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RECTIFIER DIODE

AR2009

Repetitive voltage up to **4400 V**
Mean forward current **1560 A**
Surge current **18,5 kA**

FINAL SPECIFICATION
Mar. 17 - Issue: 6

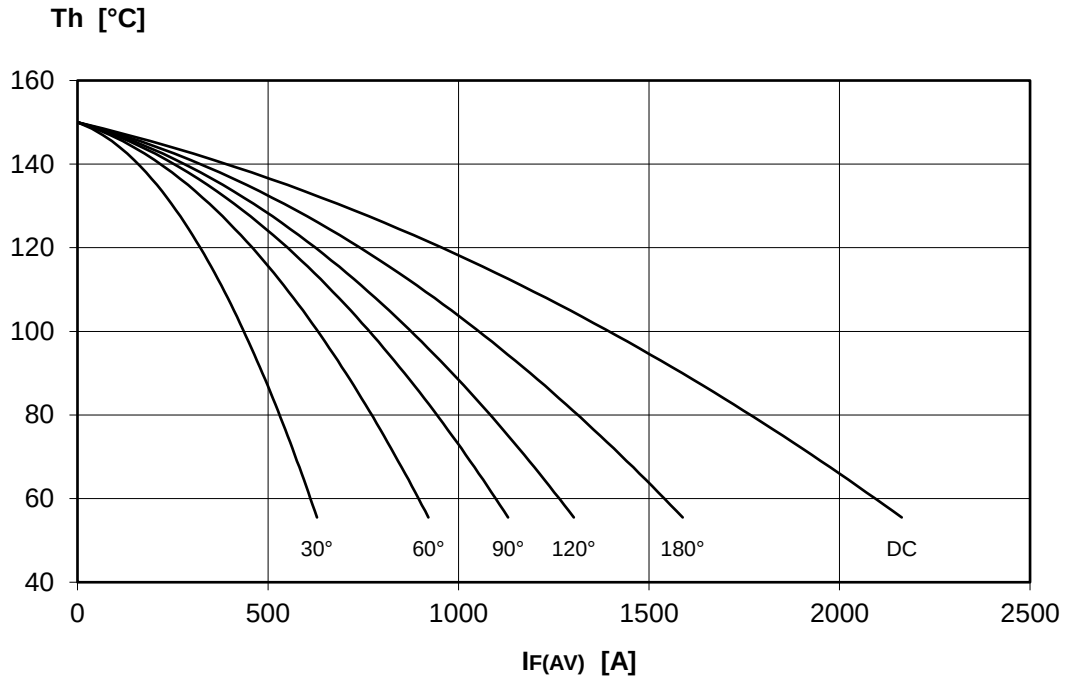
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		150	4400	V
V_{RSM}	Non-repetitive peak reverse voltage		150	4500	V
I_{RRM}	Repetitive peak reverse current	V=VRRM	150	75	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		1560	A
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Tc=85°C, double side cooled		1452	A
I_{FSM}	Surge forward current	Sine wave, 10 ms without reverse voltage	150	18,5	kA
I^2t	I^2t			1711 x 10^3	A^2s
V_{FM}	Forward voltage	Forward current = 3400 A	25	1,80	V
$V_{F(TO)}$	Threshold voltage		150	0,83	V
r_F	Forward slope resistance		150	0,393	mohm
SWITCHING					
t_{rr}	Reverse recovery time		150		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		26	°C/kW
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		6	°C/kW
T_j	Operating junction temperature			-30 / 150	°C
F	Mounting force			18.0 / 20.0	kN
	Mass			500	g

