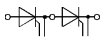
V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation) 240 A	270 A	240 A	270 A
			I_{TAV} (sin. 180; T_{case} = . . .)			
V	V	V/µs	150 A (85 °C)	172 A (81 °C)	150 A (85 °C)	172 A (81 °C)
			SKKT	**SKKT**	**SKKH**	**SKKH**
900	800	500	**131/08 D**	**161/08 D**	**131/08 D**	**161/08 D**
1300	1200	500	**131/12 D**	**161/12 D**	–	**161/12 D**
1300	1200	1000	**131/12 E**	**161/12 E**	**131/12 E**	**161/12 E**
1500	1400	1000	**131/14 E**	**161/14 E**	**131/14 E**	**161/14 E**
1700	1600	1000	**131/16 E**	**161/16 E**	**131/16 E**	**161/16 E**
1900	1800	1000	**131/18 E**	**161/18 E**	**131/18 E**	**161/18 E**
2100	2000	1000	**131/20 E**	–	**131/20 E**	–
2300	2200	1000	**131/22 E**	–	**131/22 E**	–

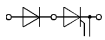
Symbol	Conditions			SKKT 131 SKKH 131	SKKT 161 SKKH 161	Units
I_{TAV}	sin. 180; T_{case} =		81 °C	–	172	A
			85 °C	150	160	A
			92 °C	130	–	
I_D	B2/B6	T_{amb} =	P 16/170 F	295/375	325/410	A
			P 16/200 F	300/380	330/415	A
			P 16/300 F	– /390	– /425	A
I_{RMS}	W1/W3	35 °C;	P 16/170 F	340/3x290	380/3x310	A
			P 16/200 F	385/3x312	385/3x337	A
			P 16/300 F	– /3x318	– /3x344	A
I_{TSM}	T_{vj} = 25 °C; 10 ms			4 700	5 400	A
	T_{vj} = 130 °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} = 130 °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} = 130 °C			200		A/µs
t_q	T_{vj} = 130 °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. 1,7	max. 1,55	V
$V_{(TO)}$	T_{vj} = 130 °C			1	1	V
r_T	T_{vj} = 130 °C			1,4	1,0	mΩ
I_{DD}; I_{RD}	T_{vj} = 130 °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$			max. 50	max. 50	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} = 130 °C; d. c.			0,25		V
I_{GD}	T_{vj} = 130 °C; d. c.			10		mA
R_{thjc}	cont.	per thyristor/ per module		0,19/0,09		°C/W
	sin. 180			0,20/0,10		°C/W
	rec. 120			0,22/0,11		°C/W
R_{thch}				0,06/0,03		°C/W
T_{vj}, T_{stg}				– 40 . . . +130		°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 %[1]		Nm
M_2	to terminals	SI (US) units		9 (80 lb. in.) ± 15 %[2]		Nm
a				5 · 9,81		m/s^2
w	approx.			820		g
Case	→ page B 1 – 76			SKKT: A 13	SKKH: A 14	

SEMIPACK® 3
Thyristor/ Diode Modules

SKKT 131 **SKKH 131**
SKKT 161 **SKKH 161**



SKKT



SKKH

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts for high reliability
- UL recognized, file no. 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] See the assembly instructions
[2] The screws must be lubricated

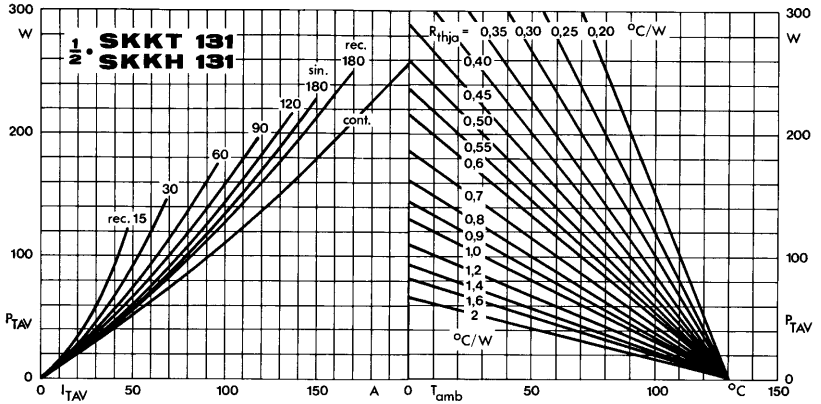


Fig. 1 a Power dissipation per thyristor vs. on-state current and ambient temperature

