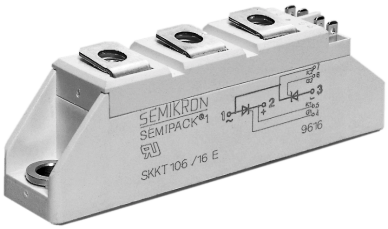
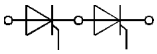
V_{RSM}	V_{RRM}	(dv/	I_{TRMS} (maximum value for continuous operation)			
	V_{DRM}	$dt)_{cr}$	95 A			
			I_{TAV} (sin. 180; T_{case} = 74°C)			
V	V	V/µs	60 A			
500	400	500	–	–	**SKKH 56/04 D**	–
700	600	500	**SKKT 56/06 D**	**SKKT 57/06 D**	**SKKH 56/06 D**	**SKKH 57/06 D**
900	800	500	**SKKT 56/08 D**	**SKKT 57/08 D**[1)]	**SKKH 56/08 D**	**SKKH 57/08 D**
1300	1200	1000	**SKKT 56/12 E**	**SKKT 57/12 E**[1)]	**SKKH 56/12 E**	**SKKH 57/12 E**
1500	1400	1000	**SKKT 56/14 E**	**SKKT 57/14 E**[1)]	**SKKH 56/14 E**	**SKKH 57/14 E**
1700	1600	1000	**SKKT 56/16 E**	**SKKT 57/16 E**[1)]	**SKKH 56/16 E**	**SKKH 57/16 E**
1900	1800	1000	**SKKT 56/18 E**	**SKKT 57/18 E**[1)]	**SKKH 56/18 E**	**SKKH 57/18 E**
2100	2000	1000	**SKKT 56/20 E**	**SKKT 57/20 E**[1)]	–	**SKKH 57/20 E**
2300	2200	1000	**SKKT 56/22 E**	**SKKT 57/22 E**[1)]	–	**SKKH 57/22 E**

Symbol	**Conditions**		**SKKT 56 SKKH 56**	**SKKT 57 SKKT 57B SKKH 57**	**Units**
I_{TAV}	sin. 180;	T_{case} = 74 °C	60		A
		T_{case} = 80 °C	55		A
I_D	B2/B6	T_{amb} = 45 °C; P 3/180	57 / 68		A
		T_{amb} = 35 °C; P 3/180 F	100 / 130		A
I_{RMS}	W1/W3	T_{amb} = 35 °C; P 3/180 F	130 / 3 x 100		A
I_{TSM}	T_{vj} = 25 °C; 10 ms		1 500		A
	T_{vj} = 125 °C; 10 ms		1 250		A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms		11 000		A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms		8 000		A^2s
t_{gd}	T_{vj} = 25 °C; I_G = 1 A;				
	di_G/dt = 1 A/µs		1		µs
t_{gr}	$V_D = 0{,}67 \cdot V_{DRM}$		2		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 = 33 Ω; typ./max.		300 / 600		mA
V_T	T_{vj} = 25 °C; I_T = 200 A		max. 1,65		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;	$V_{RD} = V_{RRM}$			
		$V_{DD} = V_{DRM}$	max. 15 [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.	per thyristor / per module	0,57 / 0,29		°C/W
	sin. 180	per thyristor / per module	0,60 / 0,30		°C/W
	rec. 120	per thyristor / per module	0,64 / 0,32		°C/W
R_{thch}			0,2 / 0,1		°C/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_1	to heatsink	SI (US) units	5 (44 lb. in.) ± 15 %[2)]		Nm
M_2	to terminals	SI (US) units	3 (26 lb. in.) ± 15 %		Nm
a			$5 \cdot 9{,}81$		m/s^2
w	approx.		95		g
Case	→ page B 1 – 95	SKKT 56: A 5 SKKH 56: A 6	SKKT 57: A 46 SKKT 57B: A 48 SKKH 57: A 47		

