

SKT 553 SG



Capsule Thyristor

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 1200$ A (maximum value for continuous operation) $I_{TAV} = 554$ A (sin. 180 DSC; $T_c = 85$ °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

SKT 553 SG

Features

- Hermetic metal case with epoxy insulator
- Capsule package for double sided cooling
- Off-state and reverse voltages up to 1800 V
- Amplifying gate

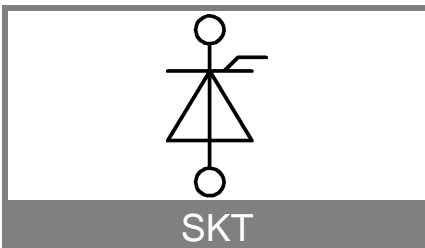
Typical Applications *

- DC motor control
- Controlled and half-controlled rectifiers
- AC controllers
- Recommended snubber network

e.g. for $V_{rms} \leq 400$ V:

$RC = 33 \Omega / 32$ W, $C = 1 \mu F$

Symbol	Condition	Values	Units
I_{TAV}	sin. 180 ; $T_c = 100$ (85) °C	392 (554)	A
I_D	2 x P8/180; $T_a = 45$ °C; B2/B6	390 / 560	A
	2 x P8/180F; $T_a = 35$ °C; B2/B6	980 / 1340	A
I_{RMS}	2 x P8/180; $T_a = 45$ °C; W1C	435	A
I_{TSM}	$T_{vj} = 25^\circ$ C ; 10 ms	9000	A
	$T_{vj} = 125^\circ$ C ; 10 ms	8000	A
i^2t	$T_{vj} = 25^\circ$ C ; 8,3...10 ms	405000	A ² s
	$T_{vj} = 125^\circ$ C ; 8,3...10 ms	320000	A ² s
V_T	$T_{vj} = 25^\circ$ C, $I_T = 1500$ A	max. 1,65	V
$V_{T(TO)}$	$T_{vj} = 125^\circ$ C	max. 0,92	V
r_T	$T_{vj} = 125^\circ$ C	max. 0,45	m Ω
$I_{DD}; I_{RD}$	$T_{vj} = 125^\circ$ C; $V_{RD} = V_{RRM}; V_{RD} = V_{RRM}$	max. 60	mA
t_{gd}	$T_{vj} = 25^\circ$ C; $i_G = 1$ A; $di_G/dt = 1$ A/ μ s	1	μ s
t_{gr}	$V_D = 0,67 * V_{DRM}$	1	μ s
$(di/dt)_{cr}$	$T_{vj} = 125^\circ$ C	max. 125	A/ μ s
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ$ C; D (E)	500 (1000)	V/ μ s
t_q	$T_{vj} = 125^\circ$ C	50 ... 250	μ s
I_H	$T_{vj} = 25^\circ$ C; typ. / max	150 / 500	mA
I_L	$T_{vj} = 25^\circ$ C; $R_G = 33 \Omega$; typ. / max	500 / 2000	mA
V_{GT}	$T_{vj} = 25^\circ$ C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25^\circ$ C; d.c.	min. 250	mA
V_{GD}	$T_{vj} = 125^\circ$ C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125^\circ$ C; d.c.	max. 10	mA
$R_{th(j-c)}$	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
$R_{th(c-s)}$	DSC / SSC	0,011 / 0,022	K/W
T_{vj}		-40...+125	°C
T_{stg}		-40...+125	°C
F	Mounting force (SI units)	5,2 ... 8	kN
m	approx.	85	g
Case		B11b	



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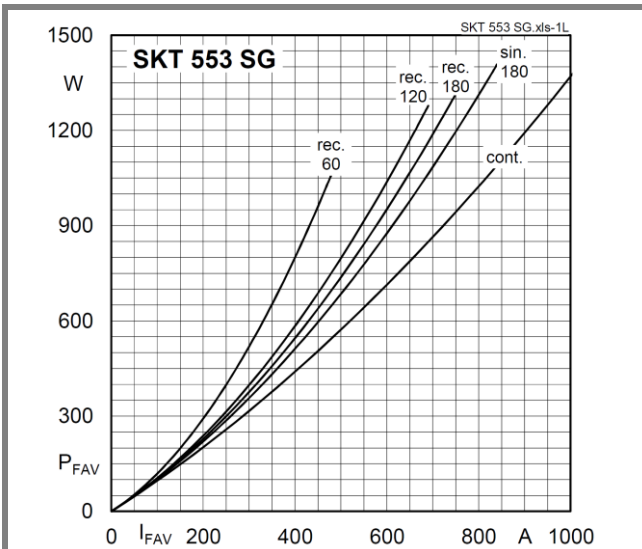


