

**RECTIFIER DIODES MODULE**

**AZD1600**

Repetitive voltage up to **1000 V**  
Mean forward current **1600 A**  
Surge current **44,8 kA**

**FINAL SPECIFICATION**

Apr. 17 - Issue: 1

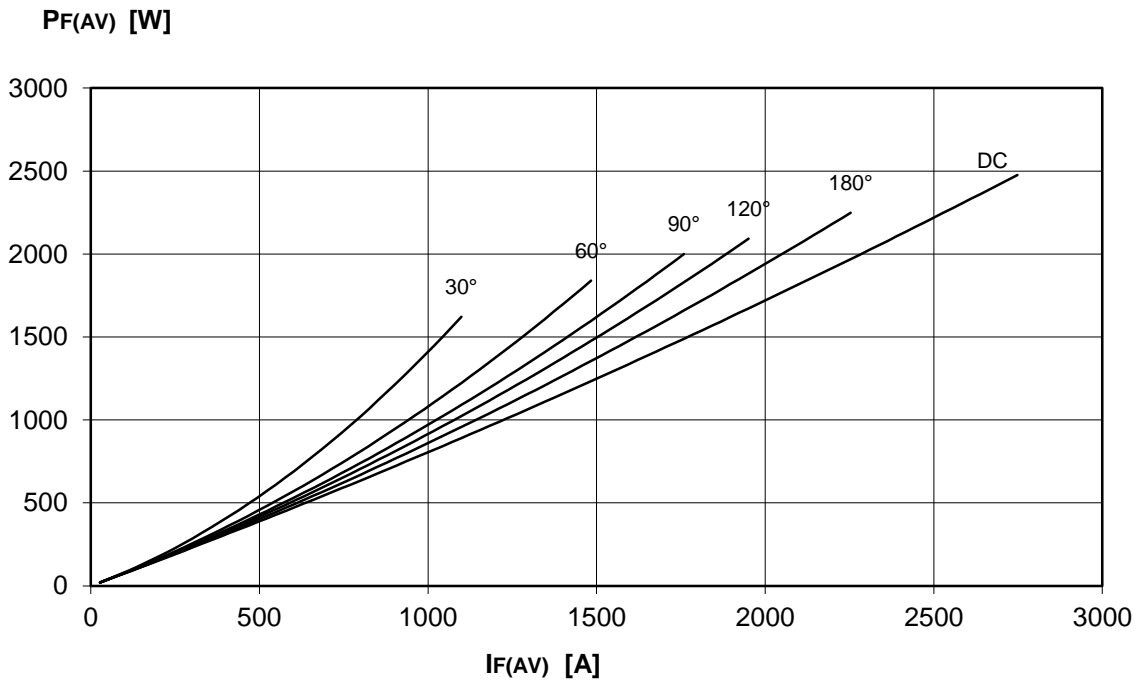
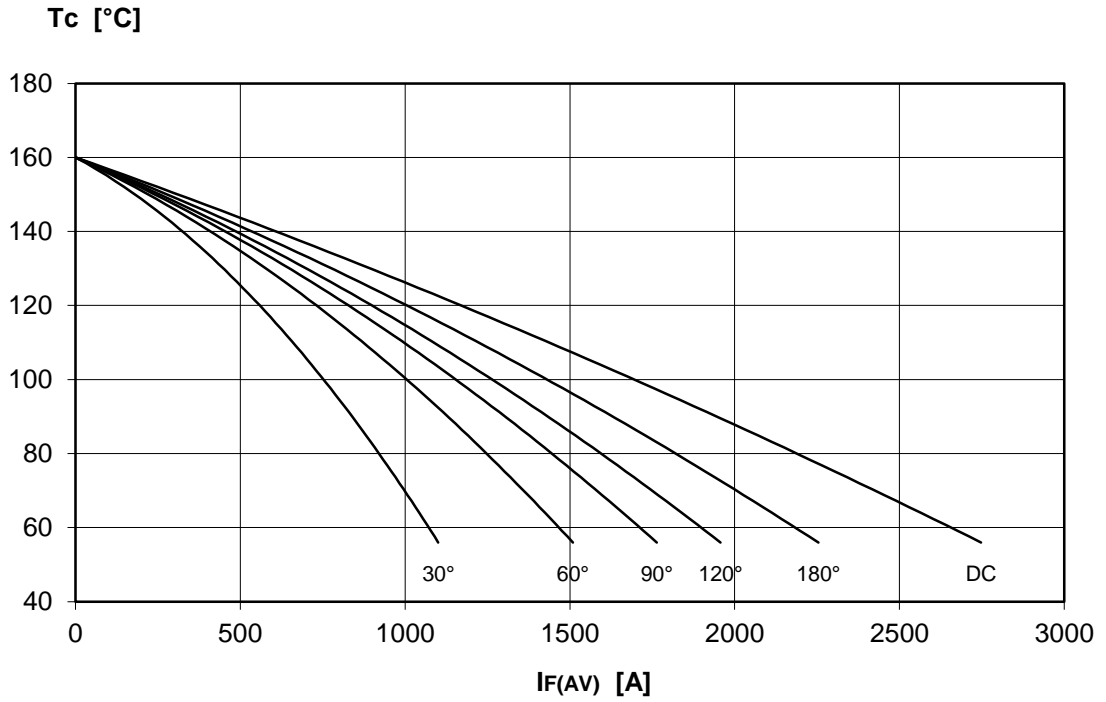
Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		160	1000	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		160	1100	V
I <sub>RRM</sub>	Repetitive peak reverse current		160	75	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, T <sub>c</sub> =95°C, single side cooled		1600	A
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, T <sub>c</sub> =85°C, single side cooled		1797	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms without reverse voltage	160	44,8	kA
I <sup>2</sup> t	I <sup>2</sup> t			10035 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>FM</sub>	Forward voltage	Forward current = 1800 A	25	1,16	V
V <sub>F(TO)</sub>	Threshold voltage		160	0,75	V
r <sub>F</sub>	Forward slope resistance		160	0,055	mohm
<b>SWITCHING</b>					
t <sub>rr</sub>	Reverse recovery time		160		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		42,0	°C/kW
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink		15,0	°C/kW
T <sub>j</sub>	Operating junction temperature			-30 / 160	°C
V <sub>ins</sub>	RMS insulation voltage	50Hz, circuit to base, all terminal shorted	25	4500	V
T	Mounting torque	Case to heatsink		4 to 6	Nm
		Busbars to terminals		12 to 18	Nm
	Mass			2800	g

