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

AR772

Repetitive voltage up to **5000 V**
Mean forward current **4175 A**
Surge current **45 kA**

FINAL SPECIFICATION

lug 02 - ISSUE : 1

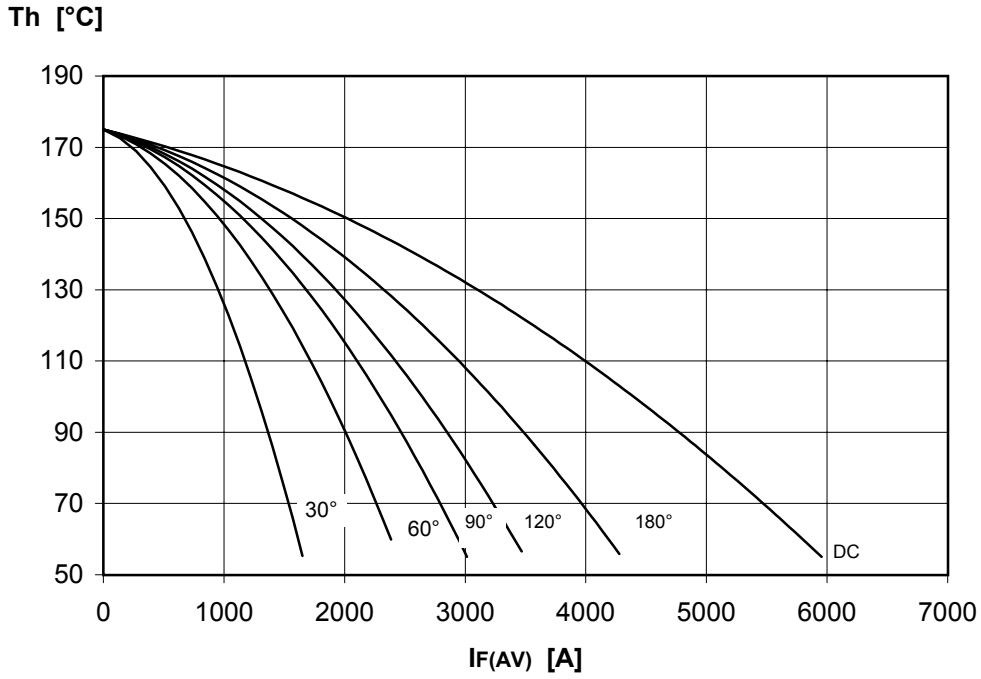
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		175	5000	V
V_{RSM}	Non-repetitive peak reverse voltage		175	5100	V
I_{RRM}	Repetitive peak reverse current	V=VRRM	175	200	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		4175	A
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		3970	A
I_{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	175	45	kA
I^2t	I^2t			10125 x 1E3	A^2s
V_{FM}	Forward voltage	Forward current = 3000 A	25	1.45	V
$V_{F(TO)}$	Threshold voltage		175	0.76	V
r_F	Forward slope resistance		175	0.180	mohm
SWITCHING					
t_{rr}	Reverse recovery time	I= 1600 A di/dt= 2A/µs	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		11	°C/kW
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		2	°C/kW
T_j	Operating junction temperature			-30 / 175	°C
F	Mounting force			46.0 / 54.0	kN
	Mass			1700	g

