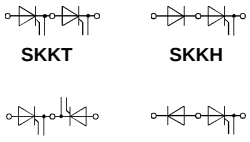
V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation) 220 A	250 A	220 A	250 A
			I_{TAV} (sin. 180; T_{case} = 80 °C)			
V	V	V/µs	148 A	168 A	148 A	168 A
			SKKT	**SKKT**	**SKKH**	**SKKH**
900	800	500	**132/08 D**	**162/08 D**	**132/08 D**	**162/08 D**
1300	1200	1000	**132/12 E**	**162/12 E**	**132/12 E**	**162/12 E**
1500	1400	1000	**132/14 E**	**162/14 E**	**132/14 E**	**162/14 E**
1700	1600	1000	**132/16 E**	**162/16 E**	**132/16 E**	**162/16 E**
1900	1800	1000	**132/18 E**	**162/18 E**	**132/18 E**	**162/18 E**
2100	2000	1000	**132/20 E**	–	**132/20 E**	–
2300	2200	1000	**132/22 E**	–	**132/22 E**	–

Symbol	Conditions		SKKT 132 SKKH 132	SKKT 162 SKKH 162	Units
I_{TAV}	sin. 180; (T_{case} = . . .)		130 (87 °C)	160 (83 °C)	A
I_D	B2/B6	T_{amb} = 45 °C, P3/180	77/100	–	A
		T_{amb} = 35 °C, P3/180F	170/200	190/230	A
		P 16/200F	250/320	290/360	A
I_{RMS}	W1/W3	P 3/180F	240/3x163	265/3x185	A
		P 16/200F	305/3x250	333/3x312	A
I_{TSM}	T_{vj} = 25 °C; 10 ms		4 700	5 400	A
	T_{vj} = 125 °C; 10 ms		4 000	5 000	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms		110 000	145 000	A^2 s
	T_{vj} = 125 °C; 8,3 ... 10 ms		80 000	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} = 125 °C		200		A/µs
t_q	T_{vj} = 125 °C		typ. 50 . . . 150		µs
I_H	T_{vj} = 25 °C		typ. 150; max. 400		mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω		typ. 0,3; max. 1		A
V_T	T_{vj} = 25 °C; I_T = 500 A		max. 1,8	max. 1,6	V
$V_{T(TO)}$	T_{vj} = 125 °C		1	0,85	V
r_T	T_{vj} = 125 °C		1,6	1,5	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DRM}; V_{RRM}		max. 40	max. 40	mA
V_{GT}	T_{vj} = 25 °C; d. c.		2		V
I_{GT}	T_{vj} = 25 °C; d. c.		200		mA
V_{GD}	T_{vj} = 125 °C; d. c.		0,25		V
I_{GD}	T_{vj} = 125 °C; d. c.		10		mA
R_{thjc}	cont.	per thyristor	0,18/0,09	0,17/0,085	°C/W
	sin. 180	per thyristor	0,19/0,095	0,18/0,09	°C/W
	rec.120	per module	0,21/0,105	0,20/0,10	°C/W
R_{thch}			0,10/0,05		°C/W
T_{vj}, T_{stg}			– 40 . . . +125		°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min		3600/3000		V~
M_1	to heatsink	SI (US) units	5 (44 lb. in.) ±15 %[2]		Nm
M_2	to terminals	SI (US) units	5 (44 lb. in.) ±15 %		Nm
a			5 · 9,81		m/s^2
w	approx.		250		g
Case	→ page B 1 – 94		SKKT: A 21 SKKH: A 22	SKMT: A 50 SKNH: A 61	

SEMIPACK® 2
Thyristor/ Diode Modules

SKKT 132 **SKKH 132**
SKMT 132[1] **SKNH 132**[1]
SKKT 162 **SKKH 162**



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)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