**ORDERING INFORMATION : AZD1600 S 10**

standard specification   VRRM/100

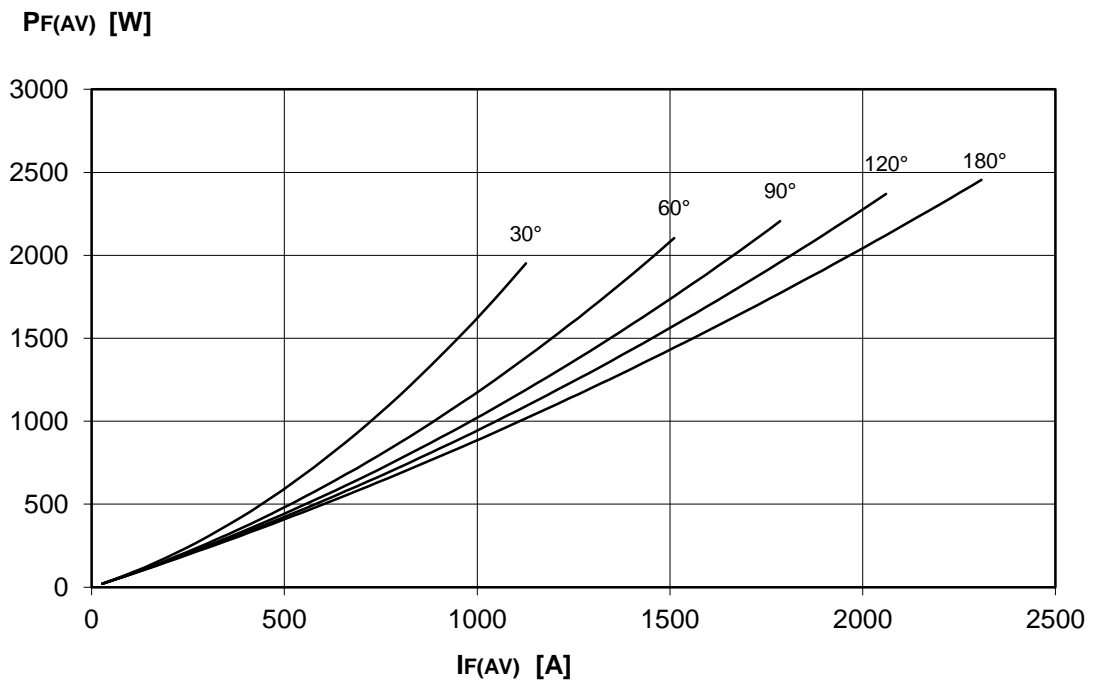
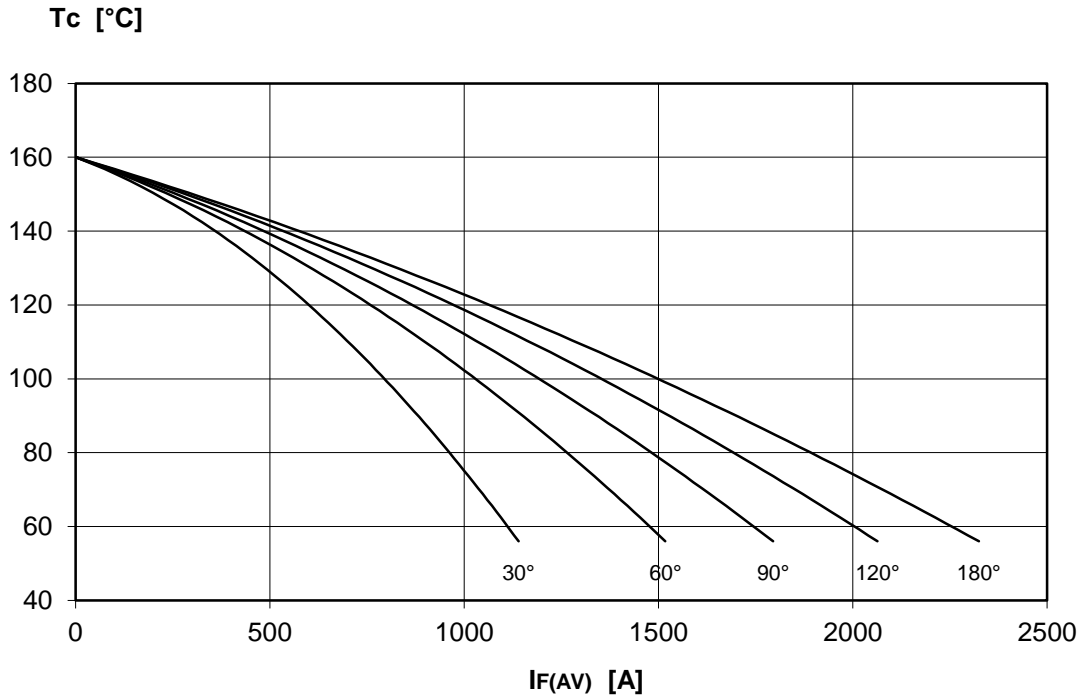
**DISSIPATION CHARACTERISTICS**

