

Features

- Heat transfer through aluminium oxide ceramic isolated metal
- Hard soldered joints for high reliability
- Space and weight savings

Typical Applications

- Various rectifiers
- AC/DC Motor drives
- DC supply for PWM inverter



Symbol	I _{RMS} =150A (maximum value for continuous operation)					Units
	I _{TAV} =95A (sin.180; T _c =85°C)					
	SKKT92/08E	SKKT92/12E	SKKT92/14E	SKKT92/16E	SKKT92/18E	
	SKKH92/08E	SKKH92/12E	SKKH92/14E	SKKH92/16E	SKKH92/18E	
	SKKT92B/08E	SKKT92B/12E	SKKT92B/14E	SKKT92B/16E	SKKT92B/18E	
V _{RRM} , V _{DRM}	800	1200	1400	1600	1800	V
V _{RSM}	900	1300	1500	1700	1900	V

Electrical characteristics

Symbol	Conditions	Values	Units
I_{TAV}	sin.180; $T_c=85(100)^\circ C$;	95(68)	A
I_D	P3/180; $T_a=45^\circ C$; B2/B6	70/85	A
	P3/180F; $T_a=35^\circ C$; B2/B6	140/175	A
I_{RMS}	P3/180F; $T_a=35^\circ C$; W1/W3	190/3 * 135	A
I_{TSM}	$T_{vj}=25^\circ C$; 10ms	2000	A
	$T_{vj}=125^\circ C$; 10ms	1750	A
I^2t	$T_{vj}=25^\circ C$; 8.3...10ms	20000	A ² s
	$T_{vj}=125^\circ C$; 8.3...10ms	15000	A ² s
V_T	$T_{vj}=25^\circ C$, $I_T=300A$	max.1.65	V
$V_{T(TO)}$	$T_{vj}=125^\circ C$	max.0.9	V
r_T	$T_{vj}=125^\circ C$	max.2	mΩ
I_{DD}, I_{RD}	$T_{vj}=125^\circ C$, $V_{RD}=V_{RRM}$, $V_{DD}=V_{DRM}$	max.20	mA
t_{gd}	$T_{vj}=25^\circ C$; $I_G=1A$; $di_G/dt=1A/\mu s$	1	μs
t_{gr}	$V_D=0.67 \cdot V_{DRM}$	2	μs
(dv/dt)cr	$T_{vj}=125^\circ C$	max.1000	V/μs
(di/dt)cr	$T_{vj}=125^\circ C$	max.150	A/μs
t_q	$T_{vj}=125^\circ C$	100	μs
I_H	$T_{vj}=25^\circ C$; typ./max.	150/250	mA
I_L	$T_{vj}=25^\circ C$; $R_G=33\Omega$; typ./max.	300/600	mA

V_{GT}	$T_{vj}=25^{\circ}\text{C}; \text{d.c.}$	min.3	V
I_{GT}	$T_{vj}=25^{\circ}\text{C}; \text{d.c.}$	min.150	mA
V_{GD}	$T_{vj}=125^{\circ}\text{C}; \text{d.c.}$	max.0.25	V
I_{GD}	$T_{vj}=125^{\circ}\text{C}; \text{d.c.}$	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
$R_{th(j-s)}$	per thyristor/per module	0.2/0.1	K/W
T_{vj}		-40...+125	$^{\circ}\text{C}$
T_{stg}		-40...+125	$^{\circ}\text{C}$
V_{isol}	a.c.50Hz; r.m.s; 1s/1min.	3600/3000	V~
M_s	to heatsink	$5 \pm 15\%^1)$	Nm
M_t	to terminals	$3 \pm 15\%$	Nm
a		$5 \cdot 9.81$	m/s^2
m	approx.	95	g

