

SKET 740



SEMIPACK® 6

Thyristor Modules

SKET 740

Preliminary Data

Features

- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate

Typical Applications

- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Softstart application

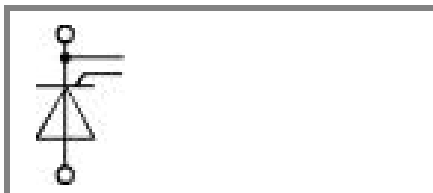
1) calculated with characteristic values

2) characteristic values

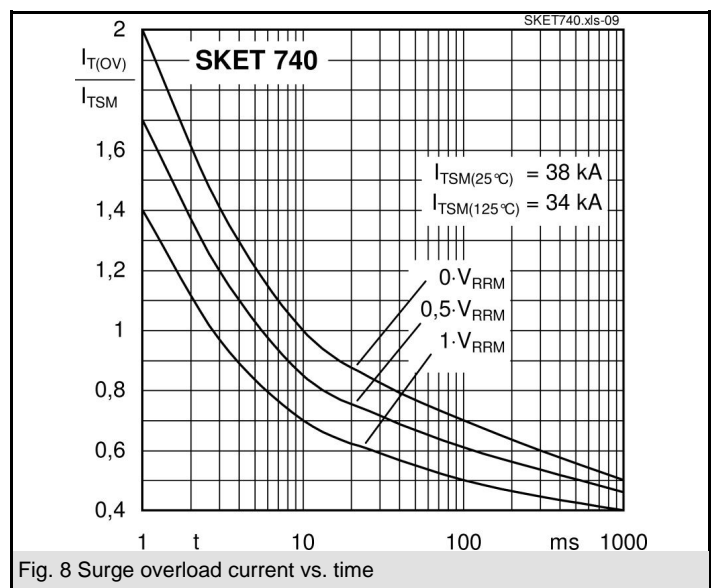
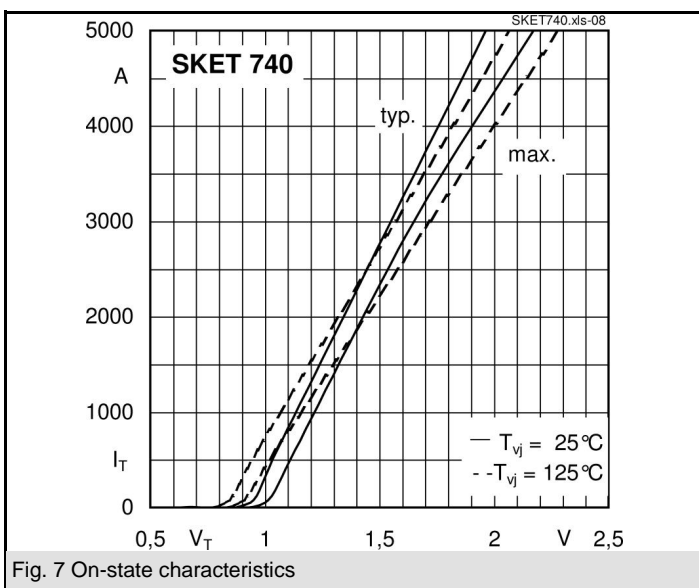
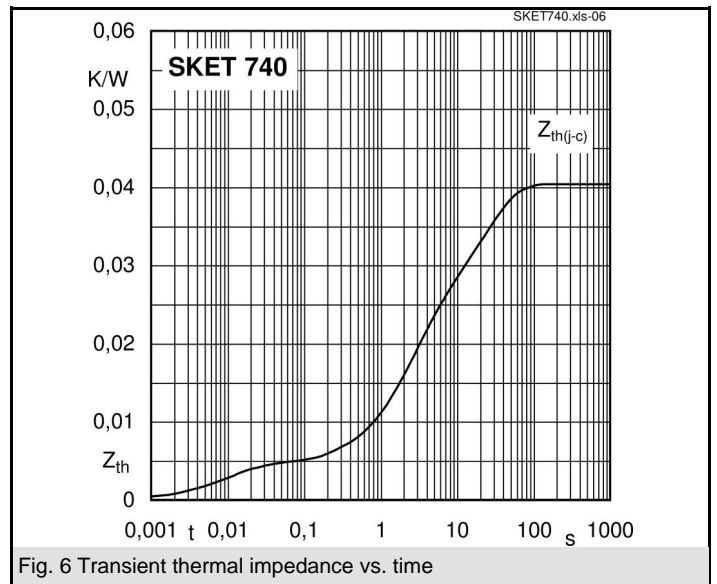
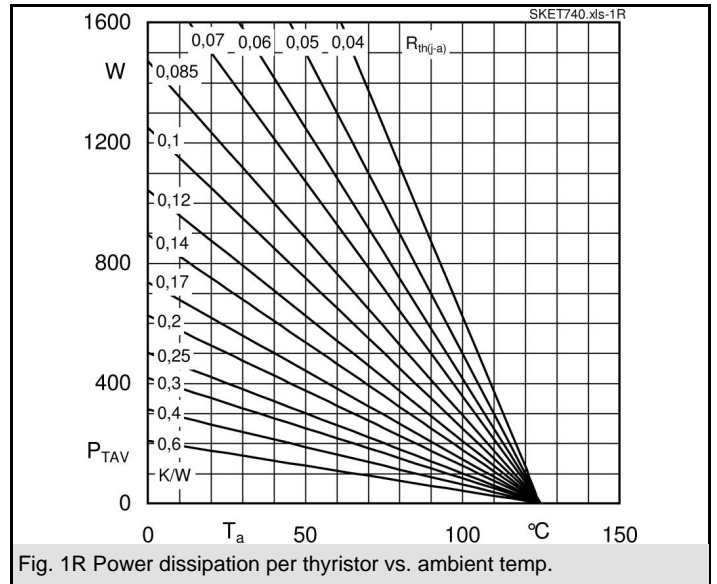
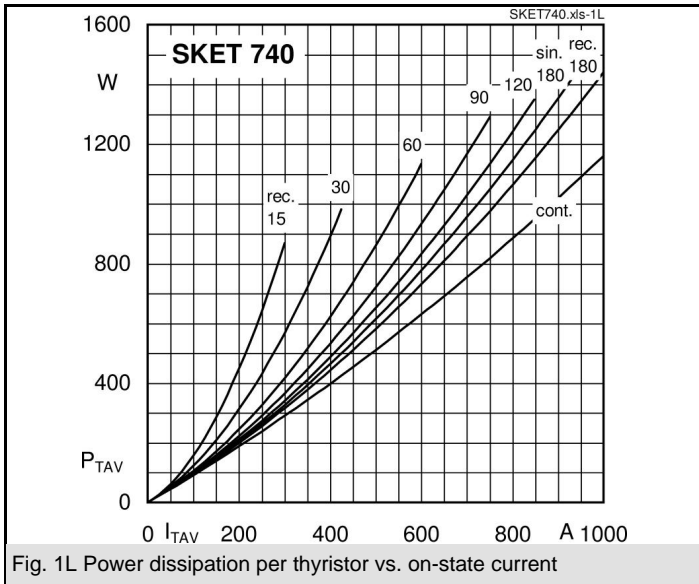
3) T_{vjmax} up to 130°C is allowable for overload conditions, max. time periode for the overload condition is 20s

