SKT 80

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Stud Thyristor

V_{RSM}	V_{RRM}, V_{DRM}	I_{TRMS} = 135 A (maximum value for continuous operation)
V	V	I_{TAV} = 80 A (sin. 180; T_c = 85 °C)
700	600	SKT 80/06D[1)]
900	800	SKT 80/08D
1300	1200	SKT 80/12E[1)]
1500	1400	SKT 80/14E
1700	1600	SKT 80/16E[1)]
1900	1800	SKT 80/18E

Line Thyristor

SKT 80

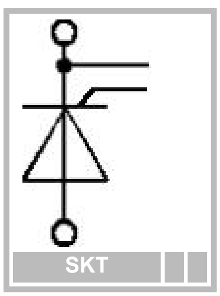
Features

- Hermetic metal case with glass insulator
- Threaded stud ISO M12 or UNF 1/2-20
- International standard case

Typical Applications

- DC motor control (e. g. for machines tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Recommended snubber network e. g. for $V_{VRMS} \leq$ 400 V: R = 47 •/10 W, C = 0,22 •F

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



Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 100 (85) °C	60 (80)	A
I_D	K1,1; T_a = 45 °C; B2 / B6	76 / 105	A
	K0,55; T_a = 45 °C; B2 / B6	110 / 150	A
I_{RMS}	K1,1; T_a = 45 °C; W1C	84	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	1700	A
	T_{vj} = 130 °C; 10 ms	1500	A
i²t	T_{vj} = 25 °C; 8,35 ... 10 ms	14500	A²s
	T_{vj} = 130 °C; 8,35 ... 10 ms	11000	A²s
V_T	T_{vj} = 25 °C; I_T = 300 A	max. 2,25	V
$V_{T(TO)}$	T_{vj} = 130 °C	max. 1,2	V
r_T	T_{vj} = 130 °C	max. 4	m•
I_{DD}; I_{RD}	T_{vj} = 130 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 30	mA
t_{gd}	T_{vj} = 25 °C; I_G = 1 A; di_G/dt = 1 A/µs	1	µs
t_{gr}	V_D = 0,67 * V_{DRM}	2	µs
$(di/dt)_{cr}$	T_{vj} = 130 °C	max. 50	A/µs
$(dv/dt)_{cr}$	T_{vj} = 130 °C ; SKT ...D / SKT ...E	max. 500 / 1000	V/µs
t_q	T_{vj} = 130 °C	100	µs
I_H	T_{vj} = 25 °C; typ. / max.	150 / 250	mA
I_L	T_{vj} = 25 °C; typ. / max.	300 / 600	mA
V_{GT}	T_{vj} = 25 °C; d.c.	min. 3	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 150	mA
V_{GD}	T_{vj} = 130 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 130 °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.	0,25	K/W
$R_{th(j-c)}$	sin. 180	0,28	K/W
$R_{th(j-c)}$	rec. 120	0,31	K/W
$R_{th(c-s)}$		0,08	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}		-	V~
M_s	to heatsink	10	Nm
a		5 * 9,81	m/s²
m	approx.	80	g
Case		B 5	

