SKKT 570, SKKH 570

SEMIPACK ®5

Thyristor / Diode Modules

SKKT 570

SKKH 570

Features

- Heat transfer through aluminium nitride ceramic insulated metal baseplate
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate
- UL recognized, file no. E63532

Typical Applications

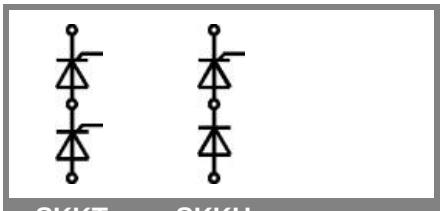
- AC motor softstarters
- Input converters for AC inverter drives
- DC motor control (e.g. for machine tools)
- Temperature control (e.g. for ovens, chemical, processes)
- Professionals light dimming (studios, theaters)

1) see assembly instructions

2) screws must be lubricated

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 1000 A (maximum value for continuous operation) I_{TAV} = 570 A (sin. 180; T_c = 85 °C)	
1300	1200	SKKT 570/12 E	SKKH 570/12 E
1700	1600	SKKT 570/16 E	SKKH 570/16 E
1900	1800	SKKT 570/18 E	SKKH 570/18 E

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 85 (100) °C;	570 (435)	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	19000	A
	T_{vj} = 135 °C; 10 ms	15500	A
i²t	T_{vj} = 25 °C; 8,3 .. 10 ms	1805000	A²s
	T_{vj} = 135 °C; 8,3 ... 10 ms	1201250	A²s
V_T	T_{vj} = 25 °C; I_T = 1700 A	max. 1,44	V
$V_{T(TO)}$	T_{vj} = 135 °C	max. 0,78	V
r_T	T_{vj} = 135 °C	max. 0,32	mΩ
I_{DD}; I_{RD}	T_{vj} = 135 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 200	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} = 135 °C	max. 250	A/µs
$(dv/dt)_{cr}$	T_{vj} = 135 °C	max. 1000	V/µs
t_q	T_{vj} = 135 °C ,	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.	300 / 2000	mA
V_{GT}	T_{vj} = 25 °C; d.c.	min. 3	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 200	mA
V_{GD}	T_{vj} = 135 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 135 °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.; per thyristor / per module	0,069 / 0,034	K/W
$R_{th(j-c)}$	sin. 180°; per thyristor / per module	0,072 / 0,036	K/W
$R_{th(j-c)}$	rec. 120°; per thyristor / per module	0,077 / 0,038	K/W
$R_{th(c-s)}$	per thyristor / per module	0,02 / 0,01	K/W
T_{vj}		- 40 ... + 135	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a.c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	5 ± 15% 1)	Nm
M_t	to terminals	12 ± 15% 2)	Nm
a		5 * 9,81	m/s²
m	approx.	1400	g
Case	SKKT	A 60b	
	SKKH	A 66b	



