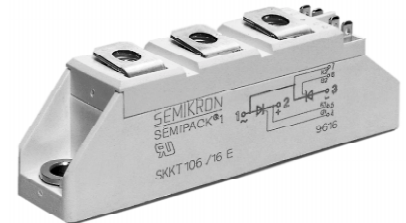


| | | | | | | |
|-----------|-----------|----------------|---|----------------------------|--------------|--------------|
| V_{RSM} | V_{RRM} | $(dv/dt)_{cr}$ | I_{TRMS} (maximum value for continuous operation) | | | |
| | V_{DRM} | | 50 A | | | |
| | | | I_{TAV} (sin. 180; $T_{case} = 68\text{ °C}$) | | | |
| V | V | V/ μ s | 32 A | | | |
| 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 |

SEMIPACK® 1 Thyristor / Diode Modules

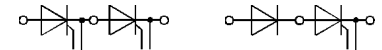
SKKT 26 **SKKH 26**
SKKT 27 **SKKH 27**
SKKT 27B



| Symbol | Conditions | SKKT 26 SKKH 26 | SKKT 27 SKKT 27B SKKH 27 | Units |
|---------------------|--|---|--|-----------------------------|
| I_{TAV} | sin. 180; $T_{case} = 68\text{ °C}$ | 32 | | A |
| | $T_{case} = 85\text{ °C}$ | 25 | | A |
| I_D | B2/B6 $T_{amb} = 45\text{ °C}$; P 3/180 | 38 / 50 | | A |
| | $T_{amb} = 35\text{ °C}$; P 3/180 F | 60 / 77 | | A |
| I_{RMS} | W1/W3 $T_{amb} = 45\text{ °C}$; P 3/180 | 52 / 3 x 37 | | A |
| I_{TSM} | $T_{vj} = 25\text{ °C}$; 10 ms | 550 | | A |
| | $T_{vj} = 125\text{ °C}$; 10 ms | 480 | | A |
| i^2t | $T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms | 1 500 | | A ² s |
| | $T_{vj} = 125\text{ °C}$; 8,3 ... 10 ms | 1 150 | | A ² s |
| t_{gd} | $T_{vj} = 25\text{ °C}$; $I_G = 1\text{ A}$ $di_G/dt = 1\text{ A}/\mu\text{s}$ | 1 | | μs |
| t_{gr} | $V_D = 0,67 \cdot V_{DRM}$ | 1 | | μs |
| $(di/dt)_{cr}$ | $T_{vj} = 125\text{ °C}$ | 150 | | A/ μs |
| t_q | $T_{vj} = 125\text{ °C}$ | typ. 80 | | μs |
| I_H | $T_{vj} = 25\text{ °C}$; typ./max. | 100 / 200 | | mA |
| I_L | $T_{vj} = 25\text{ °C}$; $R_G = 33\ \Omega$; typ./max. | 250 / 400 | | mA |
| V_T | $T_{vj} = 25\text{ °C}$; $I_T = 75\text{ A}$ | max. 1,8 | | V |
| $V_{T(TO)}$ | $T_{vj} = 125\text{ °C}$ | 0,9 | | V |
| r_T | $T_{vj} = 125\text{ °C}$ | 12 | | m Ω |
| I_{DD} ; I_{RD} | $T_{vj} = 125\text{ °C}$; $V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$ | max. 10 | | mA |
| V_{GT} | $T_{vj} = 25\text{ °C}$; d.c. | 3 | | V |
| I_{GT} | $T_{vj} = 25\text{ °C}$; d.c. | 150 | | mA |
| V_{GD} | $T_{vj} = 125\text{ °C}$; d.c. | 0,25 | | V |
| I_{GD} | $T_{vj} = 125\text{ °C}$; d.c. | 5 | | mA |
| R_{thjc} | cont. } per thyristor / sin. 180 } per module rec. 120 } | 0,9 / 0,45 | | $^{\circ}\text{C}/\text{W}$ |
| | | 0,95 / 0,48 | | $^{\circ}\text{C}/\text{W}$ |
| R_{thch} | | 1,0 / 0,5 | | $^{\circ}\text{C}/\text{W}$ |
| T_{vj} | | 0,2 / 0,1 | | $^{\circ}\text{C}/\text{W}$ |
| T_{stg} | | – 40 ... + 125 | | $^{\circ}\text{C}$ |
| | | – 40 ... + 125 | | $^{\circ}\text{C}$ |
| 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.) $\pm 15\%$ ²⁾ | | Nm |
| M_2 | to terminals } | 3 (26 lb. in.) $\pm 15\%$ | | Nm |
| a | | 5 · 9,81 | | m/s ² |
| w | approx. | 95 | | g |
| Case | → page B 1 – 95 | SKKT 26: A 5 SKKH 26: A 6 | SKKT 27: A 46 SKKT 27B: A 48 SKKH 27: A 47 | |



