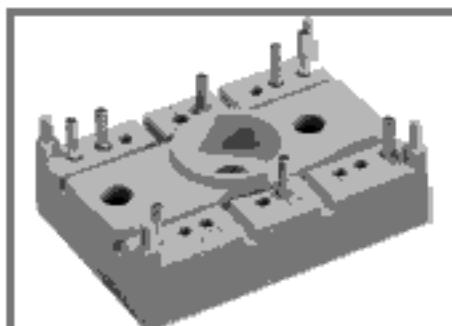


SK 70 D



SEMITOP® 2

Bridge Rectifier

SK 70 D

Preliminary Data

Features

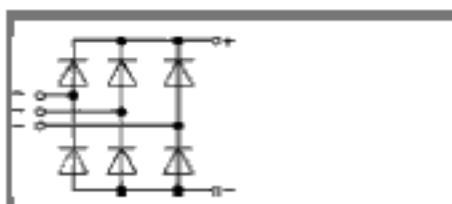
- Compact design
- One screw mounting
- Heat transfer and insulation through direct copper bonded aluminium oxide ceramic (DCB)
- Up to 1600V reverse voltage
- High surge currents
- Glass passivated diodes chips
- UL recognized, file no. E 63 532

Typical Applications

- Input rectifier for power supplies
- Rectifier

| V_{RSM} V | V_{RRM} , V_{DRM} V | $I_D = 70$ A (full conduction) ($T_a = 80$ °C) |
|----------------|----------------------------|--|
| 800 | 800 | SK 70 D 08 |
| 1200 | 1200 | SK 70 D 12 |
| 1600 | 1200 | SK 70 D 16 |

| Symbol | Conditions | Values | Units |
|---------------|--|---------------|------------------|
| I_D | $T_a = 80$ °C | 70 | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms | 370 | A |
| | $T_{vj} = 150$ °C; 10 ms | 270 | A |
| P_t | $T_{vj} = 25$ °C; 8,3...10 ms | 686 | A ² s |
| | $T_{vj} = 150$ °C; 8,3...10 ms | 366 | A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 25$ A | max. 1,25 | V |
| $V_{(TO)}$ | $T_{vj} = 150$ °C | 0,8 | V |
| r_T | $T_{vj} = 150$ °C | 13 | mΩ |
| I_{RD} | $T_{vj} = 150$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$ | max. 4 | mA |
| $R_{th(j-a)}$ | per diode | 1,7 | K/W |
| | per module | 0,28 | K/W |
| T_{solder} | terminals, 10s | 260 | °C |
| T_{vj} | | -40...+160 | °C |
| T_{stg} | | -40...+125 | °C |
| V_{isol} | a. c. 60 Hz; r.m.s.; 1 s / 1 min. | 3000 (2500) | V |
| M_s | mounting torque to heatsink | 2 | Nm |
| M_t | | | |
| a | | | m/s ² |
| m | approx. weight | 19 | g |
| Case | SEMITOP® 2 | T 7 | |



