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FAST RECOVERY DIODE

ARF670

FOR IGBT, IEGT, GCT APPLICATIONS
SNUBBERLESS OPERATION
LOW LOSSES SOFT RECOVERY

Repetitive voltage up to **4500 V**
Mean forward current **1315 A**
Surge current **15 kA**

TARGET SPECIFICATION

dic 02 - ISSUE : 01

Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		140	4500	V
V _{RSM}	Non-repetitive peak reverse voltage		140	4600	V
I _{RRM}	Repetitive peak reverse current	V=V _{RRM}	140	150	mA
V _{DC LINK}	Permanent DC voltage		140	2500	V
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		1315	A
I _{F(AV)}	Mean forward current	180° square, 50 Hz, Th=55°C, double side cooled		1370	A
I _{FSM}	Surge forward current	Sine wave, 10 ms	140	15	kA
I ² t	I ² t	reapplied reverse voltage up to 50% V _{RSM}		1125 x1E3	A ² s
V _{FM}	Forward voltage	Forward current = 1570 A	25	2.70	V
V _{F(TO)}	Threshold voltage		140	1.50	V
r _F	Forward slope resistance		140	0.60	mohm
SWITCHING					
Q _{rr}	Reverse recovery charge	I _F = 1000 A di/dt= 250 A/μs V _R = 100 V	140	1500	μC
I _{rr}	Peak reverse recovery current			650	A
Q _{rr}	Reverse recovery charge	I _F = 1000 A di/dt= 500 A/μs V _R = 350 V ±10% L = 1 μH ±10%	140	2050	μC
I _{rr}	Peak reverse recovery current			1050	A
V _{pk}	Peak reverse recovery voltage			1400	V
s	Softness (s-factor), min			0.5	
E _{OFF}	Turn off energy dissipation			0.8	J
V _{FR}	Peak forward recovery voltage	di/dt= 500 A/μs	25	35	V
MOUNTING					
R _{th(j-h)}	Thermal impedance	Junction to heatsink, double side cooled		18	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		6	°C/kW
T _j	Operating junction temperature			-40 / 140	°C
F	Mounting force			22.0 / 24.5	kN
	Mass			300	g

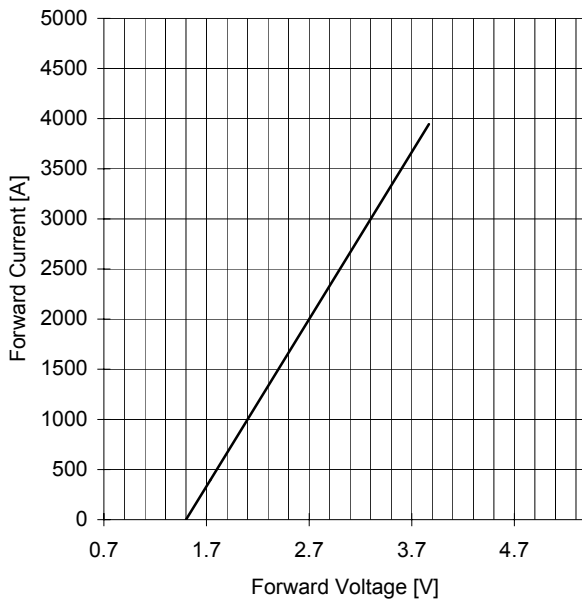
ORDERING INFORMATION : ARF670 S 45

standard specification VRRM/100

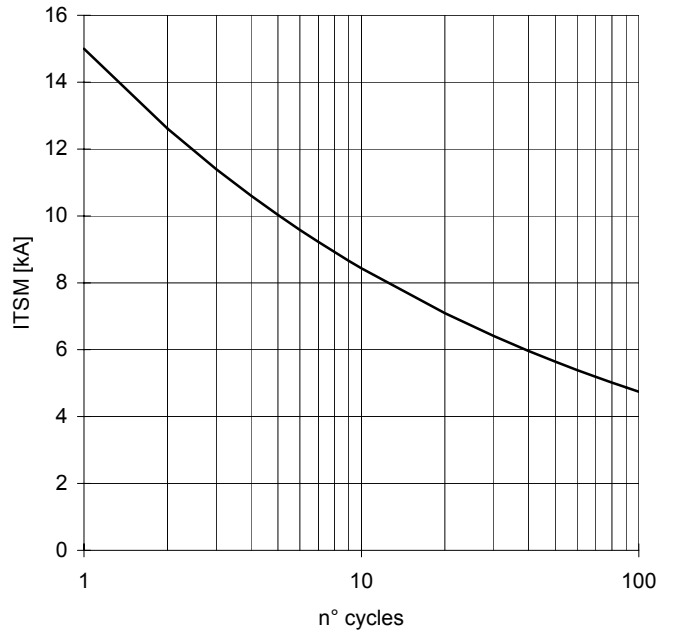
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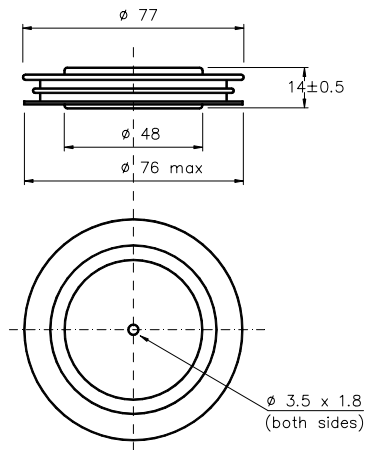
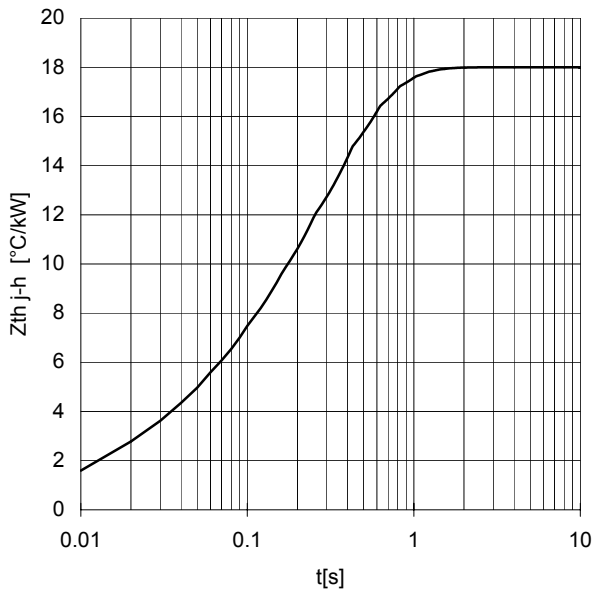
FORWARD CHARACTERISTIC
 $T_j = 140\text{ }^\circ\text{C}$



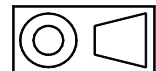
SURGE CHARACTERISTIC
 $T_j = 140\text{ }^\circ\text{C}$



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 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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