

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 _{RSM}	V _{RRM} V _{DRM}	(dv/dt) _{cr} V/μs	I _T RMS (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
1100	1000	500	SKT 10/10 D	–	–
1300	1200	500	SKT 10/12 D	–	–
		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*

Symbol	Conditions	SKT 10	SKT 16	SKT 24	Units
I _{TAV}	sin. 180; (T _{case} = ...)	10 (106)	16 (103)	24 (94)	A °C
i ² t	T _{vj} = 25 °C; 10 ms	250	370	450	A
	T _{vj} = 130 °C; 10 ms	210	330	380	A
	T _{vj} = 25 °C; 8,35 ... 10 ms	310	680	1000	A ² s
	T _{vj} = 130 °C; 8,35 ... 10 ms	220	550	720	A ² s
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	50			A/μs
I _H	T _{vj} = 25 °C	typ. 80; max. 150			mA
I _L	T _{vj} = 25 °C	typ. 150; max. 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 _{DD} = V _{DRM} ; V _{RD} = V _{RRM}	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. sin. 180/rec. 120	1,2 1,3/1,35	0,8 0,9/0,95		°C/W °C/W
R _{thch}		1,0	0,5		°C/W
T _{vj}		– 40 ... +130			°C
T _{stg}		– 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 ²
		7	12		g
Case		B 1		B 2	

