

SKT 883



Capsule Thyristor

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 1800$ A (maximum value for continuous operation) $I_{TAV} = 880$ A (sin. 180 DSC; $T_c = 85$ °C)
500	400	SKT 883/04D
900	800	SKT 883/08D
1300	1200	SKT 883/12E
1700	1600	SKT 883/16E
1900	1800	SKT 883/18E

Thyristors

SKT 883

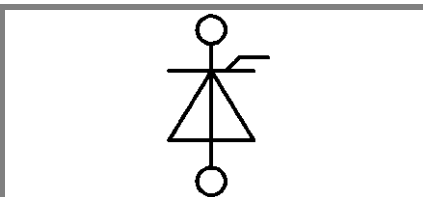
Features

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

Symbol	Condition	Values	Units
I_{TAV}	sin. 180 ; $T_c = 100$ (85) °C	624 (880)	A
I_D	2 x P8/180; $T_a = 45$ °C; B2/B6 2 x P8/180F; $T_a = 35$ °C; B2/B6	470 / 685 1345 / 1870	A A
I_{RMS}	2 x P8/180; $T_a = 45$ °C; W1C	525	A
I_{TSM}	$T_{vj} = 25^\circ$ C ; 10 ms $T_{vj} = 125^\circ$ C ; 10 ms	19000 15500	A A
i^2t	$T_{vj} = 25^\circ$ C ; 8,3...10 ms $T_{vj} = 125^\circ$ C ; 8,3...10 ms	1805000 1200000	A ² s A ² s
V_T	$T_{vj} = 25^\circ$ C, $I_T = 2400$ A	max. 1,51	V
$V_{T(TO)}$	$T_{vj} = 125^\circ$ C	max. 0,85	V
r_T	$T_{vj} = 125^\circ$ C	max. 0,26	m Ω
$I_{DD}; I_{RD}$	$T_{vj} = 125^\circ$ C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	max. 90	mA
t_{gd}	$T_{vj} = 25^\circ$ C; $i_G = 1$ A; $di_G/dt = 1$ A/ μ s	1	μ s
t_{gr}	$V_D = 0,67 * V_{DRM}$	2	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	100 ... 200	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	300 / 2000	mA
V_{GT}	$T_{vj} = 25^\circ$ C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25^\circ$ C; d.c.	min. 200	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	30	mK/W
$R_{th(j-c)}$	sin. 180; DSC / SSC	32 / 66	mK/W
$R_{th(j-c)}$	rec. 120; DSC / SSC	37 / 77	mK/W
$R_{th(c-s)}$	DSC / SSC	5 / 10	mK/W
T_{vj}		-40...+125	°C
T_{stg}		-40...+125	°C
F	Mounting force (SI units)	13 ... 17	kN
m	approx.	280	g
Case		B23	



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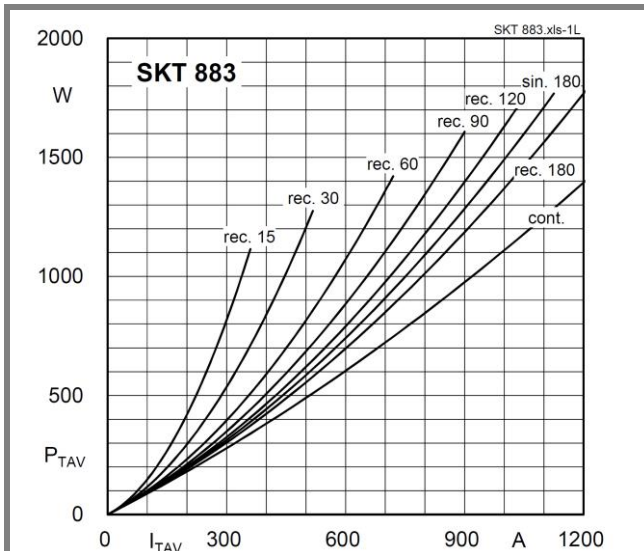


