

V _{RSM}	V _{RRM} V _{DRM}	(dv/dt) _{cr}	I _{TRMS} (maximum value for continuous operation)		
			40 A		
V	V	V/μs	I _{TAV} (sin. 180; T _{case} = 60 °C)		
			25 A		
700	600	500	SKKT 19/06 D	SKKT 20/06 D	–
900	800	500	SKKT 19/08 D	SKKT 20/08 D	SKKT 20B08 D
1300	1200	1000	SKKT 19/12 E	SKKT 20/12 E	SKKT 20B12 E
1500	1400	1000	SKKT 19/14 E	SKKT 20/14 E	SKKT 20B14 E
1700	1600	1000	SKKT 19/16 E	SKKT 20/16 E	SKKT 20B16 E

Symbol	Conditions	SKKT 19	SKKT 20 SKKT 20B	Units
I _{TAV}	sin. 180; T _{case} = 60 °C	25		A
	T _{case} = 85 °C	18		A
I _D	B2/B6 T _{amb} = 45 °C; P 3/180	31 / 38		A
	T _{amb} = 35 °C; P 3/180 F	46 / 60		A
I _{RMS}	W1/W3 T _{amb} = 45 °C; P 3/180	42 / 3 x 30		A
I _{TSM}	T _{vj} = 25 °C; 10 ms	320		A
	T _{vj} = 125 °C; 10 ms	280		A
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms	510		A ² s
	T _{vj} = 125 °C; 8,3 ... 10 ms	390		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.	100 / 200		mA
I _L	T _{vj} = 25 °C; R _G = 33 Ω; typ./max.	250 / 400		mA
V _T	T _{vj} = 25 °C; I _T = 75 A	max. 2,3		V
V _{T(TO)}	T _{vj} = 125 °C	1,0		V
r _T	T _{vj} = 125 °C	16		mΩ
I _{BD} ; I _{RD}	T _{vj} = 125 °C; V _{RD} = V _{RRM} V _{DD} = V _{DRM}	max. 10		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.	5		mA
R _{thjc}	cont. } sin. 180 } per thyristor / rec. 120 } per module	1,2 / 0,6 1,3 / 0,65 1,35 / 0,68 0,2 / 0,1		°C/W °C/W °C/W °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 } SI (US) units	5 (44 lb. in.) ± 15 % ¹⁾		Nm
M ₂	to terminals }	3 (26 lb. in.) ± 15 %		Nm
a		5 · 9,81		m/s ²
w	approx.	95		g
Case	→ page B 1 – 95	SKKT 19: A 5 SKKT 20: A 46 SKKT 20B: A 48		

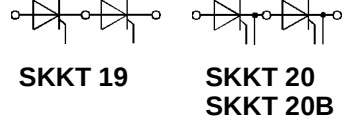
SEMIPACK® 1

Thyristor Modules

SKKT 19

SKKT 20

SKKT 20B



- 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⁾ See the assembly instructions

