



POSEICO SPA

POwer SEmiconductors Italian COrporation

POSEICO SPA

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RECTIFIER DIODE

AR770LT

Repetitive voltage up to

4500 V

Mean forward current

4230 A

Surge current

50 kA

FINAL SPECIFICATION

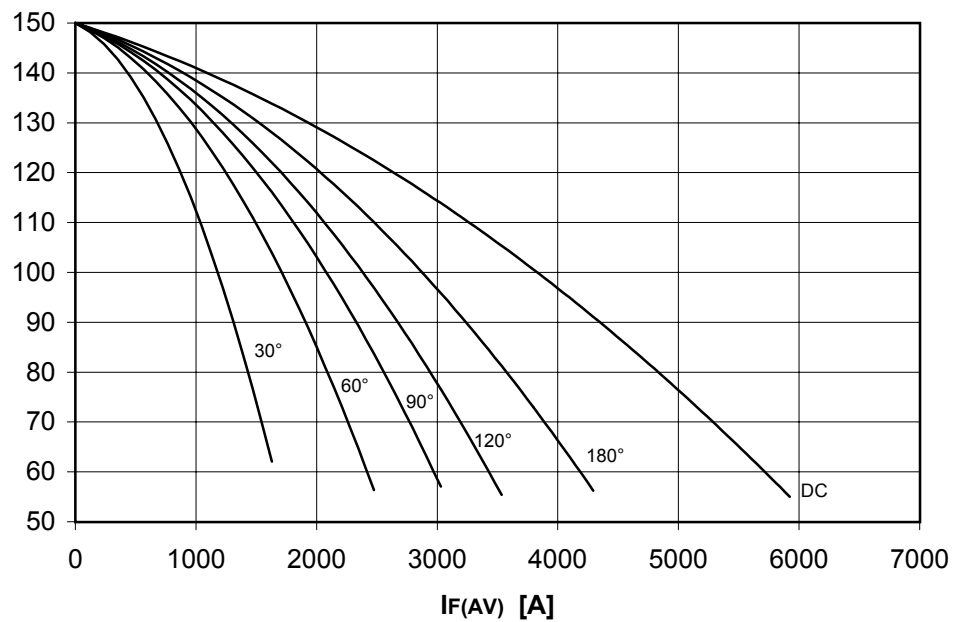
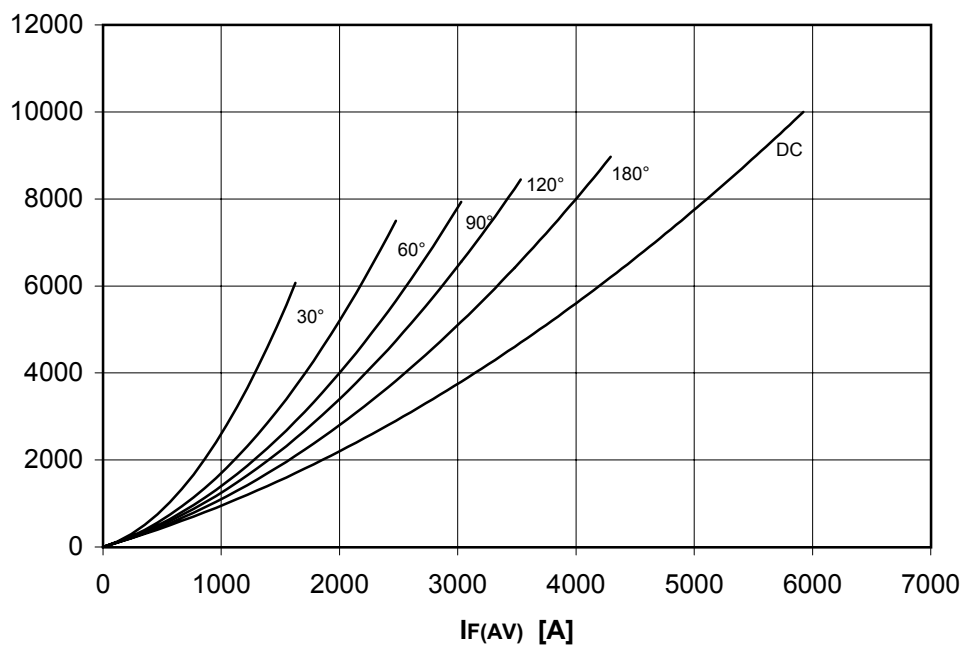
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Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	4500	V
V _{RSM}	Non-repetitive peak reverse voltage		150	4600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	150	200	mA
CONDUCTING					
I _{F (AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		4230	A
I _{F (AV)}	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		3880	A
I _{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	150	50	kA
I ² t	I ² t			12500 x 1E3	A²s
V _{FM}	Forward voltage	Forward current = 3000 A	25	1,28	V
V _{F(TO)}	Threshold voltage		150	0,80	V
r _F	Forward slope resistance		150	0,150	mohm
SWITCHING					
t _{rr}	Reverse recovery time	I= 1600 A	150		µs
Q _{rr}	Reverse recovery charge	di/dt= 2A/µs		3500	µC
I _{rr}	Peak reverse recovery current				A
MOUNTING					
R _{th(j-h)}	Thermal impedance, DC	Junction to heatsink, double side cooled		9,5	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		2	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			46.0 / 54.0	kN
	Mass			1150	g

