

# SKT 16



## Stud Thyristor

## Line Thyristor

### SKT 16

### Features

- Hermetic metal case with glass insulator
- Threaded stud ISO M6 or UNF 1/4-28
- International standard case

### Typical Applications

- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Recommended snubber network e. g. for  $V_{VRMS} \leq 400$  V:  
 $R = 100 \Omega / 5$  W,  $C = 1 \mu F$

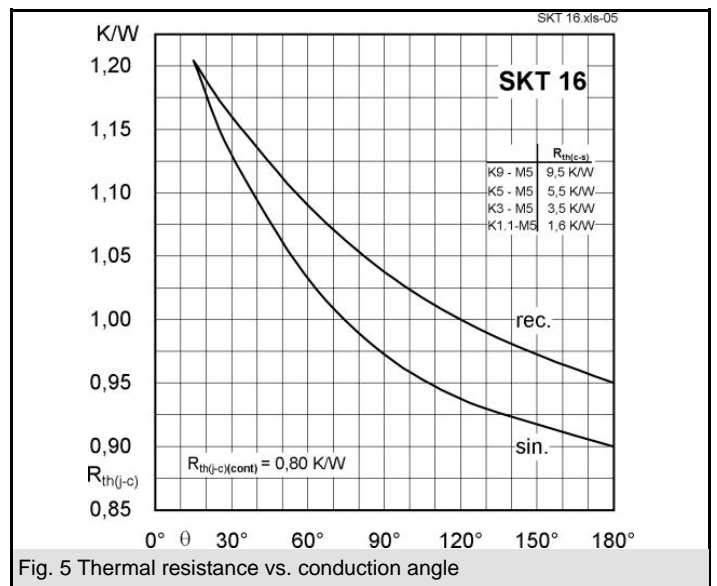
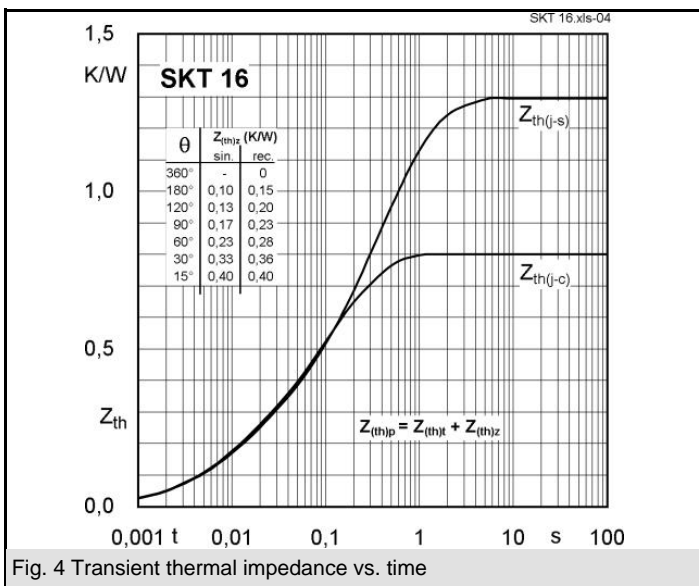
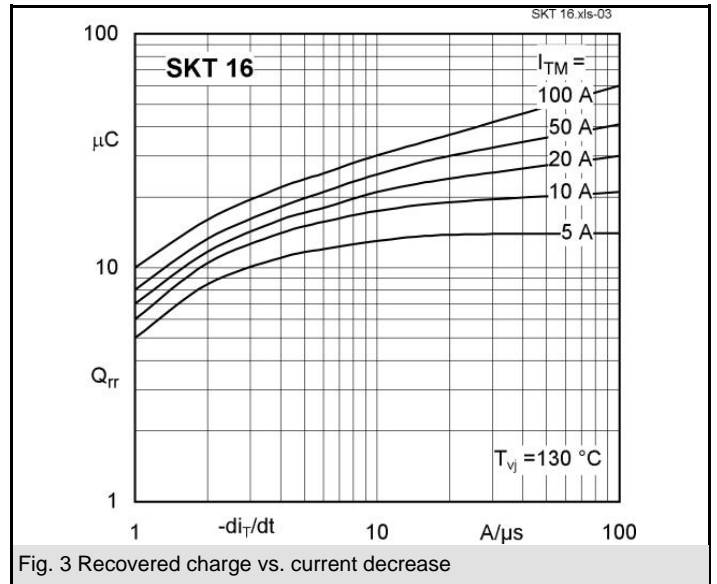
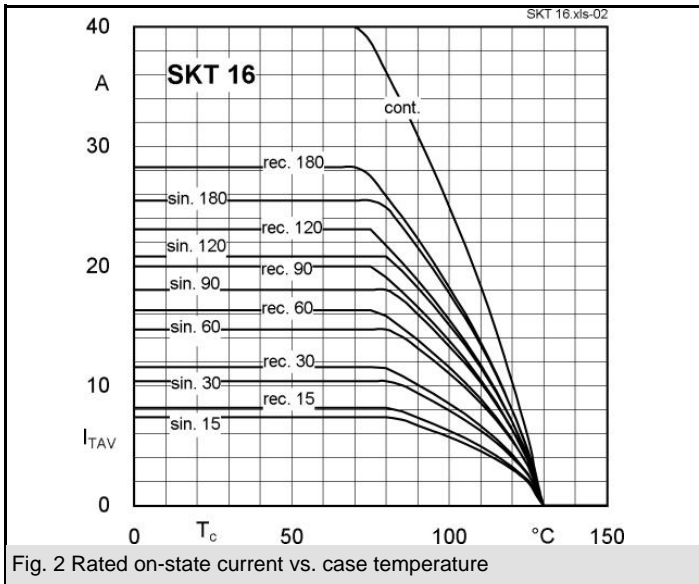
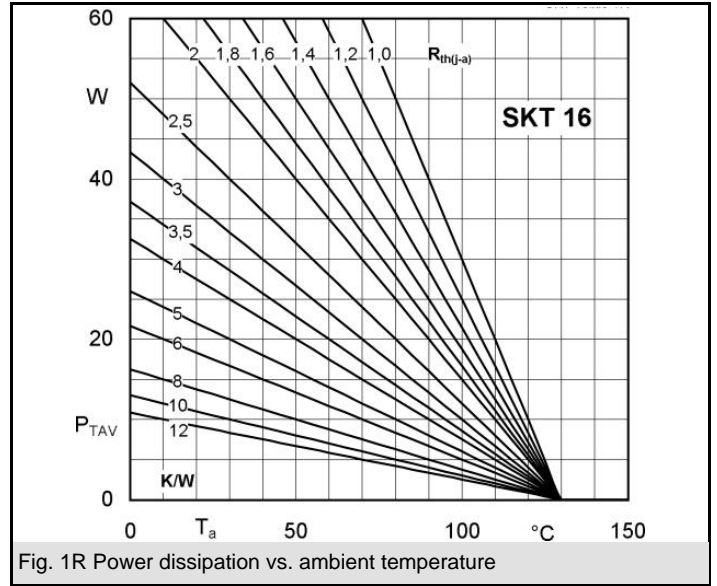
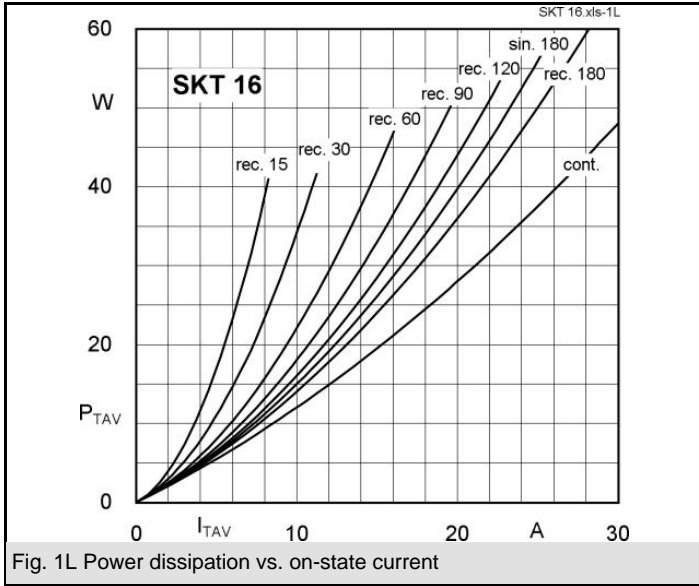
1) Available with UNF thread 1/4-28 UNF2A, e. g. SKT 16/06D UNF

