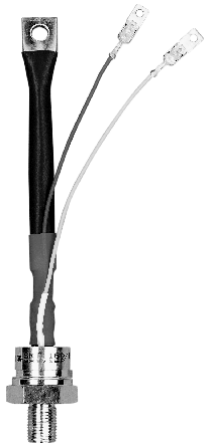
Thyristors

SKT 130
SKT 160



V_{RSM} V	V_{RRM} V_{DRM} V	$\left(\frac{dv}{dt}\right)_{cr}$ V/µs	I_{TRMS} (maximum values for continuous operation) 220 A	280 A
			I_{TAV} (sin. 180; T_{case} = . . . °C) 140 A (80 °C)	178 A (78 °C)
500	400	500	**SKT 130/04 D**	**SKT 160/04 D**
700	600	500	**SKT 130/06 D**	**SKT 160/06 D**
900	800	500	**SKT 130/08 D**	**SKT 160/08 D**
1300	1200	1000	**SKT 130/12 E**	**SKT 160/12 E***
1500	1400	1000	**SKT 130/14 E**	**SKT 160/14 E**
1700	1600	1000	**SKT 130/16 E**	**SKT 160/16 E***

Symbol	Conditions	SKT 130	SKT 160	Units
I_{TAV}	sin. 180; T_{case} = 85 °C	130	160	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	3500	4300	A
	T_{vj} = 130 °C; 10 ms	3000	3750	A
i^2t	T_{vj} = 25 °C; 8,35 ... 10 ms	61 000	92 500	A^2s
	T_{vj} = 130 °C; 8,35 ... 10 ms	45 000	70 000	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 · V_{DRM}	typ. 2		µs
$(di/dt)_{cr}$	f = 50 . . . 60 Hz	100		A/ µs
I_H	T_{vj} = 25 °C	typ. 150; max. 250		mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω	typ. 300; max. 600		mA
t_q	T_{vj} = 130 °C; typ.	120		µs
V_T	T_{vj} = 25 °C; I_T = 500 A; max.	2,25	1,75	V
$V_{T(TO)}$	T_{vj} = 130 °C	1,20	1,0	V
r_T	T_{vj} = 130 °C	2,2	1,5	mΩ
I_{DD}, I_{RD}	T_{vj} = 130 °C; V = V_{DRM} ; V_{RRM}	50	50	mA
V_{GT}	T_{vj} = 25 °C	3		V
I_{GT}	T_{vj} = 25 °C	200		mA
V_{GD}	T_{vj} = 130 °C	0,25		V
I_{GD}	T_{vj} = 130 °C	10		mA
R_{thjc}	cont.	0,16		°C/W
	sin. 180/rec. 120	0,18/0,20		°C/W
R_{thch}		0,03		°C/W
T_{vj}		– 40 ... +130		°C
T_{stg}		– 55 ... +150		°C
M	SI units	30		Nm
	US units	265		lb. in.
a		5 · 9,81		m/s^2
w		210		g
Case		B 6		

Features

- Hermetic metal cases with ceramic insulators
- Threaded studs ISO M16 x 1,5 or UNF 3/4-16
- 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)

