

# SKKT 132, SKKH 132



**SEMIPACK<sup>®</sup> 2**

## Thyristor / Diode Modules

**SKKT 132**

**SKKH 132**

### Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63532

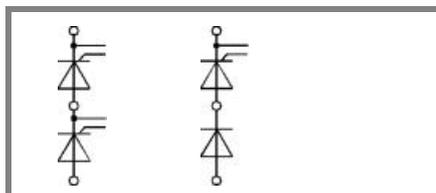
### Typical Applications\*

- 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

$V_{RSM}$ 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)	
1300	1200	SKKT 132/12 E	SKKH 132/12 E
1700	1600	SKKT 132/16 E	SKKH 132/16 E
1900	1800	SKKT 132/18 E	SKKH 132/18 E

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 <sup>2</sup> s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	80000	A <sup>2</sup> 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~
$M_s$	to heatsink	5 ± 15 % <sup>1)</sup>	Nm
$M_t$	to terminal	5 ± 15 %	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	165	g
Case	SKKT	A 21	
	SKKH	A 22	



SKKT

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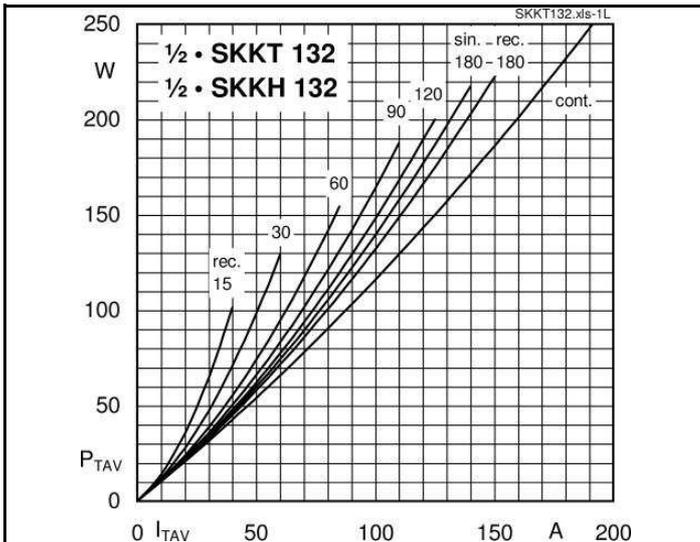


Fig. 1L Power dissipation per thyristor vs. on-state current

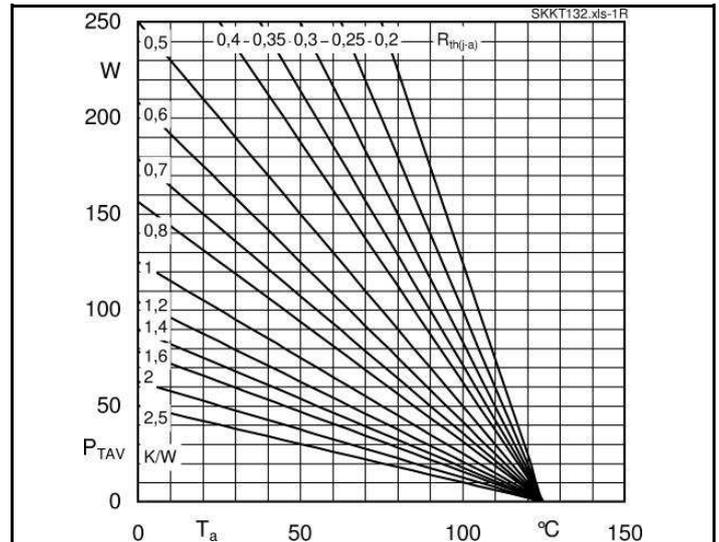


Fig. 1R Power dissipation per thyristor vs. ambient temp.

