

SEMIPACK® 1

Thyristor / Diode Modules

SKKL 92

SKMT 92

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 150 A (maximum value for continuous operation) I_{TAV} = 95 A (sin. 180; T_c = 85 °C)		
900	800	SKMT 92/08E		
1300	1200		SKKL 92/12E	
1500	1400	SKMT 92/14E		
1700	1600	SKMT 92/16E	SKKL 92/16E	
1900	1800	SKMT 92/18E		

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 85 (100) °C;	95 (68)	A
I_D	P3/180; T_a = 45 °C; B2 / B6	70 / 85	A
	P3/180F; T_a = 35 °C; B2 / B6	140 /175	A
I_{RMS}	P3/180F; T_a = 35 °C; W1 / W3	190 / 3 * 135	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	2000	A
	T_{vj} = 125 °C; 10 ms	1750	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	20000	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	15000	A²s
V_T	T_{vj} = 25 °C; I_T = 300 A	max. 1,65	V
$V_{T(TO)}$	T_{vj} = 125 °C	max. 0,9	V
r_T	T_{vj} = 125 °C	max. 2	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 20	mA
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} = 125 °C	max. 150	A/µs
$(dv/dt)_{cr}$	T_{vj} = 125 °C	max. 1000	V/µs
t_q	T_{vj} = 125 °C ,	100	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_{GT}	T_{vj} = 25 °C; d.c.	min. 3	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 150	mA
V_{GD}	T_{vj} = 125 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 125 °C; d.c.	max. 6	mA
$R_{th(j-c)}$	cont.; per thyristor / per module	0,28 / 0,14	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,3 / 0,15	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,32 / 0,16	K/W
$R_{th(c-s)}$	per thyristor / per module	0,2 / 0,1	K/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_s	to heatsink	5 ± 15 %[1)]	Nm
M_t	to terminals	3 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	95	g
Case	SKMT	A 72	
	SKKL	A 59	

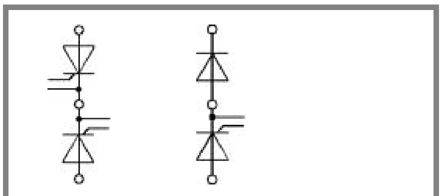
Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- Line rectifiers for transistorized AC motor controllers (SKKL)
- DC braking of AC motor (SKMT)

