



### Power Rectifier Diodes

#### Features

- Full blocking capability over wide temperature range
- Hermetically sealed ceramic package
- High case non-rupture current

#### Applications

- Traction Rectifiers
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

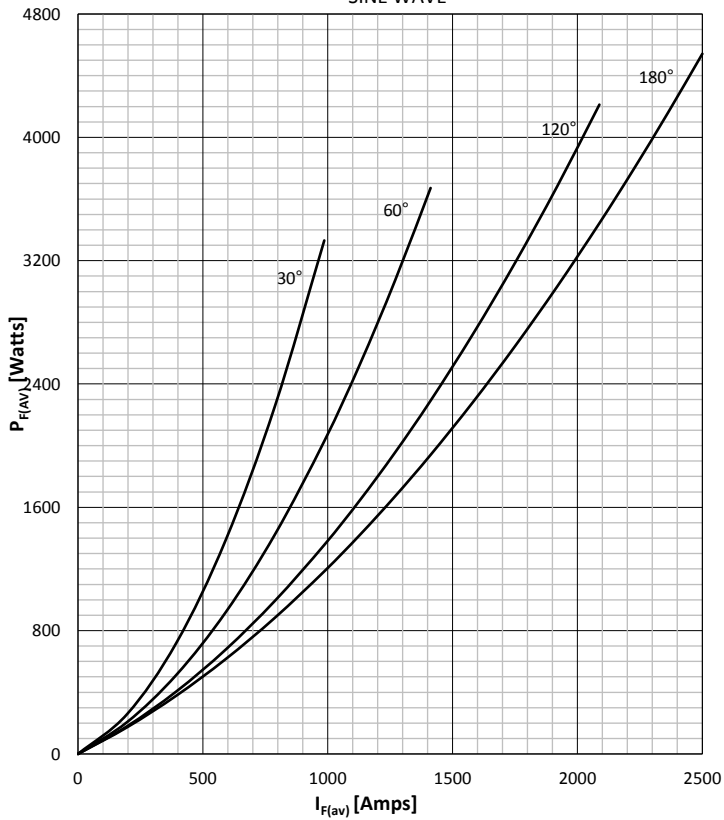
#### Key Parameters

|             |           |
|-------------|-----------|
| $V_{RRM}$   | = 2400V   |
| $I_{F(AV)}$ | = 2485A   |
| $I_{FSM}$   | = 30000A  |
| $V_{F(TO)}$ | = 0.80V   |
| $r_F$       | = 0.165mΩ |

| Symbol            | Characteristic                      | Conditions   | $T_j$ [°C] | Value              | Unit             |
|-------------------|-------------------------------------|--|------------|--------------------|------------------|
| <b>BLOCKING</b>   |                                     |  |            |                    |                  |
| $V_{RRM}$         | Repetitive peak reverse voltage     |  | 175        | 800 - 2400         | V                |
| $V_{RSM}$         | Non-repetitive peak reverse voltage |  | 175        | 900 - 2500         | V                |
| $I_{RRM}$         | Repetitive peak reverse current     | $V = V_{RRM}$  | 175        | 50                 | mA               |
| <b>CONDUCTING</b> |                                     |  |            |                    |                  |
| $I_{F(AV)}$       | Mean forward current                | 180° sin, 50 Hz, $T_c=85^\circ\text{C}$ , double side cooled<br>180° sin, 50 Hz, $T_c=84^\circ\text{C}$ , double side cooled |            | 2485<br>2500       | A                |
| $I_{FRMS}$        | RMS current                         | $T_c=84^\circ\text{C}$ , double side cooled  |            | 3925               | A                |
| $I_{FSM}$         | Surge forward current               | Sine wave, 10 ms<br>Without reverse voltage  | 25         | 30000              | A                |
|                   |                                     |  | 175        | 28000              | A                |
| $I^2 t$           | $I^2 t$                             | Sine wave, 10 ms<br>Without reverse voltage  | 25         | $4500 \times 10^3$ | A <sup>2</sup> s |
|                   |                                     |  | 175        | $3920 \times 10^3$ | A <sup>2</sup> s |
| $V_F$             | Forward voltage                     | On-state current = 2900A   | 25         | 1.27               | V                |
| $V_{F(TO)}$       | Threshold voltage                   |  | 175        | 0.80               | V                |
| $r_F$             | Forward slope resistance            |  | 175        | 0.165              | mΩ               |
| <b>MOUNTING</b>   |                                     |  |            |                    |                  |
| $R_{th(j-c)}$     | Thermal impedance, sin 180°         | Junction to case, double side cooled   |            | 0.020              | °C/W             |
| $R_{th(c-h)}$     | Thermal impedance                   | Case to heatsink, double side cooled   |            | 0.006              | °C/W             |
| $T_j$             | Max. junction temperature           |  |            | 175                | °C               |
| $T_{stg}$         | Storage temperature                 |  |            | -40 ... 175        | °C               |
| M                 | Clamping force                      |  |            | 18 - 20            | KN               |
| W                 | Weight (Approx.)                    |  |            | 550                | gm               |

