SKT 1000

THYRISTOR BRIDGE,SCR,BRIDGE

Capsule Thyristor

Line Thyristor

SKT 1000

Features

- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- International standard case
- Off-state and reverse voltages up to 2800 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

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 2300 A (maximum value for continuous operation) I_{TAV} = 1000 A (sin. 180; DSC; T_c = 85 °C)
1300	1200	SKT 1000/12E
1700	1600	SKT 1000/16E
2300	2200	SKT 1000/22EL2
2700	2600	SKT 1000/26EL2
2900	2800	SKT 1000/28EL2

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 100 (85) °C;	710 (1000)	A
I_D	2 x P8/180; T_a = 45 °C; B2 / B6	360 / 500	A
	2 x P8/180F; T_a = 35 °C; B2 / B6	1250 /1750	A
I_{RMS}	2 x P8/180; T_a = 45 °C; W1C	400	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	19000	A
	T_{vj} = 125 °C; 10 ms	16500	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	1800000	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	1360000	A²s
V_T	T_{vj} = 25 °C; I_T = 3600 A	max. 2	V
$V_{T(TO)}$	T_{vj} = 125 °C	max. 1,14	V
r_T	T_{vj} = 125 °C	max. 0,243	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 160	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	max. 1000	V/µs
t_q	T_{vj} = 125 °C ,	100 ... 250	µs
I_H	T_{vj} = 25 °C; typ. / max.	250 / 500	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; 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. 250	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	0,021	K/W
$R_{th(j-c)}$	sin. 180; DSC / SSC	0,0225 / 0,054	K/W
$R_{th(j-c)}$	rec. 120; DSC / SSC	0,027 / 0,06	K/W
$R_{th(c-s)}$	DSC / SSC	0,005 / 0,01	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 130	°C
V_{isol}		-	V~
F	mounting force	22 ... 25	kN
a			m/s²
m	approx.	480	g
Case		B 14	

