Thyristors

SKT 10
SKT 16
SKT 24

V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation)		
			30 A	40 A	50 A
			I_{TAV} (sin. 180; T_{case} = . . . °C)		
V	V	V/µs	19 A (95 °C)	25 A (74 °C)	32 A (72 °C)
500	400	500	–	**SKT 16/04 D**	**SKT 24/04 D**
700	600	500	**SKT 10/06 D**	**SKT 16/06 D***	–
900	800	500	**SKT 10/08 D**	**SKT 16/08 D**	**SKT 24/08 D**
1300	1200	1000	**SKT 10/12 E**	**SKT 16/12 E***	**SKT 24/12 E***
1500	1400	1000	–	**SKT 16/14 E**	**SKT 24/14 E**
1700	1600	1000	–	**SKT 16/16 E**	**SKT 24/16 E***
1900	1800	1000	–	**SKT 16/18 E♦**	**SKT 24/18 E♦**

Symbol	Conditions	SKT 10	SKT 16	SKT 24	Units
I_{TAV}	sin. 180; (T_{case} = . . .)	10 (106)	16 (103)	24 (94)	A °C
I_{TSM}	T_{vj} = 25 °C; 10 ms	250	370	450	A
	T_{vj} = 130 °C; 10 ms	210	330	380	A
i^2t	T_{vj} = 25 °C; 8,35 ... 10 ms	310	680	1000	A^2s
	T_{vj} = 130 °C; 8,35 ... 10 ms	220	550	720	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.	80 / 150			mA
I_L	T_{vj} = 25 °C; typ./max.	150 / 300			mA
t_q	T_{vj} = 130 °C; typ.	80			µs
V_T	T_{vj} = 25 °C; (I_T = . . .); max.	1,6 (30)	2,4 (75)	1,9 (75)	V A
$V_{T(TO)}$	T_{vj} = 130 °C	1,0	1,0	1,0	V
r_T	T_{vj} = 130 °C	18	20	10	mΩ
I_{DD}; I_{RD}	T_{vj} = 130 °C; $V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$	4	8	8	mA
V_{GT}	T_{vj} = 25 °C	3			V
I_{GT}	T_{vj} = 25 °C	100			mA
V_{GD}	T_{vj} = 130 °C	0,25			V
I_{GD}	T_{vj} = 130 °C	3			mA
R_{thjc}	cont.	1,2	0,8		°C/W
	sin. 180 / rec. 120	1,3 / 1,35	0,9 / 0,95		°C/W
R_{thch}		1,0	0,5		°C/W
T_{vj}		– 40 ... + 130			°C
T_{stg}		– 40 ... + 150			°C
M	SI units	2,0	2,5		Nm
	US units	18	22		lb. in.
a		$5 \cdot 9{,}81$	$5 \cdot 9{,}81$		m/s^2
w		7	12		g
Case		B 1	B 2		

* Available with UNF thread 1/4-28 UNF2A, e.g. SKT 16/06 D UNF

♦ Available in limited quantities

Features

- Hermetic metal cases with glass insulators
- Threaded studs ISO M5 and M6 or UNF 1/4-28
- 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)