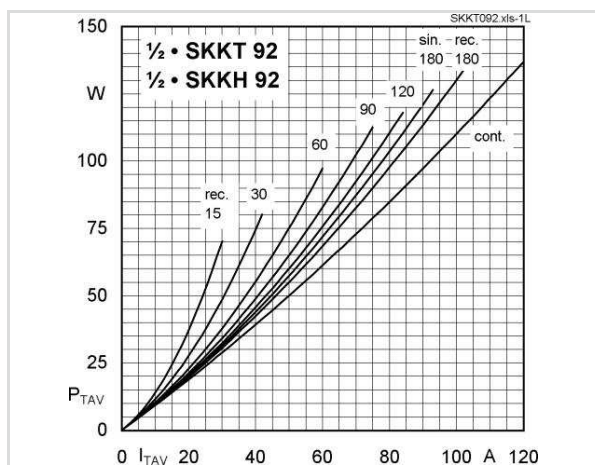


Fig. 1L Power dissipation per thyristor vs. on-state current

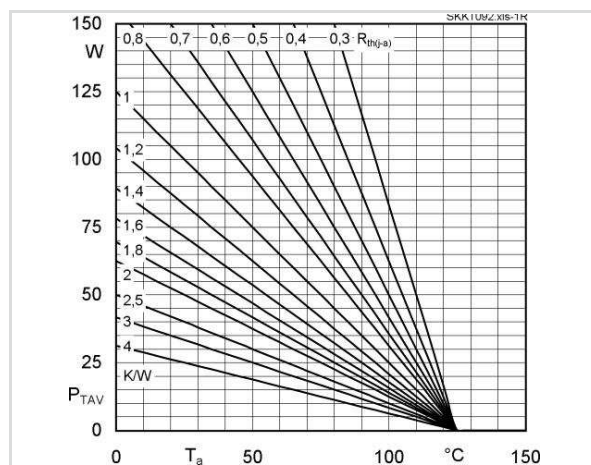


Fig. 1R Power dissipation per thyristor vs. ambient temp.

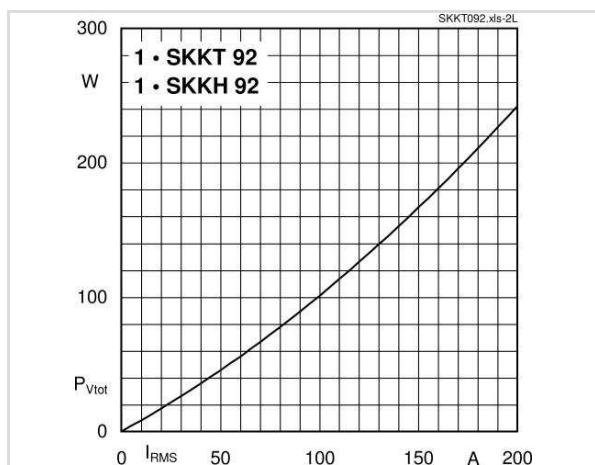


Fig. 2L Power dissipation per module vs. rms current

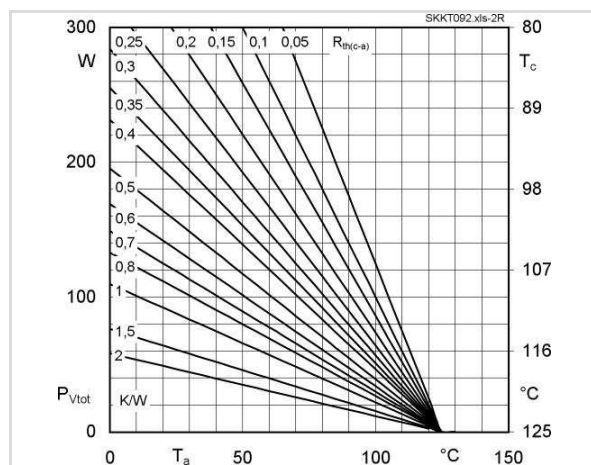


Fig. 2R Power dissipation per module vs. case temp.