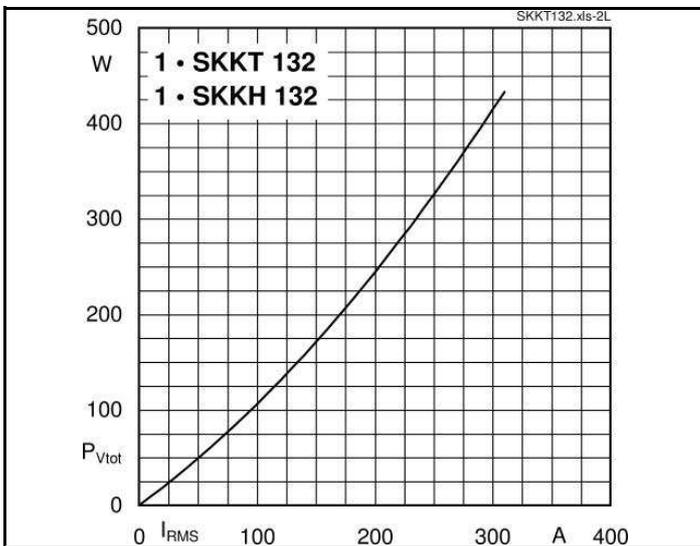


Fig. 2L Power dissipation per module vs. rms current

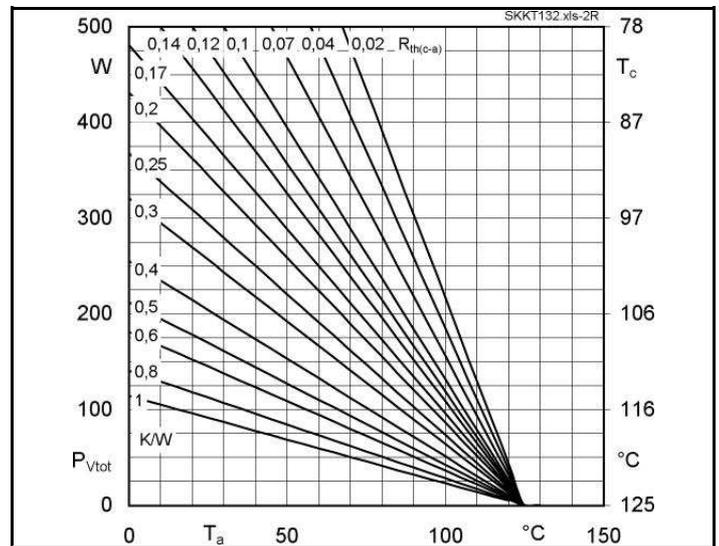


Fig. 2R Power dissipation per module vs. case temp.

