

FAST RECOVERY DIODE

ARF370

Repetitive voltage up to

4500 V

Mean forward current

484 A

Surge current

4 kA

FINAL SPECIFICATION

June 17 - Issue: 5

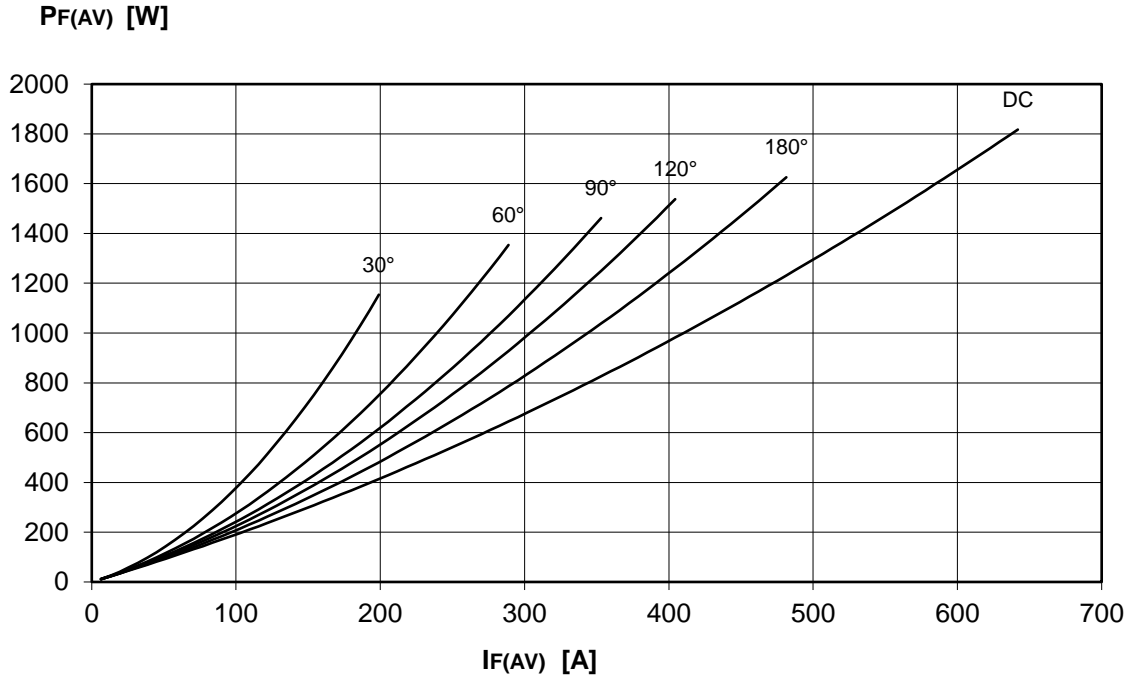
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	4500	V
V _{RSM}	Non-repetitive peak reverse voltage		150	4600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	50	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, Th=55°C, double side cooled		484	A
I _{F(AV)}	Mean forward current	180°square, 50 Hz, Th=55°C, double side cooled		486	A
I _{FSM}	Surge forward current	Sine wave, 10 ms riapped reverse voltage up to 50% VRSM	150	4	kA
I ² t	I ² t			80 x 10 ³	A ² s
V _{FM}	Forward voltage	Forward current = 1200 A	25	3,40	V
V _{F(TO)}	Threshold voltage		150	1,74	V
r _F	Forward slope resistance		150	1,700	mohm
SWITCHING					
t _{rr}	Reverse recovery time	IF= 100A	150	5	µs
Q _{rr}	Reverse recovery charge	di/dt= 100 A/µs		700	µC
I _{rr}	Peak reverse recovery current	VR= 100V		280	A
s	Softness (s-factor), min			0,5	
V _{FR}	Peak forward recovery	di/dt = 400 A/µs		80	V
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		52,0	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		10,0	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			8.4 / 9.4	kN
	Mass			280	g

