

# SKKT 132, SKKH 132, SKNH 132



SEMIPACK<sup>®</sup> 2

## Thyristor / Diode Modules

SKKT 132

SKKH 132

SKNH 132

### Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

### Typical Applications

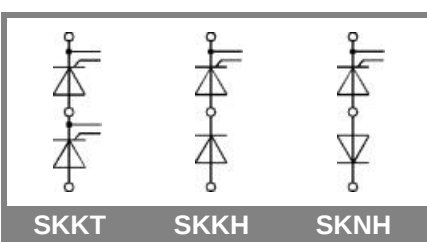
- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)
- DC braking of AC motors (SKNH)

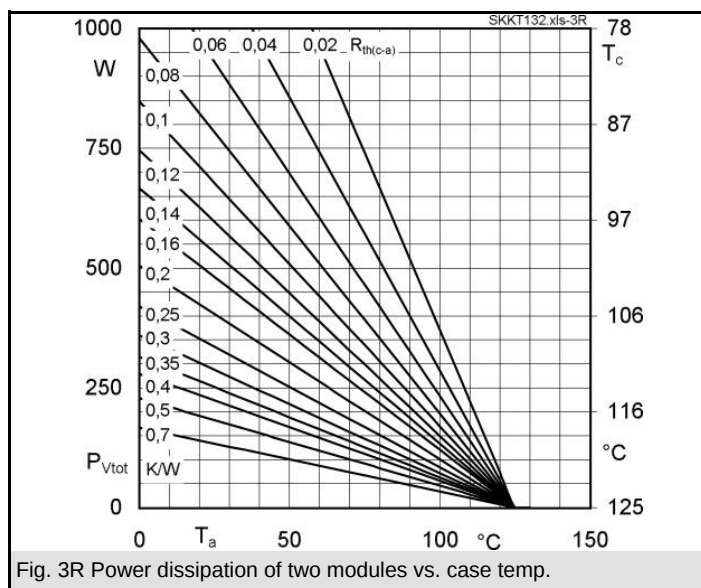
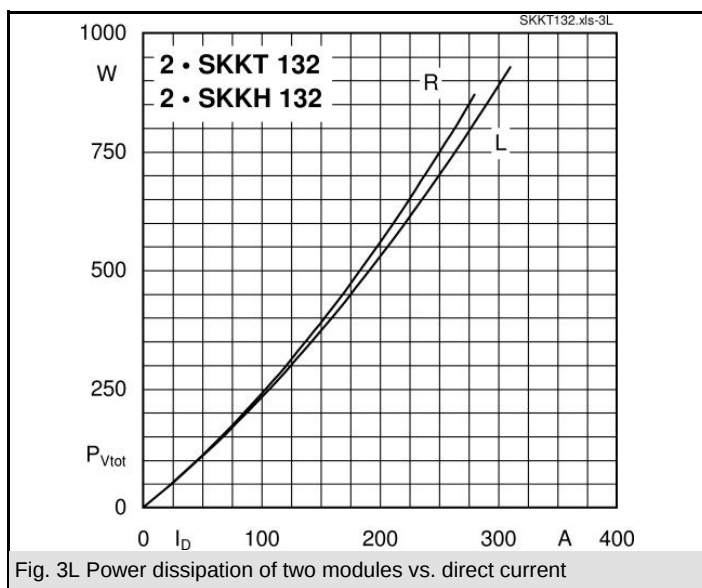
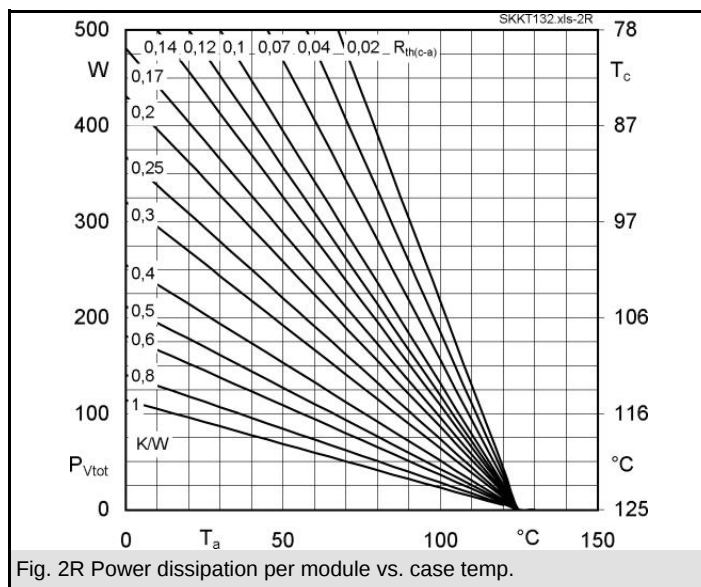
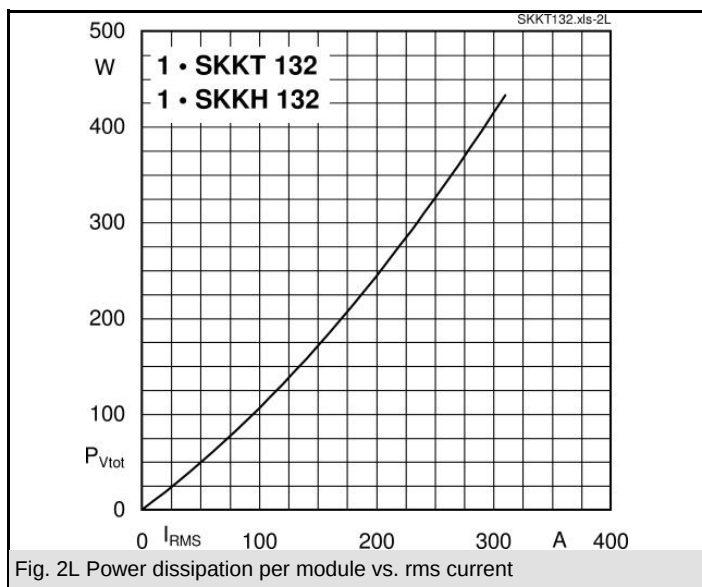
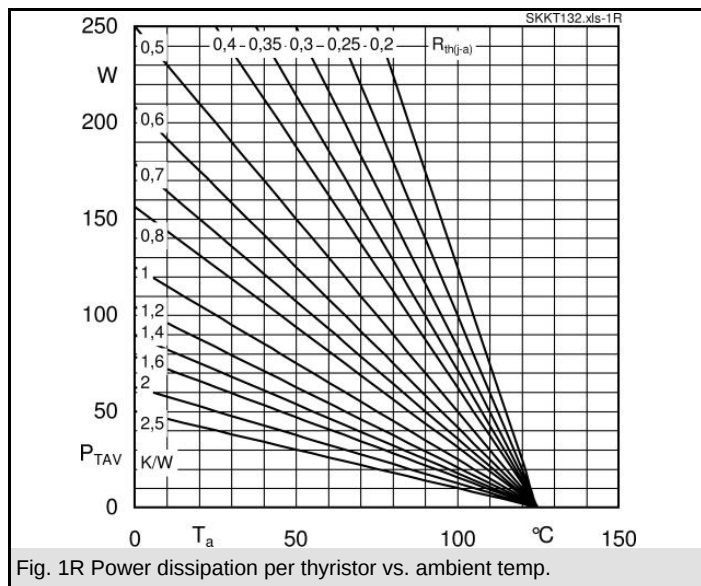
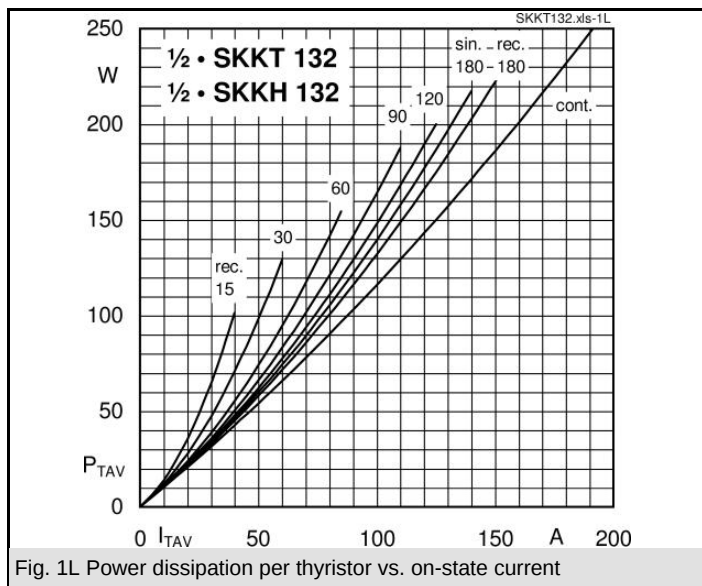
1) SKNH 132 available on request