Fig. 1L Power dissipation vs. forward current

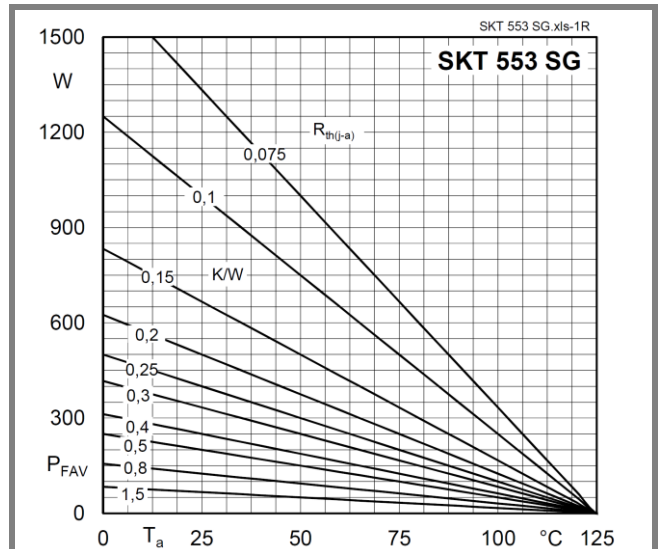


Fig. 1R Power dissipation vs. ambient temperature

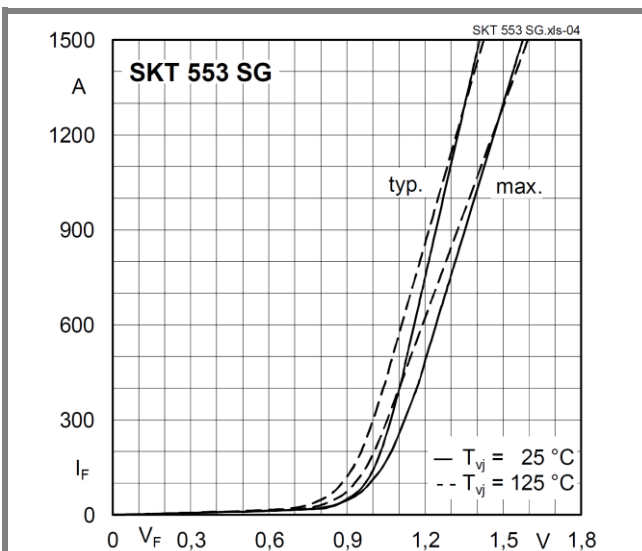