ORDERING INFORMATION : ARF370 S 45

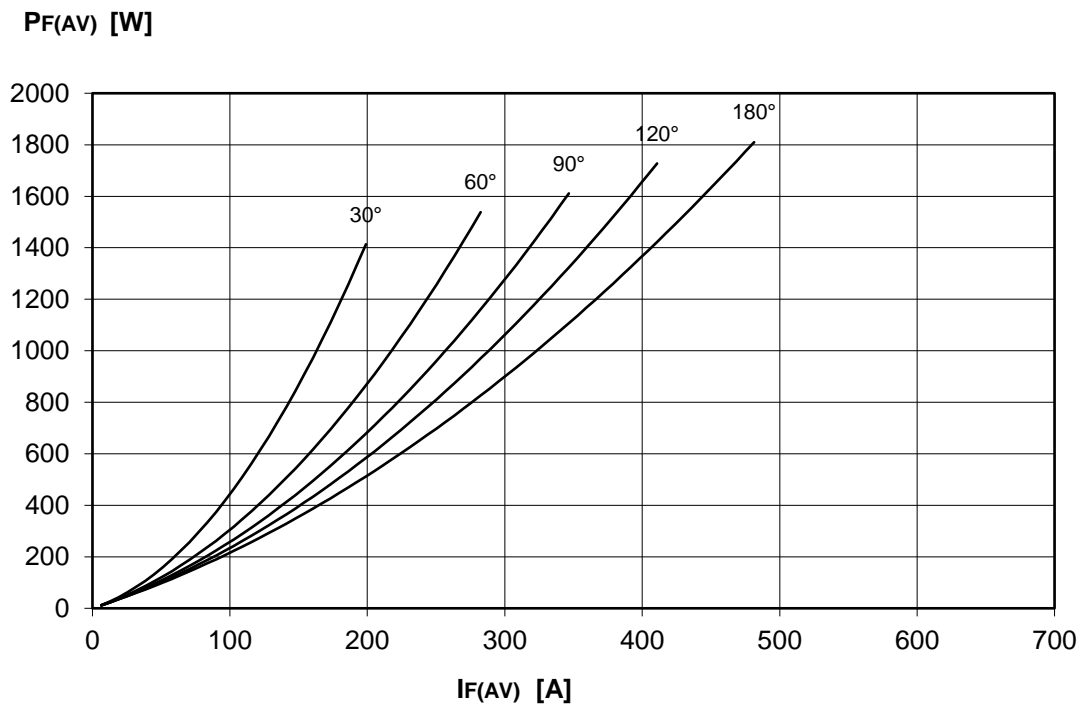
standard specification VRRM/100

DISSIPATION CHARACTERISTICS

SQUARE WAVE (50Hz)



SINE WAVE (50Hz)

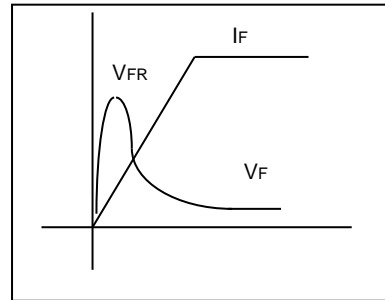
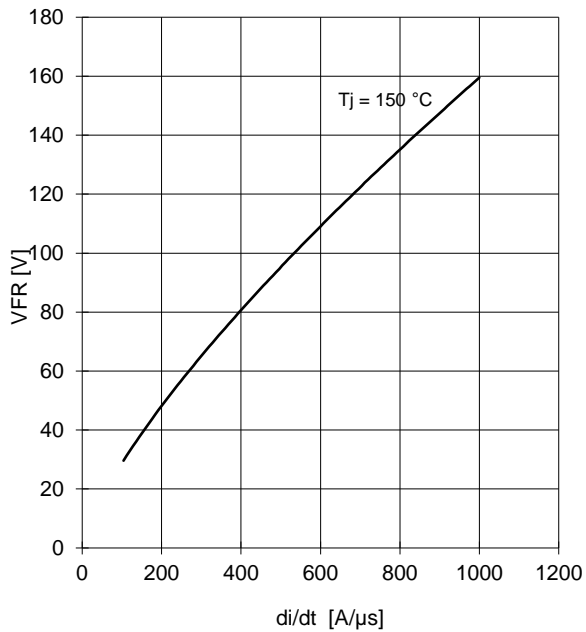


