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Power SEmiconductors Italian COrporation

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RECTIFIER DIODE

AR3007


Repetitive voltage up to **3000 V**
Mean forward current **2300 A**
Surge current **30.2 kA**

FINAL SPECIFICATION

Iug 02 - ISSUE : 06

Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	3000	V
V _{RSM}	Non-repetitive peak reverse voltage		150	3100	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	75	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		2300	A
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		2120	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	150	30.2	kA
I ² t	I ² t			4560 x 1E3	A ² s
V _{FM}	Forward voltage	Forward current = 4500 A	25	1.43	V
V _{F(TO)}	Threshold voltage		150	0.87	V
r _F	Forward slope resistance		150	0.127	mohm
SWITCHING					
t _{rr}	Reverse recovery time		150		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		26	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		6	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			18.0 / 20.0	kN
	Mass			500	g

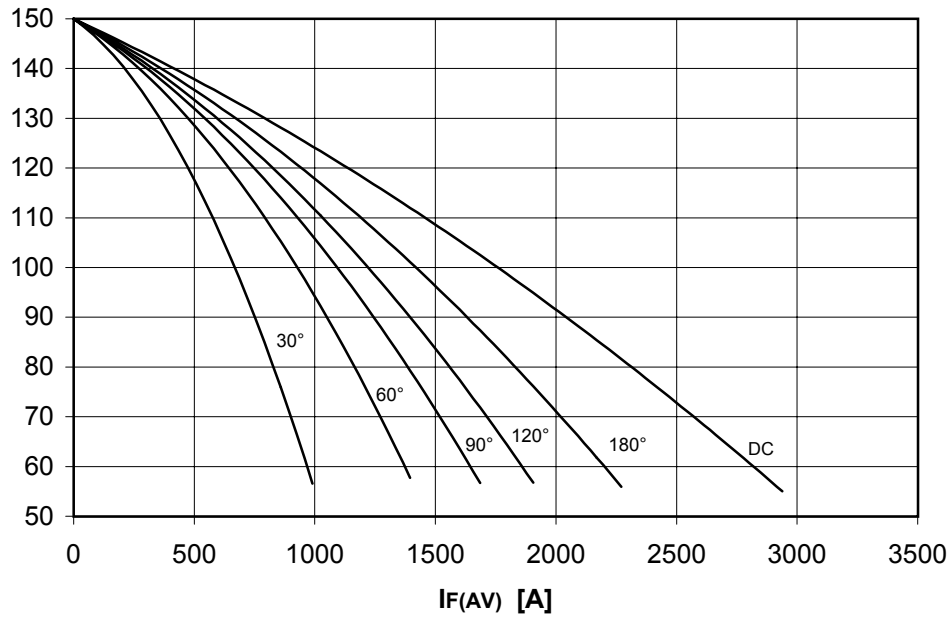
ORDERING INFORMATION : AR3007 S 30

standard specification  VRRM/100

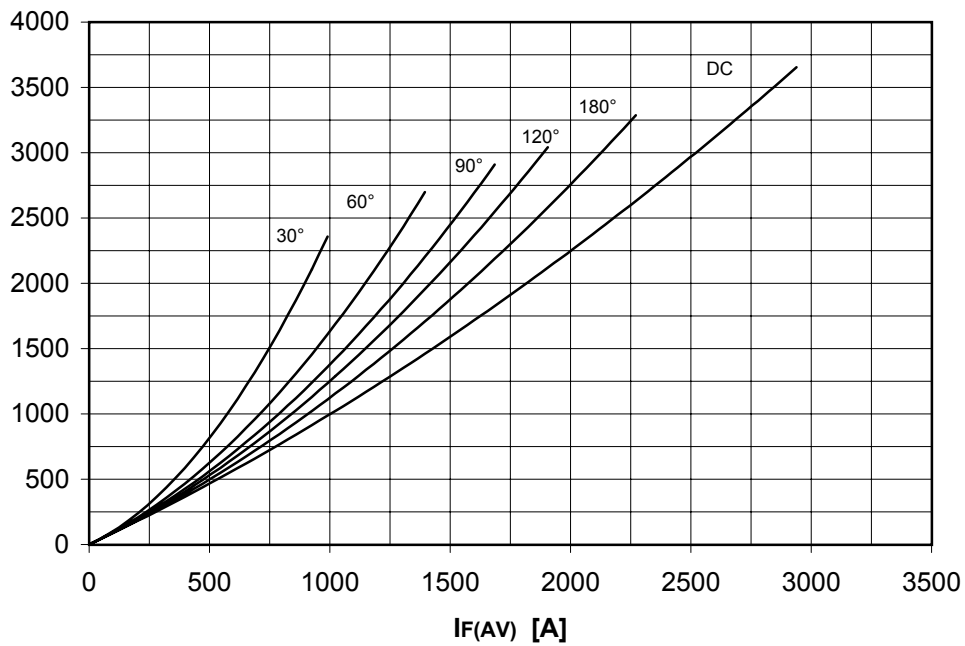
DISSIPATION CHARACTERISTICS

SQUARE WAVE

Th [°C]