SKKT SKKH

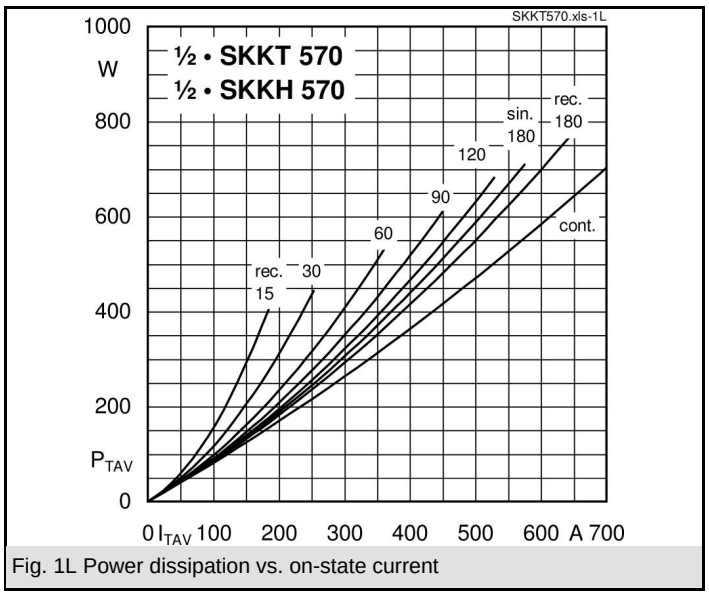


Fig. 1L Power dissipation vs. on-state current

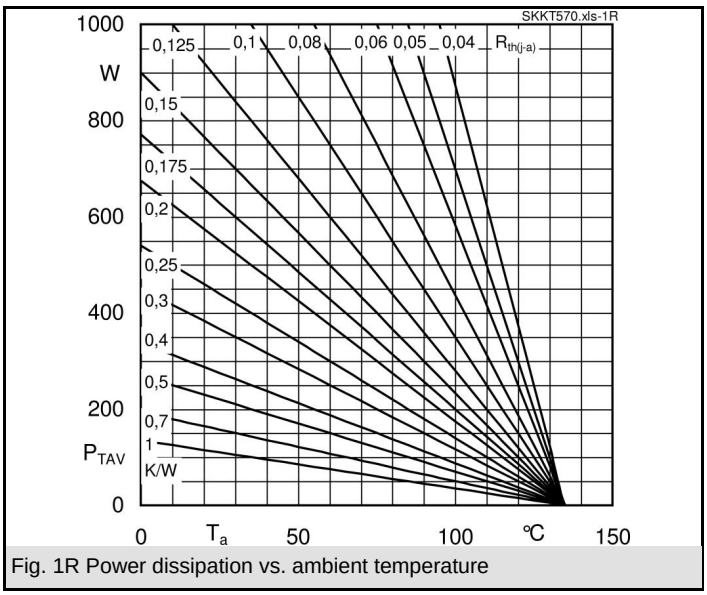


Fig. 1R Power dissipation vs. ambient temperature

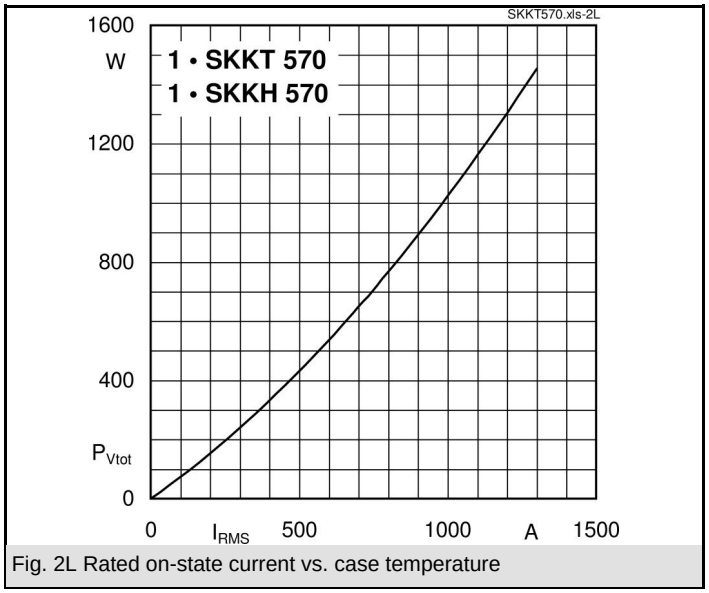


Fig. 2L Rated on-state current vs. case temperature

