SEMIKRON

V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation) 110 A	135 A	175 A
			I_{TAV} (sin. 180; T_{case} = 80 °C)		
V	V	V/µs	70 A	86 A	110 A
500	400	500	**SKT 55/04 D**	**–**	**SKT 100/04 D**
700	600	500	**SKT 55/06 D**	**SKT 80/06 D***	**–**
900	800	500	**SKT 55/08 D**	**SKT 80/08 D**	**SKT 100/08 D***
1300	1200	1000	**SKT 55/12 E**	**SKT 80/12 E***	**SKT 100/12 E***
1500	1400	1000	**SKT 55/14 E**	**SKT 80/14 E**	**SKT 100/14 E***
1700	1600	1000	**SKT 55/16 E**	**SKT 80/16 E**	**SKT 100/16 E***
1900	1800	1000	**SKT 55/18 E♦**	**SKT 80/18 E♦**	**SKT 100/18 E♦**

Symbol	Conditions	SKT 55	SKT 80	SKT 100	Units
I_{TAV}	sin. 180; (T_{case} = . . .)	55 (92)	80 (85)	100 (85)	A °C
I_{TSM}	T_{vj} = 25 °C; 10 ms	1 300	1 700	2 000	A
	T_{vj} = 130 °C; 10 ms	1 100	1 500	1 750	A
i^2t	T_{vj} = 25 °C; 8,35 ... 10 ms	8 500	14 500	20 000	A^2s
	T_{vj} = 130 °C; 8,35 ... 10 ms	6 000	11 000	15 000	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	50			A/µs
I_H	T_{vj} = 25 °C; typ./max.	150 / 250			mA
I_L	T_{vj} = 25 °C; typ./max.	300 / 600			mA
t_q	T_{vj} = 130 °C; typ.	100			µs
V_T	T_{vj} = 25 °C; (I_T = . . .); max.	1,8 (200)	2,25 (300)	1,75 (300)	V A
$V_{T(TO)}$	T_{vj} = 130 °C	0,9	1,2	1,0	V
r_T	T_{vj} = 130 °C	4	4	2,4	mΩ
I_{DD}; I_{RD}	T_{vj} = 130 °C; $V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$	25	30	30	mA
V_{GT}	T_{vj} = 25 °C	3			V
I_{GT}	T_{vj} = 25 °C	150			mA
V_{GD}	T_{vj} = 130 °C	0,25			V
I_{GD}	T_{vj} = 130 °C	10			mA
R_{thjc}	cont.	0,40	0,25		°C/W
	sin. 180 / rec. 120	0,47/0,53	0,28 / 0,31		°C/W
R_{thch}		0,08			°C/W
T_{vj}		– 40 ... + 130			°C
T_{stg}		– 40 ... + 150			°C
M	SI units	10			Nm
	US units	90			lb. in.
a		$5 \cdot 9{,}81$			m/s^2
w		65	80		g
Case		B 5			

* Available with UNF thread 1/2-20 UNF2A, e.g. SKT 80/06 D UNF

♦ Available in limited quantities

Thyristors

SKT 55
SKT 80
SKT 100

Features

- Hermetic metal cases with ceramic insulators
- Threaded studs ISO M12 or UNF 1/2-20
- Interchangeable with international standard cases

