

## Features

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Threaded stud

## Applications

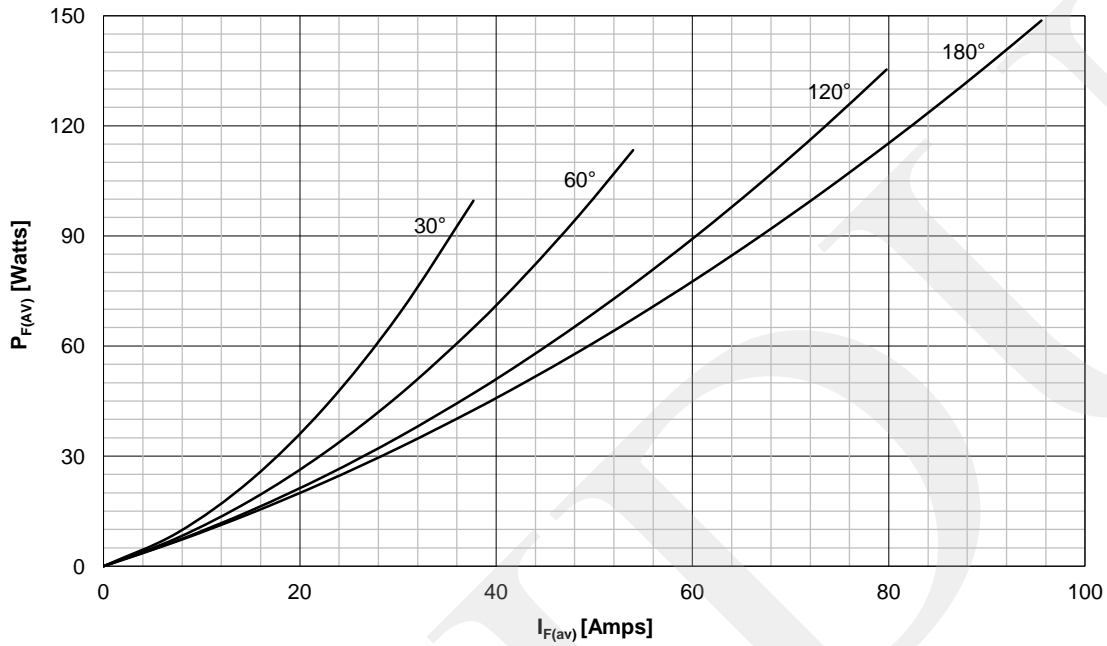
- Power Supplies
- Free-wheeling Diodes
- Uncontrolled Rectifiers

## Key Parameters

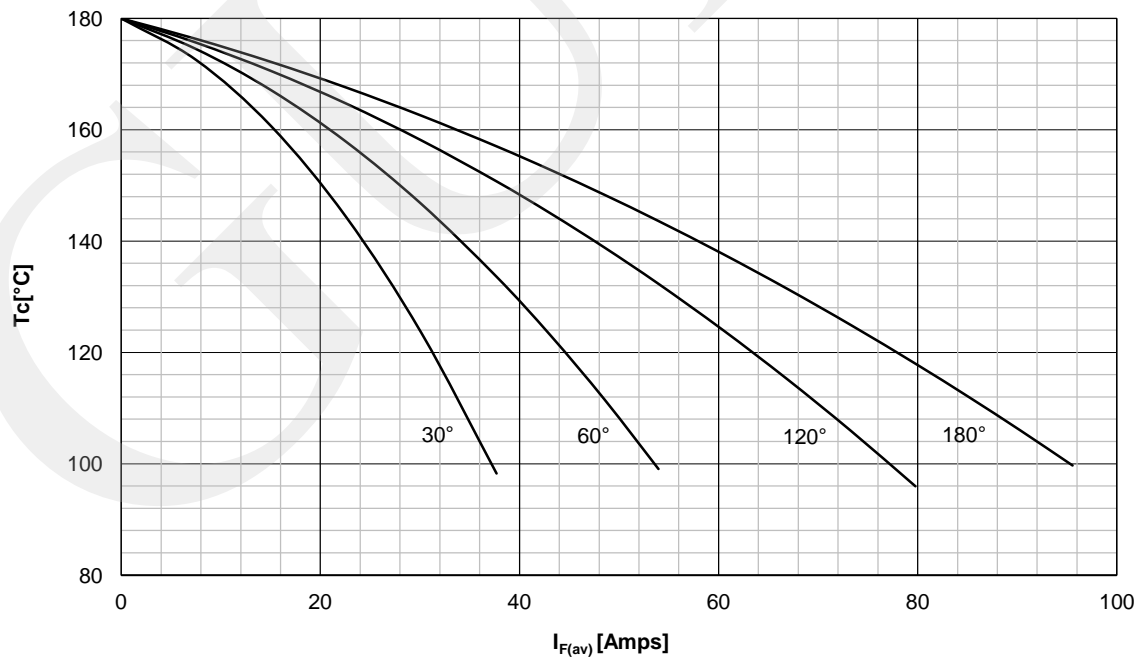
|             |         |
|-------------|---------|
| $V_{RRM}$   | = 1600V |
| $I_{F(AV)}$ | = 95A   |
| $I_{FSM}$   | = 1150A |
| $V_{F(TO)}$ | = 0.85V |
| $r_F$       | = 3.0mΩ |

