

# SKT 760



## Capsule Thyristor

## Line Thyristor

### SKT 760

#### Features

- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- Shallow design with single sided cooling
- International standard case
- Off-state and reverse voltages up to 1800 V
- Amplifying gate

#### Typical Applications

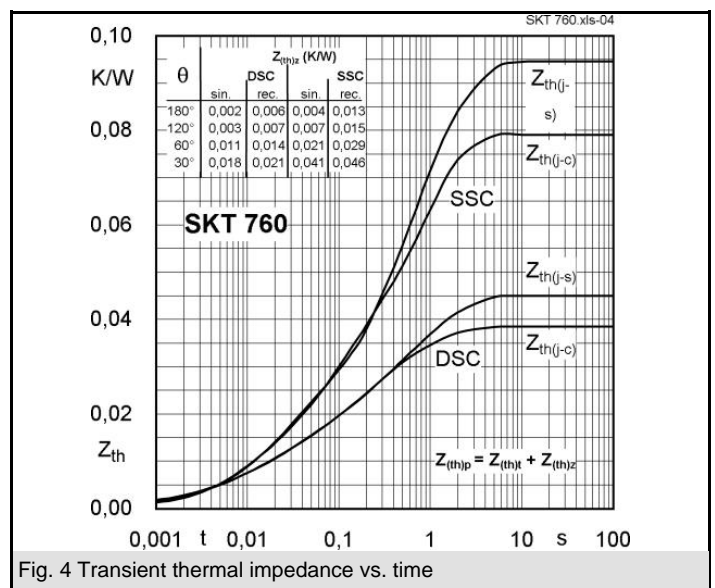
