

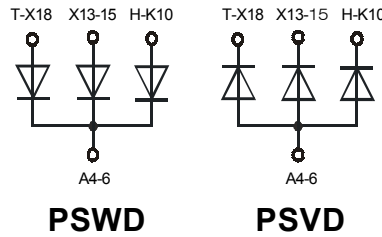
Half Three Phase Rectifier Bridge

PSWD 100
PSVD 100

$I_{dAV} = 100 A$
 $V_{RRM} = 800-1800V$

Preliminary Data Sheet

| V_{RSM} V_{DSM} (V) | V_{RRM} V_{DRM} (V) | Type | |
|-------------------------------|-------------------------------|-------------|-------------|
| 800 | 800 | PSWD 100/08 | PSVD 100/08 |
| 1200 | 1200 | PSWD 100/12 | PSVD 100/12 |
| 1400 | 1400 | PSWD 100/14 | PSVD 100/14 |
| 1600 | 1600 | PSWD 100/16 | PSVD 100/16 |
| 1800 | 1800 | PSWD 100/18 | PSVD 100/18 |



| Symbol | Test Conditions | Maximum Ratings | |
|-------------|--|--------------------------|-----------------------|
| I_{dAV} ① | $T_C = 85^\circ C$; module, sinusoidal 120° | 100 | A |
| I_{FSM} | $T_{VJ} = 45^\circ C$; $V_R = 0$ | t = 10 ms (50 Hz), sine | 480 A |
| | | t = 8.3 ms (60 Hz), sine | 510 A |
| I^2t | $T_{VJ} = T_{VJM}$; $V_R = 0$ | t = 10 ms (50 Hz), sine | 420 A |
| | | t = 8.3 ms (60 Hz), sine | 450 A |
| I^2t | $T_{VJ} = 45^\circ C$; $V_R = 0$ | t = 10 ms (50 Hz), sine | 1150 A ² s |
| | | t = 8.3 ms (60 Hz), sine | 1090 A ² s |
| T_{VJ} | | -40...+150 | °C |
| | | 150 | °C |
| T_{VJM} | | 150 | °C |
| T_{stg} | | -40...+125 | °C |
| V_{ISOL} | 50/60 Hz, RMS t = 1 min | 2500 | V~ |
| | $I_{ISOL} \leq 1 mA$ t = 1 s | 3000 | V~ |
| M_d | Mounting torque (M4) | 1.5 - 2 | Nm |
| | | 14 - 18 | lb.in. |
| Weight | typ. | 24 | g |

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

Applications

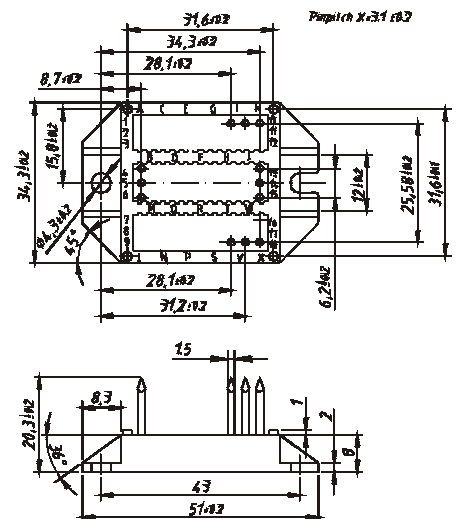
- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

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

Package style and outline

Dimensions in mm (1mm = 0.0394")



| Symbol | Test Conditions | Characteristic Values | |
|------------|---|-----------------------|------------------|
| I_R | $V_R = V_{RRM}$; $T_{VJ} = 25^\circ C$ | \leq 0.05 | mA |
| | $V_R = V_{RRM}$; $T_{VJ} = T_{VJM}$ | \leq 3 | mA |
| V_F | $I_F = 80 A$; $T_{VJ} = 25^\circ C$ | \leq 1.5 | V |
| V_{T0} | For power-loss calculations only | 0.8 | V |
| r_T | | 6.6 | mΩ |
| R_{thJC} | per diode; DC current | 1.2 | K/W |
| | per module | 0.4 | K/W |
| R_{thJH} | per diode, DC current (typ.) | 1.5 | K/W |
| | per module (typ.) | 0.5 | 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 ² |

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

① for resistive load at bridge output.