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RECTIFIER DIODE

ARF322

Repetitive voltage up to	**1600 V**
Mean forward current	**742 A**
Surge current	**11 kA**

FINAL SPECIFICATION

June 17 - Issue: 6

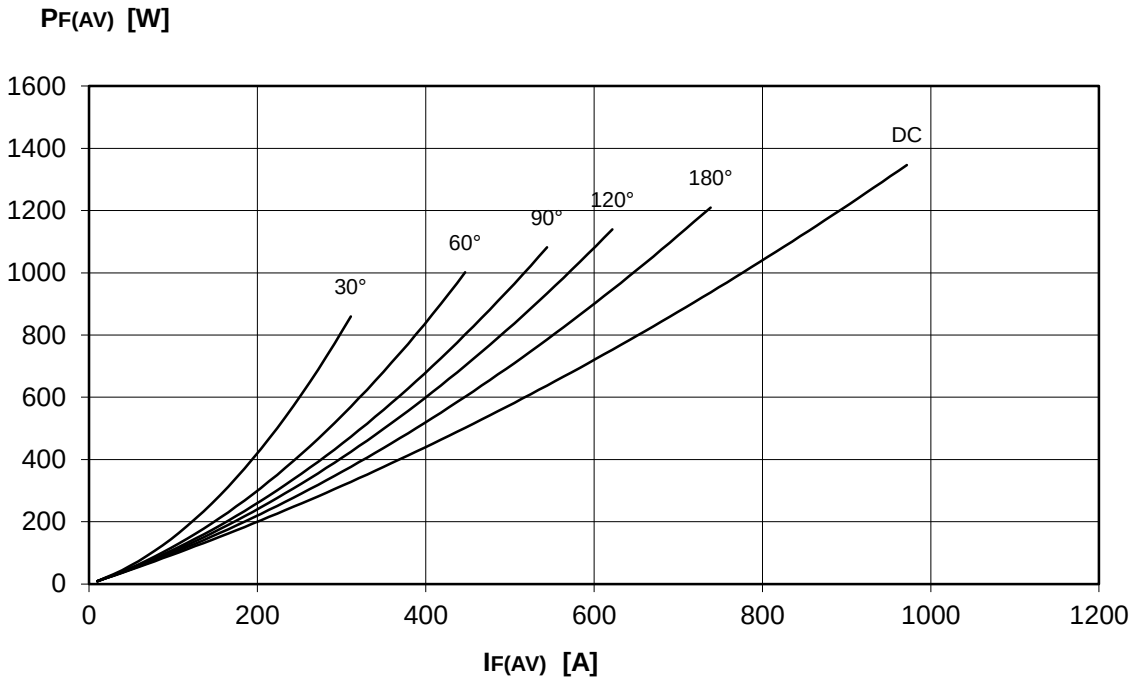
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	1600	V
V_{RSM}	Non-repetitive peak reverse voltage		125	1700	V
I_{RRM}	Repetitive peak reverse current	V=VRRM	125	50	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin, 50 Hz, Th=55°C, double side cooled		742	A
$I_{F(AV)}$	Mean forward current	180°square, 50 Hz, Th=55°C, double side cooled		744	A
I_{FSM}	Surge forward current	Sine wave, 10 ms riappled reverse voltage up to 50% VRSM	125	11	kA
I^2t	I^2t			605 x 10^3	A^2s
V_{FM}	Forward voltage	Forward current = 1200 A	25	1,65	V
$V_{F(TO)}$	Threshold voltage		125	0,90	V
r_F	Forward slope resistance		125	0,500	mohm
SWITCHING					
t_{rr}	Reverse recovery time	IF= 1000A	125	2	µs
Q_{rr}	Reverse recovery charge	di/dt= 60 A/µs		60	µC
I_{rr}	Peak reverse recovery current	VR= 50V		70	A
s	Softness (s-factor), min			0,5	
V_{FR}	Peak forward recovery	di/dt = 100 A/µs	125	4	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 / 125	°C
F	Mounting force			8.4 / 9.4	kN
	Mass			280	g

