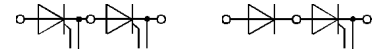


V _{RSM}	V _{RRM}	(dv/dt) _{cr}	I _{T(RMS)} (maximum values for continuous operation)			
			240 A	270 A	240 A	270 A
V	V	V/μs	I _{TAV} (sin. 180; T _{case} = . . .)			
			150 A (85 °C)	172 A (81 °C)	150 A (85 °C)	172 A (81 °C)
			SKKT	SKKT	SKKH	SKKH
900	800	500	131/08 D	161/08 D	131/08 D	161/08 D
1300	1200	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	–

SEMIPACK® 3 Thyristor / Diode Modules

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



SKKT

SKKH

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	–	A
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 ² t	T _{vj} = 25 °C; 8,3 ... 10 ms	110 000	145 000	A ² s
	T _{vj} = 130 °C; 8,3 ... 10 ms	80 000	125 000	A ² s
t _{gd}	T _{vj} = 25 °C; I _G = 1 A		1	μs
	di _G /dt = 1 A/μs		2	μs
t _{gr}	V _D = 0,67 · V _{DRM}			
(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./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. 1,7	max. 1,55	V
V _{T(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 _{RD} = V _{RRM} V _{DD} = V _{DRM}	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.		0,19 / 0,09	°C/W
	sin. 180 } per thyristor /		0,20 / 0,10	°C/W
	rec. 120 } per module		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		5 (44 lb. in.) ± 15 % ¹⁾	Nm
M ₂	to terminals		9 (80 lb. in.) ± 15 % ²⁾	Nm
a			5 · 9,81	m/s ²
w	approx.		820	g
Case	→ page B 1 – 74	SKKT: A 13	SKKH: A 14	

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts 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⁾ See the assembly instructions

²⁾ The screws must be lubricated

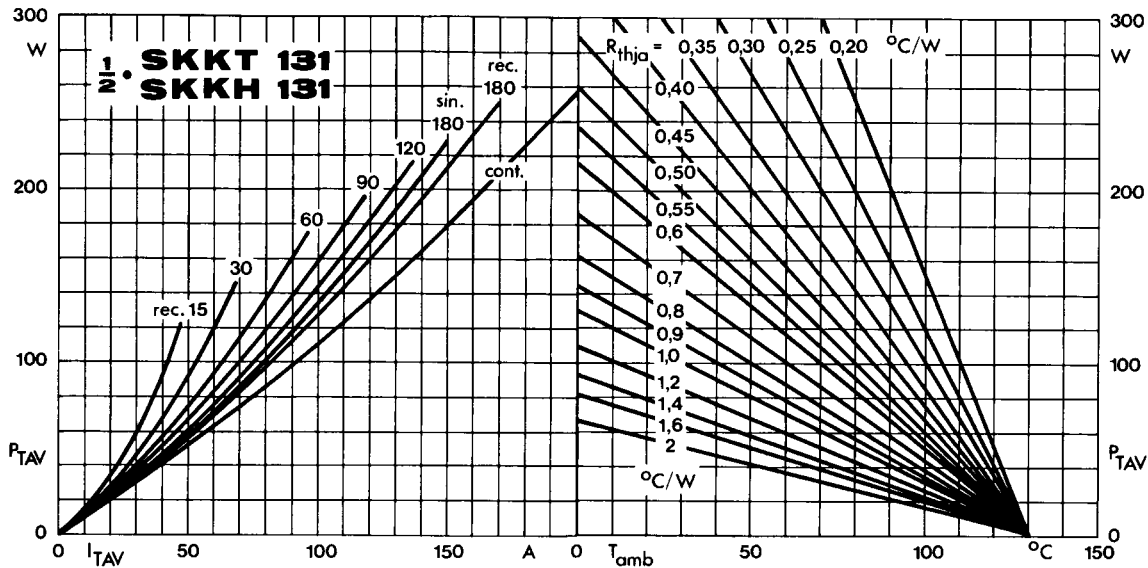


Fig. 1 a Power dissipation per thyristor vs. on-state current and ambient temperature

