POSEICO SPA
POWer SEmiconductors Italian COrporation

POSEICO SPA
Via N. Lorenzi 8, 16152 Genova - ITALY
Tel. ++ 39 010 6556234 - Fax ++ 39 010 6557519
Sales Office:
Tel. ++ 39 010 6556775 - Fax ++ 39 010 6442510

RECTIFIER DIODE

AR3001

Repetitive voltage up to **1000 V**
Mean forward current **4655 A**
Surge current **44.8 kA**

FINAL SPECIFICATION
set 02 - ISSUE : 06

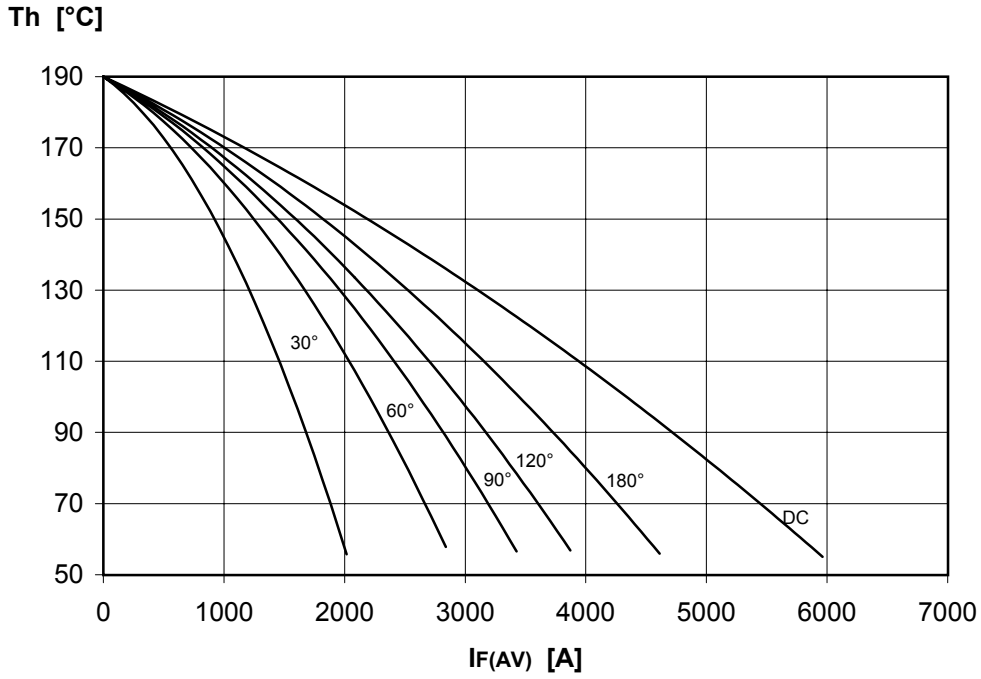
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		190	1000	V
V_{RSM}	Non-repetitive peak reverse voltage		190	1100	V
I_{RRM}	Repetitive peak reverse current	V=VRRM	190	75	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		4655	A
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		4930	A
I_{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	190	44.8	kA
I^2t	I^2t			10035 x 1E3	A^2s
V_{FM}	Forward voltage	Forward current = 4500 A	25	1.16	V
$V_{F(TO)}$	Threshold voltage		190	0.75	V
r_F	Forward slope resistance		190	0.055	mohm
SWITCHING					
t_{rr}	Reverse recovery time		190		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 / 190	°C
F	Mounting force			22.0 / 24.5	kN
	Mass			520	g

