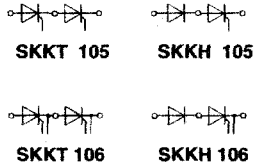
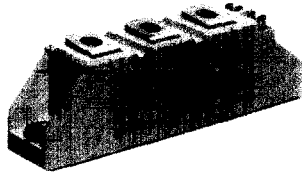


## SEMIPACK® 1 Thyristor/ Diode Modules

**SKKT 105**      **SKKH 105**  
**SKKT 106**      **SKKH 106**  
**SKKT 106B**



### 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
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

1) Also available in SKKT 106 B configuration (case A 48)

2) See the assembly instructions

VRSM	VRRM	(dv/dt) <sub>cr</sub>	I <sub>T</sub> RMS (maximum value for continuous operation)			
			180 A			
V	V	V/μs	I <sub>TAV</sub> (sin. 180; T <sub>case</sub> = 80 °C)			
			115 A			
500	400	500	--	--	SKKH 105/04 D	--
700	600	500	SKKT 105/06 D	SKKT 106/06 D	--	SKKH 106/06 D
900	800	500	SKKT 105/08 D	SKKT 106/08 D <sup>1)</sup>	SKKH 105/08 D	SKKH 106/08 D
1300	1200	1000	SKKT 105/12 E	SKKT 106/12 E <sup>1)</sup>	SKKH 105/12 E	SKKH 106/12 E
1500	1400	1000	SKKT 105/14 E	SKKT 106/14 E <sup>1)</sup>	SKKH 105/14 E	SKKH 106/14 E
1700	1600	1000	SKKT 105/16 E	SKKT 106/16 E <sup>1)</sup>	SKKH 105/16 E	SKKH 106/16 E
1900	1800	1000	SKKT 105/18 E	SKKT 106/18 E <sup>1)</sup>	SKKH 105/18 E	SKKH 106/18 E

Symbol	Conditions	SKKT 105 SKKH 105	SKKT 106 SKKT 106B SKKH 106
I <sub>TAV</sub>	sin. 180; T <sub>case</sub> = 85 °C	106 A	
I <sub>D</sub>	B2/B6   T <sub>amb</sub> = 35 °C; P 3/180 F P 16/200 F	145 A/180 A 190 A/260 A	
I <sub>RMS</sub>	W1/W3   T <sub>amb</sub> = 35 °C; P 3/180 F	200 A/3 x 140 A	
I <sub>TSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms T <sub>vj</sub> = 130 °C; 10 ms	2 250 A 1 900 A	
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms T <sub>vj</sub> = 130 °C; 8,3 ... 10 ms	25 000 A <sup>2</sup> s 18 000 A <sup>2</sup> s	
t <sub>gd</sub> t <sub>gr</sub>	T <sub>vj</sub> = 25 °C; I <sub>G</sub> = 1 A; di <sub>G</sub> /dt = 1 A/μs V <sub>D</sub> = 0,67 · V <sub>DRM</sub>	1 μs 2 μs	
(di/dt) <sub>cr</sub> t <sub>q</sub>	T <sub>vj</sub> = 130 °C T <sub>vj</sub> = 130 °C	150 A/μs typ. 100 μs	
I <sub>H</sub> I <sub>L</sub>	T <sub>vj</sub> = 25 °C; T <sub>vj</sub> = 25 °C; R <sub>G</sub> = 33 Ω	typ. 150 mA; max. 250 mA typ. 300 mA; max. 600 mA	
V <sub>T</sub>	T <sub>vj</sub> = 25 °C; I <sub>T</sub> = 300 A	max. 1,65 V	
V <sub>T(TO)</sub>	T <sub>vj</sub> = 130 °C	0,9 V	
r <sub>T</sub>	T <sub>vj</sub> = 130 °C	2 mΩ	
I <sub>DD</sub> ; I <sub>RD</sub>	T <sub>vj</sub> = 130 °C; V <sub>DD</sub> = V <sub>DRM</sub> ; V <sub>RD</sub> = V <sub>RRM</sub>	max. 20 mA	
V <sub>GT</sub> I <sub>GT</sub> V <sub>GD</sub> I <sub>GD</sub>	T <sub>vj</sub> = 25 °C; d. c. T <sub>vj</sub> = 25 °C; d. c. T <sub>vj</sub> = 130 °C; d. c. T <sub>vj</sub> = 130 °C; d. c.	3 V 150 mA 0,25 V 6 mA	
R <sub>thjc</sub> R <sub>thch</sub> T <sub>vj</sub> T <sub>stg</sub>	cont. sin. 180 } per thyristor/per module rec. 120	0,28 °C/W / 0,14 °C/W 0,30 °C/W / 0,15 °C/W 0,32 °C/W / 0,16 °C/W 0,2 °C/W / 0,1 °C/W - 40 ... +130 °C - 40 ... +125 °C	
V <sub>isol</sub> M <sub>1</sub> M <sub>2</sub> a w	a. c. 50 Hz; r.m.s.; 1 s/1 min to heatsink } SI units/ to terminals } US units	3600 V- / 3000 V- 5 Nm/44 lb. in. ± 15 % <sup>2)</sup> 3 Nm/26 lb. in. ± 15 % <sup>2)</sup> 5 · 9,81 m/s <sup>2</sup> 120 g	
Case	→ page B 1 - 93	SKKT 105: A 5 SKKH 105: A 6	SKKT 106: A 46 SKKT 106B: A 48 SKKH 106: A 47



