SEMIKRON

V_{RS} V	V_{RRM} V_{DRM} V	$(dv/dt)_{cr}$ V/µs	I_{TRMS} (maximum values for continuous operation) 920 A I_{TAV} (sin. 180; T_{case} = 80 °C) 585 A	
900	800	500	**SKKT 500/08 D**	**SKKH 500/08 D**
1300	1200	1000	**SKKT 500/12 E**	**SKKH 500/12 E**
1500	1400	1000	**SKKT 500/14 E**	**SKKH 500/14 E**
1700	1600	1000	**SKKT 500/16 E**	**SKKH 500/16 E**
1900	1800	1000	**SKKT 500/18 E**	**SKKH 500/18 E**

Symbol	Conditions			SKKT 500 SKKH 500	Units
I_{TAV}	sin. 180;	T_{case} = 85 °C		540	A
I_D		T_{case} = 89 °C		500	A
I_{RMS}	B2/B6	T_{amb}	P 16/200 F	665 / 845	A
	W1/W3	= 35 °C	P 16/300 F	850 / 3 x 670	A
I_{TSM}	T_{vj} = 25 °C; 10 ms			17 000	A
	T_{vj} = 130 °C; 10 ms			15 000	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms			1 445 000	A^2s
	T_{vj} = 130 °C; 8,3 ... 10 ms			1 125 000	A^2s
t_{gd}	T_{vj} = 25 °C	I_G = 1 A di_G/dt = 1 A/µs		1	µs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$			2	µs
$(di/dt)_{cr}$	T_{vj} = 130 °C			200	A/µs
t_q	T_{vj} = 130 °C			typ. 100 . . . 200	µs
I_H	T_{vj} = 25 °C; typ./max.			150 / 500	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ./max.			0,3 / 2	A
V_T	T_{vj} = 25 °C; I_T = 1700 A			max. 1,5	V
$V_{T(TO)}$	T_{vj} = 130 °C			0,925	V
r_T	T_{vj} = 130 °C			0,27	mΩ
I_{DD}; I_{RD}	T_{vj} = 130 °C;	$V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$		100	mA
V_{GT}	T_{vj} = 25 °C; d.c.			3	V
I_{GT}	T_{vj} = 25 °C; d.c.			200	mA
V_{GD}	T_{vj} = 130 °C; d.c.			0,25	V
I_{GD}	T_{vj} = 130 °C; d.c.			10	mA
R_{thjc}	cont.	per thyristor / per module		0,062 / 0,031	°C/W
	sin. 180			0,065 / 0,0325	°C/W
	rec. 120			0,070 / 0,035	°C/W
R_{thch}				0,02 / 0,01	°C/W
T_{vj}				– 40 ... + 130	°C
T_{stg}				– 40 ... + 130	°C
V_{isol}	a. c. 50 Hz; r.m.s; 1 s/1 min			3600/3000	V~
M_1	to heatsink (M6)	SI units		5 ± 15 % [1]	Nm
		US units		44 ± 15 % [1]	lb.in.
M_2	to terminals (M10)	SI units		12 ± 15 % [2]	Nm
		US units		106 ± 15 % [2]	lb.in.
a				$5 \cdot 9,81$	m/s^2
w	approx.			1420	g
Case				SKKT 500: A 60 a SKKH 500: A 66 a	

SEMIPACK® 5
Thyristor / Diode Modules

SKKT 500
SKKH 500

SKKT SKKH

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precisious metal pressure contacts for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- AC motor softstarters
- Input converters for AC inverter drives
- DC motor control (e.g. for machine tools)
- Temperature control (e.g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

