



POSEICO SPA
POwer SEMiconductors Italian COrporation

POSEICO SPA
Via N. Lorenzi 8, 16152 Genova - ITALY
Tel. +39 010 6556234 - Fax +39 010 6557519
Sales Office:
Tel. +39 010 6556775 - Fax +39 010 6442510

FAST RECOVERY DIODE

ARF664

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

Repetitive voltage up to
Mean forward current
Surge current

3300 V
1000 A
18 kA

TARGET SPECIFICATION

gen 03 - ISSUE : 1

| Symbol | Characteristic | Conditions | T _j [°C] | Value | Unit |
|----------------------|-------------------------------------|--|------------------------|-------------|------------------|
| BLOCKING | | | | | |
| V _{RRM} | Repetitive peak reverse voltage | | 125 | 3300 | V |
| V _{RSM} | Non-repetitive peak reverse voltage | | 125 | 3400 | V |
| I _{RRM} | Repetitive peak reverse current | V=V _{RRM} | 125 | | mA |
| V _{DC LINK} | Permanent DC voltage | | 125 | 1500 | V |
| CONDUCTING | | | | | |
| I _{F(AV)} | Mean forward current | 180° sin ,50 Hz, Th=55°C, double side cooled | | 1000 | A |
| I _{F(AV)} | Mean forward current | 180° square, 50 Hz, Th=55°C, double side cooled | | 1025 | A |
| I _{FSM} | Surge forward current | Sine wave, 10 ms reapplied reverse voltage up to 50% V _{RSM} | 125 | 18 | kA |
| I ² t | I ² t | | | 1620 x1E3 | A ² s |
| V _{FM} | Forward voltage | Forward current = 1570 A | 25 | 3.55 | V |
| V _{F(TO)} | Threshold voltage | | 125 | 1.80 | V |
| r _F | Forward slope resistance | | 125 | 0.70 | mohm |
| SWITCHING | | | | | |
| Q _{rr} | Reverse recovery charge | I _F = 1000 A di/dt= 250 A/μs V _R = 100 V | 125 | | μC |
| I _{rr} | Peak reverse recovery current | | 125 | | A |
| t _{rr} | Reverse recovery time | I _F = 1100 A | | | μs |
| Q _{rr} | Reverse recovery charge | di/dt= 500 A/μs V _R = V | 125 | 2000 | μC |
| I _{rr} | Peak reverse recovery current | | | 1100 | 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 | | 21 | °C/kW |
| R _{th(c-h)} | Thermal impedance | Case to heatsink, double side cooled | | 6 | °C/kW |
| T _j | Operating junction temperature | | | 00 / 125 | °C |
| F | Mounting force | | | 22.0 / 24.5 | kN |
| | Mass | | | 520 | g |

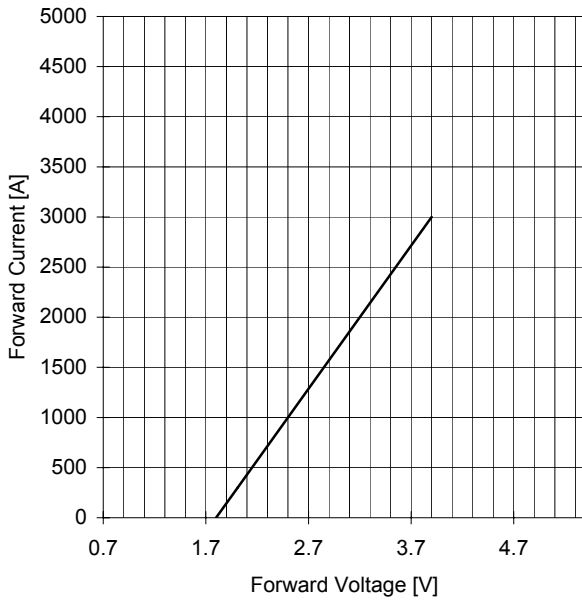
ORDERING INFORMATION : ARF664 S 33

standard specification VRRM/100

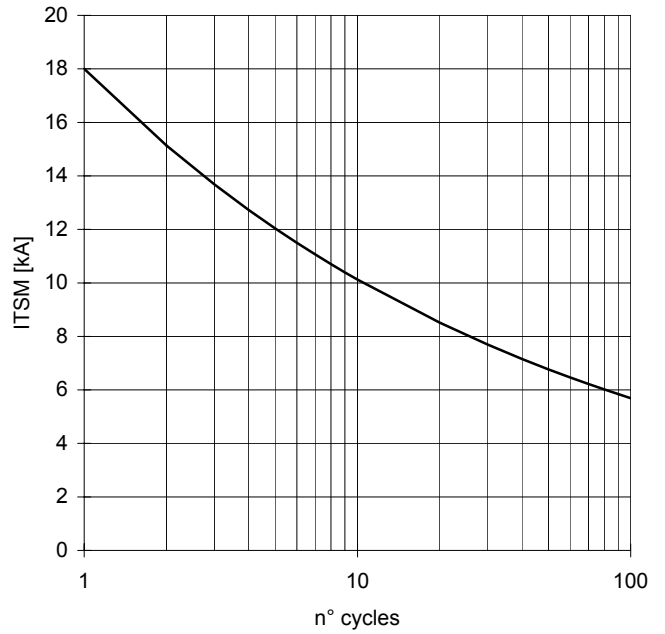
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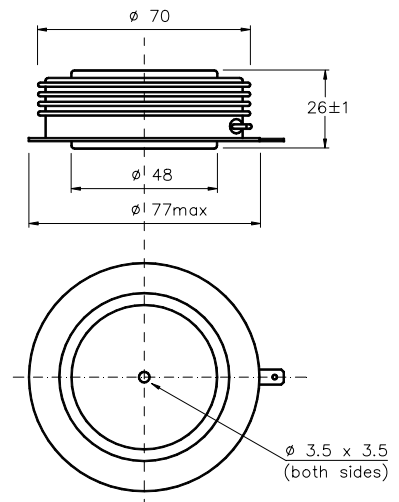
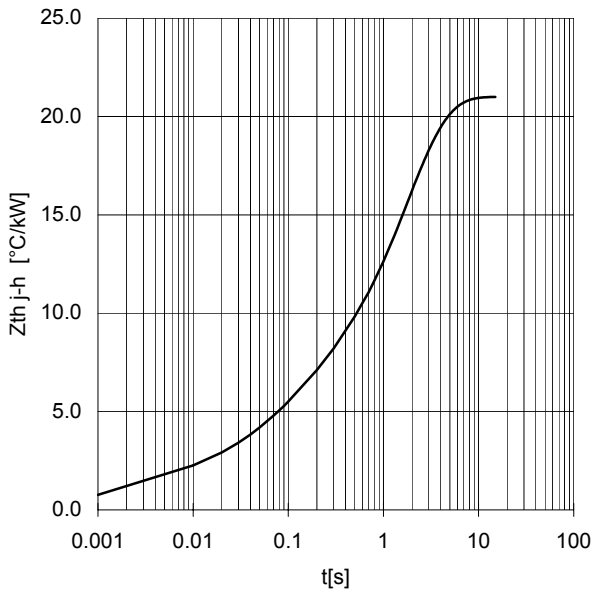
FORWARD CHARACTERISTIC
 $T_j = 125\text{ }^\circ\text{C}$



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 $< 0.03\text{ mm}$ 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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