

**RECTIFIER DIODE**

# AUS605

Repetitive voltage up to

**400 V**

Mean forward current

**13436 A**

Surge current

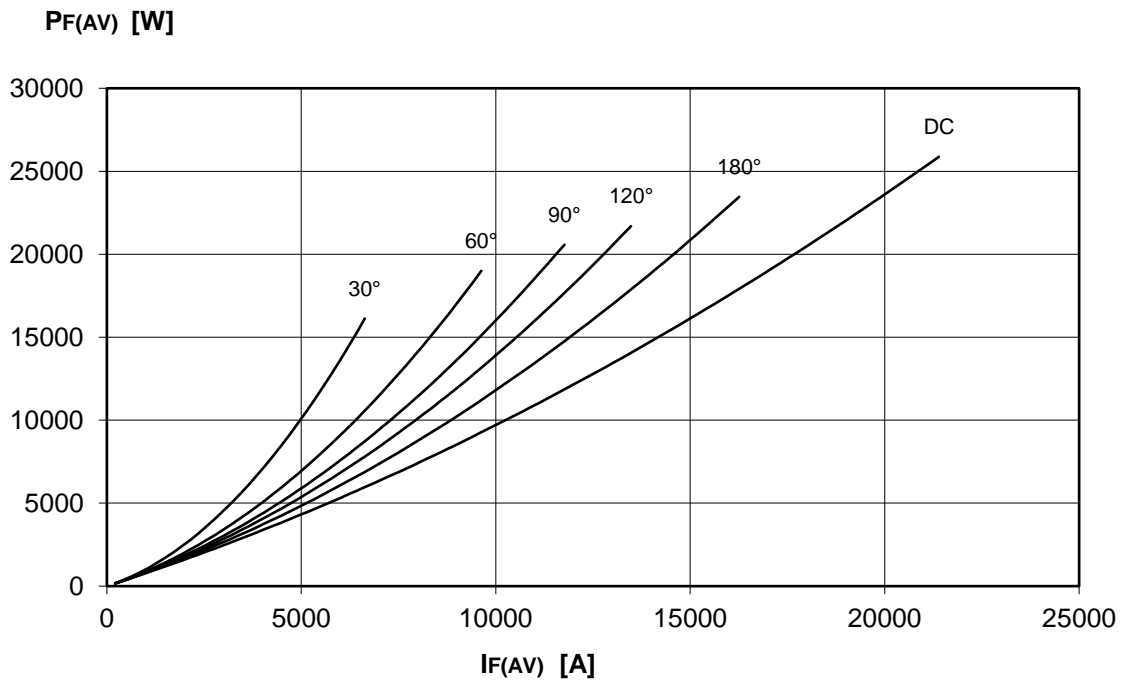
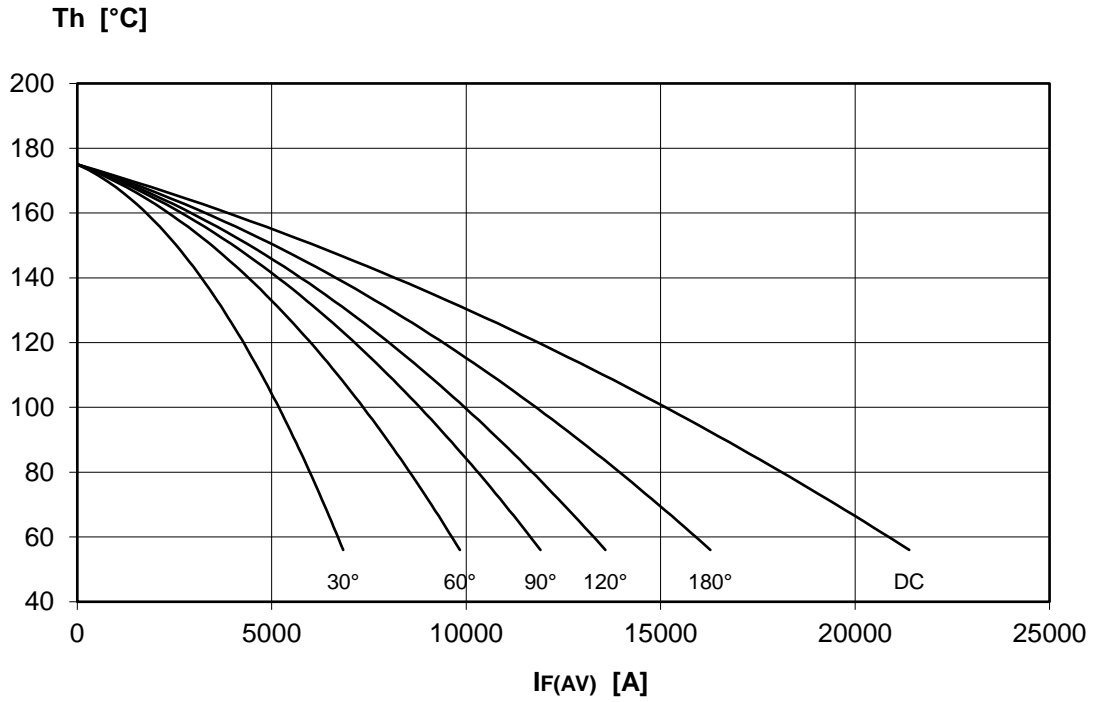
**88 kA**
**FINAL SPECIFICATION**

