



SEMIPACK® 4

Rectifier Diode Modules

SKKE 600

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precisious 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 | $I_{FRMS} = 930\text{ A}$ (maximum value for continuous operation)<br>$I_{FAV} = 600\text{ A}$ (sin. 180; $T_c = 100\text{ °C}$ ) |  |  |
|----------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------|--|--|
| 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; $T_c = 100\text{ °C}$                 | 600            | A     |
| $I_{FSM}$     | $T_{vj} = 25\text{ °C}$ ; 10 ms                 | 22000          | A     |
|               | $T_{vj} = 150\text{ °C}$ ; 10 ms                | 18000          | A     |
| $i^2t$        | $T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms         | 2420000        | A²s   |
|               | $T_{vj} = 150\text{ °C}$ ; 8,3 ... 10 ms        | 1805000        | A²s   |
| $V_F$         | $T_{vj} = 25\text{ °C}$ ; $I_F = 3000\text{ A}$ | max. 1,5       | V     |
| $V_{(TO)}$    | $T_{vj} = 150\text{ °C}$                        | max. 0,75      | V     |
| $r_T$         | $T_{vj} = 150\text{ °C}$                        | max. 0,25      | mΩ    |
| $I_{RD}$      | $T_{vj} = 150\text{ °C}$ ; $V_{RD} = V_{RRM}$   | max. 15        | 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 % 1)   | Nm    |
| a             |                                                 | 5 * 9,81       | m/s²  |
| m             | approx.                                         | 940            | g     |
| Case          |                                                 | A 42           |       |



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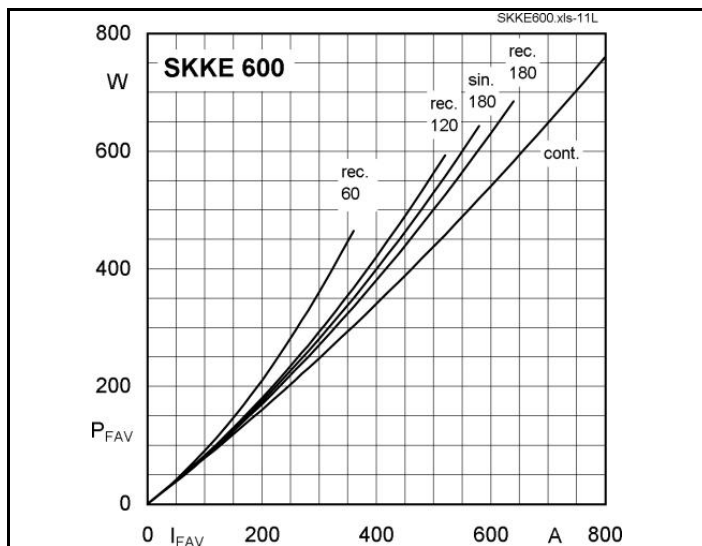


