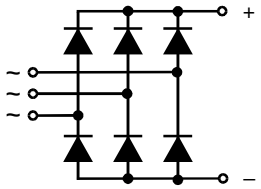
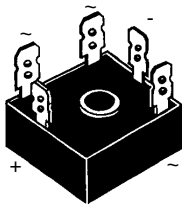
# Three Phase Rectifier Bridge

$I_{dAVM}$ = 25 A
$V_{RRM}$ = 1200-1800 V

| $V_{RSM}$ V | $V_{RRM}$ V | Type |
|---|---|---|
| 600 | 600 | VUO 25-06NO8 |
| 1200 | 1200 | VUO 25-12NO8 |
| 1400 | 1400 | VUO 25-14NO8 |
| 1600 | 1600 | VUO 25-16NO8 |
| 1800 | 1800 | VUO 25-18NO8 |




| Symbol | Test Conditions | | Maximum Ratings | |
|---|---|---|---|---|
| $I_{dAV}$ | $T_C$ = 85°C, module | | 20 | A |
| $I_{dAVM}$ | $T_C$ = 63°C, module | | 25 | A |
| $I_{FSM}$ | $T_{VJ}$ = 45°C; | t = 10 ms (50 Hz), sine | 380 | A |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 400 | A |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms (50 Hz), sine | 360 | A |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 400 | A |
| $I^2t$ | $T_{VJ}$ = 45°C | t = 10 ms (50 Hz), sine | 725 | $A^2s$ |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 750 | $A^2s$ |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms (50 Hz), sine | 650 | $A^2s$ |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 650 | $A^2s$ |
| $T_{VJ}$ | | | -40...+150 | °C |
| $T_{VJM}$ | | | 150 | °C |
| $T_{stg}$ | | | -40...+150 | °C |
| $V_{ISOL}$ | 50/60 Hz, RMS | t = 1 min | 2500 | V~ |
| | $I_{ISOL}$ ≤ 1 mA | t = 1 s | 3000 | V~ |
| $M_d$ | Mounting torque | (M5) | 2 ± 10 % | Nm |
| | | (10-32 UNF) | 18 ± 10 % | lb.in. |
| Weight | typ. | | 22 | g |

| Symbol | Test Conditions | | Characteristic Values | |
|---|---|---|---|---|
| $I_R$ | $T_{VJ}$ = 25°C; | $V_R$ = $V_{RRM}$ | ≤ 0.3 | mA |
| | $T_{VJ}$ = $T_{VJM}$; | $V_R$ = $V_{RRM}$ | ≤ 5.0 | mA |
| $V_F$ | $I_F$ = 150 A; | $T_{VJ}$ = 25°C | ≤ 2.2 | V |
| $V_{T0}$ | For power-loss calculations only | | 0.85 | V |
| $r_T$ | | | 12 | mΩ |
| $R_{thJC}$ | per diode; DC current | | 9.3 | K/W |
| | per module | | 1.55 | K/W |
| $R_{thJH}$ | per diode; DC current | | 10.2 | K/W |
| | per module | | 1.7 | K/W |
| $d_S$ | Creeping distance on surface | | 12.7 | mm |
| $d_A$ | Creepage distance in air | | 9.4 | mm |
| a | Max. allowable acceleration | | 50 | $m/s^2$ |

