

**RECTIFIER DIODE**

# AR242

Repetitive voltage up to	<b>1800 V</b>
Mean forward current	<b>831 A</b>
Surge current	<b>6.5 kA</b>

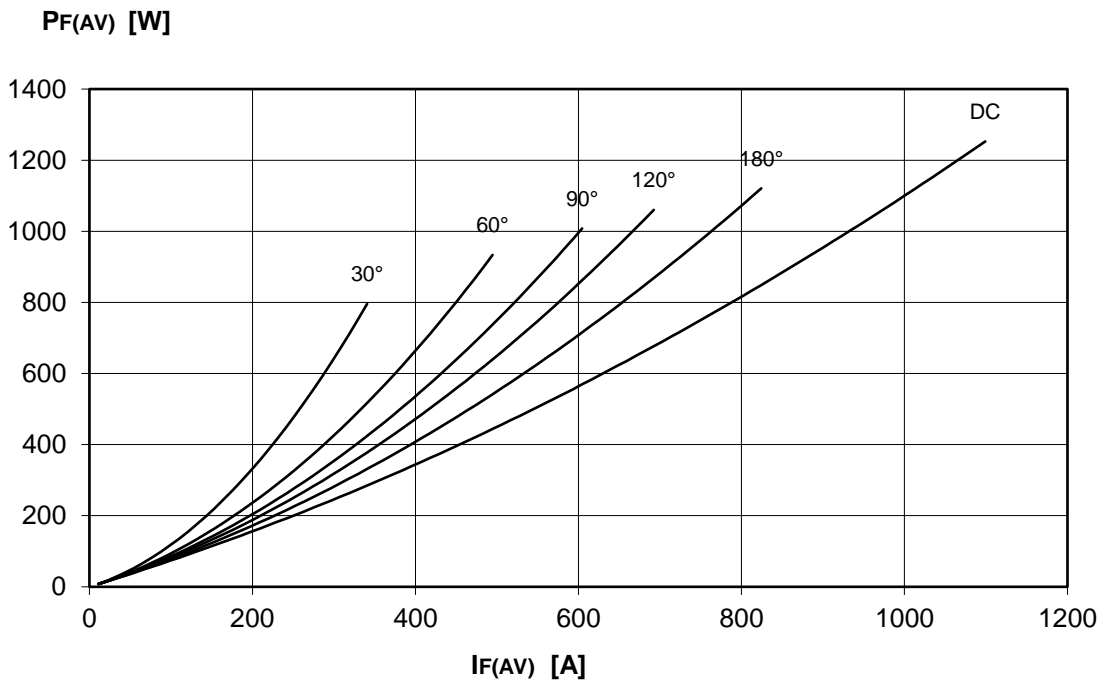
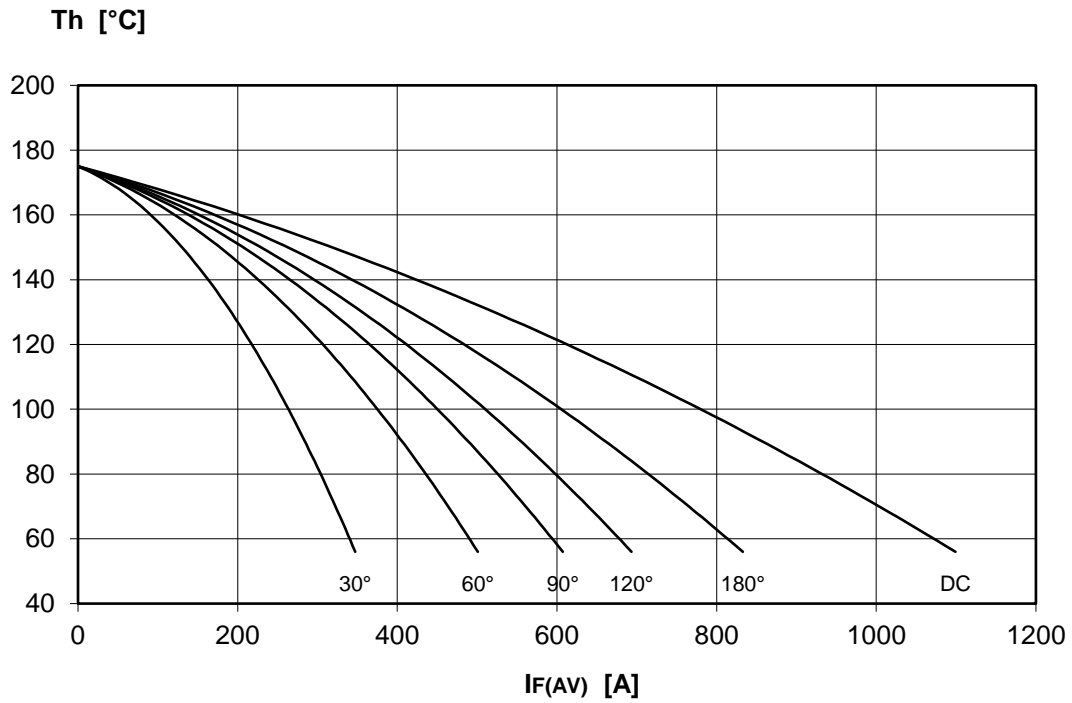
**FINAL SPECIFICATION**

