SKKT 280, SKKH 280

SEMIPACK® 3 new

Thyristor / Diode Modules

SKKH 280
SKKT 280

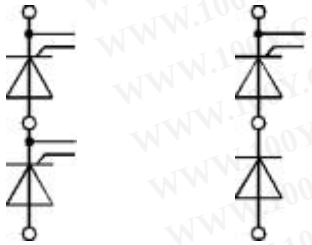
Features

- 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} = 440 A (maximum value for I_{TAV} = 280 A (sin. 180;
2100	2000	SKKT 280/20E H4 SKKH 280/20E
2300	2200	SKKT 280/22E H4 SKKH 280/22E

Symbol	Conditions
I_{TAV}	sin. 180; T_c = 79 (85) °C
I_{TSM}	T_{vj} = 25 °C; 10 ms
	T_{vj} = 125 °C; 10 ms
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms
	T_{vj} = 125 °C; 8,3 ... 10 ms
V_T	T_{vj} = 25 °C; I_T = 750 A
$V_{T(TO)}$	T_{vj} = 125 °C
r_T	T_{vj} = 125 °C
I_{DD}; I_{RD}	T_{vj} = 125 °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} = 125 °C
$(dv/dt)_{cr}$	T_{vj} = 125 °C
t_q	T_{vj} = 125 °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} = 125 °C; d.c.
I_{GD}	T_{vj} = 125 °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 terminal
a	
m	approx.
Case	SKKT
	SKKH

