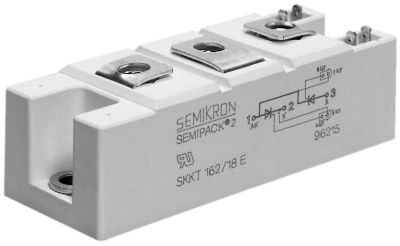
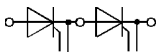
V_{RSM}	V_{RRM}	(dv/	I_{TRMS} (maximum value for continuous operation)			
	V_{DRM}	$dt)_{cr}$	220 A	250 A	220 A	250 A
			I_{TAV} (sin. 180; T_{case} = 80 °C)			
V	V	V/µs	148 A	168 A	148 A	168 A
			SKKT	**SKKT**	**SKKH**	**SKKH**
900	800	500	**132/08 D**	**162/08 D**	**132/08 D**	**162/08 D**
1300	1200	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**

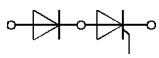
SEMIPACK® 2
Thyristor / Diode Modules

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





SKKT



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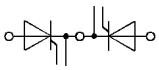
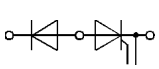


SKMT



SKNH

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; P 3/180	77 / 100	–	A
		T_{amb} = 35 °C; P 3/180 F	170 / 200	190 / 230	A
		P 16/200 F	250 / 320	290 / 360	A
I_{RMS}	W1/W3	P 3/180 F	240 / 3 x 163	265 / 3 x 185	A
		P 16/200 F	305 / 3 x 250	333 / 3 x 312	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^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms		80 000	125 000	A^2s
t_{gd}	T_{vj} = 25 °C; I_G = 1 A; di_G/dt = 1 A/µs		1		µs
t_{gr}	$V_D = 0{,}67 \cdot V_{DRM}$		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./max.		150 / 400		mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ./max.		0,3 / 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.		150		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 / per module	0,18 / 0,09	0,17 / 0,085	°C/W
	sin. 180		0,19 / 0,095	0,18 / 0,09	°C/W
	rec. 120		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.		165		g
Case	→ page B 1 – 96		SKKT: A 21	SKMT: A 50	
			SKKH: A 22	SKNH: A 61	

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)
- SKNH 162 for DC braking of induction motors for circuit see data sheet SKNH 56

[1)] SKMT 132, SKNH 132 available on request

[2)] See the assembly instructions

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This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

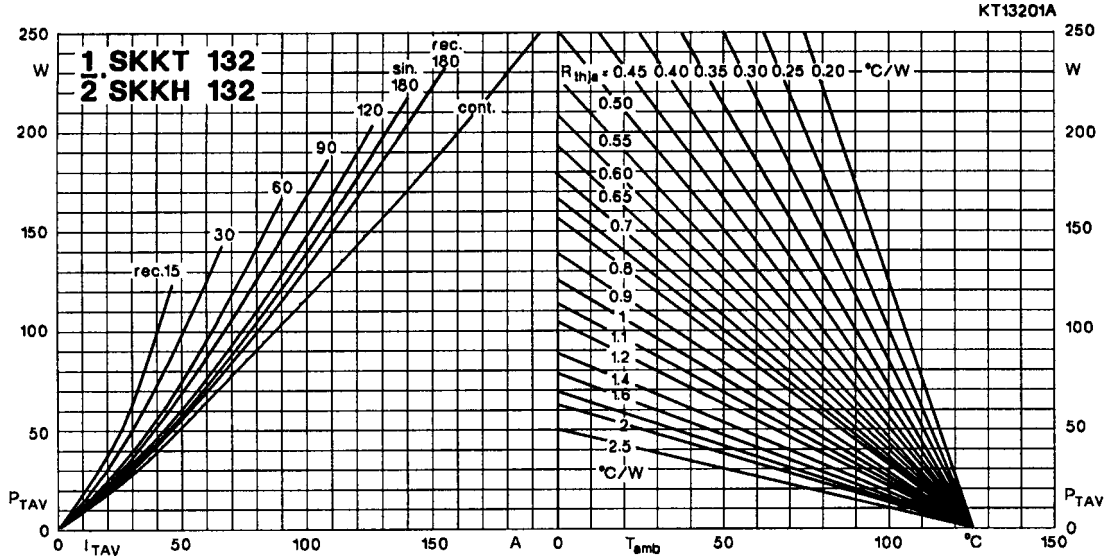

Fig. 1 a Power dissipation per thyristor vs. on-state current and ambient temperature