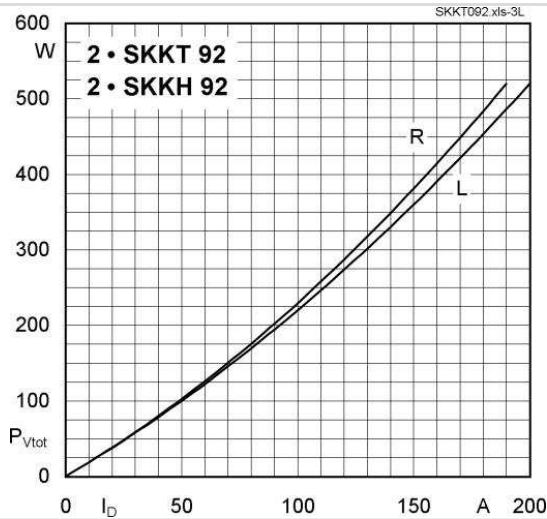


Fig. 3L Power dissipation of two modules vs. direct current

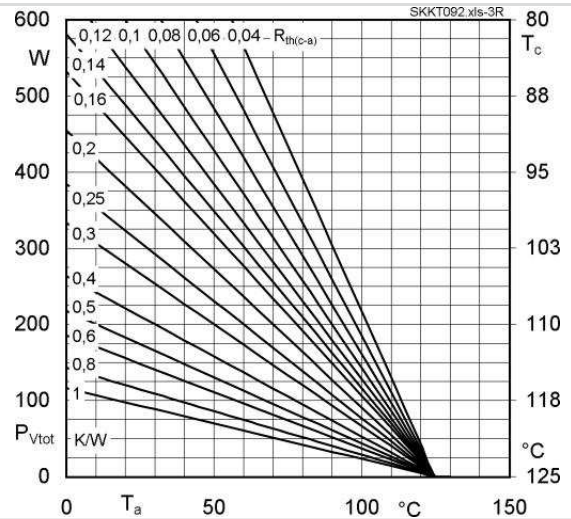


Fig. 3R Power dissipation of two modules vs. case temp.

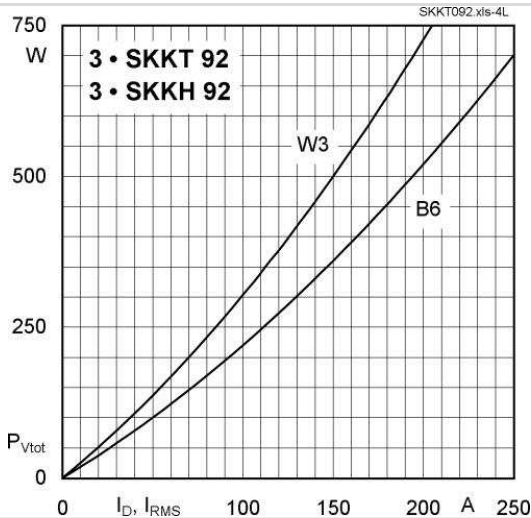


Fig. 4L Power dissipation of three modules vs. direct and rms current

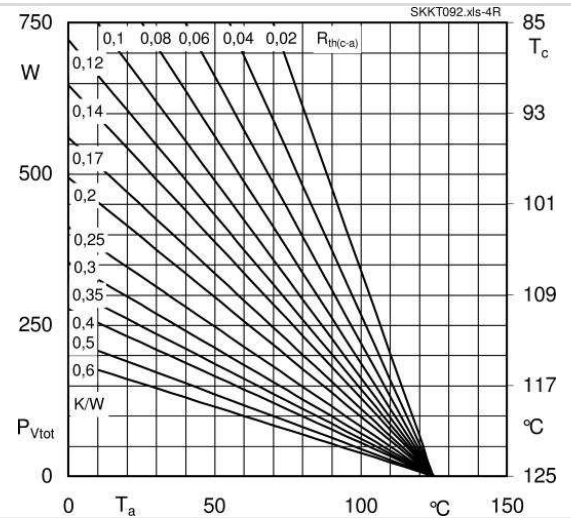


Fig. 4R Power dissipation of three modules vs. case temp.

