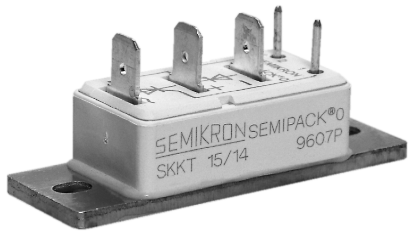
SEMIKRON

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]
			I_{TAV} (sin. 180; T_{case} = 65 °C)	
V	V	V/µs	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**

Symbol	Conditions	SKKT 15 SKKH 15	Units
I_{TAV}	sin. 180; T_{case} = 65 °C	17,5 [2]	A
	T_{case} = 75 °C	15 [1]	A
I_D	B2/B6 | T_{amb} = 45 °C; P 13A/100	14 / 17	A
I_{RMS}	W1/W3 | T_{amb} = 45 °C; P 13A/100	21 / 3 x 12	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	320	A
	T_{vj} = 125 °C; 10 ms	280	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	510	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	390	A^2s
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}	1	µs
$(di/dt)_{cr}$	T_{vj} = 125 °C	100	A/µs
t_q	T_{vj} = 125 °C	typ. 80	µs
I_H	T_{vj} = 25 °C, typ./max.	80 / 150	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ./max.	150 / 300	mA
V_T	T_{vj} = 25 °C; I_T = 75 A	max. 2,45	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,1	V
r_T	T_{vj} = 125 °C	20	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; $V_{RD} = V_{RRM}$		
	$V_{DD} = V_{DRM}$	max. 8	mA
V_{GT}	T_{vj} = 25 °C; d.c.	3	V
I_{GT}	T_{vj} = 25 °C; d.c.	100	mA
V_{GD}	T_{vj} = 125 °C; d.c.	0,25	V
I_{GD}	T_{vj} = 125 °C; d.c.	5	mA
R_{thjh}	cont. } per thyristor / per module	1,6 / 0,8	°C/W
	sin. 180	1,7 / 0,9	°C/W
	rec. 120	1,8 / 0,9	°C/W
R_{thch}		0,2 / 0,1	°C/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_1	Case to heatsink; SI (US) units	1,5 (13 lb. in.) ± 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	

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)

1) Using tin plated connectors with flexible leads of 6 mm^2 for the main terminals
2) Flexible leads of 6 mm^2 soldered to the main terminals
3) See the assembly instructions

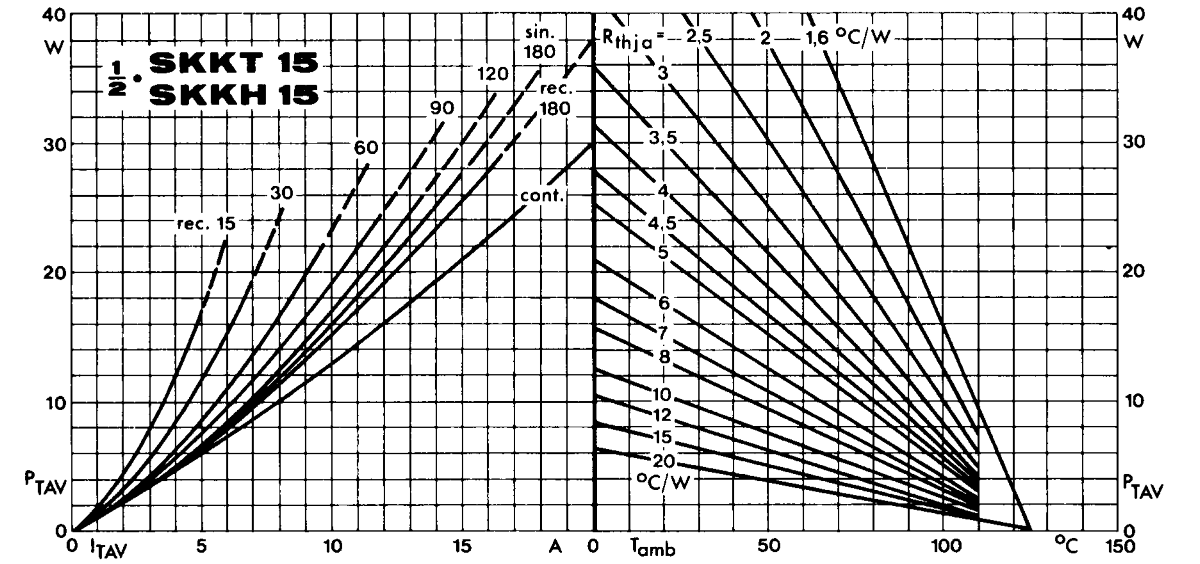


Fig. 1 Power dissipation per thyristor vs. on-state current and ambient temperature

