SKT 50 Download PDF here

Stud Thyristor

V_{RSM}	V_{RRM}, V_{DRM}	I_{TRMS} = 78 A (maximum value for continuous operation)
V	V	I_{TAV} = 50 A (sin. 180; T_c = 78 °C)
700	600	SKT 50/06D[1)]
900	800	SKT 50/08D
1300	1200	SKT 50/12E[1)]
1500	1400	SKT 50/14E[1)]
1700	1600	SKT 50/16E[1)]
1900	1800	SKT 50/18E

Line Thyristor

SKT 50

Features

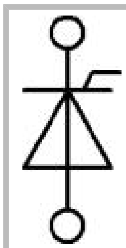
- Hermetic metal case with glass insulator
- Threaded stud ISO M8 or UNF 1/4-28
- International standard case

Typical Applications

- DC motor control (e. g. for machine 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 = 68 •/11 W, C = 0,22 •F

[1)] Available with UNF thread 1/4-28 UNF2A, e. g. SKT 50/06D UNF

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 100 (85) °C	33 (45)	A
I_D	K5; T_a = 45 °C; B2 / B6	25 / 36	A
	K3; T_a = 45 °C; B2 / B6	36 / 50	A
I_{RMS}	K3; T_a = 45 °C; W1C	40	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	1050	A
	T_{vj} = 130 °C; 10 ms	900	A
i²t	T_{vj} = 25 °C; 8,35 ... 10 ms	5000	A²s
	T_{vj} = 130 °C; 8,35 ... 10 ms	4000	A²s
V_T	T_{vj} = 25 °C; I_T = 120 A	max. 1,8	V
$V_{T(TO)}$	T_{vj} = 130 °C	max. 1,1	V
r_T	T_{vj} = 130 °C	max. 5	m•
I_{DD}; I_{RD}	T_{vj} = 130 °C; $V_{RD} = V_{RRM}$; $V_{DD} = V_{DRM}$	max. 8	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}	1,5	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.	100 / 200	mA
I_L	T_{vj} = 25 °C; R_G = 33 •; typ. / max.	250 / 400	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. 5	mA
$R_{th(j-c)}$	cont.	0,57	K/W
$R_{th(j-c)}$	sin. 180	0,6	K/W
$R_{th(j-c)}$	rec. 120	0,65	K/W
$R_{th(c-s)}$		0,2	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}		-	V~
M_s	to heatsink	4 (UNF: 2,5)	Nm
a		5 * 9,81	m/s²
m	approx.	2,2	g
Case		B 3	