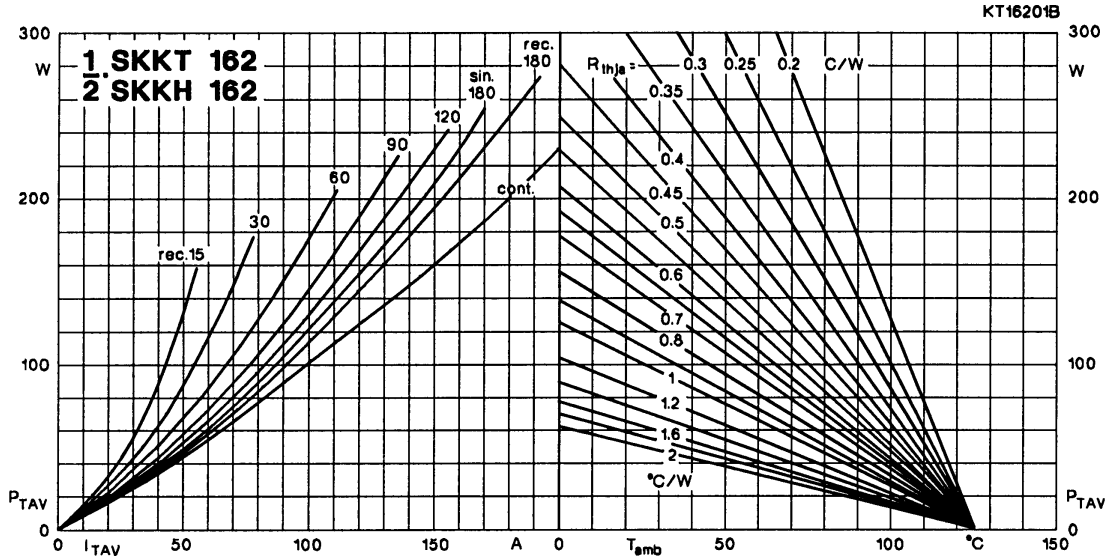

Fig. 1 b Power dissipation per thyristor vs. on-state current and ambient temperature