SKKT 26 **SKKH 26**



SKKT 27 **SKKH 27**
SKKT 27B

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

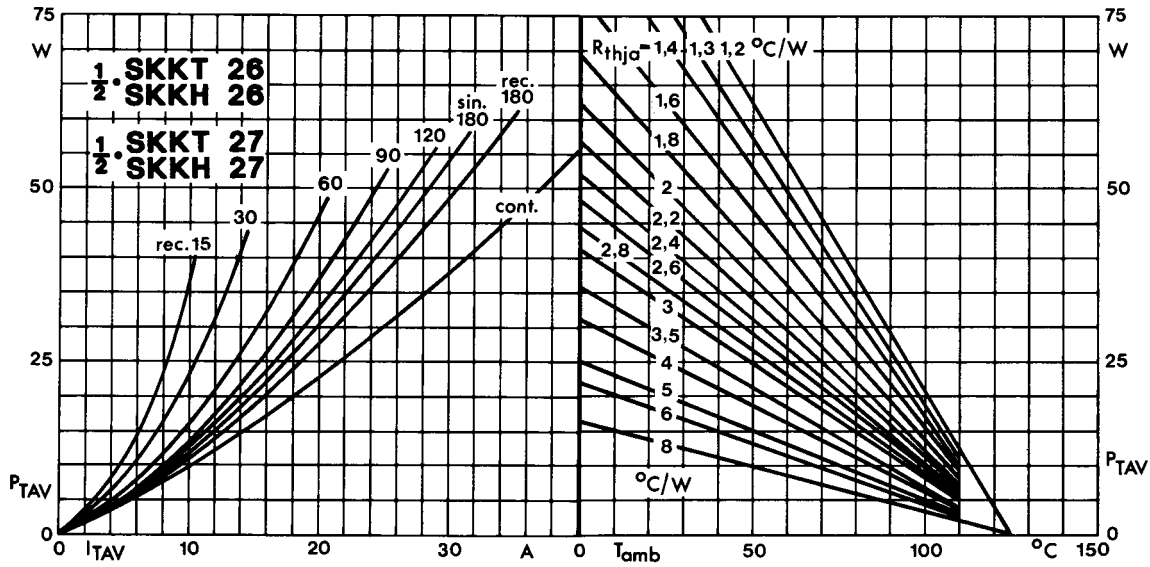


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