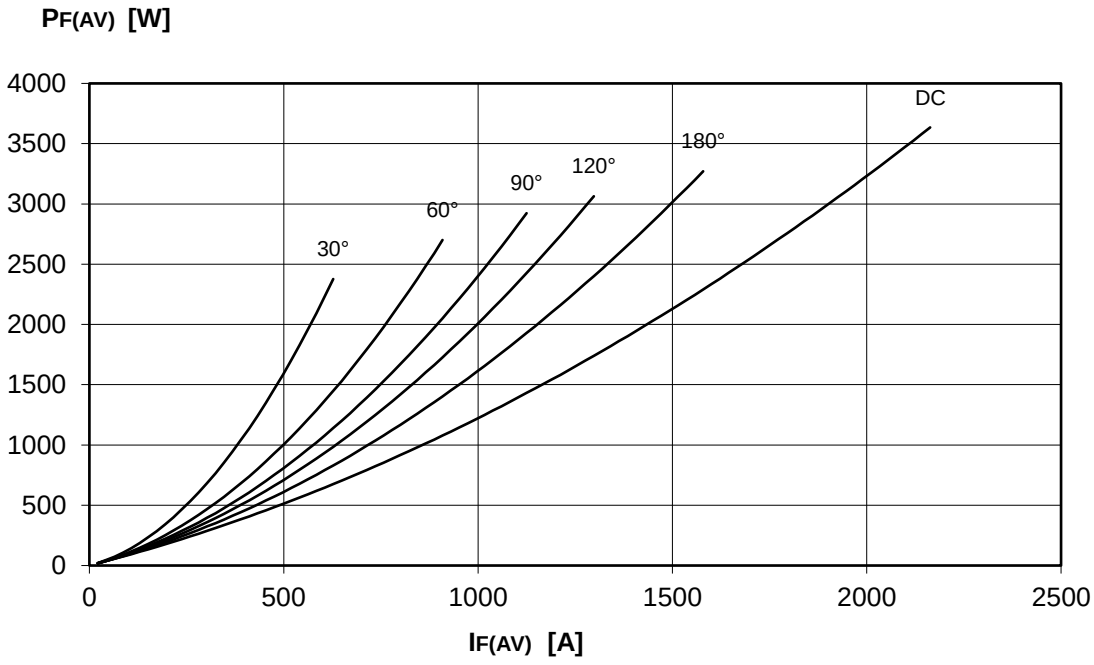
ORDERING INFORMATION : AR2009 S 44

standard specification — VRRM/100

DISSIPATION CHARACTERISTICS

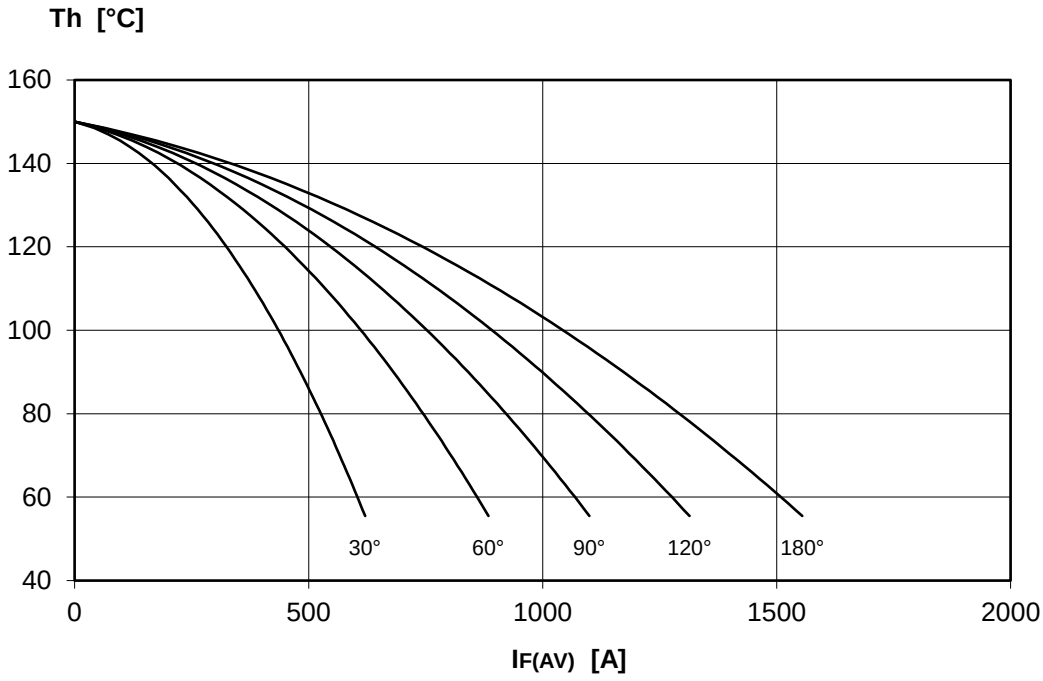
SQUARE WAVE

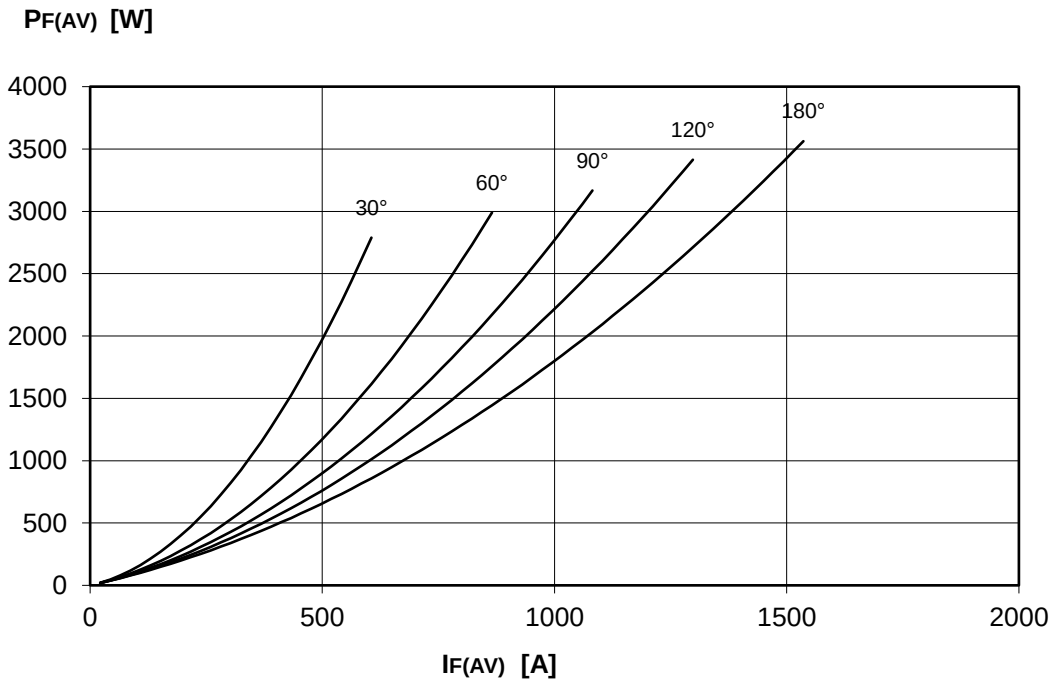




DISSIPATION CHARACTERISTICS

SINE WAVE



