

SKKT42,SKKH42,SKKT42B

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	IRMS=75A (maximum value for continuous operation) ITAV=40A (sin.180; Tc=85°C)					Units
	SKKT42/08E SKKH42/08E SKKT42B/08E	SKKT42/12E SKKH42/12E SKKT42B/12E	SKKT42/14E SKKH42/14E SKKT42B/14E	SKKT42/16E SKKH42/16E SKKT42B/16E	SKKT42/18E SKKH42/18E SKKT42B/18E	
VRRM,VDRM	800	1200	1400	1600	1800	V
VRSM	900	1300	1500	1700	1900	V

Electrical characteristics

Symbol	Conditions	Values	Units
ITAV	sin.180; Tc=85(100)°C;	42(28)	A
ID	P3/180;Ta=45°C;B2/B6	50/60	A
	P3/180F;Ta=35°C;B2/B6	85/110	A
IRMS	P3/180F;Ta=35°C;W1/W3	110/3 * 85	A
ITSM	Tvj=25°C; 10ms	1000	A
	Tvj=125°C; 10ms	850	A
I²t	Tvj=25°C; 8.3...10ms	5000	A²s
	Tvj=125°C; 8.3...10ms	3600	A²s
VT	Tvj=25°C, IT=200A	max.1.95	V
VT(TO)	Tvj=125°C	max.1	V
rT	Tvj=125°C	max.4.5	mΩ
IDD;IRD	Tvj=125°C, VRD=VRRM; VDD=VDRM	max.15	mA
tgd	Tvj=25°C;IG=1A;die/dt=1A/μs	1	μs
tgr	VD=0.67*VDRM	2	μs
(dv/dt)cr	Tvj=125°C	max.1000	V/μs
(di/dt)cr	Tvj=125°C	max.150	A/μs
tq	Tvj=125°C	80	μs
IH	Tvj=25°C;typ./max.	150/250	mA
IL	Tvj=25°C; RG=33Ω; typ./max.	300/600	mA
VGT	Tvj=25°C;d.c	min.3	V
IGT	Tvj=25°C;d.c	min.150	mA
VGD	Tvj=125°C;d.c	max.0.25	V
IGD	Tvj=125°C;d.c	max.6	mA
Rth(j-c)	cont.per thyristor/per module	0.65/0.33	K/W
Rth(j-c)	sin.180;per thyristor/per module	0.69/0.35	K/W
Rth(j-c)	rec.120;per thyristor/per module	0.73/0.37	K/W
Rth(j-s)	per thyristor/per module	0.2/0.1	K/W
Tvj		-40...+125	°C
Tstg		-40...+125	°C
Visol	a.c.50Hz; r.m.s; 1s/1min.	3600/3000	V~
Ms	to heatsink	5±15%¹)	Nm
Mt	to terminals	3±15%	Nm
a		5*9.81	m/s²
m	approx.	95	g

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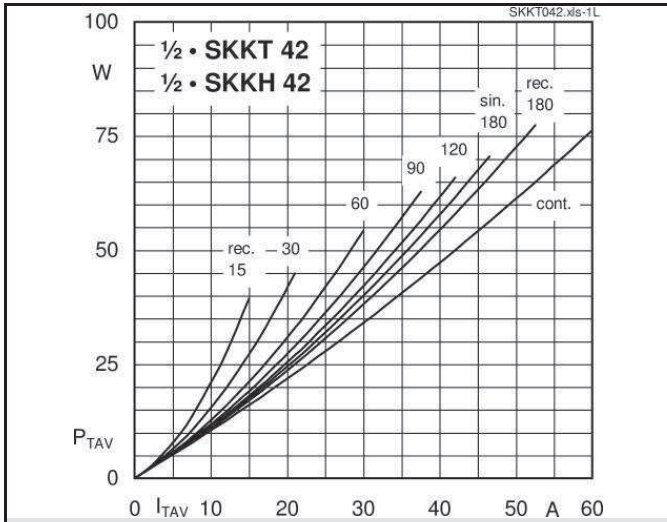


