

SKMT 92, SKKL 92



SEMIPACK[®] 1

Thyristor / Diode Modules

SKMT 92, SKKL 92

Features

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

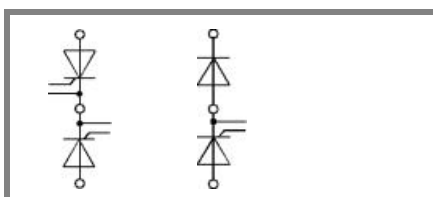
Typical Applications

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

1) See the assembly instructions

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	

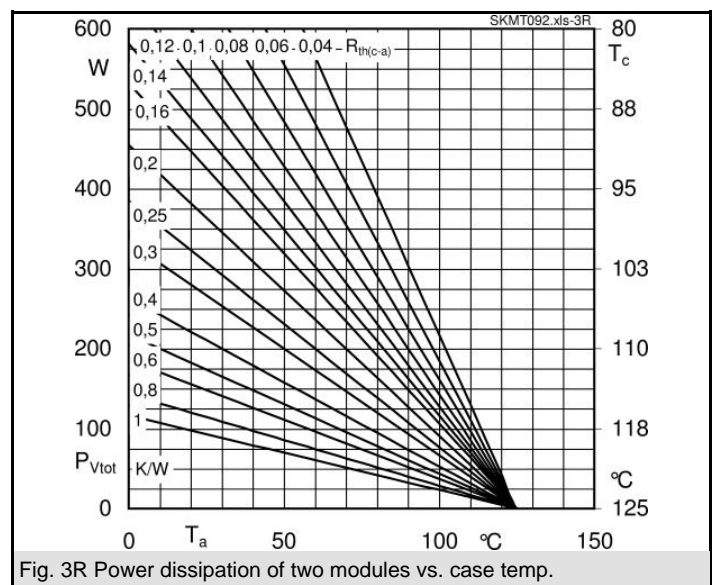
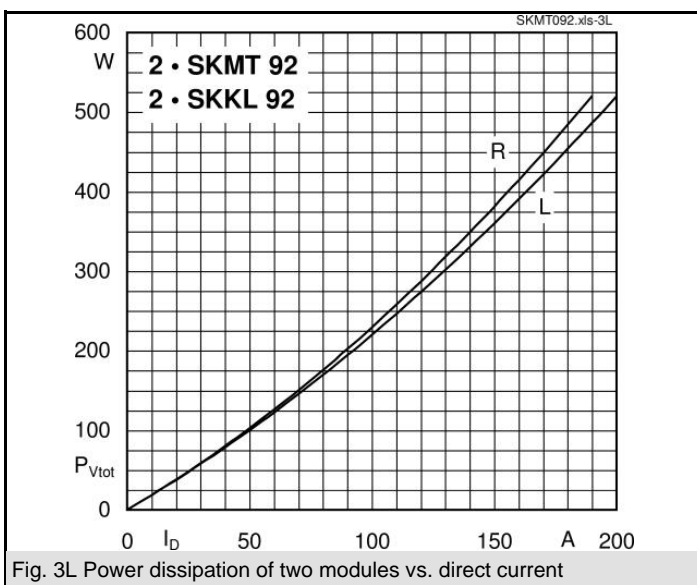
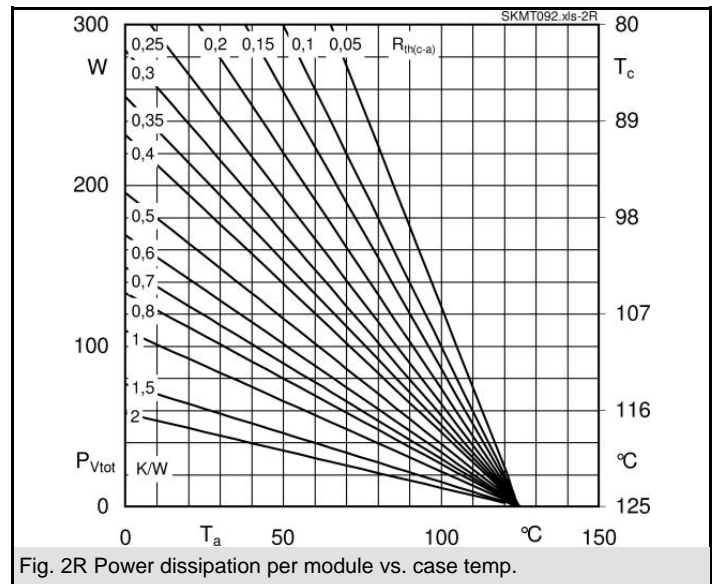
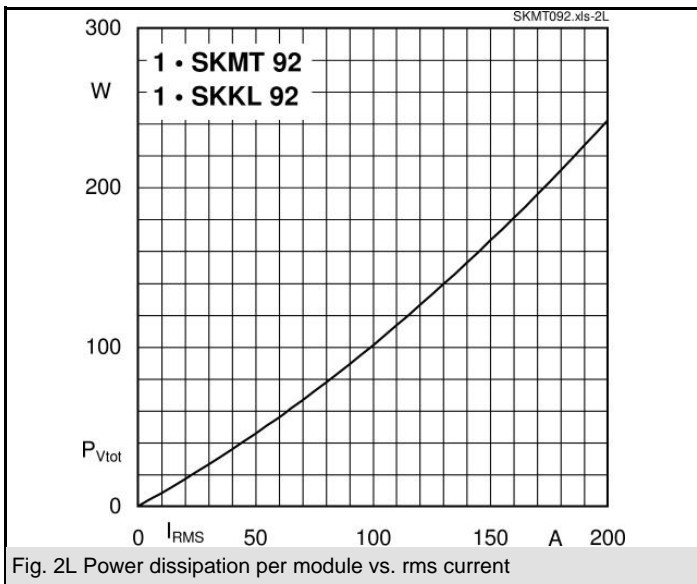
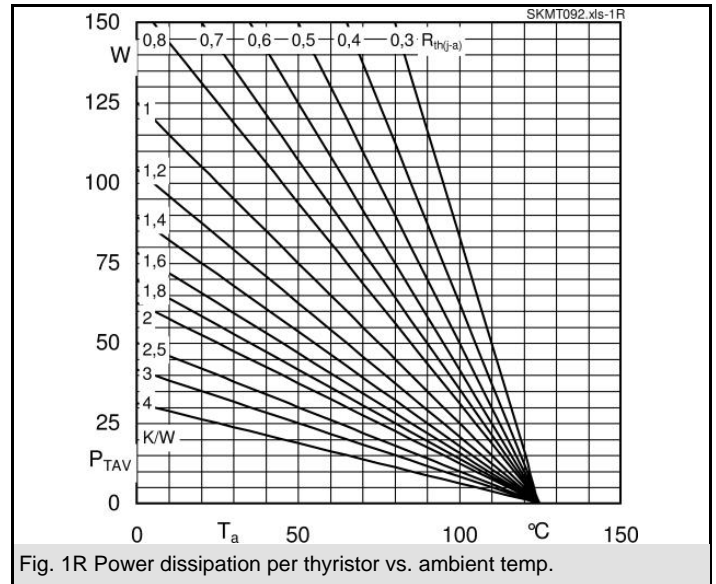
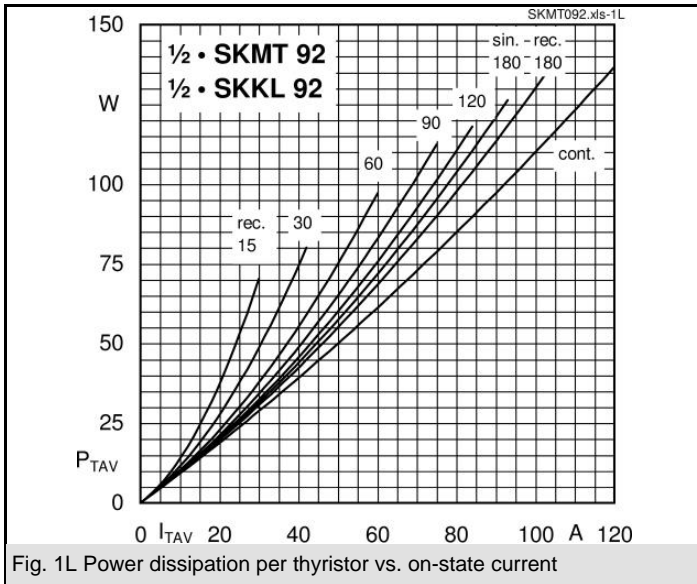
Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C	95 (68)	A
I_D	P3/180; $T_a = 45$ °C; B2 / B6	70 / 85	A
	P3/180F; $T_a = 35$ °C; B2 / B6	140 / 175	A
I_{RMS}	P3/180F; $T_a = 35$ °C; W1 / W3	190 / 3 * 135	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	2000	A
	$T_{vj} = 125$ °C; 10 ms	1750	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	20000	A ² s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	15000	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 300$ A	max. 1,65	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	0,9	V
r_T	$T_{vj} = 125$ °C	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
	sin. 180; per thyristor / per module	0,3 / 0,15	K/W
	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/s ²
m	approx.	95	g
Case	SKMT	A 72	
	SKKL	A 59	



