SKT 600 THYRISTOR BRIDGE,SCR BRIDGE

Capsule Thyristor

Line Thyristor

SKT 600

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 1400 A (maximum value for continuous operation) I_{TAV} = 600 A (sin. 180; DSC; T_c = 86 °C)		
900	800	SKT 600/08D		
1300	1200	SKT 600/12E		
1500	1400	SKT 600/14E		
1700	1600	SKT 600/16E		
1900	1800	SKT 600/18E		

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 100 (85) °C;	437 (620)	A
I_D	2 x P8/180; T_a = 45 °C; B2 / B6	400 / 560	A
	2 x P8/180 F; T_a = 35 °C; B2 / B6	1060 /1500	A
I_{RMS}	2 x P8/180; T_a = 45 °C; W1C	440	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	11500	A
	T_{vj} = 125 °C; 10 ms	10000	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	660000	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	500000	A²s
V_T	T_{vj} = 25 °C; I_T = 2400 A	max. 2	V
$V_{T(TO)}$	T_{vj} = 125 °C	max. 1	V
r_T	T_{vj} = 125 °C	max. 0,4	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 80	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/s²
m	approx.	240	g
Case		B 10	

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 Ω/32 W, C = 1 µF

SKT

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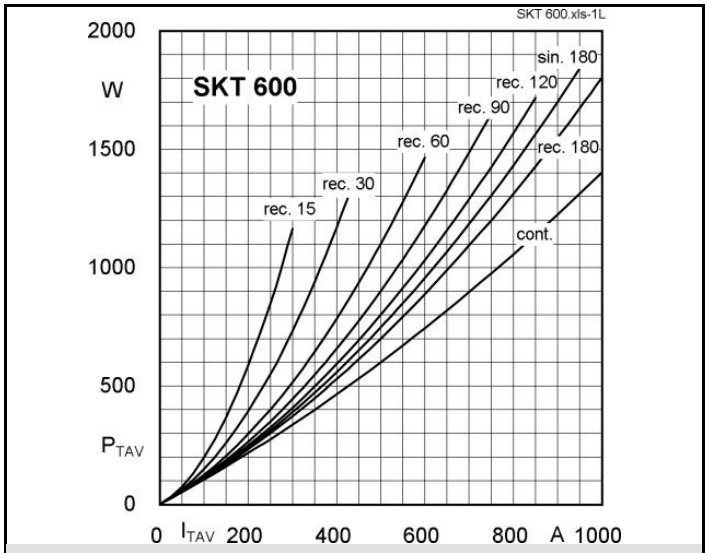


