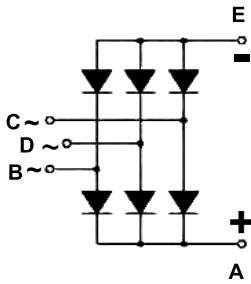


S3PDB%50

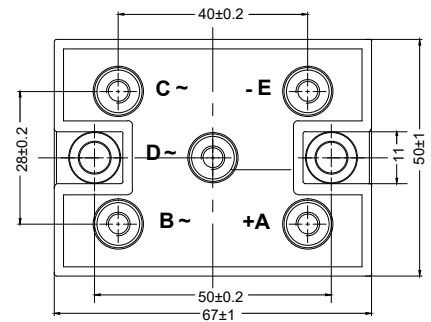
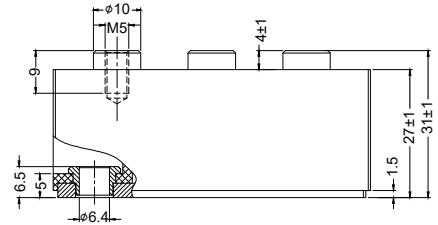
Three Phase Rectifier Modules



| Type | V_{RSM} V | V_{RRM} V |
|-------------|----------------|----------------|
| S3PDB%50N08 | 900 | 800 |
| S3PDB%50N12 | 1300 | 1200 |
| S3PDB%50N14 | 1500 | 1400 |
| S3PDB%50N16 | 1700 | 1600 |
| S3PDB%50N18 | 1900 | 1800 |



Dimensions in mm (1mm=0.0394")



| Symbol | Test Conditions | Maximum Ratings | Unit |
|------------------------------------|--|---------------------------------|-------------|
| I_{dav} | $T_C=100^{\circ}C$, module | 150 | A |
| I_{FSM} | $T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 1500 1650 | A |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 1350 1500 | |
| I^2t | $T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 11250 11300 | A^2s |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 9120 9350 | |
| T_{VJ} T_{VJM} T_{stg} | | -40...+150 150 -40...+150 | $^{\circ}C$ |
| V_{ISOL} | 50/60Hz, RMS $I_{ISOL} \leq 1mA$ $t=1min$ $t=1s$ | 2500 3000 | V~ |
| M_d | Mounting torque (M5) Terminal connection torque (M5) | $5 \pm 15\%$ $5 \pm 15\%$ | Nm |
| Weight | typ. | 248 | g |

Sirectifier®

S3PDB⁵⁰

Three Phase Rectifier Modules

| Symbol | Test Conditions | Characteristic Values | Unit |
|-------------------------|---|-----------------------|------------------|
| I_R | $V_R=V_{RRM}; T_{VJ}=25^{\circ}\text{C}$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$ | < 0.3 ≤ 8 | mA |
| V_F | $I_F=150\text{A}; T_{VJ}=25^{\circ}\text{C}$ | < 1.34 | V |
| V_{Fo} | For power-loss calculations only | 0.76 | V |
| r_F | $T_{VJ}=T_{VJM}$ | 3.5 | mΩ |
| R_{thJC} | per diode | 0.83 | K/W |
| | per module | 0.138 | |
| R_{thJK} | per diode | 1.13 | K/W |
| | per module | 0.188 | |
| d_s | Creeping distance on surface | 14 | mm |
| d_A | Creepage distance in air | 14 | mm |
| a | Max. allowable acceleration | 50 | m/s ² |

FEATURES

- * Package with Screw terminals
- * Isolation voltage 3000 V~
- * Blocking voltage up to 1800 V
- * Low forward voltage drop
- * RoHS Compliant

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 screws
- * Space and weight savings
- * Improved temperature and power cycling