| Symbol            | Characteristic                  | Conditions  | T <sub>J</sub> [°C] | Value        | Unit             |
|-------------------|---------------------------------|---|---------------------|--------------|------------------|
| <b>BLOCKING</b>   |                                 |   |                     |              |                  |
| $V_{RRM}$         | Repetitive peak reverse voltage |   | 180                 | 200 - 1600   | V                |
| $I_{RRM}$         | Repetitive peak reverse current | $V = V_{RRM}$   | 180                 | 10           | mA               |
| <b>CONDUCTING</b> |                                 |   |                     |              |                  |
| $I_{F(AV)}$       | Mean Forward current            | 180° sin ,50 Hz, T <sub>c</sub> =100°C<br>T <sub>c</sub> =125°C |                     | 95<br>70     | A                |
| $I_{FRMS}$        | RMS Forward current             |   |                     | 150          | A                |
| $I_{FSM}$         | Surge Forward current           | Sine wave, 10 ms<br>Without reverse voltage                     | 25                  | 1150         | A                |
|                   |                                 |   | 180                 | 1000         | A                |
| $I^2 t$           | $I^2 t$                         | Sine wave, 10 ms<br>Without reverse voltage                     | 25                  | 6612         | A <sup>2</sup> s |
|                   |                                 |   | 180                 | 5000         | A <sup>2</sup> s |
| $V_F$             | Peak Forward voltage            | Peak forward current = 210A                                     | 180                 | 1.50         | V                |
| $V_{F(TO)}$       | Threshold voltage               |   | 180                 | 0.85         | V                |
| $r_F$             | Forward slope resistance        |   | 180                 | 3.0          | mΩ               |
| <b>MOUNTING</b>   |                                 |   |                     |              |                  |
| $R_{th(j-c)}$     | Thermal impedance, sin 180°     | Junction to case  |                     | 0.54         | °C/W             |
| $R_{th(c-h)}$     | Thermal impedance               | Case to heatsink  |                     | 0.20         | °C/W             |
| $T_j$             | Max. junction temperature       |   |                     | 180          | °C               |
| $T_{stg}$         | Storage temperature             |   |                     | -40 .... 180 | °C               |
| M                 | Mounting Torque                 |   |                     | 4            | NM               |
| W                 | Weight (Approx.)                |   |                     | 25           | gm               |