* Available with UNF thread 3/4-16 UNF2A; e.g. SKT 160/12 E UNF

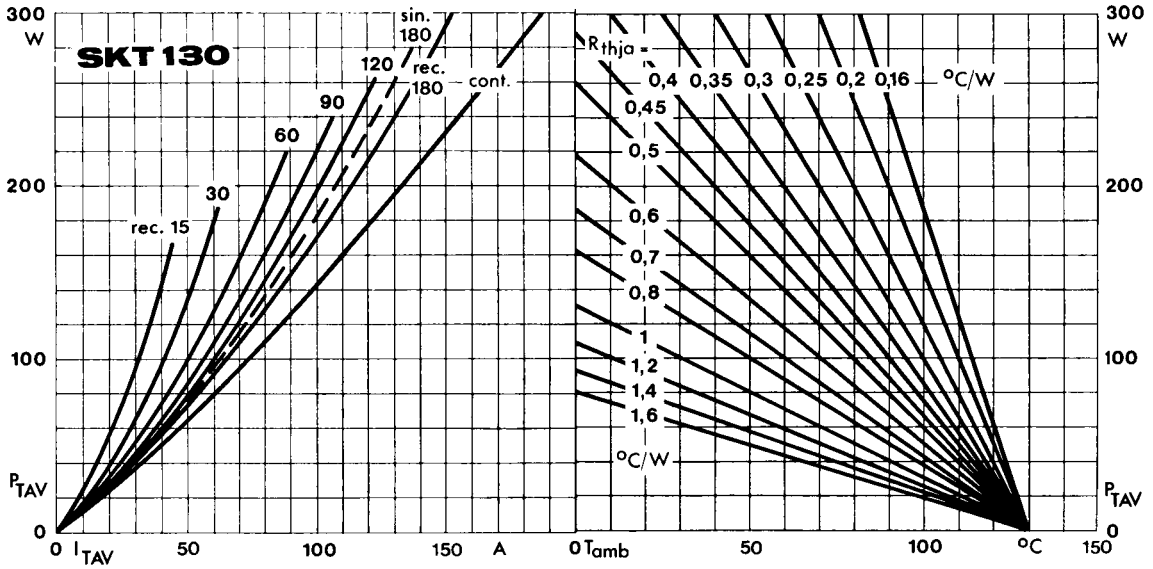


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

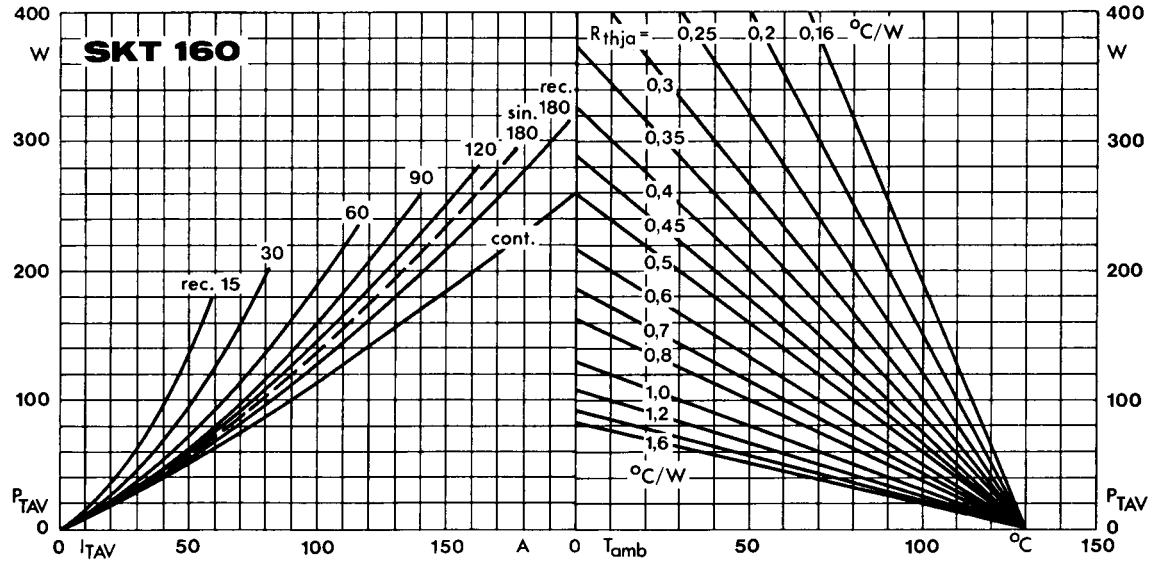


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

