



**SEMITOP® 2**

## Bridge Rectifier

### SK100B

Target Data

### Features

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

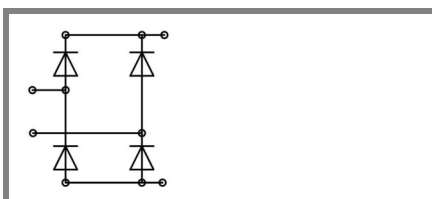
### Typical Applications

- Input rectifier for power supplies
- Rectifier

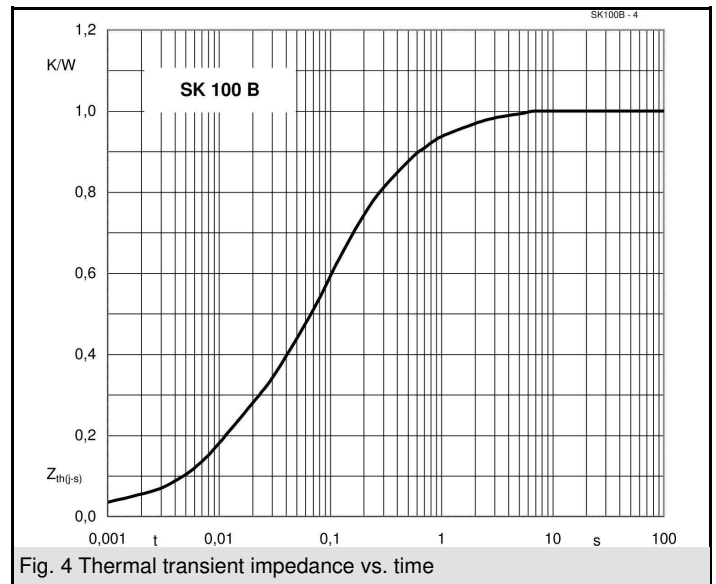
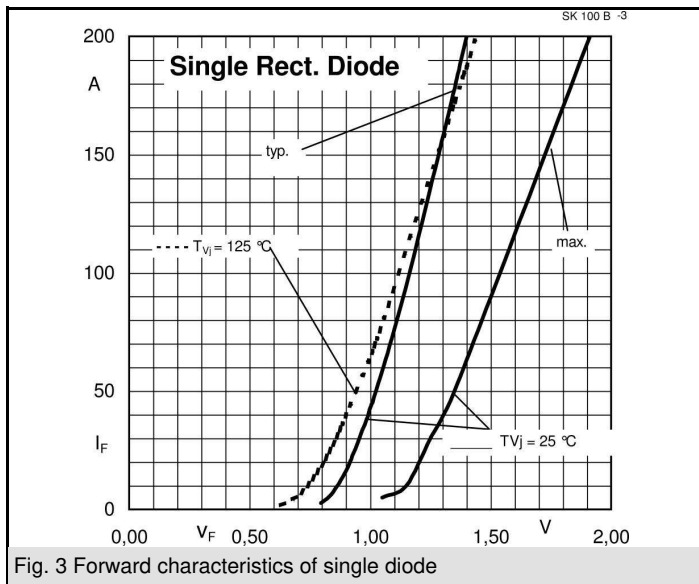
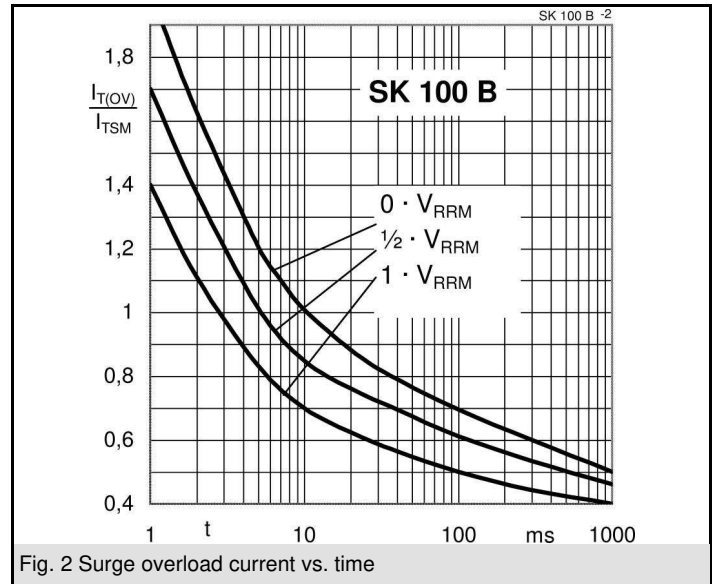
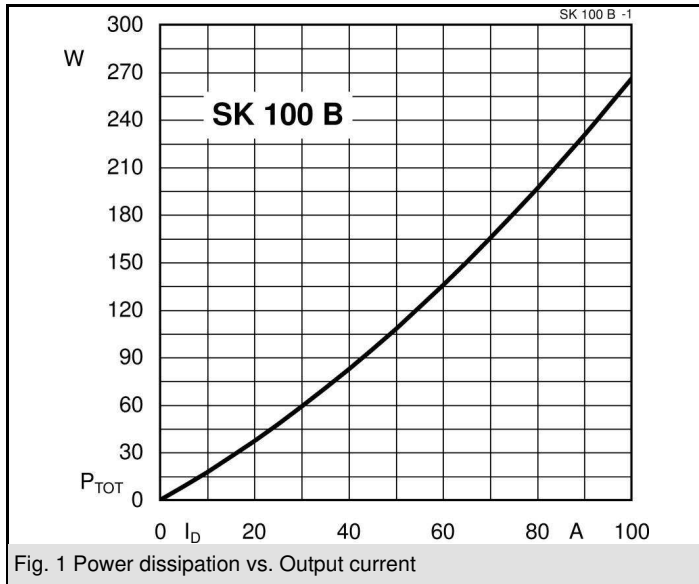
1)  $V_F$ ,  $V_{(TO)}$ ,  $r_T$  = chip level value