Fig. 1L Power dissipation vs. on-state current

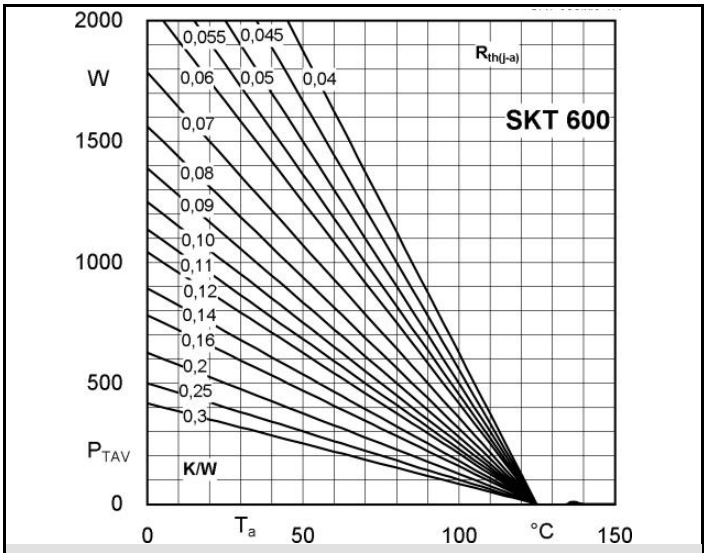


Fig. 1R Power dissipation vs. ambient temperature

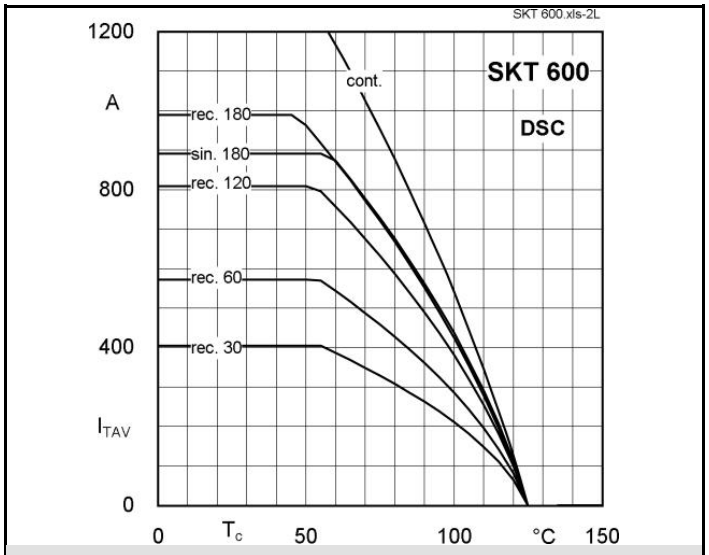


Fig. 2L Rated on-state current vs. case temperature

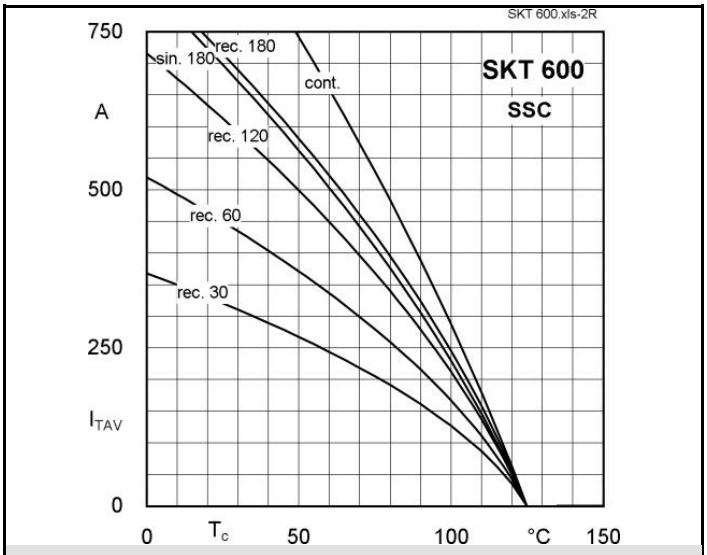


Fig. 2R Rated on-state current vs. case temperature

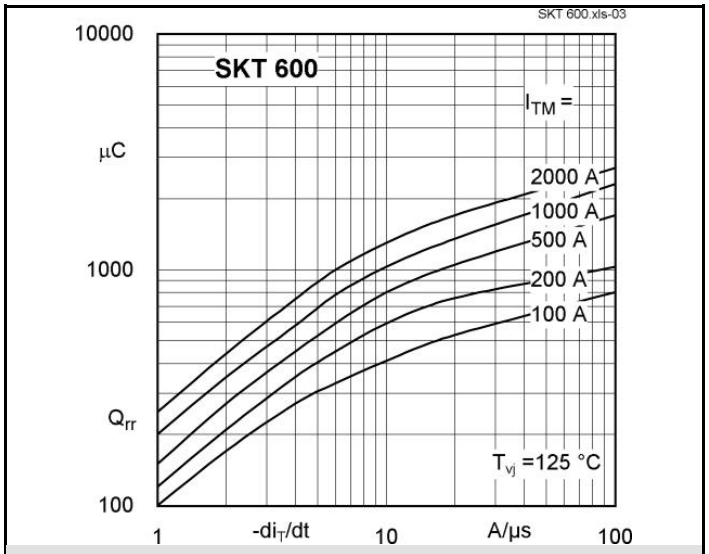
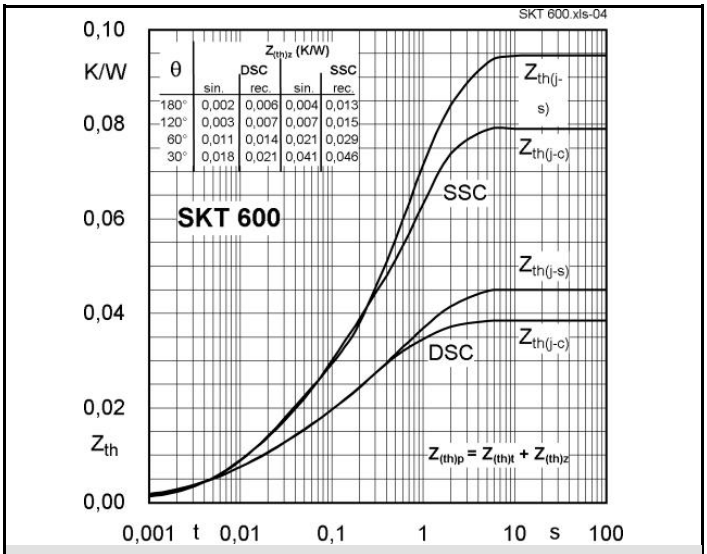


