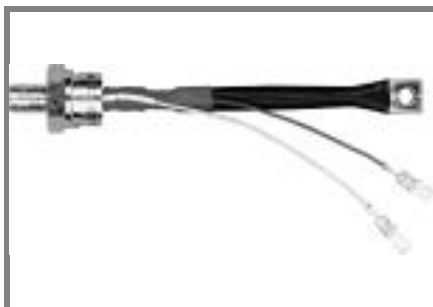


# SKT 250



**Stud Thyristor**

## Line Thyristor

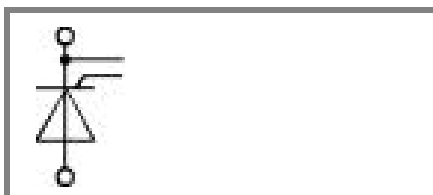
### SKT 250

#### Features

- Hermetic metal case with glass insulator
- Threaded stud ISO M24x1,5
- High  $i^2t$  and  $I_{TSM}$  values for easy fusing
- International standard case

#### Typical Applications

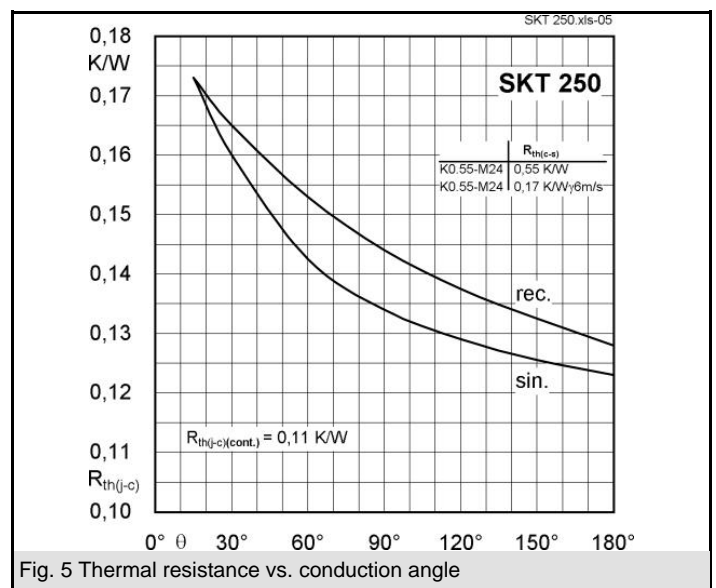
