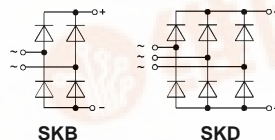
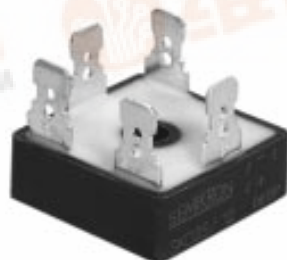


## Power Bridge Rectifiers

SKB 25  
SKD 25

## Features

- Square plastic case with isolated metal base plate and fast-on connectors
- Blocking voltage to 1600 V
- High surge currents
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting
- UL recognized, file no. E 63 532

## Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

| $V_{RSM}$<br>$V_{RRM}$ | $I_D$ ( $T_{case} = \dots$ ) |                       |                  |                       |
|------------------------|------------------------------|-----------------------|------------------|-----------------------|
|                        | 17 A (75 °C)                 |                       | 20 A (73 °C)     |                       |
| V                      | Types                        | $R_{min}$<br>$\Omega$ | Types            | $R_{min}$<br>$\Omega$ |
| 100                    | <b>SKB 25/01</b>             | 0,1                   | –                | –                     |
| 200                    | <b>SKB 25/02</b>             | 0,15                  | <b>SKD 25/02</b> | 0,15                  |
| 400                    | <b>SKB 25/04</b>             | 0,3                   | <b>SKD 25/04</b> | 0,3                   |
| 600                    | <b>SKB 25/06</b>             | 0,5                   | –                | –                     |
| 800                    | <b>SKB 25/08</b>             | 0,7                   | <b>SKD 25/08</b> | 0,7                   |
| 1200                   | <b>SKB 25/12</b>             | 1                     | <b>SKD 25/12</b> | 1                     |
| 1400                   | <b>SKB 25/14</b>             | 1,2                   | <b>SKD 25/14</b> | 1,2                   |
| 1600                   | <b>SKB 25/16</b>             | 1,5                   | <b>SKD 25/16</b> | 1,5                   |

| Symbol     | Conditions   | SKB 25                | SKD 25                | Units            |         |
|------------|--|-----------------------|-----------------------|------------------|---------|
| $I_D$      | $T_{amb} = 45\text{ °C}$ ; isolated <sup>1)</sup><br>chassis <sup>2)</sup><br>R4A/120<br>P1A/120 | 3,5<br>10<br>14<br>17 | 3,5<br>12<br>15<br>20 | A<br>A<br>A<br>A |         |
| $I_{DCL}$  | $T_{amb} = 45\text{ °C}$ ; isolated <sup>1)</sup><br>chassis <sup>2)</sup><br>R4A/120<br>P1A/120 | 3<br>9,5<br>12<br>14  | 3,5<br>12<br>15<br>20 | A<br>A<br>A<br>A |         |
| $I_{FSM}$  | $T_{vj} = 25\text{ °C}$ , 10 ms  | 370                   |                       | A                |         |
| $i^2t$     | $T_{vj} = 150\text{ °C}$ , 10 ms   | 320                   |                       | A                |         |
|            | $T_{vj} = 25\text{ °C}$ , 8,3...10 ms  | 680                   |                       | A <sup>2</sup> s |         |
|            | $T_{vj} = 150\text{ °C}$ , 8,3...10 ms   | 500                   |                       | A <sup>2</sup> s |         |
| $V_F$      | $T_{vj} = 25\text{ °C}$ ; $I_F = 150\text{ A}$   | 2,2                   |                       | V                |         |
| $V_{(TO)}$ | $T_{vj} = 150\text{ °C}$   | 0,85                  |                       | V                |         |
| $r_T$      | $T_{vj} = 150\text{ °C}$   | 12                    |                       | m $\Omega$       |         |
| $I_{RD}$   | $T_{vj} = 25\text{ °C}$ ; $V_{RD} = V_{RRM}$   | 0,3                   |                       | mA               |         |
| $t_{rr}$   | $T_{vj} = 150\text{ °C}$ ; $V_{RD} = V_{RRM}$  | 5                     |                       | mA               |         |
|            | $T_{vj} = 25\text{ °C}$  | typ. 10               |                       | $\mu$ s          |         |
| $f_G$      |  | 2000                  |                       | Hz               |         |
| $R_{thjc}$ | total  | 2                     | 1,75                  | $^{\circ}$ C/W   |         |
| $R_{thch}$ | total  | 0,15                  |                       | $^{\circ}$ C/W   |         |
| $R_{thja}$ | isolated <sup>1)</sup>   | 15                    |                       | $^{\circ}$ C/W   |         |
|            | chassis <sup>2)</sup>  | 4,7                   |                       | $^{\circ}$ C/W   |         |
|            | R4A/120  | 3,6                   |                       | $^{\circ}$ C/W   |         |
|            | P1A/120  | 2,75                  |                       | $^{\circ}$ C/W   |         |
| $T_{vj}$   |  | – 40...+ 150          |                       | $^{\circ}$ C     |         |
| $T_{stg}$  |  | – 55...+ 150          |                       | $^{\circ}$ C     |         |
| $V_{isol}$ | a.c. 50...60 Hz; r.m.s.; 1 s/ 1 min  | 3000 / 2500           |                       | V~               |         |
| RC         | $P_R = 1\text{ W}$   | 50                    |                       | $\Omega$         |         |
|            |  | 0,1                   |                       | $\mu$ F          |         |
| Fu         |  | 20                    |                       | A                |         |
| $M_1$      | to heatsink  | SI units              | $2 \pm 15\%$          |                  | Nm      |
|            |  | US units              | $18 \pm 15\%$         |                  | lb. in. |
| w          |  | 24                    | 26                    | g                |         |
| Case       |  | G 10                  | G 11                  |                  |         |

