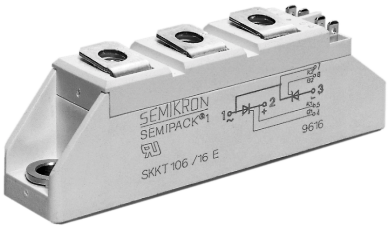
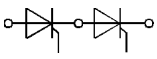
| $V_{RSM}$ | $V_{RRM}$ $V_{DRM}$ | (dv/ $dt)_{cr}$ | $I_{TRMS}$ (maximum value for continuous operation) 50 A | | | |
|---|---|---|---|---|---|---|
| | | | $I_{TAV}$ (sin. 180; $T_{case}$ = 68 °C) 32 A | | | |
| V | V | V/µs | | | | |
| 500 | 400 | 500 | – | – | **SKKH 26/04 D** | – |
| 700 | 600 | 500 | **SKKT 26/06 D** | – | **SKKH 26/06 D** | **SKKH 27/06 D** |
| 900 | 800 | 500 | **SKKT 26/08 D** | **SKKT 27/08 D**[1)] | **SKKH 26/08 D** | **SKKH 27/08 D** |
| 1300 | 1200 | 1000 | **SKKT 26/12 E** | **SKKT 27/12 E**[1)] | **SKKH 26/12 E** | **SKKH 27/12 E** |
| 1500 | 1400 | 1000 | **SKKT 26/14 E** | **SKKT 27/14 E**[1)] | **SKKH 26/14 E** | **SKKH 27/14 E** |
| 1700 | 1600 | 1000 | **SKKT 26/16 E** | **SKKT 27/16 E**[1)] | **SKKH 26/16 E** | **SKKH 27/16 E** |
| 1900 | 1800 | 1000 | **SKKT 26/18 E** | – | – | **SKKH 27/18 E** |

| **Symbol** | **Conditions** | | **SKKT 26 SKKH 26** | **SKKT 27 SKKT 27B SKKH 27** | **Units** |
|---|---|---|---|---|---|
| $I_{TAV}$ | sin. 180; | $T_{case}$ = 68 °C | 32 | | A |
| | | $T_{case}$ = 85 °C | 25 | | A |
| $I_D$ | B2/B6 | $T_{amb}$ = 45 °C; P 3/180 | 38 / 50 | | A |
| | | $T_{amb}$ = 35 °C; P 3/180 F | 60 / 77 | | A |
| $I_{RMS}$ | W1/W3 | $T_{amb}$ = 45 °C; P 3/180 | 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 | | 1 500 | | $A^2s$ |
| | $T_{vj}$ = 125 °C; 8,3 ... 10 ms | | 1 150 | | $A^2s$ |
| $t_{gd}$ | $T_{vj}$ = 25 °C; $I_G$ = 1 A | | | | |
| | | $di_G/dt$ = 1 A/µs | 1 | | µs |
| $t_{gr}$ | $V_D = 0{,}67 \cdot V_{DRM}$ | | 1 | | µs |
| $(di/dt)_{cr}$ | $T_{vj}$ = 125 °C | | 150 | | A/µs |
| $t_q$ | $T_{vj}$ = 125 °C | | typ. 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 |
| $V_T$ | $T_{vj}$ = 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 |
| $V_{GT}$ | $T_{vj}$ = 25 °C; d.c. | | 3 | | V |
| $I_{GT}$ | $T_{vj}$ = 25 °C; d.c. | | 150 | | mA |
| $V_{GD}$ | $T_{vj}$ = 125 °C; d.c. | | 0,25 | | V |
| $I_{GD}$ | $T_{vj}$ = 125 °C; d.c. | | 5 | | mA |
| $R_{thjc}$ | cont. | per thyristor / per module | 0,9 / 0,45 | | °C/W |
| | sin. 180 | per thyristor / per module | 0,95 / 0,48 | | °C/W |
| | rec. 120 | per thyristor / per module | 1,0 / 0,5 | | °C/W |
| $R_{thch}$ | | per thyristor / per module | 0,2 / 0,1 | | °C/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~ |
| $M_1$ | to heatsink | SI (US) units | 5 (44 lb. in.) ± 15 %[2)] | | Nm |
| $M_2$ | to terminals | SI (US) units | 3 (26 lb. in.) ± 15 % | | Nm |
| a | | | $5 \cdot 9{,}81$ | | $m/s^2$ |
| w | approx. | | 95 | | g |
| Case | → page B 1 – 95 | SKKT 26: A 5<br>SKKH 26: A 6 | SKKT 27: A 46<br>SKKT 27B: A 48<br>SKKH 27: A 47 | | |

