

SKKT 172, SKKH 172



SEMIPACK[®] 2

Thyristor / Diode Modules

SKKH 172

SKKT 172

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*

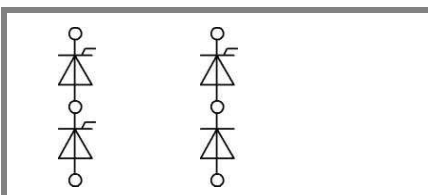
- DC motor control (e.g. for machine tools)
- AC motor soft starters

1) Characteristic values

2) See the assembly instructions

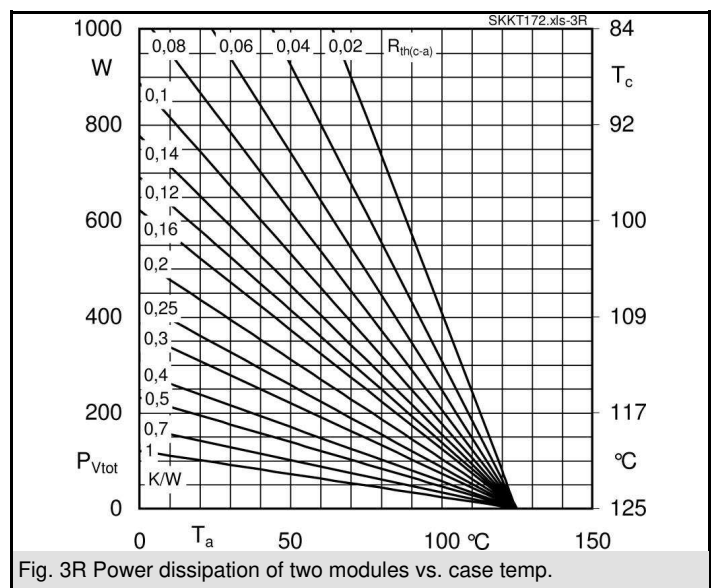
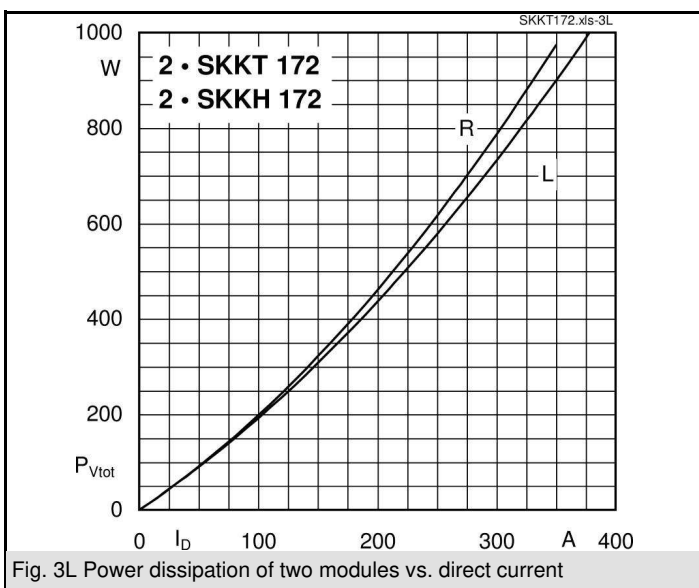
