

## Three Phase Rectifier Bridge

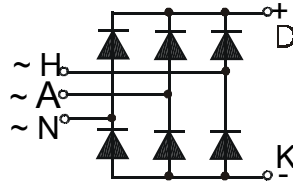
## PSD 27

$$I_{dAV} = 28 \text{ A}$$

$$V_{RRM} = 600-1200 \text{ V}$$

Preliminary Data Sheet

| $V_{RSM}$<br>$V_{DSM}$<br>(V) | $V_{RRM}$<br>$V_{DRM}$<br>(V) | Type      |
|-------------------------------|-------------------------------|-----------|
| 700                           | 600                           | PSD 27/06 |
| 900                           | 800                           | PSD 27/08 |
| 1300                          | 1200                          | PSD 27/12 |



| Symbol        | Test Conditions  | Maximum Ratings     |
|---------------|--|---------------------|
| $I_{dAV}^*$   | $T_C = 100 \text{ }^\circ\text{C}$ , (per module)            | 28 A                |
| $I_{FSM}$     | $T_{VJ} = 45 \text{ }^\circ\text{C}$ t = 10 ms (50 Hz), sine | 100 A               |
|               | $V_R = 0$ t = 8.3 ms (60 Hz), sine                           | 106 A               |
|               | $T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine                   | 85 A                |
|               | $V_R = 0$ t = 8.3 ms (60 Hz), sine                           | 90 A                |
| $\int i^2 dt$ | $T_{VJ} = 45 \text{ }^\circ\text{C}$ t = 10 ms (50 Hz), sine | 50 A <sup>2</sup> s |
|               | $V_R = 0$ t = 8.3 ms (60 Hz), sine                           | 47 A <sup>2</sup> s |
|               | $T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine                   | 36 A <sup>2</sup> s |
|               | $V_R = 0$ t = 8.3 ms (60 Hz), sine                           | 33 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 - 1.8 Nm        |
|               |  | 14 - 16 lb.in.      |
| <b>Weight</b> | typ.   | 10 g                |

| Symbol     | Test Conditions  | Characteristic Value |
|------------|--|----------------------|
| $I_R$      | $V_R = V_{RRM}$ , $T_{VJ} = T_{VJM}$                       | $\leq 0.3$ mA        |
|            | $V_R = V_{RRM}$ , $T_{VJ} = 25 \text{ }^\circ\text{C}$     | $\leq 5$ mA          |
| $V_F$      | $I_F = 7 \text{ A}$ , $T_{VJ} = 25 \text{ }^\circ\text{C}$ | $\leq 1.12$ V        |
| $V_{TO}$   | For power-loss calculations only                           | 0.8 V                |
| $r_T$      |  | 40 mΩ                |
| $R_{thJC}$ | per diode; DC  | 2.3 K/W              |
|            | per module   | 0.39 K/W             |
| $R_{thJH}$ | per diode; DC  | 2.8 K/W              |
|            | per module   | 0.47 K/W             |
| $d_s$      | Creeping distance on surface                               | 8.2 mm               |
| $d_A$      | Creeping 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

### Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar glass passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- UL registered, E 148688

### Applications

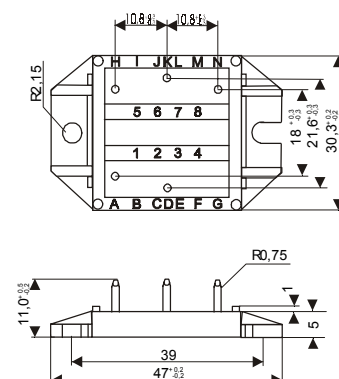
- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

### Advantages

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

### Package style and outline

Dimensions in mm (1mm = 0.0394")



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