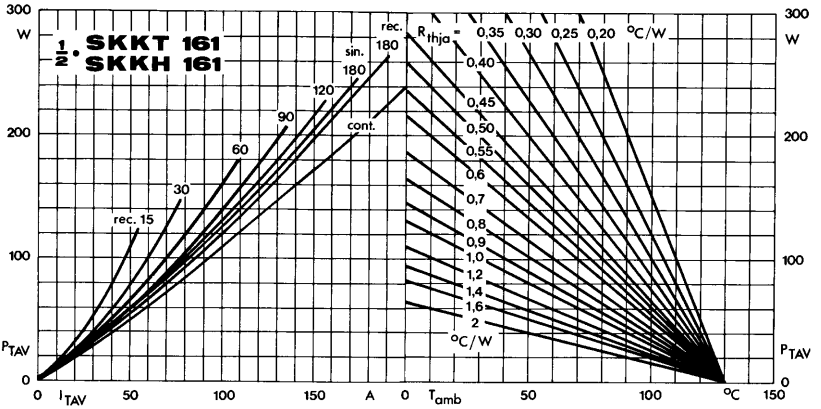


Fig. 1 b Power dissipation per thyristor vs. on-state current and ambient temperature

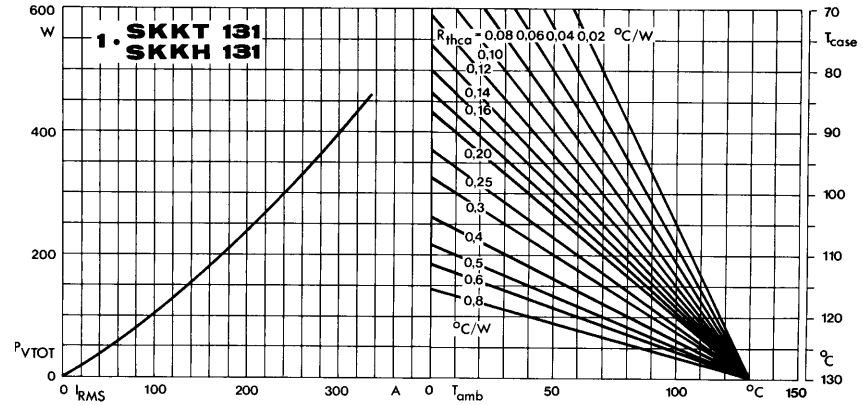


Fig. 2 a Power dissipation per module vs. rms current and case temperature

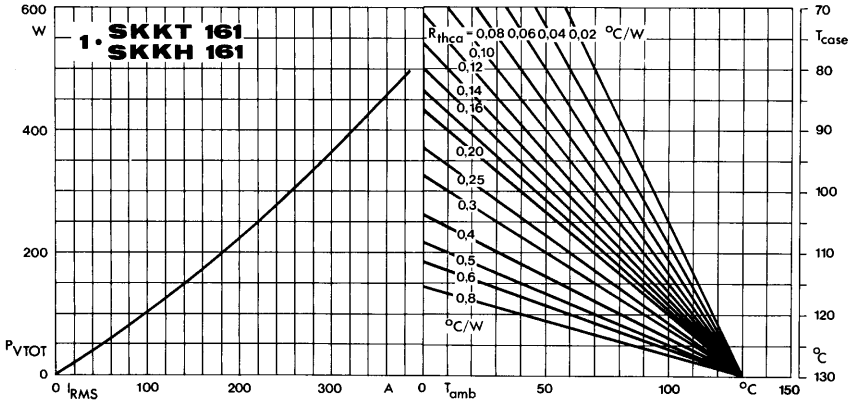


Fig. 2 b Power dissipation per module vs. rms current and case temperature