ORDERING INFORMATION : AR770LT S 45standard specification ☐ ☐ VRRM/100

DISSIPATION CHARACTERISTICS

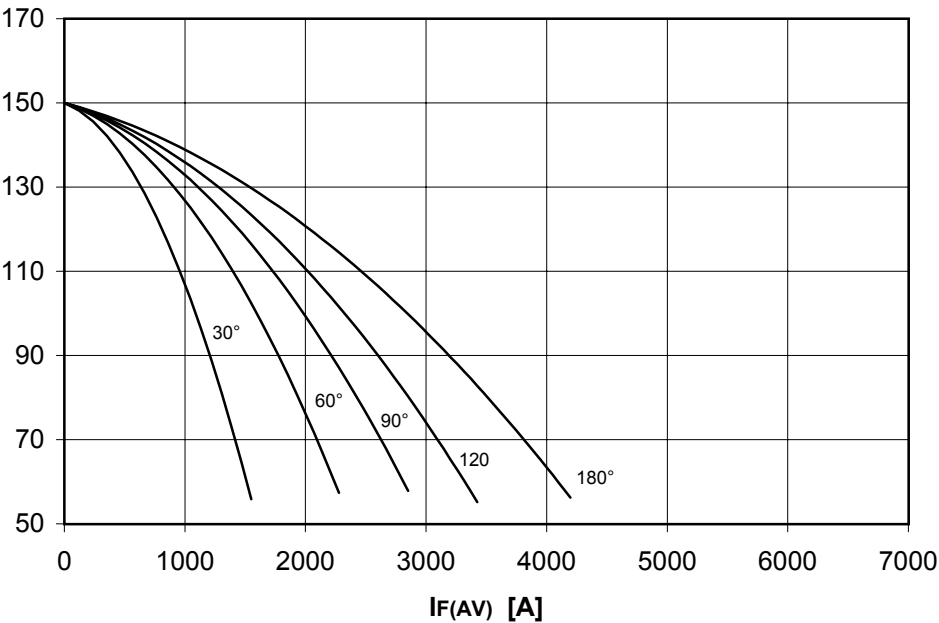
SQUARE WAVE

 T_h [°C] $P_F(AV)$ [W]

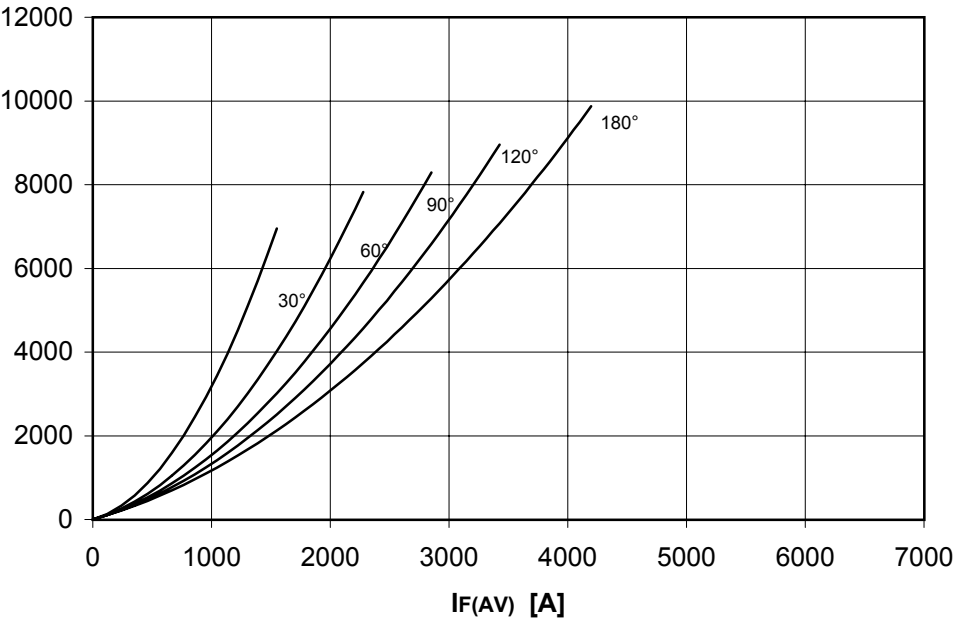
DISSIPATION CHARACTERISTICS

SINE WAVE

Th [°C]