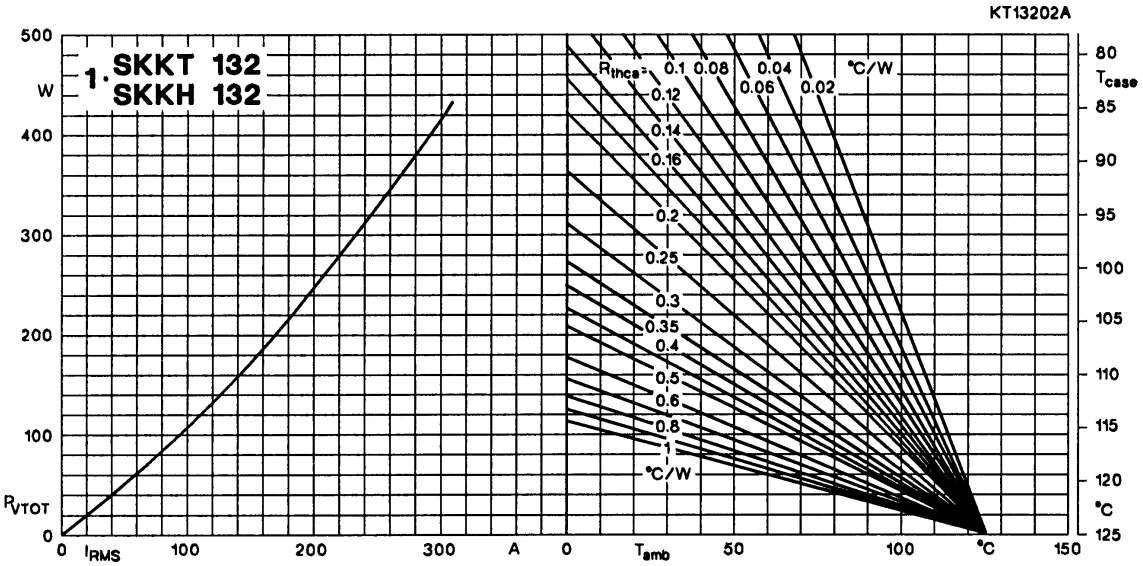

Fig. 2 a Power dissipation per module vs. rms current and case temperature

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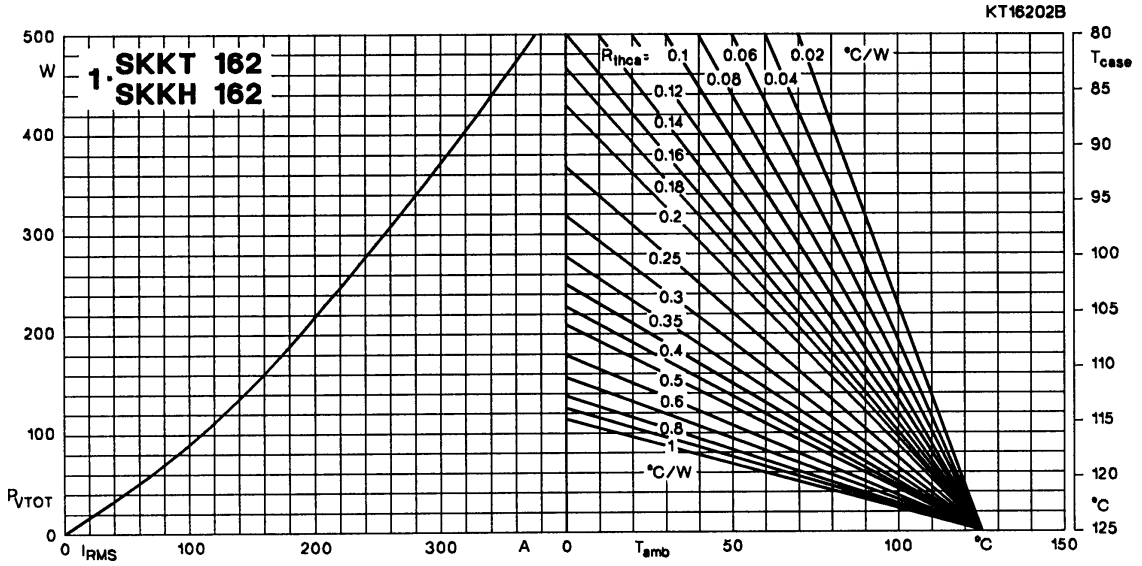

Fig. 2 b Power dissipation per module vs. rms current and case temperature

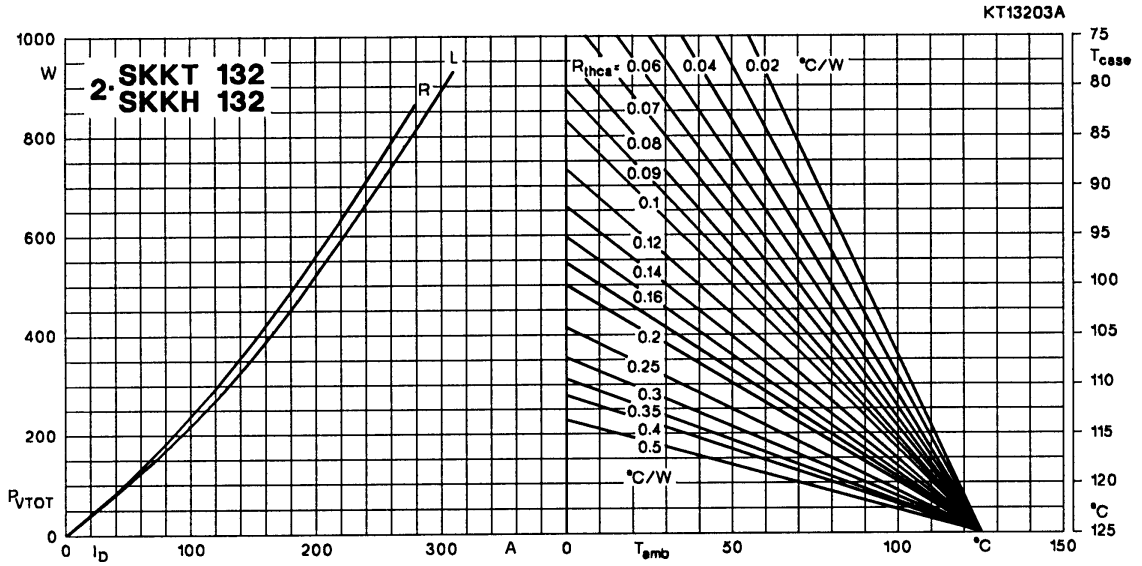

Fig. 3 a Power dissipation of two modules vs. direct current and case temperature

