

FAST RECOVERY DIODE

ARF240

Repetitive voltage up to

2500 V

Mean forward current

280 A

Surge current

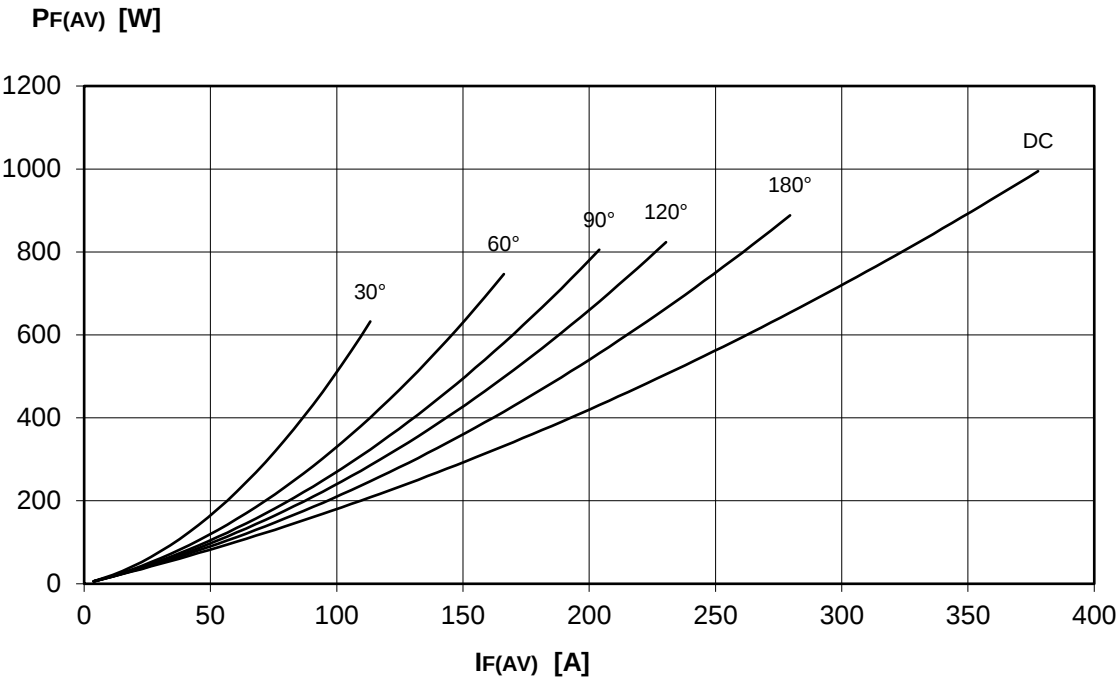
3 kA
FINAL SPECIFICATION

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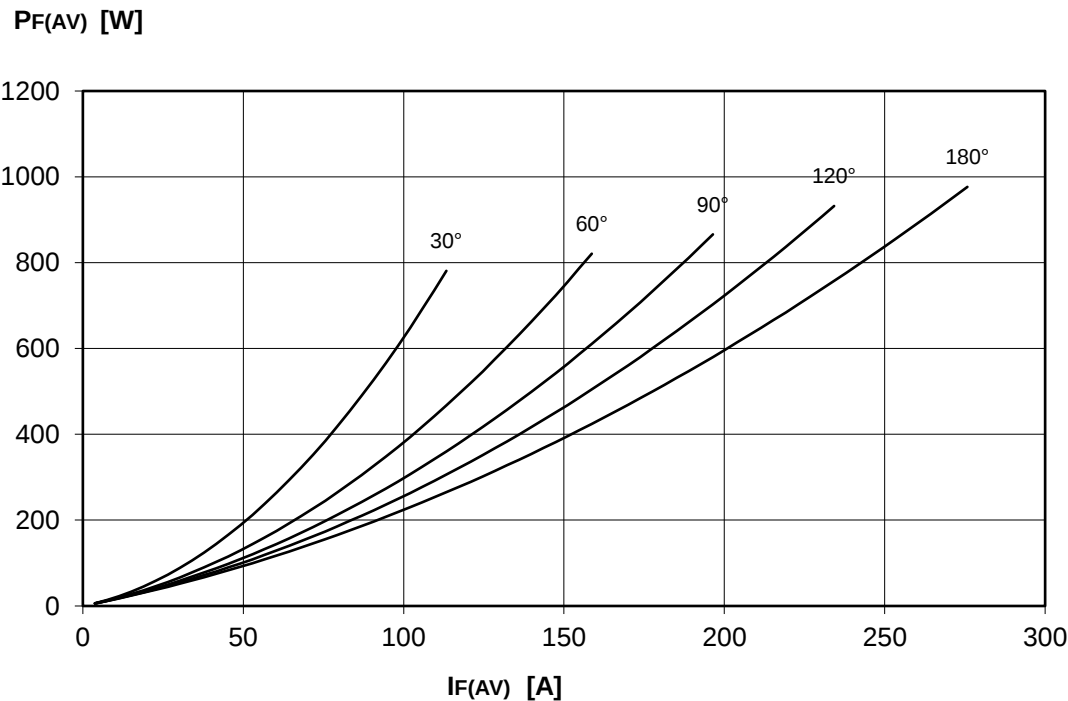
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	2500	V
V _{RSM}	Non-repetitive peak reverse voltage		150	2600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	50	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, Th=55°C, double side cooled		280	A
I _{F(AV)}	Mean forward current	180°square, 50 Hz, Th=55°C, double side cooled		283	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	150	3	kA
I ² t	I ² t			45 x 10 ³	A ² s
V _{FM}	Forward voltage	Forward current = 1000 A	25	4,80	V