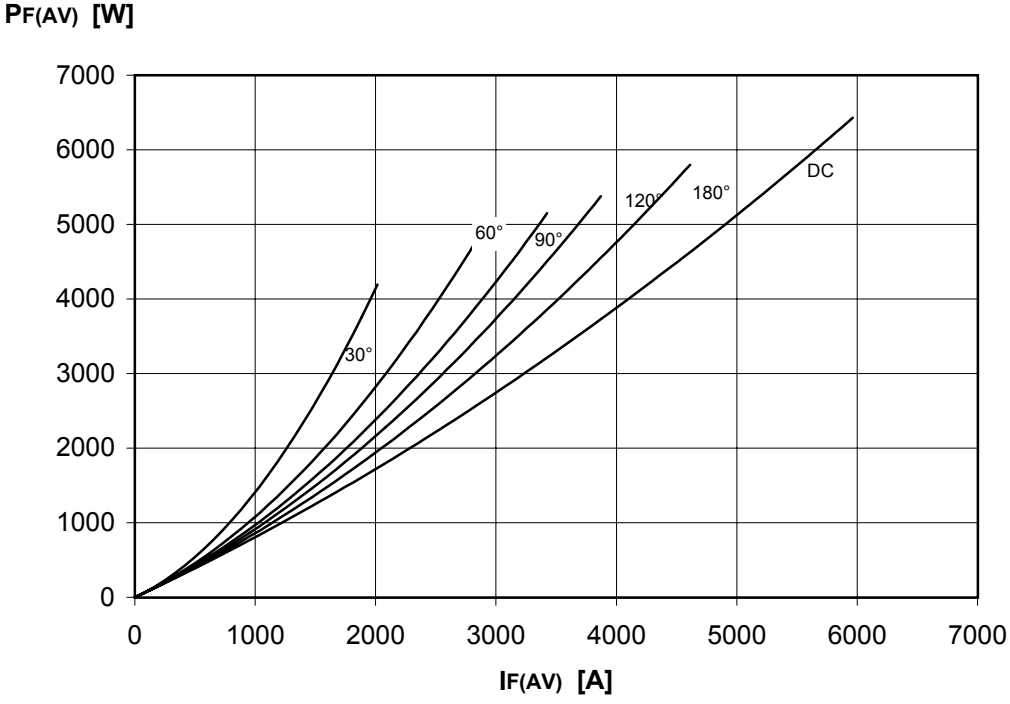
ORDERING INFORMATION : AR3001 S 10

standard specification — VRRM/100

DISSIPATION CHARACTERISTICS

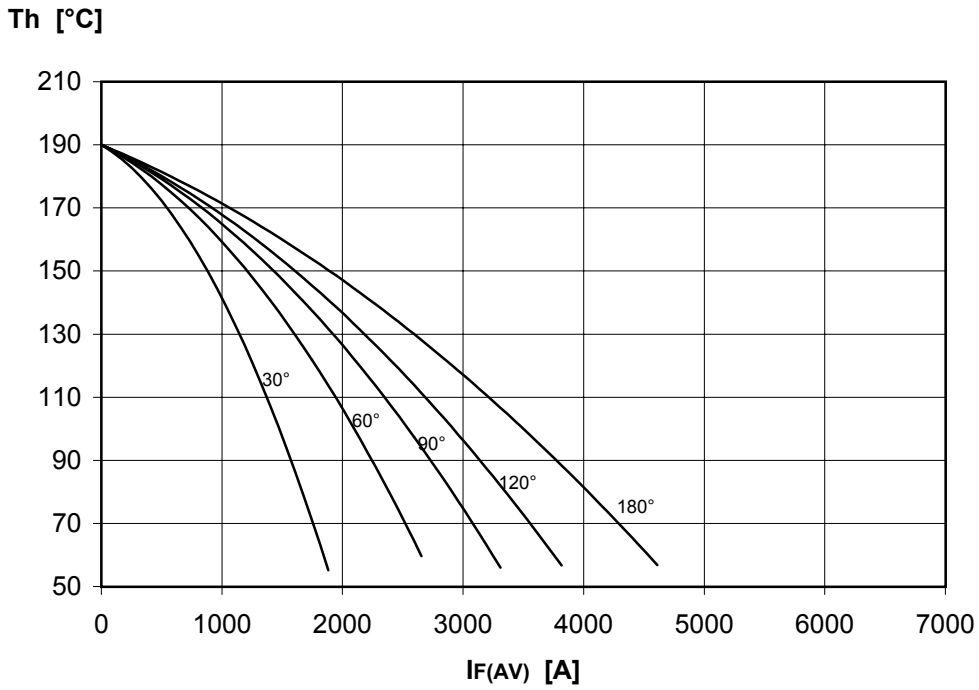
SQUARE WAVE

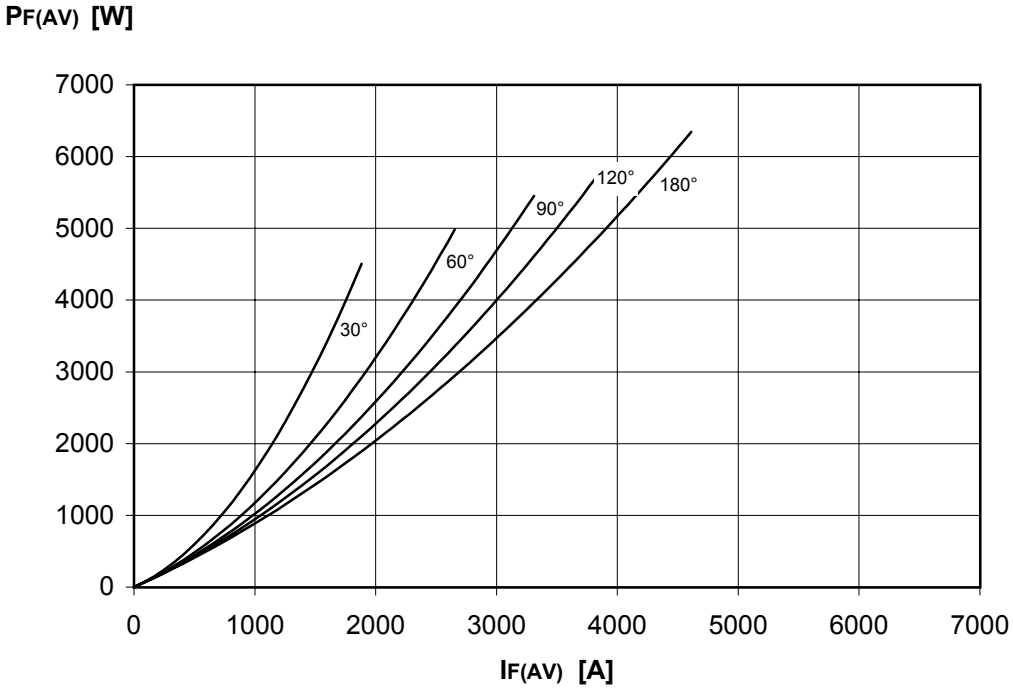




DISSIPATION CHARACTERISTICS