Typical Applications

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

I:\Marketin\FRAMEDAT\datbl\B03-Thyristoren\SKT55-80-100.fm

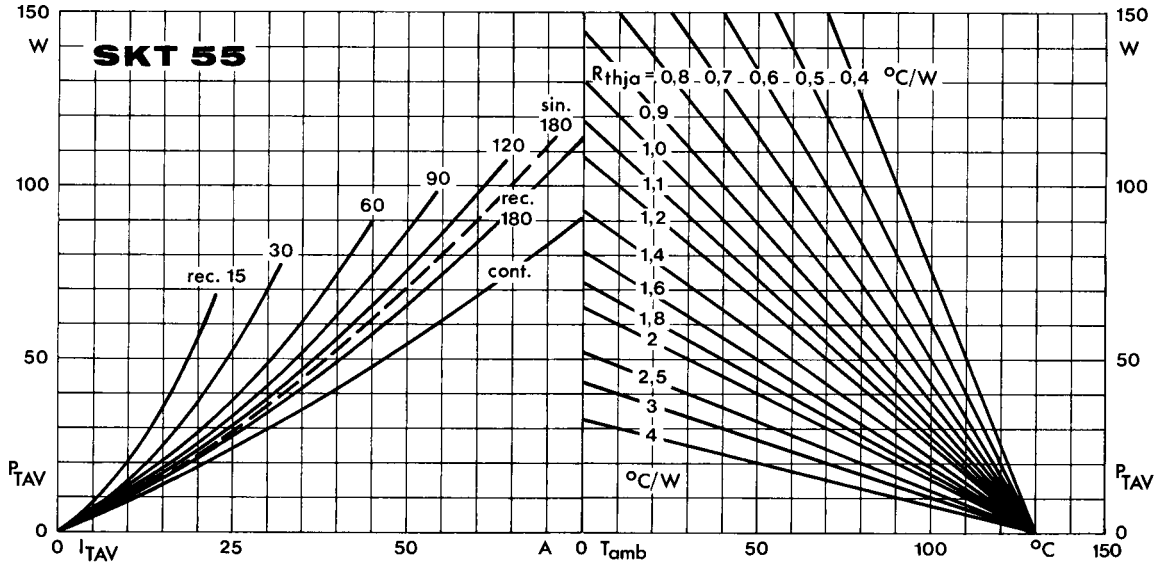


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

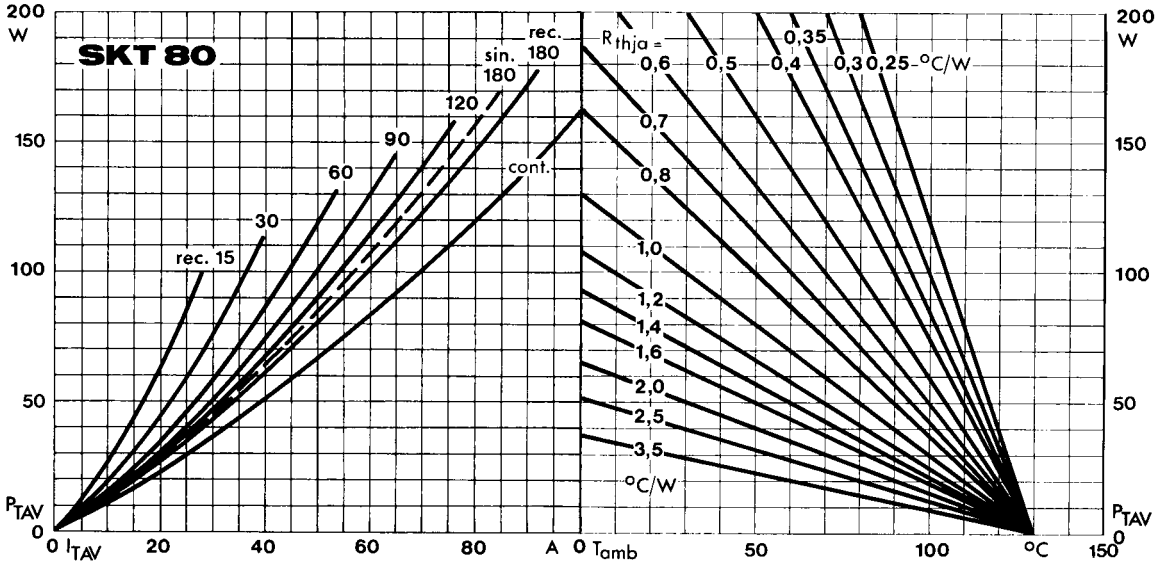


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

