SEMIKRON

V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation)	
			600 A	700 A
			I_{TAV} (sin. 180; T_{case} = . . .; DSC)	
V	V	V/µs	380 A (60 °C)	450 A (57 °C)
500	400	1000	**SKT 240/04 E**	**SKT 340/04 D**
900	800	1000	**SKT 240/08 E**	**SKT 340/08 E**
1300	1200	1000	**SKT 240/12 E**	**SKT 340/12 E**
1500	1400	1000	**SKT 240/14 E**	**SKT 340/14 E**
1700	1600	1000	**SKT 240/16 E**	**SKT 340/16 E**
1900	1800	1000	**SKT 240/18 E**	**SKT 340/18 E**

Symbol	Conditions	SKT 240	SKT 340	Units
I_{TAV}	sin. 180; (T_{case} = . . .); DSC	240 (92)	340 (82)	A °C
I_{TSM}	T_{vj} = 25 °C; 10 ms	5 000	5 700	A
	T_{vj} = 125 °C; 10 ms	4 500	5 200	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	125 000	162 000	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	101 000	135 000	A^2s
t_{gd}	T_{vj} = 25 °C I_G = 1 A di_G/dt = 1 A/µs	typ. 1		µs
t_{gr}	$V_D = 0{,}67 \cdot V_{DRM}$	typ. 2		µs
$(di/dt)_{cr}$	f = 50 ... 60 Hz	125		A/µs
I_H	T_{vj} = 25 °C; typ./max.	150 / 400		mA
I_L	T_{vj} = 25 °C; typ./max.	0,3 / 1		A
t_q	T_{vj} = 125 °C; typ.	50 ... 150		µs
V_T	T_{vj} = 25 °C; I_T = 1000 A; max.	2,3	1,9	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,0	1,0	V
r_T	T_{vj} = 125 °C	1,4	0,9	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; $V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$	40	40	mA
V_{GT}	T_{vj} = 25 °C	2		V
I_{GT}	T_{vj} = 25 °C	150		mA
V_{GD}	T_{vj} = 125 °C	0,25		V
I_{GD}	T_{vj} = 125 °C	10		mA
R_{thjc}	cont.; DSC	0,070		°C/W
	sin. 180; DSC/SSC	0,072 / 0,151		°C/W
	rec. 120; DSC/SSC	0,080 / 0,168		°C/W
R_{thch}	DSC/SSC	0,020 / 0,040		°C/W
T_{vj}		– 40 ... + 125		°C
T_{stg}		– 40 ... + 130		°C
F	SI units	4 ... 5		kN
	US units	900 ... 1100		lbs.
w		61		g
Case	→ page B 3 – 32	B 8		

Thyristors

SKT 240
SKT 340

Features

- Hermetic metal cases with ceramic insulators
- Capsule packages for double sided cooling
- Shallow design with single sided cooling
- International standard cases
- Off-state and reverse voltages up to 1800 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)

