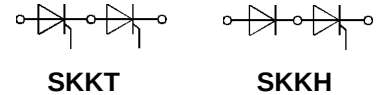
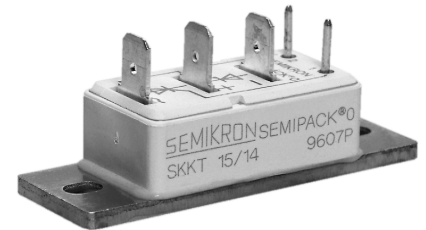


V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation)	
			24 A ¹⁾ ; 30 A ²⁾	24 A ¹⁾ ; 45 A ²⁾
V	V	V/ μ s	I_{TAV} (sin. 180; $T_{case} = 65^\circ C$) 17,5 A ²⁾	17,5 A ²⁾
500	400	500	SKKT 15/04 D	SKKH 15/04 D
700	600	500	SKKT 15/06 D	SKKH 15/06 D
900	800	500	SKKT 15/08 D	SKKH 15/08 D
1300	1200	1000	SKKT 15/12 E	SKKH 15/12 E
1500	1400	1000	SKKT 15/14 E	SKKH 15/14 E
1700	1600	1000	SKKT 15/16 E	SKKH 15/16 E

SEMIPACK® 0 Thyristor / Diode Modules

SKKT 15 SKKH 15



SKKT

SKKH

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)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

Symbol	Conditions	SKKT 15 SKKH 15	Units
I_{TAV}	sin. 180; $T_{case} = 65^\circ C$ $T_{case} = 75^\circ C$	17,5 ²⁾ 15 ¹⁾	A
I_D	B2/B6 $T_{amb} = 45^\circ C$; P 13A/100	14 / 17	A
I_{RMS}	W1/W3 $T_{amb} = 45^\circ C$; P 13A/100	21 / 3 x 12	A
I_{TSM}	$T_{vj} = 25^\circ C$; 10 ms $T_{vj} = 125^\circ C$; 10 ms	320 280	A
i^2t	$T_{vj} = 25^\circ C$; 8,3 ... 10 ms $T_{vj} = 125^\circ C$; 8,3 ... 10 ms	510 390	A ² s A ² s
t_{gd}	$T_{vj} = 25^\circ C$ $I_G = 1 A$ $di_G/dt = 1 A/\mu s$	1	μs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$	1	μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ C$	100	A/ μs
t_q	$T_{vj} = 125^\circ C$	typ. 80	μs
I_H	$T_{vj} = 25^\circ C$; typ./max.	80 / 150	mA
I_L	$T_{vj} = 25^\circ C$; $R_G = 33 \Omega$; typ./max.	150 / 300	mA
V_T	$T_{vj} = 25^\circ C$; $I_T = 75 A$	max. 2,45	V
$V_{T(TO)}$	$T_{vj} = 125^\circ C$	1,1	V
r_T	$T_{vj} = 125^\circ C$	20	m Ω
I_{DD} ; I_{RD}	$T_{vj} = 125^\circ C$; $V_{RD} = V_{RRM}$ $V_{DD} = V_{DRM}$	max. 8	mA
V_{GT}	$T_{vj} = 25^\circ C$; d.c.	3	V
I_{GT}	$T_{vj} = 25^\circ C$; d.c.	100	mA
V_{GD}	$T_{vj} = 125^\circ C$; d.c.	0,25	V
I_{GD}	$T_{vj} = 125^\circ C$; d.c.	5	mA
R_{thjh}	cont. sin. 180 rec. 120	1,6 / 0,8 1,7 / 0,9 1,8 / 0,9	$^\circ C/W$ $^\circ C/W$ $^\circ C/W$
R_{thch}	per thyristor / per module	0,2 / 0,1	$^\circ C/W$
T_{vj}		- 40 ... + 125	$^\circ C$
T_{stg}		- 40 ... + 125	$^\circ C$
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min	3600 / 3000	V~
M_1	Case to heatsink; SI (US) units	1,5 (13 lb. in.) $\pm 15\%$ ³⁾	Nm
a		5 · 9,81	m/s ²
w	approx.	50	g
Case	→ page B 1 – 30	SKKT 15: A 1 SKKH 15: A 2	

¹⁾ Using tin plated connectors with flexible leads of 6 mm² for the main terminals

