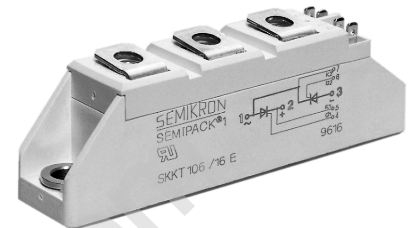


V _{RSM}	V _{RDM}	(dv/dt) _{cr}	I _{TRMS} (maximum value for continuous operation)			
			125 A			
			I _{TAV} (sin. 180; T _{case} = 78 °C)			
V	V	V/μs	80 A			
700	600	500	SKKT 71/06 D	–	–	SKKH 72/06 D
900	800	500	SKKT 71/08 D	SKKT 72/08 D ¹⁾	SKKH 71/08 D	SKKH 72/08 D
1300	1200	1000	SKKT 71/12 E	SKKT 72/12 E ¹⁾	SKKH 71/12 E	SKKH 72/12 E
1500	1400	1000	SKKT 71/14 E	SKKT 72/14 E ¹⁾	SKKH 71/14 E	SKKH 72/14 E
1700	1600	1000	SKKT 71/16 E	SKKT 72/16 E ¹⁾	SKKH 71/16 E	SKKH 72/16 E
1900	1800	1000	SKKT 71/18 E	SKKT 72/18 E ¹⁾	SKKH 71/18 E	SKKH 72/18 E
2100	2000	1000	–	SKKT 72/20 E	–	SKKH 72/20 E
2300	2200	1000	–	SKKT 72/22 E	–	SKKH 72/22 E

SEMIPACK® 1 Thyristor / Diode Modules

SKKT 71 SKKH 71
SKKT 72 SKKH 72
SKKT 72B



Symbol	Conditions	SKKT 71 SKKH 71	SKKT 72 SKKT 72B SKKH 72	Units
I _{TAV}	sin. 180; T _{case} = 78 °C	80		A
I _D	T _{case} = 85 °C	70		A
	B2/B6 T _{amb} = 45 °C; P 3/180	62 / 75		A
I _{RMS}	T _{amb} = 35 °C; P 3/180 F	115 / 145		A
	W1/W3 T _{amb} = 45 °C; P 3/180 F	155 / 3 x 115		A
I _{TSM}	T _{vj} = 25 °C; 10 ms	1 600		A
	T _{vj} = 125 °C; 10 ms	1 450		A
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms	13 000		A ² s
	T _{vj} = 125 °C; 8,3 ... 10 ms	10 500		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}	1		μs
(di/dt) _{cr}	T _{vj} = 125 °C	150		A/μs
t _q	T _{vj} = 125 °C	typ. 80		μs
I _H	T _{vj} = 25 °C; typ./max.	150 / 250		mA
I _L	T _{vj} = 25 °C; R _G = 32 Ω; typ./max.	300 / 600		mA
V _T	T _{vj} = 25 °C; I _T = 300A	max. 1,9		V
V _{T(TO)}	T _{vj} = 125 °C	0,9		V
r _T	T _{vj} = 125 °C	3,5		mΩ
I _{DD} ; I _{RD}	T _{vj} = 125 °C; V _{RD} = V _{RDM} V _{DD} = V _{DRM}	max. 20 ³⁾		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} = 125 °C; d.c.	0,25		V
I _{GD}	T _{vj} = 125 °C; d.c.	6		mA
R _{thjc}	cont. } sin. 180 } rec. 120 } per thyristor / per module	0,35 / 0,18		°C/W
		0,37 / 0,19		°C/W
		0,39 / 0,20		°C/W
		0,2 / 0,1		°C/W
R _{thch}		– 40 ... + 125		°C
T _{vj}		– 40 ... + 125		°C
T _{stg}				
V _{isol}	a. c. 50 Hz; r.m.s; 1 s/1 min	3600 / 3000		V~
M ₁	to heatsink } to terminals } SI (US) units	5 (44 lb. in.) ± 15 % ²⁾		Nm
M ₂		3 (26 lb. in.) ± 15 %		Nm
a		5 · 9,81		m/s ²
w	approx.	120		g
Case	→ page B 1 – 95	SKKT 71: A 5 SKKH 71: A 6	SKKT 72: A 46 SKKT 72B: A 48 SKKH 72: A 47	



SKKT 71

SKKH 71



SKKT 72
SKKT 72B

SKKH 72

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 72 B configuration (case A 48)

