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Power SEmiconductors Italian COrporation

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RECTIFIER DIODE

AR679

Repetitive voltage up to **4500 V**
Mean forward current **3025 A**
Surge current **30 kA**

TARGET SPECIFICATION

nov 02 - ISSUE : 03

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	4500	V
V _{RSM}	Non-repetitive peak reverse voltage		150	4600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	150	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		3025	A
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		2785	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	150	30	kA
I ² t	I ² t			4500 x 1E3	A ² s
V _{FM}	Forward voltage	Forward current = 2000 A	150	1.15	V
V _{F(TO)}	Threshold voltage		150	0.75	V
r _F	Forward slope resistance		150	0.200	mohm
SWITCHING					
t _{rr}	Reverse recovery time				μs
Q _{rr}	Reverse recovery charge		150		μC
I _{rr}	Peak reverse recovery current				A
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		14	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		3	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			35.0 / 40.0	kN
	Mass			850	g

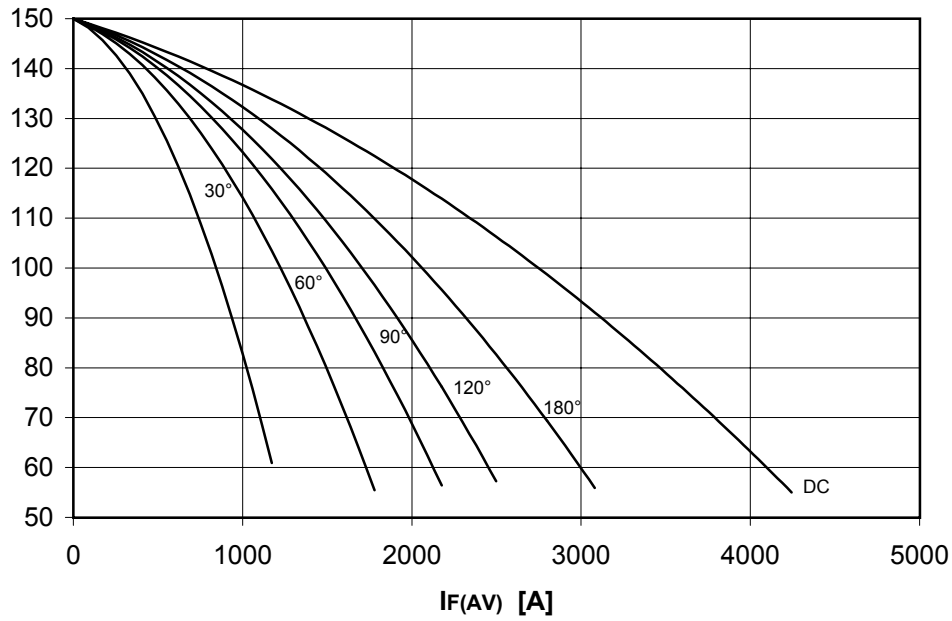
ORDERING INFORMATION : AR679 S 45

standard specification VRRM/100

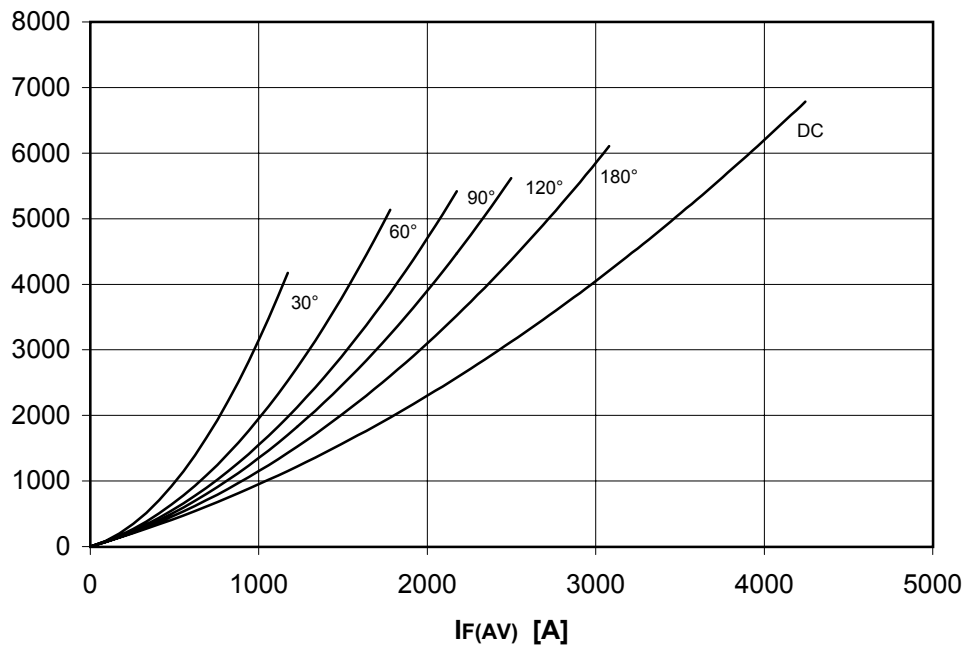
DISSIPATION CHARACTERISTICS

SQUARE WAVE

Th [°C]



