

## Thyristors

**SKT 10**  
**SKT 16**  
**SKT 24**



### 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)

V <sub>RSM</sub>	V <sub>RRM</sub> V <sub>DRM</sub>	(dv/dt) <sub>cr</sub>	I <sub>T</sub> RMS (maximum values for continuous operation)		
			30 A	40 A	50 A
			I <sub>TAV</sub> (sin. 180; T <sub>case</sub> = ... °C)		
V	V	V/μs	19 A (95 °C)	25 A (74 °C)	32 A (72 °C)
500	400	500	–	<b>SKT 16/04 D</b>	<b>SKT 24/04 D</b>
700	600	500	<b>SKT 10/06 D</b>	<b>SKT 16/06 D*</b>	–
900	800	500	<b>SKT 10/08 D</b>	<b>SKT 16/08 D</b>	<b>SKT 24/08 D</b>
1100	1000	500	<b>SKT 10/10 D</b>	–	–
1300	1200	500	<b>SKT 10/12 D</b>	–	–
		1000	<b>SKT 10/12 E</b>	<b>SKT 16/12 E*</b>	<b>SKT 24/12 E*</b>
1500	1400	1000	–	<b>SKT 16/14 E</b>	<b>SKT 24/14 E</b>
1700	1600	1000	–	<b>SKT 16/16 E</b>	<b>SKT 24/16 E*</b>

Symbol	Conditions	SKT 10	SKT 16	SKT 24	Units
I <sub>TAV</sub>	sin. 180; (T <sub>case</sub> = ...)	10 (106)	16 (103)	24 (94)	A °C
I <sub>TSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms	250	370	450	A
i <sup>2</sup> t	T <sub>vj</sub> = 130 °C; 10 ms	210	330	380	A
	T <sub>vj</sub> = 25 °C; 8,35 ... 10 ms	310	680	1000	A <sup>2</sup> s
t <sub>gd</sub>	T <sub>vj</sub> = 130 °C; 8,35 ... 10 ms	220	550	720	A <sup>2</sup> s
	T <sub>vj</sub> = 25 °C; I <sub>G</sub> = 1 A; di <sub>G</sub> /dt = 1 A/μs	typ. 1			μs
t <sub>gr</sub>	V <sub>D</sub> = 0,67 · V <sub>DRM</sub>	typ. 2			μs
(di/dt) <sub>cr</sub>	f = 50 ... 60 Hz	50			A/μs
I <sub>H</sub>	T <sub>vj</sub> = 25 °C	typ. 80; max. 150			mA
I <sub>L</sub>	T <sub>vj</sub> = 25 °C	typ. 150; max. 300			mA
t <sub>q</sub>	T <sub>vj</sub> = 130 °C; typ.	80			μs
V <sub>T</sub>	T <sub>vj</sub> = 25 °C; (I <sub>T</sub> = ...); max.	1,6 (30)	2,4 (75)	1,9 (75)	V A
V <sub>T(TO)</sub>	T <sub>vj</sub> = 130 °C	1,0	1,0	1,0	V
r <sub>T</sub>	T <sub>vj</sub> = 130 °C	18	20	10	mΩ
I <sub>DD</sub> , I <sub>RD</sub>	T <sub>vj</sub> = 130 °C; V <sub>DD</sub> = V <sub>DRM</sub> ; V <sub>RD</sub> = V <sub>RRM</sub>	4	8	8	mA
V <sub>GT</sub>	T <sub>vj</sub> = 25 °C	3			V
I <sub>GT</sub>	T <sub>vj</sub> = 25 °C	100			mA
V <sub>GD</sub>	T <sub>vj</sub> = 130 °C	0,25			V
I <sub>GD</sub>	T <sub>vj</sub> = 130 °C	3			mA
R <sub>thjc</sub>	cont.	1,2	0,8		°C/W
R <sub>thch</sub>	sin. 180/rec. 120	1,3/1,35	0,9/0,95		°C/W
		1,0	0,5		°C/W
T <sub>vj</sub>		– 40 ... +130			°C
T <sub>stg</sub>		– 55 ... +150			°C
M	SI units	2,0	2,5		Nm
a	US units	18	22		lb. in.
w		5 · 9,81	5 · 9,81		m/s <sup>2</sup>
		7	12		g
Case		B 1		B 2	

