

SKKT 273; SKKH 273



SEMIPACK[®] 3

Thyristor / Diode Modules

SKKT 273

SKKH 273

Features

- Industrial standard package
- Electrically insulated base plate
- Heat transfer through aluminum oxide ceramic insulated metal base plate
- Chip soldered on direct copper bonded Al₂O₃ ceramic
- Thyristor with center gate
- UL recognition applied for file no. E63532

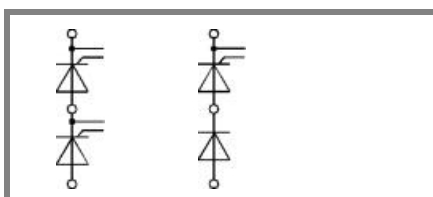
Typical Applications*

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

1) See the assembly instructions

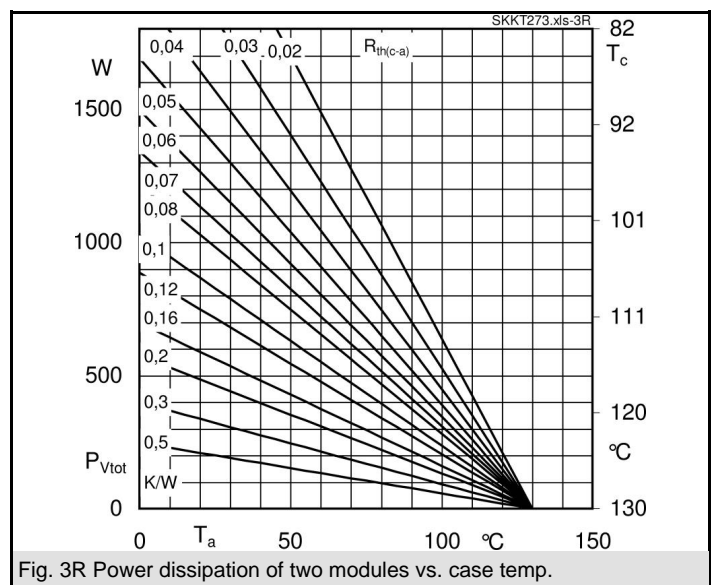
