SEMIKRON

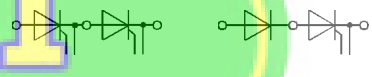
SEMIPACK® 1
Thyristor / Diode Modules

SKKT 26 SKKH 26
SKKT 27 SKKH 27
SKKT 27B

V_{RSM} V	V_{RRM} V_{DRM} V	$(dv/dt)_{cr}$ V/µs	I_{TRMS} (maximum value for continuous operation) 50 A			
			I_{TAV} (sin. 180; T_{case} = 68 °C) 32 A			
500	400	500	–	–	**SKKH 26/04 D**	–
700	600	500	**SKKT 26/06 D**	–	**SKKH 26/06 D**	**SKKH 27/06 D**
900	800	500	**SKKT 26/08 D**	**SKKT 27/08 D**[1]	**SKKH 26/08 D**	**SKKH 27/08 D**
1300	1200	1000	**SKKT 26/12 E**	**SKKT 27/12 E**[1]	**SKKH 26/12 E**	**SKKH 27/12 E**
1500	1400	1000	**SKKT 26/14 E**	**SKKT 27/14 E**[1]	**SKKH 26/14 E**	**SKKH 27/14 E**
1700	1600	1000	**SKKT 26/16 E**	**SKKT 27/16 E**[1]	**SKKH 26/16 E**	**SKKH 27/16 E**

Symbol	Conditions		SKKT 26 SKKH 26	SKKT 27 SKKT 27B SKKH 27	Units
I_{TAV}	sin. 180;	T_{case} = 68 °C	32		A
		T_{case} = 85 °C	25		A
I_D	B2/B6	T_{amb} = 45 °C; P 3/180	38 / 50		A
		T_{amb} = 35 °C; P 3/180 F	60 / 77		A
I_{RMS}	W1/W3	T_{amb} = 45 °C; P 3/180	52 / 3 x 37		A
I_{TSM}	T_{vj} = 25 °C; 10 ms		550		A
	T_{vj} = 125 °C; 10 ms		480		A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms		1 500		A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms		1 150		A^2s
t_{gd}	T_{vj} = 25 °C; I_G = 1 A		1		µs
		di_G/dt = 1 A/µs			
t_{gr}	$V_D = 0{,}67 \cdot V_{DRM}$		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. 1,8		V
$V_{T(TO)}$	T_{vj} = 125 °C		0,9		V
r_T	T_{vj} = 125 °C		12		mΩ
I_{DD}; 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.	per thyristor / per module	0,9 / 0,45		°C/W
	sin. 180		0,95 / 0,48		°C/W
	rec. 120		1,0 / 0,5		°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 · 9,81		m/s^2
w	approx.		95		g
Case	→ page B 1 – 95	SKKT 26: A 5 SKKH 26: A 6	SKKT 27: A 46 SKKT 27B: A 48 SKKH 27: A 47		

SKKT 26 **SKKH 26**



SKKT 27 **SKKH 27**
SKKT 27B

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 27B configuration (case A 48)