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

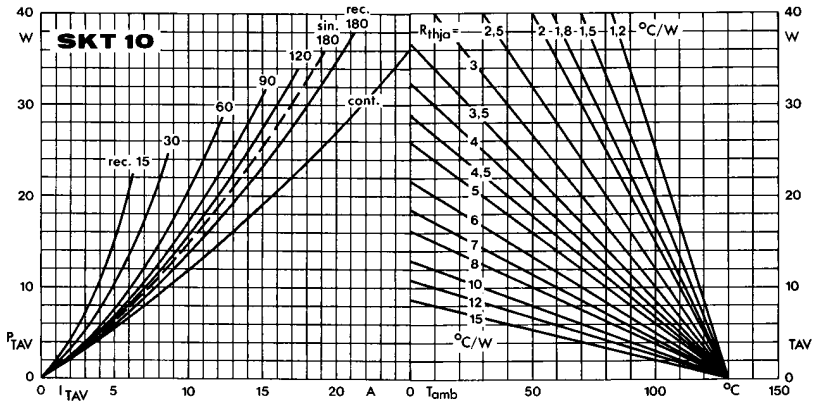


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

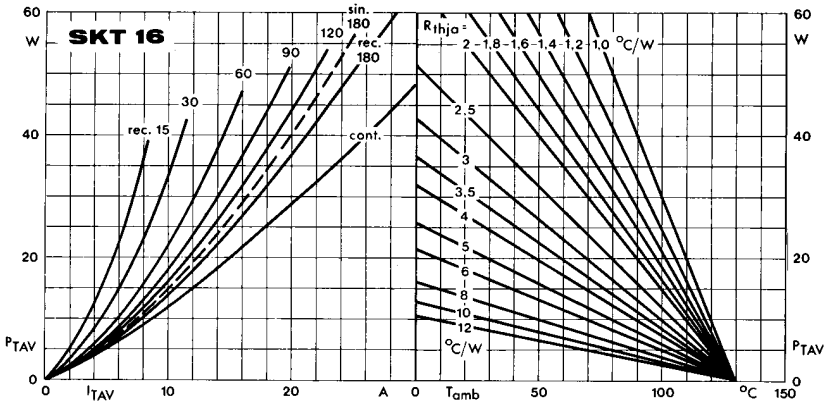


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

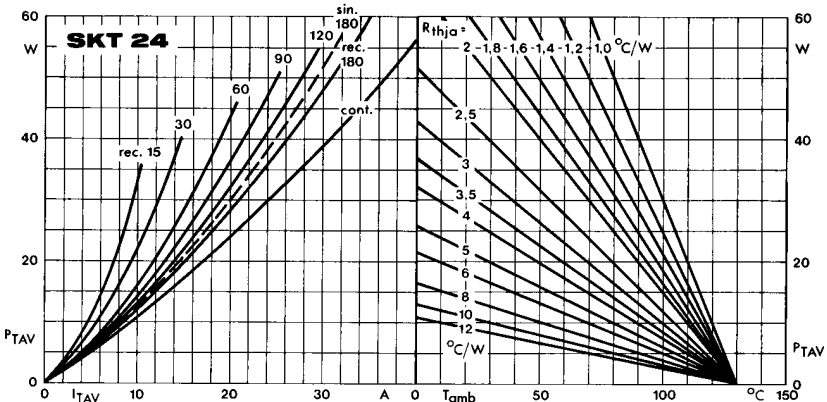


Fig. 1 c Power dissipation vs. on-state current and ambient temperature

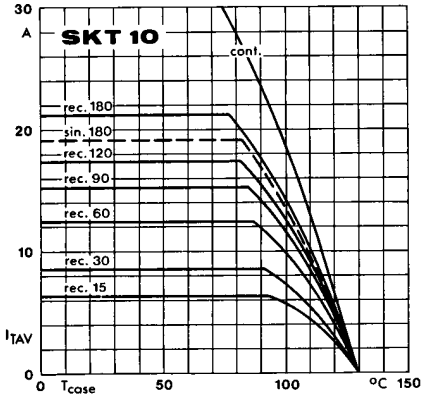


Fig. 2 a Rated on-state current vs. case temperature

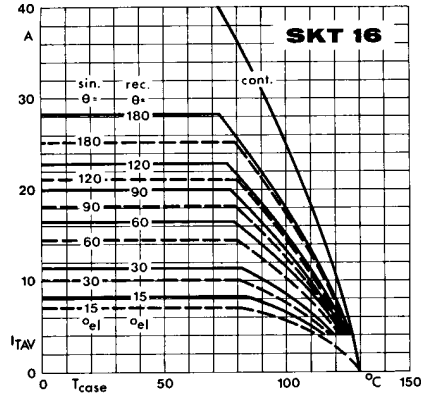


Fig. 2 b