**SQUARE WAVE**

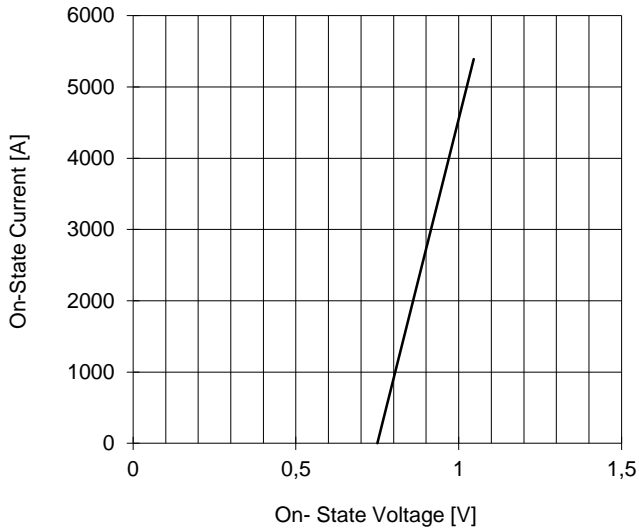


**DISSIPATION CHARACTERISTICS**

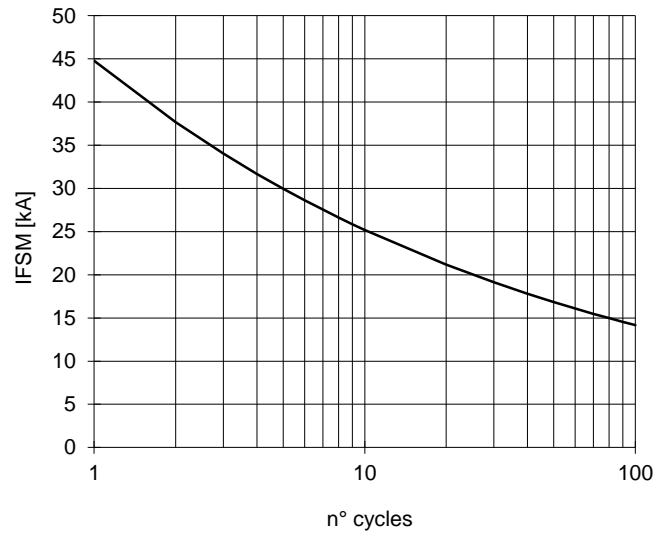
SINE WAVE



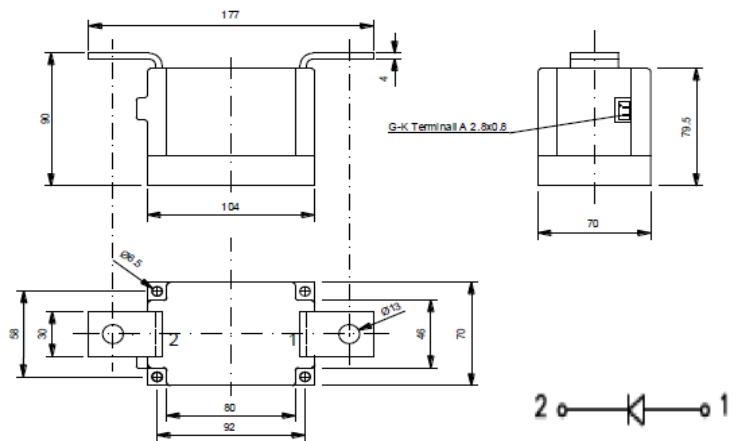
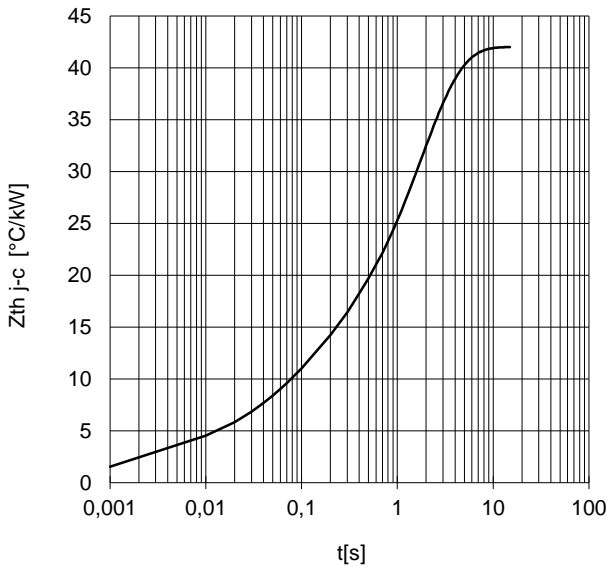
ON-STATE CHARACTERISTIC  
T<sub>j</sub> = 150 °C



SURGE CHARACTERISTIC  
T<sub>j</sub> = 160 °C



TRANSIENT THERMAL IMPEDANCE



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.

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