SKKT 250, SKKH 250

SEMIPACK® 3

Thyristor / Diode Modules

SKKH 250
SKKT 250

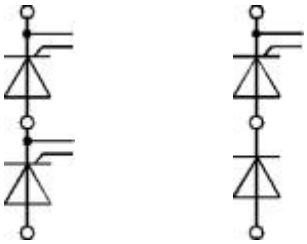
Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate
- UL recognized, file no. E 63 532

Typical Applications

- DC motor control (e. g. for machine tools)
- AC motor starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

[1] See the assembly instructions
[2] The screws must be lubricated



SKKT SKKH

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 420 A (maximum value for I_{TAV} = 250 A (sin. 180; T	
900	800	SKKT 250/08E	
1300	1200	SKKT 250/12E	SKKH 250/12
1500	1400	SKKT 250/14E	SKKH 250/14
1700	1600	SKKT 250/16E	SKKH 250/16
1900	1800	SKKT 250/18E	SKKH 250/18

Symbol	Conditions
I_{TAV}	sin. 180; T_c = 85 (100) °C;
I_D	P16/200F; T_a = 35 °C; B2/B6
I_{RMS}	P16/200F; T_a = 35 °C; W1 / W3
I_{TSM}	T_{vj} = 25 °C; 10 ms
	T_{vj} = 130 °C; 10 ms
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms
	T_{vj} = 130 °C; 8,3 ... 10 ms
V_T	T_{vj} = 25 °C; I_T = 750 A
$V_{T(TO)}$	T_{vj} = 130 °C
r_T	T_{vj} = 130 °C
I_{DD}; I_{RD}	T_{vj} = 130 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}
t_{gd}	T_{vj} = 25 °C; I_G = 1 A; di_G/dt = 1 A/µs
t_{gr}	V_D = 0,67 * V_{DRM}
$(di/dt)_{cr}$	T_{vj} = 130 °C
$(dv/dt)_{cr}$	T_{vj} = 130 °C
t_q	T_{vj} = 130 °C
I_H	T_{vj} = 25 °C; typ. / max.
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ. / max.
V_{GT}	T_{vj} = 25 °C; d.c.
I_{GT}	T_{vj} = 25 °C; d.c.
V_{GD}	T_{vj} = 130 °C; d.c.
I_{GD}	T_{vj} = 130 °C; d.c.
$R_{th(j-c)}$	cont.; per thyristor / per module
$R_{th(j-c)}$	sin. 180; per thyristor / per module
$R_{th(j-c)}$	rec. 120; per thyristor / per module
$R_{th(c-s)}$	per thyristor / per module
T_{vj}	
T_{stg}	
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.
M_s	to heatsink
M_t	to terminals
a	
m	approx.
Case	SKKT SKKH

