



## Power Bridge Rectifiers

### SKD 50

#### Features

- Isolated metal case with screw terminals
- Blocking voltage up to 1600 V
- High surge current
- Easy chassis mounting

#### Typical Applications

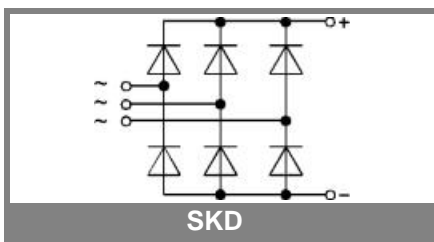
- Three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network:  
RC: 0.1  $\mu$ F, 50  $\Omega$  ( $P_R = 1$  W)

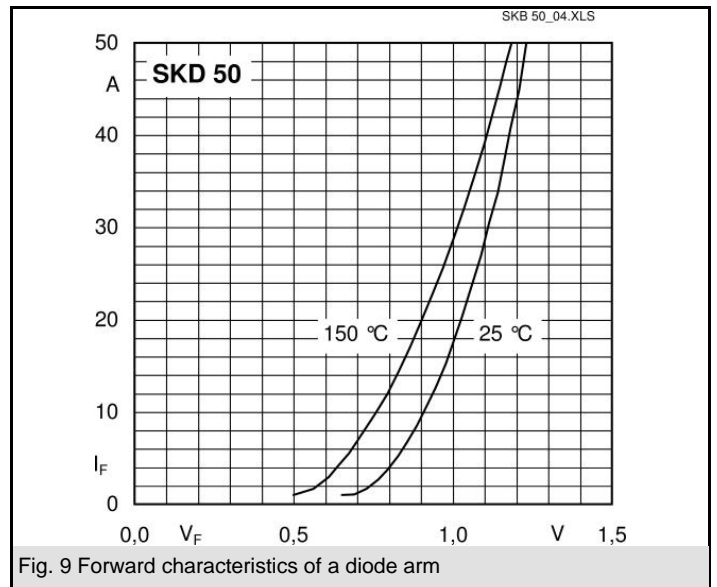
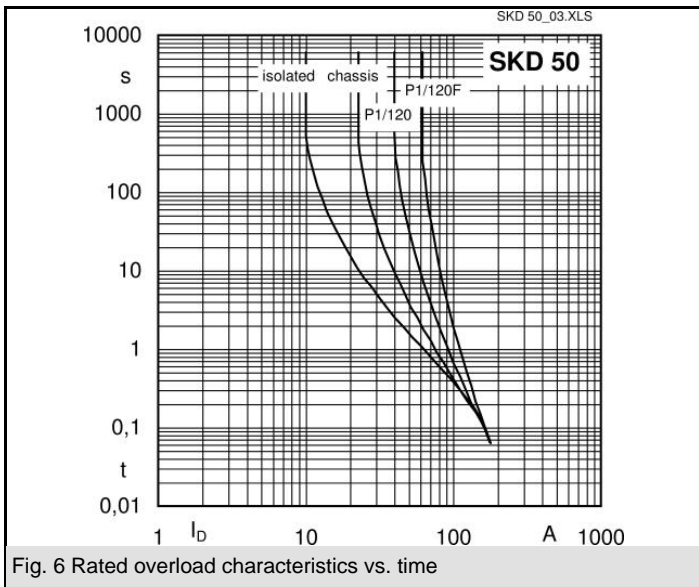
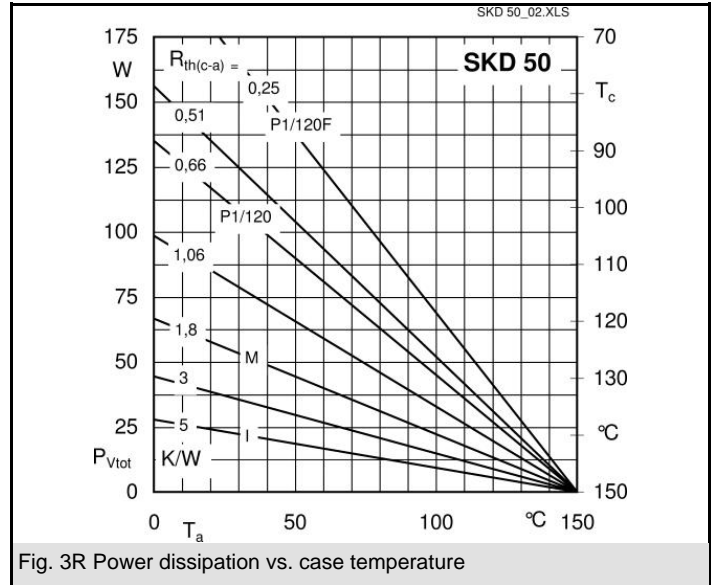
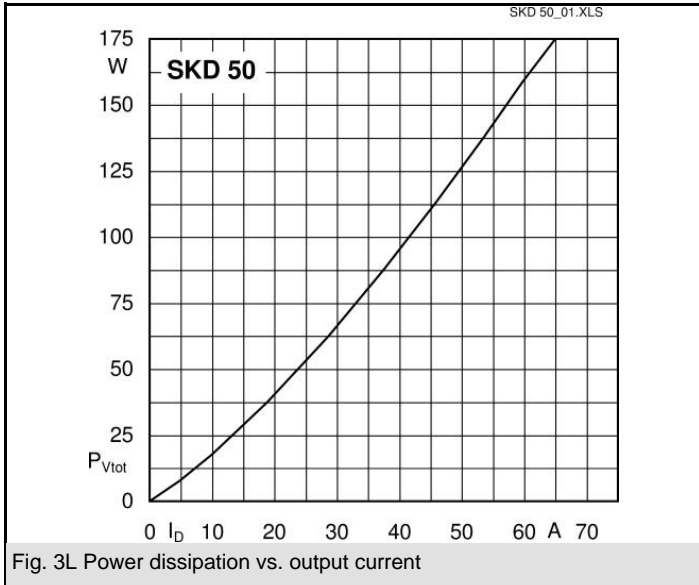
1) Freely suspended or mounted on an insulator