[1] SKMT 132, SKNH 132 available on request
[2] See the assembly instructions

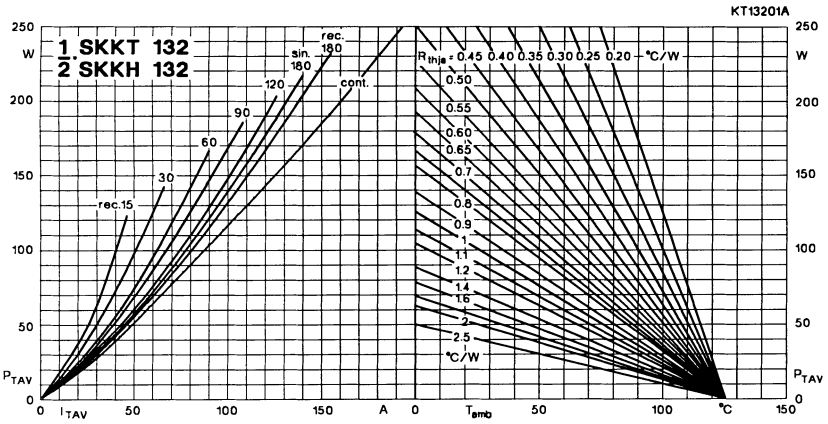


Fig. 1 a Power dissipation per thyristor vs. on-state current and ambient temperature

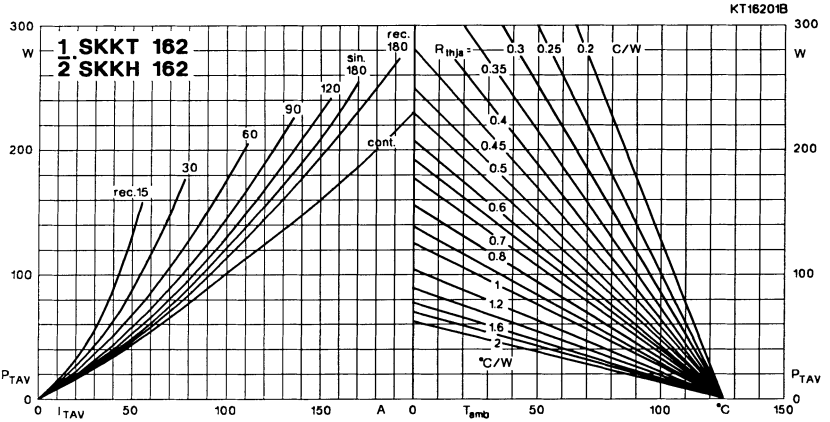


Fig. 1 b Power dissipation per thyristor vs. on-state current and ambient temperature