²⁾ See the assembly instructions

³⁾ /20 E, /22 E max. 30 mA

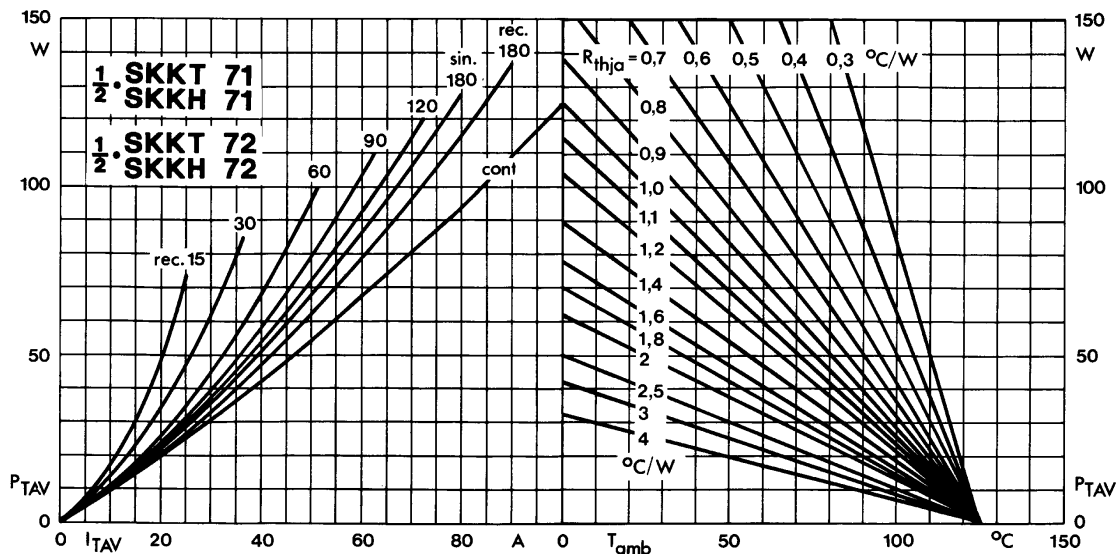


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

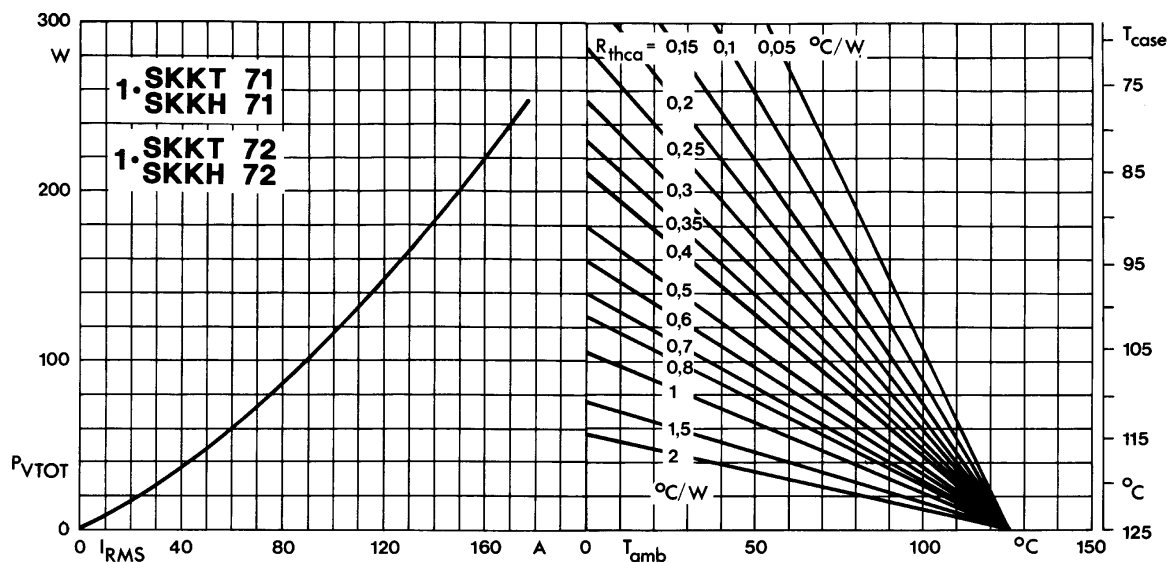


Fig. 2 Power dissipation per module vs. rms current and case temperature

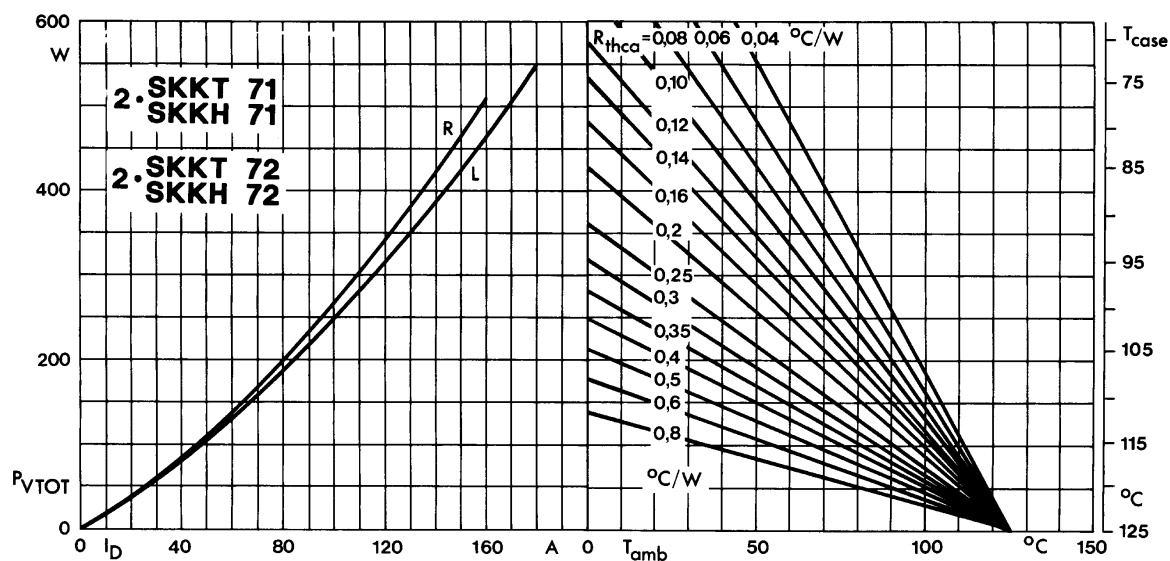


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

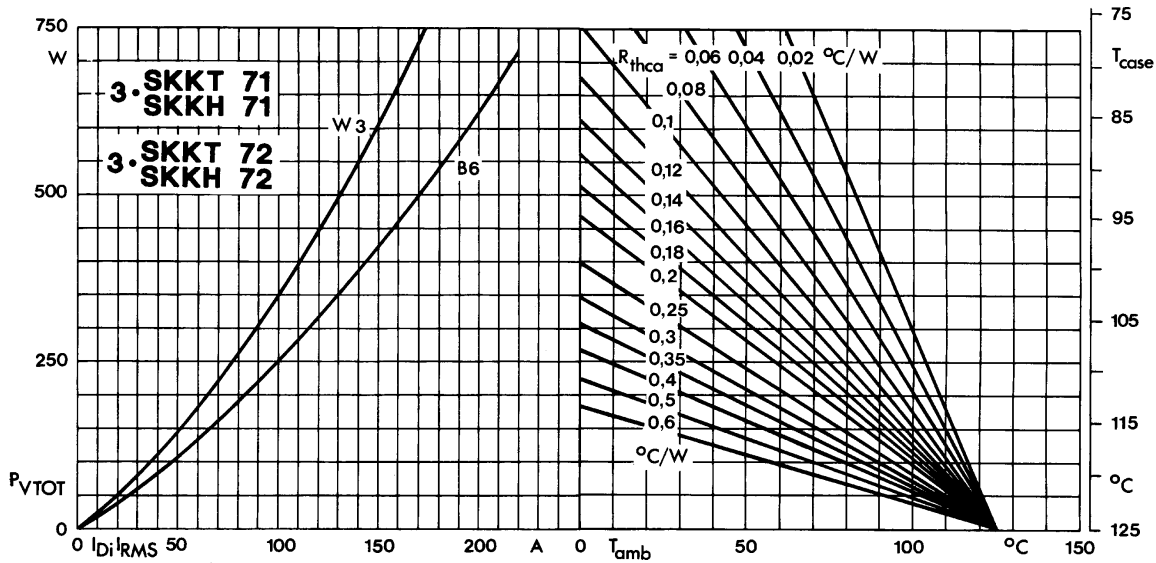