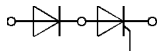
SEMIPACK® 1
Thyristor / Diode Modules

SKKT 56 SKKH 56
SKKT 57 SKKH 57
SKKT 57B





SKKT 56



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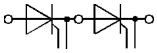
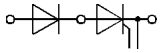


SKKT 57
SKKT 57B



SKKH 57

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 57B configuration (case A 48)
[2)] See the assembly instructions
[3)] /20 E, /22 E max. 30 mA

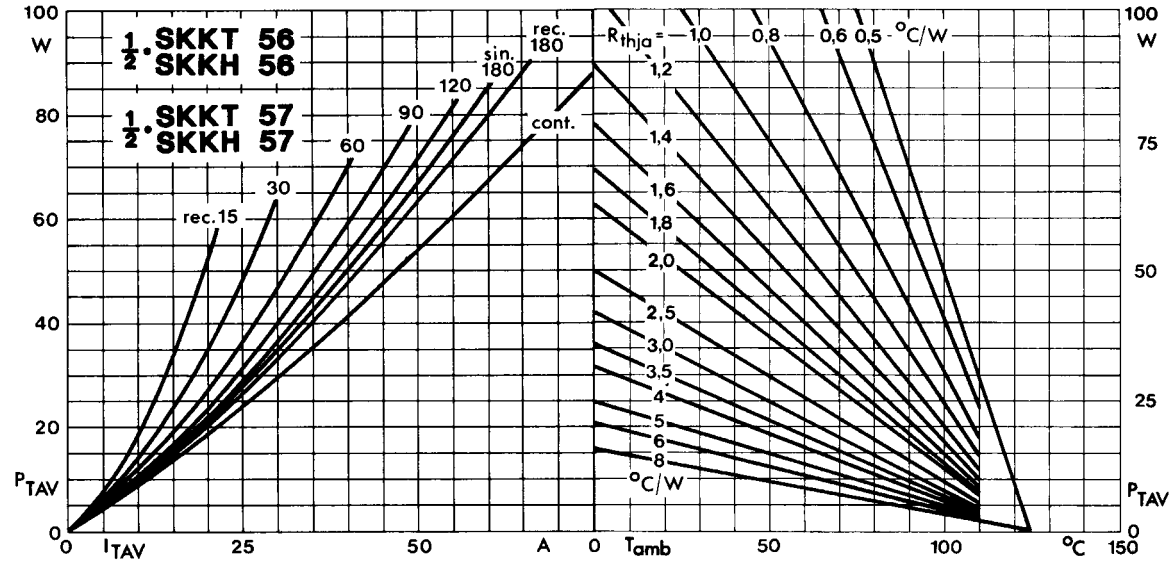


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

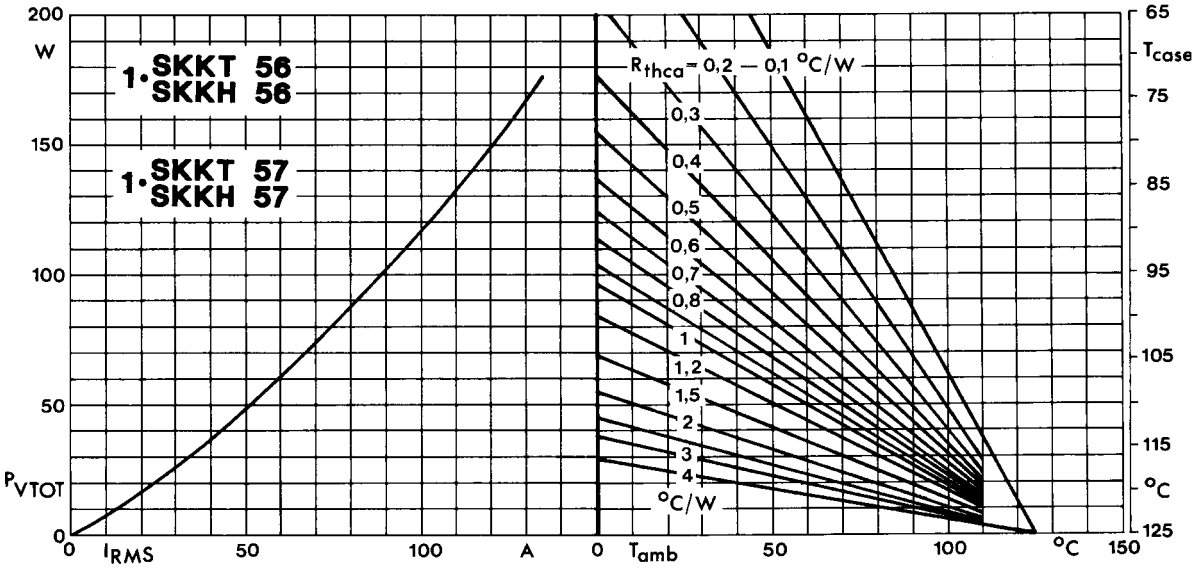


Fig. 2 Power dissipation per module vs. rms current and case temperature

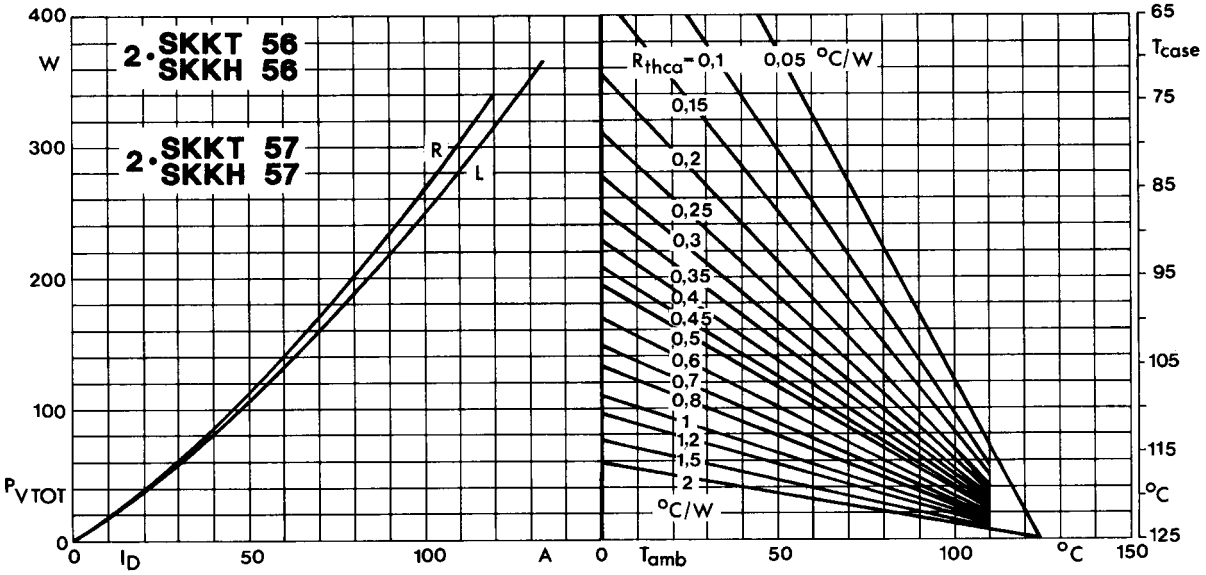


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

