

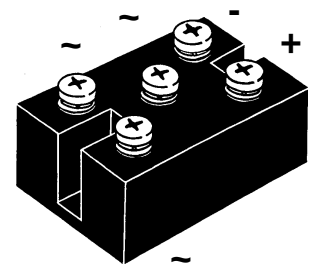
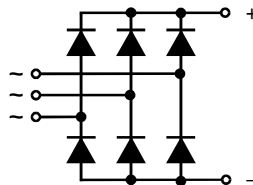
## Three Phase Rectifier Bridge

$$I_{dAVM} = 166 \text{ A}$$

$$V_{RRM} = 1200-1800 \text{ V}$$

| $V_{RSM}$ | $V_{RRM}$ | Type           |
|-----------|-----------|----------------|
| V         | V         |                |
| 1200      | 1200      | VUO 125-12NO7  |
| 1400      | 1400      | VUO 125-14NO7  |
| 1600      | 1600      | VUO 125-16NO7  |
| 1800      | 1800      | VUO 125-18NO7* |

\* delivery time on request



| Symbol     | Test Conditions                            | Maximum Ratings                                           |
|------------|--------------------------------------------|-----------------------------------------------------------|
| $I_{dAVM}$ | $T_C = 85^\circ\text{C}$ , module          | 166 A                                                     |
| $I_{FSM}$  | $T_{VJ} = 45^\circ\text{C}$ ;<br>$V_R = 0$ | $t = 10 \text{ ms}$ (50 Hz), sine 1800 A                  |
|            |                                            | $t = 8.3 \text{ ms}$ (60 Hz), sine 1950 A                 |
|            | $T_{VJ} = T_{VJM}$ ;<br>$V_R = 0$          | $t = 10 \text{ ms}$ (50 Hz), sine 1600 A                  |
|            |                                            | $t = 8.3 \text{ ms}$ (60 Hz), sine 1800 A                 |
| $I^2t$     | $T_{VJ} = 45^\circ\text{C}$ ;<br>$V_R = 0$ | $t = 10 \text{ ms}$ (50 Hz), sine 16200 A <sup>2</sup> s  |
|            |                                            | $t = 8.3 \text{ ms}$ (60 Hz), sine 16000 A <sup>2</sup> s |
|            | $T_{VJ} = T_{VJM}$ ;<br>$V_R = 0$          | $t = 10 \text{ ms}$ (50 Hz), sine 12800 A <sup>2</sup> s  |
|            |                                            | $t = 8.3 \text{ ms}$ (60 Hz), sine 13600 A <sup>2</sup> s |
| $T_{VJ}$   |                                            | -40...+150 °C                                             |
| $T_{VJM}$  |                                            | 150 °C                                                    |
| $T_{stg}$  |                                            | -40...+150 °C                                             |
| $V_{ISOL}$ | 50/60 Hz, RMS                              | $t = 1 \text{ min}$ 2500 V~                               |
|            | $I_{ISOL} \leq 1 \text{ mA}$               | $t = 1 \text{ s}$ 3000 V~                                 |
| $M_d$      | Mounting torque (M5)                       | 5 ± 15 % Nm                                               |
|            |                                            | 44 ± 15 % lb.in.                                          |
|            | Terminal connection torque (M5)            | 5 ± 15 % Nm                                               |
|            |                                            | 44 ± 15 % lb.in.                                          |
| Weight     | typ.                                       | 225 g                                                     |

### Features

- Package with screw terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

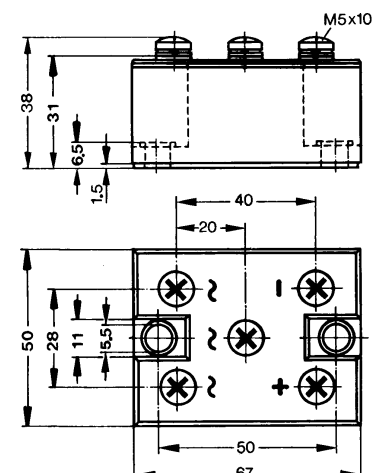
### Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

### Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling

### Dimensions in mm (1 mm = 0.0394")



Data according to IEC 60747 and refer to a single diode unless otherwise stated.  
IXYS reserves the right to change limits, test conditions and dimensions.