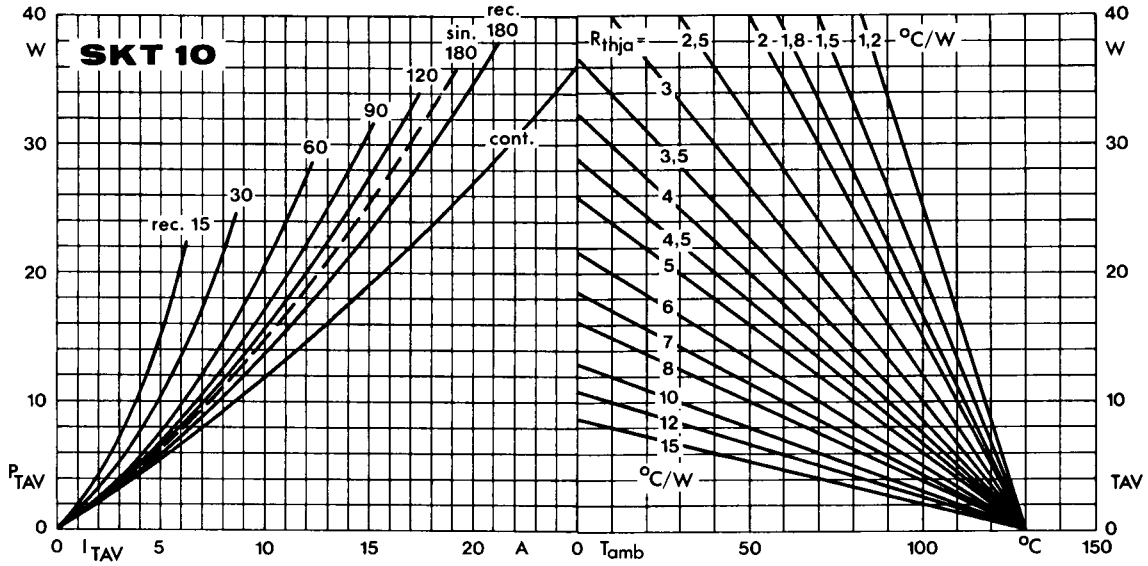


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

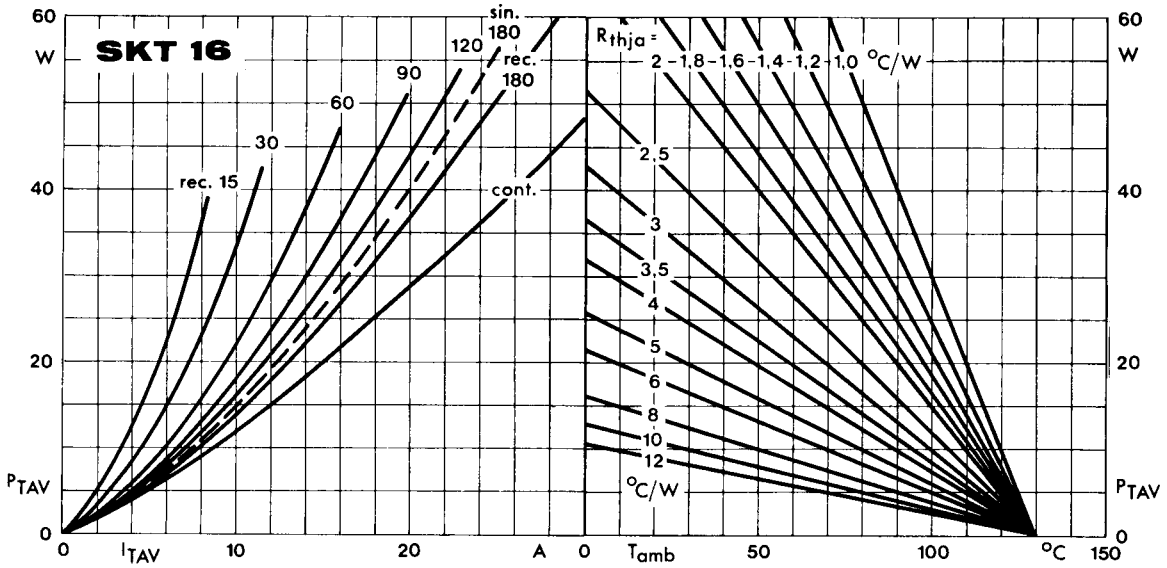


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

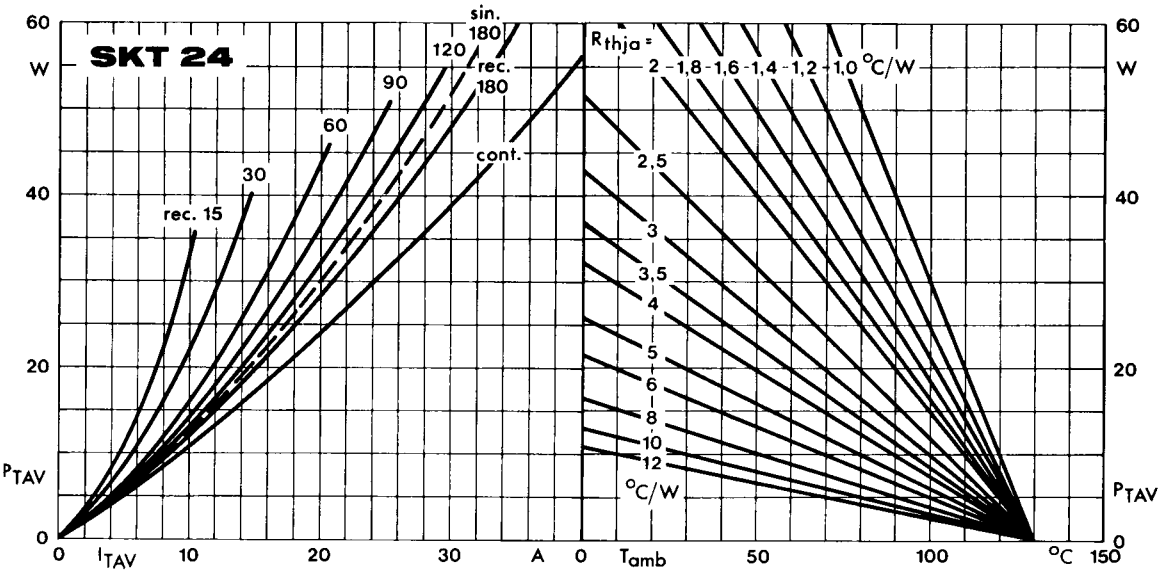


Fig. 1 c Power dissipation vs. on-state current and ambient temperature