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

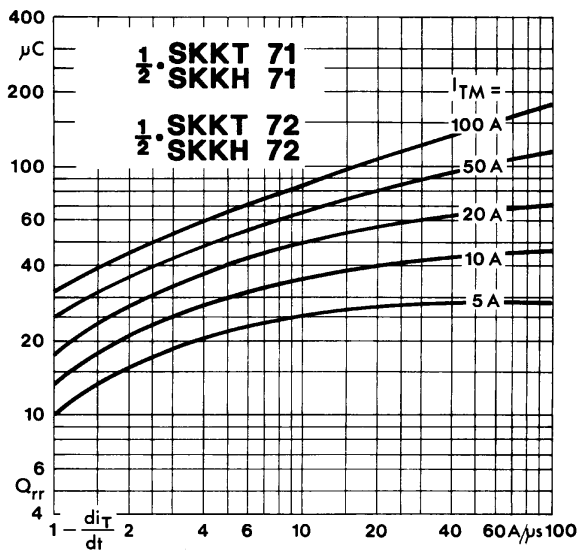


Fig. 5 Recovered charge vs. current decrease

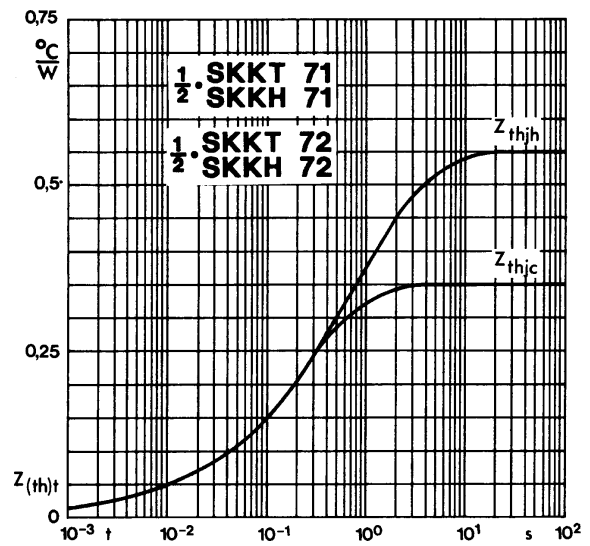


Fig. 6 Transient thermal impedance vs. time

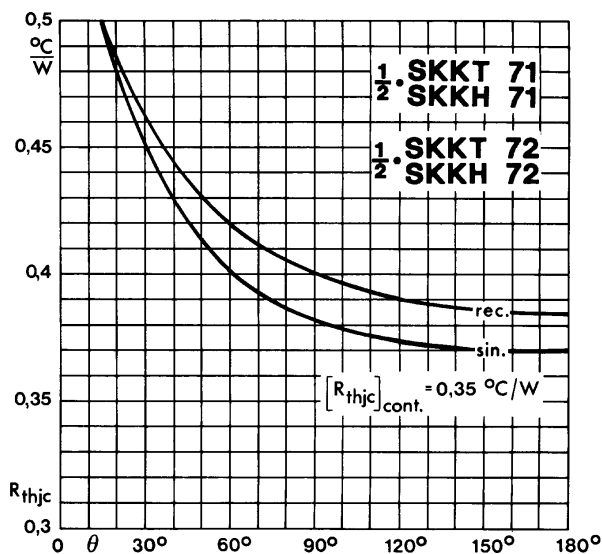


Fig. 7 Thermal resistance vs. conduction angle

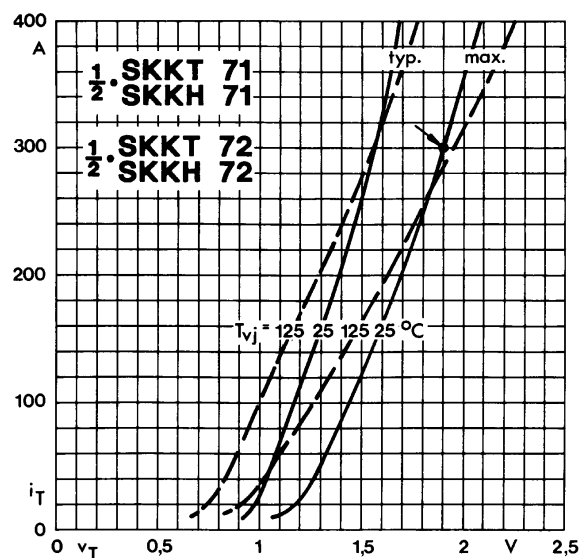


Fig. 8 On-state characteristics