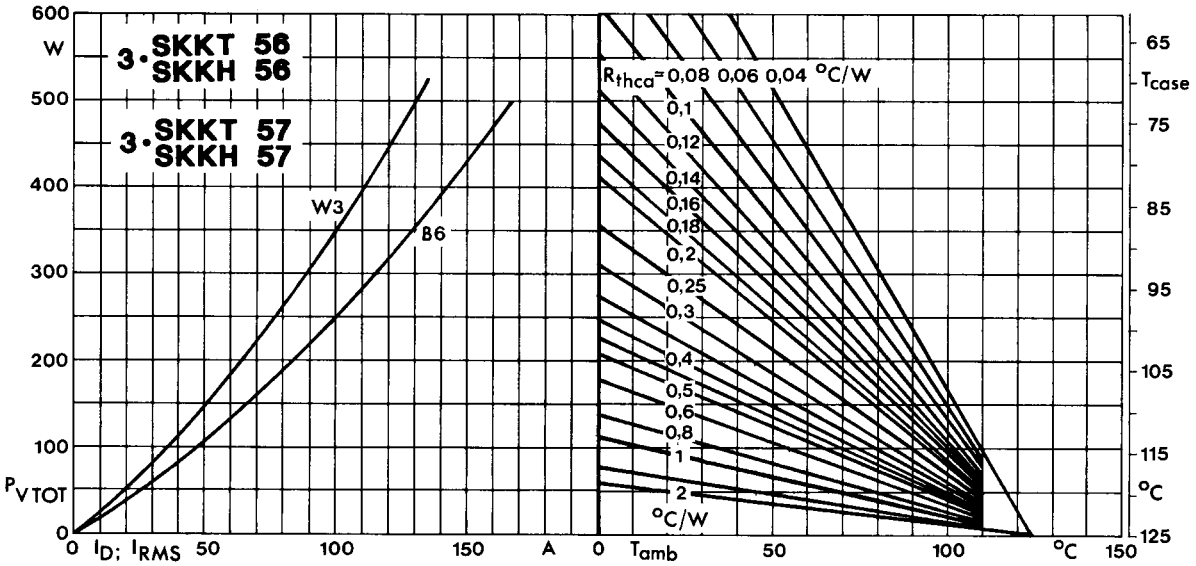


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

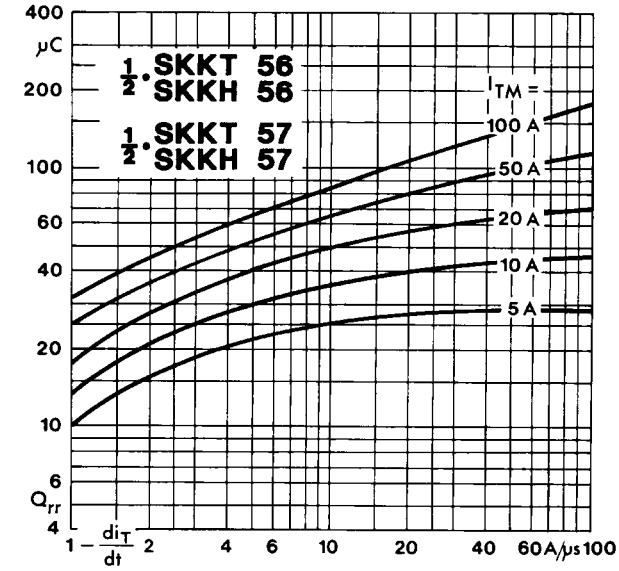


Fig. 5 Recovered charge vs. current decrease

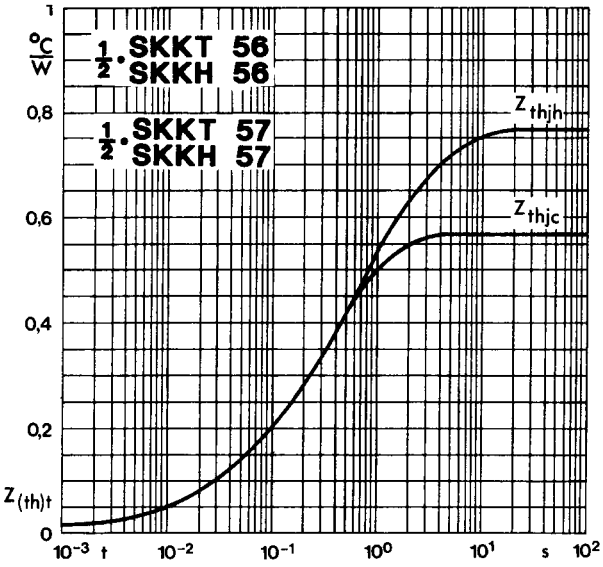


Fig. 6 Transient thermal impedance vs. time

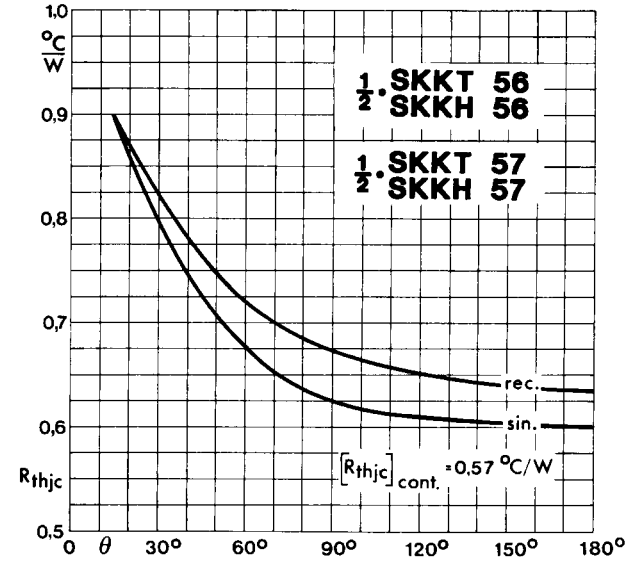


Fig. 7 Thermal resistance vs. conduction angle

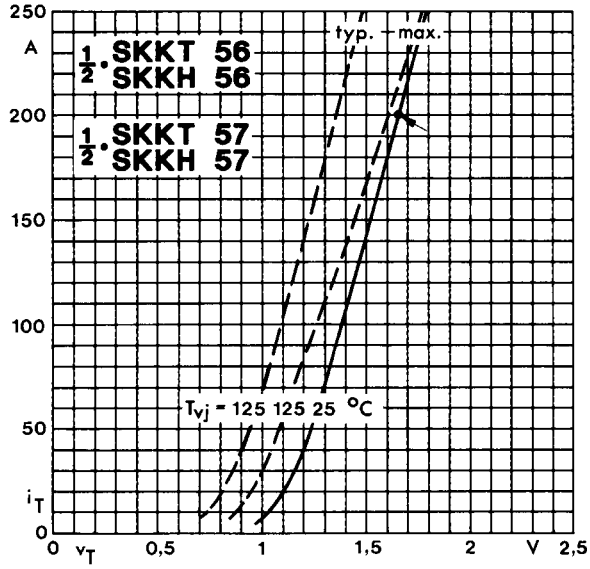


