

## SEMIKRON® 3 Rectifier Diode Modules

**SKKD 201 SKKE 201**  
**SKKD 260 SKKE 260**  
**SKMD 260<sup>1)</sup>**



| V <sub>RSM</sub> | V <sub>RRM</sub> | I <sub>FRMS</sub> (maximum values for continuous operation) |                    |                    |                    |
|------------------|------------------|---|--------------------|--------------------|--------------------|
|                  |                  | 315 A   | 410 A              | 315 A              | 410 A              |
| V                | V                | I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = 80 °C)      |                    |                    |                    |
|                  |                  | 200 A   | 260 A              | 200 A              | 260 A              |
| 900              | 800              | <b>SKKD 201/08</b>  | <b>SKKD 260/08</b> | <b>SKKE 201/08</b> | –                  |
| 1300             | 1200             | <b>SKKD 201/12</b>  | <b>SKKD 260/12</b> | <b>SKKE 201/12</b> | <b>SKKE 260/12</b> |
| 1500             | 1400             | <b>SKKD 201/14</b>  | <b>SKKD 260/14</b> | <b>SKKE 201/14</b> | <b>SKKE 260/14</b> |
| 1700             | 1600             | <b>SKKD 201/16</b>  | <b>SKKD 260/16</b> | <b>SKKE 201/16</b> | <b>SKKE 260/16</b> |
| 2100             | 2000             | <b>SKKD 201/20</b>  | <b>SKKD 260/20</b> | <b>SKKE 201/20</b> | <b>SKKE 260/20</b> |
| 2300             | 2200             | <b>SKKD 201/22</b>  | <b>SKKD 260/22</b> | <b>SKKE 201/22</b> | <b>SKKE 260/22</b> |

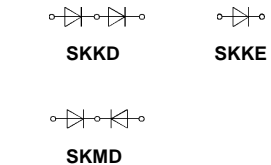
| Symbol  | Conditions   | SKKD 201<br>SKKE 201   | SKKD 260<br>SKKE 260   | Units   |   |
|---|--|--|--|---|---|
| I <sub>FAV</sub><br>I <sub>D</sub> <sup>1)</sup>                              | sin. 180; T <sub>case</sub> = 85 °C<br>B2/B6   T <sub>amb</sub> = 35 °C;<br>P 3/180 F<br>P 16/200 F  | 200<br>250/295<br>385/515  | 260<br>280/320<br>490/655  | A<br>A<br>A   |   |
| I <sub>FSM</sub><br>i <sup>2</sup> t  | T <sub>vj</sub> = 25 °C; 10 ms<br>T <sub>vj</sub> = 130 °C; 10 ms<br>T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms<br>T <sub>vj</sub> = 130 °C; 8,3 ... 10 ms | 6 000<br>5 000<br>180 000<br>125 000   | 11 000<br>10 000<br>605 000<br>500 000   | A<br>A<br>A <sup>2</sup> s<br>A <sup>2</sup> s  |   |
| I <sub>RD</sub>   | T <sub>vj</sub> max.; V <sub>RD</sub> = V <sub>RRM</sub>   | 9  | 15   | mA  |   |
| V <sub>F</sub><br>V <sub>(TO)</sub><br>r <sub>T</sub>                         | T <sub>vj</sub> = 25 °C (I <sub>F</sub> = . . .); max.<br>T <sub>vj</sub> = 130 °C<br>T <sub>vj</sub> = 130 °C   | 1,35 (600 A)<br>0,80<br>0,8  | 1,25 (750 A)<br>0,90<br>0,37   | V<br>V<br>mΩ  |   |
| R <sub>thjc</sub><br>R <sub>thch</sub><br>T <sub>vj</sub><br>T <sub>stg</sub> | } per diode/per module <sup>2)</sup>   | 0,19/0,10<br>0,06/0,03<br>– 40 ... +130<br>– 40 ... +130   | 0,14/0,07<br>0,04/0,02<br>– 40 ... +130<br>– 40 ... +130   | °C/W<br>°C/W<br>°C<br>°C  |   |
| V <sub>isol</sub><br>M <sub>1</sub><br>M <sub>2</sub><br>a<br>w               |  | a. c. 50 Hz; r.m.s.; 1 s/1 min<br>to heatsink<br>SI units<br>US units<br>to terminals<br>SI units<br>US units<br>approx. | 3600/3000<br>5 ± 15 % <sup>3)</sup><br>44 ± 15 % <sup>3)</sup><br>9 ± 15 % <sup>4)</sup><br>80 ± 15 % <sup>4)</sup><br>5 · 9,81<br>800 | 0,14/0,07<br>0,04/0,02<br>– 40 ... +130<br>– 40 ... +130<br>– 40 ... +130<br>– 40 ... +130<br>940 | V~<br>Nm<br>lb.in.<br>Nm<br>lb.in.<br>m/s <sup>2</sup><br>g |
| Case  |  | → page B 1 – 76  | SKKD 201<br>SKKE 201   | A 16<br>A 17  |   |
|   |  | → page B 1 – 82  | SKKD 260<br>SKKE 260<br>SKMD 260   |   | A 27<br>A 28<br>A 58  |