[2] See the assembly instructions

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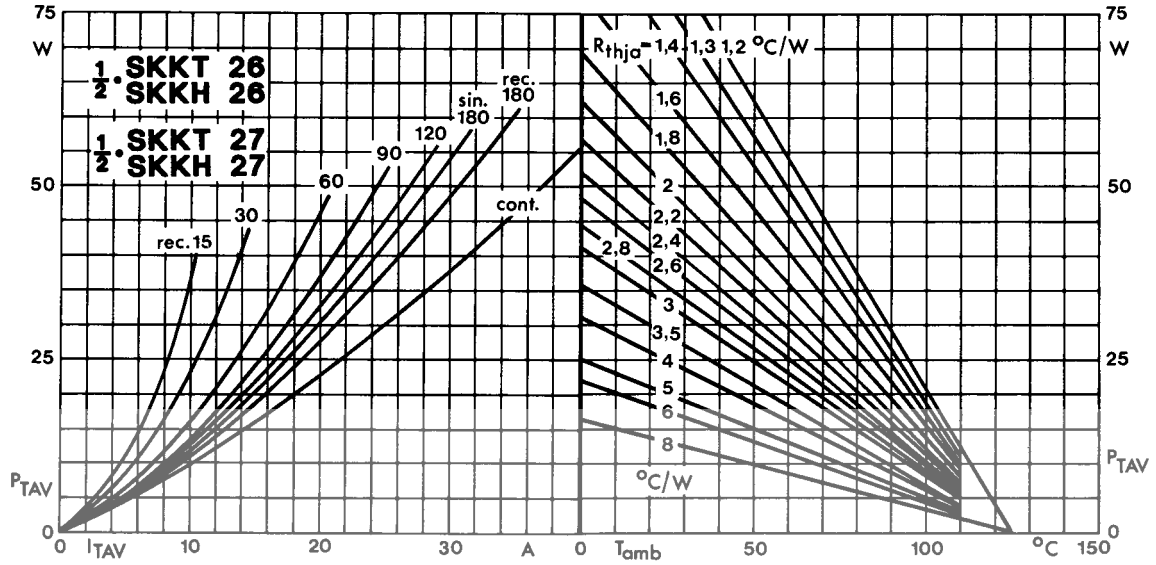

Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

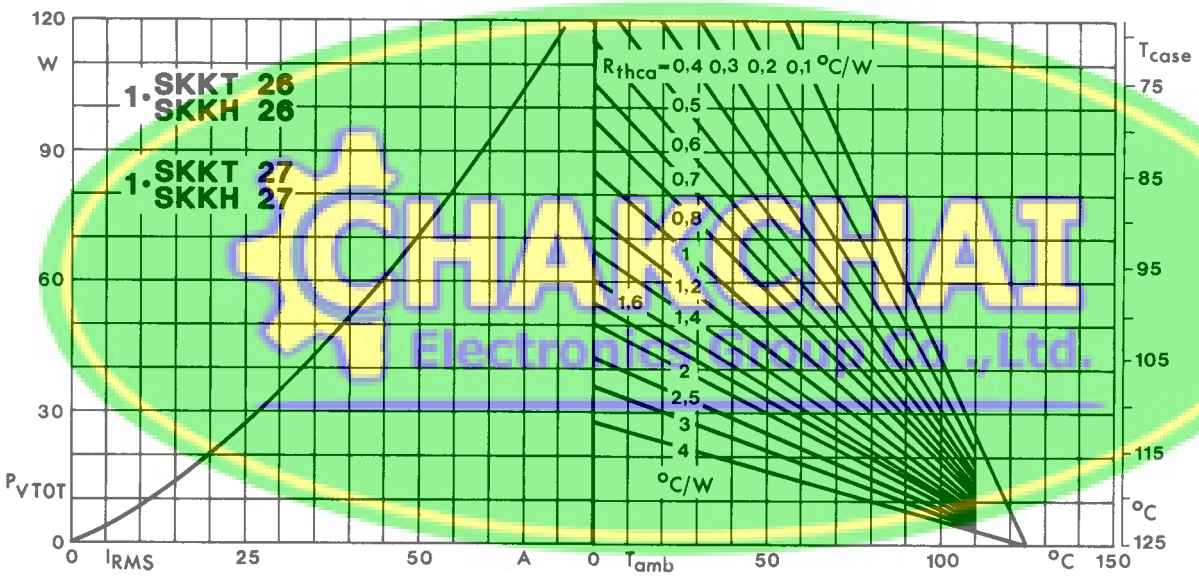

Fig. 2 Power dissipation per module vs. rms current and case temperature

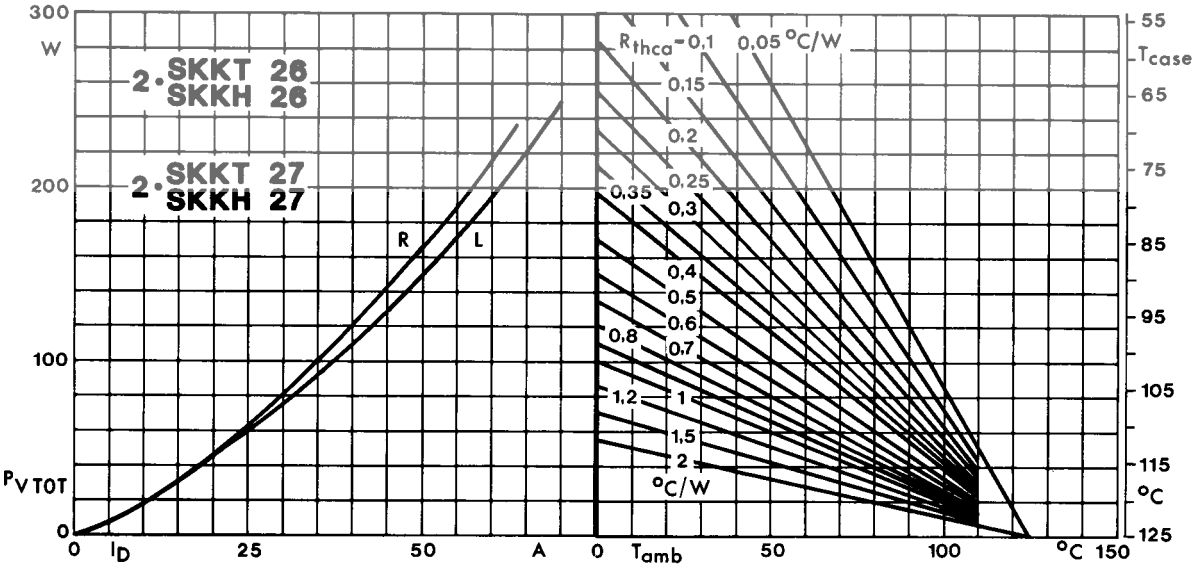