SKT

Diagrams

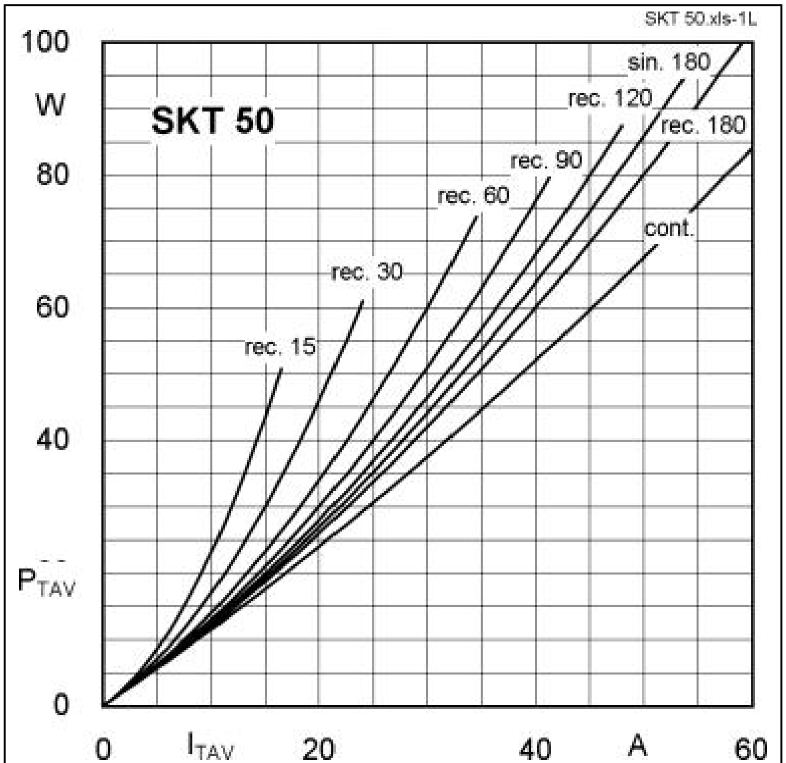


Fig. 1L Power dissipation vs. on-state current

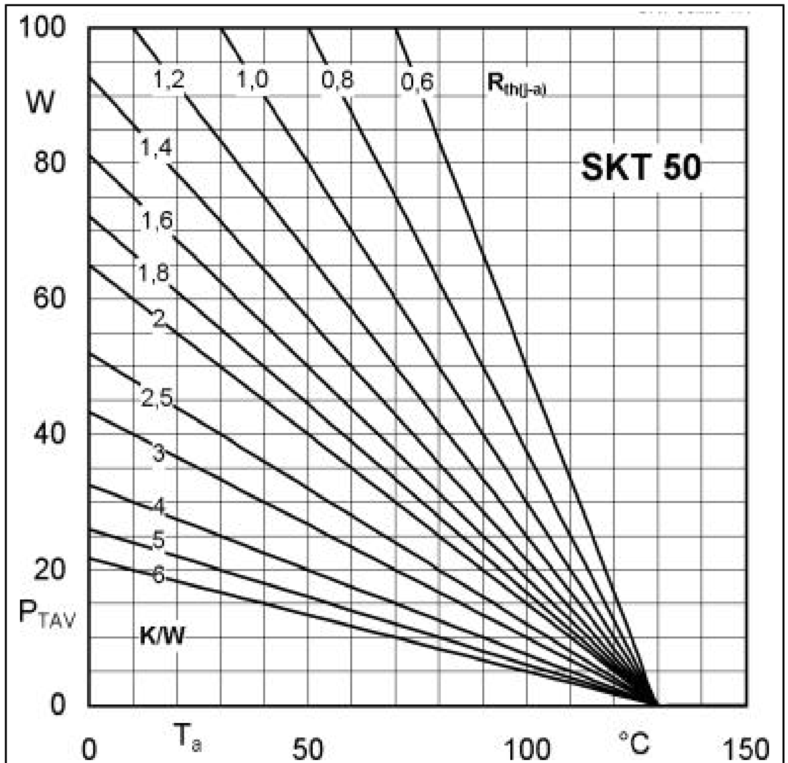


Fig. 1R Power dissipation vs. ambient temperature