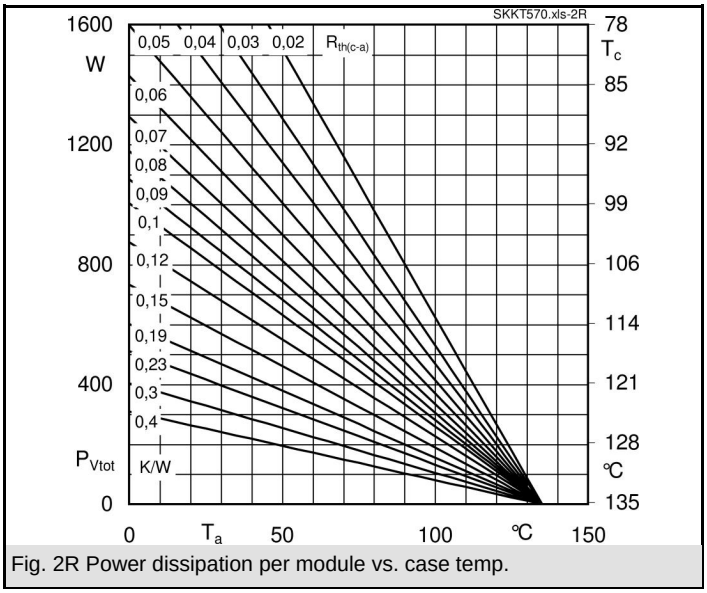


Fig. 2R Power dissipation per module vs. case temp.

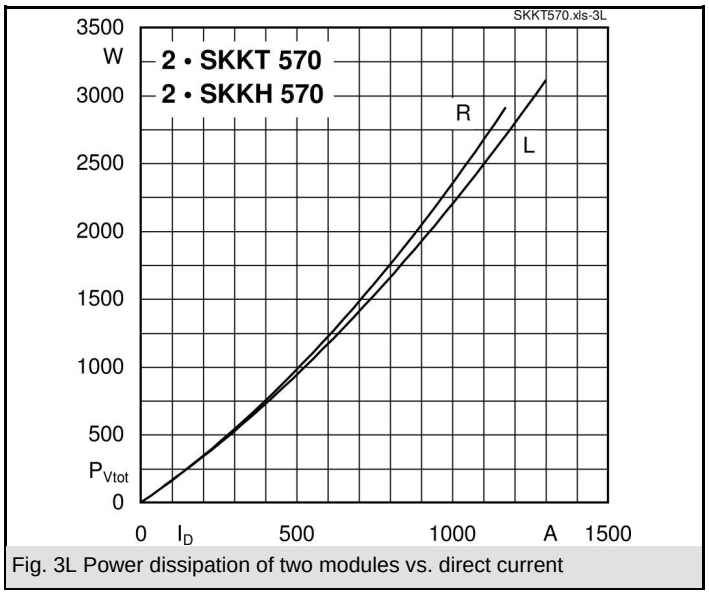


Fig. 3L Power dissipation of two modules vs. direct current

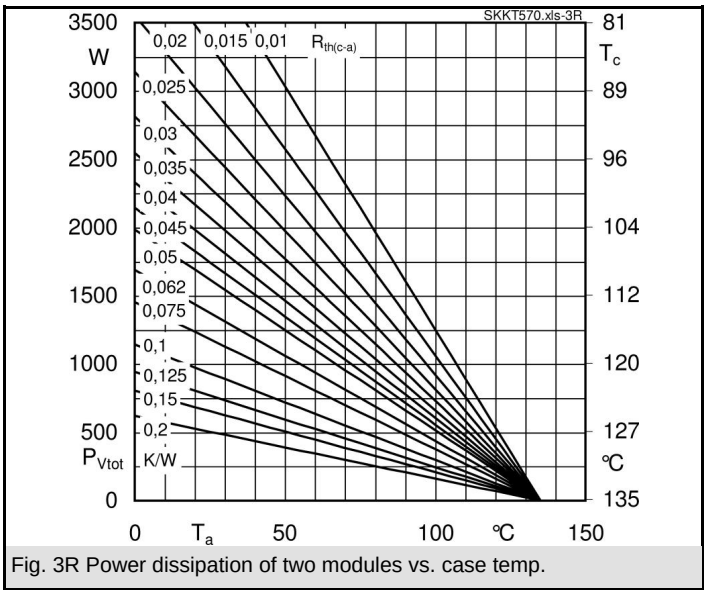


Fig. 3R Power dissipation of two modules vs. case temp.

