

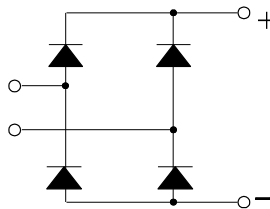
## Single Phase Rectifier Bridge

## PSB 25T PSB 25TN

$I_{dAVM} = 21 \text{ A}$   
 $V_{RRM} = 1200 \text{ V to } 2200 \text{ V}$

Preliminary Data Sheet

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | Type Number           |                         |
|----------------|----------------|-----------------------|-------------------------|
|                |                | Gold-plated terminals | Nickel-plated terminals |
| 1200           | 1200           | PSB 25T/12            | PSB 25TN/12             |
| 1400           | 1400           | PSB 25T/14            | PSB 25TN/14             |
| 1600           | 1600           | PSB 25T/16            | PSB 25TN/16             |
| 1800           | 1800           | PSB 25T/18            | PSB 25TN/18             |
| 2000           | 2000           | PSB 25T/20            | PSB 25TN/20             |
| 2200           | 2200           | PSB 25T/22            | PSB 25TN/22             |



| Symbol        | Test Conditions                                   |                     |             | Maximum Ratings |                  |
|---------------|---------------------------------------------------|---------------------|-------------|-----------------|------------------|
| $I_{dAVM}$    | $T_c = 63^\circ\text{C}$ per module               |                     |             | 21              | A                |
| $I_{FSM}$     | $T_{vj} = 45^\circ\text{C}$ , $V_R = 0 \text{ V}$ | $t = 10 \text{ ms}$ | 50 Hz, sine | 380             | A                |
|               | $T_{vj} = T_{vjM}$ , $V_R = 0 \text{ V}$          | $t = 10 \text{ ms}$ | 50 Hz, sine | 360             | A                |
| $\int i^2 dt$ | $T_{vj} = 45^\circ\text{C}$ , $V_R = 0 \text{ V}$ | $t = 10 \text{ ms}$ | 50 Hz, sine | 725             | A <sup>2</sup> s |
| $T_{vj}$      |                                                   |                     |             | -40 ... +150    | $^\circ\text{C}$ |
| $T_{vjM}$     |                                                   |                     |             | 150             | $^\circ\text{C}$ |
| $T_{stg}$     |                                                   |                     |             | -40 ... +150    | $^\circ\text{C}$ |
|               |                                                   |                     |             |                 |                  |
| $V_{isol}$    | 50/60 Hz, RMS                                     | $t = 1 \text{ min}$ |             | 2500            | V~               |
|               | $I_{isol} \leq 1 \text{ mA}$                      | $t = 1 \text{ s}$   |             | 3000            | V~               |
| $M_d$         | Mounting torque                                   | (M5)                |             | 2±10%           | Nm               |
|               |                                                   | (10-32 UNF)         |             | 18±10%          | lb in            |
| Weight        | typ.                                              |                     |             | 20              | g                |

### Features

- ¼" gold- or nickel-plated FASTON terminals
- Isolation voltage 3000 V~
- Mesa glass-passivated chips
- Blocking voltage up to 2200 V
- Low forward voltage drop
- UL registered E 148688

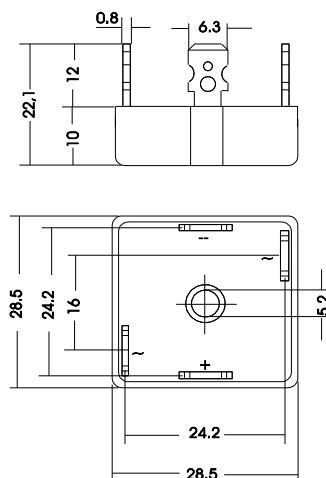
### Applications

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

### Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature and power cycling capability

### Package style and outline



Dimensions in mm (1mm = 0.0394")

| Symbol        | Test Conditions                  |                             |        | Characteristic Value |                  |
|---------------|----------------------------------|-----------------------------|--------|----------------------|------------------|
| $I_R$         | $V_R = V_{RRM}$                  | $T_{vj} = 25^\circ\text{C}$ | $\leq$ | 0.3                  | mA               |
|               | $V_R = V_{RRM}$                  | $T_{vj} = T_{vjM}$          | $\leq$ | 5.0                  | mA               |
| $V_F$         | $I_F = 150 \text{ A}$            | $T_{vj} = 25^\circ\text{C}$ | $\leq$ | 2.2                  | V                |
| $V_{TO}$      | For power-loss calculations only |                             |        | 0.85                 | V                |
| $r_T$         | $T_{vj} = T_{vjM}$               |                             |        | 12                   | mΩ               |
| $R_{th(j-c)}$ | per diode; DC current            |                             |        | 8.2                  | K/W              |
|               | per module                       |                             |        | 2.05                 | K/W              |
| $R_{th(j-s)}$ | per diode; DC current            |                             |        | 9.4                  | K/W              |
|               | per module                       |                             |        | 2.35                 | K/W              |
| $d_s$         | Creeping distance on surface     |                             |        | 12.7                 | mm               |
| $d_A$         | Creeping distance on air         |                             |        | 9.4                  | mm               |
| $a$           | Maximum allowable acceleration   |                             |        | 50                   | m/s <sup>2</sup> |

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