2) See the assembly instructions

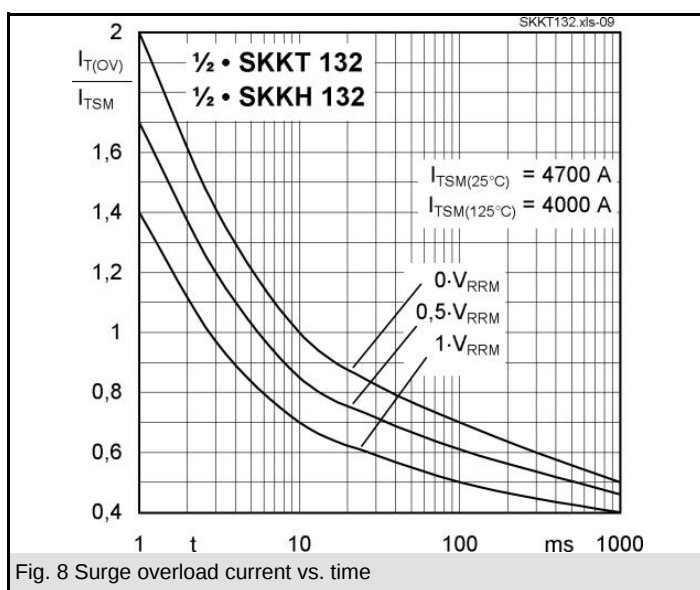
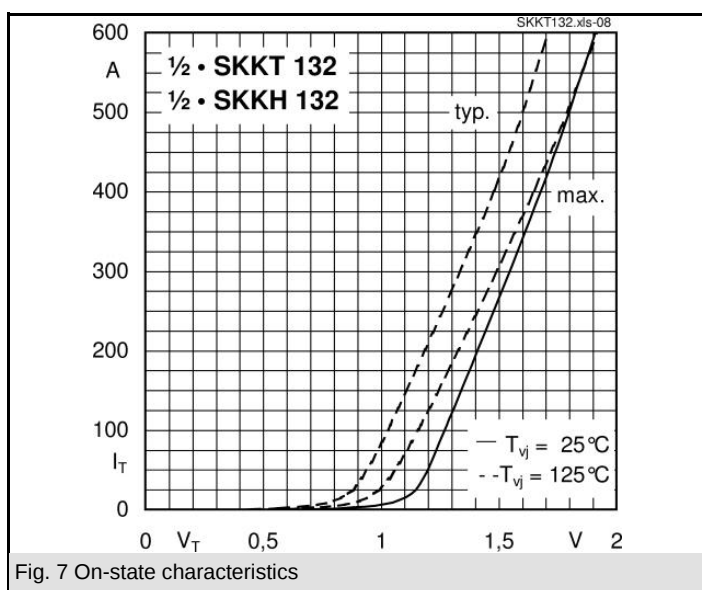
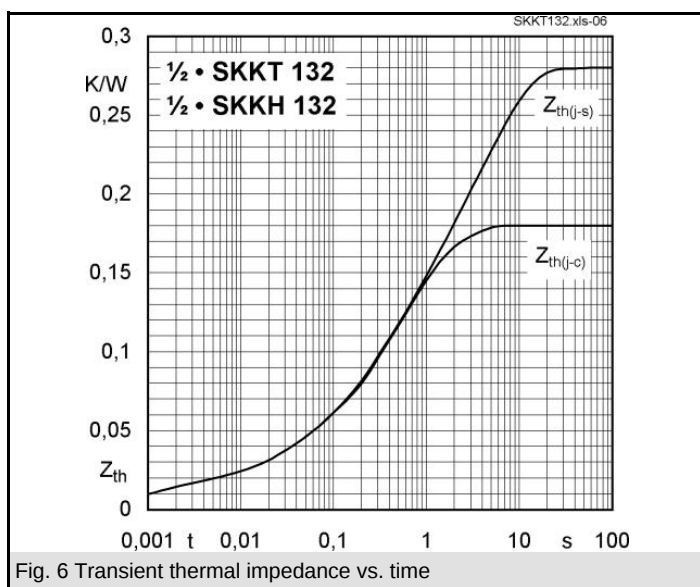
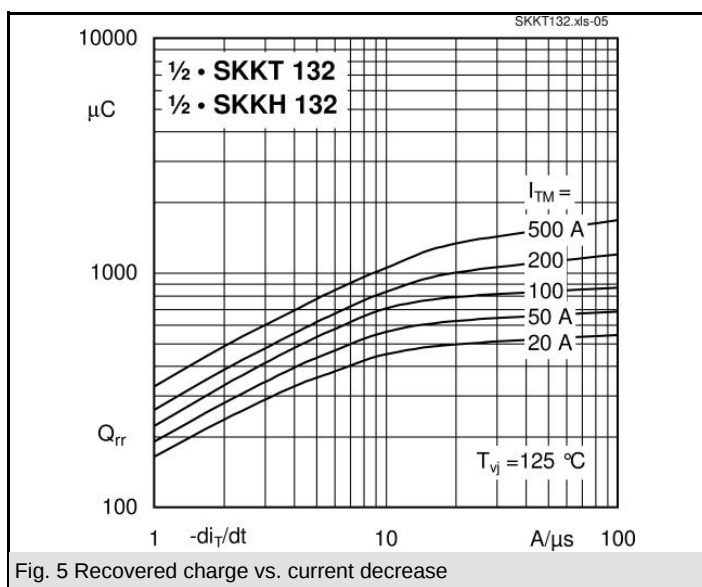
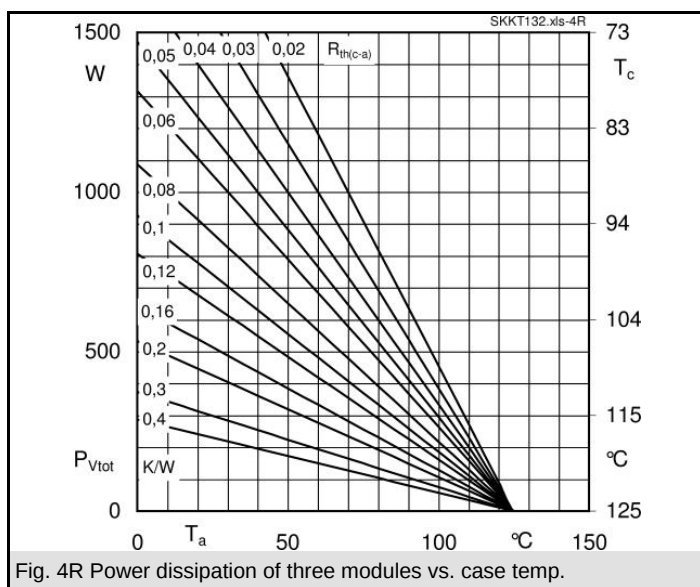
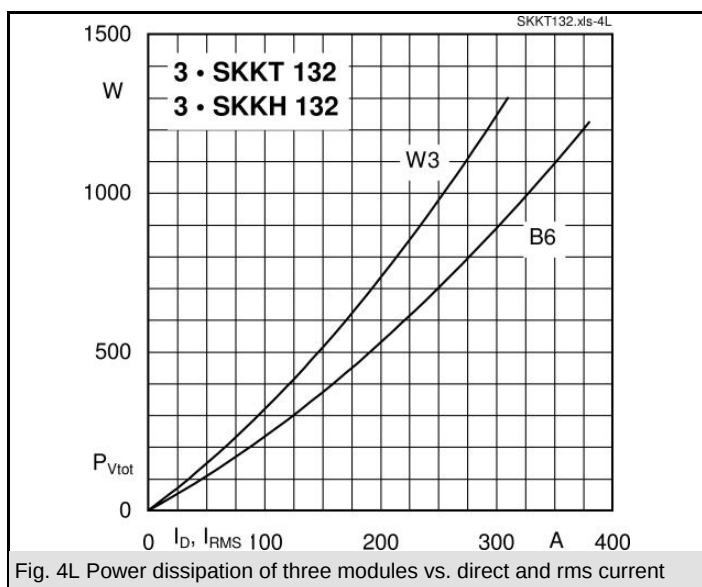
| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_{TRMS} = 220$ A (maximum value for continuous operation)<br>$I_{TAV} = 130$ A (sin. 180; $T_c = 87$ °C) |              |                               |
|----------------|-------------------------|------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|
| 900            | 800                     | SKKT 132/08E                                                                                               | SKKH 132/08E | SKNH 132/12E <sup>1)</sup>    |
| 1300           | 1200                    | SKKT 132/12E                                                                                               | SKKH 132/12E |                               |
| 1500           | 1400                    | SKKT 132/14E                                                                                               | SKKH 132/14E |                               |
| 1700           | 1600                    | SKKT 132/16E                                                                                               | SKKH 132/16E |                               |
| 1900           | 1800                    | SKKT 132/18E                                                                                               | SKKH 132/18E | SKNH 132/18E H4 <sup>1)</sup> |

