

# SKKT 92, SKKH 92, SKKT 92B



**SEMIPACK<sup>®</sup> 1**

## Thyristor / Diode Modules

### SKKT 92

### SKKT 92B

### SKKH 92

### 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 | $I_{TRMS} = 150$ A (maximum value for continuous operation) |             |             |
|----------------|-------------------------|---|-------------|-------------|
|                |                         | $I_{TAV} = 95$ A (sin. 180; $T_c = 85$ °C)                  |             |             |
| 900            | 800                     | SKKT 92/08E   | SKKT 92B08E | SKKH 92/08E |
| 1300           | 1200                    | SKKT 92/12E   | SKKT 92B12E | SKKH 92/12E |
| 1500           | 1400                    | SKKT 92/14E   | SKKT 92B14E | SKKH 92/14E |
| 1700           | 1600                    | SKKT 92/16E   | SKKT 92B16E | SKKH 92/16E |
| 1900           | 1800                    | SKKT 92/18E   | SKKT 92B18E | SKKH 92/18E |

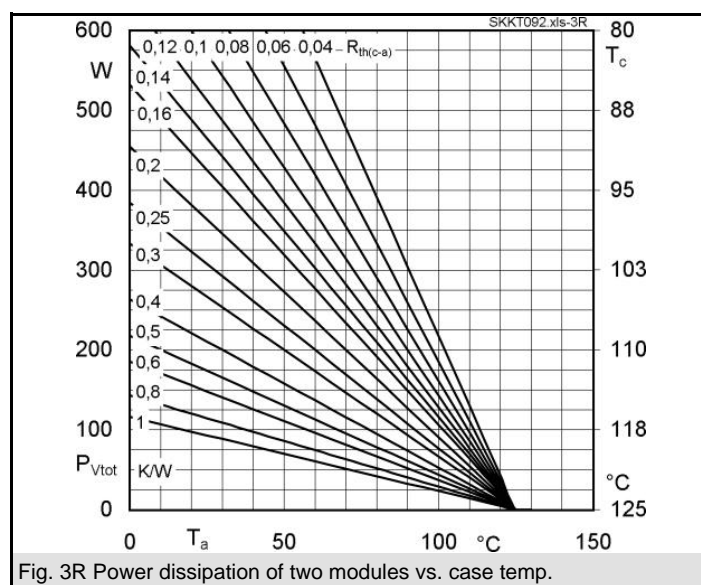
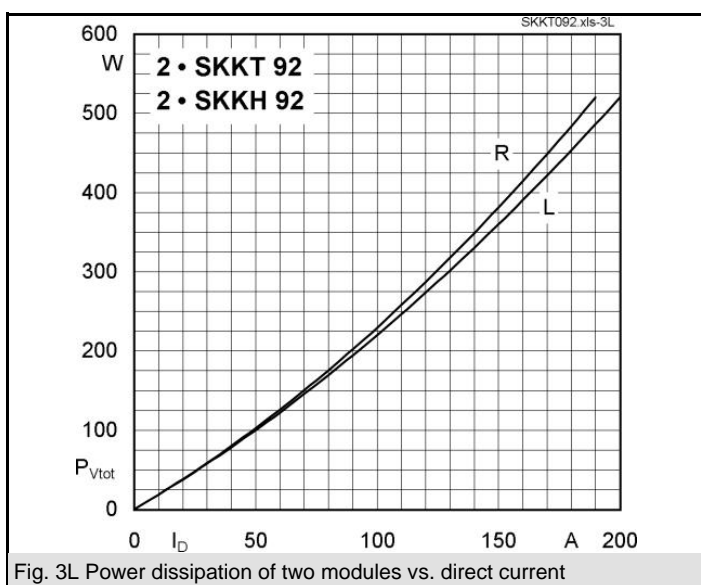
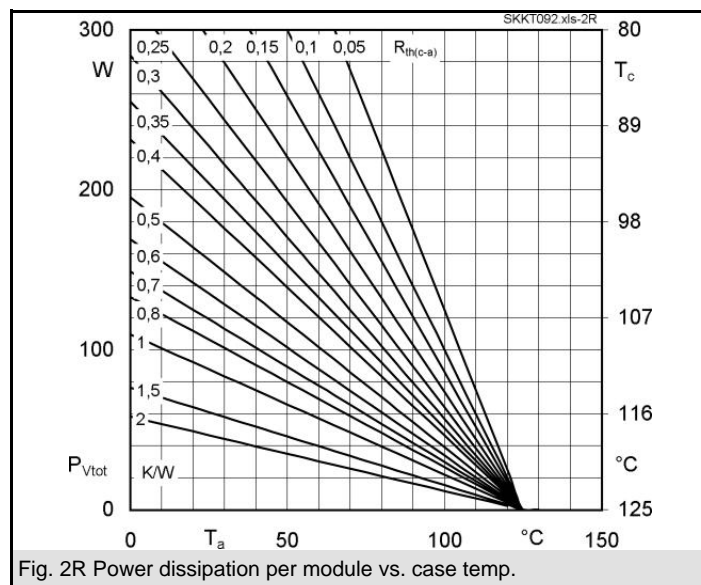
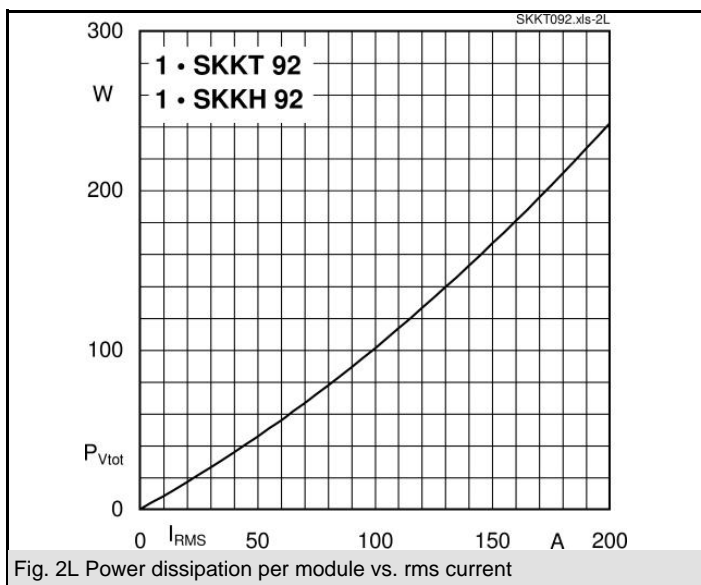
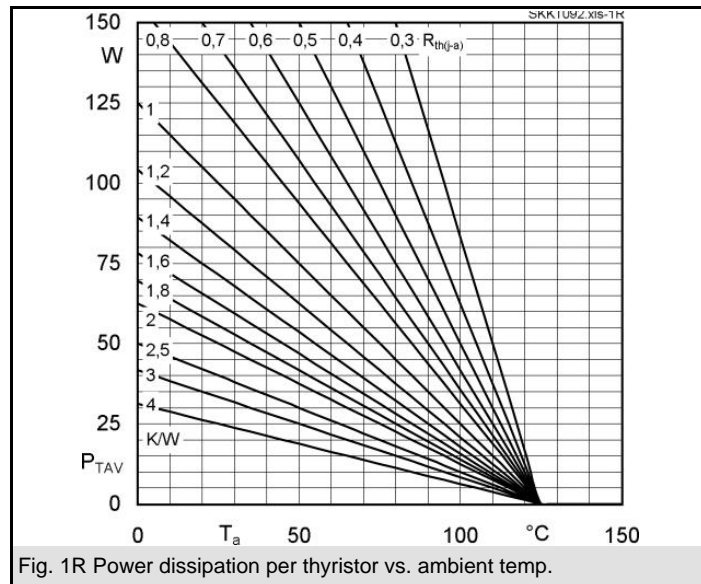
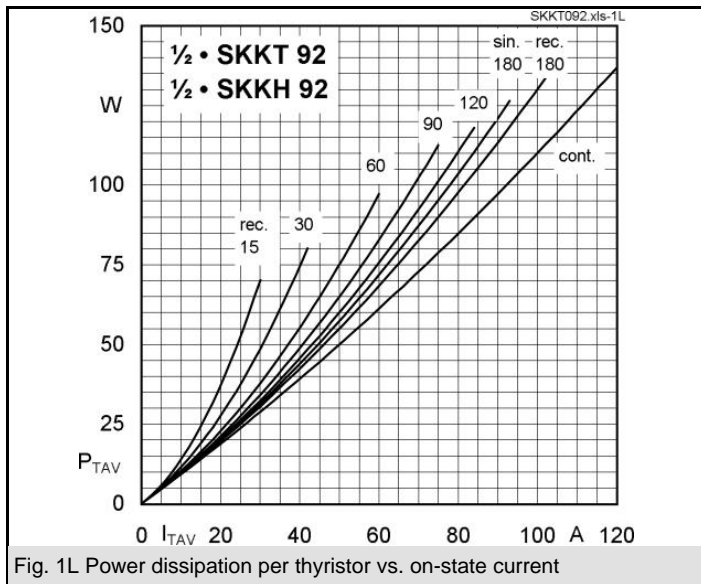
| Symbol           | Conditions  | Values                 | Units            |
|------------------|---|------------------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 85$ (100) °C                           | 95 (68)                | A                |
| $I_D$            | P3/180; $T_a = 45$ °C; B2 / B6                          | 70 / 85                | A                |
|                  | P3/180F; $T_a = 35$ °C; B2 / B6                         | 140 / 175              | A                |
| $I_{RMS}$        | P3/180F; $T_a = 35$ °C; W1 / W3                         | 190 / 3 * 135          | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 2000                   | A                |
|                  | $T_{vj} = 125$ °C; 10 ms                                | 1750                   | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,3 ... 10 ms                         | 20000                  | A <sup>2</sup> s |
|                  | $T_{vj} = 125$ °C; 8,3 ... 10 ms                        | 15000                  | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 300$ A                         | max. 1,65              | V                |
| $V_{T(TO)}$      | $T_{vj} = 125$ °C                                       | 0,9                    | V                |
| $r_T$            | $T_{vj} = 125$ °C                                       | 2                      | mΩ               |
| $I_{DD}; I_{RD}$ | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 20                | 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. 150               | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 125$ °C                                       | max. 1000              | V/μs             |
| $t_q$            | $T_{vj} = 125$ °C                                       | 100                    | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 250              | mA               |
| $I_L$            | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max.             | 300 / 600              | 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. 6                 | mA               |
| $R_{th(j-c)}$    | cont.; per thyristor / per module                       | 0,28 / 0,14            | K/W              |
| $R_{th(j-c)}$    | sin. 180; per thyristor / per module                    | 0,3 / 0,15             | K/W              |
| $R_{th(j-c)}$    | rec. 120; per thyristor / per module                    | 0,32 / 0,16            | 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                   |                  |