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

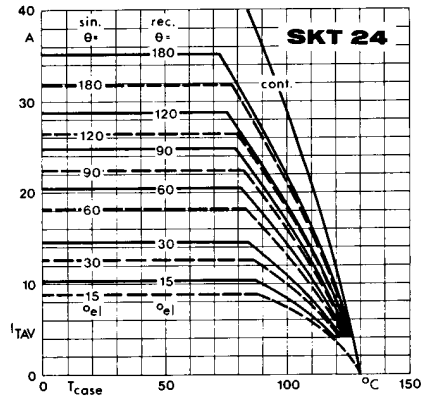


Fig. 2 c Rated on-state current vs. case temperature

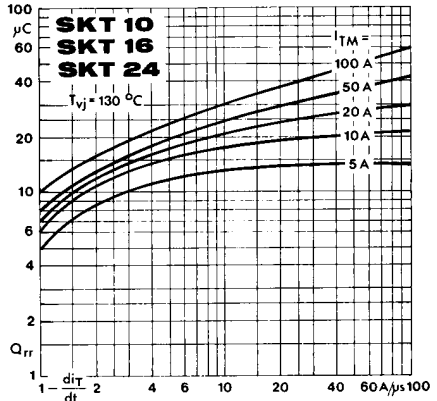


Fig. 3 Recovered charge vs. current decrease

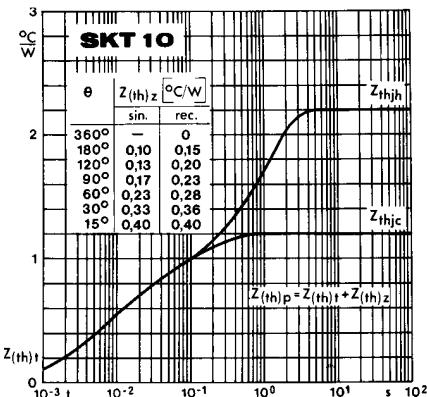


Fig. 4 a Transient thermal impedance vs. time

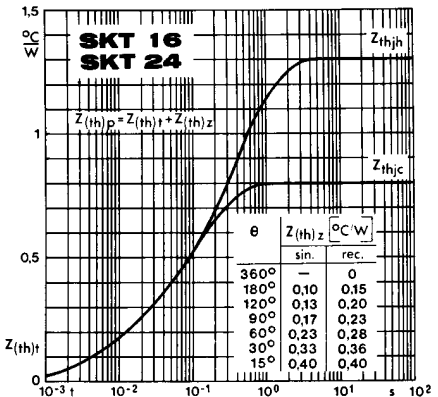


Fig. 4 b

Fig. 4 b Transient thermal impedance vs. time

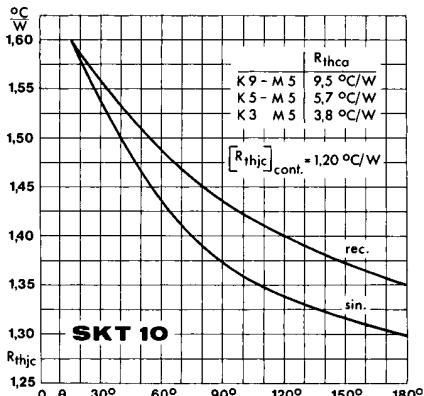


Fig. 5 a Thermal resistance vs. conduction angle

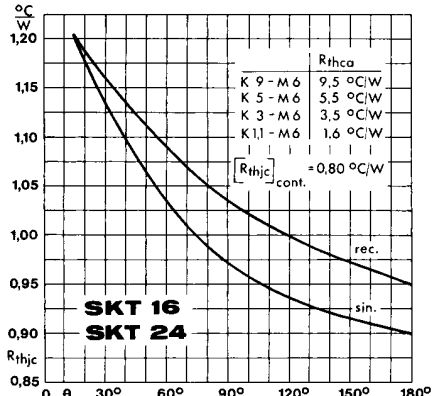


