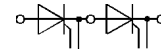


## SKKT 500, SKKH 500

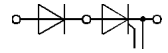
V <sub>RS</sub>	V <sub>RRM</sub> V <sub>DRM</sub>	(dv/dt) <sub>cr</sub>	I <sub>TRMS</sub> (maximum values for continuous operation)	
			920 A	
			I <sub>TAV</sub> (sin. 180; T <sub>case</sub> = 80 °C)	
			585 A	
900	800	500	<b>SKKT 500/08 D</b>	<b>SKKH 500/08 D</b>
1300	1200	1000	<b>SKKT 500/12 E</b>	<b>SKKH 500/12 E</b>
1500	1400	1000	<b>SKKT 500/14 E</b>	<b>SKKH 500/14 E</b>
1700	1600	1000	<b>SKKT 500/16 E</b>	<b>SKKH 500/16 E</b>
1900	1800	1000	<b>SKKT 500/18 E</b>	<b>SKKH 500/18 E</b>

## SEMIPACK® 5 Thyristor / Diode Modules

### SKKT 500 SKKH 500



SKKT



SKKH

Symbol	Conditions	SKKT 500 SKKH 500	Units
I <sub>TAV</sub>	sin. 180; T <sub>case</sub> = 85 °C	540	A
I <sub>D</sub>	T <sub>case</sub> = 89 °C	500	A
I <sub>RMS</sub>	B2/B6	665 / 845	A
	W1/W3	P 16/200 F P 16/300 F	850 / 3 x 670
I <sub>TSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms	17 000	A
	T <sub>vj</sub> = 130 °C; 10 ms	15 000	A
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms	1 445 000	A <sup>2</sup> s
	T <sub>vj</sub> = 130 °C; 8,3 ... 10 ms	1 125 000	A <sup>2</sup> s
t <sub>gd</sub>	T <sub>vj</sub> = 25 °C I <sub>G</sub> = 1 A di <sub>G</sub> /dt = 1 A/μs	1	μs
t <sub>gr</sub>	V <sub>D</sub> = 0,67 · V <sub>DRM</sub>	2	μs
(di/dt) <sub>cr</sub>	T <sub>vj</sub> = 130 °C	200	A/μs
t <sub>q</sub>	T <sub>vj</sub> = 130 °C	typ. 100 ... 200	μs
I <sub>H</sub>	T <sub>vj</sub> = 25 °C; typ./max.	150 / 500	mA
I <sub>L</sub>	T <sub>vj</sub> = 25 °C; R <sub>G</sub> = 33 Ω; typ./max.	0,3 / 2	A
V <sub>T</sub>	T <sub>vj</sub> = 25 °C; I <sub>T</sub> = 1700 A	max. 1,5	V
V <sub>T(TO)</sub>	T <sub>vj</sub> = 130 °C	0,925	V
r <sub>T</sub>	T <sub>vj</sub> = 130 °C	0,27	mΩ
I <sub>DD</sub> ; I <sub>RD</sub>	T <sub>vj</sub> = 130 °C; V <sub>RD</sub> = V <sub>RRM</sub> V <sub>DD</sub> = V <sub>DRM</sub>	100	mA
V <sub>GT</sub>	T <sub>vj</sub> = 25 °C; d.c.	3	V
I <sub>GT</sub>	T <sub>vj</sub> = 25 °C; d.c.	200	mA
V <sub>GD</sub>	T <sub>vj</sub> = 130 °C; d.c.	0,25	V
I <sub>GD</sub>	T <sub>vj</sub> = 130 °C; d.c.	10	mA
R <sub>thjc</sub>	cont.	} per thyristor / } per module	0,062 / 0,031
R <sub>thch</sub>	sin. 180		0,065 / 0,0325
	rec. 120		0,070 / 0,035
	T <sub>vj</sub>		0,02 / 0,01
	T <sub>stg</sub>		- 40 ... + 130
V <sub>isol</sub>	a. c. 50 Hz; r.m.s.; 1 s/1 min	3600/3000	V~
M <sub>1</sub>	to heatsink(M6)	5 ± 15 % <sup>1)</sup>	Nm
	SI units	44 ± 15 % <sup>1)</sup>	lb.in.
M <sub>2</sub>	to terminals(M10)	12 ± 15 % <sup>2)</sup>	Nm
	SI units	106 ± 15 % <sup>2)</sup>	lb.in.
a		5 · 9,81	m/s <sup>2</sup>
w	approx.	1420	g
Case		SKKT 500: A 60 a SKKH 500: A 66 a	

### Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precise 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)

<sup>1)</sup> See the assembly instructions  
<sup>2)</sup> The screws must be lubricated

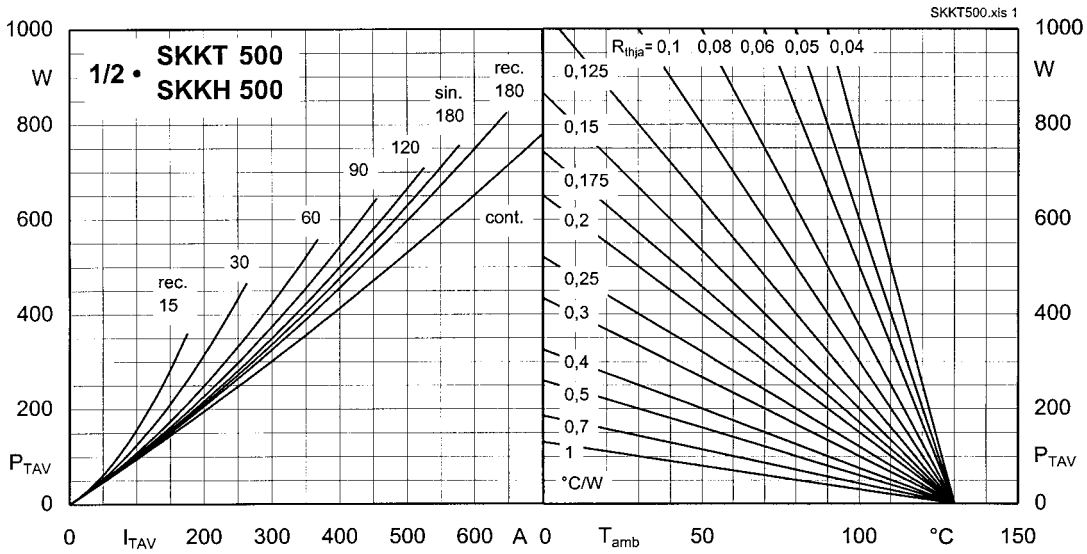


