

SEMIPONT® 1

Power Bridge Rectifiers

SKD 31

Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current ratings
- UL recognized, file no. E 63 532

Typical Applications

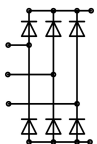
- DC power supply, e.g. for transistorized AC motor controllers
- Battery chargers
- Non-controlled DC motor field supply
- Recommended snubber network:
RC: 0.1 μ F, 50 Ω ($P_R = 1$ W)

1) Freely suspended or mounted on an insulator

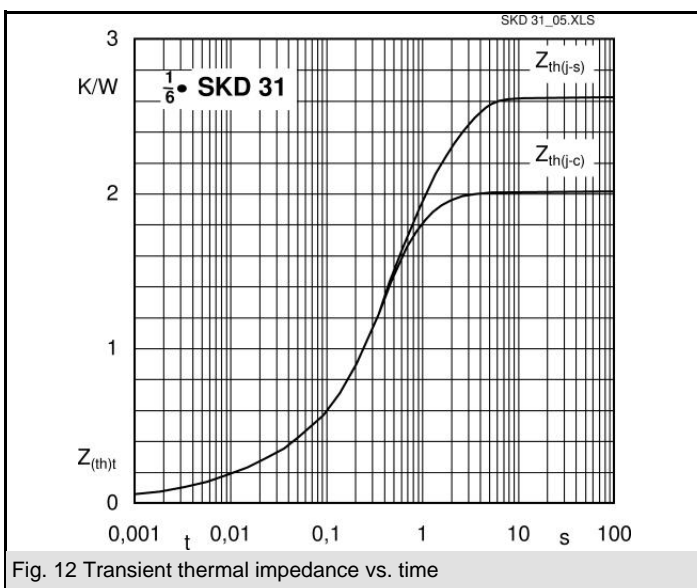
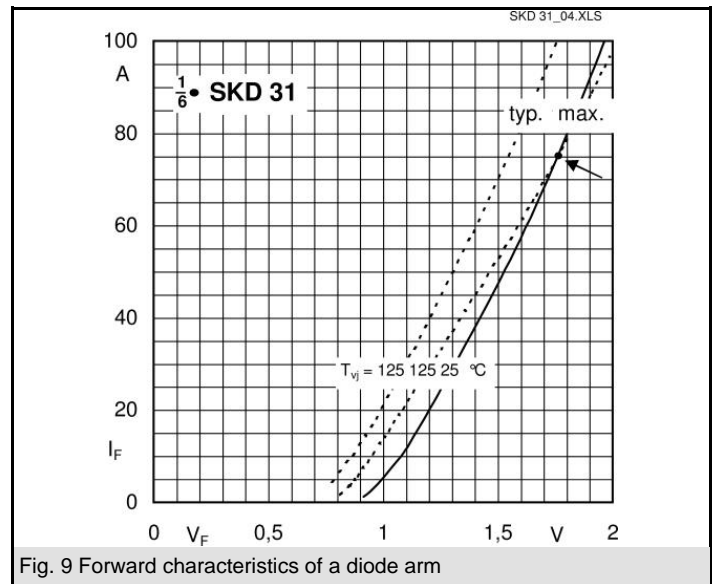
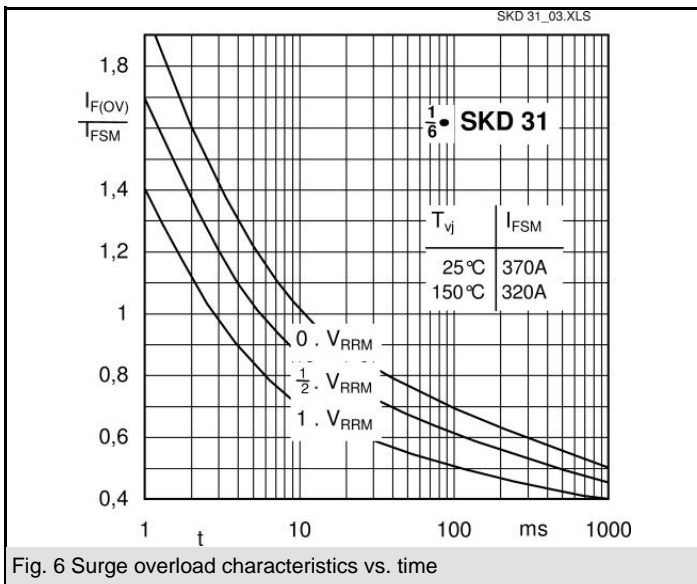
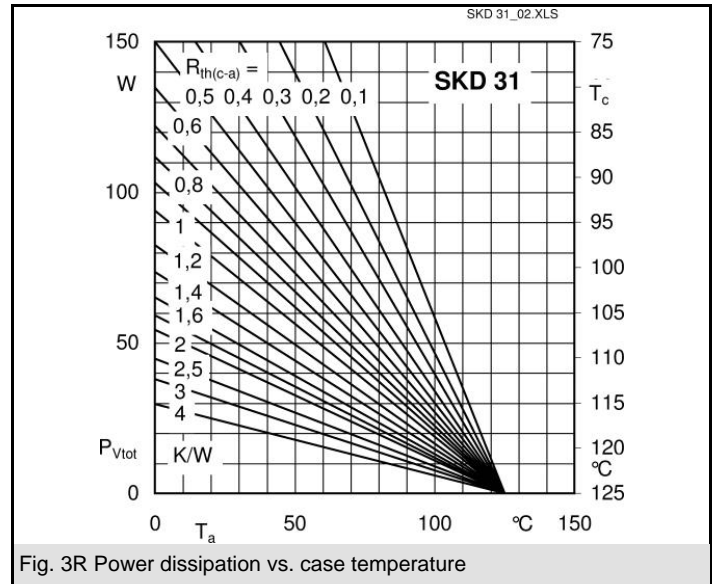
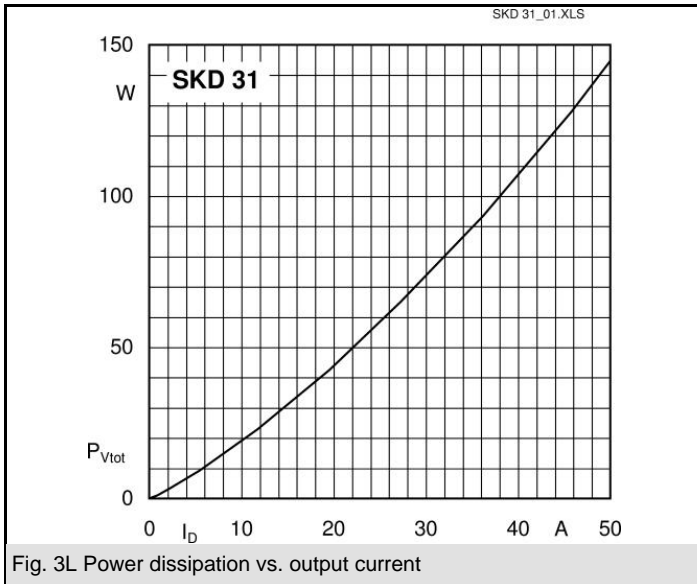
2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