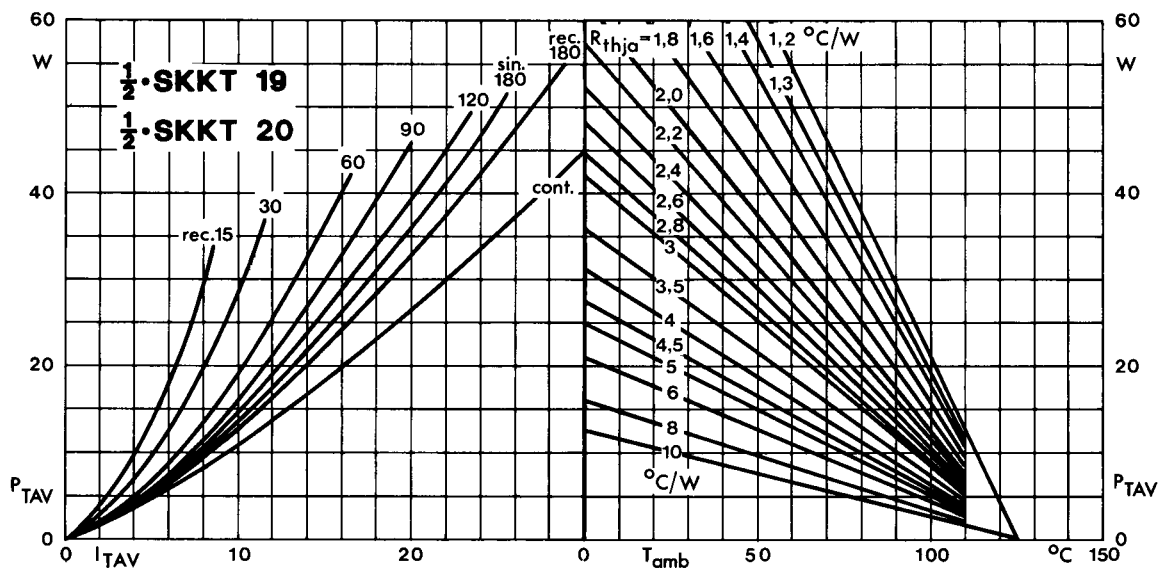


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

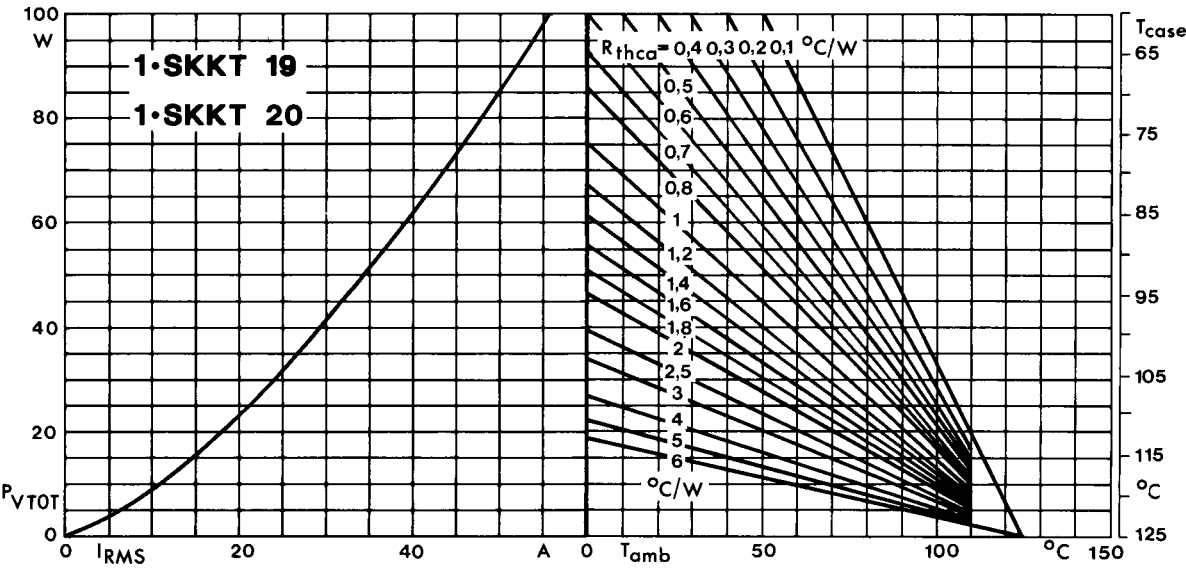


Fig. 2 Power dissipation per module vs. rms current and case temperature

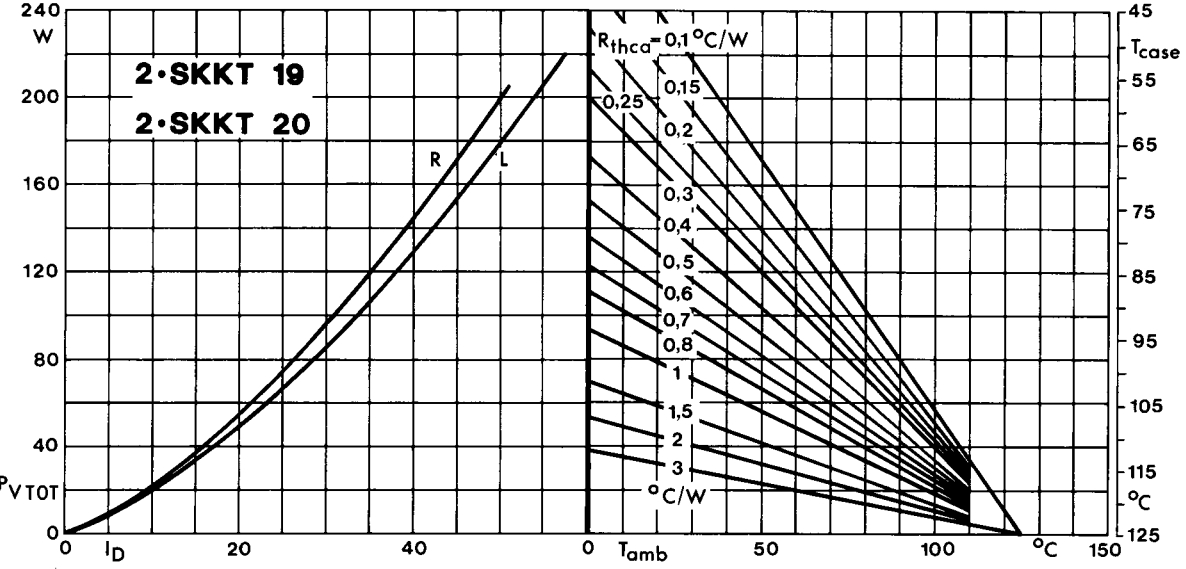


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

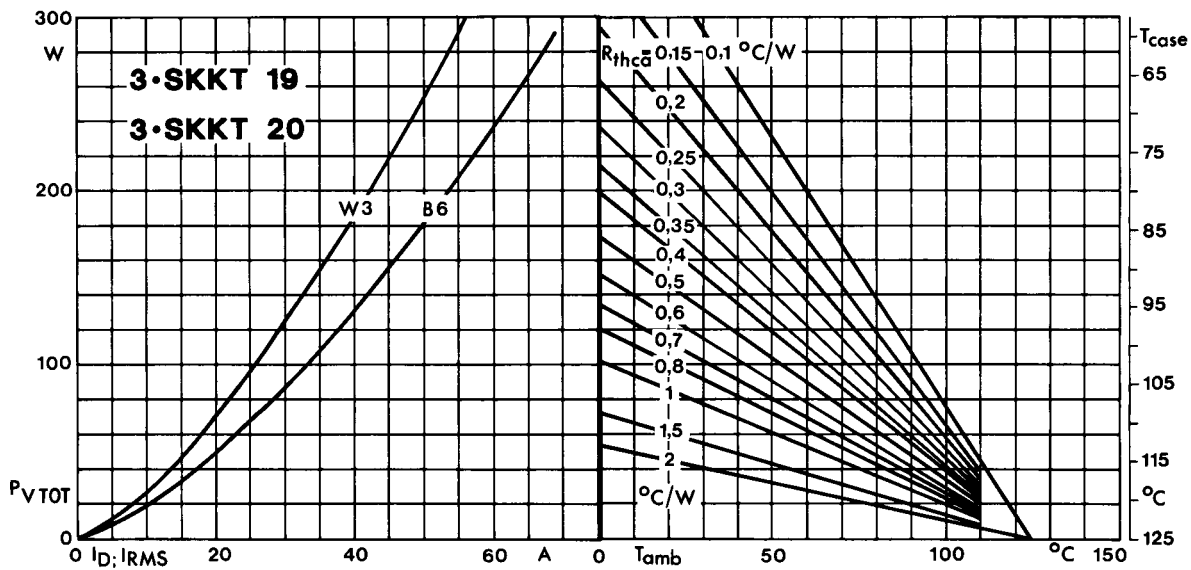