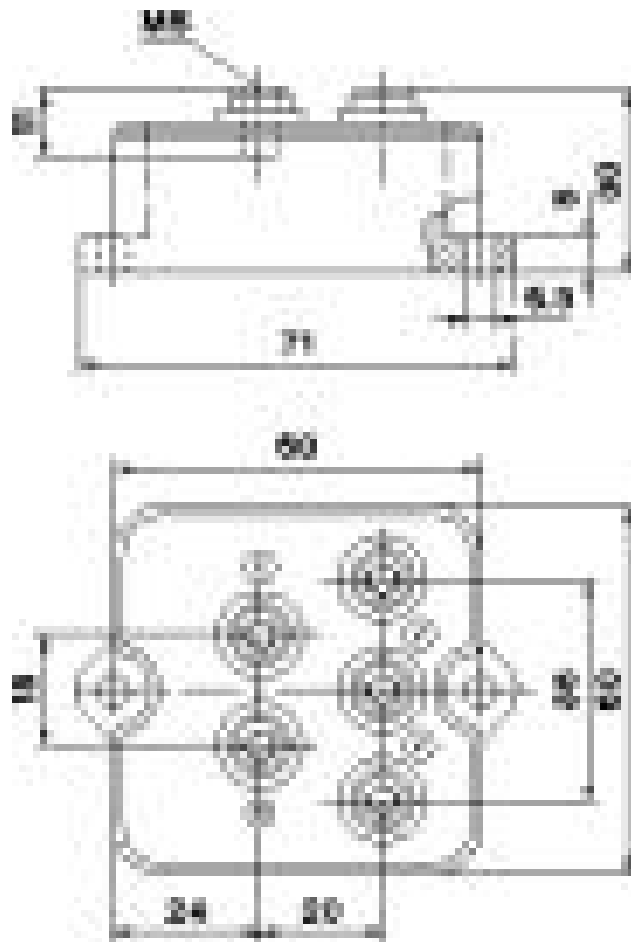
2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