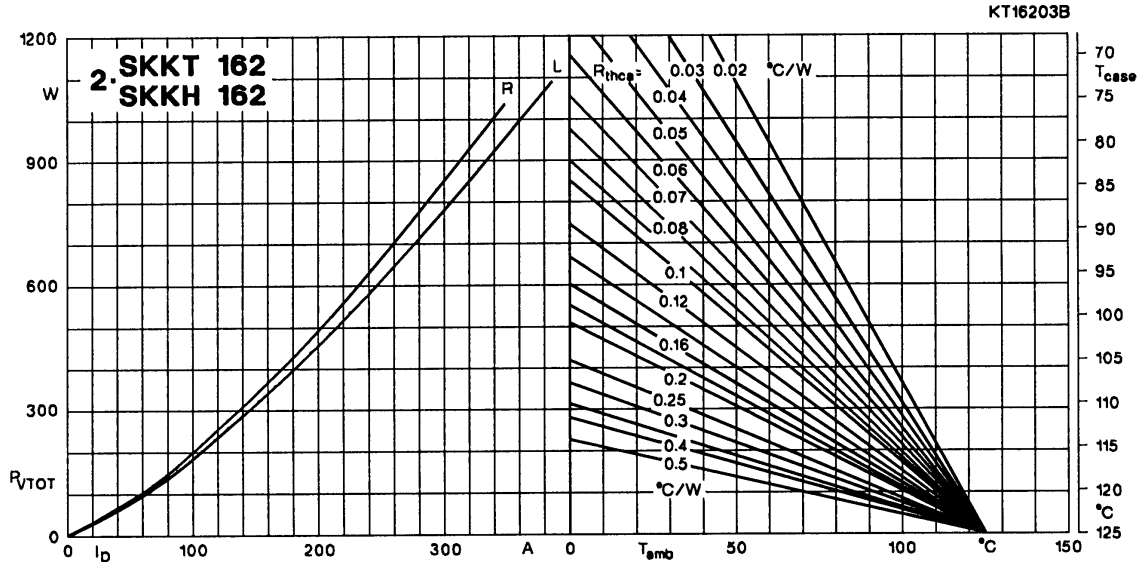

Fig. 3 b Power dissipation of two modules vs. direct current and case temperature

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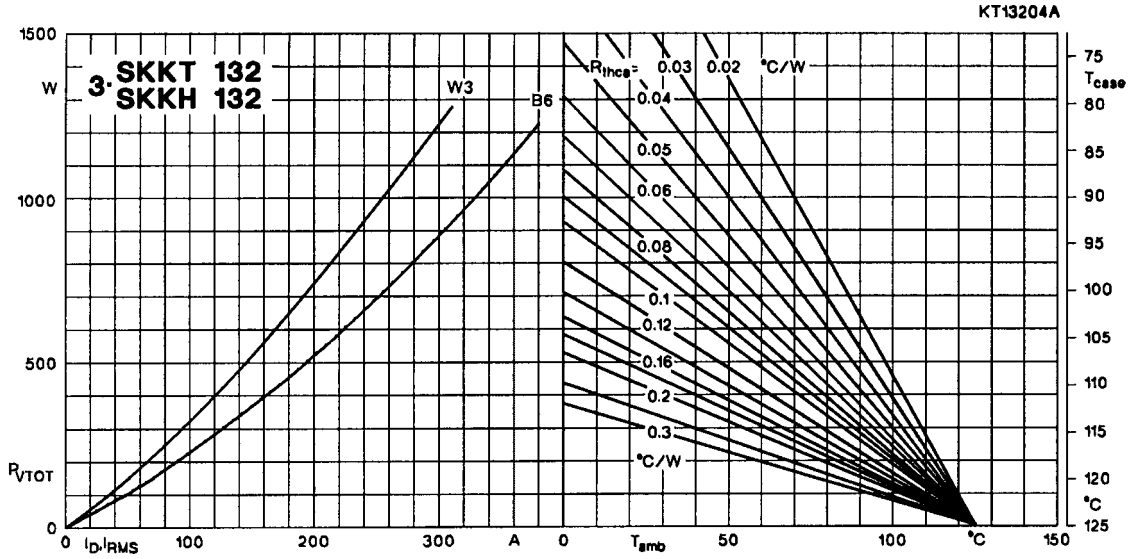

Fig. 4 a Power dissipation of three modules vs. direct and rms current and case temperature