Fig. 8 On-state characteristics

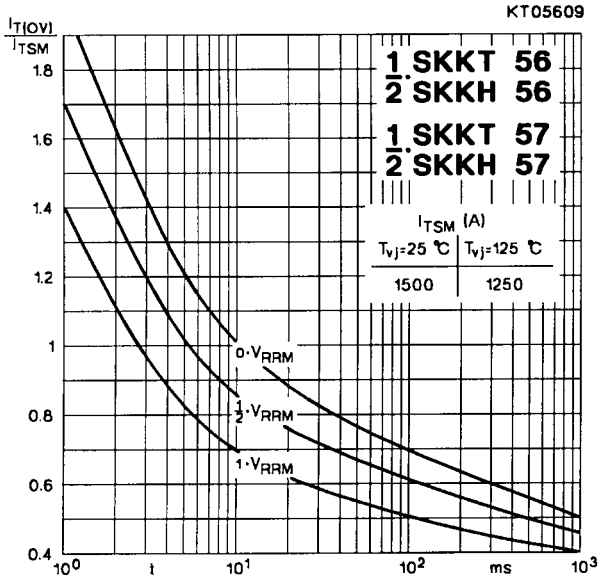


Fig. 9 Surge overload current vs. time

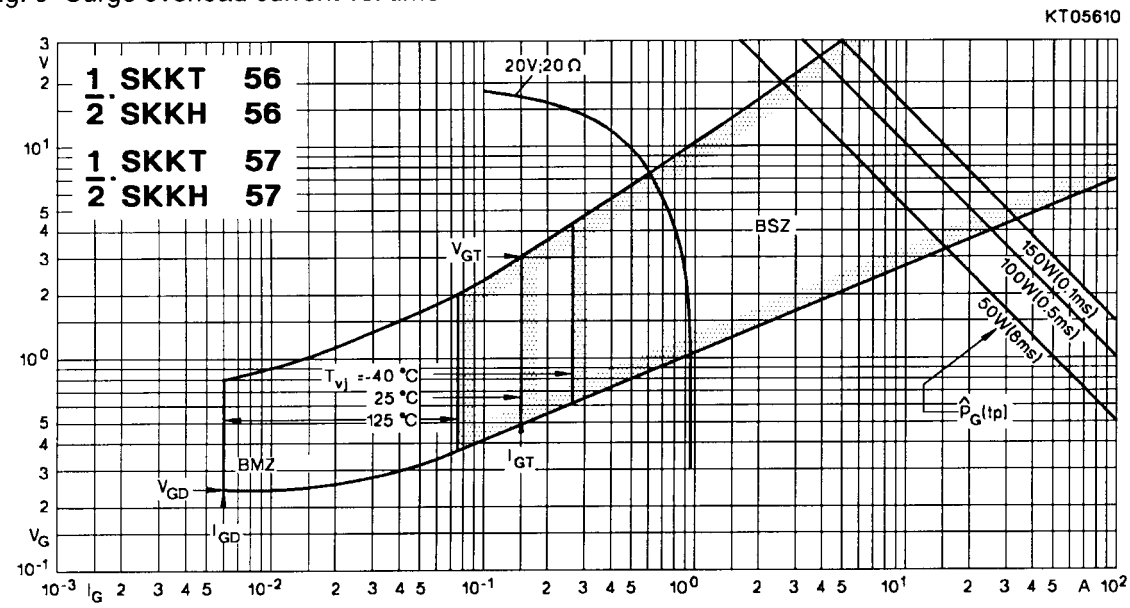


Fig. 10 Gate trigger characteristics

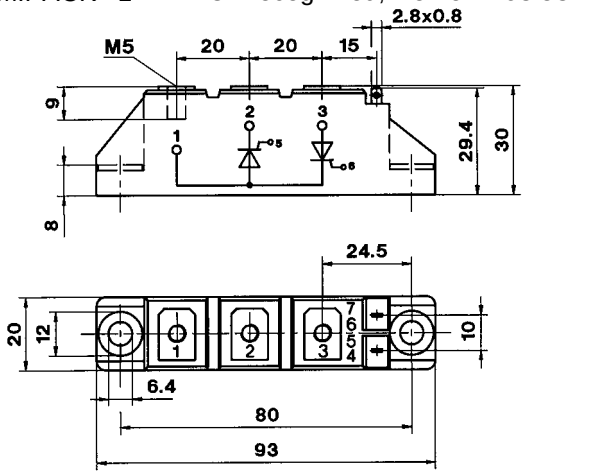
SKKT 19 . . . 105

Case A 5

IEC 192-2: A 77 A
JEDEC: TO-240 AA

SEMIPACK® 1

UL recognized, file no. E 63 532



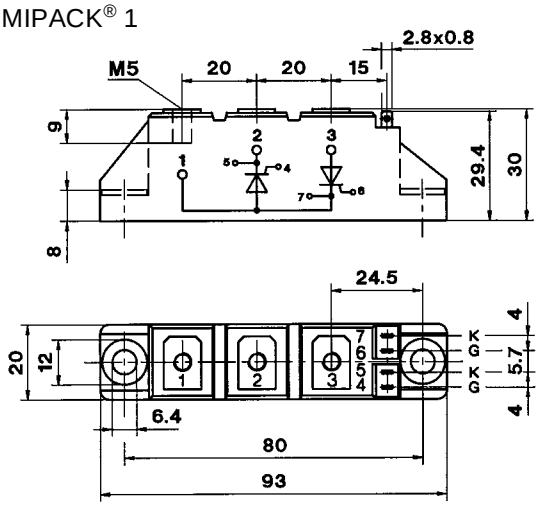