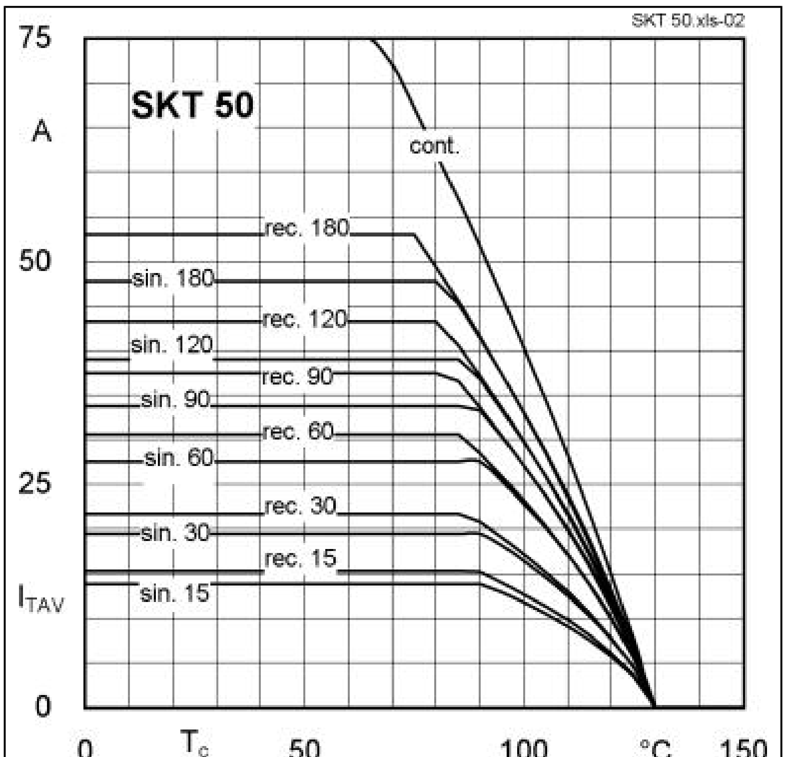


Fig. 2 Rated on-state current vs. case temperature

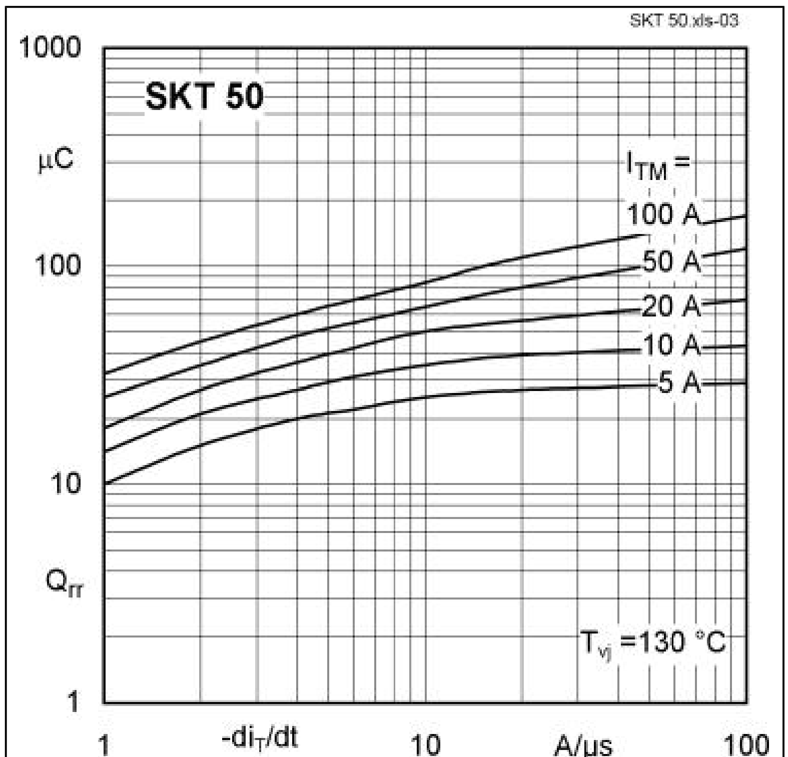


Fig. 3 Recovered charge vs. current decrease

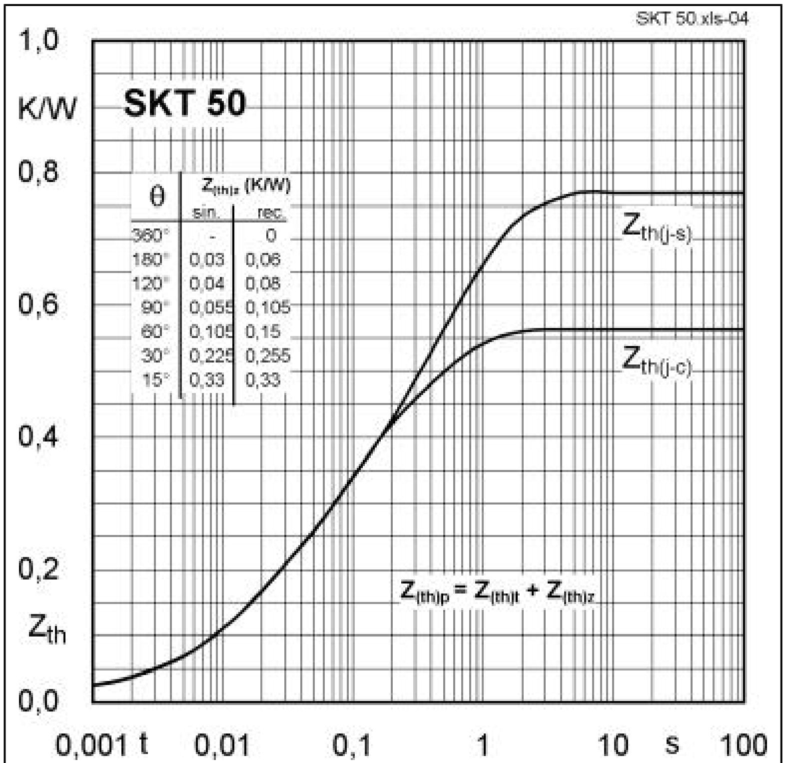


