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## RECTIFIER DIODE

# AR3004

Repetitive voltage up to **2600 V**  
Mean forward current **3345 A**  
Surge current **35.3 kA**

### FINAL SPECIFICATION

nov 02 - ISSUE : 06

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		175	2600	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		175	2700	V
I <sub>RRM</sub>	Repetitive peak reverse current	V=VRRM	175	75	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		3345	A
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		3450	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms without reverse voltage	175	35.3	kA
I <sup>2</sup> t	I <sup>2</sup> t			6230 x 1E3	A <sup>2</sup> s
V <sub>FM</sub>	Forward voltage	Forward current = 2900 A	25	1.20	V
V <sub>F(TO)</sub>	Threshold voltage		175	0.80	V
r <sub>F</sub>	Forward slope resistance		175	0.110	mohm
<b>SWITCHING</b>					
t <sub>rr</sub>	Reverse recovery time				μs
Q <sub>rr</sub>	Reverse recovery charge		175		μC
I <sub>rr</sub>	Peak reverse recovery current				A
<b>MOUNTING</b>					
R <sub>th(j-h)</sub>	Thermal impedance, DC	Junction to heatsink, double side cooled		21	°C/kW
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		6	°C/kW
T <sub>j</sub>	Operating junction temperature			-30 / 175	°C
F	Mounting force			22.0 / 24.5	kN
	Mass			520	g