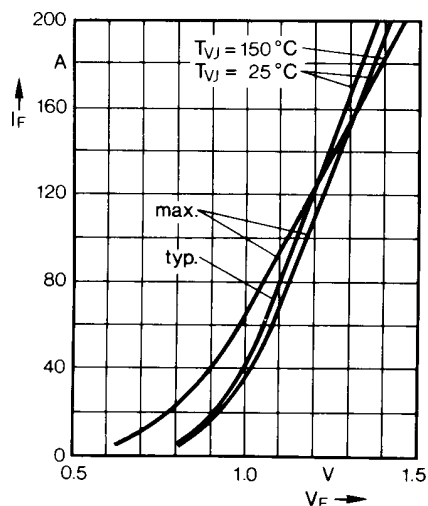


Fig. 1 Forward current versus voltage drop per diode

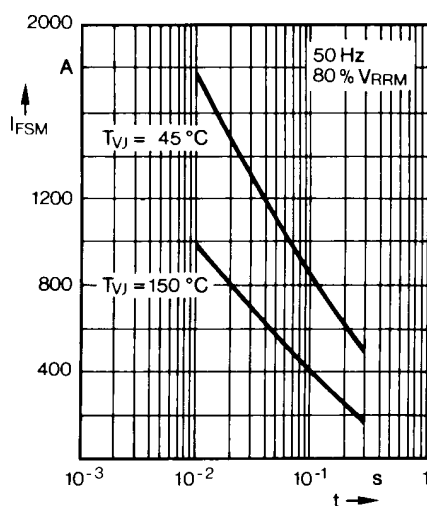


Fig. 2 Surge overload current per diode  
 $I_{FSM}$ : Crest value.  $t$ : duration