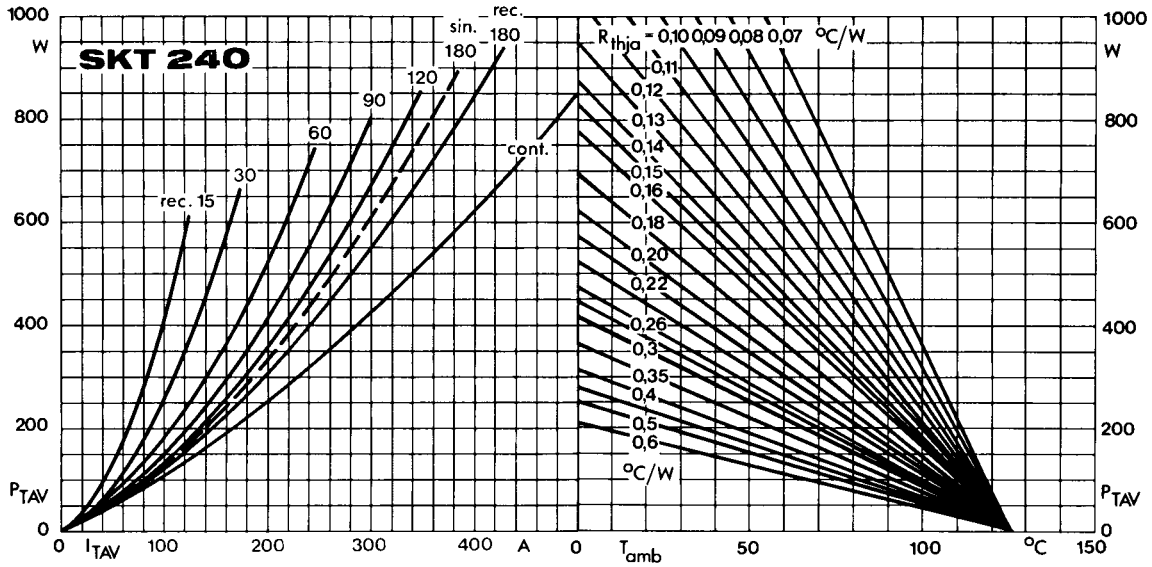


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

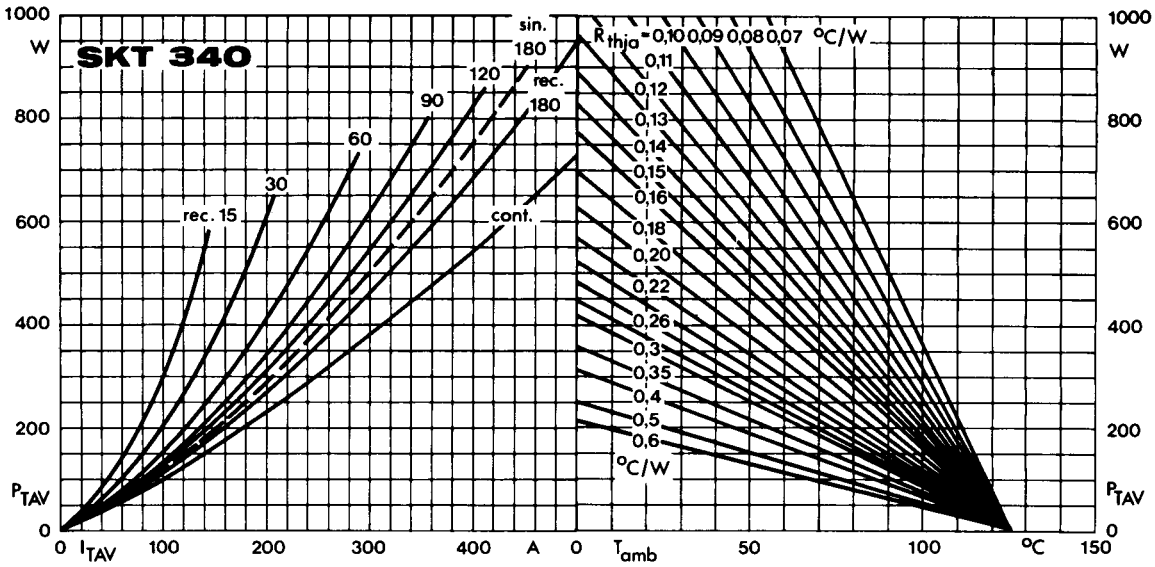


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

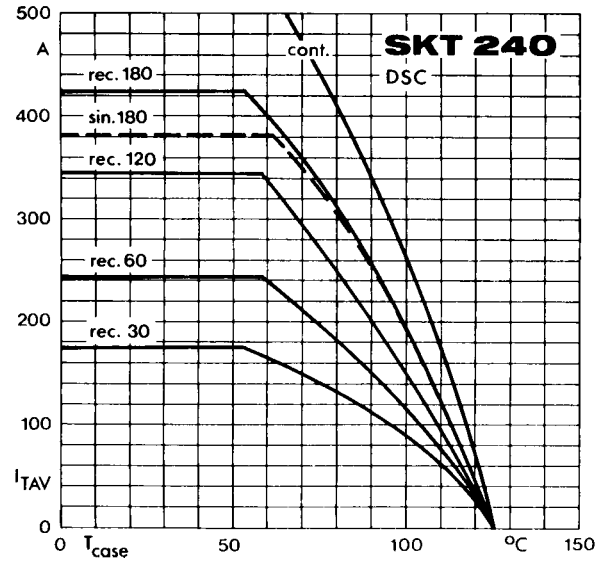


Fig. 2 a Rated on-state current vs. case temperature