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

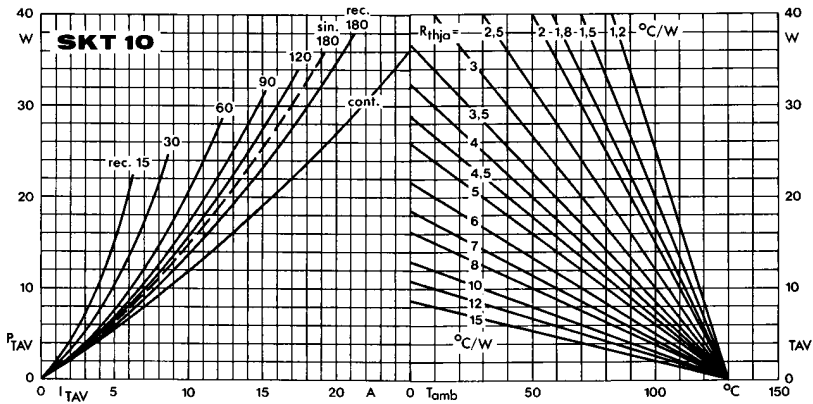


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

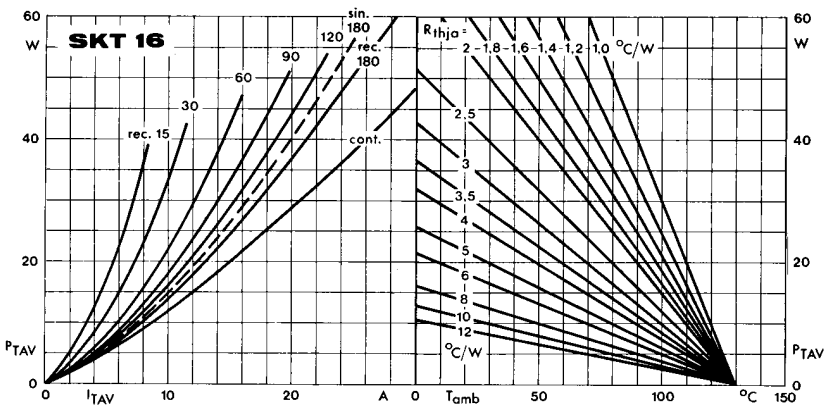


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

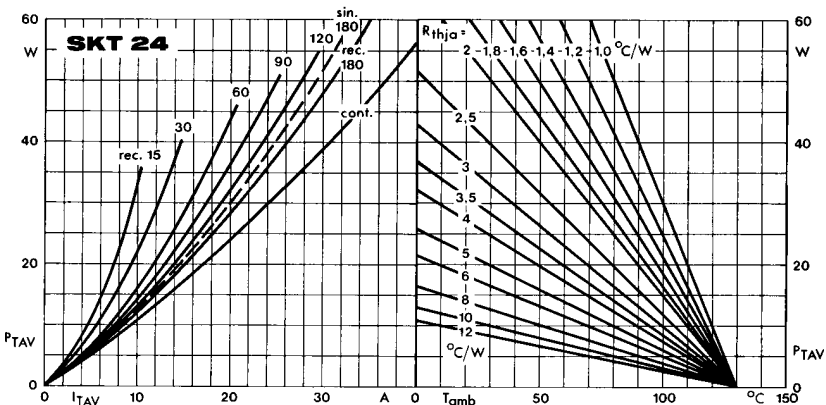


Fig. 1 c Power dissipation vs. on-state current and ambient temperature

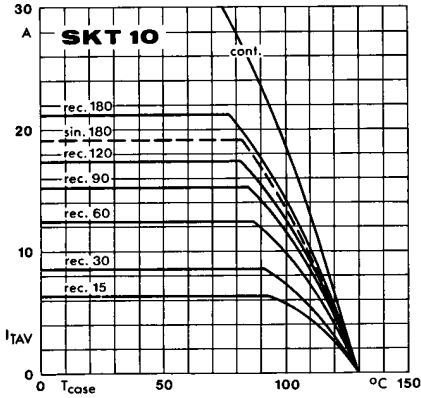


Fig. 2 a Rated on-state current vs. case temperature

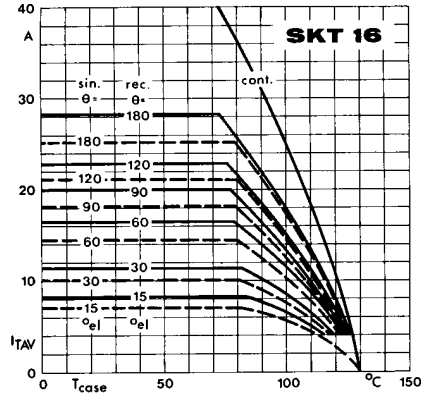


Fig. 2 b

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

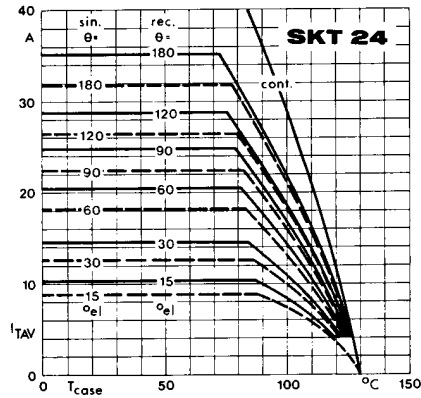


Fig. 2 c Rated on-state current vs. case temperature

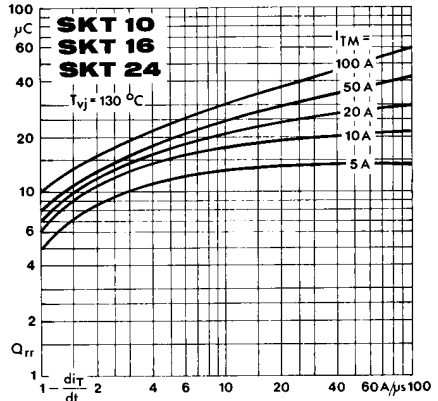