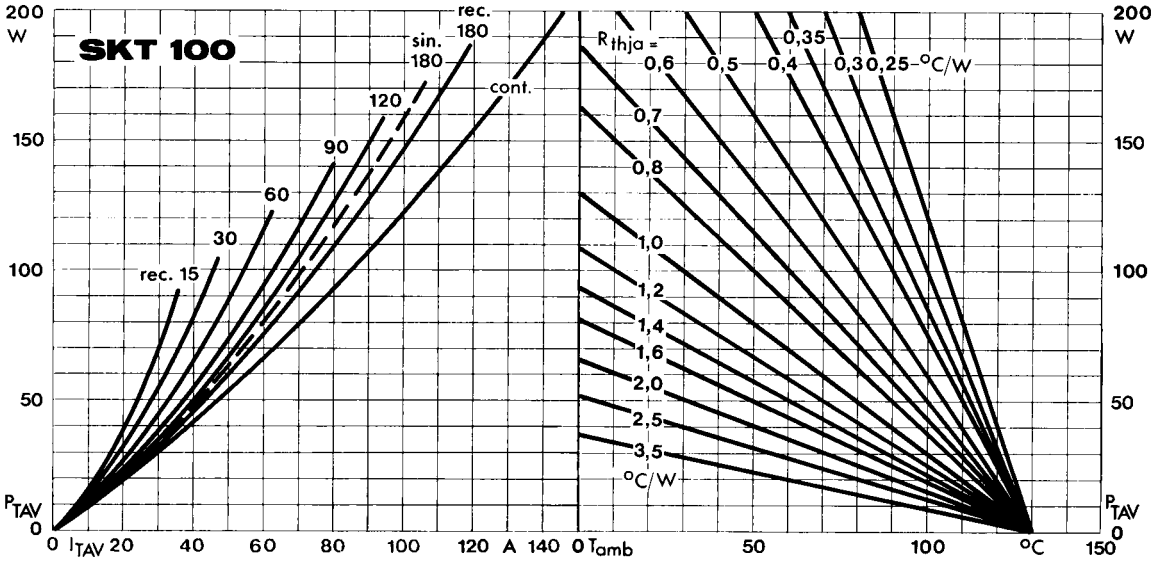


Fig. 1 c Power dissipation vs. on-state current and ambient temperature

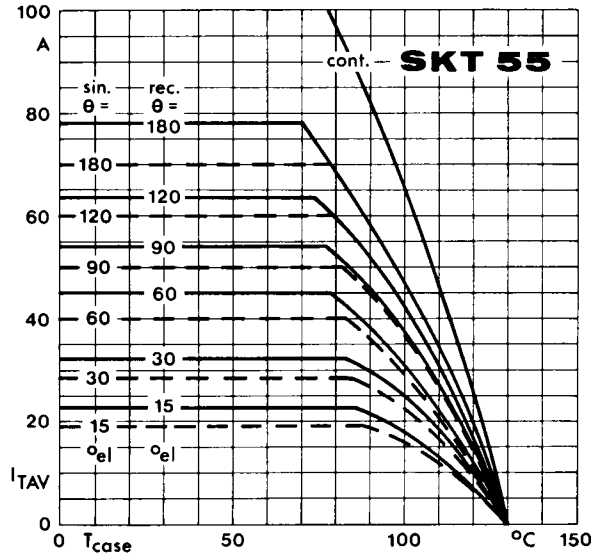


Fig. 2 a Rated on-state current vs. case temperature

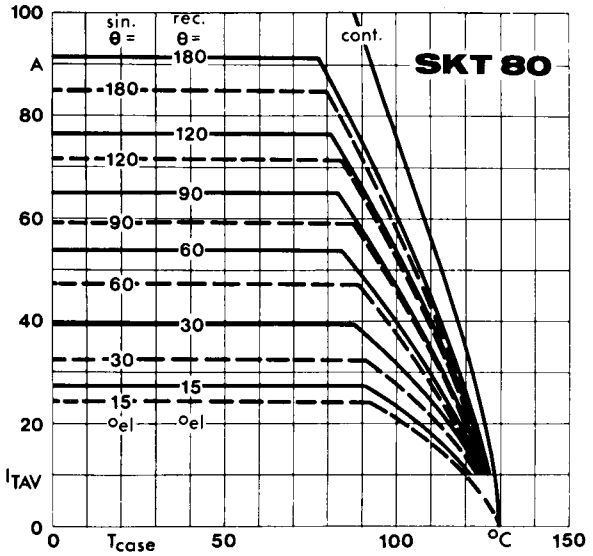


Fig. 2 b Rated on-state current vs. case temperature