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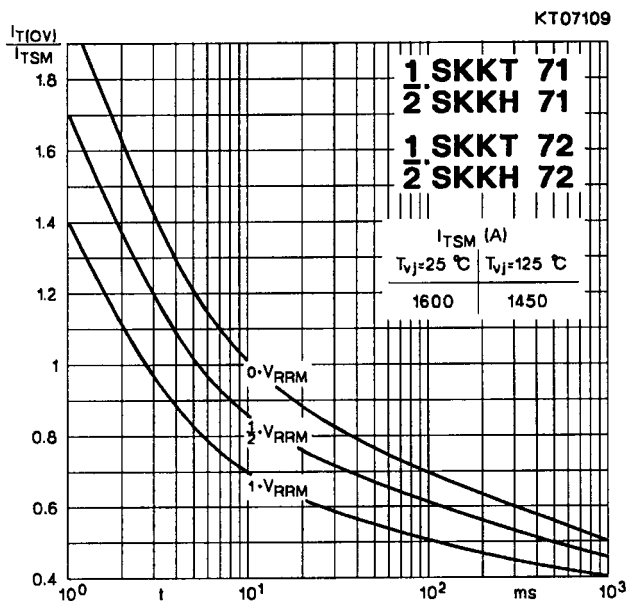


Fig. 9 Surge overload current vs. time

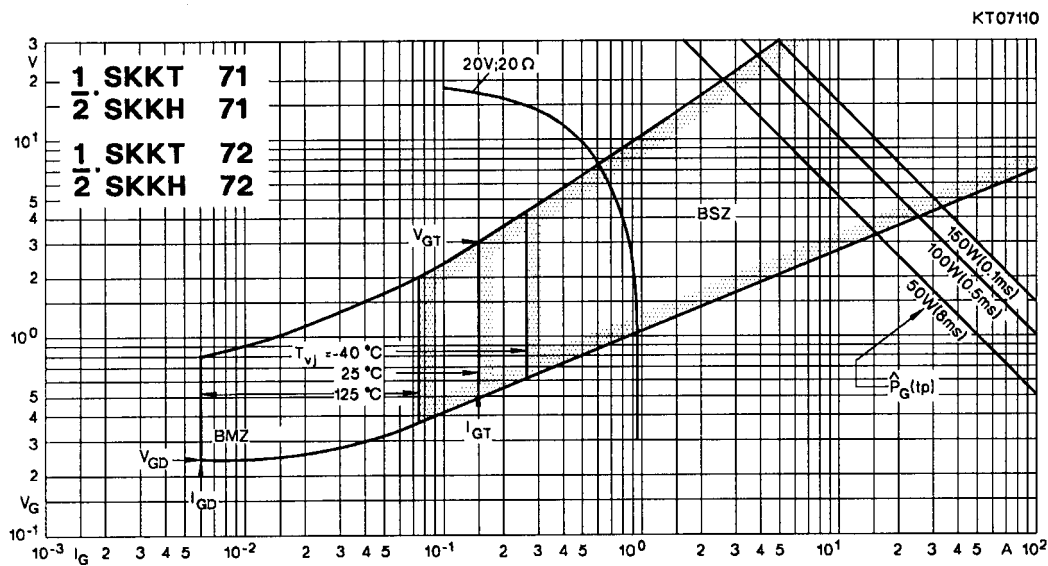


Fig. 10 Gate trigger characteristics

SKKT 19 ... 105

Case A 5

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1

UL recognized, file no. E 63 532



Dimensions in mm

SKKT 20/ ... 106/

Case A 46

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1



Dimensions in mm

