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FAST RECOVERY DIODE

ARF794HT

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

Repetitive voltage up to
Mean forward current
Surge current

6000 V
1060 A
20 kA

TARGET SPECIFICATION

mar 03 - ISSUE : 2

| Symbol | Characteristic | Conditions | T _j [°C] | Value | Unit |
|----------------------|-------------------------------------|------------------------------------------------------------|------------------------|-------------|------------------|
| BLOCKING | | | | | |
| V _{RRM} | Repetitive peak reverse voltage | | 125 | 6000 | V |
| V _{RSM} | Non-repetitive peak reverse voltage | | 125 | 6100 | V |
| I _{RRM} | Repetitive peak reverse current | V=VRRM | 125 | | mA |
| V _{DC LINK} | Permanent DC voltage | | 125 | 3200 | V |
| CONDUCTING | | | | | |
| I _{F(AV)} | Mean forward current | 180° sin ,50 Hz, Th=55°C, double side cooled | | 1060 | A |
| I _{F(AV)} | Mean forward current | 180° square, 50 Hz, Th=55°C, double side cooled | | 1110 | A |
| I _{FSM} | Surge forward current | Sine wave, 10 ms | 125 | 20 | kA |
| I ² t | I ² t | reapplied reverse voltage up to 50% VRSM | | 2000 x1E3 | A ² s |
| V _{FM} | Forward voltage | Forward current = 1570 A | 25 | 5.6 | V |
| V _{F(TO)} | Threshold voltage | | 125 | 2.10 | V |
| r _F | Forward slope resistance | | 125 | 1.40 | mohm |
| SWITCHING | | | | | |
| Q _{rr} | Reverse recovery charge | I _F = 1000 A di/dt= 250 A/μs VR = 100 V | 125 | | μC |
| I _{rr} | Peak reverse recovery current | | 125 | | A |
| t _{rr} | Reverse recovery time | I _F = 1000 A | | | μs |
| Q _{rr} | Reverse recovery charge | di/dt= 500 A/μs VR = V | 125 | 4000 | μC |
| I _{rr} | Peak reverse recovery current | | 125 | 1600 | A |
| s | Softness (s-factor), min | | | | |
| E _{OFF} | Turn off energy dissipation | | | | J |
| V _{FR} | Peak forward recovery | di/dt= 500 A/μs | 125 | | V |
| MOUNTING | | | | | |
| R _{th(j-h)} | Thermal impedance | Junction to heatsink, double side cooled | | 11 | °C/kW |
| R _{th(c-h)} | Thermal impedance | Case to heatsink, double side cooled | | 2 | °C/kW |
| T _j | Operating junction temperature | | | -30 / 125 | °C |
| F | Mounting force | | | 46.0 / 54.0 | kN |
| | Mass | | | 1700 | g |