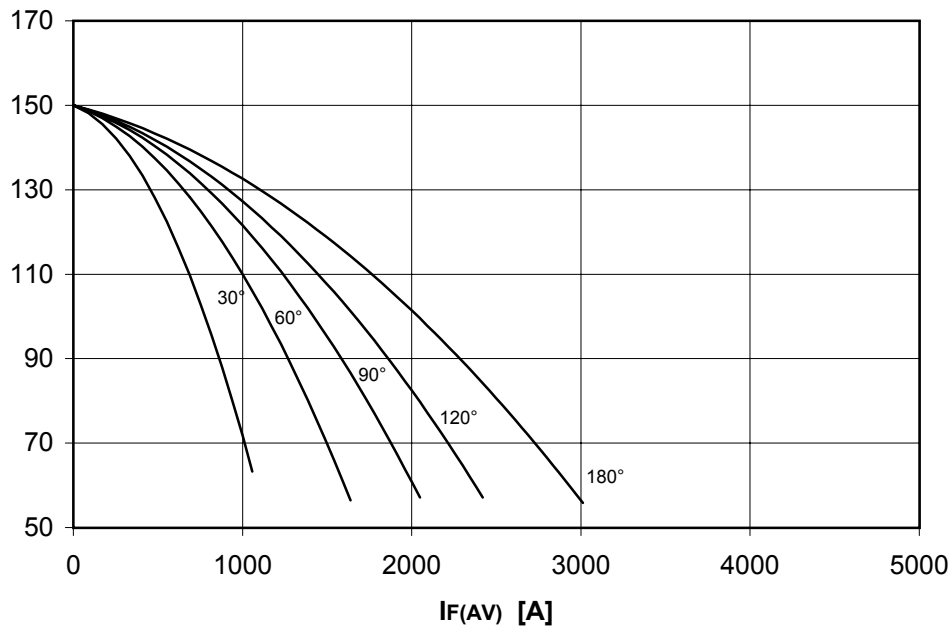
PF(AV) [W]



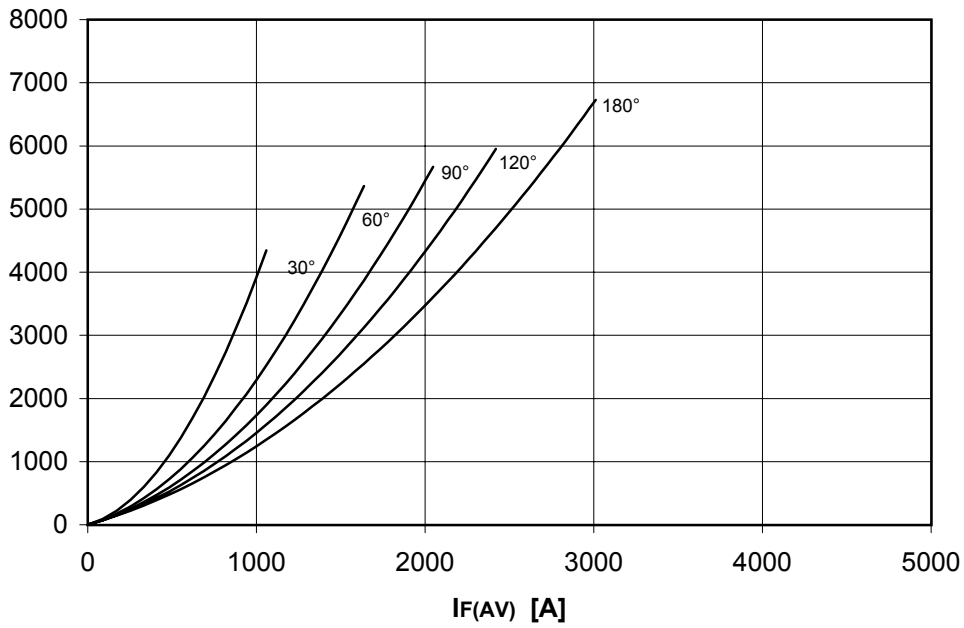
DISSIPATION CHARACTERISTICS

SINE WAVE

Th [°C]



