ANSALDO

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Tx 270318 ANSUSE I -

FAST RECOVERY DIODE

ARF676

Repetitive voltage up to **4800 V**
Mean forward current **1515 A**
Surge current **18 kA**

FINAL SPECIFICATION

feb 97 - ISSUE : 03

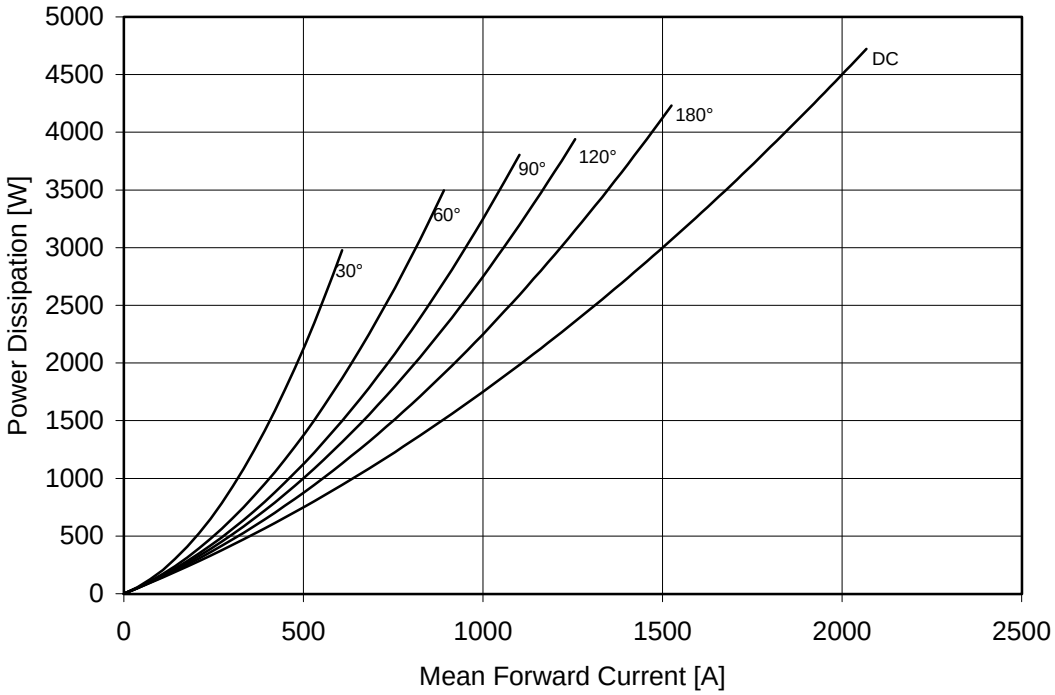
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		140	4800	V
V_{RSM}	Non-repetitive peak reverse voltage		140	4900	V
I_{RRM}	Repetitive peak reverse current	V=VRRM	140	100	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		1515	A
$I_{F(AV)}$	Mean forward current	180° square,50 Hz,Th=55°C,double side cooled		1535	A
I_{FSM}	Surge forward current	Sine wave, 10 ms reapplied reverse voltage up to 50% VRSM	140	18	kA
I^2t	I^2t			1620 x1E3	A^2s
V_{FM}	Forward voltage	Forward current 1570 A	25	2.4	V
$V_{F(TO)}$	Threshold voltage		140	1.25	V
r_F	Forward slope resistance		140	0.500	mohm
SWITCHING					
t_{rr}	Reverse recovery time	I F = 1000 A di/dt= 250 A/µs VR = 100 V	140	6	µs
Q_{rr}	Reverse recovery charge			2000	µC
I_{rr}	Peak reverse recovery current			800	A
s	Softness (s-factor), min			0.5	
V_{FR}	Peak forward recovery	di/dt= 400 A/µs	140	40	V
MOUNTING					
$R_{th(j-h)}$	Thermal impedance	Junction to heatsink, double side cooled		18	°C/kW
T_j	Operating junction temperature			-30 / 140	°C
F	Mounting force			22.0 / 24.5	kN
	Mass			300	g