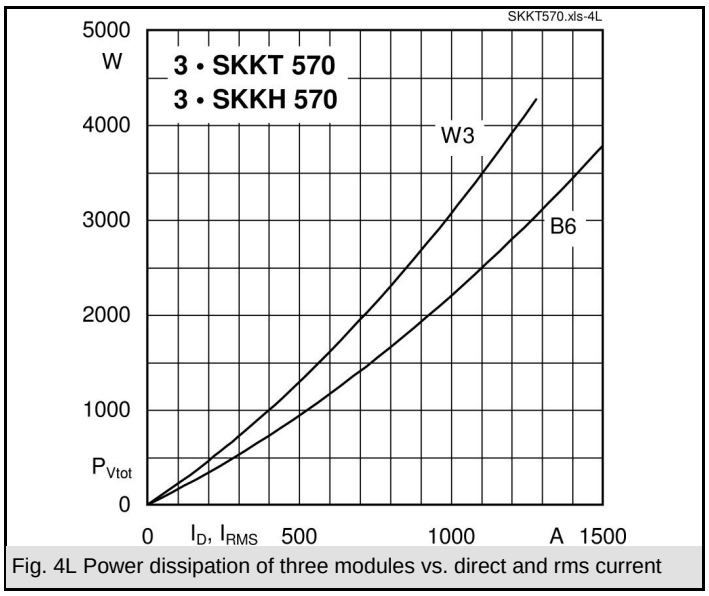


Fig. 4L Power dissipation of three modules vs. direct and rms current

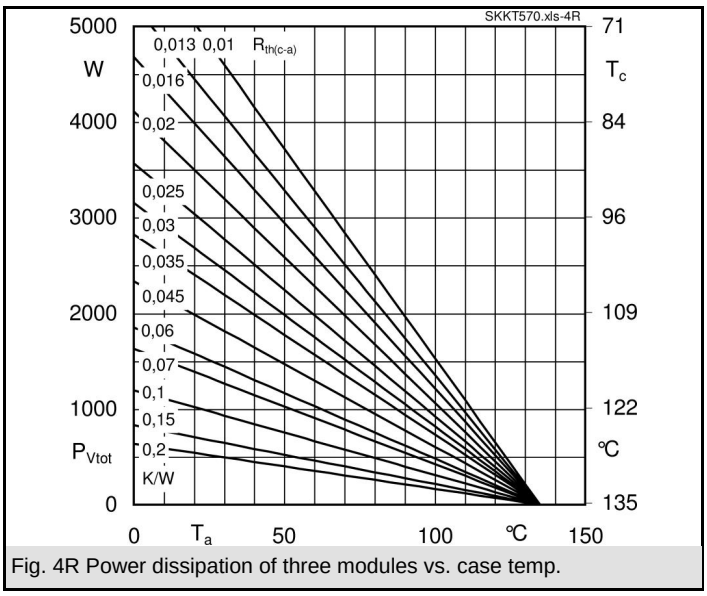


Fig. 4R Power dissipation of three modules vs. case temp.