Fig. 1L Power dissipation vs. forward current

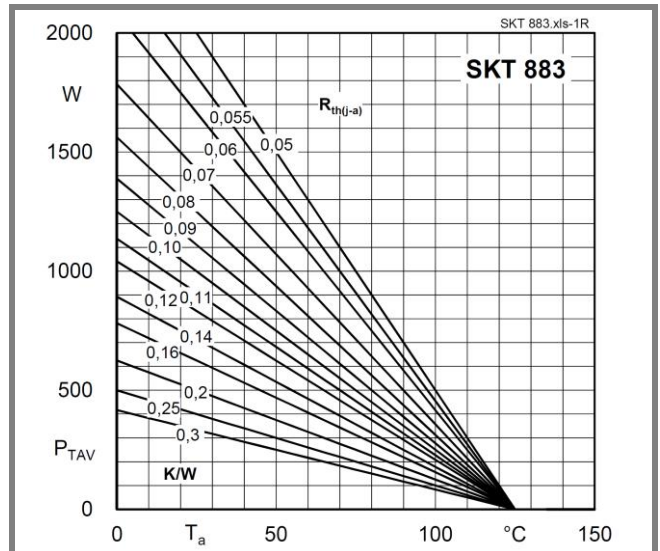


Fig. 1R Power dissipation vs. ambient temperature

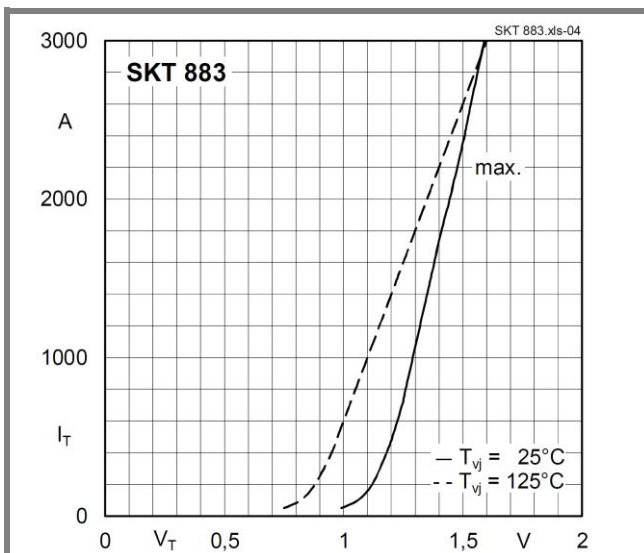


Fig. 4 Forward characteristics

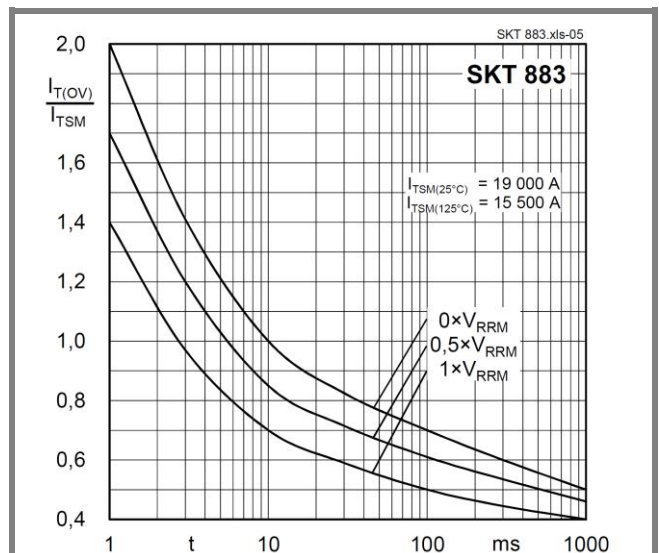


