

# SKKT 27, SKKT 27B, SKKH 27



**SEMIPACK<sup>®</sup> 1**

## Thyristor / Diode Modules

**SKKT 27**

**SKKT 27B**

**SKKH 27**

### 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)
- AC motor soft starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

1) See the assembly instructions

| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_{TRMS} = 50$ A (maximum value for continuous operation)<br>$I_{TAV} = 27$ A (sin. 180; $T_c = 82$ °C) |             |             |
|----------------|-------------------------|--|-------------|-------------|
| 900            | 800                     | SKKT 27/08E  | SKKT 27B08E | SKKH 27/08E |
| 1300           | 1200                    | SKKT 27/12E  | SKKT 27B12E | SKKH 27/12E |
| 1500           | 1400                    | SKKT 27/14E  | SKKT 27B14E | SKKH 27/14E |
| 1700           | 1600                    | SKKT 27/16E  | SKKT 27B16E | SKKH 27/16E |
| 1900           | 1800                    |  |             | SKKH 27/18E |

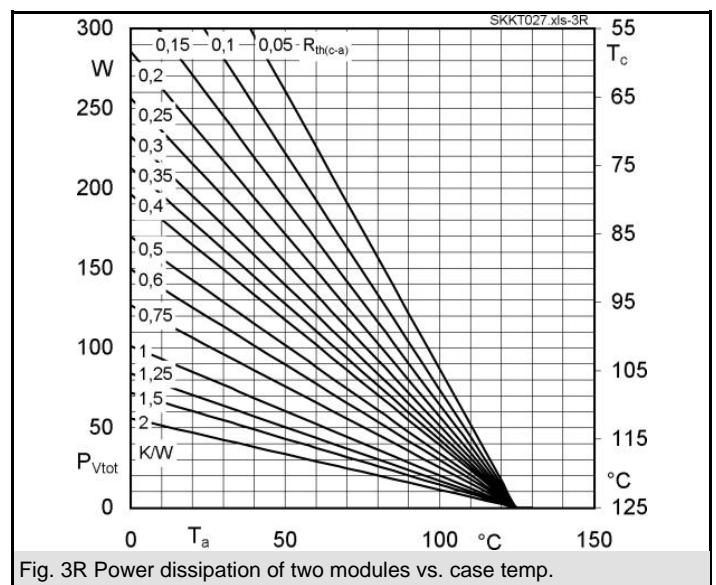
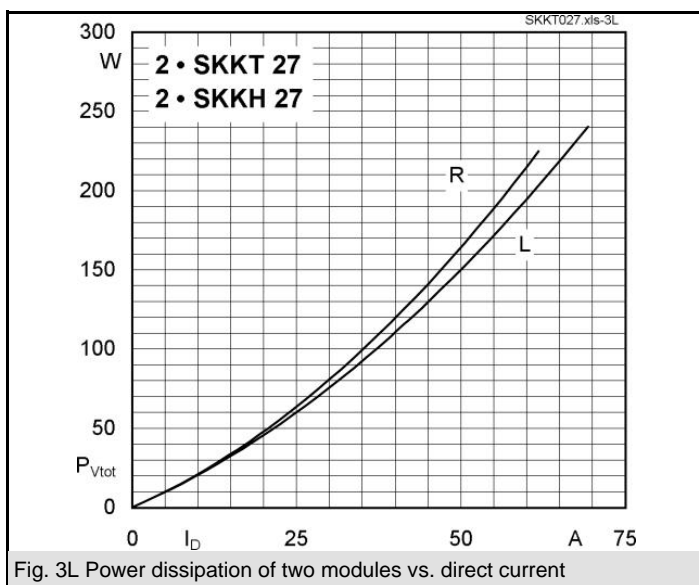
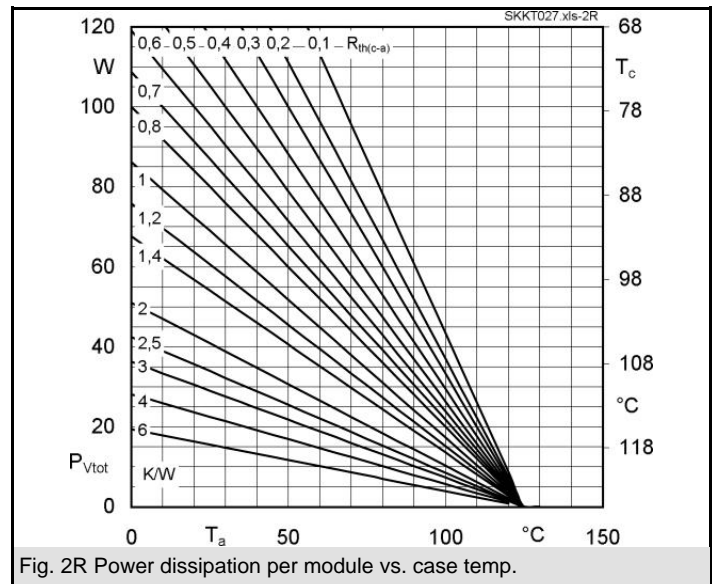
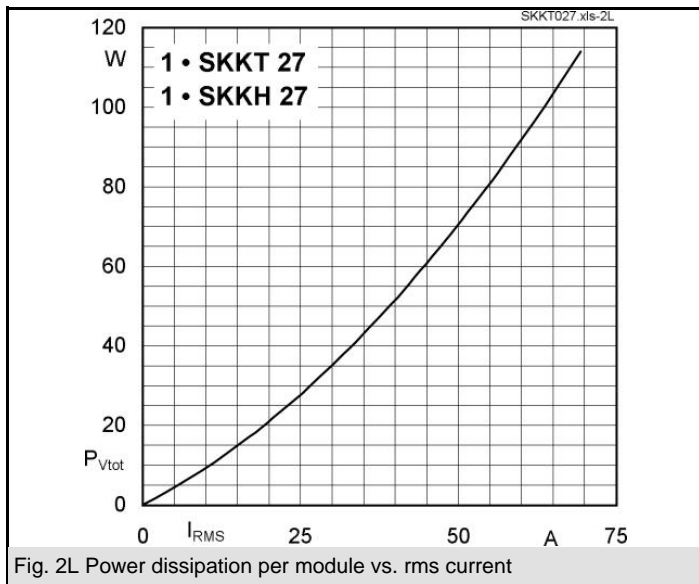
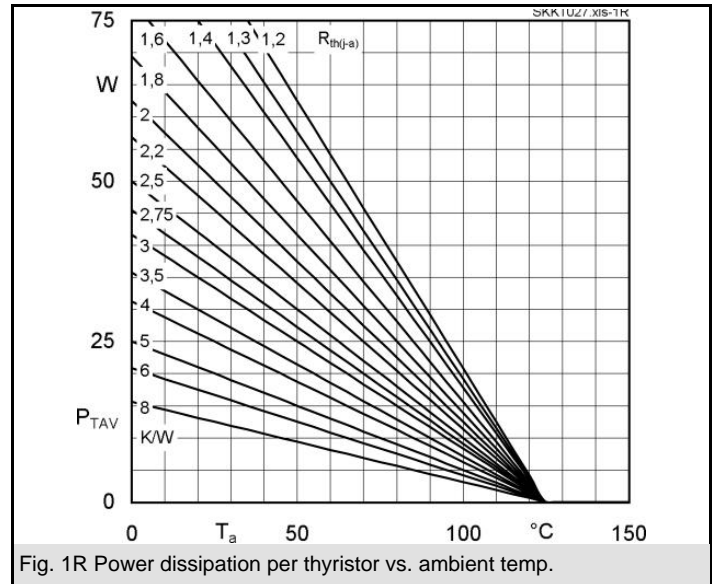
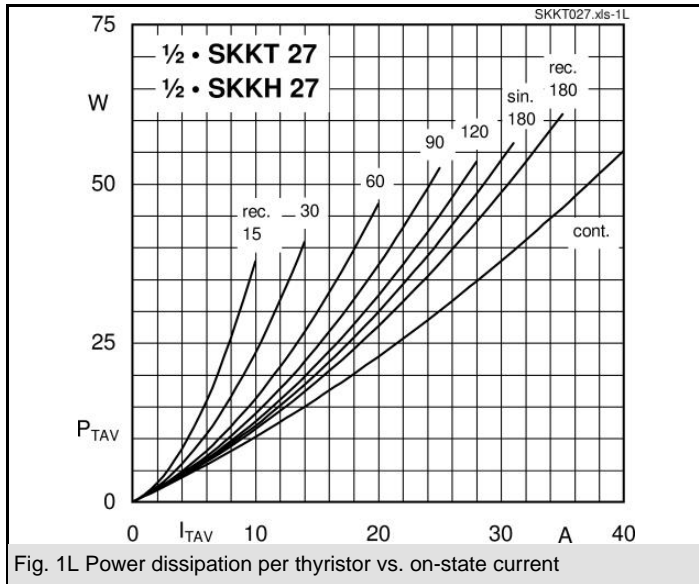
| Symbol           | Conditions  | Values                 | Units            |
|------------------|---|------------------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 85$ (100) °C                           | 25 (18)                | A                |
| $I_D$            | P3/180; $T_a = 45$ °C; B2 / B6                          | 38 / 50                | A                |
