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Tx 270318 ANSUSE I -**FAST RECOVERY DIODE****ARF565**

Repetitive voltage up to

3200 V

Mean forward current

1215 A

Surge current

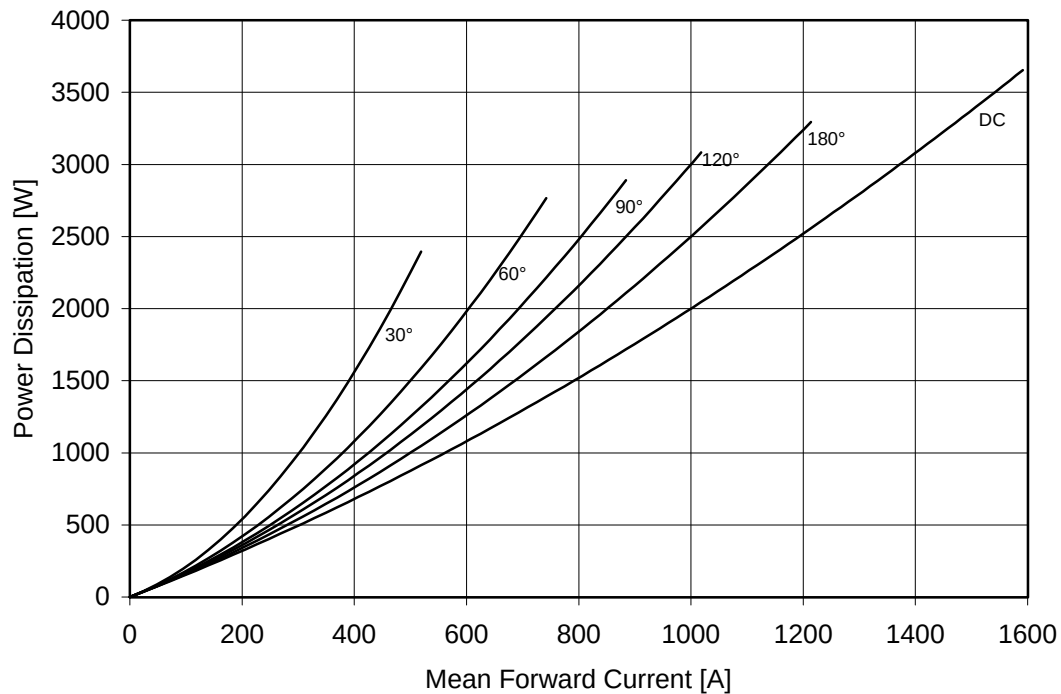
14 kA**FINAL SPECIFICATION**

nov 97 - ISSUE : 02

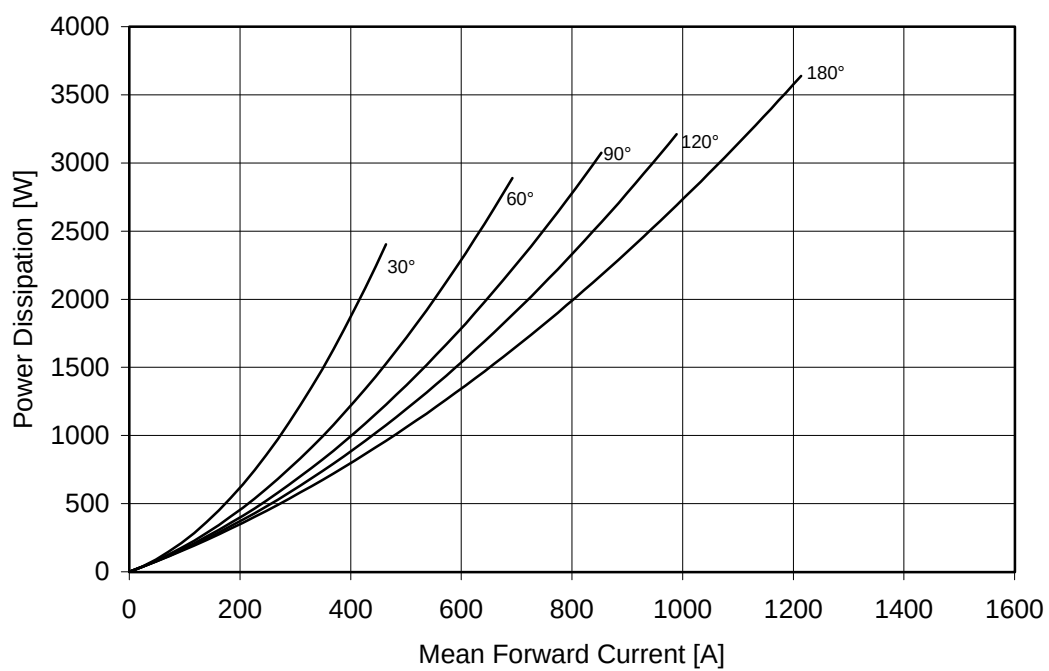
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	3200	V
V _{RSM}	Non-repetitive peak reverse voltage		150	3300	V
I _{RRM}	Repetitive peak reverse current	V=V _{RRM}	150	75	mA
CONDUCTING					
I _{F (AV)}	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		1215	A
I _{F (AV)}	Mean forward current	180° square,50 Hz,Th=55°C,double side cooled		1220	A
I _{FSM}	Surge forward current	Sine wave, 10 ms	150	14	kA
I ² t	I ² t	reapplied reverse voltage up to 50% VRSM		980 x1E3	A ² s
