SEMIKRON

V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation)	
			2300 A	2800 A
			I_{TAV} (sin. 180; T_{case} = . . .; DSC)	
V	V	V/µs	1465 A (58 °C)	1780 A (55 °C)
1300	1200	1000	**SKT 1000/12 E L3**	**SKT 1200/12 E L3**
1500	1400	1000	–	**SKT 1200/14 E L3**
1700	1600	1000	**SKT 1000/16 E L3**	**SKT 1200/16 E L3**
1900	1800	1000	–	**SKT 1200/18 E L3**
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	Units
I_{TAV}	sin. 180; T_{case} = 85 °C; DSC	1000	1200	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	19 000	30 000	A
	T_{vj} = 125 °C; 10 ms	16 500	25 500	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	1 800	4 500	kA^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	1 360	3 250	kA^2s
t_{gd}	T_{vj} = 25 °C I_G = 1 A di_G/dt = 1 A/µs	typ. 1		µs
t_{gr}	V_D = 0,67 · V_{DRM}	typ. 2		µs
$(di/dt)_{cr}$	f = 50 ... 60 Hz	125		A/µs
I_H	T_{vj} = 25 °C; typ./max.	250 / 500		mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ./max.	0,5 / 2		A
t_q	T_{vj} = 125 °C; typ.	100 ... 250		µs
V_T	T_{vj} = 25 °C; I_T = 3600 A; max.	2,0	1,65	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,14	0,95	V
r_T	T_{vj} = 125 °C	0,243	0,18	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM} V_{DD} = V_{DRM}	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.;	0,021		°C/W
	sin. 180; DSC/SSC	0,0225 / 0,054		°C/W
	rec. 120; DSC/SSC	0,027 / 0,060		°C/W
R_{thch}	DSC/SSC	0,005 / 0,010		°C/W
T_{vj}		– 40 ... + 125		°C
T_{stg}		– 40 ... + 130		°C
F	SI units	22 ... 25		kN
	US units	5000 ... 5600		lbs.
w		510		g
Case		B 14 A		

Thyristors

SKT 1000
SKT 1200

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
- 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)

