

FAST RECOVERY DIODE

ARF671

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

Repetitive voltage up to
Mean forward current
Surge current

4500 V
790 A
15 kA

TARGET SPECIFICATION

giu 00 - ISSUE : 02

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	4500	V
V _{RSM}	Non-repetitive peak reverse voltage		125	4600	V
I _{RRM}	Repetitive peak reverse current	V=VRRM	125	80	mA
V _{DC LINK}	Permanent DC voltage		125	2800	V
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		790	A
I _{F(AV)}	Mean forward current	180° square,50 Hz,Th=55°C,double side cooled		820	A
I _{FSM}	Surge forward current	Sine wave, 10 ms	125	15	kA
I ² t	I ² t	reapplied reverse voltage up to 50% VRSM		1125 x1E3	A ² s
V _{FM}	Forward voltage	Forward current = 2500 A	125	4.65	V
V _{F(TO)}	Threshold voltage		125	1.90	V
r _F	Forward slope resistance		125	1.100	mohm
SWITCHING					
Q _{rr}	Reverse recovery charge	I _F = 1000 A di/dt= 250 A/μs VR = 100 V	125	1000	μC
I _{rr}	Peak reverse recovery current		125	525	A
t _{rr}	Reverse recovery time	I _F = 2100 A			μs
Q _{rr}	Reverse recovery charge	di/dt= 1000 A/μs VR = 1800 V		2500	μC
I _{rr}	Peak reverse recovery current		125	1400	A
s	Softness (s-factor), min				
E _{OFF}	Turn off energy dissipation				J
V _{FR}	Peak forward recovery	di/dt= 400 A/μs	125		V
MOUNTING					
R _{th(j-h)}	Thermal impedance	Junction to heatsink, double side cooled		21	°C/kW
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		6	°C/kW
T _j	Operating junction temperature			-30 / 125	°C
F	Mounting force			22.0 / 24.5	kN
	Mass			300	g

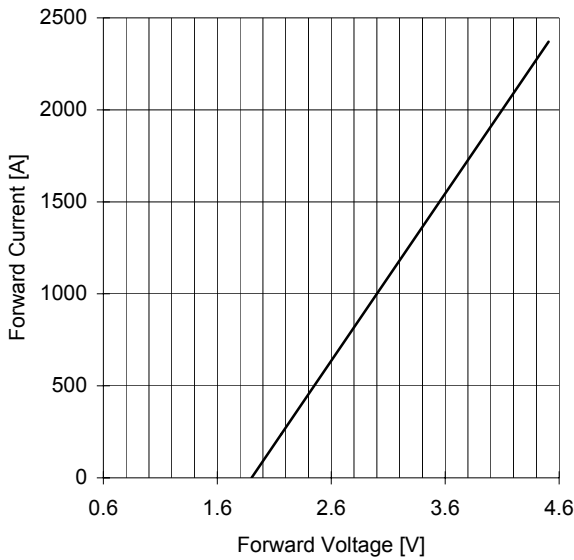
ORDERING INFORMATION : ARF671 S 45

standard specification VRRM/100

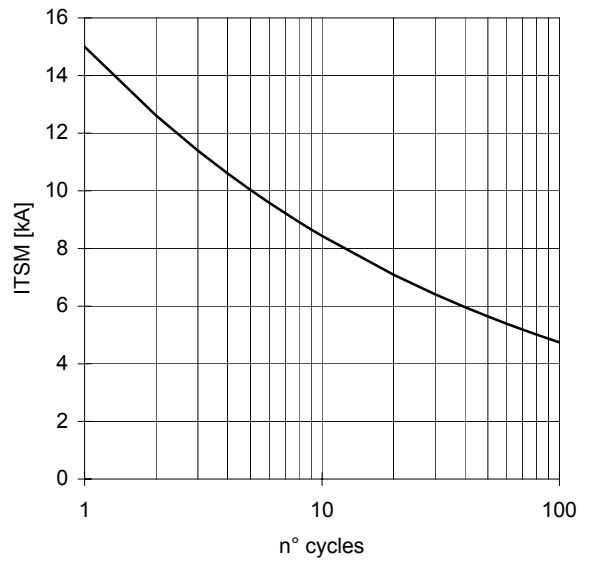
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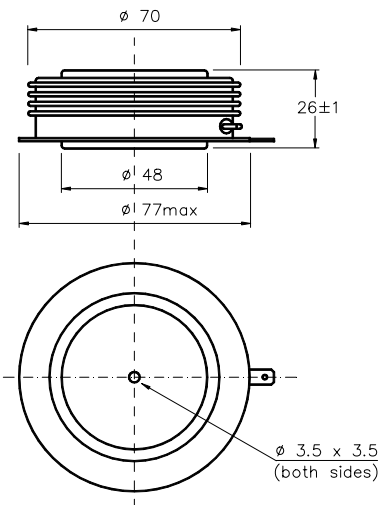
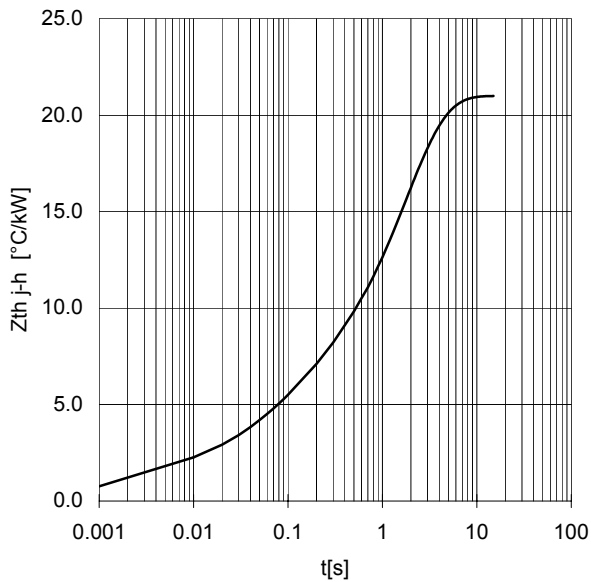
FORWARD CHARACTERISTIC
 $T_j = 125^\circ\text{C}$



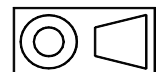
SURGE CHARACTERISTIC
 $T_j = 125^\circ\text{C}$



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 $< 2 \mu\text{m}$.

In the interest of product improvement ANSALDO 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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