SKKT570,SKKH570

Features

►Heat transfer through aluminium oxide ceramic isolated metal
►Hard soldered jounts for high reliability
►Space and weight savings

Typical Applications

►Various rectifiers
►AC/DC Motor drives
►DC supply for PWM inverter

Symbol	I_{RMS}=1000A (maximum value for continuous operation) I_{TAV}=570A (sin.180; Tc=85ºC)						Units
	SKKT570/12E	SKKT570/16E	SKKH570/18E	SKKH570/12E	SKKH570/162E	SKKH570/18E	
V_{RRM},V_{DRM}	1200	1600	1800	1200	1600	1800	V
V_{RSM}	1300	1700	1900	1300	1700	1900	V

Electrical characteristics

Symbol	Conditions	Values	Units
I_{TAV}	sin.180; Tc=85(100)ºC;	570(435)	A
I_{TSM}	Tvj=25ºC; 10ms	19000	A
	Tvj=135ºC; 10ms	15500	A
I^2t	Tvj=25ºC; 8.3...10ms	1805000	A^2s
	Tvj=135ºC; 8.3...10ms	1201250	A^2s
V_T	Tvj=25ºC, I_T=1700A	max1.44	V
$V_{T(TO)}$	Tvj=135ºC	max.0.78	V
r_T	Tvj=135ºC	max.0.32	mΩ
I_{DD};I_{RD}	Tvj=130ºC, V_{RD}=V_{RRM} ; V_{DD}=V_{DRM}	max.200	mA
t_{gd}	Tvj=25ºC;I_G=1A;di_G/dt=1A/µs	1	µs
tgr	V_D=0.67*V_{DRM}	2	µs
(dv/dt)cr	Tvj=135ºC	max.1000	V/µs
(di/dt)cr	Tvj=135ºC	max.130	A/µs
tq	Tvj=135ºC	200	µs
I_H	Tvj=25ºC;typ/max.	150/500	mA
I_L	Tvj=25ºC; R_G=33Ω; typ./max.	300/2000	mA
V_{GT}	Tvj=25ºC;d.c	min.3	V
I_{GT}	Tvj=25ºC;d.c	min.200	mA
V_{GD}	Tvj=135ºC;d.c	max.0.25	V
I_{GD}	Tvj=135ºC;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	0.77/0.38	K/W
$R_{th(j-s)}$	per thyristor/per module	0.02/0.01	K/W
Tvj		-40...+135	ºC
T_{stg}		-40...+125	ºC
V_{isol}	a.c.50Hz; r.m.s; 1s/1min.	3600/3000	V~
M_s	to heatsink	5±15%[1])	Nm
M_t	to terminals	12±15%	Nm
a		5*9.81	m/s^2
m	approx.	1400	g

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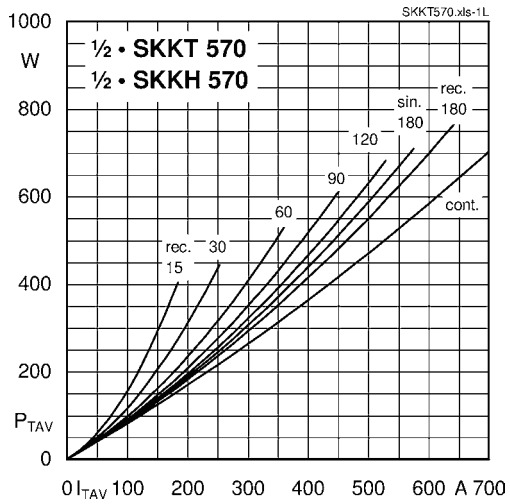