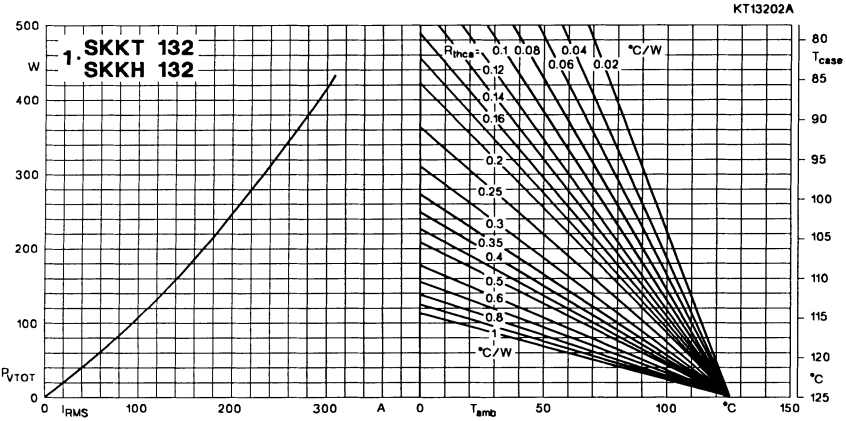


Fig. 2 a Power dissipation per module vs. rms current and case temperature

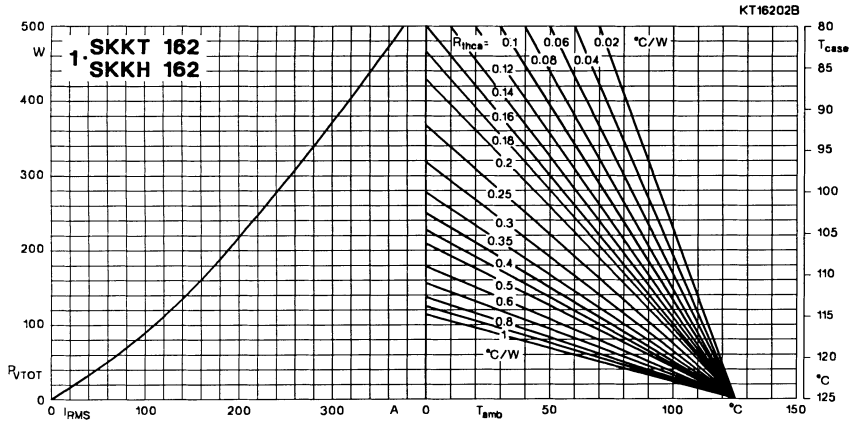


Fig. 2 b Power dissipation per module vs. rms current and case temperature

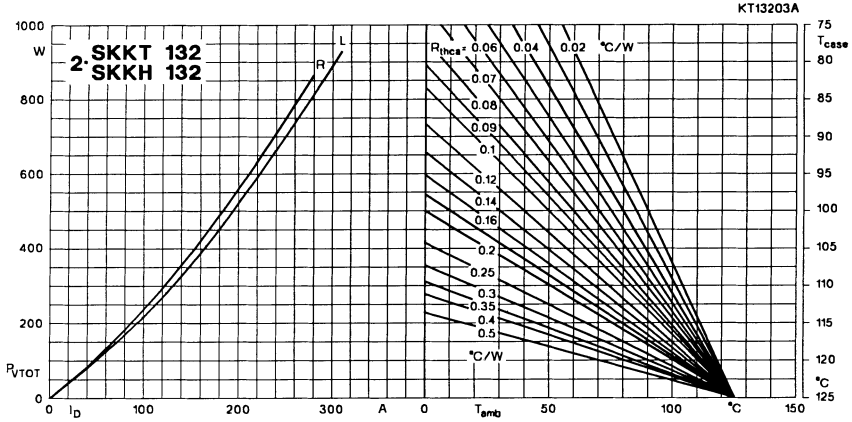


Fig. 3 a Power dissipation of two modules vs. direct current and case temperature

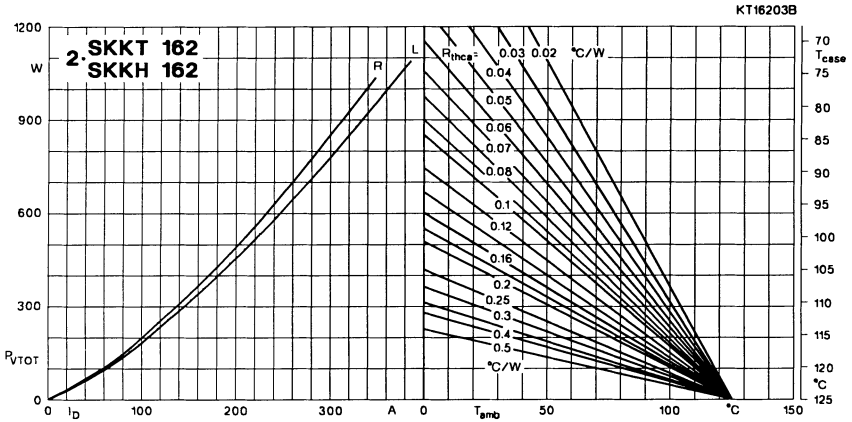


Fig. 3 b Power dissipation of two modules vs. direct current and case temperature

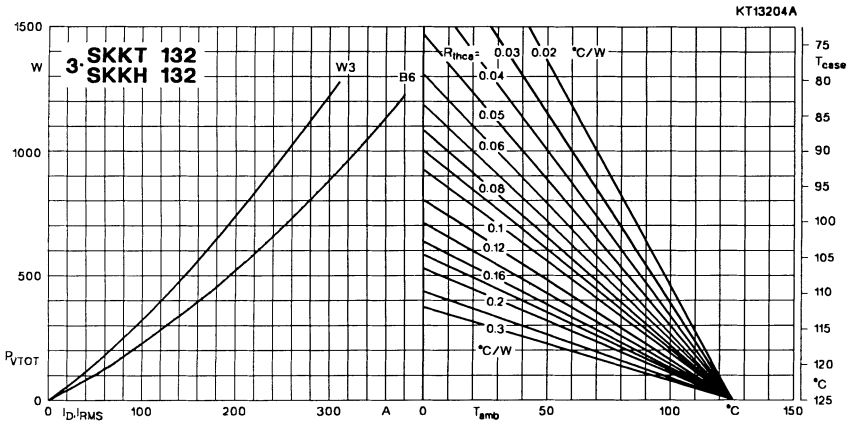


Fig. 4 a Power dissipation of three modules vs. direct and rms current and case temperature