Fig. 11L Power dissipation per diode vs. forward current

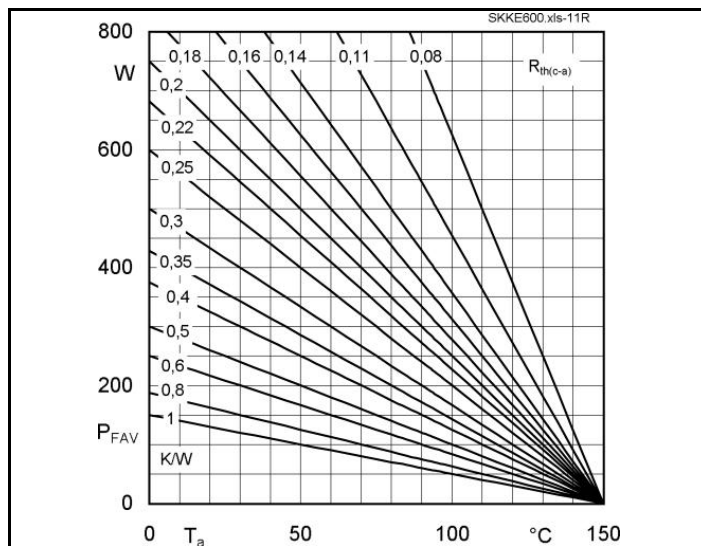


Fig. 11R Power dissipation per diode vs. ambient temperature

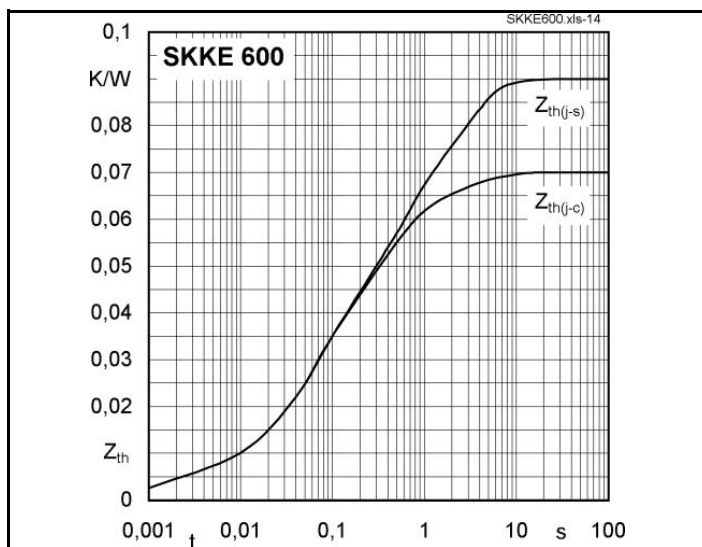


Fig. 14 Transient thermal impedance vs. time

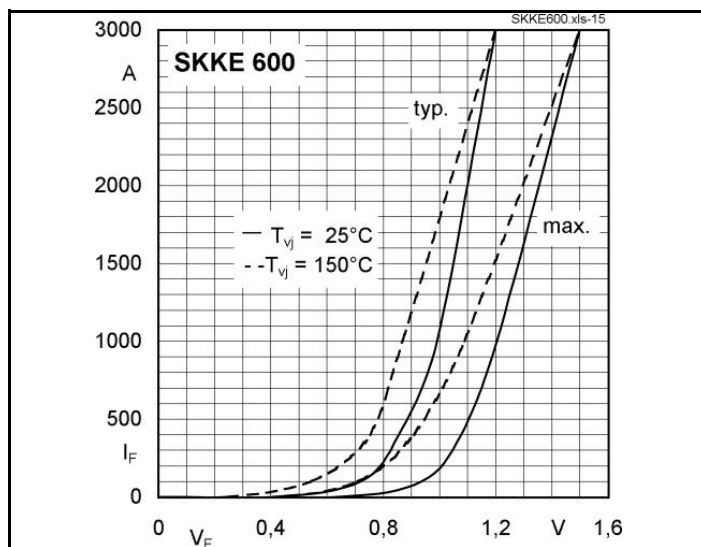


Fig. 15 Forward characteristics

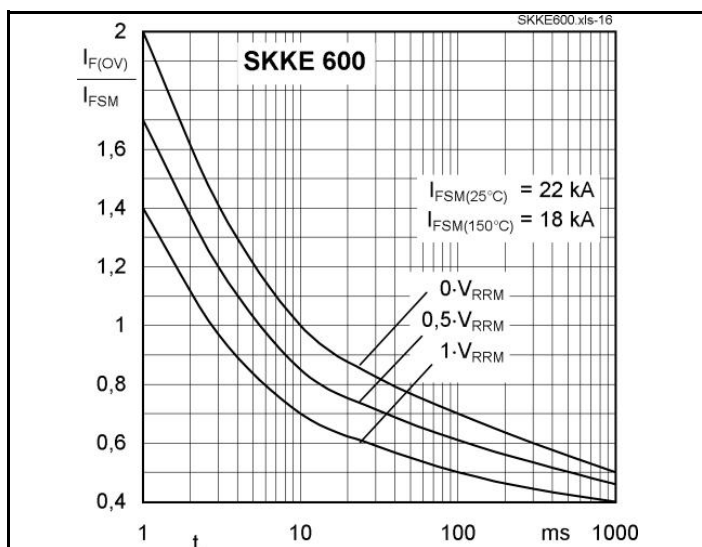
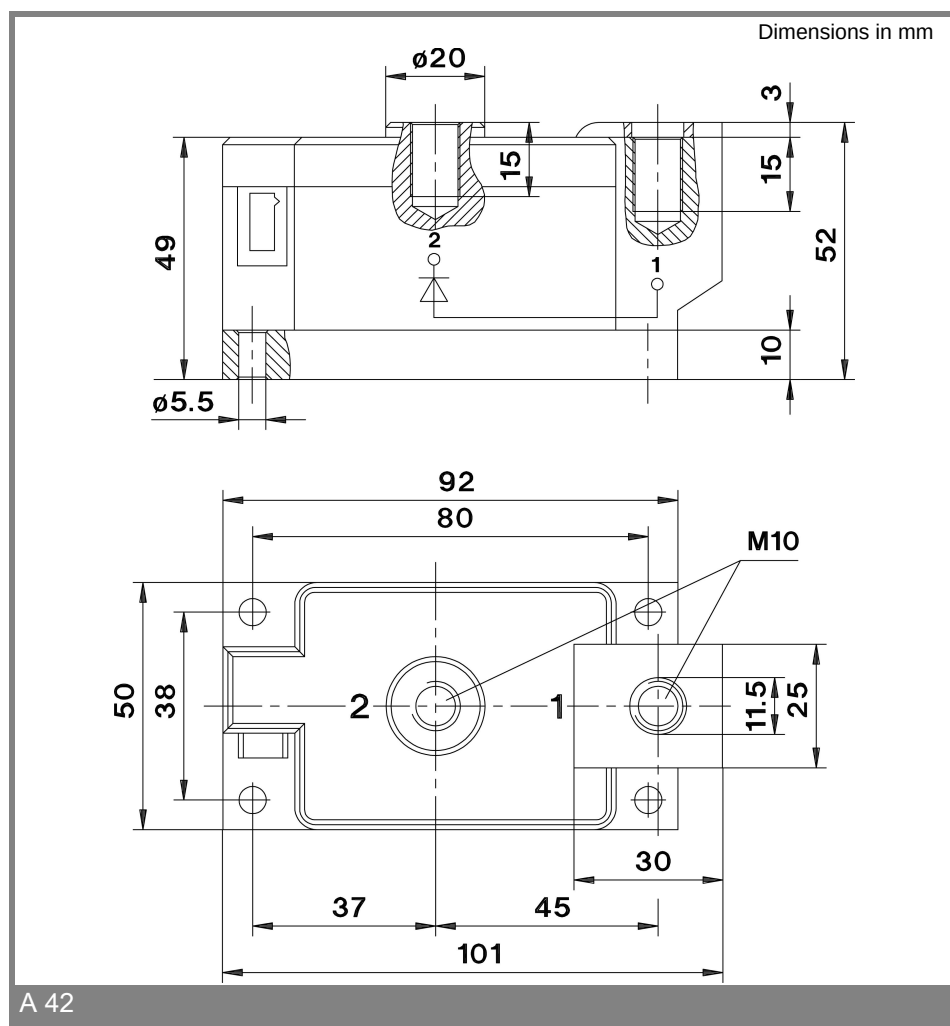


Fig. 16 Surge overload current vs. time



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