V _{FM}	Forward voltage	Forward current 2000 A	150	2.5	V
V _{F(TO)}	Threshold voltage		150	1.50	V
r _F	Forward slope resistance		150	0.500	mohm
SWITCHING					
t _{rr}	Reverse recovery time	I _F = 1000 A di/dt= 100 A/μs VR = 50 V	150	5.0	μs
Q _{rr}	Reverse recovery charge			1000	μC
I _{rr}	Peak reverse recovery current			420	A
s	Softness (s-factor), min			0.5	
V _{FR}	Peak forward recovery	di/dt= 100 A/μs	150	40	V
MOUNTING					
R _{th(j-h)}	Thermal impedance	Junction to heatsink, double side cooled		26	°C/kW
T _j	Operating junction temperature			-30 / 150	°C
F	Mounting force			18.0 / 20.0	kN
	Mass			500	g
ORDERING INFORMATION : ARF565 S 32 standard specification ☐ ☐ VRRM/100					

DISSIPATION CHARACTERISTICS

SQUARE WAVE

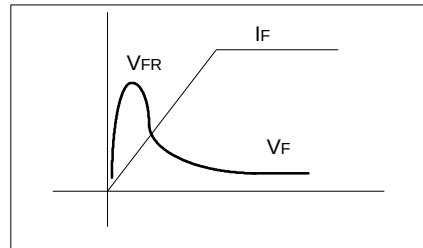
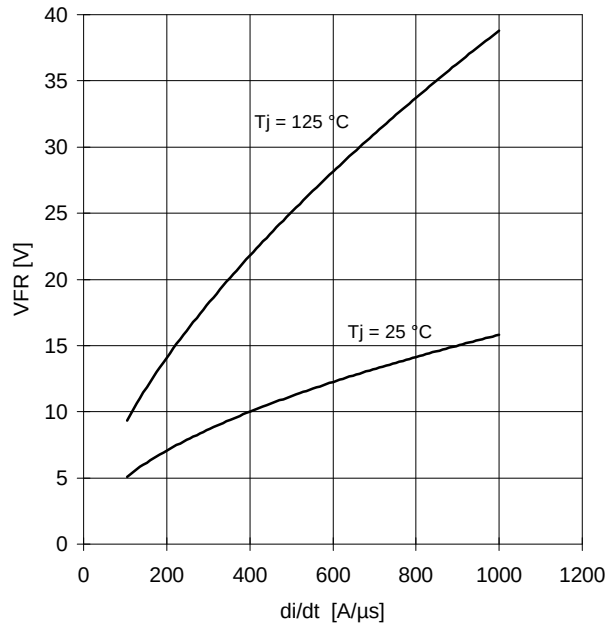