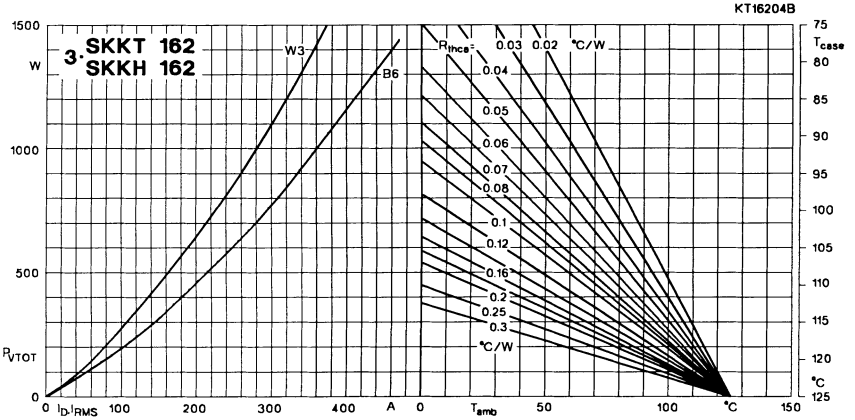


Fig. 4 b Power dissipation of three modules vs. direct and rms current and case temperature

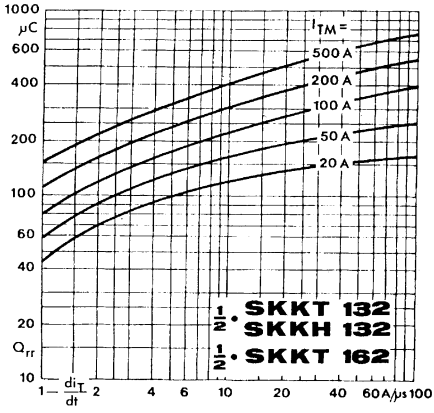


Fig. 5 Recovered charge vs. current decrease

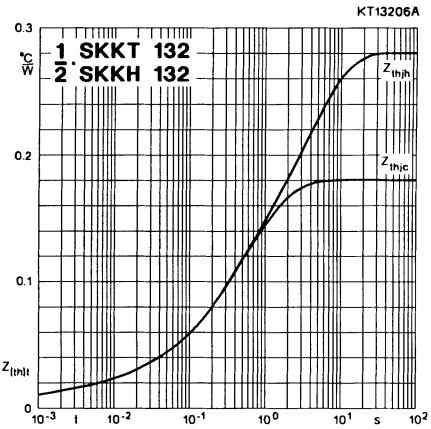


Fig. 6 a Transient thermal impedance vs. time

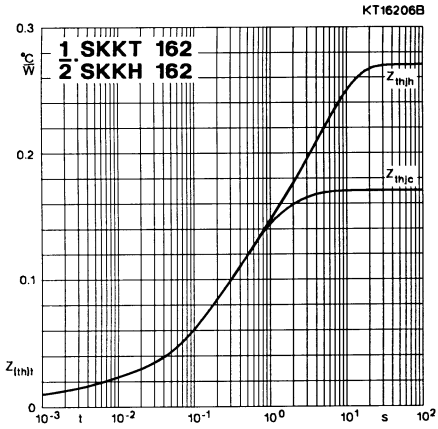


Fig. 6 b Transient thermal impedance vs. time

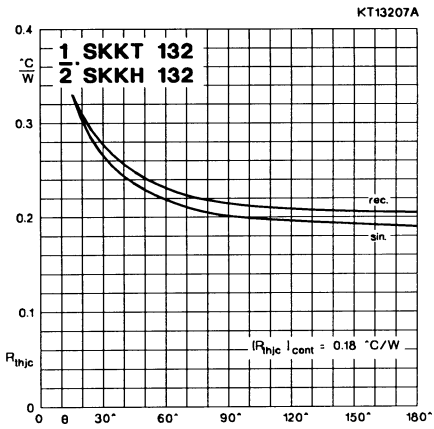


Fig. 7 a Thermal resistance vs. conduction angle

