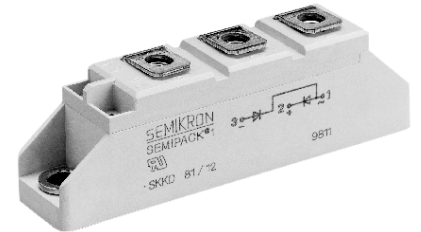


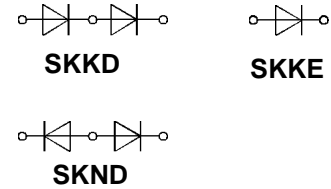
| V <sub>RSM</sub> | V <sub>RRM</sub> | I <sub>FRMS</sub> (maximum value for continuous operation) |                   |                   |
|------------------|------------------|--|-------------------|-------------------|
|                  |                  | 90 A   | 140 A             | 140 A             |
|                  |                  | I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = . . .)     |                   |                   |
| V                | V                | 57 A (71 °C)   | 90 A (80 °C)      | 90 A (80 °C)      |
| 500              | 400              | <b>SKKD 46/04</b>  | <b>SKKD 81/04</b> | <b>SKKE 81/04</b> |
| 700              | 600              | <b>SKKD 46/06</b>  | <b>SKKD 81/06</b> | <b>SKKE 81/06</b> |
| 900              | 800              | <b>SKKD 46/08</b>  | <b>SKKD 81/08</b> | <b>SKKE 81/08</b> |
| 1300             | 1200             | <b>SKKD 46/12</b>  | <b>SKKD 81/12</b> | <b>SKKE 81/12</b> |
| 1500             | 1400             | <b>SKKD 46/14</b>  | <b>SKKD 81/14</b> | <b>SKKE 81/14</b> |
| 1700             | 1600             | <b>SKKD 46/16</b>  | <b>SKKD 81/16</b> | <b>SKKE 81/16</b> |
| 1900             | 1800             | <b>SKKD 46/18</b>  | <b>SKKD 81/18</b> | <b>SKKE 81/18</b> |
| 2100             | 2000             | –  | <b>SKKD 81/20</b> | <b>SKKE 81/20</b> |
| 2300             | 2200             | –  | <b>SKKD 81/22</b> | <b>SKKE 81/22</b> |

## SEMIPACK® 1 Rectifier Diode Modules

**SKKD 46**      **SKKD 81**  
**SKND 46**<sup>1)</sup>    **SKKE 81**  
**SKND 81**<sup>1)</sup>



| Symbol  | Conditions  | SKKD 46  | SKKD 81<br>SKKE 81                            | Units                                   |
|---|---|--|---|---|
| I <sub>FAV</sub><br>I <sub>D</sub> <sup>1)</sup>                | sin. 180 (T <sub>case</sub> = . . .)<br>B2/B6   T <sub>amb</sub> = 45 °C; P 3/120<br>P 3/180<br>T <sub>amb</sub> = 35 °C; P 3/180 F | 45 (86 °C)<br>50 / 60<br>54 / 66<br>95 / 120   | 80 (87 °C)<br>63 / 70<br>70 / 85<br>135 / 175 | A<br>A<br>A<br>A                        |
| I <sub>FSM</sub>  | T <sub>vj</sub> = 25 °C; 10 ms<br>T <sub>vj</sub> = 125 °C; 10 ms   | 700<br>600   | 2 000<br>1 750                                | A<br>A                                  |
| i <sup>2</sup> t  | T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms<br>T <sub>vj</sub> = 125 °C; 8,3 ... 10 ms   | 2 450<br>1 800   | 20 000<br>15 000                              | A <sup>2</sup> s<br>A <sup>2</sup> s    |
| I <sub>RD</sub>   | T <sub>vj</sub> = 125 °C; V <sub>RD</sub> = V <sub>RRM</sub>  | 3  | 4,5   | mA                                      |
| V <sub>F</sub>  | T <sub>vj</sub> = 25 °C; (I <sub>F</sub> = . . .); max.   | 1,95 (250 A)   | 1,55 (300 A)                                  | V                                       |
| V <sub>(TO)</sub>   | T <sub>vj</sub> = 125 °C  | 0,85   | 0,85  | V                                       |
| r <sub>T</sub>  | T <sub>vj</sub> = 125 °C  | 5  | 1,8   | mΩ                                      |
| R <sub>thjc</sub><br>R <sub>thch</sub>                          | } per diode / per module <sup>2)</sup>  | 0,6 / 0,3<br>0,2 / 0,1   | 0,4 / 0,2<br>0,2 / 0,1                        | °C/W<br>°C/W                            |
| T <sub>vj</sub><br>T <sub>stg</sub>                             |   | – 40 ... + 125<br>– 40 ... + 125   |   | °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>to terminals } SI (US) units<br>approx.  | 3600 / 3000<br>5 (44 lb. in.) ± 15 % <sup>3)</sup><br>3 (26 lb. in.) ± 15 % <sup>3)</sup><br>5 · 9,81<br>120 <sup>4)</sup> |   | V~<br>Nm<br>Nm<br>m/s <sup>2</sup><br>g |
| Case  | → page B 1 – 95   | SKKD: A 10<br>SKKE: A 12<br>SKND: A 19   |   |   |



### Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- **SKND** center tap connection common anode
- 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

<sup>1)</sup> SKND 46, SKND 81 available on request

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

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

<sup>4)</sup> SKKD 46, SKKD 81 95 g

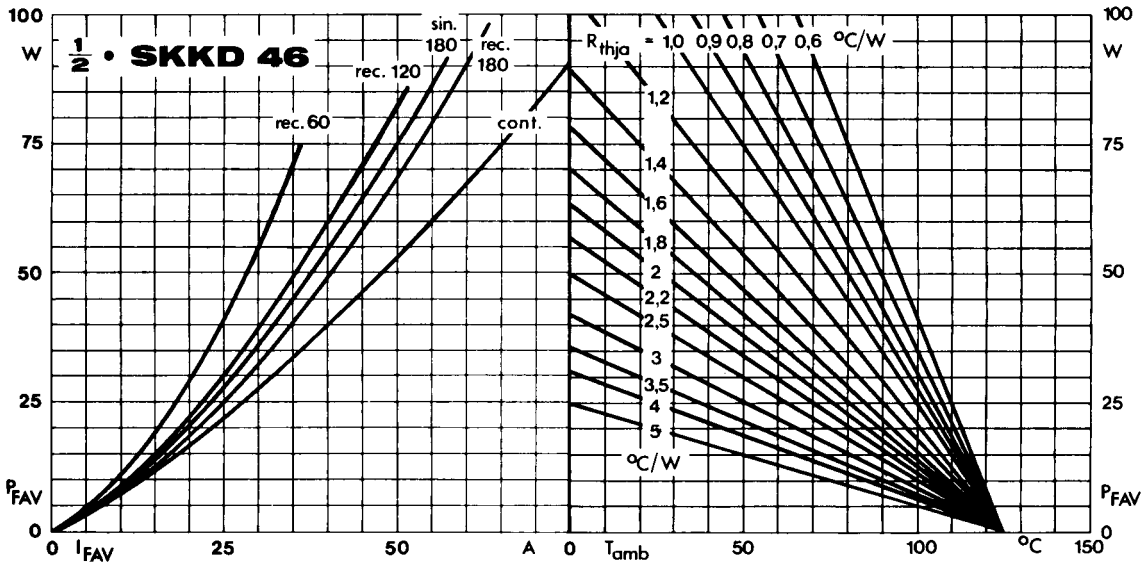


Fig. 11 a Power dissipation per diode vs. forward current and ambient temperature