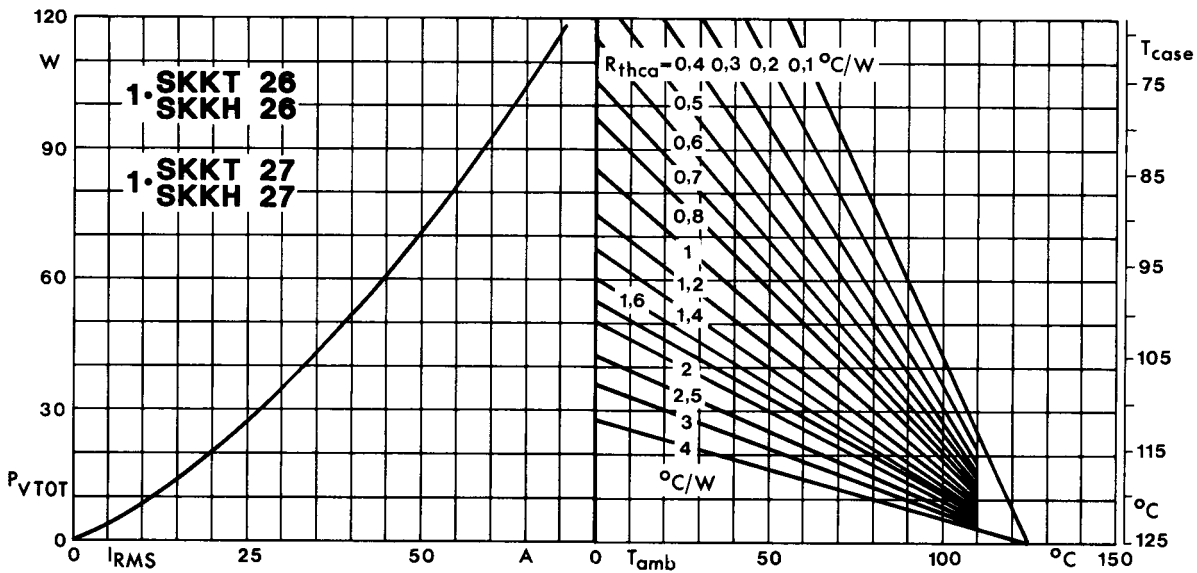


Fig. 2 Power dissipation per module vs. rms current and case temperature

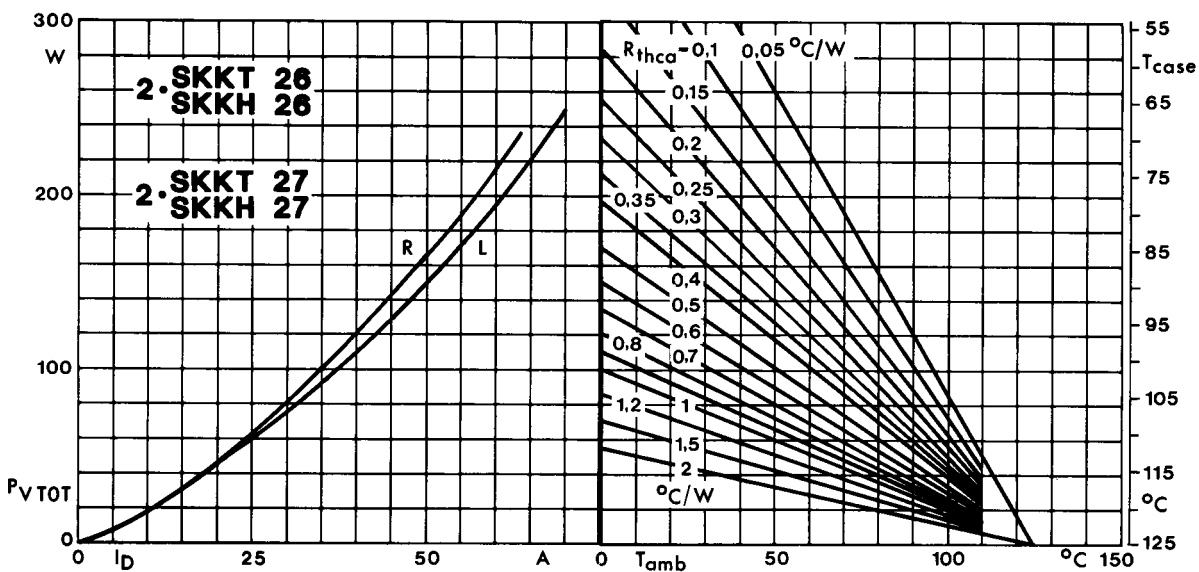


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