[1] See the assembly instructions
[2] The screws must be lubricated

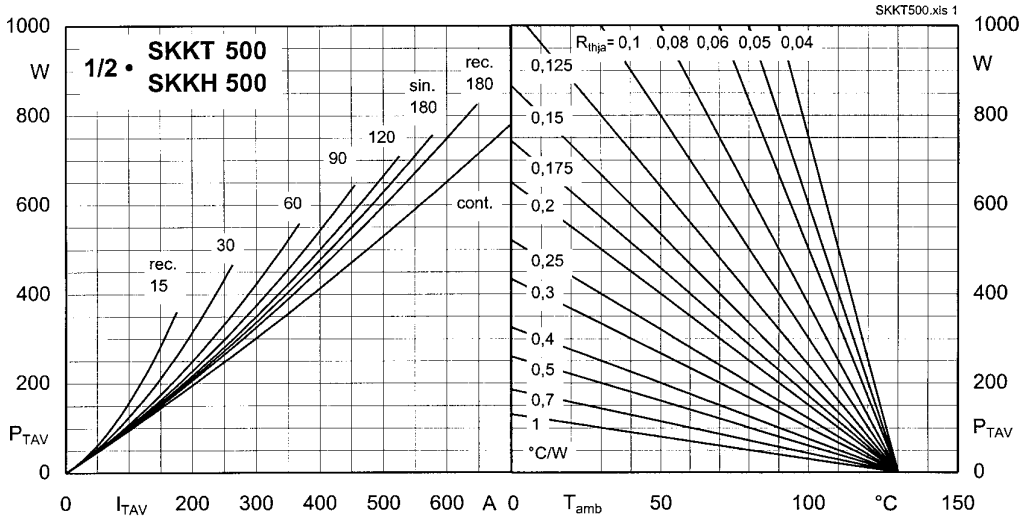

Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

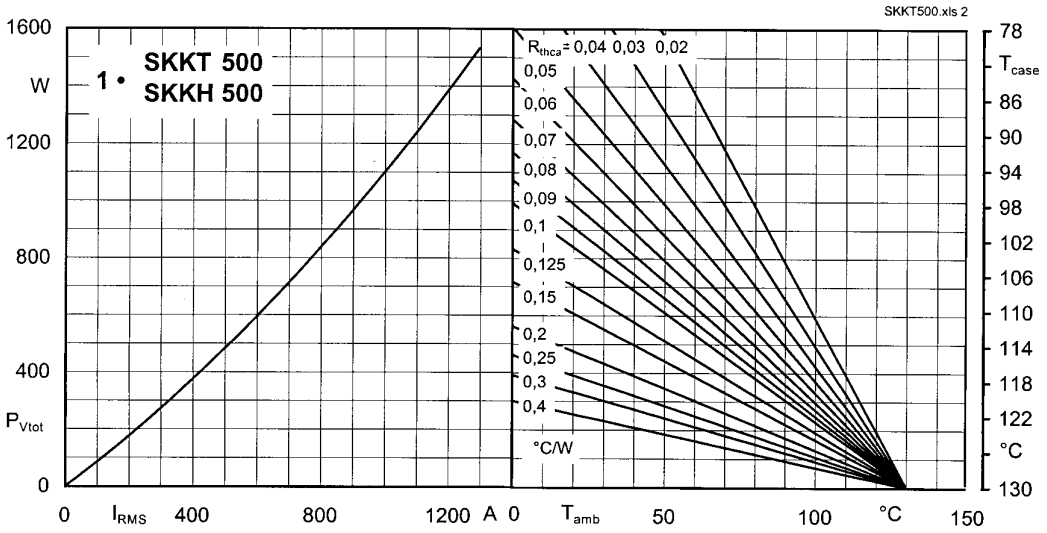

Fig. 2 Power dissipation per module vs. rms current and case temperature