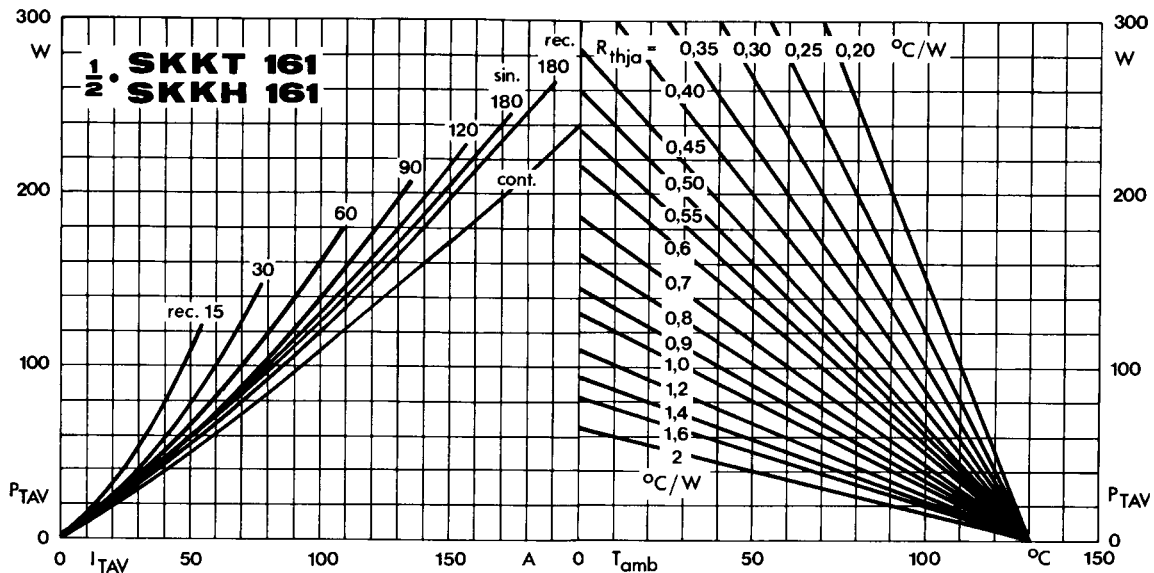


Fig. 1 b Power dissipation per thyristor vs. on-state current and ambient temperature