D

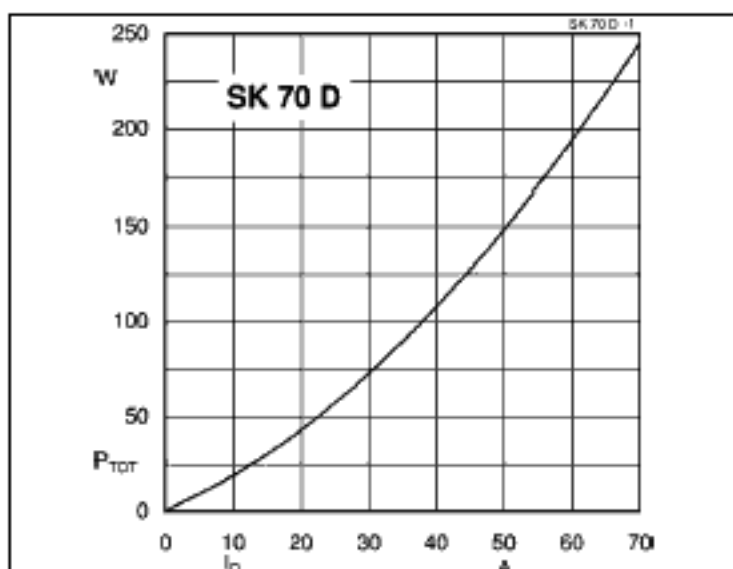


Fig. 1 Power dissipation vs. Output current

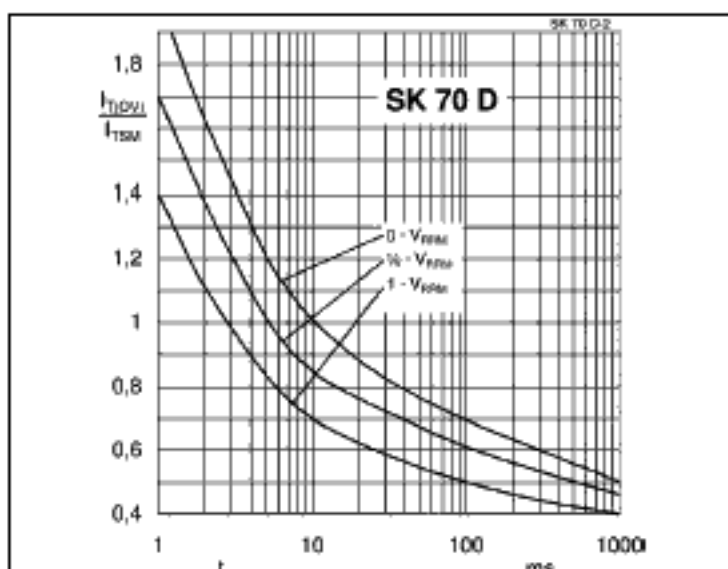


Fig. 2 Surge overload current vs. time

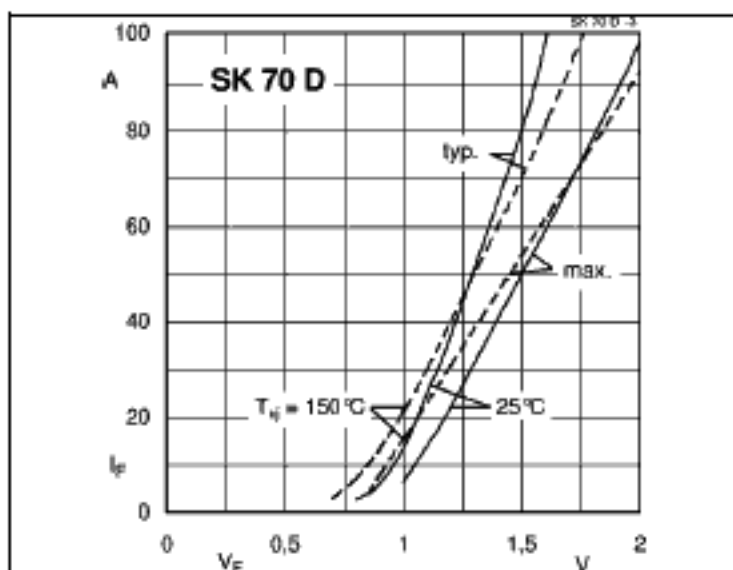


Fig. 3 Forward characteristics of single diode

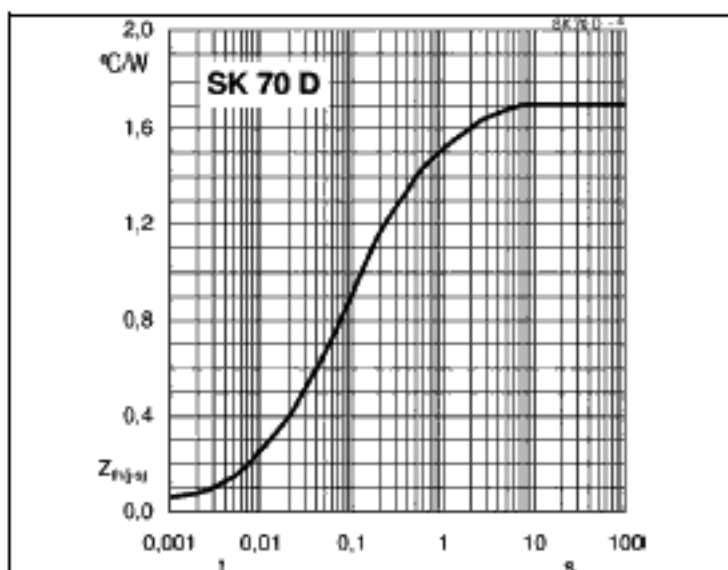
