

Thyristors

SKT 1000 SKT 1200



V_{RSM}	V_{RRM} V_{DRM}	$\left(\frac{dv}{dt}\right)_{cr}$	I_{TRMS} (maximum values for continuous operation)	
			2300 A	2800 A
V	V	V/ μ s	I_{TAV} (sin. 180; $T_{case} = \dots$; DSC)	
			1465 A (58 °C)	1780 A (55 °C)
500	400	500	SKT 1000/04 D	SKT 1200/04 D
900	800	500	SKT 1000/08 D	–
1300	1200	500	–	SKT 1200/12 D
		1000	SKT 1000/12 E	SKT 1200/12 E
1500	1400	1000	SKT 1000/14 E	SKT 1200/14 E
1700	1600	1000	SKT 1000/16 E	SKT 1200/16 E
1900	1800	1000	SKT 1000/18 E	SKT 1200/18 E
2300	2200	1000	SKT 1000/22 E L2	–
2700	2600	1000	SKT 1000/26 E L2	–
2900	2800	1000	SKT 1000/28 E L2	–

Symbol	Conditions	SKT 1000	SKT 1200
I_{TAV}	sin. 180; $T_{case} = 85$ °C; DSC	1000 A	1200 A
I_{TSM}	$T_{vj} = 25$ °C: 10 ms $T_{vj} = 125$ °C: 10 ms	19 000 A 16 500 A	30 000 A 25 500 A
i^2t	$T_{vj} = 25$ °C: 8,3 ... 10 ms $T_{vj} = 125$ °C: 8,3 ... 10 ms	1800 kA ² s 1360 kA ² s	4500 kA ² s 3250 kA ² s
t_{gd} t_{gr} $(di/dt)_{cr}$	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/ μ s $V_D = 0,67 \cdot V_{DRM}$ $f = 50 \dots 60$ Hz	typ. 1 μ s typ. 2 μ s 125 A/ μ s 250 mA/500 mA	
I_H	$T_{vj} = 25$ °C; typ./max.	500 mA/2 A	
I_L	$T_{vj} = 25$ °C; $R_G = 33$ Ω ; typ./max.	100 ... 250 μ s	
t_q	$T_{vj} = 125$ °C; typ.		
V_T	$T_{vj} = 25$ °C; $I_T = 3600$ A; max.	2,0 V	1,65 V
$V_{T(TO)}$	$T_{vj} = 125$ °C	1,14 V	0,95 V
r_T	$T_{vj} = 125$ °C	0,243 m Ω	0,18 m Ω
I_{DD}, I_{RD}	$T_{vj} = 125$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	100 mA	100 mA
V_{GT}	$T_{vj} = 25$ °C	5 V	
I_{GT}	$T_{vj} = 25$ °C	250 mA	
V_{GD}	$T_{vj} = 125$ °C	0,25 V	
I_{GD}	$T_{vj} = 125$ °C	10 mA	
R_{thjc}	cont. sin. 180; DSC/SSC rec. 120; DSC/SSC	0,021 °C/W 0,0225/0,054 °C/W 0,027/0,060 °C/W 0,005/0,010 °C/W	
R_{thch}	DSC/SSC	– 40 ... +125 °C – 40 ... +130 °C	
T_{vj} T_{stg}			
F	SI units	22 ... 25 kN	
w	US units	5000 ... 5600 lbs. 550 g	
Case		B 14	

Features

- Hermetic metal cases with ceramic insulators
- Capsule packages for double sided cooling
- International standard cases
- Off-state and reverse voltages up to 2800 V

Typical Applications

- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)

