

SKKT 132, SKKH 132, SKNH 132



SEMIPACK[®] 2

Thyristor / Diode Modules

SKKT 132

SKKH 132

SKNH 132

Features

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

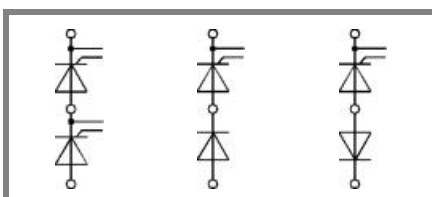
Typical Applications

- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)
- DC braking of AC motors (SKNH)

- 1) SKNH 132 available on request
- 2) See the assembly instructions

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 220$ A (maximum value for continuous operation) $I_{TAV} = 130$ A (sin. 180; $T_c = 87$ °C)		
900	800	SKKT 132/08E	SKKH 132/08E	SKNH 132/12E ¹⁾
1300	1200	SKKT 132/12E	SKKH 132/12E	
1500	1400	SKKT 132/14E	SKKH 132/14E	
1700	1600	SKKT 132/16E	SKKH 132/16E	
1900	1800	SKKT 132/18E	SKKH 132/18E	SKNH 132/18E H4 ¹⁾

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C;	137 (96)	A
I_D	P3/180; $T_a = 45$ °C; B2 / B6	77 / 100	A
	P3/180F; $T_a = 35$ °C; B2 / B6	170 / 200	A
I_{RMS}	P3/180F; $T_a = 35$ °C; W1 / W3	240 / 3 * 163	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	4700	A
	$T_{vj} = 125$ °C; 10 ms	4000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	110000	A ² s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	80000	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 500$ A	max. 1,8	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 1	V
r_T	$T_{vj} = 125$ °C	max. 1,6	mΩ
$I_{DD}; I_{RD}$	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$	max. 40	mA
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	max. 200	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	max. 1000	V/μs
t_q	$T_{vj} = 125$ °C	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.	300 / 1000	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 2	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 150	mA
V_{GD}	$T_{vj} = 125$ °C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125$ °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.; per thyristor / per module	0,18 / 0,09	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,19 / 0,095	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,21 / 0,105	K/W
$R_{th(c-s)}$	per thyristor / per module	0,1 / 0,05	K/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 / 3000	V~
M_s	a. c. 50 Hz; r.m.s.; 1 s / 1 min. for SKK ...H4	4800 / 4000	V~
M_s	to heatsink	5 ± 15 % ²⁾	Nm
M_t	to terminal	5 ± 15 %	Nm
a		5 * 9,81	m/s ²
m	approx.	165	g
Case	SKKT	A 21	
	SKKH	A 22	
	SKNH	A 61	