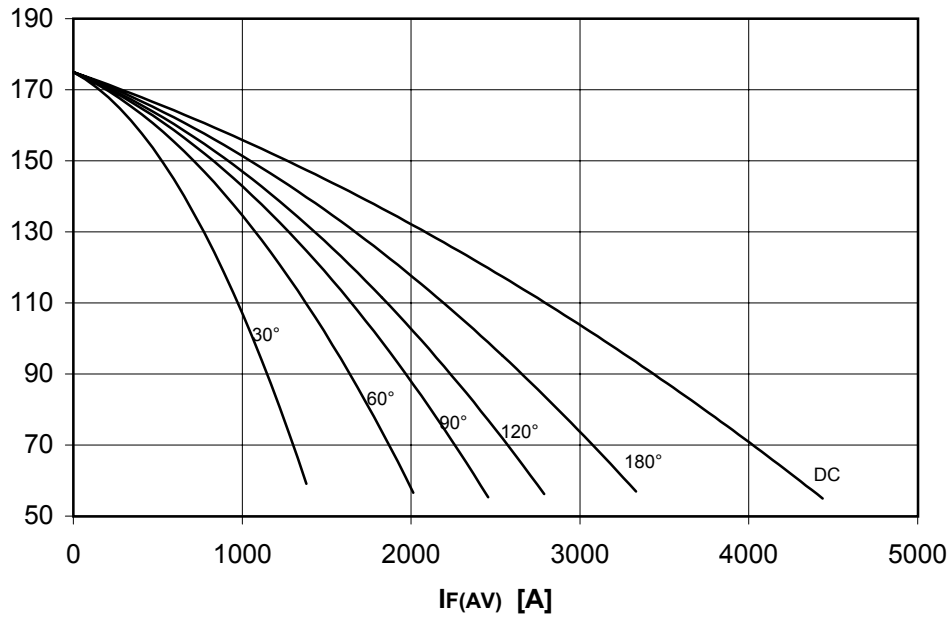
### ORDERING INFORMATION : AR3004 S 26

standard specification   VRRM/100

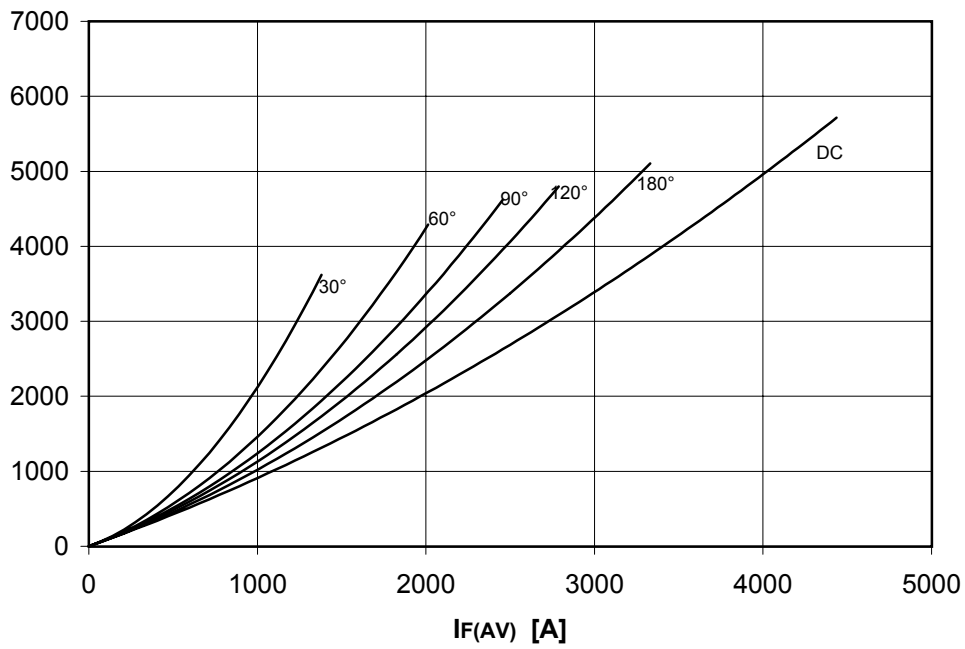
## DISSIPATION CHARACTERISTICS

SQUARE WAVE

Th [°C]



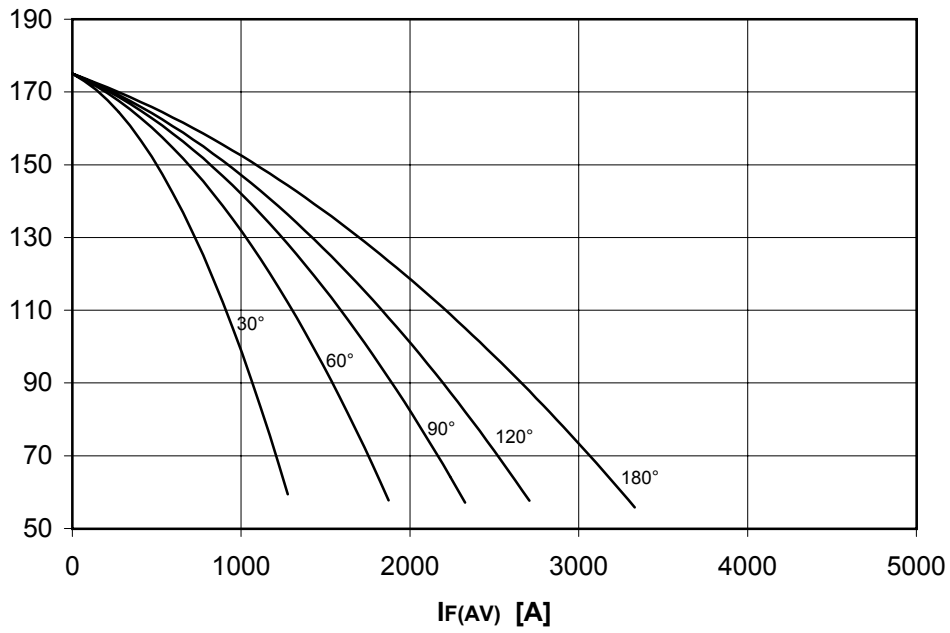
PF(AV) [W]



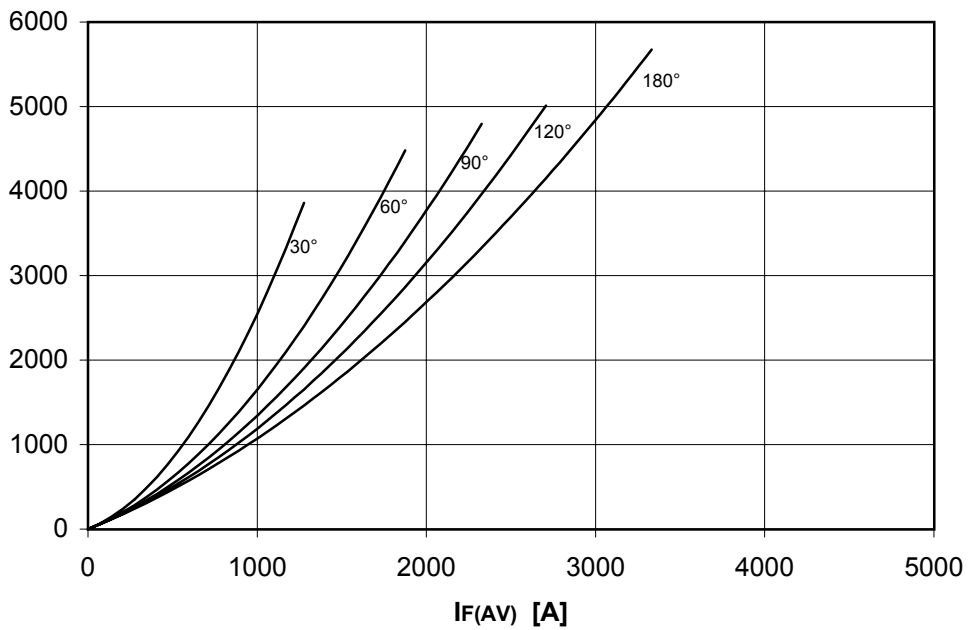
## DISSIPATION CHARACTERISTICS

SINE WAVE

Th [°C]