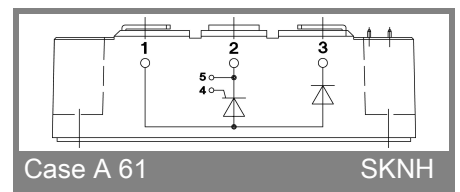
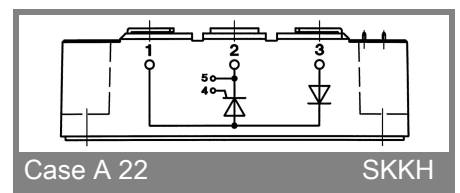
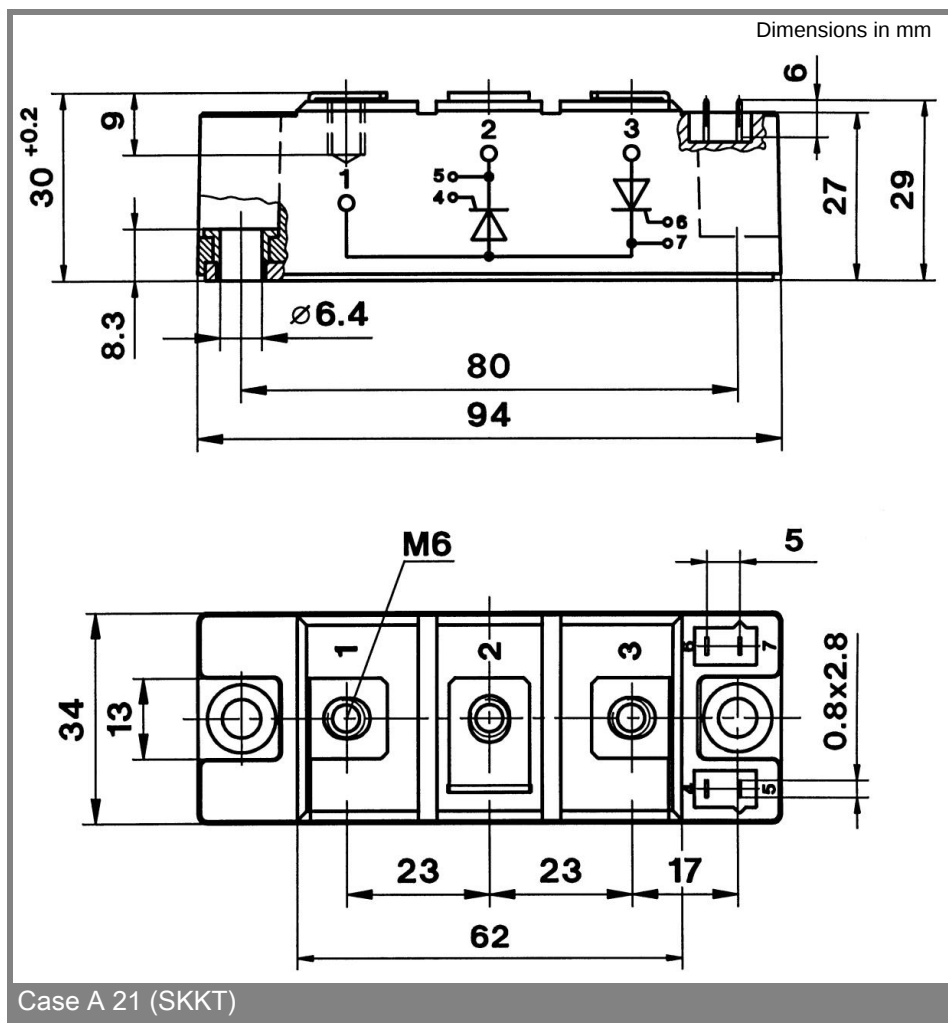
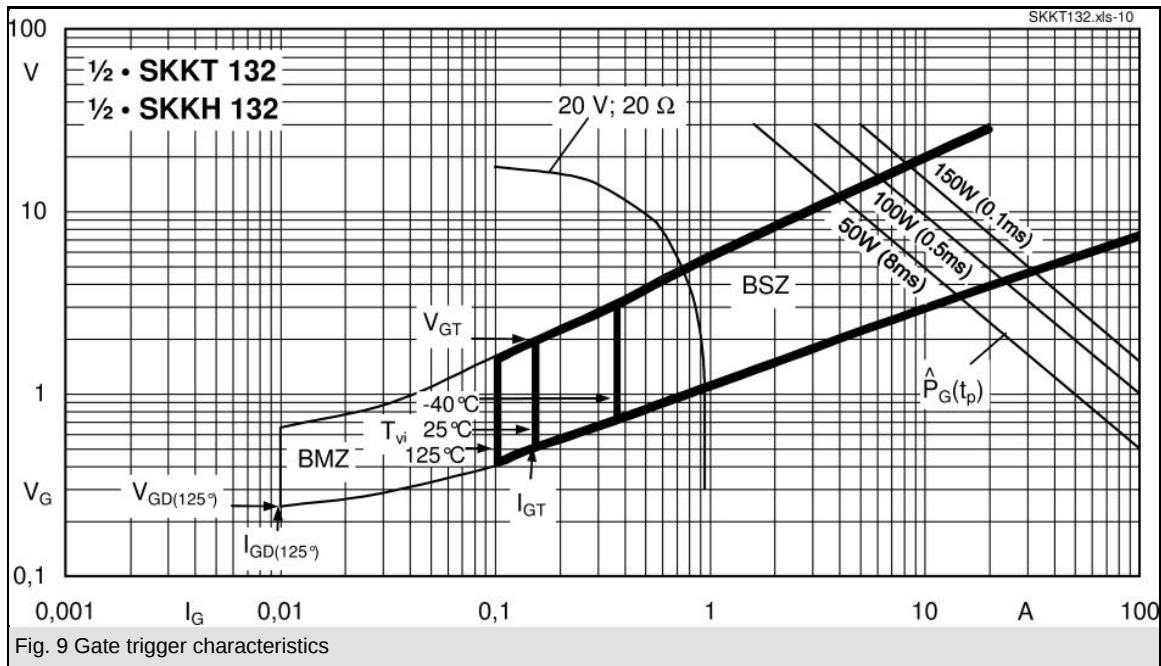
| Symbol           | Conditions                                              | Values                 | Units            |
|------------------|---------------------------------------------------------|------------------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 85$ (100) °C;                          | 137 (96)               | A                |
| $V_{isol}$       | sin. 180; $T_c =$ °C;                                   | 4800 (4000)            | A                |
| $I_D$            | P3/180; $T_a = 45$ °C; B2 / B6                          | 77 / 100               | A                |
|                  | P3/180F; $T_a = 35$ °C; B2 / B6                         | 170 / 200              | A                |
| $I_{RMS}$        | P3/180F; $T_a = 35$ °C; W1 / W3                         | 240 / 3 * 163          | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 4700                   | A                |
|                  | $T_{vj} = 125$ °C; 10 ms                                | 4000                   | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,3 ... 10 ms                         | 110000                 | A <sup>2</sup> s |
|                  | $T_{vj} = 125$ °C; 8,3 ... 10 ms                        | 80000                  | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 500$ A                         | max. 1,8               | V                |
| $V_{T(TO)}$      | $T_{vj} = 125$ °C                                       | max. 1                 | V                |