Fig. 3 Recovered charge vs. current decrease



θ	Z_(th)z (K/W) DSC sin.	DSC rec.	SSC sin.	SSC rec.
180°	0,002	0,006	0,004	0,013
120°	0,003	0,007	0,007	0,015
60°	0,011	0,014	0,021	0,029
30°	0,018	0,021	0,041	0,046

Fig. 4 Transient thermal impedance vs. time

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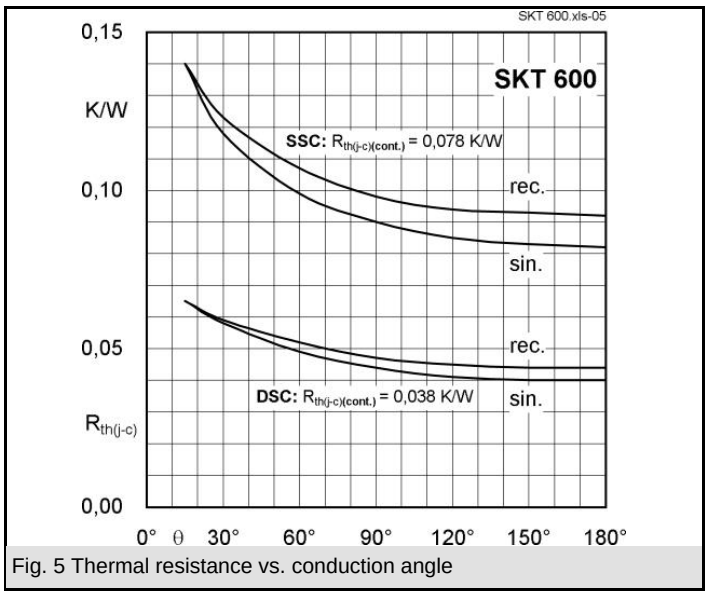