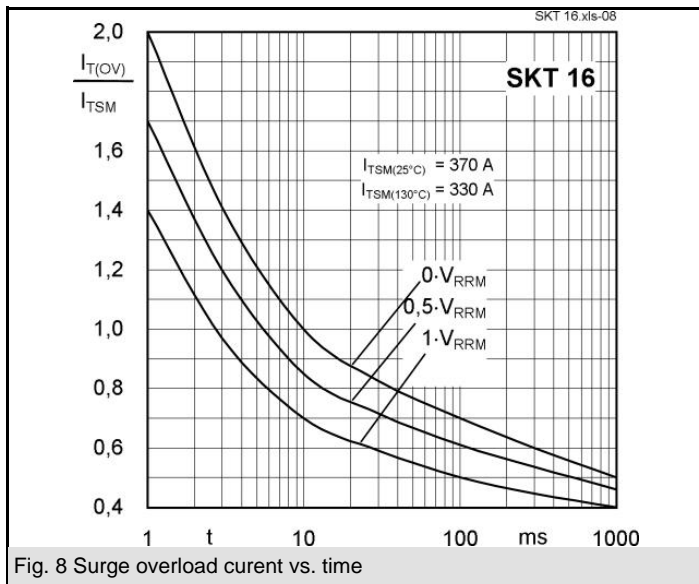
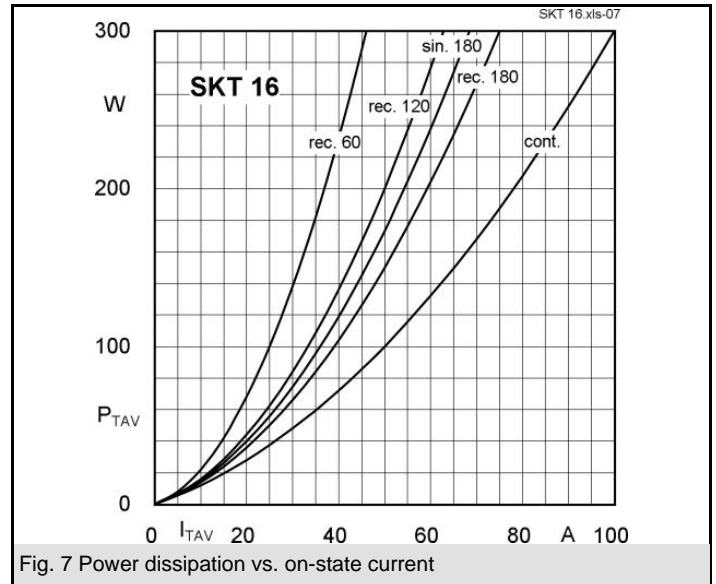
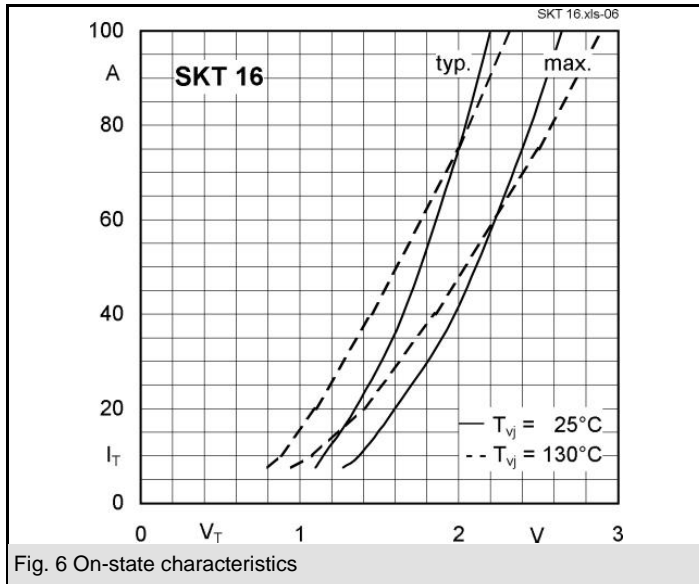
| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_{TRMS} = 40$ A (maximum value for continuous operation)<br>$I_{TAV} = 16$ A (sin. 180; $T_c = 104$ °C) |  |
|----------------|-------------------------|---|--|
| 500            | 400                     | SKT 16/04D  |  |
| 700            | 600                     | SKT 16/06D <sup>1)</sup>  |  |
| 900            | 800                     | SKT 16/08D  |  |
| 1300           | 1200                    | SKT 16/12E <sup>1)</sup>  |  |
| 1500           | 1400                    | SKT 16/14E  |  |
| 1700           | 1600                    | SKT 16/16E  |  |
| 1900           | 1800                    | SKT 16/18E  |  |