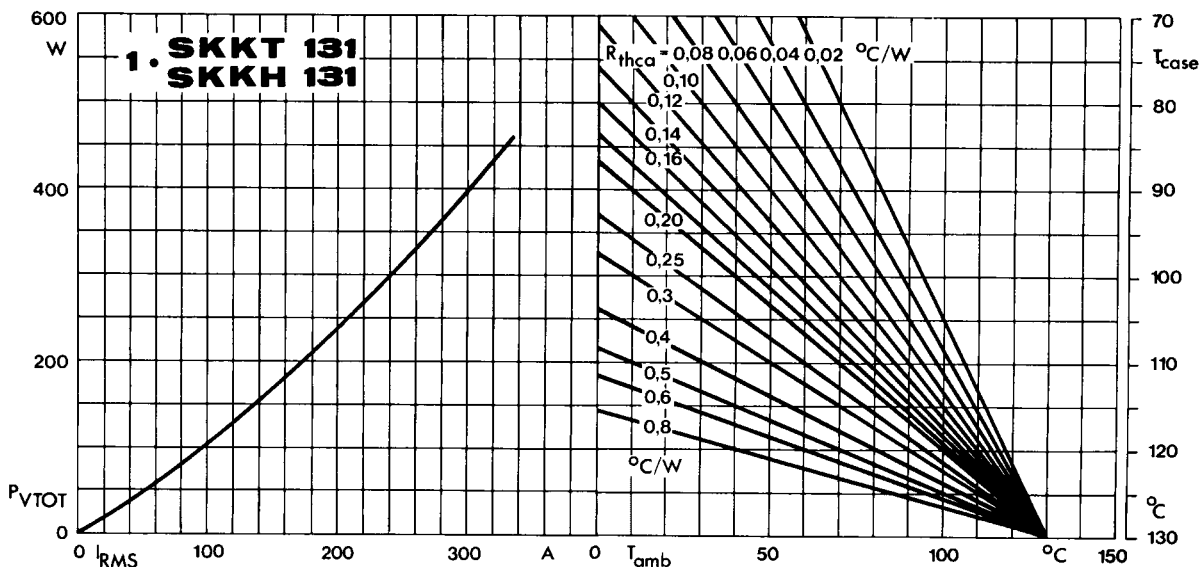


Fig. 2 a Power dissipation per module vs. rms current and case temperature

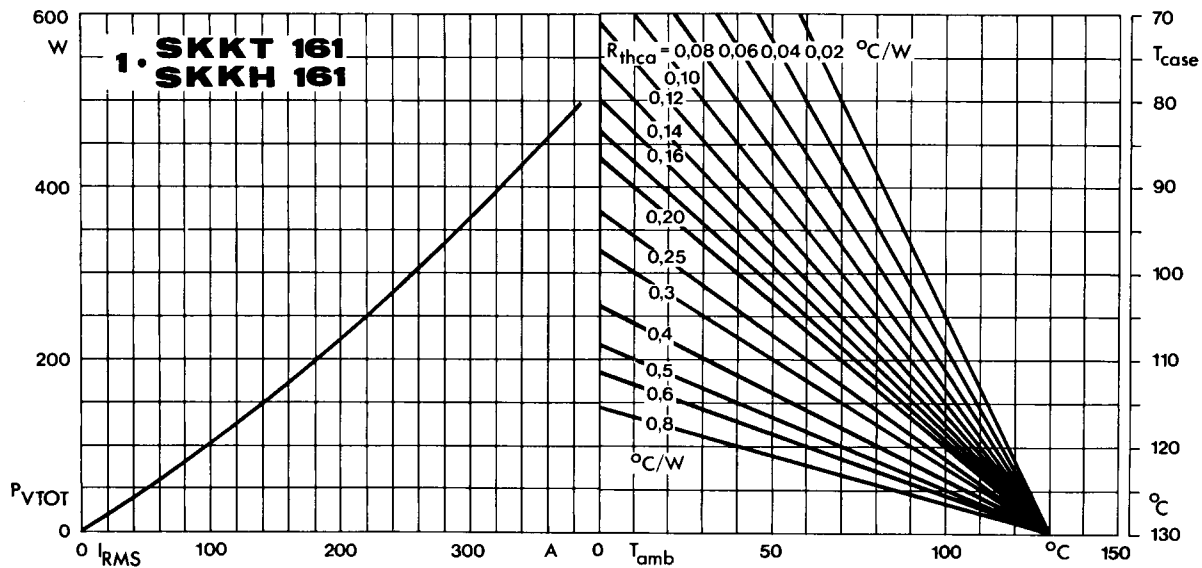


Fig. 2 b Power dissipation per module vs. rms current and case temperature