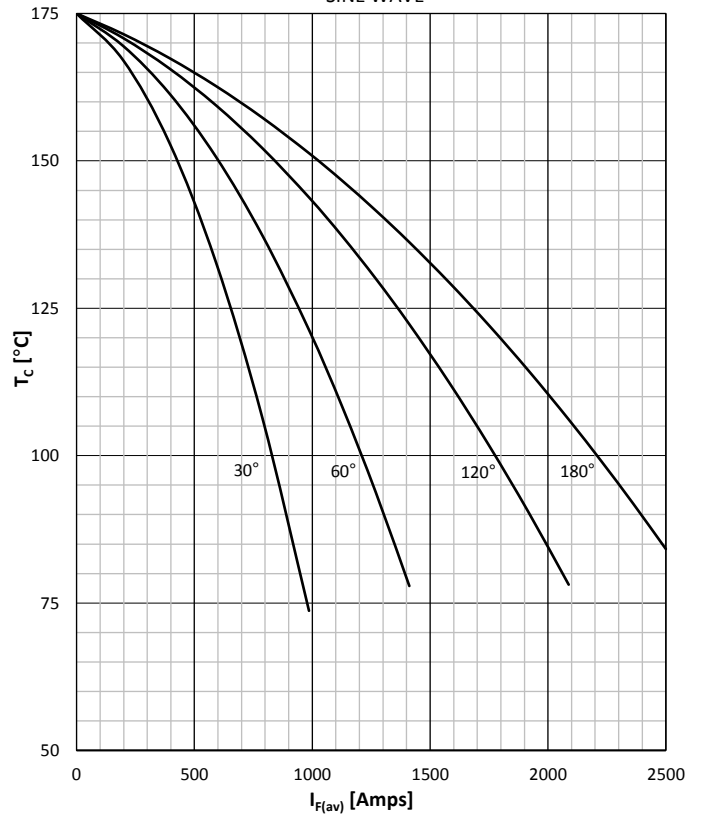
DISSIPATION CHARACTERISTICS

SINE WAVE



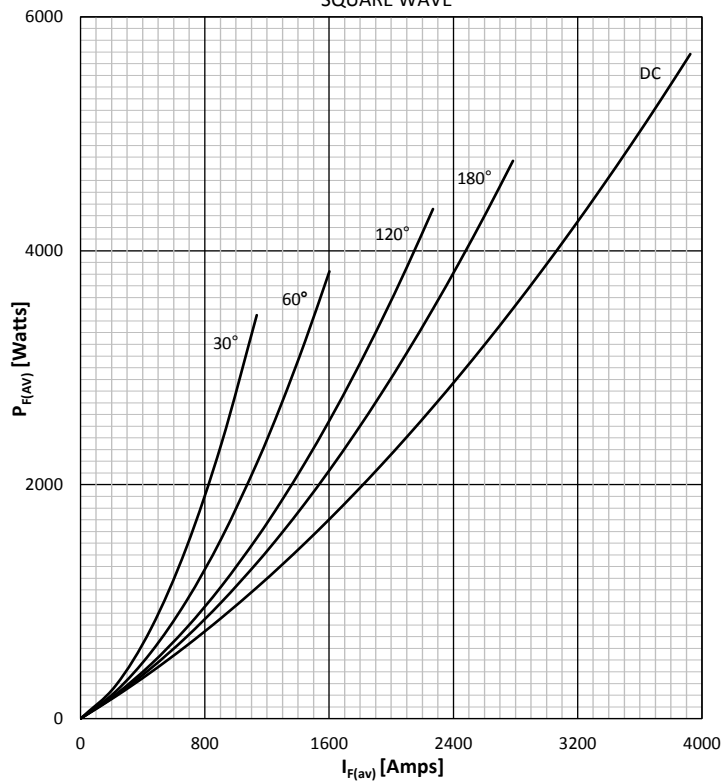
FORWARD CURRENT DERATING CURVE

SINE WAVE



