SKT 600 THYRISTOR BRIDGE, SCR BRIDGE

Capsule Thyristor

Line Thyristor

SKT 600

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

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. 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/s²
m	approx.	240	g
Case		B 10	

SKT

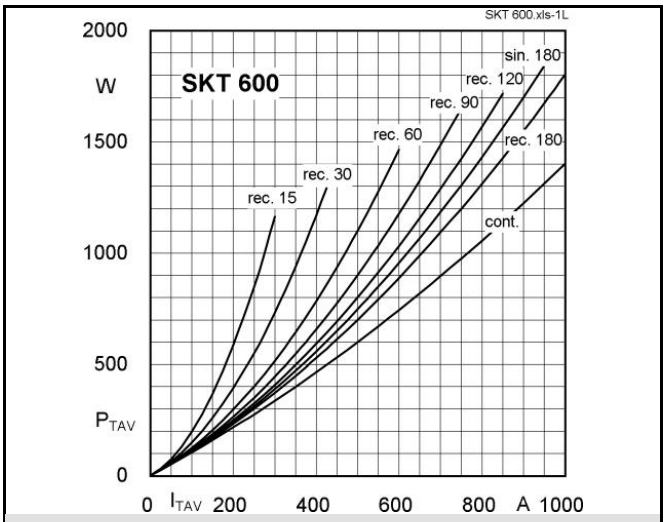


Fig. 1L Power dissipation vs. on-state current