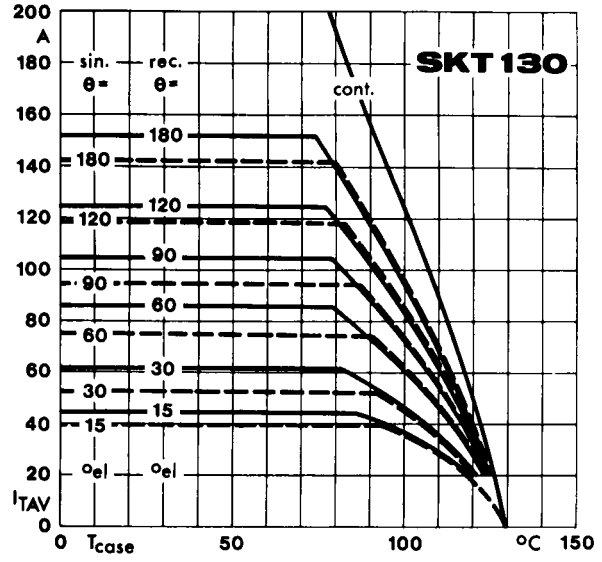


Fig. 2 a Rated on-state current vs. case temperature

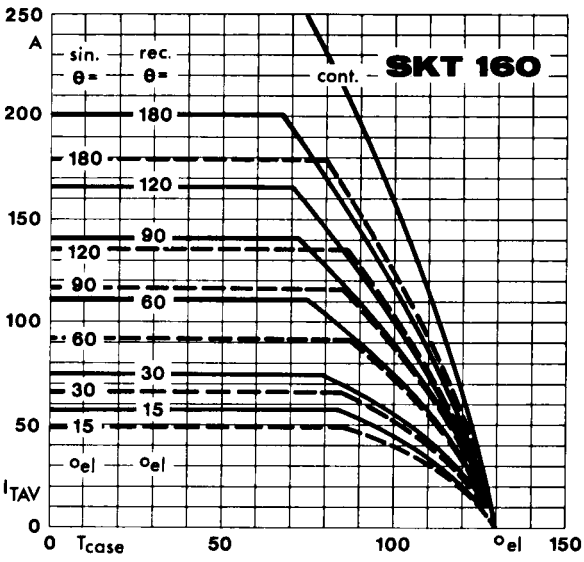


Fig. 2 b Rated on-state current vs. case temperature

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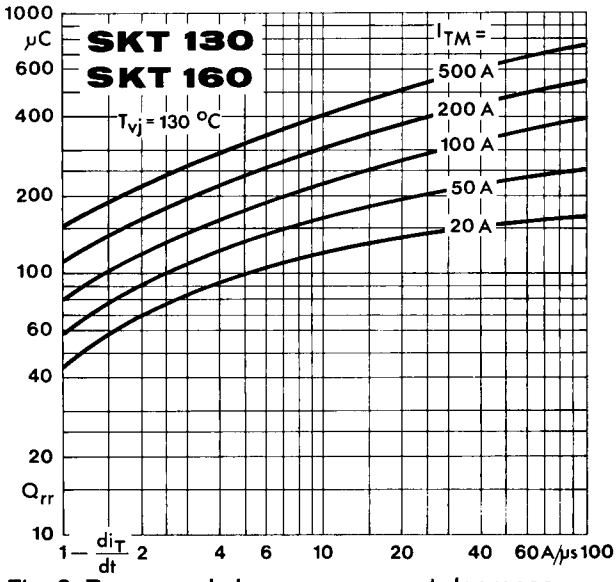