Mar. 17 - Issue: 3

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		175	1800	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		175	1900	V
I <sub>RRM</sub>	Repetitive peak reverse current	V=VRRM	175	50	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, Th=55°C, double side cooled		831	A
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, Tc=85°C, double side cooled		804	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms without reverse voltage	175	6.5	kA
I <sup>2</sup> t	I <sup>2</sup> t			211 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>FM</sub>	Forward voltage	Forward current = 1000 A	25	1.40	V
V <sub>F(TO)</sub>	Threshold voltage		175	0.70	V
r <sub>F</sub>	Forward slope resistance		175	0.400	mohm
<b>SWITCHING</b>					
t <sub>rr</sub>	Reverse recovery time		175		μs
Q <sub>rr</sub>	Reverse recovery charge				μC
I <sub>rr</sub>	Peak reverse recovery current				A
<b>MOUNTING</b>					
R <sub>th(j-h)</sub>	Thermal impedance, DC	Junction to heatsink, double side cooled		95.0	°C/kW
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		20.0	°C/kW
T <sub>j</sub>	Operating junction temperature			-30 / 175	°C
F	Mounting force			04.5 / 05.0	kN
	Mass			55	g
<b>ORDERING INFORMATION : AR242 S 18</b> standard specification <input type="checkbox"/> <input type="checkbox"/> VRRM/100					