Fig. 5 b Thermal resistance vs. conduction angle

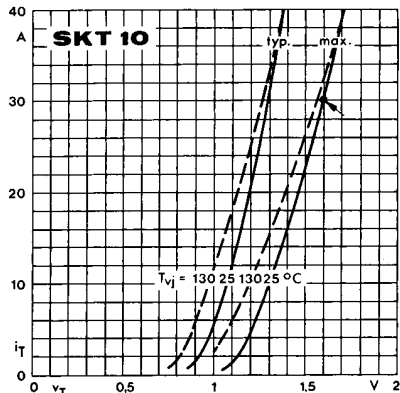


Fig. 6 a On-state characteristics

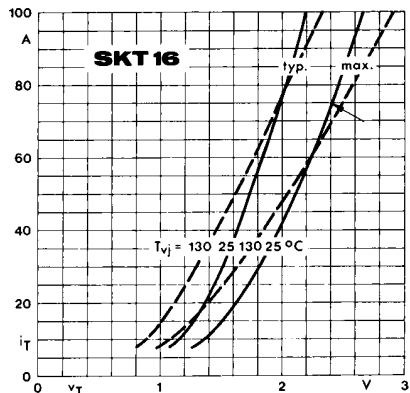


Fig. 6 b On-state characteristics

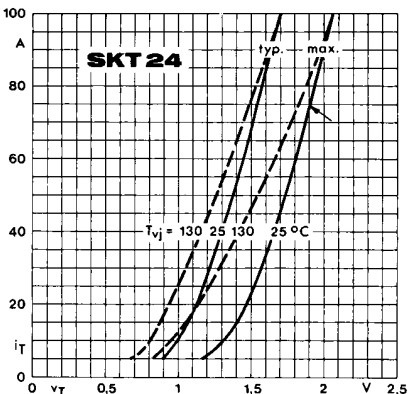


Fig. 6 c On-state characteristics

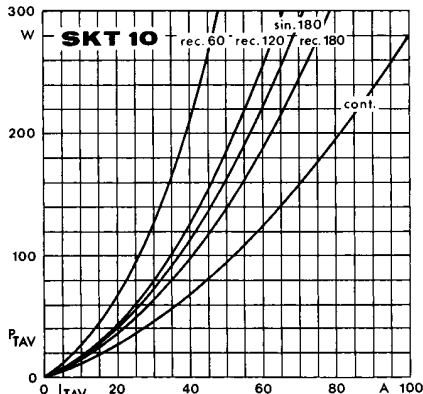


Fig. 7 a Power dissipation vs. on-state current

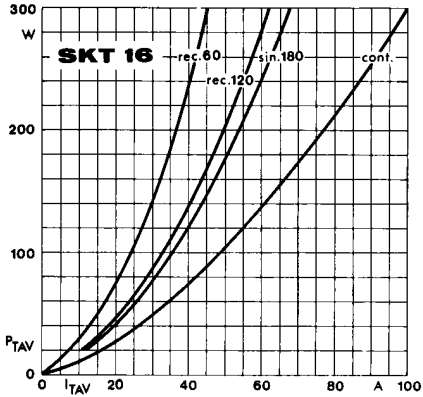


Fig. 7 b Power dissipation vs. on-state current

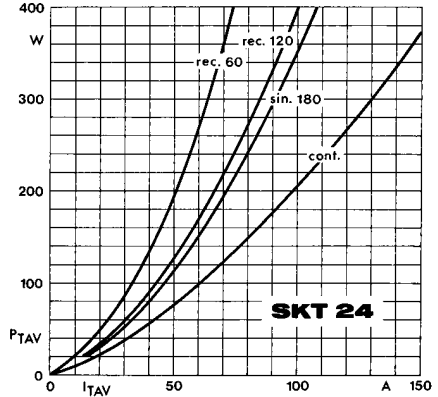