Dimensions in mm

SKKT 20/ . . . 106/

Case A 46

IEC 192-2: A 77 A
JEDEC: TO-240 AA

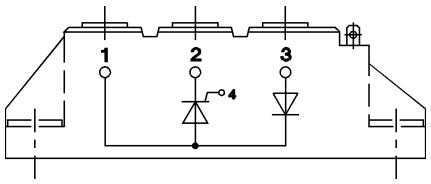
SEMIPACK® 1



Dimensions in mm

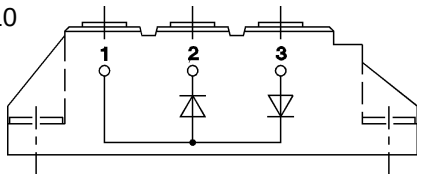
SKKH 26 . . . 105

Case A 6



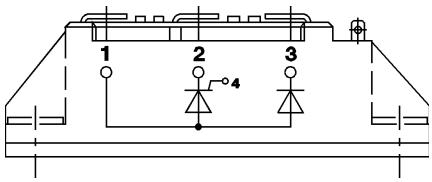
SKKD 26 . . . 100

Case A 10



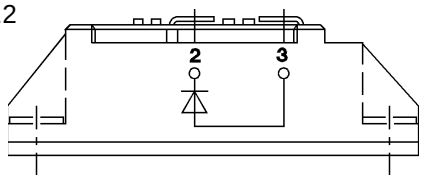
SKNH 56 . . . 91

Case A 7



