POWERSEM

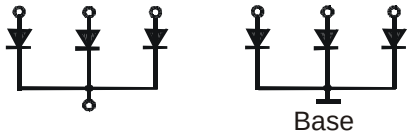
# Diode Modules

**PSWD 120**
**PSYD 120**

$I_{FRMS}$ = 3x 70 A
$V_{RRM}$ = 800 - 1800 V

Preliminary Data Sheet

| $V_{RSM}$ $V_{DSM}$ | $V_{RRM}$ $V_{DRM}$ | Type | Type |
|---|---|---|---|
| 900 | 800 | PSWD 120/08 | PSYD 120/08 |
| 1300 | 1200 | PSWD 120/12 | PSYD 120/12 |
| 1500 | 1400 | PSWD 120/14 | PSYD 120/14 |
| 1700 | 1600 | PSWD 120/16 | PSYD 120/16 |
| 1900 | 1800 | PSWD 120/18 | PSYD 120/18 |




**PSWD** **PSYD**

| Symbol | Test Conditions | | | Maximum Ratings | |
|---|---|---|---|---|---|
| $I_{FAVM}$ | $T_C$ = 85°C | | | 70 | A |
| $I_{FSM}$ | $T_{VJ}$ = 45°C | t = 10 ms | (50 Hz), sine | 1800 | A |
| | $V_R$ = 0 | t = 8.3 ms | (60 Hz), sine | 1950 | A |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms | (50 Hz), sine | 1600 | A |
| | $V_R$ = 0 | t = 8.3 ms | (60 Hz), sine | 1800 | A |
| $\int i^2 dt$ | $T_{VJ}$ = 45°C | t = 10 ms | (50 Hz), sine | 16200 | $A^2$ s |
| | $V_R$ = 0 | t = 8.3 ms | (60 Hz), sine | 16200 | $A^2$ s |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms | (50 Hz), sine | 12800 | $A^2$ s |
| | $V_R$ = 0 | t = 8.3 ms | (60 Hz), sine | 13400 | $A^2$ 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 ~ |
| | $I_{ISOL}$ ≤ 1 mA | t = 1 s | | 3000 | V ~ |
| $M_d$ | Mounting torque | | (M6) | 5 | Nm |
| | Terminal connection torque | | (M6) | 5 | Nm |
| Weight | typ. | | | 270 | g |

| Symbol | Test Conditions | | | Characteristic Value | |
|---|---|---|---|---|---|
| $I_R$ | $V_R$ = $V_{RRM}$ | $T_{VJ}$ = 25°C | ≤ | 0.3 | mA |
| | $V_R$ = $V_{RRM}$ | $T_{VJ}$ = $T_{VJM}$ | ≤ | 5 | mA |
| $V_F$ | $I_F$ = 300 A | $T_{VJ}$ = 25°C | ≤ | 1.55 | V |
| $V_{TO}$ | For power-loss calculations only | | | 0.8 | V |
| $r_T$ | $T_{VJ}$ = $T_{VJM}$ | | | 3 | mΩ |
| $R_{thJC}$ | per diode; DC current | | | 0.65 | K/W |
| | per module | | | 0.108 | K/W |
| $R_{thJK}$ | per diode; DC current | | | 0.83 | K/W |
| | per module | | | 0.138 | K/W |
| $d_S$ | Creeping distance on surface | | | 10.0 | mm |
| $d_A$ | Creeping distance in air | | | 9.4 | mm |
| a | Max. allowable acceleration | | | 50 | $m/s^2$ |

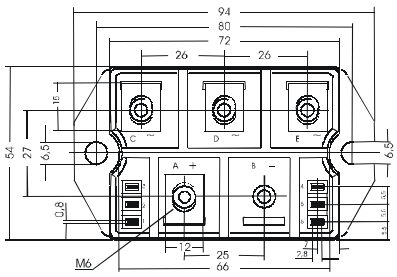
Features
- Package with screw terminals
- Isolation voltage 3000 V~
- Planar glasspassivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered, E148688

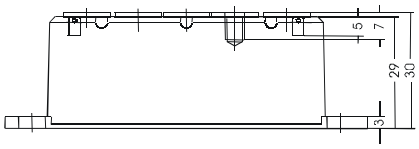
Applications
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

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

## Package, style and outline

Dimensions in mm (1 mm=0.0394")

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