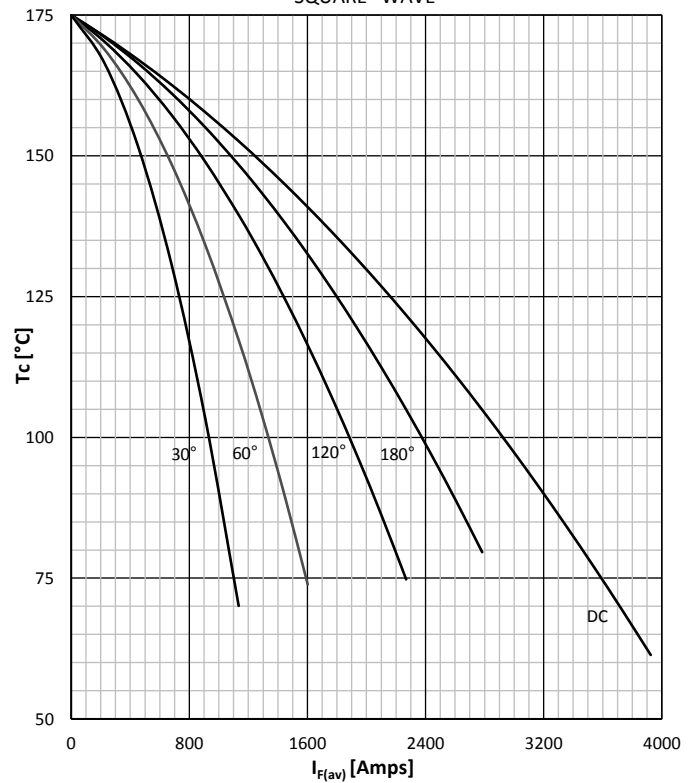
DISSIPATION CHARACTERISTICS

SQUARE WAVE

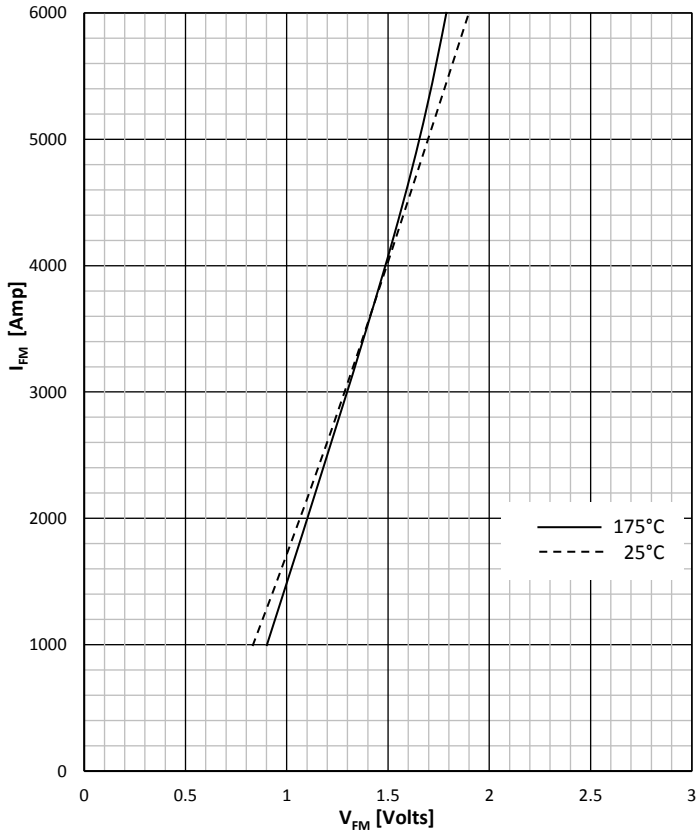


FORWARD CURRENT DERATING CURVE