1) See the assembly instructions



SKMT **SKKL**

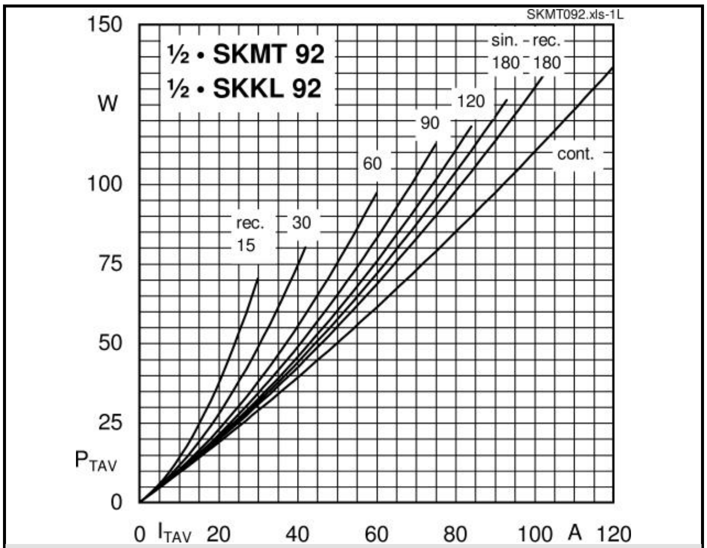


Fig. 1L Power dissipation per thyristor vs. on-state current

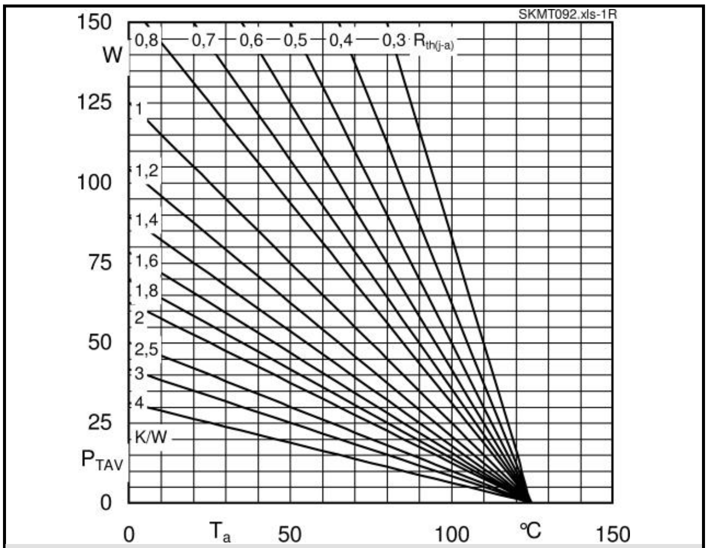


Fig. 1R Power dissipation per thyristor vs. ambient temp.

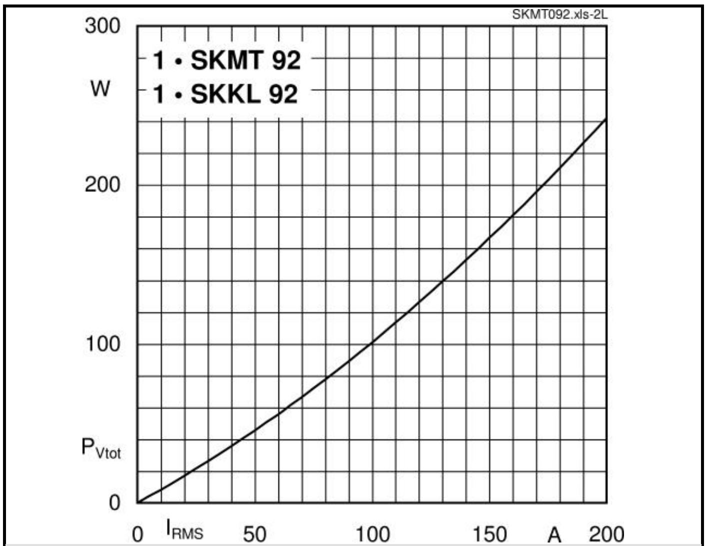


Fig. 2L Power dissipation per module vs. rms current

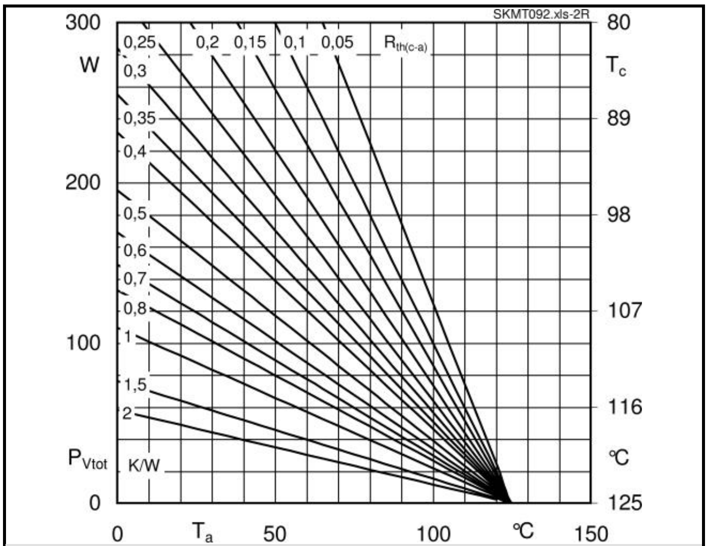


Fig. 2R Power dissipation per module vs. case temp.