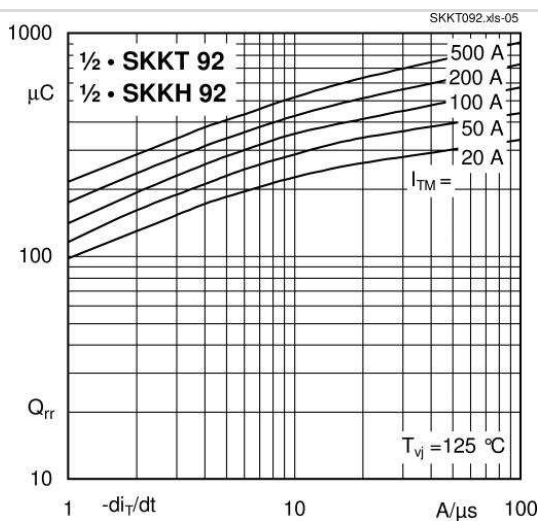


Fig. 5 Recovered charge vs. current decrease

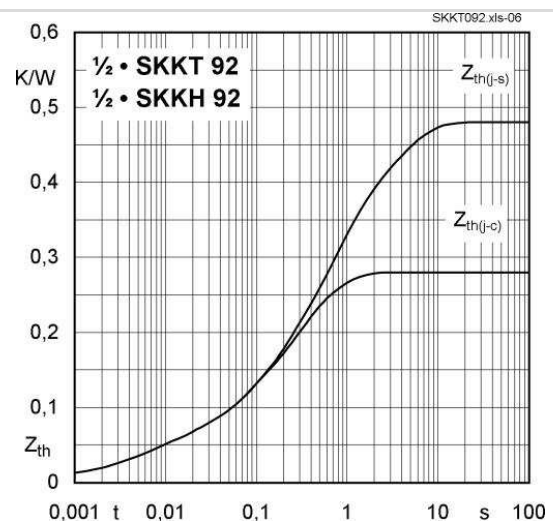


Fig. 6 Transient thermal impedance vs. time

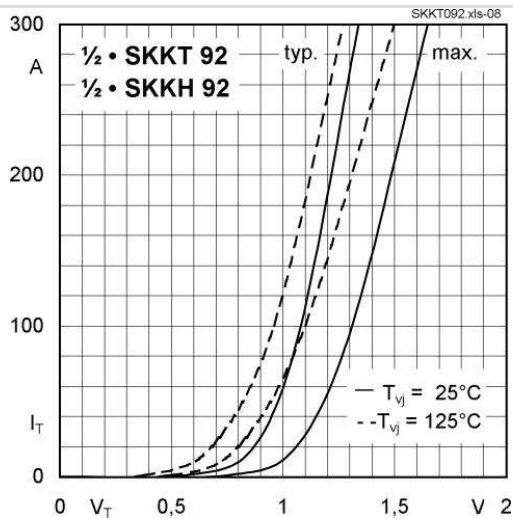


Fig. 7 On-state characteristics

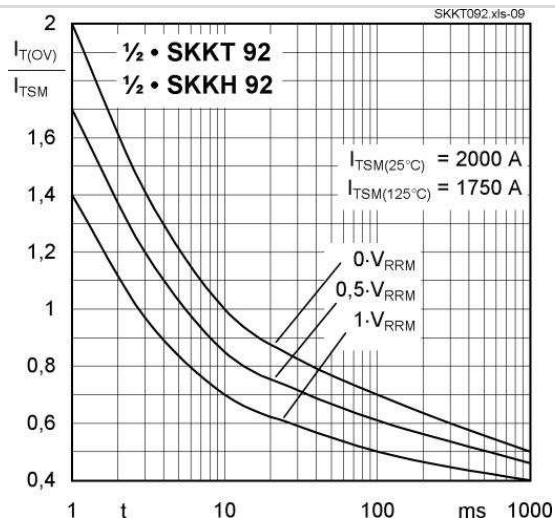


Fig. 8 Surge overload current vs. time