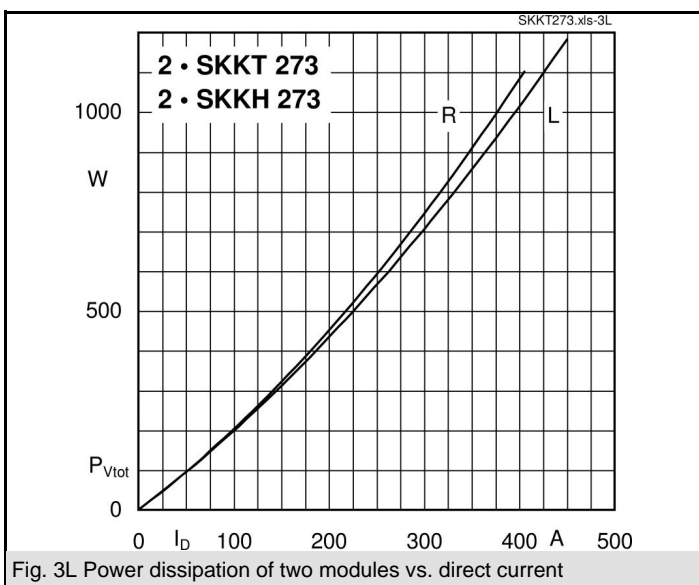
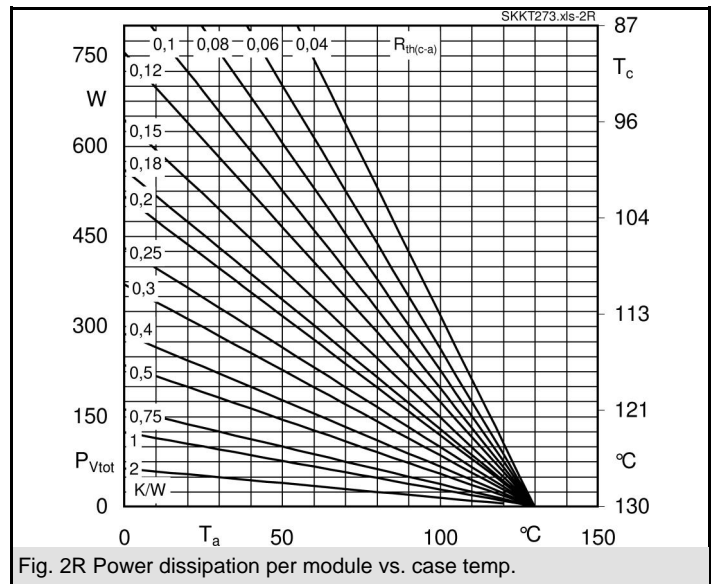
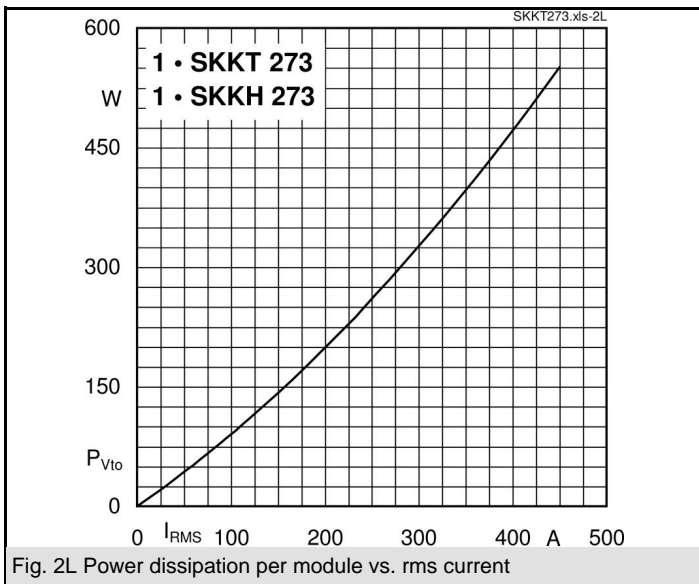
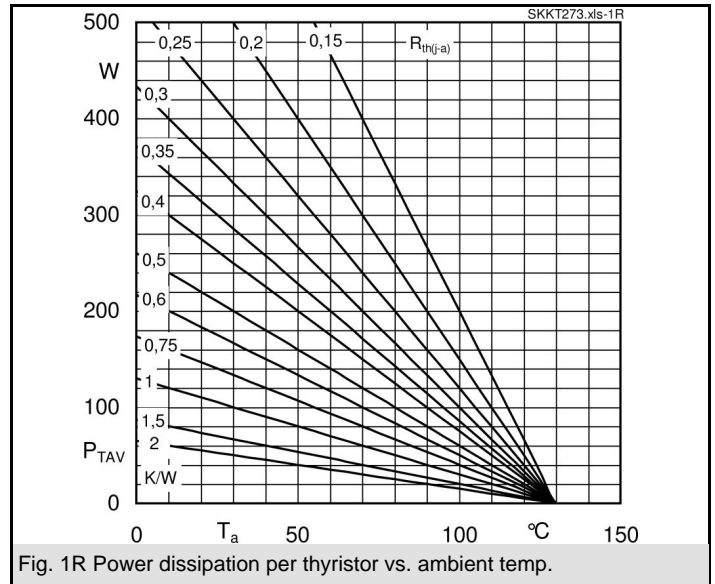
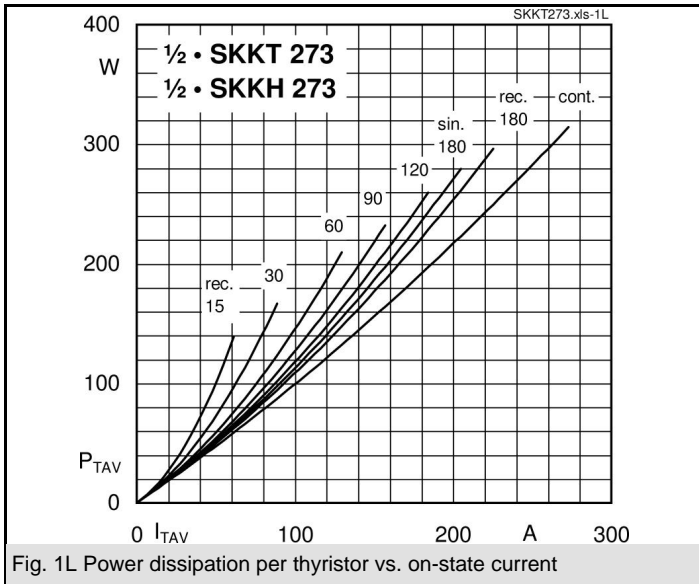
| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_{TRMS} = 450$ A (maximum value for continuous operation) $I_{TAV} = 273$ A (sin. 180; $T_c = 85$ °C) | |
|----------------|-------------------------|--|--------------|
| 1300 | 1200 | SKKT 273/12E | SKKH 273/12E |
| 1700 | 1600 | SKKT 273/16E | SKKH 273/16E |
| 1900 | 1800 | SKKT 273/18E | SKKH 273/18E |