Fig. 3 Recovered charge vs. current decrease

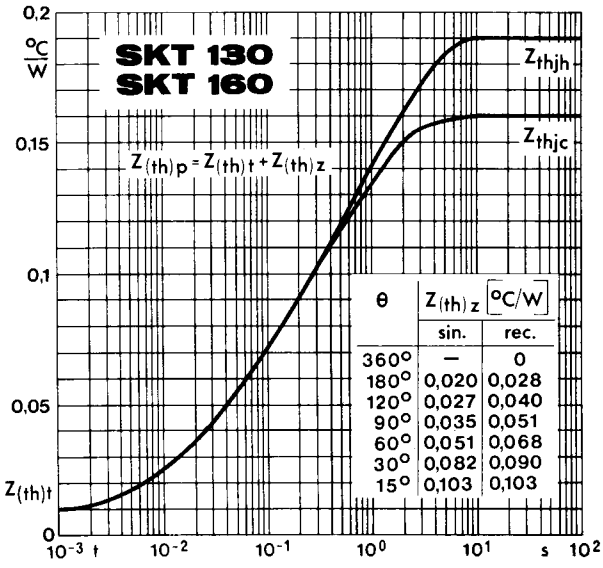

Fig. 4 Transient thermal impedance vs. time

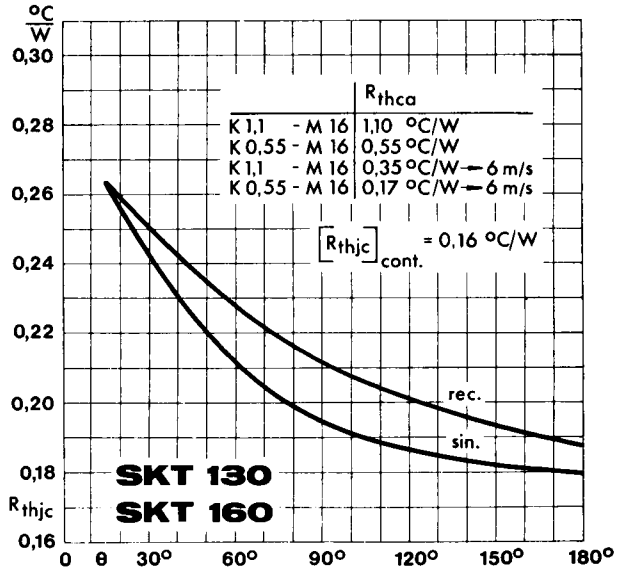

Fig. 5 Thermal resistance vs. conduction angle

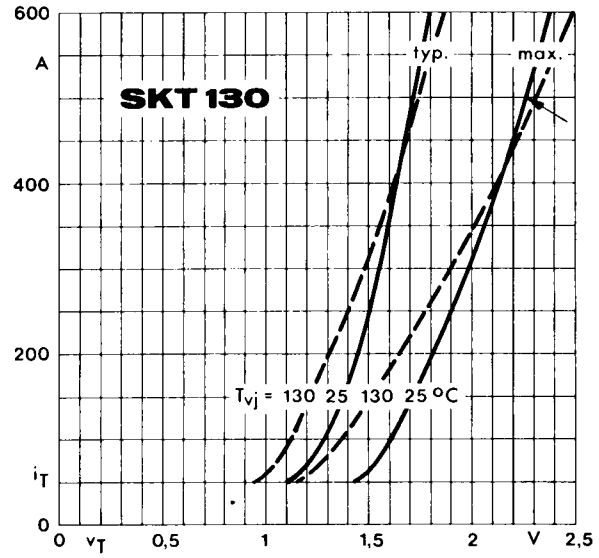

Fig. 6 a On-state characteristics

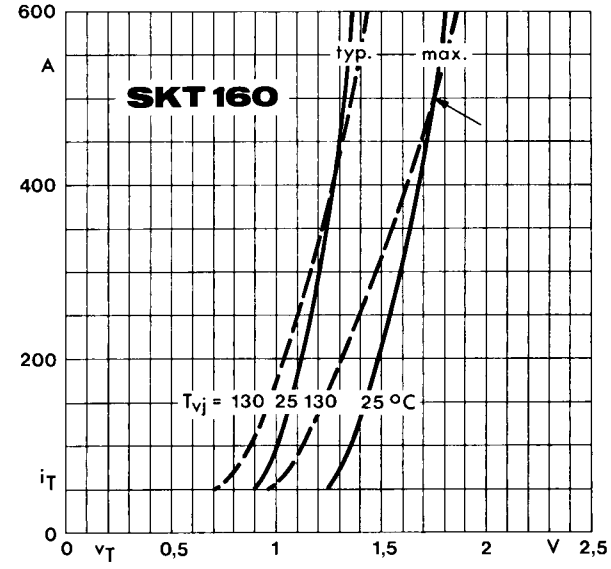

Fig. 6 b On-state characteristics

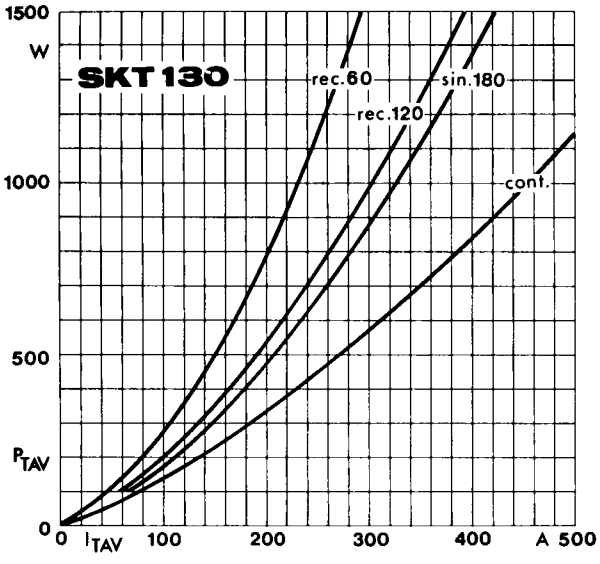

