



## Power Bridge Rectifiers

### SKB 35

#### Features

- Square plastic case with isolated metal base plate and fast-on connectors
- Blocking voltage up to 1600 V
- High surge current
- Easy chassis mounting
- UL recognized plastic material

#### Typical Applications

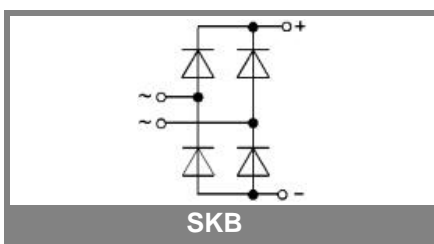
- Rectifier for power supplies
- Input rectifier for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network:  
RC: 50 Ω, 0.1 μF ( $P_R = 1 \text{ W}$ )

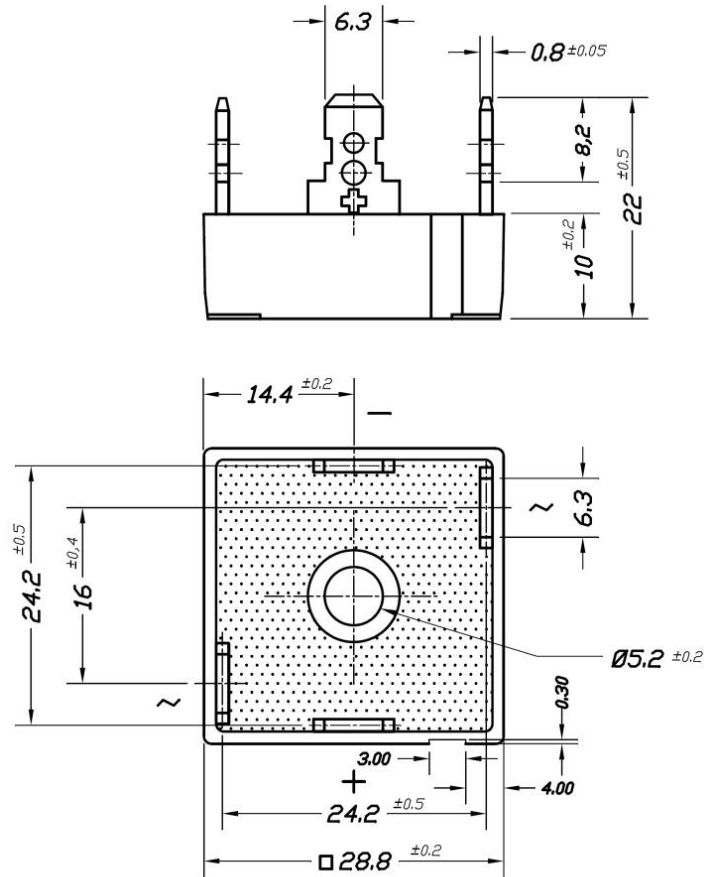
1) Freely suspended or mounted on an insulator

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 | $I_D = 35 \text{ A } (T_c = 29^\circ\text{C})$<br>Types | $C_{max}$<br>μF | $R_{min}$<br>Ω |
|-------------------------|-----------------|---|-----------------|----------------|
| 400                     | 125             | SKB 35/04   |                 | 0,3            |
| 800                     | 250             | SKB 35/08   |                 | 0,7            |
| 1200                    | 400             | SKB 35/12   |                 | 1              |
| 1600                    | 500             | SKB 35/16   |                 | 1,5            |

| Symbol        | Conditions  | Values         | Units            |
|---------------|---|----------------|------------------|
| $I_D$         | $T_a = 45^\circ\text{C}, P1/120 \text{ black}$        | 22             | A                |
|               | $T_a = 40^\circ\text{C}, \text{chassis}^2)$           | 13,5           | A                |
| $I_{DCL}$     | $T_a = 45^\circ\text{C}, P1/120 \text{ black}$        | 18,5           | A                |
|               | $T_a = 40^\circ\text{C}, \text{chassis}^2)$           | 12             | A                |
|               | $T_a = 45^\circ\text{C}, \text{isolated}^1)$          | 3,9            | A                |
| $I_{FSM}$     | $T_{vj} = 25^\circ\text{C}, 10 \text{ ms}$            | 380            | A                |
|               | $T_{vj} = 150^\circ\text{C}, 10 \text{ ms}$           | 330            | A                |
| $i^2t$        | $T_{vj} = 25^\circ\text{C}, 8,3 \dots 10 \text{ ms}$  | 700            | A <sup>2</sup> s |
|               | $T_{vj} = 150^\circ\text{C}, 8,3 \dots 10 \text{ ms}$ | 540            | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25^\circ\text{C}, I_F = 150 \text{ A}$      | max. 1,9       | V                |
| $V_{(TO)}$    | $T_{vj} = 150^\circ\text{C}$                          | max. 0,85      | V                |
| $r_T$         | $T_{vj} = 150^\circ\text{C}$                          | max. 7         | mΩ               |
| $I_{RD}$      | $T_{vj} = 25^\circ\text{C}, V_{RD} = V_{RRM}$         | 300            | μA               |
|               | $T_{vj} = ^\circ\text{C}, V_{RD} = V_{RRM} \geq V$    |                | μA               |
| $I_{RD}$      | $T_{vj} = 150^\circ\text{C}, V_{RD} = V_{RRM}$        | 5              | mA               |
|               | $T_{vj} = ^\circ\text{C}, V_{RD} = V_{RRM} \geq V$    |                | mA               |
| $t_{rr}$      | $T_{vj} = 25^\circ\text{C}$                           | 10             | μs               |
| $f_G$         |   | 2000           | Hz               |
| $R_{th(j-a)}$ | isolated <sup>1)</sup>                                | 14,5           | K/W              |
|               | chassis <sup>2)</sup>                                 | 4,2            | K/W              |
| $R_{th(j-c)}$ | total   | 1,5            | 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.               | 3000 / 2500    | V~               |
| $M_s$         | to heatsink   | $2 \pm 15 \%$  | Nm               |
| $M_t$         |   |                | Nm               |
| $a$           |   |                | m/s <sup>2</sup> |
| $w$           | approx.   | 18             | g                |
| $F_u$         |   | 25             | A                |
| Case          |   | G 10b          |                  |





Case G 10b

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