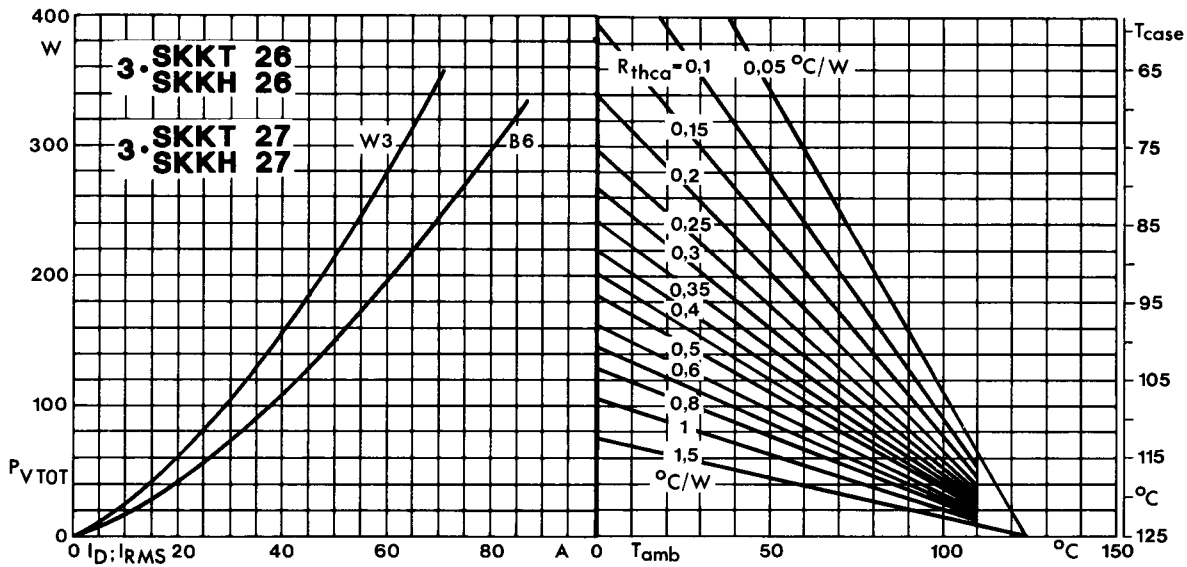


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

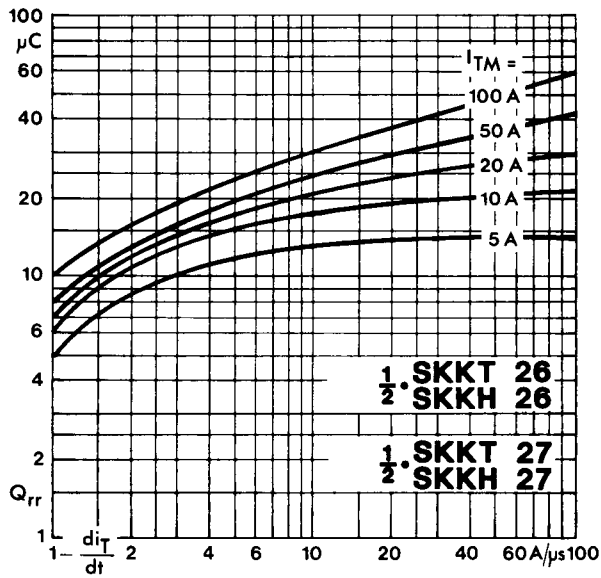


Fig. 5 Recovered charge vs. current decrease