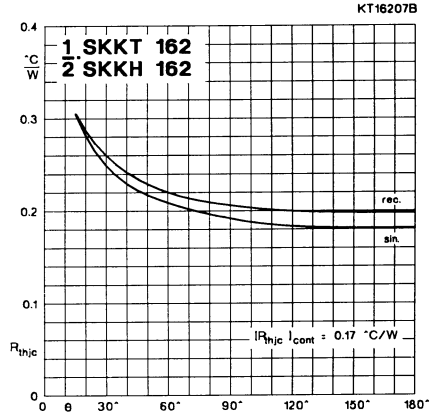


Fig. 7 b Thermal resistance vs. conduction angle

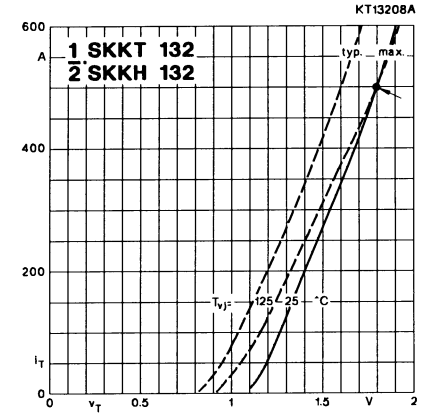


Fig. 8 a On-state characteristics

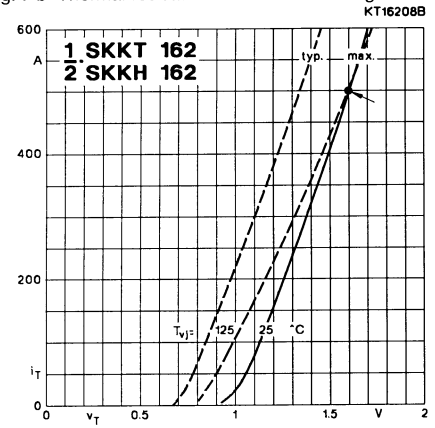


Fig. 8 b On-state characteristics

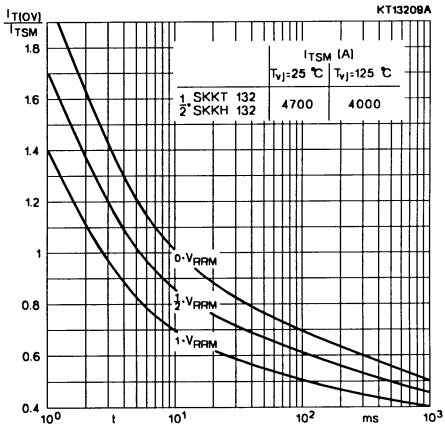


Fig. 9 a Surge overload current vs. time

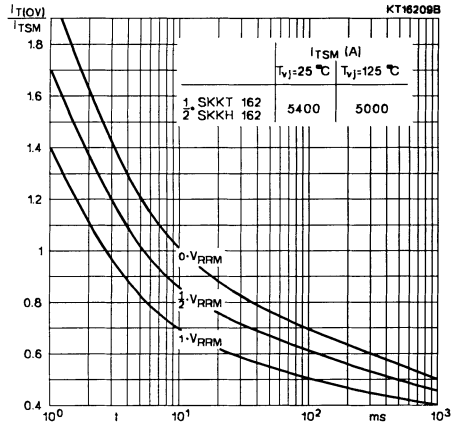


Fig. 9 b Surge overload current vs. time

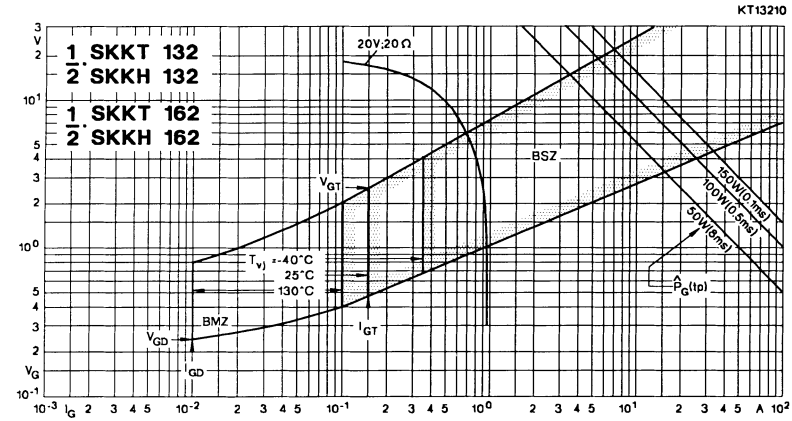


Fig. 10 Gate trigger characteristics