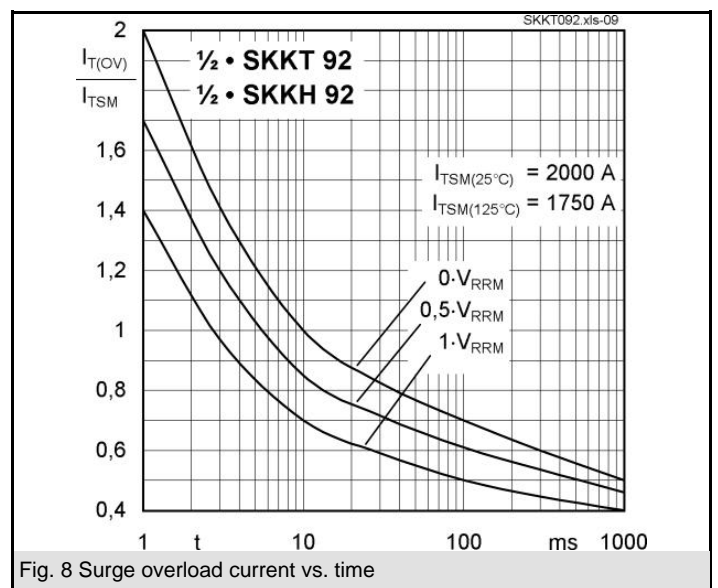
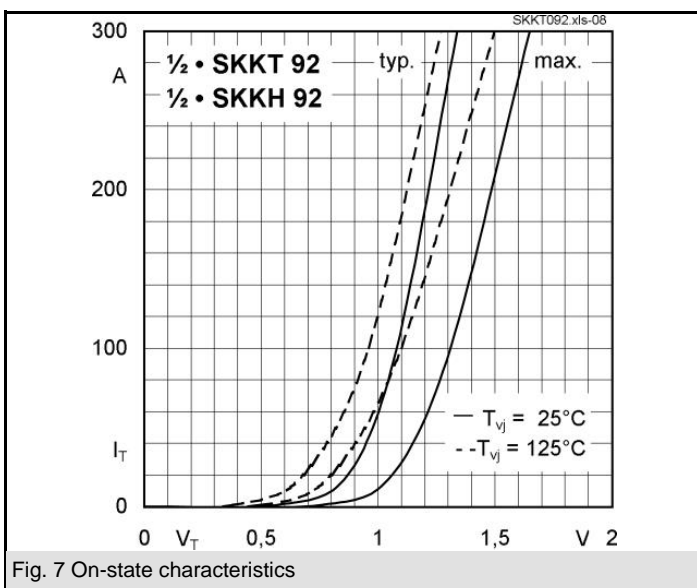
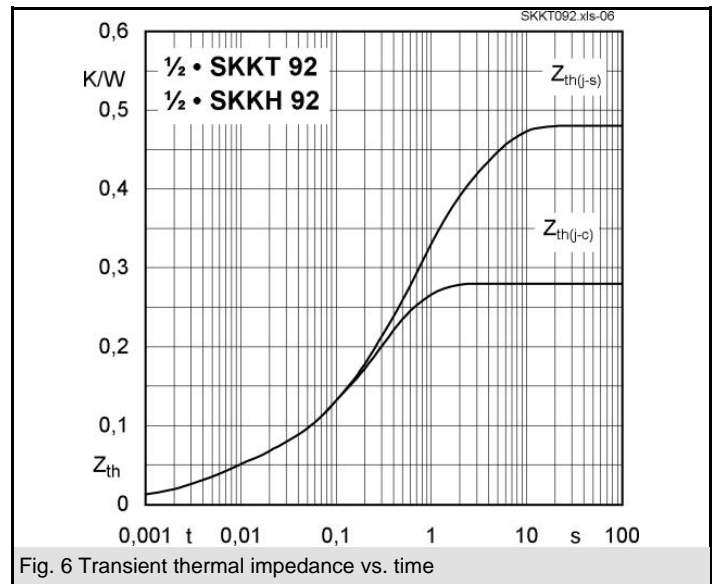
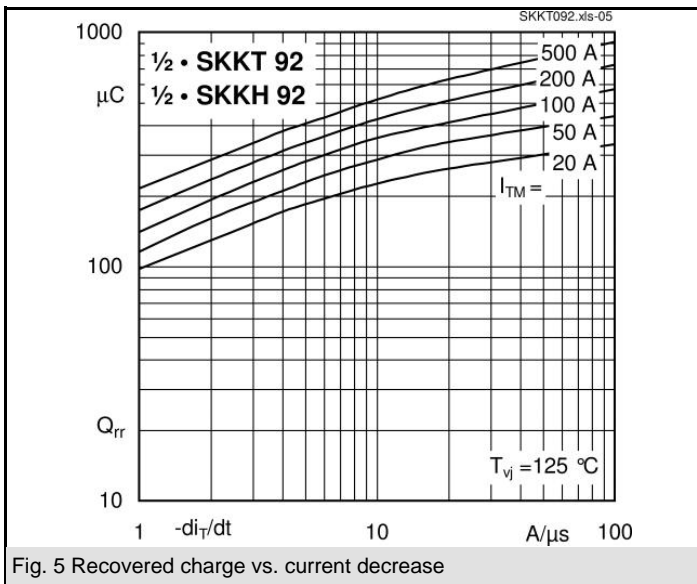