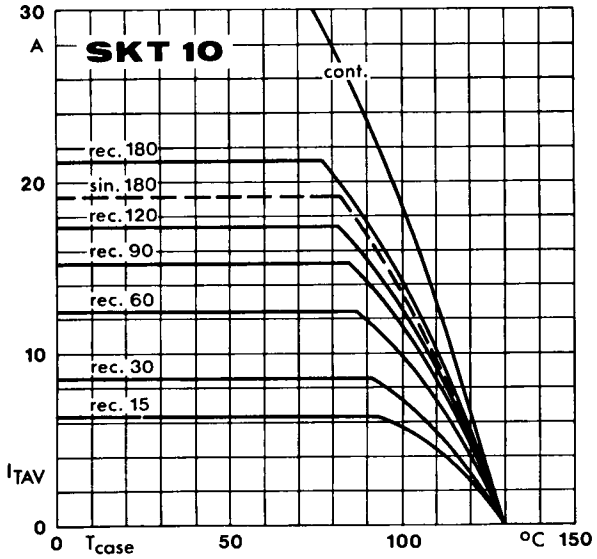


Fig. 2 a Rated on-state current vs. case temperature

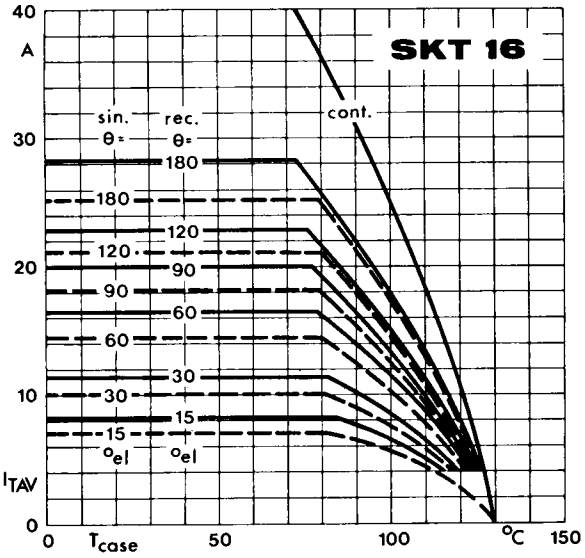


Fig. 2 b

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

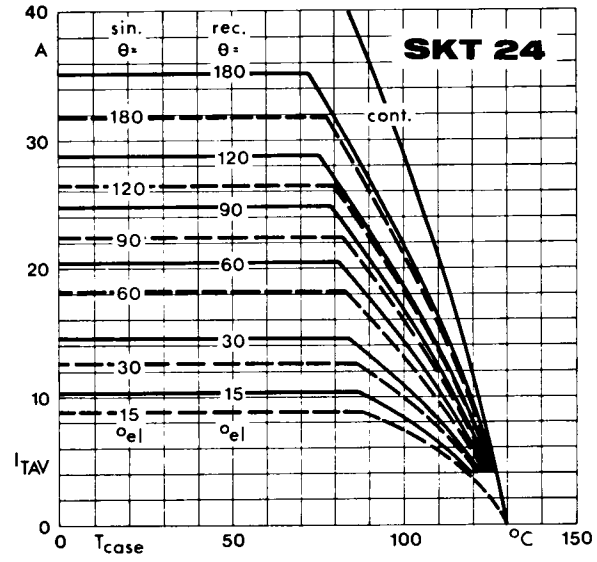


Fig. 2 c Rated on-state current vs. case temperature

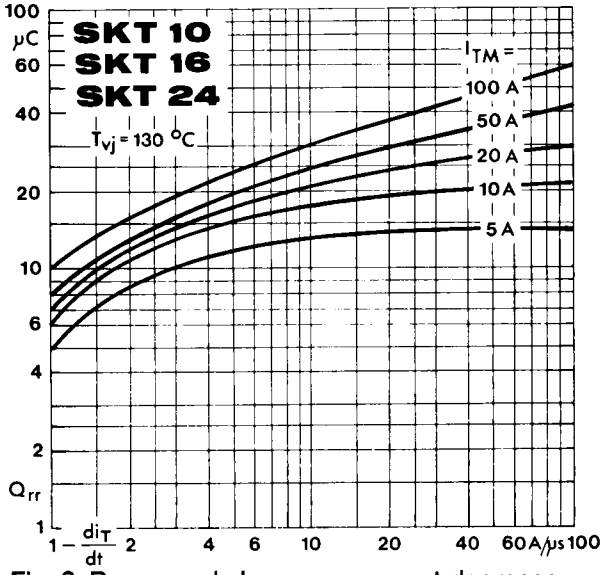