Fig. 4 Transient thermal impedance vs. time

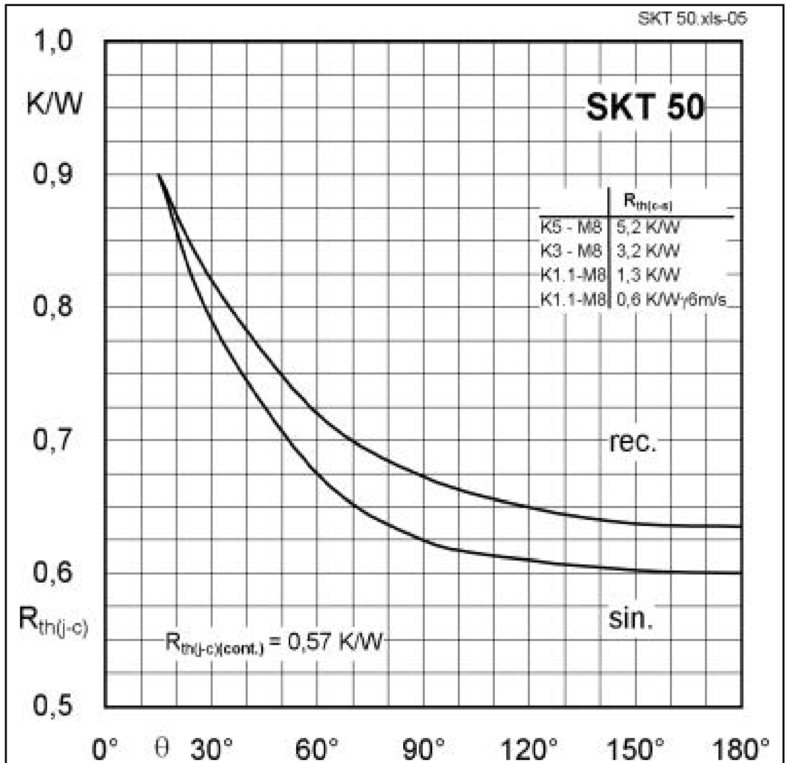


Fig. 5 Thermal resistance vs. conduction angle

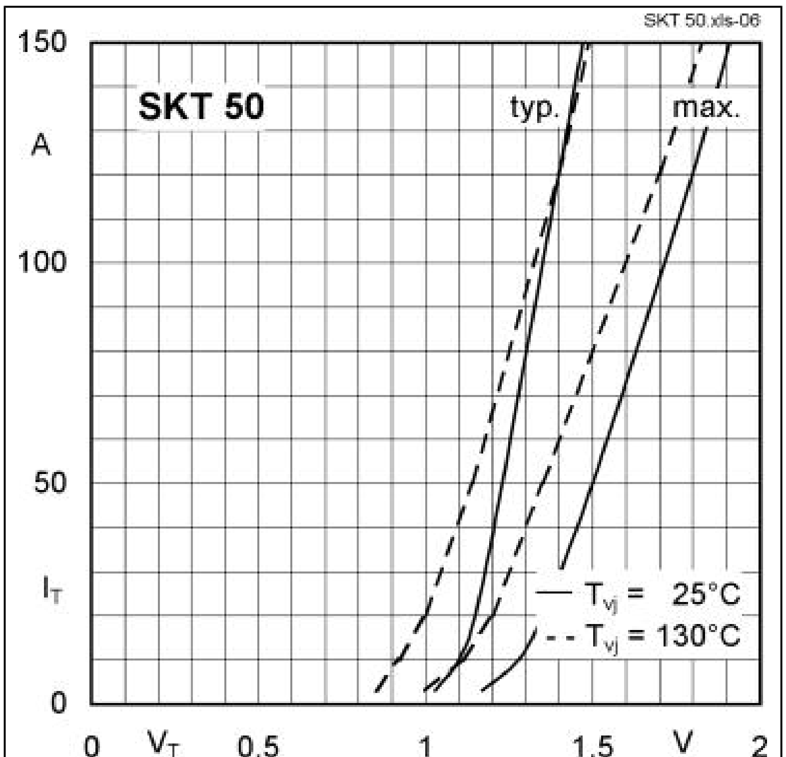


Fig. 6 On-state characteristics