Diagrams

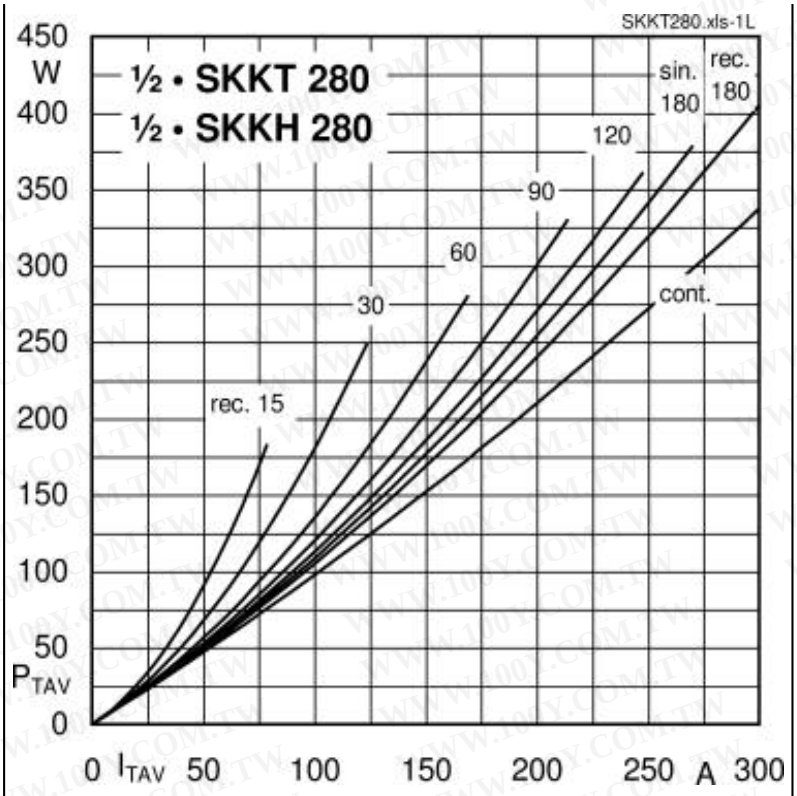


Fig. 1L Power dissipation per thyristor vs. on-state current

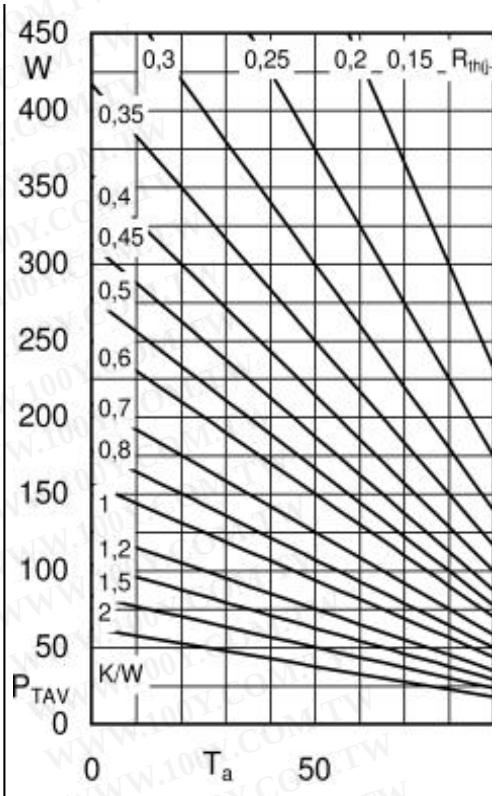


Fig. 1R Power dissipation per thyristor vs. am

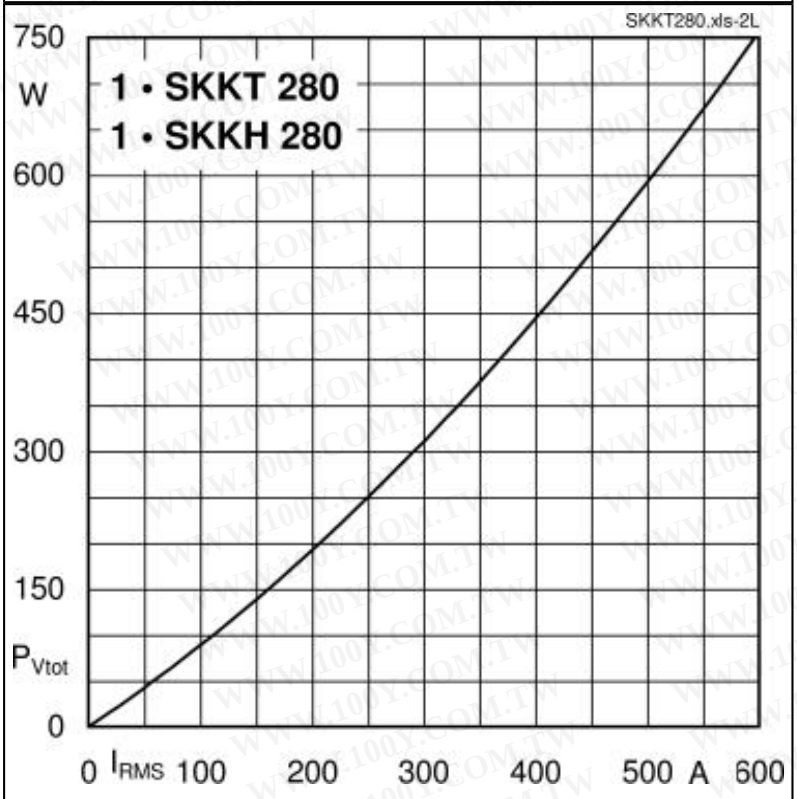


Fig. 2L Power dissipation per module vs. rms current

