

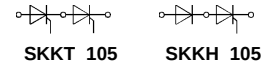
V _{RSM}	V _{RRM}	(dv/dt) _{cr}	I _T RMS (maximum value for continuous operation)			
			180 A			
V	V	V/μs	I _{TAV} (sin. 180; T _{case} = 80 °C)			
			115 A			
500	400	500	–	–	SKKH 105/04 D	–
700	600	500	SKKT 105/06 D	SKKT 106/06 D	–	SKKH 106/06 D
900	800	500	SKKT 105/08 D	SKKT 106/08 D ¹⁾	SKKH 105/08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

SEMIKRON® 1 Thyristor/ Diode Modules

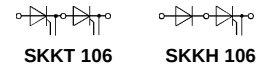
SKKT 105 SKKH 105
SKKT 106 SKKH 106
SKKT 106B



Symbol	Conditions	SKKT 105 SKKH 105	SKKT 106 SKKT 106B SKKH 106
I _{TAV}	sin. 180; T _{case} = 85 °C	106 A	
I _D	B2/B6 T _{amb} = 35 °C; P 3/180 F	145 A/180 A	
	P16/200 F	190 A/260 A	
I _{RMS}	W1/W3 T _{amb} = 35 °C; P 3/180 F	200 A/3 x 140 A	
I _{TSM}	T _{vj} = 25 °C; 10 ms	2 250 A	
	T _{vj} = 130 °C; 10 ms	1 900 A	
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms	25 000 A ² s	
	T _{vj} = 130 °C; 8,3 ... 10 ms	18 000 A ² s	
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} = 130 °C	150 A/μs	
t _q	T _{vj} = 130 °C	typ. 100 μs	
I _H	T _{vj} = 25 °C;	typ. 150 mA; max. 250 mA	
I _L	T _{vj} = 25 °C; R _G = 33 Ω	typ. 300 mA; max. 600 mA	
V _T	T _{vj} = 25 °C; I _T = 300 A	max. 1,65 V	
V _{T(TO)}	T _{vj} = 130 °C	0,9 V	
r _T	T _{vj} = 130 °C	2 mΩ	
I _{DD} ; I _{RD}	T _{vj} = 130 °C; V _{DD} = V _{DRM} ; V _{RD} = V _{RRM}	max. 20 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.	6 mA	
R _{thjc}	cont. sin. 180 } per thyristor/per module	0,28 °C/W / 0,14 °C/W	
R _{thch}	rec.120 }	0,30 °C/W / 0,15 °C/W	
T _{vj}		0,32 °C/W / 0,16 °C/W	
T _{stg}		0,2 °C/W / 0,1 °C/W	
		– 40 ... +130 °C	
		– 40 ... +125 °C	
V _{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min	3600 V~ / 3000 V~	
M ₁	to heatsink } SI units/	5 Nm/44 lb. in. ± 15 % ²⁾	
M ₂	to terminals } US units	3 Nm/26 lb. in. ± 15 % ²⁾	
a		5 · 9,81 m/s ²	
w	approx.	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



