

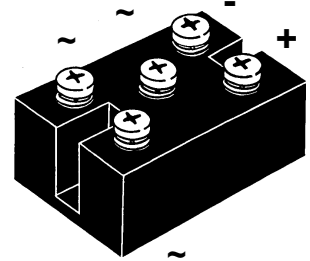
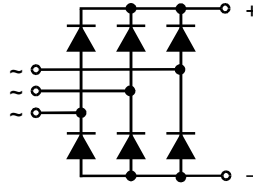
Three Phase Rectifier Bridge

$$I_{dAVM} = 140 \text{ A}$$

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

| V_{RSM} | V_{RRM} | Type |
|-----------|-----------|----------------|
| V | V | |
| 1200 | 1200 | VUO 105-12NO7 |
| 1400 | 1400 | VUO 105-14NO7 |
| 1600 | 1600 | VUO 105-16NO7 |
| 1800 | 1800 | VUO 105-18NO7* |

* delivery time on request



| Symbol | Test Conditions | Maximum Ratings |
|------------|---|---|
| I_{dAVM} | $T_C = 85^\circ\text{C}$, module | 140 A |
| I_{FSM} | $T_{VJ} = 45^\circ\text{C}$; $V_R = 0$ | t = 10 ms (50 Hz), sine 1500 A |
| | | t = 8.3 ms (60 Hz), sine 1650 A |
| I^2t | $T_{VJ} = T_{VJM}$; $V_R = 0$ | t = 10 ms (50 Hz), sine 1350 A |
| | | t = 8.3 ms (60 Hz), sine 1500 A |
| T_{VJ} | $T_{VJ} = 45^\circ\text{C}$; $V_R = 0$ | t = 10 ms (50 Hz), sine 11250 A ² s |
| | | t = 8.3 ms (60 Hz), sine 11300 A ² s |
| T_{VJM} | $T_{VJ} = T_{VJM}$; $V_R = 0$ | t = 10 ms (50 Hz), sine 9120 A ² s |
| | | t = 8.3 ms (60 Hz), sine 9350 A ² s |
| T_{stg} | | -40...+150 °C |
| | | 150 °C |
| V_{ISOL} | 50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$ | t = 1 min 2500 V~ |
| | | t = 1 s 3000 V~ |
| M_d | Mounting torque (M5) | 5 ± 15 % Nm |
| | | 44 ± 15 % lb.in. |
| Weight | typ. | Terminal connection torque (M5) |
| | | 5 ± 15 % Nm |
| | | 44 ± 15 % lb.in. |

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

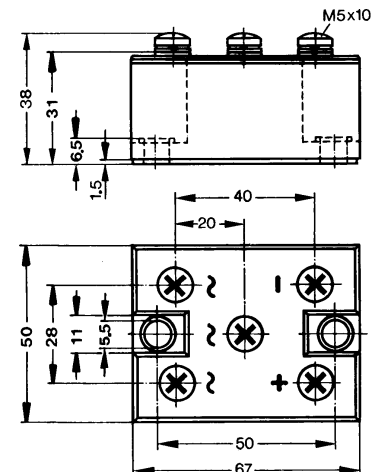
Advantages

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

| Symbol | Test Conditions | Characteristic Values |
|------------|--|--------------------------------------|
| I_R | $V_R = V_{RRM1}$; $V_R = V_{RRM2}$ | $T_{VJ} = 25^\circ\text{C}$ ≤ 0.3 mA |
| | | $T_{VJ} = T_{VJM}$ ≤ 8.0 mA |
| V_F | $I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ | ≤ 1.6 V |
| V_{T0} | For power-loss calculations only | 0.8 V |
| r_T | | 5 mΩ |
| R_{thJC} | per diode | 0.83 K/W |
| | per module | 0.138 K/W |
| R_{thJH} | per diode | 1.13 K/W |
| | per module | 0.188 K/W |

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.

Dimensions in mm (1 mm = 0.0394")