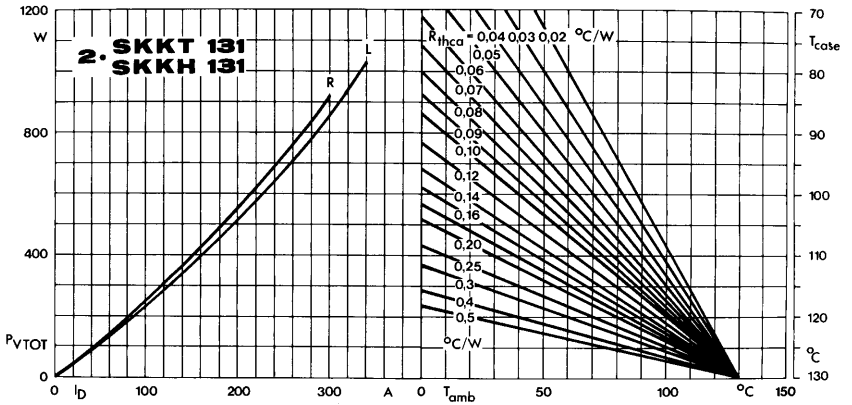


Fig. 3 a Power dissipation of two modules vs. direct current and case temperature

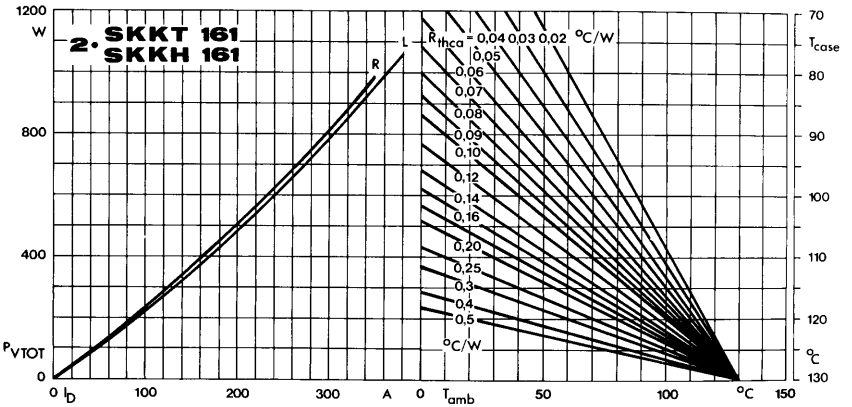


Fig. 3 b Power dissipation of two modules vs. direct current and case temperature

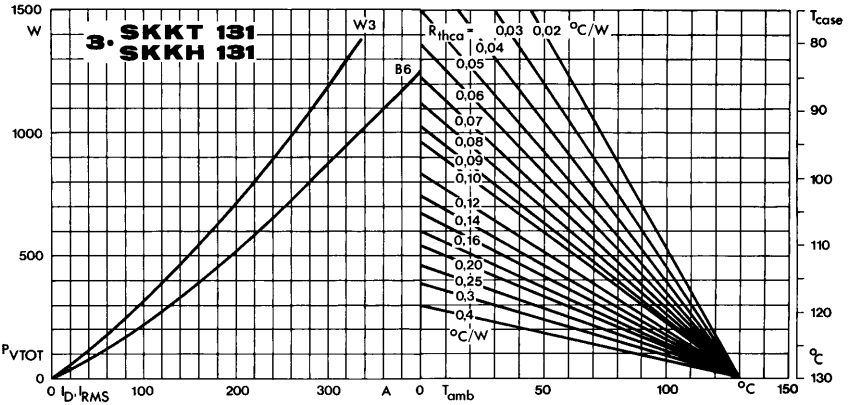


Fig. 4 a Power dissipation of three modules vs. direct and rms current and case temperature