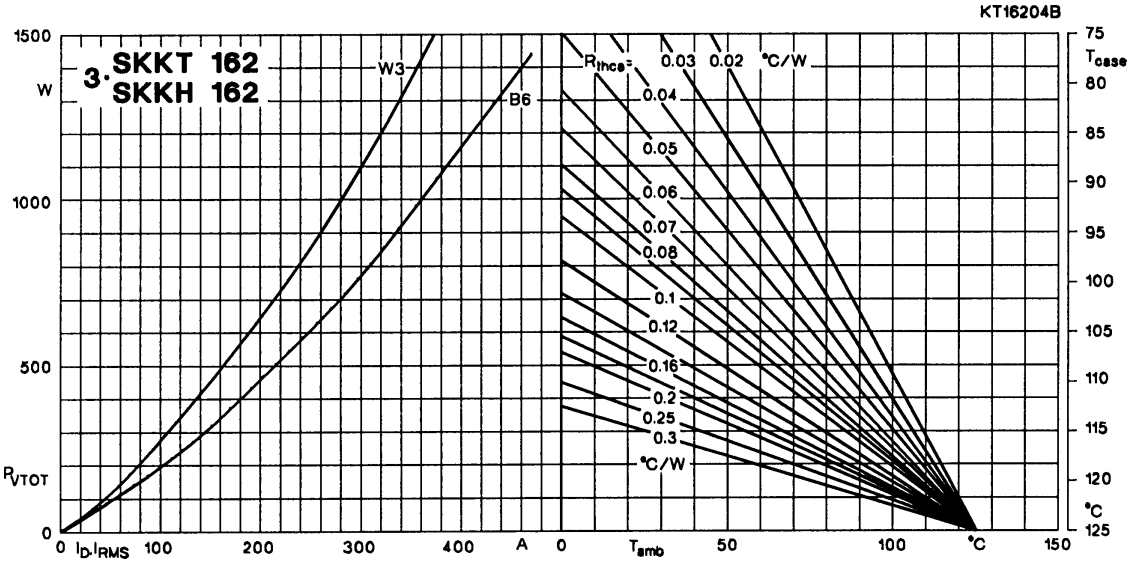

Fig. 4 b Power dissipation of three modules vs. direct and rms current and case temperature

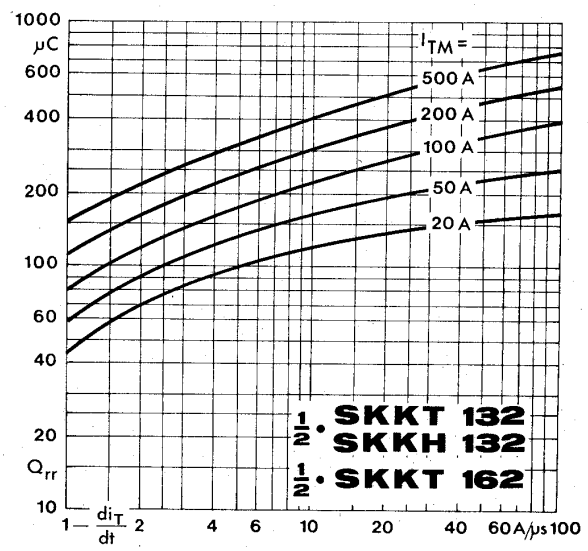

Fig. 5 Recovered charge vs. current decrease

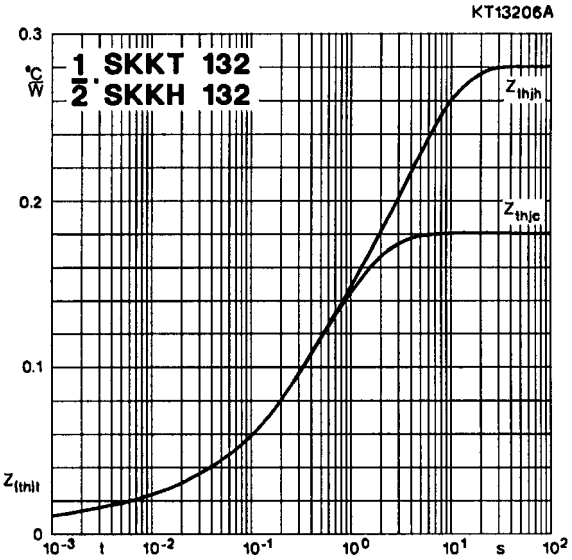

Fig. 6 a Transient thermal impedance vs. time

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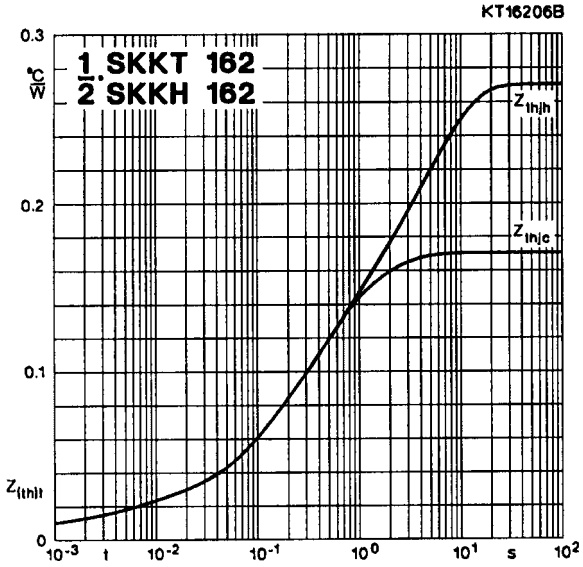

