

RECTIFIER DIODE

AR870

Repetitive voltage up to	4200 V
Mean forward current	4888 A
Surge current	60 kA

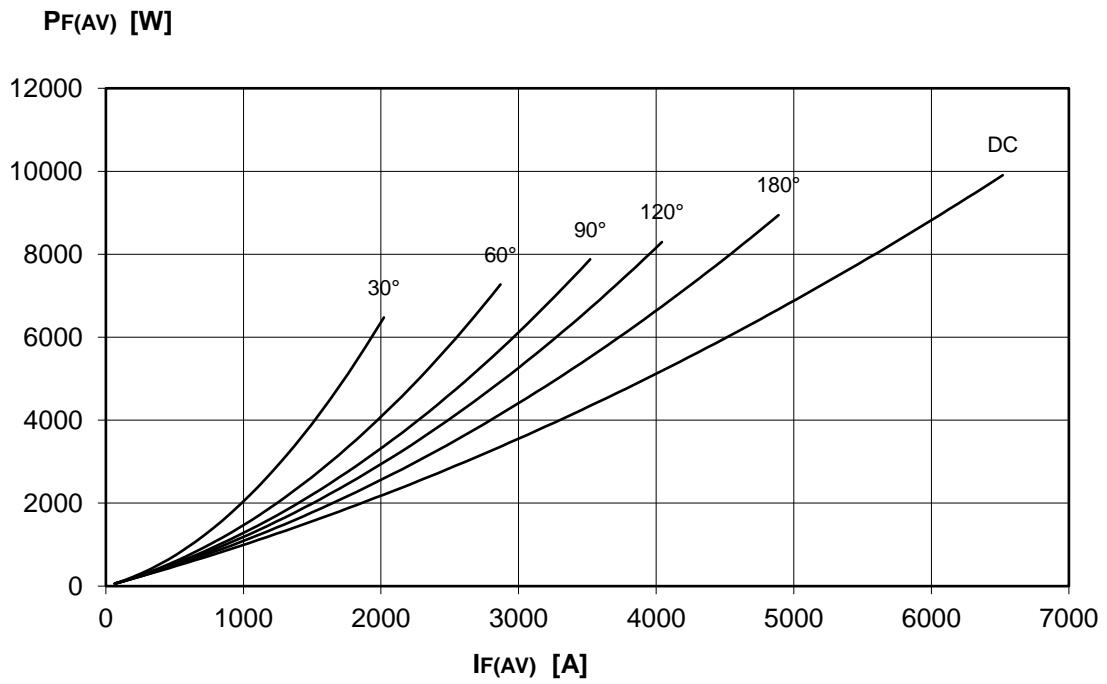
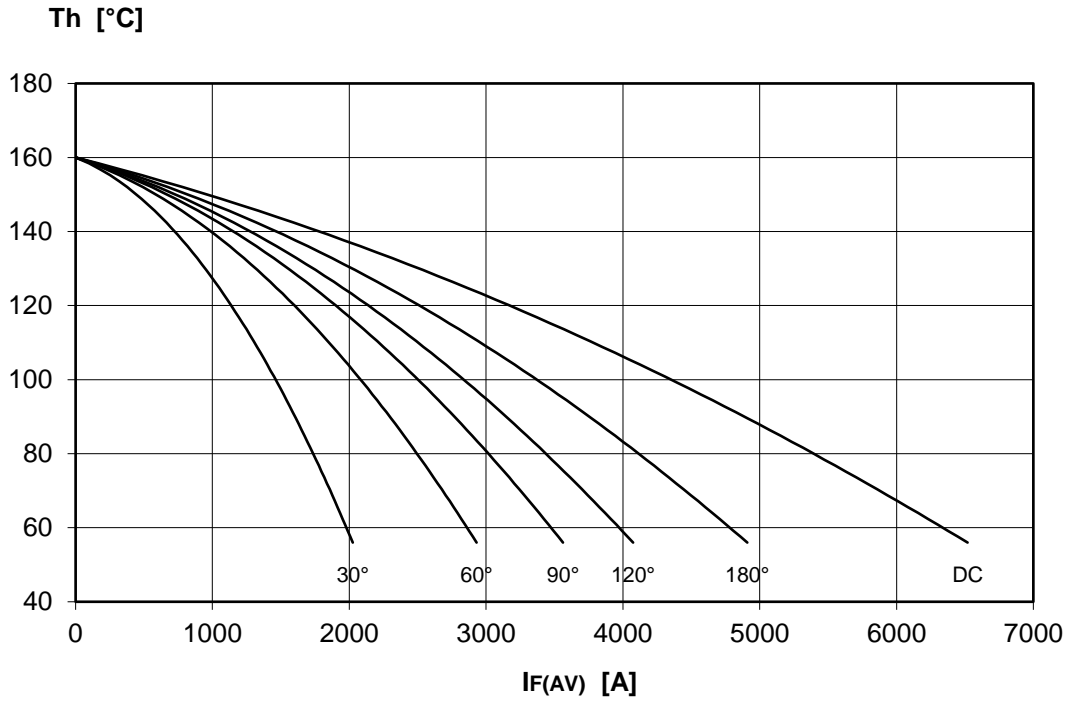
FINAL SPECIFICATION