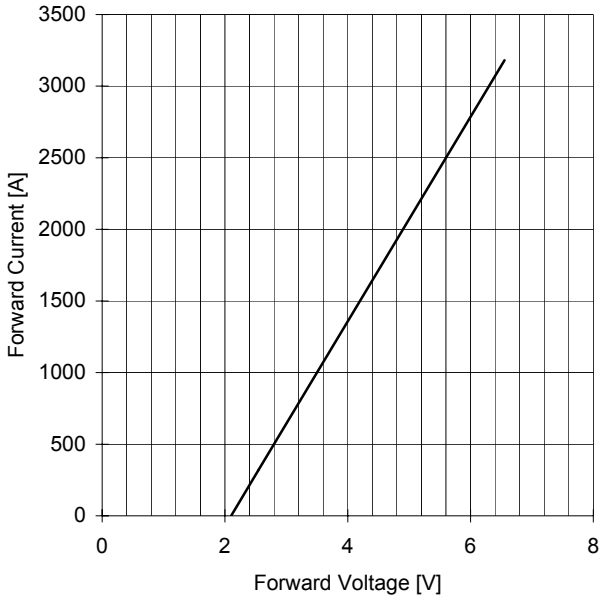
ORDERING INFORMATION : ARF794HT S 60

standard specification VRRM/100

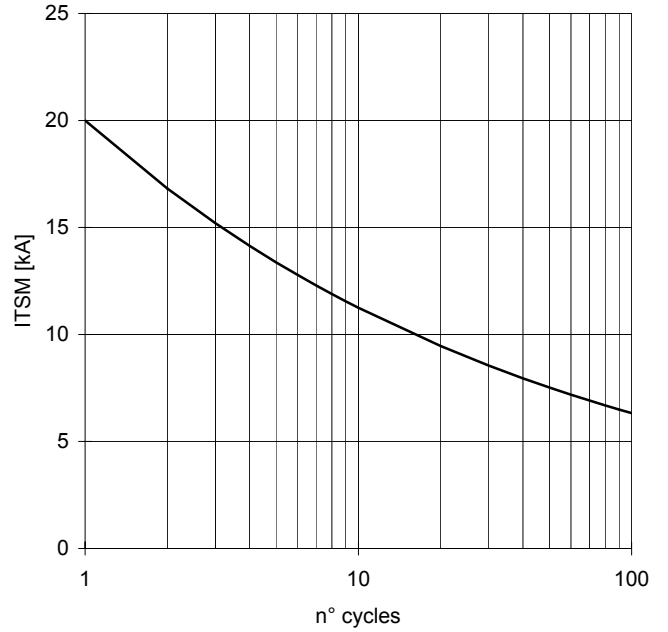
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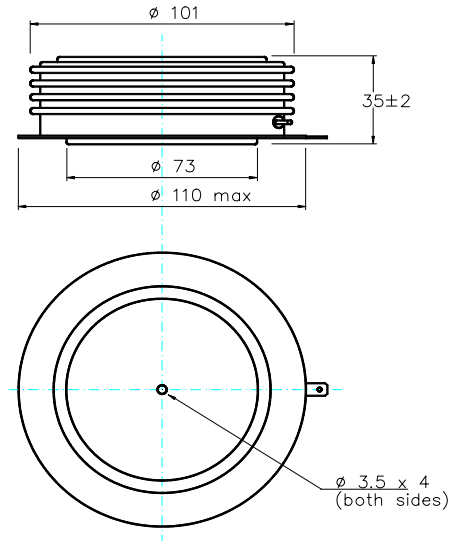
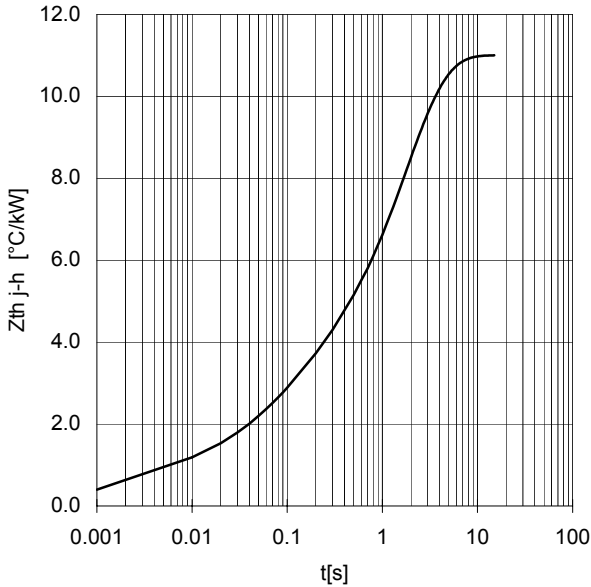
FORWARD CHARACTERISTIC
 $T_j = 125\text{ }^\circ\text{C}$



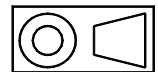
SURGE CHARACTERISTIC
 $T_j = 125\text{ }^\circ\text{C}$



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 $< .03 \text{ mm}$ and roughness $< 2 \text{ }\mu\text{m}$.
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.

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