S3PDB⁵⁰

Three Phase Rectifier Modules

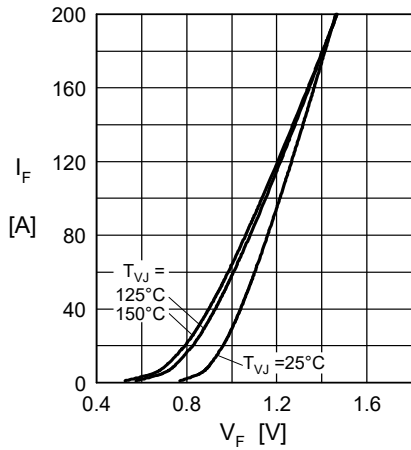


Fig. 1 Forward current versus voltage dropper diode

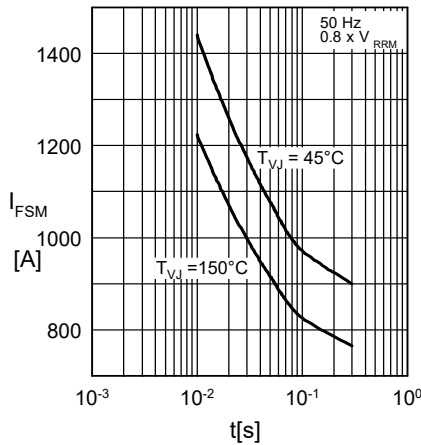


Fig. 2 Surge overload current vs. time per diode

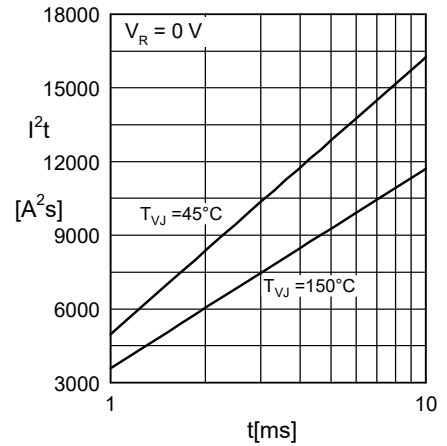


Fig. 3 I^2t versus time per diode

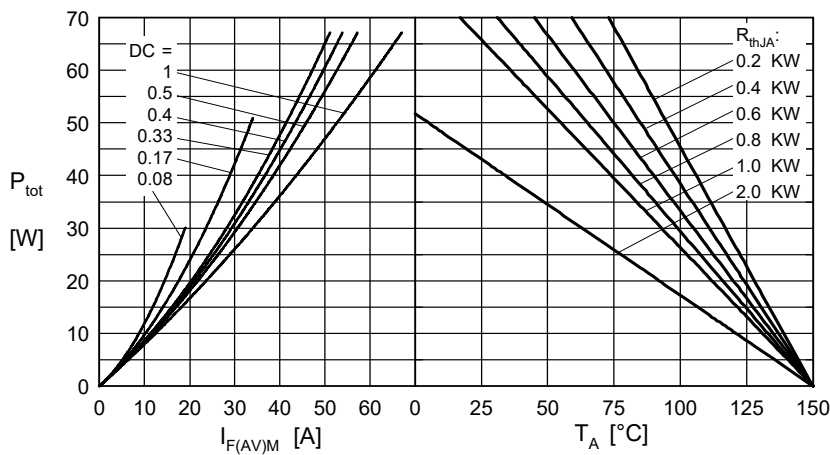


Fig. 4 Power dissipation vs. forward current and ambient temperature per diode

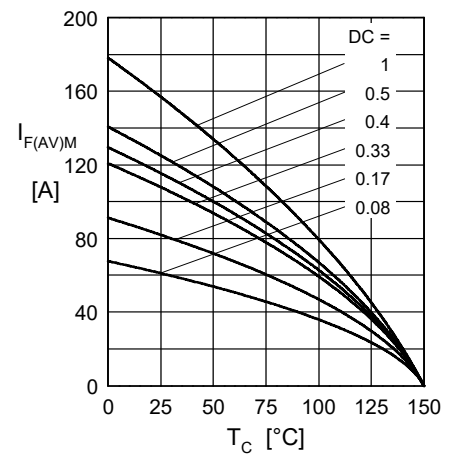


Fig. 5 Max. forward current vs. case temperature per diode