Diagrams

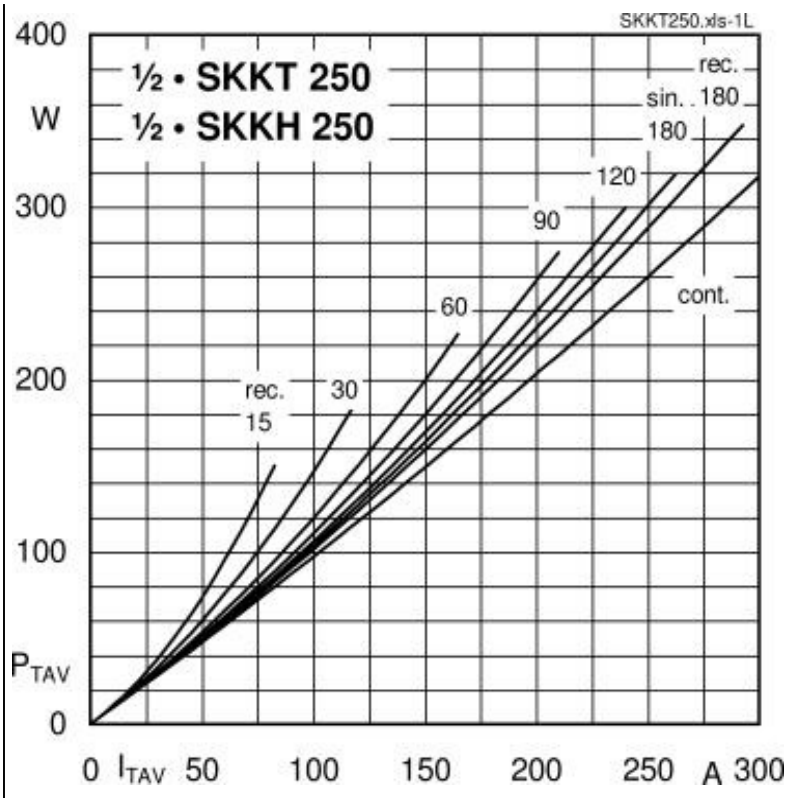


Fig. 1L Power dissipation per thyristor vs. on-state current

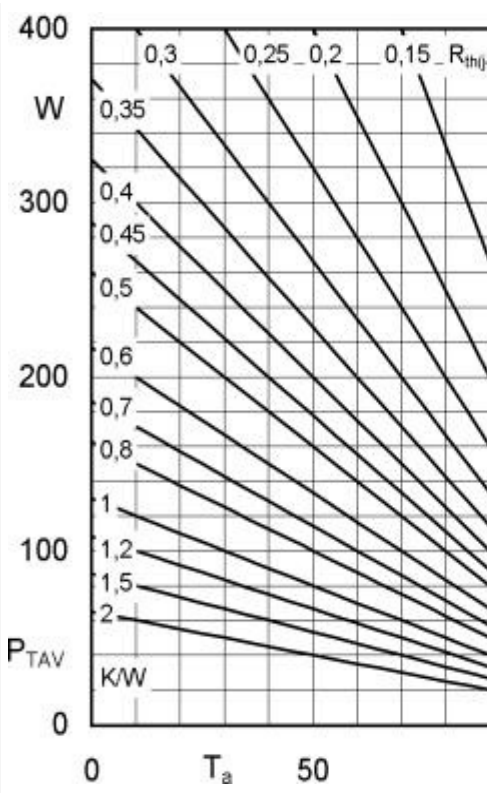


Fig. 1R Power dissipation per thyristor vs. am

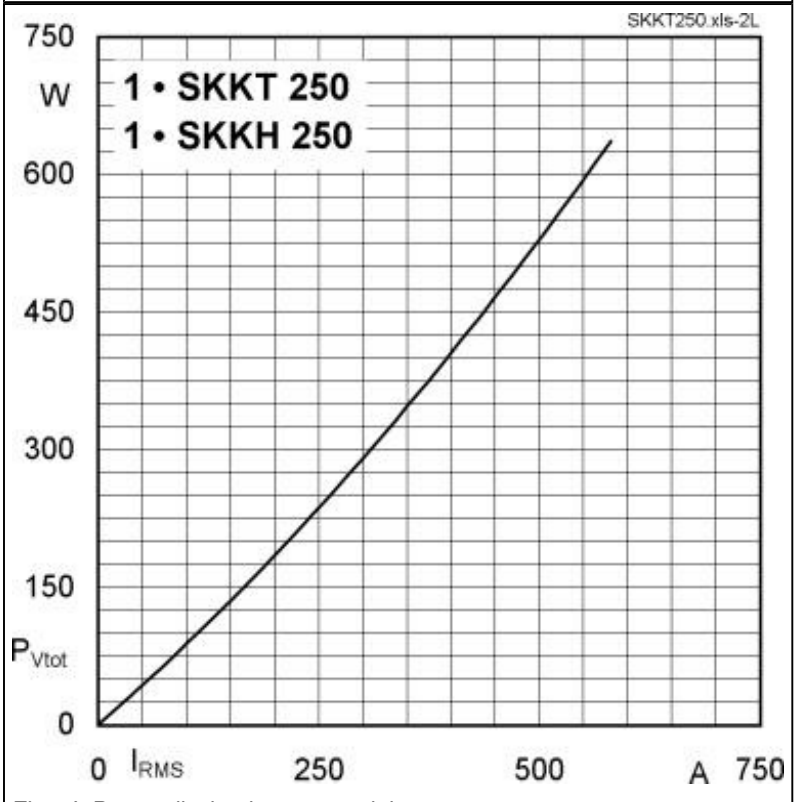


Fig. 2L Power dissipation per module vs. rms current