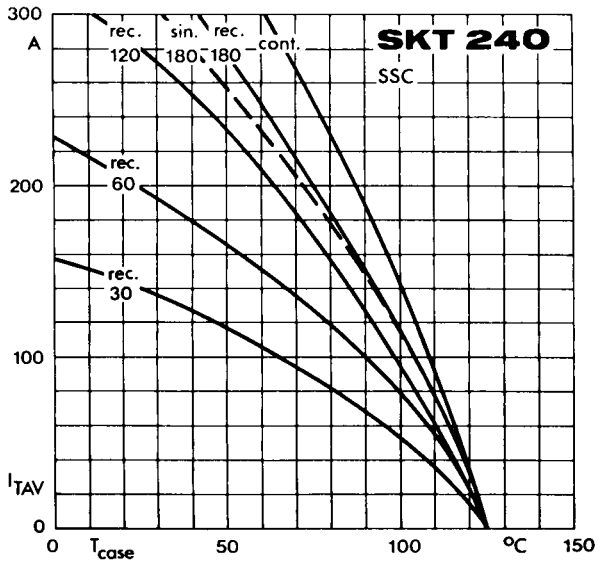


Fig. 2 b Rated on-state current vs. case temperature

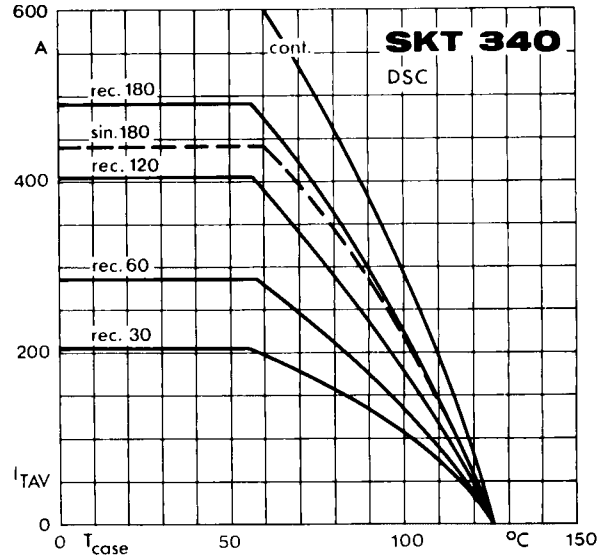


Fig. 2 c Rated on-state current vs. case temperature

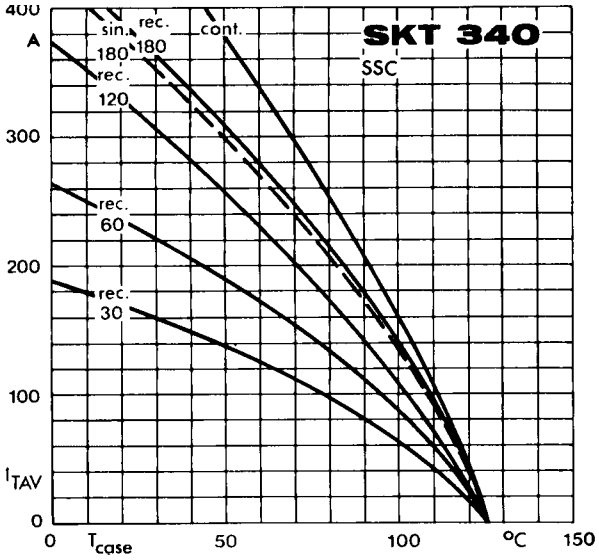


Fig. 2 d Rated on-state current vs. case temperature