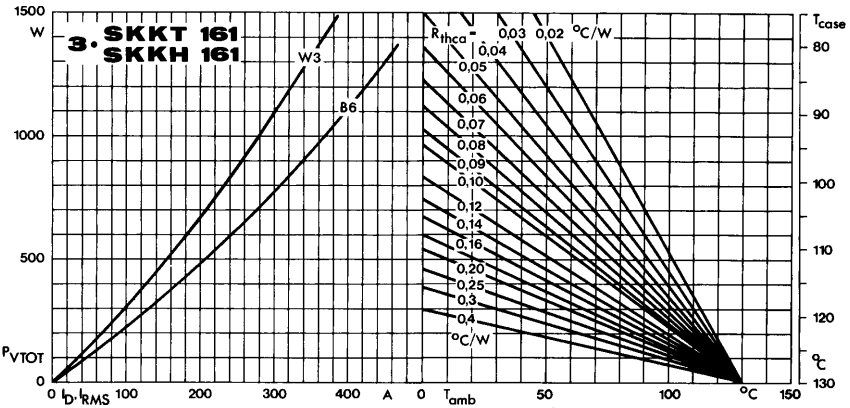


Fig. 4 b Power dissipation of three modules vs. direct and rms current and case temperature

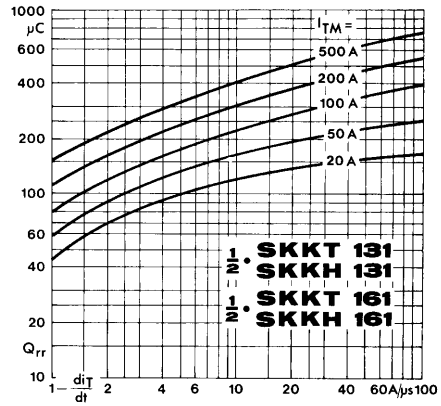


Fig. 5 Recovered charge vs. current decrease

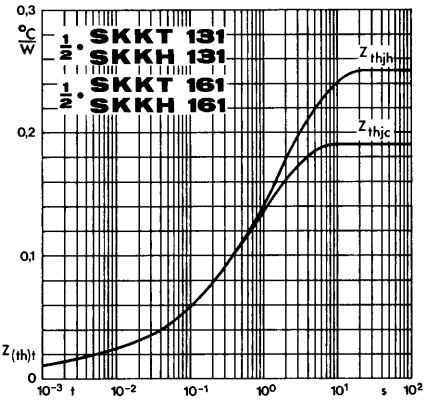


Fig. 6 Transient thermal impedance vs. time

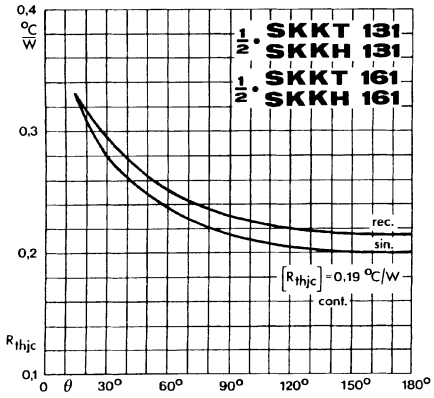


Fig. 7 Thermal resistance vs. conduction angle

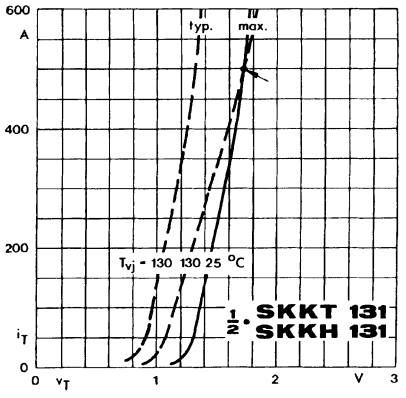


Fig. 8 a On-state characteristic

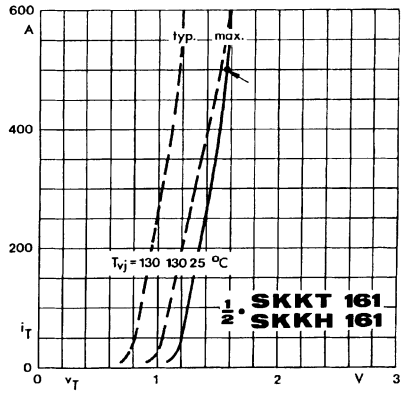


Fig. 8 b On-state characteristics