Fig. 1L Power dissipation per thyristor vs. on-state current

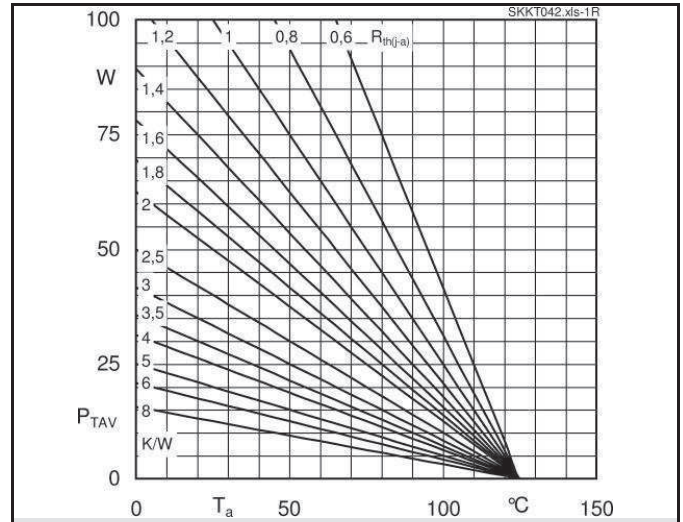


Fig. 1R Power dissipation per thyristor vs. ambient temp.

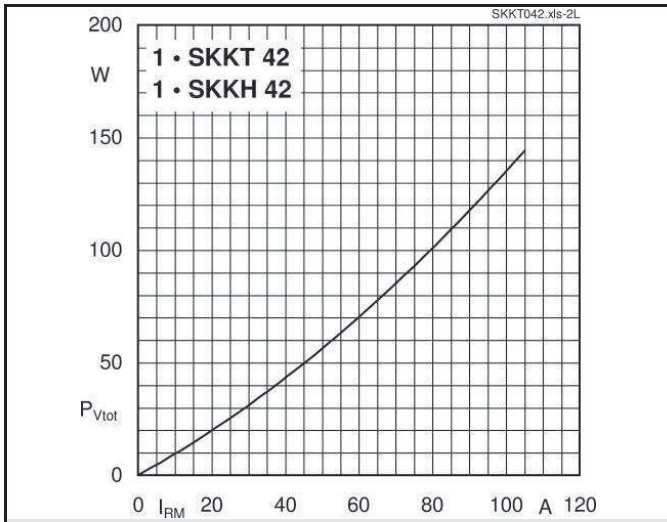


Fig. 2L Power dissipation per module vs. rms current

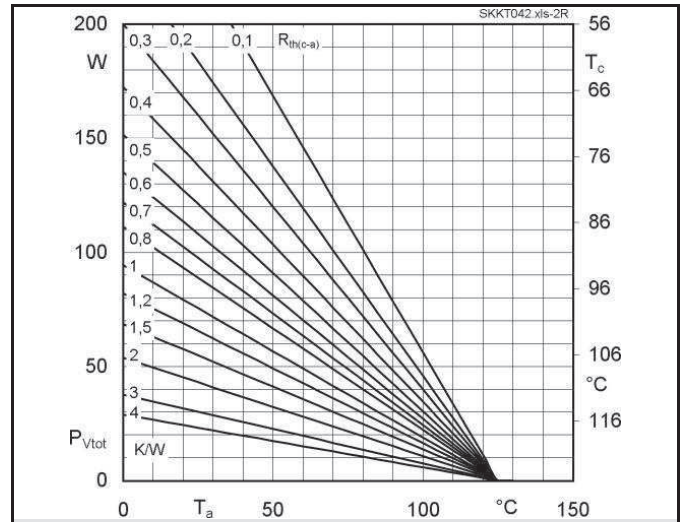


Fig. 2R Power dissipation per module vs. case temp.

