA
Safety factor	I^2t	$1125 \cdot 10^3$	A^2s
Operation junction temperature range	T_j	-60 … +175	°C
Storage temperature range	T_{stg}	-60 … +50	

D105-630X

ELECTRICAL CHARACTERISTICS					
Parameter and conditions	**Symbol**	**Values**			**Units**
		min	**typ.**	**max**	
Maximum peak forward voltage, T_j = 25 °C, I_F = 1980 A	V_{FM}	-	-	1,6	V
On-state threshold voltage, T_j = 175 °C, I_F = 990 - 2970 A	V_{TO}	-	-	1,00	
On-state slope resistance, T_j = 175 °C, I_F = 990 - 2970 A	r_T	-	-	0,4	mΩ
Recovery charge, T_j = 175 °C, I_F = 630 A, di_F/dt= -5 A/µs, V_R≥ 100 V	Q_{RR}	-	-		µAs
Recovery current, T_j = 175 °C, I_F = 630 A, di_F/dt= -5 A/µs, V_R≥ 100 V	I_{RR}	-	-		A
THERMAL PARAMETERS					
Thermal resistance junction to case, DC per diode cathode side cooled	$R_{th(j-c)}$	-	-	0,06	°C/W
MECHANICAL PARAMETERS					
Weight	w	-	0,58	-	kg
Torque	Md	13	-	17	N·m
Centrifugal the acceleration, working along an axis of symmetry of the diode aside the bases: Long Short-term(5min)	a			47088 66708	m/c^2
Long tangential the acceleration, working perpendicularly axes of the diode				4900	

D105-630X

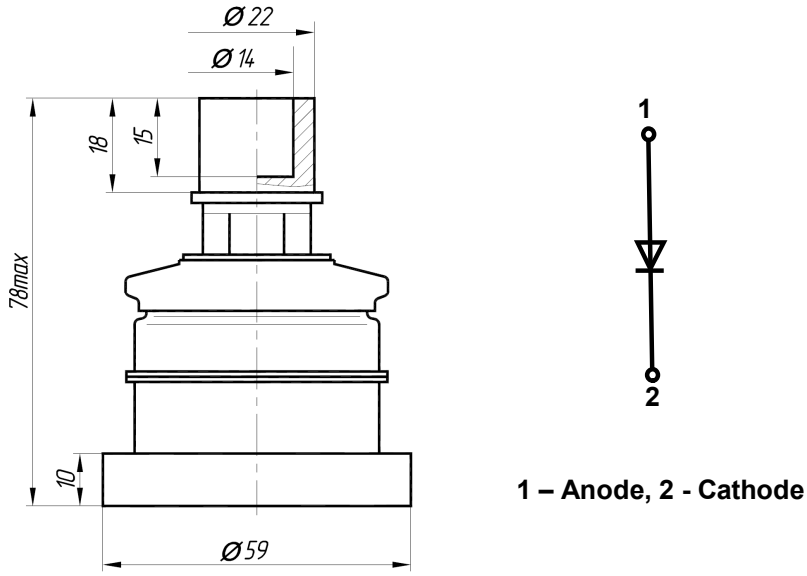

Fig. 1. Device Outline Drawing
(dimensions in mm)

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