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FAST RECOVERY DIODE

ARF912

Repetitive voltage up to **2600 V**
Mean forward current **755 A**
Surge current **6 kA**

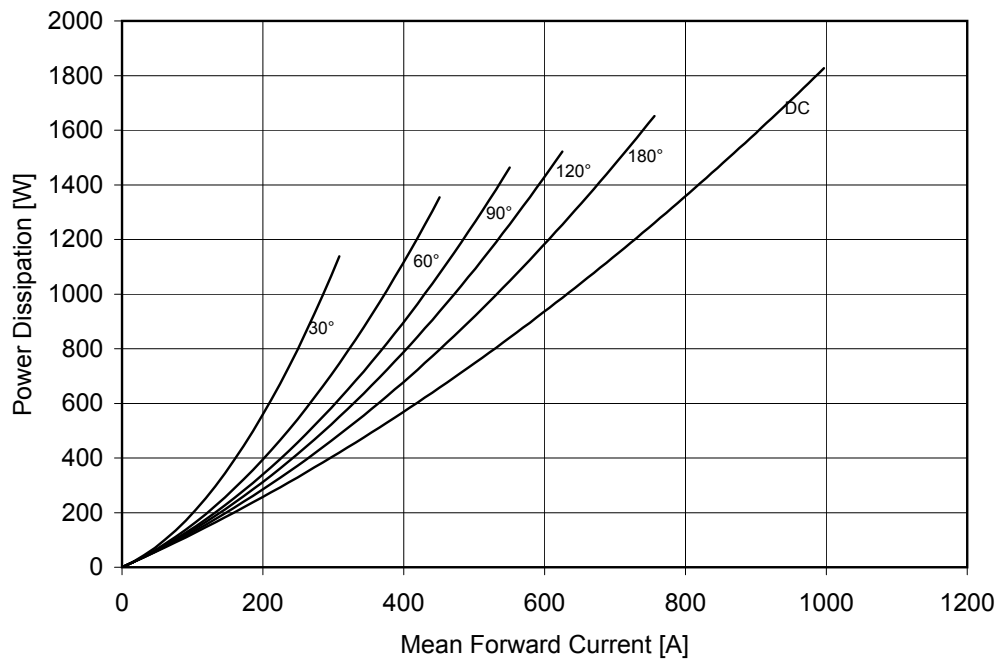
FINAL SPECIFICATION

apr 97 - ISSUE : 04

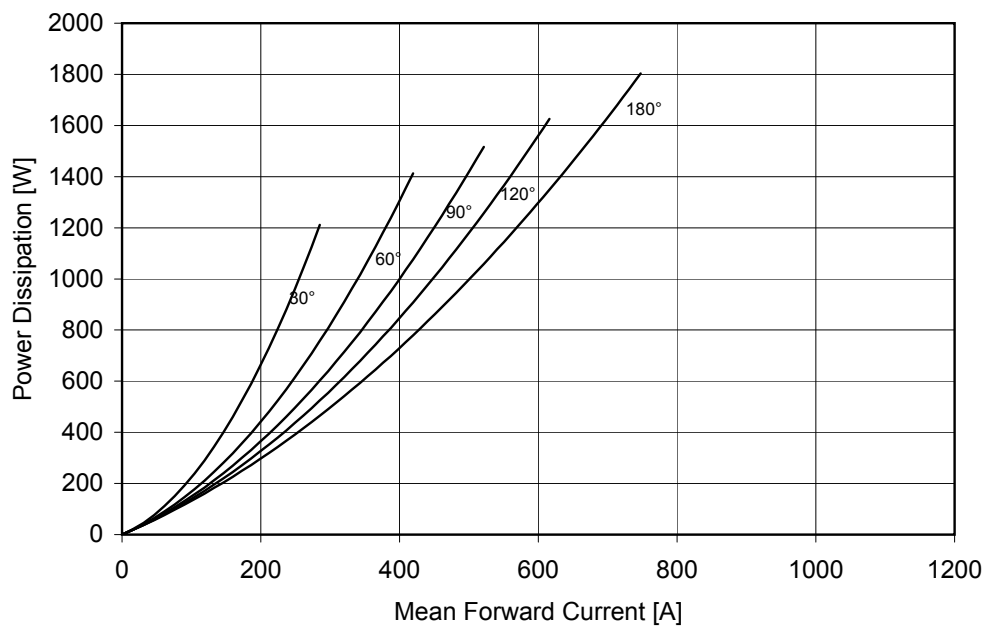
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	2600	V
V _{RSM}	Non-repetitive peak reverse voltage		150	2700	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	50	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		755	A
I _{F(AV)}	Mean forward current	180° square,50 Hz,Th=55°C,double side cooled		755	A
I _{FSM}	Surge forward current	Sine wave, 10 ms reapplied reverse voltage up to 50% VRSM	150	6,4	kA
I ² t	I ² t			205 x1E3	A ² s
V _{FM}	Forward voltage	Forward current = 1200 A	25	2,3	V
V _{F(TO)}	Threshold voltage		150	1,15	V
r _F	Forward slope resistance		150	0,685	mohm
SWITCHING					
t _{rr}	Reverse recovery time	I _F = 350 A di/dt= 80 A/μs VR = 100 V	150	4	μs
Q _{rr}	Reverse recovery charge			260	μC
I _{rr}	Peak reverse recovery current			140	A
s	Softness (s-factor), min			0,4	
V _{FR}	Peak forward recovery	di/dt= 400 A/μs	150	20	V
MOUNTING					
R _{th(j-h)}	Thermal impedance	Junction to heatsink, double side cooled		52	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			8.4 / 9.4	kN
	Mass			280	g
ORDERING INFORMATION : ARF912 S 26					
standard specification <input type="checkbox"/> <input type="checkbox"/> VRRM/100					