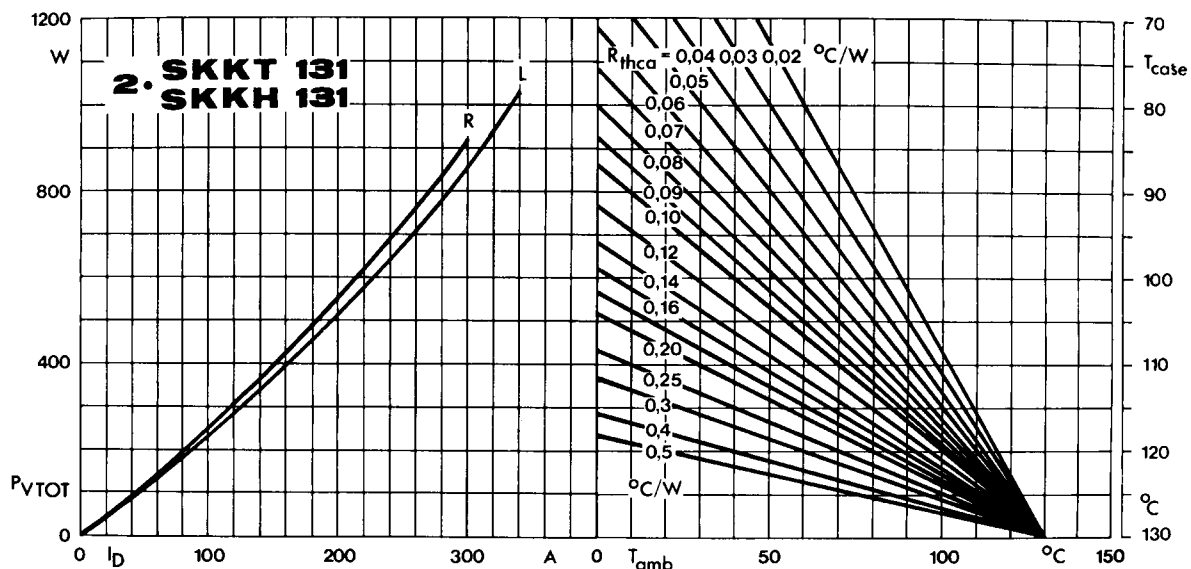


Fig. 3 a Power dissipation of two modules vs. direct current and case temperature

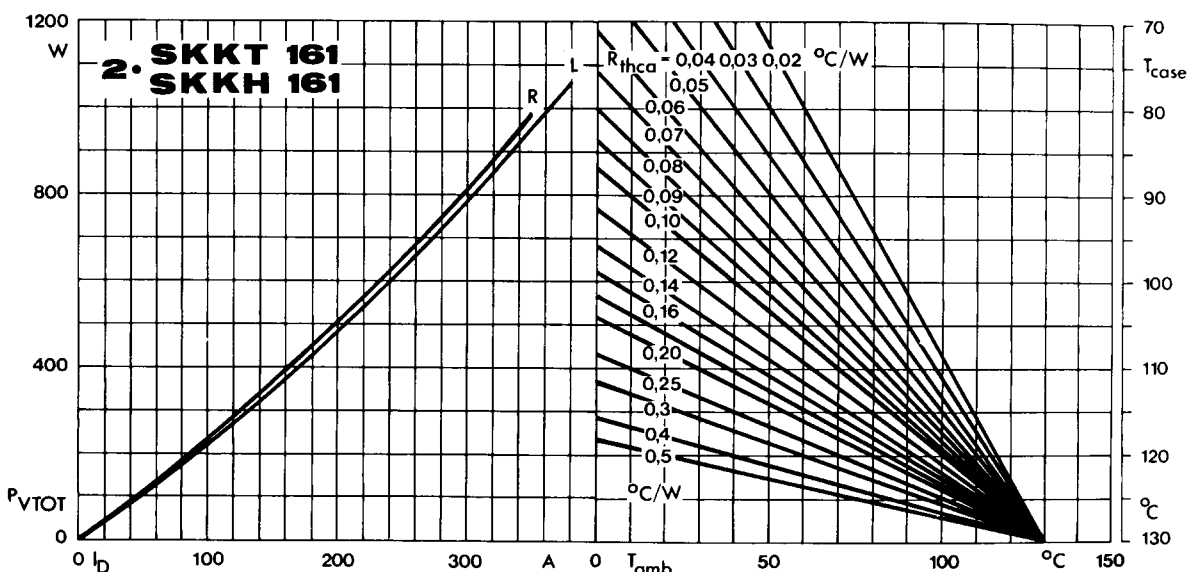


Fig. 3 b Power dissipation of two modules vs. direct current and case temperature

