



## Power Bridge Rectifiers

### SKD 25

#### Features

- Square plastic case with isolated metal base plate and fast-on connectors
- Blocking voltage to 1600 V
- High surge current
- Easy chassis mounting
- UL recognized, file no. E 63 532

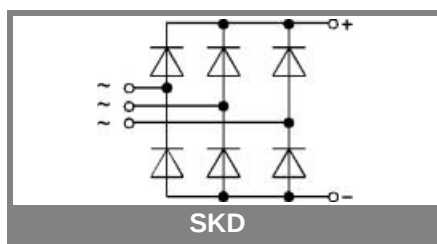
#### Typical Applications

- Three phase rectifier for power supplies
- Input rectifiers for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network:  
RC: 50  $\Omega$ , 0.1  $\mu$ F ( $P_R = 1$  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 | $I_D = 20$ A ( $T_c = 73$ °C)<br>Types | $C_{max}$<br>$\mu$ F | $R_{min}$<br>$\Omega$ |
|-------------------------|-----------------|----------------------------------------|----------------------|-----------------------|
| 200                     |                 | SKD 25/02                              |                      | 0,15                  |
| 400                     |                 | SKD 25/04                              |                      | 0,3                   |
| 800                     |                 | SKD 25/08                              |                      | 0,7                   |
| 1200                    |                 | SKD 25/12                              |                      | 1                     |
| 1400                    |                 | SKD 25/14                              |                      | 1,2                   |
| 1600                    |                 | SKD 25/16                              |                      | 1,5                   |

| Symbol        | Conditions                                                                                   | Values                      | Units                                |
|---------------|----------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------|
| $I_D$         | $T_a = 45$ °C, isolated <sup>1)</sup><br>$T_a = 45$ °C, chassis <sup>2)</sup>                | 3,5<br>12                   | A<br>A                               |
| $I_{DCL}$     | $T_a = 45$ °C, isolated <sup>1)</sup><br>$T_a = 45$ °C, chassis <sup>2)</sup><br>$T_a =$ °C, | 3,5<br>12                   | A<br>A<br>A                          |
| $I_{FSM}$     | $T_{vj} = 25$ °C, 10 ms<br>$T_{vj} = 150$ °C, 10 ms                                          | 370<br>320                  | A<br>A                               |
| $i^2t$        | $T_{vj} = 25$ °C, 8,3 ... 10 ms<br>$T_{vj} = 150$ °C, 8,3 ... 10 ms                          | 680<br>500                  | A <sup>2</sup> s<br>A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C, $I_F = 150$ A                                                              | max. 2,2                    | V                                    |
| $V_{(TO)}$    | $T_{vj} = 150$ °C                                                                            | max. 0,85                   | V                                    |
| $r_T$         | $T_{vj} = 150$ °C                                                                            | max. 12                     | m $\Omega$                           |
| $I_{RD}$      | $T_{vj} = 25$ °C, $V_{RD} = V_{RRM}$<br>$T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$             | 300                         | $\mu$ A<br>$\mu$ A                   |
| $I_{RD}$      | $T_{vj} = 150$ °C, $V_{RD} = V_{RRM}$<br>$T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$            | 5                           | mA<br>mA                             |
| $t_{rr}$      | $T_{vj} = 25$ °C                                                                             | 10                          | $\mu$ s                              |
| $f_G$         |                                                                                              | 2000                        | Hz                                   |
| $R_{th(j-a)}$ | isolated <sup>1)</sup><br>chassis <sup>2)</sup>                                              | 15<br>4,7                   | K/W<br>K/W                           |
| $R_{th(j-c)}$ | total                                                                                        | 1,75                        | K/W                                  |
| $R_{th(c-s)}$ | total                                                                                        | 0,15                        | 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.<br>to heatsink                                      | 3000 / 2500<br>2 $\pm$ 15 % | V~<br>Nm<br>Nm<br>m/s <sup>2</sup>   |
| $M_s$         |                                                                                              |                             |                                      |
| $M_t$         |                                                                                              |                             |                                      |
| a             |                                                                                              |                             |                                      |
| w             |                                                                                              | 26                          | g                                    |
| Fu            |                                                                                              | 20                          | A                                    |
| Case          |                                                                                              | G 11b                       |                                      |