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

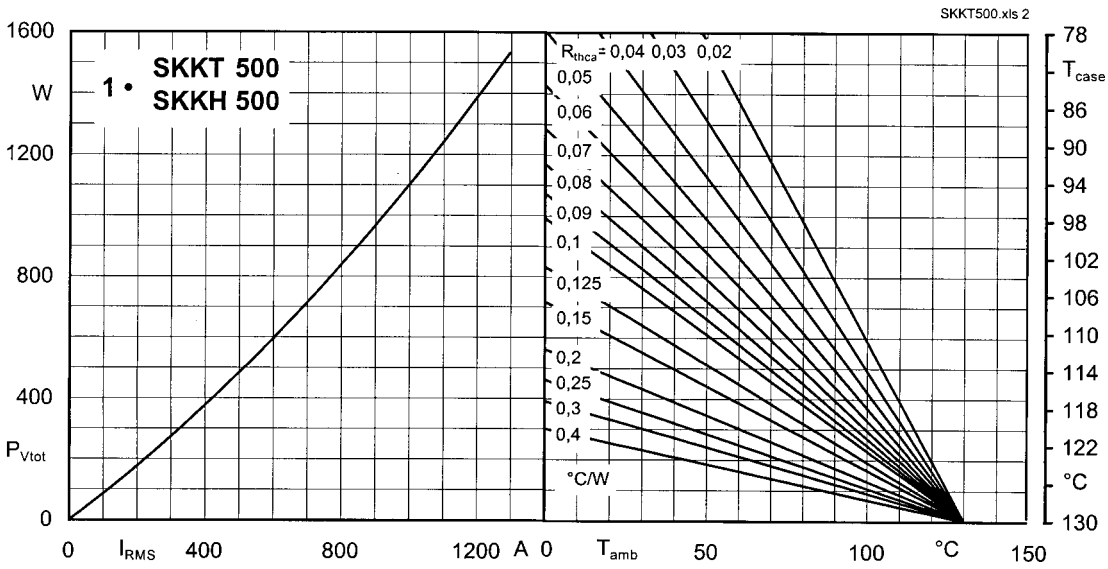


Fig. 2 Power dissipation per module vs. rms current and case temperature

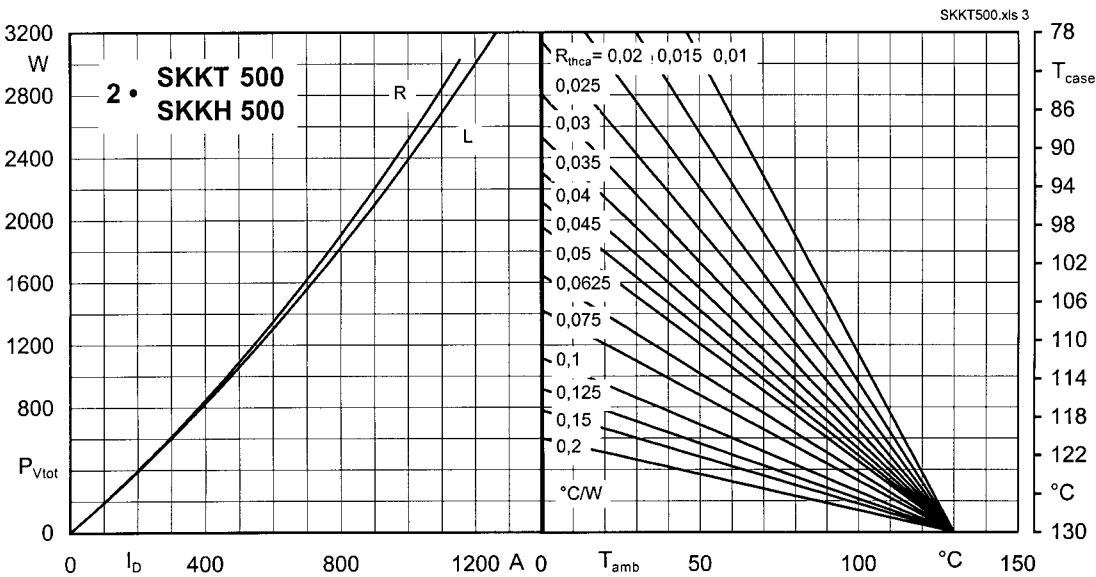


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

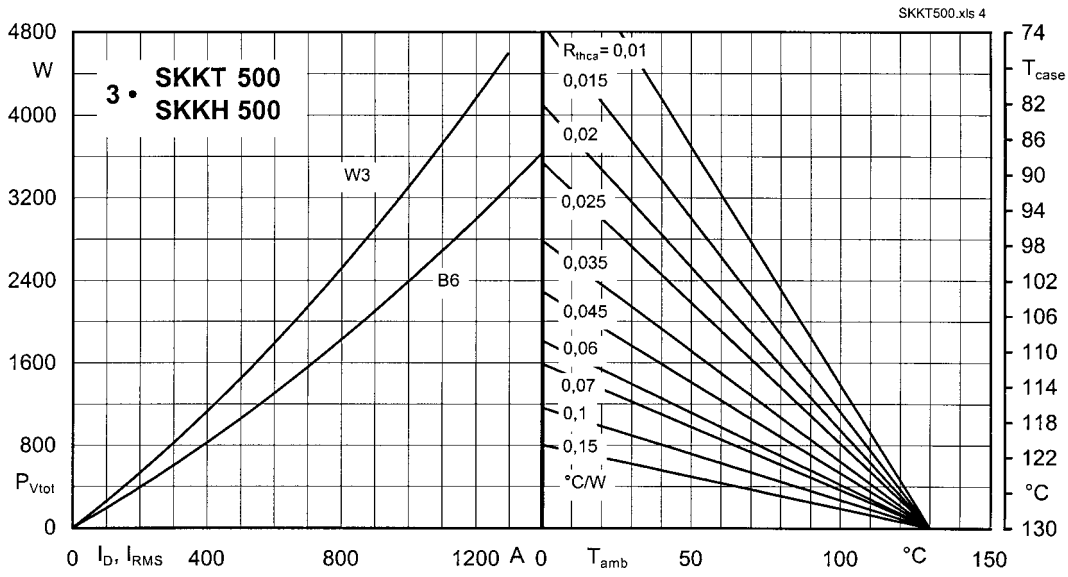