Fig. 6 b Transient thermal impedance vs. time

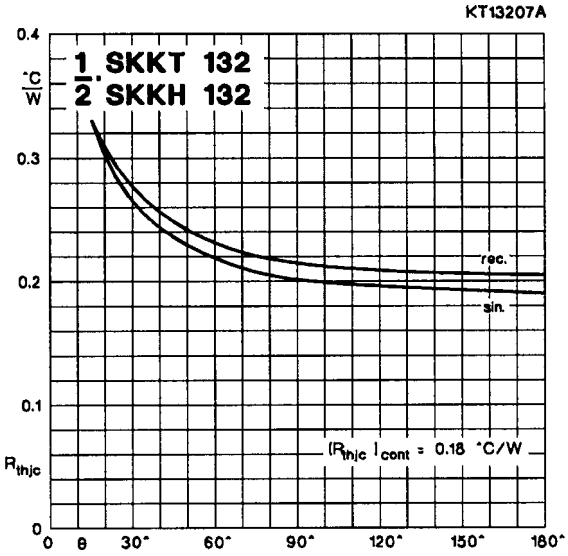

Fig. 7 a Thermal resistance vs. conduction angle

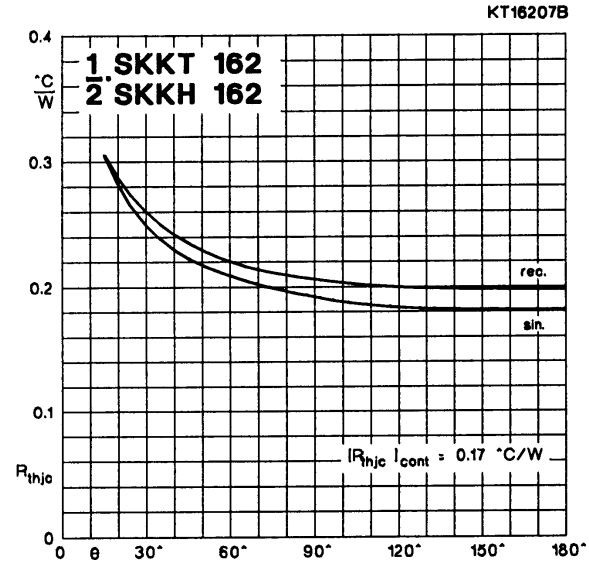

Fig. 7 b Thermal resistance vs. conduction angle

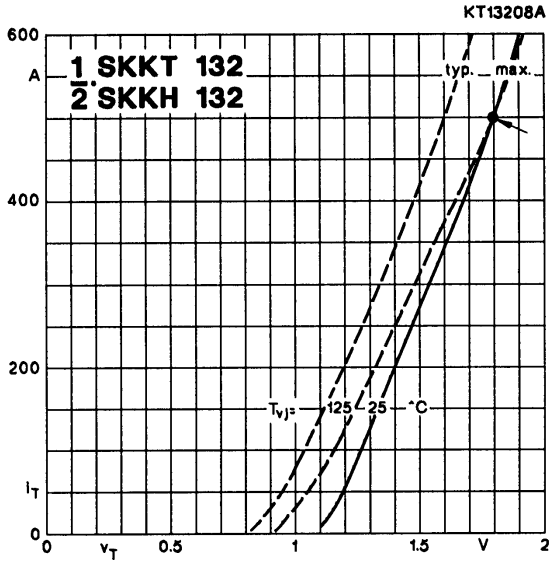