SINE WAVE



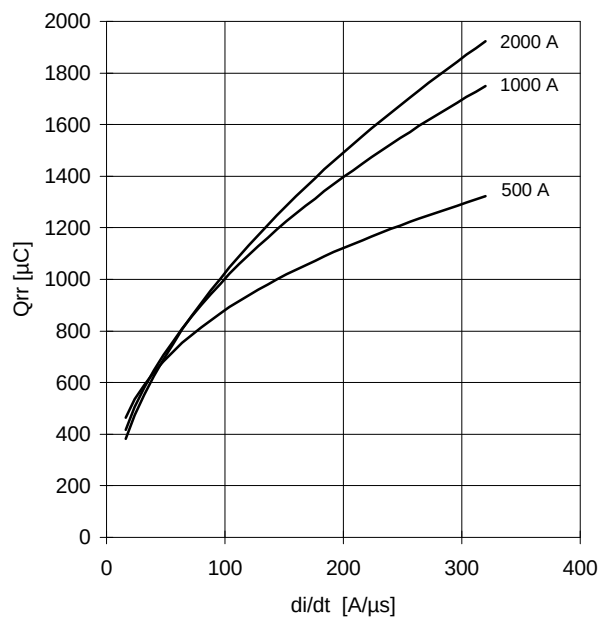
SWITCHING CHARACTERISTICS

FORWARD RECOVERY VOLTAGE



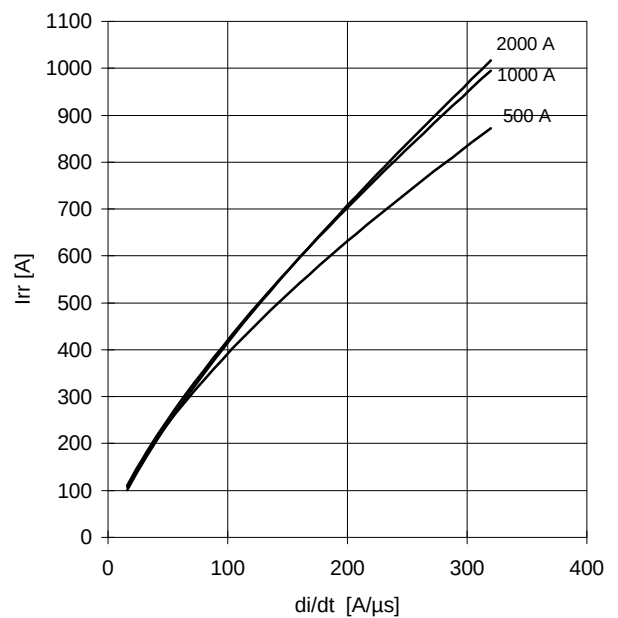
REVERSE RECOVERY CHARGE

Tj = 125 °C



REVERSE RECOVERY CURRENT

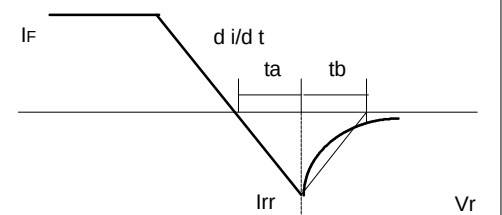
Tj = 125 °C



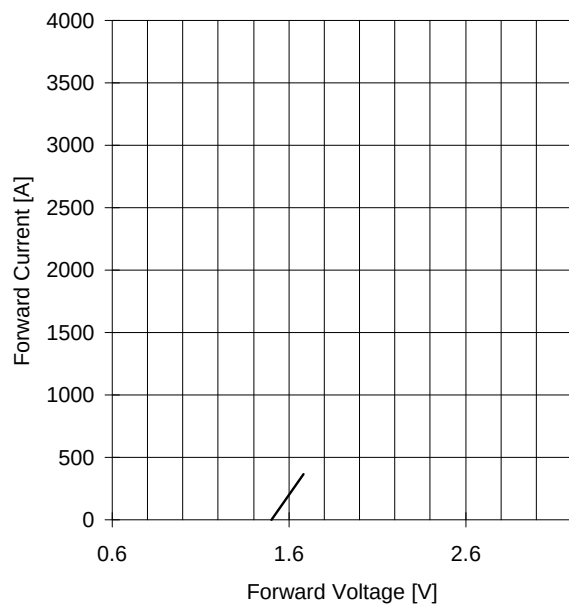
$$t_a = I_{rr} / (di/dt) \quad t_b = t_{rr} - t_a$$