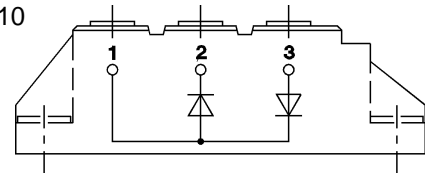
SKKH 26 ... 105

Case A 6



SKKD 26 ... 100

Case A 10



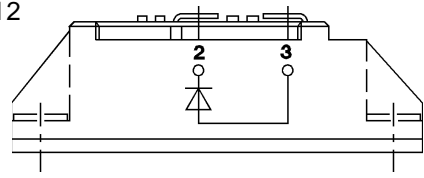
SKNH 56 ... 91

Case A 7



SKKE 81

Case A 12



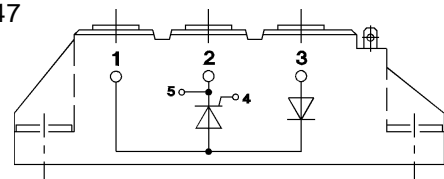
SKKL 56 ... 105

Case A 9



SKKH 27 ... 106

Case A 47



SKND 46 ... 81

Case A 19



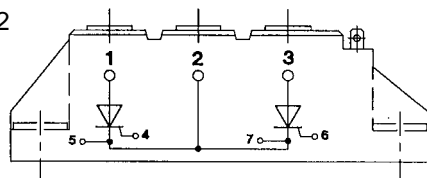
SKKT 20 B ... 106 B

Case A 48



SKMT 92

Case A 72



SKKL 42 ... 106

Case A 59