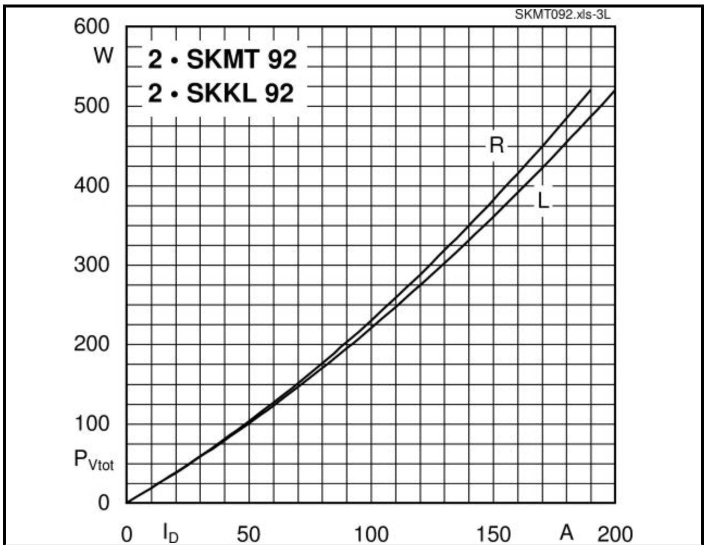


Fig. 3L Power dissipation of two modules vs. direct current

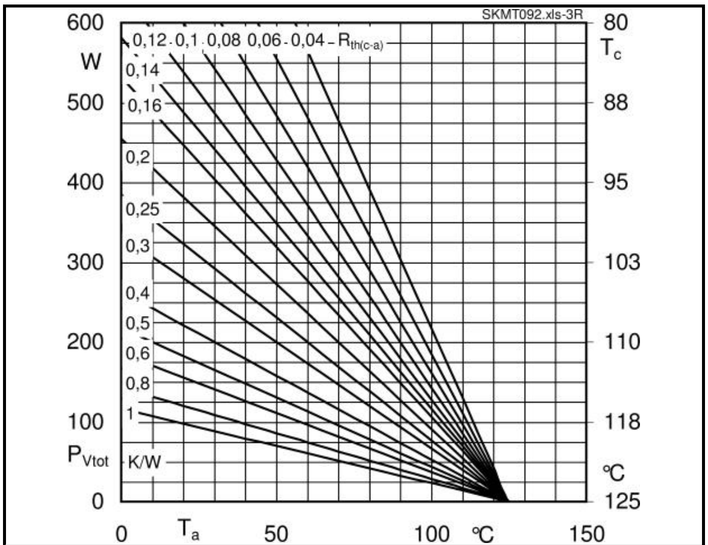


Fig. 3R Power dissipation of two modules vs. case temp.