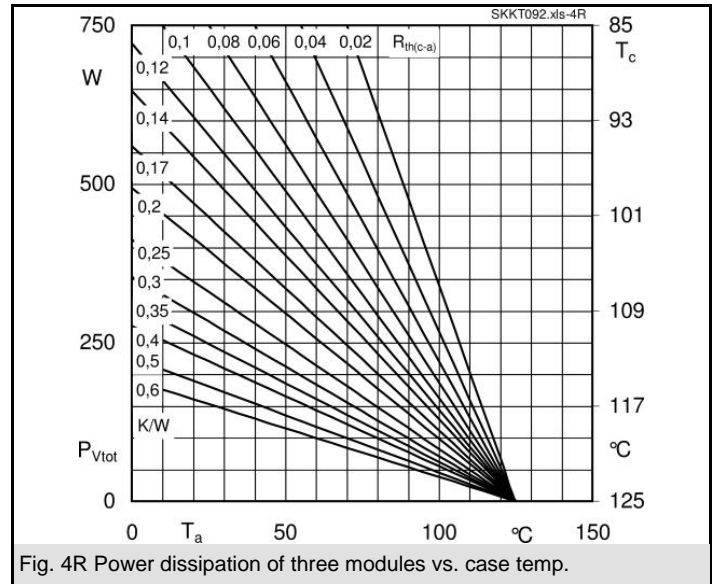
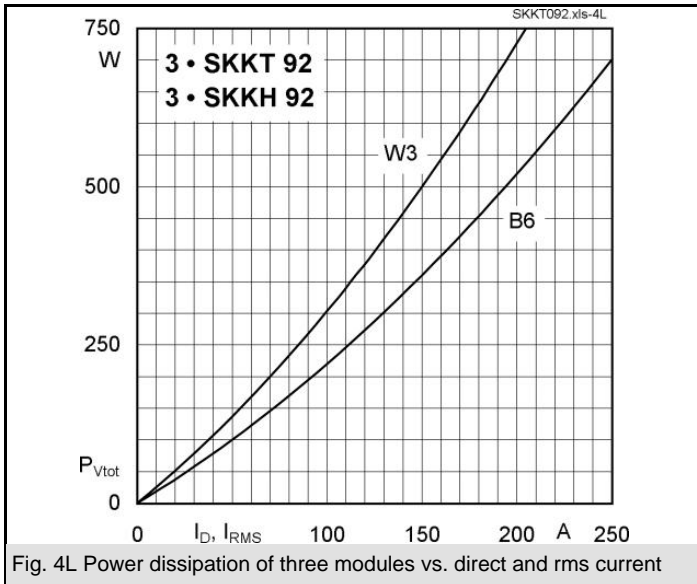
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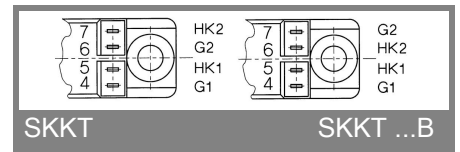