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

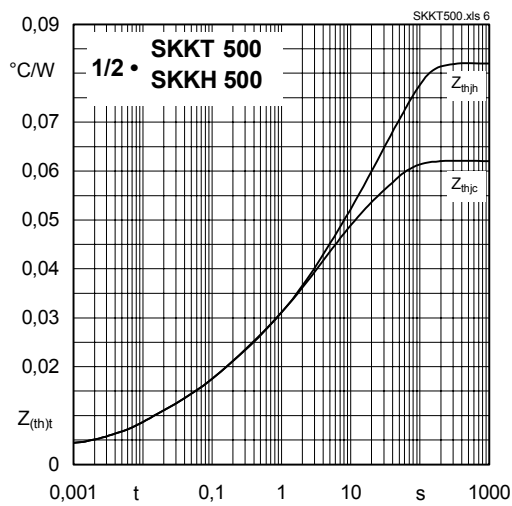


Fig. 6 Transient thermal impedance vs. time

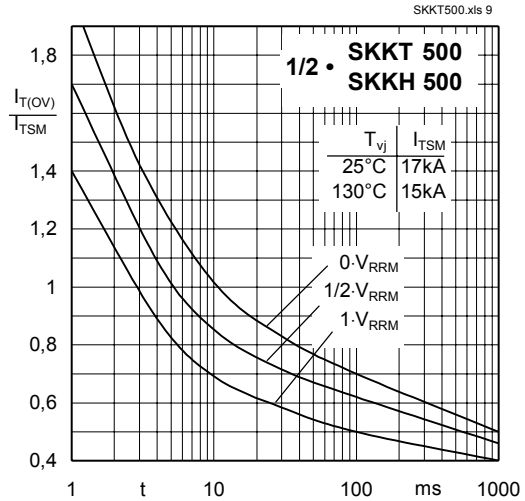


Fig. 9 Surge overload current vs. time

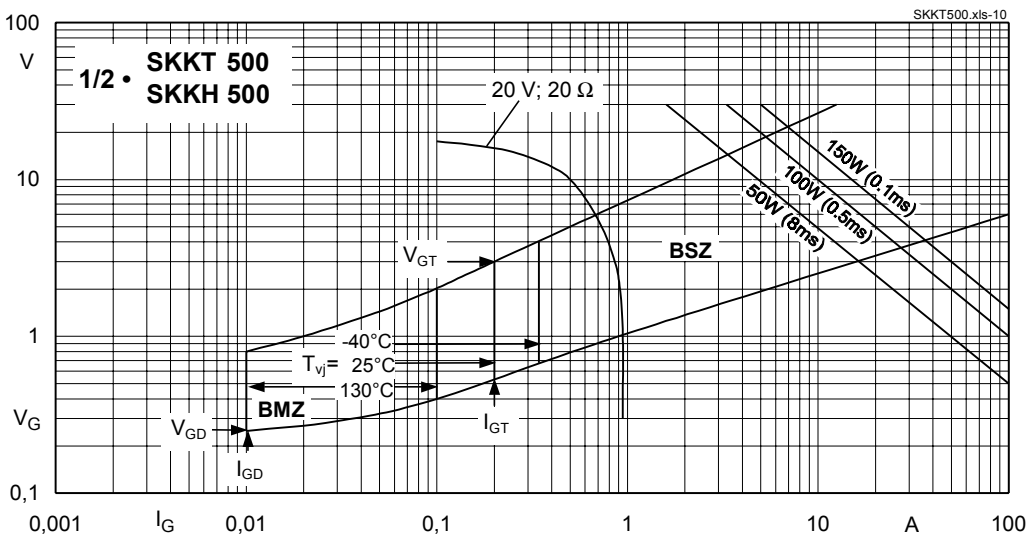
