

# SKT 553 SG



Capsule Thyristor

| VRSM<br>V | VRRM, V <sub>DRM</sub><br>V | ITRMS 1200 A (maximum value for continuous operation)<br>ITAV = 554 A (sin. 180 DSC; T = 85 °C) |
|-----------|-----------------------------|-------------------------------------------------------------------------------------------------|
| 500       | 400                         | SKT 553/04D SG                                                                                  |
| 900       | 800                         | SKT 553/08E SG                                                                                  |
| 1300      | 1200                        | SKT 553/12E SG                                                                                  |
| 1500      | 1400                        | SKT 553/14E SG                                                                                  |
| 1700      | 1600                        | SKT 553/16E SG                                                                                  |
| 1900      | 1800                        | SKT 553/18E SG                                                                                  |

## Thyristors

ITAV  
SKT 553 SG

IRMS

### Features ITSM

- Hermetic metal case with epoxy insulator i2t
- Capsule package for double sided cooling
- Off-state and reverse voltages VT up to 1800 V VT(TO)
- Amplifying gate rT
- IDD; IRD

### Typical Applications \* tgd

- DC motor control tgr
- Controlled and half-controlled (di/dt)cr rectifiers (dV/dt)cr
- AC controllers tq
- Recommended snubber IH network IL  
e.g. for Vrms ≤ 400 V: VGT  
RC= 33 Ω/32 W, C = 1 μF IGT

VGD

IGD

Rth(j-c)

Rth(j-c)

Rth(j-c)

Rth(c-s)

Tvj

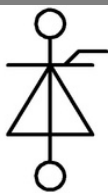
Tstg

F

m

Case

| Symbol | Condition                                        | Values        | Units |
|--------|--------------------------------------------------|---------------|-------|
|        | sin. 180 ; TC = 100 (85) °C                      | 392 (554)     | A     |
|        | 2 x P8/180; Ta = 45 °C; B2/B6                    | 390 / 560     | A     |
|        | 2 x P8/180F; Ta = 35 °C; B2/B6                   | 980 / 1340    | A     |
|        | 2 x P8/180; Ta = 45 °C; W1C                      | 435           | A     |
|        | Tvj = 25° C ; 10 ms                              | 9000          | A     |
|        | Tvj = 125° C ; 10 ms                             | 8000          | A     |
|        | Tvj = 25° C ; 8,3...10 ms                        | 405000        | A2s   |
|        | Tvj = 125° C ; 8,3...10 ms                       | 320000        | A2s   |
|        | Tvj = 25° C, II = 1500 A                         | max. 1,65     | V     |
|        | Tvj = 125° C                                     | max. 0,92     | V     |
|        | Tvj = 125° C                                     | max. 0,45     | m□    |
|        | Tvj = 125° C; VRD = VRRM; VRD = V <sub>RRM</sub> | max. 60       | mA    |
|        | Tvj = 25° C; iG = 1A; diG/dt = 1 A/μs            | 1             | μs    |
|        | VD = 0,67 * VDRM                                 | 1             | μs    |
|        | Tvj = 125° C                                     | max. 125      | A/μs  |
|        | Tvj = 125° C; D (E)                              | 500 (1000)    | V/μs  |
|        | Tvj = 125° C                                     | 50 ... 250    | μs    |
|        | Tvj = 25° C; typ. / max                          | 150 / 500     | mA    |
|        | Tvj = 25° C; RG = 33 Ω; typ. / max               | 500 / 2000    | mA    |
|        | Tvj = 25° C; d.c.                                | min. 3        | V     |
|        | Tvj = 25° C; d.c.                                | min. 250      | mA    |
|        | Tvj = 125° C; d.c.                               | max. 0,25     | V     |
|        | Tvj = 125° C; d.c.                               | max. 10       | mA    |
|        | cont., DSC                                       | 0,045         | K/W   |
|        | sin. 180; DSC / SSC                              | 0,047 / 0,10  | K/W   |
|        | rec. 120; DSC / SSC                              | 0,052 / 0,11  | K/W   |
|        | DSC / SSC                                        | 0,011 / 0,022 | K/W   |
|        |                                                  | -40...+125    | °C    |
|        |                                                  | -40...+125    | °C    |
|        | Mounting force ( SI units )                      | 5,2 ... 8     | kN    |
|        | approx.                                          | 85            | g     |
|        |                                                  | B11b          |       |