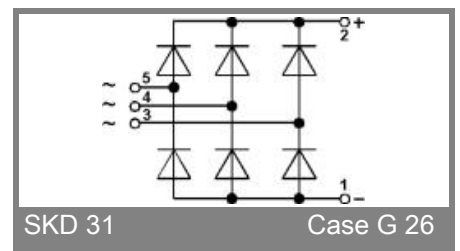
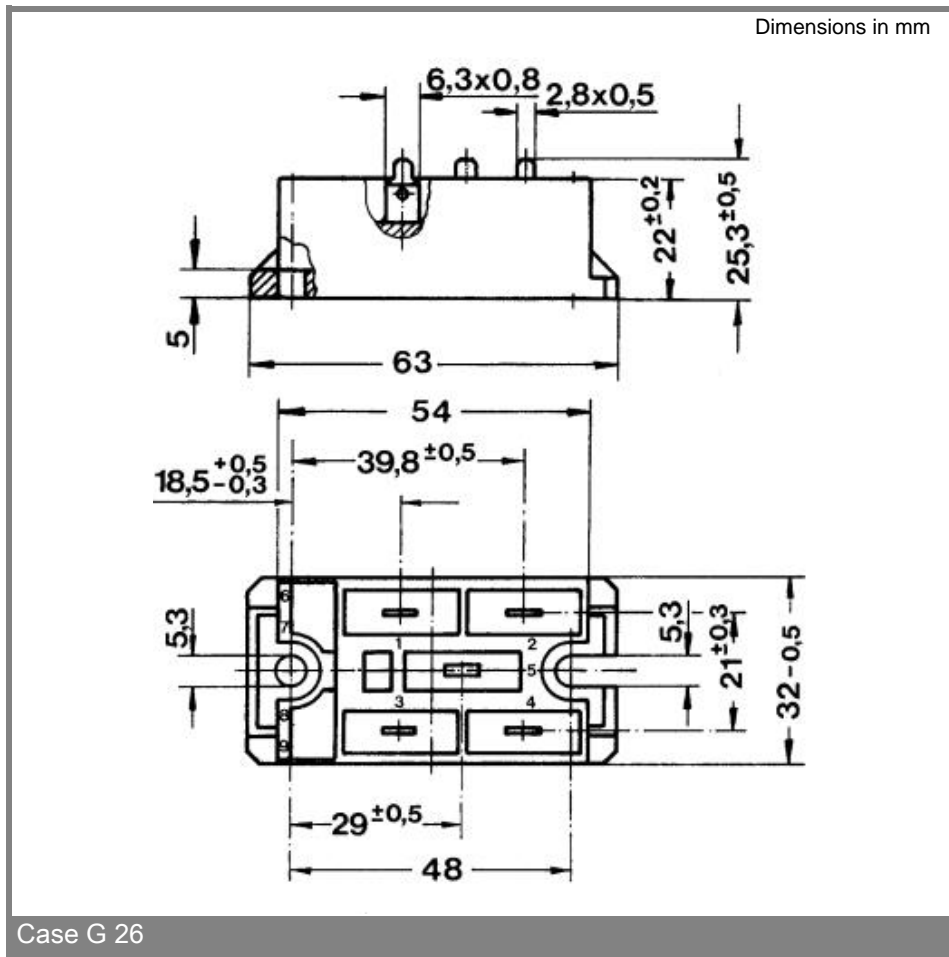
| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_D = 31$ A (full conduction) ($T_c = 100$ °C) |
|----------------|-------------------------|---|
| 200 | 200 | SKD 31/02 |
| 400 | 400 | SKD 31/04 |
| 800 | 800 | SKD 31/08 |
| 1200 | 1200 | SKD 31/12 |
| 1400 | 1400 | SKD 31/14 |
| 1600 | 1600 | SKD 31/16 |