²⁾ Flexible leads of 6 mm² soldered to the main terminals

³⁾ See the assembly instructions

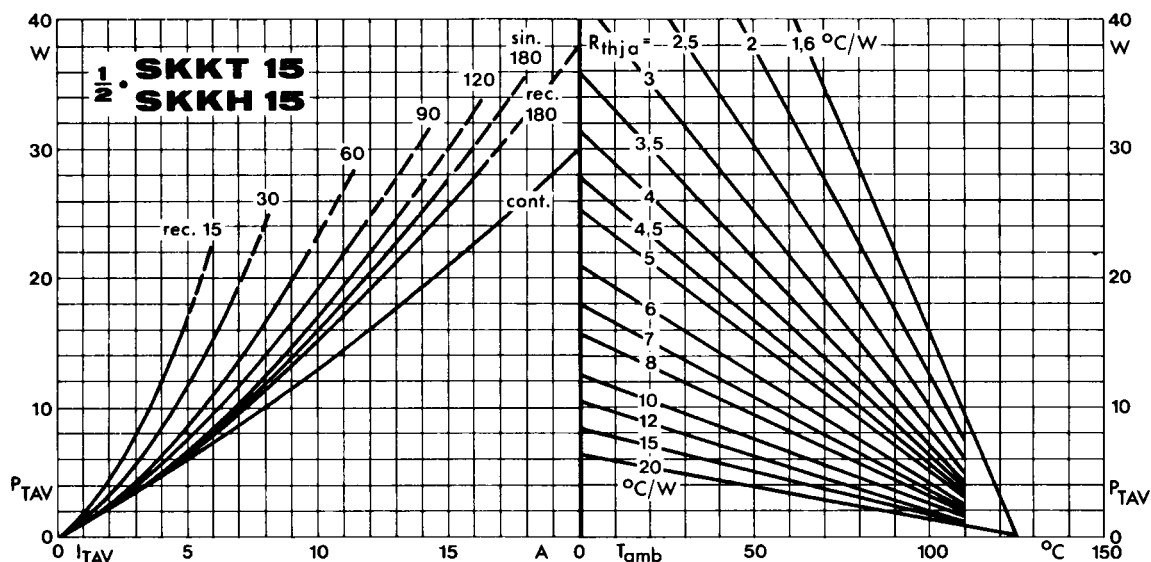


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

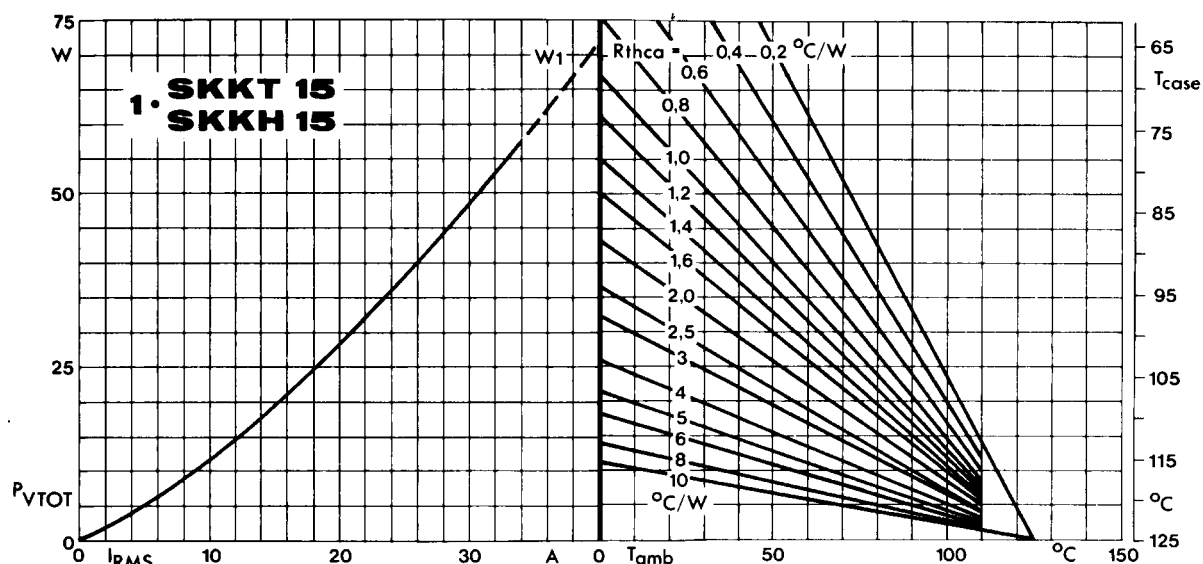


Fig. 2 Power dissipation per module vs. rms current and case temperature