SKMT

SKKL

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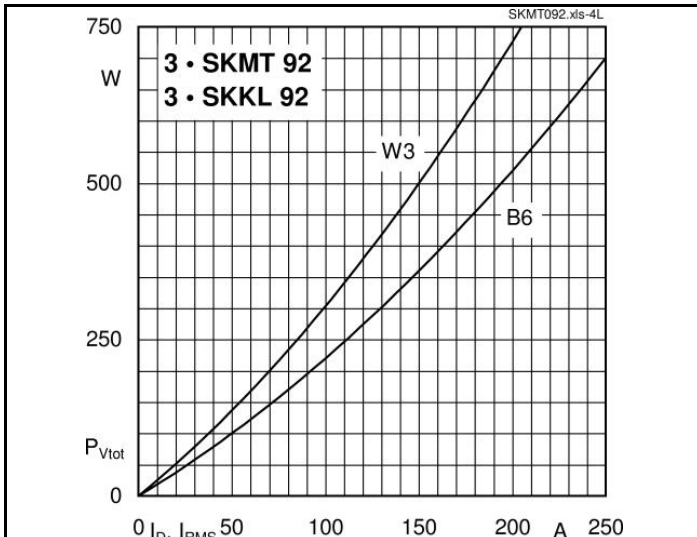


Fig. 4L Power dissipation of three modules vs. direct and rms current

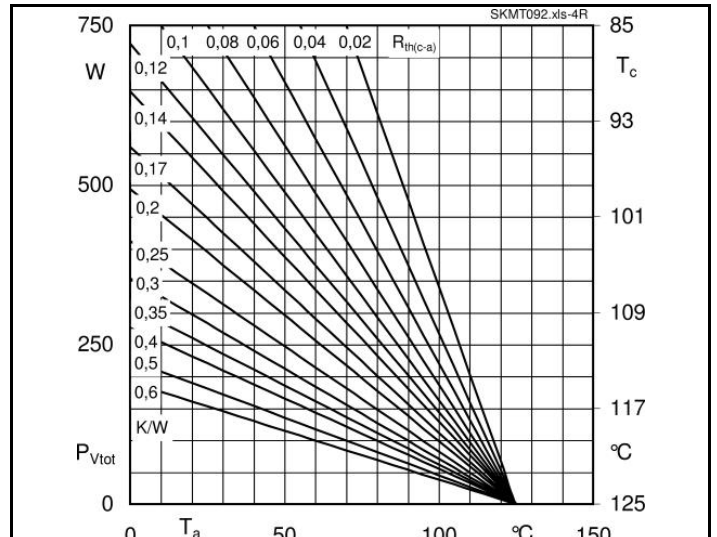


Fig. 4R Power dissipation of three modules vs. case temp.