Fig. 1L: Power dissipation per thyristor vs. on-state current

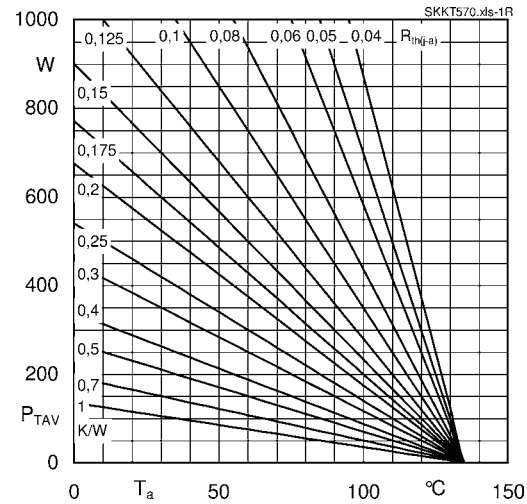


Fig. 1R: Power dissipation per thyristor vs. ambient temperature

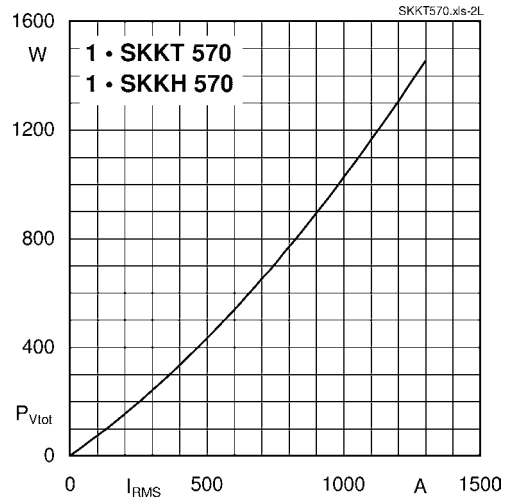


Fig. 2L: Power dissipation of one module vs. rms current

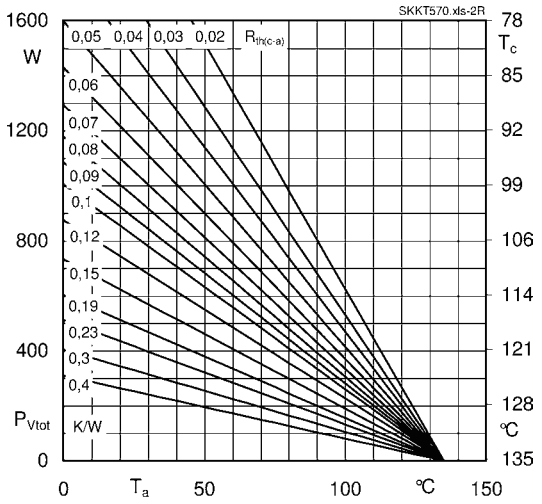


Fig. 2R: Max. power dissipation of one module vs. case temperature

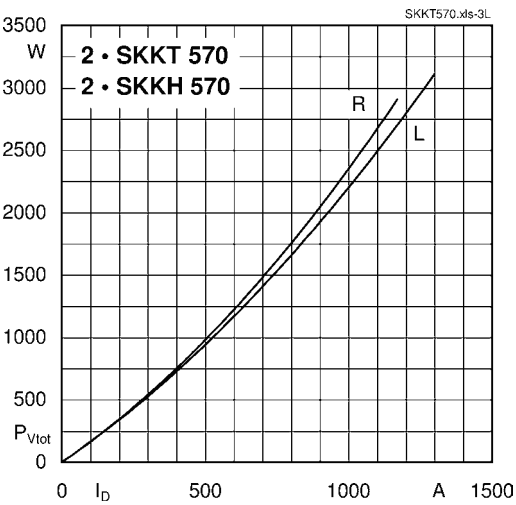