| | | | |
|----------------|-------------------------|--|--|
| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_{TRMS} = 1500$ A (maximum value for continuous operation) | |
| 1900 | 1800 | $I_{TAV} = 740$ A (sin. 180; $T_c = 82$ °C) | |
| 2300 | 2200 | SKET 740/18G H4 | |
| | | SKET 740/22G H4 | |

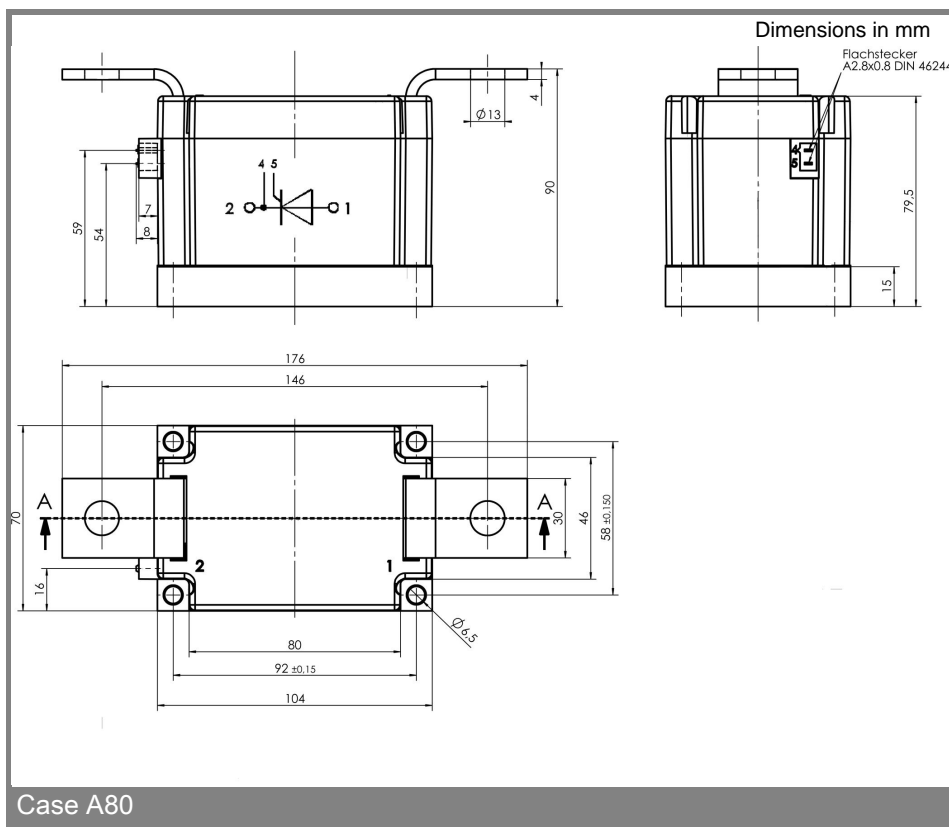
| Symbol | Conditions | Values | Units |
|------------------------|---|------------------------------|------------------|
| I_{TAV} | sin. 180; $T_c = 85$ (100) °C; | 700 (490) | A |
| $I_{TAV(typ.)}^{1)}$ | sin. 180; $T_c = 85$ (100) °C; | 745 (520) | A |
| I_{TSM} | $T_{vj} = 25$ °C; 10 ms | 36000 | A |
| | $T_{vj} = 125$ °C; 10 ms | 31000 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms | 6480000 | A ² s |
| | $T_{vj} = 125$ °C; 8,3 ... 10 ms | 4805000 | A ² s |
| V_T | $T_{vj} = 25$ °C; $I_T = 3000$ A | max. 1,65 | V |
| $V_{T(typ.)}^{2)}$ | $T_{vj} = 25$ °C; $I_T = 3000$ A | 1,55 | V |
| $V_{T(TO)}$ | $T_{vj} = 125$ °C | max. 0,88 | V |
| r_T | $T_{vj} = 125$ °C | max. 0,28 | mΩ |
| $V_{T(TO)(typ.)}^{2)}$ | $T_{vj} = 125$ °C | 0,82 | V |
| $r_{T(typ.)}^{2)}$ | $T_{vj} = 125$ °C | 0,25 | mΩ |
| I_{DD}, I_{RD} | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 150 | 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 |
| $(di/dt)_{cr}$ | $T_{vj} = 125$ °C | max. 200 | A/μs |
| $(dv/dt)_{cr}$ | $T_{vj} = 125$ °C | max. 2000 | V/μs |
| t_q | $T_{vj} = 125$ °C | 200 | μs |
| I_H | $T_{vj} = 25$ °C; typ. / max. | 1000 / 2000 | mA |
| I_L | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max. | 1500 / 2500 | mA |
| V_{GT} | $T_{vj} = 25$ °C; d.c. | min. 3 | V |
| I_{GT} | $T_{vj} = 25$ °C; d.c. | min. 300 | mA |
| V_{GD} | $T_{vj} = 125$ °C; d.c. | max. 0,25 | V |
| I_{GD} | $T_{vj} = 125$ °C; d.c. | max. 10 | mA |
| $R_{th(j-c)}$ | cont. | 0,0405 | K/W |
| $R_{th(j-c)}$ | sin. 180 | 0,042 | K/W |
| $R_{th(j-c)}$ | rec. 120 | 0,043 | K/W |
| $R_{th(c-s)}$ | | 0,01 | K/W |
| T_{vj} | | - 40 ... + 125 ³⁾ | °C |
| T_{stg} | | - 40 ... + 125 | °C |
| V_{isol} | a. c. 50 Hz; r.m.s.; 1s / 1 min. | 4800 / 4000 | V~ |
| M_s | to heatsink | 6 ± 15 % | Nm |
| M_t | to terminal | 18 ± 15 % | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 2150 | g |
| Case | | A80 | |



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