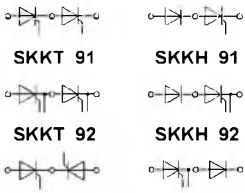
V_{RSM} V	V_{RRM} V_{DRM} V	$(dv/dt)_{cr}$ V/µs	I_{TRMS} (maximum value for continuous operation) 150 A			
			I_{TAV} (sin. 180; T_{case} = 85 °C) 95 A			
500	400	500	–	–	SKKH 91/04 D	–
700	600	500	SKKT 91/06 D	SKKT 92/06 D	SKKH 91/06 D	SKKH 92/06 D
900	800	500	SKKT 91/08 D	SKKT 92/08 D[1]	SKKH 91/08 D	SKKH 92/08 D
1300	1200	500	SKKT 91/12 D	–	SKKH 91/12 D	–
1300	1200	1000	SKKT 91/12 E	SKKT 92/12 E[1]	–	SKKH 92/12 E
1500	1400	1000	SKKT 91/14 E	SKKT 92/14 E[1]	SKKH 91/14 E	SKKH 92/14 E
1700	1600	1000	SKKT 91/16 E	SKKT 92/16 E[1]	SKKH 91/16 E	SKKH 92/16 E
1900	1800	1000	SKKT 91/18 E	SKKT 92/18 E[1]	SKKH 91/18 E	SKKH 92/18 E

Symbol	Conditions		SKKT 91 SKKH 91	SKKT 92 SKKT 92B SKKH 92
I_{TAV}	sin. 180; T_{case} = 85 °C		95 A	
I_D	B2/B6	T_{amb} = 45 °C, P 3/180	70 A/85 A	
		T_{amb} = 35 °C; P 3/180 F	140 A/175 A	
I_{RMS}	W1/W3	T_{amb} = 35 °C; P 3/180 F	190 A/3 x 135 A	
I_{TSM}	T_{vj} = 25 °C; 10 ms		2 000 A	
	T_{vj} = 125 °C; 10 ms		1 750 A	
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms		20 000 A^2s	
	T_{vj} = 125 °C; 8,3 ... 10 ms		15 000 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 · V_{DRM}		2 µs	
$(di/dt)_{cr}$	T_{vj} = 125 °C		150 A/µs	
t_q	T_{vj} = 125 °C		typ. 100 µs	
I_H	T_{vj} = 25 °C;		max. 250 mA	
I_L	T_{vj} = 25 °C; R_G = 33 Ω		max. 600 mA	
V_T	T_{vj} = 25 °C; I_T = 300 A		max. 1,65 V	
$V_{T(TO)}$	T_{vj} = 125 °C		0,9 V	
r_T	T_{vj} = 125 °C		2 mΩ	
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}		max. 20 mA	
V_{GT}	T_{vj} = 25 °C; d. c.		3 V	
I_{GT}	T_{vj} = 25 °C; d. c.		150 mA	
V_{GD}	T_{vj} = 125 °C; d. c.		0,25 V	
I_{GD}	T_{vj} = 125 °C; d. c.		6 mA	
R_{thjc}	cont.	per thyristor/per module	0,28 °C/W / 0,14 °C/W	
	sin. 180		0,30 °C/W / 0,15 °C/W	
	rec.120		0,32 °C/W / 0,16 °C/W	
R_{thch}			0,2 °C/W / 0,1 °C/W	
T_{vj}			– 40 ... +125 °C	
T_{stg}			– 40 ... +125 °C	
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min		3600 V~/ 3000 V~	
M_1	to heatsink	SI units/ US units	5 Nm/44 lb. in. ± 15 %[3]	
M_2	to terminals		3 Nm/26 lb.in. ± 15 %	
a			5 · 9,81 m/s^2	
w	approx.		120 g	
Case	→ page B 1 – 93		SKKT 91: A 5 SKKH 91: A 6 SKMT 91: A 65 SKKH 92: A 47	SKKL 92: A 59 SKKT 92: A 46 SKKT 92B: A 48

SEMIPACK® 1
Thyristor/ Diode Modules

SKKT 91 **SKKH 91**
SKKT 92 **SKKH 92**
SKKT 92B **SKMT 91**[2]
SKKL 92[2]



Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- DC motor control (e. g. for machine tools)
- AC motor soft starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

[1] Also available in SKKT 92 B configuration (case A 48)
[2] SKKL 92, SKMT 91 available on request
[3] See the assembly instructions