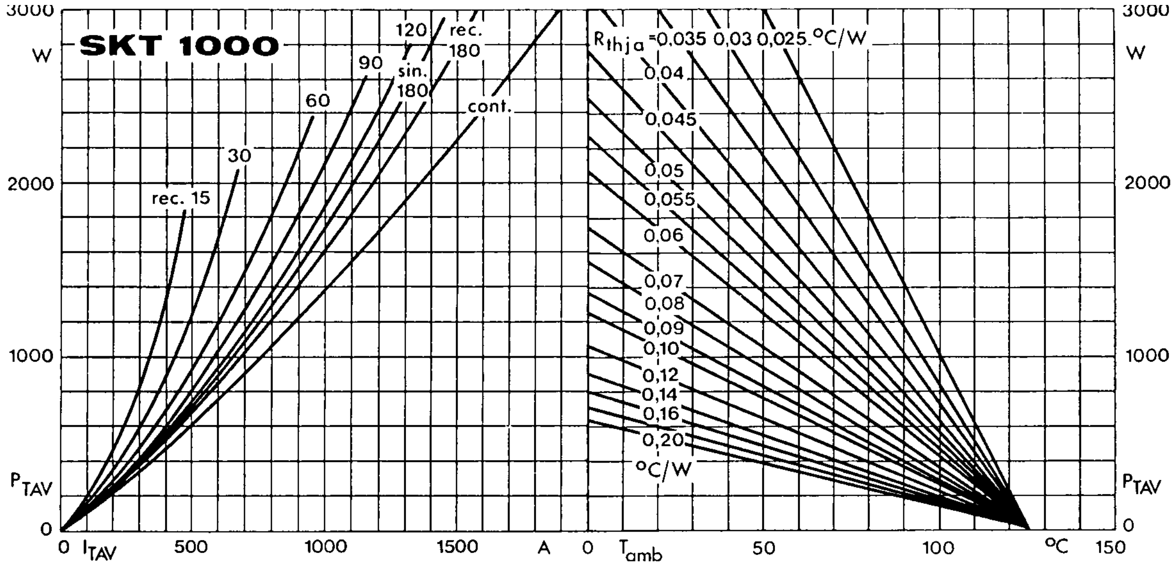


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

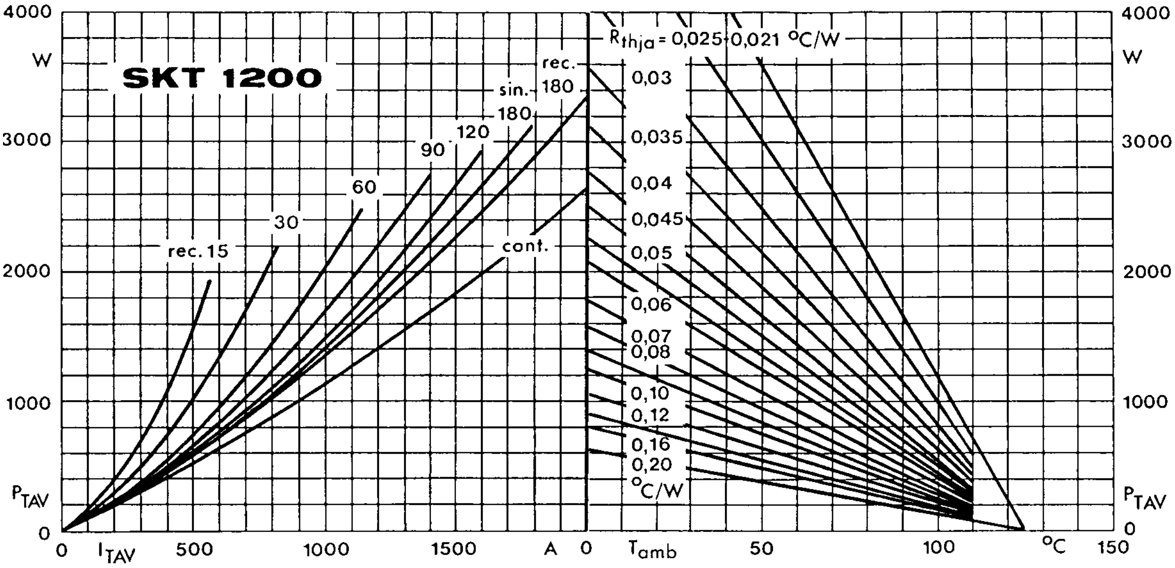


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

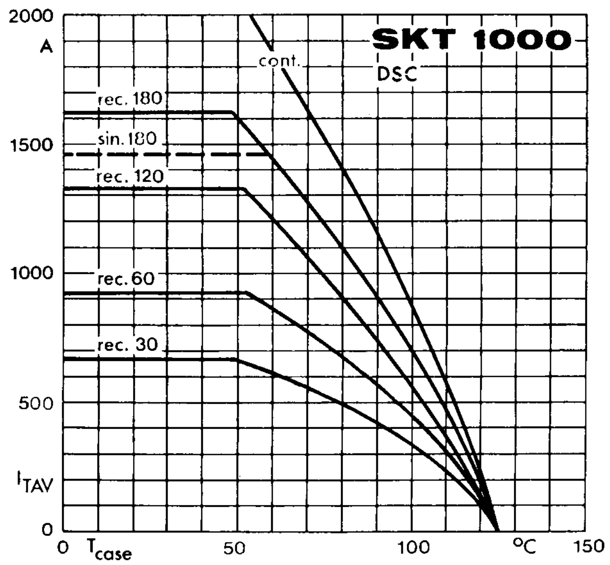


Fig. 2 a Rated on-state current vs. case temperature

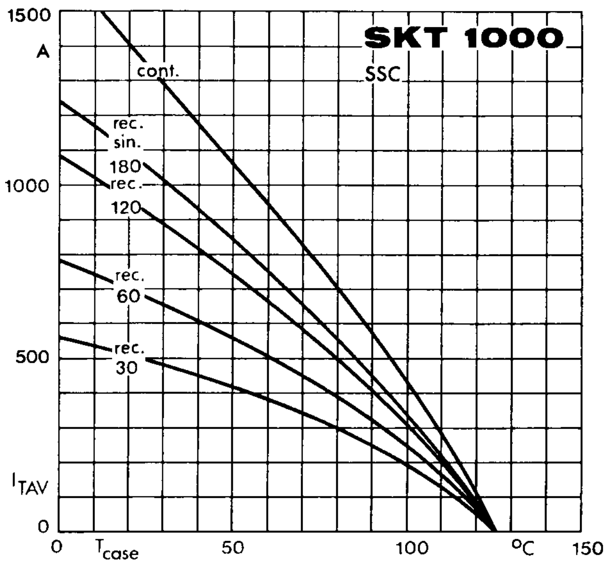