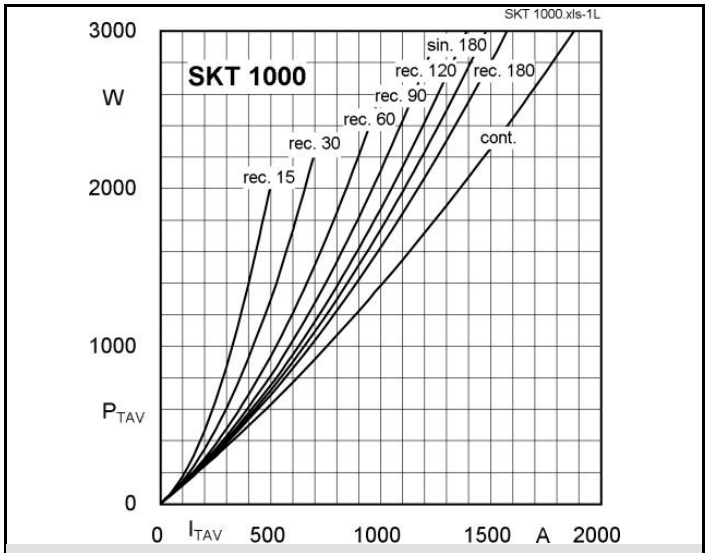


Fig. 1L Power dissipation vs. on-state current

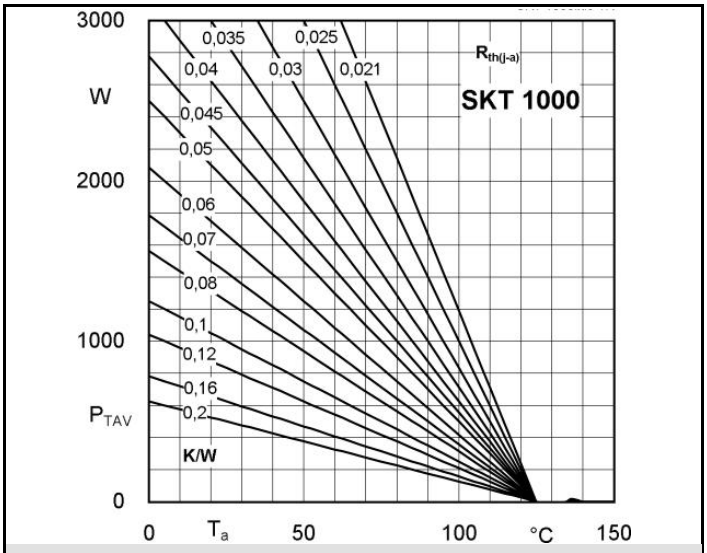


Fig. 1R Power dissipation vs. ambient temperature

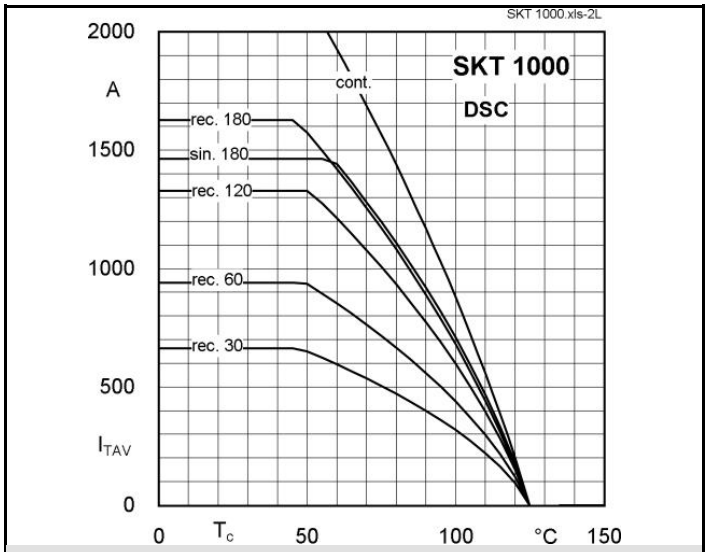


Fig. 2L Rated on-state current vs. case temperature

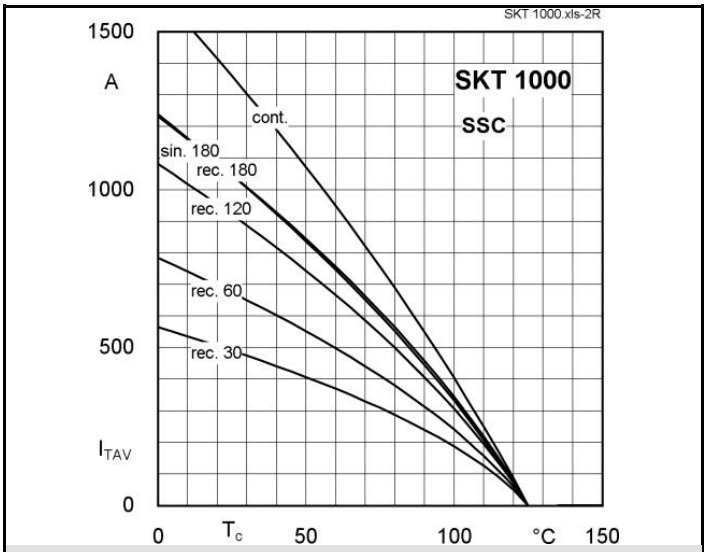


