



## SEMIPACK<sup>®</sup> 4

### Rectifier Diode Modules

#### SKKE 600

#### Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precise metal pressure contacts for high reliability
- UL recognized, file no. E 63 532

#### Typical Applications

- Rectifiers

1) The screws must be lubricated

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | $I_{FRMS} = 930$ A (maximum value for continuous operation)<br>$I_{FAV} = 600$ A (sin. 180; $T_c = 100$ °C) |  |
|----------------|----------------|---|--|
| 1200           | 1200           | SKKE 600/12   |  |
| 1600           | 1600           | SKKE 600/16   |  |
| 2000           | 2000           | SKKE 600/20H4   |  |
| 2200           | 2200           | SKKE 600/22H4   |  |

| Symbol        | Conditions                                      | Values                  | Units            |
|---------------|---|-------------------------|------------------|
| $I_{FAV}$     | sin. 180; $T_c = 100$ °C                        | 600                     | A                |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms                         | 22000                   | A                |
|               | $T_{vj} = 150$ °C; 10 ms                        | 18000                   | A                |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3 ... 10 ms                 | 2420000                 | A <sup>2</sup> s |
|               | $T_{vj} = 150$ °C; 8,3 ... 10 ms                | 1805000                 | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 3000$ A                | max. 1,5                | V                |
| $V_{(TO)}$    | $T_{vj} = 150$ °C                               | 0,75                    | V                |
| $r_T$         | $T_{vj} = 150$ °C                               | 0,25                    | mΩ               |
| $I_{RD}$      | $T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$           | max. 20                 | mA               |
| $R_{th(j-c)}$ | cont.; per diode = per module                   | 0,07                    | K/W              |
|               | sin. 180; per diode = per module                | 0,075                   | K/W              |
| $R_{th(c-s)}$ | per diode = per module                          | 0,02                    | K/W              |
| $T_{vj}$      |   | - 40 ... + 150          | °C               |
| $T_{stg}$     |   | - 40 ... + 130          | °C               |
| $V_{isol}$    | a. c. 50 Hz; r.m.s.; 1 s / 1 min.               | 3600 / 3000             | V~               |
| $V_{isol}$    | a. c. 50 Hz; r.m.s.; 1 s / 1 min. for SKKE...H4 | 4800 / 4000             | V~               |
| $M_s$         | to heatsink                                     | 5 ± 15%                 | Nm               |
| $M_t$         | to terminals                                    | 17 ± 15 % <sup>1)</sup> | Nm               |
| a             |   | 5 * 9,81                | m/s <sup>2</sup> |
| m             | approx.   | 940                     | g                |
| Case          |   | A 42                    |                  |