Fig. 2 b Rated on-state current vs. case temperature

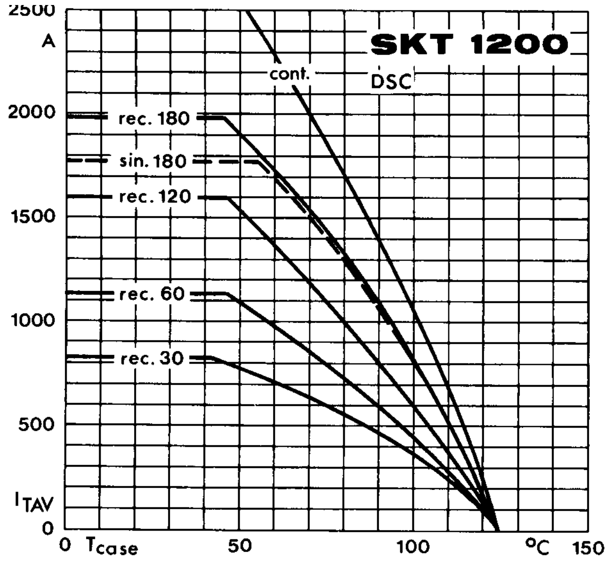


Fig. 2 c Rated on-state current vs. case temperature

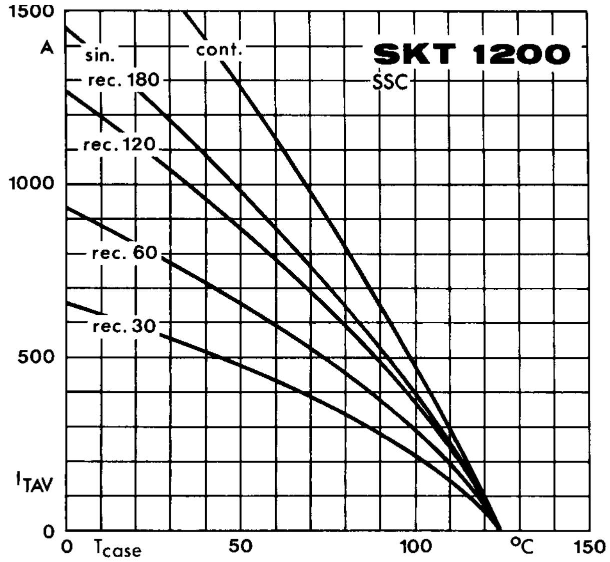


Fig. 2 d Rated on-state current vs. case temperature

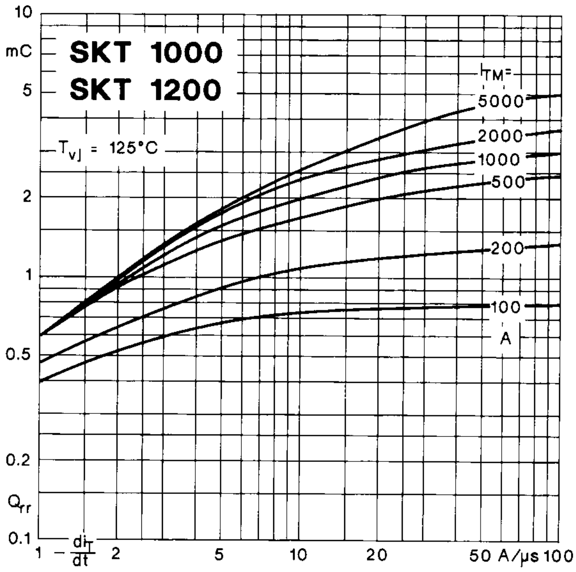


Fig. 3 Recovered charge vs. current decrease