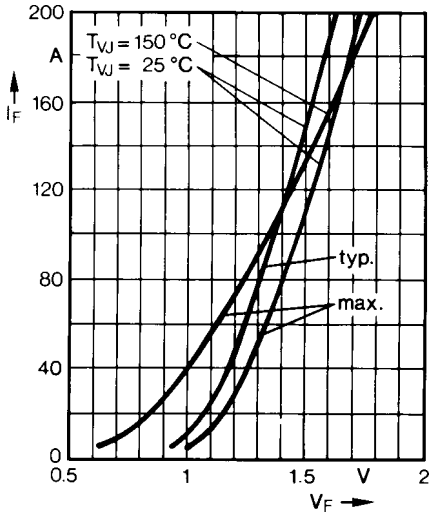


Fig. 1 Forward current versus voltage drop per diode

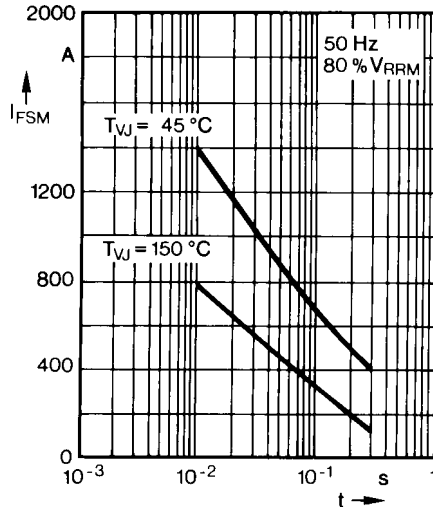


Fig. 2 Surge overload current per diode
 I_{FSM} : Crest value. t : duration

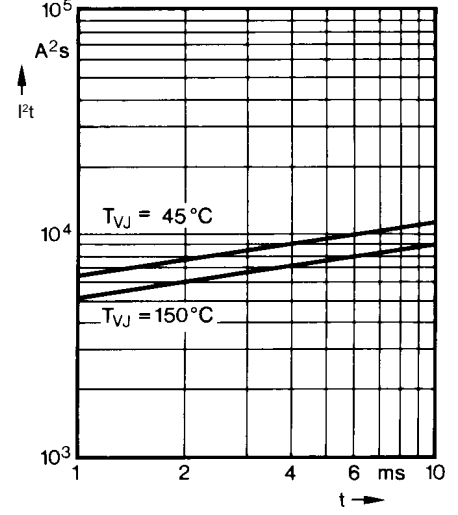


Fig. 3 I^2t versus time (1-10 ms) per diode

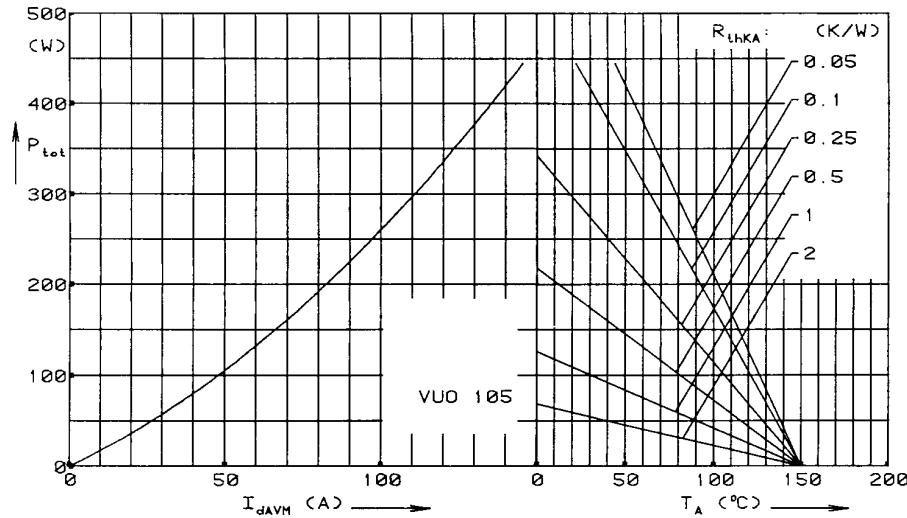


Fig. 4 Power dissipation versus direct output current and ambient temperature

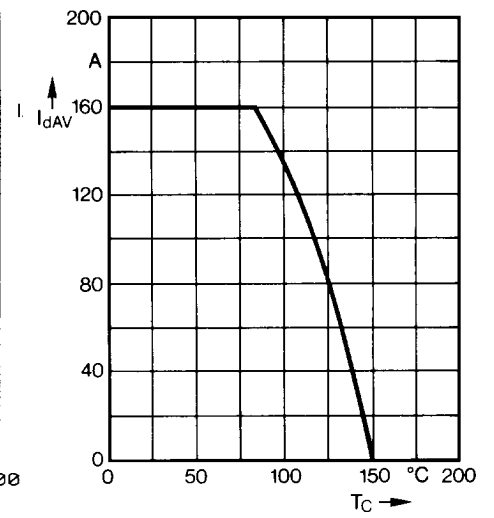


Fig. 5 Maximum forward current at case temperature

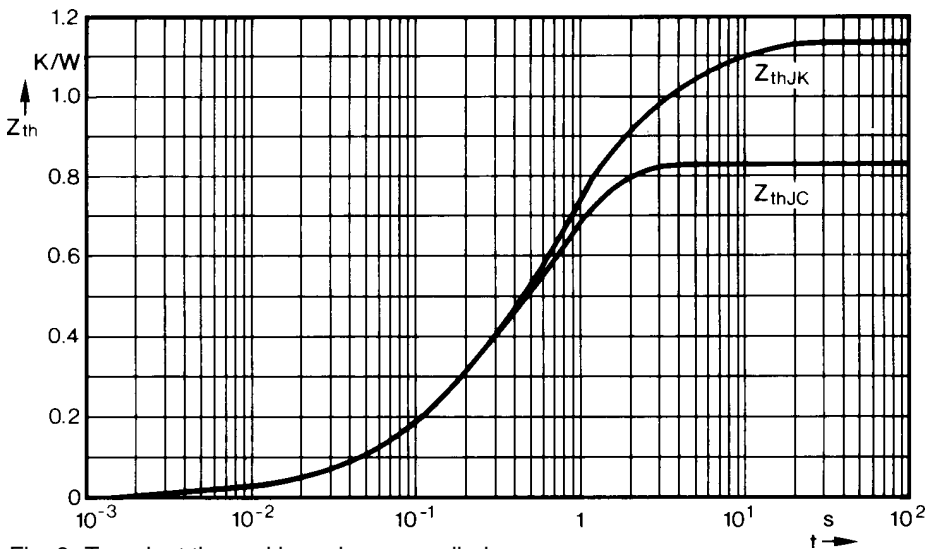


Fig. 6 Transient thermal impedance per diode

Constants for Z_{thJC} calculation:

| i | R_{thi} (K/W) | t_i (s) |
|---|-----------------|-----------|
| 1 | 0.014 | 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) |
|---|-----------------|-----------|
| 1 | 0.014 | 0.011 |
| 2 | 0.067 | 0.094 |
| 3 | 0.139 | 0.28 |
| 4 | 0.61 | 0.7 |
| 5 | 0.3 | 4.2 |

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.