Fig. 3 Recovered charge vs. current decrease

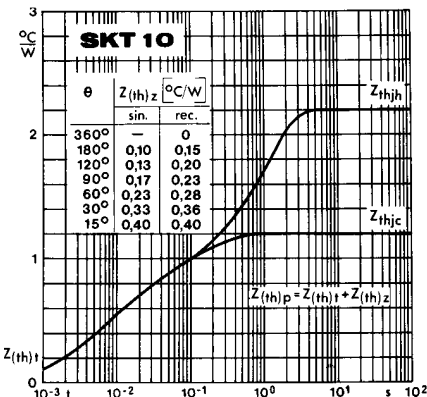


Fig. 4 a Transient thermal impedance vs. time

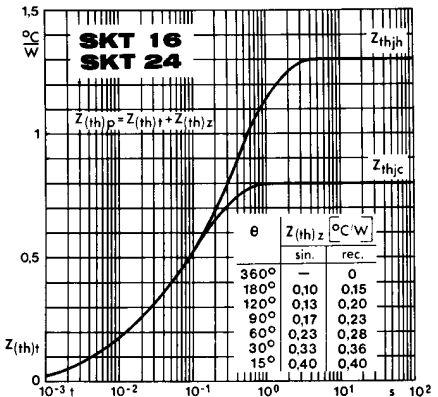


Fig. 4 b

Fig. 4 b Transient thermal impedance vs. time

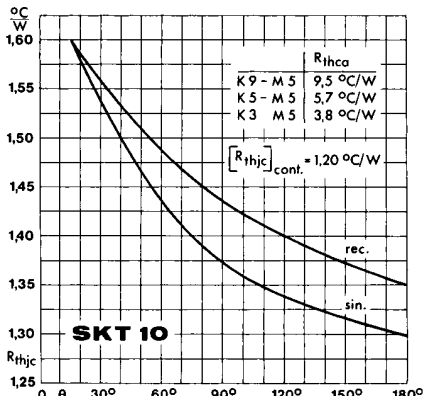


Fig. 5 a Thermal resistance vs. conduction angle

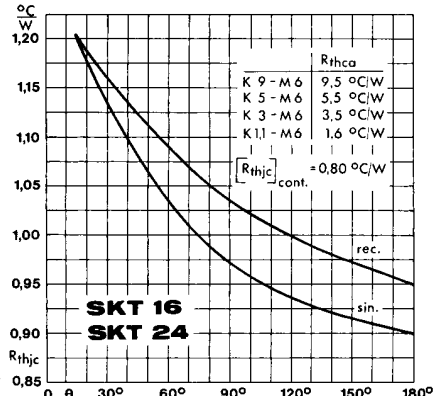


Fig. 5 b Thermal resistance vs. conduction angle

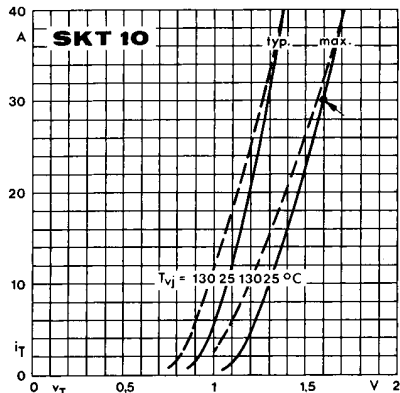


Fig. 6 a On-state characteristics

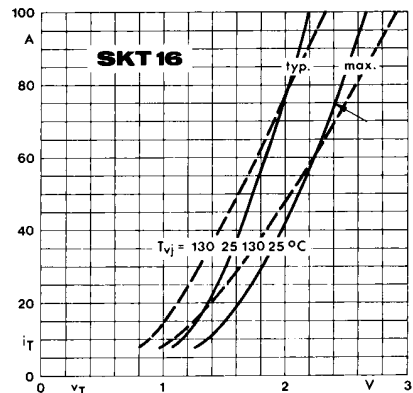


Fig. 6 b On-state characteristics

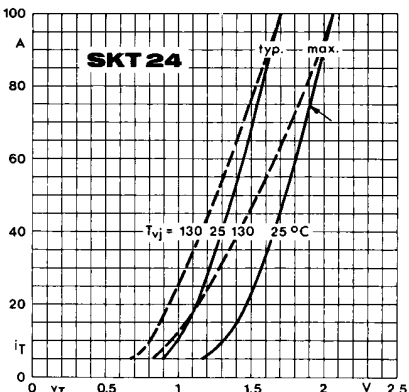


Fig. 6 c On-state characteristics

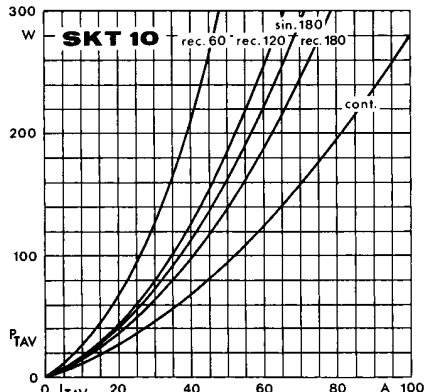