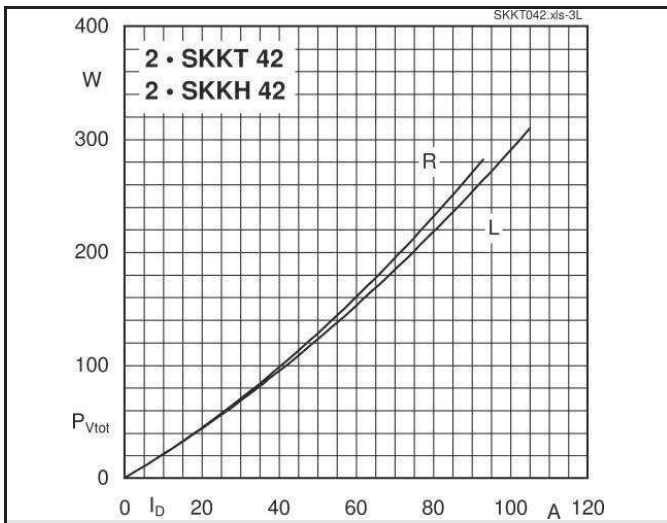


Fig. 3L Power dissipation of two modules vs. direct current

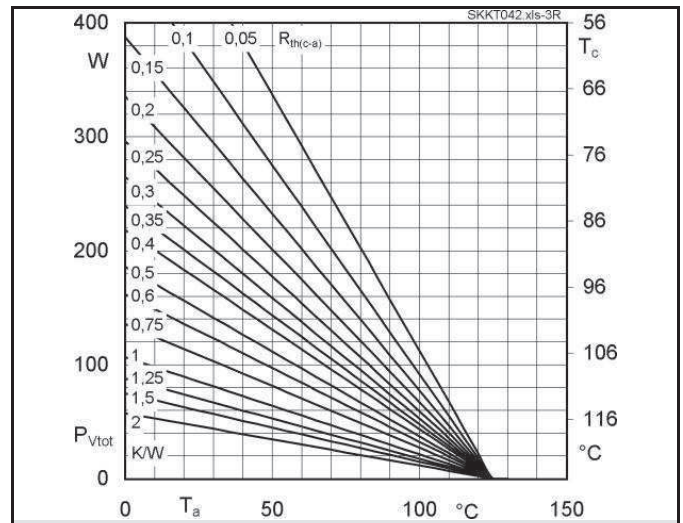


Fig. 3R Power dissipation of two modules vs. case temp.

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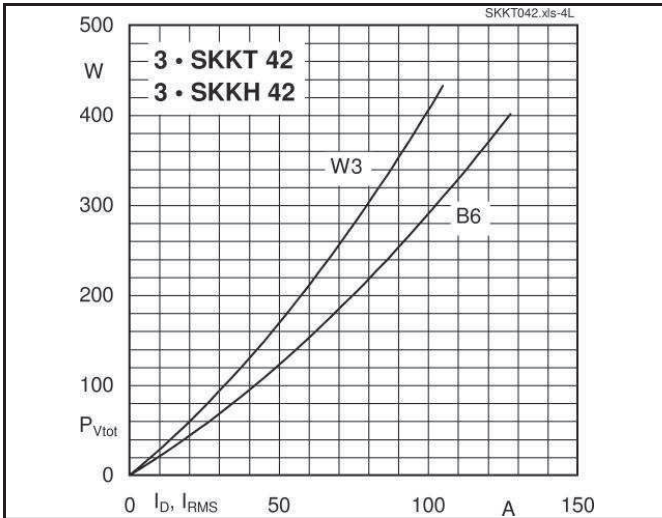


Fig. 4L Power dissipation of three modules vs. direct and rms current

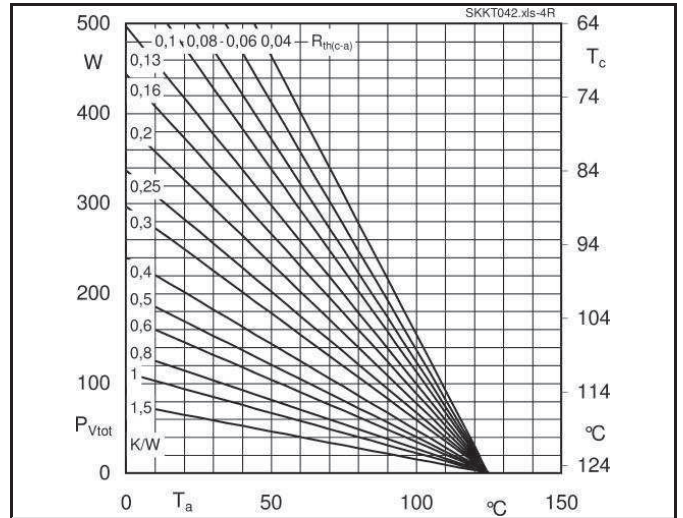


Fig. 4R Power dissipation of three modules vs. case temp.