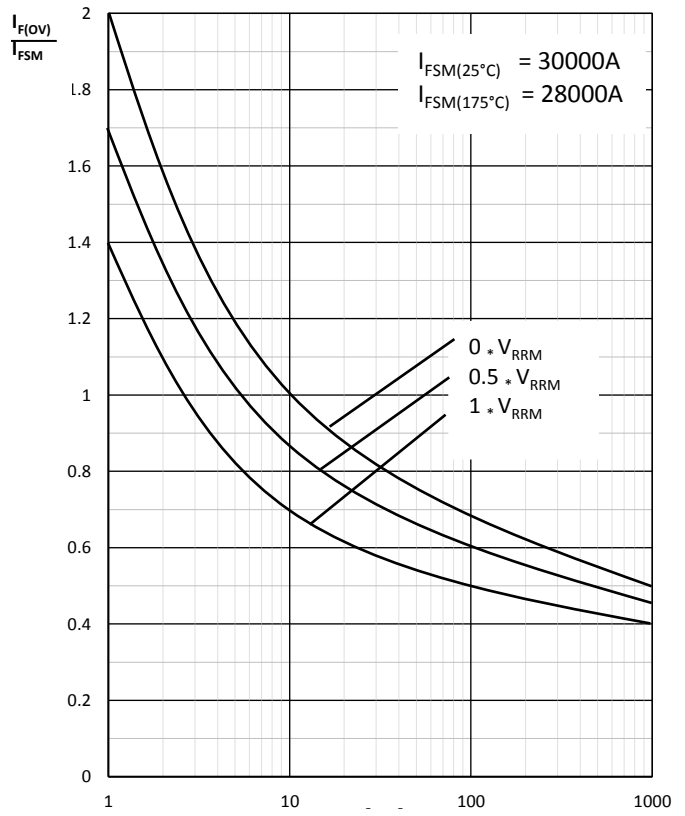
SQUARE WAVE



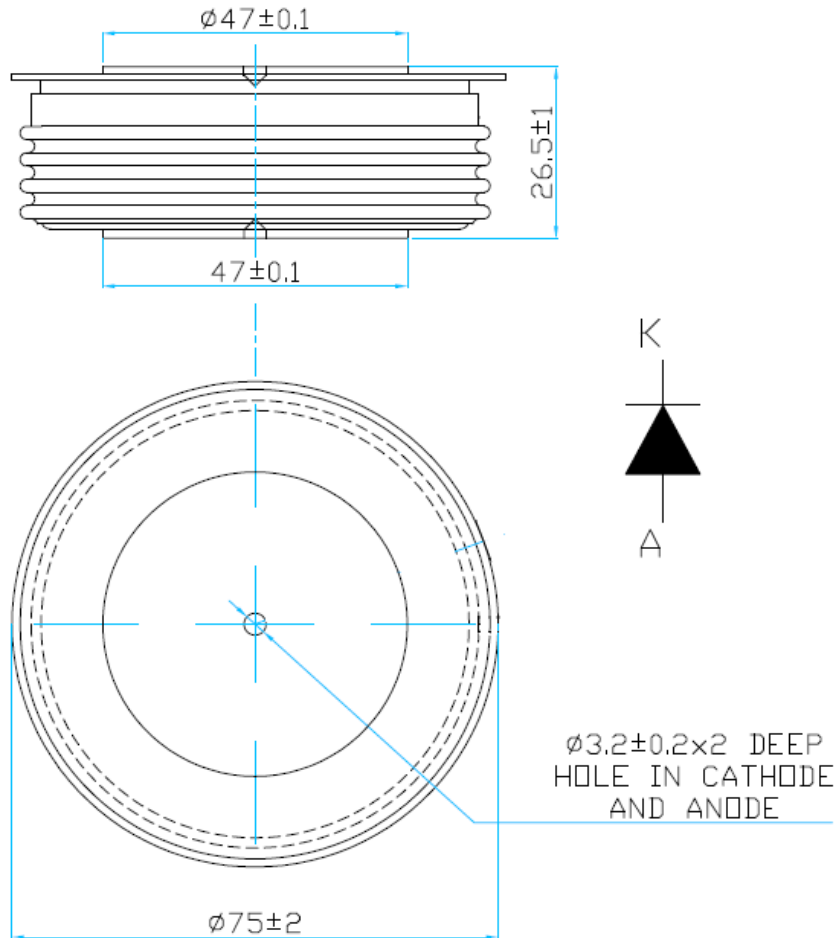
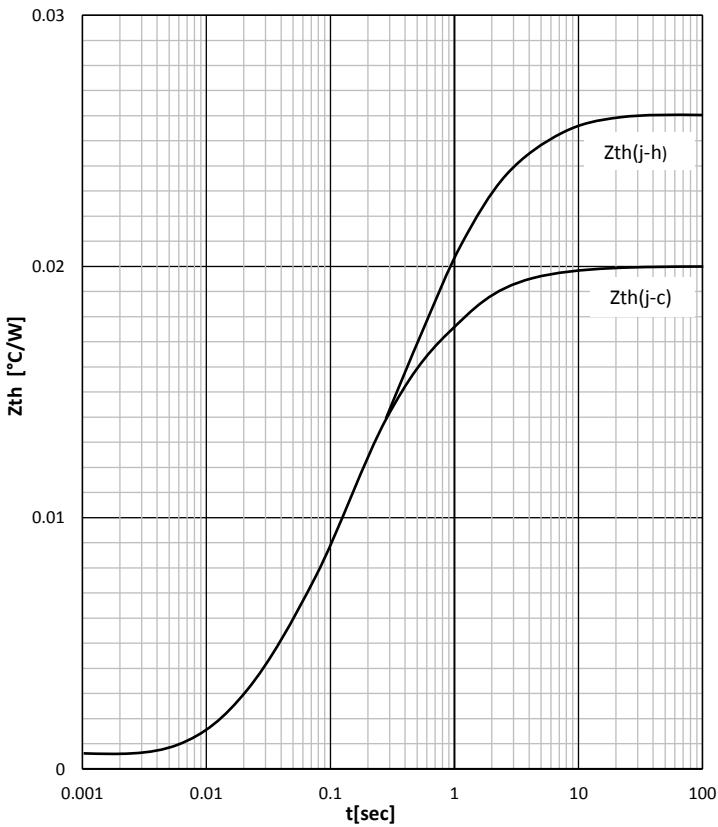
**FORWARD CHARACTERISTIC**



**SURGE CHARACTERISTICS**



**TRANSIENT THERMAL IMPEDANCE, DSC**



*Scomes srl reserves the right to change any specification without notice*

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