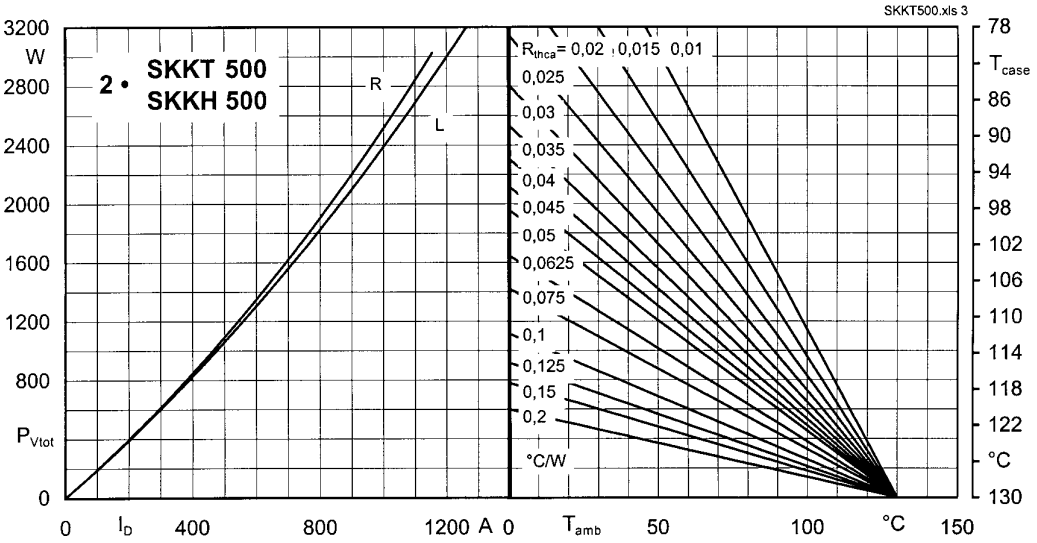

Fig. 3 Power dissipation of two module vs. direct current and case temperature

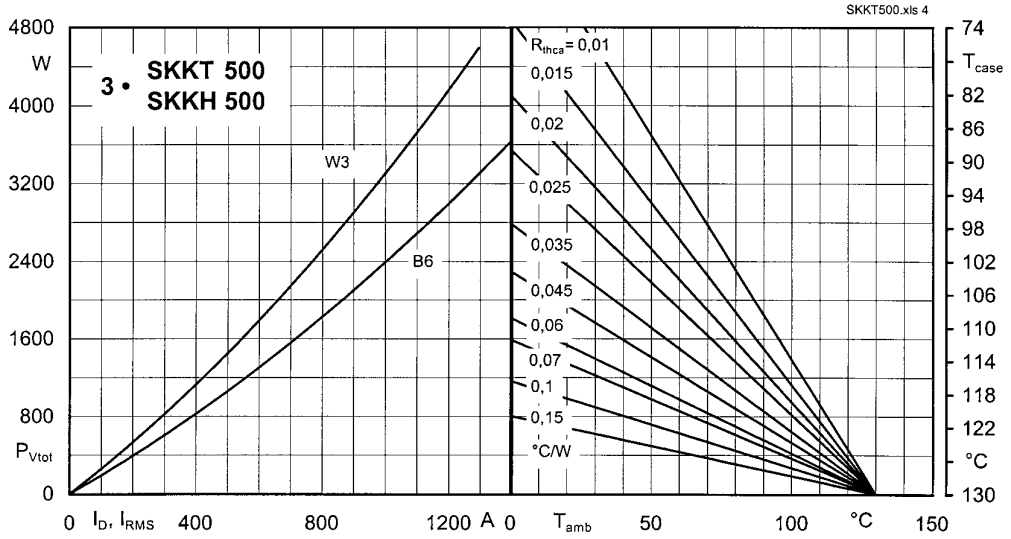

Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

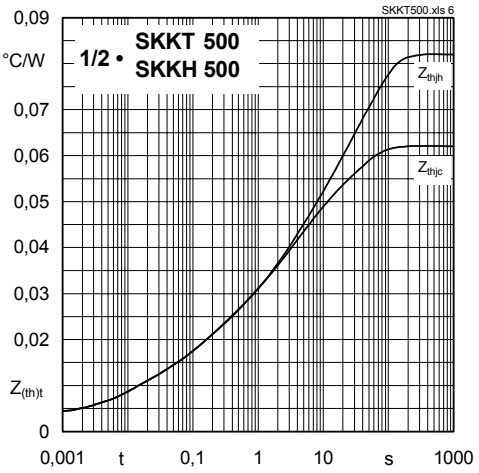

Fig. 6 Transient thermal impedance vs. time