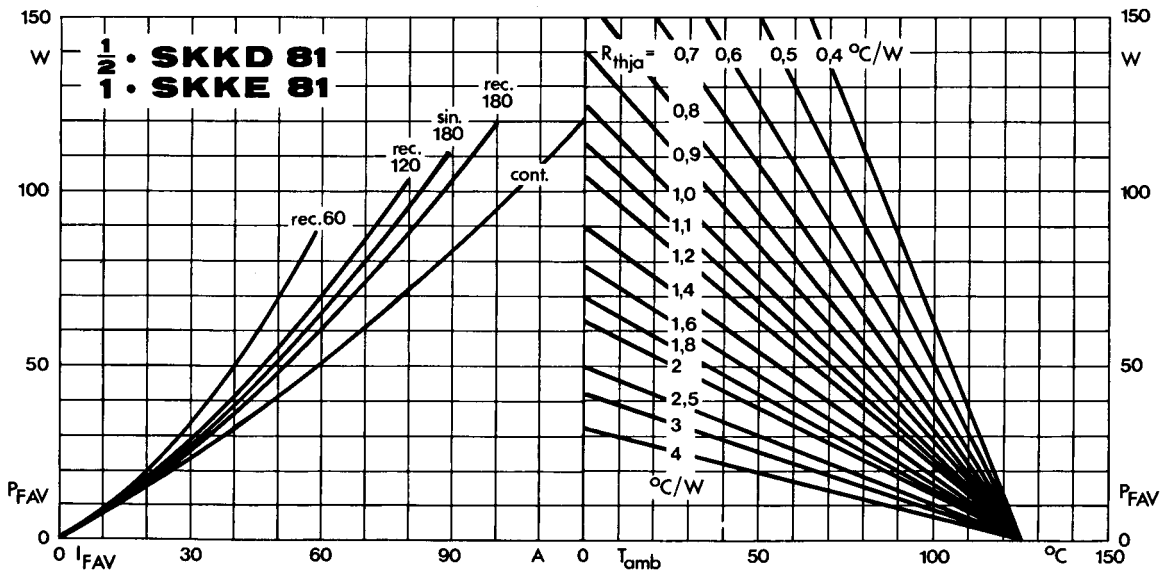


Fig. 11 b Power dissipation per diode vs. forward current and ambient temperature

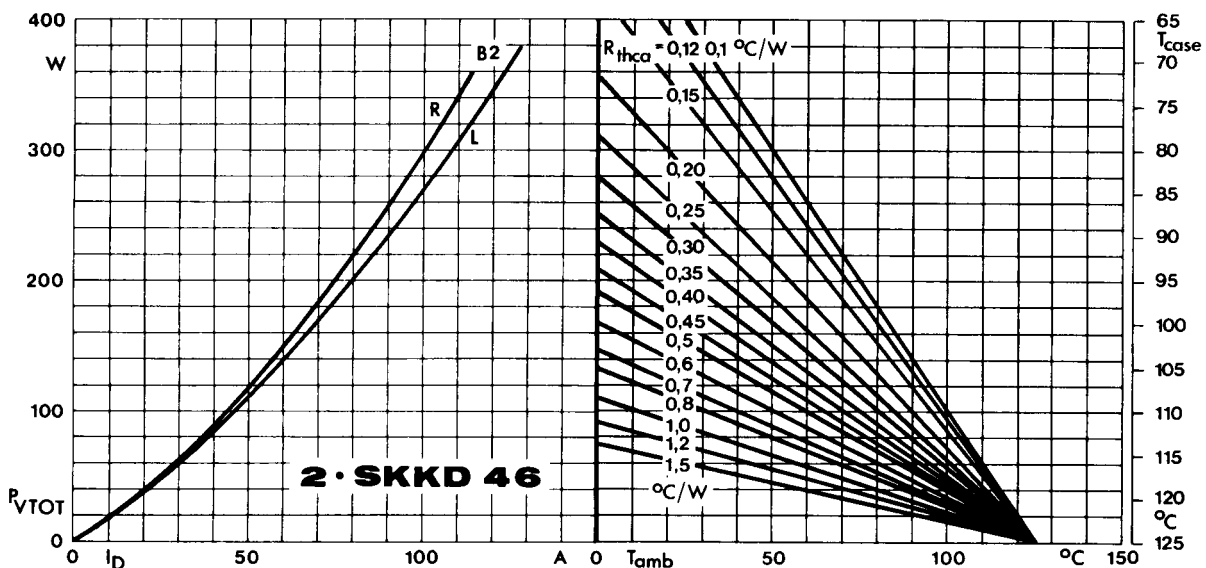


Fig. 12 a Power dissipation of two modules vs. direct current and case temperature