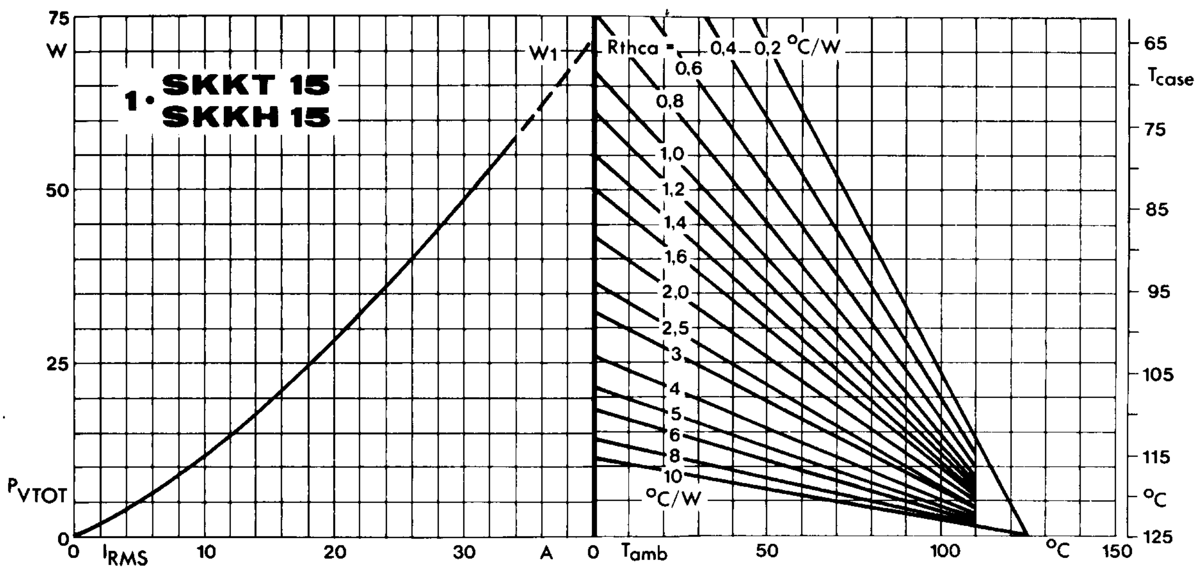


Fig. 2 Power dissipation per module vs. rms current and case temperature

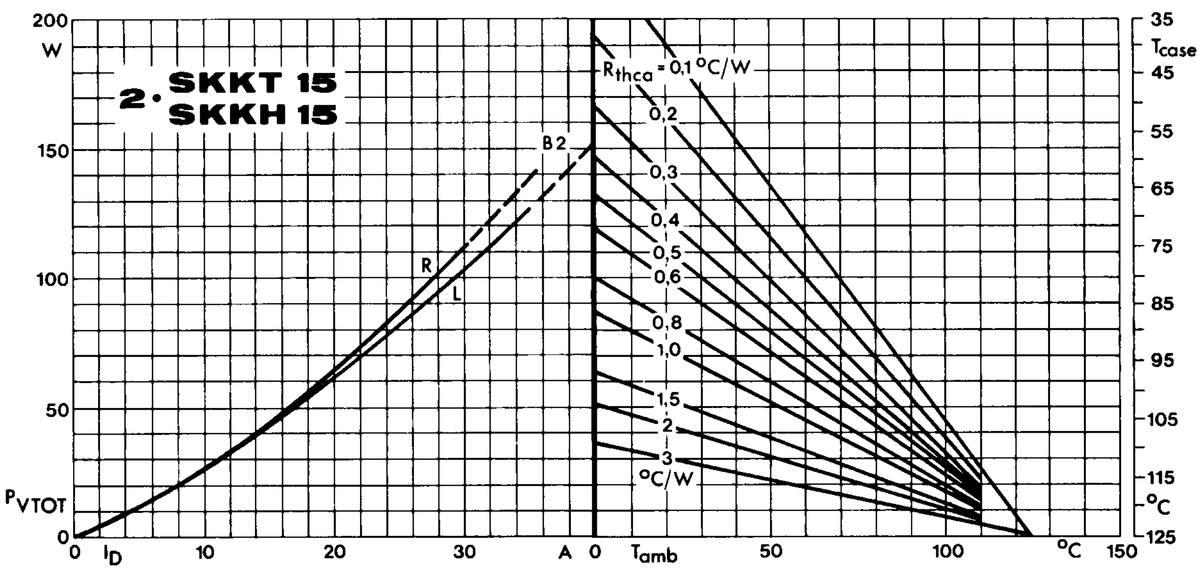