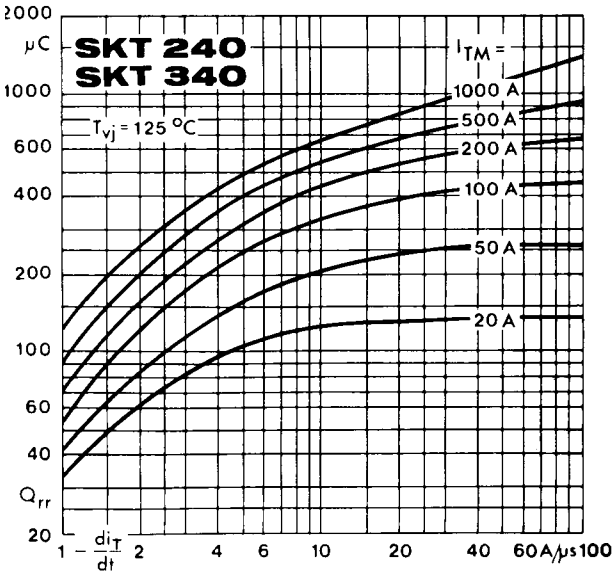
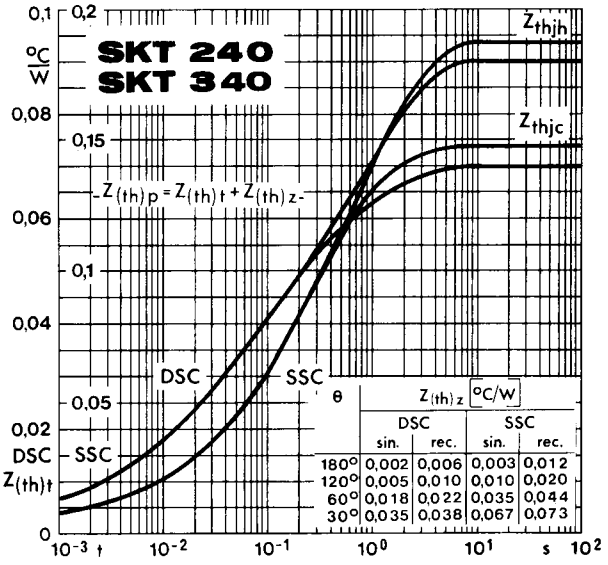


Fig. 3 Recovered charge vs. current decrease



θ	$Z_{(th)z}$ °C/W			
	DSC		SSC	
	sin.	rec.	sin.	rec.
180°	0,002	0,006	0,003	0,012
120°	0,005	0,010	0,010	0,020
60°	0,018	0,022	0,035	0,044
30°	0,035	0,038	0,067	0,073