| Symbol | Conditions | Values | Units |
|------------------|---|------------------------|--------------------------------------|
| I_{TAV} | sin. 180; $T_c = 85$ (100) °C; | 273 (202) | A |
| I_{TSM} | $T_{vj} = 25$ °C; 10 ms $T_{vj} = 130$ °C; 10 ms | 9000 8000 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 130$ °C; 8,3 ... 10 ms | 405000 320000 | A ² s A ² s |
| V_T | $T_{vj} = 25$ °C; $I_T = 750$ A | max. 1,6 | V |
| $V_{T(TO)}$ | $T_{vj} = 130$ °C | max. 0,9 | V |
| r_T | $T_{vj} = 130$ °C | max. 0,92 | mΩ |
| I_{DD}, I_{RD} | $T_{vj} = 130$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 100 | mA |
| t_{gd} | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs | 1 | μs |
| t_{gr} | $V_D = 0,67 * V_{DRM}$ | 2 | μs |
| $(di/dt)_{cr}$ | $T_{vj} = 130$ °C | max. 130 | A/μs |
| $(dv/dt)_{cr}$ | $T_{vj} = 130$ °C | max. 1000 | V/μs |
| t_q | $T_{vj} = 130$ °C, typ. | 150 | μs |
| I_H | $T_{vj} = 25$ °C; typ. / max. | 150 / 500 | mA |
| I_L | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max. | 300 / 2000 | mA |
| V_{GT} | $T_{vj} = 25$ °C; d.c. | min. 2 | V |
| I_{GT} | $T_{vj} = 25$ °C; d.c. | min. 150 | mA |
| V_{GD} | $T_{vj} = 130$ °C; d.c. | max. 0,25 | V |
| I_{GD} | $T_{vj} = 130$ °C; d.c. | max. 10 | mA |
| $R_{th(j-c)}$ | cont.; per thyristor / per module | 0,104 / 0,052 | K/W |
| $R_{th(j-c)}$ | sin. 180; per thyristor / per module | 0,108 / 0,054 | K/W |
| $R_{th(j-c)}$ | rec. 120; per thyristor / per module | 0,122 / 0,061 | K/W |
| $R_{th(c-s)}$ | per thyristor / per module | 0,08 / 0,04 | K/W |
| T_{vj} | | - 40 ... + 130 | °C |
| T_{stg} | | - 40 ... + 125 | °C |
| V_{isol} | a. c. 50 Hz; r.m.s.; 1 s / 1 min. | 3600 / 3000 | V~ |
| M_s | to heatsink | 5 ± 15 % ¹⁾ | Nm |
| M_t | to terminals | 9 ± 15 % | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 410 | g |
| Case | SKKT SKKH | A 43a A 56a | |