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		160	4200	V
V _{RSM}	Non-repetitive peak reverse voltage		160	4300	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	160	300	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, Th=55°C, double side cooled		4888	A
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, Tc=85°C, double side cooled		4344	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	160	60	kA
I ² t	I ² t			18000 x 10 ³	A ² s
V _{FM}	Forward voltage	Forward current = 4000 A	25	1,28	V
V _{F(TO)}	Threshold voltage		160	0,90	V
r _F	Forward slope resistance		160	0,095	mohm
SWITCHING					
t _{rr}	Reverse recovery time		160		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		10,5	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		1,5	°C/kW
T _j	Operating junction temperature			-30 / 160	°C
F	Mounting force			60.0 / 80.0	kN
	Mass			1700	g
ORDERING INFORMATION : AR870 S 42					
standard specification <input type="checkbox"/> <input type="checkbox"/> VRRM/100					

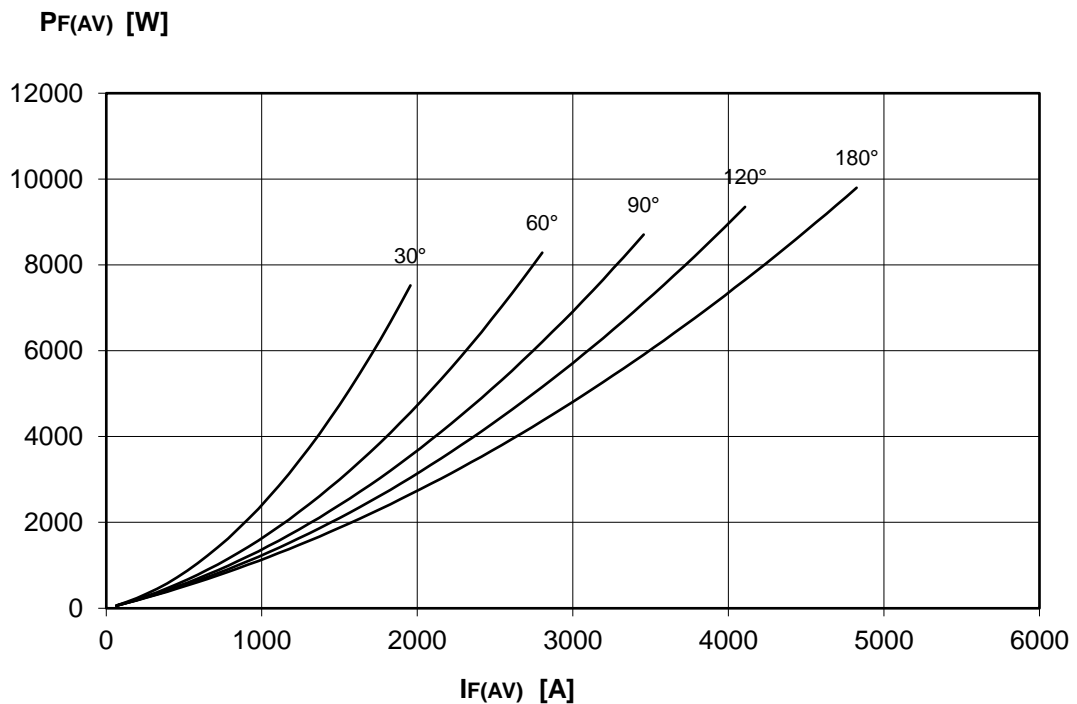
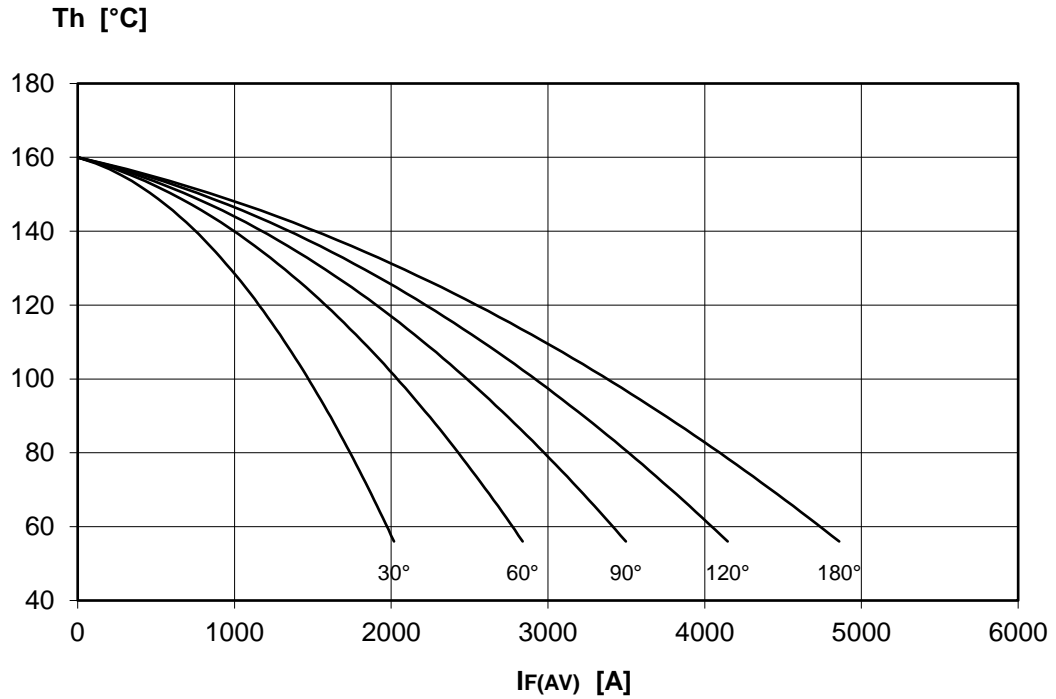
DISSIPATION CHARACTERISTICS