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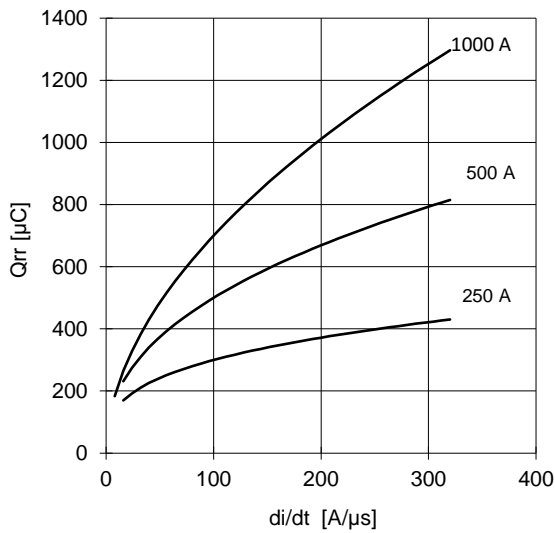


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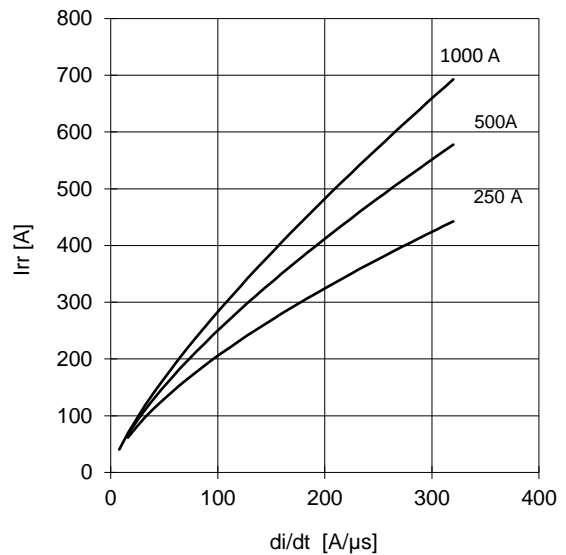
FORWARD RECOVERY VOLTAGE



REVERSE RECOVERY CHARGE T_j = 150 °C



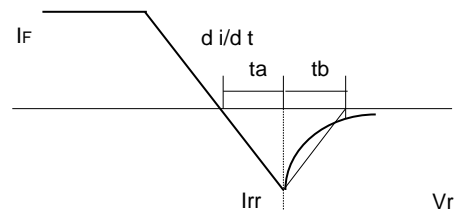
REVERSE RECOVERY CURRENT T_j = 150 °C



$$t_a = I_{rr} / (di/dt) \quad t_b = t_{rr} - t_a$$

$$\text{Softness (s factor)} \quad s = t_b / t_a$$

$$\text{Energy dissipation during recovery } E_r = V_r \cdot (Q_{rr} - I_{rr} \cdot t_a / 2)$$