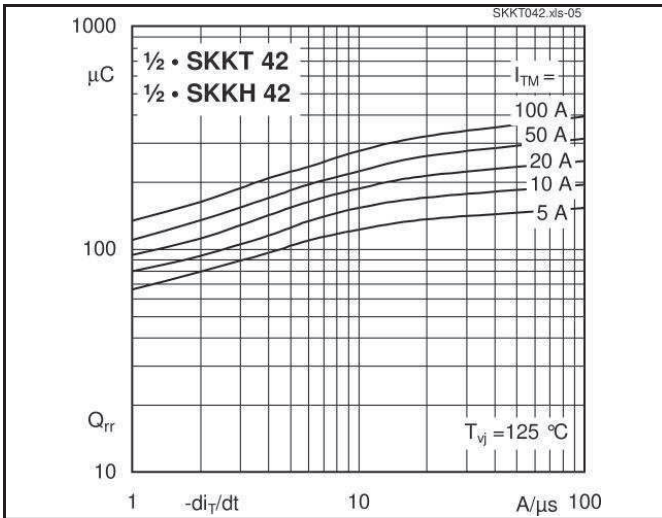


Fig. 5 Recovered charge vs. current decrease

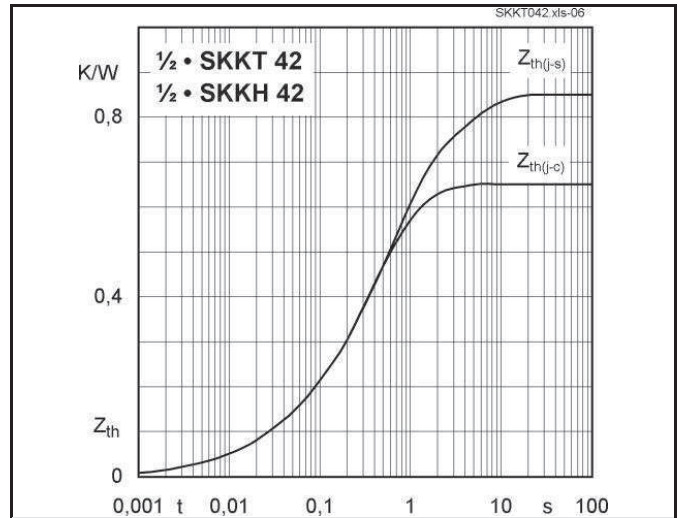


Fig. 6 Transient thermal impedance vs. time

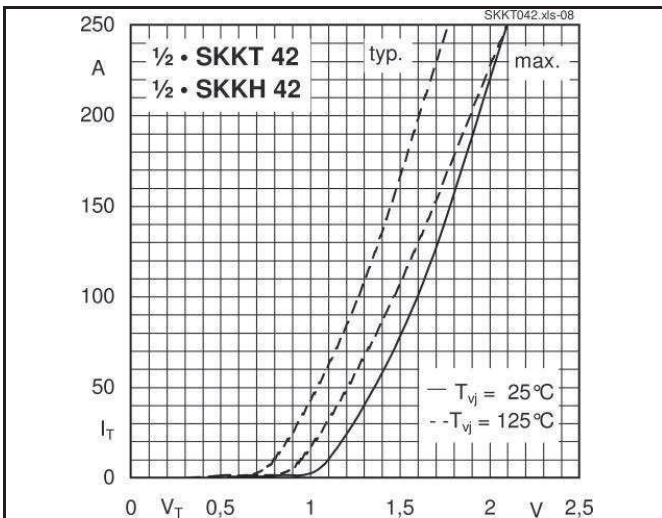