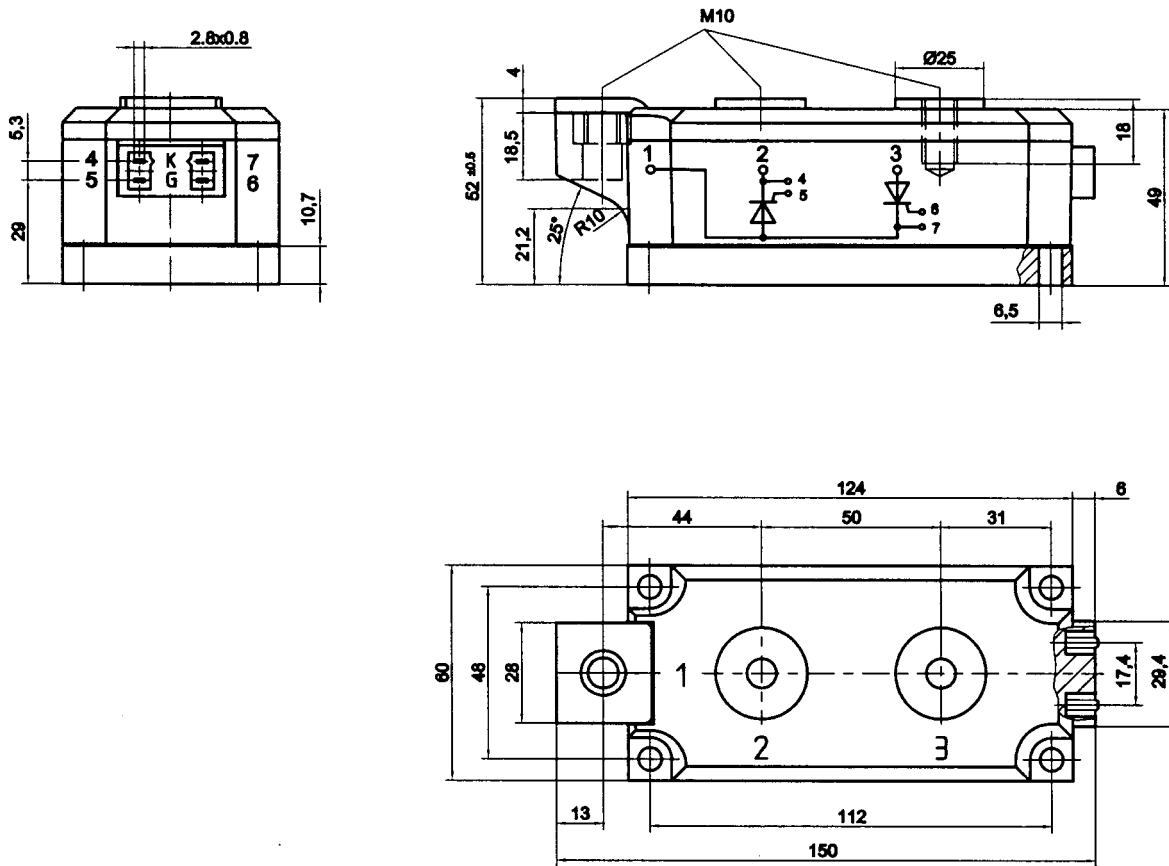


Fig. 10 Gate trigger characteristics

# SKKT 500, SKKH 500

## SKKT 500

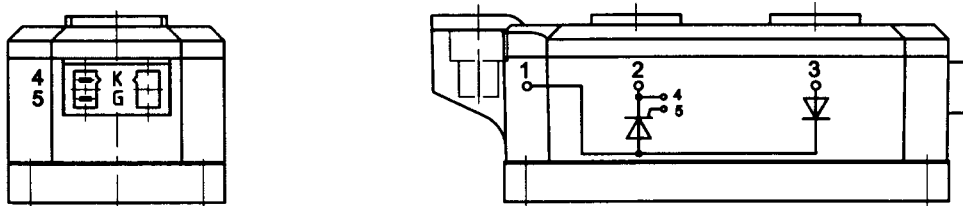
Case A 60 a  
SEMIPACK® 5



Dimensions in mm

## SKKH 500

Case A 66 a



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