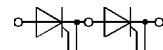


V_{RS}	V_{RRM}	(dv/dt) _{cr}	I_{TRMS} (maximum values for continuous operation)
	V_{DRM}		920 A
V	V	V/μs	I_{TAV} (sin. 180; T _{case} = 80 °C)
900	800	500	585 A
1300	1200	1000	SKKT 500/08 D
1500	1400	1000	SKKT 500/12 E
1700	1600	1000	SKKT 500/14 E
1800	1800	1000	SKKT 500/16 E
			SKKT 500/18 E

SEMIPACK® 5 Thyristor Modules

SKKT 500

Preliminary Data



SKKT

Symbol	Conditions	SKKT 500	Units
I_{TAV}	sin. 180; T _{case} = 85 °C	540	A
I_D	T _{case} = 89 °C	500	A
I_{RMS}	B2/B6 W1/W3	665 / 845 850 / 3 x 670	A 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 ² s
	T _{vj} = 130 °C; 8,3 ... 10 ms	1 125 000	A ² s
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	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. } sin. 180 } per thyristor / rec. 120 } per module	0,062 / 0,031 0,065 / 0,0325 0,070 / 0,035	°C/W °C/W °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)	5 ± 15 % ¹⁾	Nm
	SI units		
	US units	44 ± 15 % ¹⁾	lb.in.
M_2	to terminals (M10)	12 ± 15 % ²⁾	Nm
	SI units		
	US units	106 ± 15 % ²⁾	lb.in.
a		5 · 9,81	m/s ²
w	approx.	1420	g
Case		A 60	

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precise metal pressure contacts for high reliability
- UL recognition applied for: file no. E 63 632

Typical Applications

- AC motor starters
- Input converters for AC inverter drives
- DC motor control (e.g. for machine tools)
- Temperature control (e.g. for ovens, chemical processes)