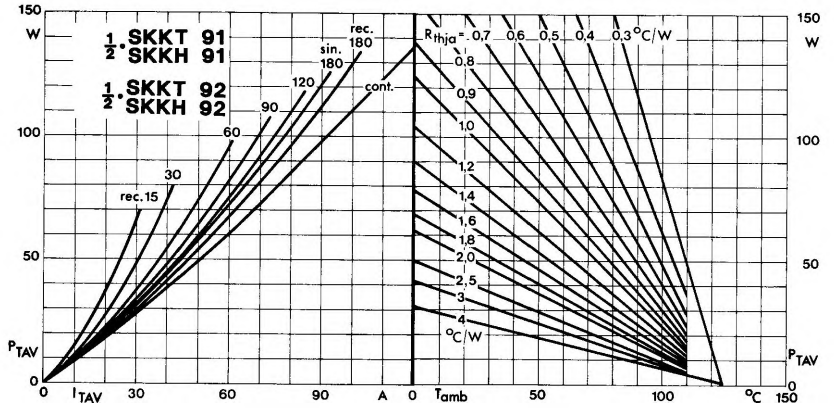


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

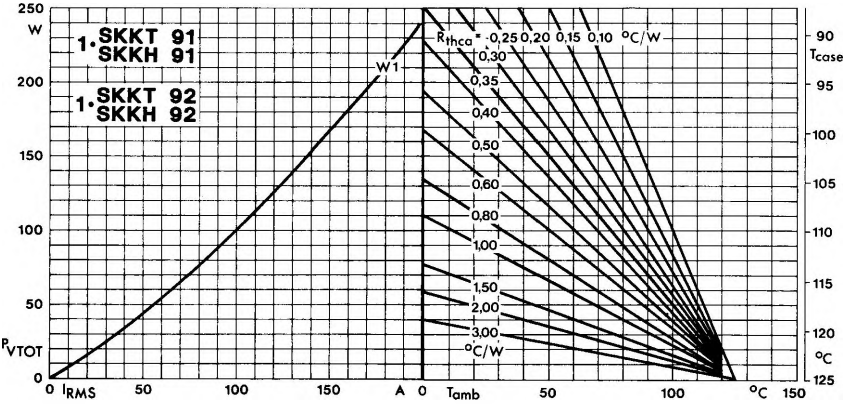


Fig. 2 Power dissipation per module vs. rms current and case temperature

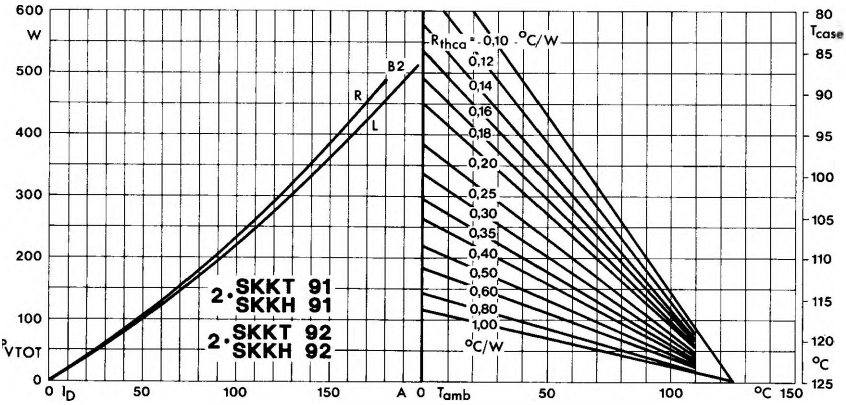


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

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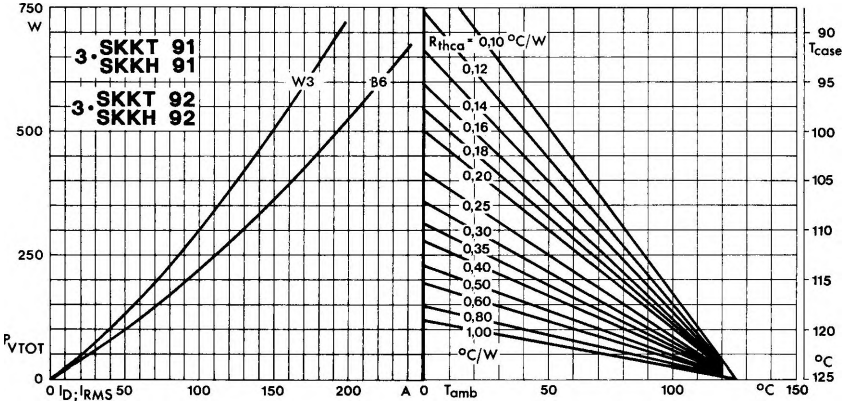

Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

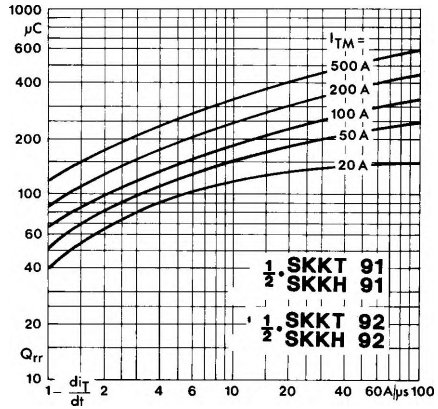

Fig. 5 Recovered charge vs. current decrease

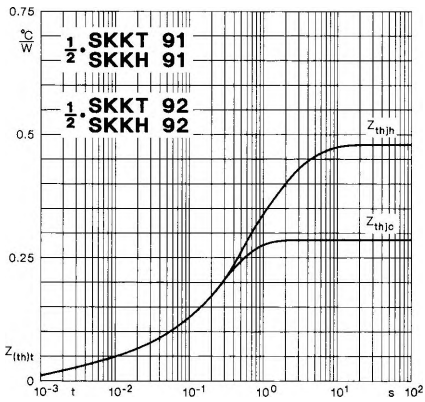

Fig. 6 Transient thermal impedance vs. time

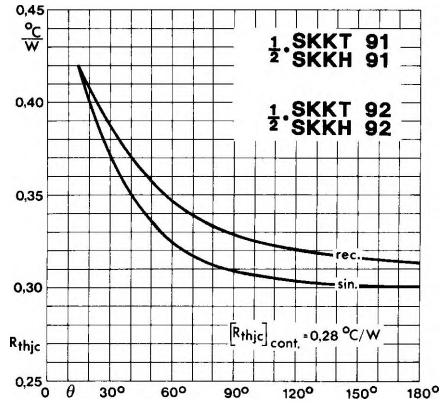

Fig. 7 Thermal resistance vs. conduction angle

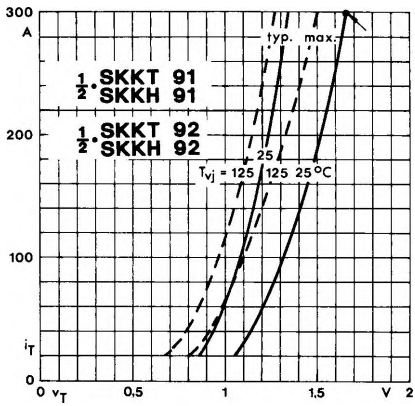

Fig. 8 On-state characteristics

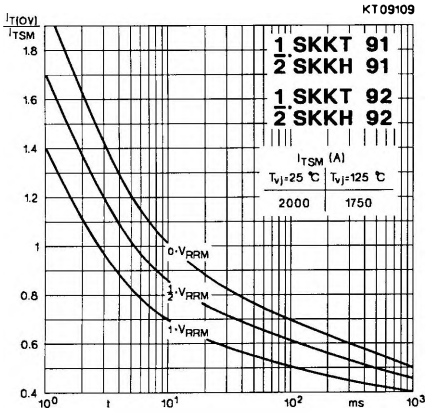

Fig. 9 Surge overload current vs. time

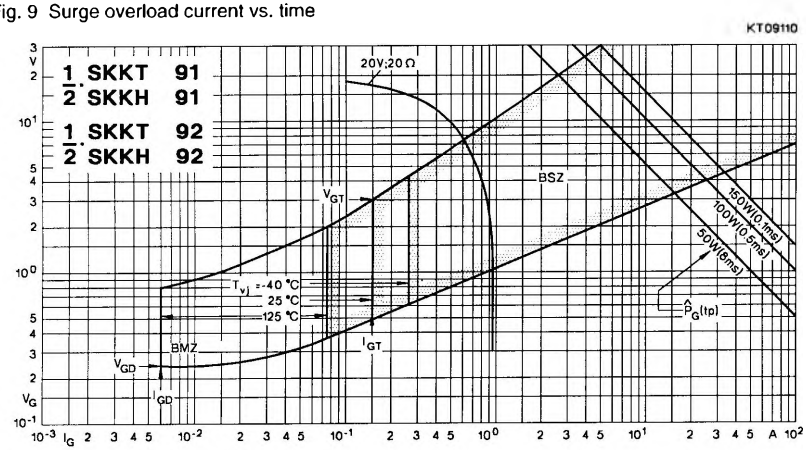

Fig. 10 Gate trigger characteristics

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