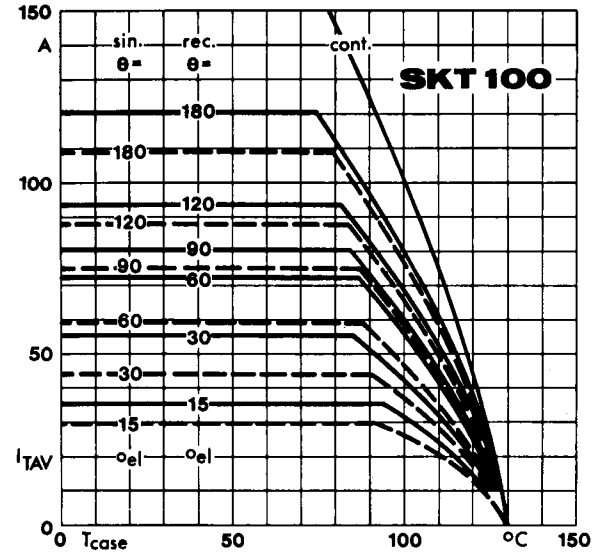


Fig. 2 c Rated on-state current vs. case temperature

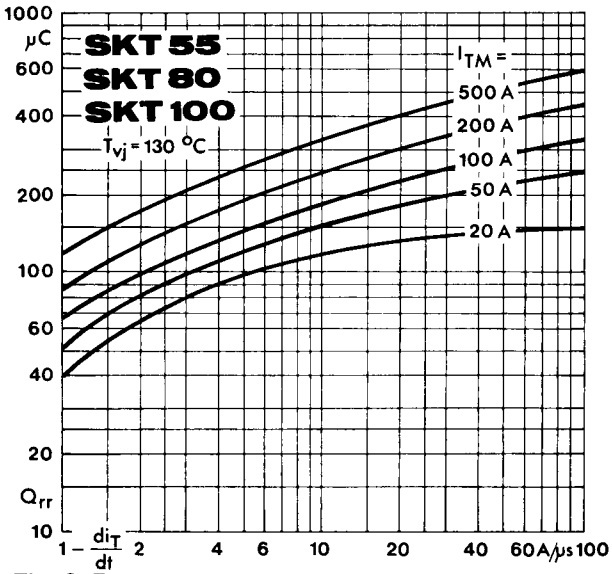


Fig. 3 Recovered charge vs. current decrease

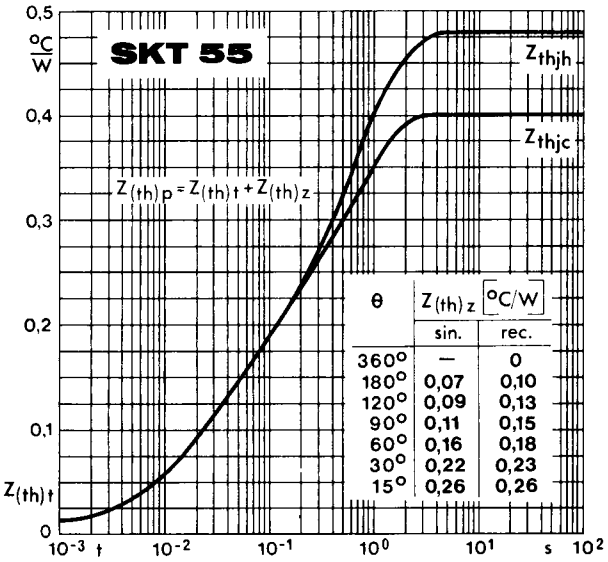


Fig. 4 a Transient thermal impedance vs. time