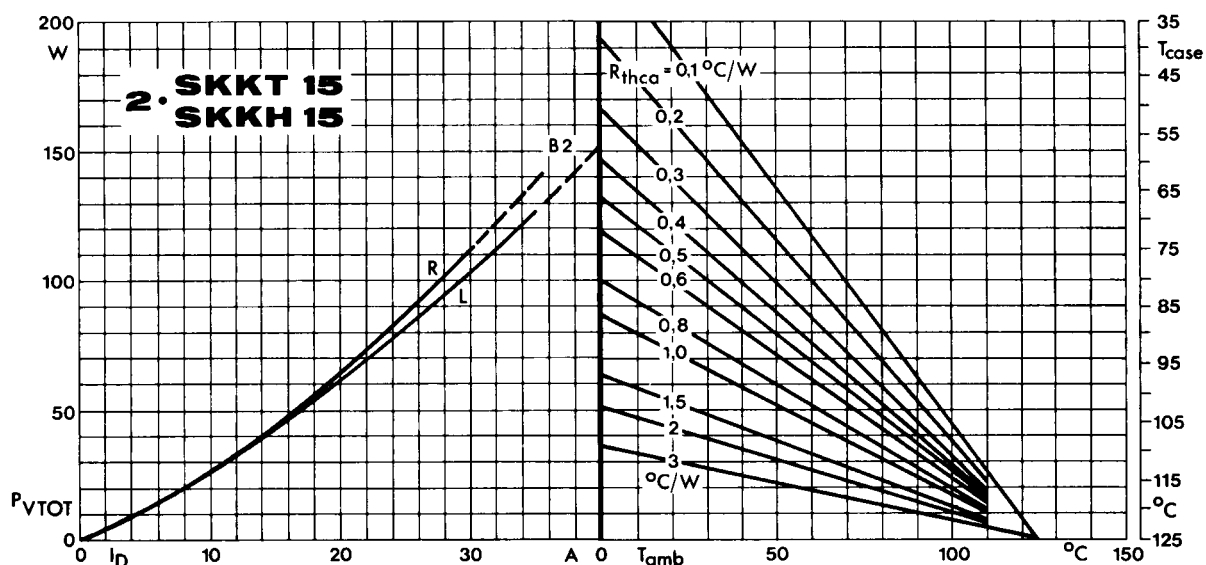


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

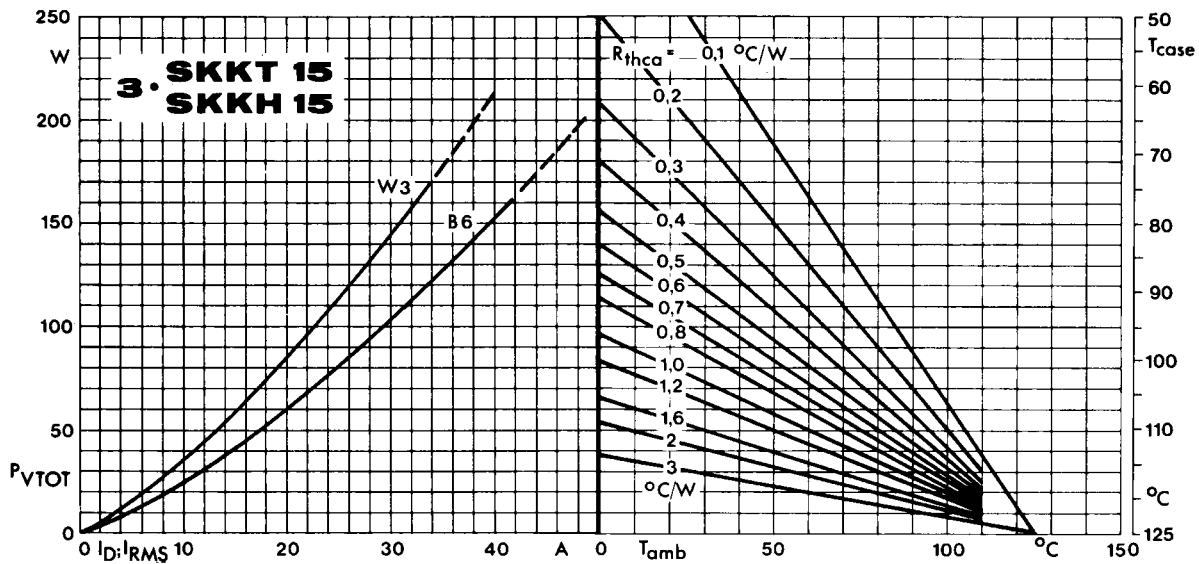


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

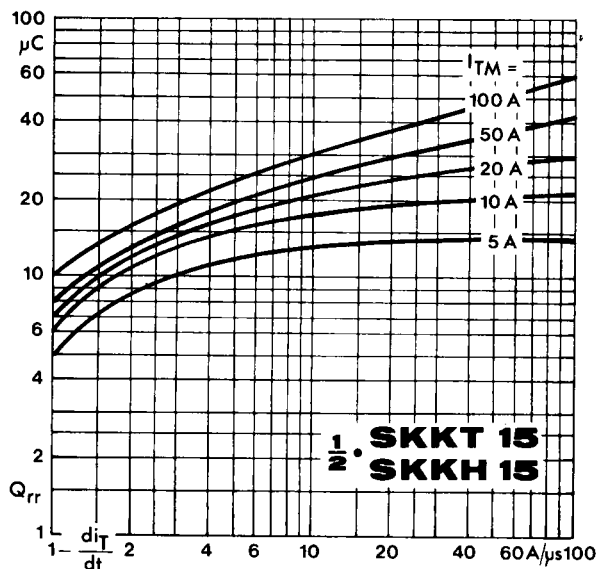


Fig. 5 Recovered charge vs. current decrease

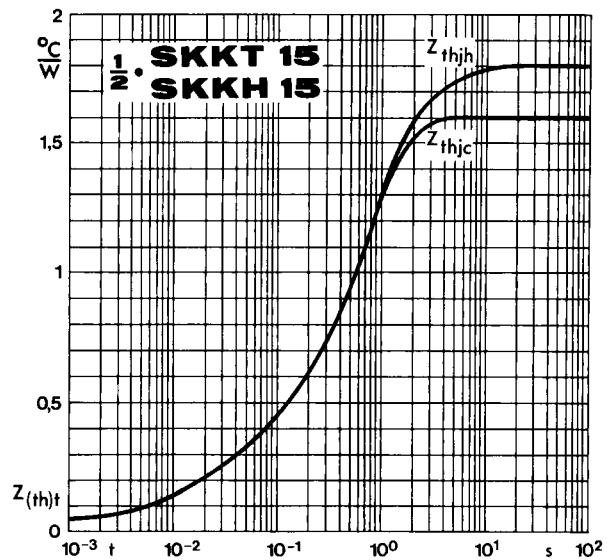