SKKT

SKKH

SKNH

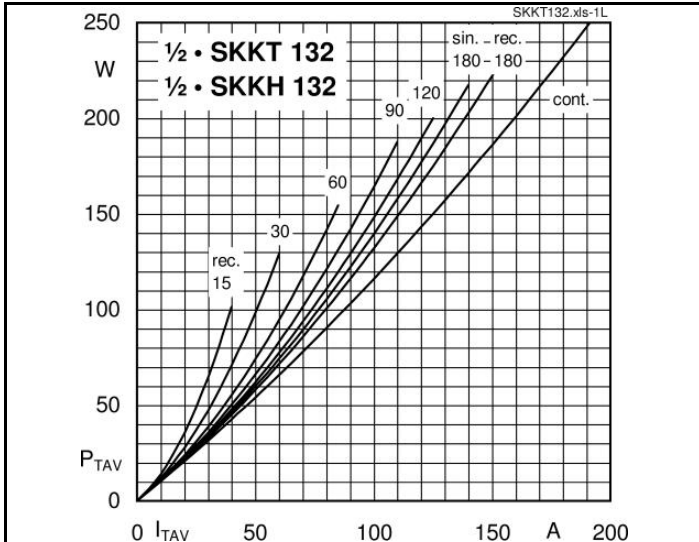


Fig. 1L Power dissipation per thyristor vs. on-state current

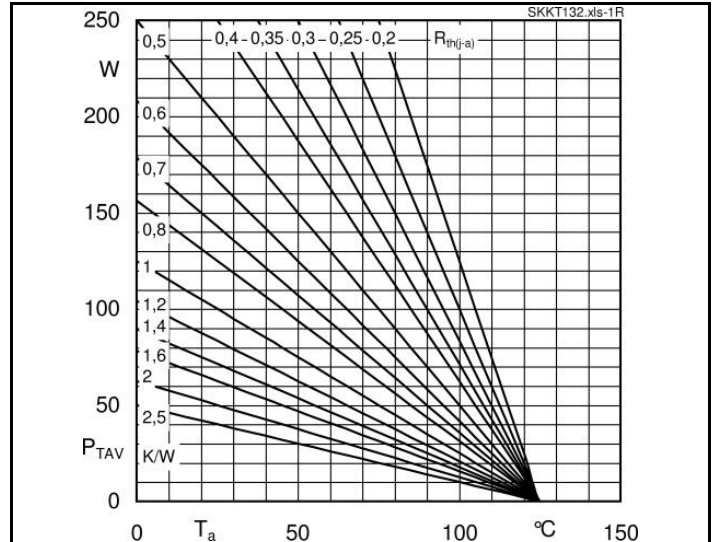


Fig. 1R Power dissipation per thyristor vs. ambient temp.

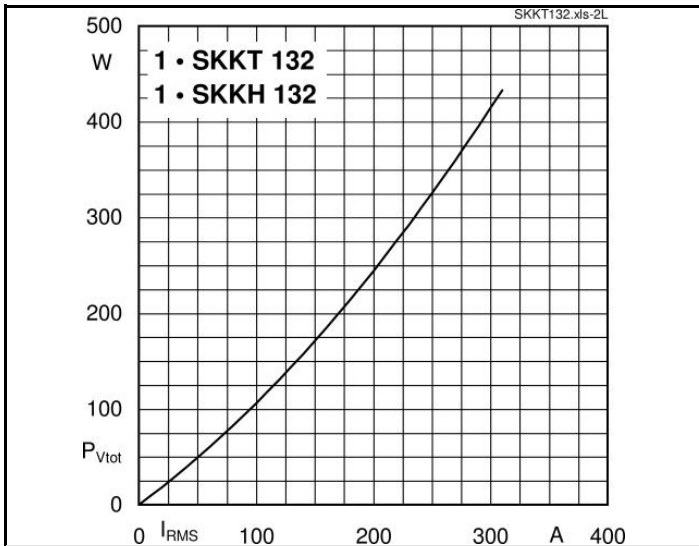


Fig. 2L Power dissipation per module vs. rms current

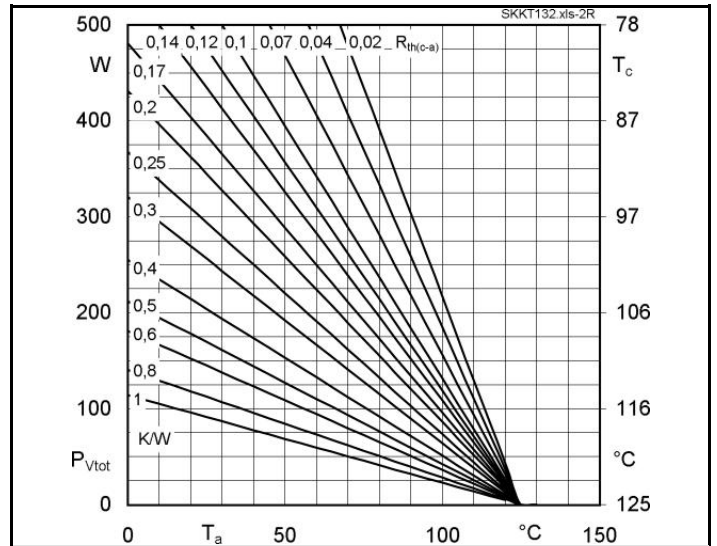


Fig. 2R Power dissipation per module vs. case temp.