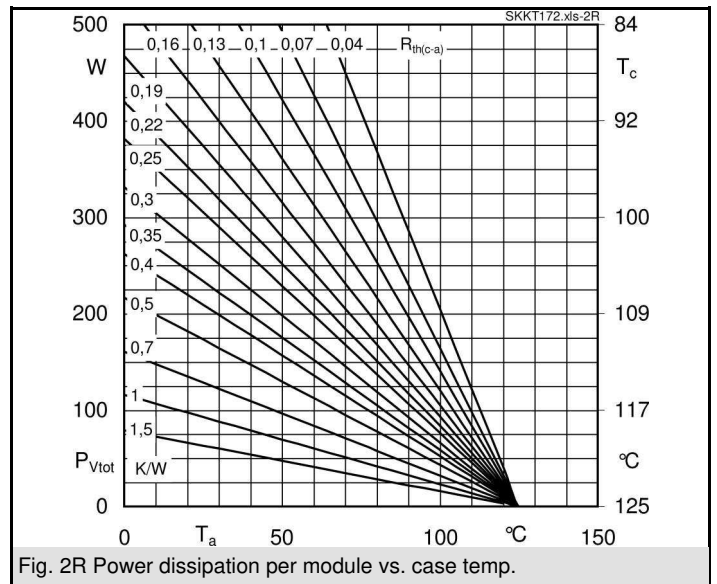
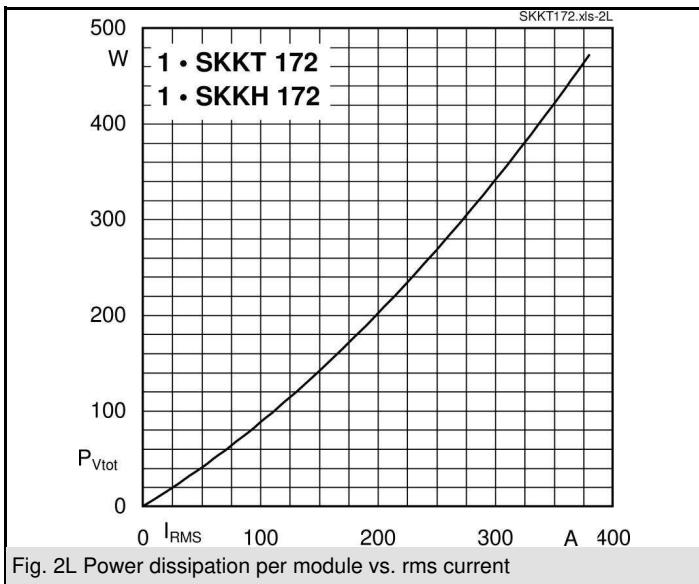
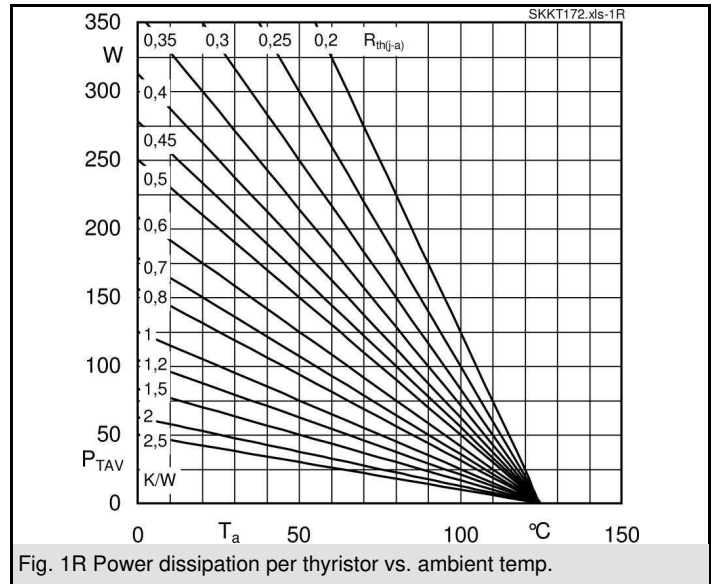
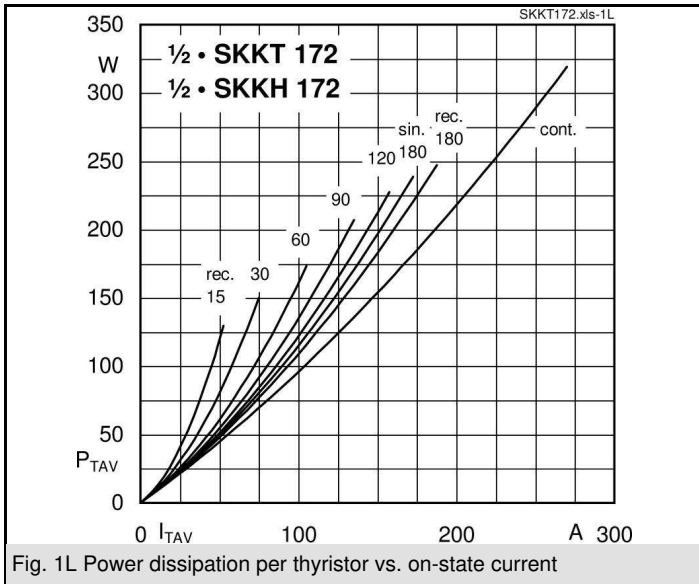
V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 275$ A (maximum value for continuous operation) $I_{TAV} = 172$ A (sin. 180; $T_c = 86$ °C)	
1500	1400	SKKT 172/14E	
1700	1600	SKKT 172/16E	SKKH 172/16E
1900	1800	SKKT 172/18E	