Fig. 7 a Power dissipation vs. on-state current

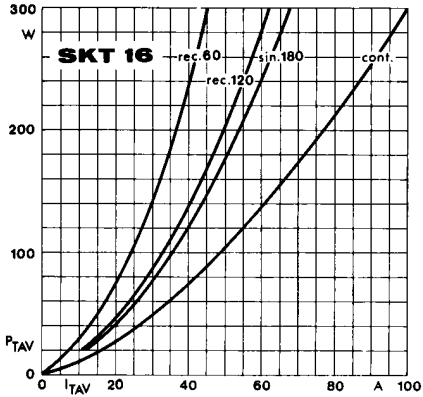


Fig. 7 b Power dissipation vs. on-state current

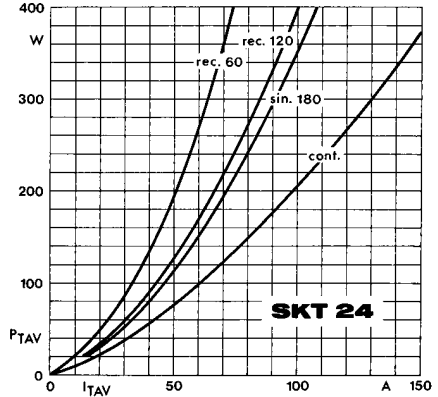


Fig. 7 c Power dissipation vs. on-state current

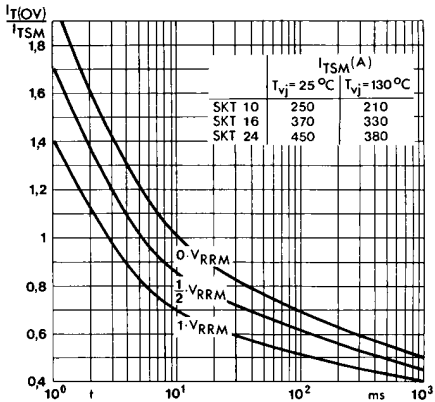


Fig. 8 Surge overload current vs. time

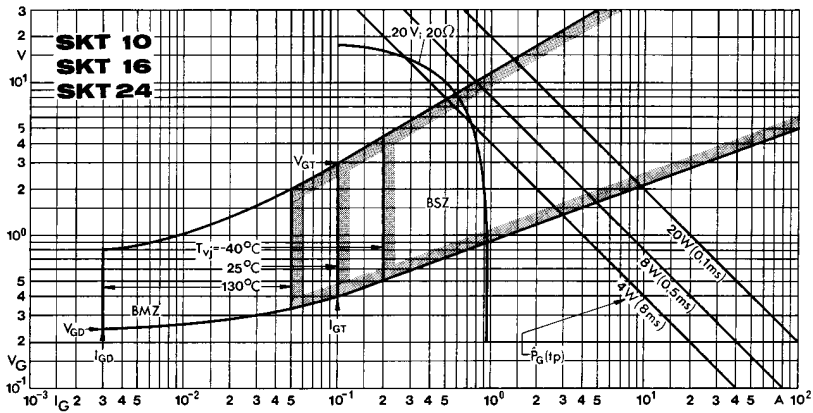


Fig. 9 Gate trigger characteristics

SKT 10

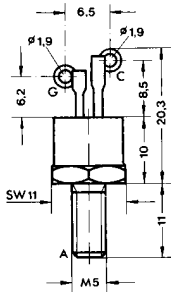
Case B 1

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

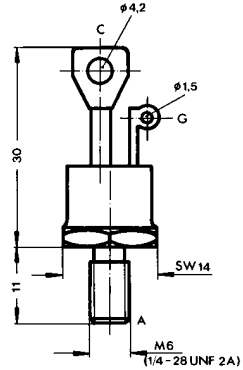
Case B 2

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**

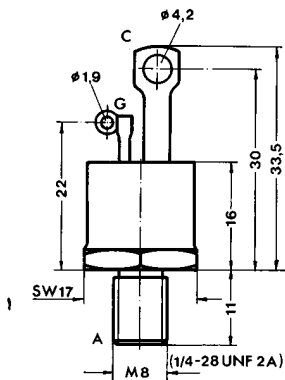
Case B 3

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