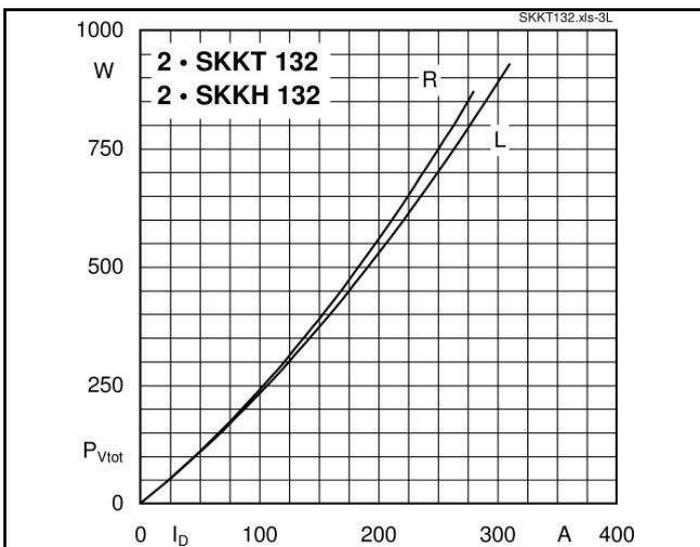


Fig. 3L Power dissipation of two modules vs. direct current

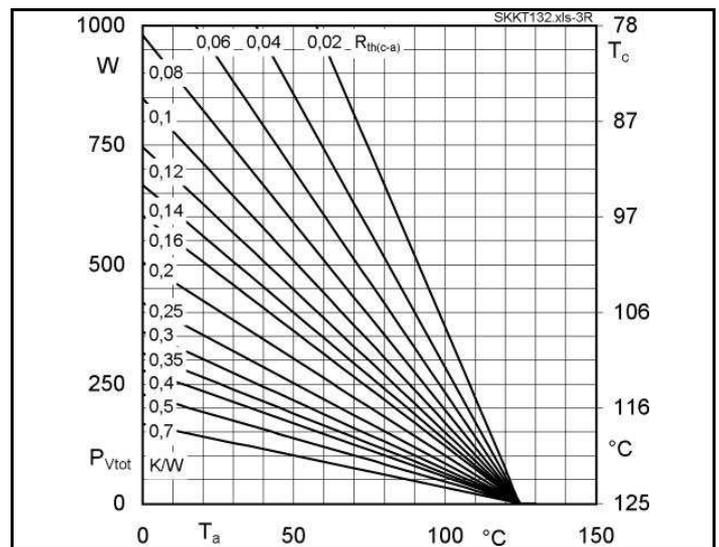
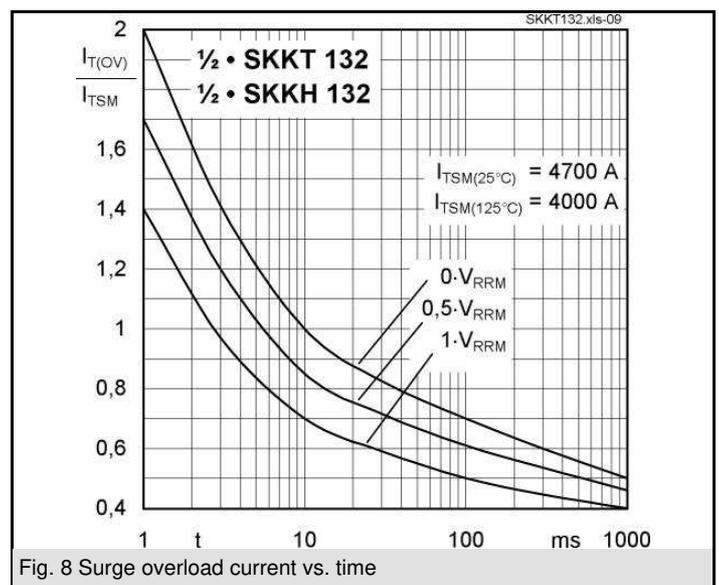
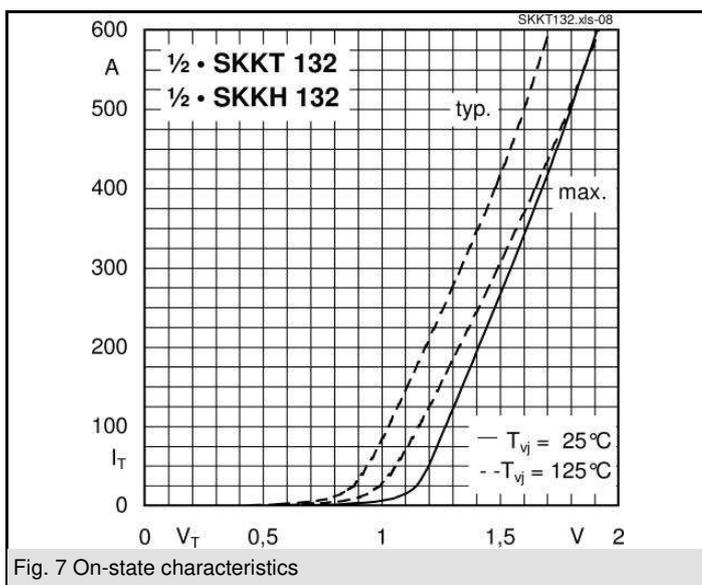