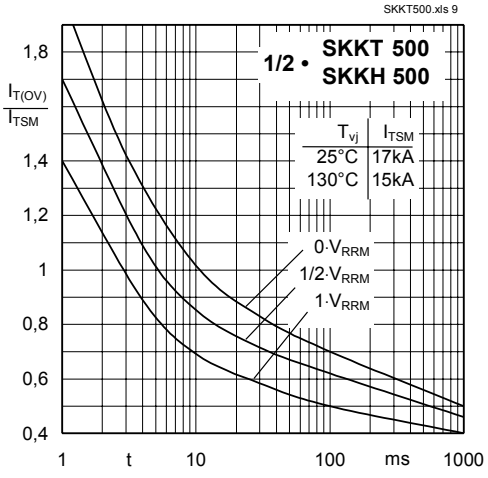

Fig. 9 Surge overload current vs. time

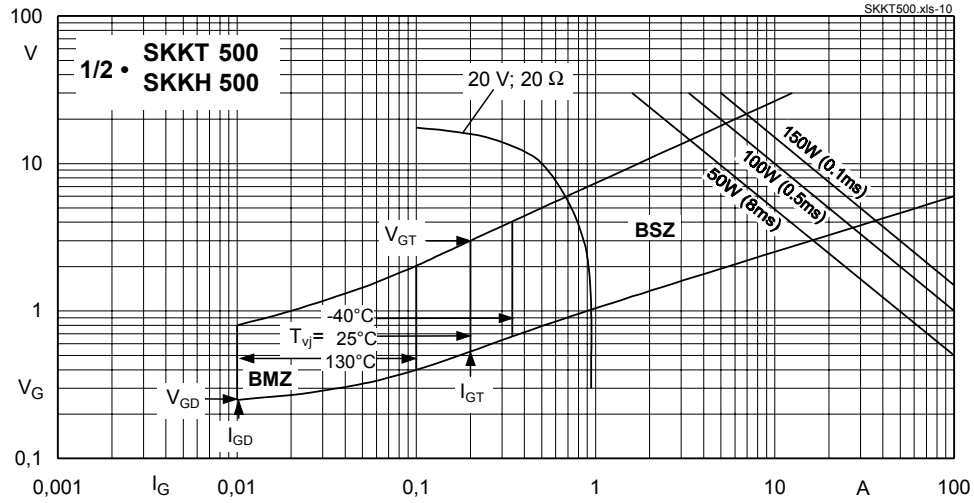

Fig. 10 Gate trigger characteristics

SKKT 500

Case A 60 a

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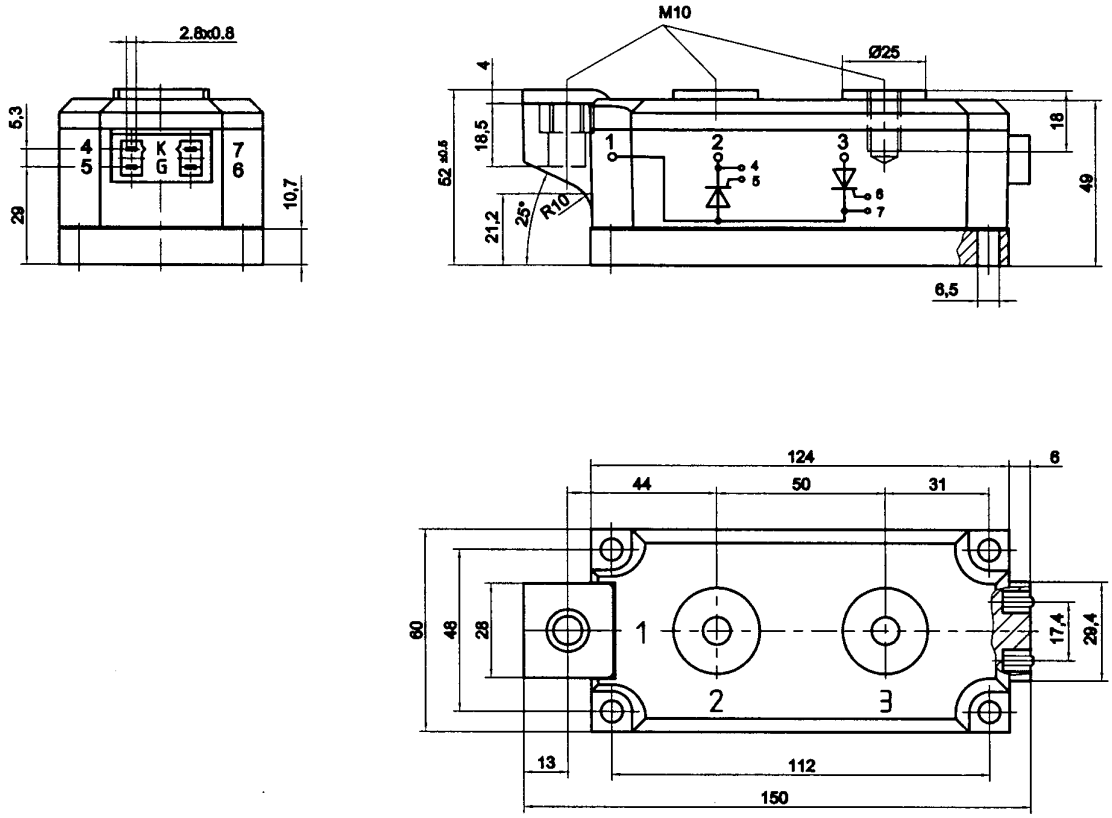

Dimensions in mm

SKKH 500

Case A 66 a