

# SKD 210



**SEMIPONT® 4**

## Power Bridge Rectifiers

### SKD 210

Preliminary Data

#### Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage up to 1800 V
- High surge currents
- Three phase bridge rectifier
- Easy chassis mounting
- UL recognition applied for file no. E 63 532

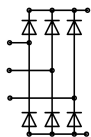
#### Typical Applications

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

1) Max. output current limited by the terminals: 220A rms

| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_D = 210$ A (full conduction)<br>( $T_c = 99$ °C) |
|----------------|-------------------------|---|
| 900            | 800                     | SKD 210/08  |
| 1300           | 1200                    | SKD 210/12  |
| 1700           | 1600                    | SKD 210/16  |
| 1900           | 1800                    | SKD 210/18  |

| Symbol        | Conditions  | Values            | Units            |
|---------------|---|-------------------|------------------|
| $I_D$         | $T_c = 100$ °C  | 207               | A                |
| $I_D$         | $T_c = 95$ °C   | 220 <sup>1)</sup> | A                |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms                                   | 2000              | A                |
|               | $T_{vj} = 150$ °C; 10 ms                                  | 1600              | A                |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3 ... 10 ms                           | 20000             | A <sup>2</sup> s |
|               | $T_{vj} = 150$ °C; 8,3 ... 10 ms                          | 12800             | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 300$ A                           | max. 1,65         | V                |
| $V_{(TO)}$    | $T_{vj} = 150$ °C   | max. 0,85         | V                |
| $r_T$         | $T_{vj} = 150$ °C   | max. 3            | mΩ               |
| $I_{RD}$      | $T_{vj} = 25$ °C; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$ | max. 0,5          | mA               |
|               | $T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$                     | 6                 | mA               |
| $R_{th(j-c)}$ | per diode   | 0,5               | K/W              |
|               | total   | 0,083             | K/W              |
| $R_{th(c-s)}$ | total   | 0,03              | K/W              |
| $T_{vj}$      |   | - 40 ... + 150    | °C               |
| $T_{stg}$     |   | - 40 ... + 125    | °C               |
| $V_{isol}$    | a. c. 50 Hz; r.m.s.; 1 s / 1 min.                         | 3600 ( 3000 )     | V                |
| $M_s$         | to heatsink   | 5 ± 15 %          | Nm               |
| $M_t$         | to terminals  | 5 ± 15 %          | Nm               |
| m             |   | 270               | g                |
| Case          |   | G 37              |                  |