| $r_T$            | $T_{vj} = 125$ °C                                       | max. 1,6               | mΩ               |
| $I_{DD}, I_{RD}$ | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}, V_{DD} = V_{DRM}$ | max. 40                | mA               |
| $t_{gd}$         | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs       | 1                      | μs               |
| $t_{gr}$         | $V_D = 0,67 * V_{DRM}$                                  | 2                      | μs               |
| $(di/dt)_{cr}$   | $T_{vj} = 125$ °C                                       | max. 200               | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 125$ °C                                       | max. 1000              | V/μs             |
| $t_q$            | $T_{vj} = 125$ °C                                       | 50 ... 150             | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 400              | mA               |
| $I_L$            | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max.             | 300 / 1000             | mA               |
| $V_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 2                 | V                |
| $I_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 150               | mA               |
| $V_{GD}$         | $T_{vj} = 125$ °C; d.c.                                 | max. 0,25              | V                |
| $I_{GD}$         | $T_{vj} = 125$ °C; d.c.                                 | max. 10                | mA               |
| $R_{th(j-c)}$    | cont.; per thyristor / per module                       | 0,18 / 0,09            | K/W              |
| $R_{th(j-c)}$    | sin. 180; per thyristor / per module                    | 0,19 / 0,095           | K/W              |
| $R_{th(j-c)}$    | rec. 120; per thyristor / per module                    | 0,21 / 0,105           | K/W              |
| $R_{th(c-s)}$    | per thyristor / per module                              | 0,1 / 0,05             | K/W              |
| $T_{vj}$         |                                                         | - 40 ... + 125         | °C               |
| $T_{stg}$        |                                                         | - 40 ... + 125         | °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 SKK ...H4         | 4800 / 4000            | V~               |
| $M_s$            | to heatsink                                             | 5 ± 15 % <sup>2)</sup> | Nm               |
| $M_t$            | to terminal                                             | 5 ± 15 %               | Nm               |
| $a$              |                                                         | 5 * 9,81               | m/s <sup>2</sup> |
| $m$              | approx.                                                 | 165                    | g                |
| Case             | SKKT                                                    | A 21                   |                  |
|                  | SKKH                                                    | A 22                   |                  |
|                  | SKNH                                                    | A 61                   |                  |





# SKKT 132, SKKH 132, SKNH 132





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