Fig. 2R Rated on-state current vs. case temperature

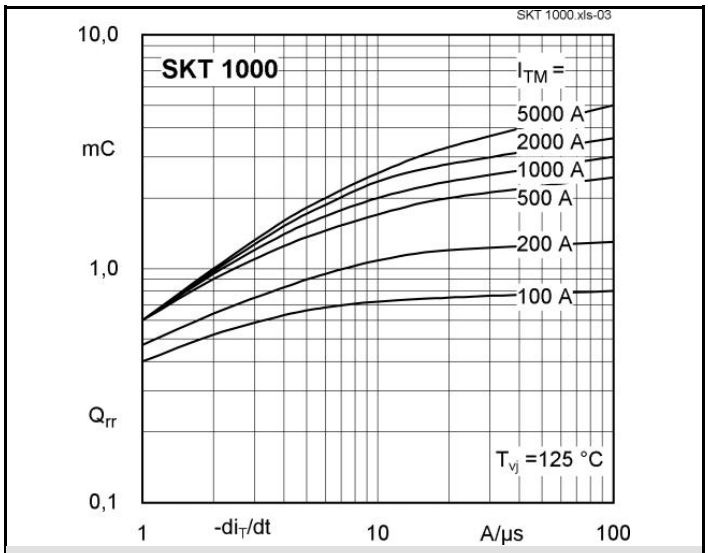


Fig. 3 Recovered charge vs. current decrease

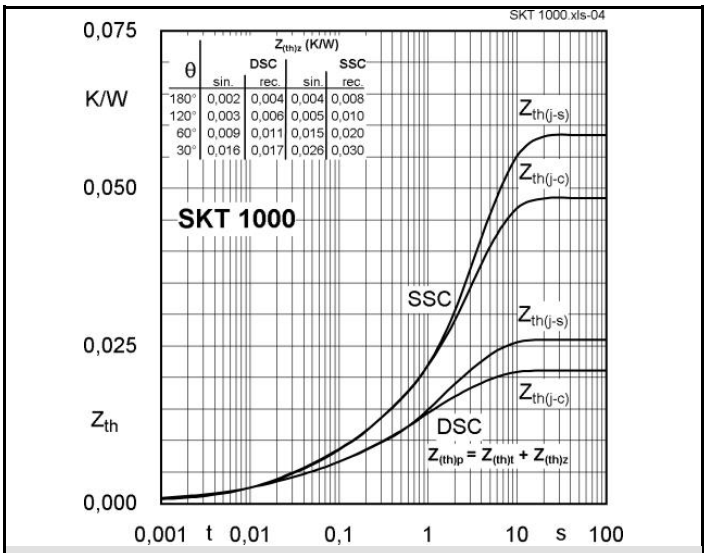


Fig. 4 Transient thermal impedance vs. time

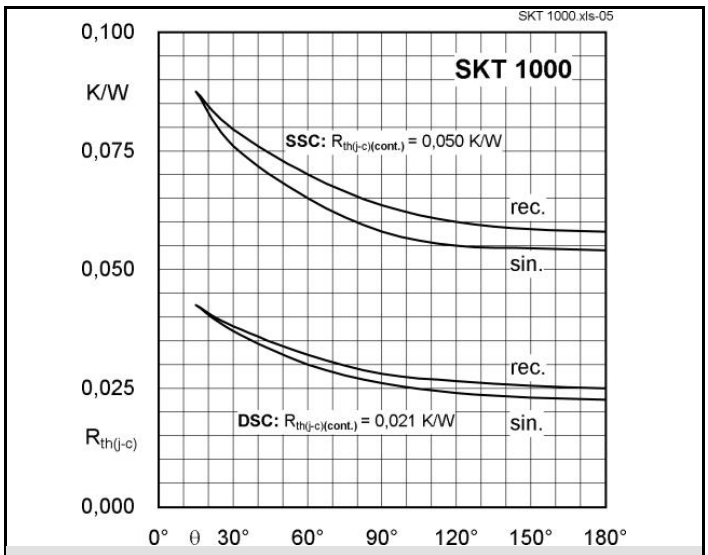