¹⁾ See the assembly instructions

²⁾ The screws must be lubricated

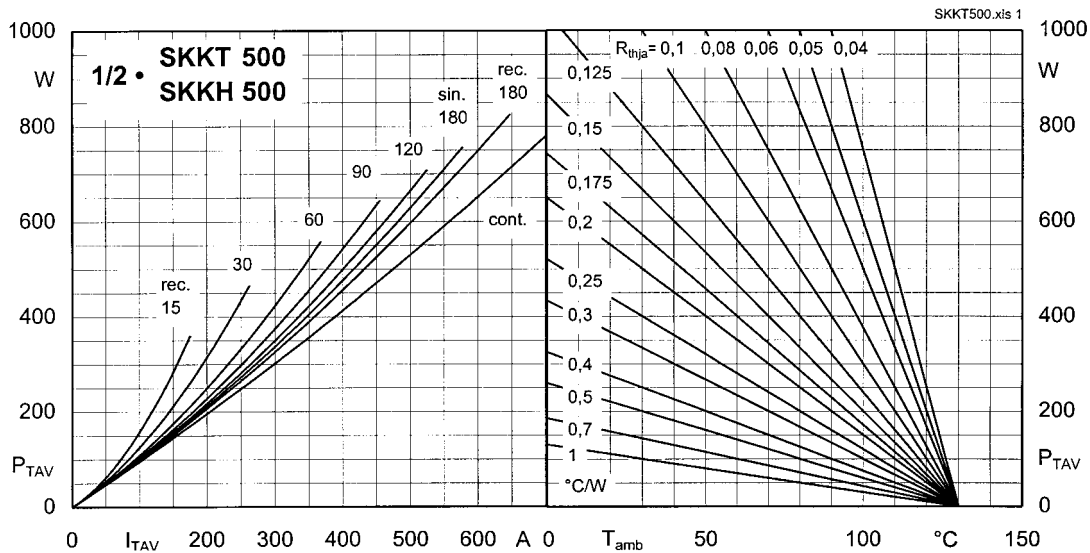


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

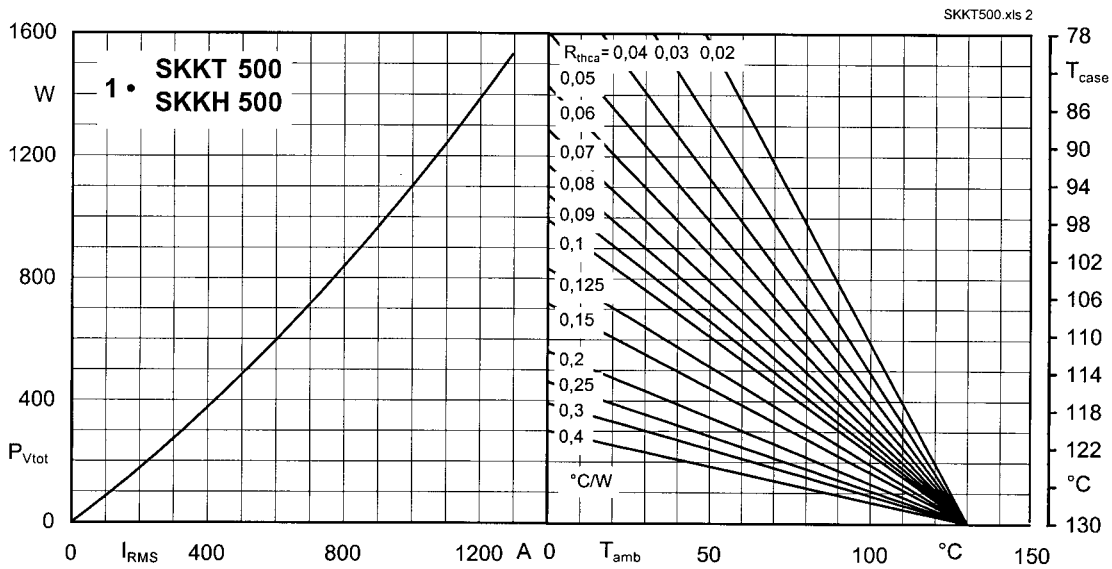


Fig. 2 Power dissipation per module vs. rms current and case temperature

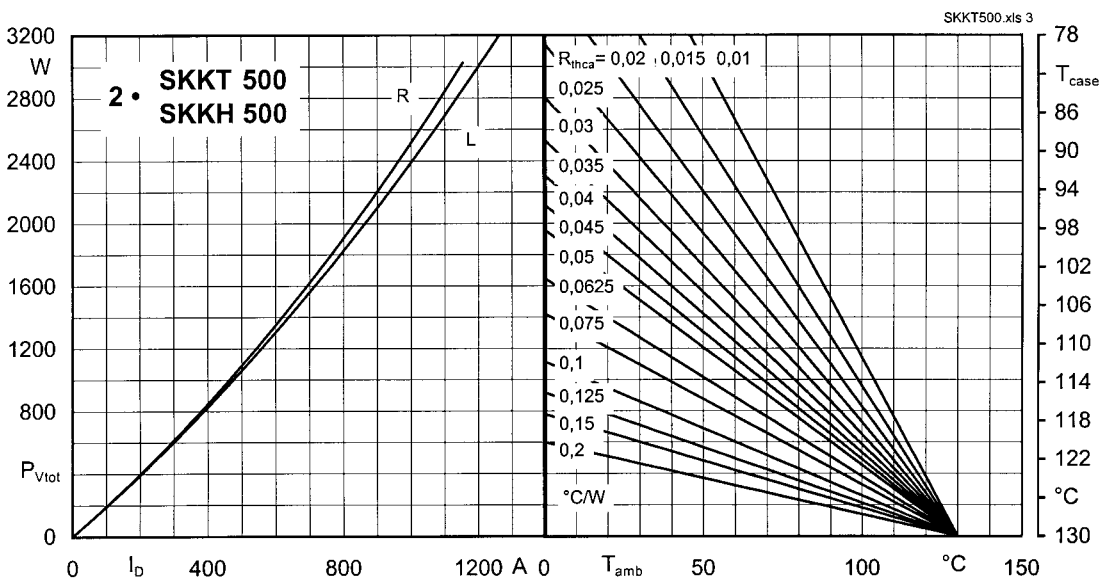