SKT

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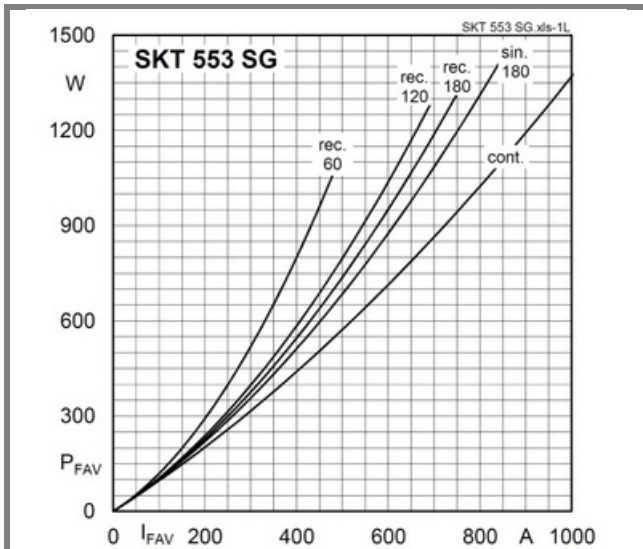


Fig. 1L Power dissipation vs. forward current

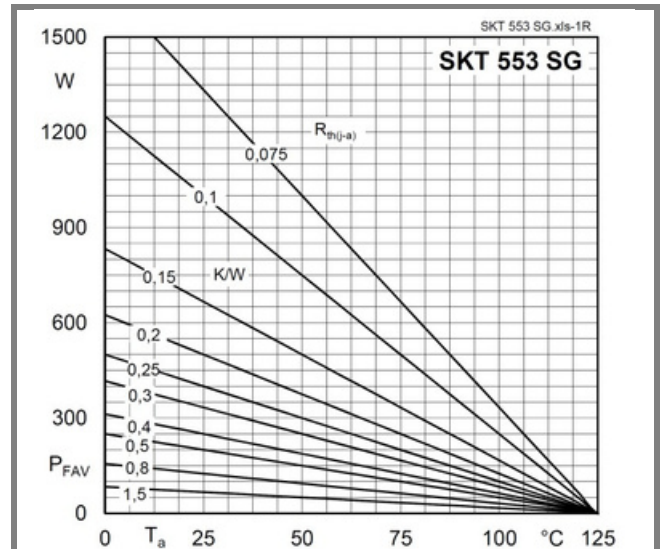


Fig. 1R Power dissipation vs. ambient temperature