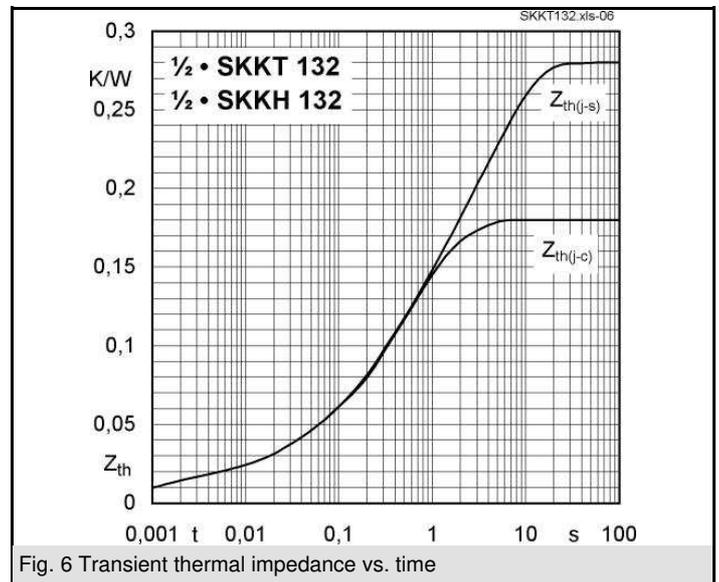
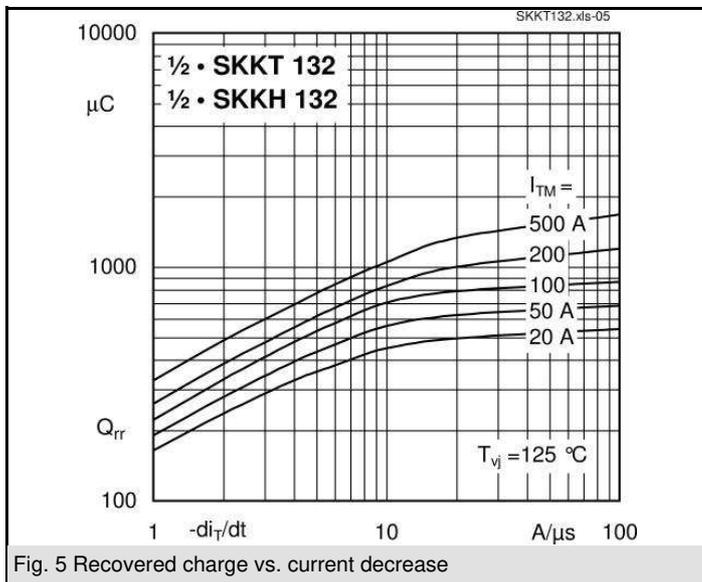
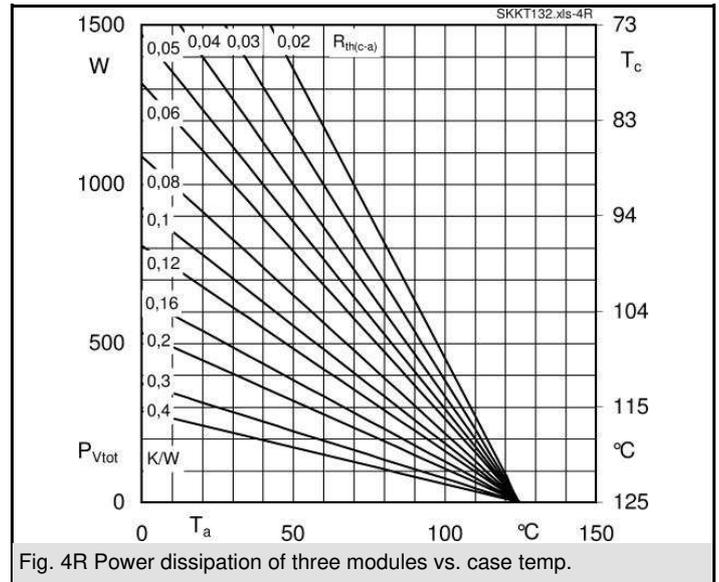
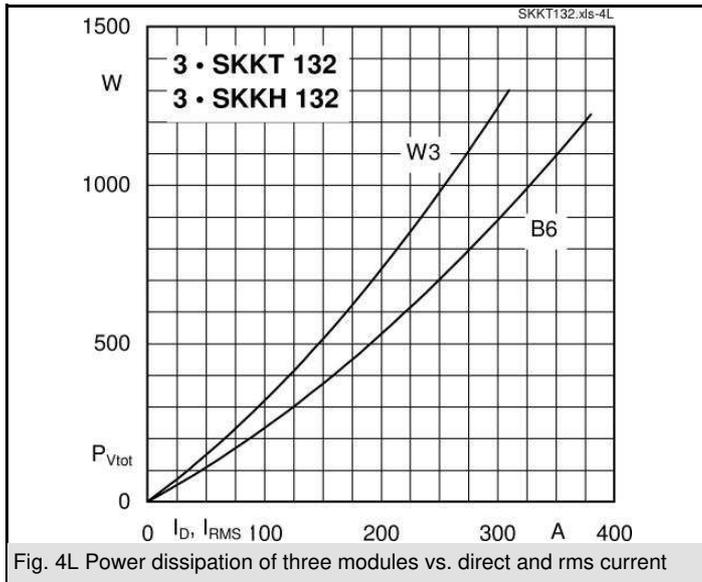
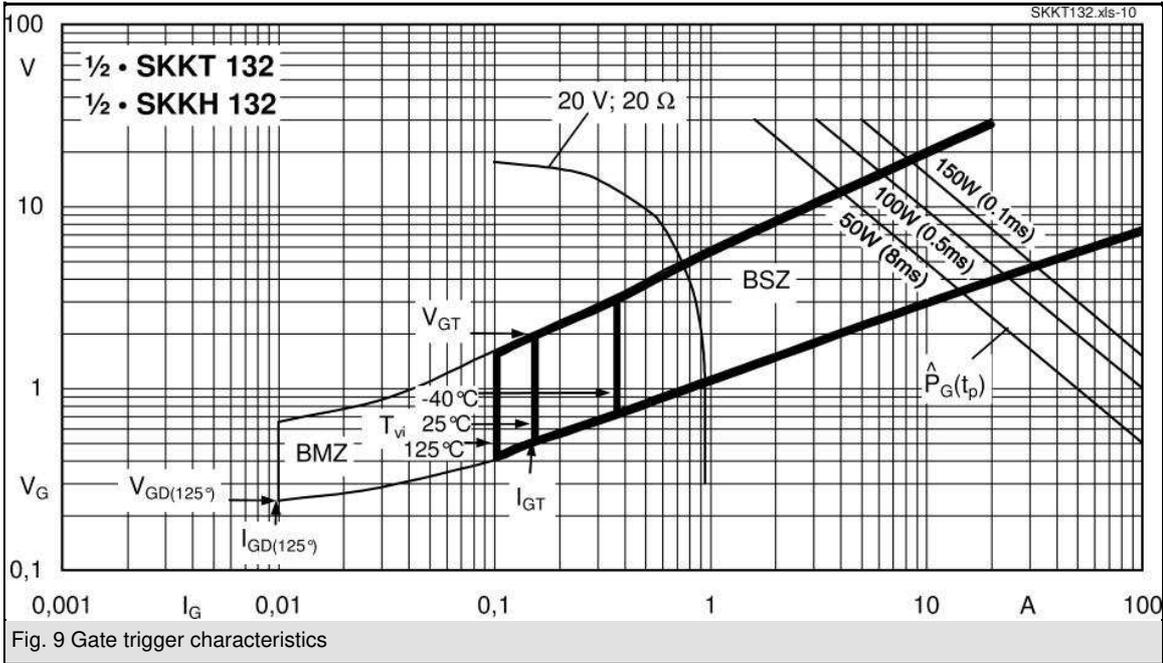