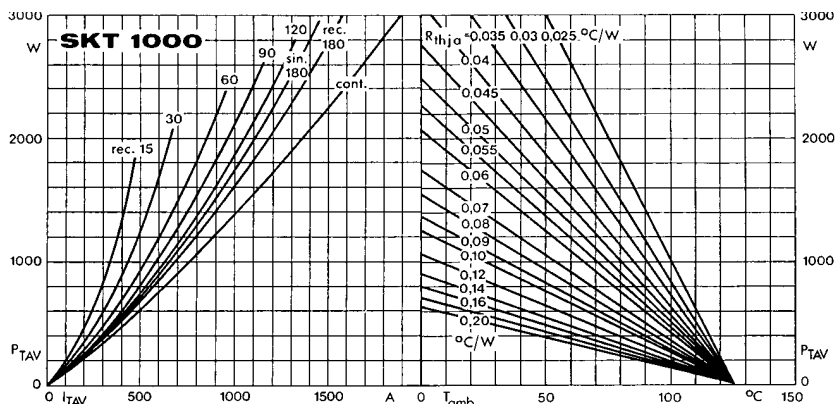


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

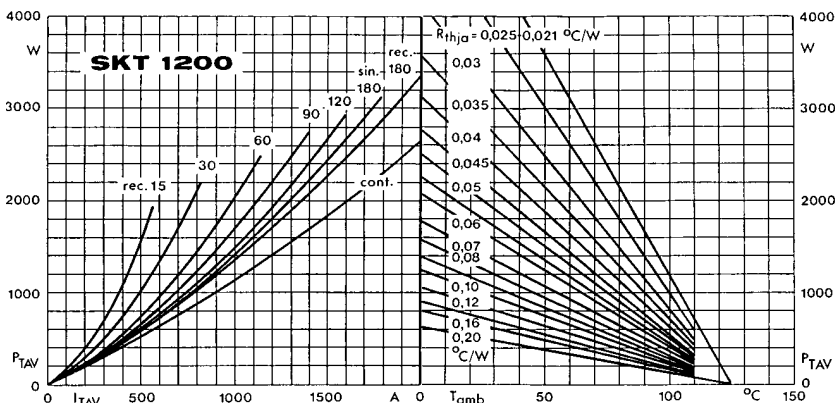


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

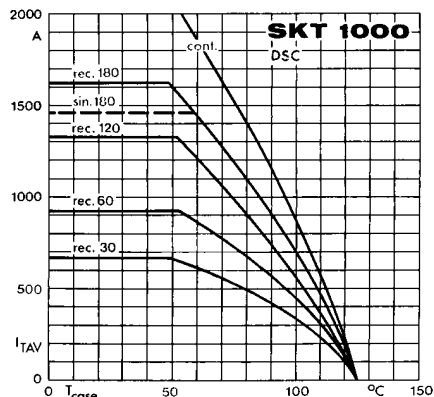


Fig. 2 a Rated on-state current vs. case temperature

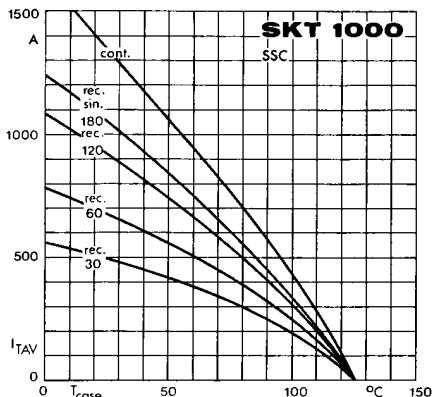


Fig. 2 b Rated on-state current vs. case temperature

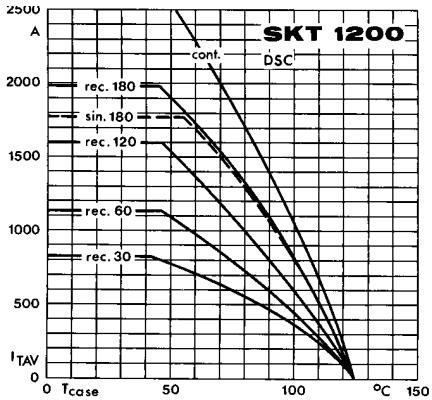


Fig. 2 c Rated on-state current vs. case temperature

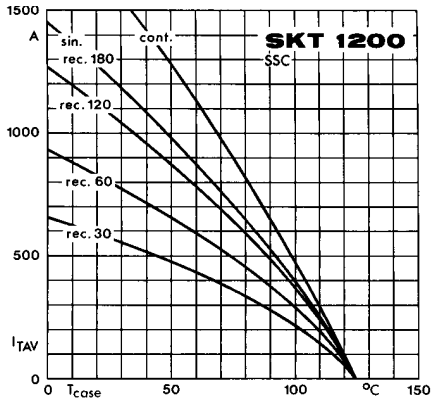