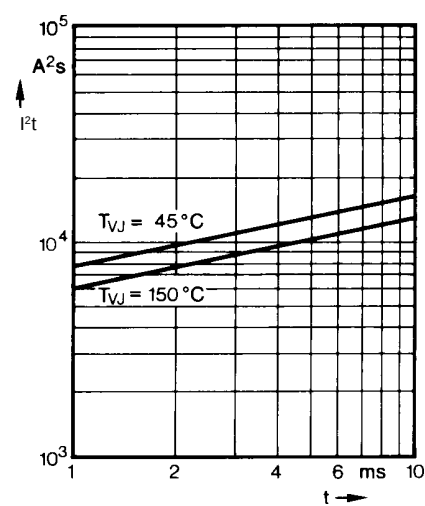


Fig. 3  $I^2t$  versus time (1-10 ms) per diode

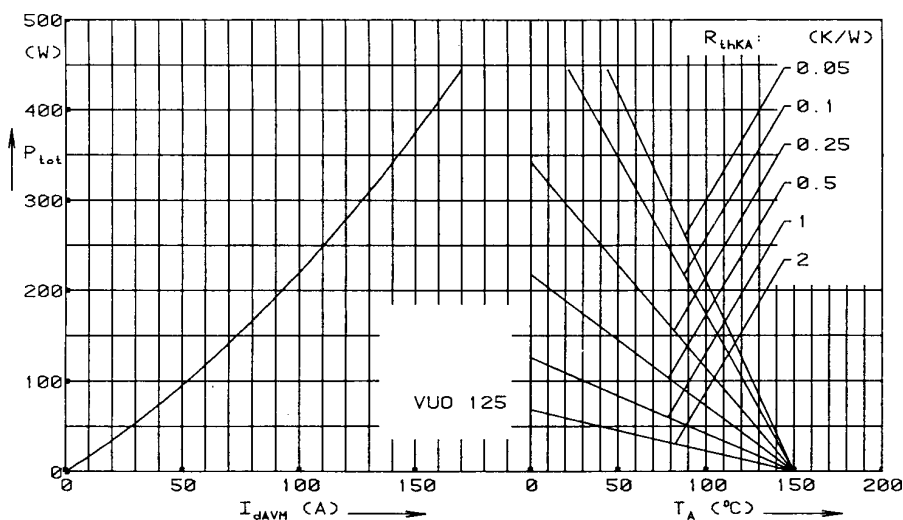


Fig. 4 Power dissipation versus direct output current and ambient temperature

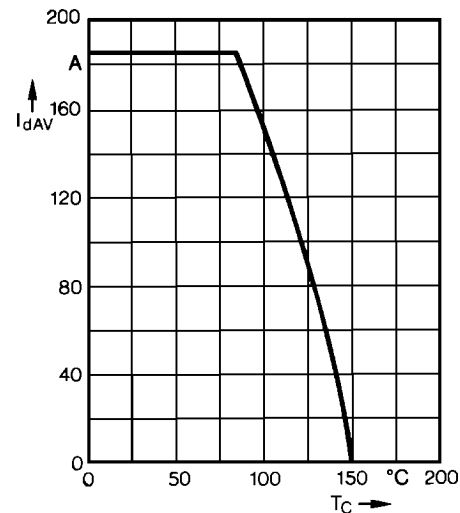


Fig. 5 Maximum forward current at case temperature

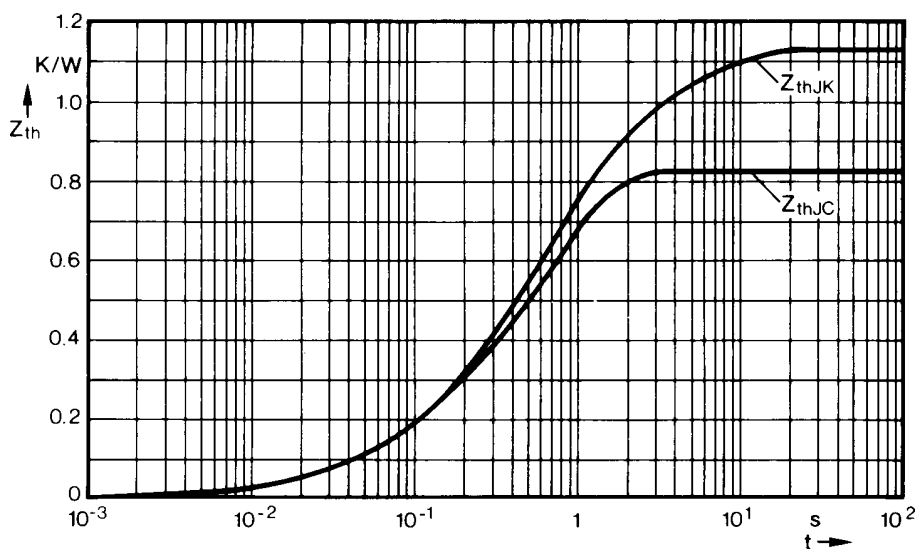


Fig. 6 Transient thermal impedance per diode

Constants for  $Z_{thJC}$  calculation:

| i | $R_{thi}$ (K/W) | $t_i$ (s) |
|---|-----------------|-----------|
| 1 | 0.014           | 0.011     |
| 2 | 0.067           | 0.094     |
| 3 | 0.139           | 0.28      |
| 4 | 0.61            | 0.7       |

Constants for  $Z_{thJK}$  calculation:

| i | $R_{thi}$ (K/W) | $t_i$ (s) |
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| 2 | 0.067           | 0.094     |
| 3 | 0.139           | 0.28      |
| 4 | 0.61            | 0.7       |
| 5 | 0.3             | 4.2       |