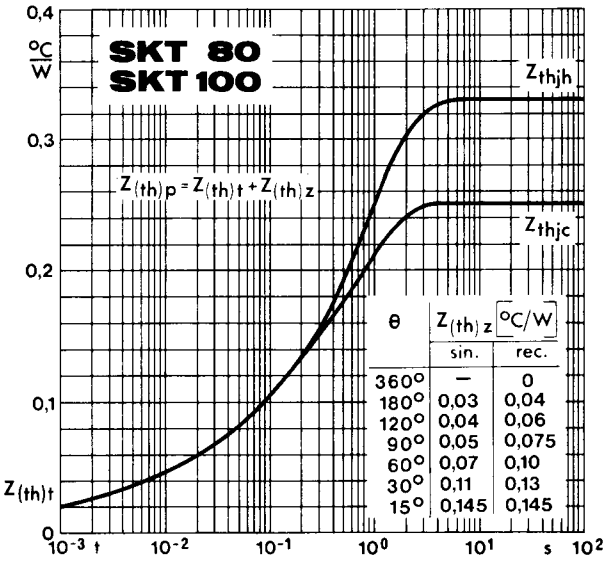


Fig. 4 b Transient thermal impedance vs. time

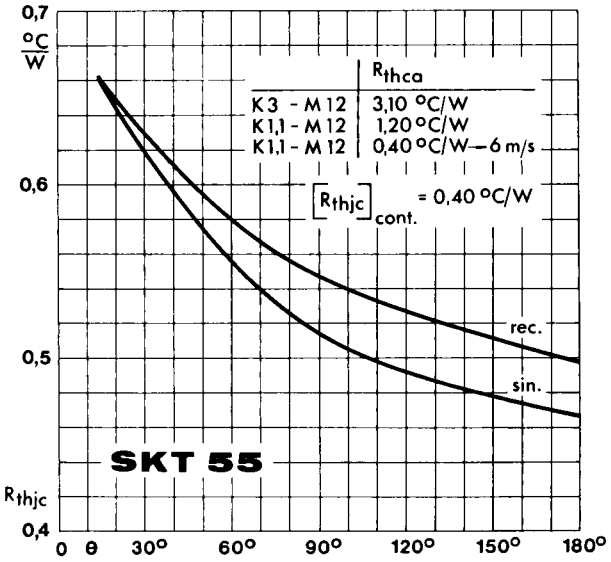


Fig. 5 a Thermal resistance vs. conduction angle

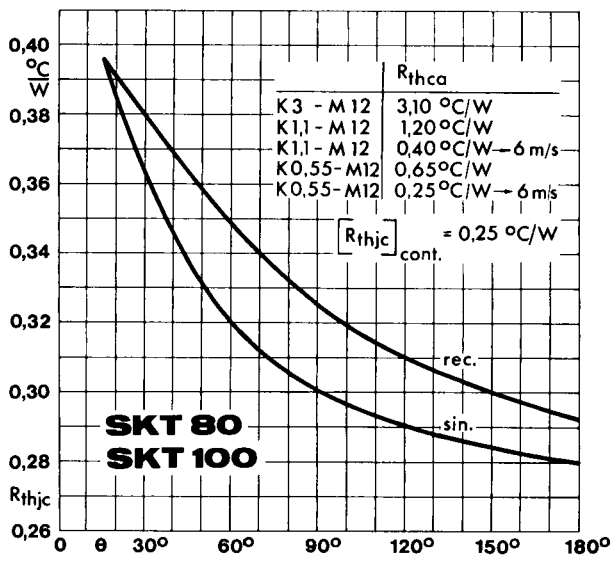


Fig. 5 b Thermal resistance vs. conduction angle

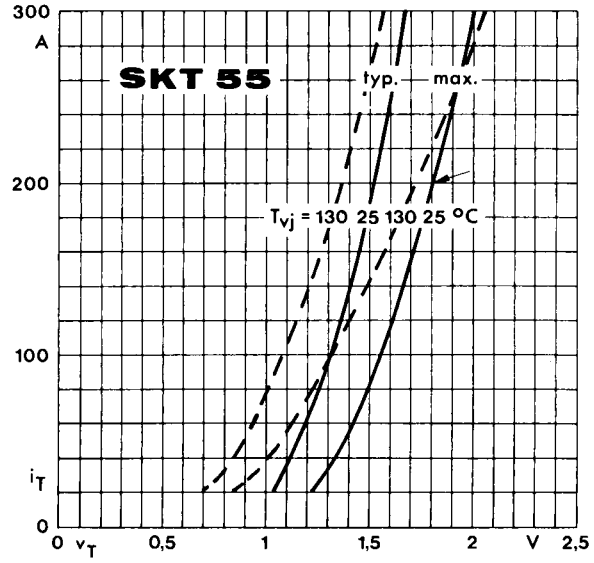