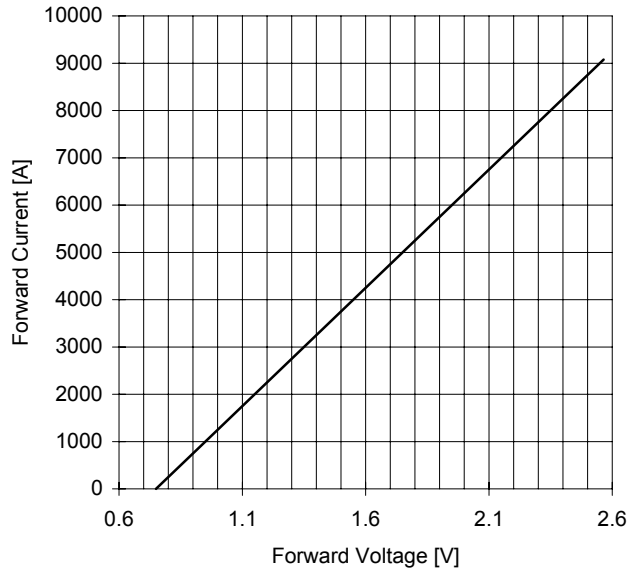
PF(AV) [W]



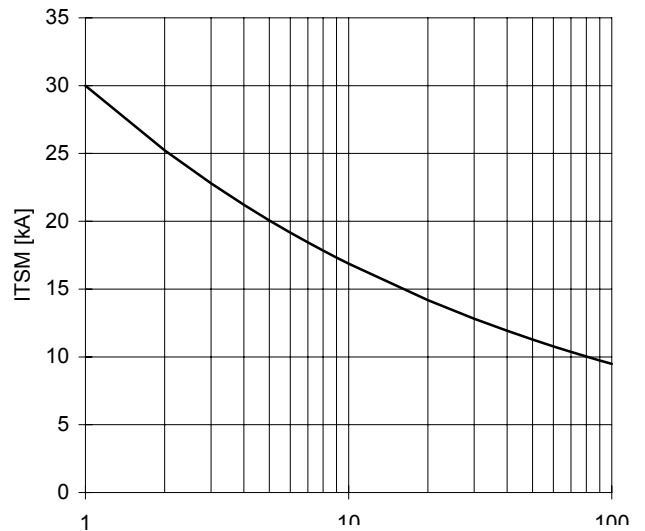
AR679 RECTIFIER DIODE

TARGET SPECIFICATION nov 02 - ISSUE : 03

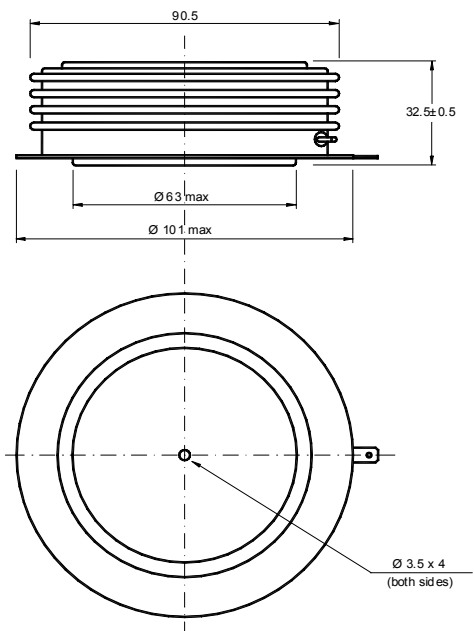
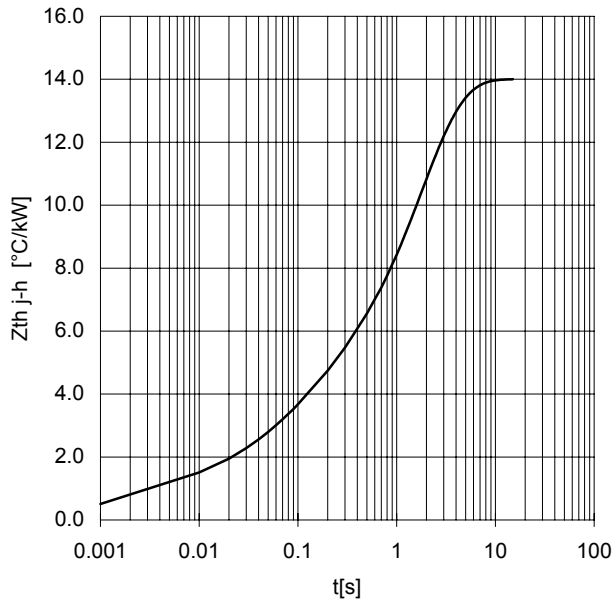
FORWARD CHARACTERISTIC
 $T_j = 150\text{ }^\circ\text{C}$



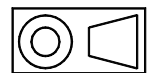
SURGE CHARACTERISTIC
 $T_j = 150\text{ }^\circ\text{C}$



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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