Fig. 3 Recovered charge vs. current decrease

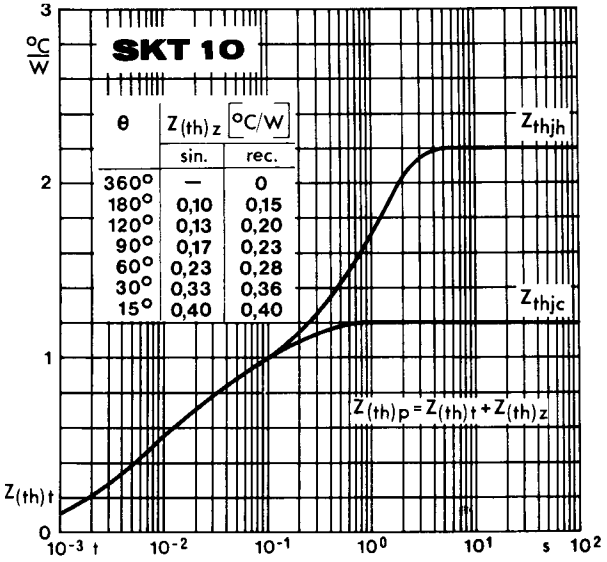


Fig. 4 a Transient thermal impedance vs. time

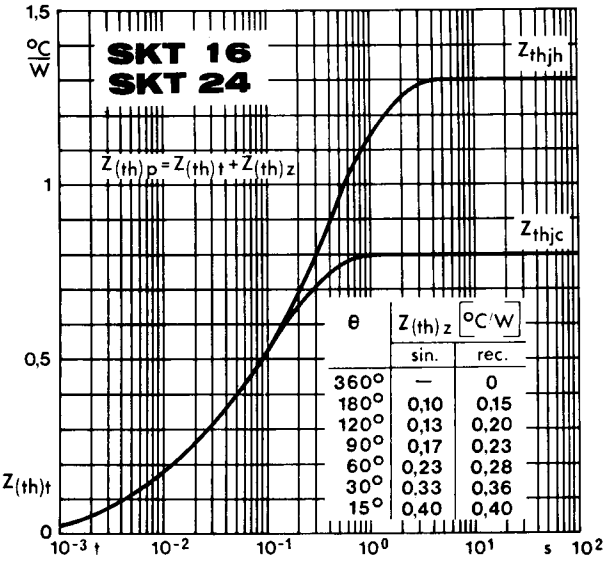


Fig. 4 b

Fig. 4 b Transient thermal impedance vs. time

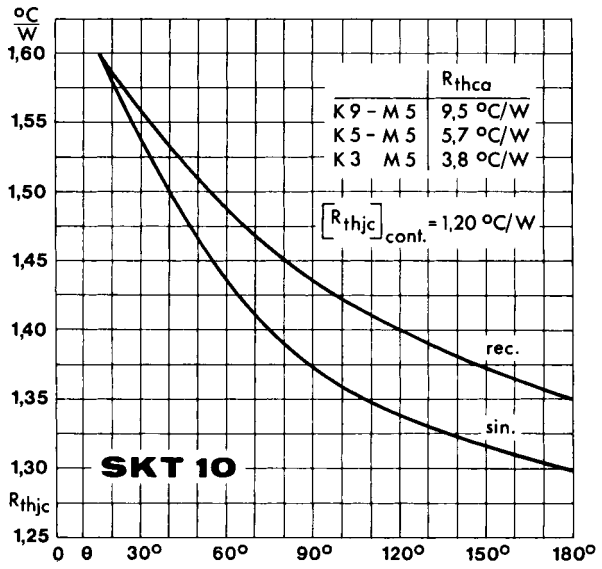


Fig. 5 a Thermal resistance vs. conduction angle