<sup>1)</sup> SKMD 260 available on request

<sup>2)</sup> SKKD types only

<sup>3)</sup> See the assembly instructions

<sup>4)</sup> The screws must be lubricated



### Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts
- **SKKD** half bridge connection
- **SKMD** center-tap connection common cathode
- UL recognized, file no. E 63 532

### Typical Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors
- SKKE: Free-wheeling diodes

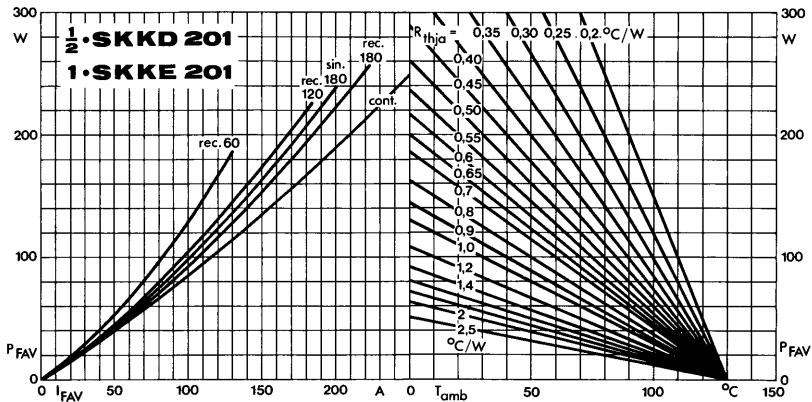


Fig. 11 a Power dissipation per diode vs. forward current and ambient temperature

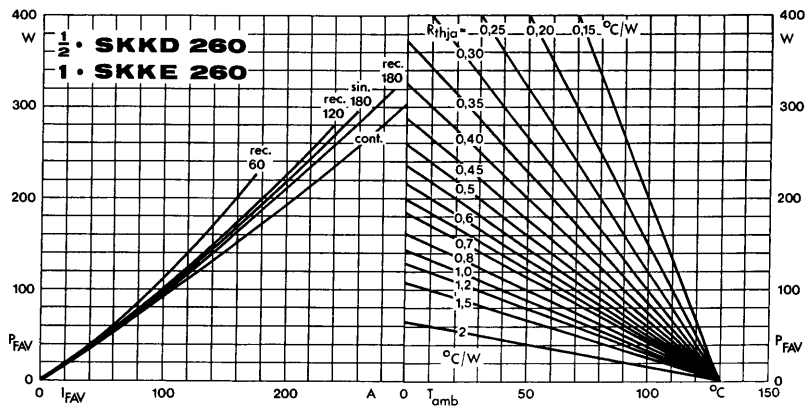


Fig. 11 b Power dissipation per diode vs. forward current and ambient temperature