Fig. 4 Transient thermal impedance vs. time

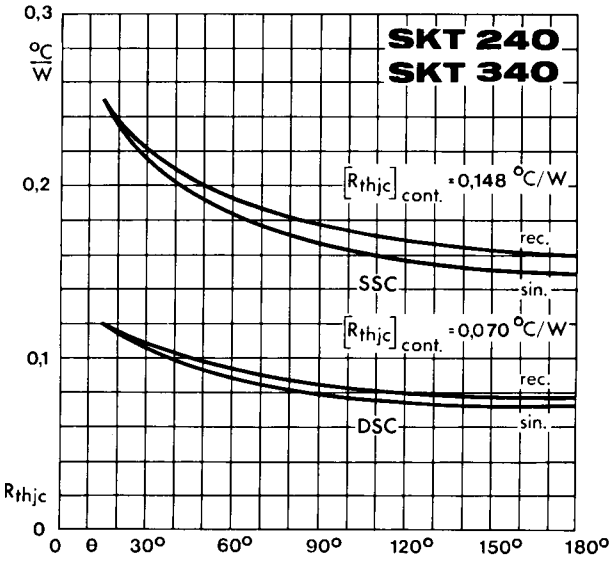


Fig. 5 Thermal resistance vs. conduction angle

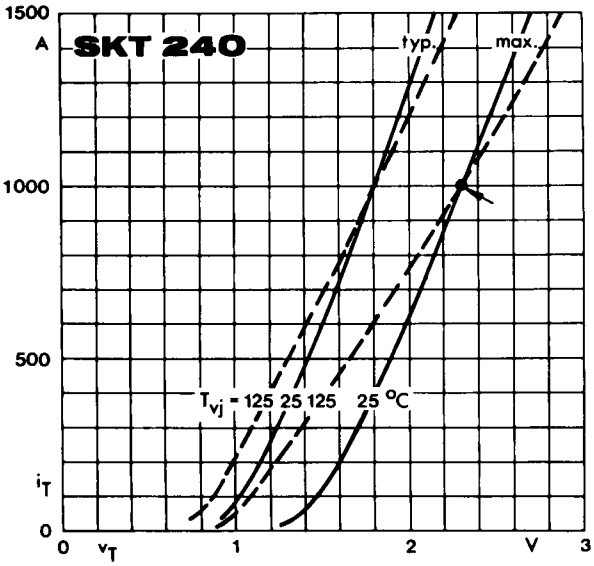


Fig. 6 a On-state characteristics

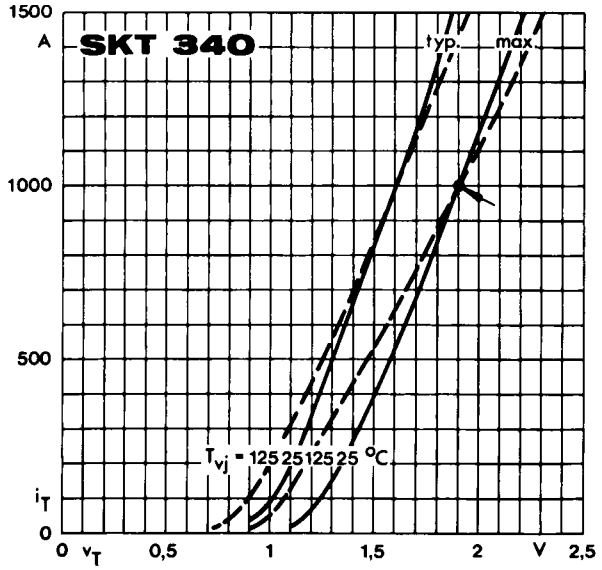


Fig. 6 b On-state characteristics

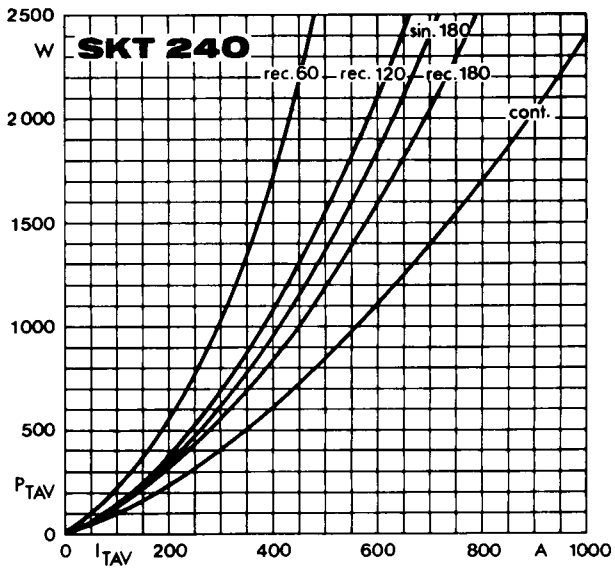