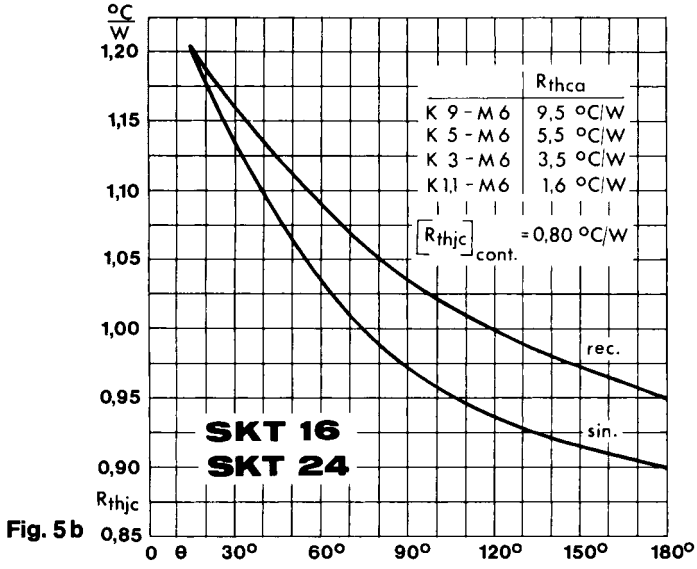


Fig. 5 b Thermal resistance vs. conduction angle

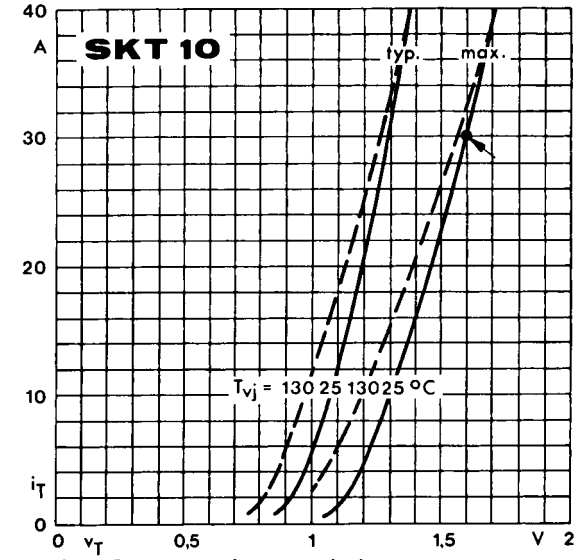


Fig. 6 a On-state characteristics

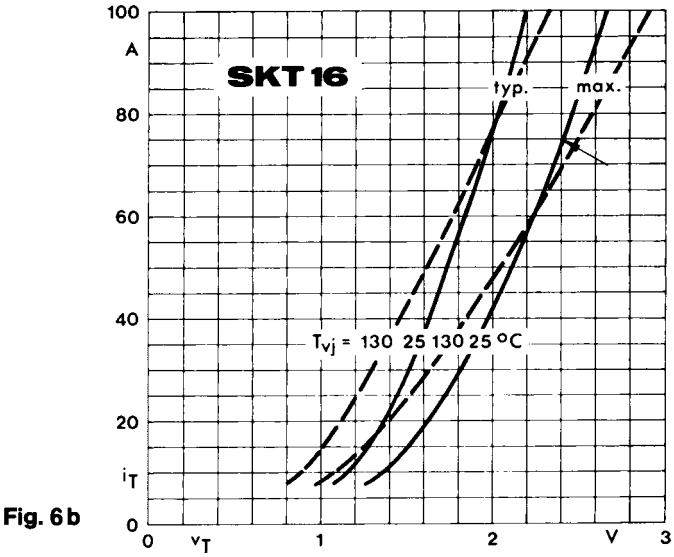


Fig. 6 b On-state characteristics

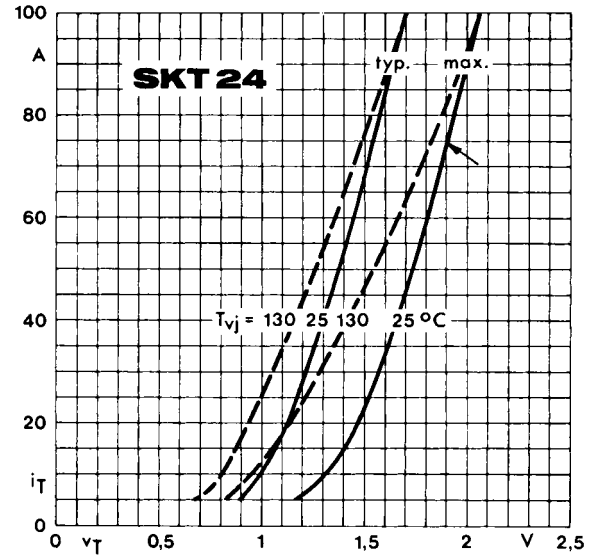


Fig. 6 c On-state characteristics