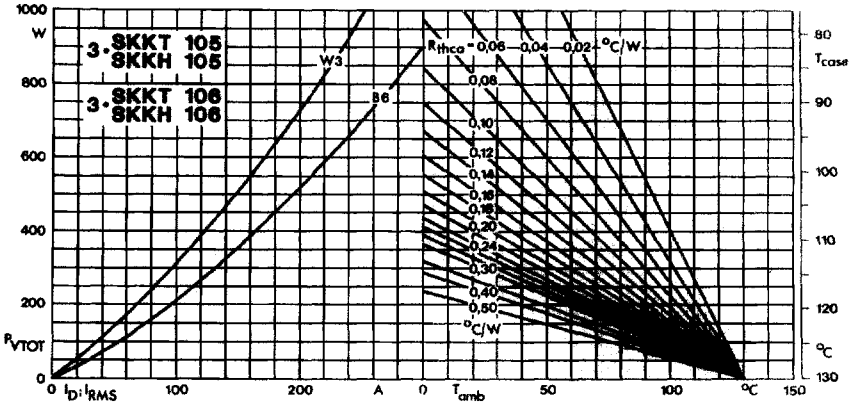


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

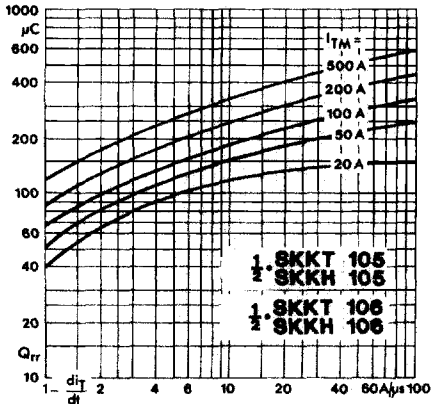


Fig. 5 Recovered charge vs. current decrease

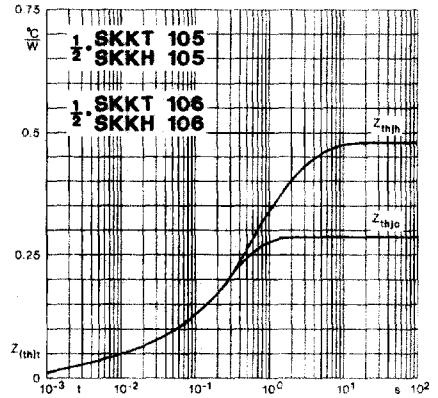


Fig. 6 Transient thermal impedance vs. time

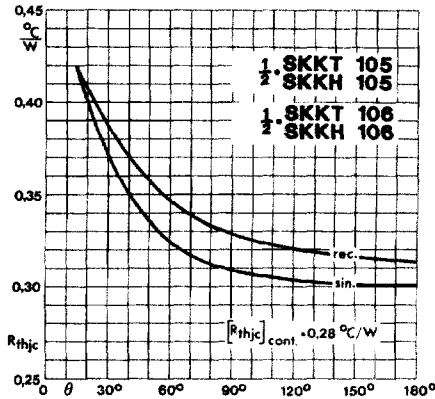


Fig. 7 Thermal resistance vs. conduction angle

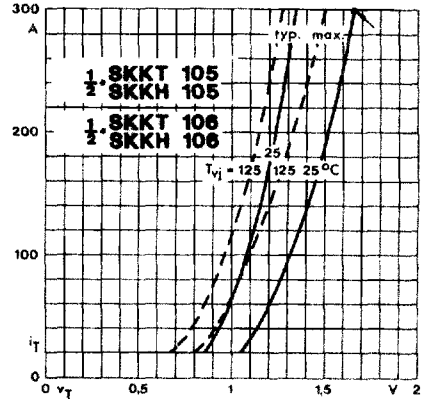


Fig. 8 On-state characteristics

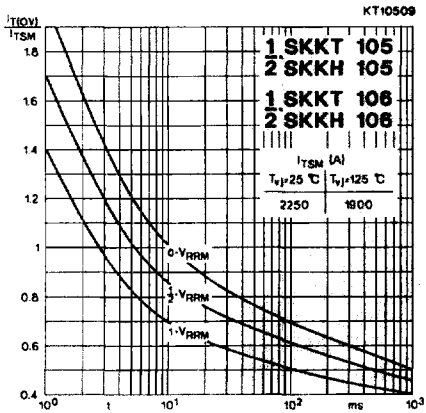


Fig. 9 Surge overload current vs. time

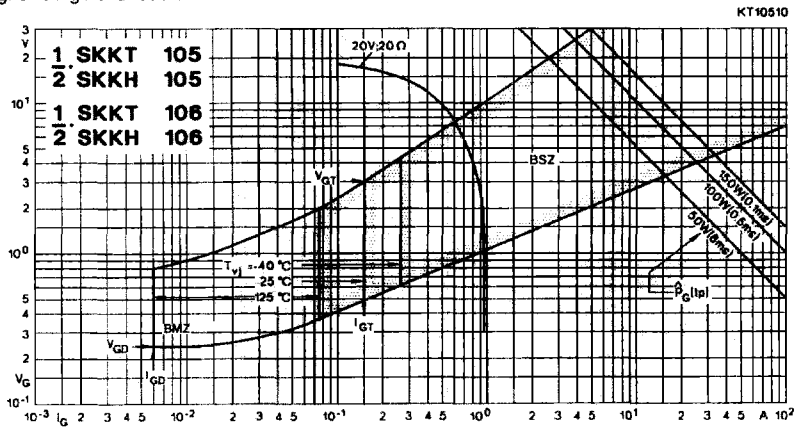


Fig. 10 Gate trigger characteristics