Fig. 4 Forward characteristics

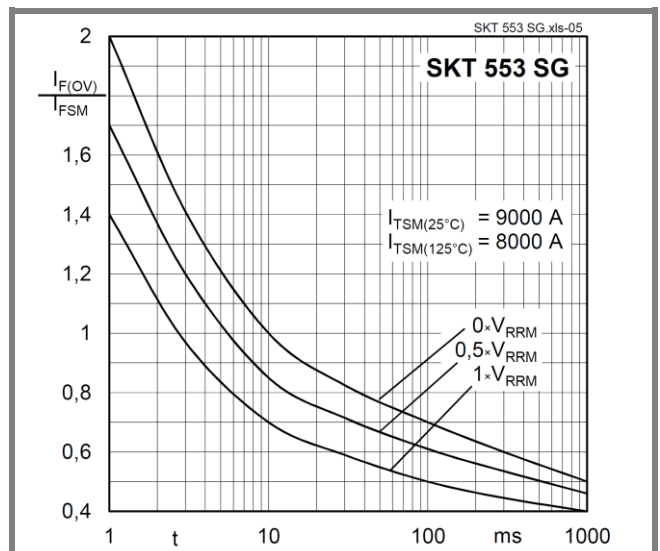


Fig. 5 Surge overload current vs. time

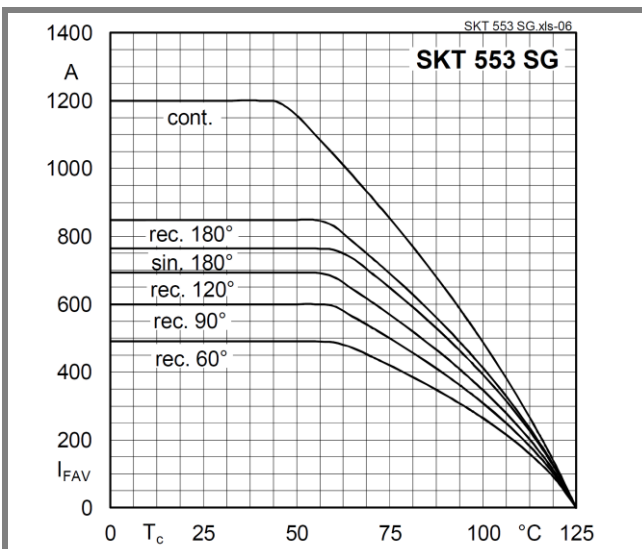


Fig. 6 Forward current vs. case temperature