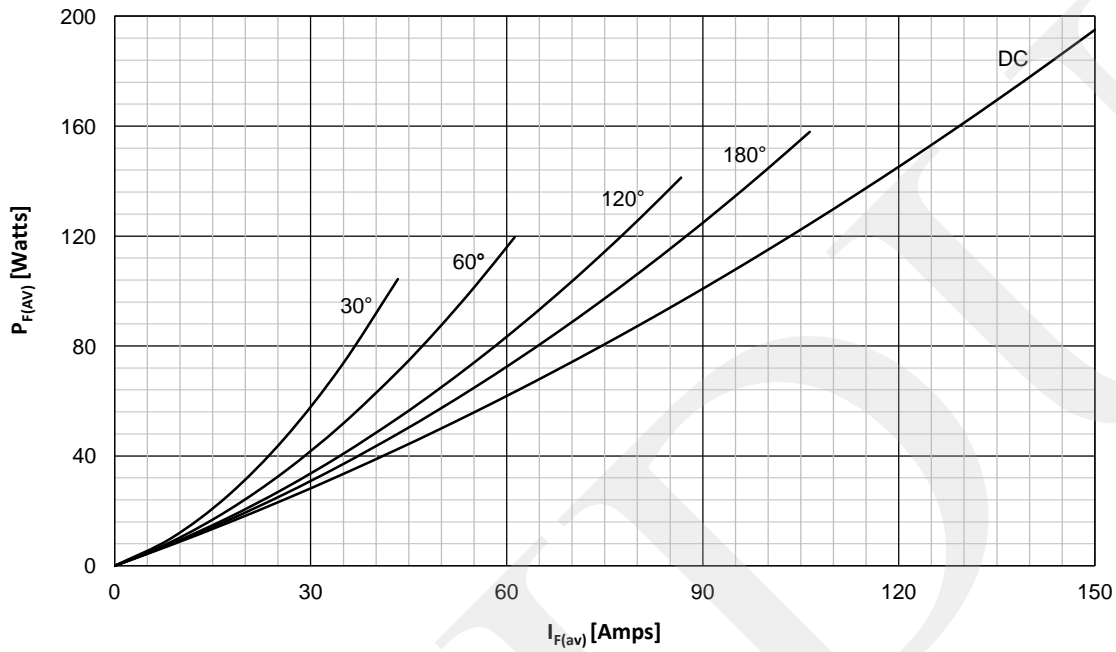
DISSIPATION CHARACTERISTICS  
SINE WAVE



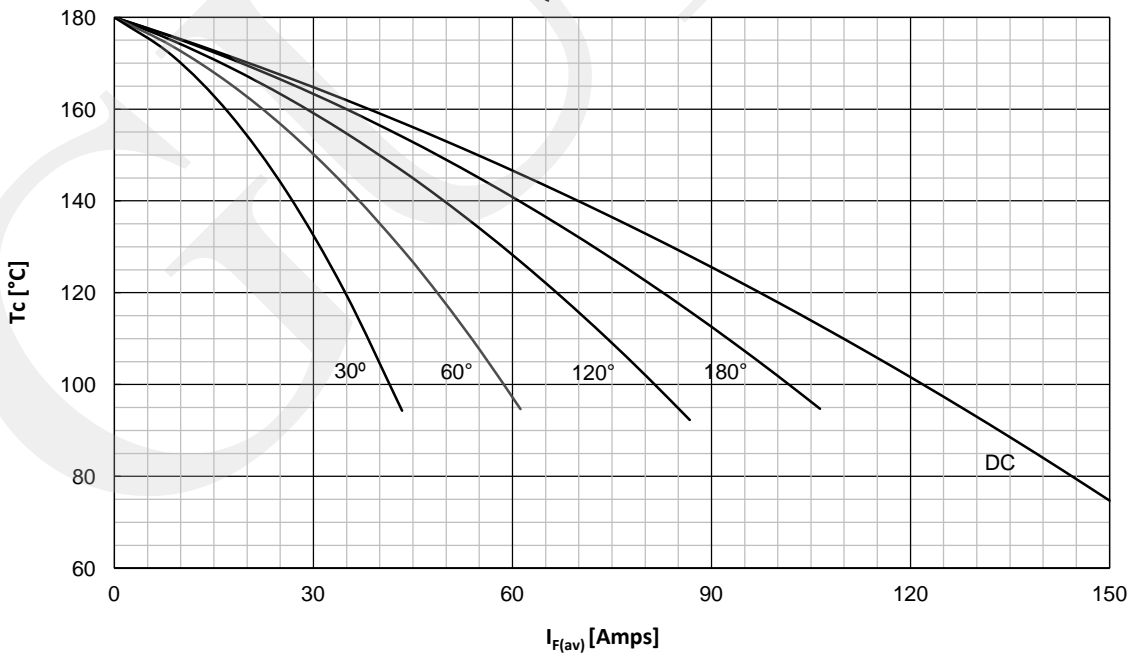
FORWARD CURRENT DERATING CURVE  
SINE WAVE