Fig. 5 Surge overload current vs. time

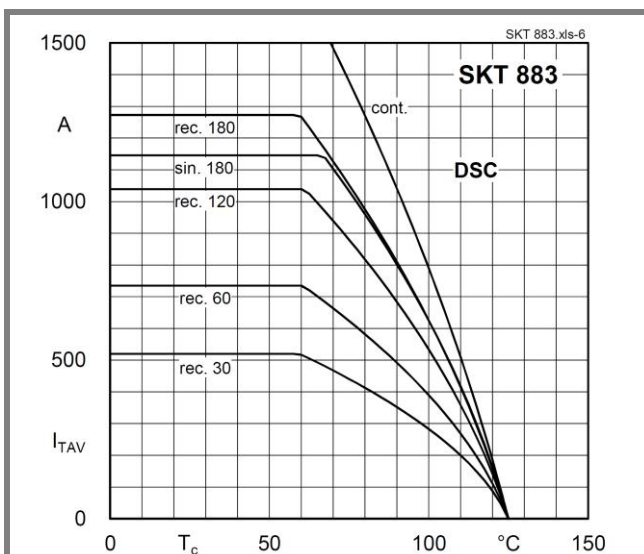


Fig. 6 Forward current vs. case temperature

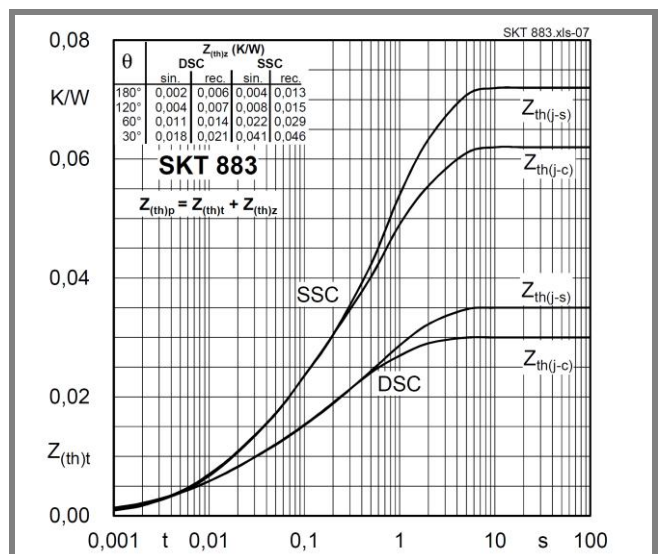


Fig. 7 Transient thermal impedance vs. time