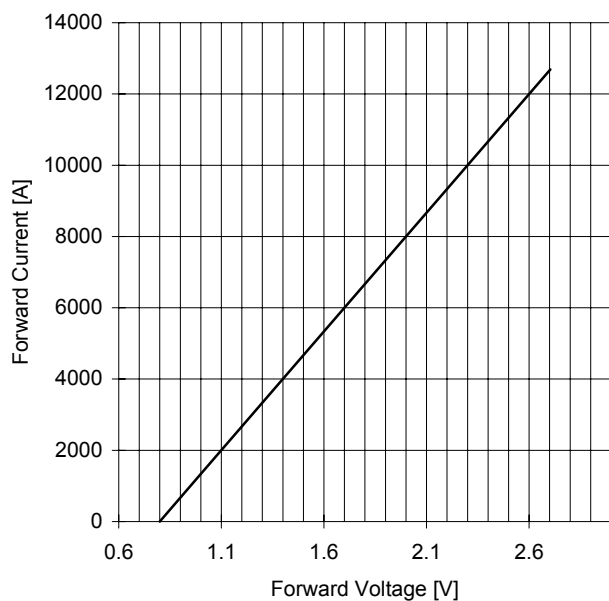
PF(AV) [W]



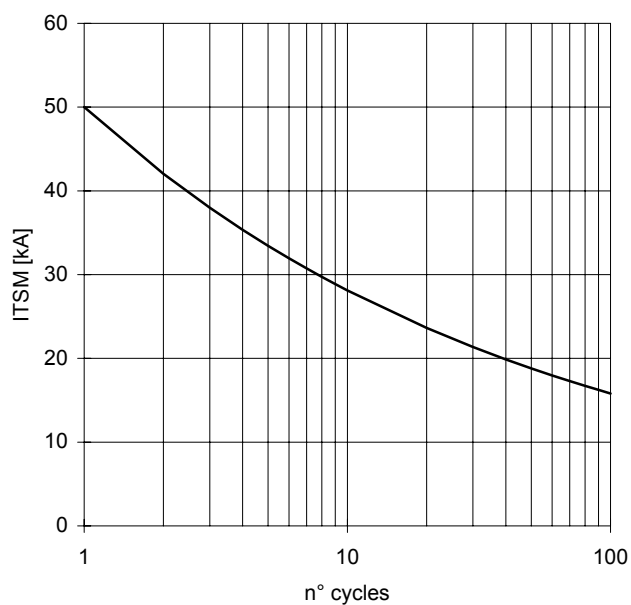
AR770LT RECTIFIER DIODE

FINAL SPECIFICATION lug 02 - ISSUE : 02

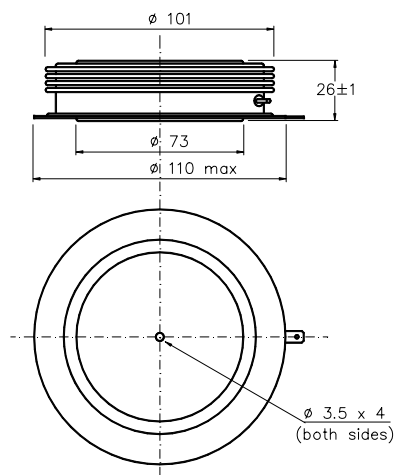
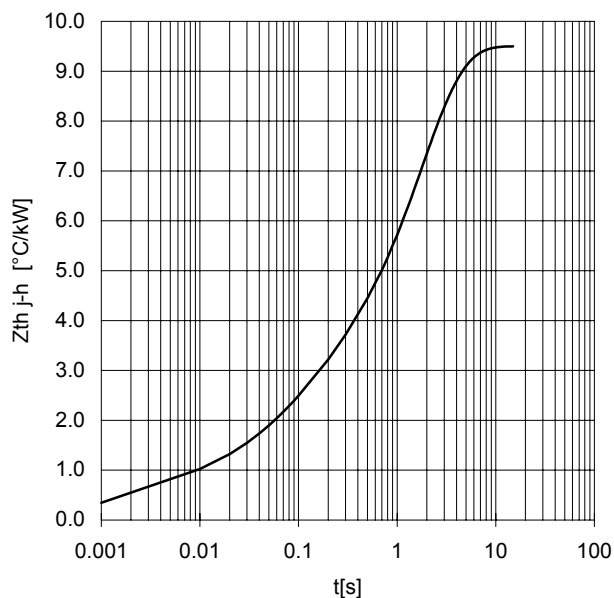
FORWARD CHARACTERISTIC
 $T_J = 150\text{ }^{\circ}\text{C}$



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 $< .03\text{ mm}$ and roughness $< 2\text{ }\mu\text{m}$.

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 (symbols over shaded background) and characteristics is reported.

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