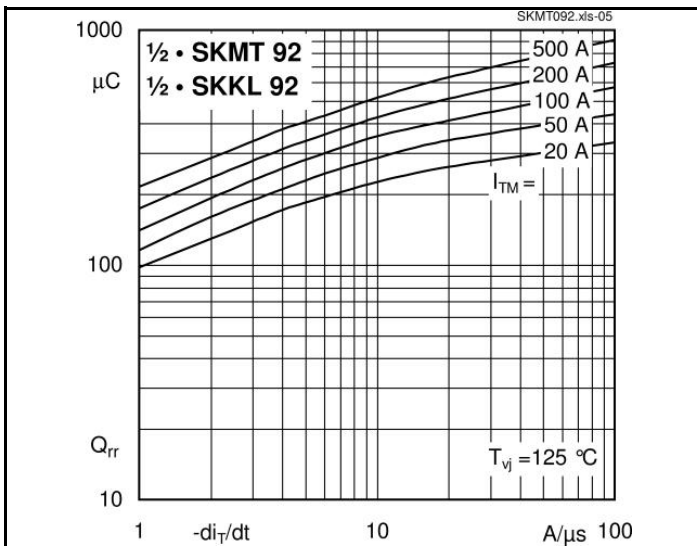


Fig. 5 Recovered charge vs. current decrease

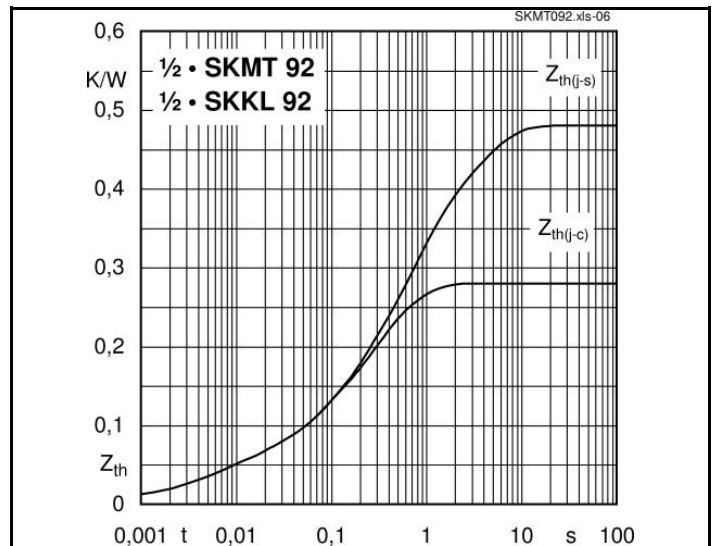


Fig. 6 Transient thermal impedance vs. time

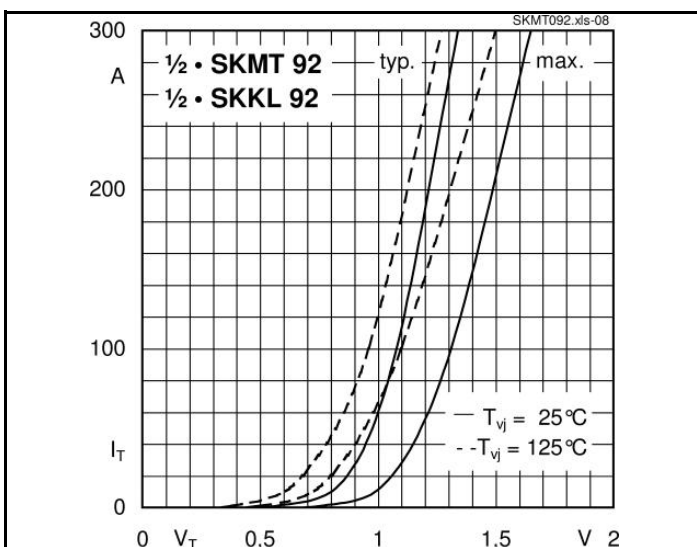