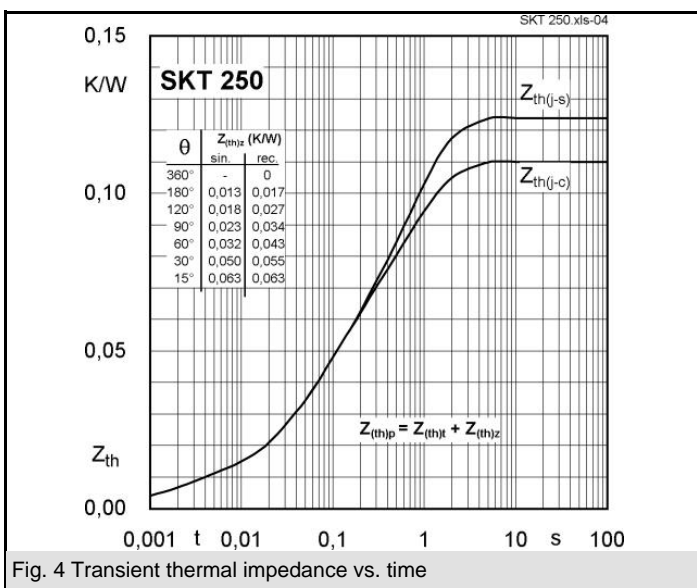
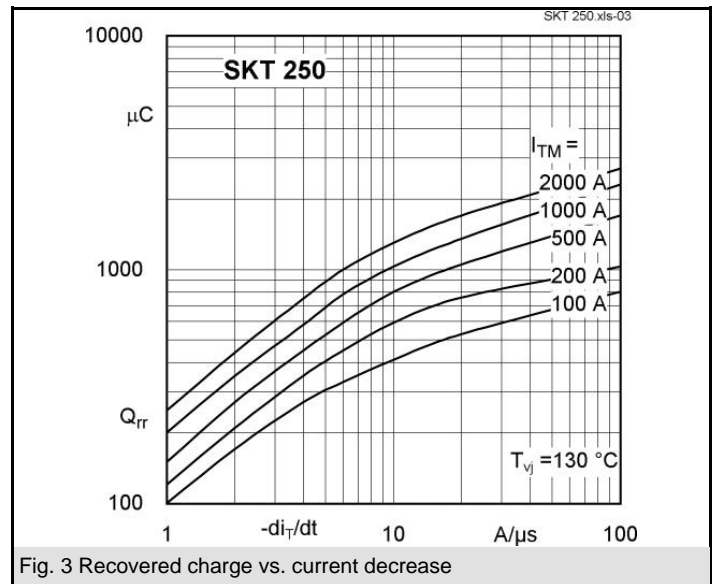
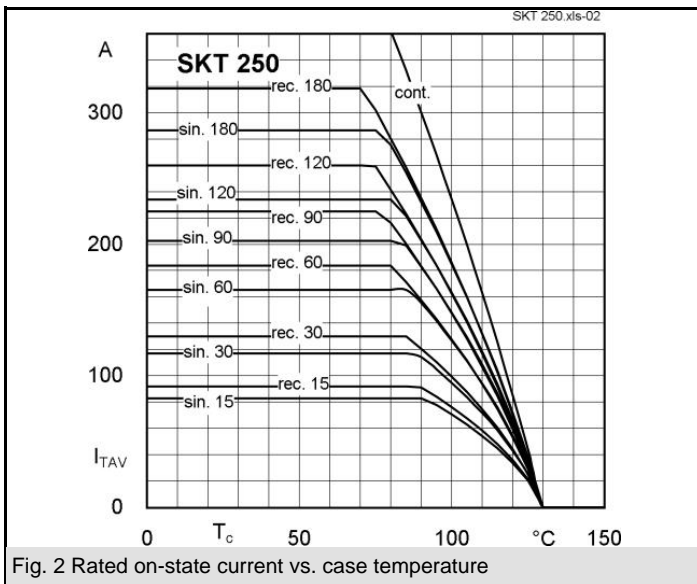
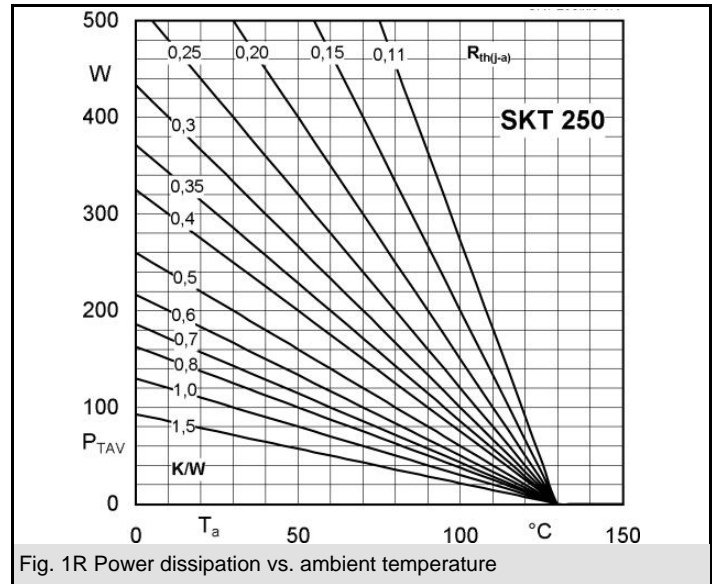
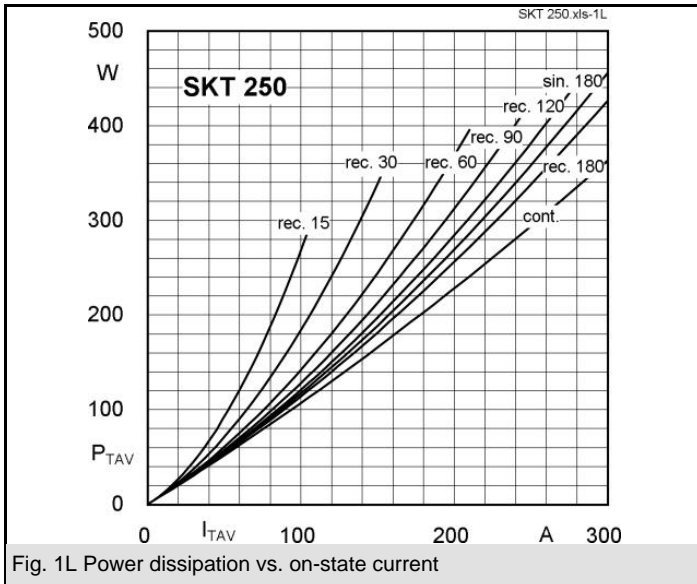
- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Recommended snubber network e. g. for  $V_{VRMS} \leq 400$  V:  
 $R = 33 \Omega / 32$  W,  $C = 0,47 \mu F$