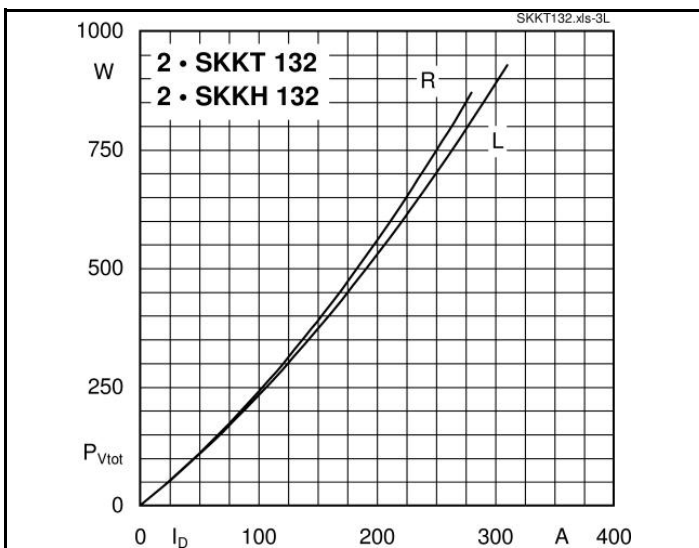


Fig. 3L Power dissipation of two modules vs. direct current

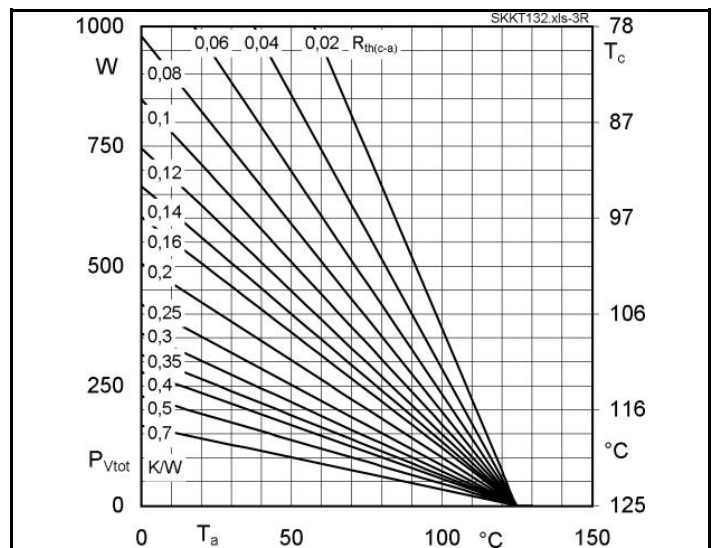
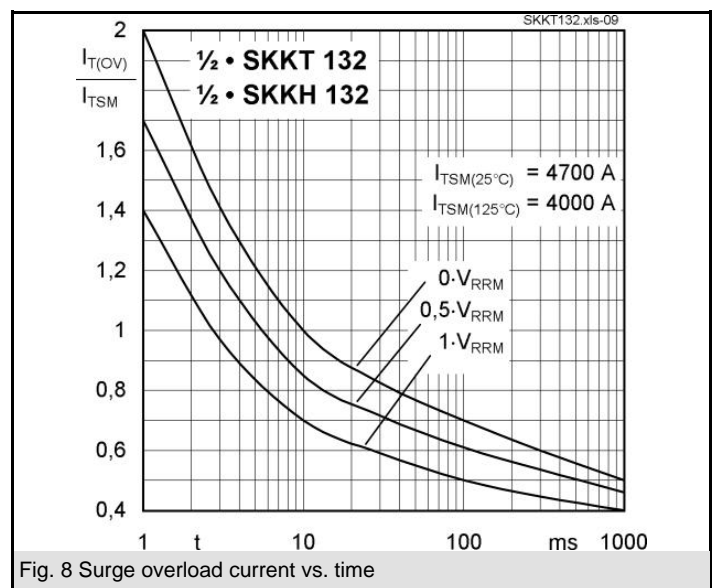
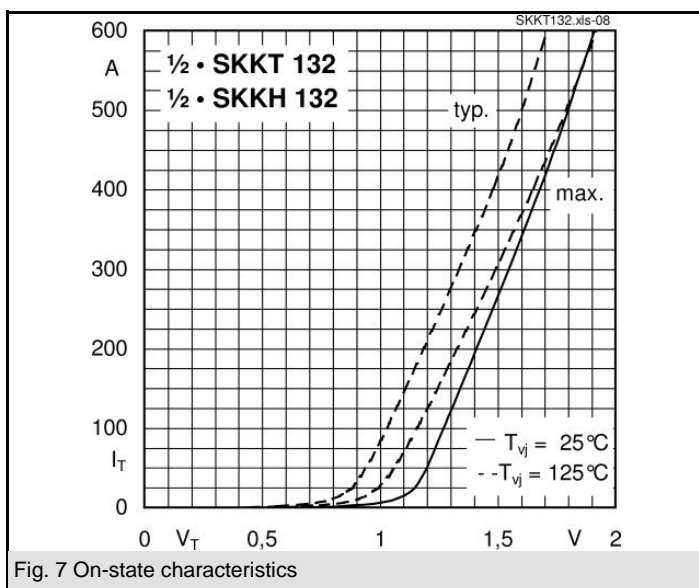