Fig. 7 On-state characteristics

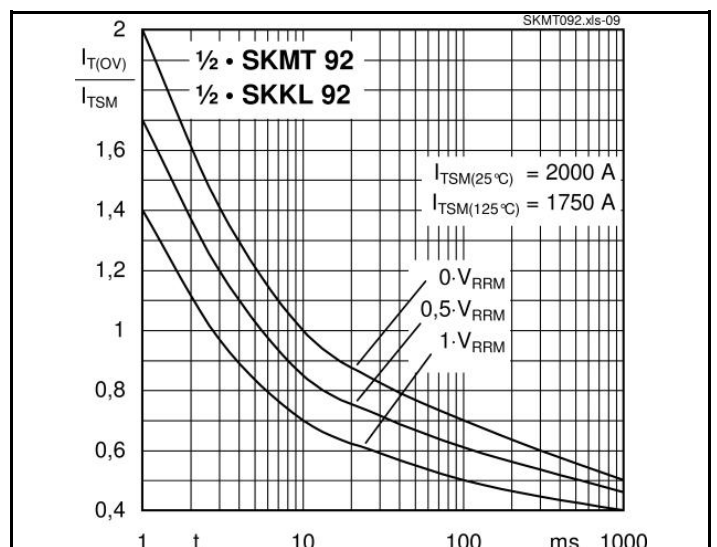
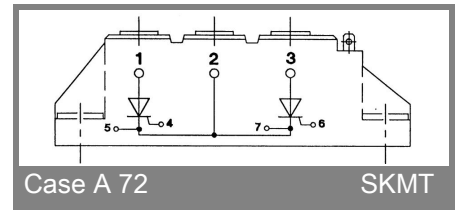
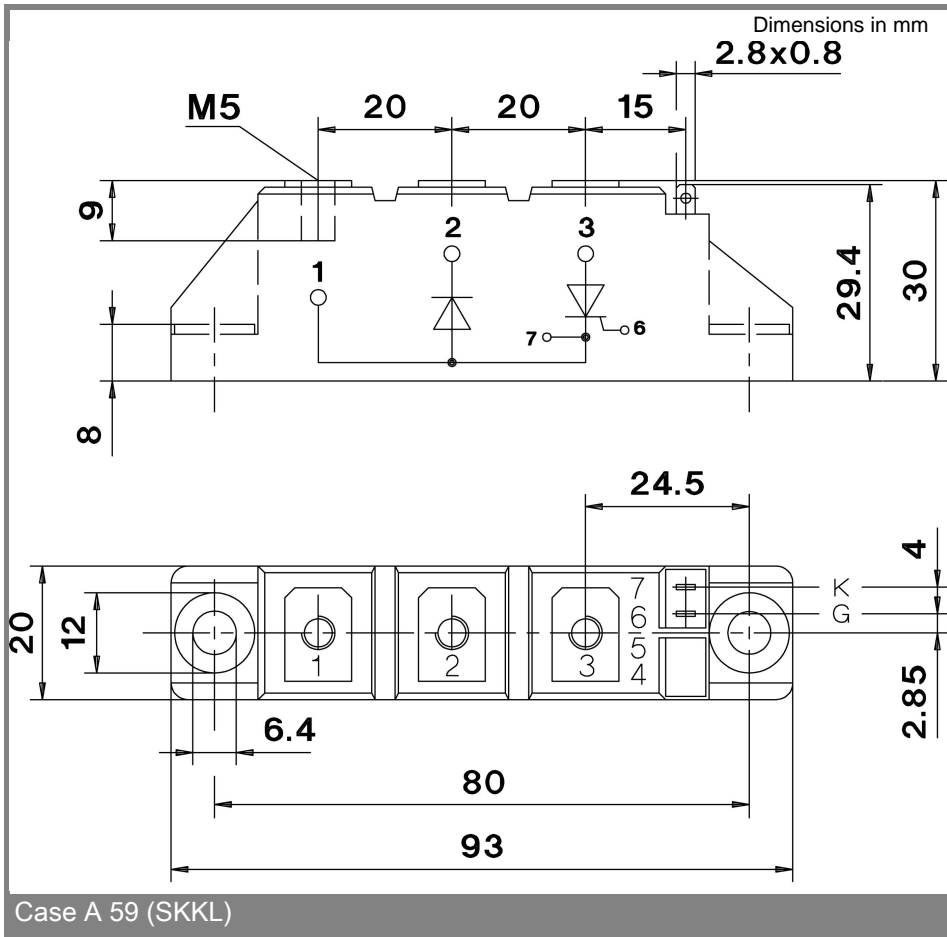


Fig. 8 Surge overload current vs. time

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