

# Three Phase Rectifier Bridge

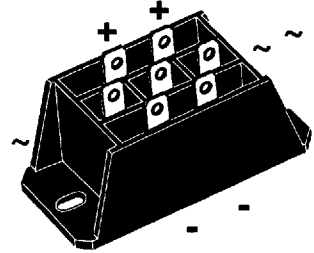
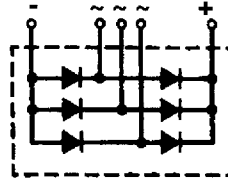
## VUO 60

$V_{RRM} = 800 - 1800 \text{ V}$

$I_{dAV} = 58 \text{ A}$

| $V_{RSM}$ | $V_{RRM}$ | Type          |
|-----------|-----------|---------------|
| V         | V         |               |
| 900       | 800       | VUO 60-08NO3  |
| 1300      | 1200      | VUO 60-12NO3  |
| 1500      | 1400      | VUO 60-14NO3  |
| 1700      | 1600      | VUO 60-16NO3  |
| 1900      | 1800      | VUO 60-18NO3* |

\* delivery time on request



| Symbol        | Test Conditions                            | Maximum Ratings   |
|---------------|--|---|
| $I_{dAV}$ ①   | $T_C = 85^\circ\text{C}$ , module          | 58 A  |
| $I_{dAVM}$ ①  | module                                     | 75 A  |
| $I_{FSM}$     | $T_{VJ} = 45^\circ\text{C}$ ;<br>$V_R = 0$ | $t = 10 \text{ ms}$ (50 Hz), sine 600 A<br>$t = 8.3 \text{ ms}$ (60 Hz), sine 525 A                                 |
|               | $T_{VJ} = T_{VJM}$<br>$V_R = 0$            | $t = 10 \text{ ms}$ (50 Hz), sine 415 A<br>$t = 8.3 \text{ ms}$ (60 Hz), sine 440 A                                 |
| $\int i^2 dt$ | $T_{VJ} = 45^\circ\text{C}$<br>$V_R = 0$   | $t = 10 \text{ ms}$ (50 Hz), sine 1250 A <sup>2</sup> s<br>$t = 8.3 \text{ ms}$ (60 Hz), sine 1160 A <sup>2</sup> s |
|               | $T_{VJ} = T_{VJM}$<br>$V_R = 0$            | $t = 10 \text{ ms}$ (50 Hz), sine 860 A <sup>2</sup> s<br>$t = 8.3 \text{ ms}$ (60 Hz), sine 810 A <sup>2</sup> s   |
| $T_{VJ}$      |  | -40...+125 °C   |
| $T_{VJM}$     |  | 125 °C  |
| $T_{stg}$     |  | -40...+125 °C   |
| $V_{ISOL}$    | 50/60 Hz, RMS                              | $t = 1 \text{ min}$ 3000 V~   |
|               | $I_{ISOL} \leq 1 \text{ mA}$               | $t = 1 \text{ s}$ 3600 V~   |
| $M_d$         | Mounting torque (M5)<br>(10-32 UNF)        | 2-2.5 Nm<br>18-22 lb.in.  |
| Weight        | typ.                                       | 50 g  |

### Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- 1/4" fast-on terminals
- UL registered E 72873

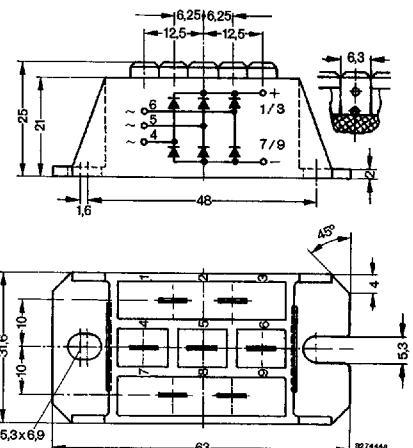
### Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Rectifier for DC motors field current

### Advantages

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

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



| Symbol     | Test Conditions  | Characteristic Values |
|------------|--|-----------------------|
| $I_R$      | $V_R = V_{RRM}$ ;<br>$T_{VJ} = 25^\circ\text{C}$       | 0.3 mA                |
|            | $V_R = V_{RRM}$ ;<br>$T_{VJ} = T_{VJM}$                | 5 mA                  |
| $V_F$      | $I_F = 150 \text{ A}$ ;<br>$T_{VJ} = 25^\circ\text{C}$ | 1.9 V                 |
| $V_{T0}$   | For power-loss calculations only                       | 0.9 V                 |
| $r_T$      | $T_{VJ} = T_{VJM}$                                     | 6.0 mΩ                |
| $R_{thJC}$ | per diode, DC current                                  | 1.62 K/W              |
|            | per module   | 0.27 K/W              |
| $R_{thJK}$ | per diode, DC current                                  | 2.22 K/W              |
|            | per module   | 0.37 K/W              |
| $d_s$      | Creeping distance on surface                           | 10 mm                 |
| $d_A$      | Creepage distance in air                               | 9.4 mm                |
| $a$        | Max. allowable acceleration                            | 50 m/s <sup>2</sup>   |

Data according to DIN/IEC 747 and 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.

**Use output terminals in parallel connection!**