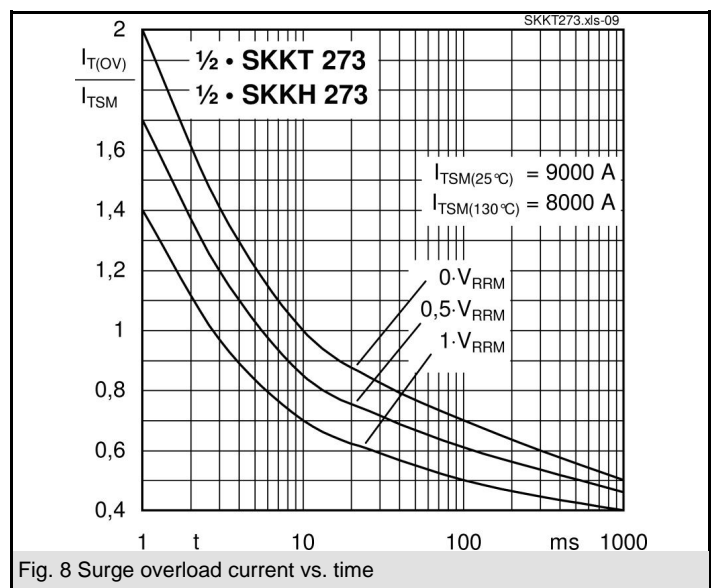
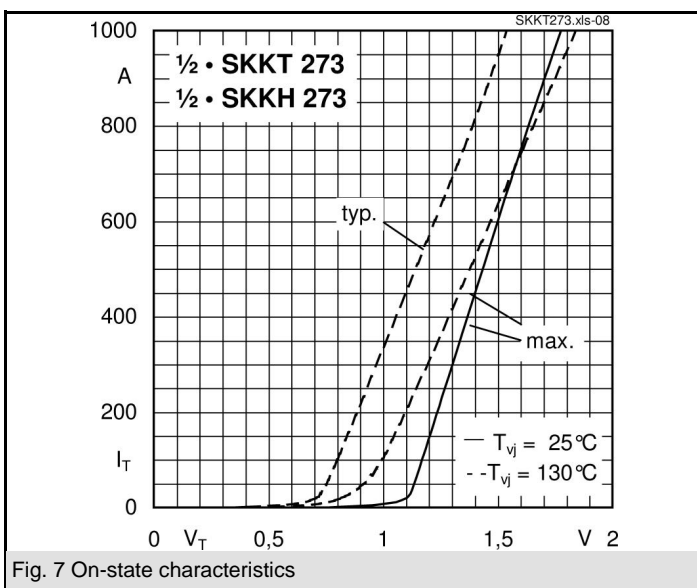
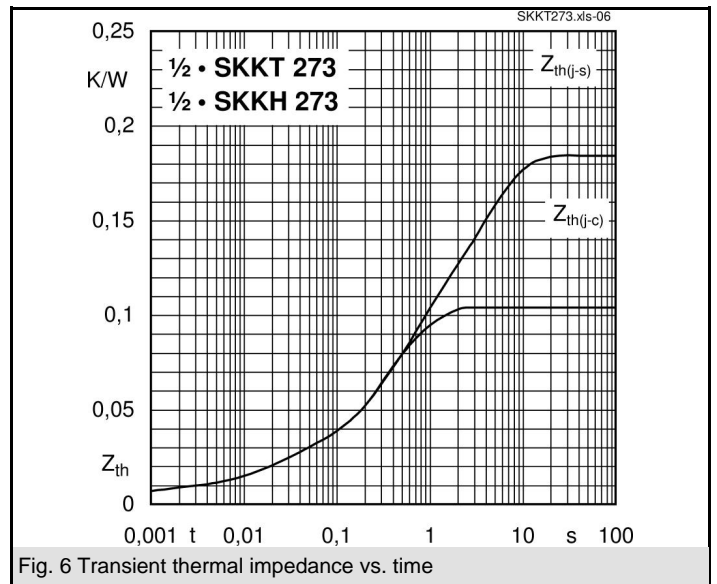