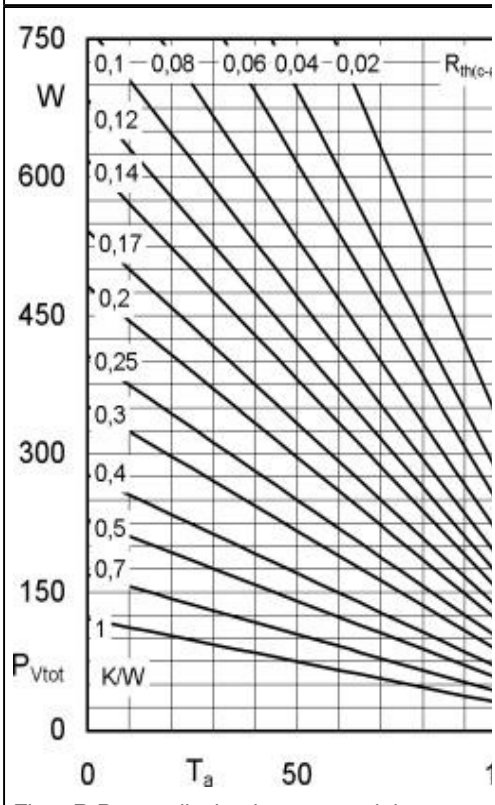


Fig. 2R Power dissipation per module vs. cas

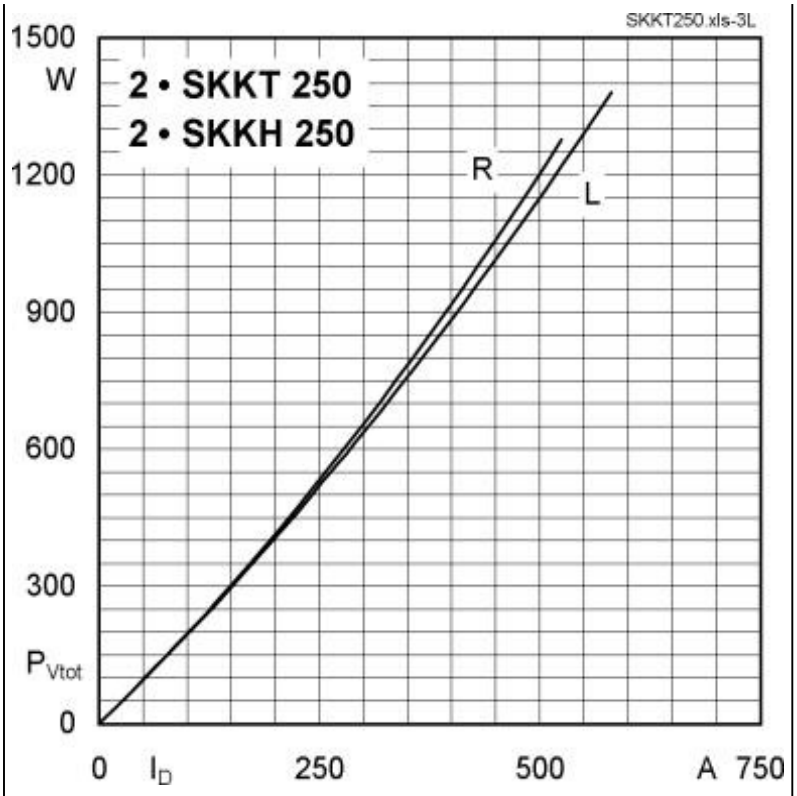


Fig. 3L Power dissipation of two modules vs. direct current

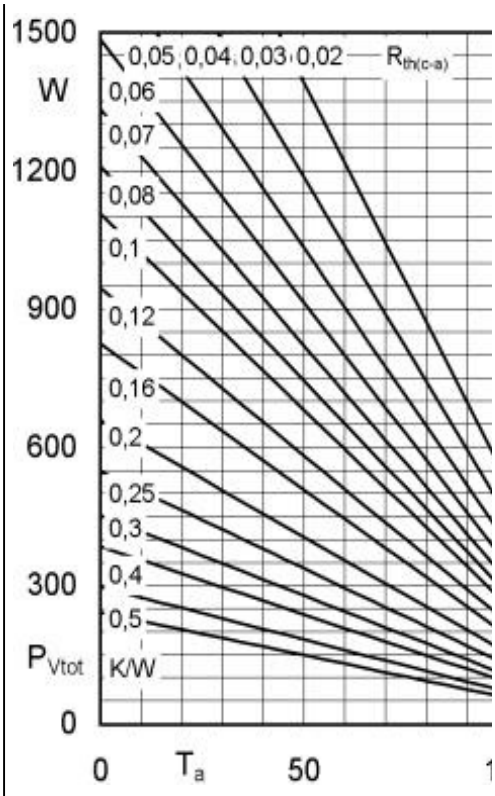


Fig. 3R Power dissipation of two modules vs.