Fig. 6 a On-state characteristics

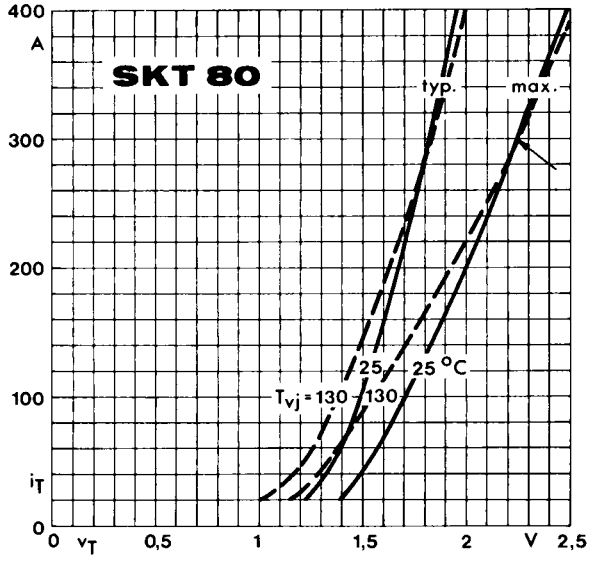


Fig. 6 b On-state characteristics

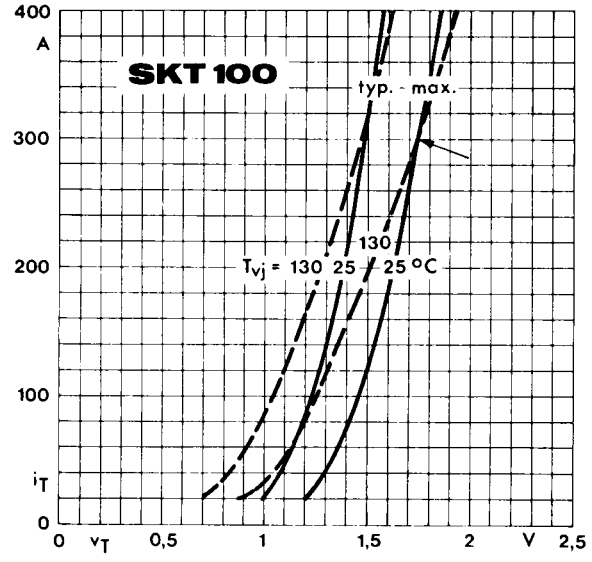


Fig. 6 c On-state characteristics

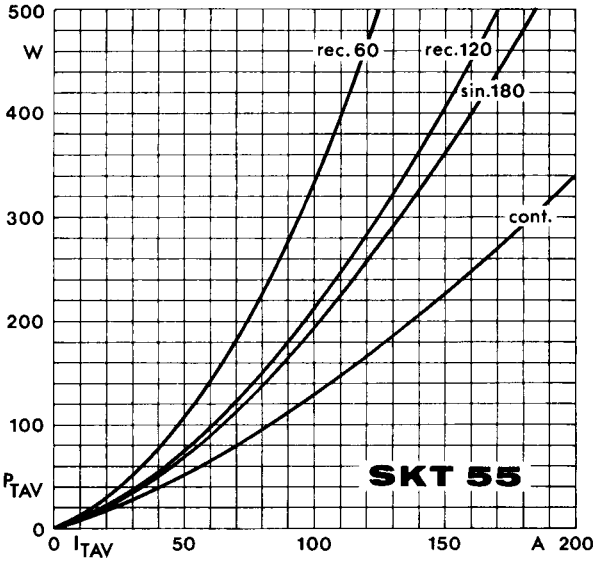


Fig. 7 a Power dissipation vs. on-state current

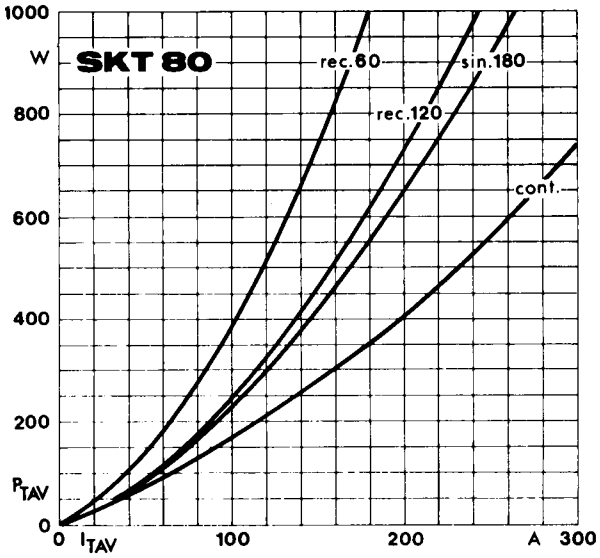