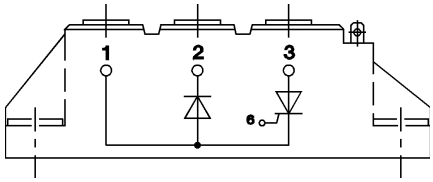
SKKE 81

Case A 12



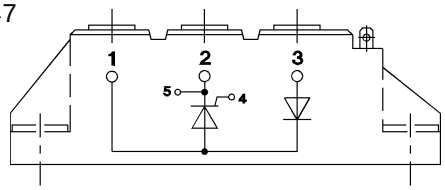
SKKL 56 . . . 105

Case A 9



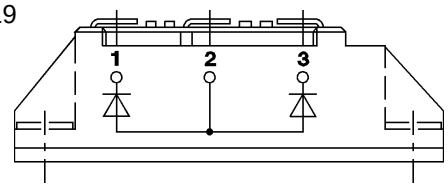
SKKH 27 . . . 106

Case A 47



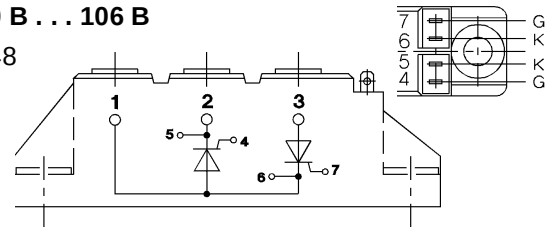
SKND 46 . . . 81

Case A 19



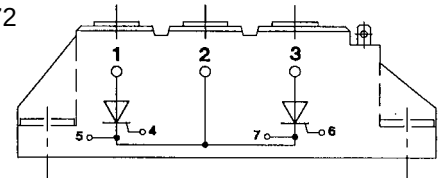
SKKT 20 B . . . 106 B

Case A 48



SKMT 92

Case A 72



SKKL 42 . . . 106

Case A 59