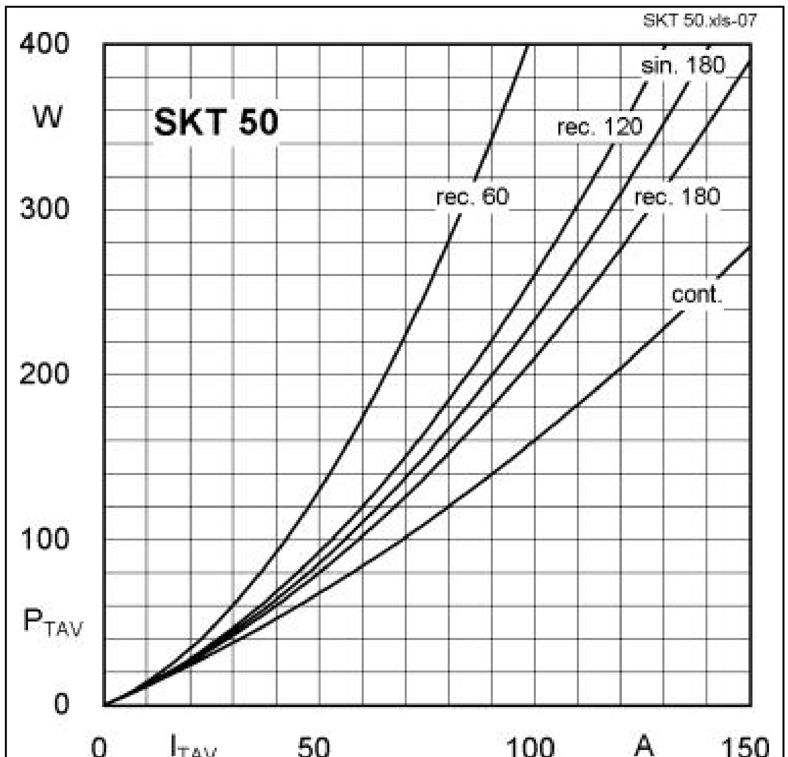


Fig. 7 Power dissipation vs. on-state current

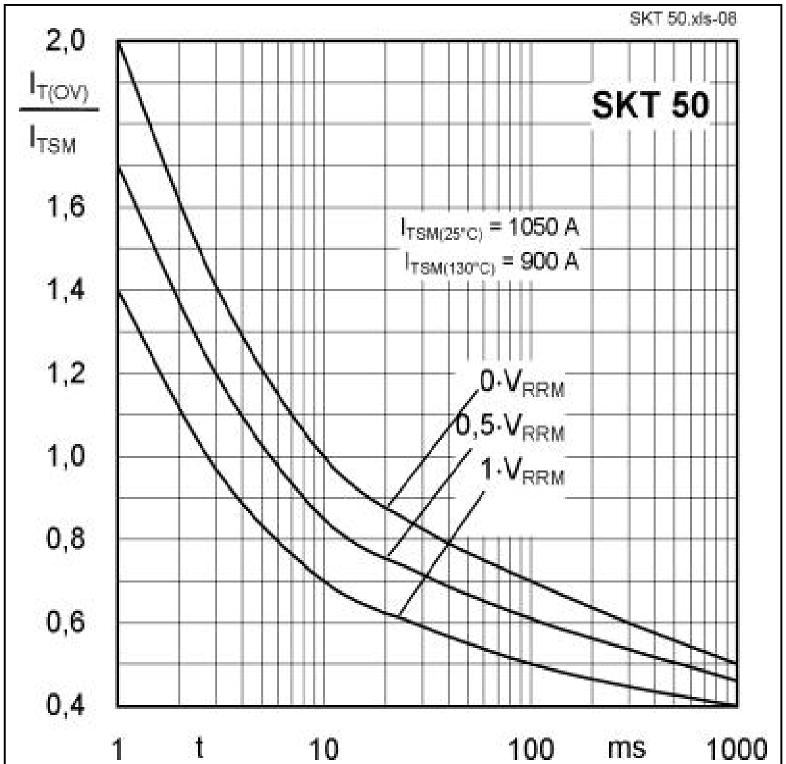


Fig. 8 Surge overload curent vs. time

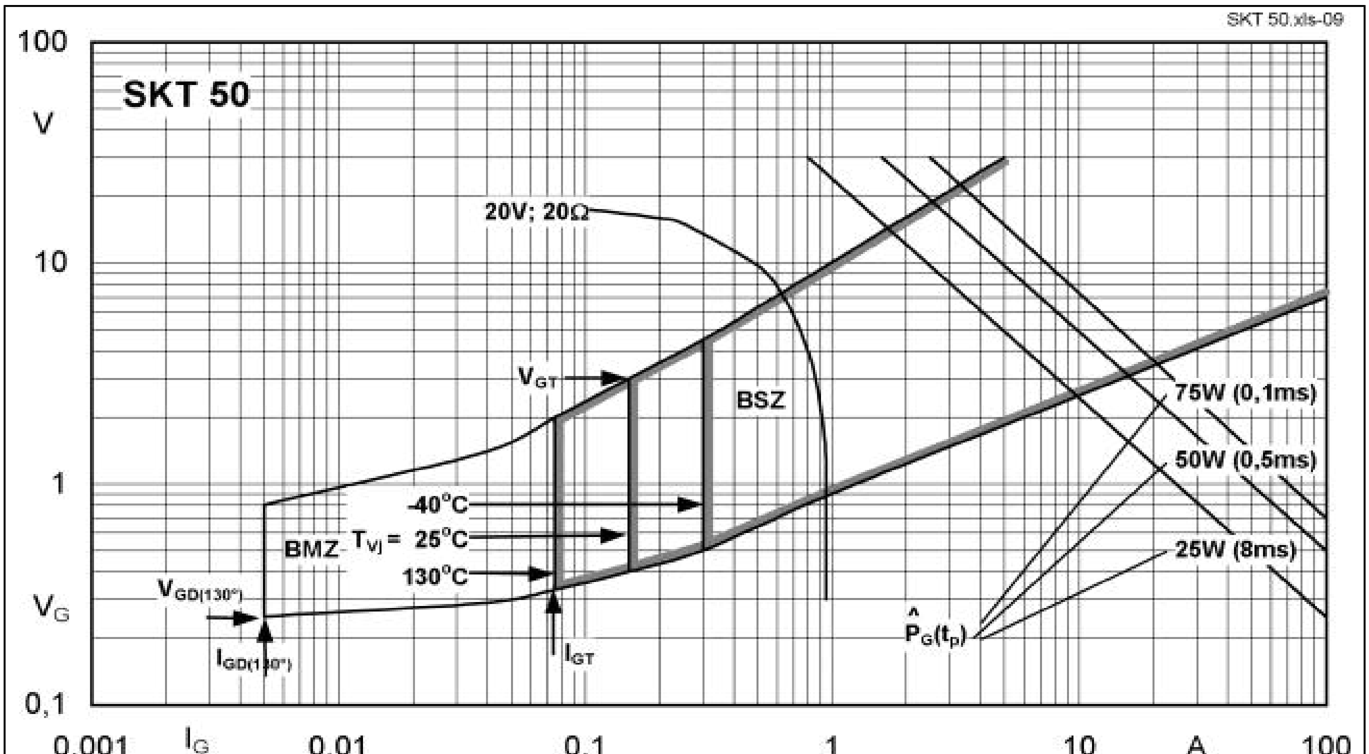