|                  | P3/180F; $T_a = 35$ °C; B2 / B6                         | 60 / 77                | A                |
| $I_{RMS}$        | P3/180; $T_a = 45$ °C; W1 / W3                          | 52 / 3 x 37            | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 550                    | A                |
|                  | $T_{vj} = 125$ °C; 10 ms                                | 480                    | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,3 ... 10 ms                         | 1500                   | A <sup>2</sup> s |
|                  | $T_{vj} = 125$ °C; 8,3 ... 10 ms                        | 1150                   | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 75$ A                          | max. 1,8               | V                |
| $V_{T(TO)}$      | $T_{vj} = 125$ °C                                       | 0,9                    | V                |
| $r_T$            | $T_{vj} = 125$ °C                                       | 12                     | mΩ               |
| $I_{DD}; I_{RD}$ | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 10                | mA               |
| $t_{gd}$         | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs       | 1                      | μs               |
| $t_{gr}$         | $V_D = 0,67 * V_{DRM}$                                  | 1                      | μs               |
| $(di/dt)_{cr}$   | $T_{vj} = 125$ °C                                       | max. 150               | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 125$ °C                                       | max. 1000              | V/μs             |
| $t_q$            | $T_{vj} = 125$ °C                                       | 80                     | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 100 / 200              | mA               |
| $I_L$            | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max.             | 250 / 400              | mA               |
| $V_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 3                 | 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. 5                 | mA               |
| $R_{th(j-c)}$    | cont.; per thyristor / per module                       | 0,9 / 0,45             | K/W              |
|                  | sin. 180; per thyristor / per module                    | 0,95 / 0,48            | K/W              |
|                  | rec. 120; per thyristor / per module                    | 1 / 0,5                | K/W              |
| $R_{th(c-s)}$    | per thyristor / per module                              | 0,2 / 0,1              | 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~               |
| $M_s$            | to heatsink   | 5 ± 15 % <sup>1)</sup> | Nm               |
| $M_t$            | to terminals  | 3 ± 15 %               | Nm               |
| $a$              |   | 5 * 9,81               | m/s <sup>2</sup> |
| $m$              | approx.   | 95                     | g                |
| Case             | SKKT  | A 46                   |                  |
|                  | SKKT ...B   | A 48                   |                  |
|                  | SKKH  | A 47                   |                  |