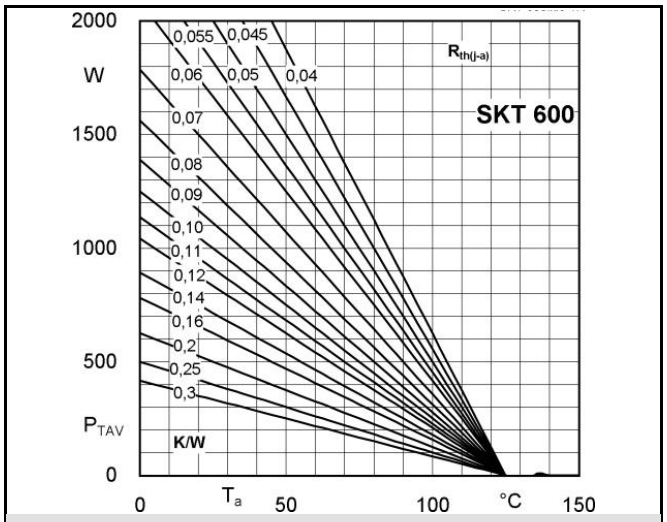


Fig. 1R Power dissipation vs. ambient temperature

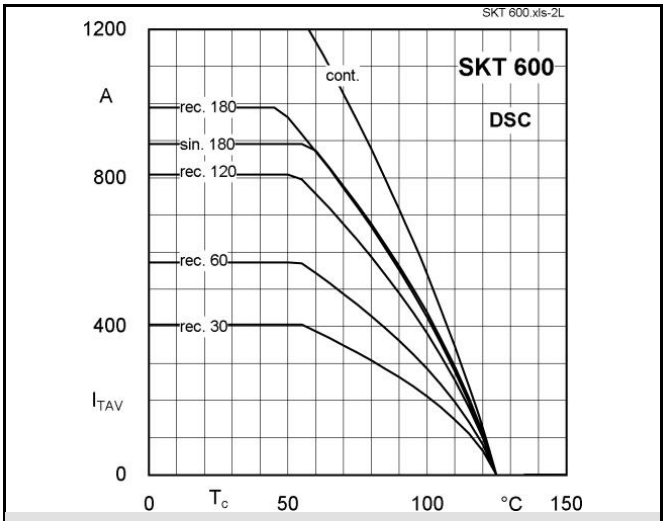


Fig. 2L Rated on-state current vs. case temperature

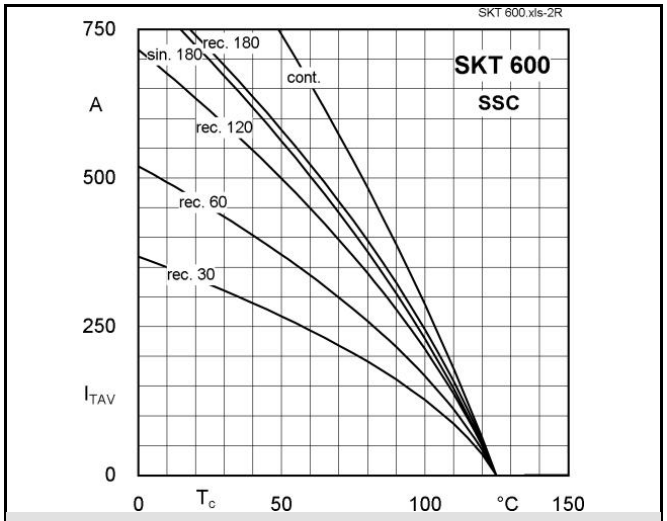


Fig. 2R Rated on-state current vs. case temperature

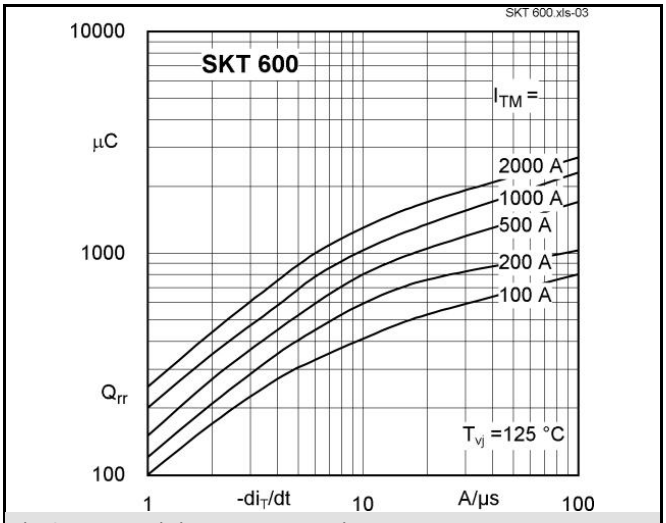


Fig. 3 Recovered charge vs. current decrease