ORDERING INFORMATION : ARF322 S 16

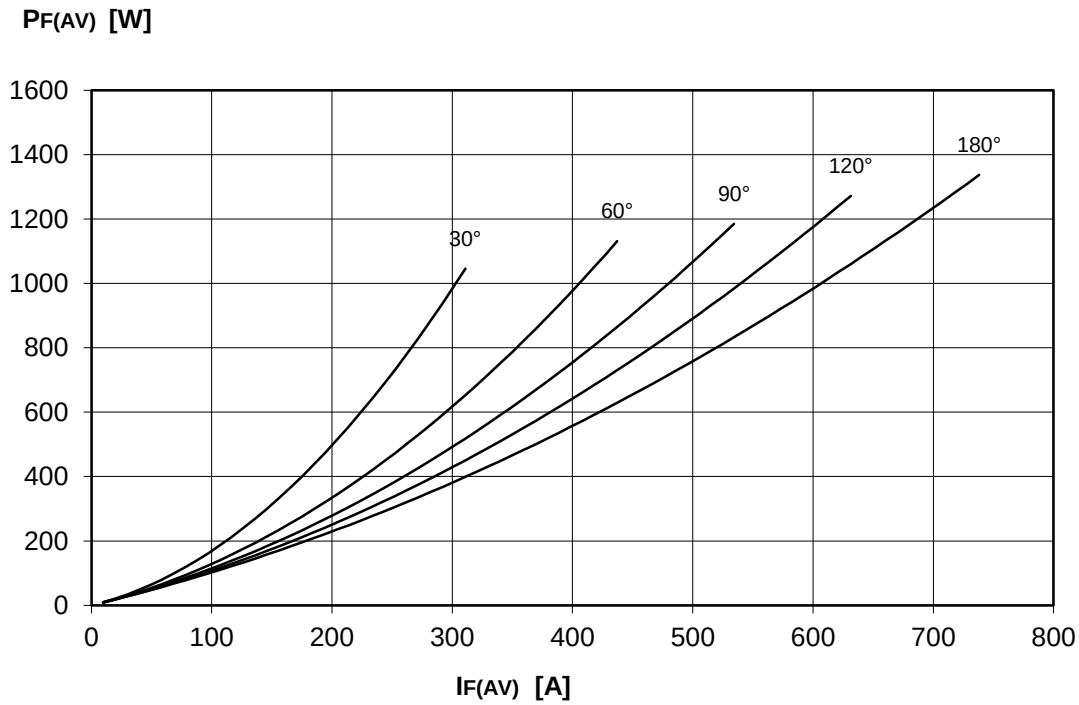
standard specification — VRRM/100

DISSIPATION CHARACTERISTICS

SQUARE WAVE (50Hz)



SINE WAVE (50Hz)