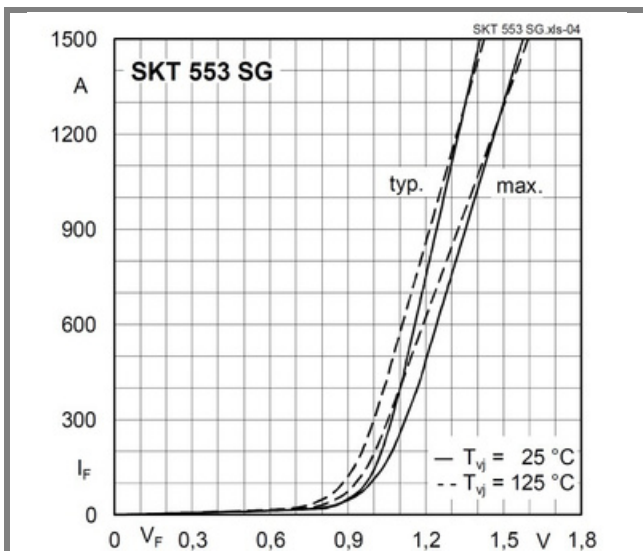


Fig. 4 Forward characteristics

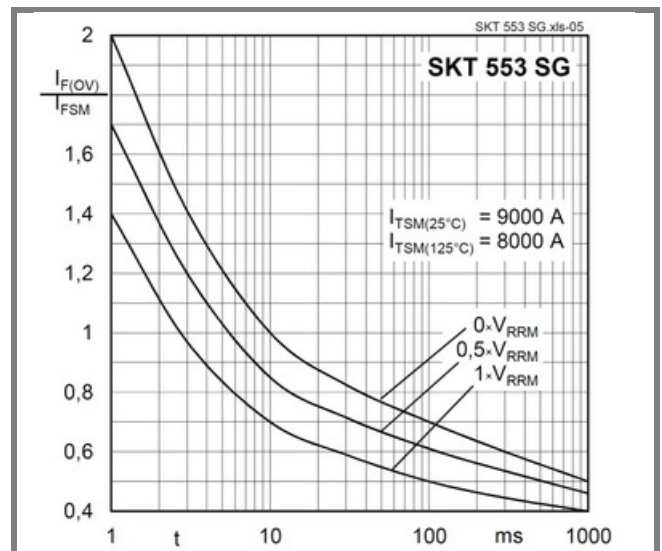


Fig. 5 Surge overload current vs. time

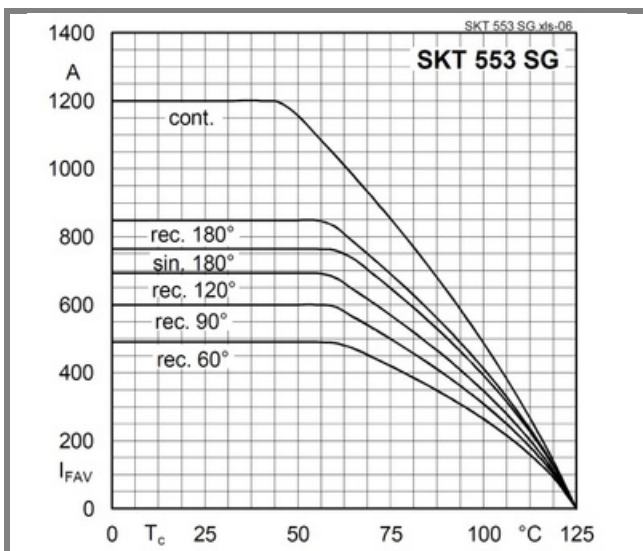