| $V_{RSM}, V_{RRM}$<br>V | $V_{VRMS}$<br>V | $I_D = 50$ A ( $T_c = 92$ °C)<br>Types | $C_{max}$<br>$\mu$ F | $R_{min}$<br>$\Omega$ |
|-------------------------|-----------------|--|----------------------|-----------------------|
| 200                     |                 | SKD 50/02A3                            |                      | 0,1                   |
| 400                     |                 | SKD 50/04A3                            |                      | 0,2                   |
| 800                     |                 | SKD 50/08A3                            |                      | 0,4                   |
| 1200                    |                 | SKD 50/12A3                            |                      | 0,6                   |
| 1400                    |                 | SKD 50/14A3                            |                      | 0,7                   |
| 1600                    |                 | SKD 50/16A3                            |                      | 0,8                   |

| Symbol        | Conditions                               | Values         | Units            |
|---------------|--|----------------|------------------|
| $I_D$         | $T_a = 45$ °C, isolated <sup>1)</sup>    | 10             | A                |
|               | $T_a = 45$ °C, chassis <sup>2)</sup>     | 22             | A                |
| $I_{DCL}$     | $T_a = 45$ °C, isolated <sup>1)</sup>    | 10             | A                |
|               | $T_a = 45$ °C, chassis <sup>2)</sup>     | 22             | A                |
|               | $T_a = 35$ °C, P1A/120 F                 | 60             | A                |
| $I_{FSM}$     | $T_{vj} = 25$ °C, 10 ms                  | 750            | A                |
|               | $T_{vj} = 150$ °C, 10 ms                 | 600            | A                |
| $i^2t$        | $T_{vj} = 25$ °C, 8,3 ... 10 ms          | 2800           | A <sup>2</sup> s |
|               | $T_{vj} = 150$ °C, 8,3 ... 10 ms         | 1800           | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C, $I_F = 150$ A          | max. 1,6       | V                |
| $V_{(TO)}$    | $T_{vj} = 150$ °C                        | max. 0,85      | V                |
| $r_T$         | $T_{vj} = 150$ °C                        | max. 8         | m $\Omega$       |
| $I_{RD}$      | $T_{vj} = 25$ °C, $V_{RD} = V_{RRM}$     | 1000           | $\mu$ A          |
|               | $T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$ |                | $\mu$ A          |
| $I_{RD}$      | $T_{vj} = 150$ °C, $V_{RD} = V_{RRM}$    | 10             | mA               |
|               | $T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$ |                | mA               |
| $t_{tr}$      | $T_{vj} = 25$ °C                         | 10             | $\mu$ s          |
| $f_G$         |  | 2000           | Hz               |
| $R_{th(j-a)}$ | isolated <sup>1)</sup>                   | 5,5            | K/W              |
|               | chassis <sup>2)</sup>                    | 2,3            | K/W              |
| $R_{th(j-c)}$ | total                                    | 0,45           | K/W              |
| $R_{th(c-s)}$ | total                                    | 0,06           | K/W              |
| $T_{vj}$      |  | - 40 ... + 150 | °C               |
| $T_{stg}$     |  | - 55 ... + 150 | °C               |
| $V_{isol}$    | a. c. 50 ... 60 Hz; r.m.s.; 1 s / 1 min. | 3000 / 2500    | V~               |
| $M_s$         | to heatsink                              | 5 $\pm$ 15 %   | Nm               |
| $M_t$         | to terminals                             | 3 $\pm$ 15 %   | Nm               |
| $a$           |  | 5 * 9,81       | m/s <sup>2</sup> |
| $w$           |  | 250            | g                |
| $F_u$         |  | 50             | A                |
| Case          |  | G 15           |                  |







Case G 15

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