SKKE

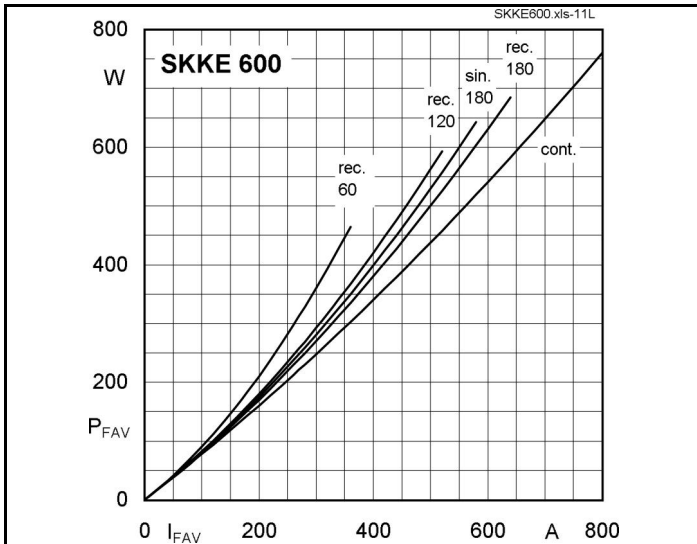


Fig. 11L Power dissipation per diode vs. forward current

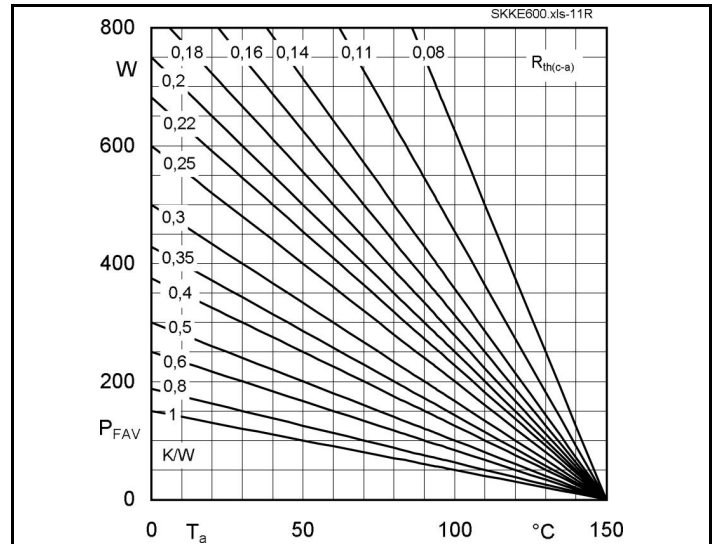


Fig. 11R Power dissipation per diode vs. ambient temperature

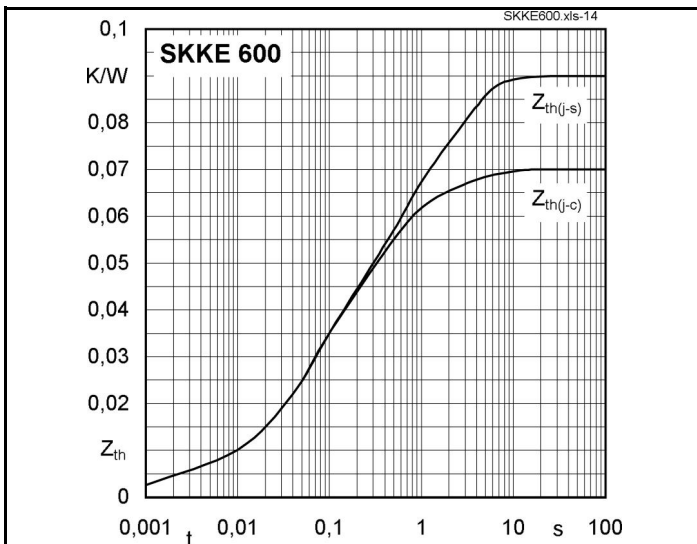


Fig. 14 Transient thermal impedance vs. time

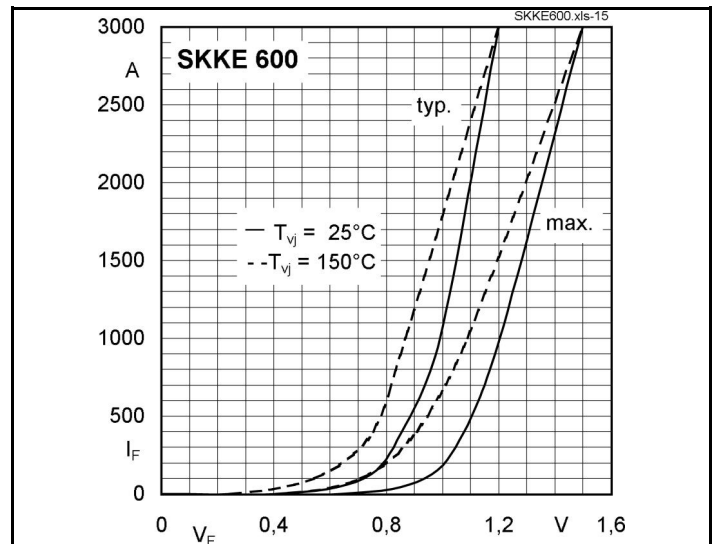


Fig. 15 Forward characteristics

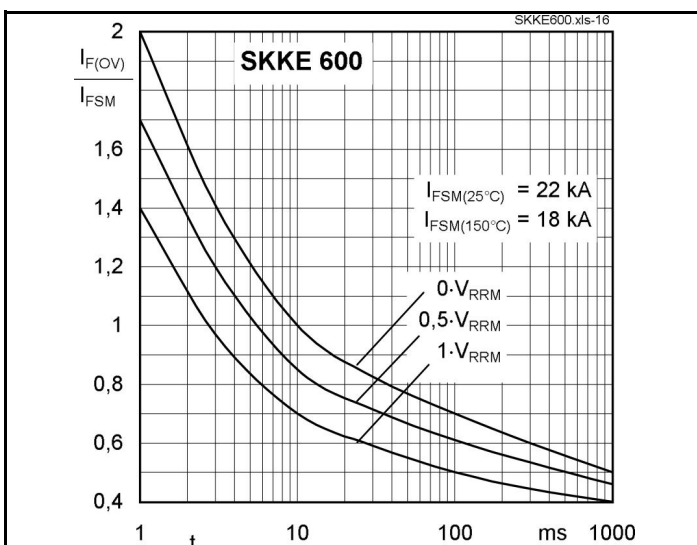


Fig. 16 Surge overload current vs. time