SQUARE WAVE



DISSIPATION CHARACTERISTICS

SINE WAVE

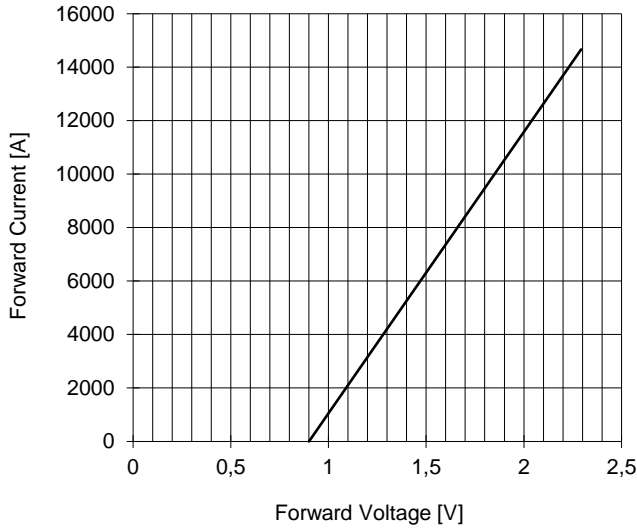


AR870 RECTIFIER DIODE

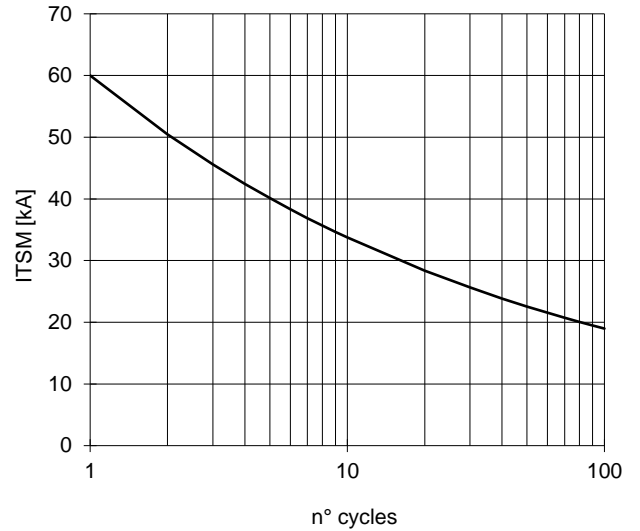


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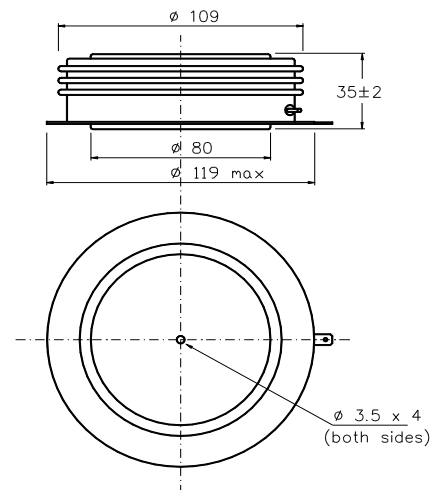
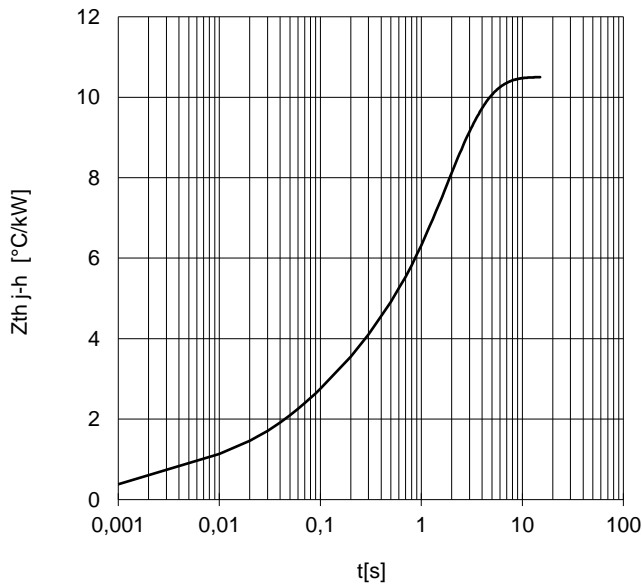
FORWARD CHARACTERISTIC
T_j = 160 °C



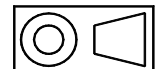
SURGE CHARACTERISTIC
T_j = 160 °C



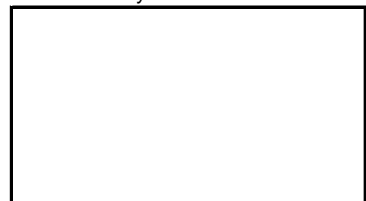
TRANSIENT THERMAL IMPEDANCE
DOUBLE SIDE COOLED



Dimensions
in mm



Distributed by



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.