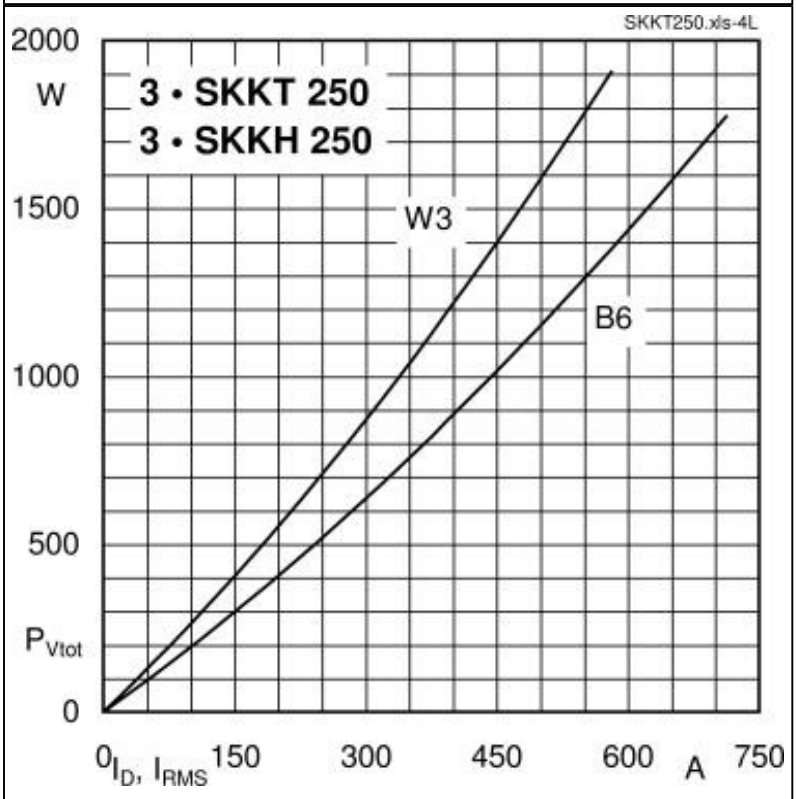


Fig. 4L Power dissipation of three modules vs. direct and rms current

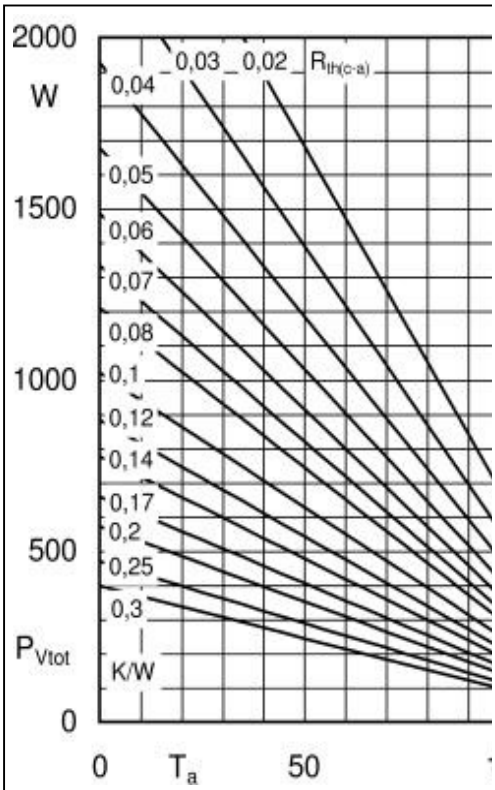


Fig. 4R Power dissipation of three modules vs