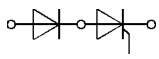
# SEMIPACK® 1
# Thyristor / Diode Modules

**SKKT 26 SKKH 26**
**SKKT 27 SKKH 27**
**SKKT 27B**

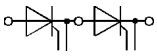


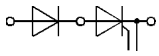
**SKKT 26**



**SKKH 26**



**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)] Also available in SKKT 27B configuration (case A 48)
[2)] See the assembly instructions

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

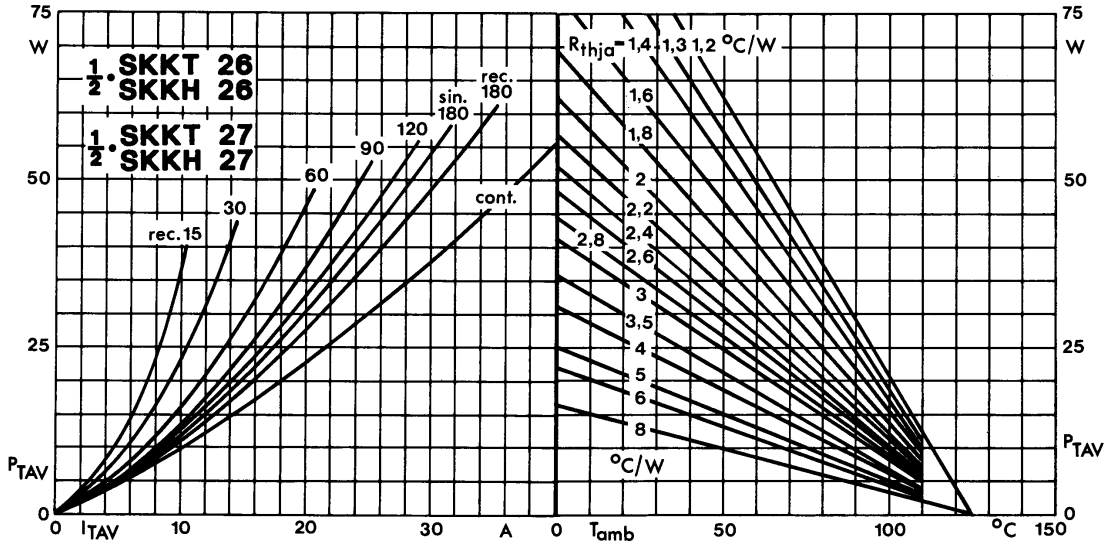



Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

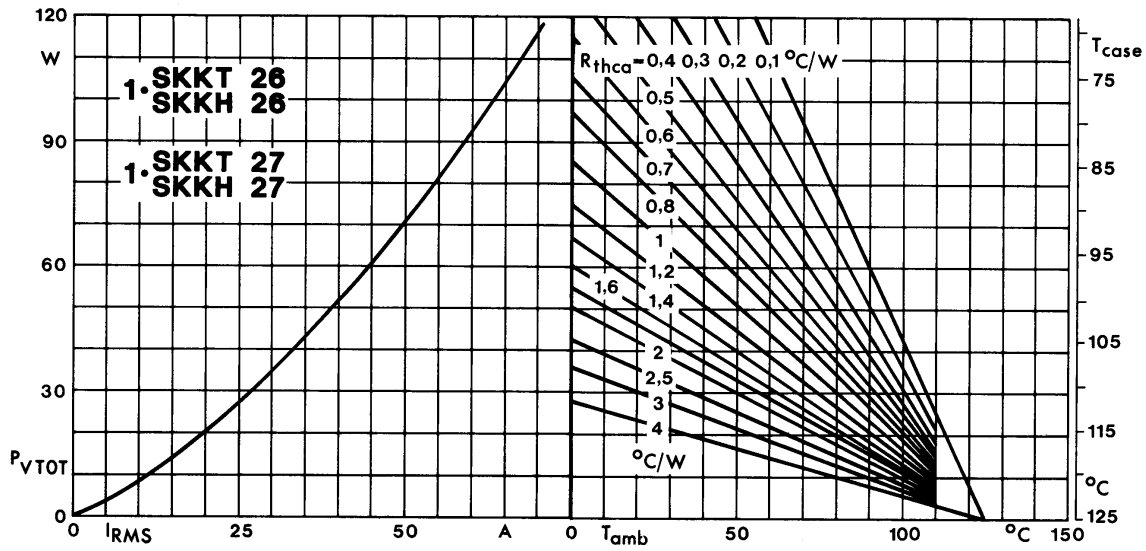



Fig. 2 Power dissipation per module vs. rms current and case temperature

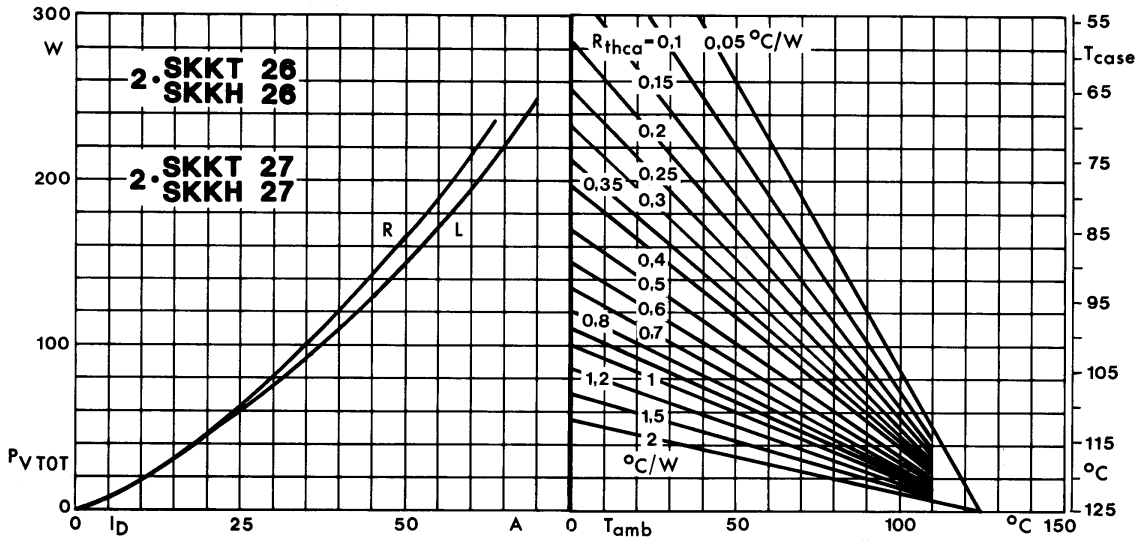



Fig. 3 Power dissipation of two modules vs. direct current and case temperature

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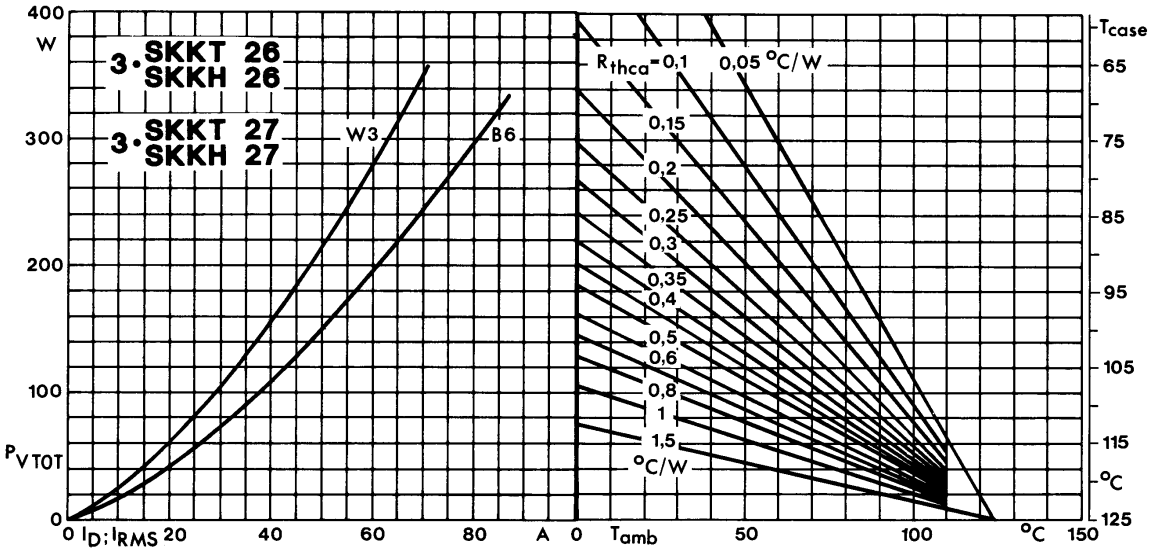