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Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		175	400	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		175	500	V
I <sub>RRM</sub>	Repetitive peak reverse current	V=VRRM	175	75	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, Th=85°C, double side cooled		13436	A
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, Tc=55°C, double side cooled		26675	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms without reverse voltage	175	88	kA
I <sup>2</sup> t	I <sup>2</sup> t			38720 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>FM</sub>	Forward voltage	Forward current = 10000 A	25	0,92	V
V <sub>F(TO)</sub>	Threshold voltage		175	0,76	V
r <sub>F</sub>	Forward slope resistance		175	0,021	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-c)</sub>	Thermal impedance, DC	Junction to case, double side cooled		4,6	°C/kW
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		2,5	°C/kW
T <sub>j</sub>	Operating junction temperature			-30 / 175	°C
F	Mounting force			35.0 / 65.0	kN
	Mass			160	g
<b>ORDERING INFORMATION : AUS605 S 04</b> standard specification <input type="checkbox"/> <input type="checkbox"/> VRRM/100					

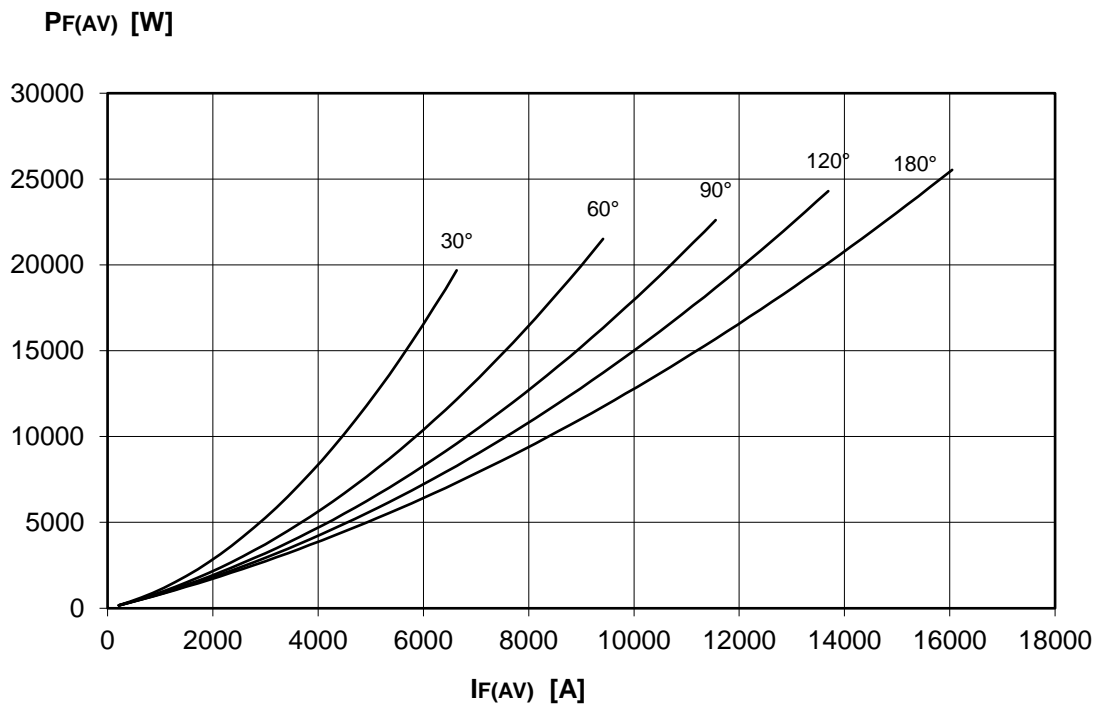
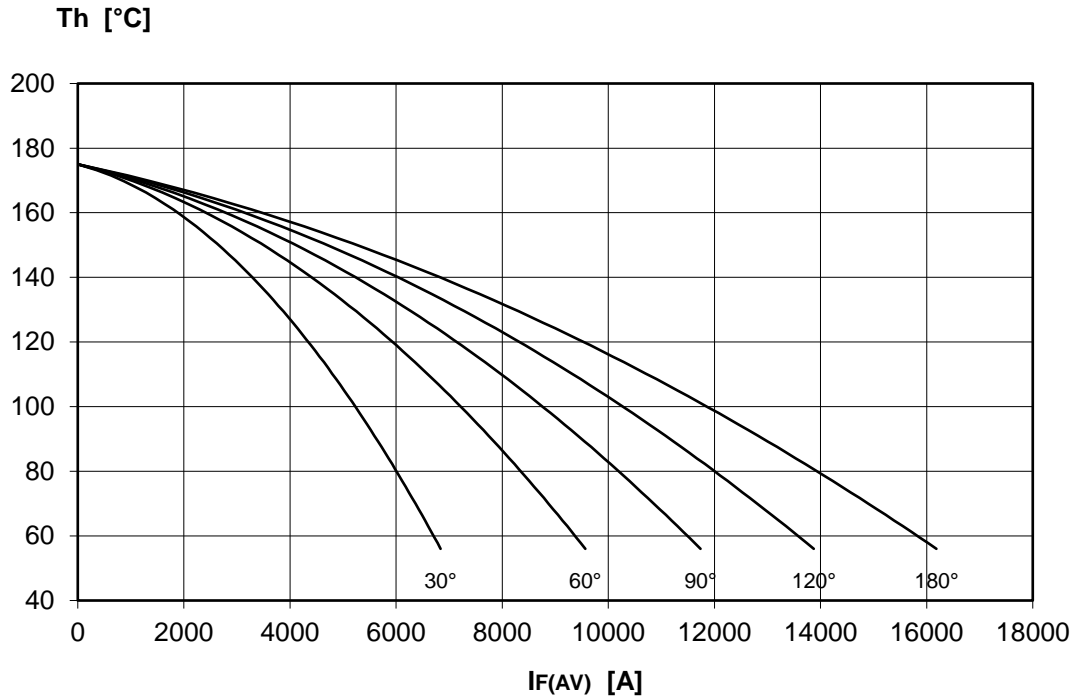
**DISSIPATION CHARACTERISTICS**