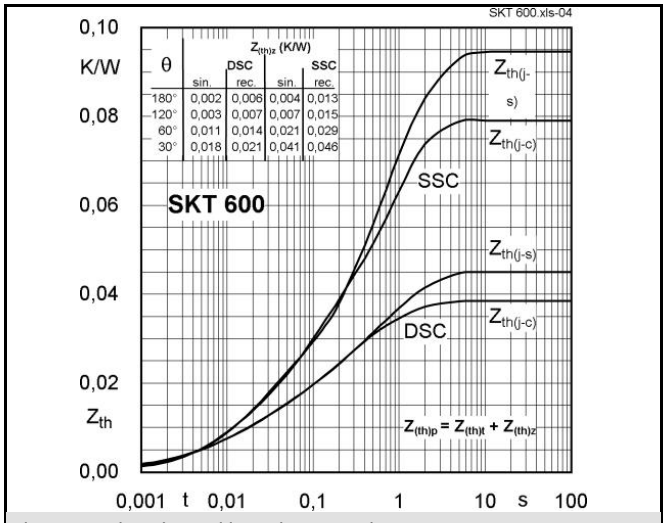


Fig. 4 Transient thermal impedance vs. time

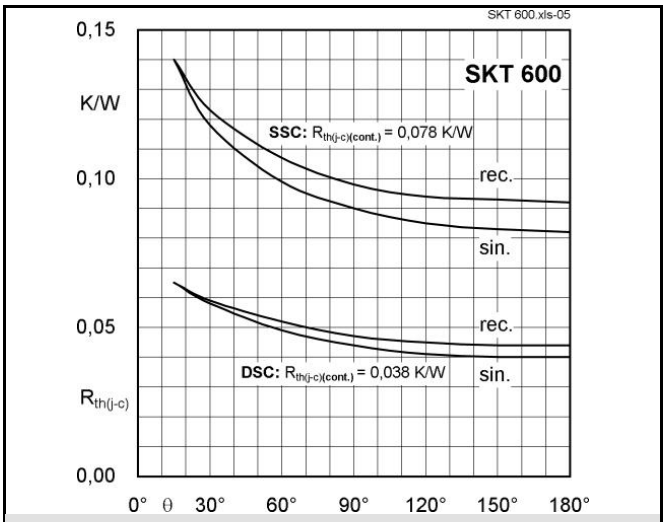


Fig. 5 Thermal resistance vs. conduction angle

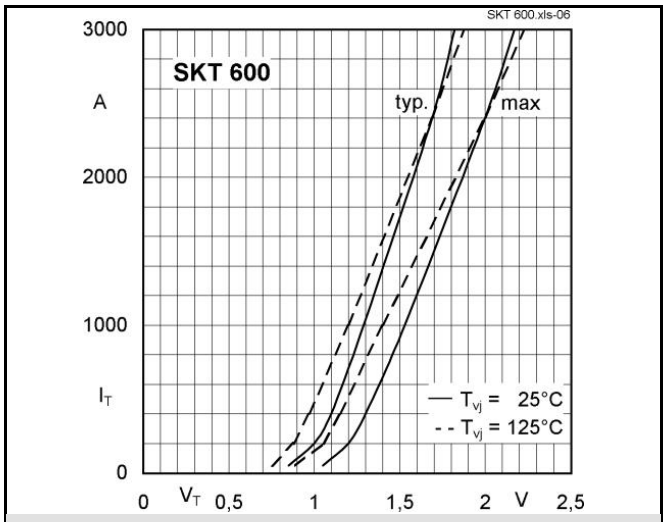


Fig. 6 On-state characteristics

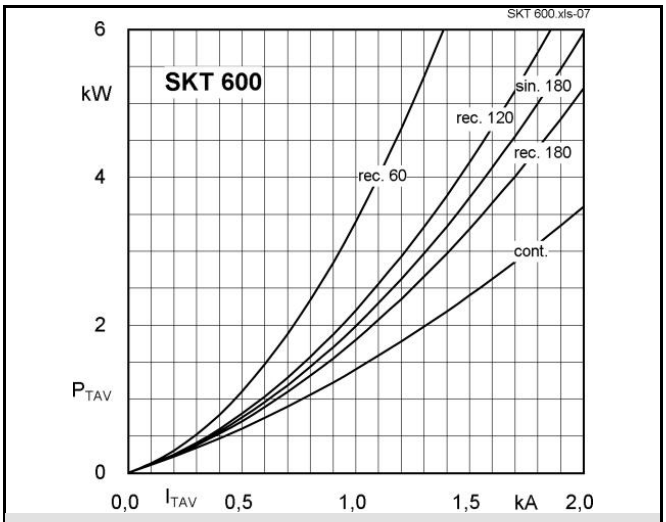


Fig. 7 Power dissipation vs. on-state current

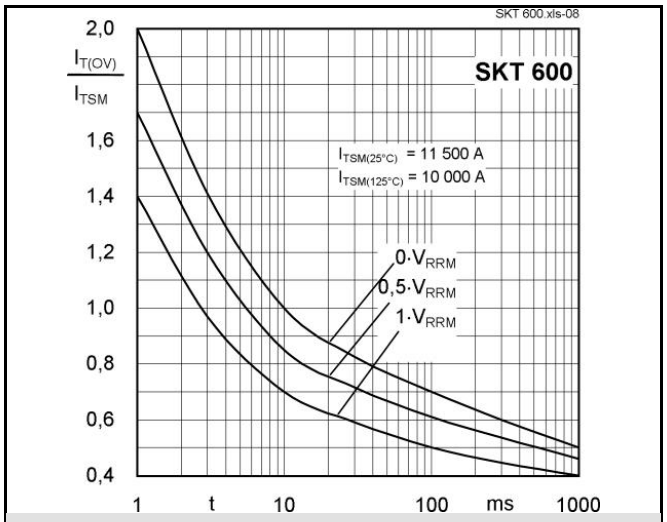