Fig. 3 Power dissipation of two modules vs. direct current and case temperature

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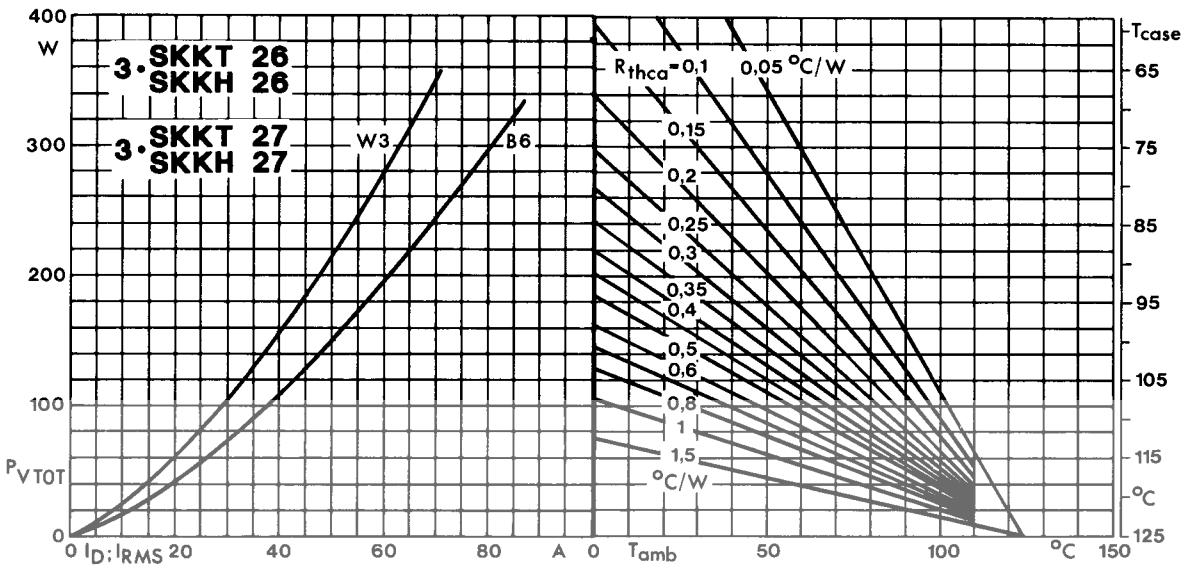

Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

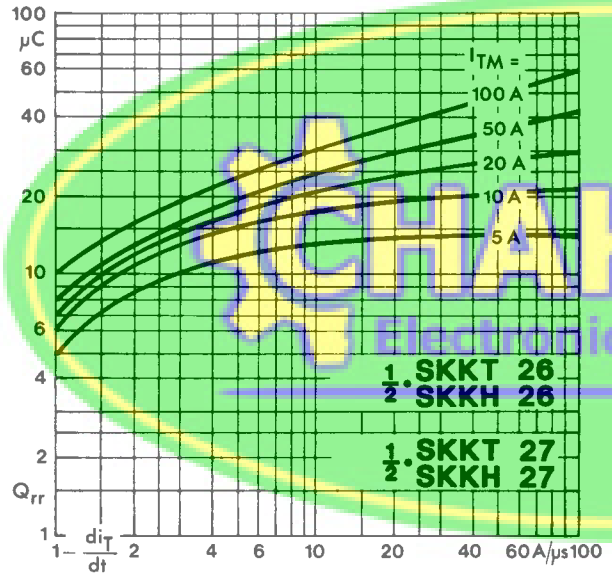

Fig. 5 Recovered charge vs. current decrease

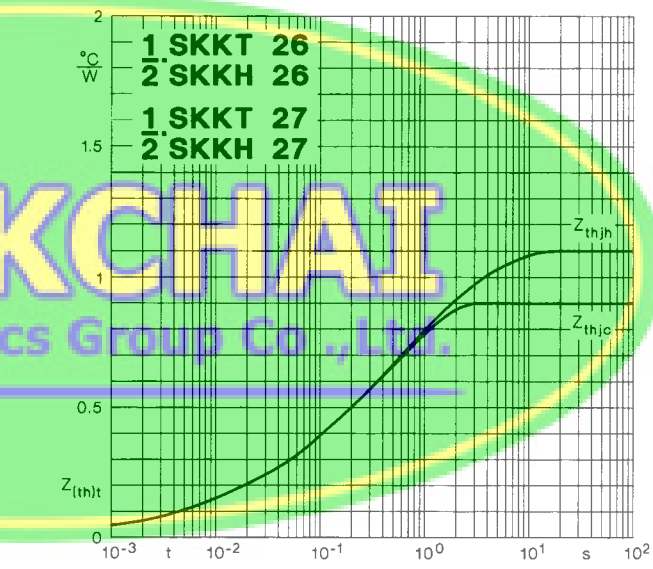

Fig. 6 Transient thermal impedance vs. time

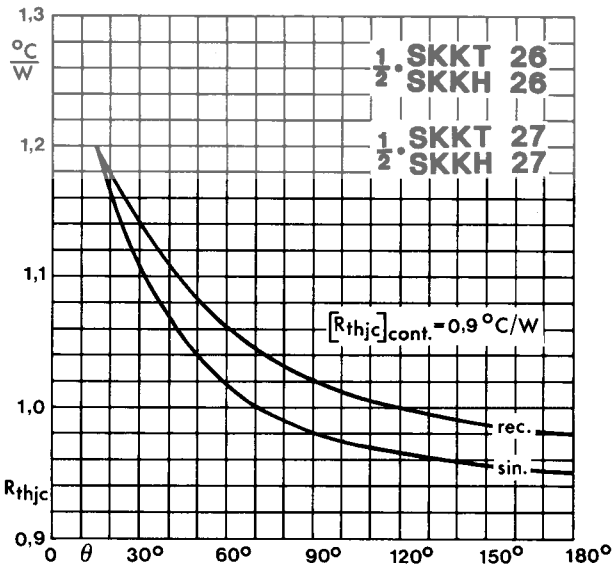

Fig. 7 Thermal resistance vs. conduction angle

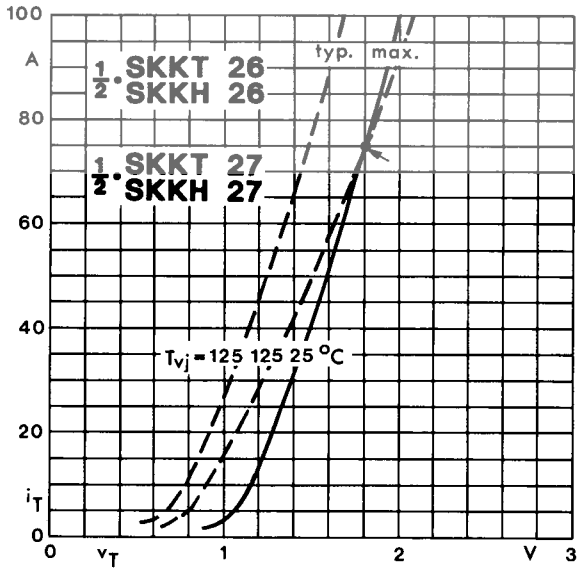

Fig. 8 On-state characteristics

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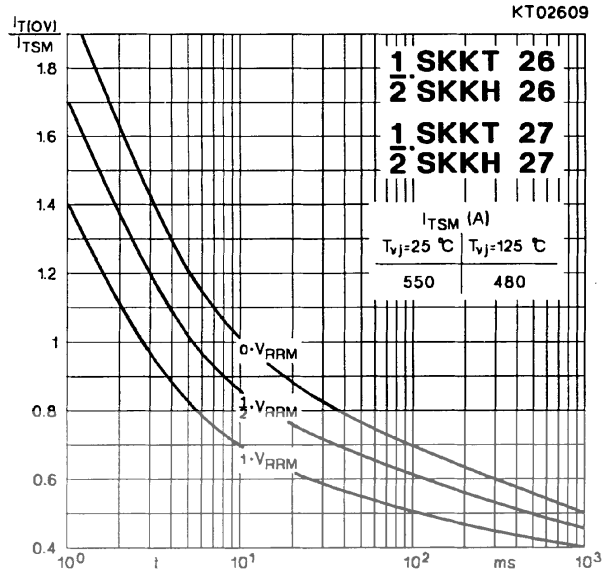

