



Power Bridge Rectifiers

SKB 30

Features

- Isolated metal case with screw terminals
- Blocking voltage up to 1600 V
- High surge current
- Easy chassis mounting
- UL recognized, file no. E 63 532

Typical Applications

- Single 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 μ F, 50 Ω ($P_R = 1$ 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} V | V_{VRMS} V | $I_D = 30$ A ($T_c = 94$ °C) Types | C_{max} μ F | R_{min} Ω |
|-------------------------|-----------------|--|----------------------|-----------------------|
| 200 | | SKB 30/02A1 | | 0,15 |
| 400 | | SKB 30/04A1 | | 0,3 |
| 800 | | SKB 30/08A1 | | 0,5 |
| 1200 | | SKB 30/12A1 | | 0,75 |
| 1400 | | SKB 30/14A1 | | 0,9 |
| 1600 | | SKB 30/16A1 | | 1 |

| Symbol | Conditions | Values | Units |
|---------------|--|----------------|--------------------------------------|
| I_D | $T_a = 45$ °C, isolated ¹⁾ $T_a = 45$ °C, chassis ²⁾ | 6,5 15 | A A |
| I_{DCL} | $T_a = 45$ °C, isolated ¹⁾ $T_a = 45$ °C, chassis ²⁾ $T_a =$ °C, | 6 13 | A A A |
| I_{FSM} | $T_{vj} = 25$ °C, 10 ms $T_{vj} = 150$ °C, 10 ms | 370 320 | A A |
| i^2t | $T_{vj} = 25$ °C, 8,3 ... 10 ms $T_{vj} = 150$ °C, 8,3 ... 10 ms | 680 500 | A ² s A ² 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 Ω |
| I_{RD} | $T_{vj} = 25$ °C, $V_{RD} = V_{RRM}$ $T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$ | 300 | μ A μ A |
| I_{RD} | $T_{vj} = 150$ °C, $V_{RD} = V_{RRM}$ $T_{vj} =$ °C, $V_{RD} = V_{RRM} \geq V$ | 5 | mA mA |
| t_{tr} | $T_{vj} = 25$ °C | 25 | μ s |
| f_G | | 2000 | Hz |
| $R_{th(j-a)}$ | isolated ¹⁾ chassis ²⁾ | 8,5 3,3 | K/W K/W |
| $R_{th(j-c)}$ | total | 0,7 | K/W |
| $R_{th(c-s)}$ | total | 0,1 | 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 | 1,5 \pm 15 % | Nm |
| a | | | m/s ² |
| w | | 125 | g |
| F_u | | 25 | A |
| Case | | G 12 | |