Diagrams

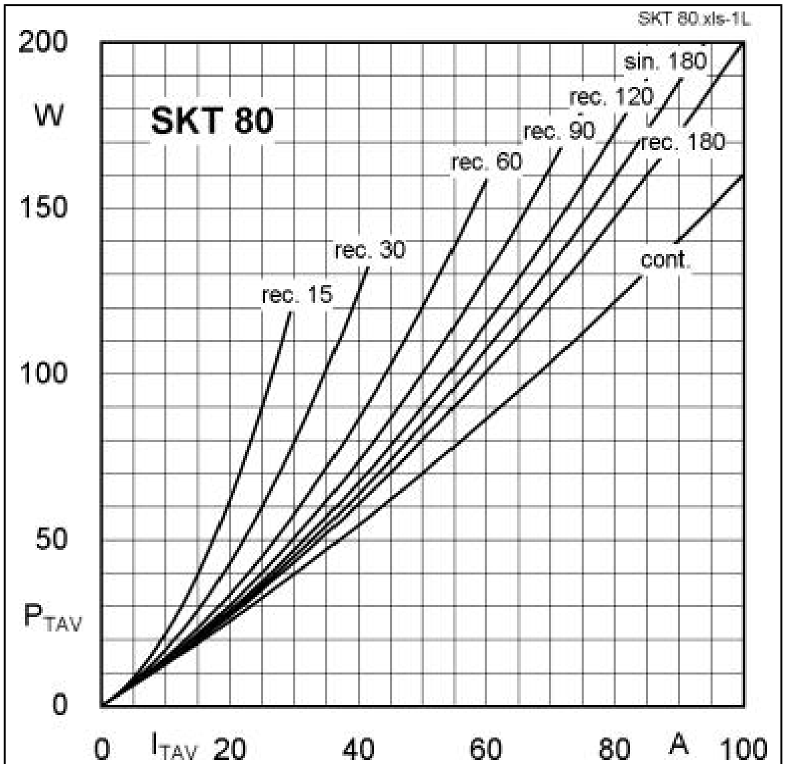


Fig. 1L Power dissipation vs. on-state current

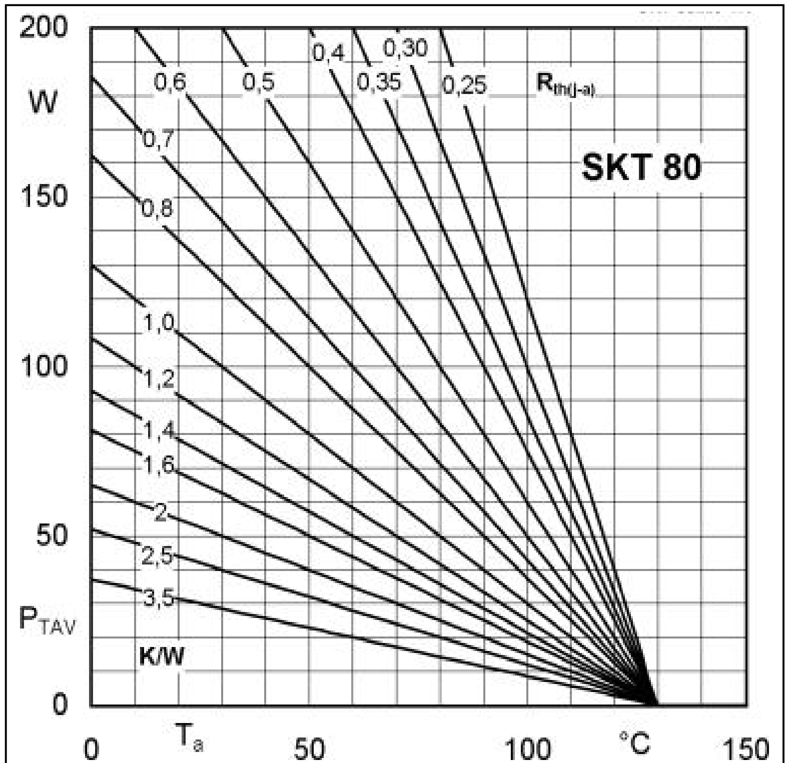


Fig. 1R Power dissipation vs. ambient temperature