Fig. 3 Power dissipation of two module vs. direct current and case temperature

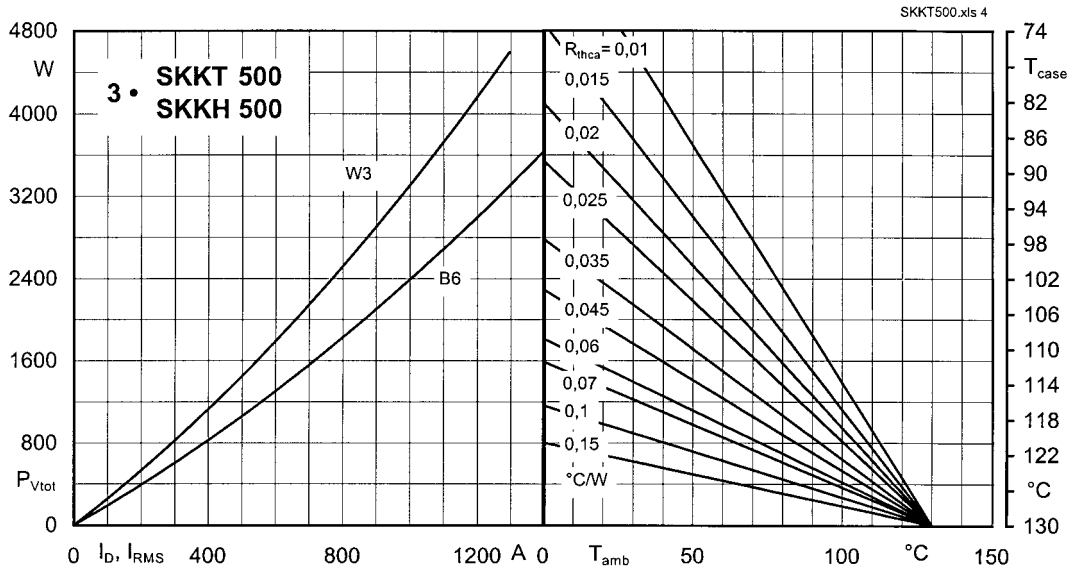
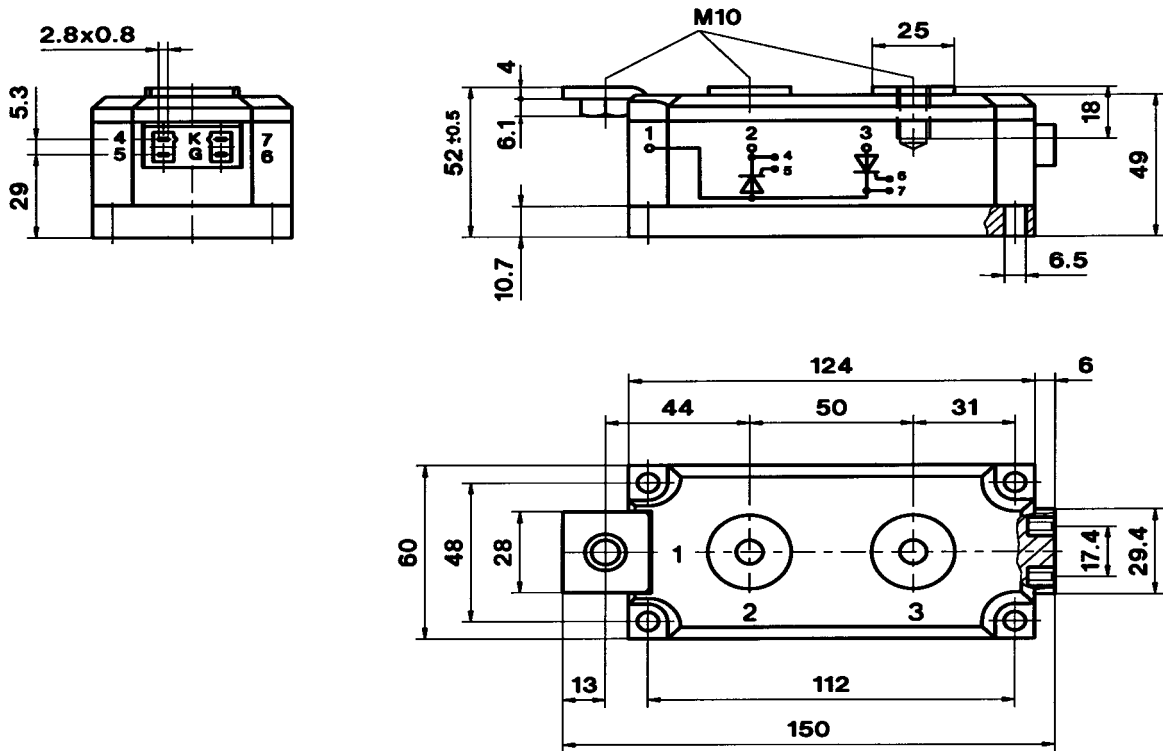


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

SKKT 500

Case A 60
SEMIPACK® 5

UL recognition, file E63532
applied for



Dimensions in mm