Fig. 2 d Rated on-state current vs. case temperature

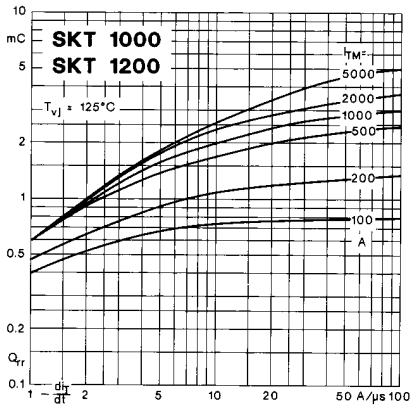


Fig. 3 Recovered charge vs. current decrease

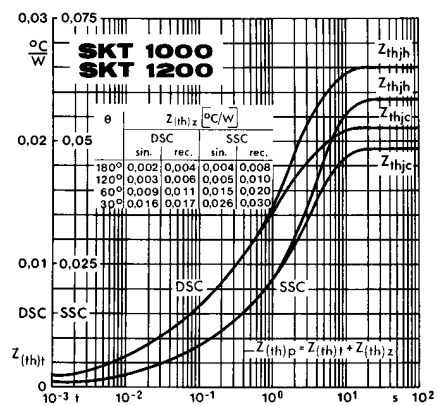


Fig. 4 Transient thermal impedance vs. time

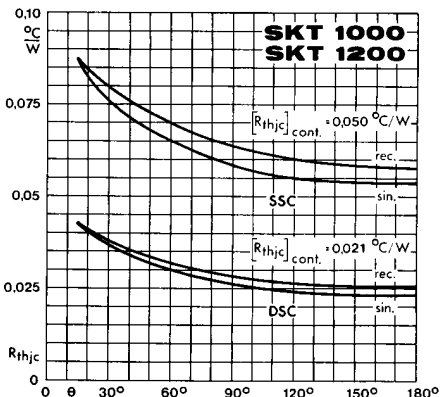


Fig. 5 Thermal resistance vs. conduction angle

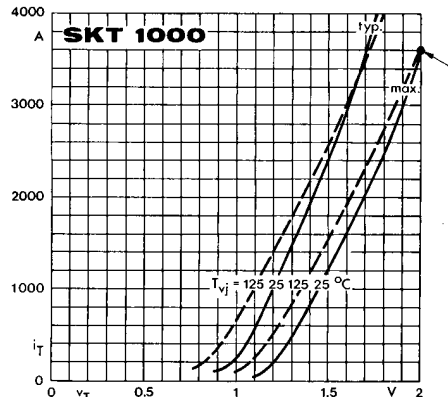


Fig. 6 a On-state characteristics

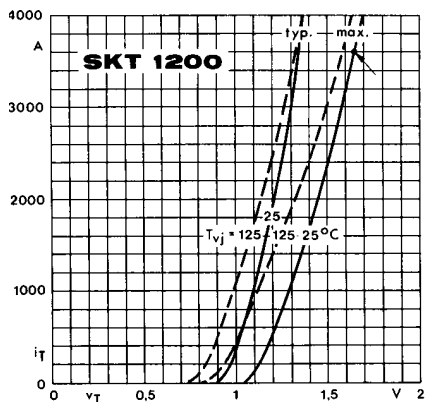


Fig. 6 b On-state characteristics

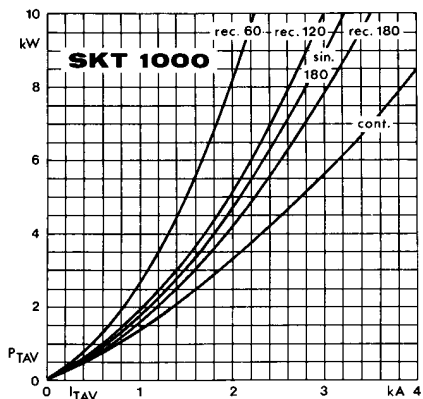


Fig. 7 a Power dissipation vs. on-state current