Fig. 5 Thermal resistance vs. conduction angle

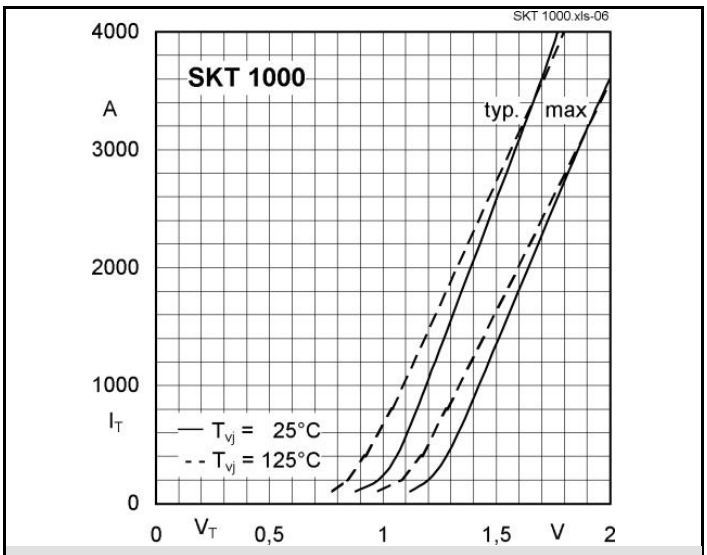


Fig. 6 On-state characteristics

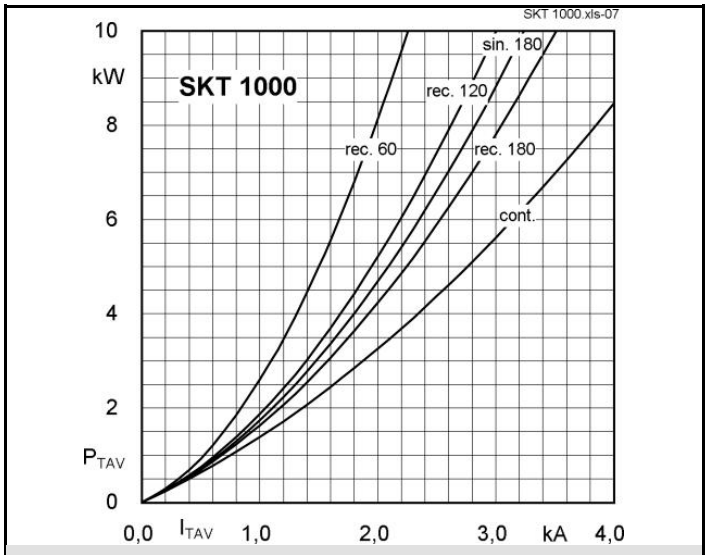


Fig. 7 Power dissipation vs. on-state current

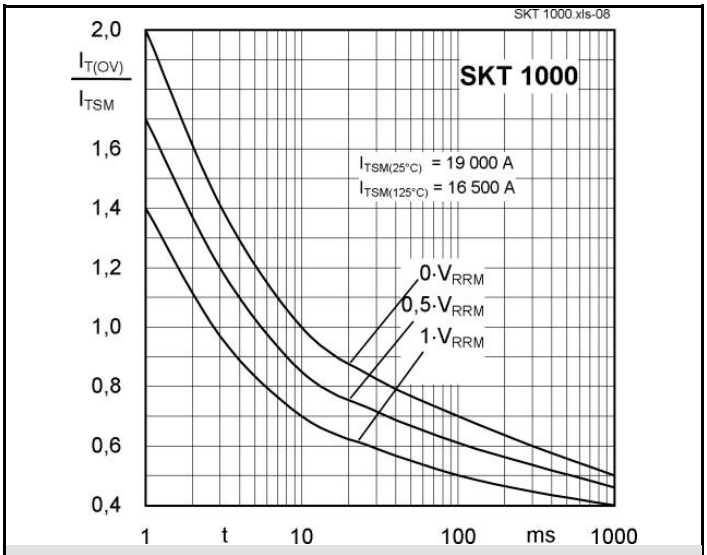


Fig. 8 Surge overload current vs. time

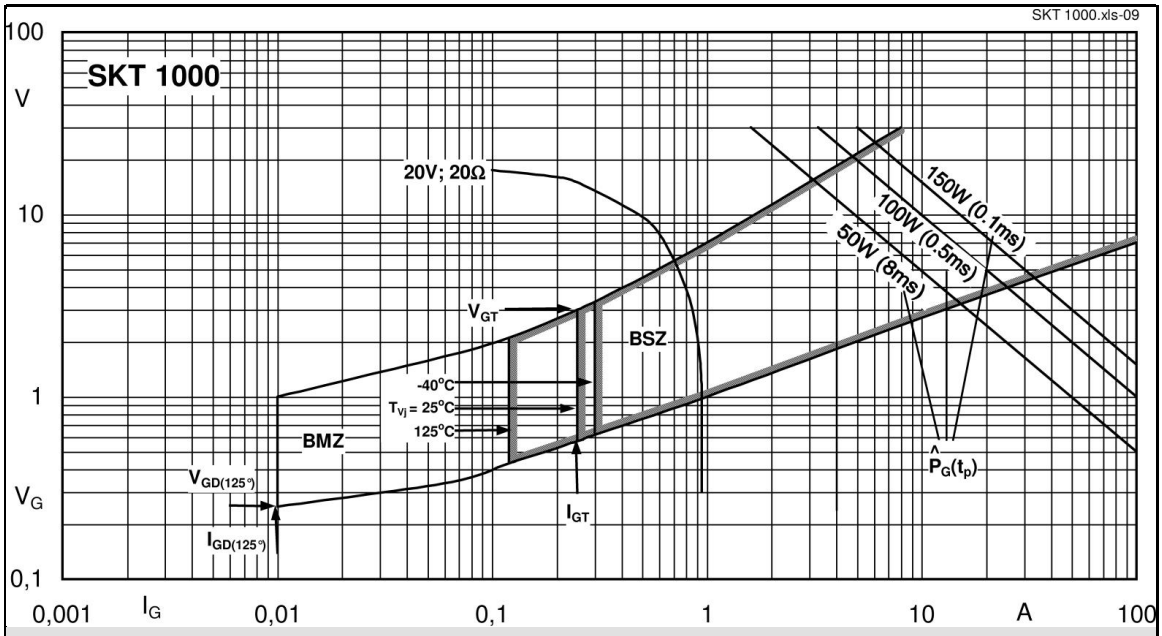