Fig. 7 a Power dissipation vs. on-state current

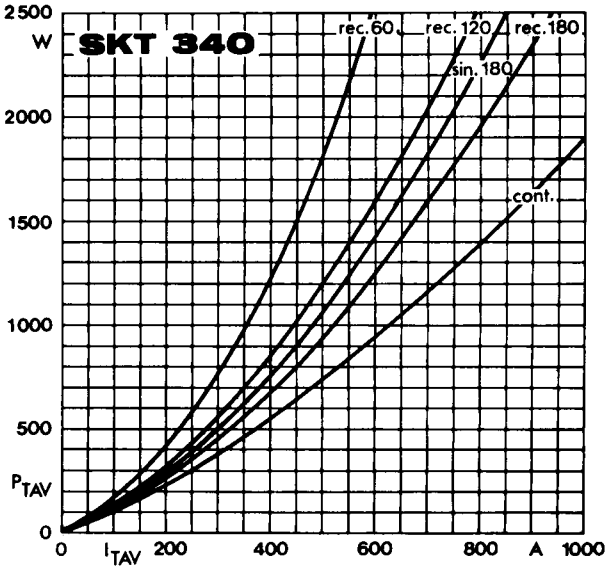


Fig. 7 b Power dissipation vs. on-state current

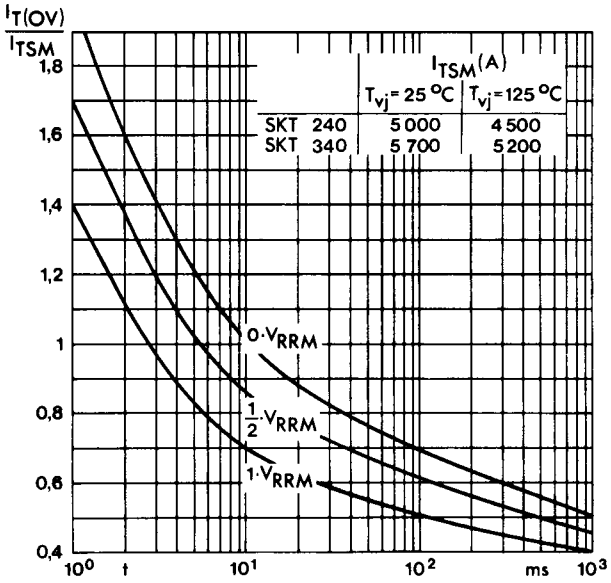


Fig. 8 Surge overload current vs. time

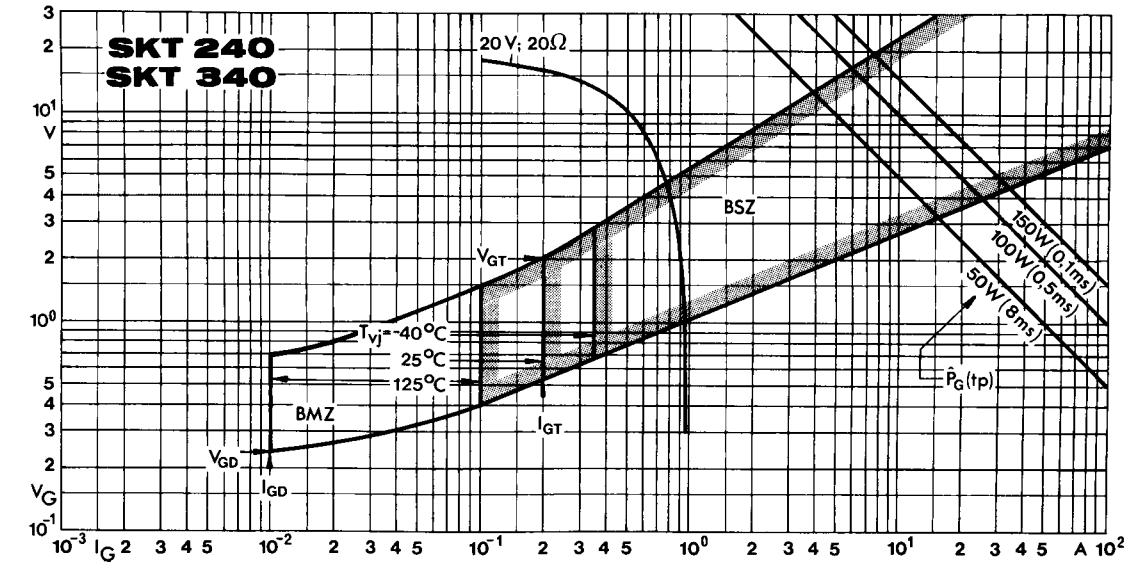
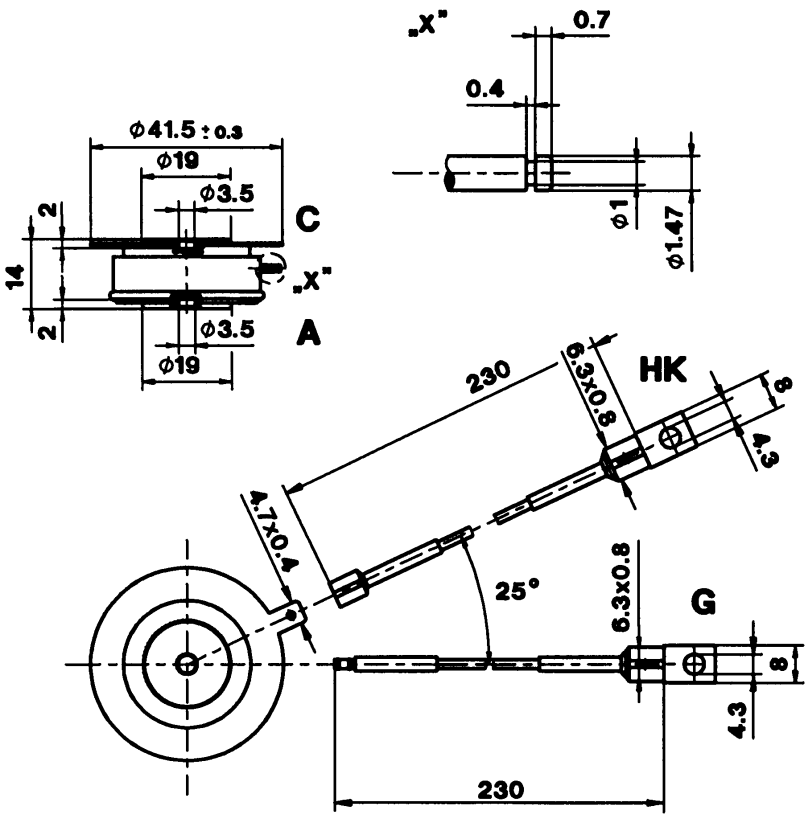