| Symbol | Conditions | Values | Units |
|---------------|--|-------------------|------------------|
| I_D | $T_c = 85$ °C | 44 | A |
| | $T_a = 45$ °C; isolated ¹⁾ | 5,3 | A |
| | $T_a = 45$ °C; chassis ²⁾ | 17 | A |
| | $T_a = 45$ °C; R4A/120 (P1A/120) | 27 (32) | A |
| | $T_a = 35$ °C; P1A/120 F | 56 | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms | 370 | A |
| | $T_{vj} = 125$ °C; 10 ms | 320 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms ms | 685 | A ² s |
| | $T_{vj} = 125$ °C; 8,3 ... 10 ms ms | 510 | A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 75$ A | max. 1,75 | V |
| $V_{(TO)}$ | $T_{vj} = 125$ °C | max. 0,85 | V |
| r_T | $T_{vj} = 125$ °C | max. 12 | m Ω |
| I_{RD} | $T_{vj} = 25$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$ | max. 0,2 | mA |
| | $T_{vj} = 125$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$ | 2 | mA |
| $R_{th(j-c)}$ | per diode | 2 | K/W |
| | total | 0,33 | K/W |
| | total | 0,1 | K/W |
| $R_{th(c-s)}$ | total | 0,1 | K/W |
| $R_{th(j-a)}$ | isolated ¹⁾ (chassis ²⁾) | 15 (3) | K/W |
| T_{vj} | | - 40 ... + 125 °C | °C |
| T_{stg} | | - 40 ... + 125 °C | °C |
| V_{isol} | a. c. 50 Hz; r.m.s.; 1 s / 1 min. | 3600 (3000) | V |
| M_s | to heatsink | 2 \pm 15 % | Nm |
| M_t | | | |
| m | | 66 | g |
| Case | | G 26 | |



SKD





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