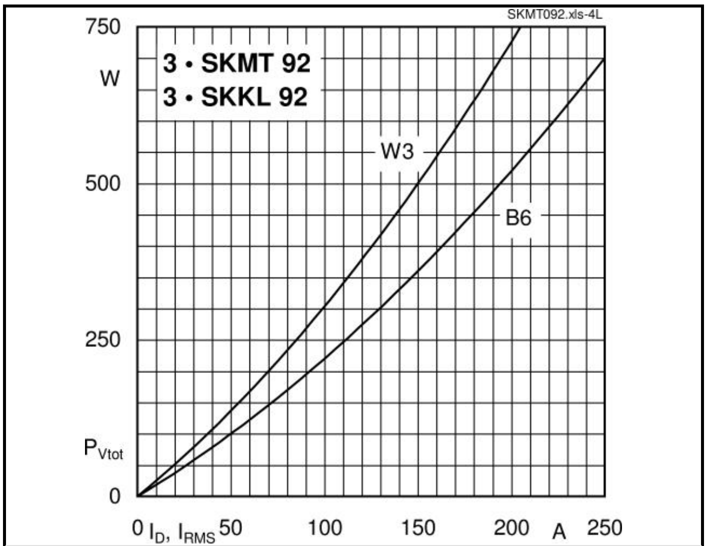


Fig. 4L Power dissipation of three modules vs. direct and rms current

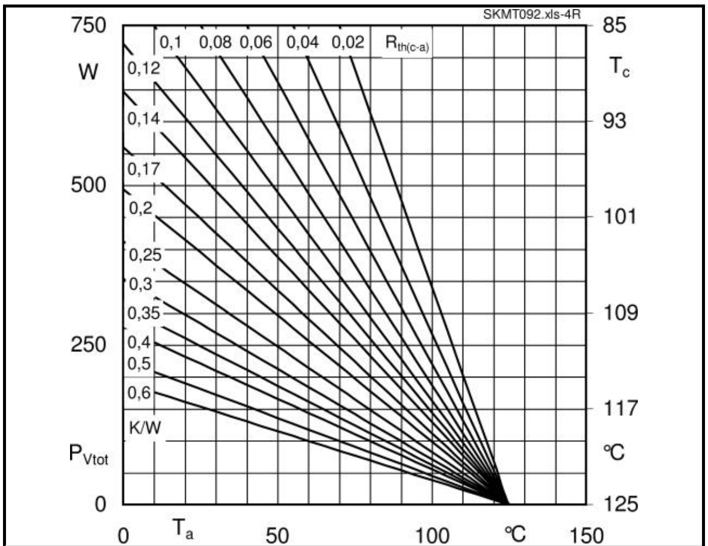


Fig. 4R Power dissipation of three modules vs. case temp.