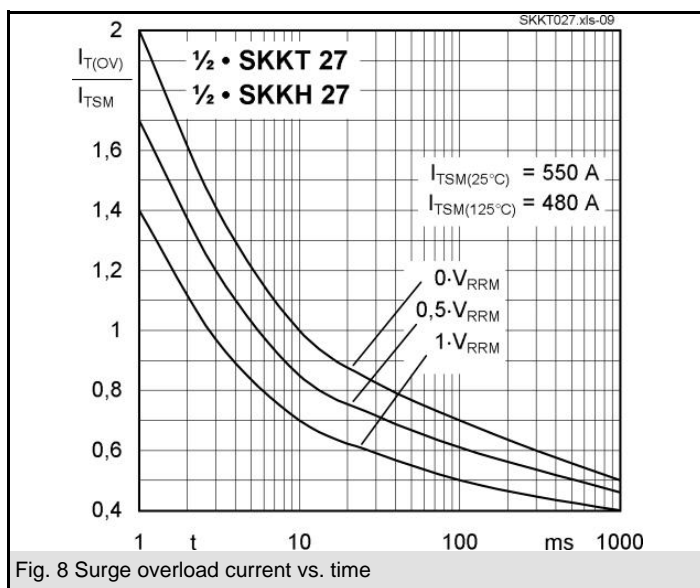
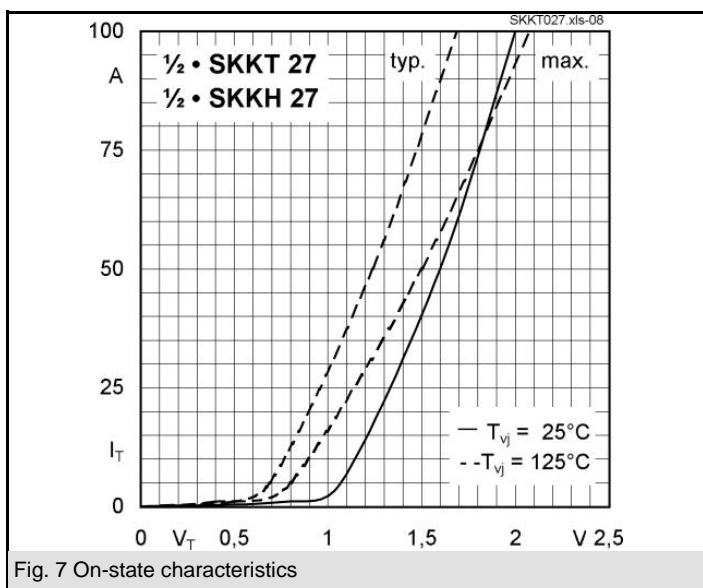
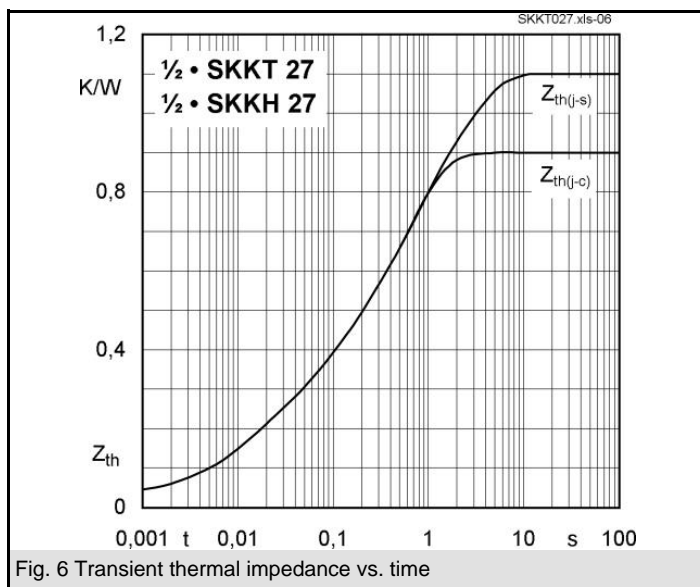
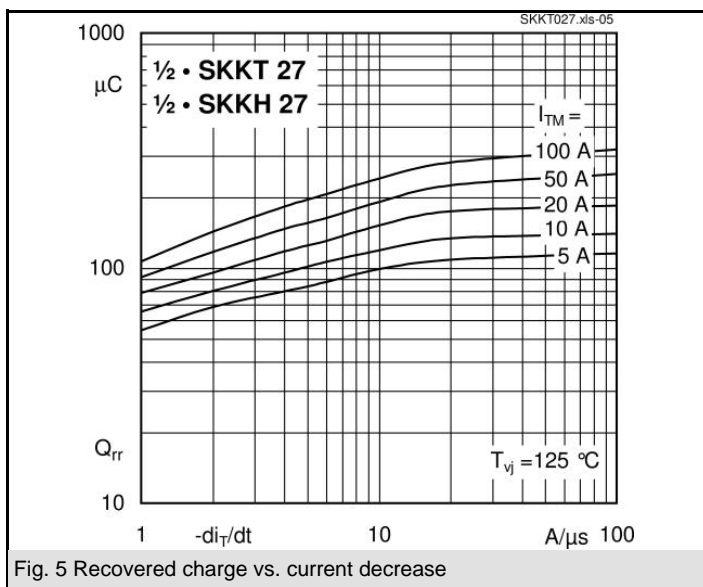
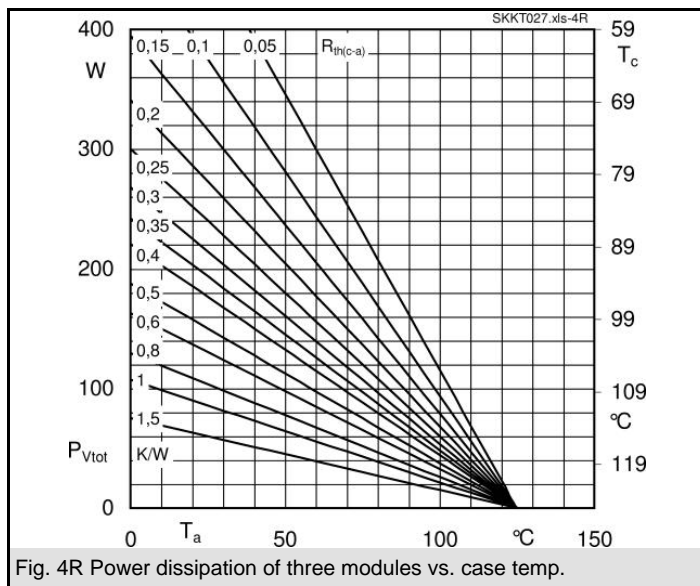
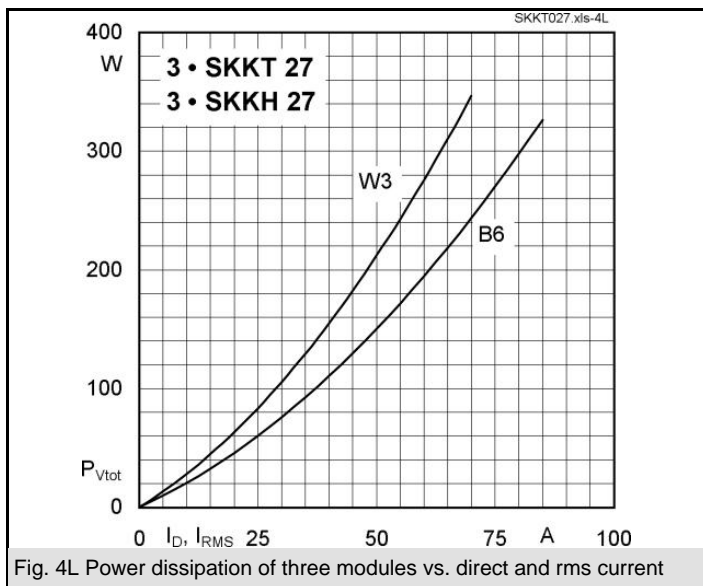
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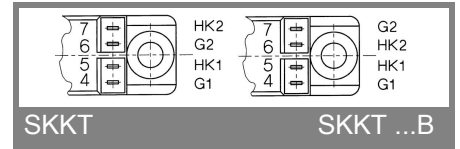
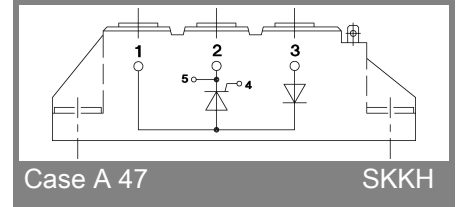
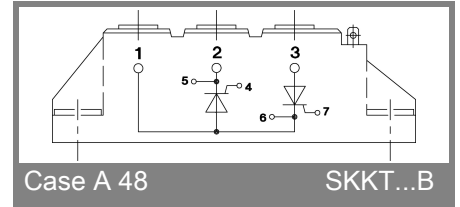
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