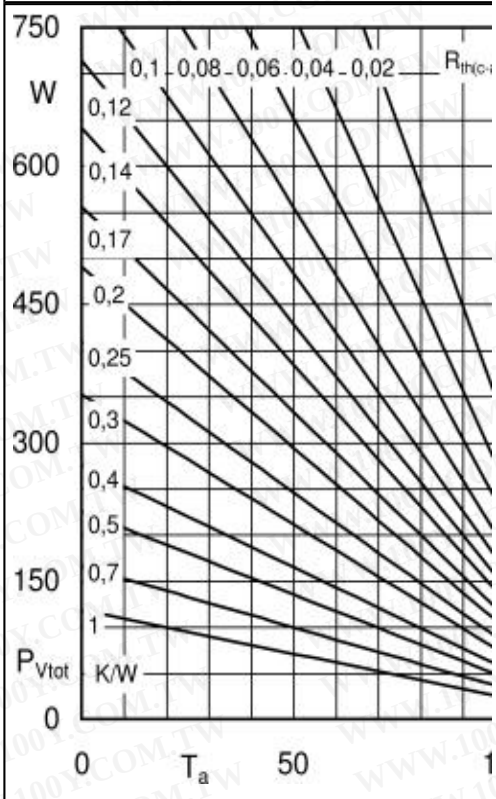


Fig. 2R Power dissipation per module vs. cas

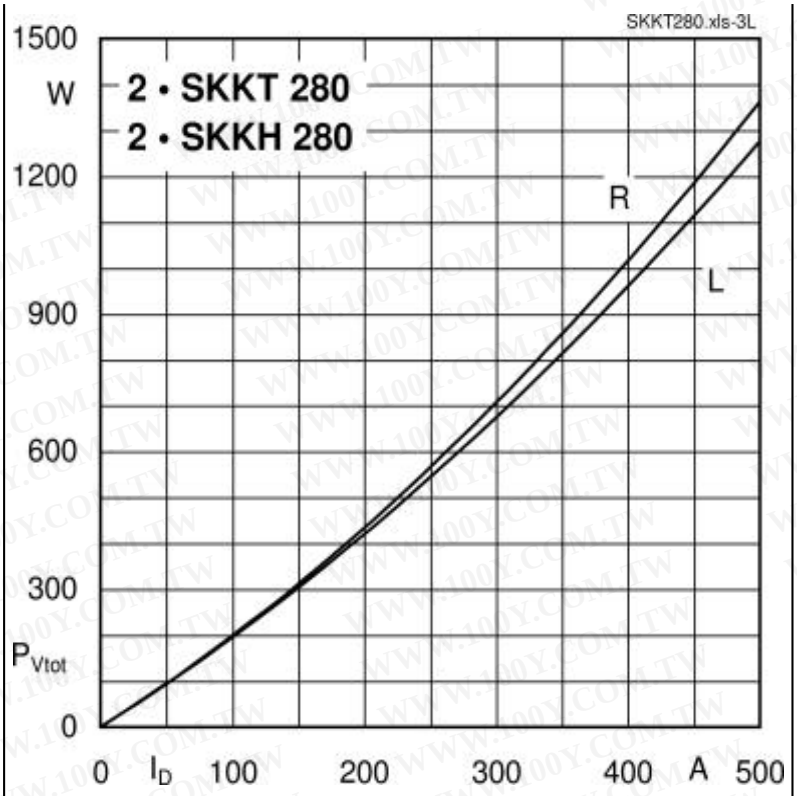


Fig. 3L Power dissipation of two modules vs. direct current

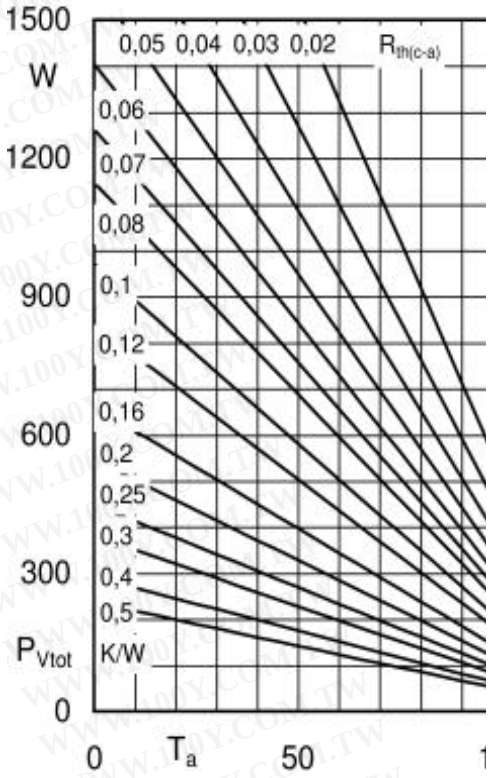


Fig. 3R Power dissipation of two modules vs.