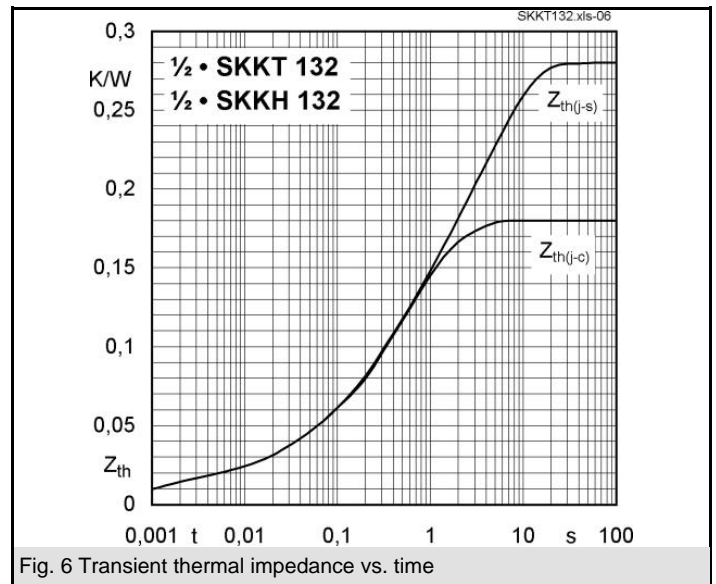
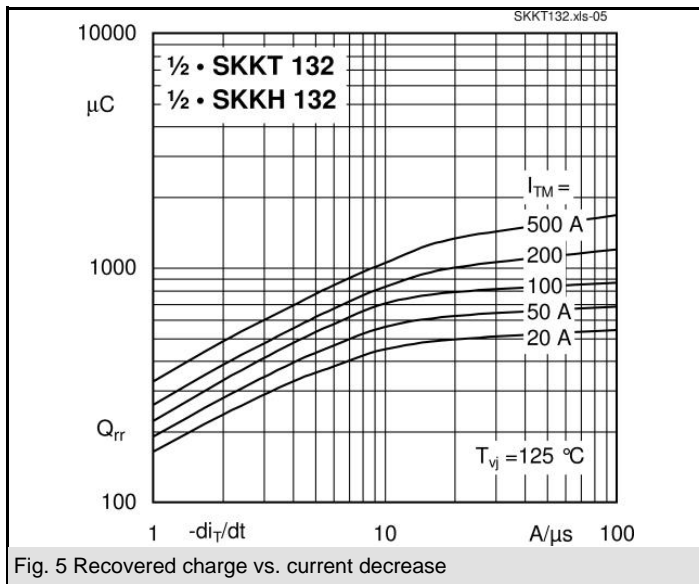
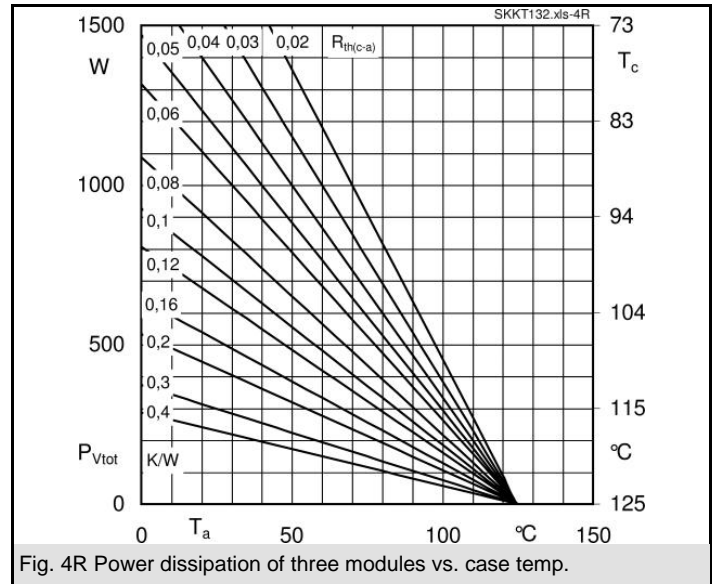
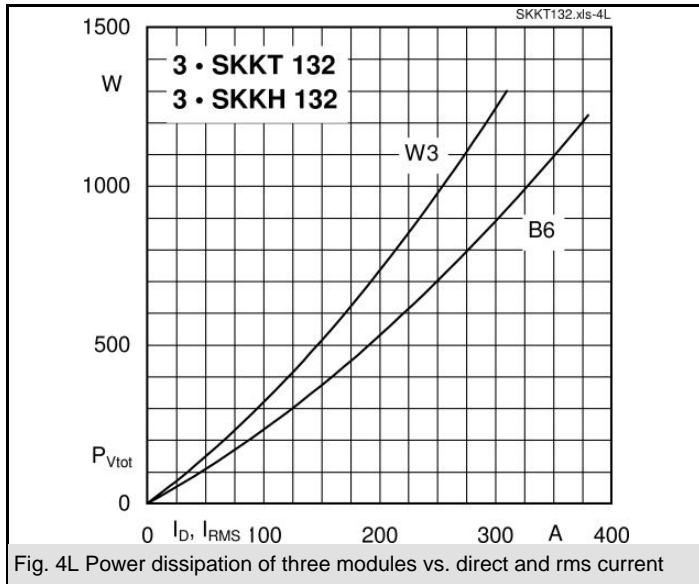
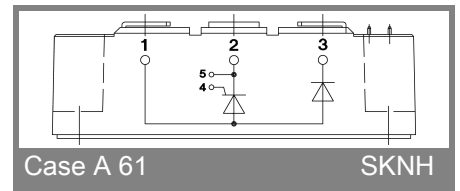