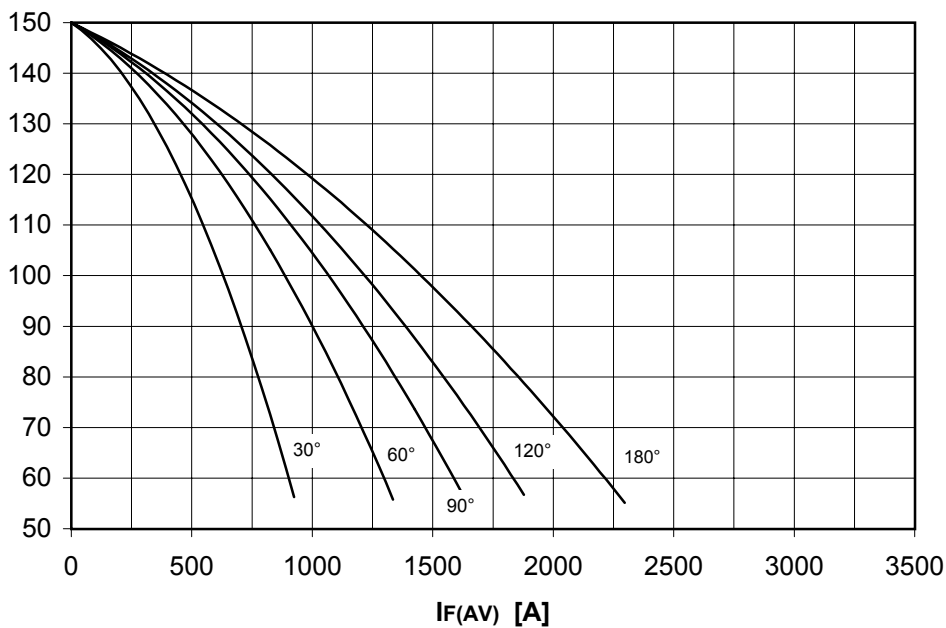
PF(AV) [W]



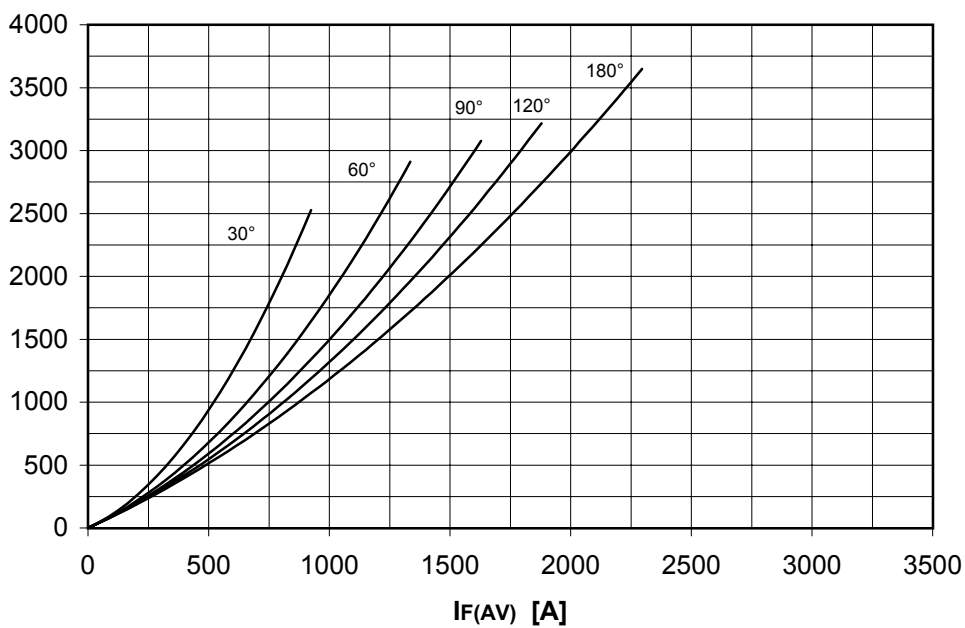
DISSIPATION CHARACTERISTICS

SINE WAVE

Th [°C]