SKKT 105 SKKH 105



SKKT 106 SKKH 106

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

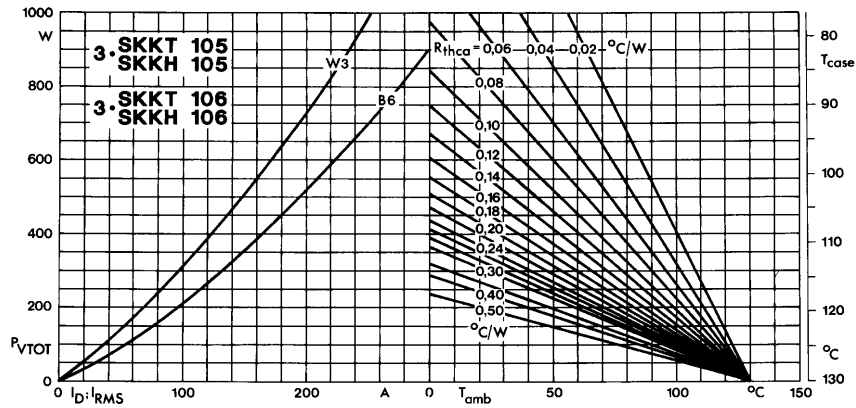


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

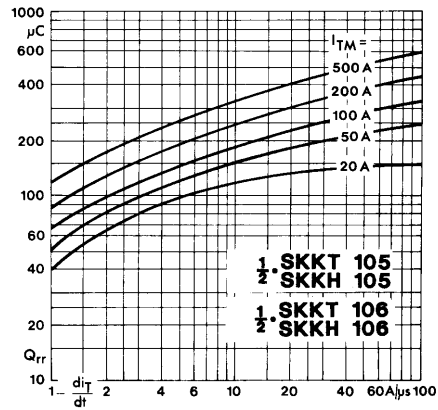


Fig. 5 Recovered charge vs. current decrease

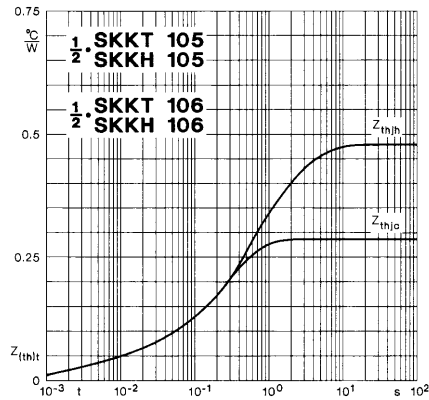


Fig. 6 Transient thermal impedance vs. time

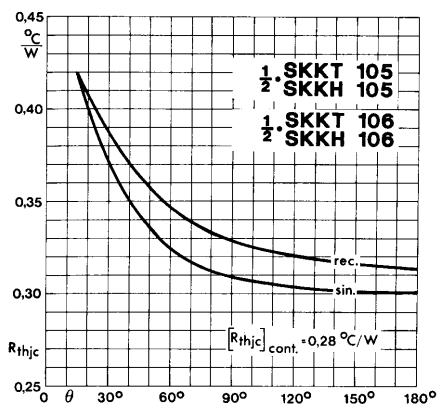


Fig. 7 Thermal resistance vs. conduction angle

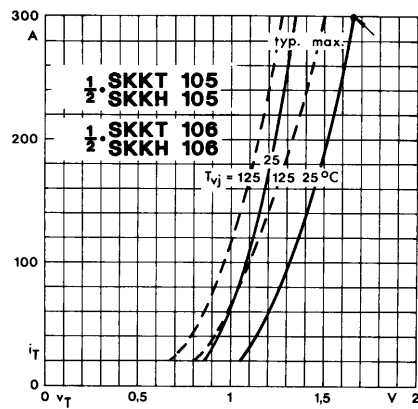


Fig. 8 On-state characteristics

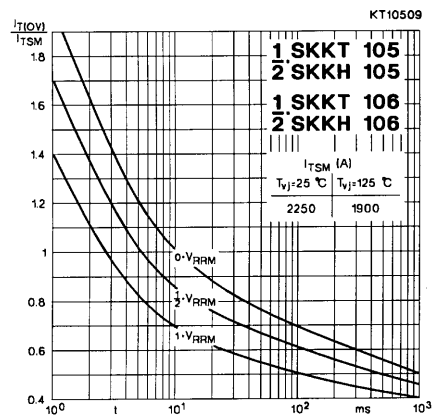


Fig. 9 Surge overload current vs. time

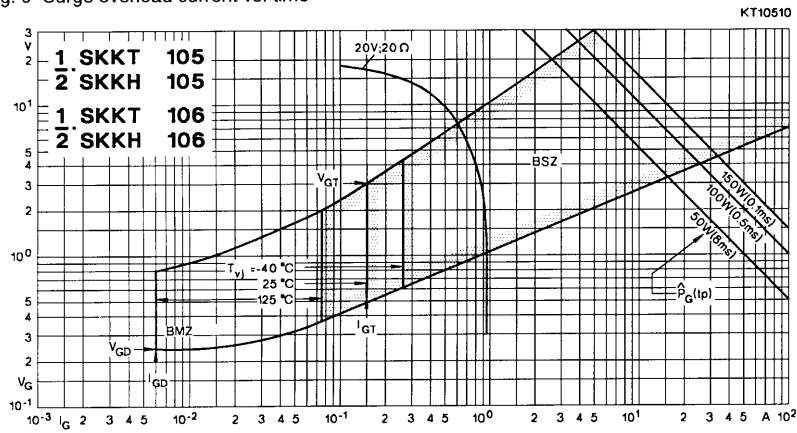


Fig. 10 Gate trigger characteristics