Fig. 6 Forward current vs. case temperature

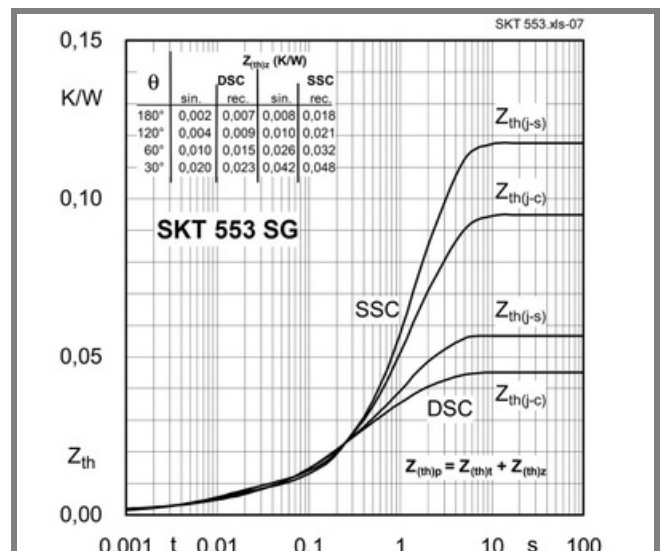


Fig. 7 Transient thermal impedance vs. time

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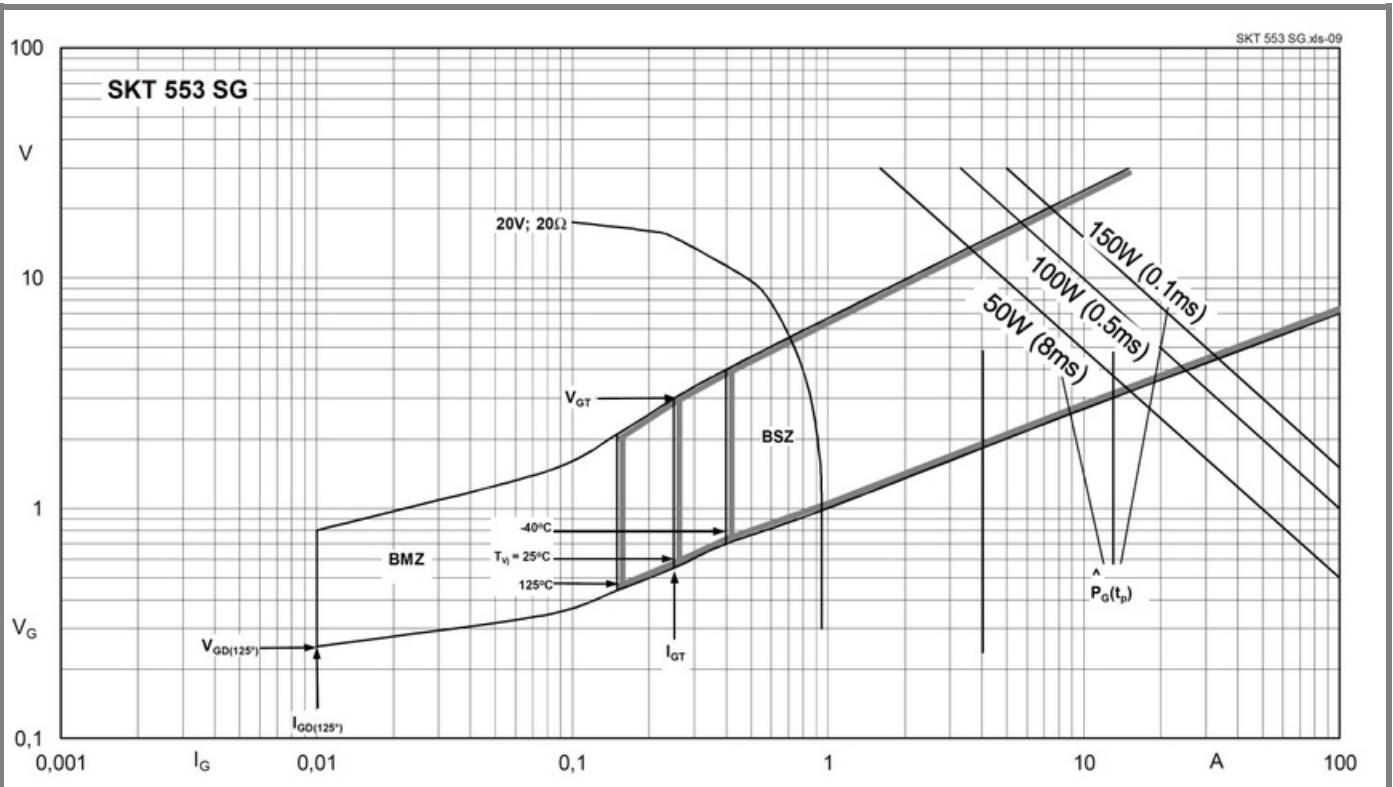