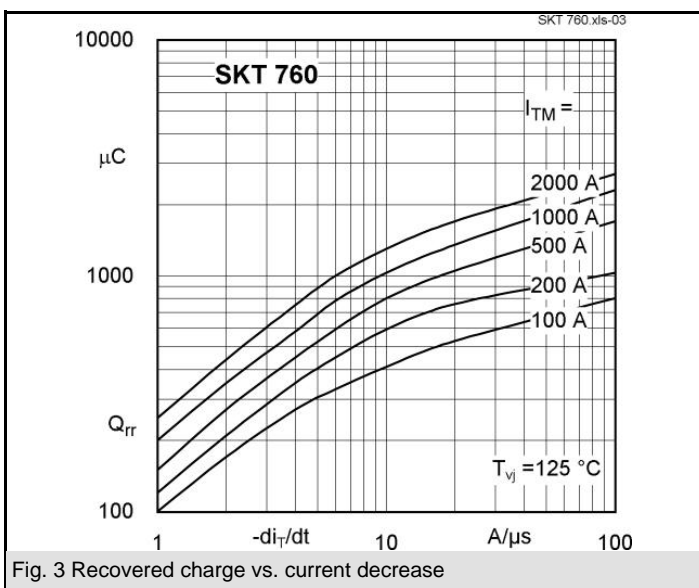
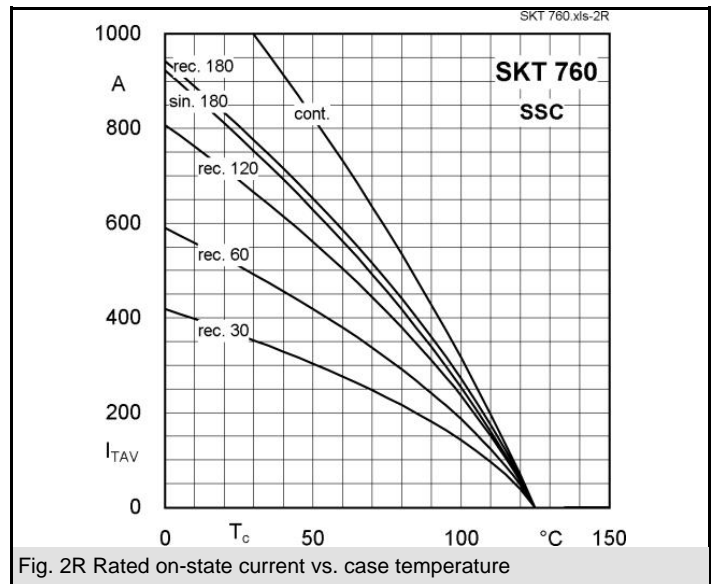
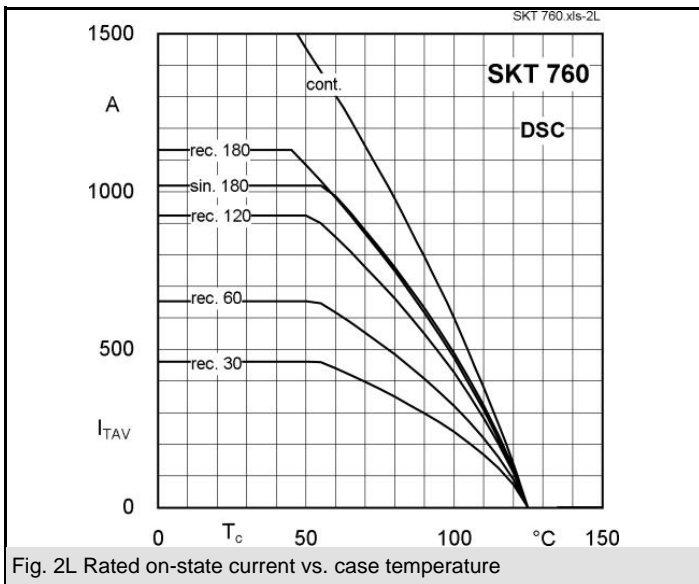
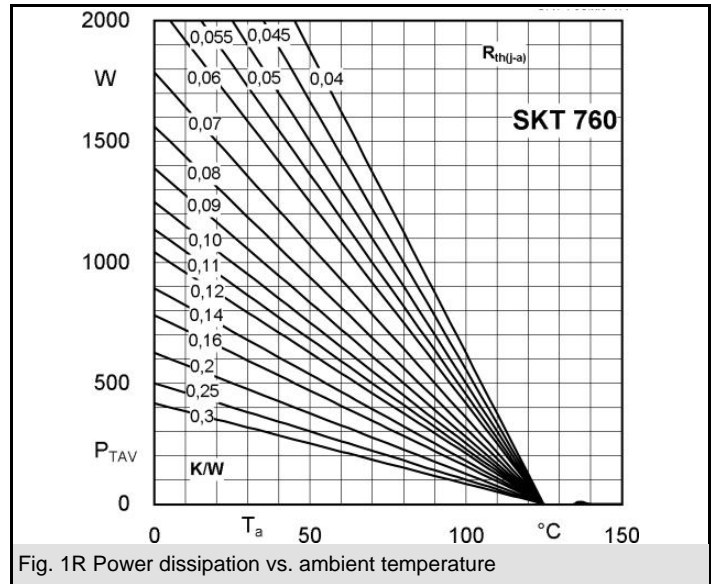
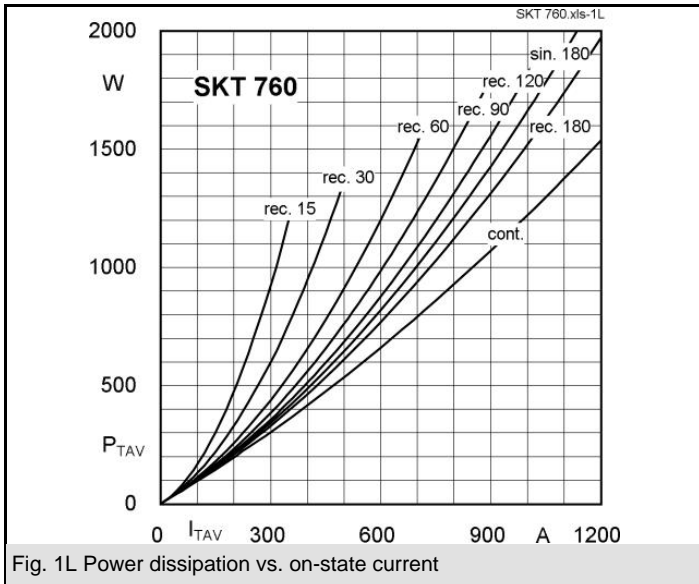
- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Recommended snubber network e. g. for  $V_{VRMS} \leq 400$  V:  
 $R = 33 \Omega / 32$  W,  $C = 1 \mu F$