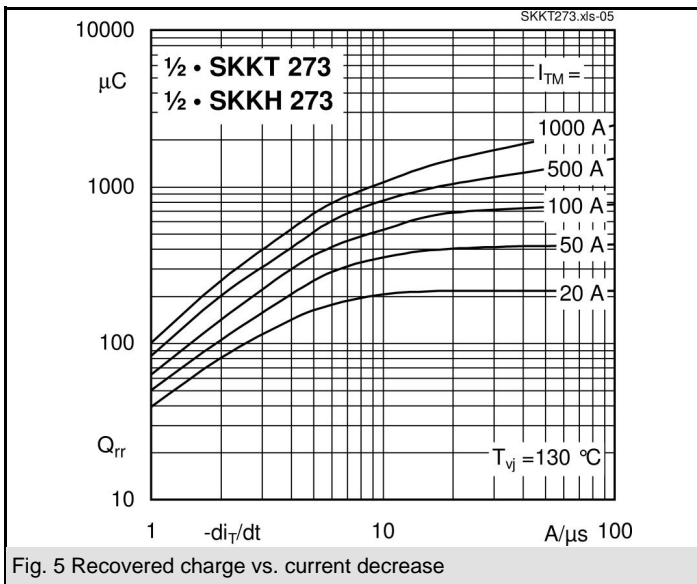
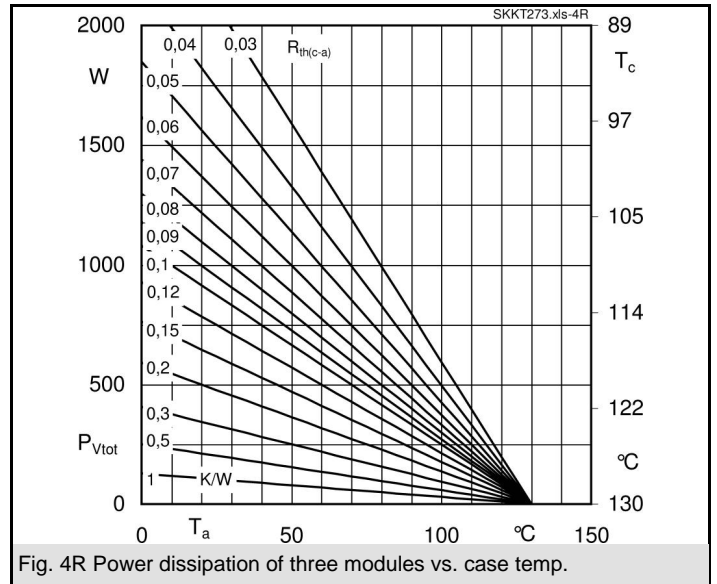
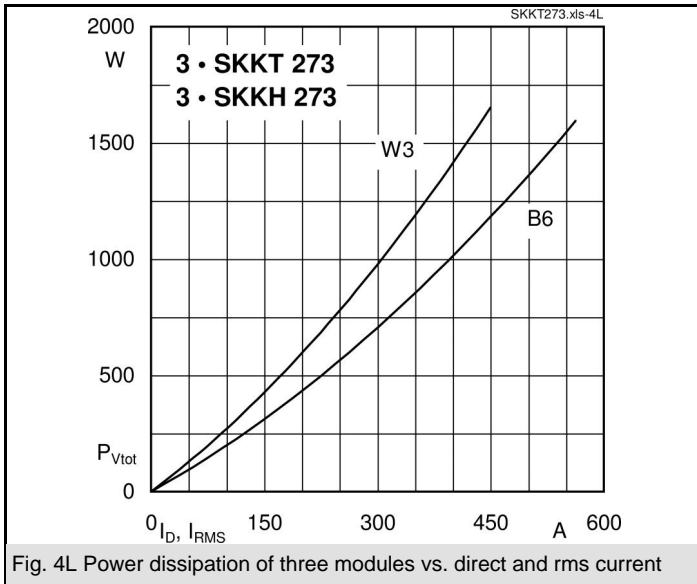