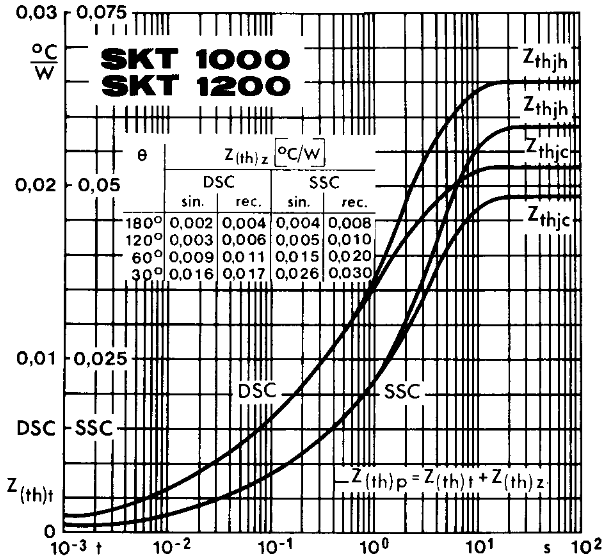


Fig. 4 Transient thermal impedance vs. time

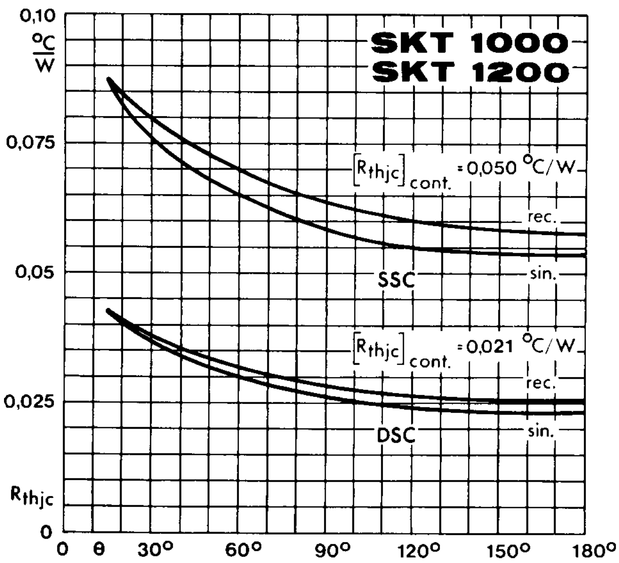


Fig. 5 Thermal resistance vs. conduction angle

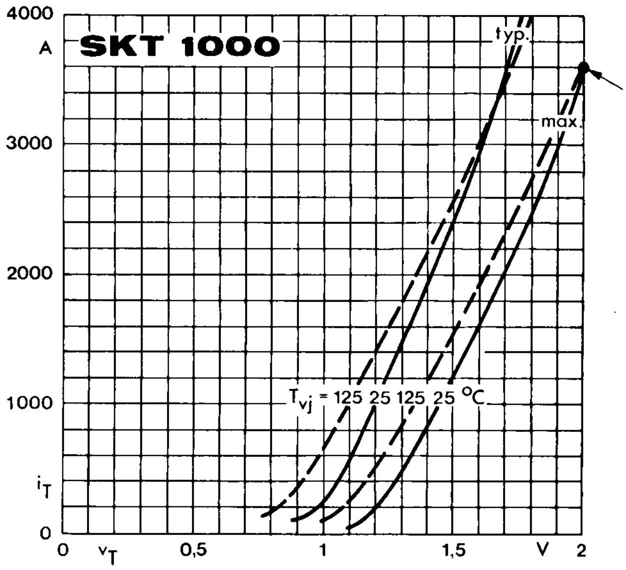


Fig. 6 a On-state characteristics

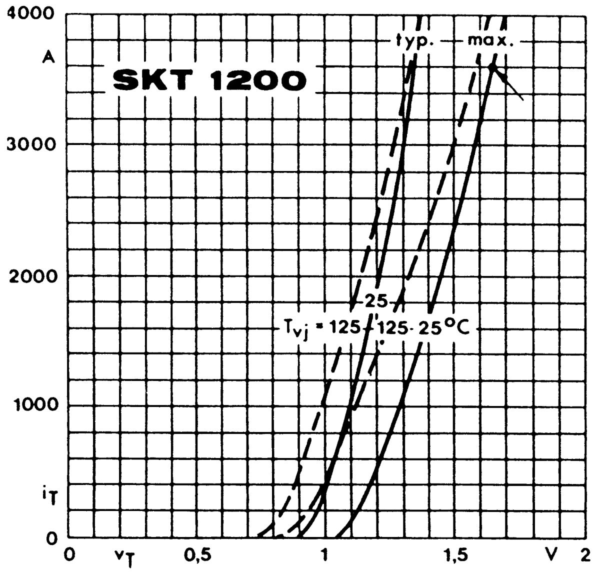


Fig. 6 b On-state characteristics