Fig. 3 Power dissipation of two modules vs. direct current and case temperature

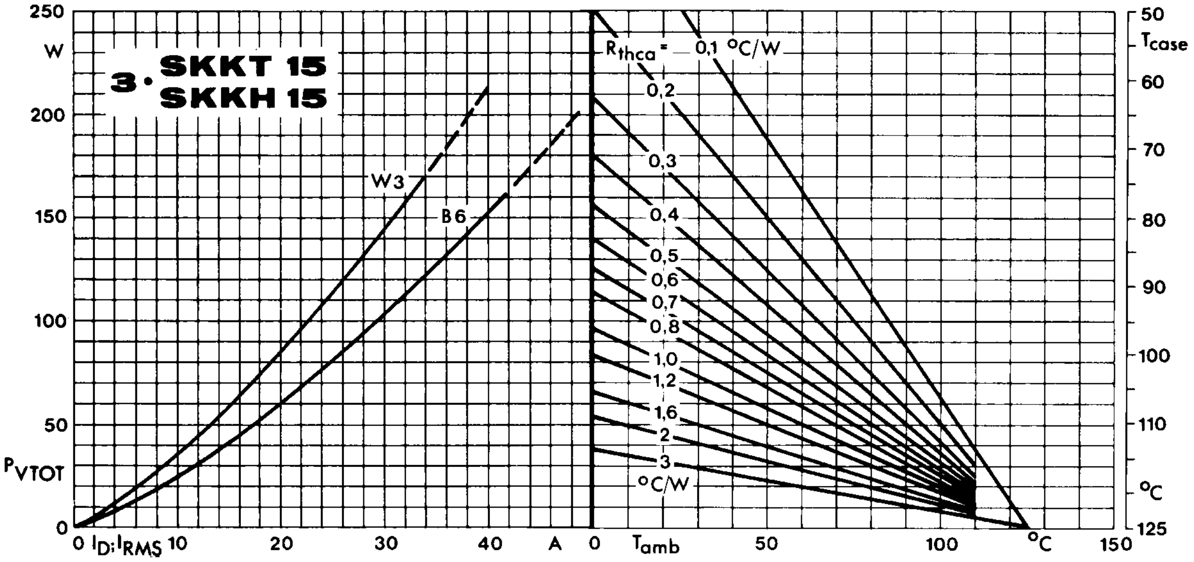


Fig. 4 Power dissipation of three modules vs. direct and rms current and case temperature

