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POwer SEMiconductors Italian COrporation

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RECTIFIER DIODE

AR3004

Repetitive voltage up to **2600 V**

Mean forward current **3345 A**

Surge current **35.3 kA**

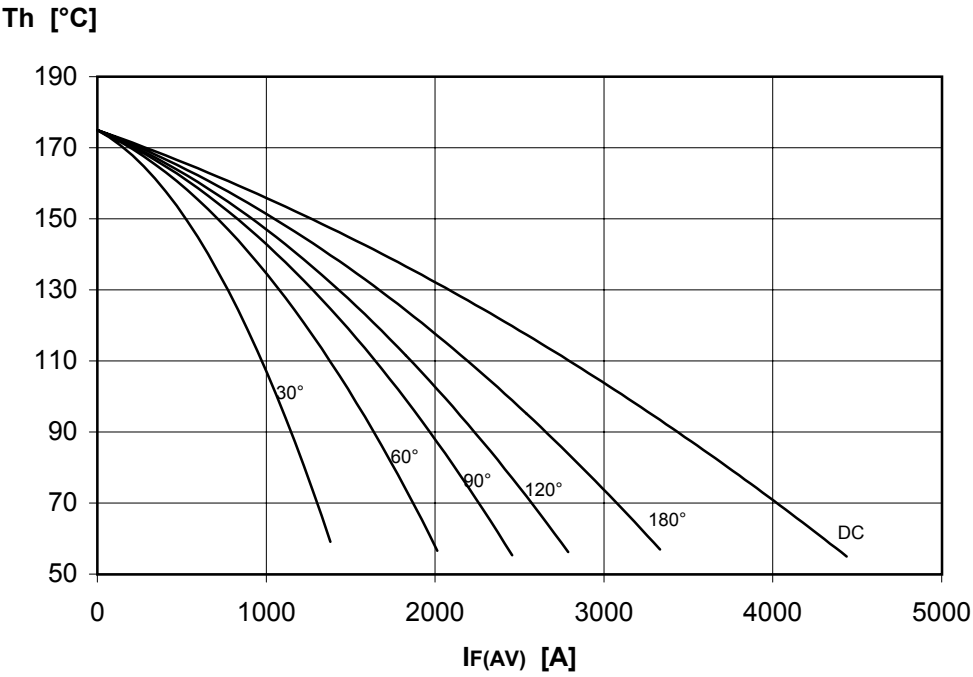
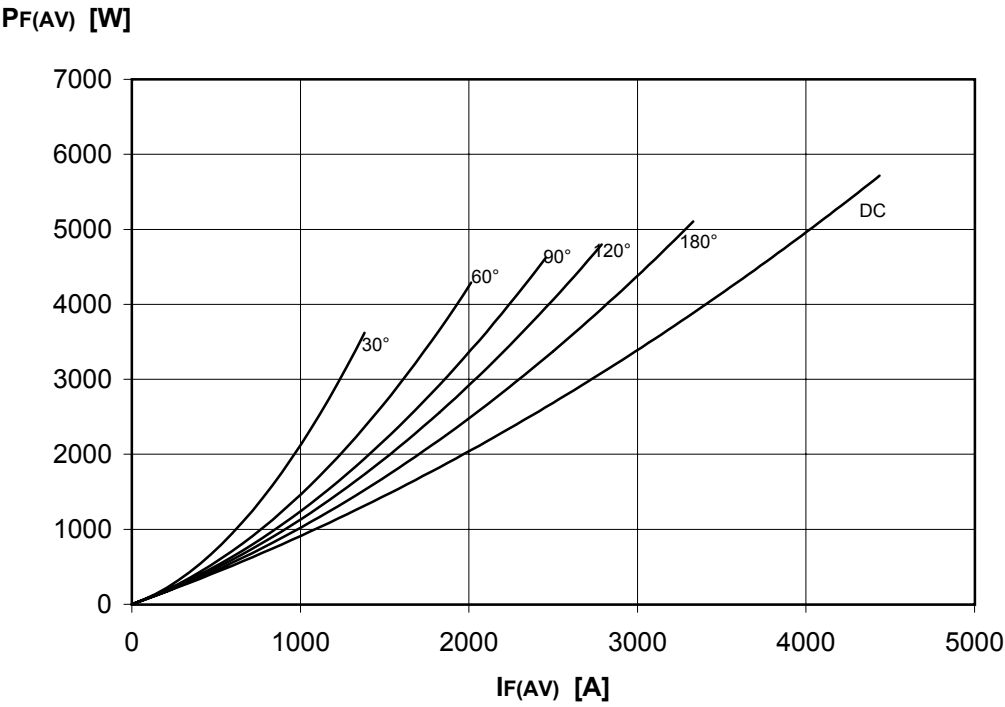
FINAL SPECIFICATION