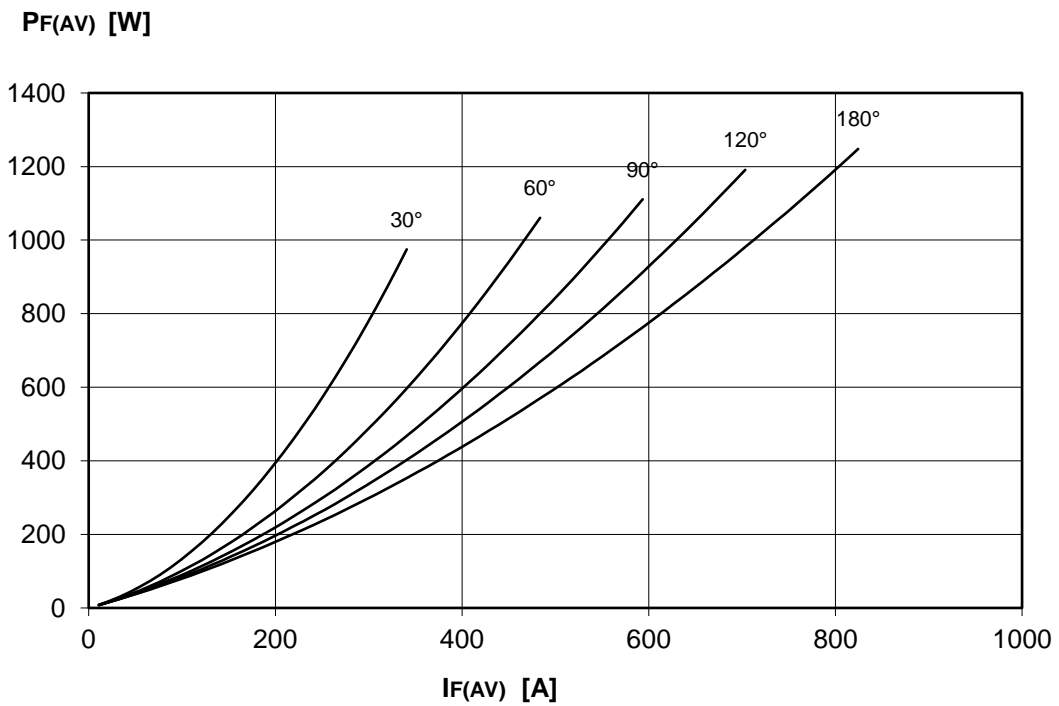
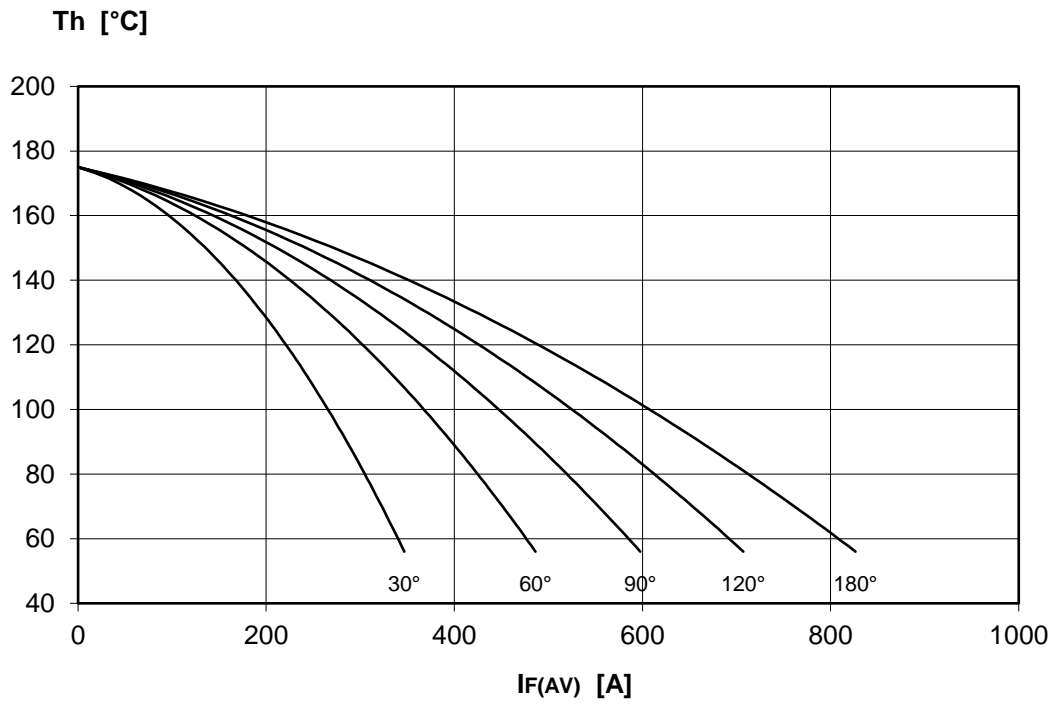
DISSIPATION CHARACTERISTICS

