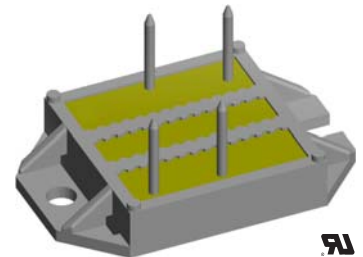
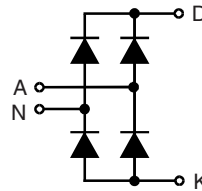


# Single Phase Rectifier Bridge

$I_{dAV} = 68 \text{ A}$   
 $V_{RRM} = 800-1600 \text{ V}$

Preliminary data

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | Types        |
|----------------|----------------|--------------|
| 900            | 800            | VBO 68-08NO7 |
| 1300           | 1200           | VBO 68-12NO7 |
| 1700           | 1600           | VBO 68-16NO7 |



| Symbol      | Conditions                               | Maximum Ratings   |
|-------------|--|---|
| $I_{dAV}^*$ | $T_C = 90^\circ\text{C}$ , module        | 68 A  |
| $I_{FSM}$   | $T_{VJ} = 45^\circ\text{C}$<br>$V_R = 0$ | t = 10 ms (50 Hz), sine 530 A<br>t = 8.3 ms (60 Hz), sine 570 A                                 |
|             | $T_{VJ} = T_{VJM}$<br>$V_R = 0$          | t = 10 ms (50 Hz), sine 480 A<br>t = 8.3 ms (60 Hz), sine 520 A                                 |
| $I^2t$      | $T_{VJ} = 45^\circ\text{C}$<br>$V_R = 0$ | t = 10 ms (50 Hz), sine 1400 A <sup>2</sup> s<br>t = 8.3 ms (60 Hz), sine 1360 A <sup>2</sup> s |
|             | $T_{VJ} = T_{VJM}$<br>$V_R = 0$          | t = 10 ms (50 Hz), sine 1150 A <sup>2</sup> s<br>t = 8.3 ms (60 Hz), sine 1140 A <sup>2</sup> s |
| $T_{VJ}$    |  | -40...+150 °C   |
| $T_{VJM}$   |  | 150 °C  |
| $T_{stg}$   |  | -40...+125 °C   |
| $V_{ISOL}$  | 50/60 Hz, RMS t = 1 min                  | 2500 V~   |
|             | $I_{ISOL} \leq 1 \text{ mA}$ t = 1 s     | 3000 V~   |
| $M_d$       | Mounting torque (M4)                     | 1.5 - 2 Nm<br>14 - 18 lb.in.  |
| Weight      | typ.                                     | 18 g  |

## Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- UL registered E 72873

## Applications

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

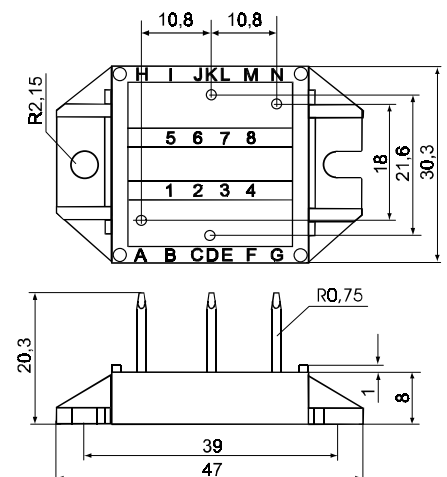
## Advantages

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

| Symbol     | Conditions                                       | Characteristic Values |
|------------|--|-----------------------|
| $I_R$      | $V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$      | $\leq 0.5 \text{ mA}$ |
|            | $V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$               | $\leq 3 \text{ mA}$   |
| $V_F$      | $I_F = 80 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$ | $\leq 1.5 \text{ V}$  |
| $V_{T0}$   | For power-loss calculations only                 | 0.8 V                 |
| $r_T$      |  | 7.5 mΩ                |
| $R_{thJC}$ | per diode; DC current                            | 1.2 K/W               |
|            | per module                                       | 0.3 K/W               |
| $R_{thJH}$ | per diode; DC current                            | 1.5 K/W               |
|            | per module                                       | 0.38 K/W              |
| $d_s$      | Creeping distance on surface                     | 11.2 mm               |
| $d_A$      | Creepage distance in air                         | 9.7 mm                |
| $a$        | Max. allowable acceleration                      | 50 m/s <sup>2</sup>   |

Data according to IEC 60747 refer to a single diode unless otherwise stated  
 \* for resistive load at bridge output

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



IXYS reserves the right to change limits, test conditions and dimensions.

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