Fig. 7 On-state characteristics

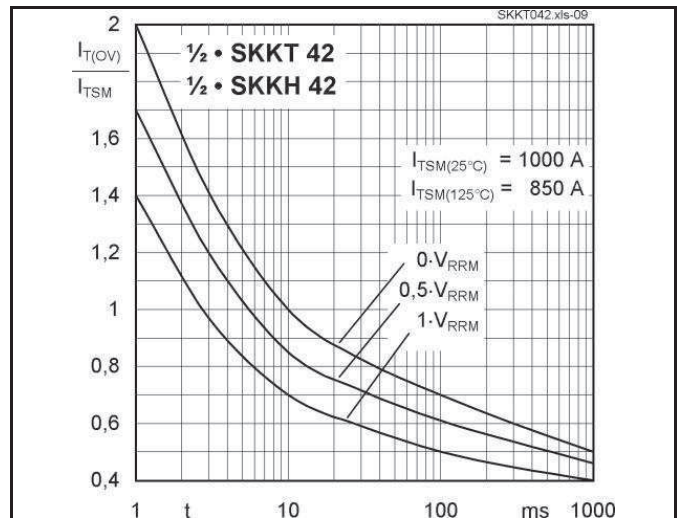
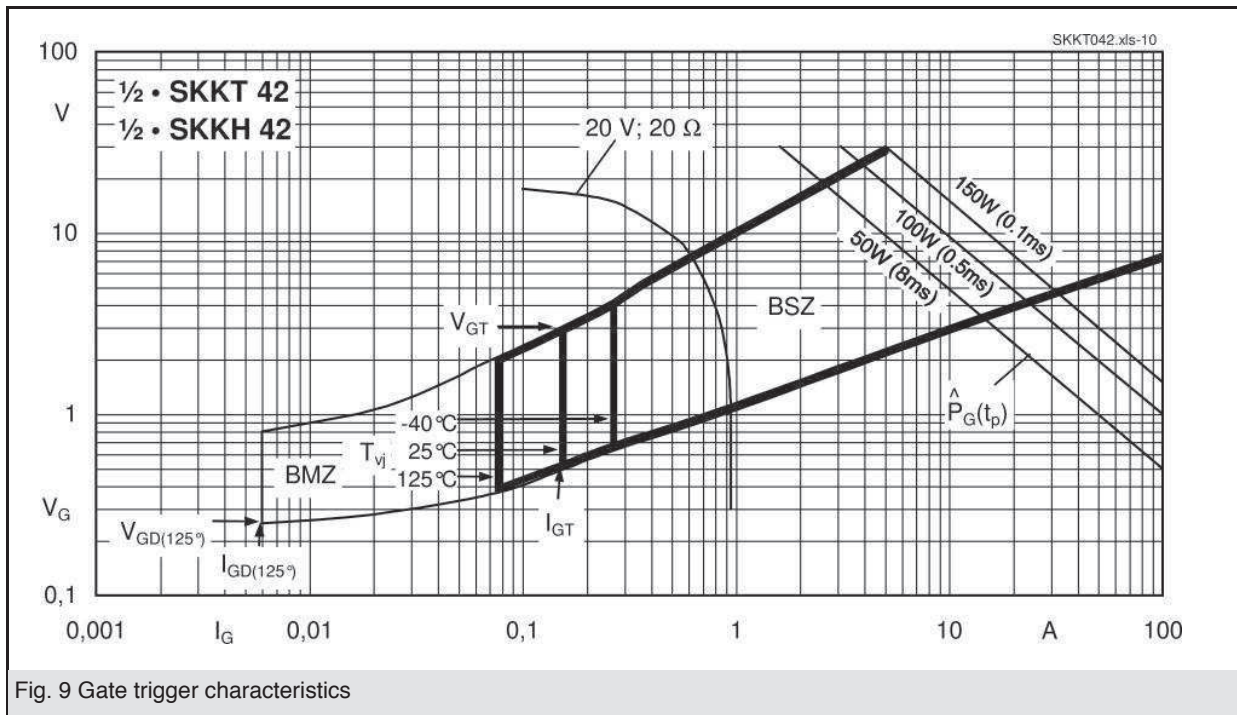


Fig. 8 Surge overload current vs. time

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Dimensions in mm