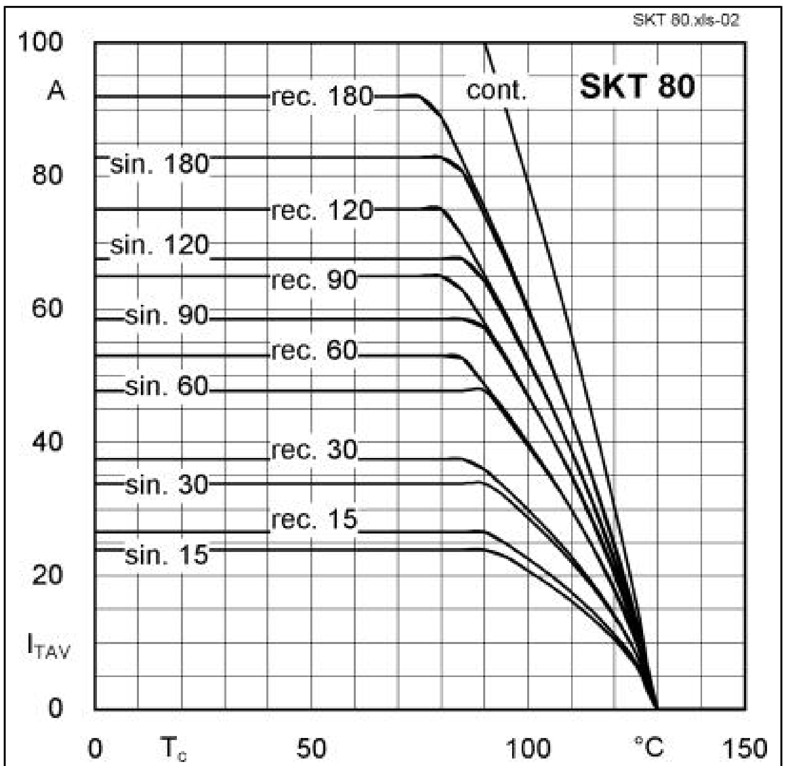


Fig. 2 Rated on-state current vs. case temperature

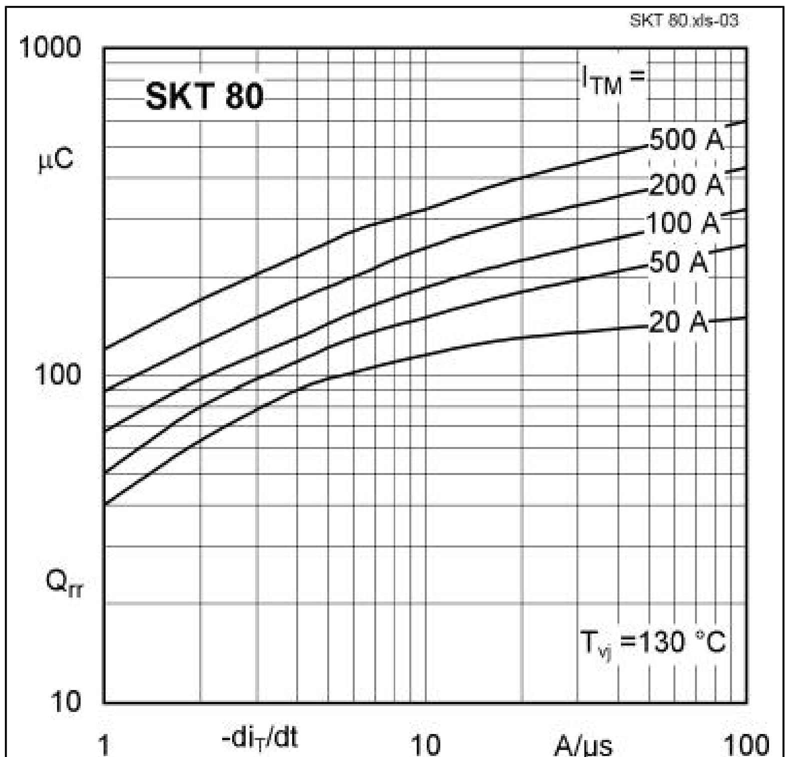


Fig. 3 Recovered charge vs. current decrease

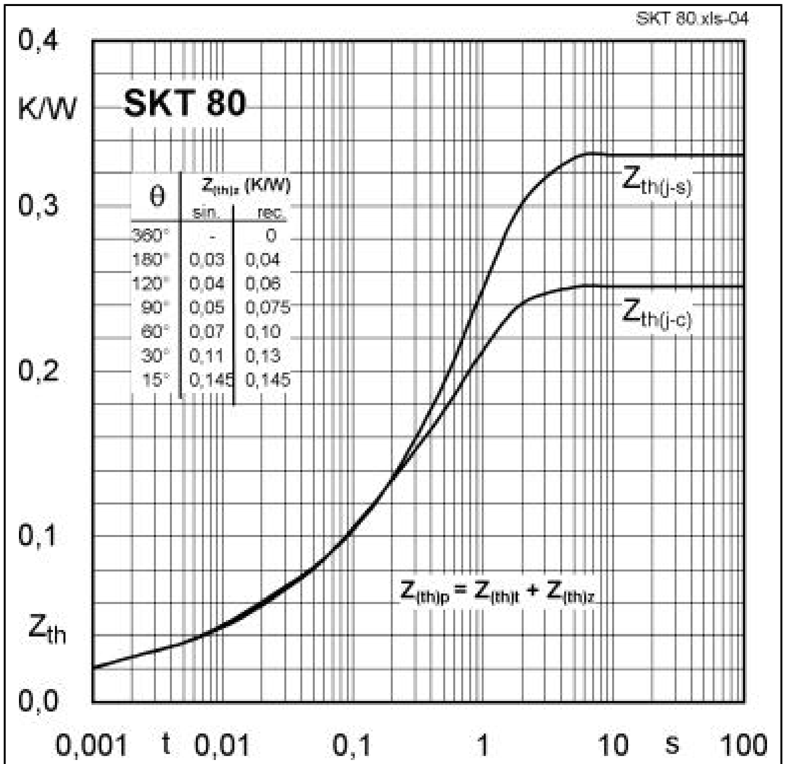