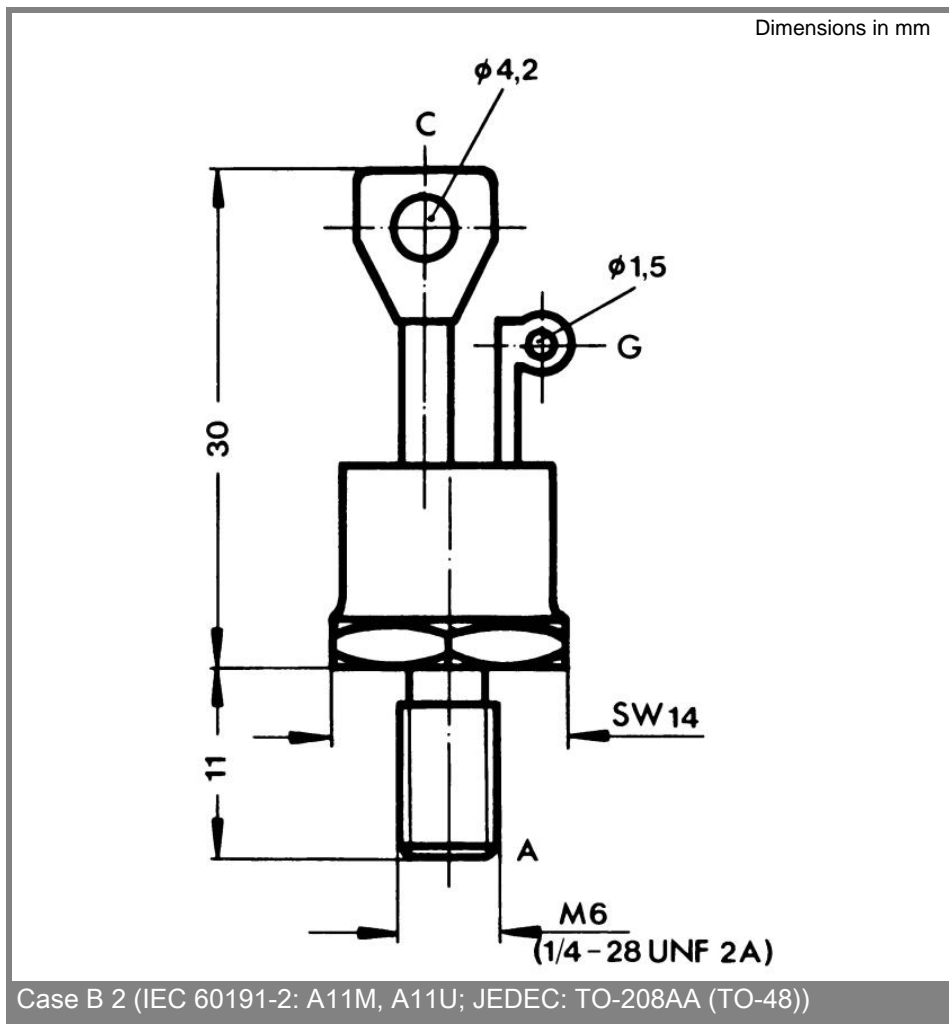
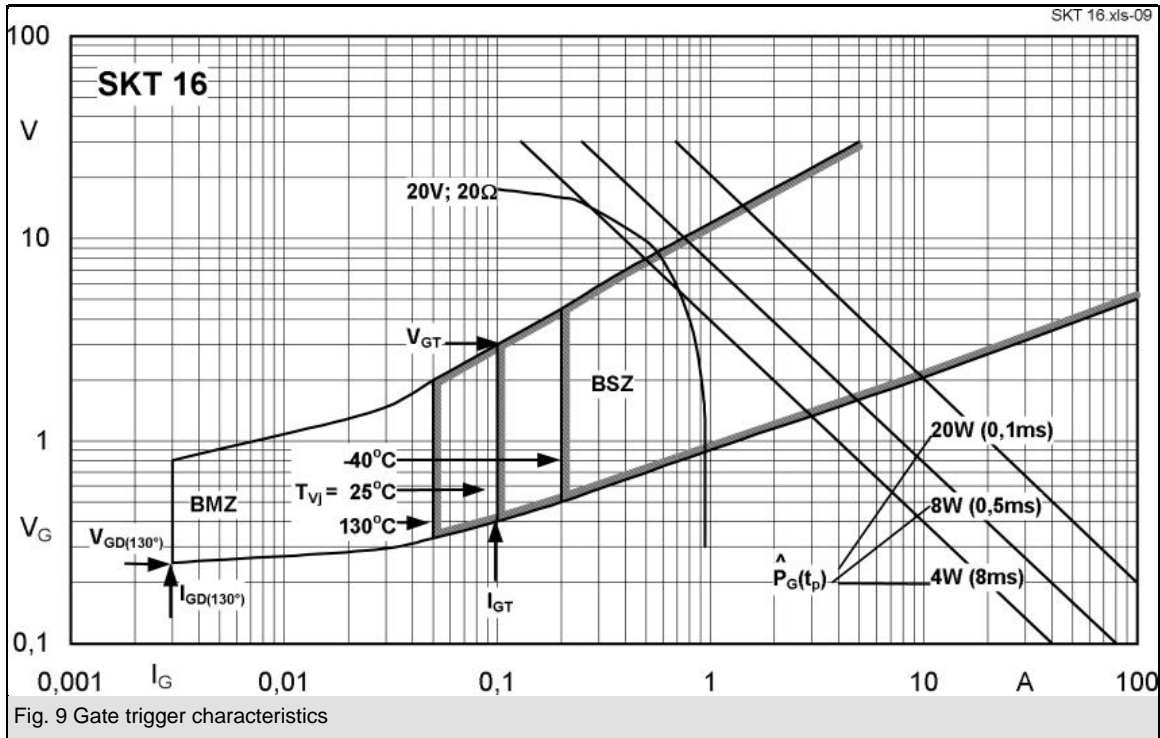
| Symbol           | Conditions  | Values          | Units            |
|------------------|---|-----------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 100$ (85) °C;                          | 18 (23)         | A                |
| $I_D$            | K5; $T_a = 45$ °C; B2 / B6                              | 18 / 24         | A                |
|                  | K3; $T_a = 45$ °C; B2 / B6                              | 24 / 33         | A                |
| $I_{RMS}$        | K5; $T_a = 45$ °C; W1C                                  | 20              | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 370             | A                |
|                  | $T_{vj} = 130$ °C; 10 ms                                | 330             | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,35 ... 10 ms                        | 680             | A <sup>2</sup> s |
|                  | $T_{vj} = 130$ °C; 8,35 ... 10 ms                       | 550             | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 75$ A                          | max. 2,4        | V                |
| $V_{T(TO)}$      | $T_{vj} = 130$ °C                                       | max. 1          | V                |
| $r_T$            | $T_{vj} = 130$ °C                                       | max. 20         | mΩ               |
| $I_{DD}, I_{RD}$ | $T_{vj} = 130$ °C; $V_{RD} = V_{RRM}, V_{DD} = V_{DRM}$ | max. 8          | 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               |