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

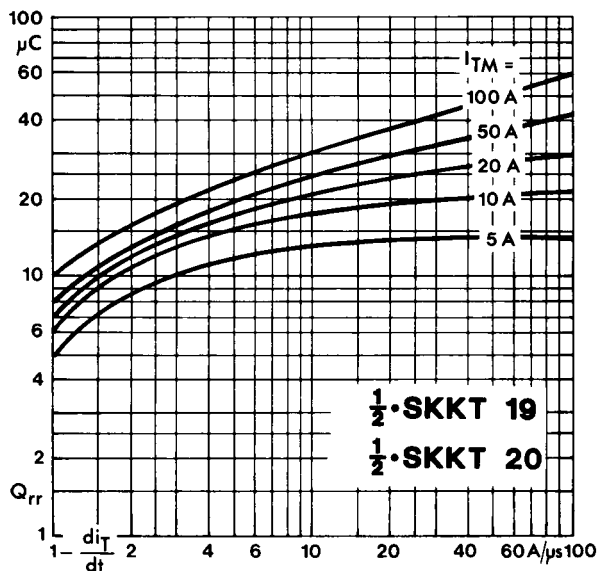


Fig. 5 Recovered charge vs. current decrease

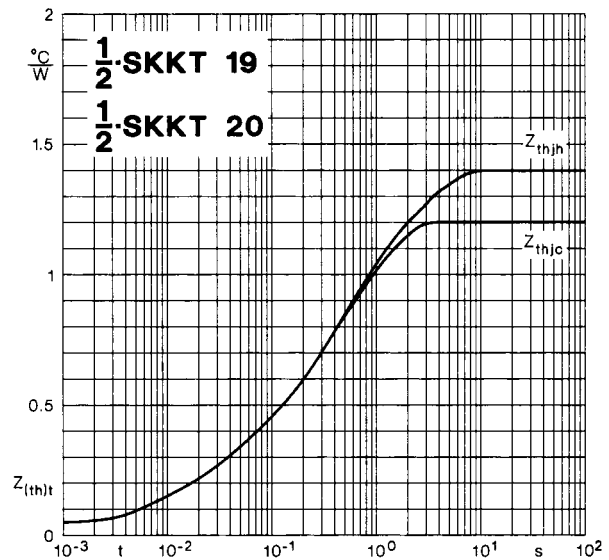


Fig. 6 Transient thermal impedance vs. time

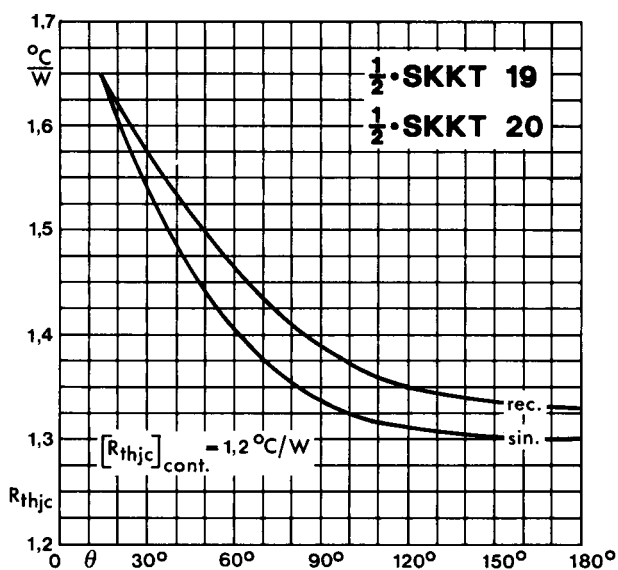


Fig. 7 Thermal resistance vs. conduction angle

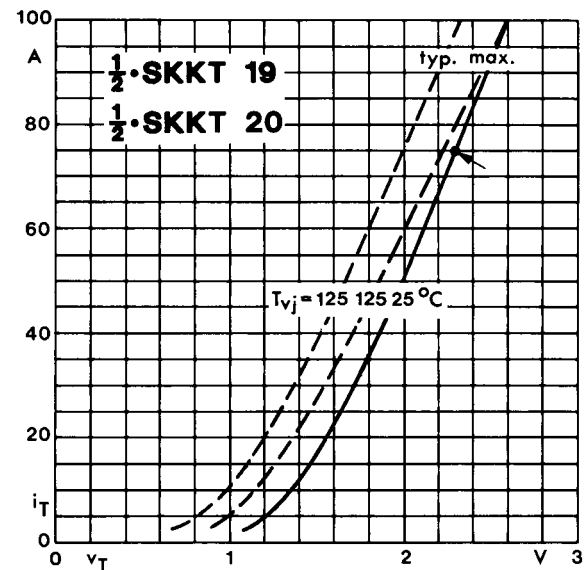


Fig. 8 On-state characteristics