V _{F(TO)}	Threshold voltage		150	1,50	V
r _F	Forward slope resistance		150	3,0	mohm
SWITCHING					
t _{rr}	Reverse recovery time	IF= 200A di/dt= 80 A/μs VR= 100V	150	2	μs
Q _{rr}	Reverse recovery charge			90	μC
I _{rr}	Peak reverse recovery current			90	A
s	Softness (s-factor), min			0,4	
V _{FR}	Peak forward recovery	di/dt = 400 A/μs	150	30	V
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		95,0	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		20,0	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			4.5 / 5.0	kN
	Mass			55	g
ORDERING INFORMATION : ARF240 S 25 standard specification ☐ ☐ VRRM/100					

DISSIPATION CHARACTERISTICS

SQUARE WAVE (50Hz)



SINE WAVE (50Hz)

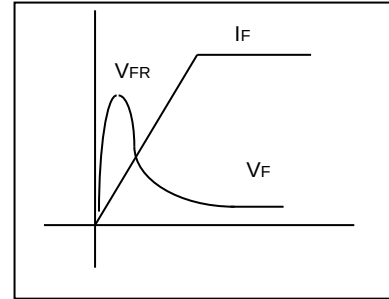
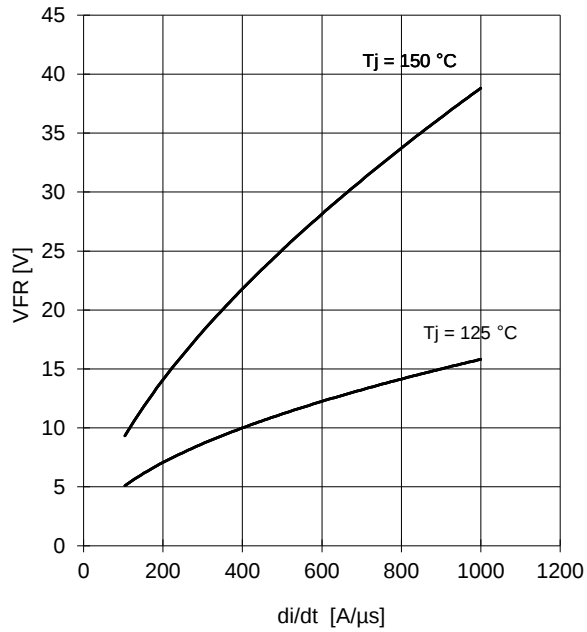


