POSEICO
POSEICO SPA
POwer SEmiconductors Italian COrporation

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RECTIFIER DIODE

AR609

Repetitive voltage up to	**600 V**
Mean forward current	**5380 A**
Surge current	**50.4 kA**

FINAL SPECIFICATION

ago 02 - ISSUE : 03

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		190	600	V
V_{RSM}	Non-repetitive peak reverse voltage		190	700	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		5380	A
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		5720	A
I_{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	190	50.4	kA
I^2t	I^2t			12701 x 1E3	A^2s
V_{FM}	Forward voltage	Forward current = 4500 A	25	1.05	V
$V_{F(TO)}$	Threshold voltage		190	0.73	V
r_F	Forward slope resistance		190	0.035	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

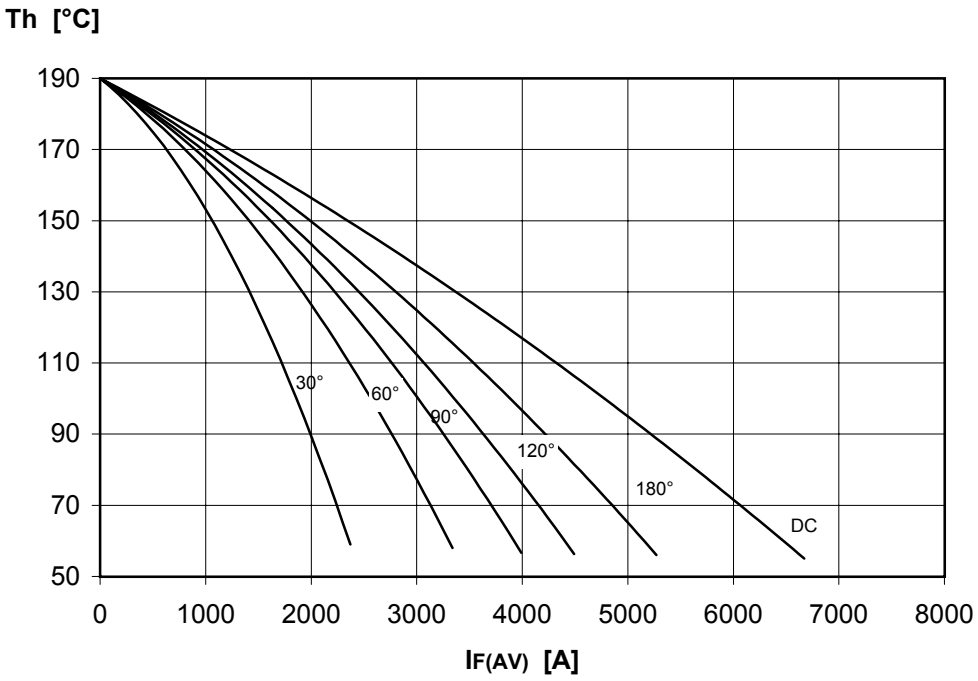
ORDERING INFORMATION : AR609 S 06

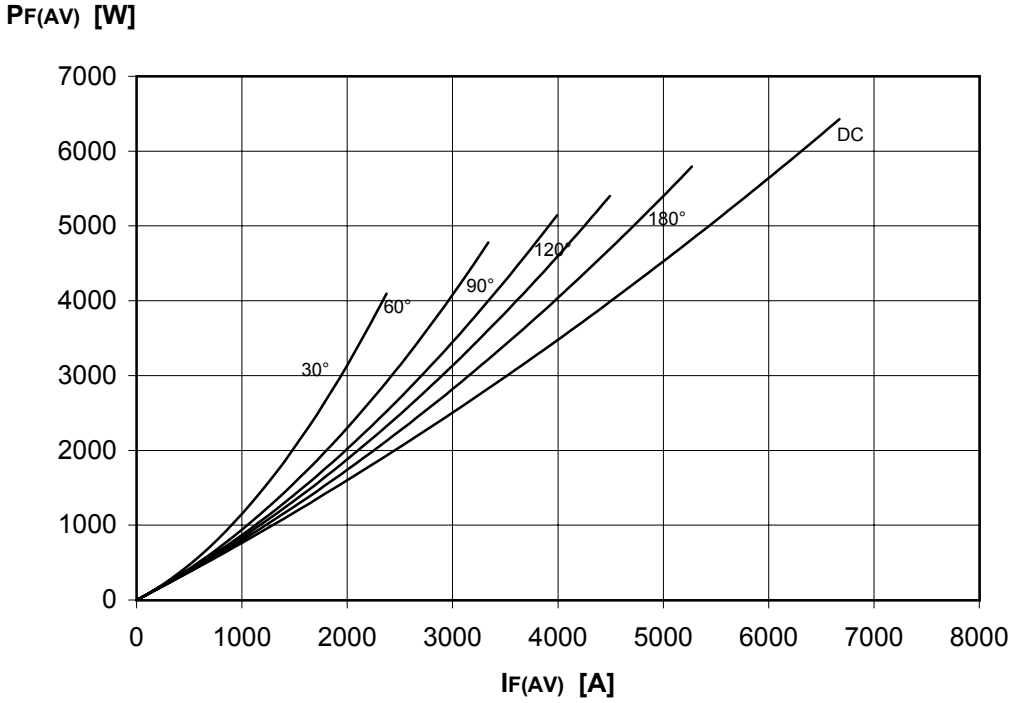
S standard specification

06 VRRM/100

DISSIPATION CHARACTERISTICS

SQUARE WAVE





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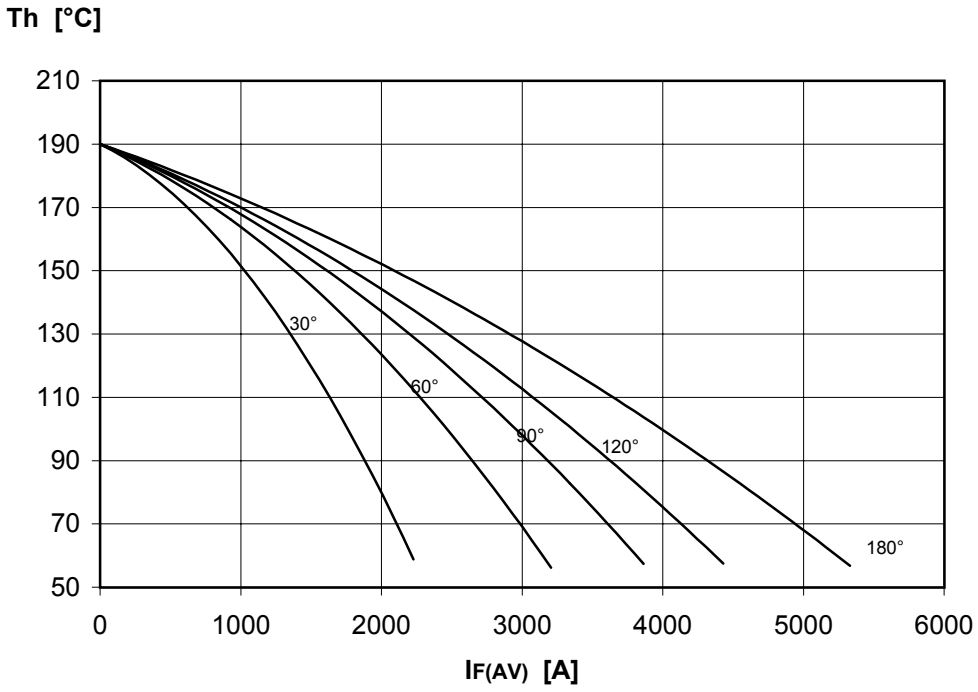
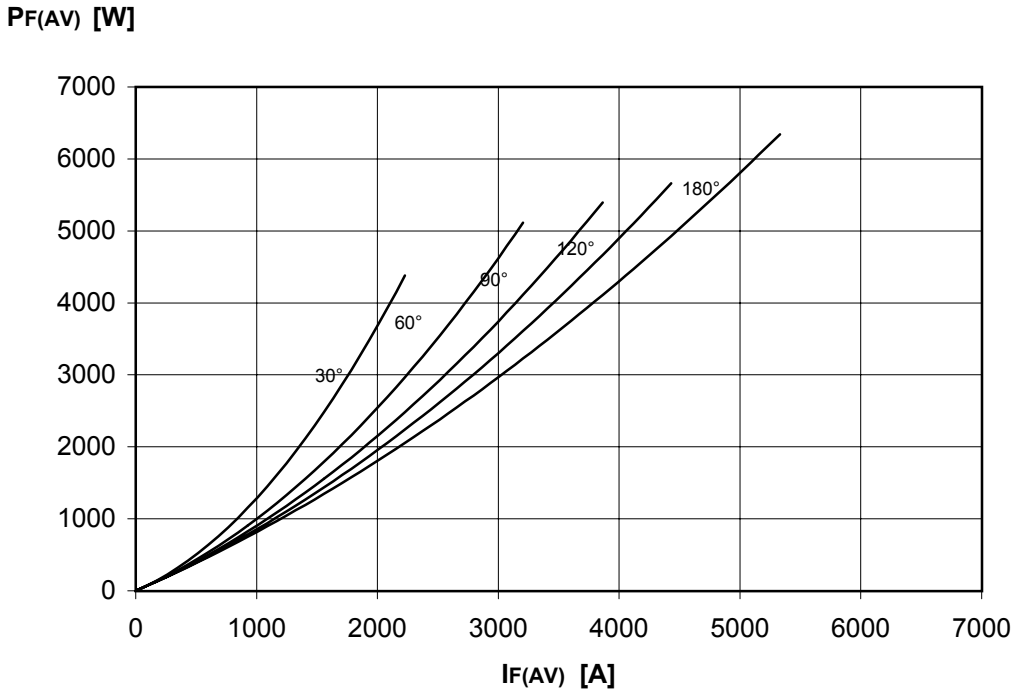
DISSIPATION CHARACTERISTICS