ORDERING INFORMATION : ARF676 S 48

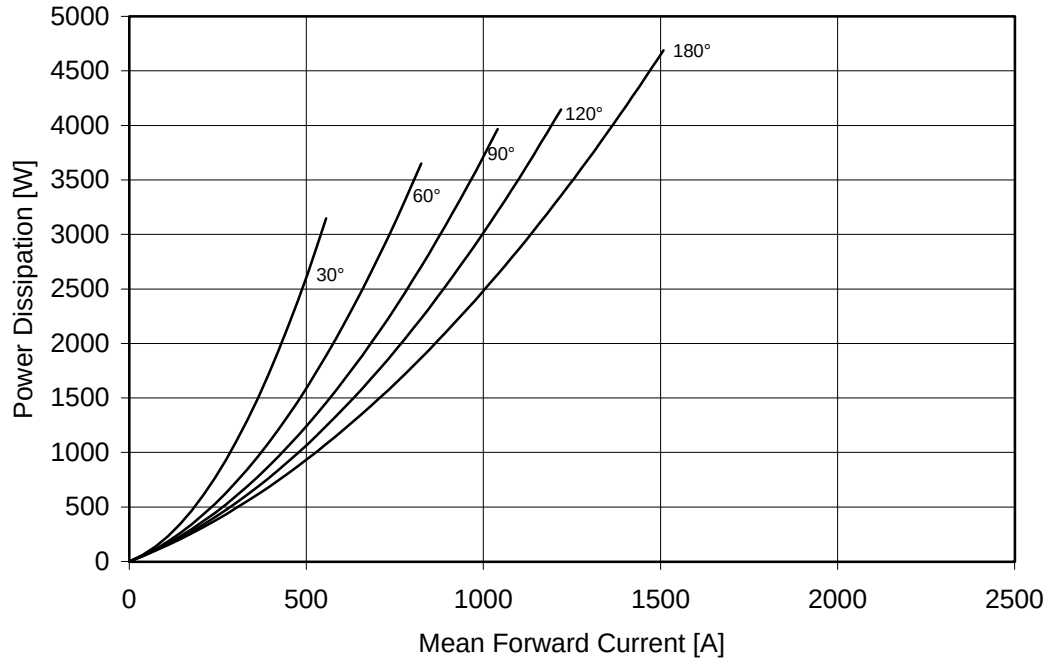
standard specification — VRRM/100

DISSIPATION CHARACTERISTICS

SQUARE WAVE



SINE WAVE



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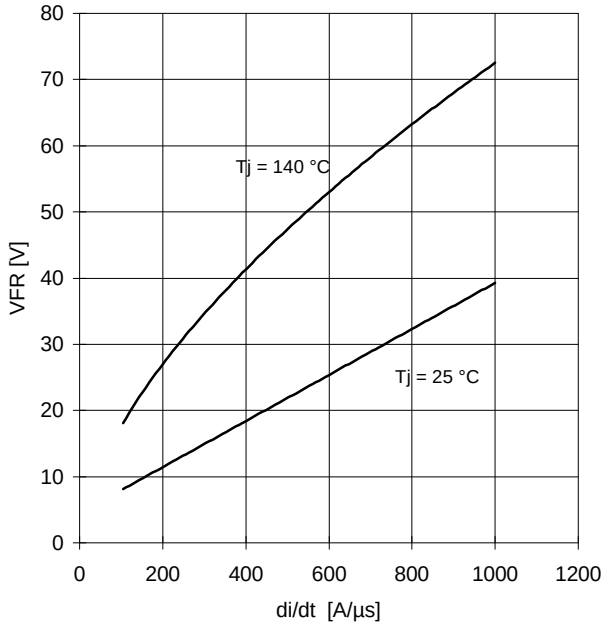
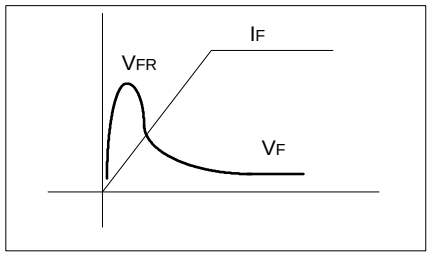
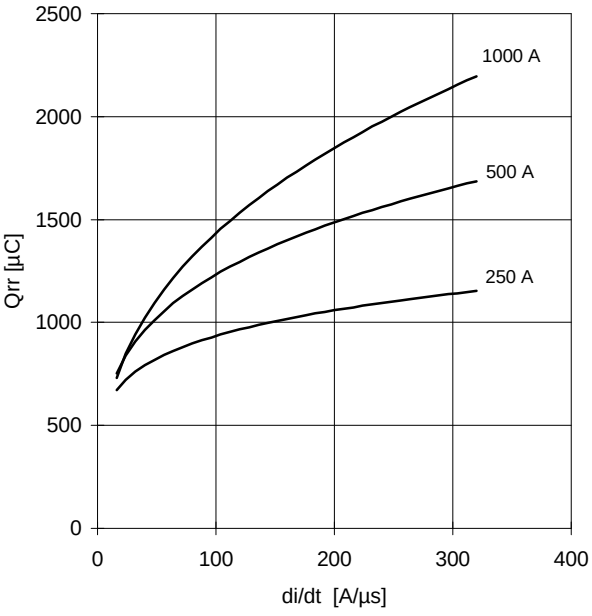
SWITCHING CHARACTERISTICS