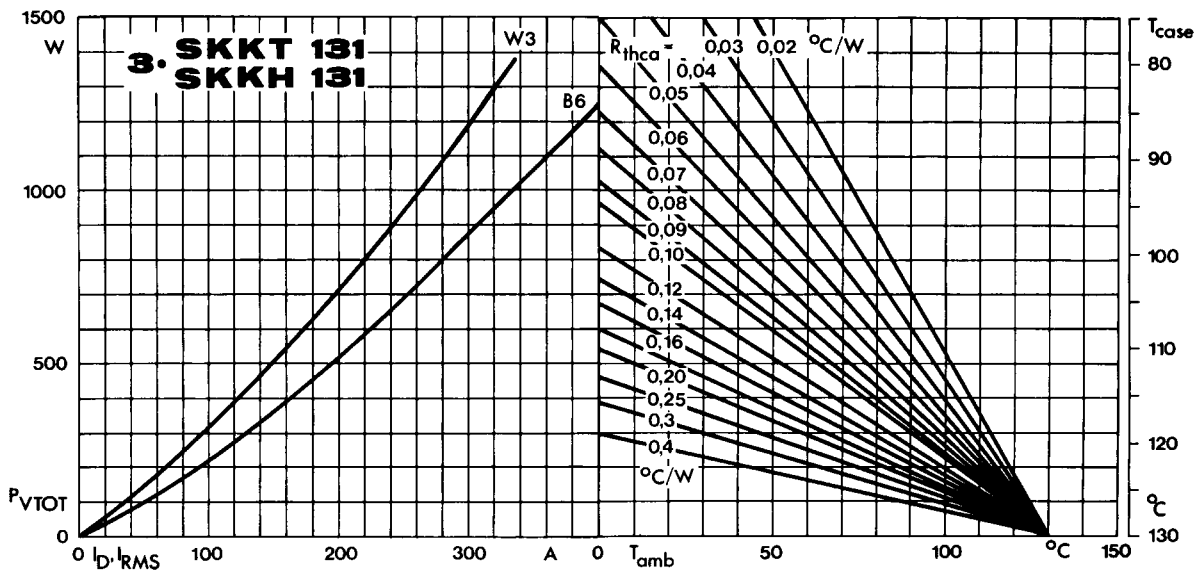


Fig. 4 a Power dissipation of three modules vs. direct and rms current and case temperature

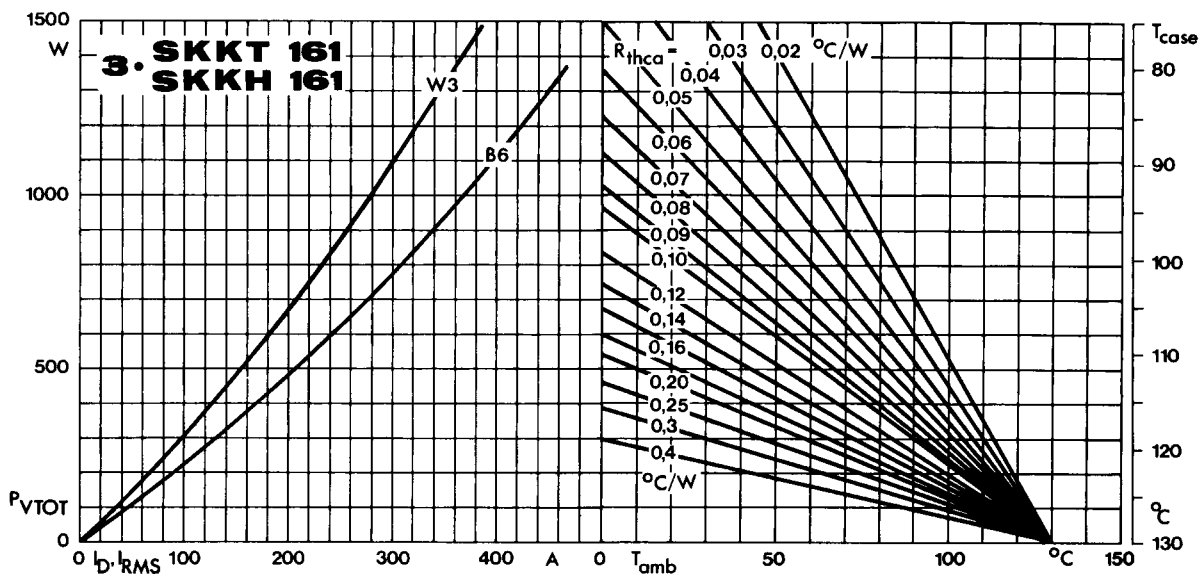


Fig. 4 b Power dissipation of three modules vs. direct and rms current and case temperature