Fig. 9 Gate trigger characteristics

SKT 240
SKT 340

Case B 8

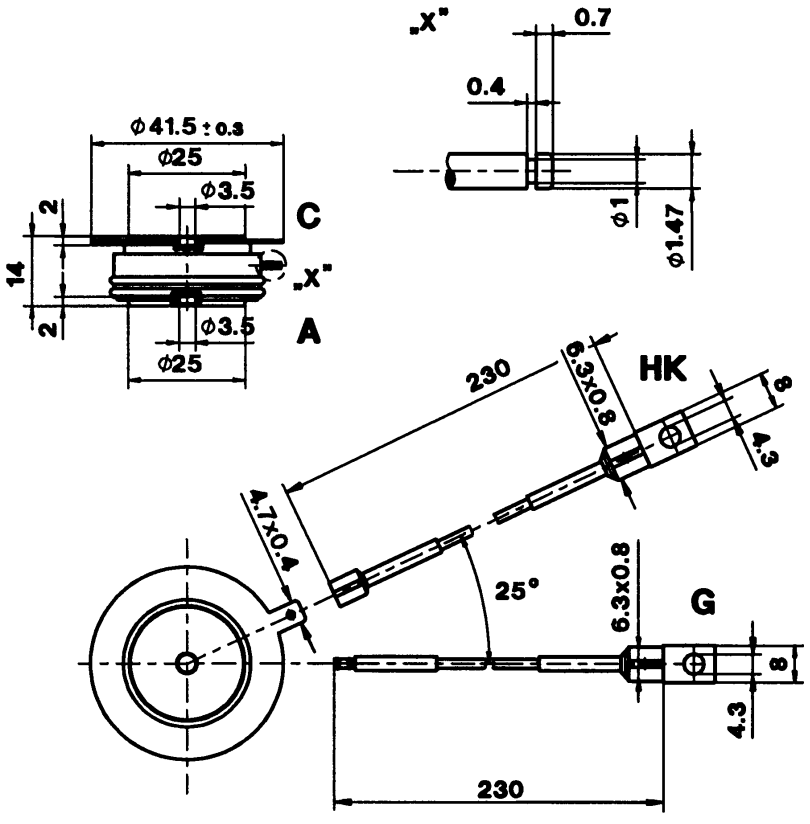
DIN 41814: 151 A 4
JEDEC: TO-200 AB



SKT 491
SKT 551

Case B 11

DIN 41814: 152 A 4
JEDEC: TO-200 AB



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

Dimensions in mm