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

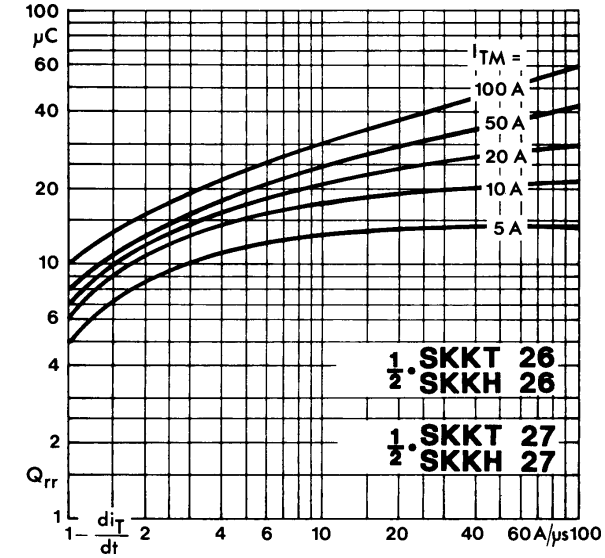


Fig. 5 Recovered charge vs. current decrease

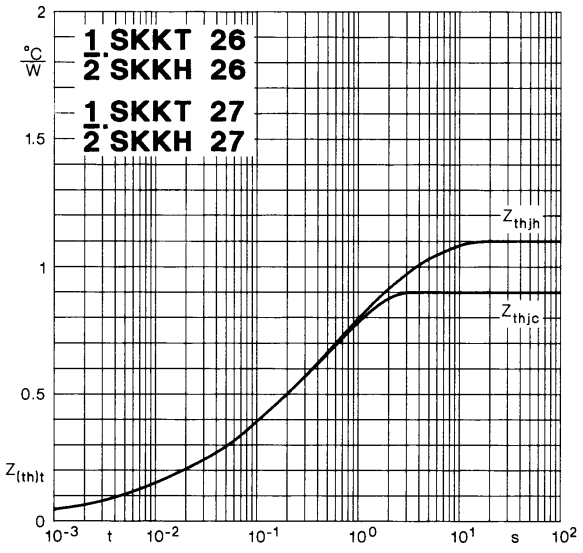


Fig. 6 Transient thermal impedance vs. time

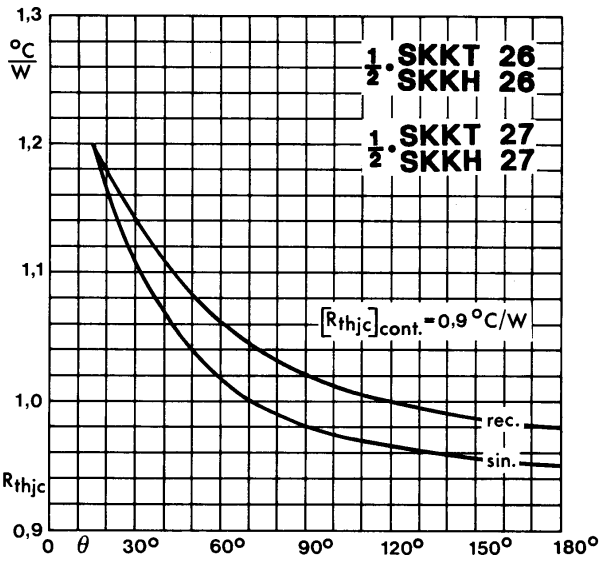


Fig. 7 Thermal resistance vs. conduction angle