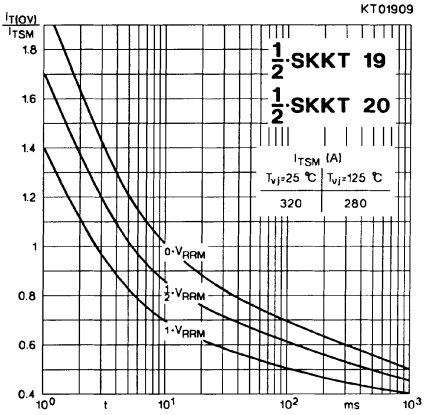


Fig. 9 Surge overload current vs. time

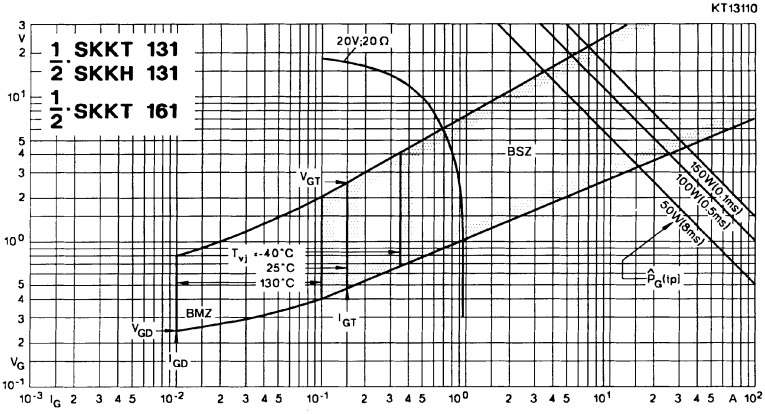
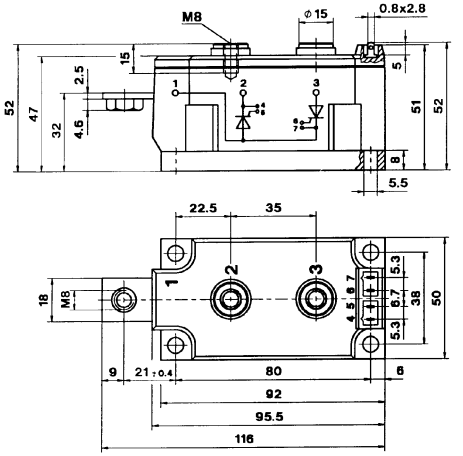


Fig. 10 Gate trigger characteristics

SKKT 131, SKKT 161

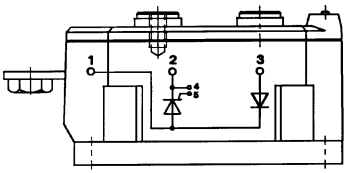
Case A 13

SEMIPACK 3 UL recognized, file no. E 63 532



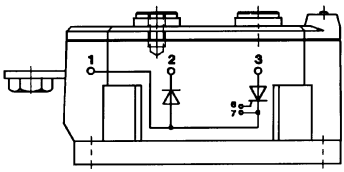
SKKH 131, SKKH 161

Case A 14



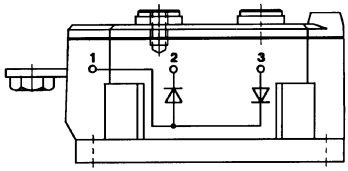
SKKL 131, SKKL 161

Case A 15



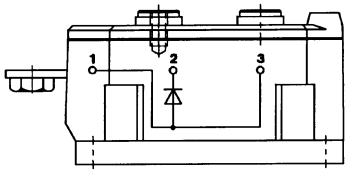
SKKD 201

Case A 16



SKKE 201

Case A 17



Dimensions in mm