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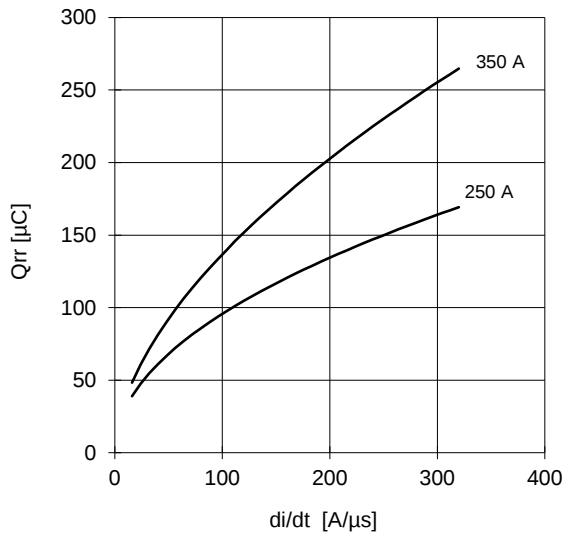


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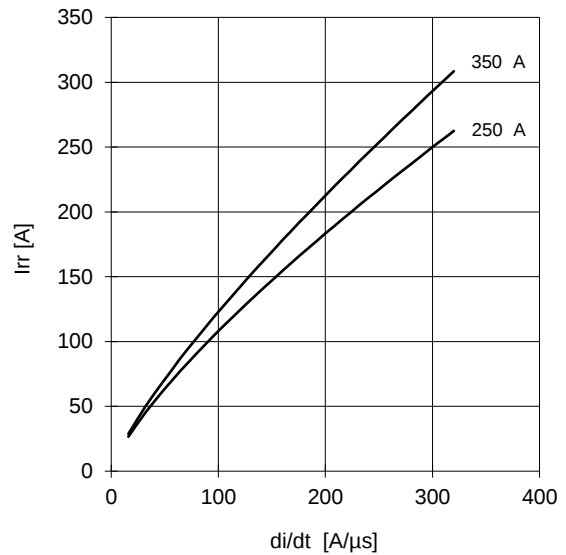
FORWARD RECOVERY VOLTAGE



REVERSE RECOVERY CHARGE $T_j = 150\text{ }^{\circ}\text{C}$



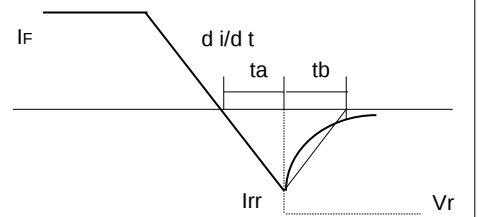
REVERSE RECOVERY CURRENT $T_j = 150\text{ }^{\circ}\text{C}$