Fig. 3L: Power dissipation of two modules vs. direct current

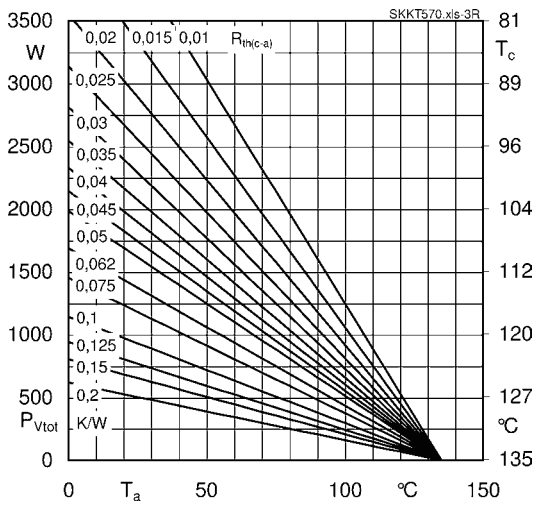


Fig. 3R: Power dissipation of two modules vs. case temperature

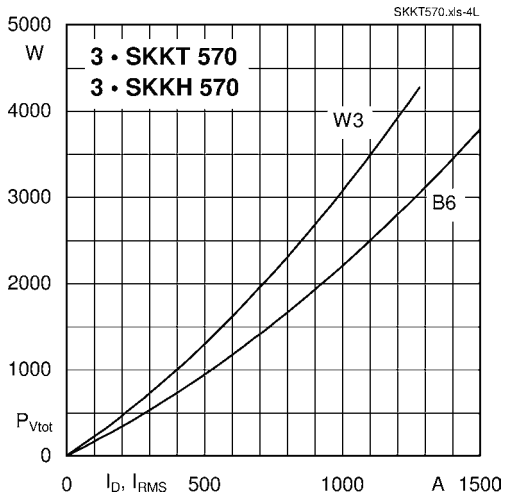


Fig. 4L: Power dissipation of three modules vs. direct and rms current

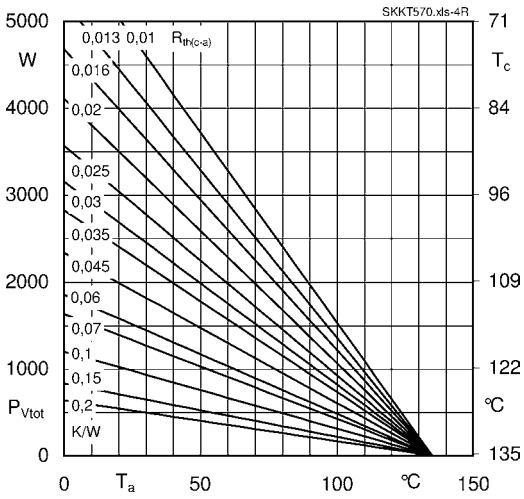


Fig. 4R: Power dissipation of three modules vs. case temperature

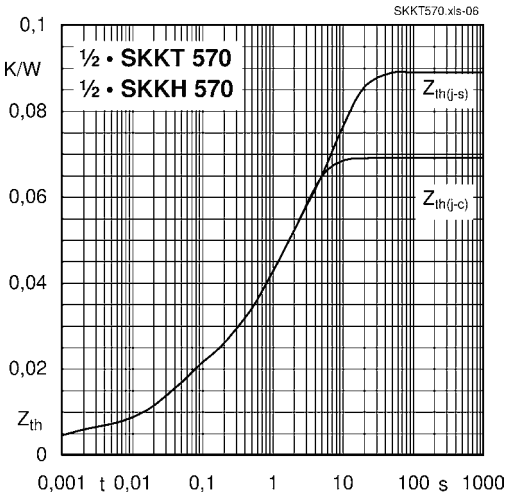


