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## FAST RECOVERY DIODE

# ARF794LT

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

Repetitive voltage up to  
Mean forward current  
Surge current

**6000 V**  
**1160 A**  
**20 kA**

### TARGET SPECIFICATION

mar 03 - ISSUE : 2

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		125	6000	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		125	6100	V
I <sub>RRM</sub>	Repetitive peak reverse current	V=VRRM	125		mA
V <sub>DC LINK</sub>	Permanent DC voltage		125	3200	V
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, Th=55°C, double side cooled		1160	A
I <sub>F(AV)</sub>	Mean forward current	180° square, 50 Hz, Th=55°C, double side cooled		1220	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms	125	20	kA
I <sup>2</sup> t	I <sup>2</sup> t	reapplied reverse voltage up to 50% VRSM		2000 x1E3	A <sup>2</sup> s
V <sub>FM</sub>	Forward voltage	Forward current = 1570 A	25	5.6	V
V <sub>F(TO)</sub>	Threshold voltage		125	2.10	V
r <sub>F</sub>	Forward slope resistance		125	1.40	mohm
<b>SWITCHING</b>					
Q <sub>rr</sub>	Reverse recovery charge	I <sub>F</sub> = 1000 A    di/dt= 250 A/μs VR = 100 V	125		μC
I <sub>rr</sub>	Peak reverse recovery current		125		A
t <sub>rr</sub>	Reverse recovery time	I <sub>F</sub> = 1000 A			μs
Q <sub>rr</sub>	Reverse recovery charge	di/dt= 500 A/μs VR = V	125	4000	μC
I <sub>rr</sub>	Peak reverse recovery current		125	1600	A
s	Softness (s-factor), min				
E <sub>OFF</sub>	Turn off energy dissipation				J
V <sub>FR</sub>	Peak forward recovery	di/dt= 500 A/μs	125		V
<b>MOUNTING</b>					
R <sub>th(j-h)</sub>	Thermal impedance	Junction to heatsink, double side cooled		9.5	°C/kW
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		2	°C/kW
T <sub>j</sub>	Operating junction temperature			-30 / 125	°C
F	Mounting force			46.0 / 54.0	kN
	Mass			1150	g

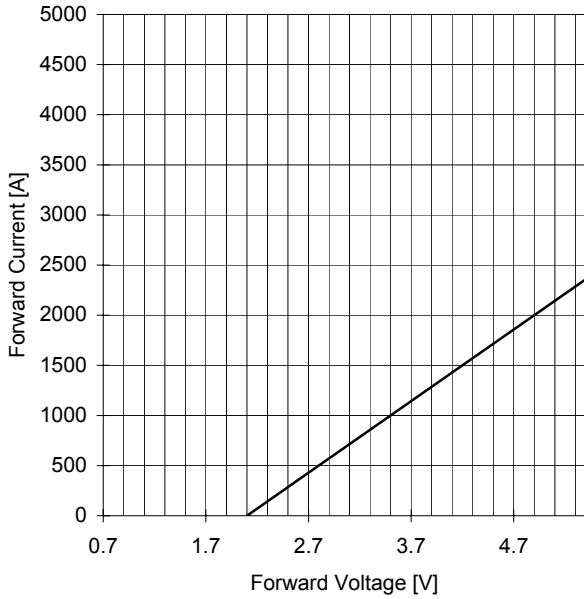
### ORDERING INFORMATION : ARF794LT S 60

standard specification   VRRM/100

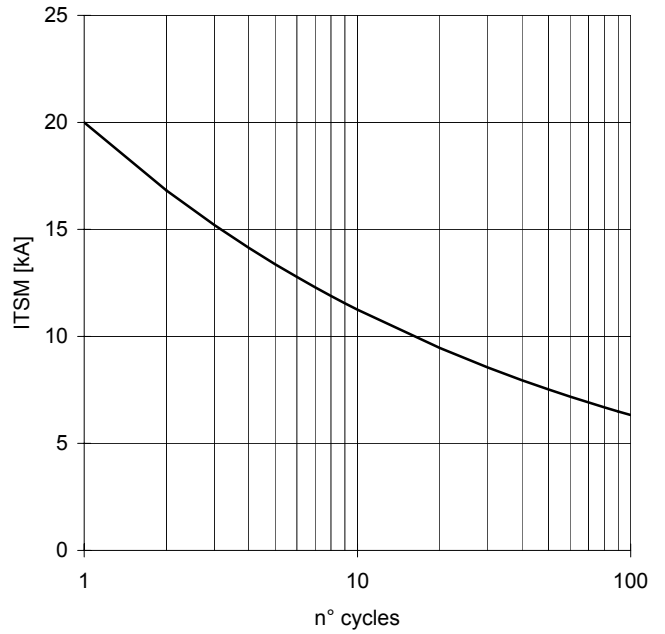
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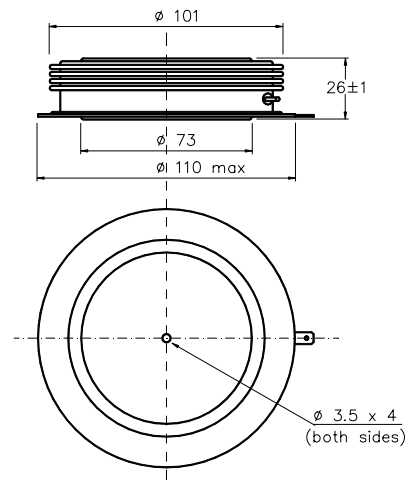
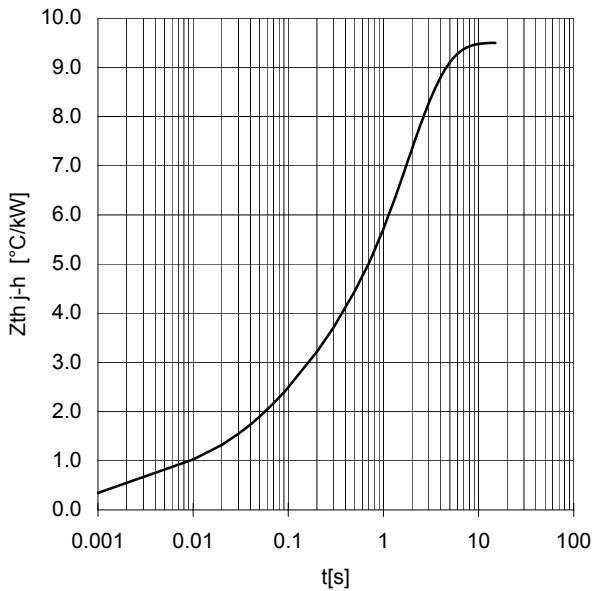
FORWARD CHARACTERISTIC  
 $T_j = 125^\circ\text{C}$



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



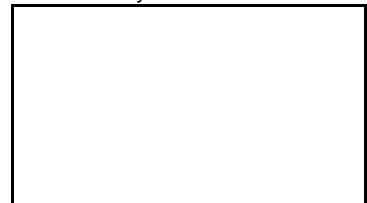
TRANSIENT THERMAL IMPEDANCE  
DOUBLE SIDE COOLED



Dimensions  
in mm



Distributed by



All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink, surfaces with flatness  $< 0.03 \text{ mm}$  and roughness  $< 2 \mu\text{m}$ .

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.