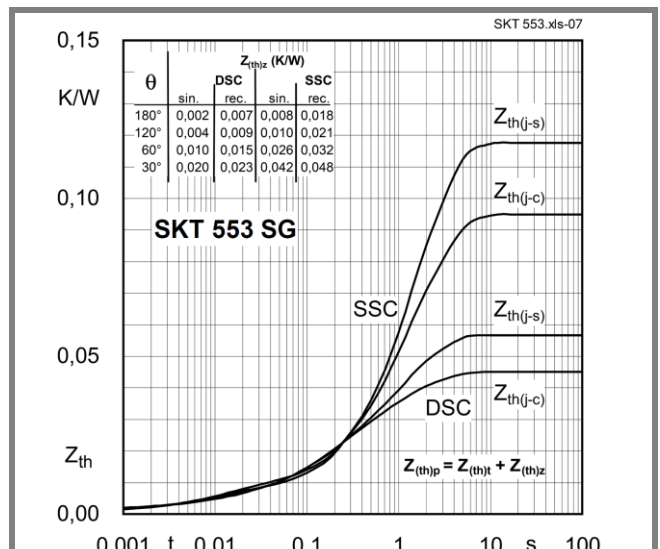


Fig. 7 Transient thermal impedance vs. time

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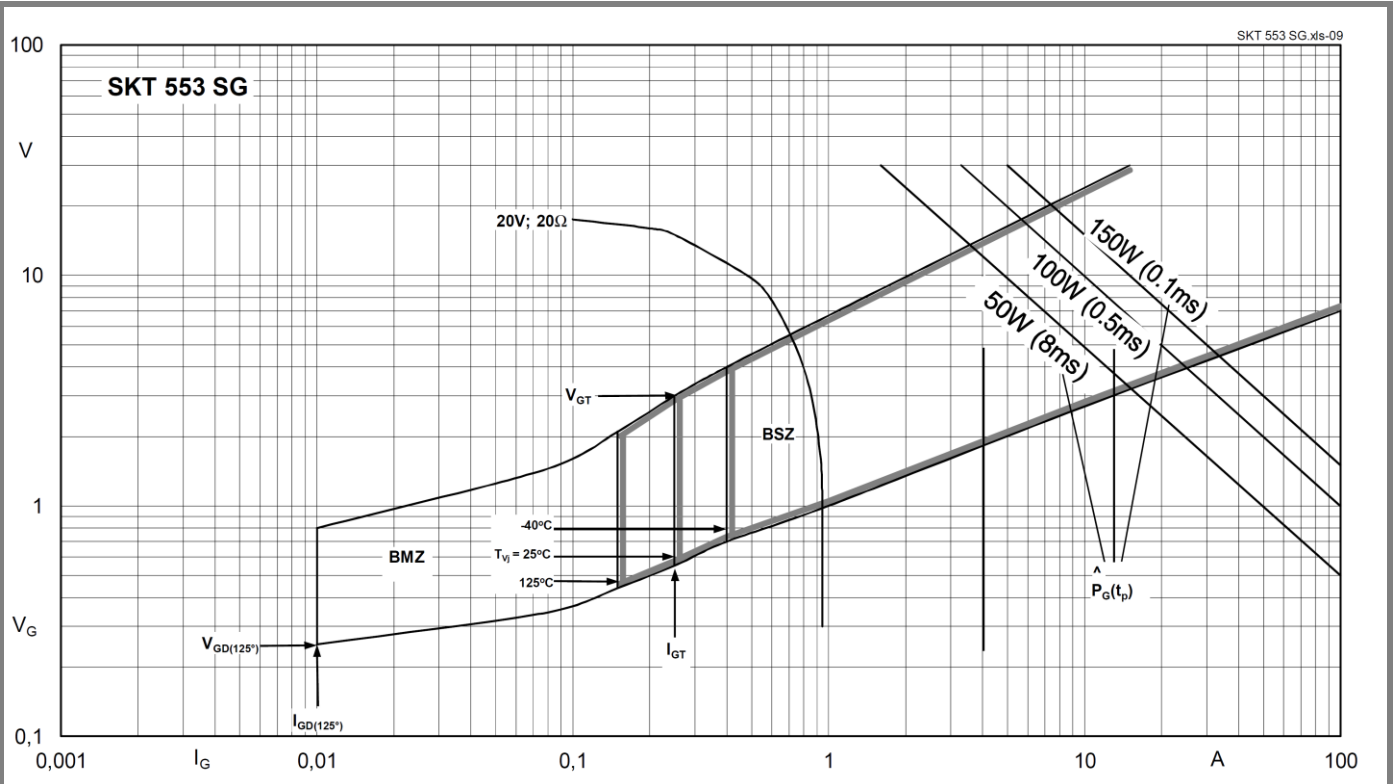