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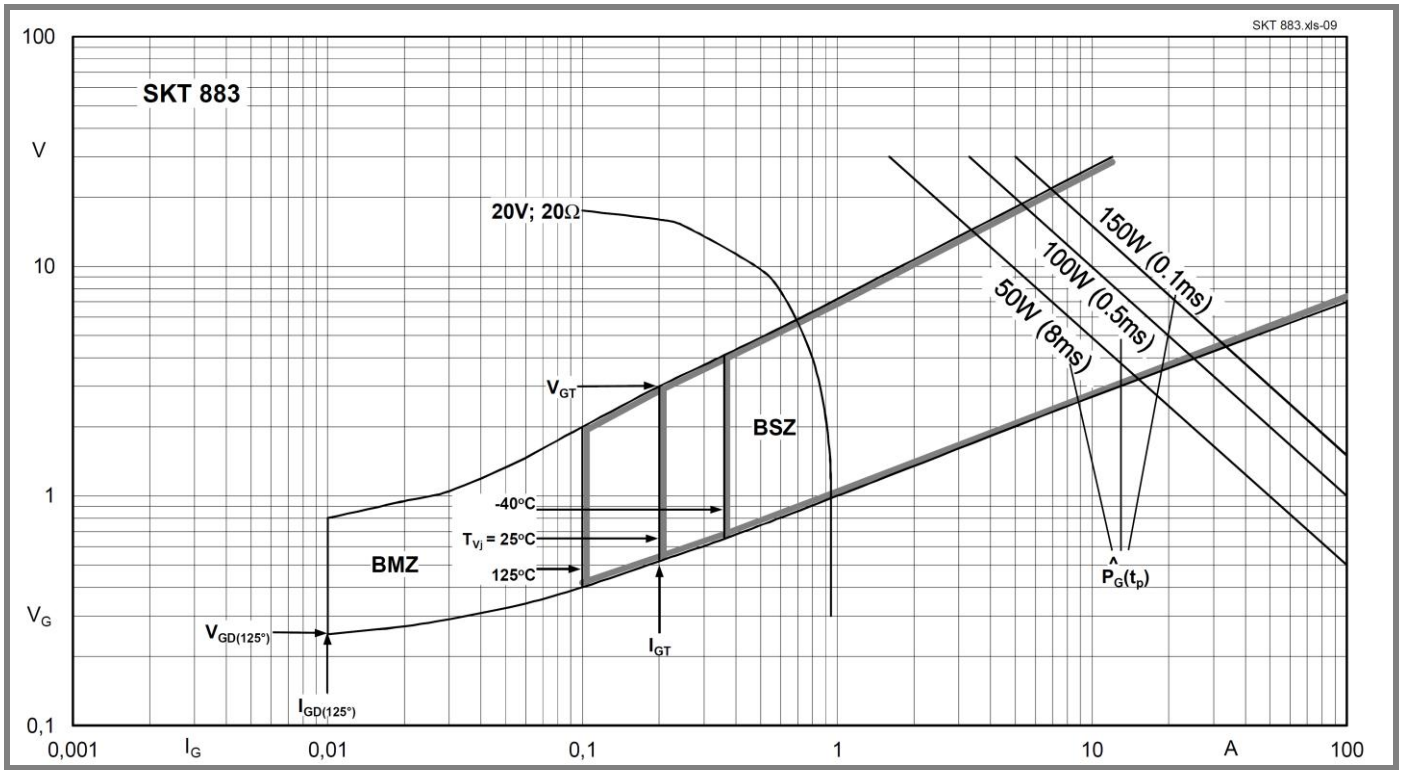
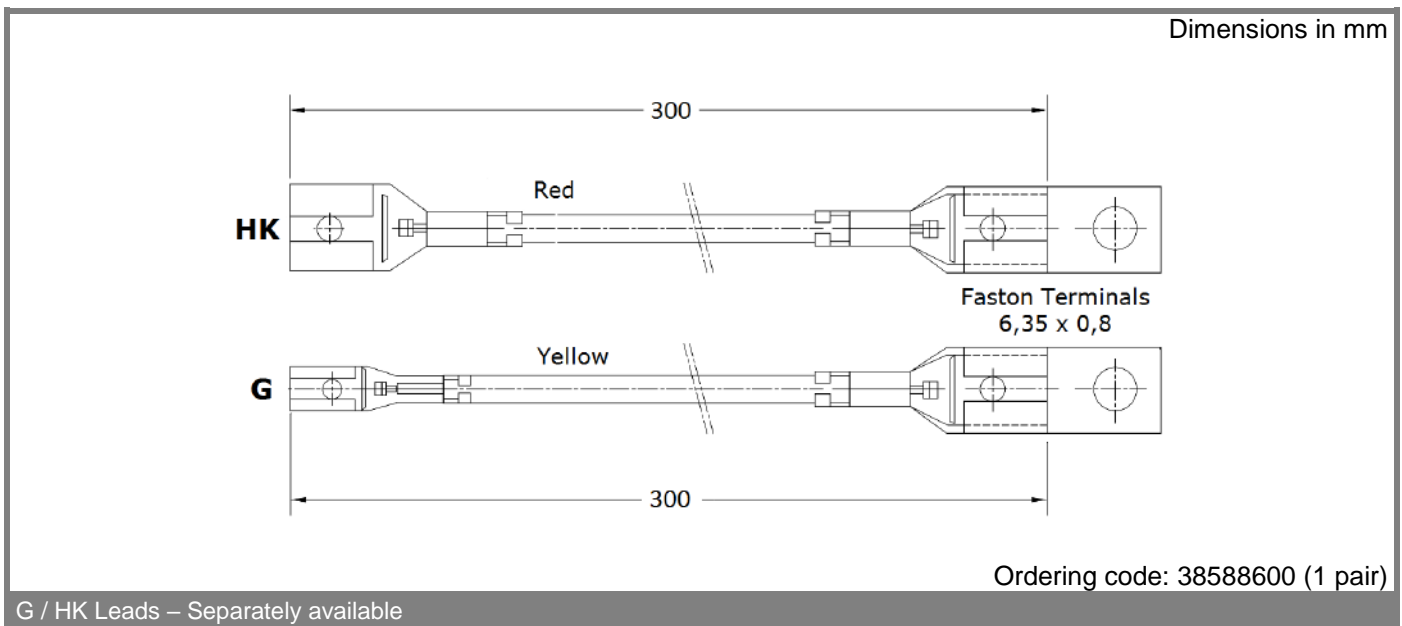
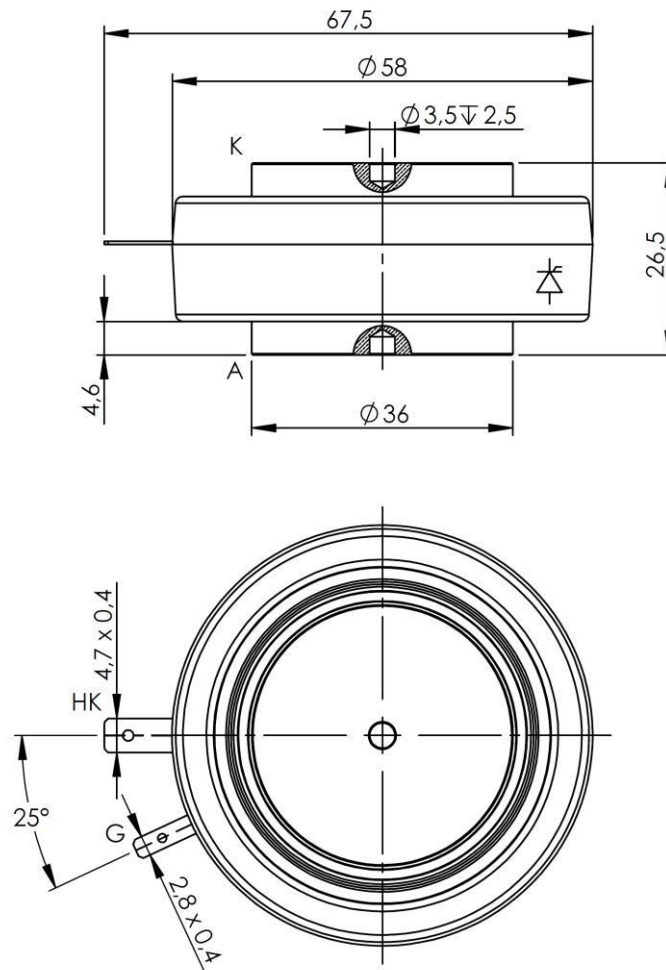


Fig. 9 Gate trigger characteristics





Case B23

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