Fig. 5 Thermal resistance vs. conduction angle

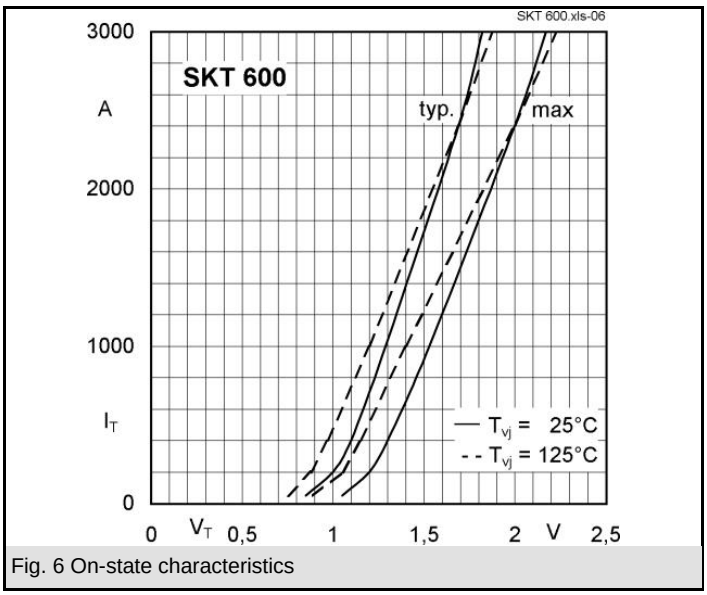

Fig. 6 On-state characteristics

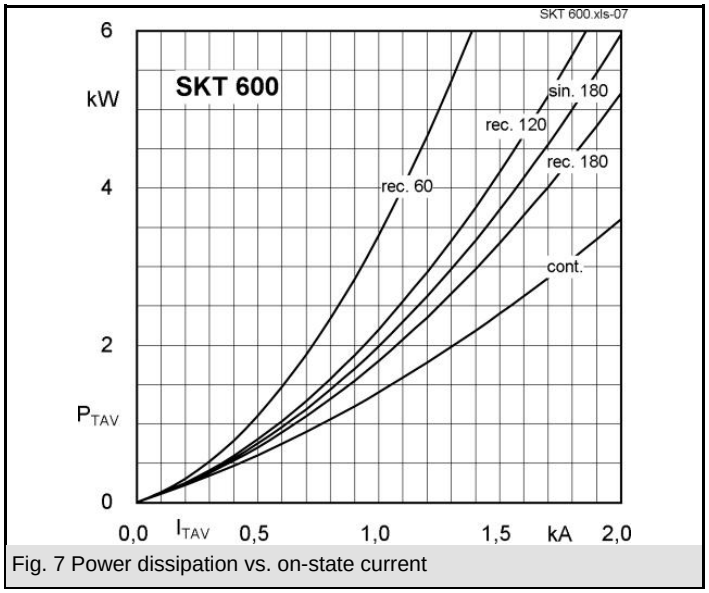

Fig. 7 Power dissipation vs. on-state current

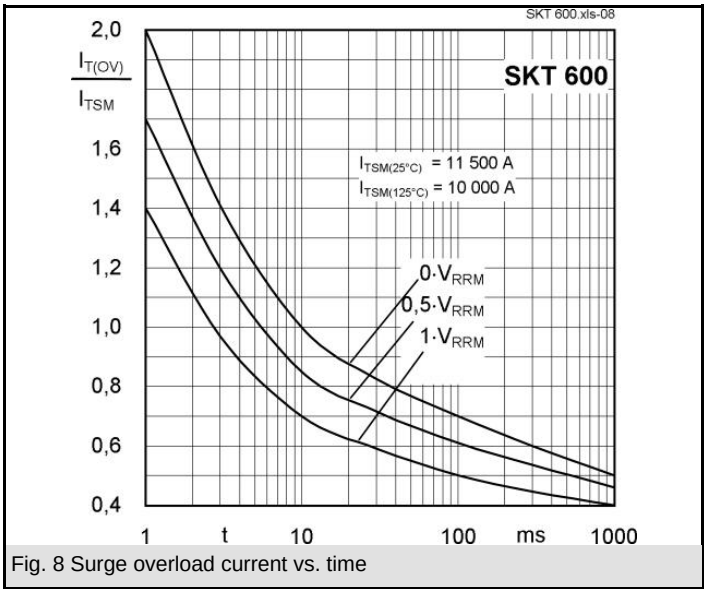

Fig. 8 Surge overload current vs. time