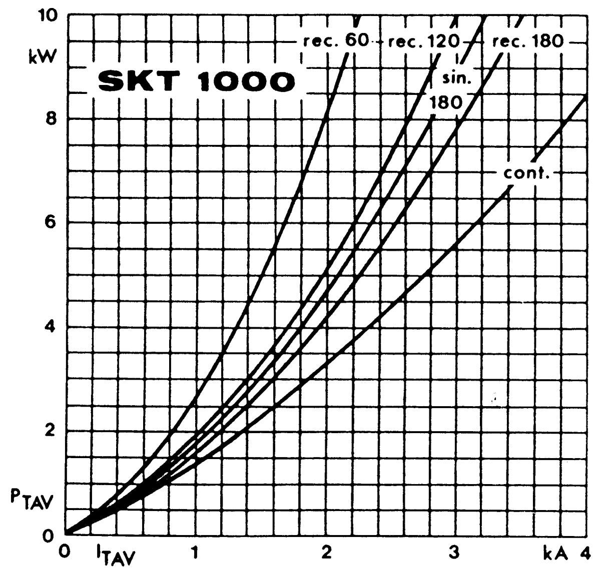


Fig. 7 a Power dissipation vs. on-state current

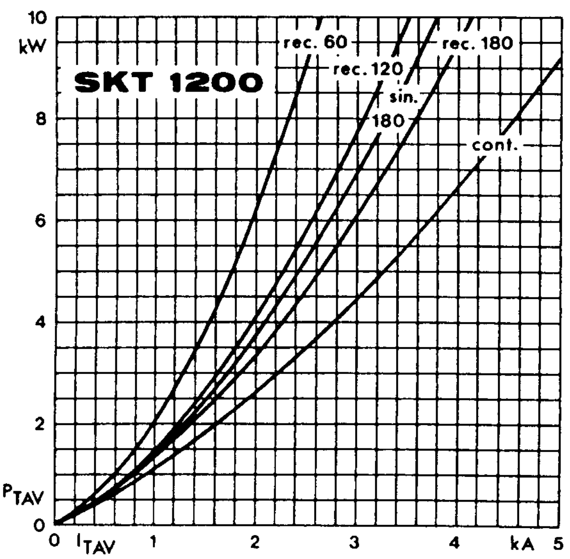


Fig. 7 b Power dissipation vs. on-state current

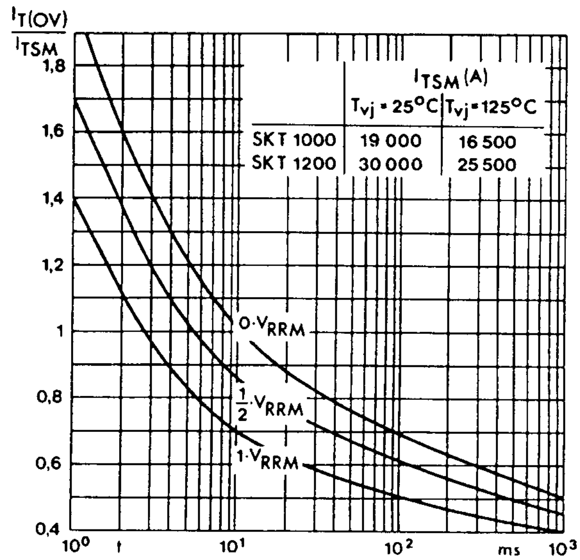


Fig. 8 Surge overload current vs. time

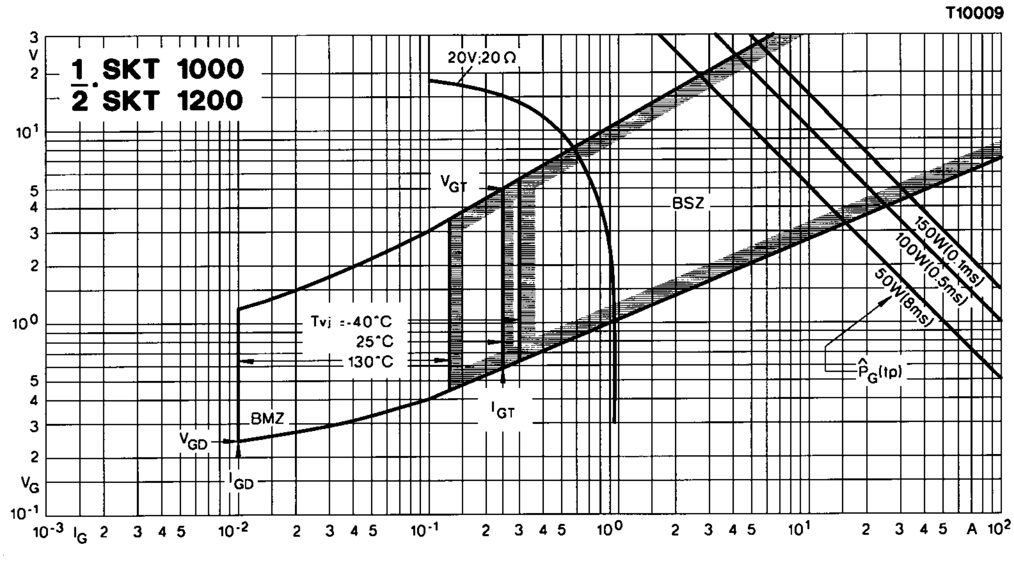