ARF322 RECTIFIER DIODE

POSEICO POWER ELECTRONICS

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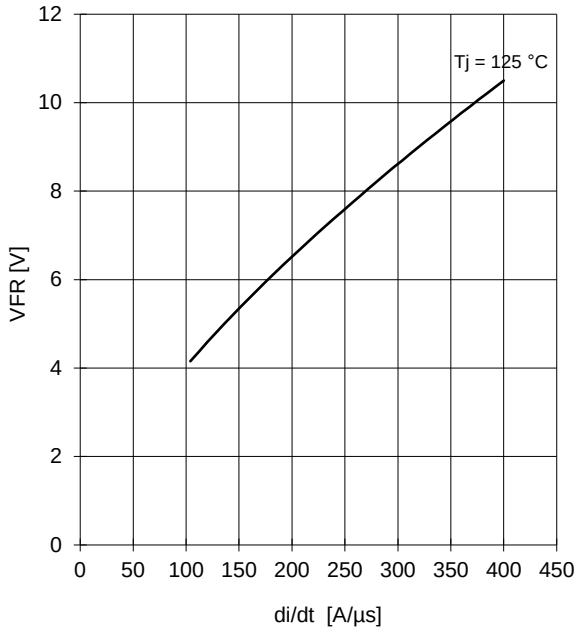
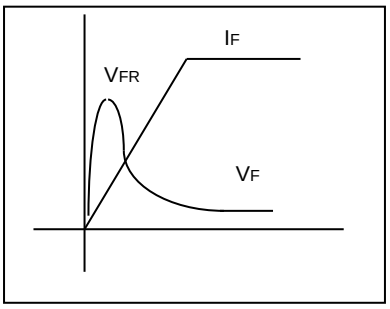
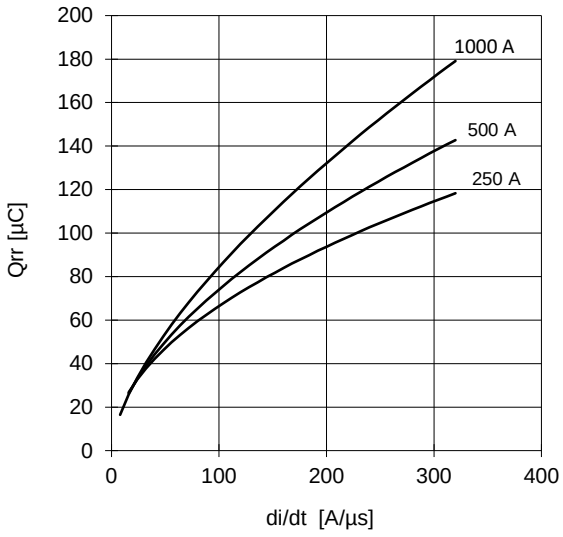
FORWARD RECOVERY VOLTAGE

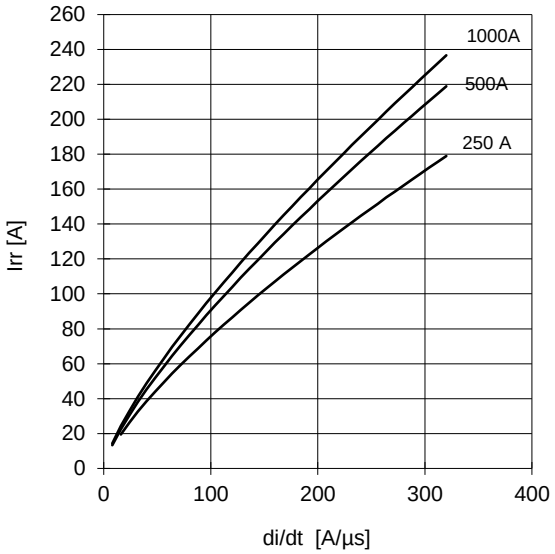




REVERSE RECOVERY CHARGE
Tj = 125 °C



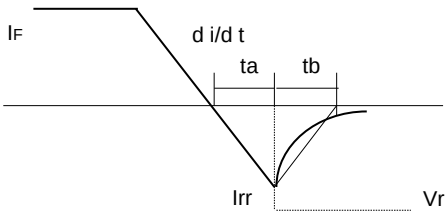
REVERSE RECOVERY CURRENT
Tj = 125 °C



ta = Irr / (di/dt) tb = trr - ta

Softness (s factor) s = tb / ta

Energy dissipation during recovery Er = Vr ·(Qrr - Irr ·ta / 2)