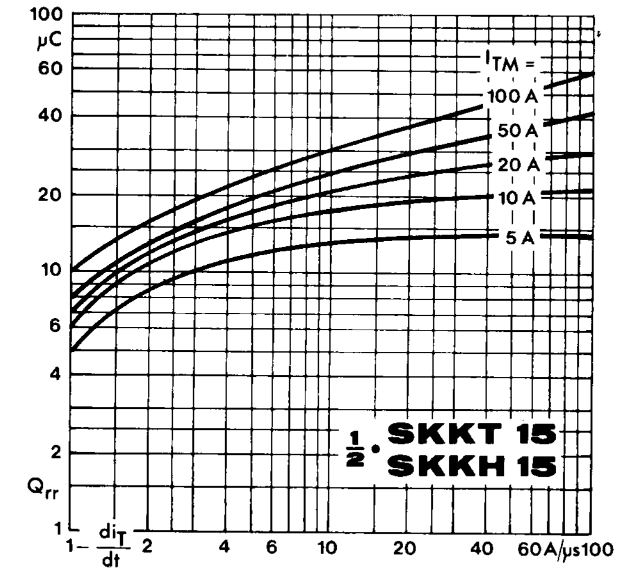


Fig. 5 Recovered charge vs. current decrease

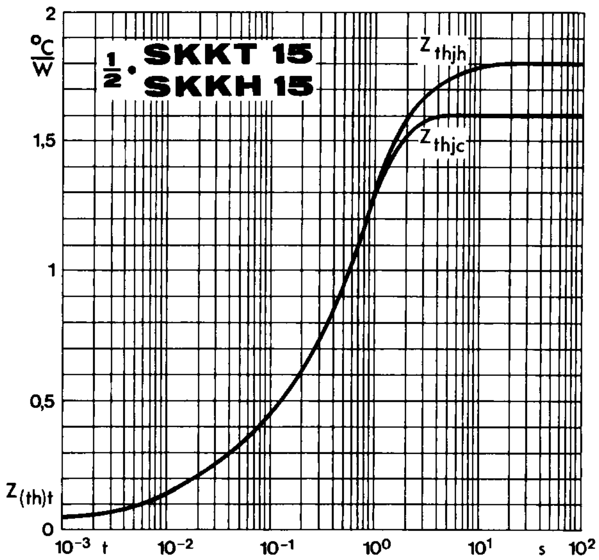


Fig. 6 Transient thermal impedance vs. time

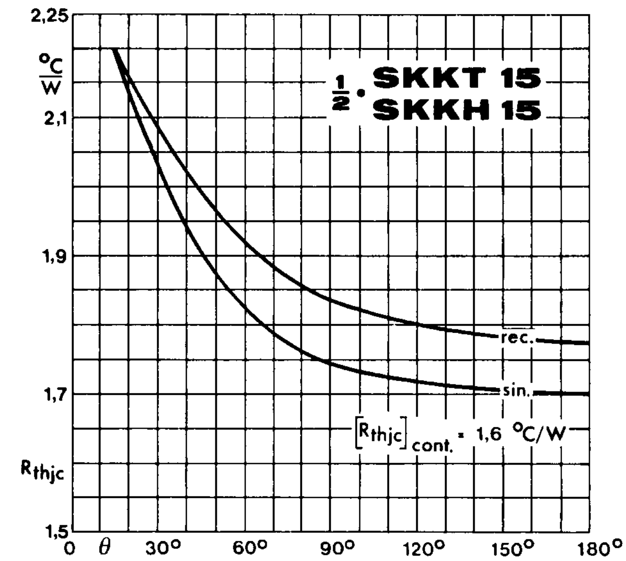


Fig. 7 Thermal resistance vs. conduction angle

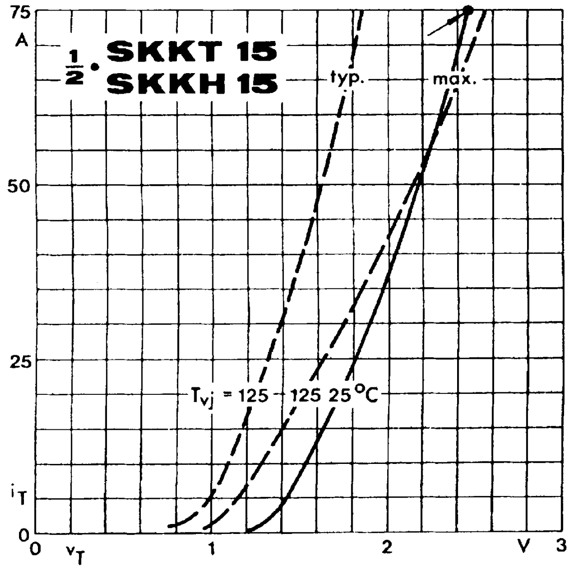


Fig. 8 On-state characteristics

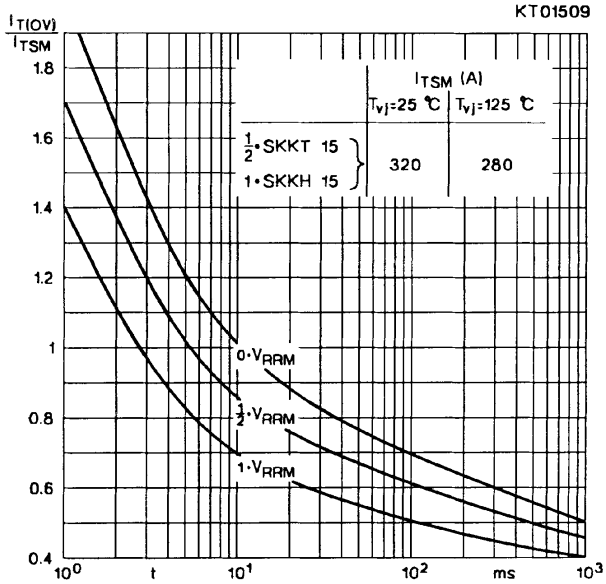