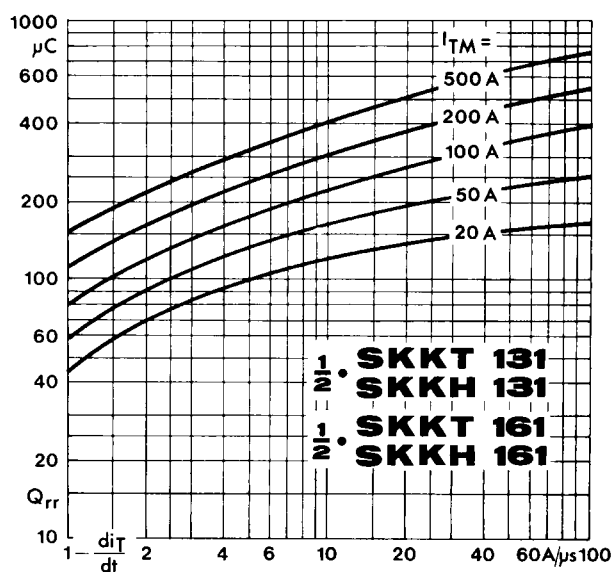


Fig. 5 Recovered charge vs. current decrease

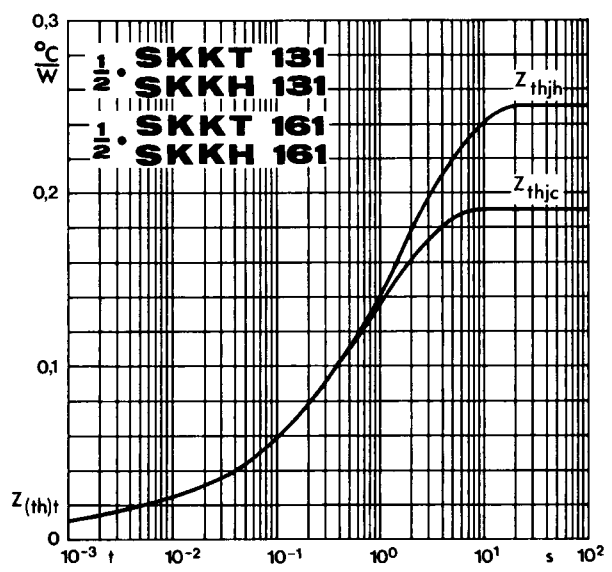


Fig. 6 Transient thermal impedance vs. time

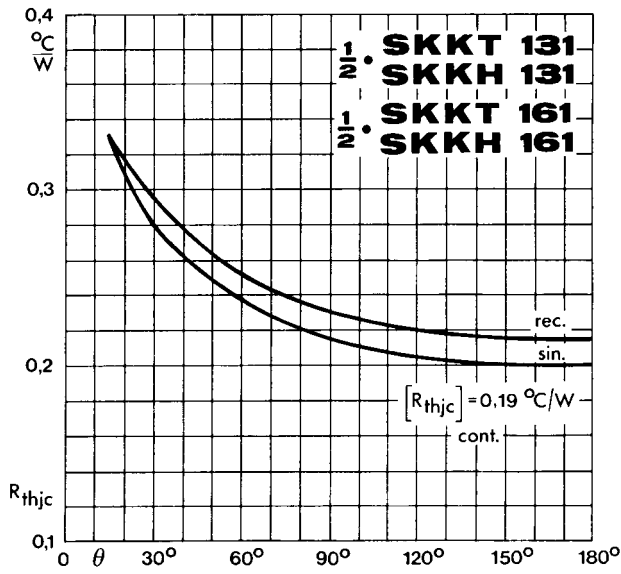


Fig. 7 Thermal resistance vs. conduction angle

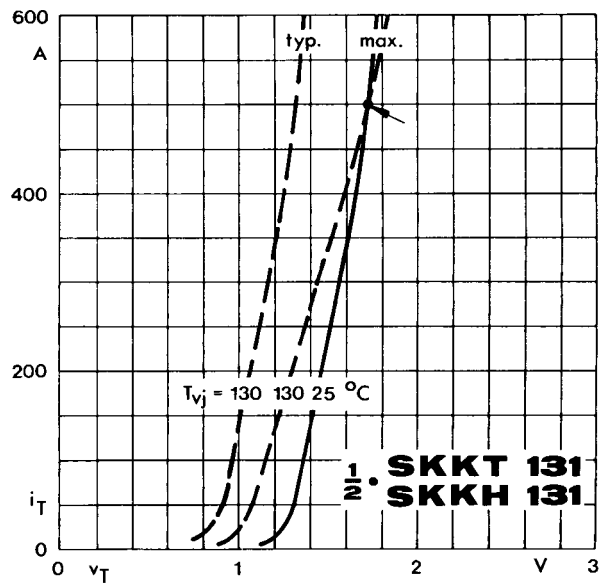


Fig. 8 a On-state characteristic