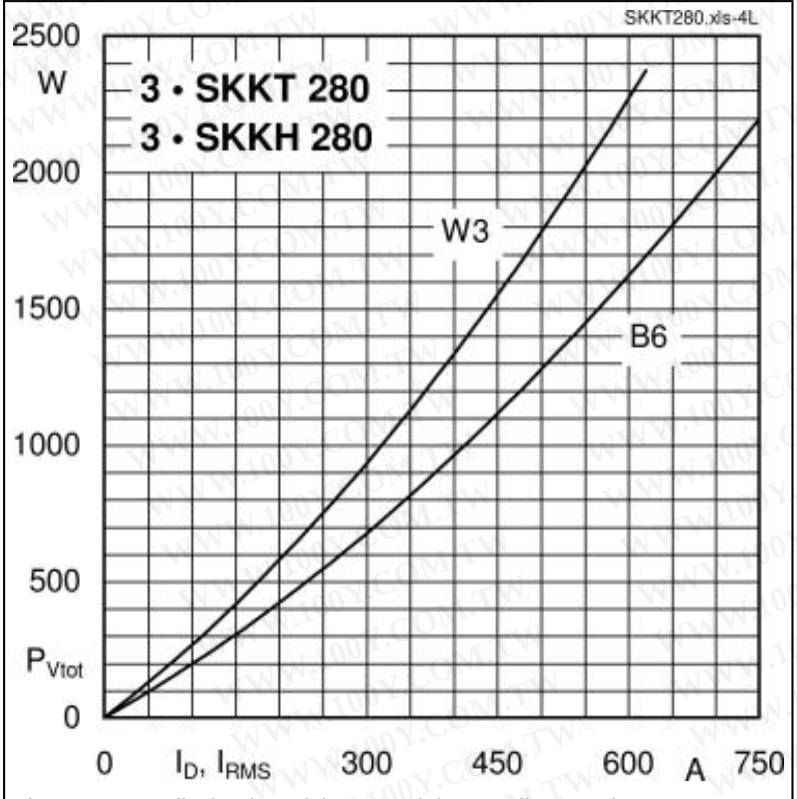


Fig. 4L Power dissipation of three modules vs. direct and rms current

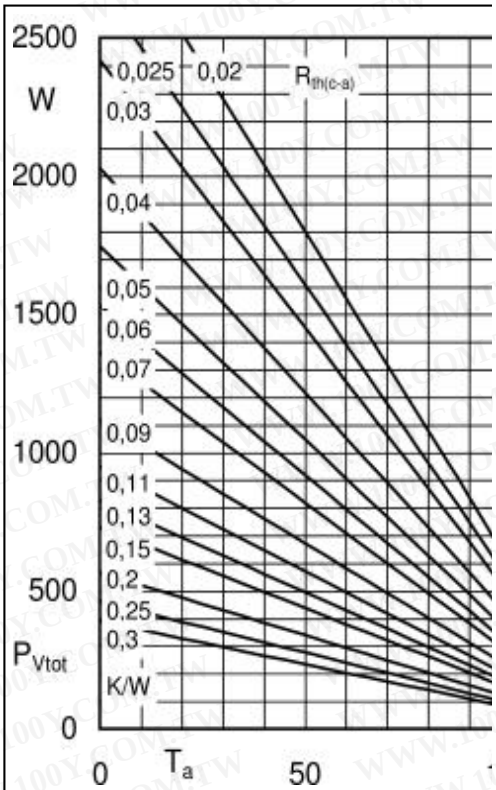