ARF322 RECTIFIER DIODE

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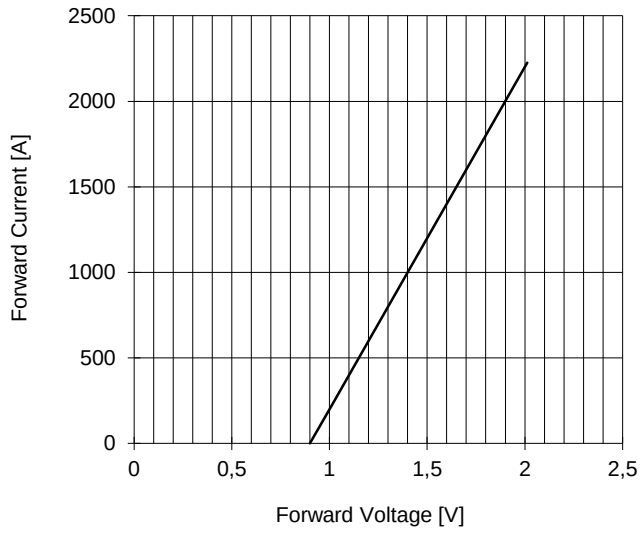
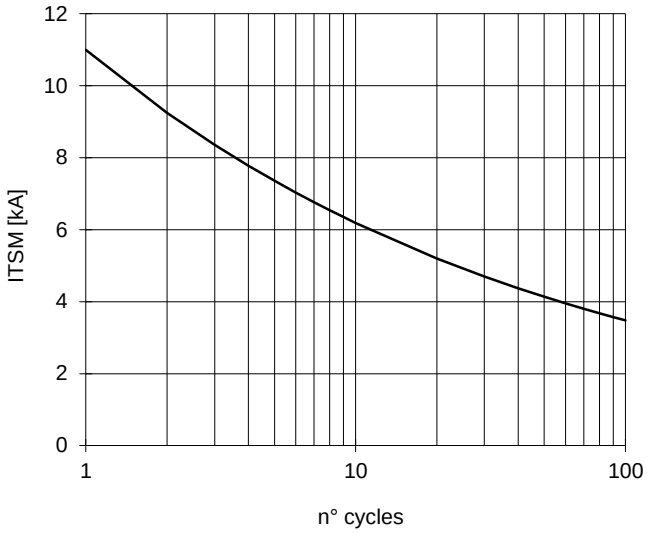
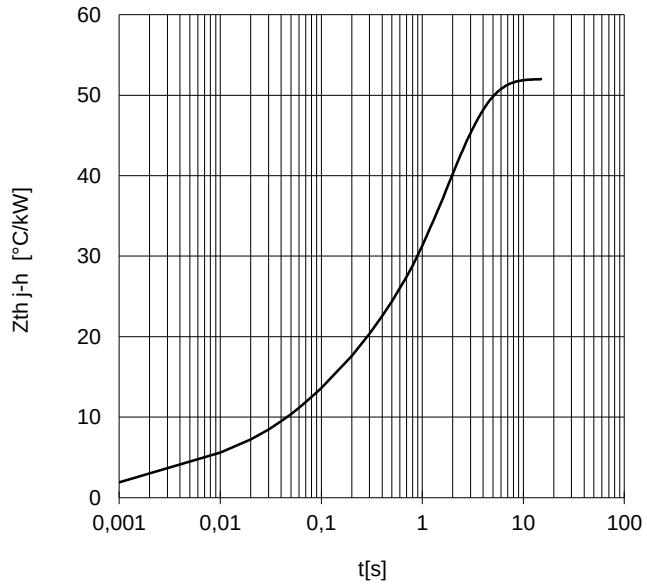
FORWARD CHARACTERISTIC
Tj = 125 °C

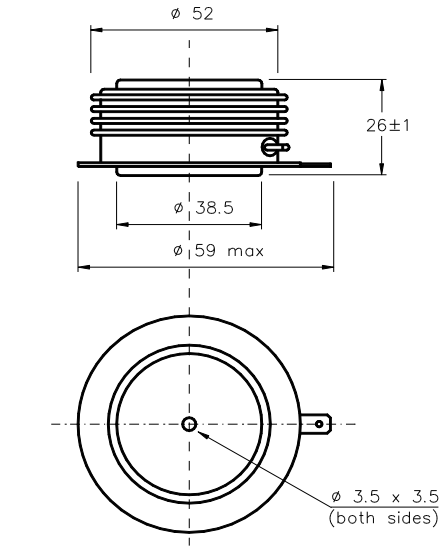


SURGE CHARACTERISTIC
Tj = 125 °C



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 (simbols over shaded background) and characteristics is reported.

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