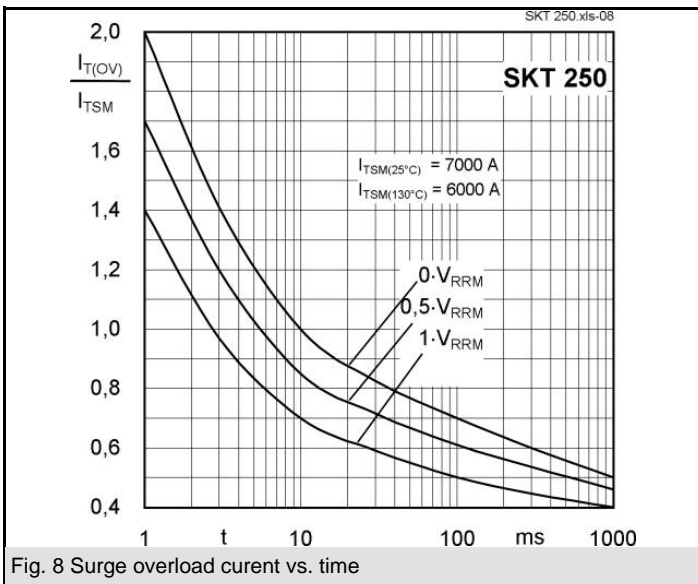
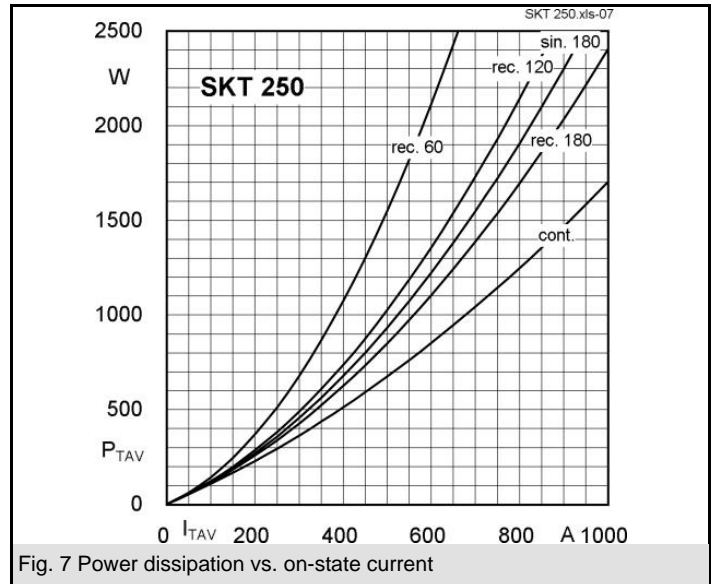
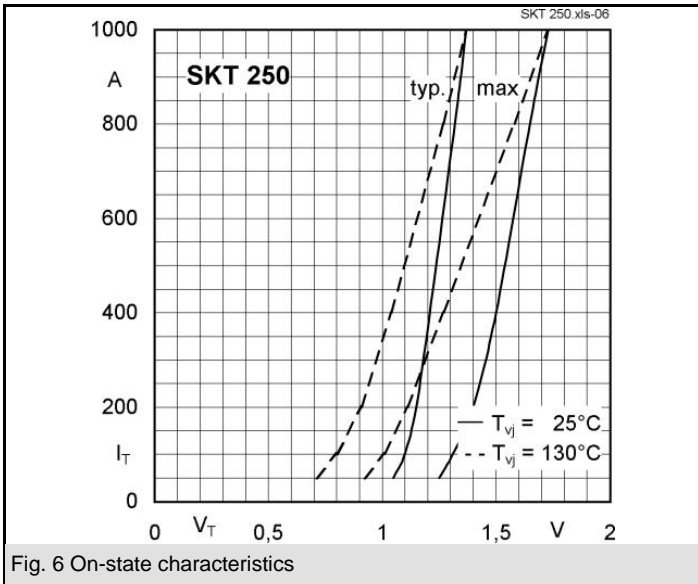
**SKT**

| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_{TRMS} = 450$ A (maximum value for continuous operation)<br>$I_{TAV} = 250$ A (sin. 180; $T_c = 85$ °C) |  |
|----------------|-------------------------|--|--|
| 500            | 400                     | SKT 250/04D  |  |
| 900            | 800                     | SKT 250/08D  |  |
| 1300           | 1200                    | SKT 250/12E  |  |
| 1500           | 1400                    | SKT 250/14E  |  |
| 1700           | 1600                    | SKT 250/16E  |  |

| Symbol           | Conditions  | Values          | Units            |
|------------------|---|-----------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 100$ (85) °C                           | 185 (250)       | A                |
| $I_D$            | K0,55; $T_a = 45$ °C; B2 / B6                           | 240 / 330       | A                |
|                  | K0,55F; $T_a = 35$ °C; B2 / B5                          | 490 / 675       | A                |
| $I_{RMS}$        | K0,55; $T_a = 45$ °C; W1C                               | 265             | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 7000            | A                |
|                  | $T_{vj} = 130$ °C; 10 ms                                | 6000            | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,35 ... 10 ms                        | 245000          | A <sup>2</sup> s |
|                  | $T_{vj} = 130$ °C; 8,35 ... 10 ms                       | 180000          | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 800$ A                         | max. 1,65       | V                |
| $V_{T(TO)}$      | $T_{vj} = 130$ °C                                       | max. 1          | V                |
| $r_T$            | $T_{vj} = 130$ °C                                       | max. 0,7        | mΩ               |
| $I_{DD}; I_{RD}$ | $T_{vj} = 130$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 50         | 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. 100        | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 130$ °C; SKT ...D / SKT ...E                  | max. 500 / 1000 | V/μs             |
| $t_q$            | $T_{vj} = 130$ °C                                       | 50 ... 150      | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 250       | mA               |
| $I_L$            | $T_{vj} = 25$ °C; $R_G = 33 \Omega$ ; 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. 200        | mA               |
| $V_{GD}$         | $T_{vj} = 130$ °C; d.c.                                 | max. 0,25       | V                |
| $I_{GD}$         | $T_{vj} = 130$ °C; d.c.                                 | max. 10         | mA               |
| $R_{th(j-c)}$    | cont.   | 0,11            | K/W              |
| $R_{th(j-c)}$    | sin. 180  | 0,123           | K/W              |
| $R_{th(j-c)}$    | rec. 120  | 0,137           | K/W              |
| $R_{th(c-s)}$    |   | 0,015           | K/W              |
| $T_{vj}$         |   | - 40 ... + 130  | °C               |
| $T_{stg}$        |   | - 55 ... + 150  | °C               |
| $V_{isol}$       |   | -               | V~               |
| $M_s$            | to heatsink   | 60              | Nm               |
| $a$              |   | 5 * 9,81        | m/s <sup>2</sup> |
| $m$              | approx.   | 490             | g                |
| Case             |   | B 7             |                  |