Fig. 8 a On-state characteristics

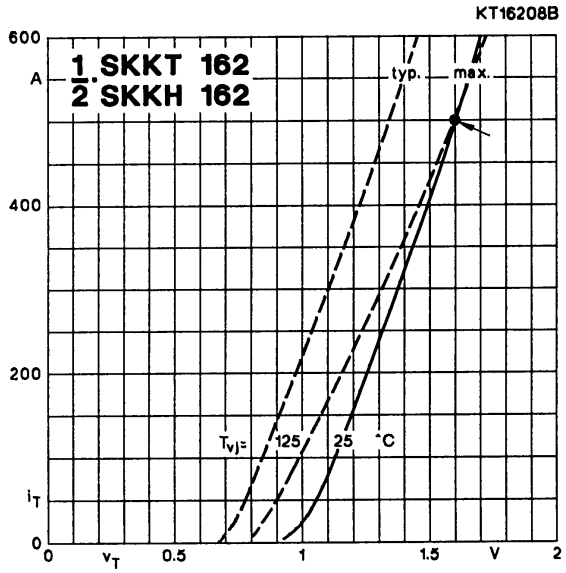

Fig. 8 b On-state characteristics

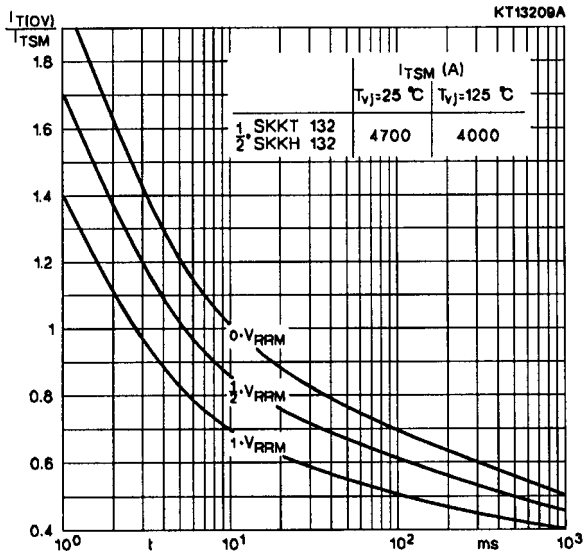

Fig. 9 a Surge overload current vs. time

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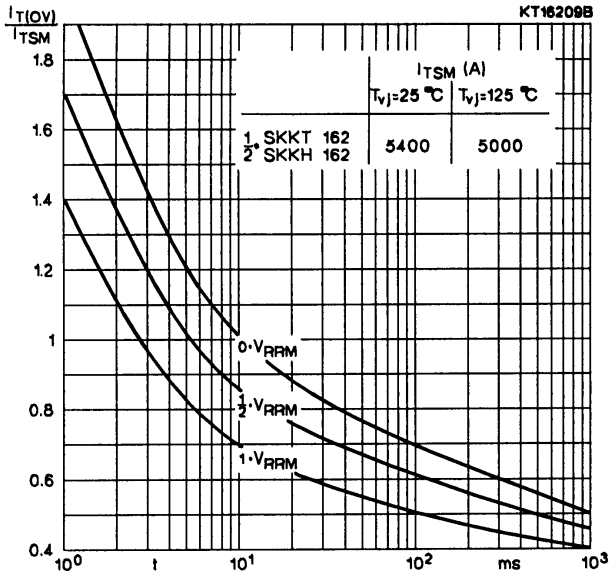