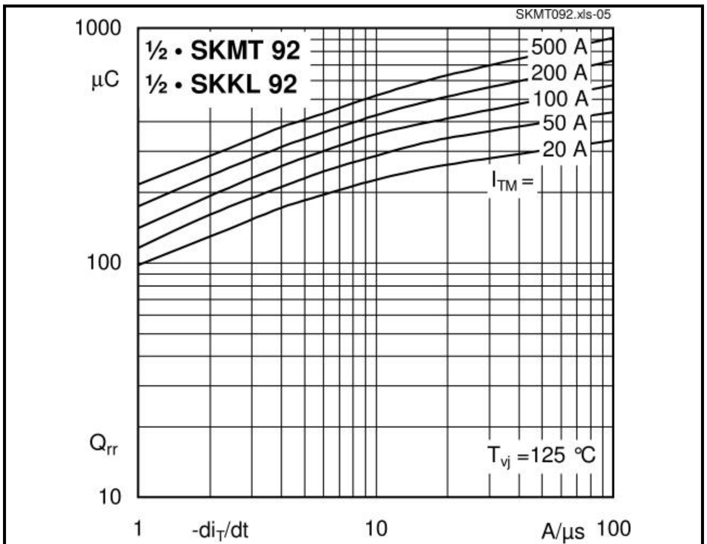


Fig. 5 Recovered charge vs. current decrease

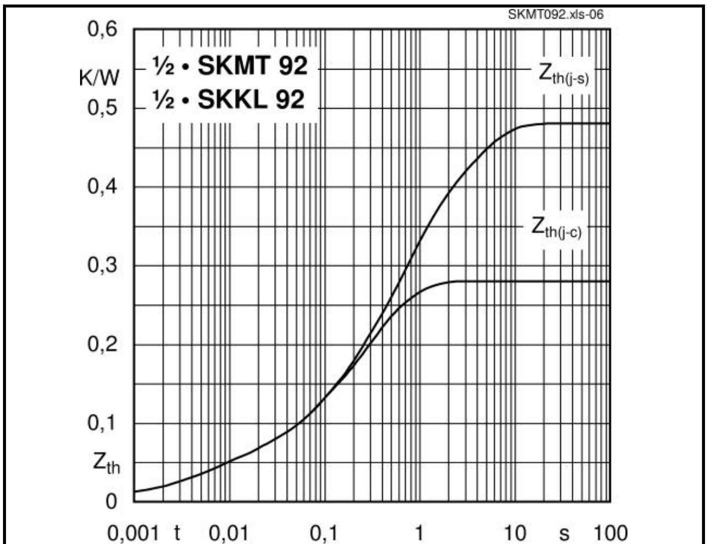


Fig. 6 Transient thermal impedance vs. time

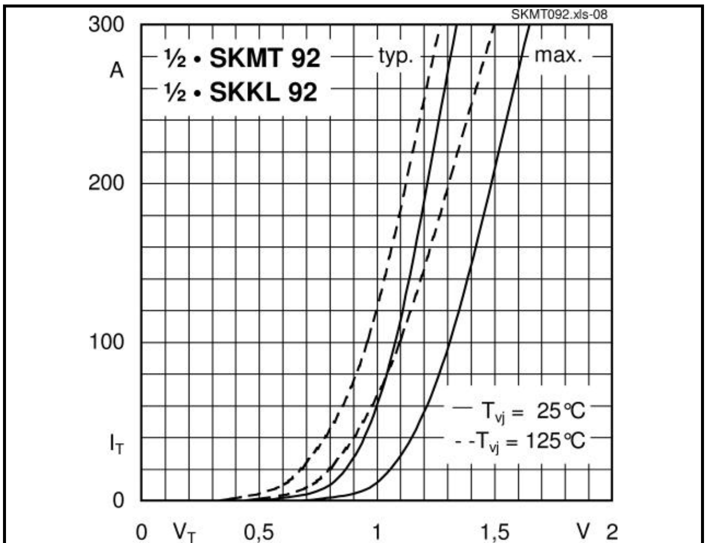


Fig. 7 On-state characteristics

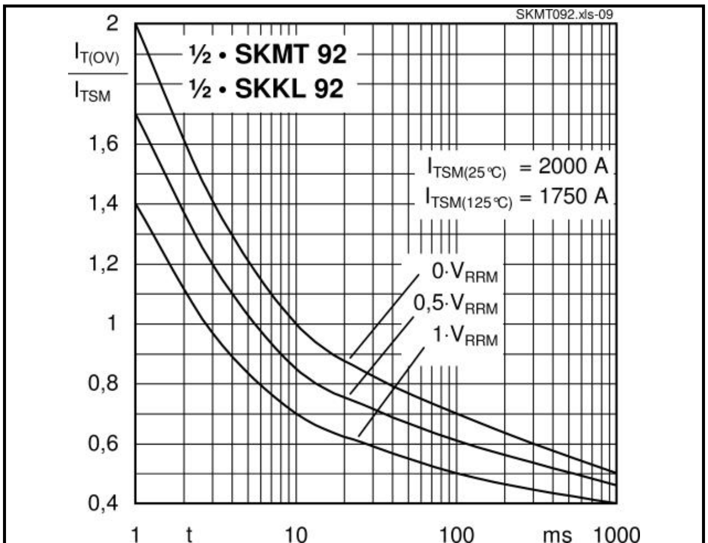