Fig. 9 Surge overload current vs. time

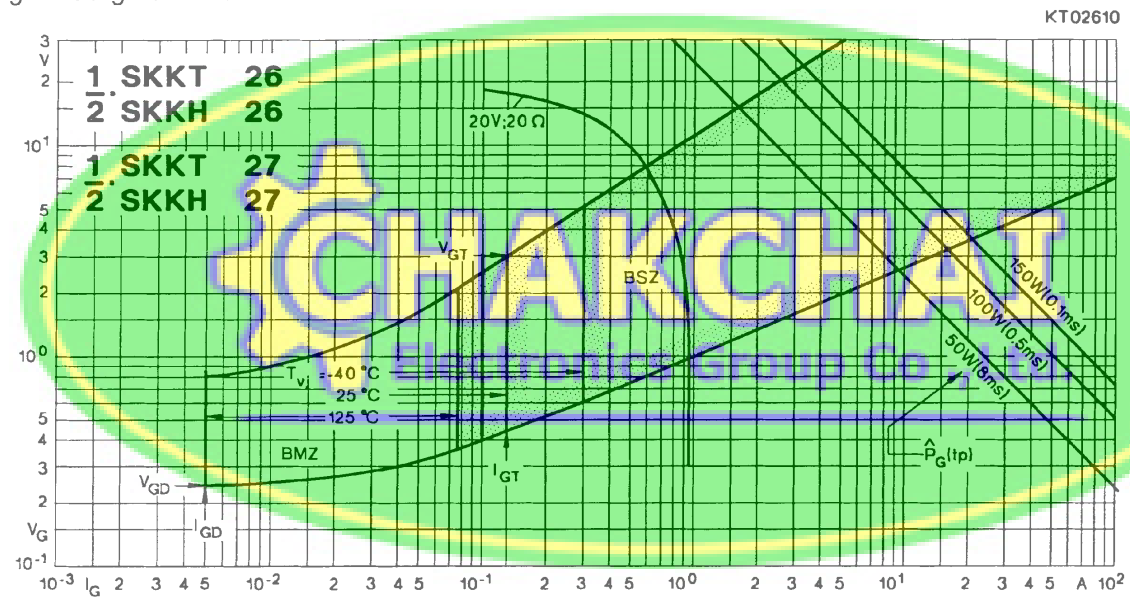

Fig. 10 Gate trigger characteristics

SKMD 100

Case A 33

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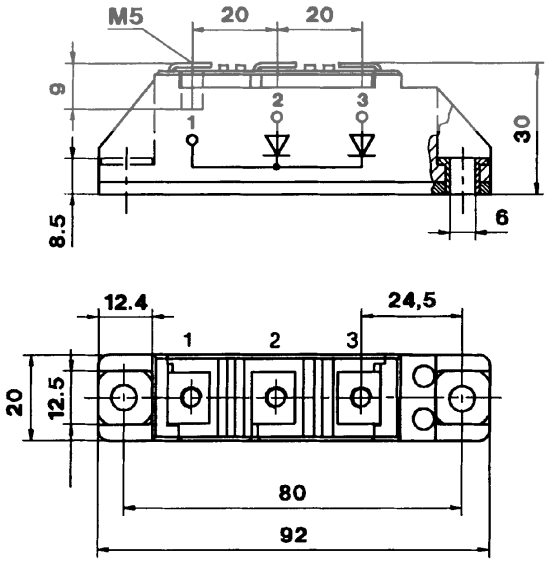

Dimensions in mm

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SKKT 19 . . . 105

Case A 5

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

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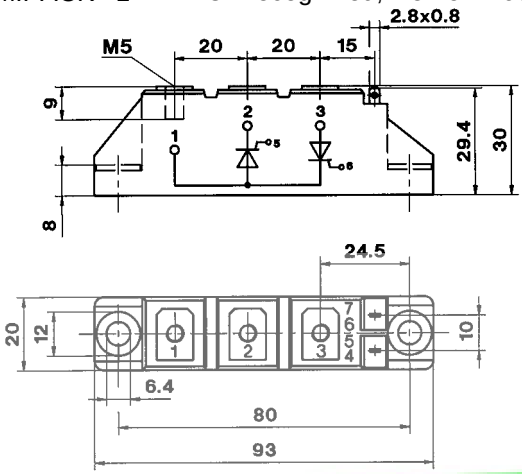
UL recognized, file no. E 63 532