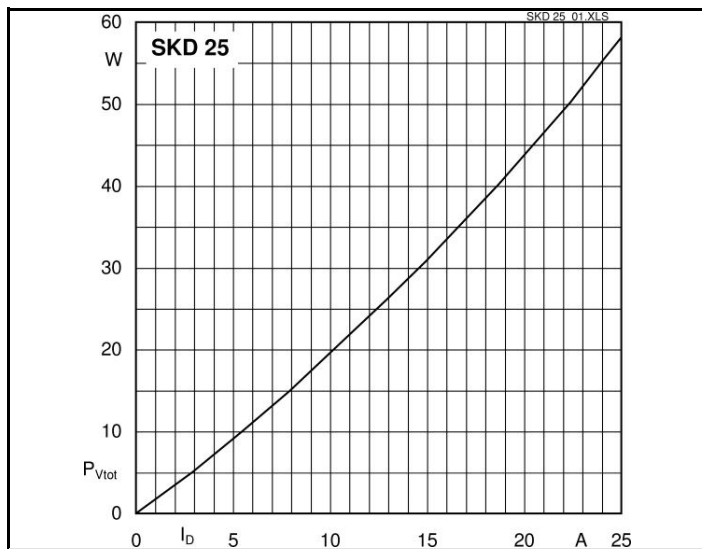


Fig. 3L Power dissipation vs. output current

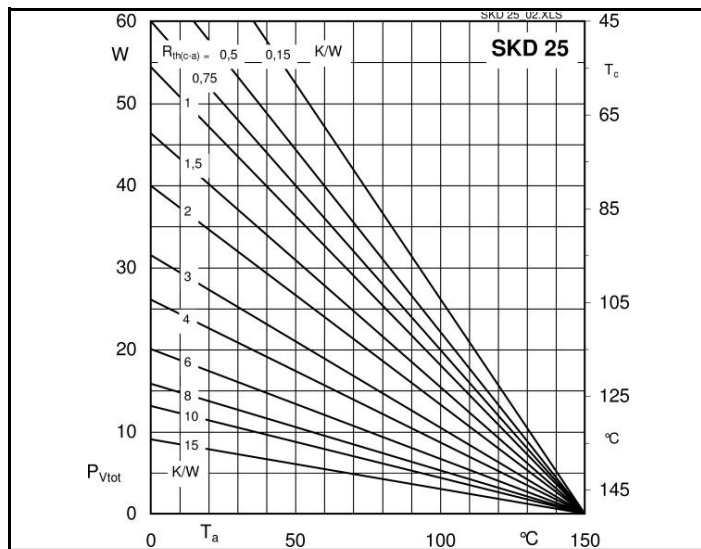


Fig. 3R Power dissipation vs. case temperature

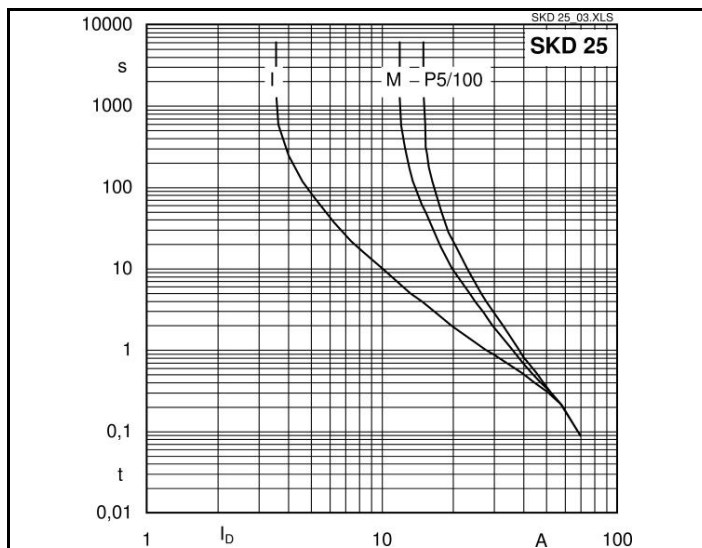