Fig. 4 Transient thermal impedance vs. time

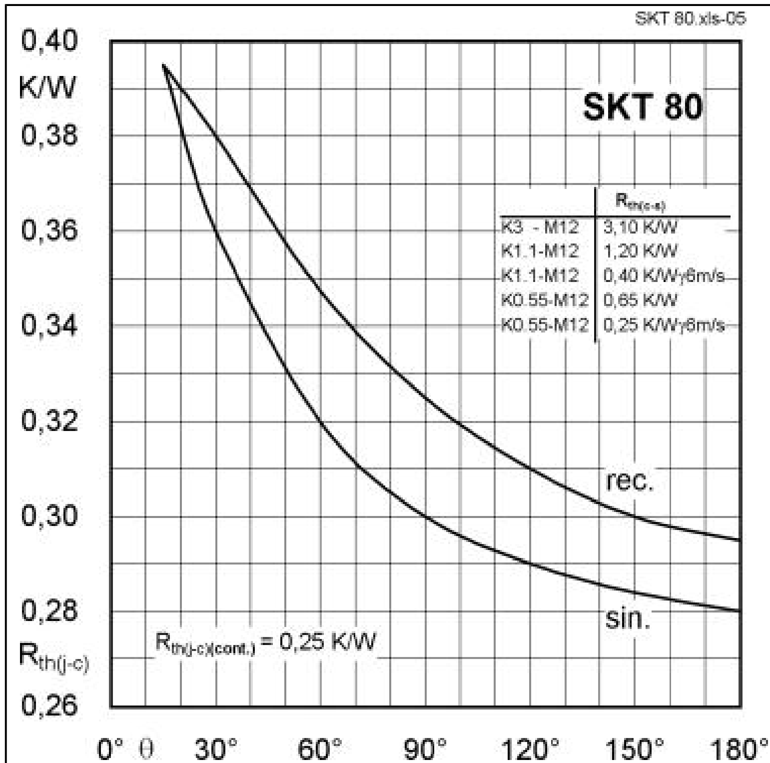


Fig. 5 Thermal resistance vs. conduction angle

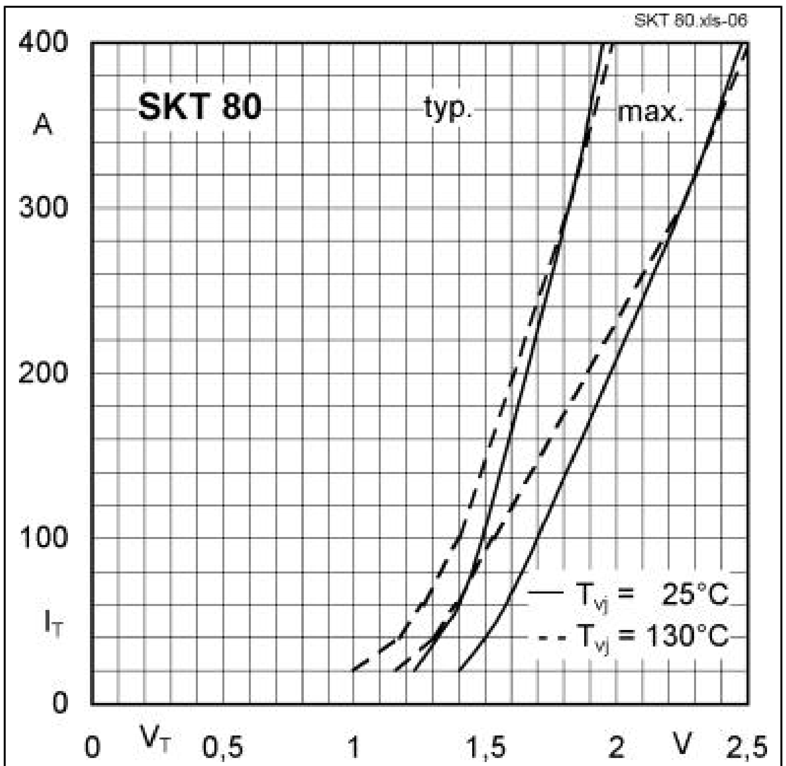