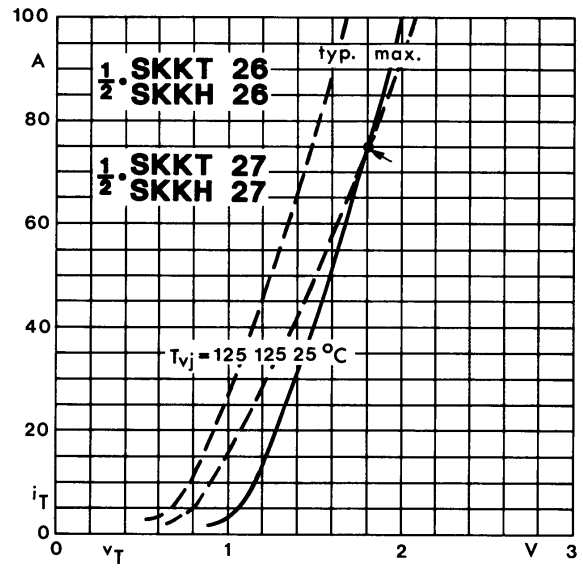


Fig. 8 On-state characteristics

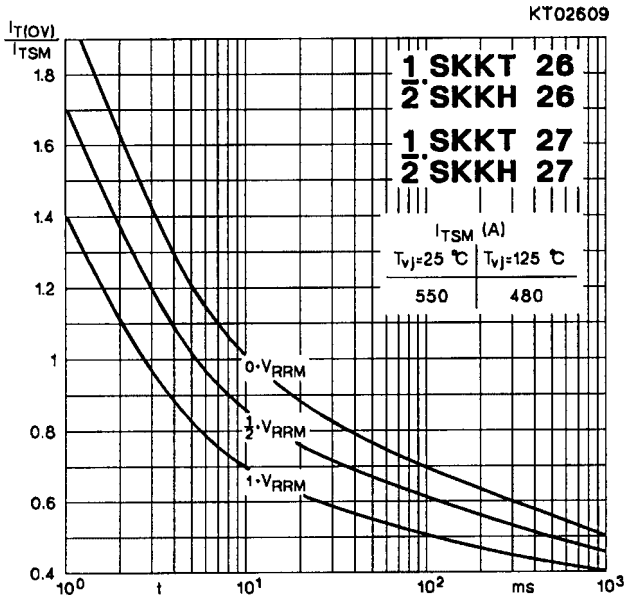


Fig. 9 Surge overload current vs. time

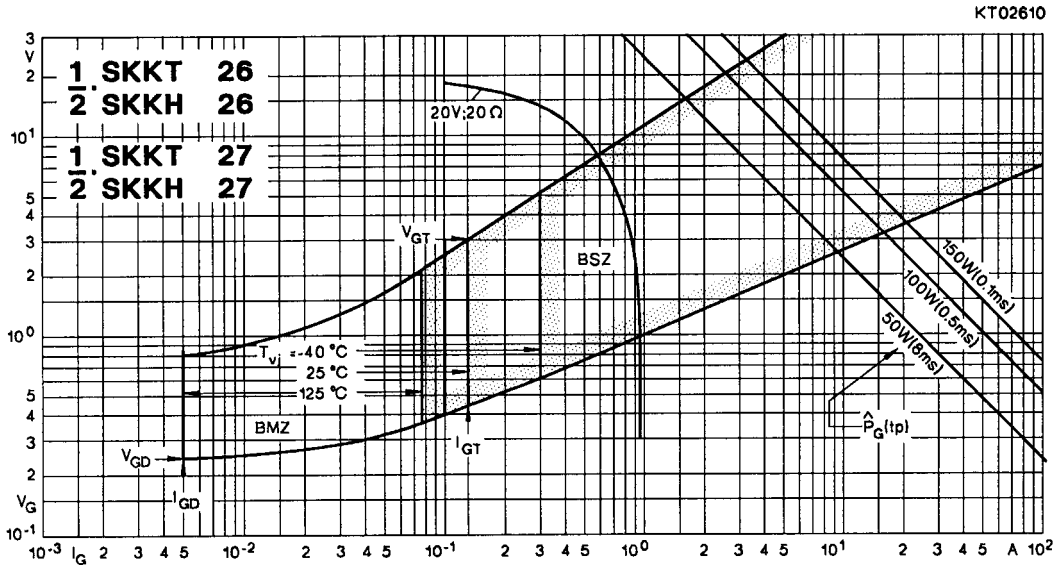


Fig. 10 Gate trigger characteristics

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