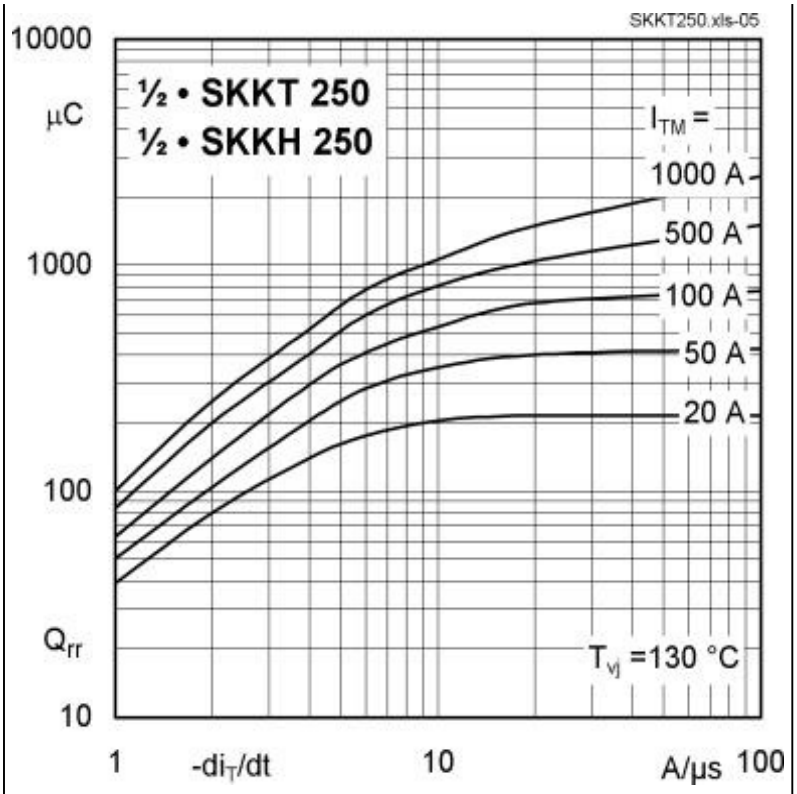


Fig. 5 Recovered charge vs. current decrease

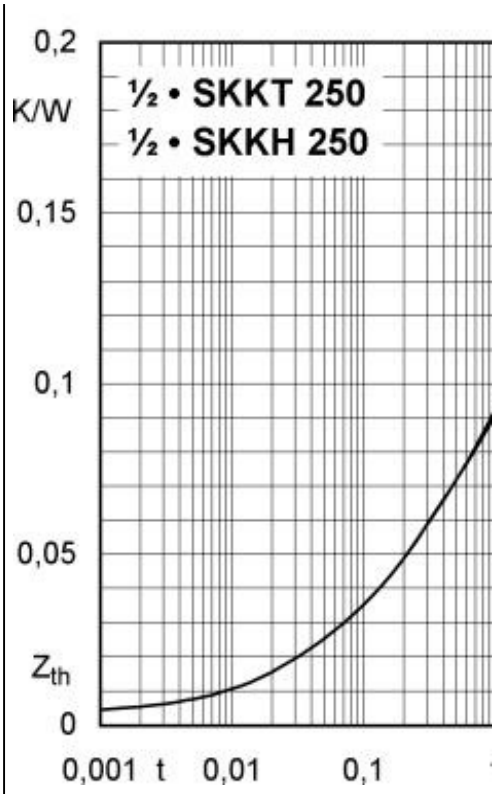


Fig. 6 Transient thermal impedance vs. time