Fig. 6 On-state characteristics

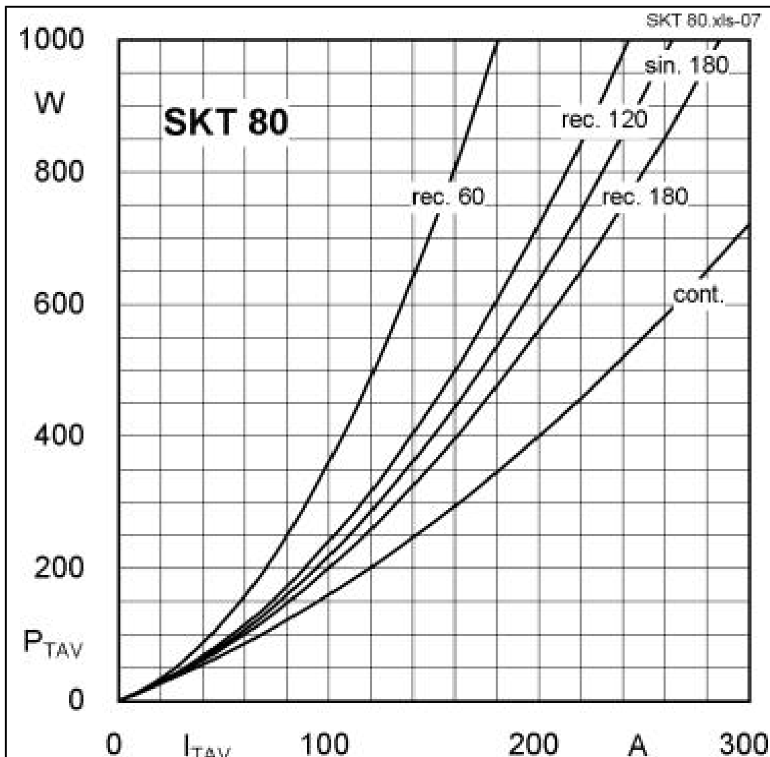


Fig. 7 Power dissipation vs. on-state current

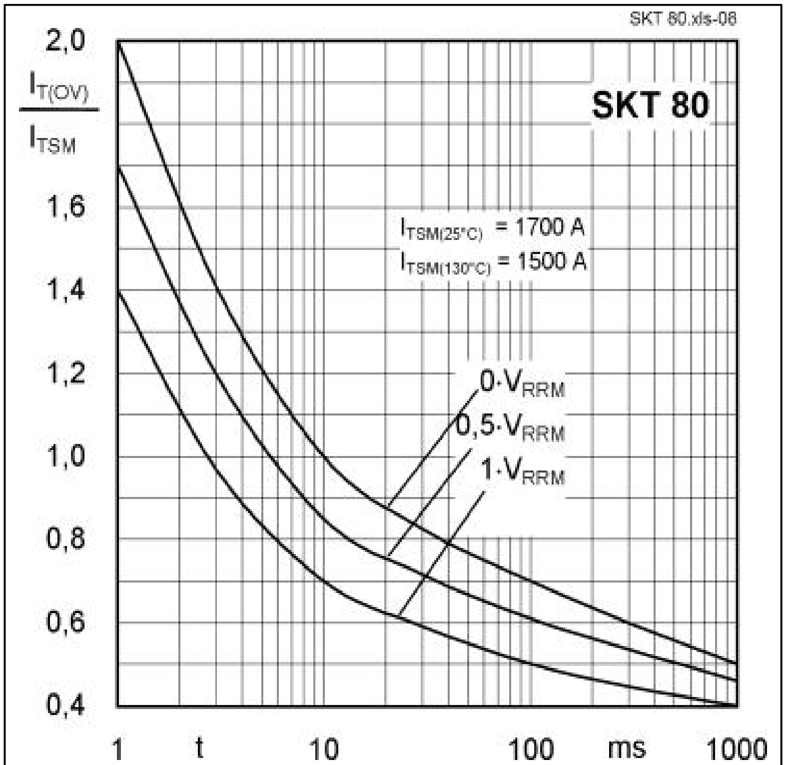


Fig. 8 Surge overload curent vs. time