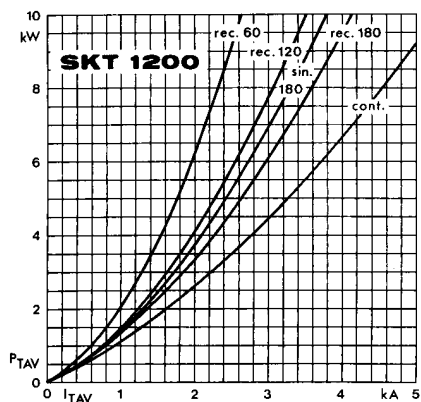


Fig. 7 b Power dissipation vs. on-state current

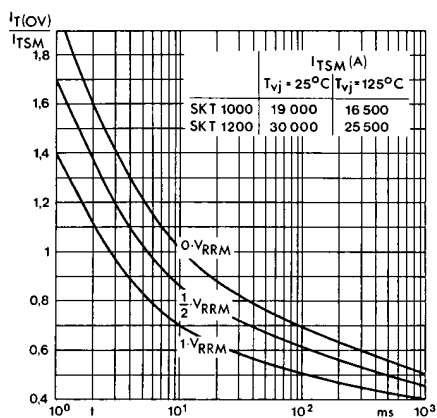


Fig. 8 Surge overload current vs. time

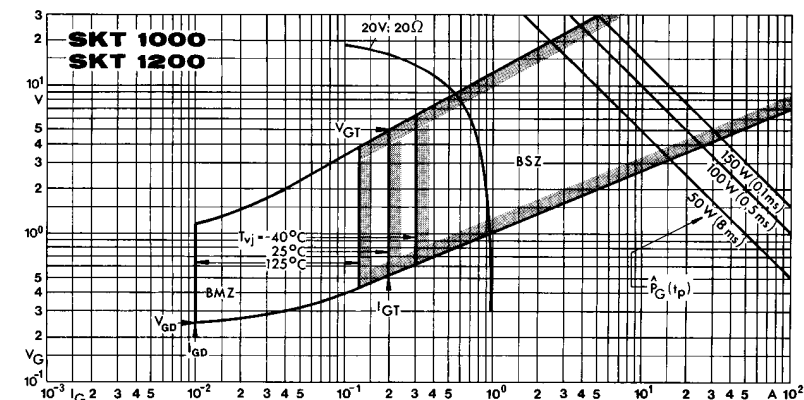
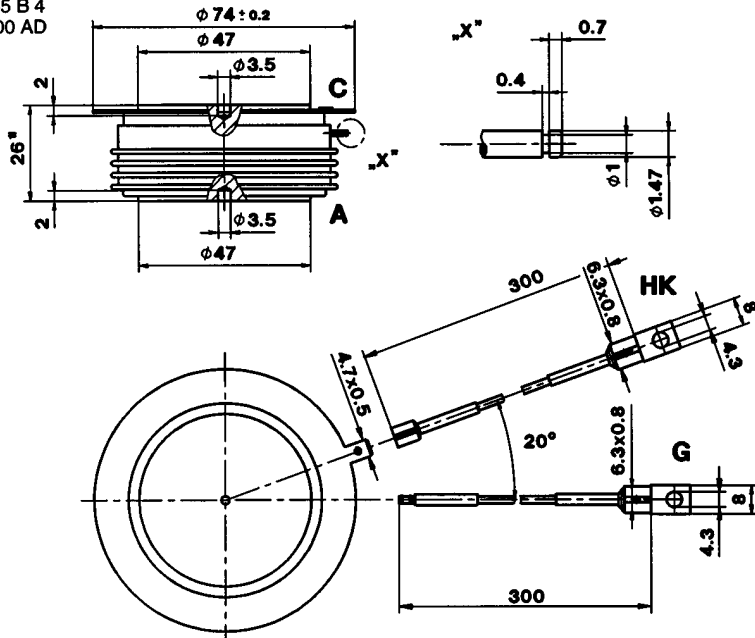


Fig. 9 Gate trigger characteristics

SKT 1000
SKT 1200

Case B 14

DIN 41814: 155 B 4
JEDEC: TO-200 AD



1) SKT 1000/... L 2: 27,5 mm

C: Cathode terminal
A: Anode terminal
G: Gate terminal (yellow sleeve)
HK: Auxiliary cathode terminal (red sleeve)

Dimensions in mm