Fig. 6 Rated overload characteristics vs. time

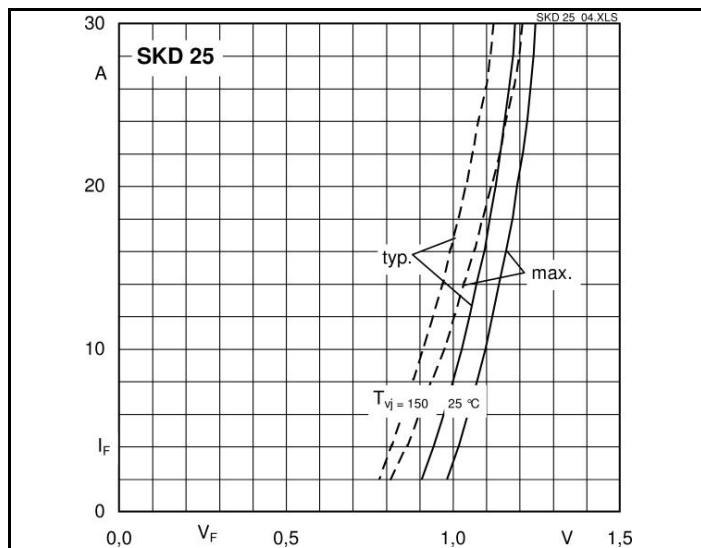
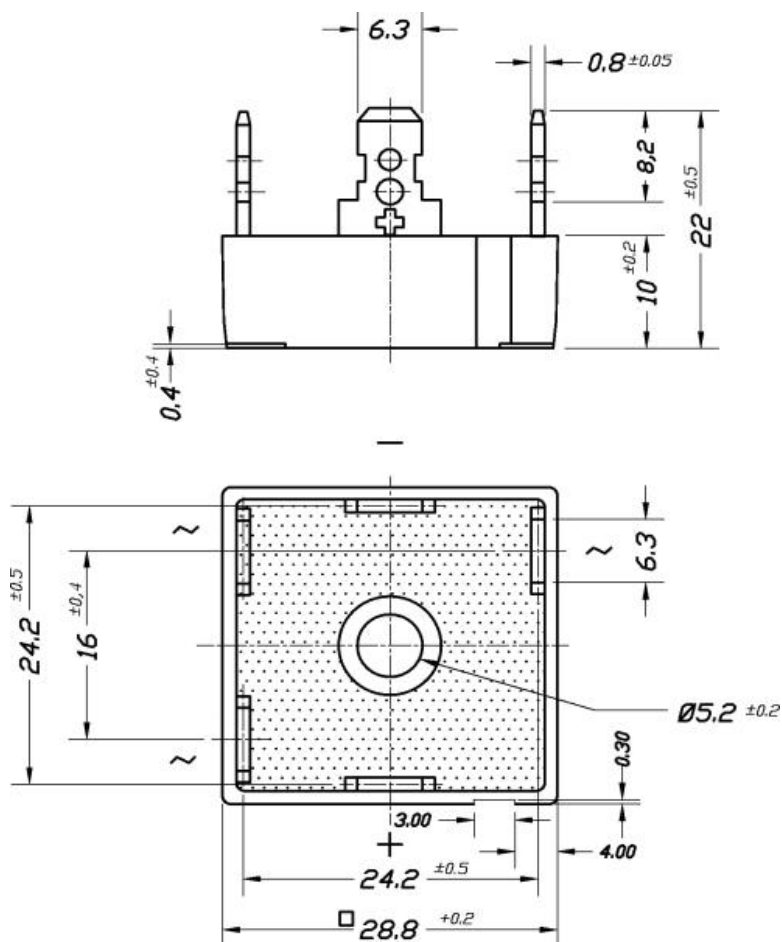


Fig. 9 Forward characteristics of a diode arm



Case G 11b

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