SINE WAVE





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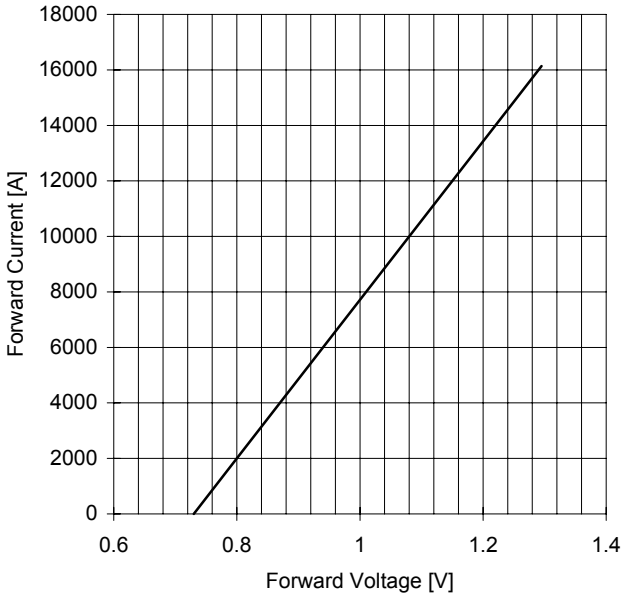
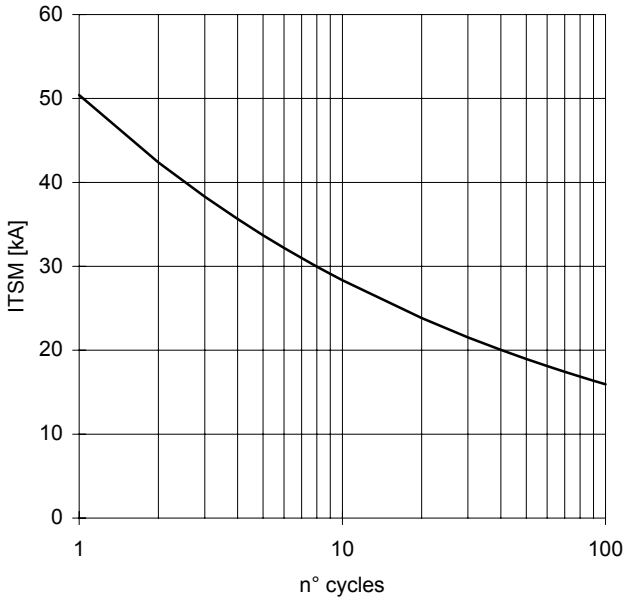
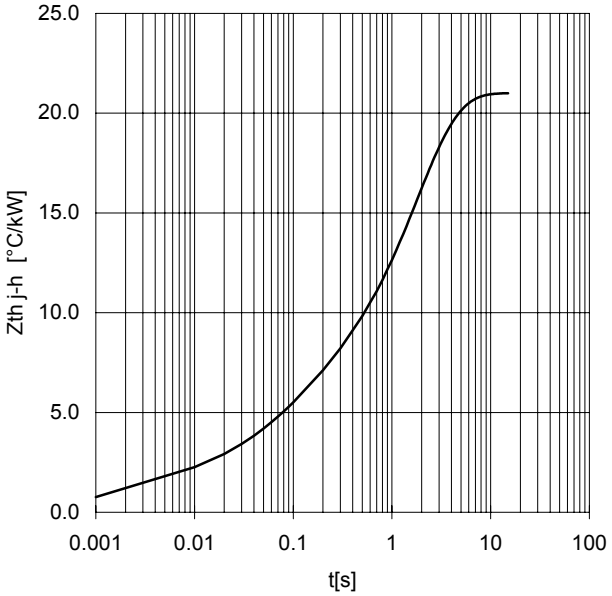
FORWARD CHARACTERISTIC
Tj = 190 °C

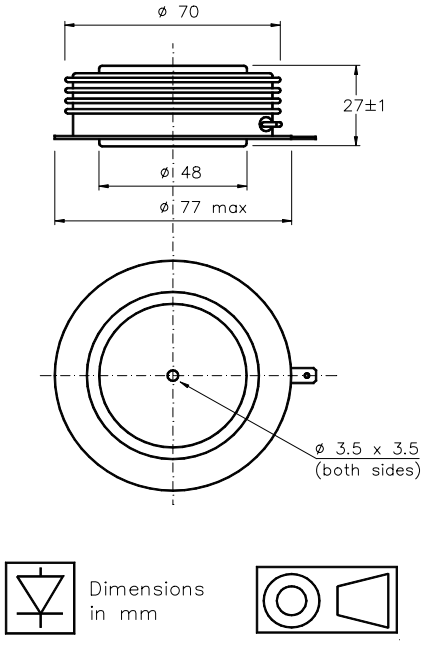


SURGE CHARACTERISTIC
Tj = 190 °C



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 µm.
In the interest of product improvement POSEICO 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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