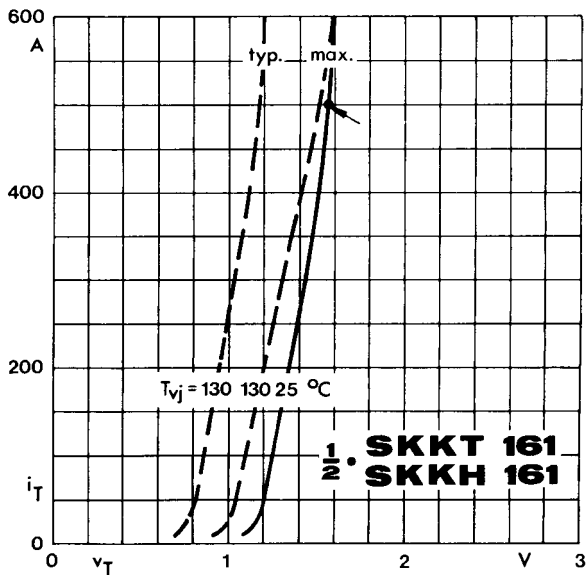


Fig. 8 b On-state characteristics

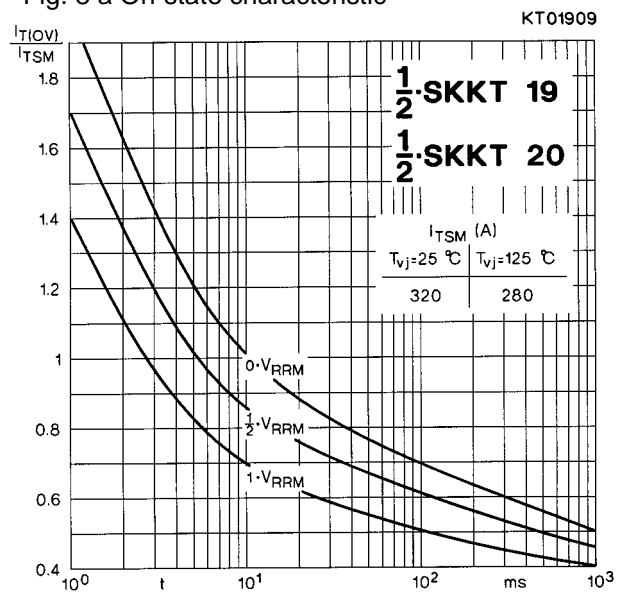


Fig. 9 Surge overload current vs. time

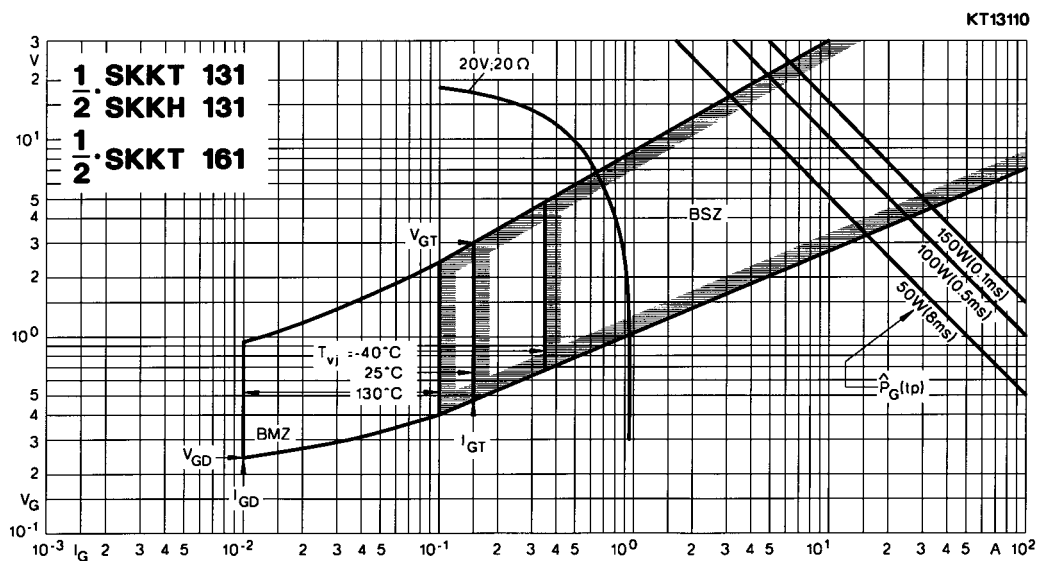
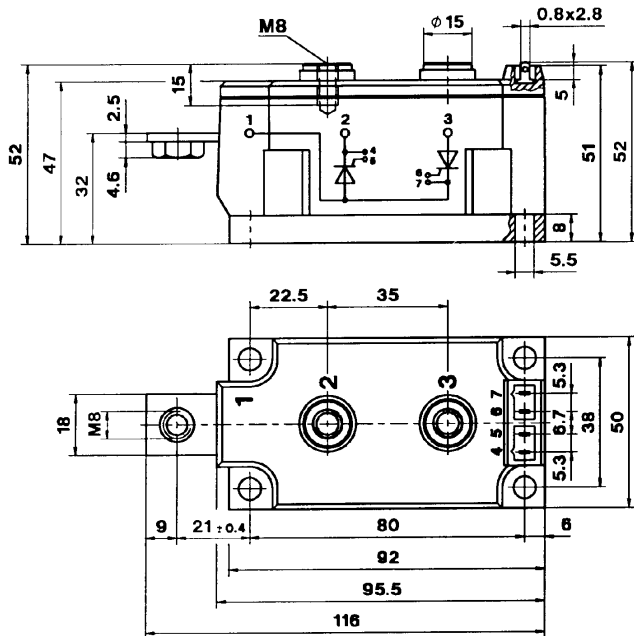


Fig. 10 Gate trigger characteristics

SKKT 131, SKKT 161