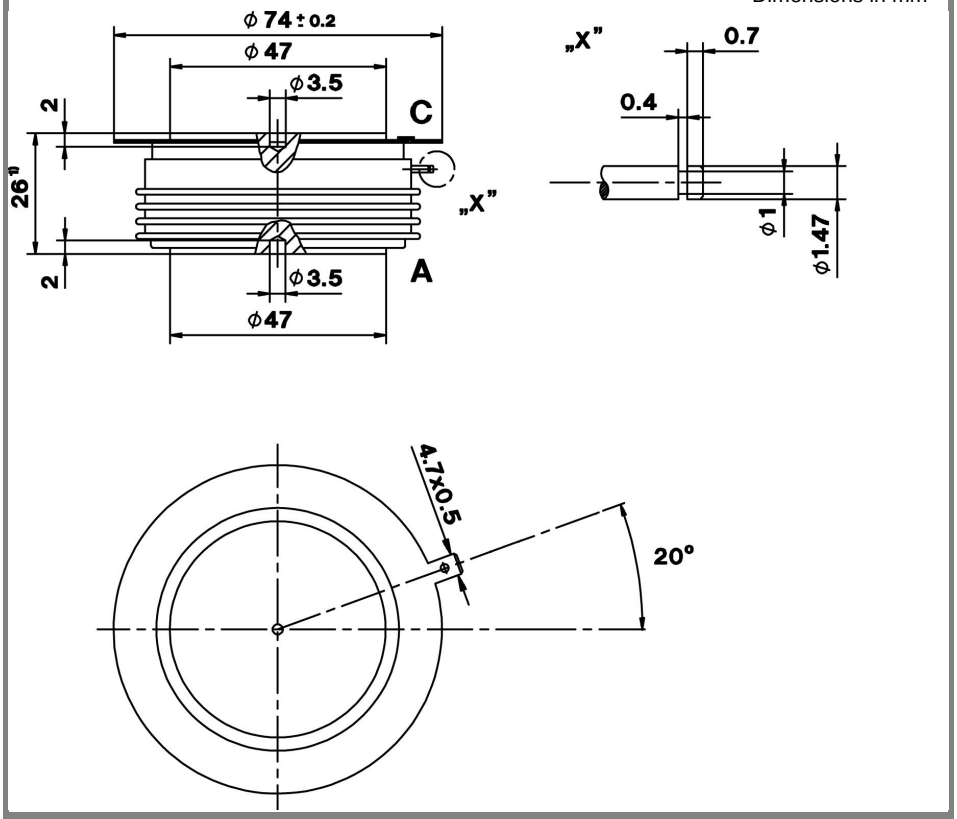
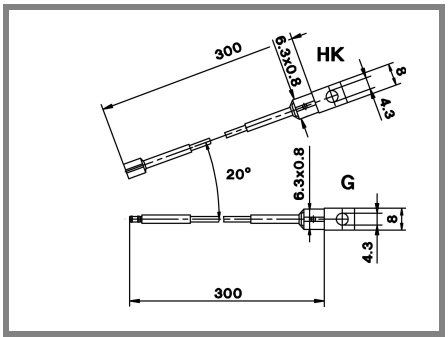


Fig. 9 Gate trigger characteristics

Dimensions in mm



Case B 14 (JEDEC: TO-200AD)



HK/Gate leads: separately available
ID-No.:33901270
(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 staff.