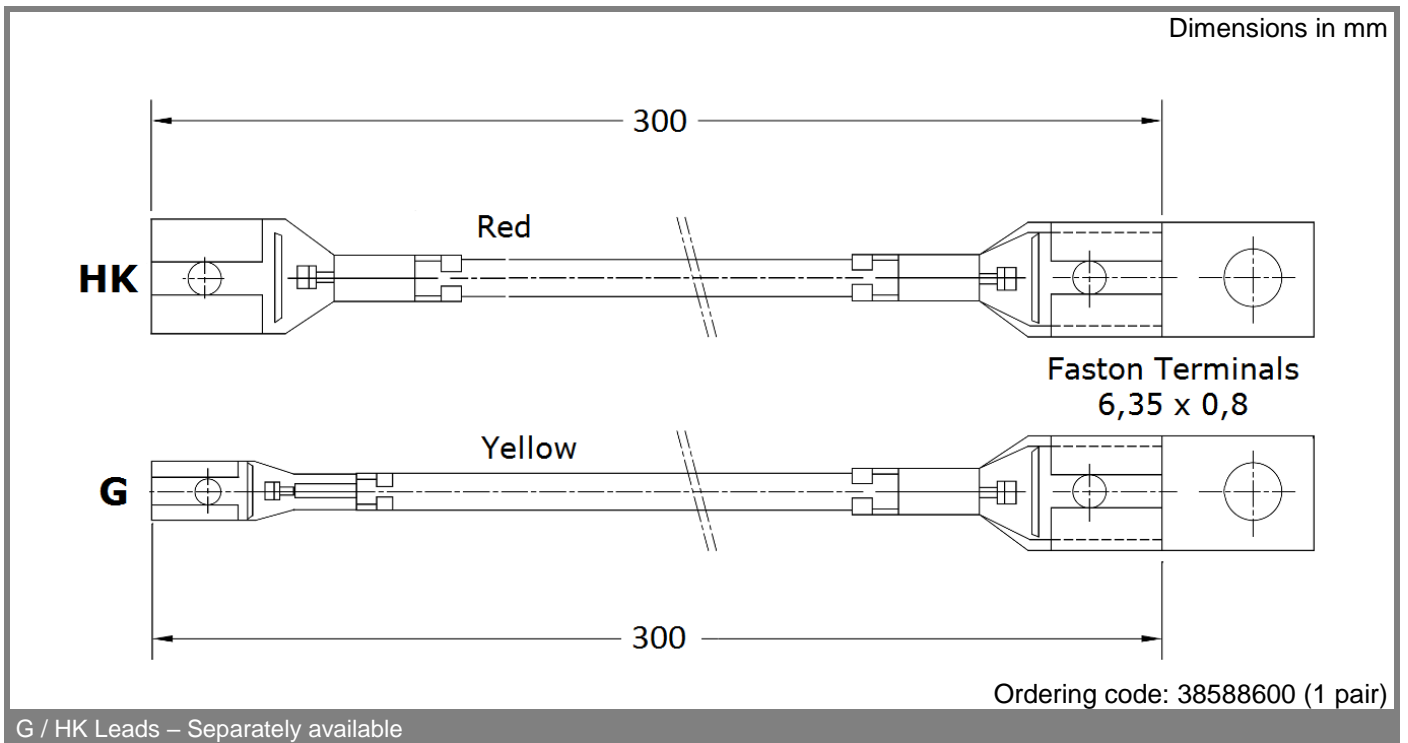
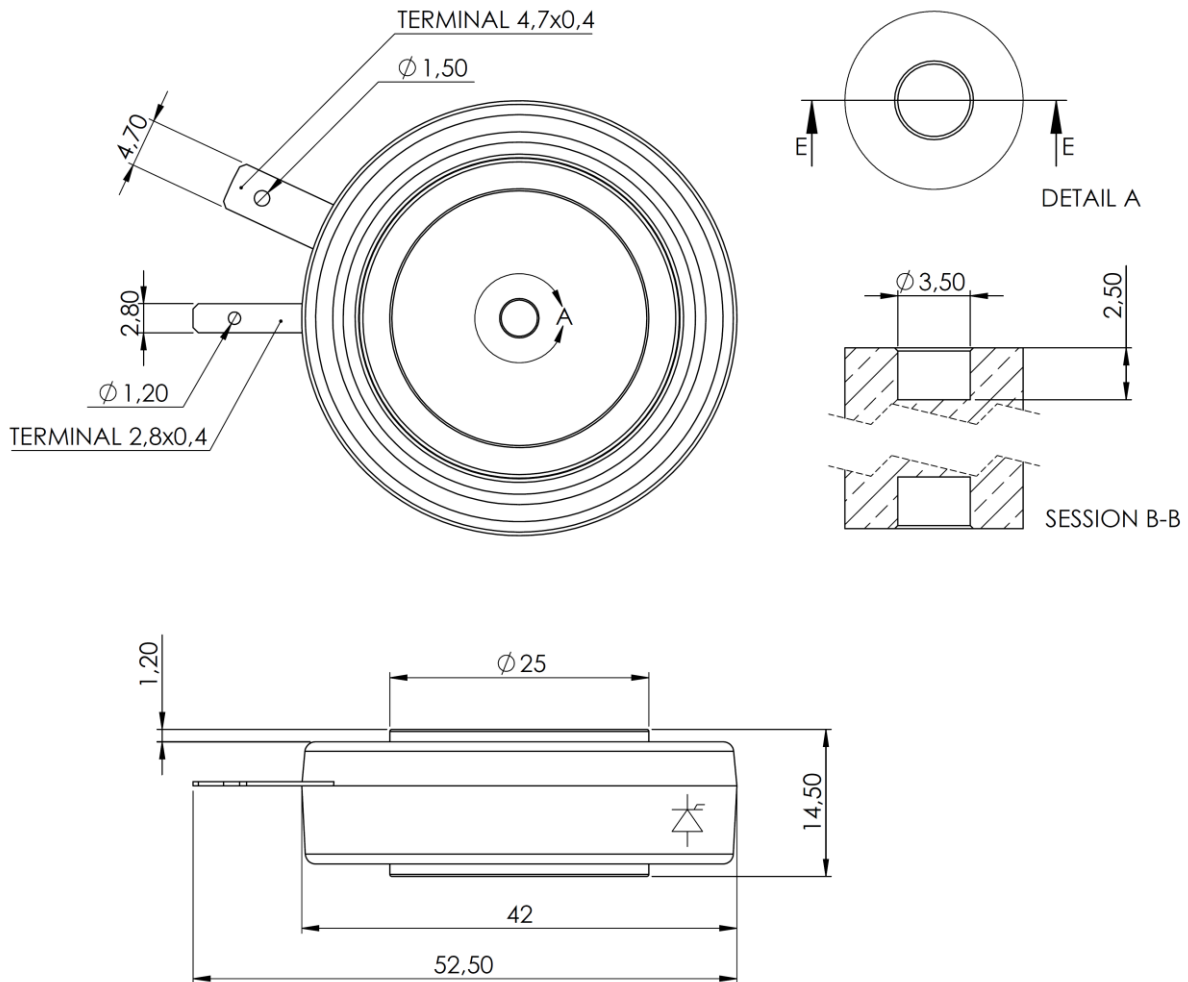


Fig. 9 Gate trigger characteristics



Dimensions in mm



Case B11b

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