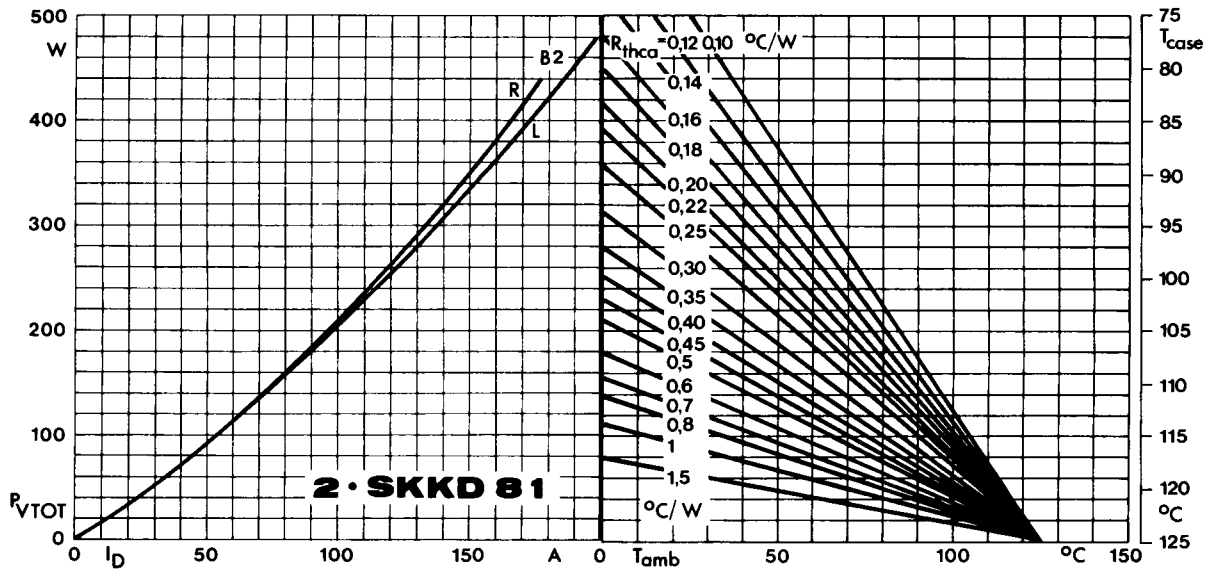


Fig. 12 b Power dissipation of two modules vs. direct current and case temperature

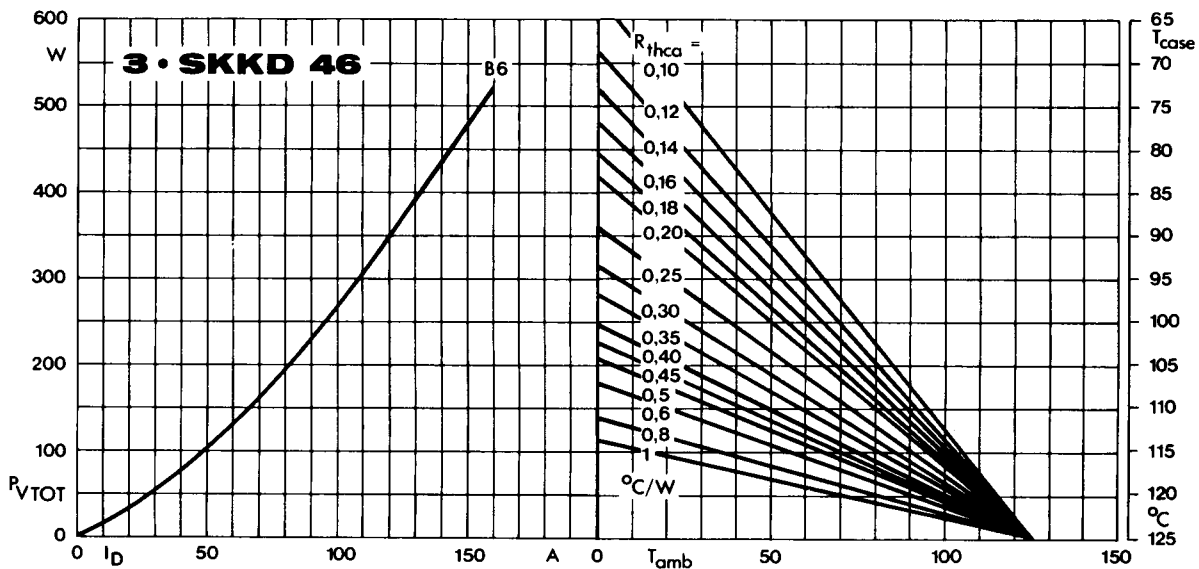


Fig. 13 a Power dissipation of three modules vs. direct current and case temperature