Fig. 8 Surge overload current vs. time

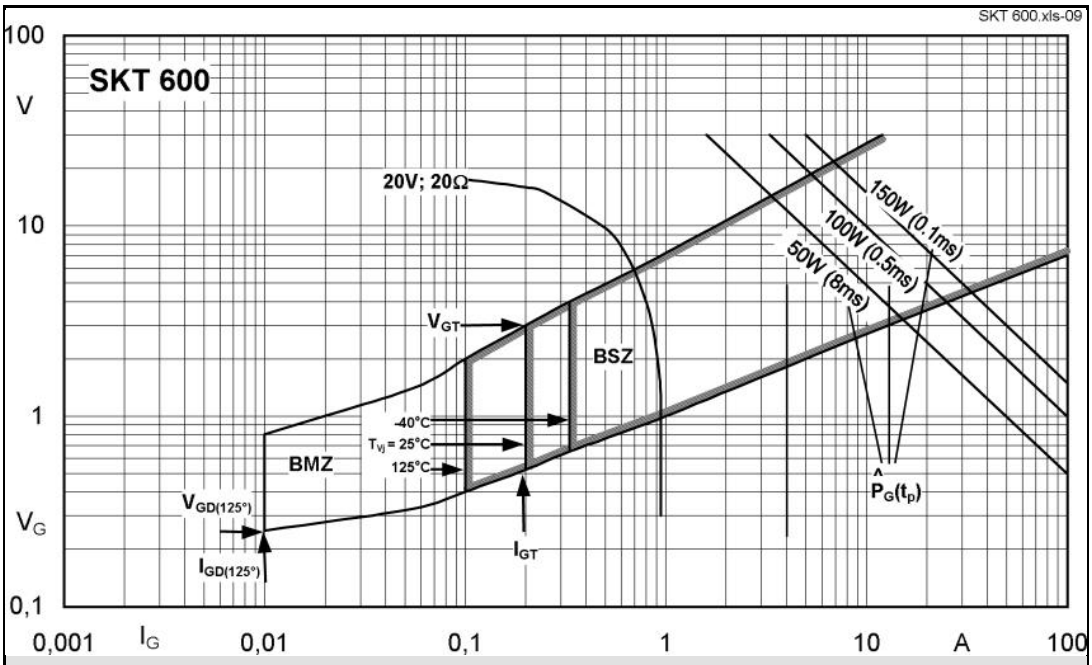
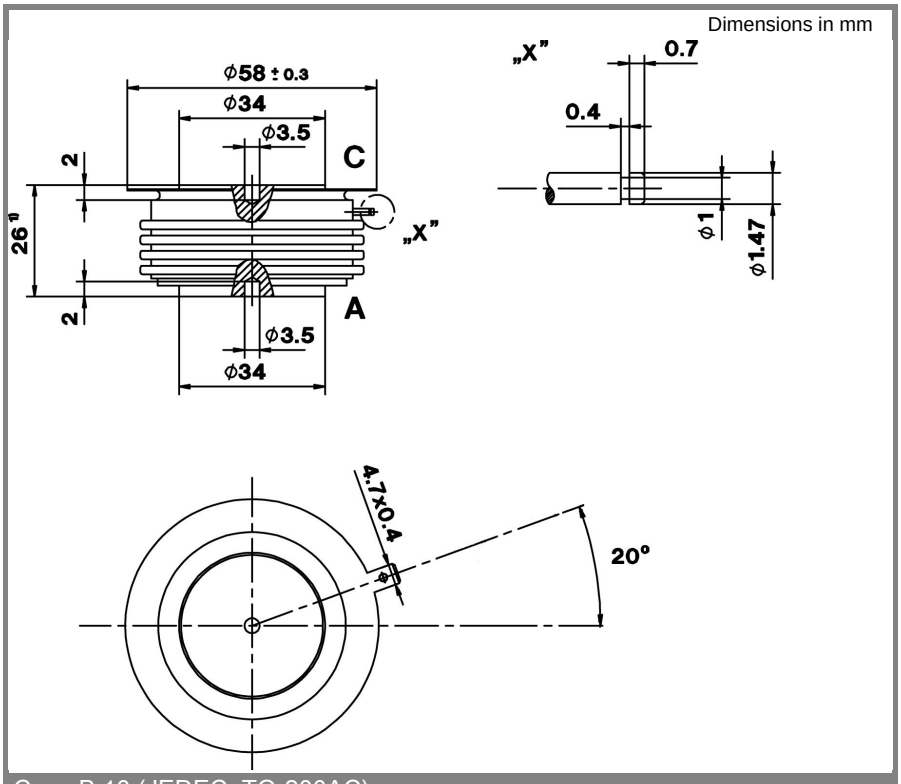
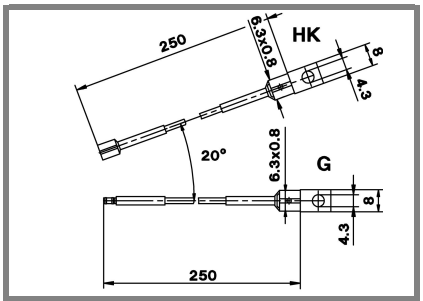


Fig. 9 Gate trigger characteristics

Dimensions in mm



Case B 10 (JEDEC: TO-200AC)



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

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.