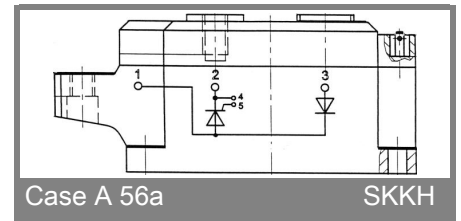
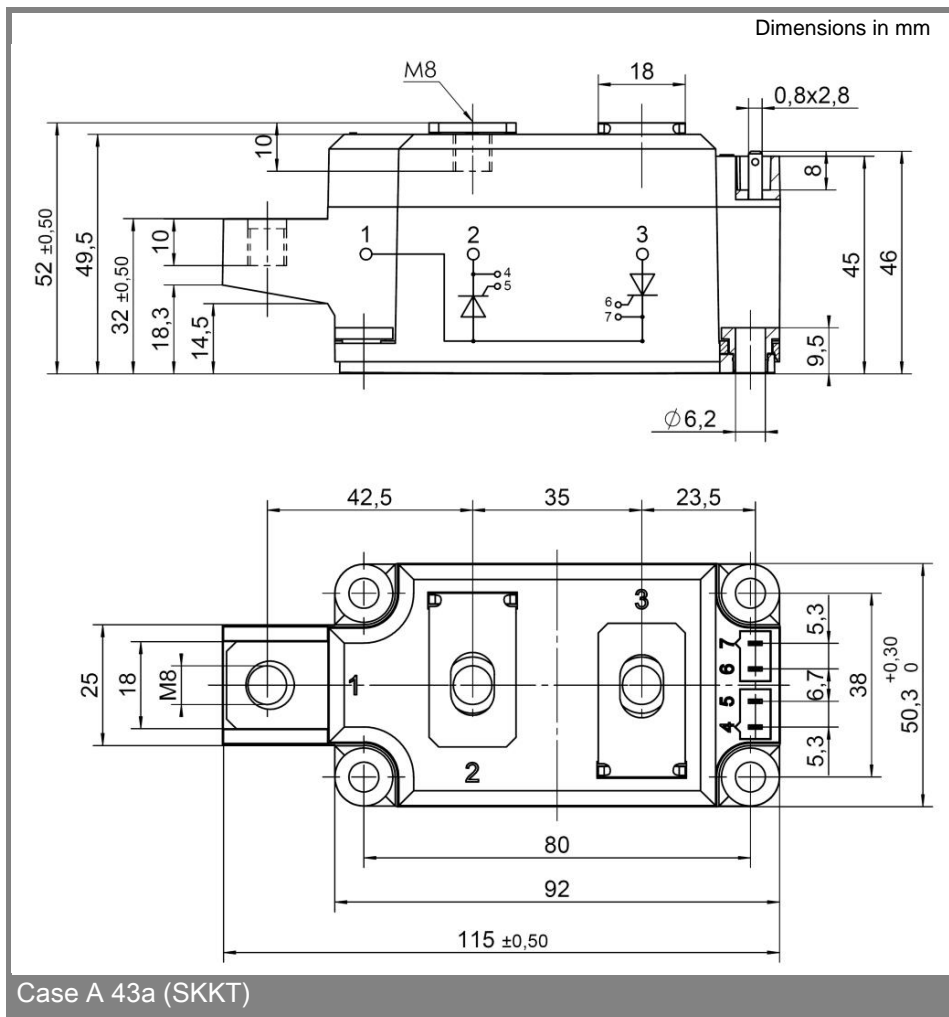
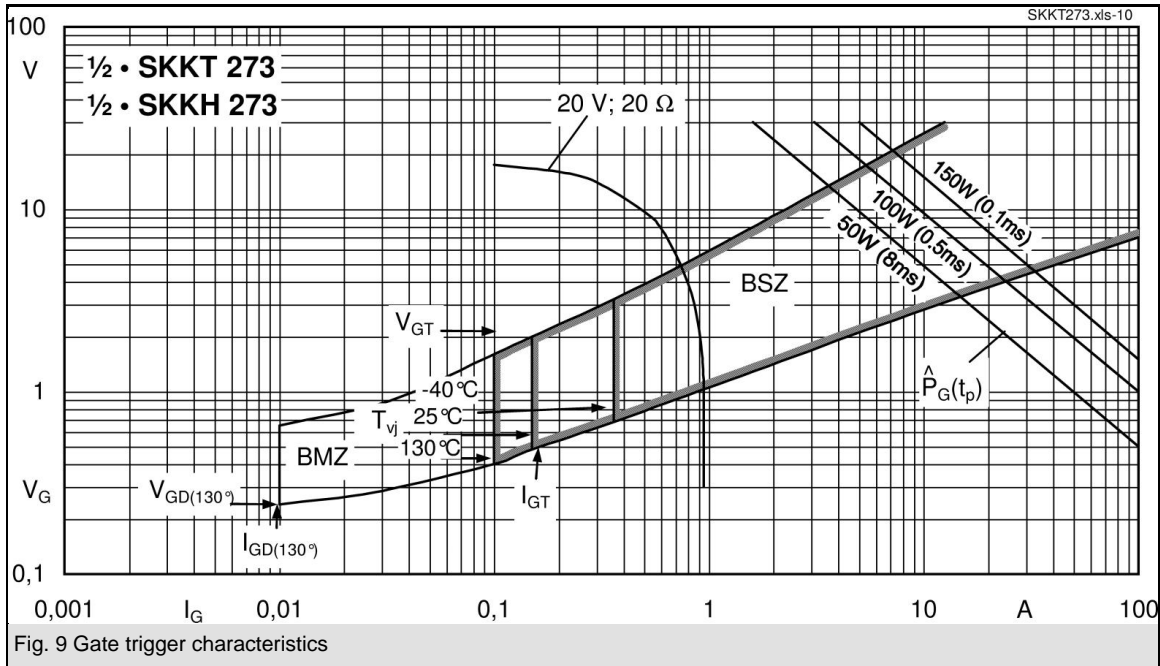
SKKT

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* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We

therefore strongly recommend prior consultation of our personal.