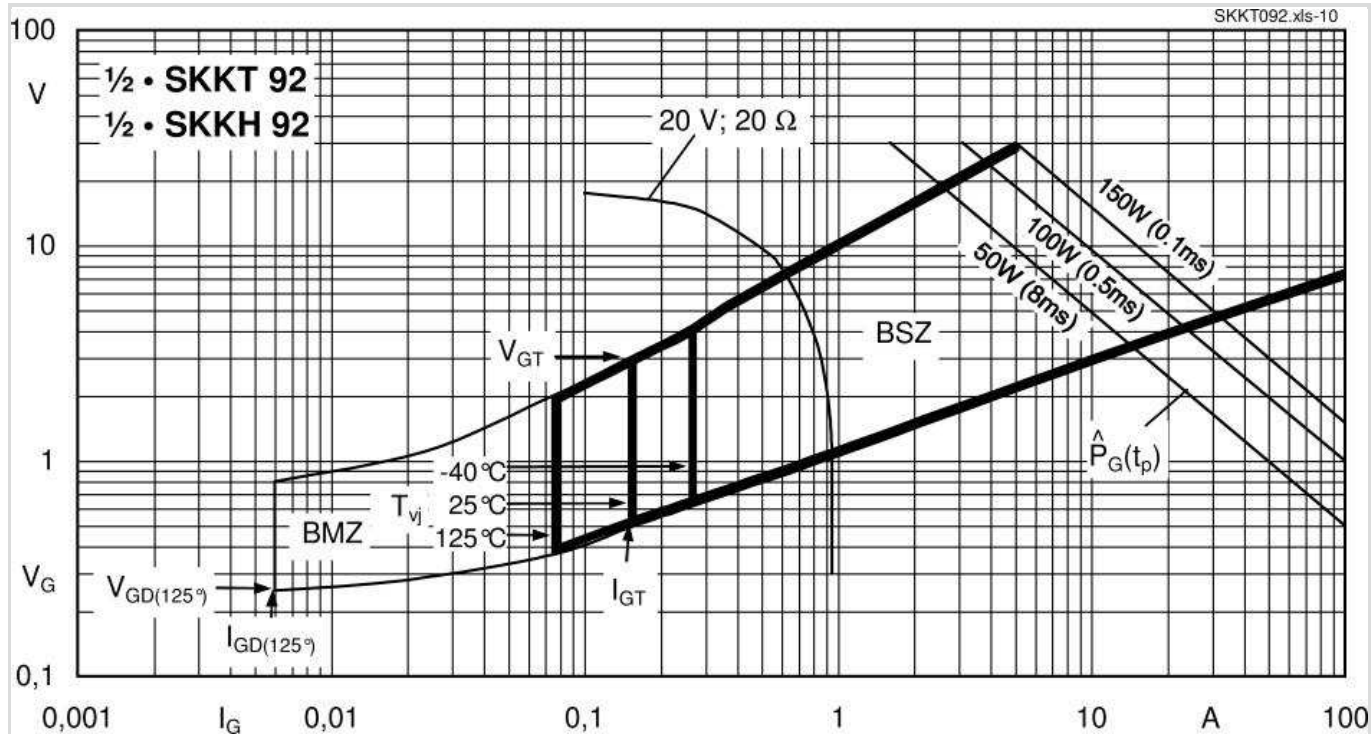
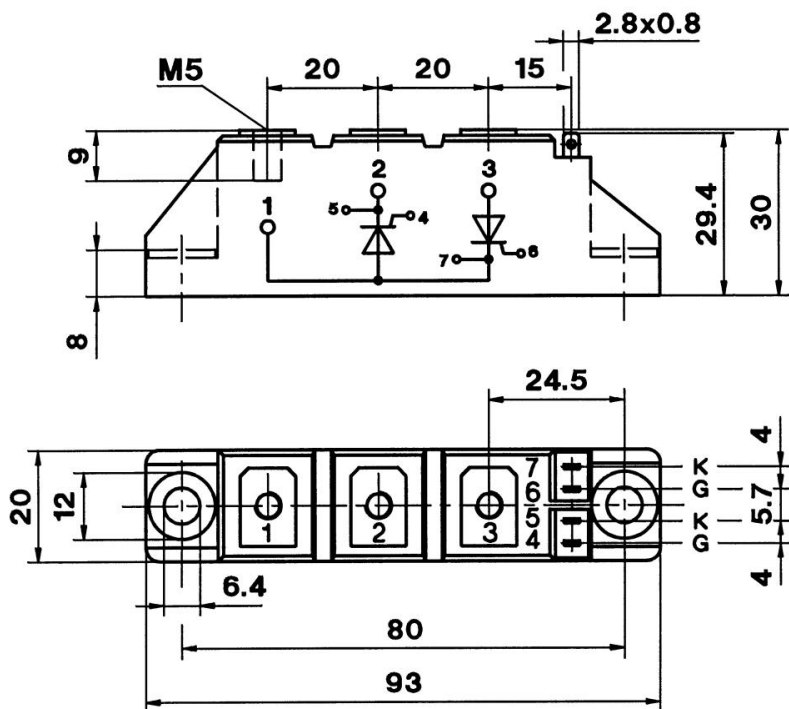


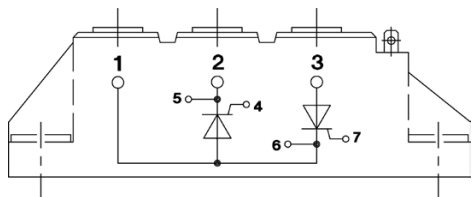
Fig. 9 Gate trigger characteristics

Dimensions in mm

05

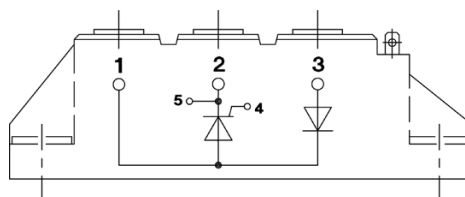


Case A 46 (SKKT)



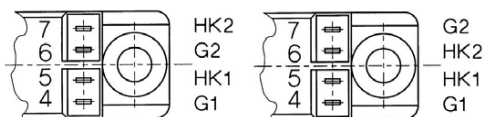
Case A 48

SKKT.. B



Case A 47

SKKH



SKKT

SKKT...B