FORWARD RECOVERY VOLTAGE

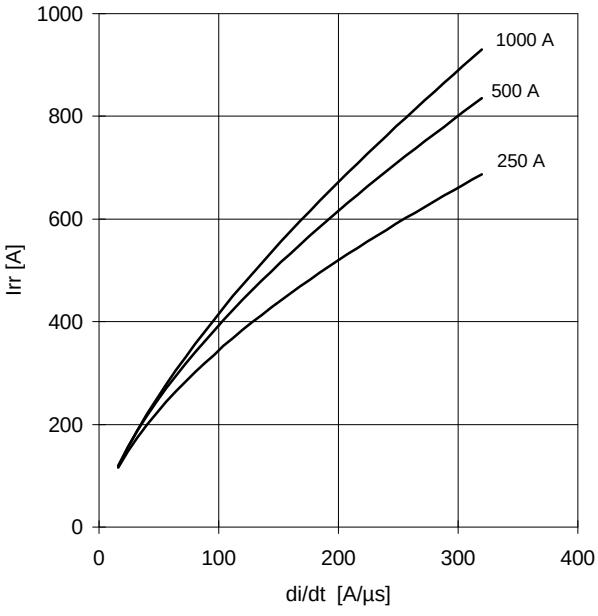




REVERSE RECOVERY CHARGE
Tj = 140 °C



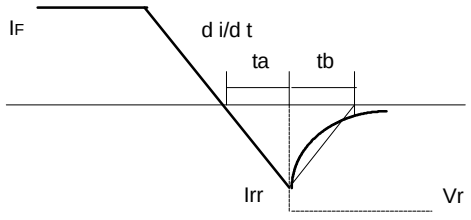
REVERSE RECOVERY CURRENT
Tj = 140 °C



ta = Irr / (di/dt) tb = trr - ta

Softness (s factor) s = tb / ta

Energy dissipation during recovery Er = Vr · (Qrr - Irr ·ta / 2)



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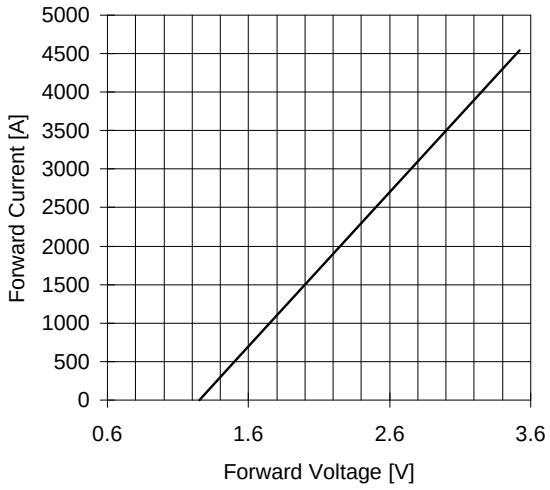
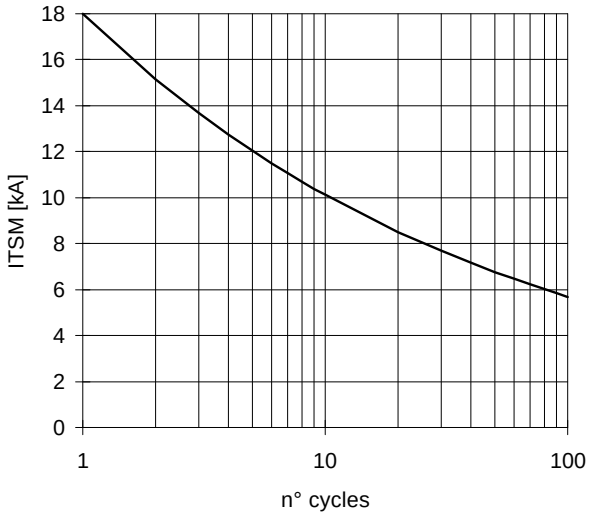
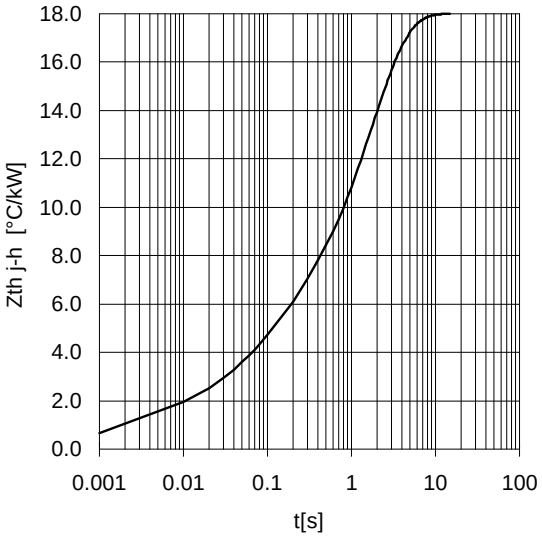
FORWARD CHARACTERISTIC
Tj = 140 °C

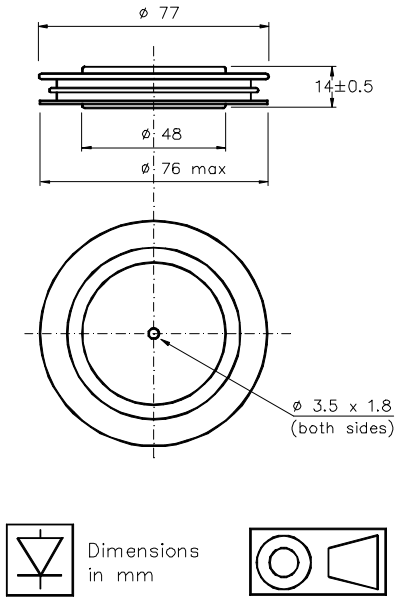


SURGE CHARACTERISTIC
Tj = 140 °C



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 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 (simbols over shaded background) and characteristics is reported.

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