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

### Features

- Package with ¼" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

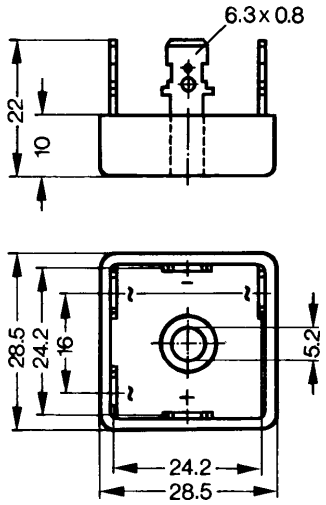
### Applications

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

### Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature and power cycling

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



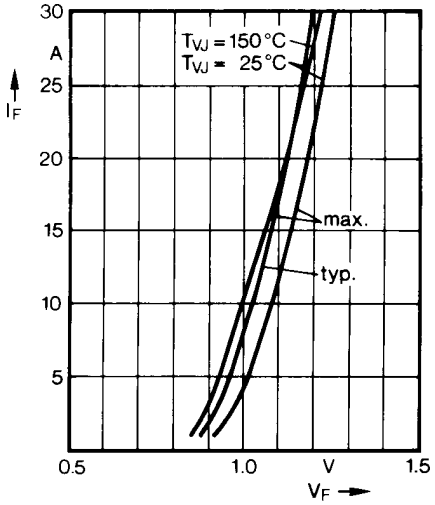



Fig. 1 Forward current versus voltage drop per diode

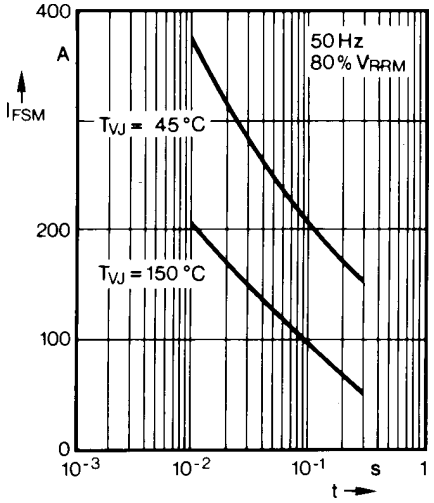



Fig. 2 Surge overload current per diode $I_{FSM}$: Crest value. t: duration

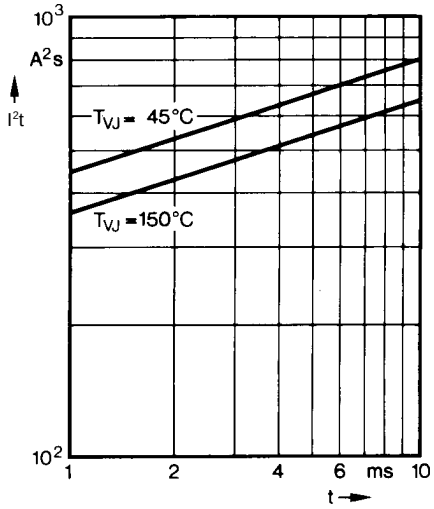



Fig. 3 $I^2t$ versus time (1-10 ms) per diode

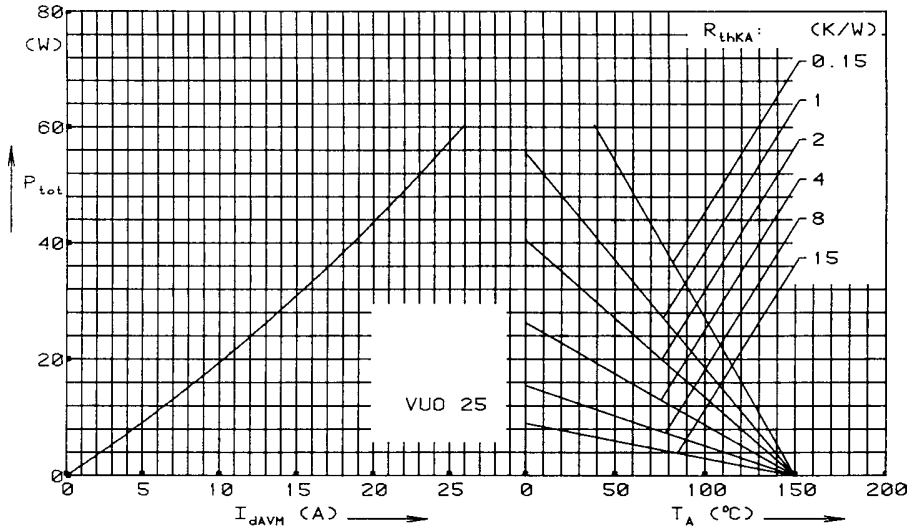



Fig. 4 Power dissipation versus direct output current and ambient temperature

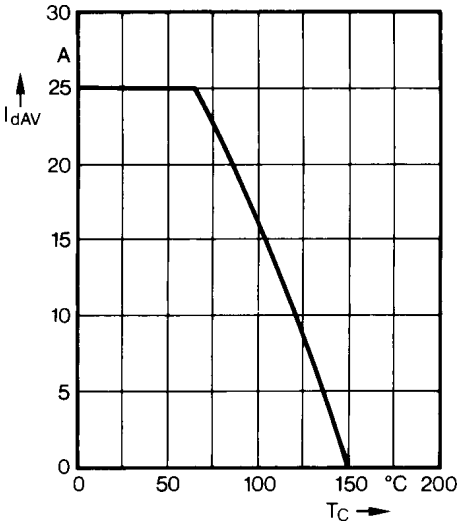



Fig. 5 Maximum forward current at case temperature

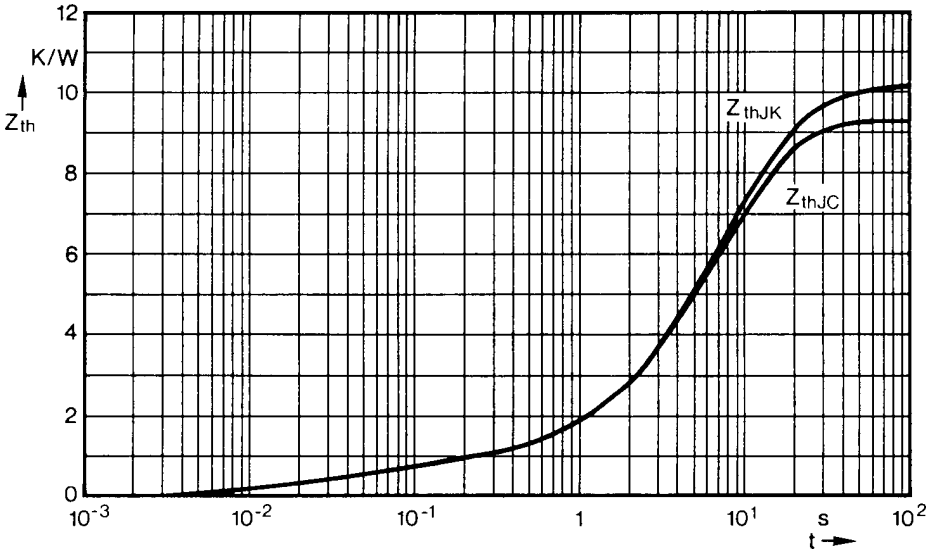



Fig. 6 Transient thermal impedance per diode

Constants for $Z_{thJC}$ calculation:

| i | $R_{thi}$ (K/W) | $t_i$ (s) |
|---|---|---|
| 1 | 0.194 | 0.024 |
| 2 | 0.556 | 0.07 |
| 3 | 2.25 | 5.8 |
| 4 | 6.3 | 8.5 |

Constants for $Z_{thJK}$ calculation:

| i | $R_{thi}$ (K/W) | $t_i$ (s) |
|---|---|---|
| 1 | 0.194 | 0.024 |
| 2 | 0.556 | 0.07 |
| 3 | 2.25 | 5.8 |
| 4 | 6.3 | 8.5 |
| 5 | 0.9 | 28.0 |