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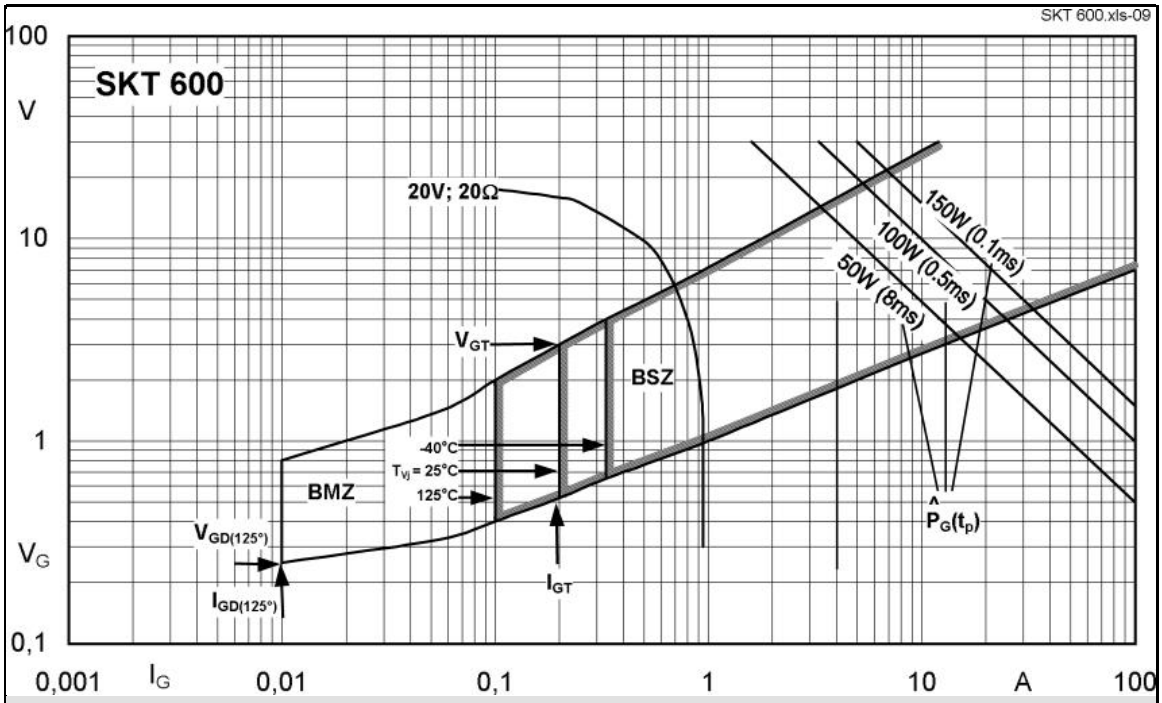
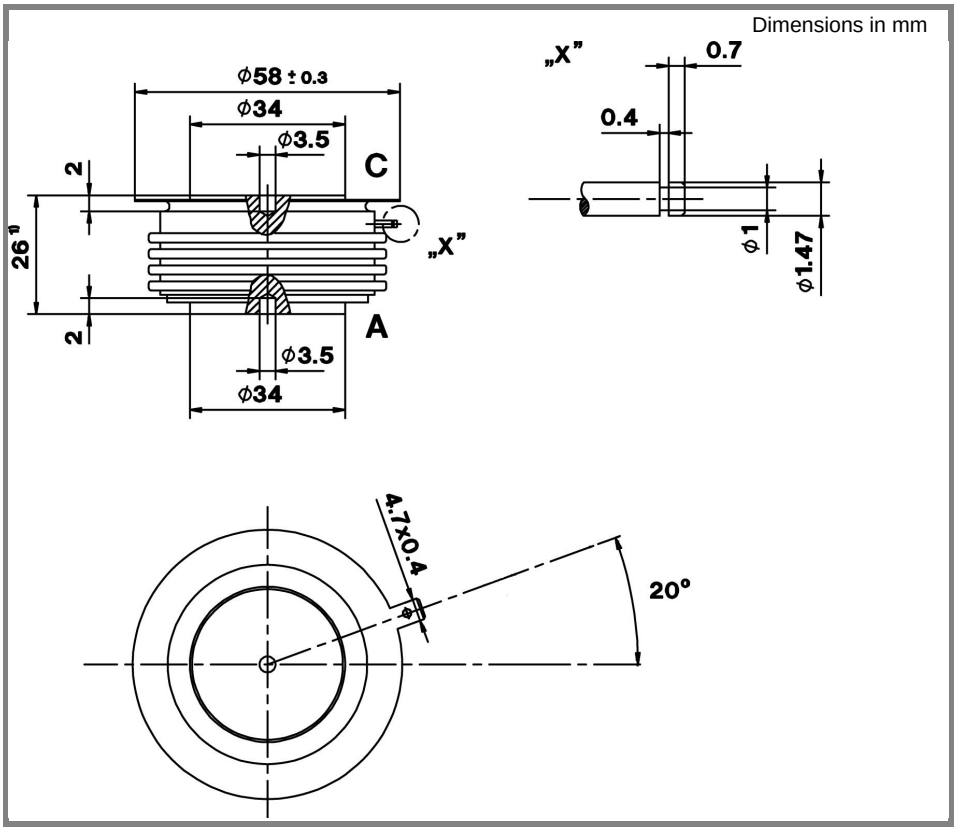
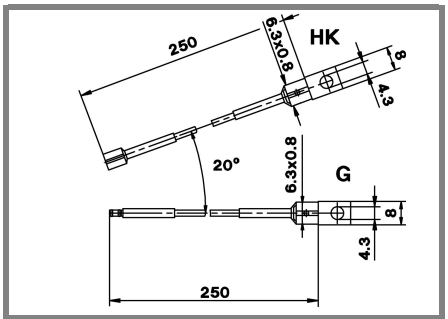


Fig. 9 Gate trigger characteristics



Case B 10 (JEDEC: TO-200AC)



HK/Gate leads: ID-No.:33901260 (12pcs each) — separately available

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