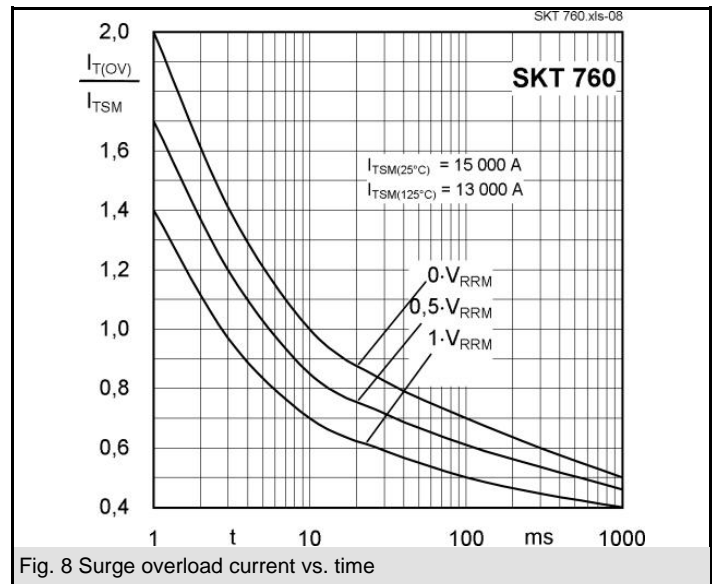
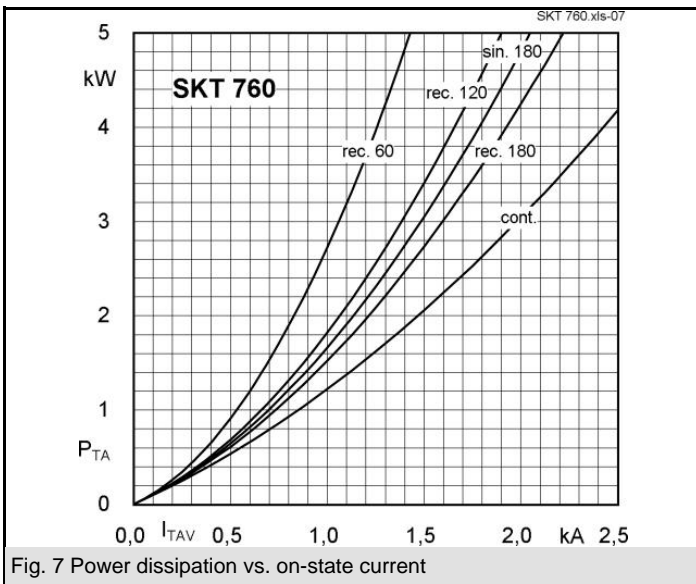
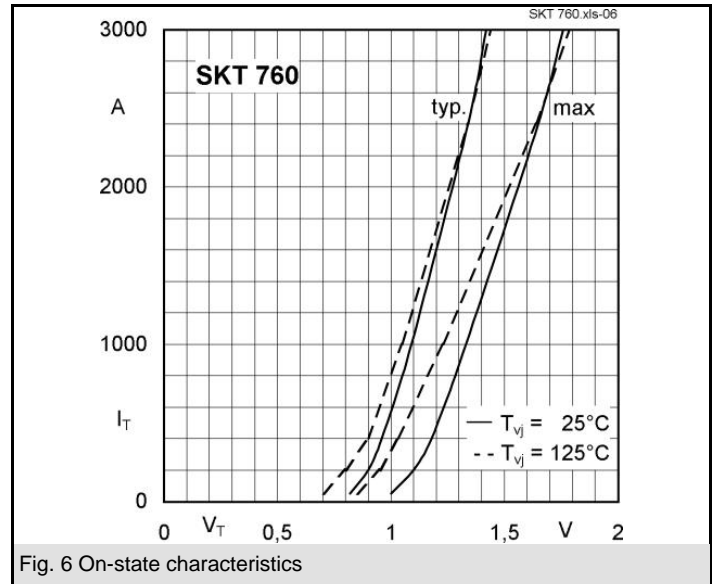
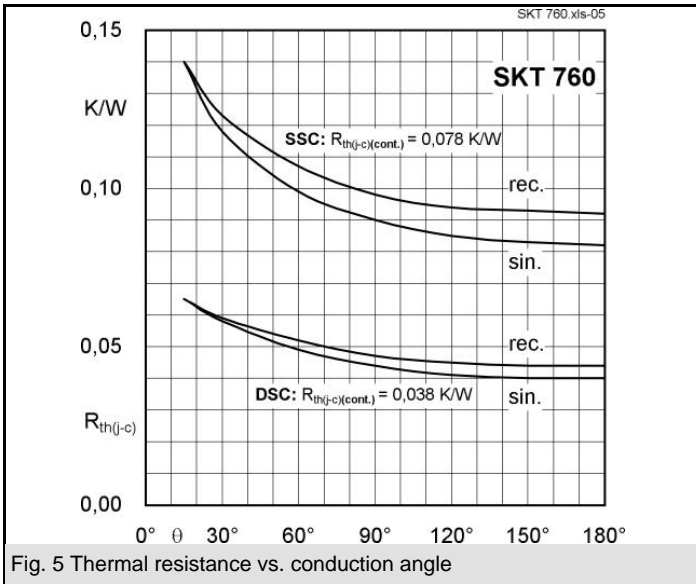
| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_{TRMS} = 1600$ A (maximum value for continuous operation)<br>$I_{TAV} = 760$ A (sin. 180; DSC; $T_c = 80$ °C) |  |
|----------------|-------------------------|--|--|
| 900            | 800                     | SKT 760/08D  |  |
| 1300           | 1200                    | SKT 760/12E  |  |
| 1500           | 1400                    | SKT 760/14E  |  |
| 1700           | 1600                    | SKT 760/16E  |  |
| 1900           | 1800                    | SKT 760/18E  |  |