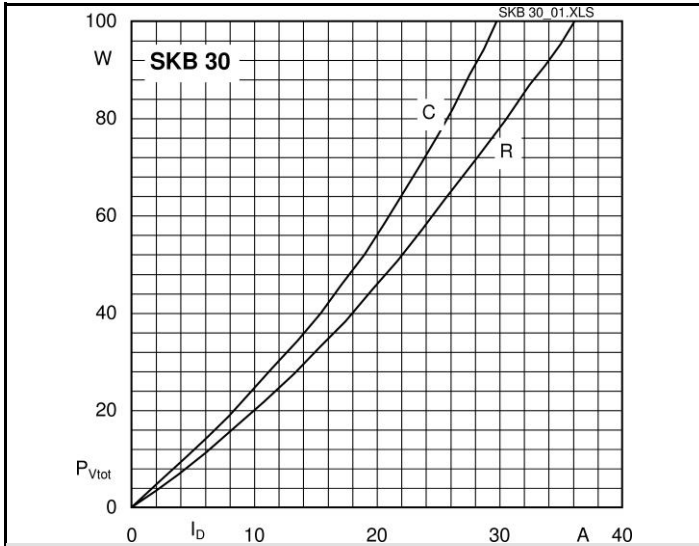


Fig. 3L Power dissipation vs. output current

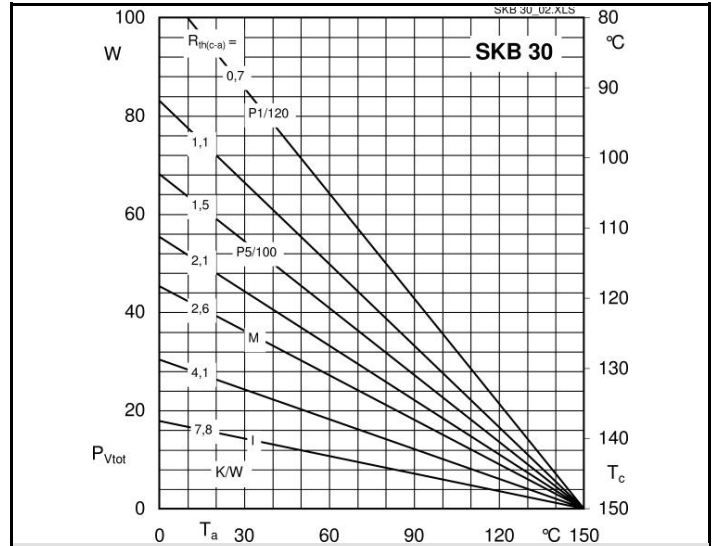


Fig. 3R Power dissipation vs. case temperature

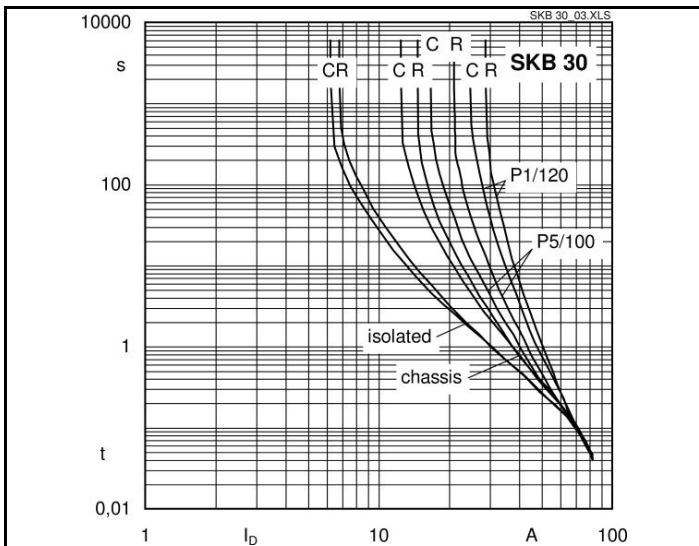


Fig. 6 Rated overload characteristics vs. time

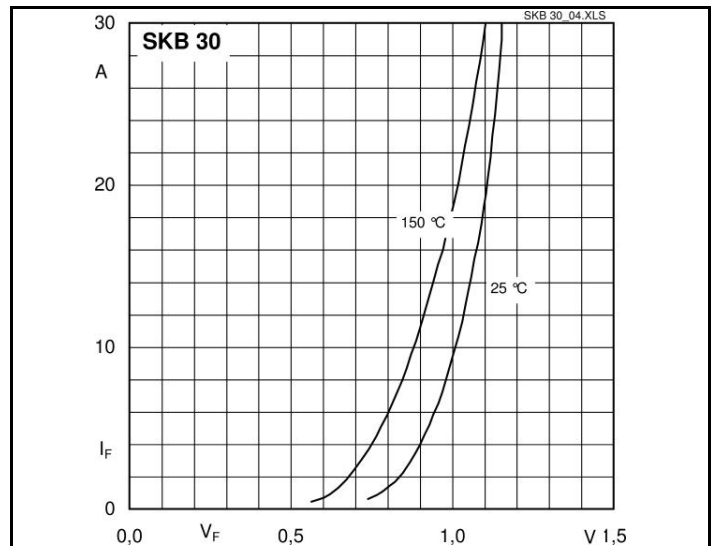
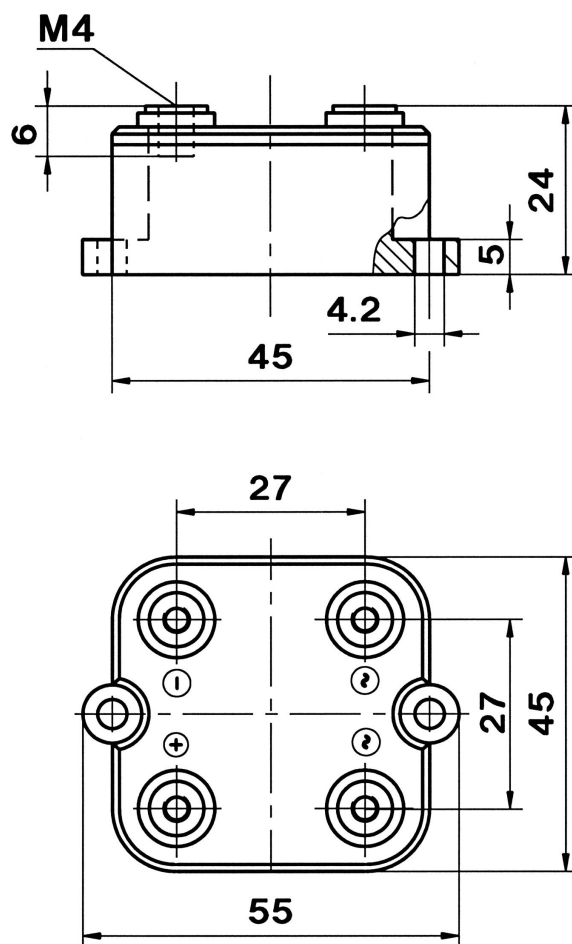


Fig. 9 Forward characteristics of a diode arm



Case G 12

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