DISSIPATION CHARACTERISTICS  
SQUARE WAVE

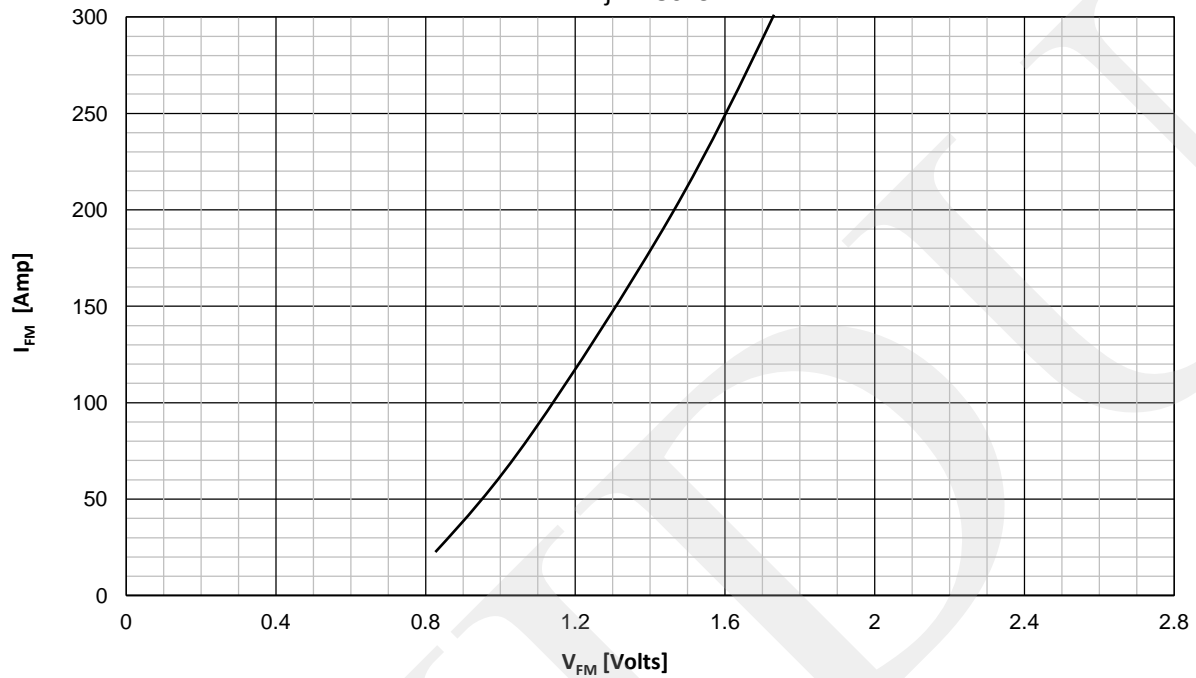


FORWARD CURRENT DERATING CURVE  
SQUARE WAVE

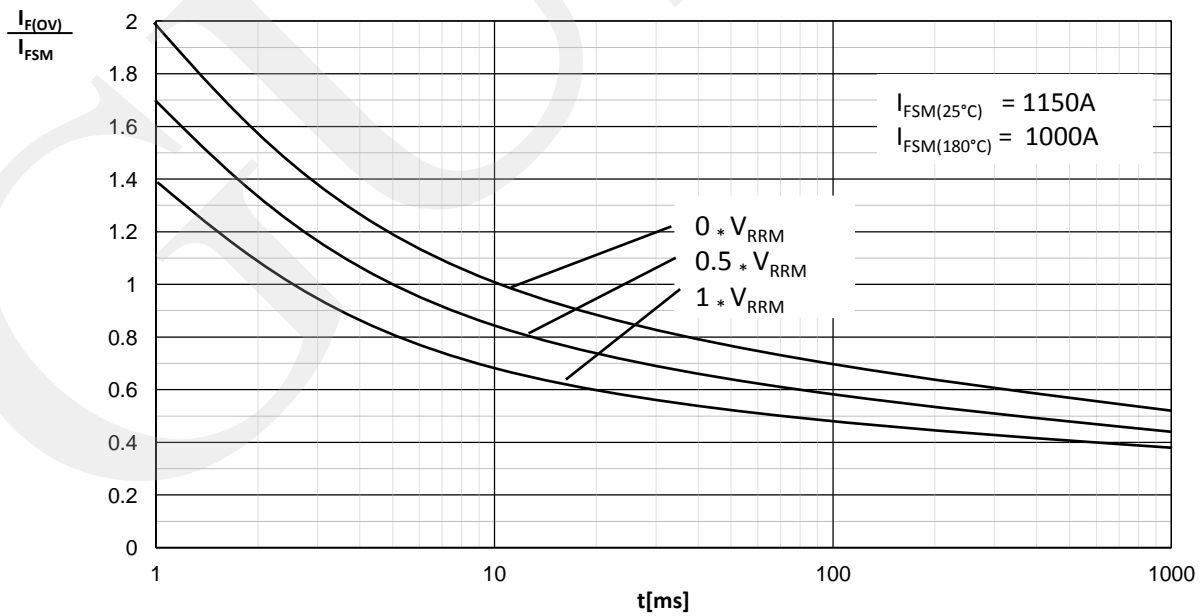


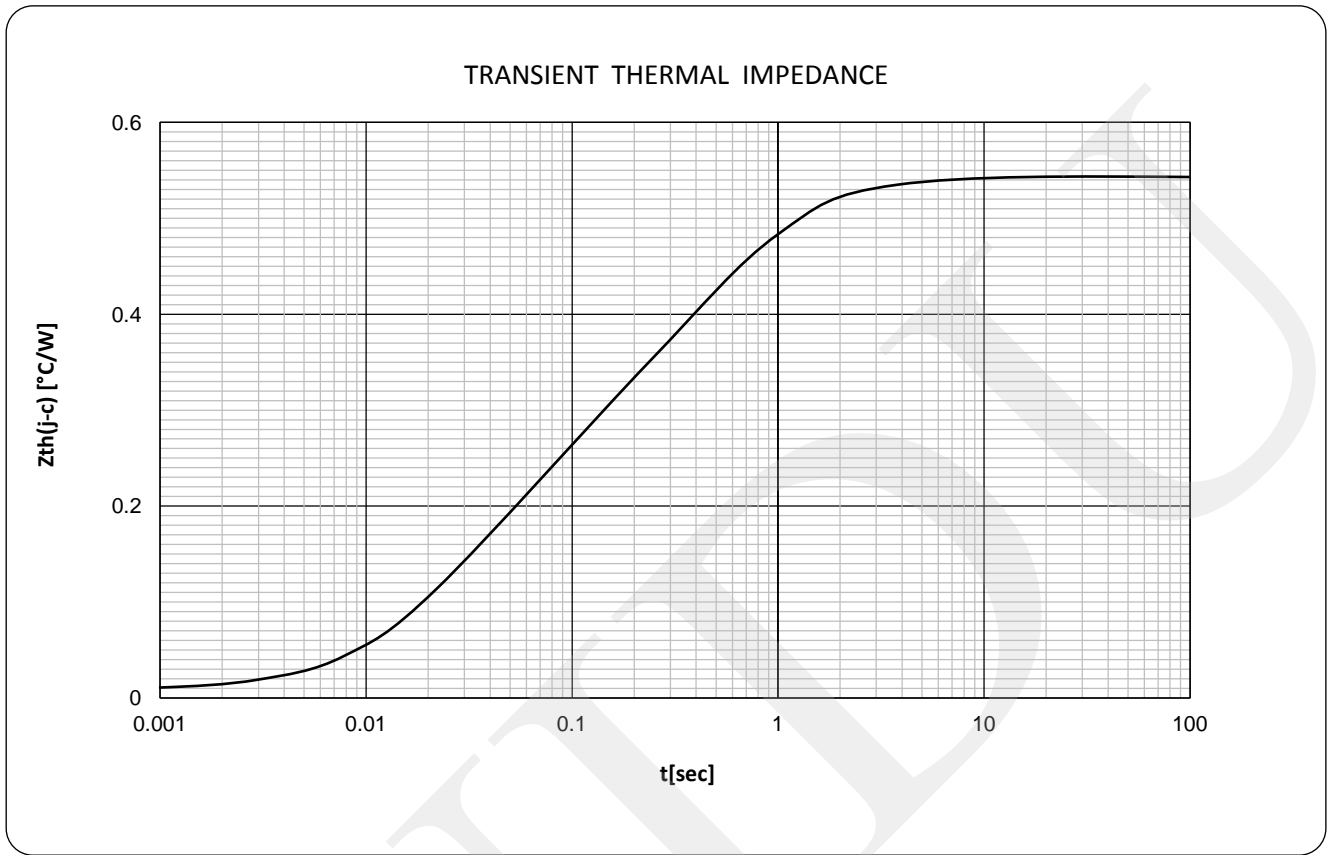
FORWARD CHARACTERISTICS

$T_j = 180^\circ\text{C}$



SURGE CHARACTERISTICS





**ORDERING INFORMATION**

|                 |              |  |  |   |
|-----------------|--------------|--|--|---|
| <b>GDZP</b>     | <b>71</b>    | <b>N</b>                                     | <b>XX</b>                              | <b>M</b>  |
| Rectifier Diode | Current code | Polarity<br>R= Stud Anode<br>N= Stud Cathode | Voltage Code<br>Code X 100 = $V_{RRM}$ | Stud Threads<br>M = Stud M8 X 1.25<br>U = Stud 1/4" UNF |

Order Code GDZP71R16M – 1600V  $V_{RRM}$ , M8 Stud, Diode with stud anode.

Outline