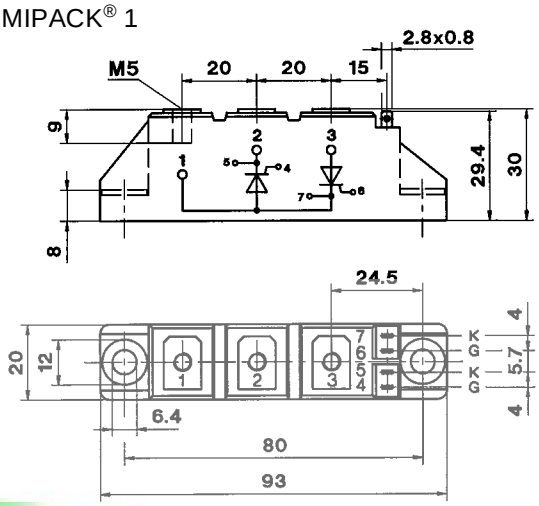
Dimensions in mm

SKKT 20/ . . . 106/

Case A 46

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

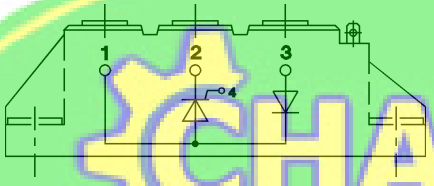
SEMIPACK® 1



Dimensions in mm

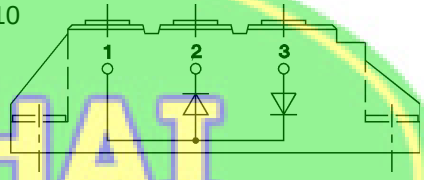
SKKH 26 . . . 105

Case A 6



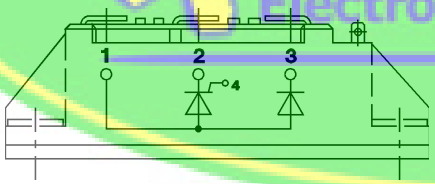
SKKD 26 . . . 100

Case A 10



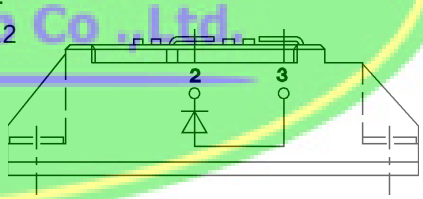
SKNH 56 . . . 91

Case A 7



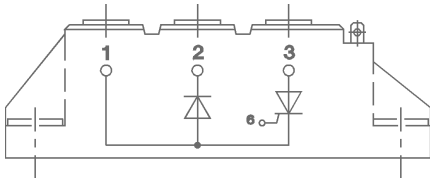
SKKE 81

Case A 12



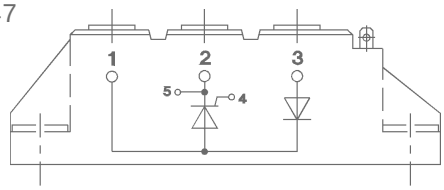
SKKL 56 . . . 105

Case A 9



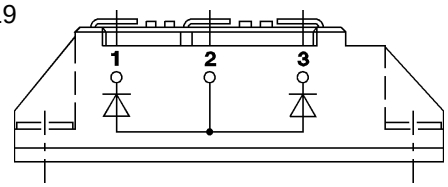
SKKH 27 . . . 106

Case A 47



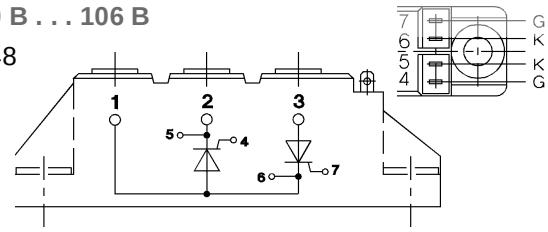
SKND 46 . . . 81

Case A 19



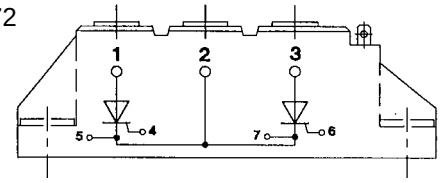
SKKT 20 B . . . 106 B

Case A 48



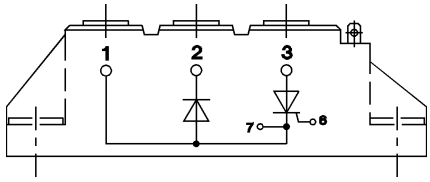
SKMT 92

Case A 72



SKKL 42 . . . 106

Case A 59



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