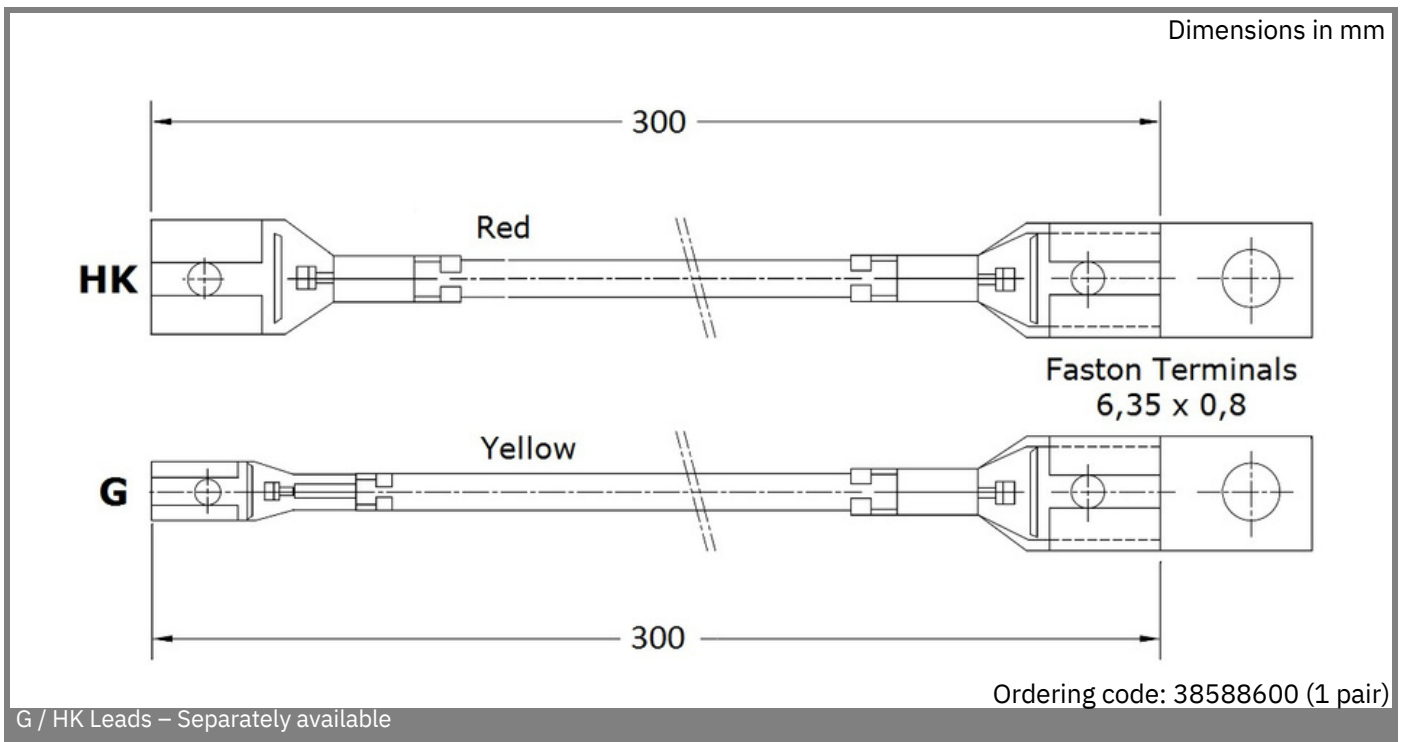
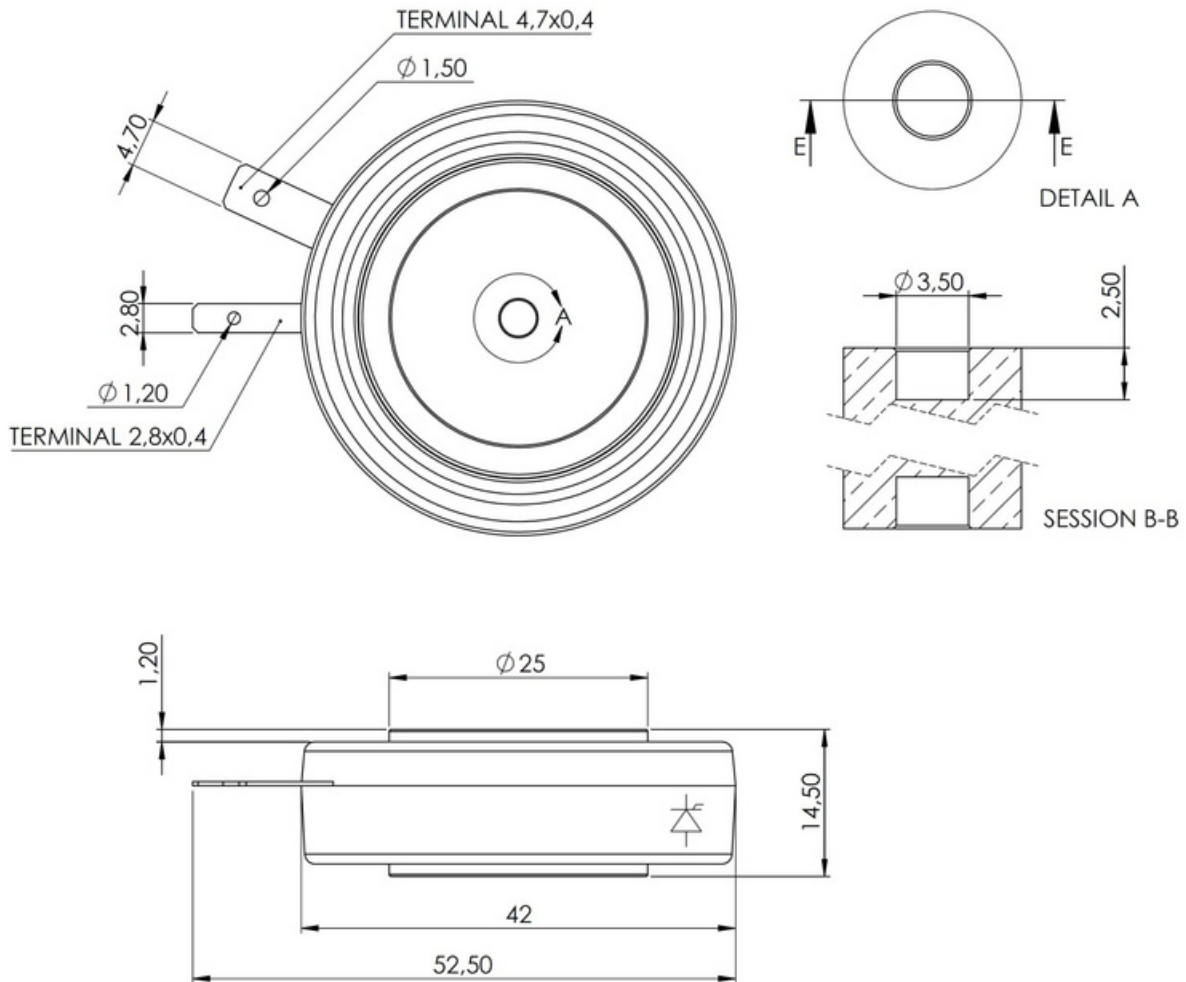


Fig. 9 Gate trigger characteristics



Dimensions in mm



Case B11b

**\*IMPORTANT INFORMATION AND WARNINGS**

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