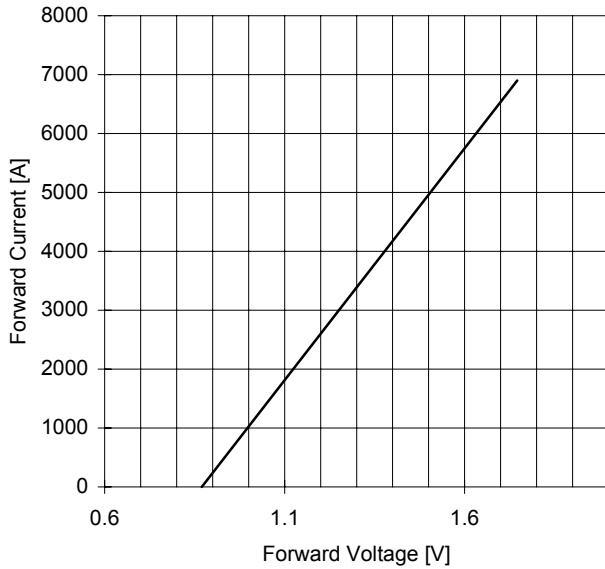
PF(AV) [W]



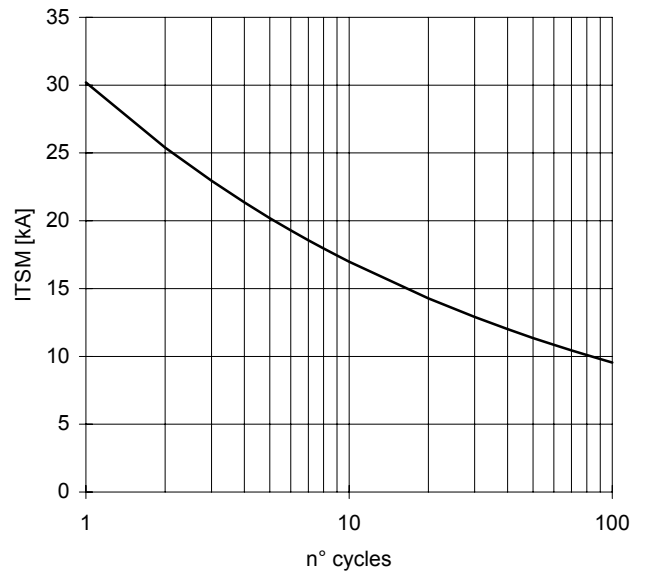
AR3007 RECTIFIER DIODE

FINAL SPECIFICATION lug 02 - ISSUE : 06

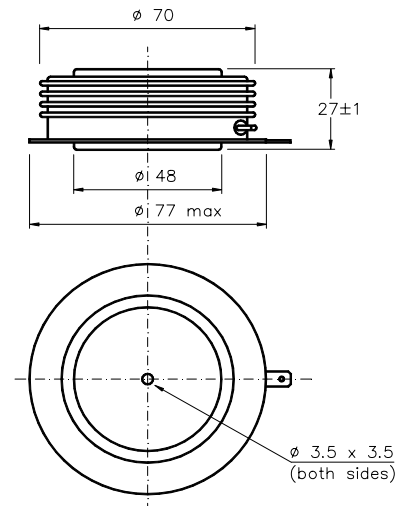
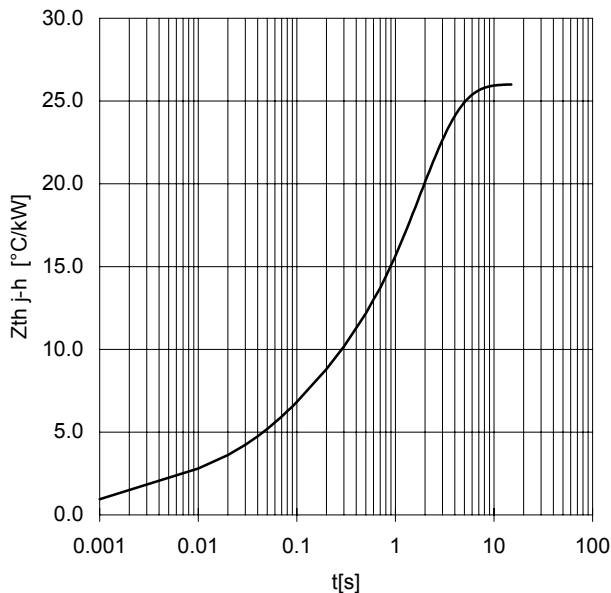
FORWARD CHARACTERISTIC
T_j = 150 °C



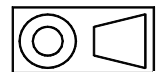
SURGE CHARACTERISTIC
T_j = 150 °C



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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