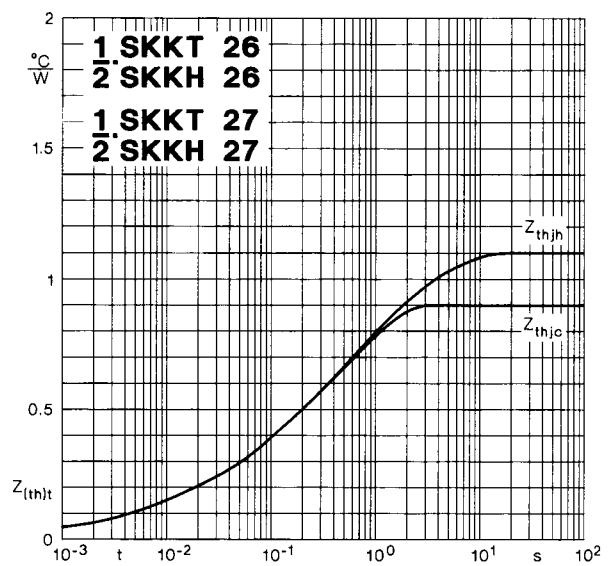


Fig. 6 Transient thermal impedance vs. time

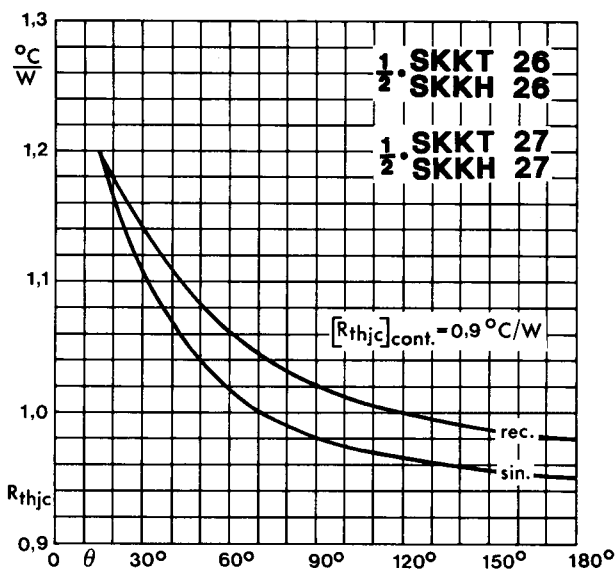


Fig. 7 Thermal resistance vs. conduction angle

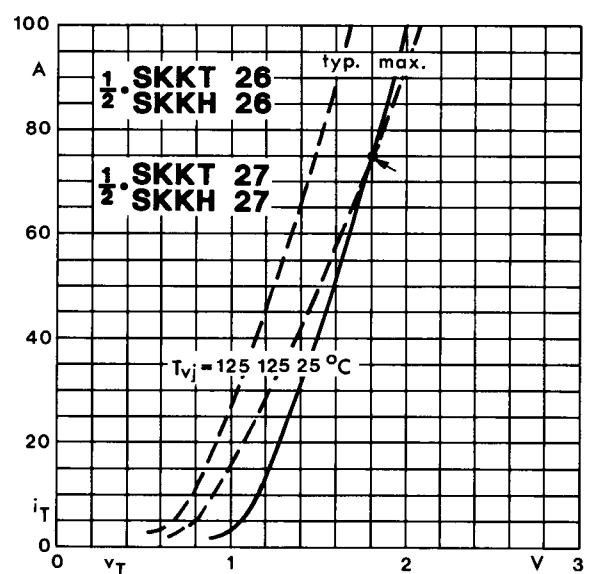