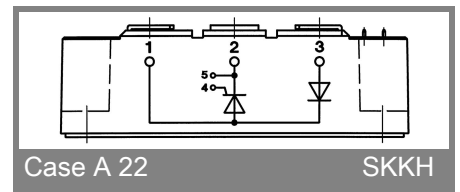
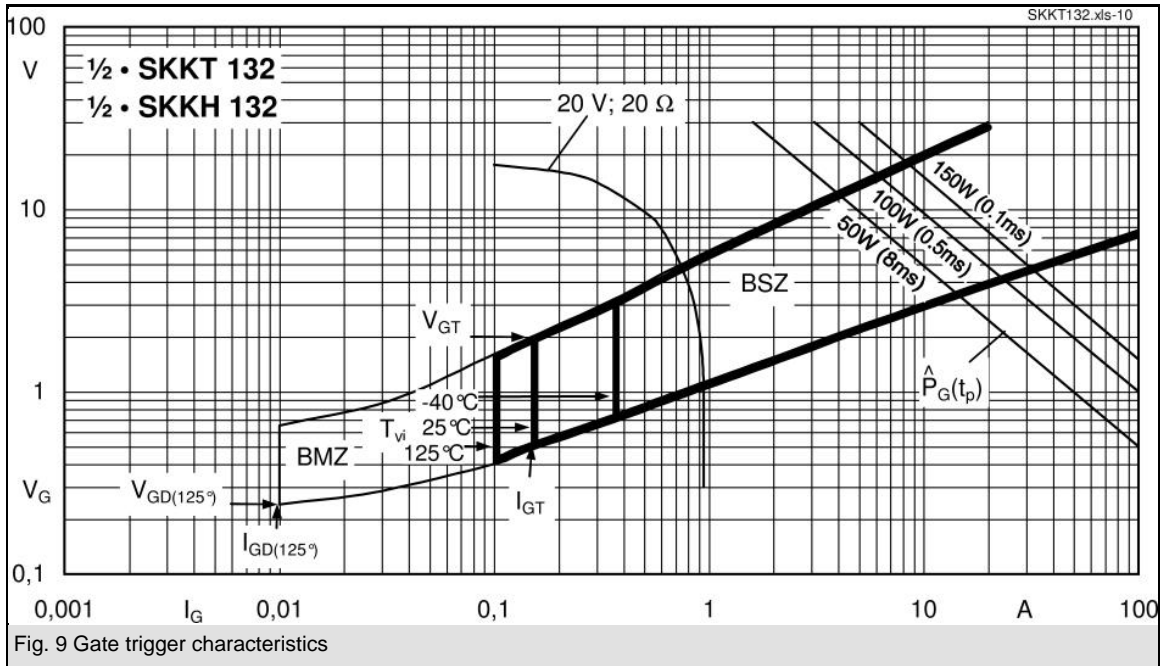


Fig. 3R Power dissipation of two modules vs. case temp.

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