Fig. 9 b Surge overload current vs. time

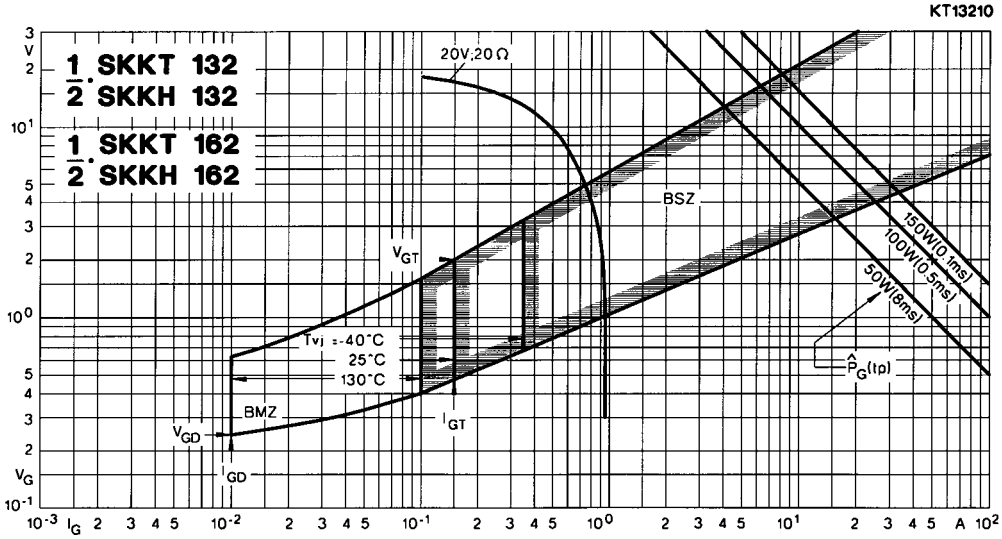

Fig. 10 Gate trigger characteristics

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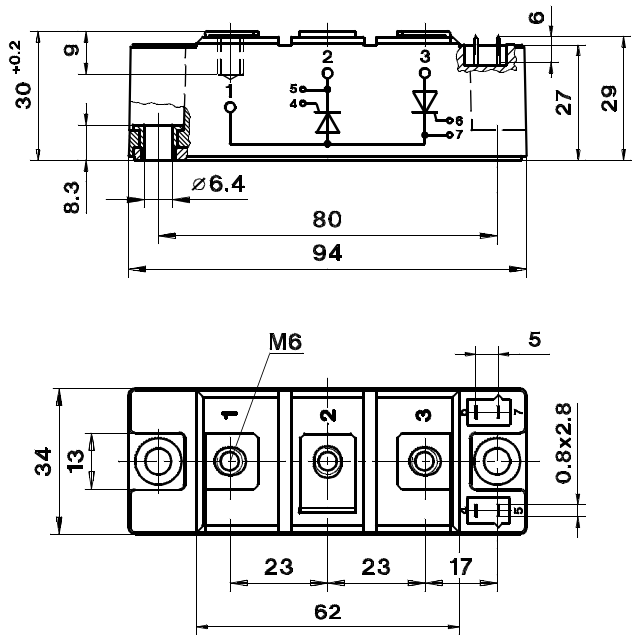
SKKT 122, 132, 162

Case A 21

SEMIPACK® 2 UL recognized, file no. E 63 532



SKMT 132

Case A 50

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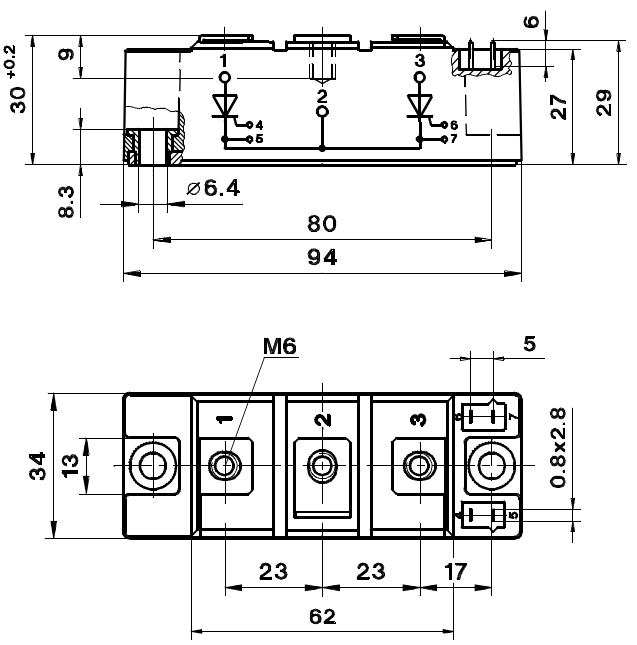
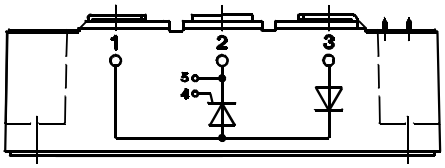


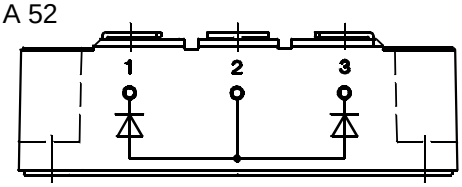
SKKH 122, 132, 162

Case A 22



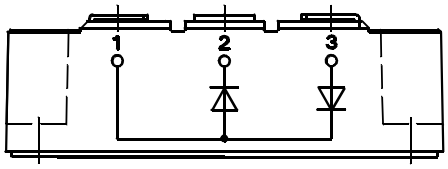
SKND 165

Case A 52



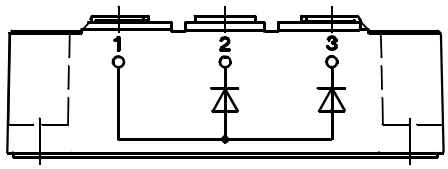
SKKD 162

Case A 23



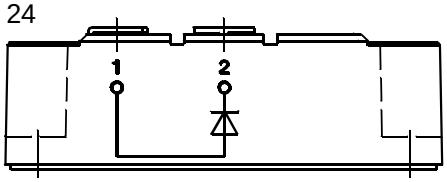
SKND 162

Case A 57



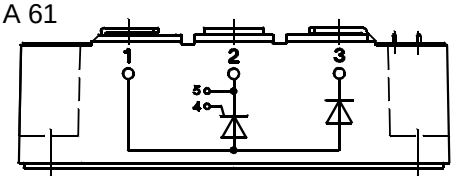
SKKE 162

Case A 24



SKNH 132

Case A 61



Dimensions in mm

Dimensions in mm

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