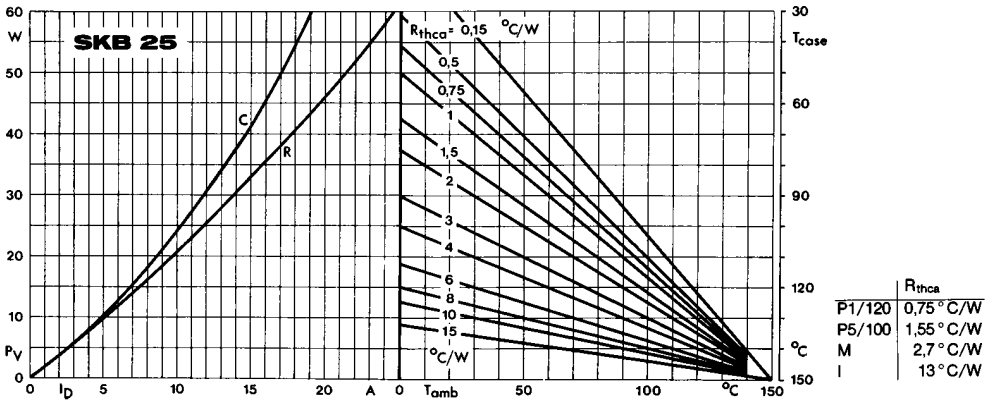


Fig. 3 a Power dissipation vs. output current and case temperature

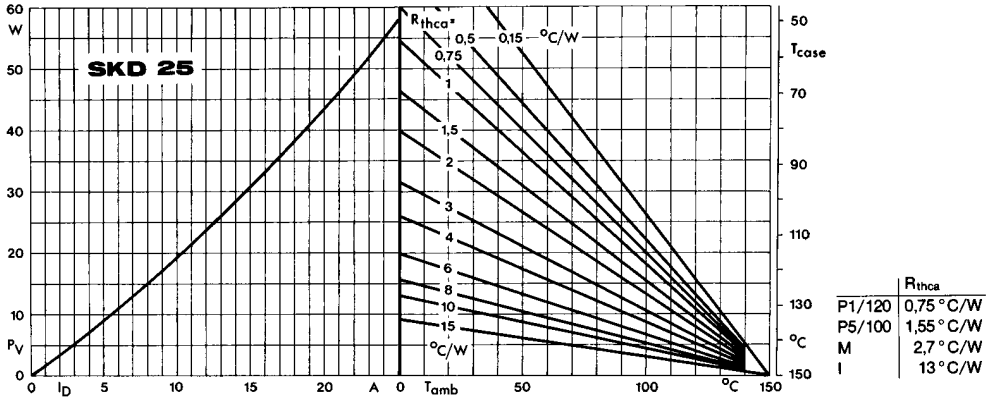


Fig. 3 b Power dissipation vs. output current and case temperature

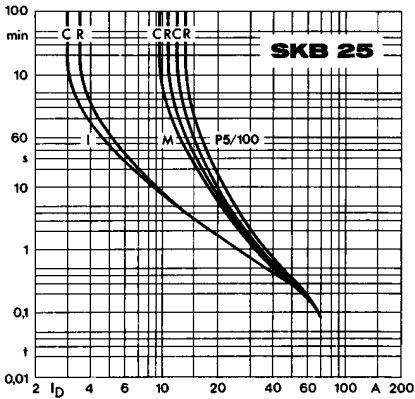


Fig. 6 a

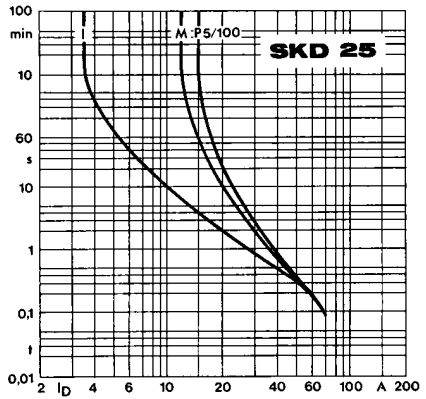


Fig. 6 b



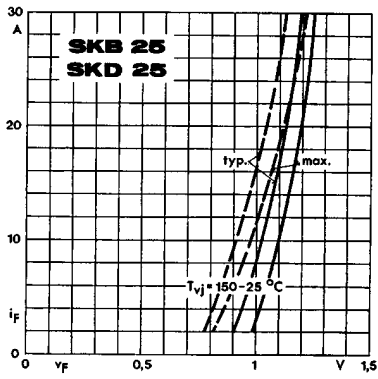
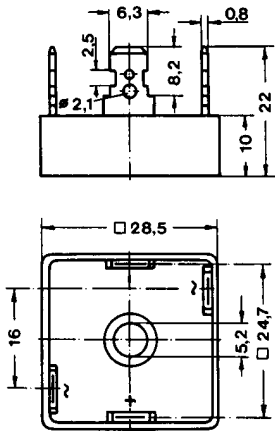


Fig. 9 Forward characteristics of a single diode



**SKB 25**

Case G 10



**SKD 25**

Case G 11