$$\text{Softness (s factor)} \quad s = t_b / t_a$$

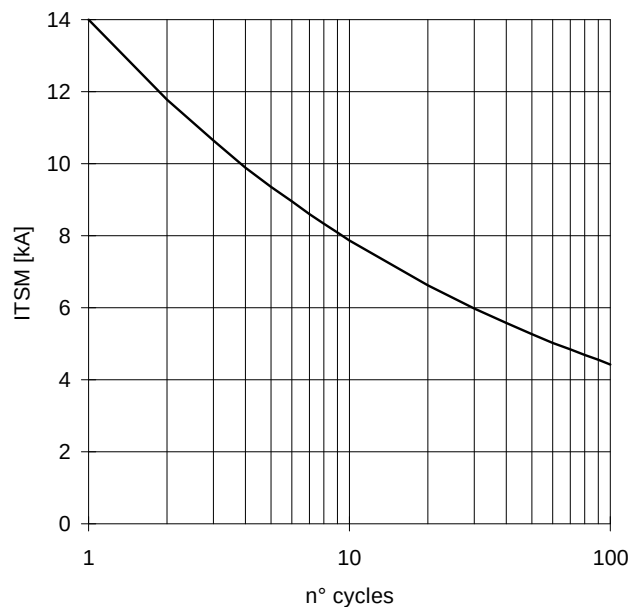
$$\text{Energy dissipation during recovery } E_r = V_r \cdot (Q_{rr} - I_{rr} \cdot t_a / 2)$$



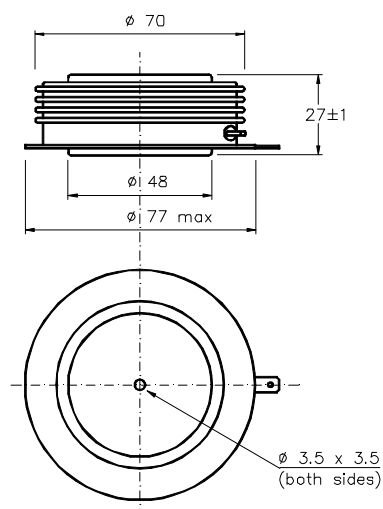
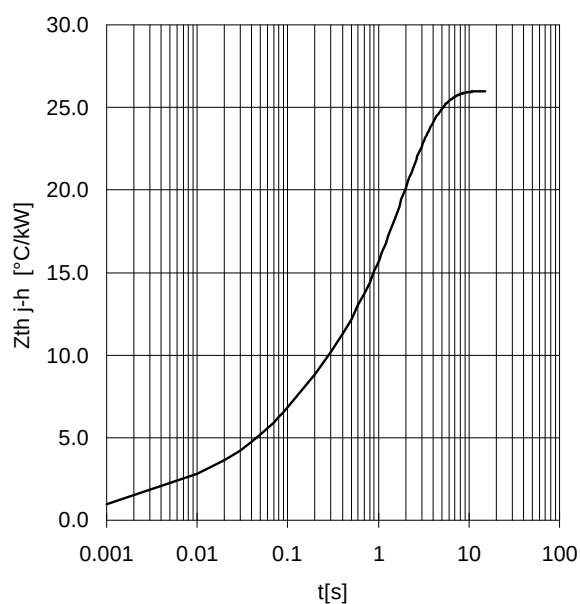
FORWARD CHARACTERISTIC
T_j = 150 °C



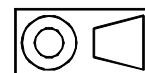
SURGE CHARACTERISTIC
T_j = 150 °C



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 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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