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C;	175 (124)	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms	5400 5000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 10 ms	145000 125000	A ² s A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 500$ A	max. 1,41	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,83	V
r_T	$T_{vj} = 125$ °C	max. 1,3	mΩ
$V_{T(TO)(typ.)}^{1)}$	$T_{vj} = 125$ °C	0,8	V
$r_{T(typ.)}^{1)}$	$T_{vj} = 125$ °C	1,2	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	typ. 175	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	0,155 / 0,078	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,164 / 0,082	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,18 / 0,09	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 % ²⁾	Nm
M_t	to terminal	5 ± 15 %	Nm
a		$5 * 9,81$	m/s ²
m	approx.	165	g
Case	SKKT SKKH	A 21 A 22	

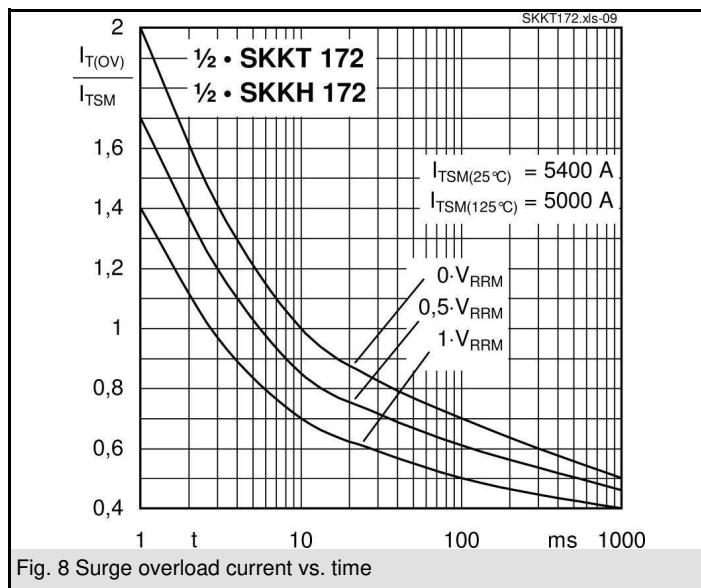
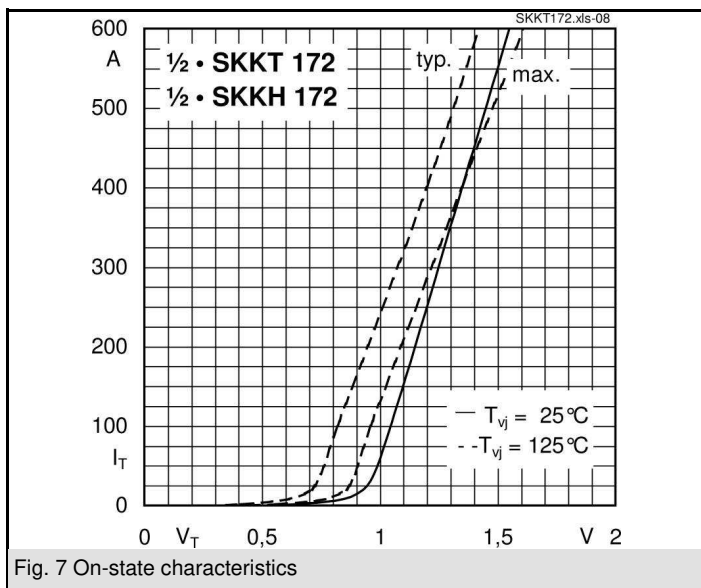
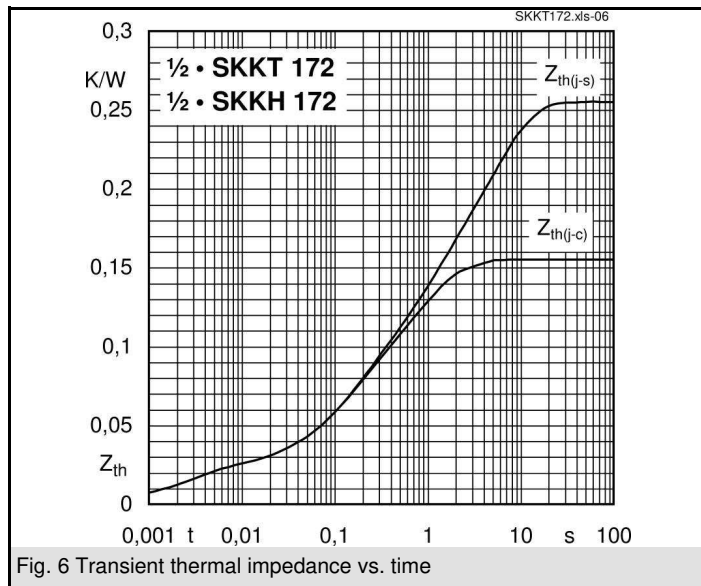
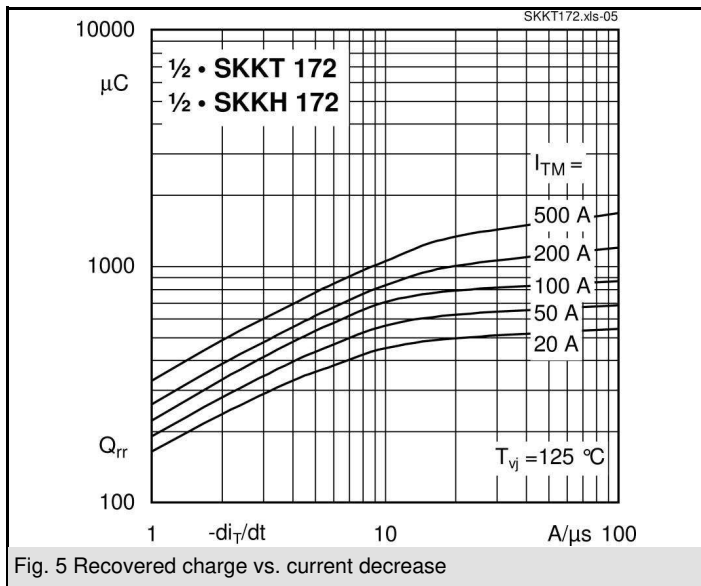
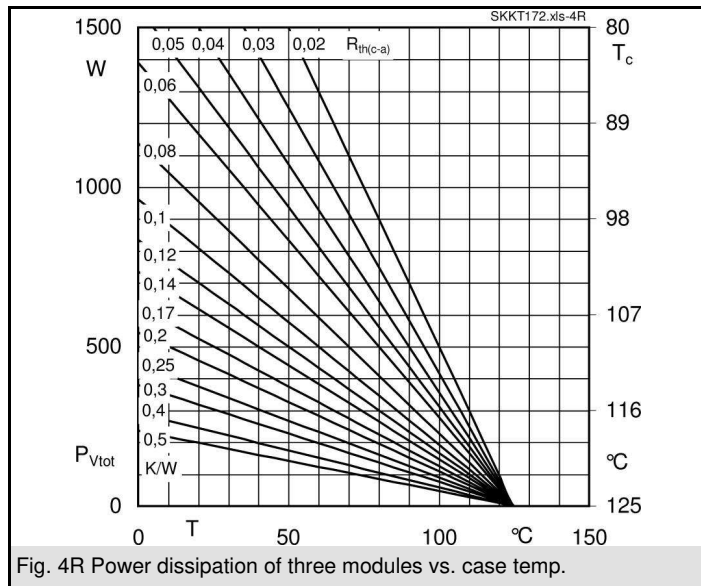
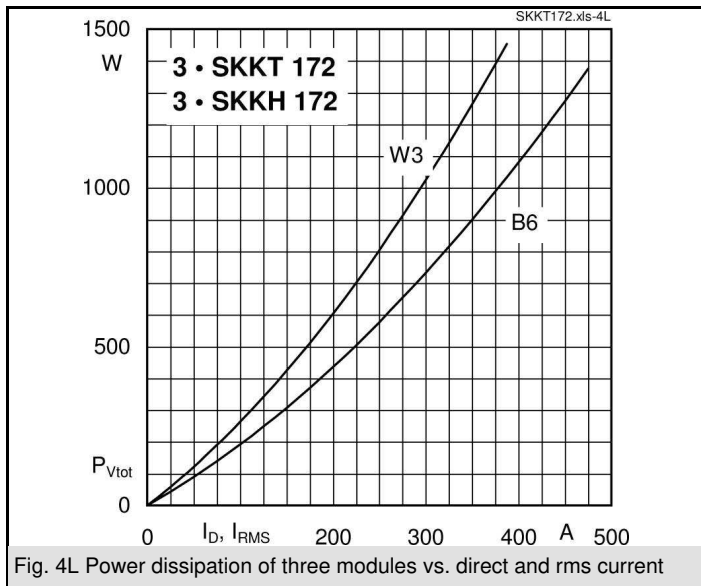