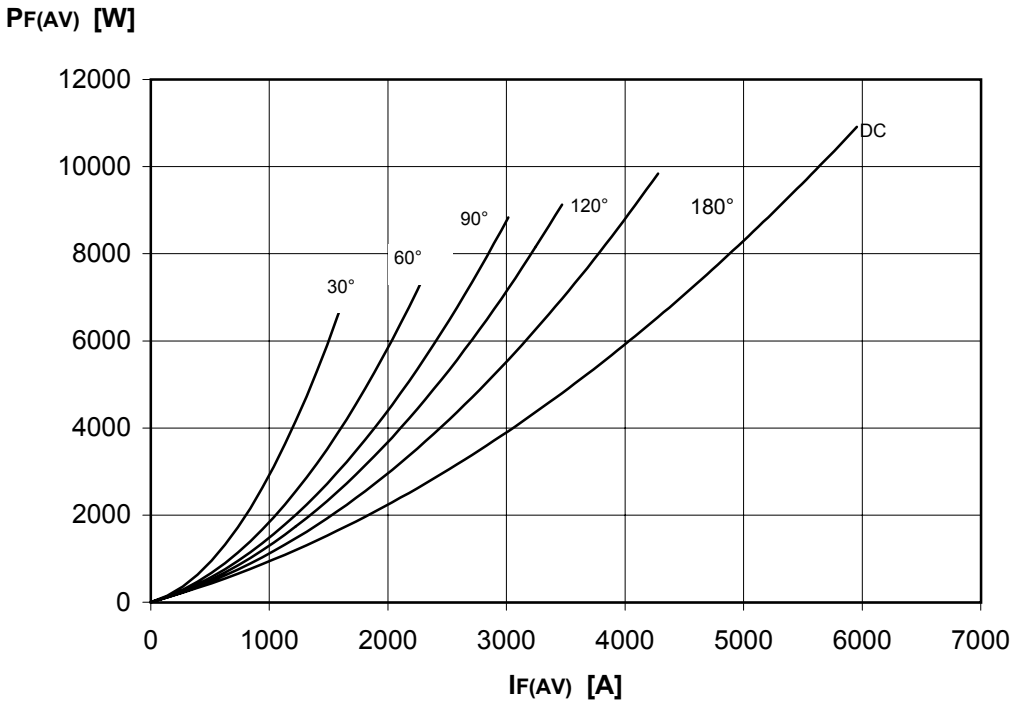
ORDERING INFORMATION : AR772 S 50

standard specification — VRRM/100

DISSIPATION CHARACTERISTICS

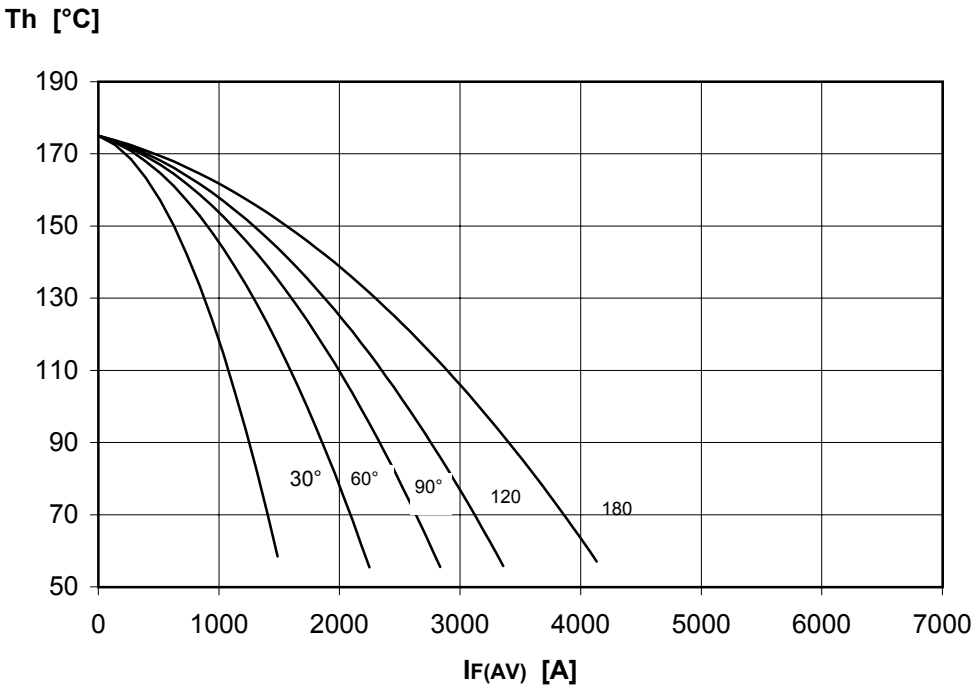
SQUARE WAVE

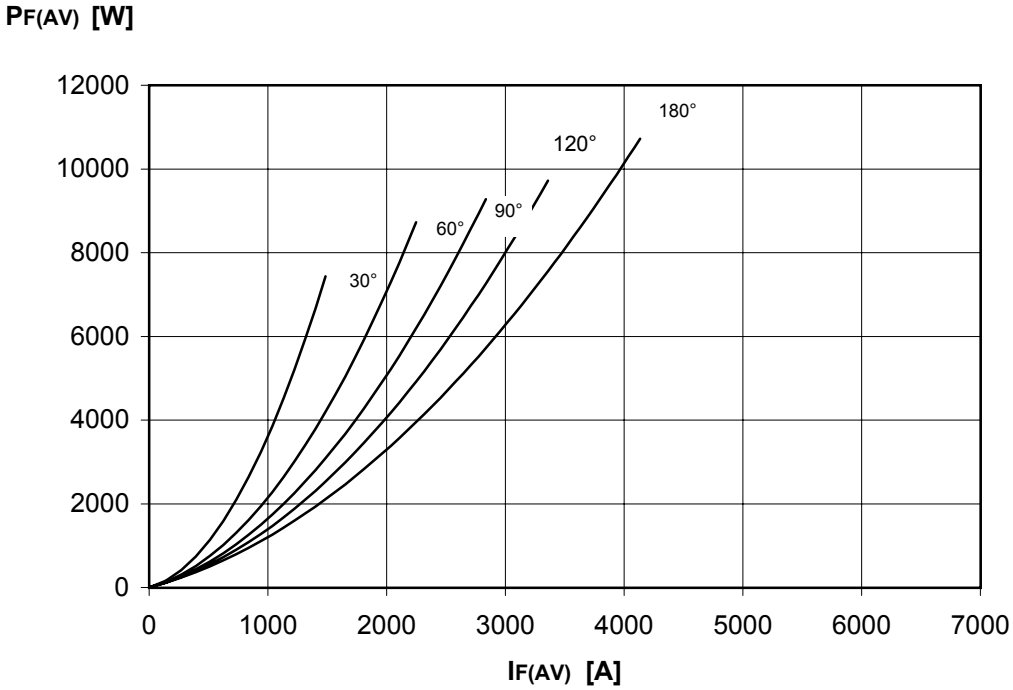




DISSIPATION CHARACTERISTICS

SINE WAVE



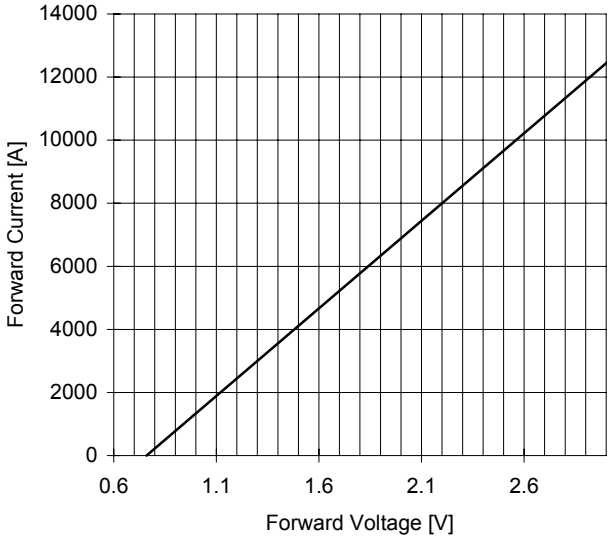


AR772 RECTIFIER DIODE