Fig. 7 a Power dissipation vs. on-state current

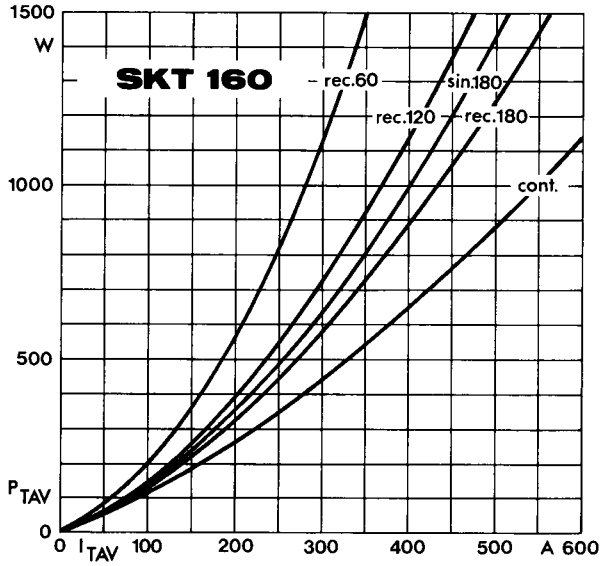

Fig. 7 b Power dissipation vs. on-state current

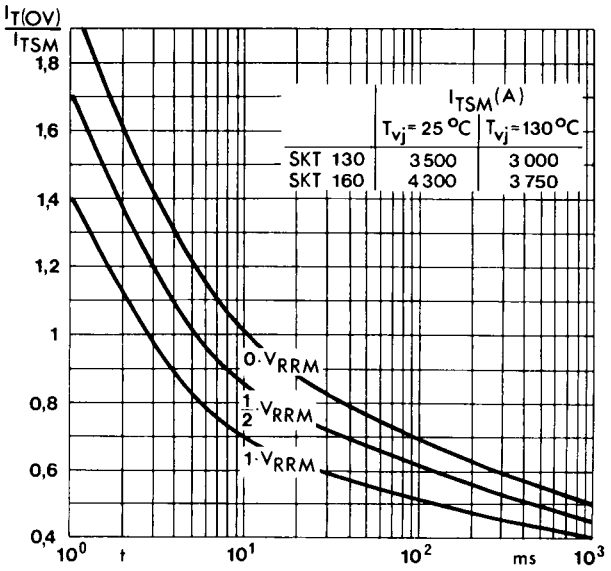

Fig. 8 Surge overload current vs. time

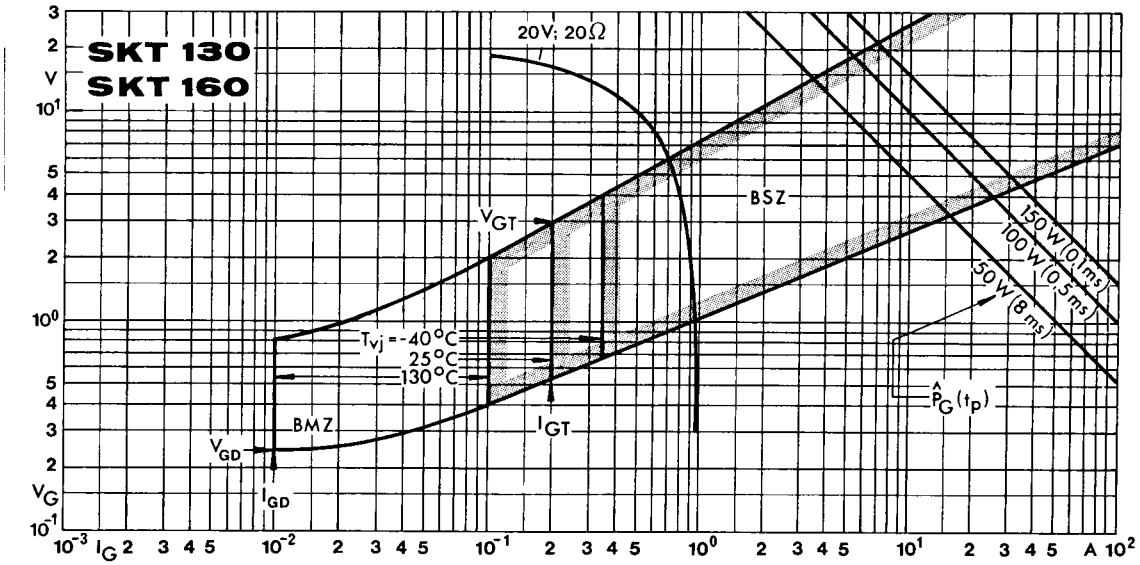

Fig. 9 Gate trigger characteristics

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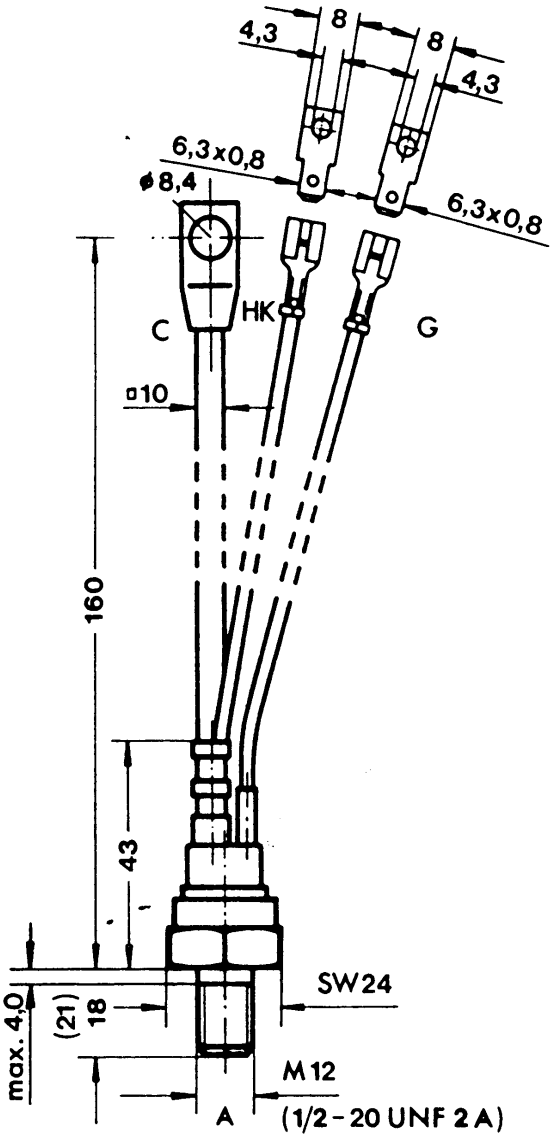