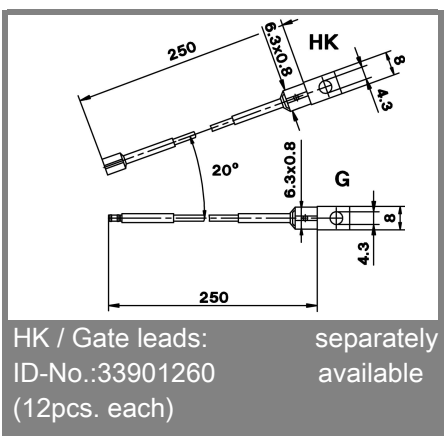
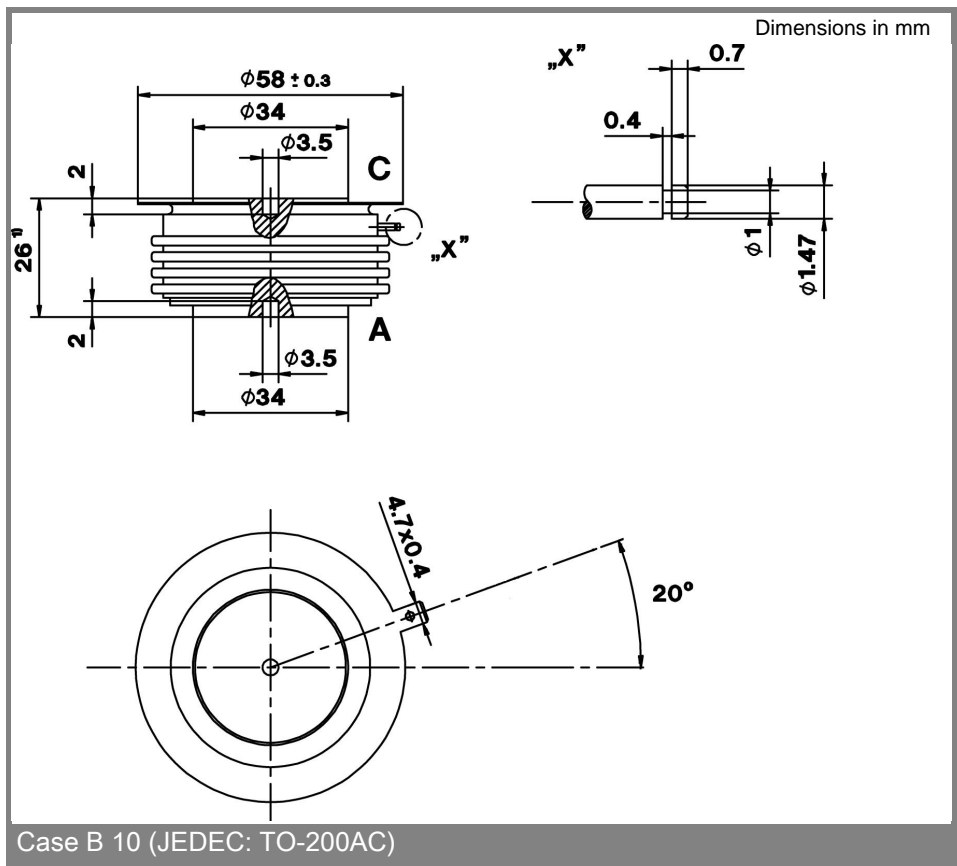
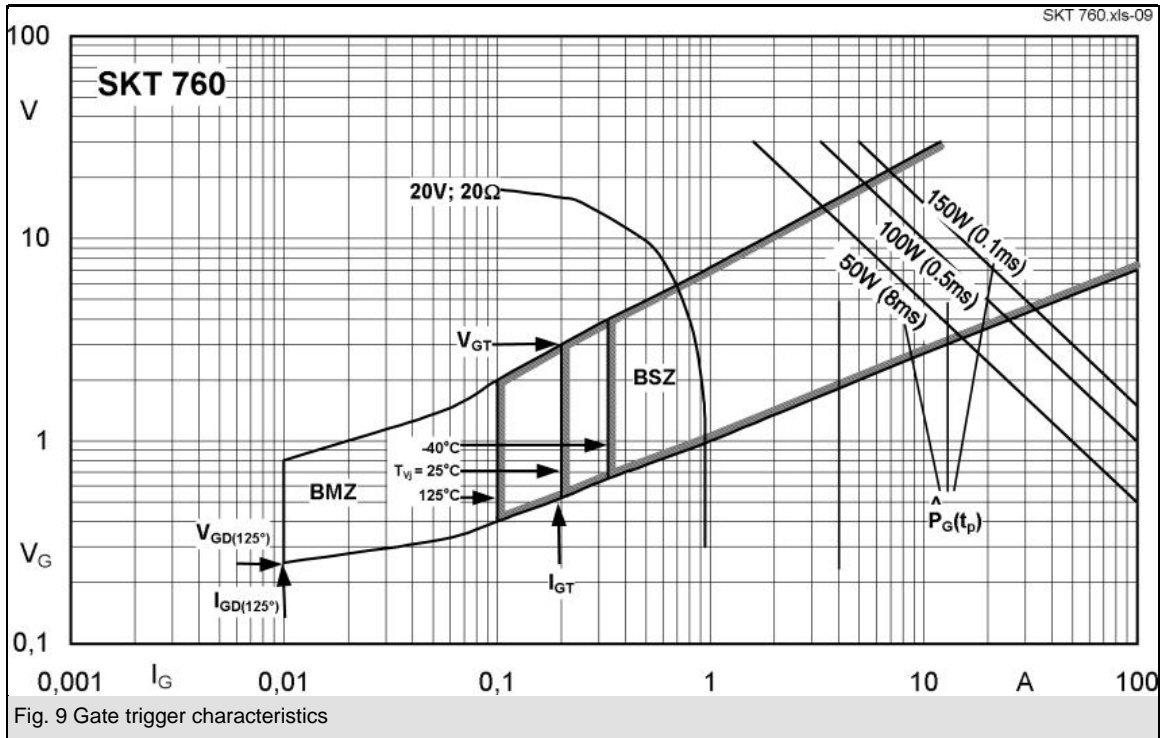
| Symbol           | Conditions  | Values          | Units            |
|------------------|---|-----------------|------------------|
| $I_{TAV}$        | sin. 180; $T_c = 100$ (85) °C;                          | 488 (696)       | A                |
| $I_D$            | 2 x P8/180; $T_a = 45$ °C; B2 / B6                      | 440 / 620       | A                |
|                  | 2 x P8/180 F; $T_a = 35$ °C; B2 / B6                    | 1200 / 1700     | A                |
| $I_{RMS}$        | 2 x P8/180; $T_a = 45$ °C; W1C                          | 480             | A                |
| $I_{TSM}$        | $T_{vj} = 25$ °C; 10 ms                                 | 15000           | A                |
|                  | $T_{vj} = 125$ °C; 10 ms                                | 13000           | A                |
| $i^2t$           | $T_{vj} = 25$ °C; 8,3 ... 10 ms                         | 1125000         | A <sup>2</sup> s |
|                  | $T_{vj} = 125$ °C; 8,3 ... 10 ms                        | 845000          | A <sup>2</sup> s |
| $V_T$            | $T_{vj} = 25$ °C; $I_T = 2400$ A                        | max. 1,65       | V                |
| $V_{T(TO)}$      | $T_{vj} = 125$ °C                                       | max. 0,92       | V                |
| $r_T$            | $T_{vj} = 125$ °C                                       | max. 0,3        | mΩ               |
| $I_{DD}, I_{RD}$ | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 90         | 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. 125        | A/μs             |