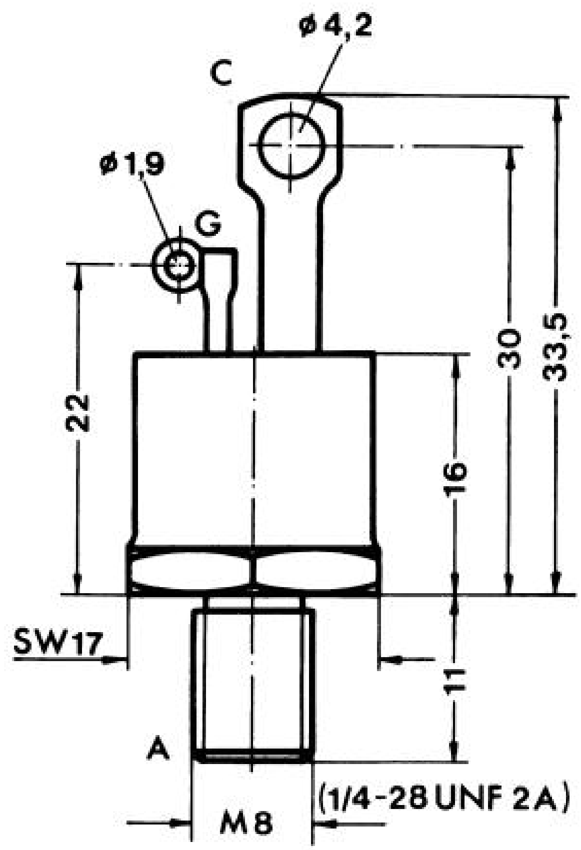


Fig. 9 Gate trigger characteristics

Cases / Circuits

Dimensions in mm



Case B 3 (IEC 60191-2: A38MA, A14U; JEDEC: TO-208AC (TO-65))

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