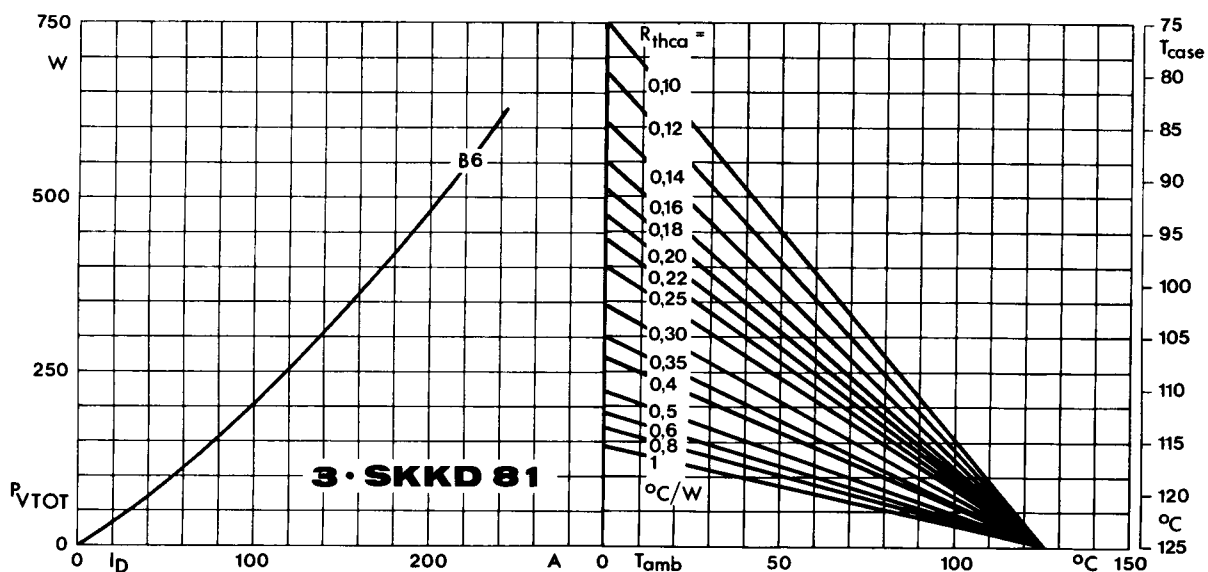


Fig. 13 b Power dissipation of three modules vs. direct current and case temperature