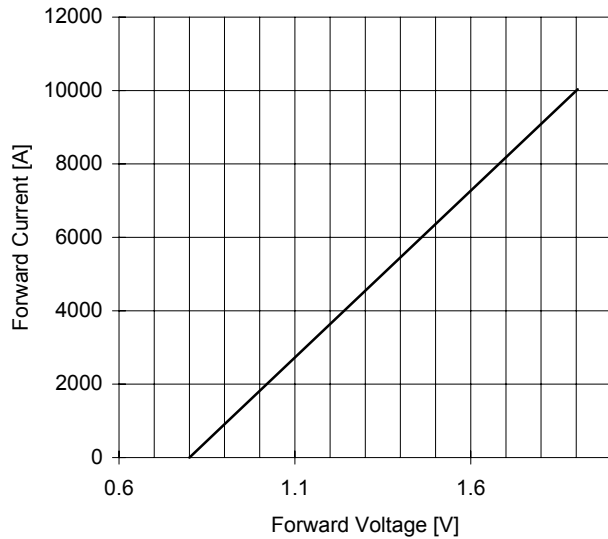
PF(AV) [W]



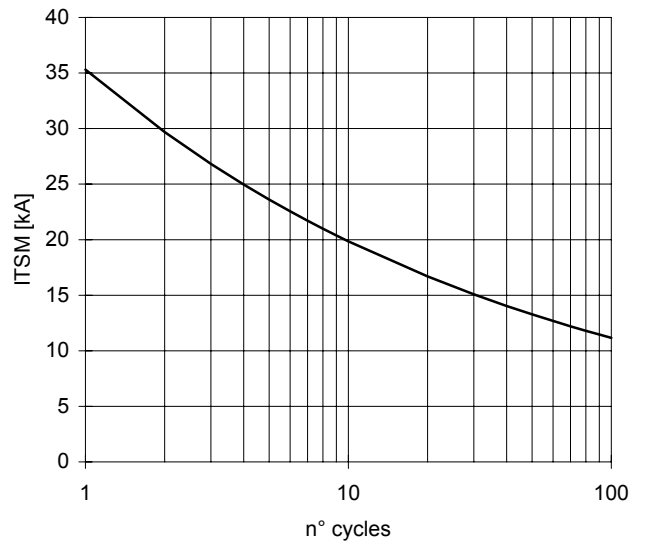
# AR3004 RECTIFIER DIODE

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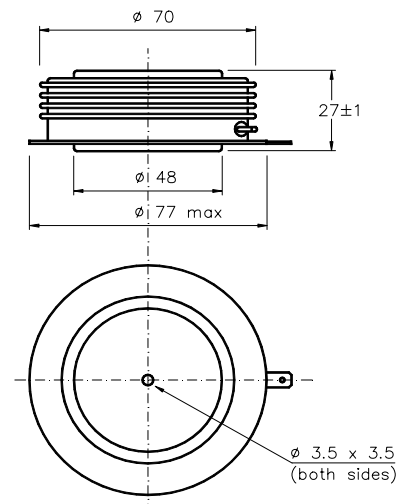
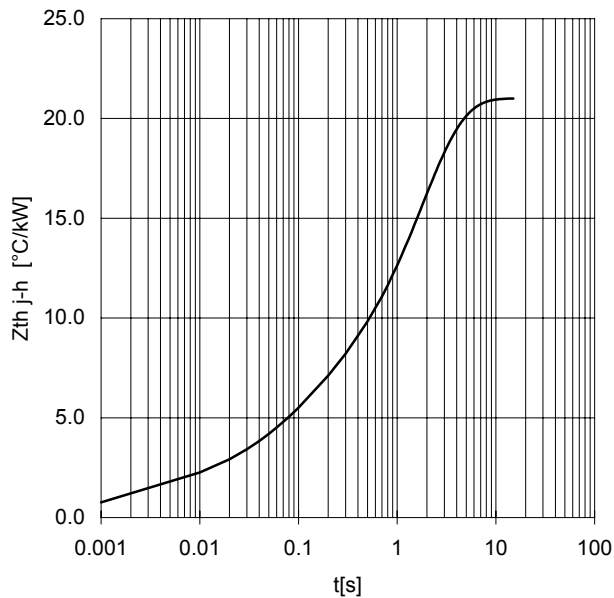
FORWARD CHARACTERISTIC  
 $T_j = 175\text{ }^\circ\text{C}$



SURGE CHARACTERISTIC  
 $T_j = 175\text{ }^\circ\text{C}$



TRANSIENT THERMAL IMPEDANCE  
DOUBLE SIDE COOLED



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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