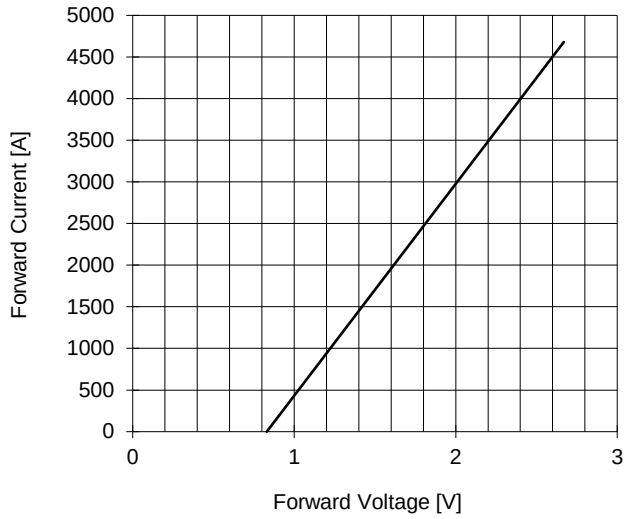


AR2009 RECTIFIER DIODE

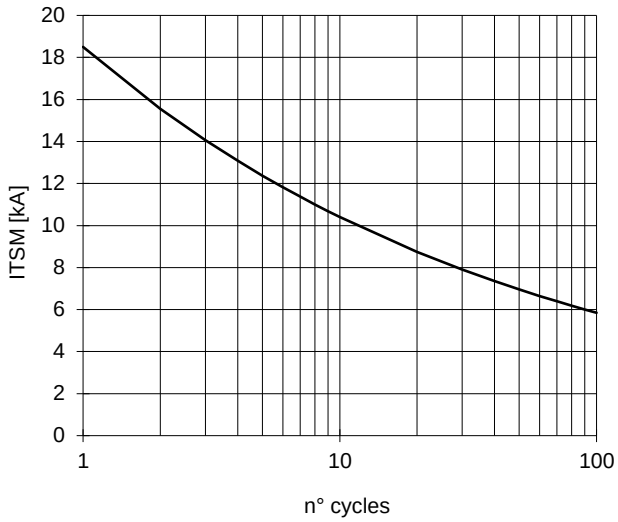
POSEICO POWER ELECTRONICS

FINAL SPECIFICATION Mar. 17 - Issue: 6

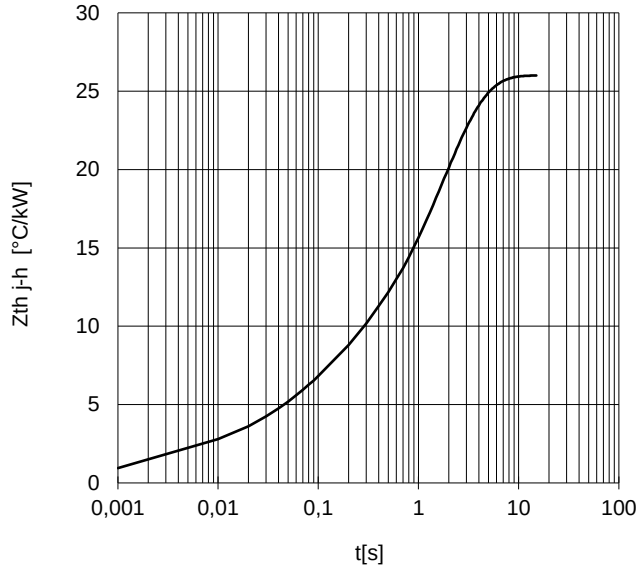
FORWARD CHARACTERISTIC
Tj = 150 °C

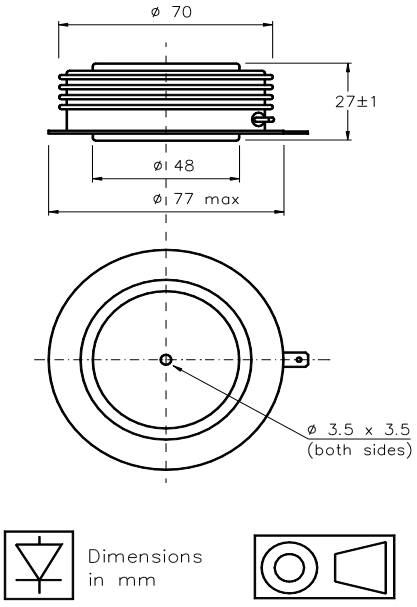


SURGE CHARACTERISTIC
Tj = 150 °C



TRANSIENT THERMAL IMPEDANCE
DOUBLE SIDE COOLED





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 (simbols over shaded background) and characteristics is reported.

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