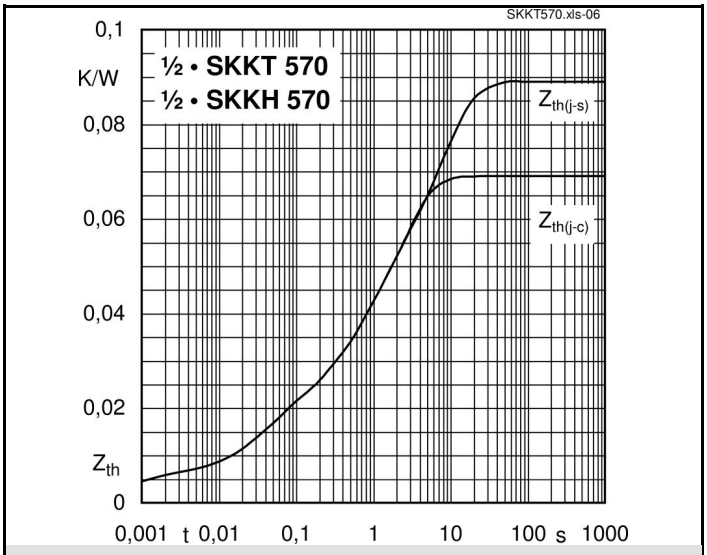


Fig. 6 Transient thermal impedance vs. time

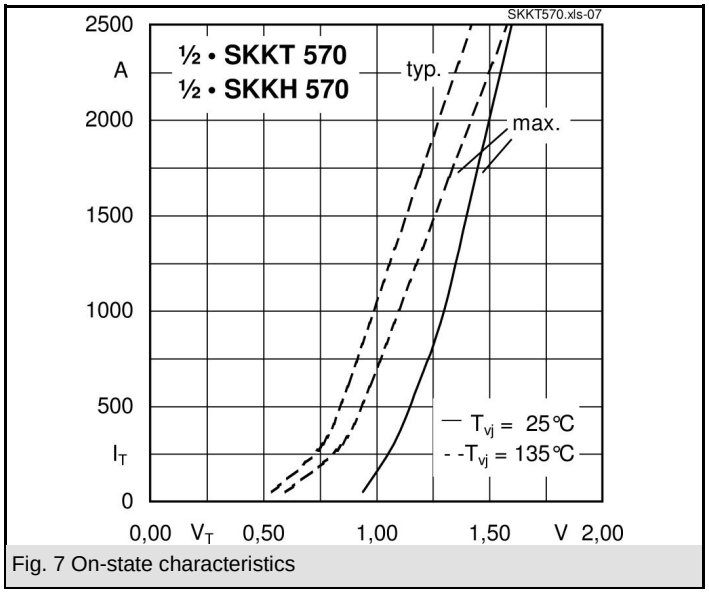


Fig. 7 On-state characteristics

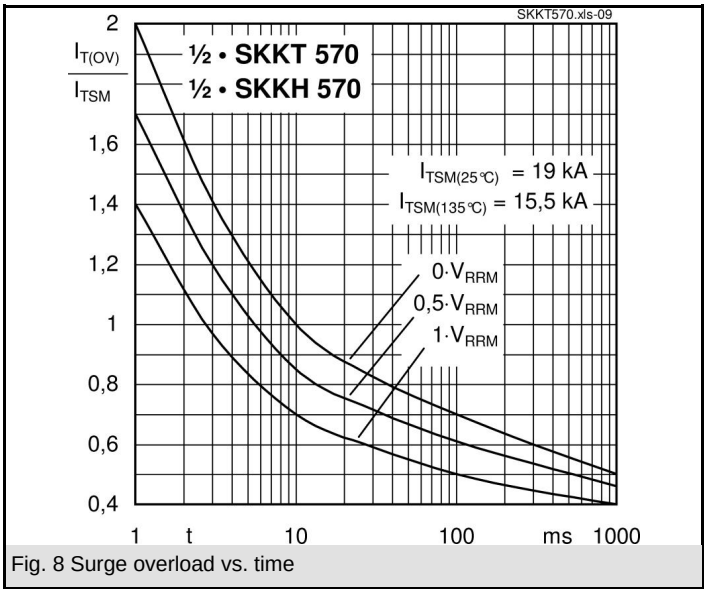


Fig. 8 Surge overload vs. time