Fig. 8 Surge overload current vs. time

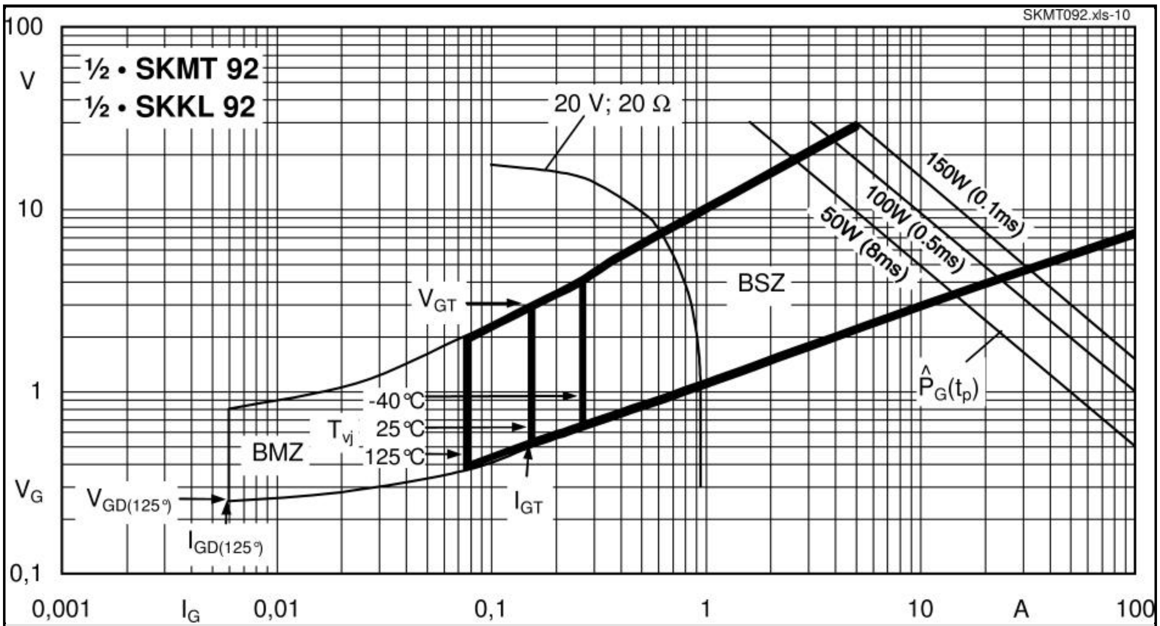
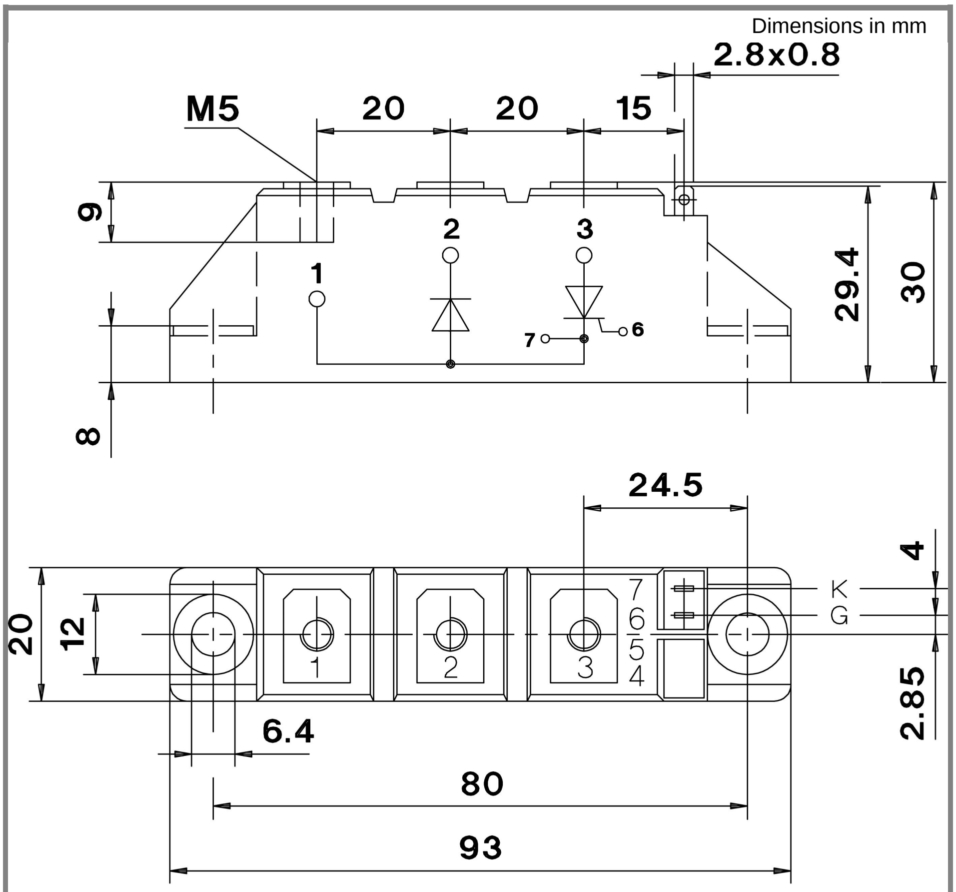
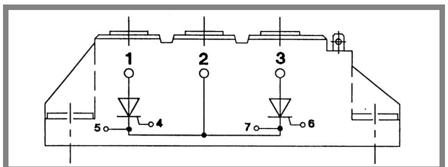


Fig. 9 Gate trigger characteristics



Case A 59 (SKKL)



Case A 72 SKMT

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