Fig. 7 b Power dissipation vs. on-state current

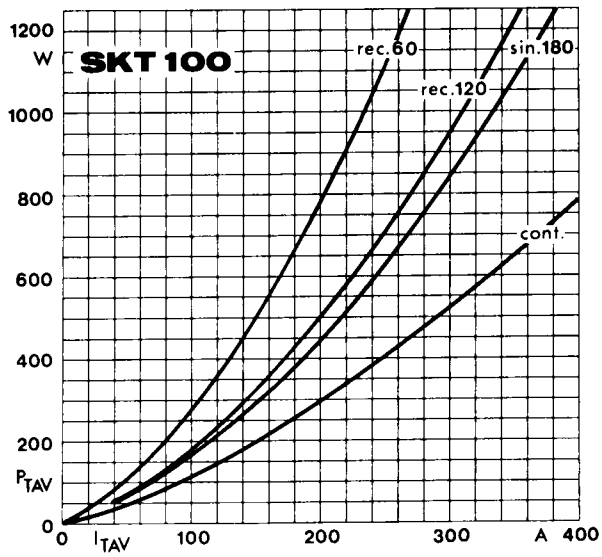


Fig. 7 c Power dissipation vs. on-state current

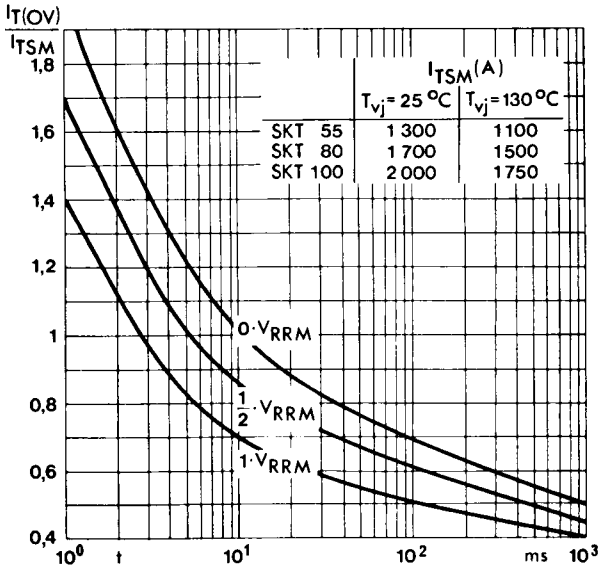


Fig. 8 Surge overload current vs. time

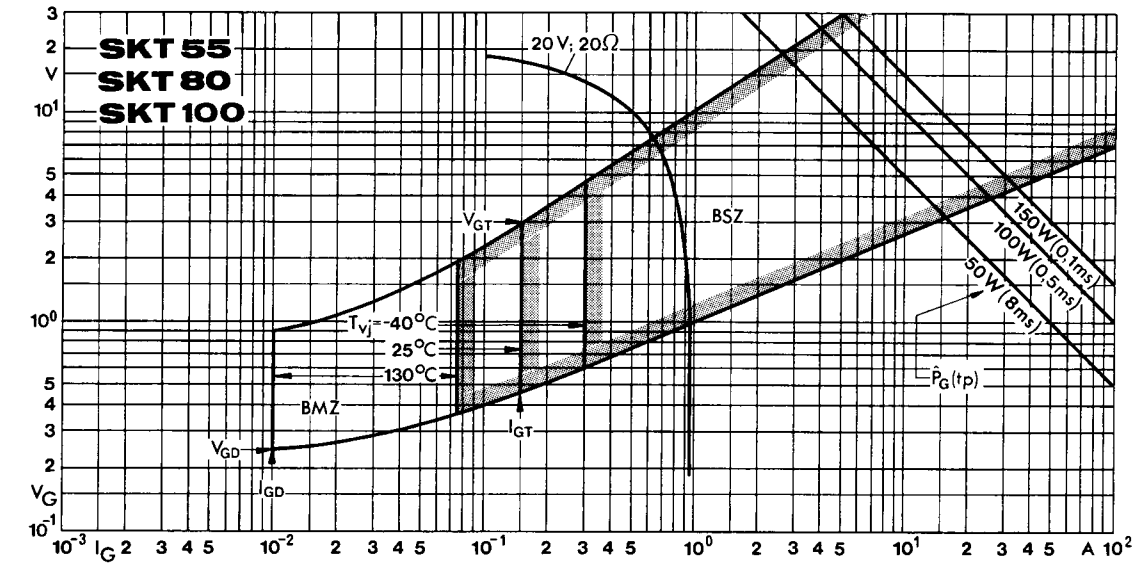
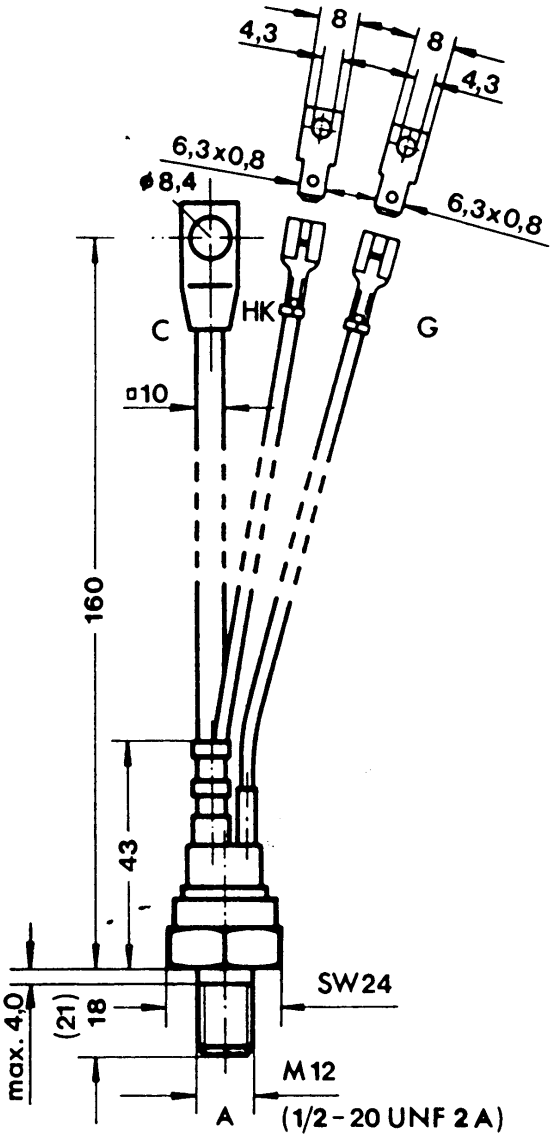