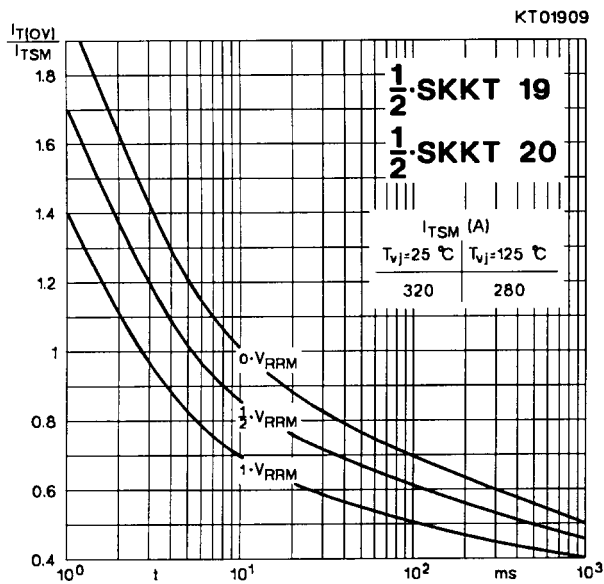


Fig. 9 Surge overload current vs. time

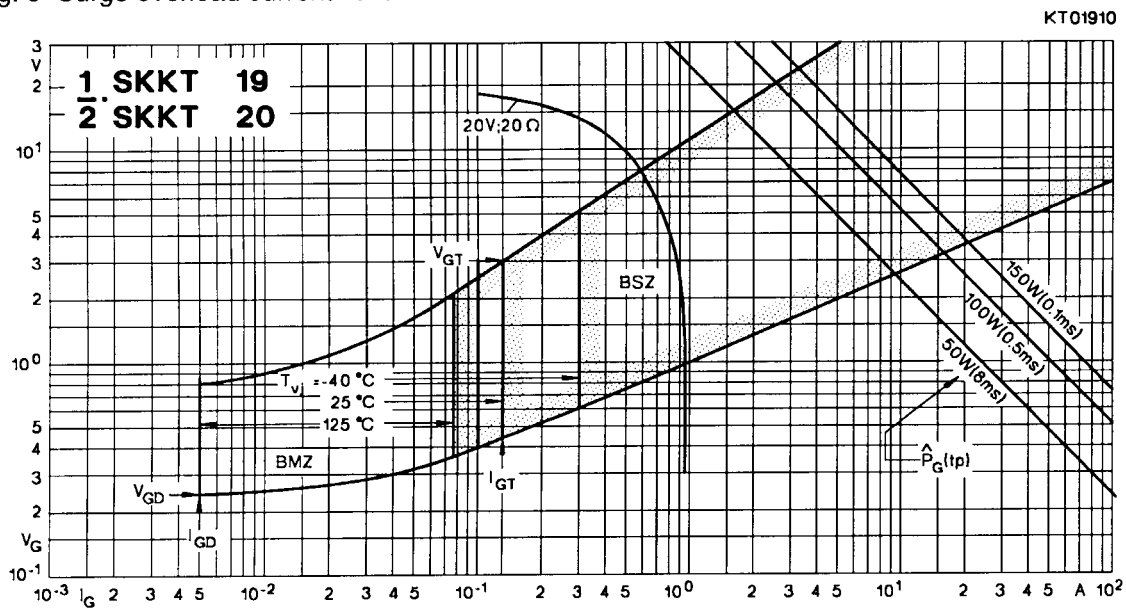


Fig. 10 Gate trigger characteristics

SKKT 19 ... 105

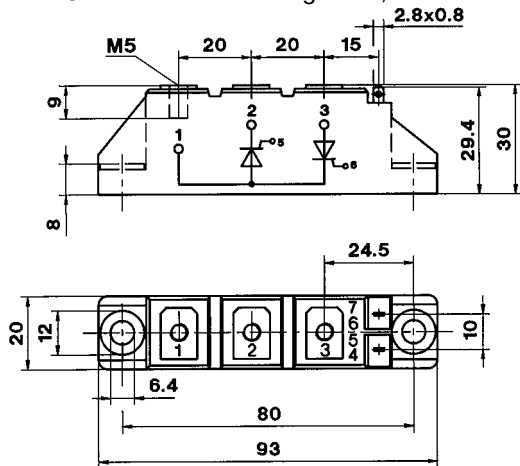
Case A 5

IEC 192-2: A 77 A

JEDEC: TO-240 AA

SEMIPACK® 1

UL recognized, file no. E 63 532



Dimensions in mm

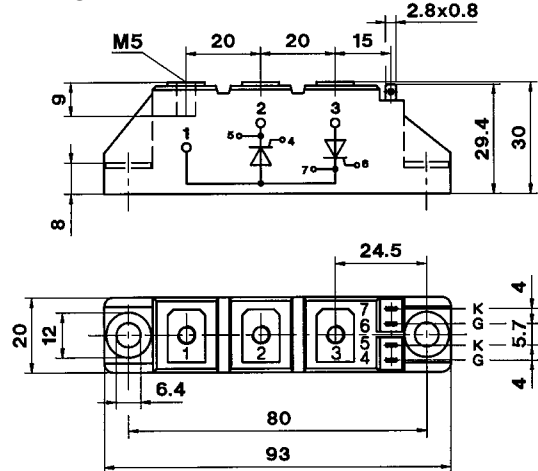