Fig. 4R Power dissipation of three modules v

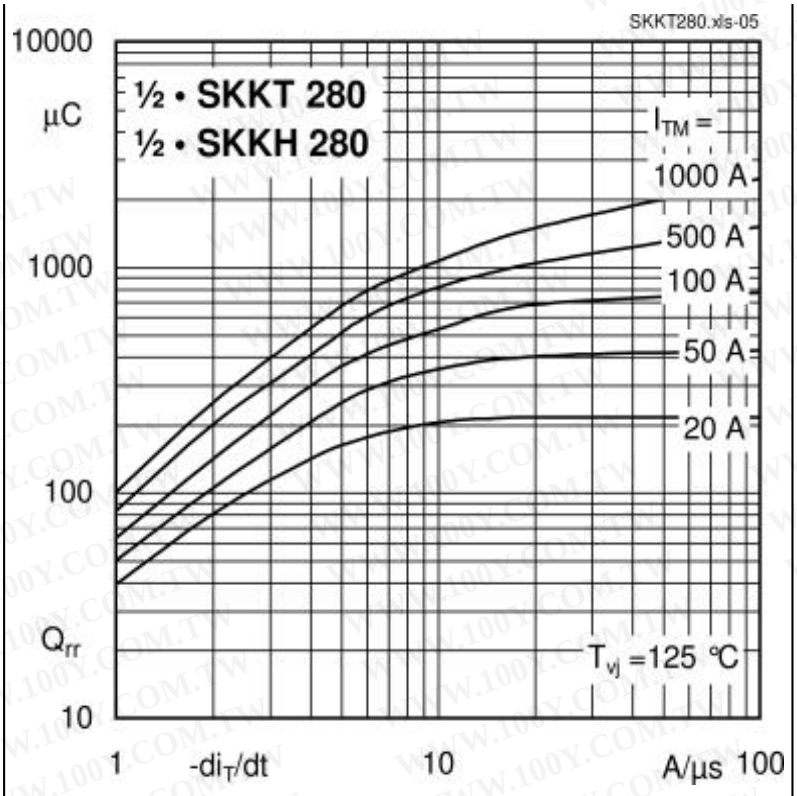


Fig. 5 Recovered charge vs. current decrease

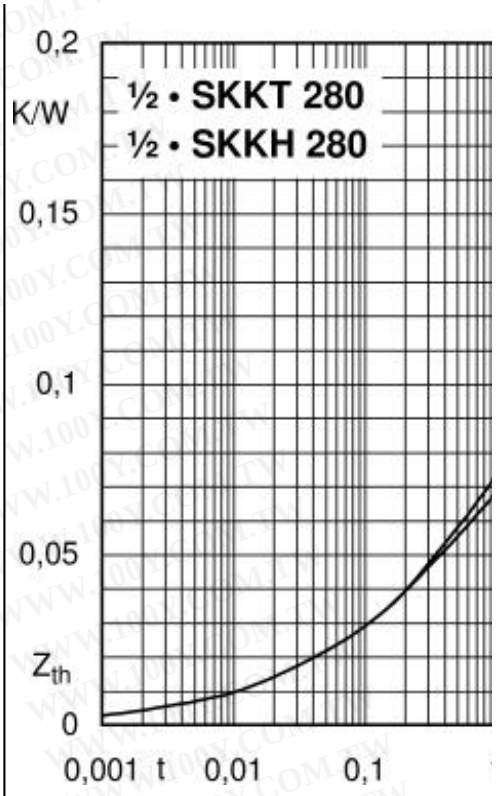