| $(dv/dt)_{cr}$   | $T_{vj} = 125$ °C; SKT ...D / SKT ...E                  | max. 500 / 1000 | V/μs             |
| $t_q$            | $T_{vj} = 125$ °C,                                      | 100 ... 200     | μs               |
| $I_H$            | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 500       | mA               |
| $I_L$            | $T_{vj} = 25$ °C; typ. / max.                           | 500 / 2000      | mA               |
| $V_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 3          | V                |
| $I_{GT}$         | $T_{vj} = 25$ °C; d.c.                                  | min. 200        | mA               |
| $V_{GD}$         | $T_{vj} = 125$ °C; d.c.                                 | max. 0,25       | V                |
| $I_{GD}$         | $T_{vj} = 125$ °C; d.c.                                 | max. 10         | mA               |
| $R_{th(j-c)}$    | cont.; DSC  | 0,038           | K/W              |
| $R_{th(j-c)}$    | sin. 180; DSC / SSC                                     | 0,04 / 0,082    | K/W              |
| $R_{th(j-c)}$    | rec. 120; DSC / SSC                                     | 0,045 / 0,093   | K/W              |
| $R_{th(c-s)}$    | DSC / SSC   | 0,007 / 0,014   | K/W              |
| $T_{vj}$         |   | - 40 ... + 125  | °C               |
| $T_{stg}$        |   | - 40 ... + 130  | °C               |
| $V_{isol}$       |   | -               | V~               |
| F                | mounting force  | 10 ... 13       | kN               |
| a                |   |                 | m/s <sup>2</sup> |
| m                | approx.   | 240             | g                |
| Case             |   | B 10            |                  |



SKT







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