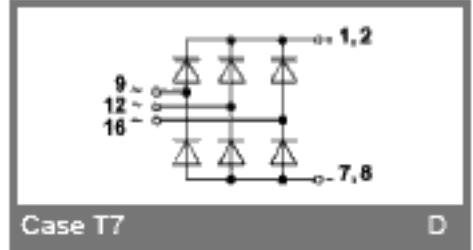
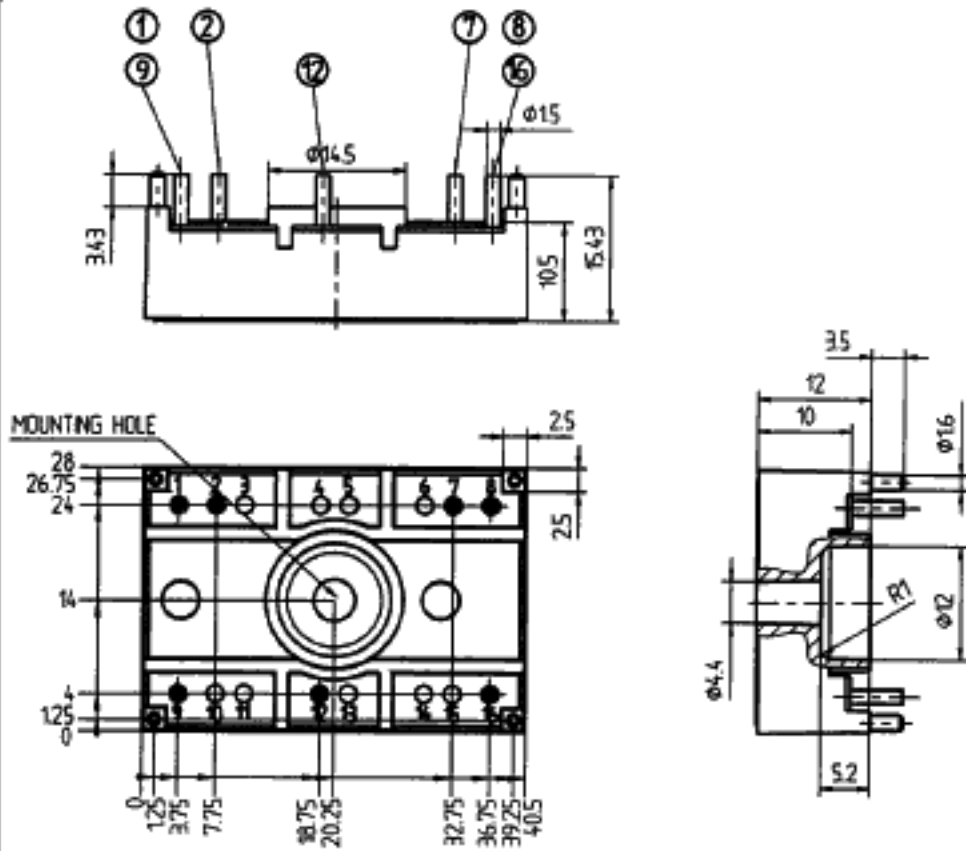


Fig. 4 Thermal transient impedance vs. time

Dimensions in mm



Case T7

D

Case T7 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins = 2mm)

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