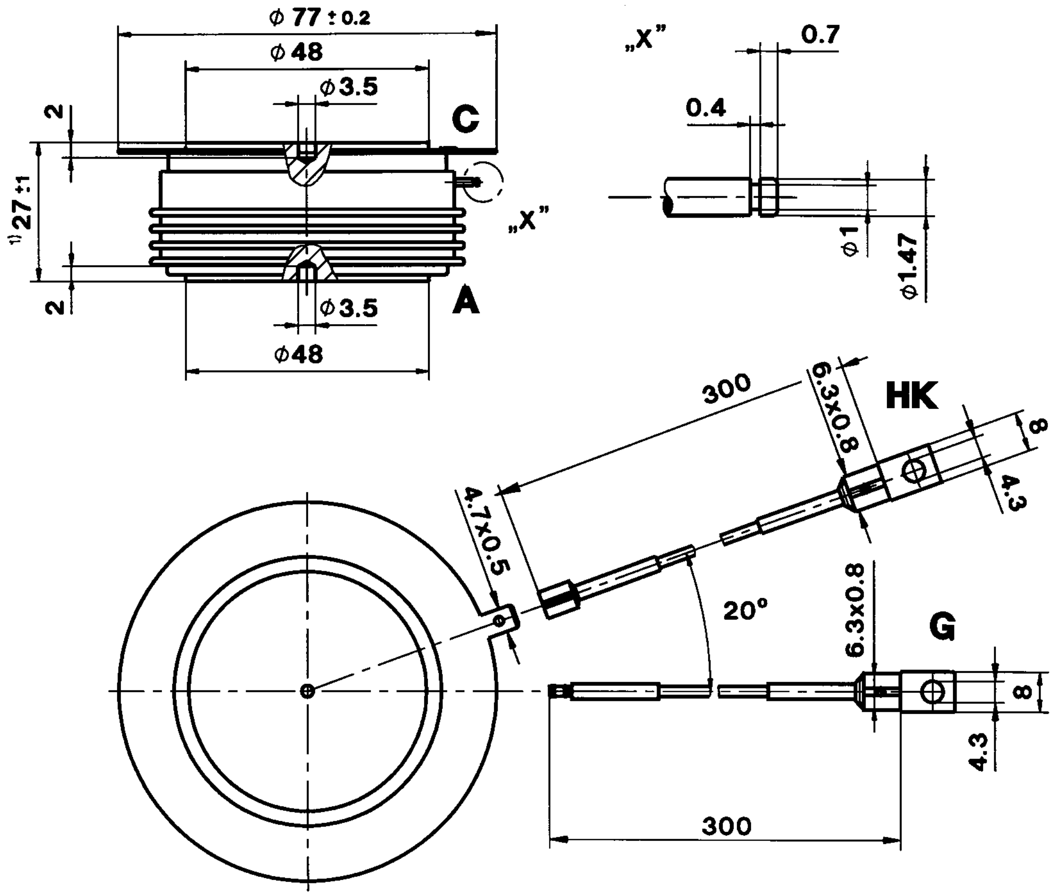


Fig. 9 Gate trigger characteristics

SKT 1000/. . . L3
SKT 1200/. . . L3

Case B 14 A

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



Dimensions in mm

1) SKT 1000/. . . L2: 27,5 mm

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

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