nov 02 - ISSUE : 06

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

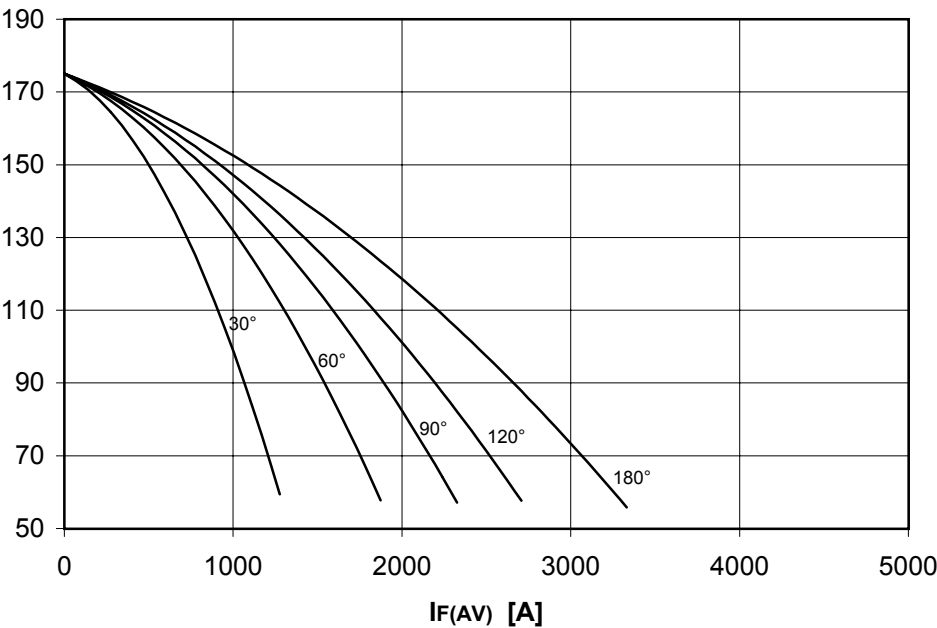
SQUARE WAVE



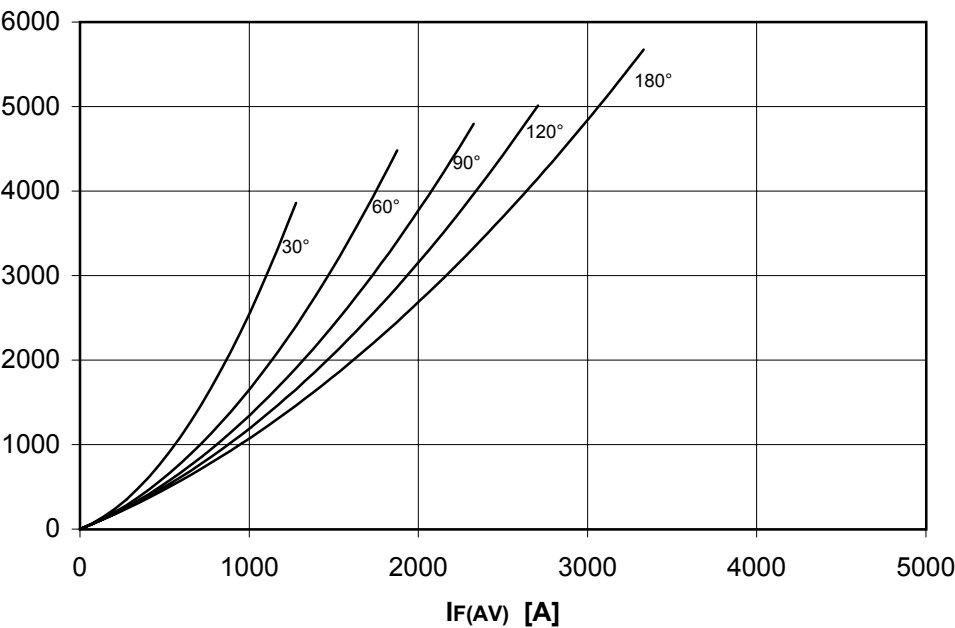
DISSIPATION CHARACTERISTICS

SINE WAVE

Th [°C]