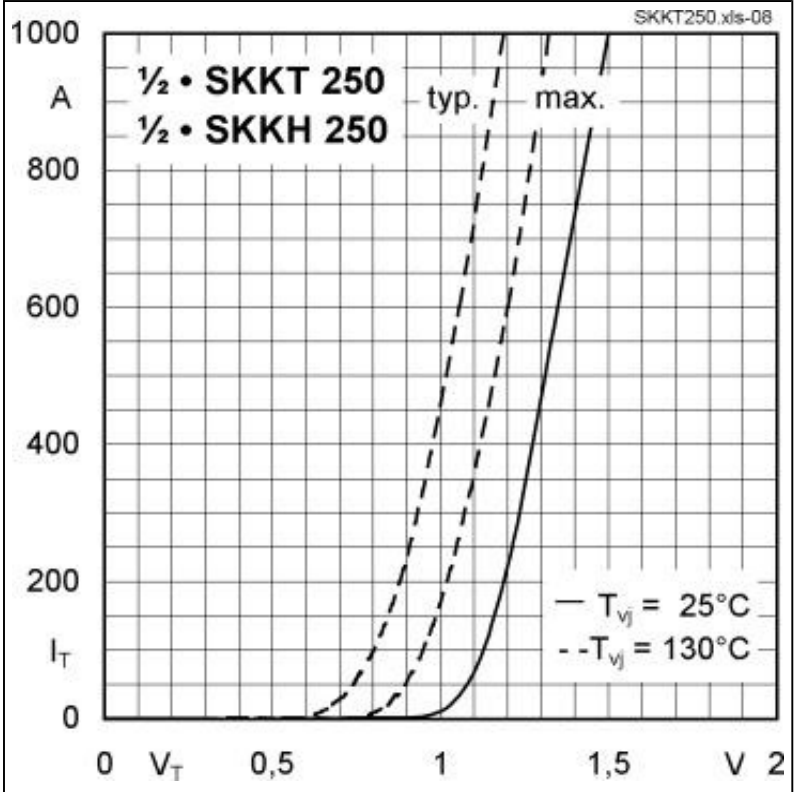


Fig. 7 On-state characteristics

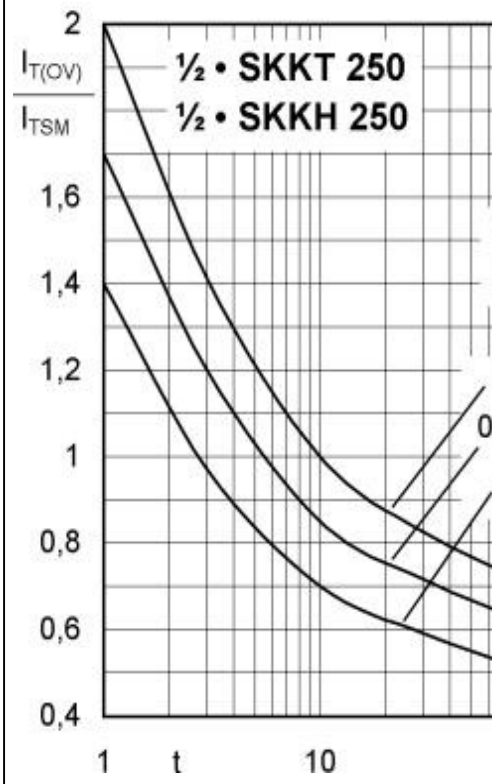


Fig. 8 Surge overload current vs. time