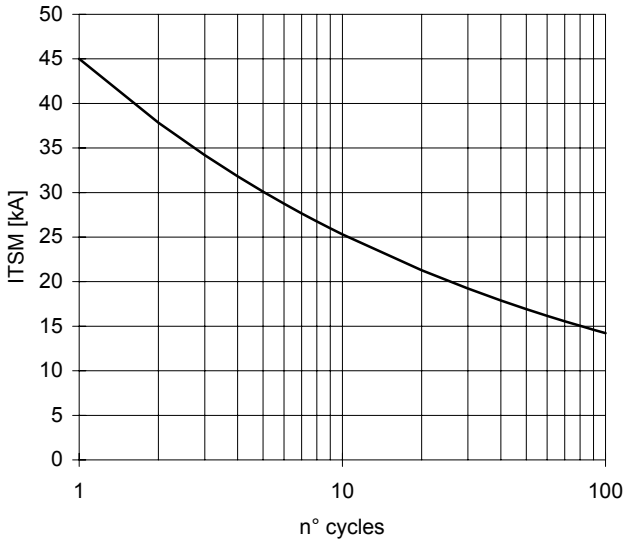
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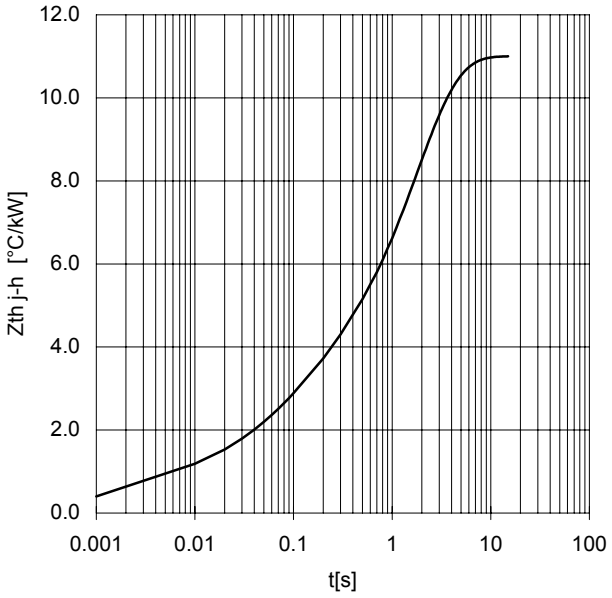
FORWARD CHARACTERISTIC
Tj = 175 °C

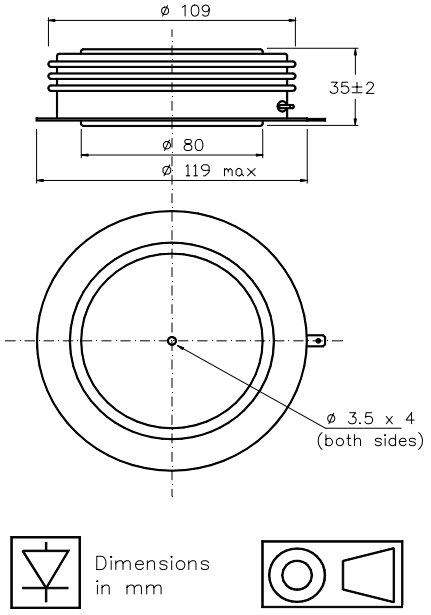


SURGE CHARACTERISTIC
Tj = 175 °C



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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