Fig. 6 Transient thermal impedance vs. time

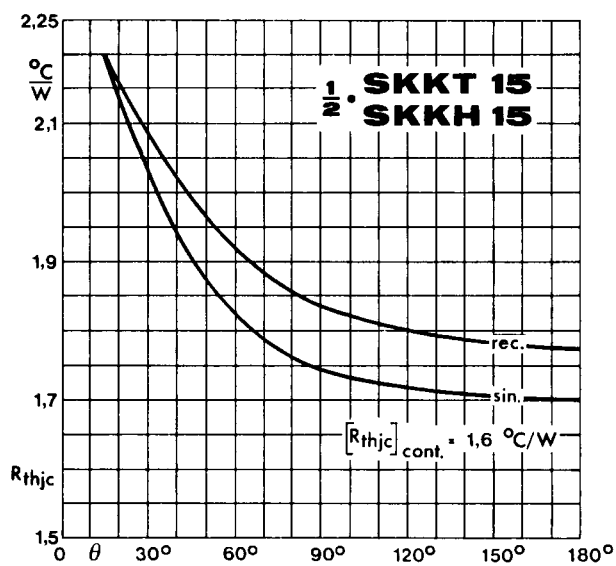


Fig. 7 Thermal resistance vs. conduction angle

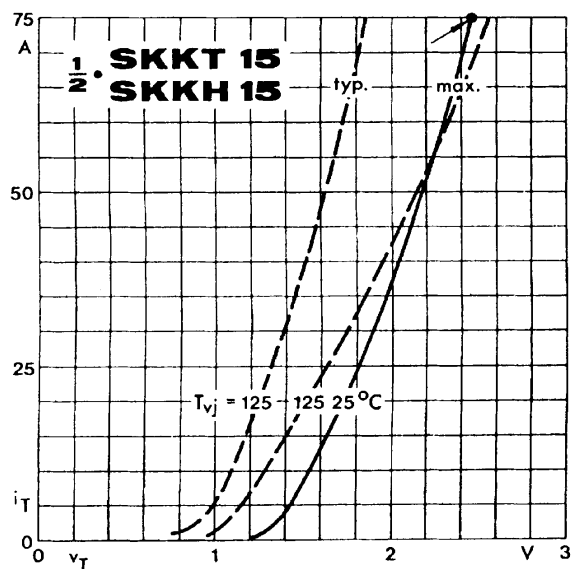


Fig. 8 On-state characteristics

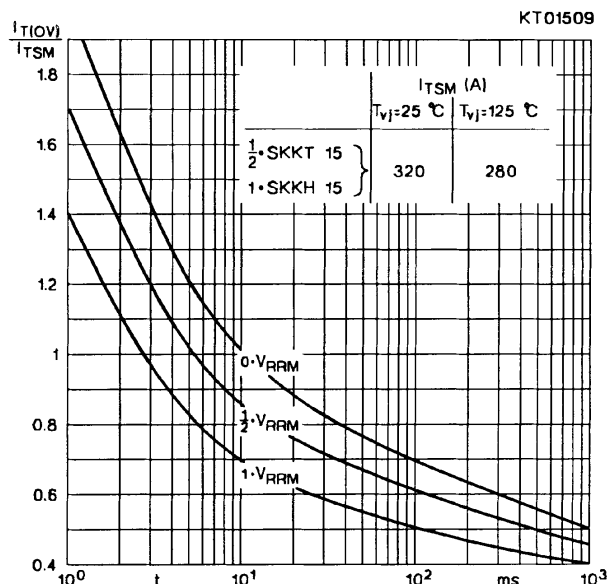


Fig. 9 Surge overload current vs. time