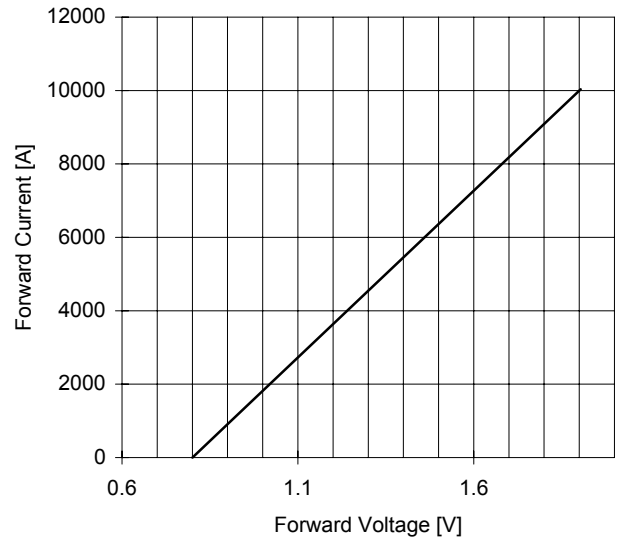
PF(AV) [W]



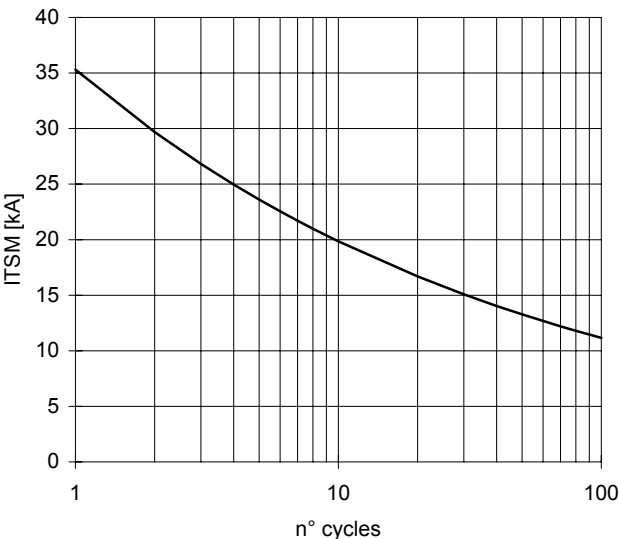
AR3004 RECTIFIER DIODE

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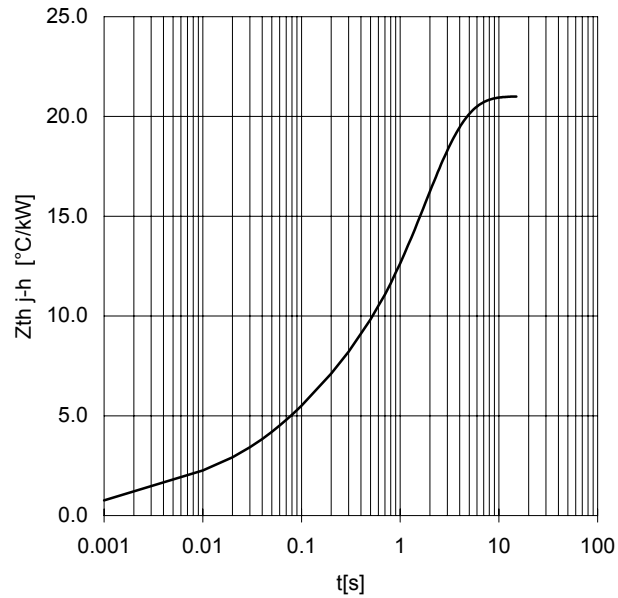
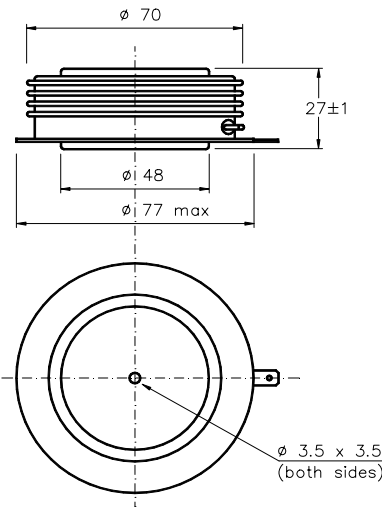
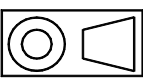
FORWARD CHARACTERISTIC
 $T_J = 175^\circ\text{C}$



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



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 $< .03$ mm and roughness $< 2\ \mu\text{m}$.
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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