Fig. 8 On-state characteristics

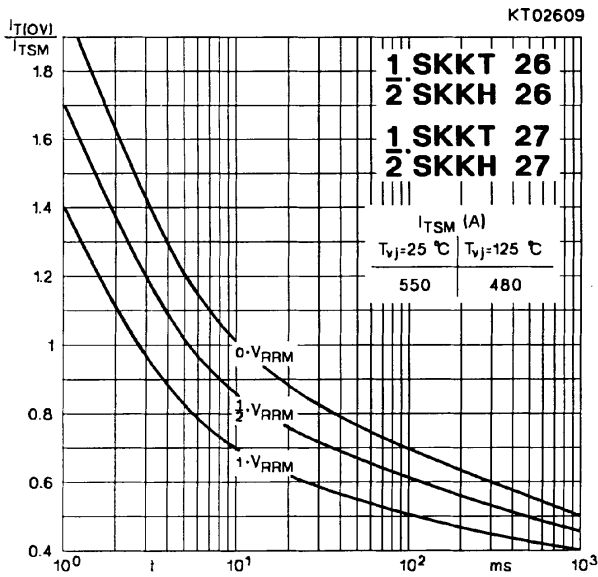


Fig. 9 Surge overload current vs. time

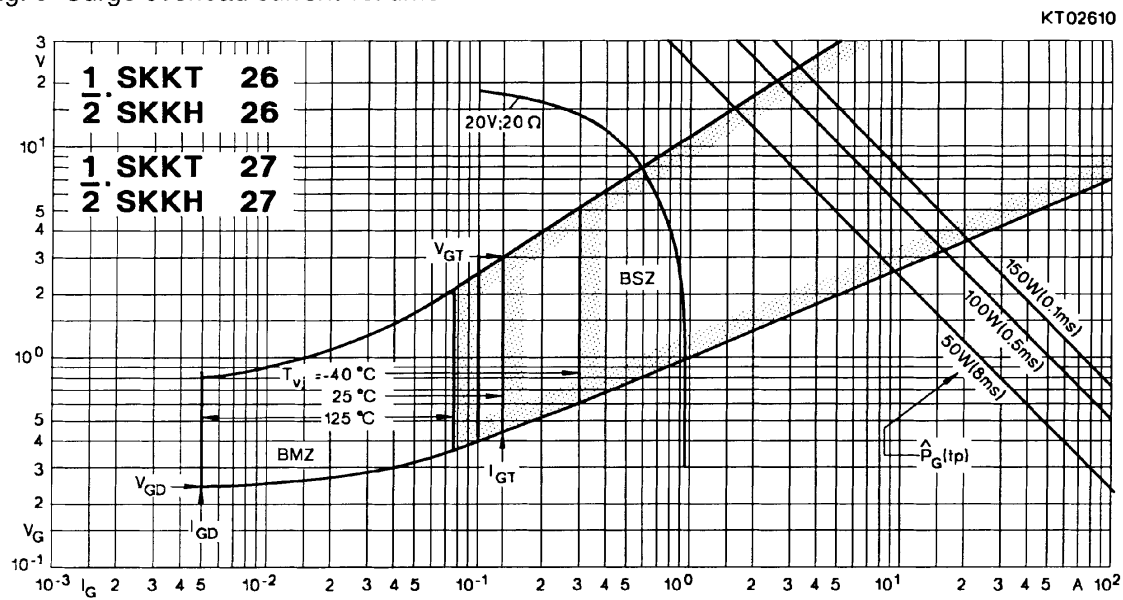
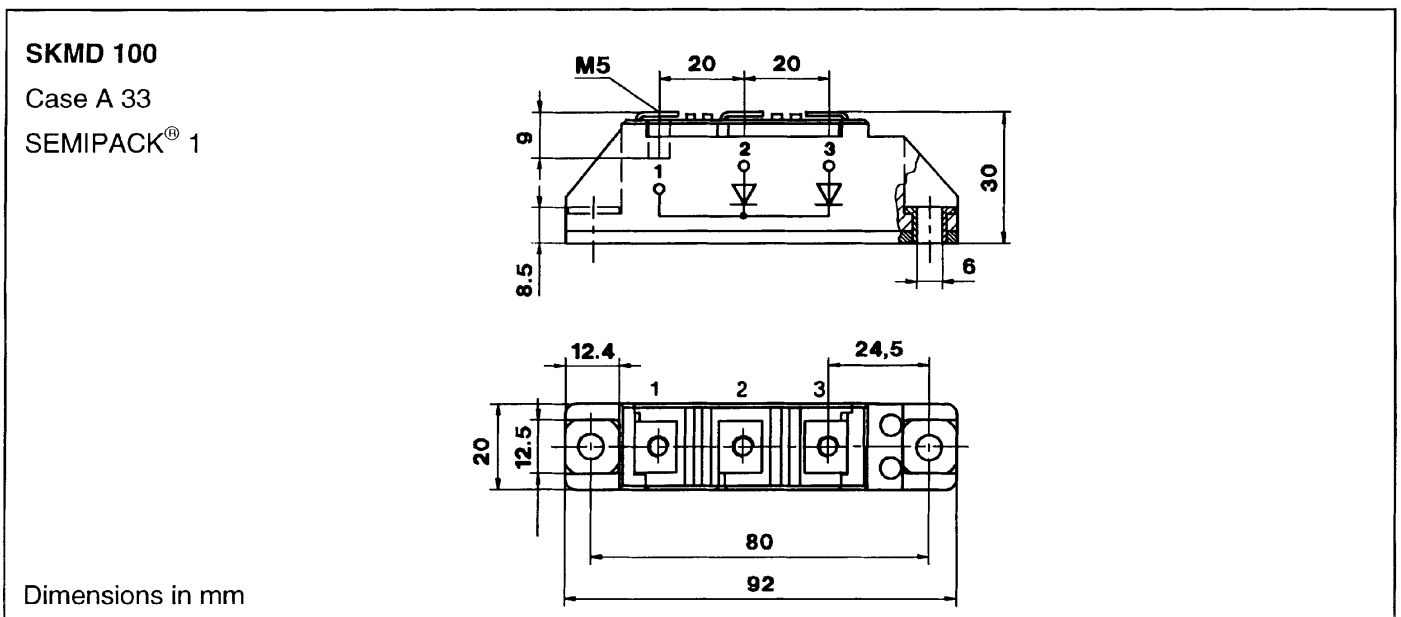