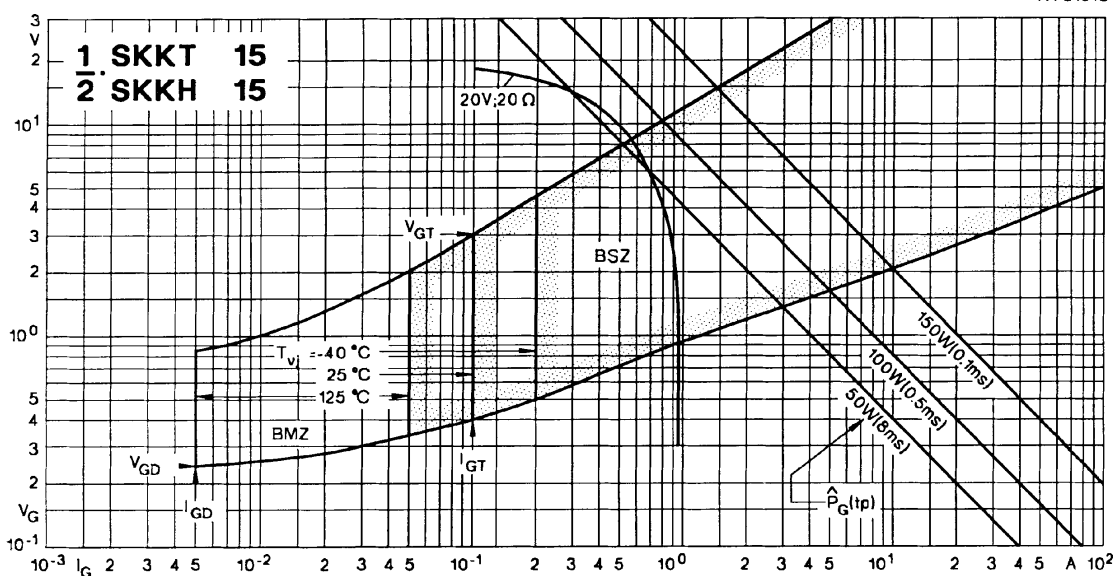
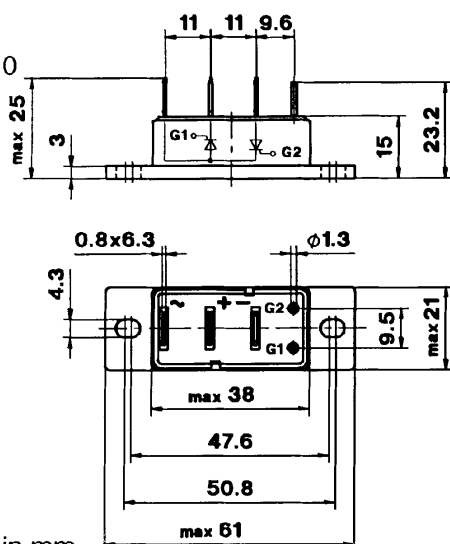


Fig. 10 Gate trigger characteristics

SKKT 15

Case A 1

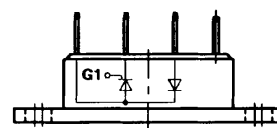
SEMPACK 0



Dimensions in mm

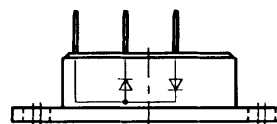
SKKH 15

Case A 2



SKKD 15

Case A 3



SKKE 15

Case A 4