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

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

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

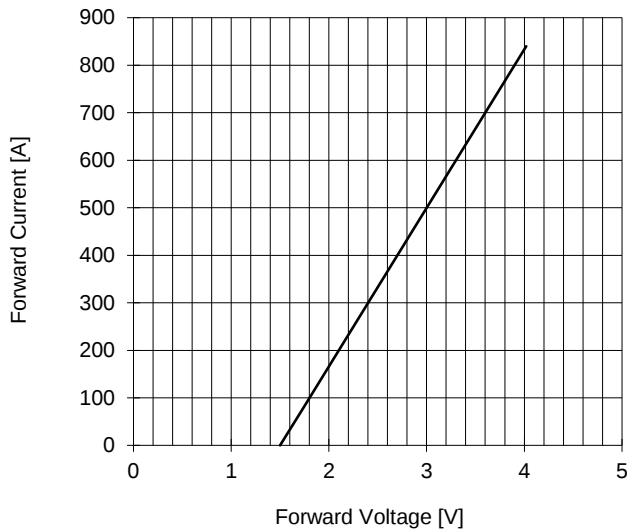


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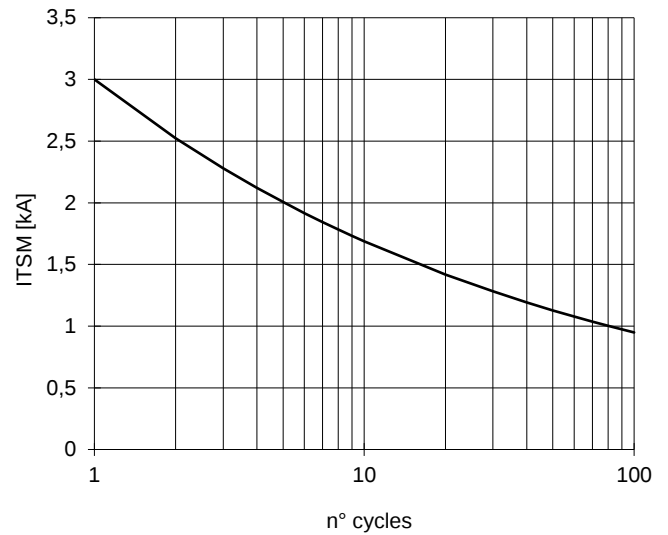


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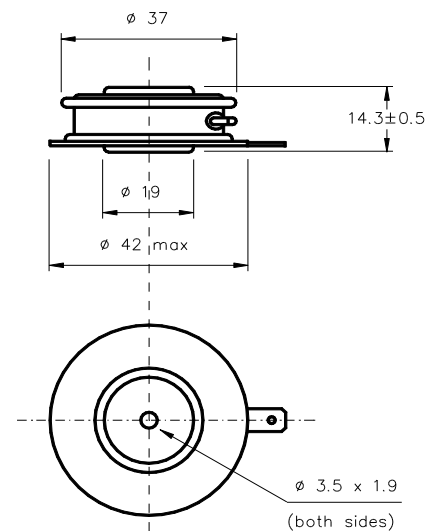
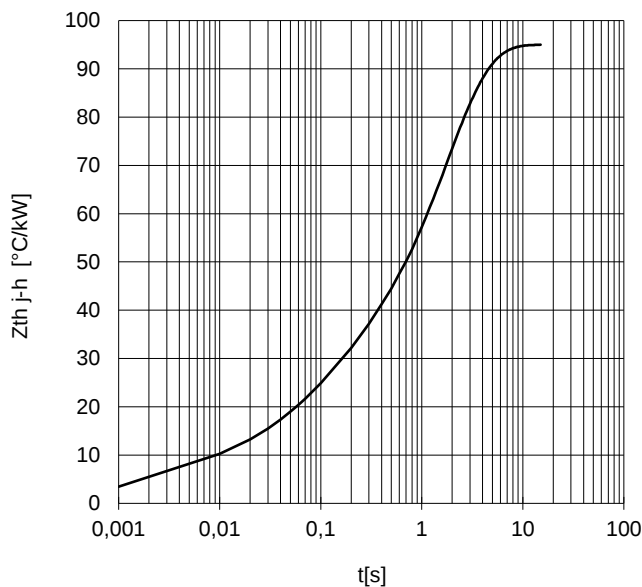
FORWARD CHARACTERISTIC
 $T_J = 150\text{ }^{\circ}\text{C}$



SURGE CHARACTERISTIC
 $T_J = 150\text{ }^{\circ}\text{C}$



TRANSIENT THERMAL IMPEDANCE
DOUBLE SIDE COOLED



Dimensions
in mm



All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink, surfaces with flatness $< .03\text{ mm}$ and roughness $< 2\text{ }\mu\text{m}$. 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.

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