SKKT 20/ ... 106/

Case A 46

IEC 192-2: A 77 A

JEDEC: TO-240 AA

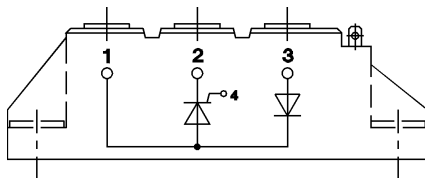
SEMIPACK® 1



Dimensions in mm

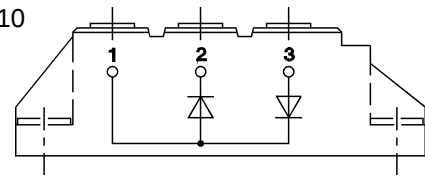
SKKH 26 ... 105

Case A 6



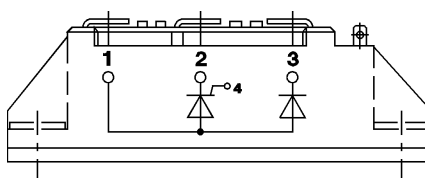
SKKD 26 ... 100

Case A 10



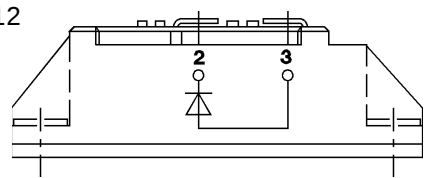
SKNH 56 ... 91

Case A 7



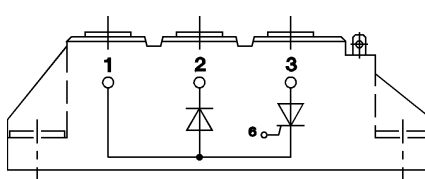