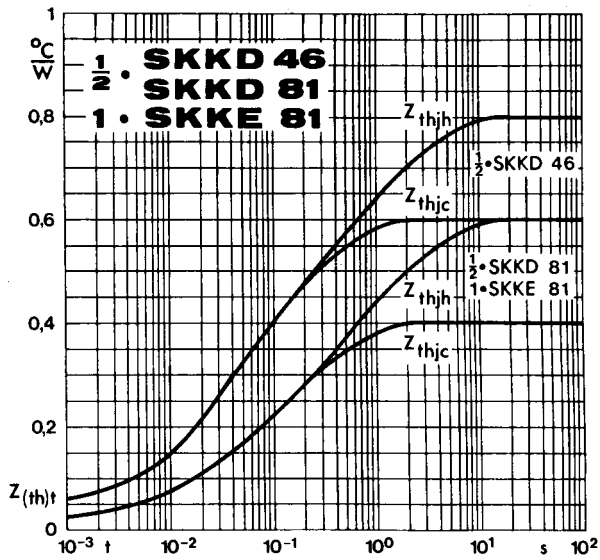


Fig. 14 Transient thermal impedance vs. time

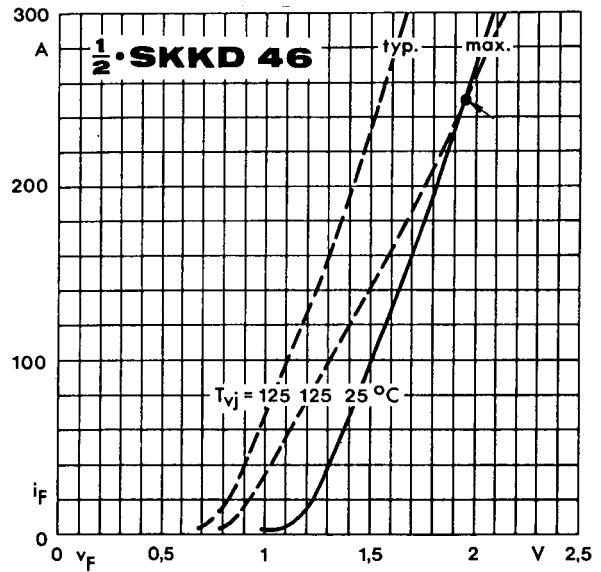


Fig. 15 a Forward characteristics

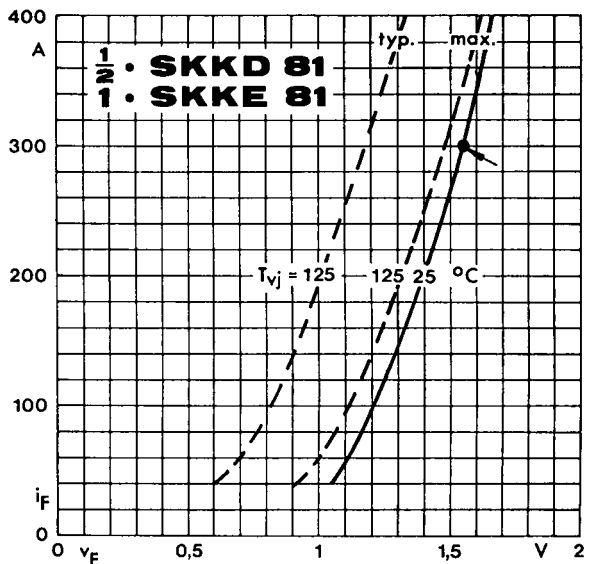


Fig. 15 b Forward characteristics

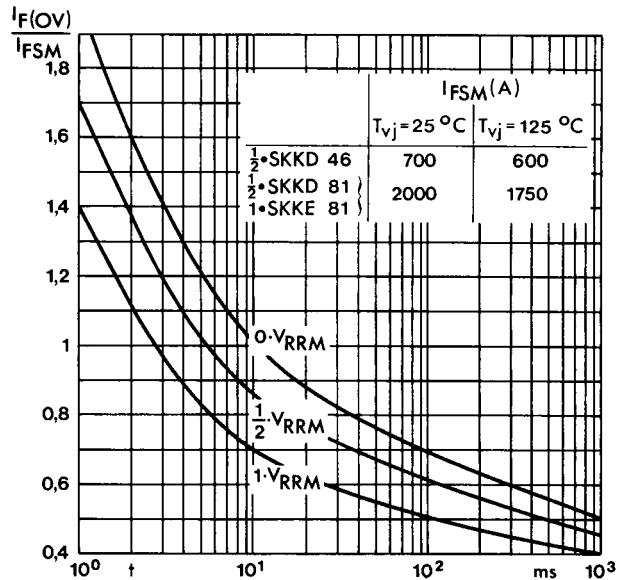


Fig. 16 Surge overload current vs. time

## SKKT 19 ... 105

Case A 5

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1

UL recognized, file no. E 63 532



Dimensions in mm

## SKKT 20/ ... 106/

Case A 46

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1



Dimensions in mm

## SKKH 26 ... 105

Case A 6



## SKKD 26 ... 100

Case A 10



## SKNH 56 ... 91

Case A 7



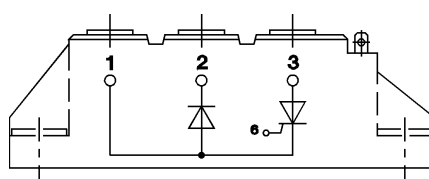
## SKKE 81

Case A 12



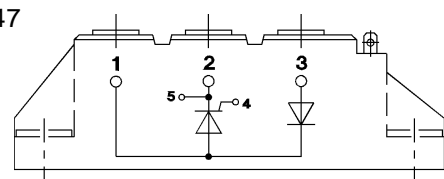
## SKKL 56 ... 105

Case A 9



## SKKH 27 ... 106

Case A 47



## SKND 46 ... 81

Case A 19



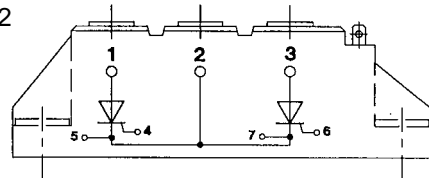
## SKKT 20 B ... 106 B

Case A 48



## SKMT 92

Case A 72



## SKKL 42 ... 106

Case A 59