Fig. 7 c Power dissipation vs. on-state current

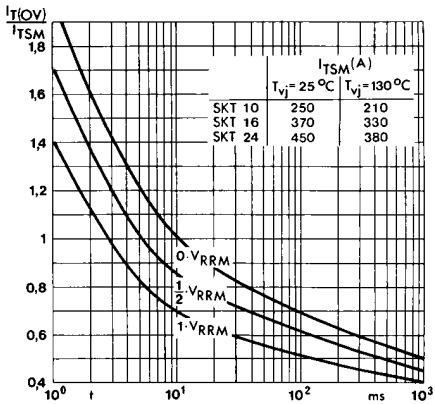


Fig. 8 Surge overload current vs. time

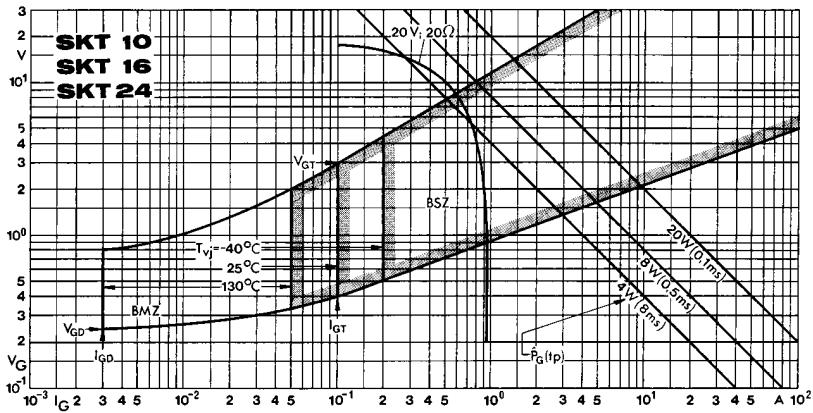


Fig. 9 Gate trigger characteristics

**SKT 10**

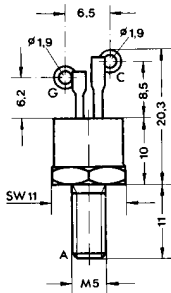
Case B 1

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**

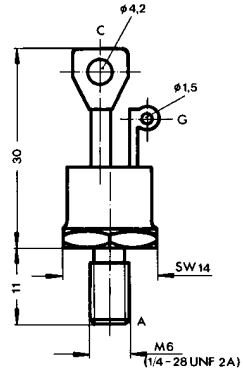
Case B 2

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**

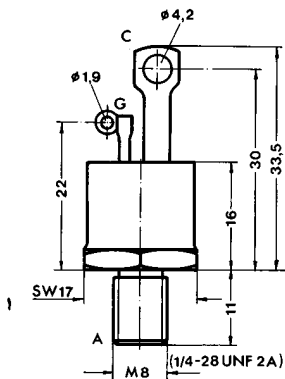
Case B 3

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