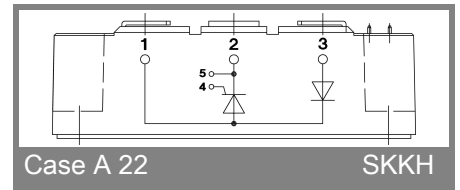
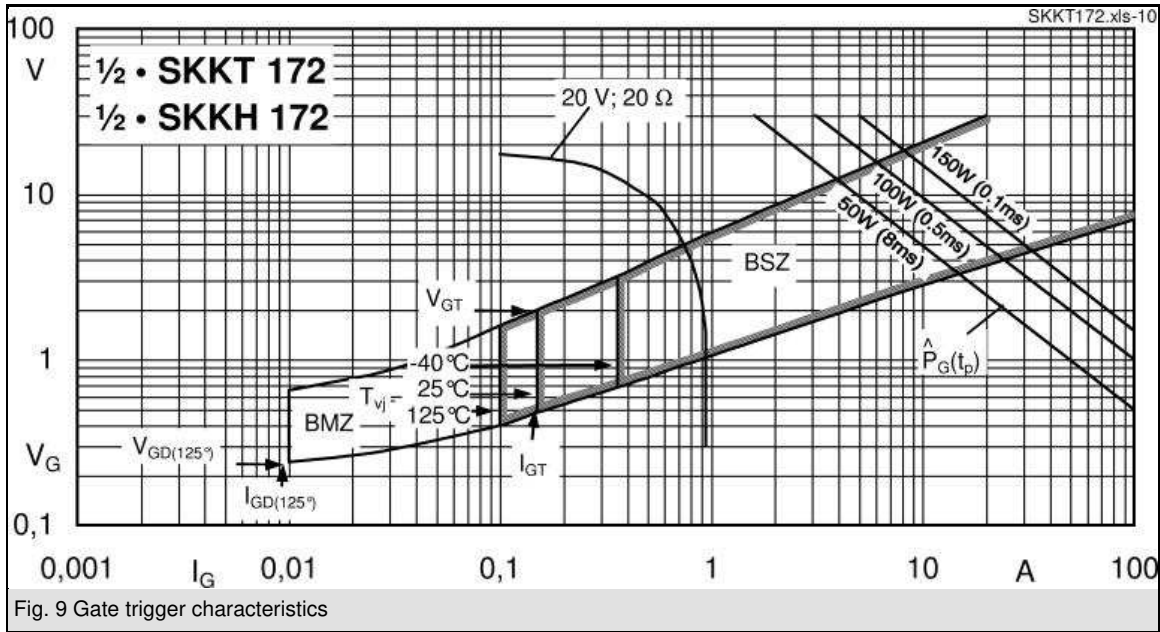
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SKKT 172, SKKH 172





* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON

products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.