**SQUARE WAVE**



DISSIPATION CHARACTERISTICS

SINE WAVE

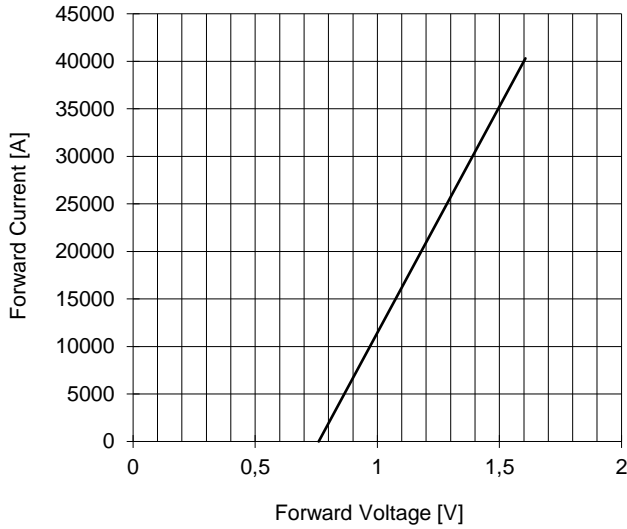


# AUS605 RECTIFIER DIODE

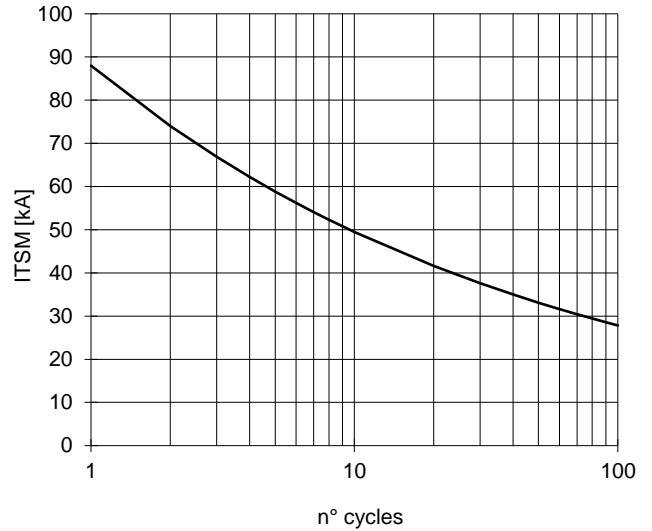


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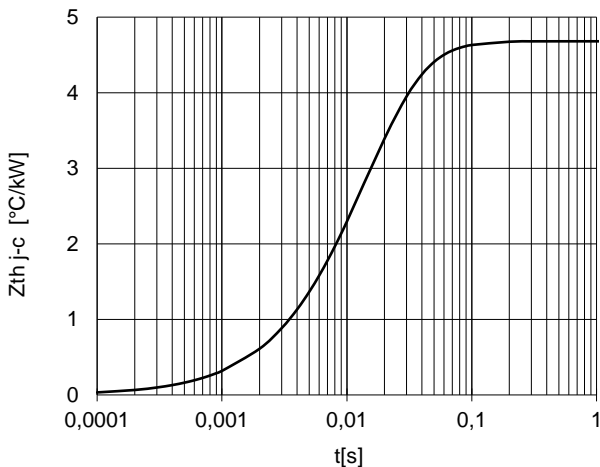
FORWARD CHARACTERISTIC  
T<sub>j</sub> = 175 °C



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

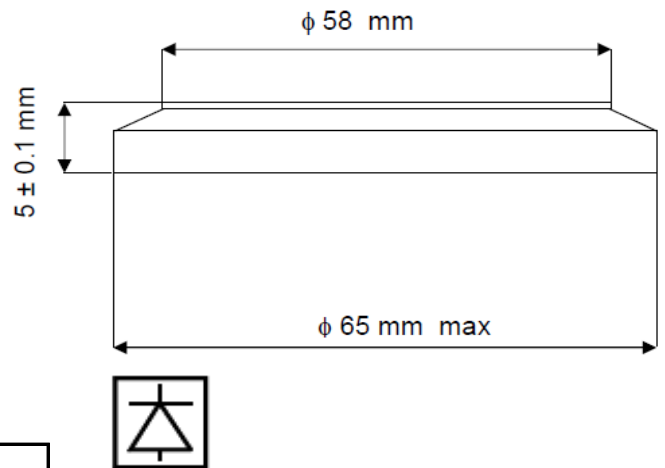


TRANSIENT THERMAL IMPEDANCE  
DOUBLE SIDE COOLED

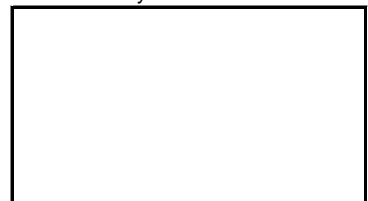


$$Z_{th\ j-c}(t) = \sum_{i=1}^n A_i * \left(1 - e^{-\frac{t}{\tau_i}}\right)$$

	0	1	2	3	4
A <sub>i</sub> [°C/kW]	2,700	0,900	0,300	0,780	0,780
τ <sub>i</sub> [s]	0,015	0,02	0,05	0,019	0,019



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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.