Fig. 10 Gate trigger characteristics



SKKT 19 ... 105

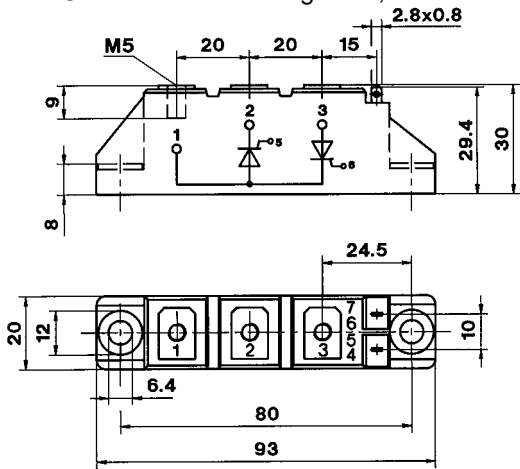
Case A 5

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1

UL recognized, file no. E 63 532



Dimensions in mm

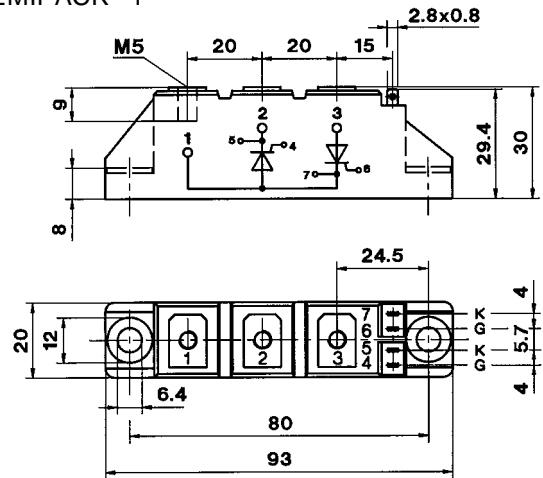
SKKT 20/ ... 106/

Case A 46

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1



Dimensions in mm

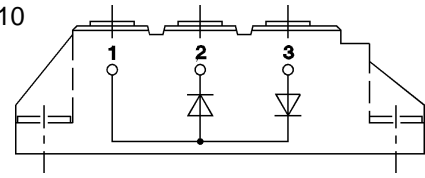
SKKH 26 ... 105

Case A 6



SKKD 26 ... 100

Case A 10



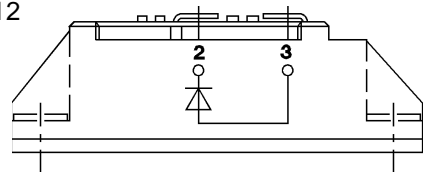
SKNH 56 ... 91

Case A 7



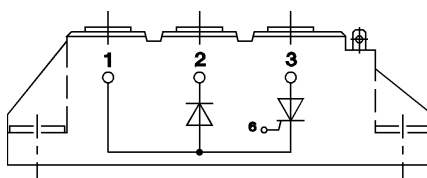
SKKE 81

Case A 12



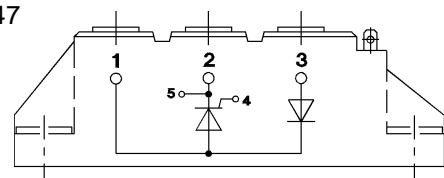
SKKL 56 ... 105

Case A 9



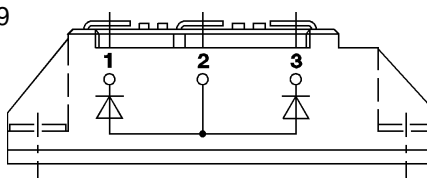
SKKH 27 ... 106

Case A 47



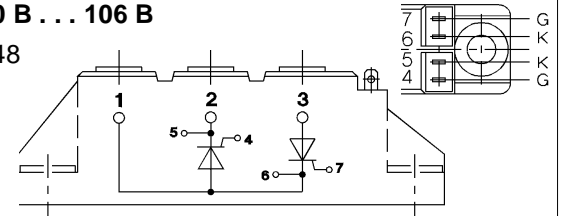
SKND 46 ... 81

Case A 19



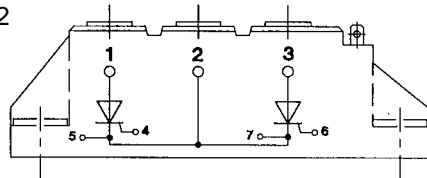
SKKT 20 B ... 106 B

Case A 48



SKMT 92

Case A 72



SKKL 42 ... 106

Case A 59