SINE WAVE



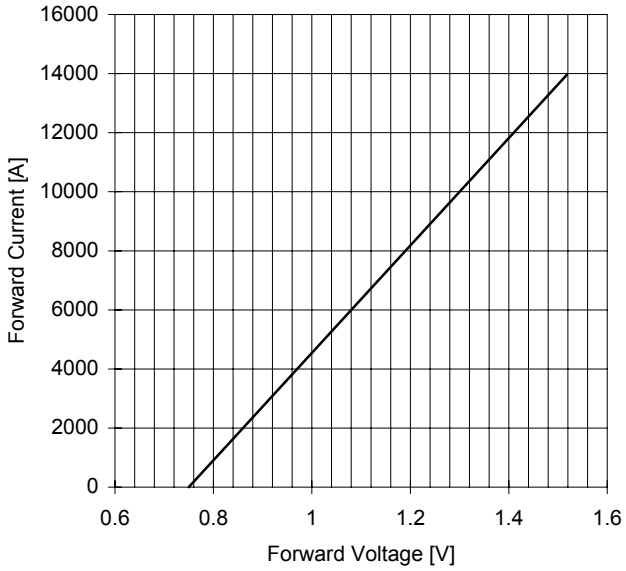


AR3001 RECTIFIER DIODE

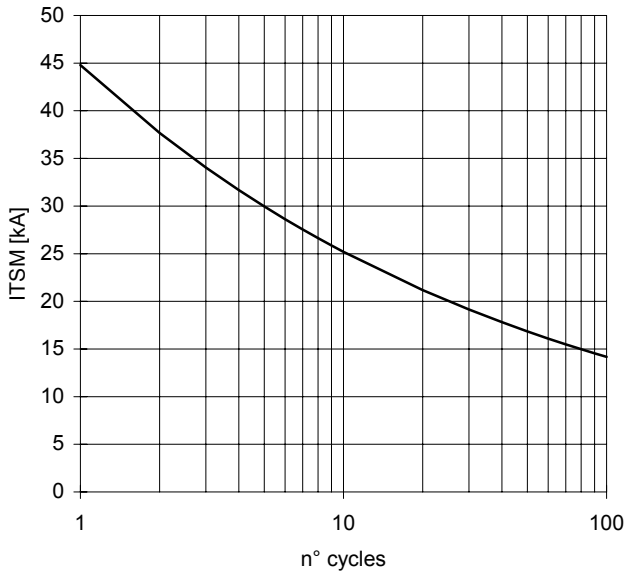
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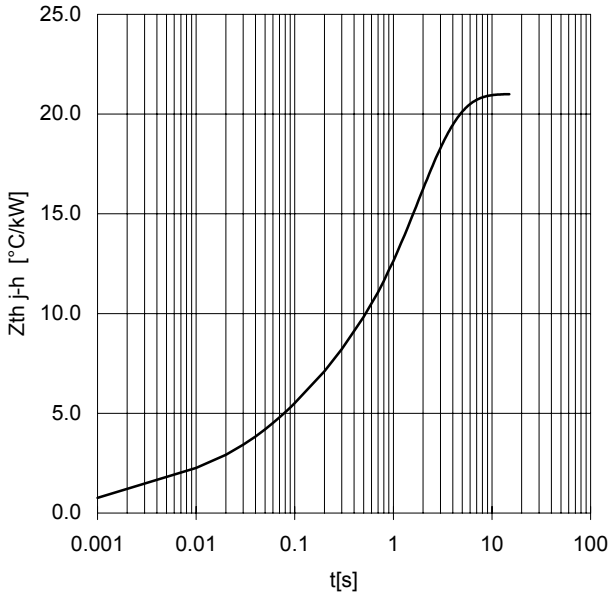
FORWARD CHARACTERISTIC
Tj = 190 °C

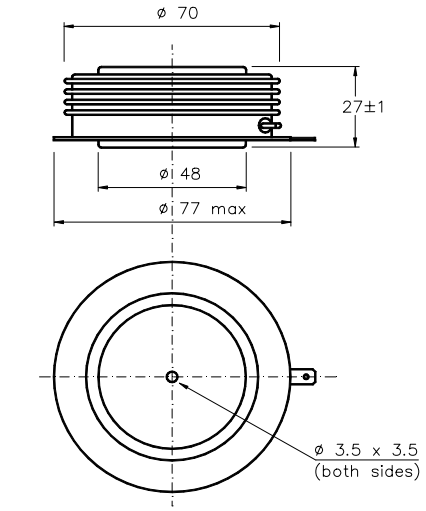


SURGE CHARACTERISTIC
Tj = 190 °C

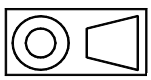


TRANSIENT THERMAL IMPEDANCE
DOUBLE SIDE COOLED





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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