Fig. 6 Transient thermal impedance vs. time

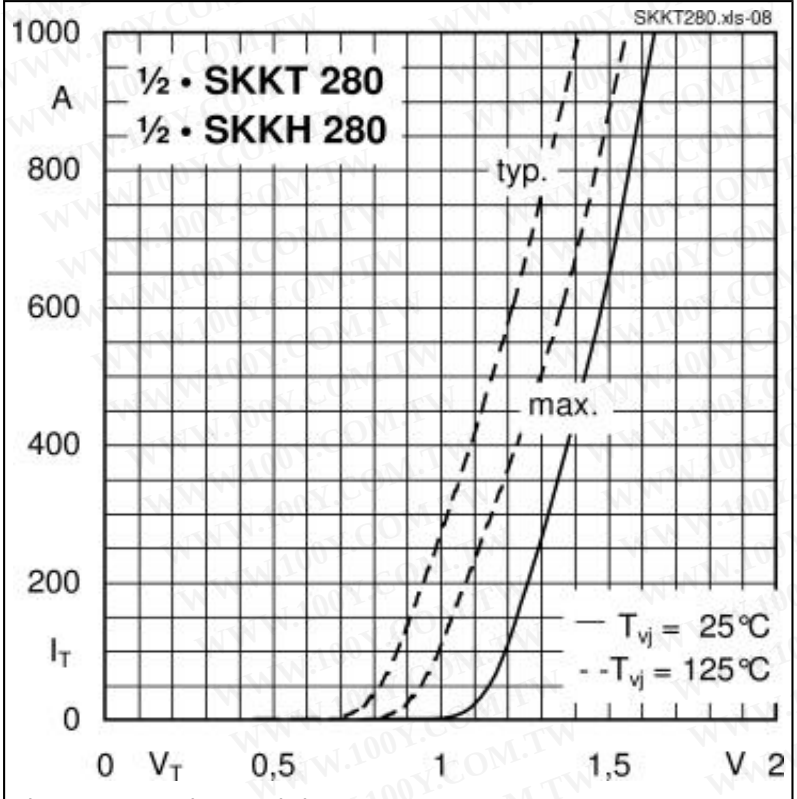


Fig. 7 On-state characteristics

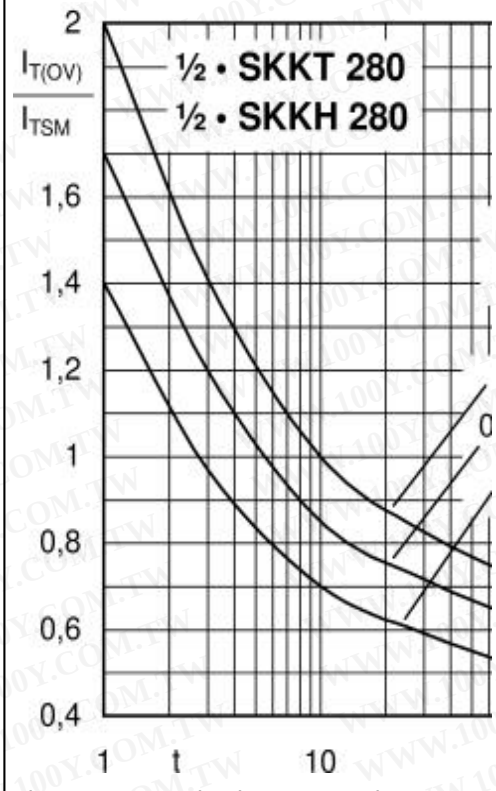


Fig. 8 Surge overload current vs. time