DISSIPATION CHARACTERISTICS

SQUARE WAVE

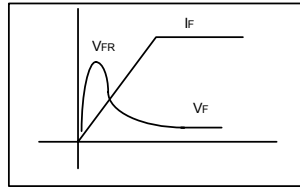
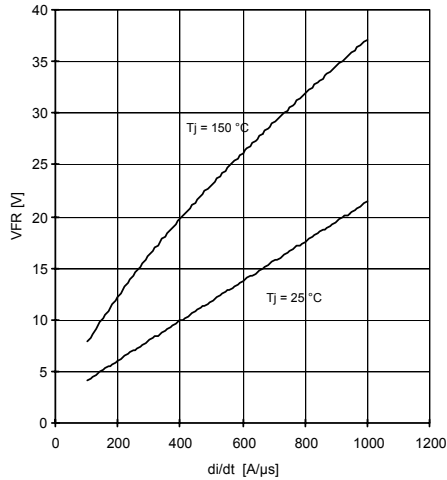


SINE WAVE

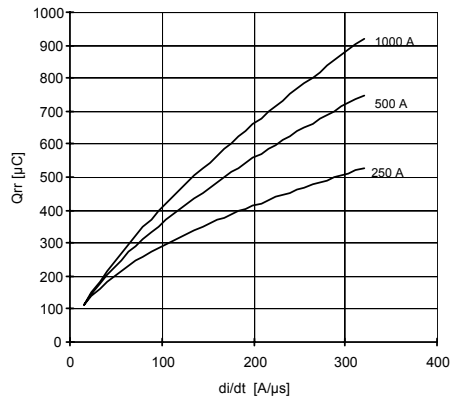


SWITCHING CHARACTERISTICS

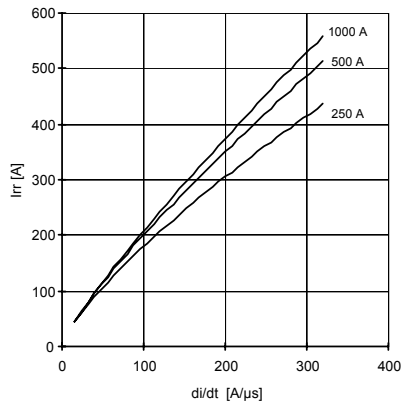
FORWARD RECOVERY VOLTAGE



REVERSE RECOVERY CHARGE
TJ = 150 °C



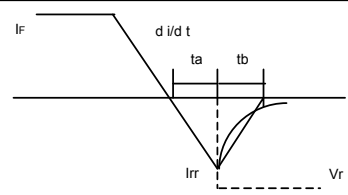
REVERSE RECOVERY CURRENT
TJ = 150 °C



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

Softness (s factor) $s = t_b / t_a$

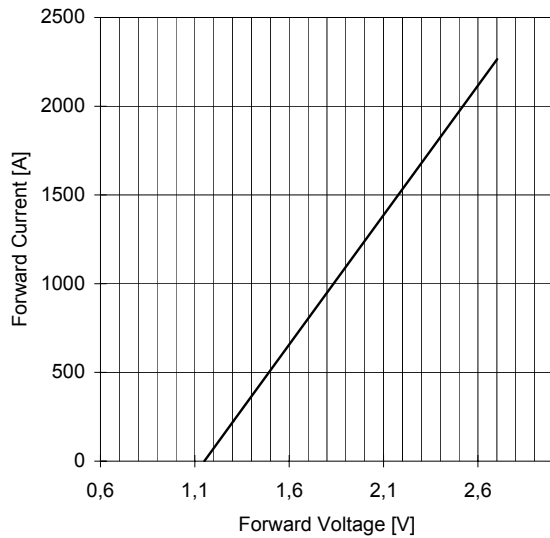