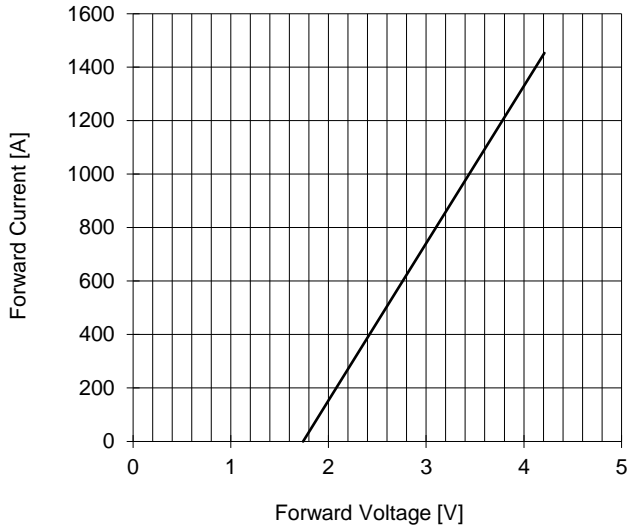


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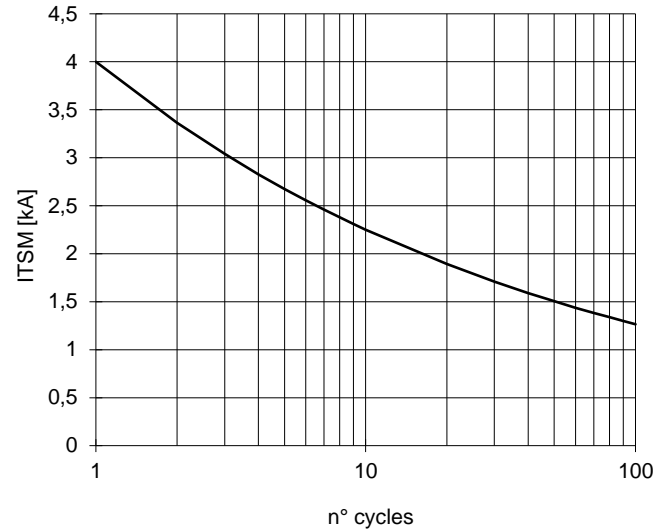


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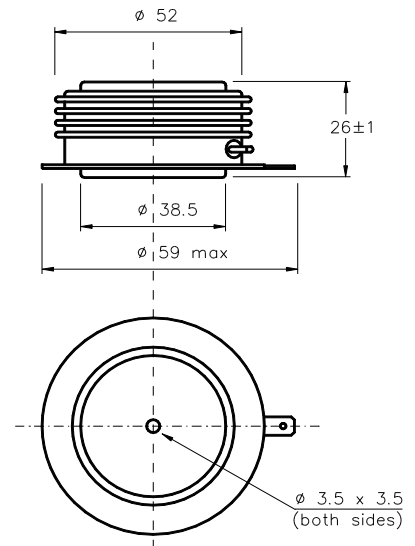
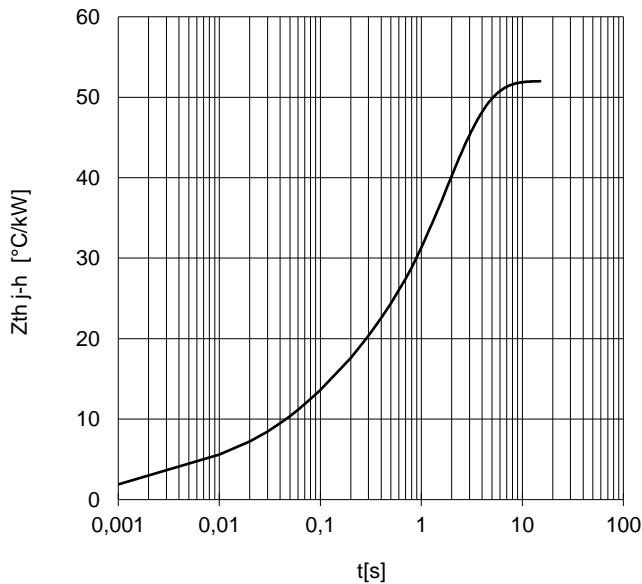
FORWARD CHARACTERISTIC
T_j = 150 °C



SURGE CHARACTERISTIC
T_j = 150 °C



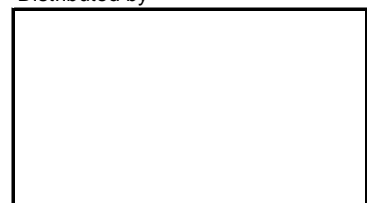
TRANSIENT THERMAL IMPEDANCE
DOUBLE SIDE COOLED



Dimensions
in mm



Distributed by



All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink, surfaces with flatness < .03 mm and roughness < 2 μm. In the interest of product improvement POSEICO SpA reserves the right to change any data given in this data sheet at any time without previous notice. If not stated otherwise the maximum value of ratings (symbols over shaded background) and characteristics is reported.