SKD

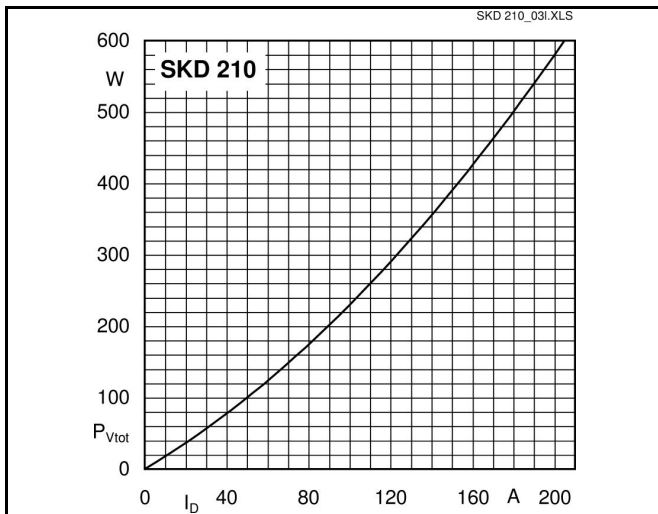


Fig. 3L: Power dissipation vs. output current

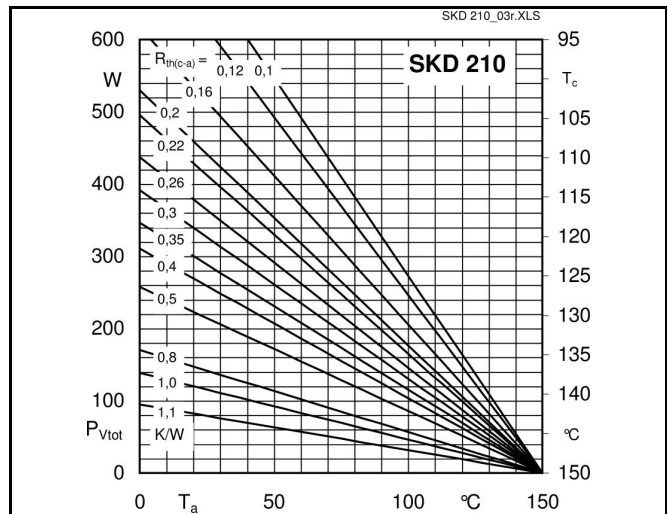


Fig. 3R Power dissipation vs. case temperature

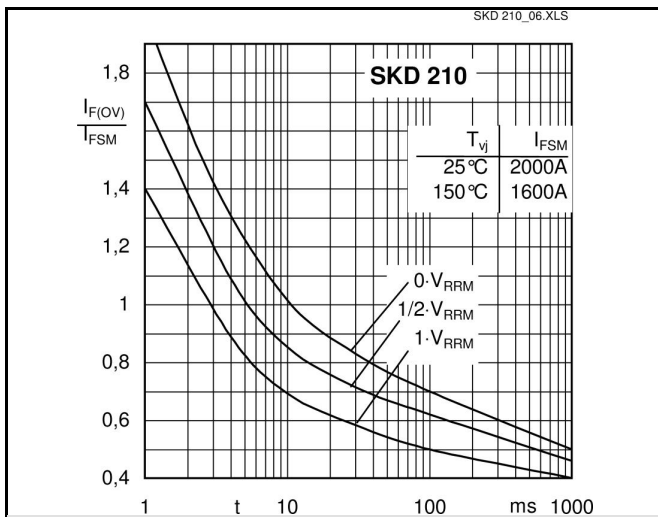


Fig. 6 Surge overload characteristics vs. time

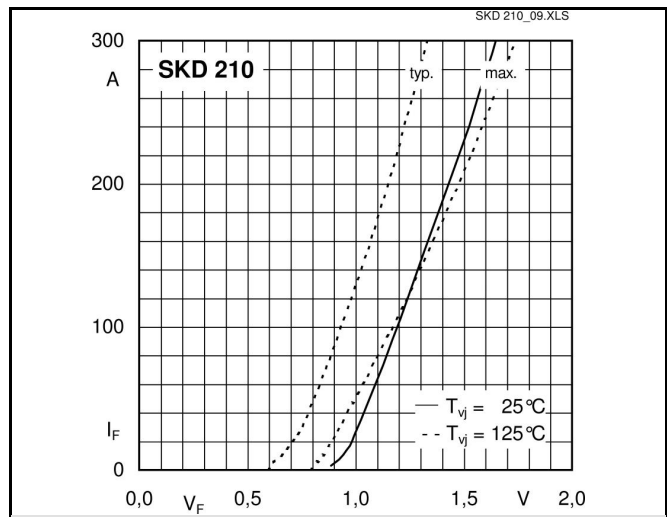


Fig. 9 Forward characteristics of a diode arm

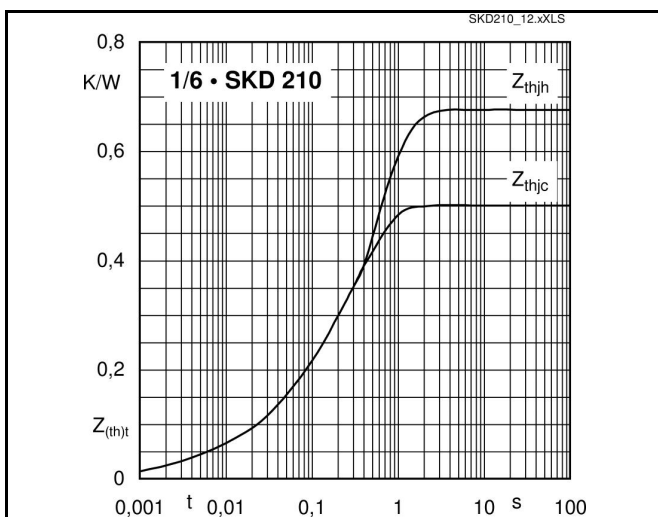
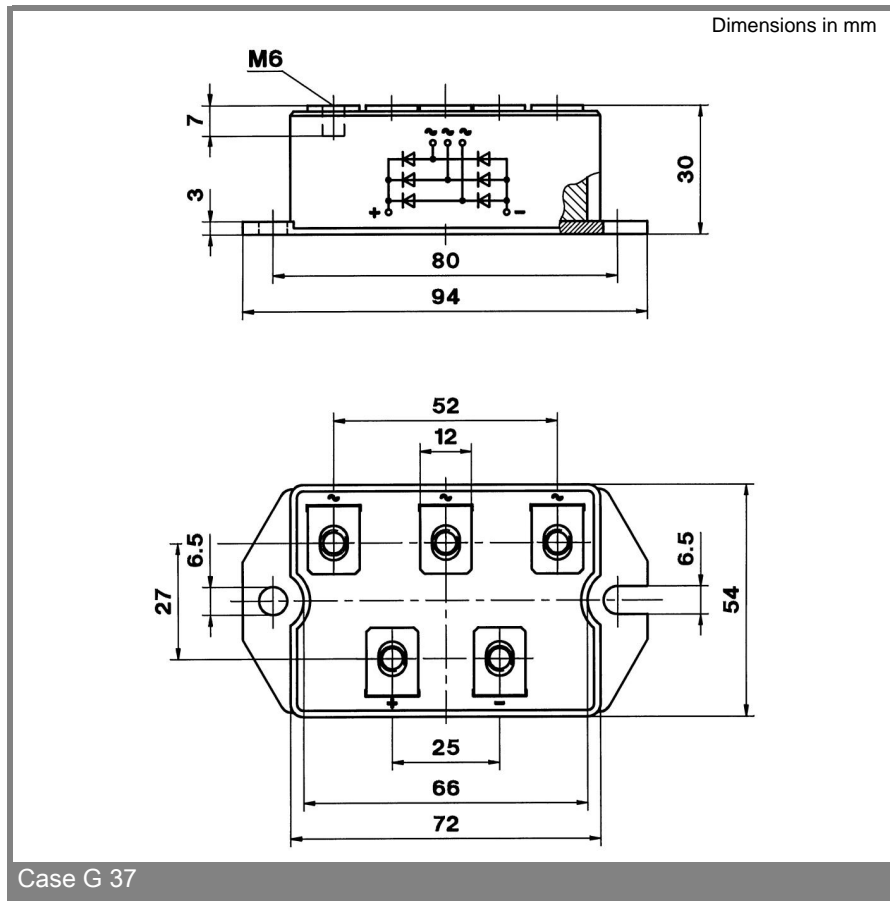


Fig. 12 Transient thermal impedance vs. time



Case G 37

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