Energy dissipation during recovery $E_r = V_r \cdot (Q_{rr} - I_{rr} \cdot t_a / 2)$



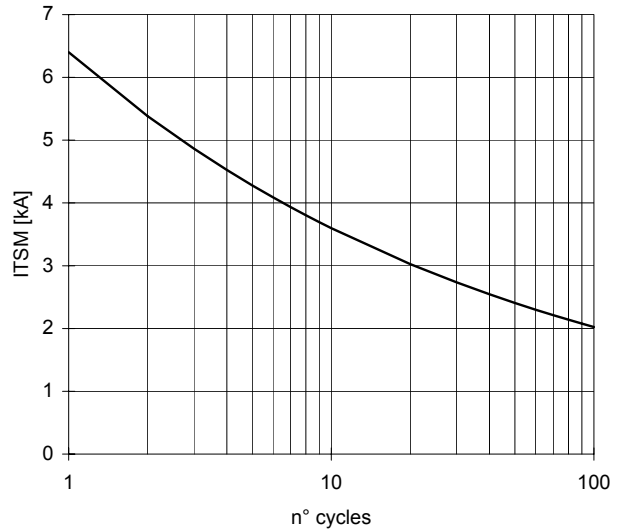
ARF912 FAST RECOVERY DIODE

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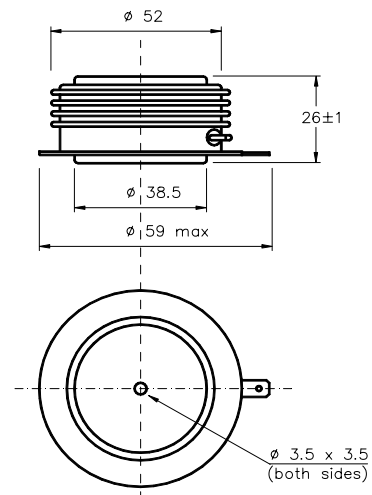
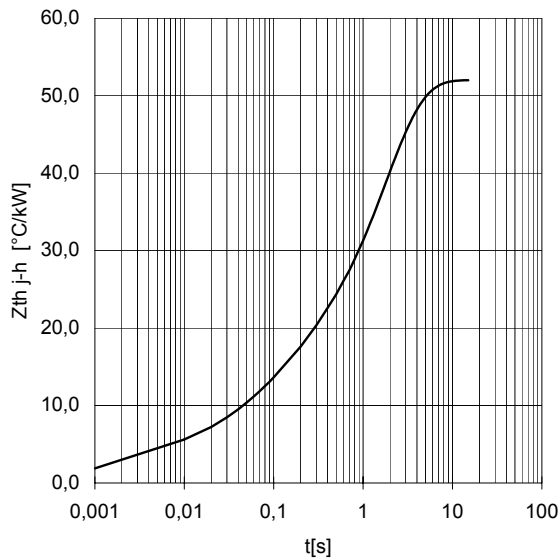
FORWARD CHARACTERISTIC
 $T_j = 150\text{ }^\circ\text{C}$



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 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.

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