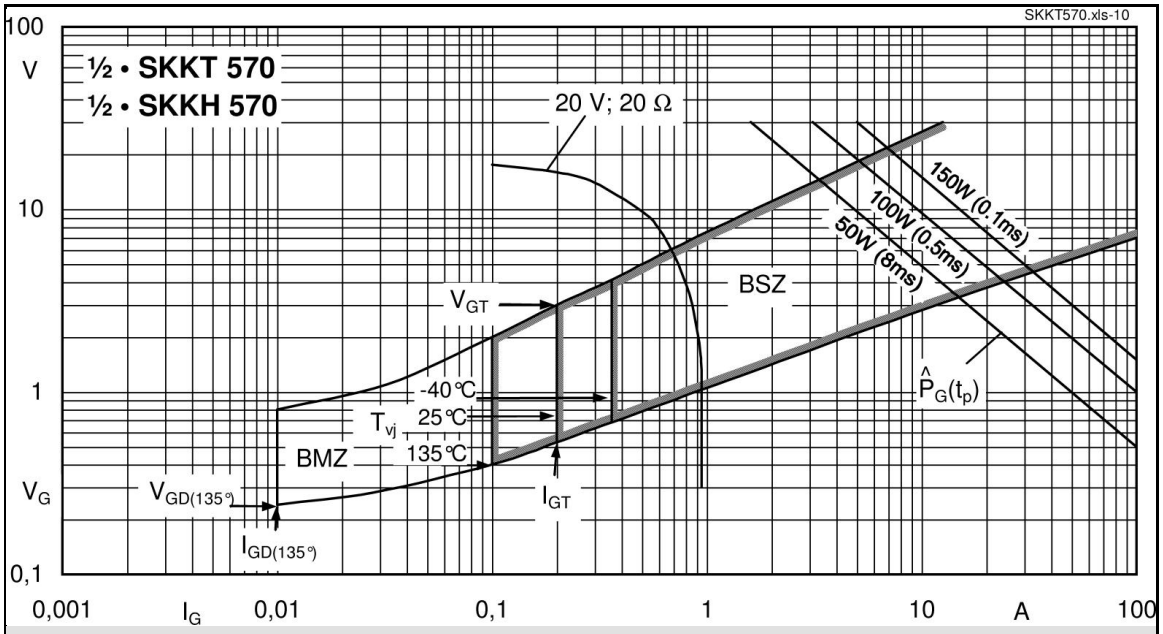
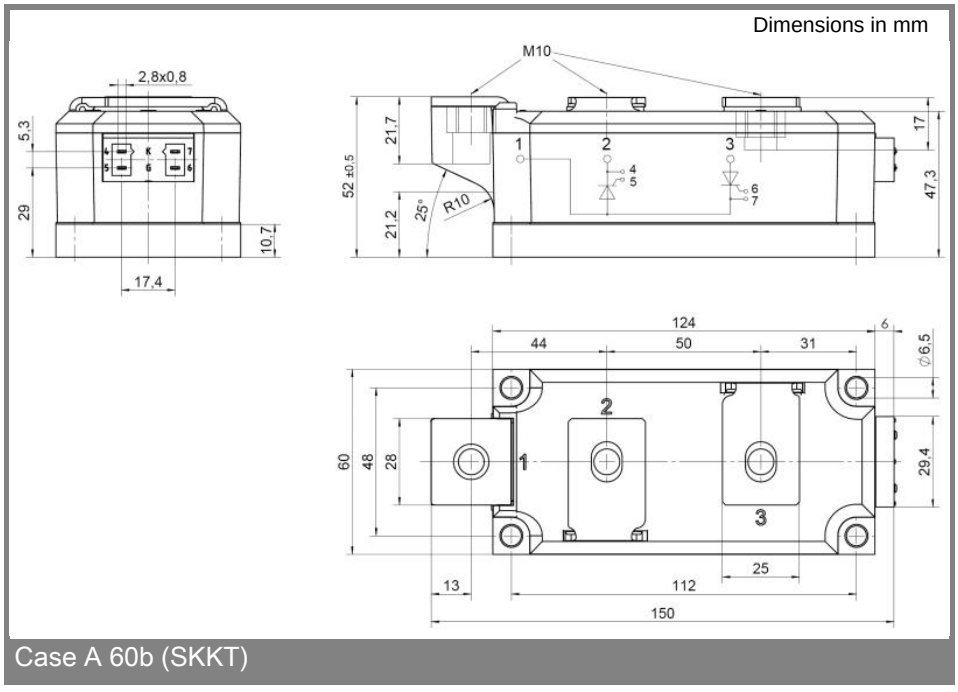
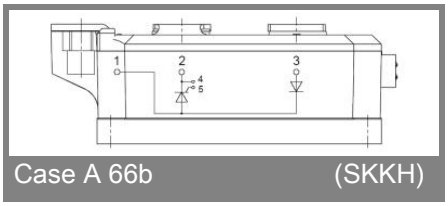


Fig. 9 Gate trigger characteristics



Case A 60b (SKKT)



Case A 66b (SKKH)

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