Fig. 9 Gate trigger characteristics

SKT 55
SKT 80
SKT 100

Case B 5

IEC-Publ. 191-2: (A 12 MA, A 12 U)
DIN 41892: (204 B 3)
BS 3934: SO – 30 C
JEDEC: TO – 209 (TO – 94)[1)]

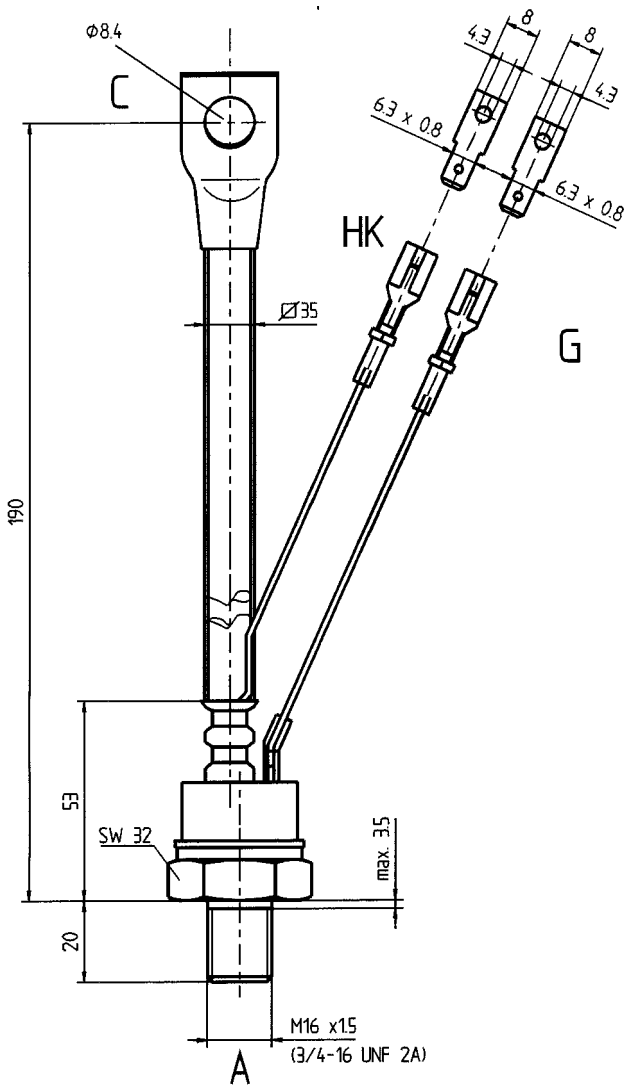


[1)] modified version. In the USA and Canada these types are available with the original TO-209 (TO-94) dimensions. TO-208 AD (TO-83) with flag terminals is also available.

SKT 130
SKT 160

Case B 6

IEC-Publ. 191-2: A 47 MC
DIN 41893: 205 B 4
JEDEC: TO-209 (TO-93)



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

Dimensions in mm