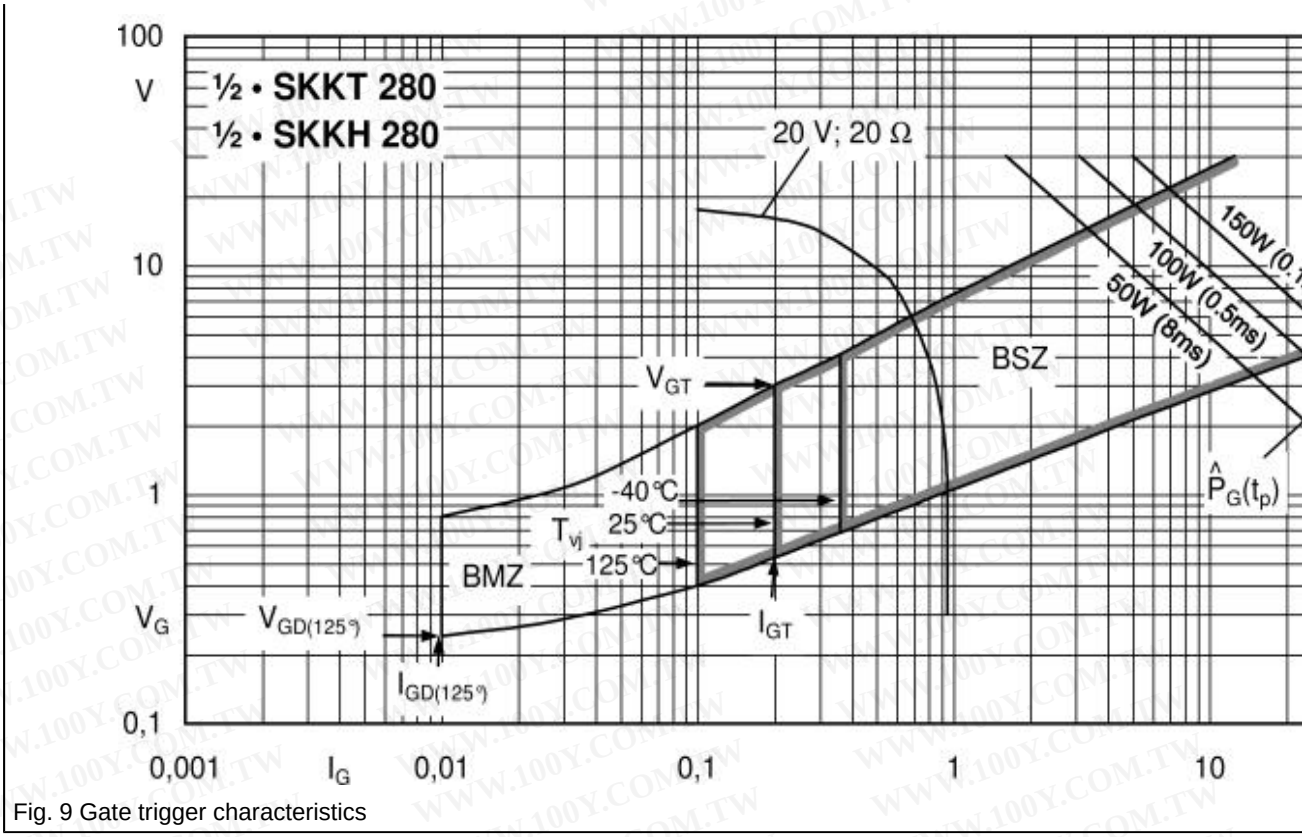
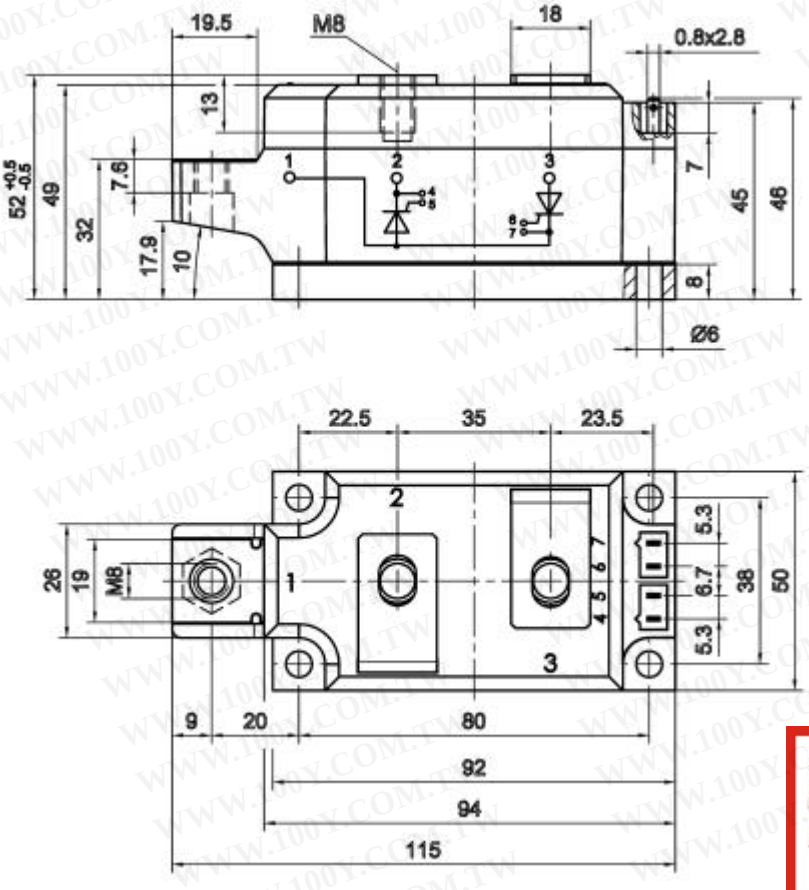


Fig. 9 Gate trigger characteristics

Cases / Circuits

Dimensions in mm



Case A