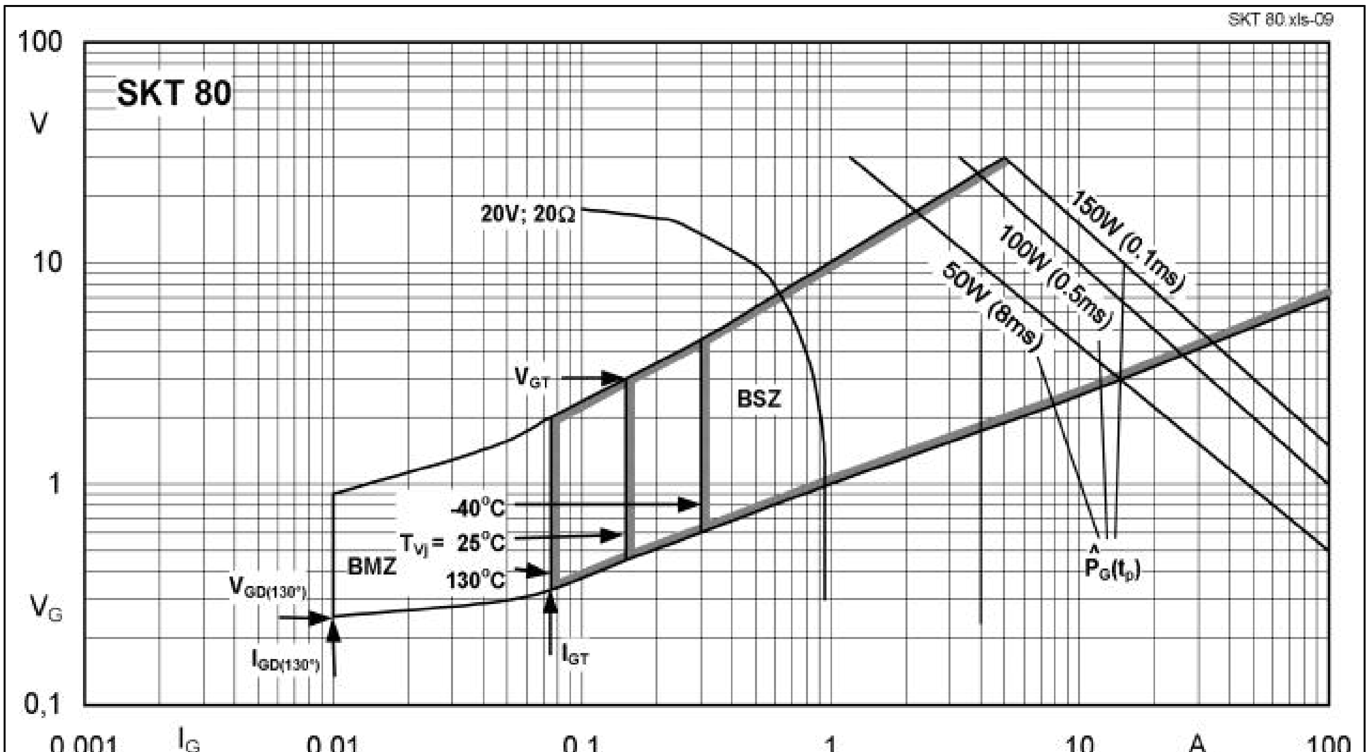
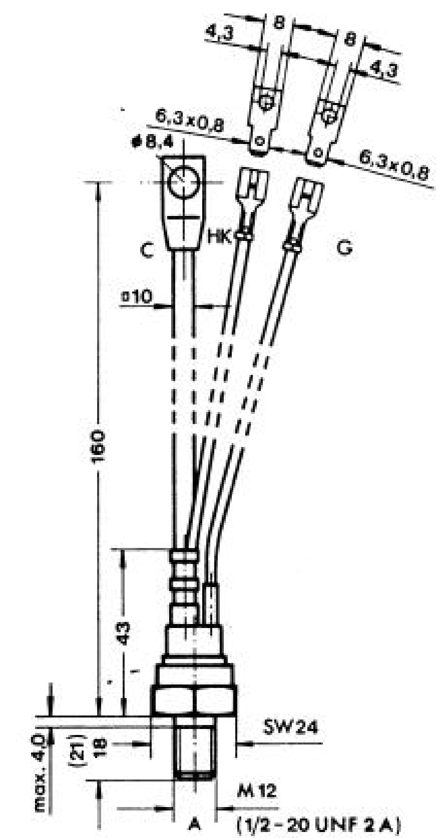


Fig. 9 Gate trigger characteristics

Cases / Circuits

Dimensions in mm



Case B 5 (IEC 60191-2: A12MA, A12U; JEDEC: TO-209 (TO-94))