SKKE 81

Case A 12



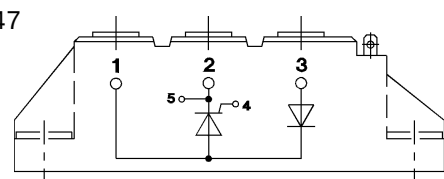
SKKL 56 ... 105

Case A 9



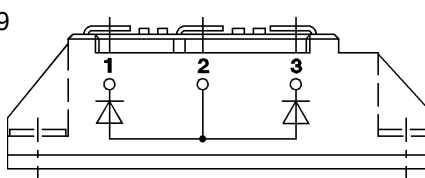
SKKH 27 ... 106

Case A 47



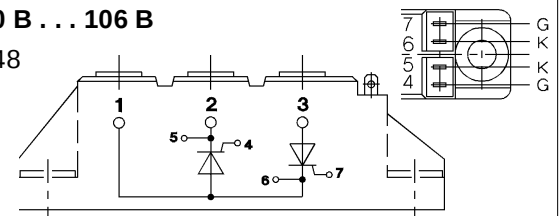
SKND 46 ... 81

Case A 19



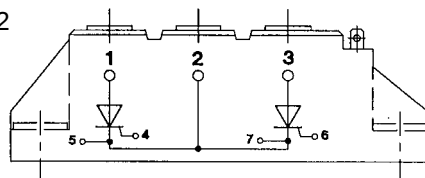
SKKT 20 B ... 106 B

Case A 48



SKMT 92

Case A 72



SKKL 42 ... 106

Case A 59