| $(di/dt)_{cr}$   | $T_{vj} = 130$ °C                                       | max. 50         | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 130$ °C; SKT ...D / SKT ...E                  | max. 500 / 1000 | V/μs             |
| $t_q$            | $T_{vj} = 130$ °C,                                      | 80              | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 80 / 150        | mA               |
| $I_L$            | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 300       | mA               |
| $V_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 3          | V                |
| $I_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 100        | mA               |
| $V_{GD}$         | $T_{vj} = 130$ °C; d.c.                                 | max. 0,25       | V                |
| $I_{GD}$         | $T_{vj} = 130$ °C; d.c.                                 | max. 3          | mA               |
| $R_{th(j-c)}$    | cont.   | 0,8             | K/W              |
| $R_{th(j-c)}$    | sin. 180  | 0,9             | K/W              |
| $R_{th(j-c)}$    | rec. 120  | 0,95            | K/W              |
| $R_{th(c-s)}$    |   | 0,5             | K/W              |
| $T_{vj}$         |   | - 40 ... + 130  | °C               |
| $T_{stg}$        |   | - 40 ... + 150  | °C               |
| $V_{isol}$       |   | -               | V~               |
| $M_s$            | to heatsink   | 2,5             | Nm               |
| $a$              |   | $5 * 9,81$      | m/s <sup>2</sup> |
| $m$              | approx.   | 13              | g                |
| Case             |   | B 2             |                  |



SKT







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