# SKT 250



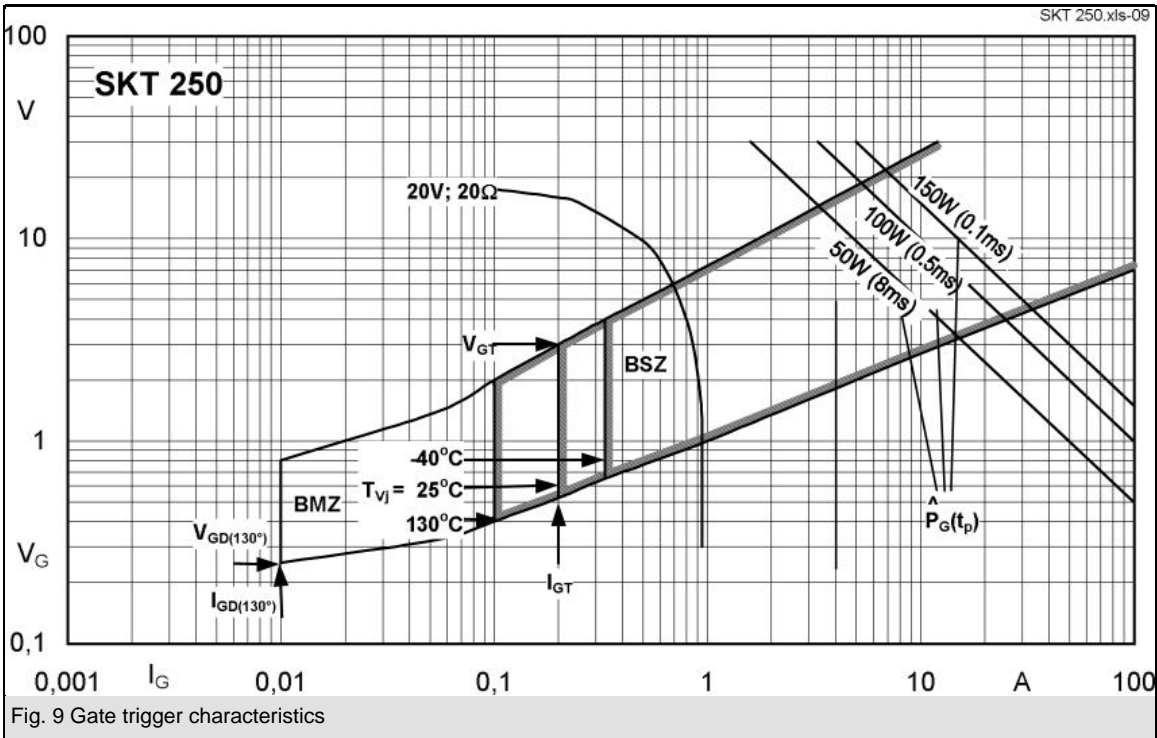
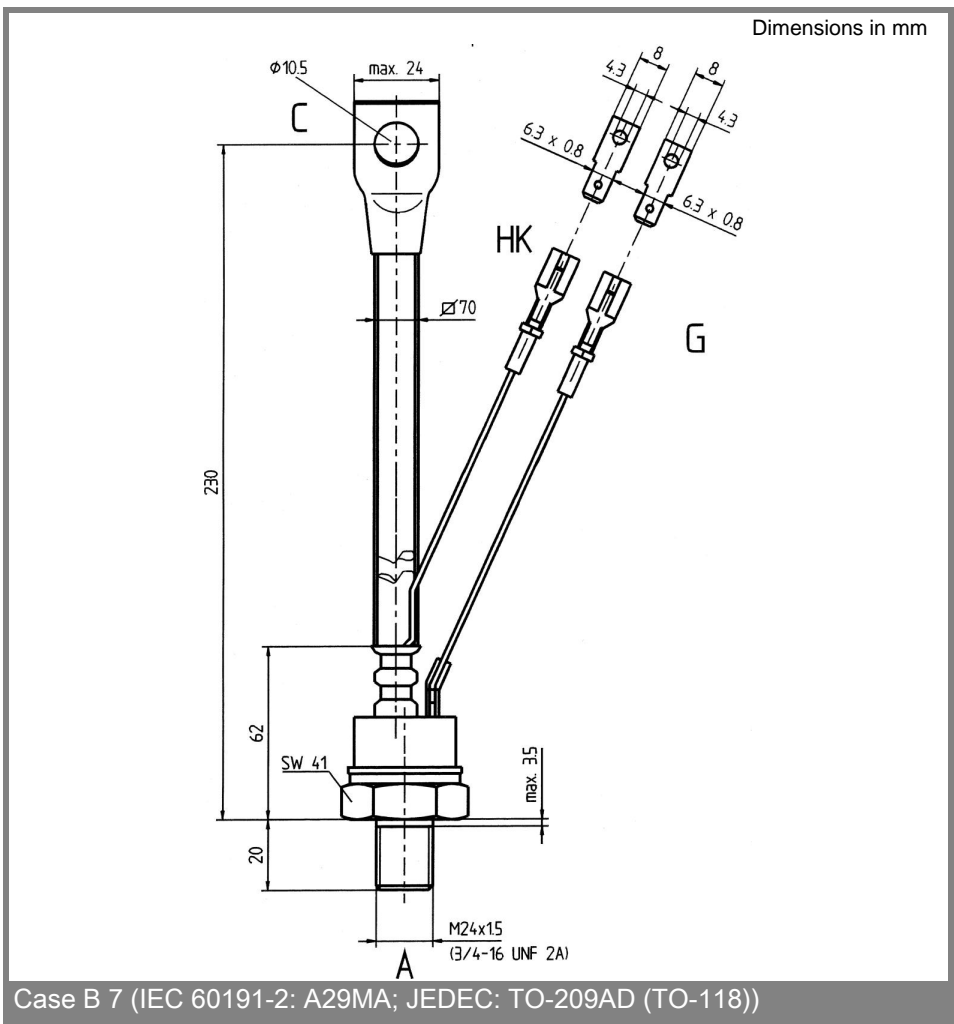


Fig. 9 Gate trigger characteristics



Case B 7 (IEC 60191-2: A29MA; JEDEC: TO-209AD (TO-118))

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