SKT 55
SKT 80
SKT 100

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)]

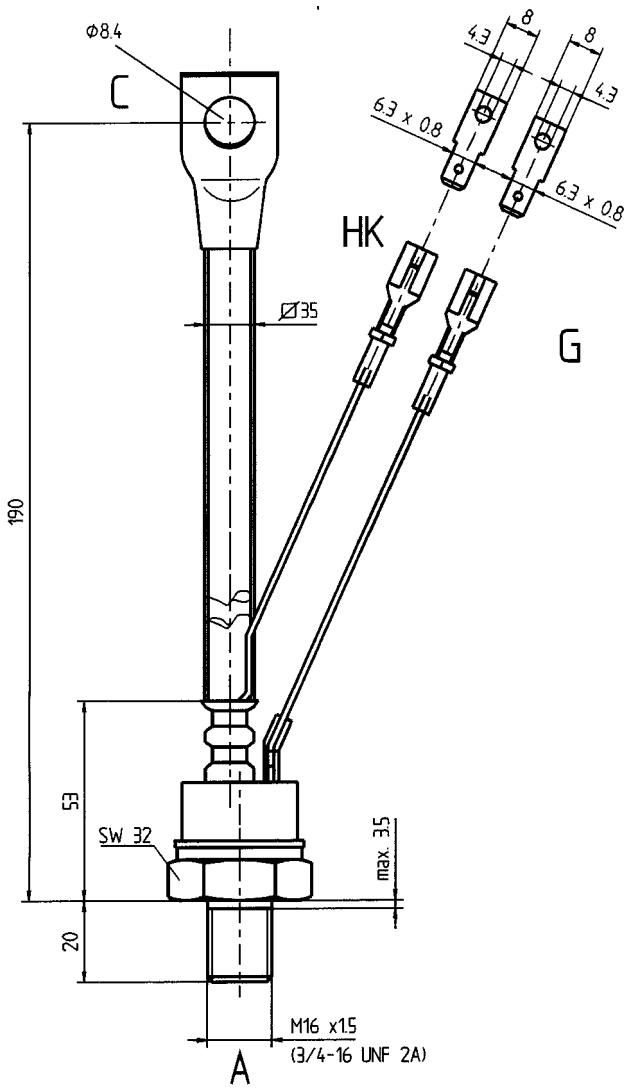


[1)] modified version. In the USA and Canada these types are available with the original TO-209 (TO-94) dimensions. TO-208 AD (TO-83) with flag terminals is also available.

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

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