Fig. 9 Surge overload current vs. time

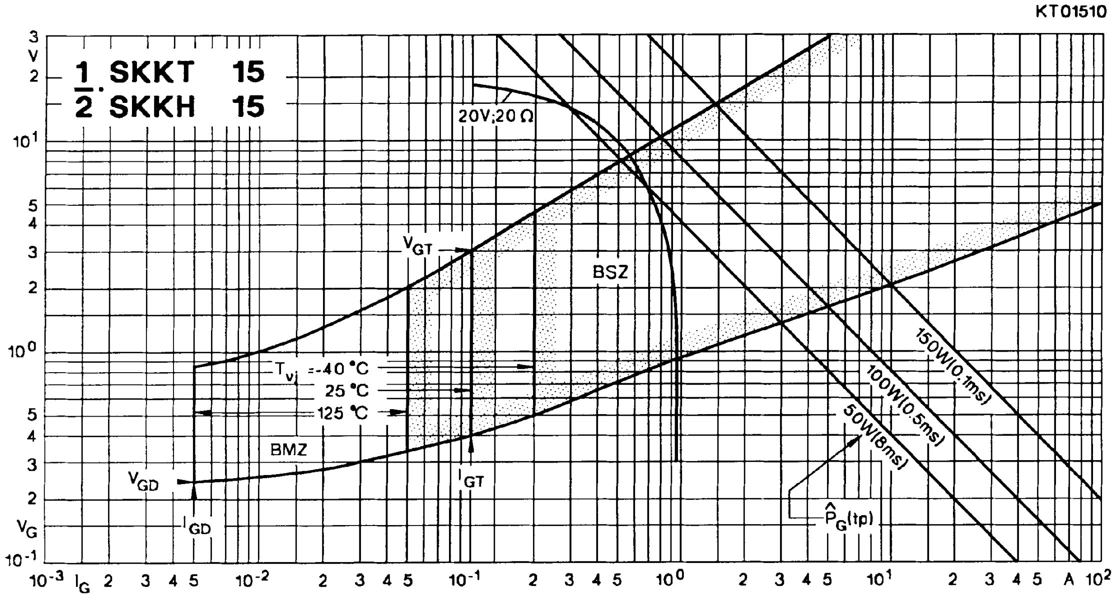
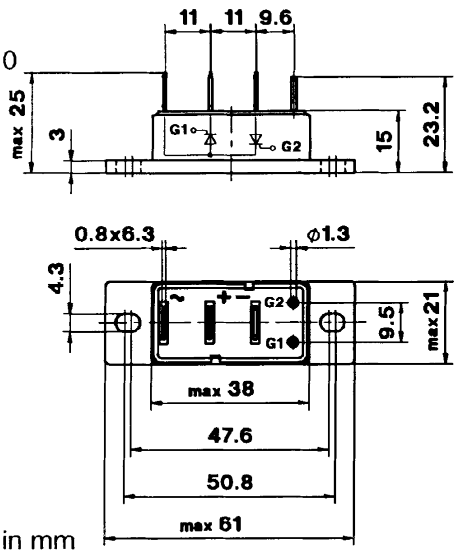


Fig. 10 Gate trigger characteristics

SKKT 15

Case A 1

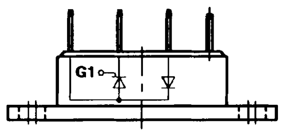
SEMIPACK 0



Dimensions in mm

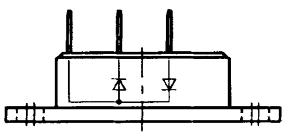
SKKH 15

Case A 2



SKKD 15

Case A 3



SKKE 15

Case A 4