

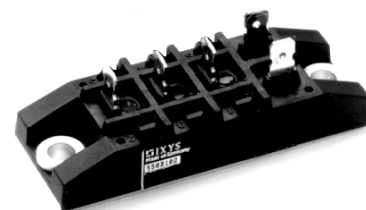
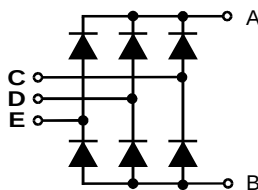
## Three Phase Rectifier Bridge

$$I_{dAV} = 85 \text{ A}$$

$$V_{RRM} = 800\text{-}1600 \text{ V}$$

Preliminary data

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | Types        |
|----------------|----------------|--------------|
| 900            | 800            | VUO 85-08NO7 |
| 1300           | 1200           | VUO 85-12NO7 |
| 1500           | 1400           | VUO 85-14NO7 |
| 1700           | 1600           | VUO 85-16NO7 |



| Symbol             | Test Conditions                                          |                          | Maximum Ratings |                  |
|--------------------|----------------------------------------------------------|--------------------------|-----------------|------------------|
| I <sub>dAV</sub> ① | T <sub>C</sub> = 100°C, module                           |                          | 85              | A                |
| I <sub>FSM</sub>   | T <sub>VJ</sub> = 45°C;<br>V <sub>R</sub> = 0            | t = 10 ms (50 Hz), sine  | 750             | A                |
|                    |                                                          | t = 8.3 ms (60 Hz), sine | 820             | A                |
|                    | T <sub>VJ</sub> = T <sub>VJM</sub><br>V <sub>R</sub> = 0 | t = 10 ms (50 Hz), sine  | 600             | A                |
|                    |                                                          | t = 8.3 ms (60 Hz), sine | 700             | A                |
| I <sup>2</sup> t   | T <sub>VJ</sub> = 45°C<br>V <sub>R</sub> = 0             | t = 10 ms (50 Hz), sine  | 2800            | A <sup>2</sup> s |
|                    |                                                          | t = 8.3 ms (60 Hz), sine | 2820            | A <sup>2</sup> s |
|                    | T <sub>VJ</sub> = T <sub>VJM</sub><br>V <sub>R</sub> = 0 | t = 10 ms (50 Hz), sine  | 2200            | A <sup>2</sup> s |
|                    |                                                          | t = 8.3 ms (60 Hz), sine | 2250            | A <sup>2</sup> s |
| T <sub>VJ</sub>    |                                                          |                          | -40...+150      | °C               |
| T <sub>VJM</sub>   |                                                          |                          | 150             | °C               |
| T <sub>stg</sub>   |                                                          |                          | -40...+125      | °C               |
| V <sub>ISOL</sub>  | 50/60 Hz, RMS<br>I <sub>ISOL</sub> ≤ 1 mA                | t = 1 min                | 2500            | V~               |
|                    |                                                          | t = 1 s                  | 3000            | V~               |
| M <sub>d</sub>     | Mounting torque (M5)<br>(10-32 UNF)                      | 5 ± 15 %                 | Nm              |                  |
|                    |                                                          | 44 ± 15 %                | lb.in.          |                  |
| Weight             | typ.                                                     |                          | 110             | g                |

### Features

- Package with copper base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- ¼" fast-on power terminals

### Applications

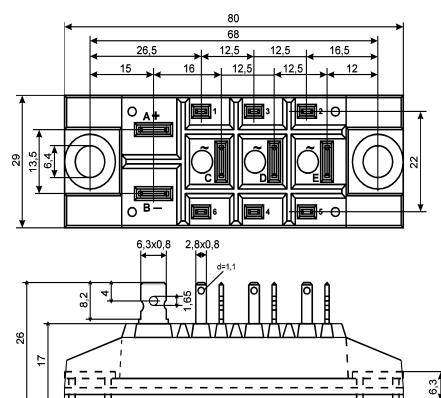
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

### Advantages

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

| Symbol     | Test Conditions                                     | Characteristic Values |
|------------|-----------------------------------------------------|-----------------------|
| $I_R$      | $V_R = V_{RRM}$ ;<br>$T_{VJ} = 25^\circ\text{C}$    | $\leq 0.5 \text{ mA}$ |
|            | $V_R = V_{RRM}$ ;<br>$T_{VJ} = T_{VJM}$             | $\leq 10 \text{ mA}$  |
| $V_F$      | $I_F = 150 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$ | $\leq 1.6 \text{ V}$  |
| $V_{T0}$   | For power-loss calculations only                    | 0.8 V                 |
| $r_T$      |                                                     | 6 mΩ                  |
| $R_{thJC}$ | per diode; DC current                               | 1.3 K/W               |
|            | per module                                          | 0.22 K/W              |
| $R_{thJH}$ | per diode; DC current                               | 1.6 K/W               |
|            | per module                                          | 0.27 K/W              |
| $d_s$      | Creeping distance on surface                        | 16.1 mm               |
| $d_A$      | Creepage distance in air                            | 7.5 mm                |
| $a$        | Max. allowable acceleration                         | 50 m/s <sup>2</sup>   |

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



Data according to IEC 60747 refer to a single diode unless otherwise stated

① for resistive load at bridge output. IXYS reserves the right to change limits, test conditions and dimensions.