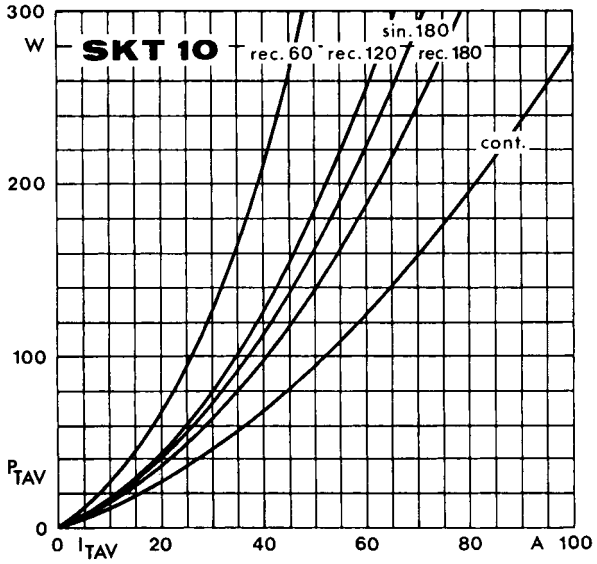


Fig. 7 a Power dissipation vs. on-state current

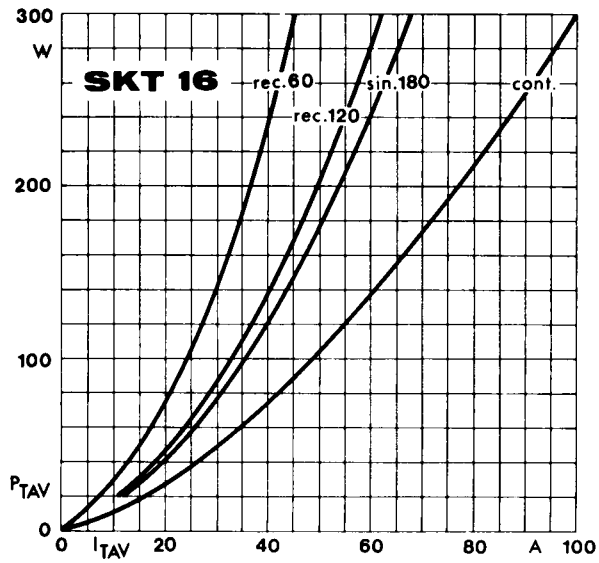


Fig. 7 b Power dissipation vs. on-state current

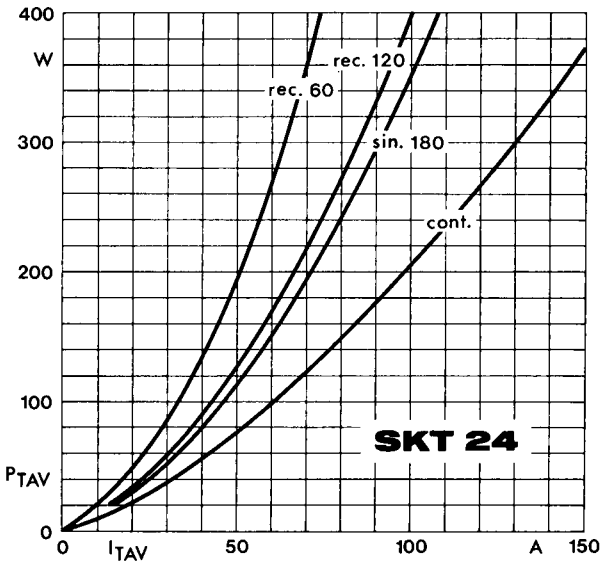


Fig. 7 c Power dissipation vs. on-state current

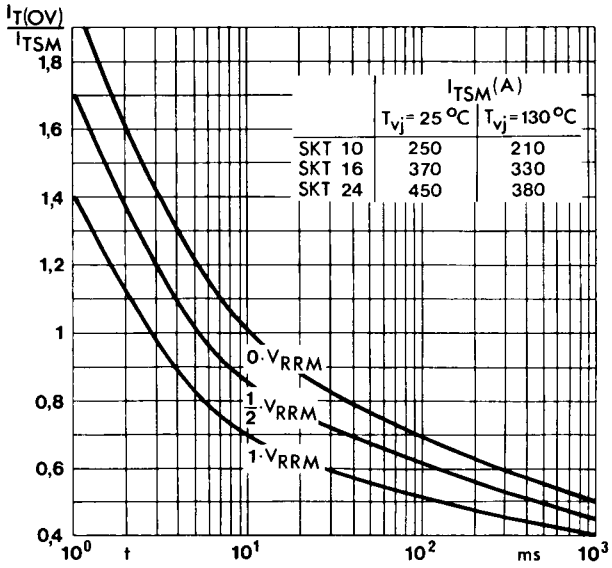


Fig. 8 Surge overload current vs. time