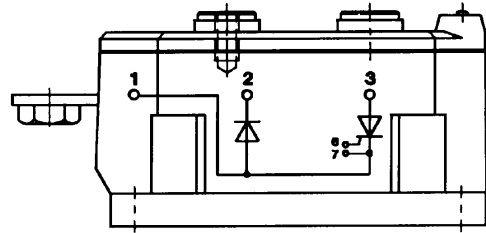
Case A 13

SEMIPACK 3 UL recognized, file no. E 63 532



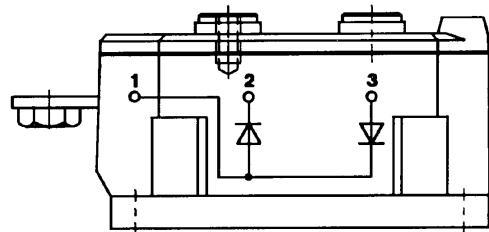
SKKL 131, SKKL 161

Case A 15



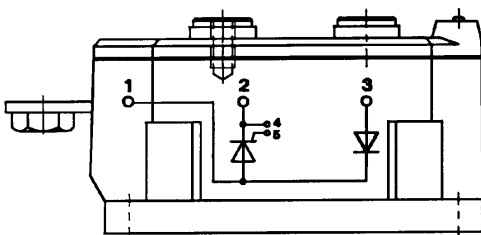
SKKD 201

Case A 16



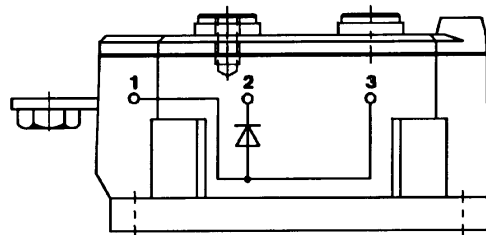
SKKH 131, SKKH 161

Case A 14



SKKE 201

Case A 17



Dimensions in mm