Fig. 3R Power dissipation of two modules vs. case temp.

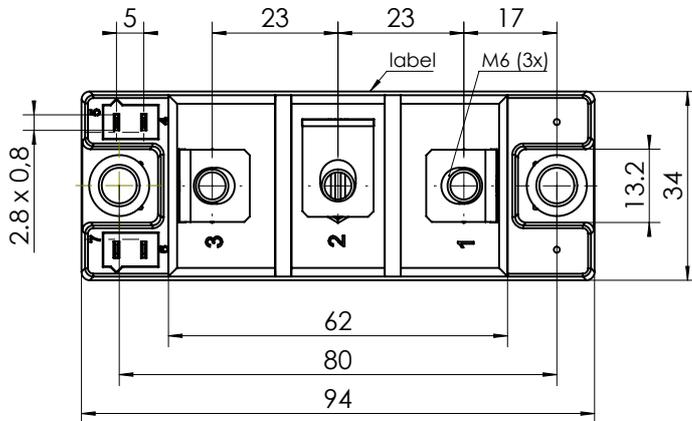
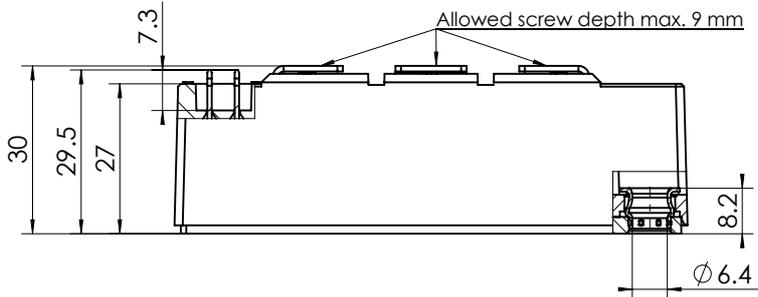
# SKKT 132, SKKH 132



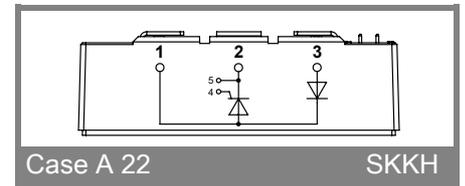
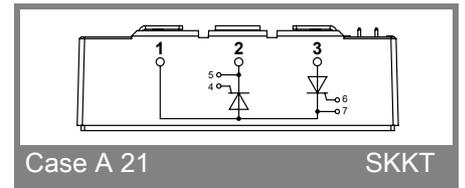
# SKKT 132, SKKH 132



Dimensions in mm  
General tolerance  $\pm 0.5$  mm



SEMPACK 2



## IMPORTANT INFORMATION AND WARNINGS

This is an electrostatic discharge sensitive device (ESDS) according to international standard IEC 61340.

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