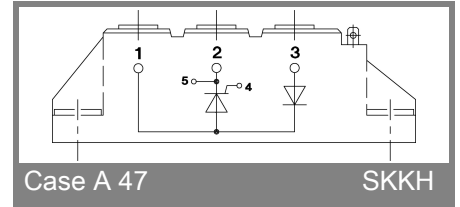
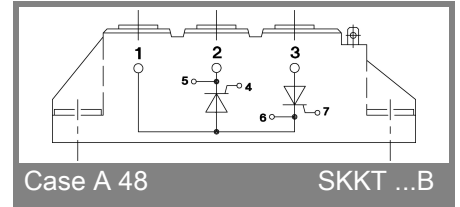
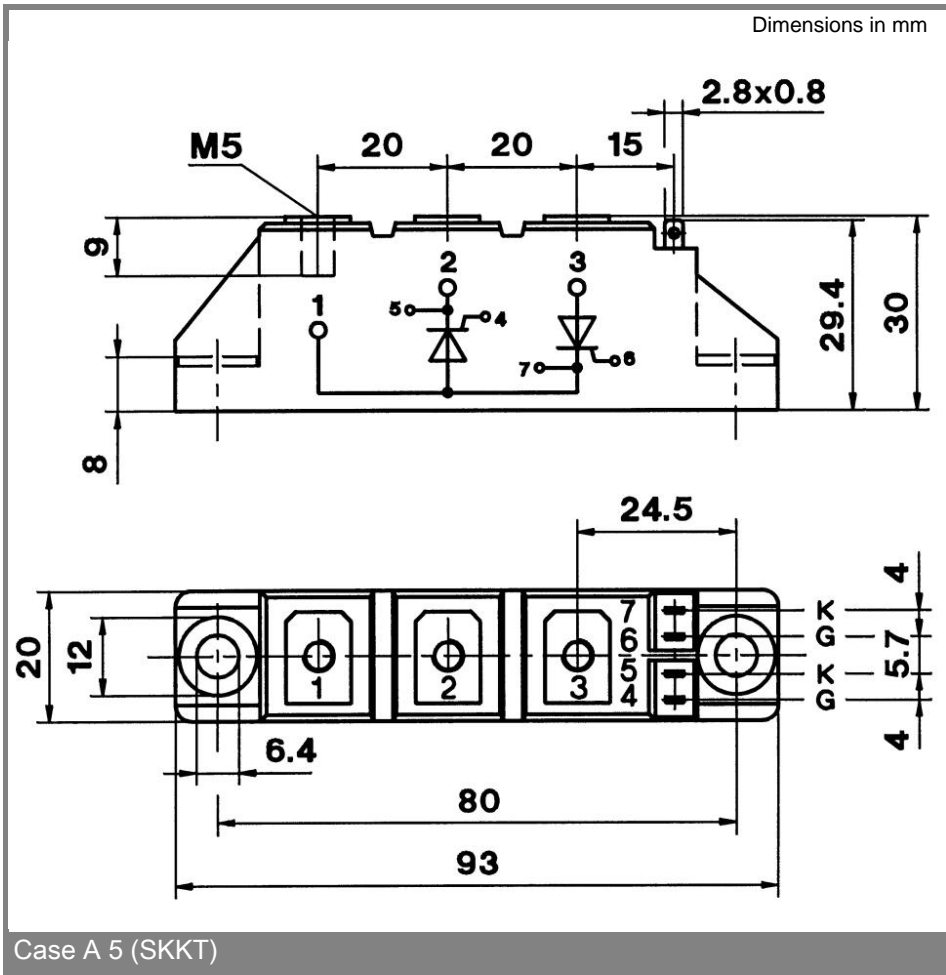
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