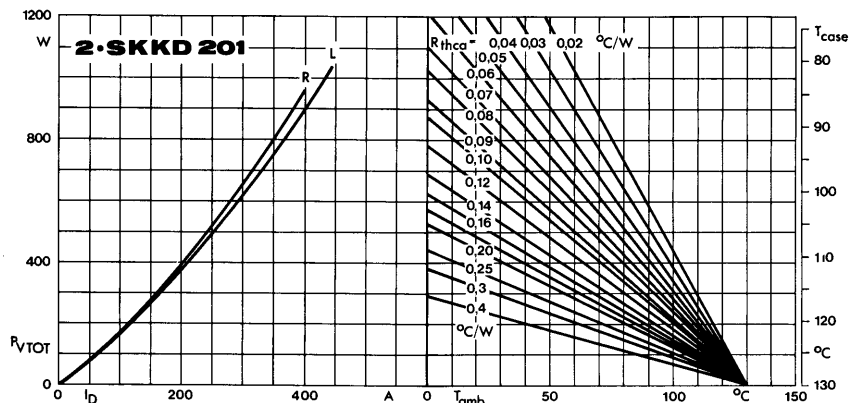


Fig. 12 a Power dissipation of two modules vs. direct current and case temperature

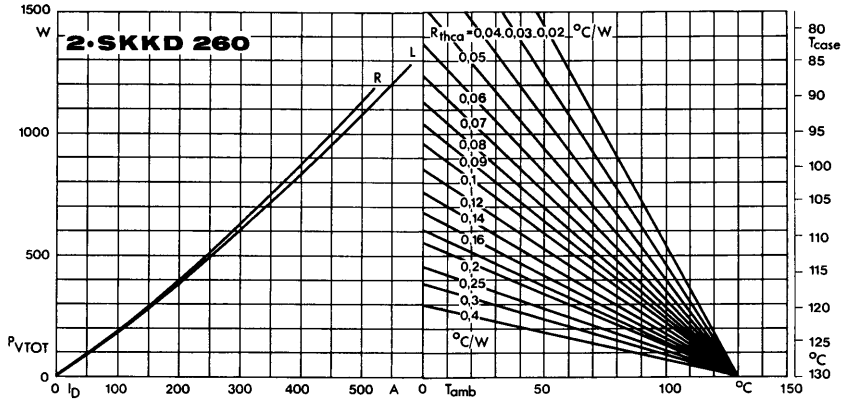


Fig. 12 b Power dissipation of two modules vs. direct current and case temperature

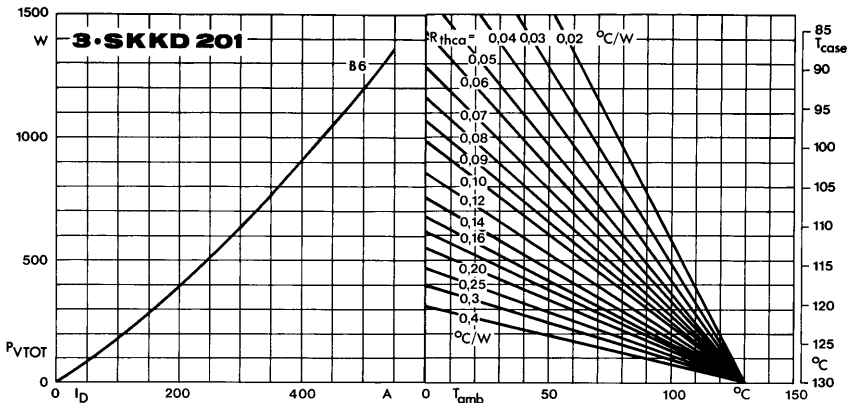


Fig. 13 a Power dissipation of three modules vs. direct current and case temperature