Fig. 6: Transient thermal impedance vs. time

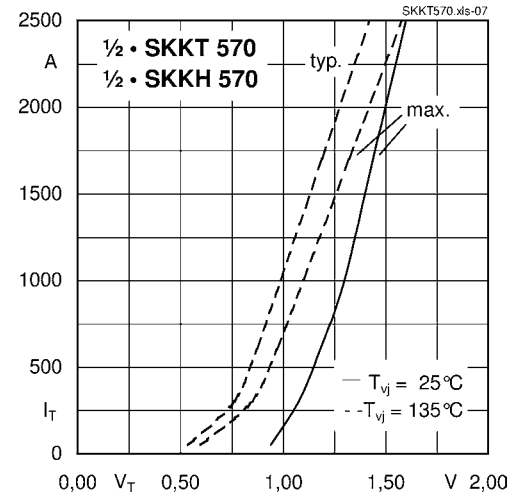


Fig. 7: On-state characteristics

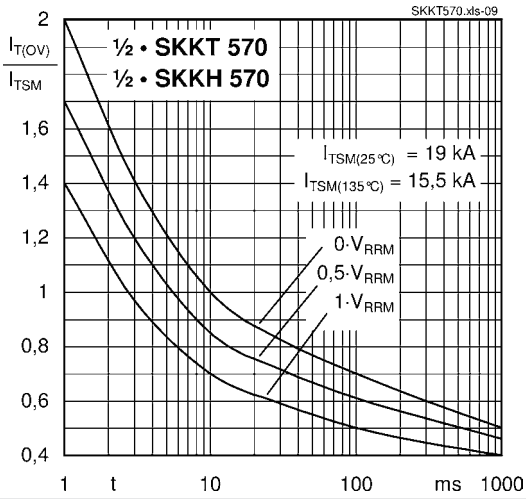


Fig. 8: Surge overload current vs. time

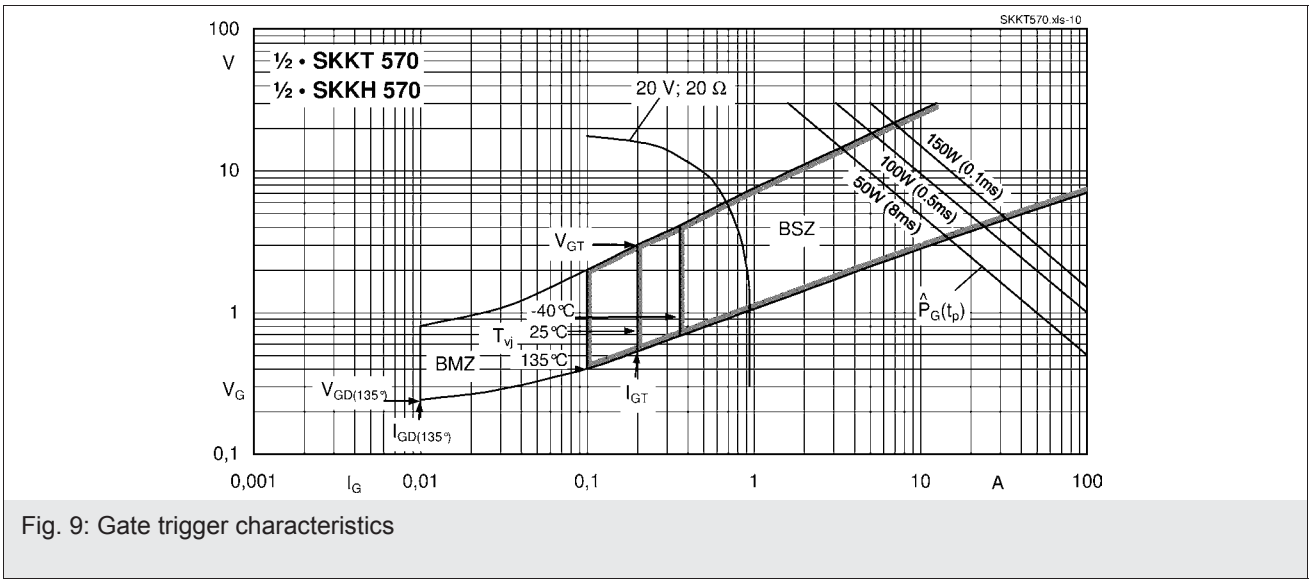
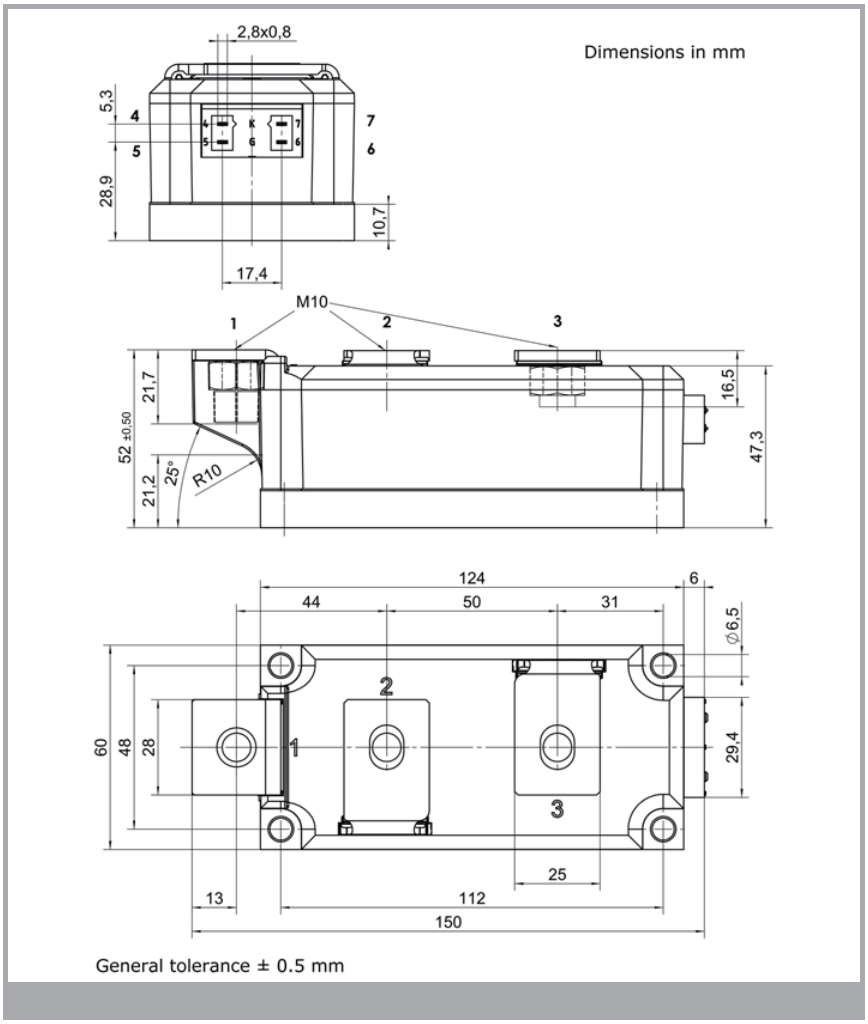
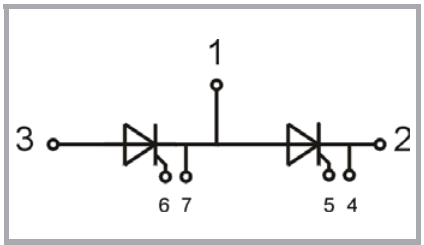


Fig. 9: Gate trigger characteristics





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