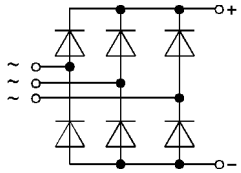
| $V_{RSM}$<br>$V_{RRM}$<br>V | $I_D$ ($T_{case}$ = 100 °C)<br>31 A |
|---|---|
| 1200 | **SKD 31 F 12** |
| 1400 | **SKD 31 F 14** |
| 1600 | **SKD 31 F 16** |

# SEMIPONT® 1
# Fast Power Bridge Rectifiers

## SKD 31 F

Preliminary Data from test samples



| Symbol | Conditions | SKD 31 F | Units |
|---|---|---|---|
| $I_D$ | $T_{case}$ = 85 °C | 44 | 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 | 685 | $A^2s$ |
| | $T_{vj}$ = 125 °C; 8,3 ... 10 ms | 510 | $A^2s$ |
| $t_{rr}$ | $T_{vj}$ = 25 °C; $I_F = I_R$ = 1 A<br>– $di_F/dt \geq$ 50 A/µs, $V_R$ = 24 V | max. 2 | µs |
| $t_f$ | see next page | min. 0,5 | µs |
| $V_F$ | $T_{vj}$ = 25 °C; $I_F$ = 75 A | max. 1,75 | V |
| $V_{(TO)}$ | $T_{vj}$ = 125 °C | 0,85 | V |
| $r_T$ | $T_{vj}$ = 125 °C | 12 | mΩ |
| $I_{RD}$ | $T_{vj}$ = 25 °C/125 °C; $V_{RD} = V_{RRM}$ | 0,2/2 | mA |
| $R_{thjc}$ | per diode | 2,0 | °C/W |
| | total | 0,33 | °C/W |
| $R_{thch}$ | total | 0,1 | °C/W |
| $R_{thja}$ | isolated [1] | 15 | °C/W |
| | chassis [2] | 3 | °C/W |
| | P5A/100 | 1,85 | °C/W |
| | P1A/120 | 1,05 | °C/W |
| $T_{vj}$ | | – 40 ... + 125 | °C |
| $T_{stg}$ | | – 40 ... + 125 | °C |
| $V_{isol}$ | a. c. 50 Hz; r.m.s; 1 s/1 min | 3600 / 3000 | V~ |
| $M_1$ | Case to heatsinkSI units | 2 ± 15 % | Nm |
| | US units | 18 ± 15 % | lb. in. |
| w | | 66 | g |
| Case | | G 26 | |

[1] Freely suspended or mounted on an insulator
[2] Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

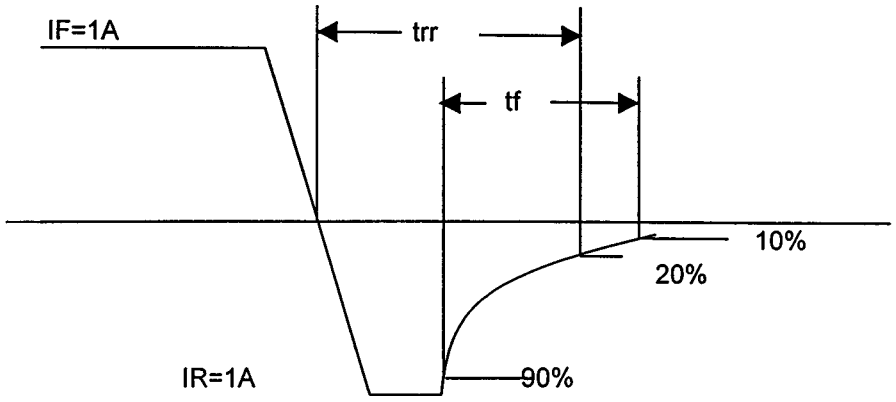
### Features

- Fast and soft recovery for low line interference
- Sturdy isolated metal base plate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating

### Typical Applications

- DC power supply, e. g. for transistorized AC motor controllers
- Battery chargers
- Non-controlled DC motor field supply

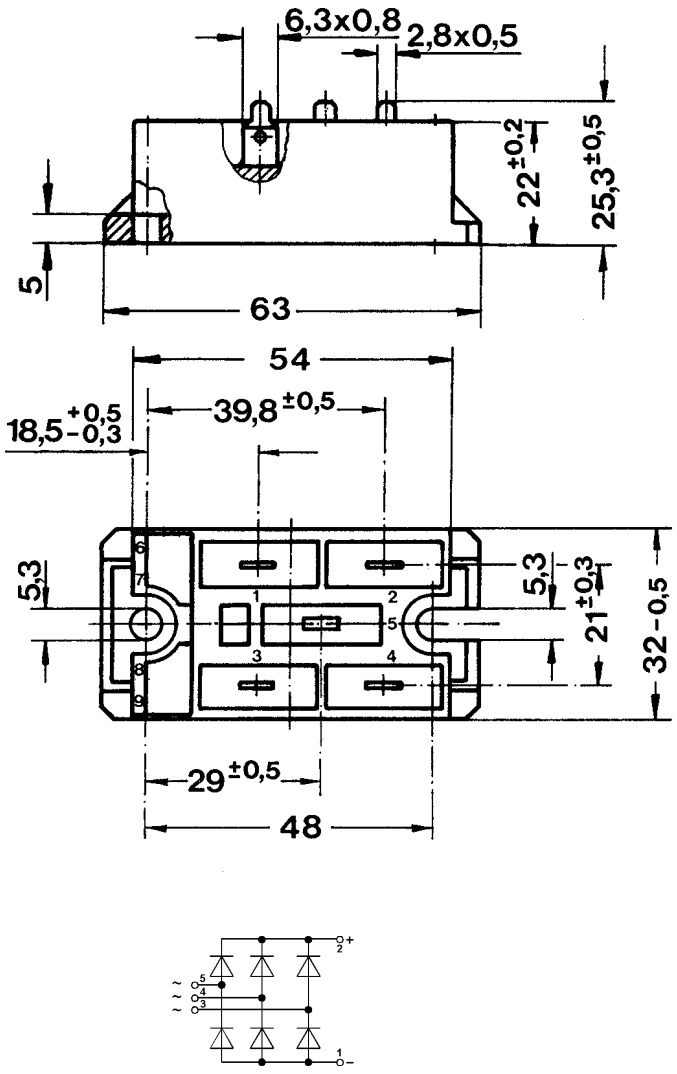
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$t_{rr}$, $t_f$ test curve

**SKD 31 F**

Case G 26
SEMIPONT® 1






Dimensions in mm

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