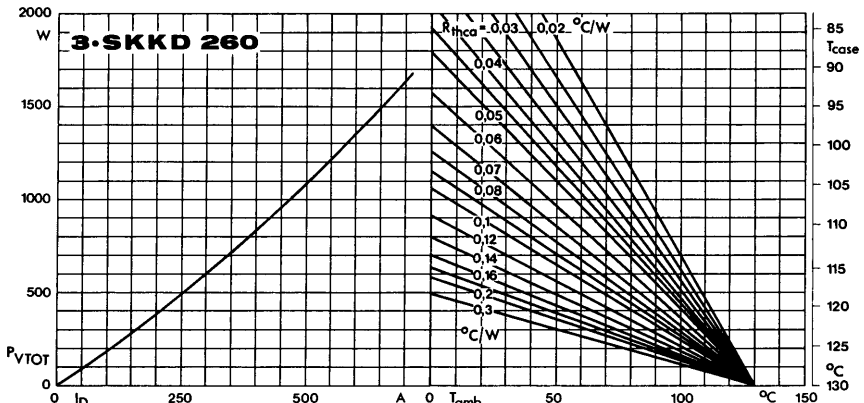


Fig. 13 b Power dissipation of three modules vs. direct current and case temperature

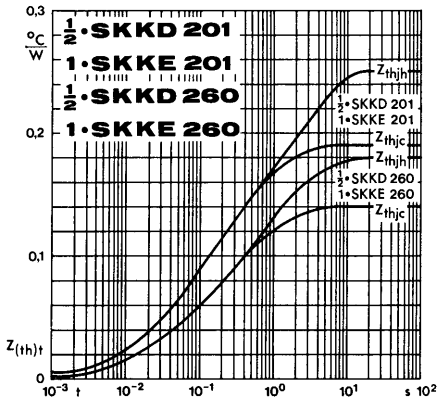


Fig. 14 Transient thermal impedance vs. time

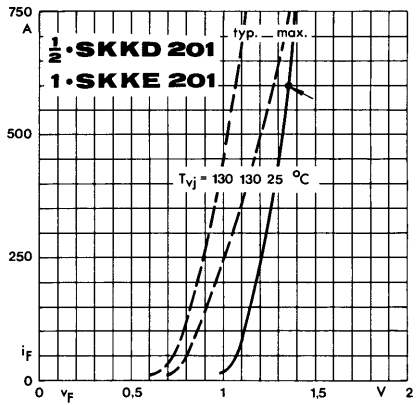


Fig. 15 a Forward characteristics

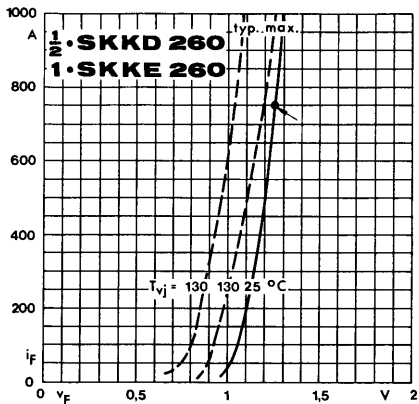


Fig. 15 b Forward characteristics

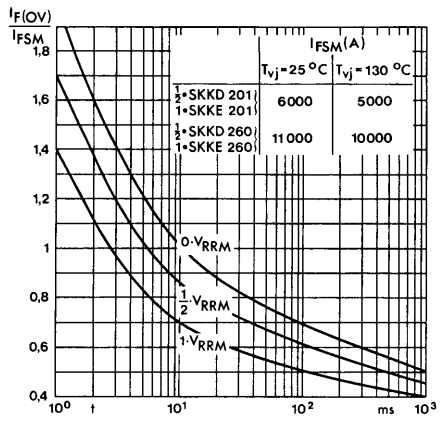


Fig. 16 Surge overload current vs. time