SQUARE WAVE



**DISSIPATION CHARACTERISTICS**

SINE WAVE

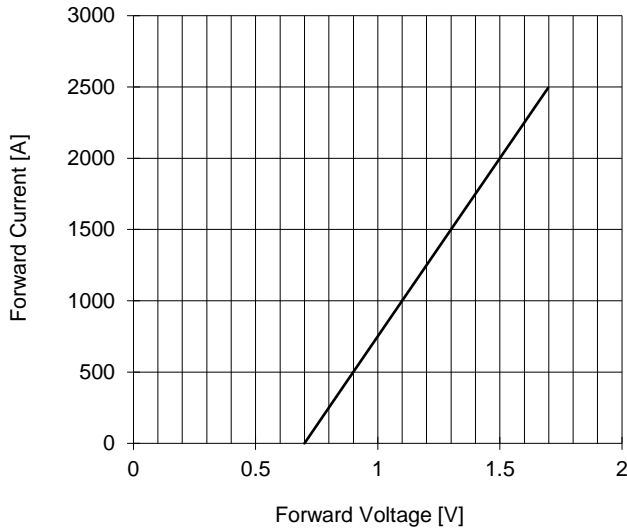


# AR242 RECTIFIER DIODE



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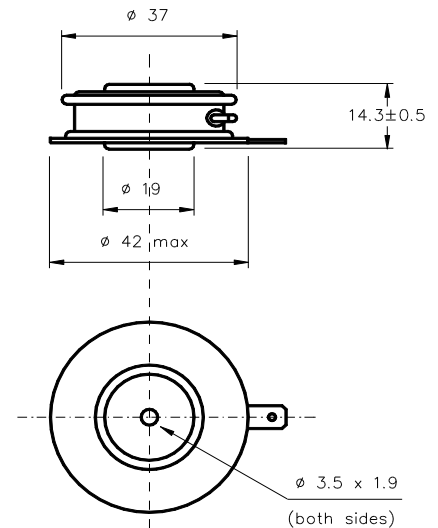
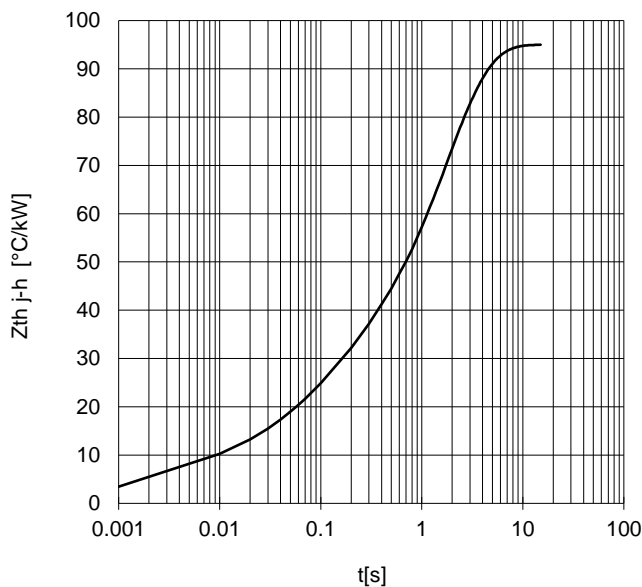
FORWARD CHARACTERISTIC  
T<sub>j</sub> = 175 °C



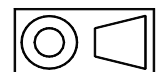
SURGE CHARACTERISTIC  
T<sub>j</sub> = 175 °C



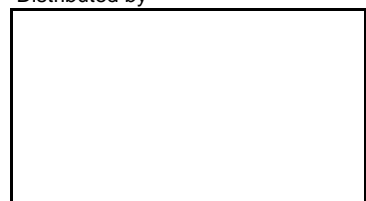
TRANSIENT THERMAL IMPEDANCE  
DOUBLE SIDE COOLED



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.