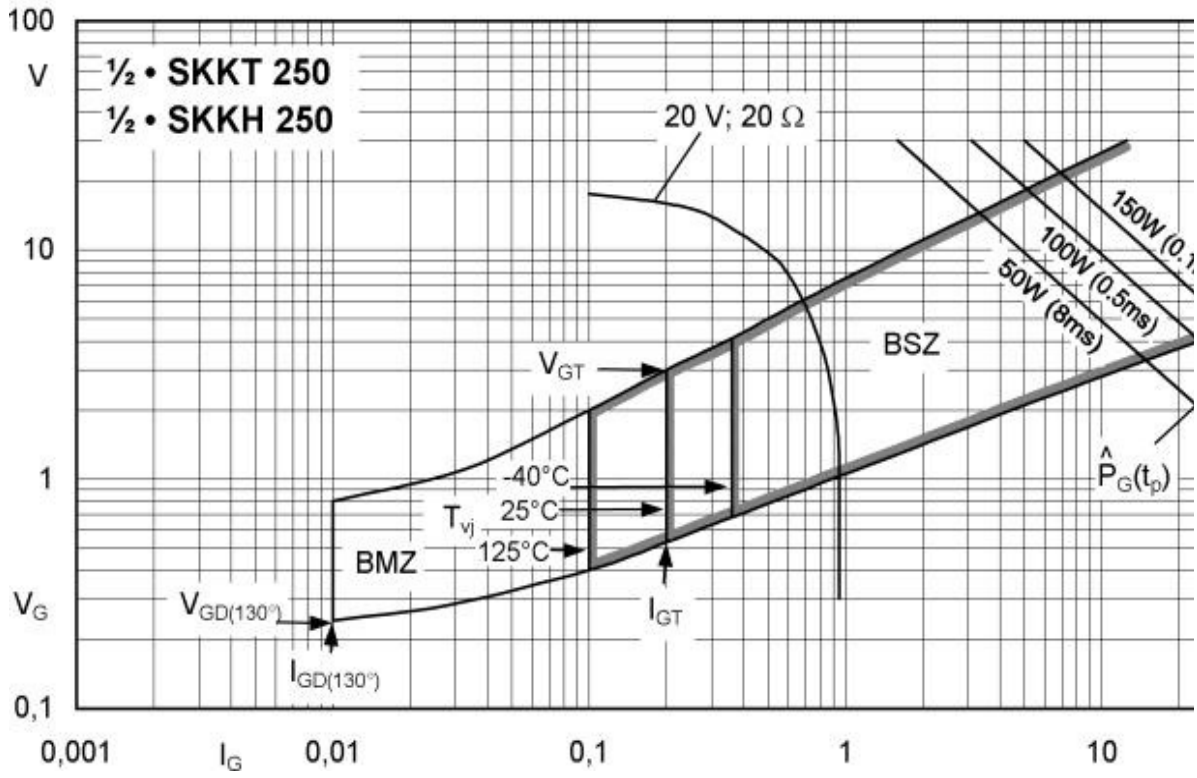
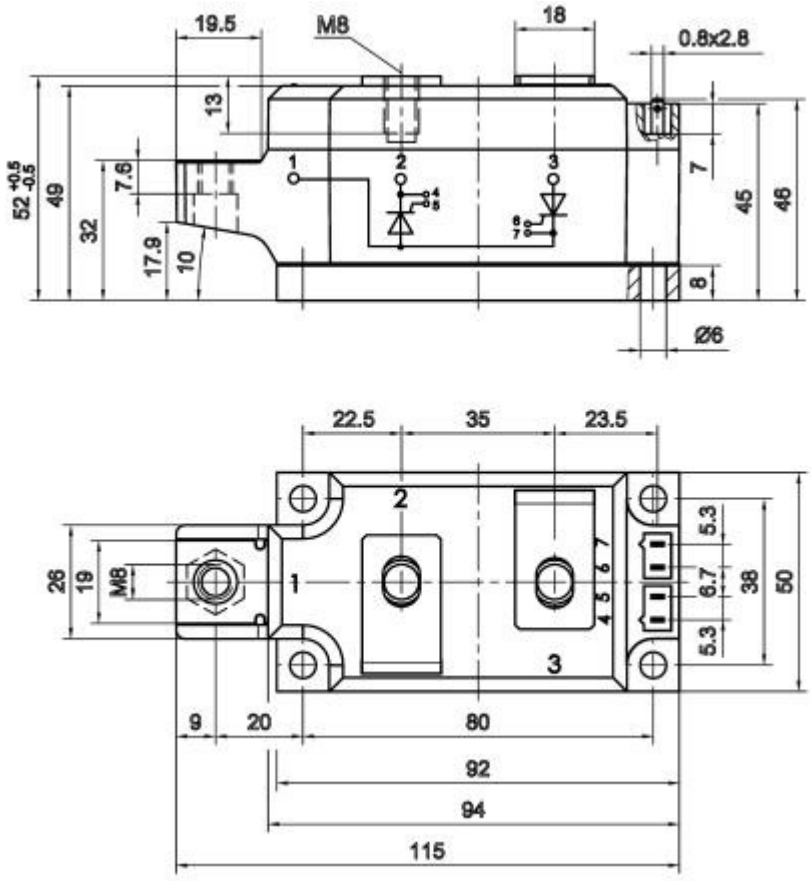


Fig. 9 Gate trigger characteristics

Cases / Circuits

Dimensions in mm



Case A 73b (SKKT)

Case A