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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

lug 07 - ISSUE : 02

Symbol	Characteristic	Conditions	Tj [°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=VRRM	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^2t	I^2t	reapplied reverse voltage up to 50% VRSM		1125 x1E3	A^2s
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 VR = 100 V	140	1500	µC
I_{rr}	Peak reverse recovery current			650	A
Q_{rr}	Reverse recovery charge	I F = 1000 A di/dt= 1000 A/µs		2750	µC
I_{rr}	Peak reverse recovery current	VR = 350 V ±10%	140	1600	A
V_{pk}	Peak reverse recovery voltage	L= 1 µH ±10%		2600	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

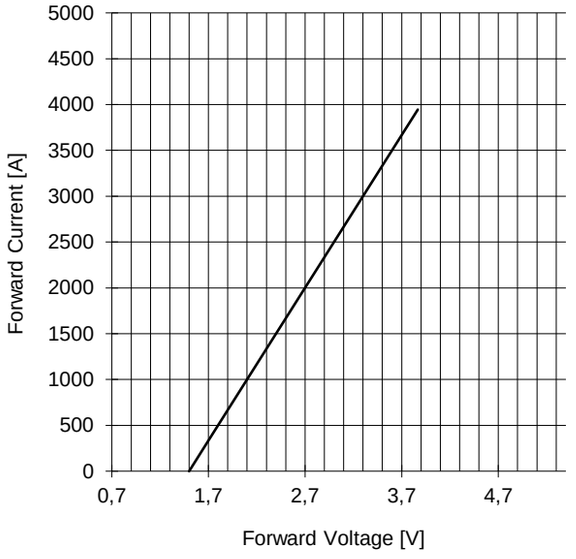
ORDERING INFORMATION : ARF670 S 45

standard specification — VRRM/100

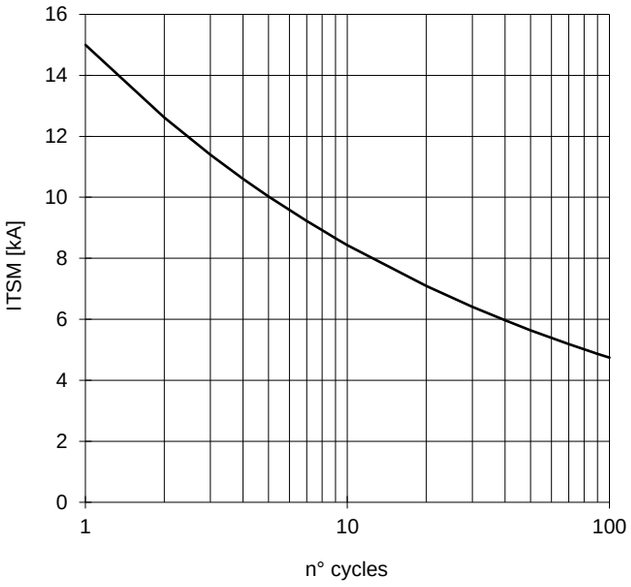
ARF670 FAST RECOVERY DIODE

TARGET SPECIFICATION lug 07 - ISSUE : 02

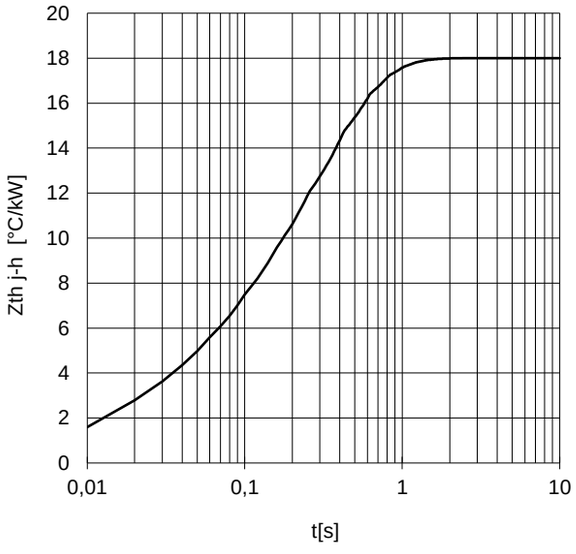
FORWARD CHARACTERISTIC
Tj = 140 °C

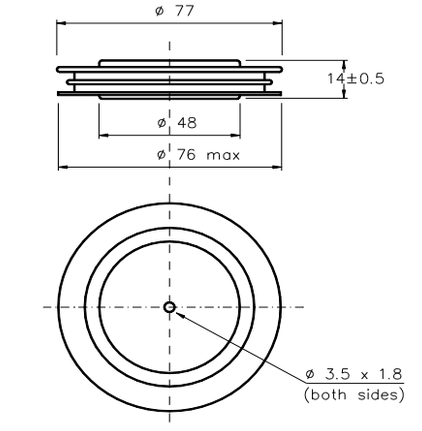


SURGE CHARACTERISTIC
Tj = 140 °C



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 (simbols over shaded background) and characteristics is reported.

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