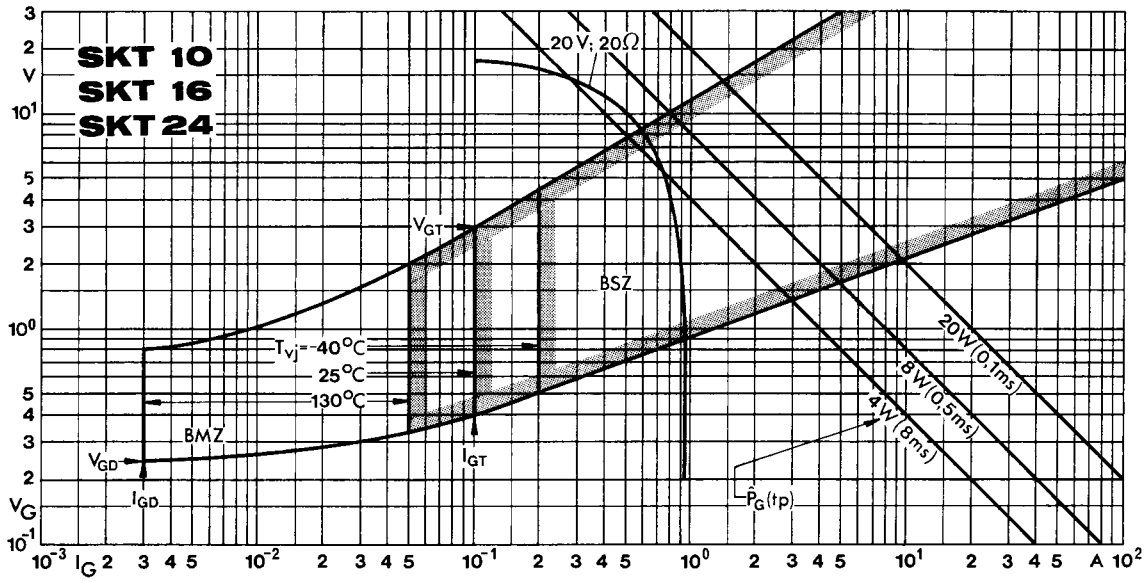
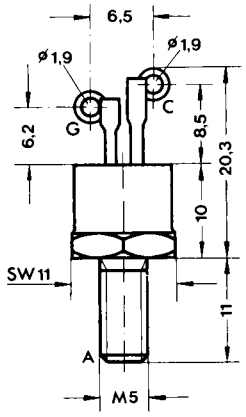


Fig. 9 Gate trigger characteristics

SKT 10

Case B 1

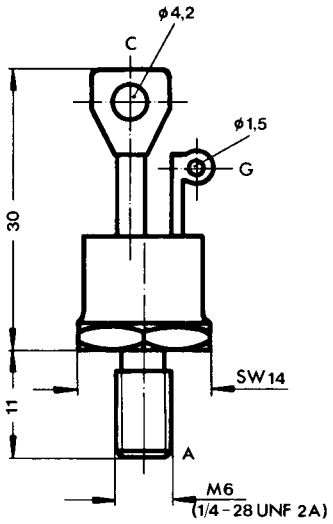
IEC-Publ. 191-2: A 13 M
DIN 41891: 200 B 3
BS 3934: SO – 35 A
JEDEC: TO – 208 AB (TO – 64) metric



SKT 16
SKT 24

Case B 2

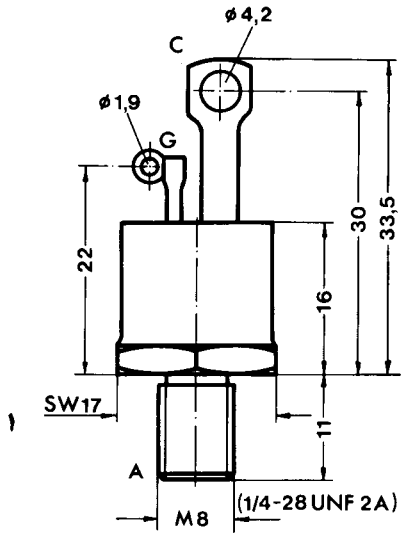
IEC-Publ. 191-2: A 11 M, A 11 U
DIN 41892: 201 C 3
BS 3934: SO – 36
JEDEC: TO – 208 AA (TO – 48)



SKT 40
SKT 50

Case B 3

IEC-Publ. 191-2: A 38 MA, A 14 U
DIN 41892: 202 C 3
BS 3934: SO – 28
JEDEC: TO – 208 AC (TO – 65)



C: Cathode terminal
A: Anode terminal
G: Gate terminal

Dimensions in mm