| $V_{RSM}$<br>V | $V_{RRM}$ , $V_{DRM}$<br>V | $I_D = 51$ A (full conduction)<br>( $T_s = 80$ °C) |
|----------------|----------------------------|--|
| 900            | 800                        | SK100B08   |
| 1300           | 1200                       | SK100B12   |
| 1700           | 1600                       | SK100B16   |

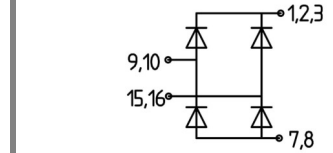
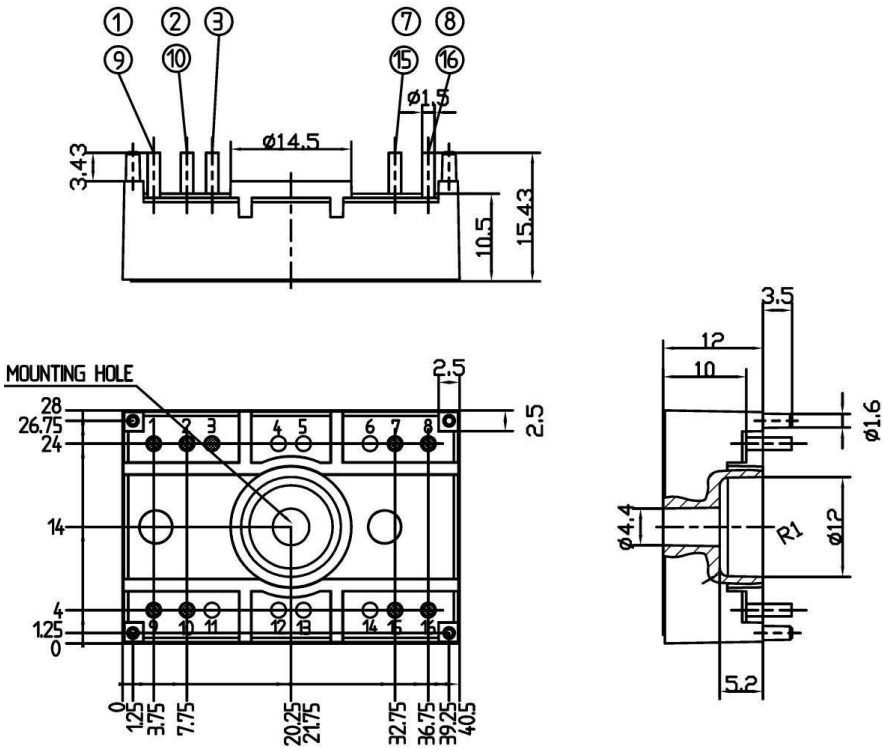
| Symbol        | Conditions  | Values        | Units                                |
|---------------|---|---------------|--------------------------------------|
| $I_D$         | $T_s = 80$ °C   | 100           | A                                    |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms<br>$T_{vj} = 150$ °C; 10 ms             | 1000<br>890   | A<br>A                               |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3...10 ms<br>$T_{vj} = 125$ °C; 8,3...10 ms | 5000<br>3960  | A <sup>2</sup> s<br>A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 40$ A                                  | max. 1,21     | V                                    |
| $V_{(TO)}$    | $T_{vj} = 125$ °C   | max. 0,83     | V                                    |
| $r_T$         | $T_{vj} = 125$ °C   | max. 3,9      | mΩ                                   |
| $I_{RD}$      | $T_{vj} = 150$ °C; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$      | max. 1,1      | mA<br>mA                             |
| $R_{th(f-s)}$ | per diode<br>per module   | 1<br>0,25     | K/W<br>K/W                           |
| $T_{solder}$  | terminals, 10s  | 260           | °C                                   |
| $T_{vj}$      |   | -40...+150    | °C                                   |
| $T_{stg}$     |   | -40...+125    | °C                                   |
| $V_{isol}$    | a. c. 50 Hz; r.m.s.; 1 s / 1 min.                               | 3000 ( 2500 ) | V                                    |
| $M_s$         | mounting torque to heatsink                                     | 2             | Nm                                   |
| $M_t$         |   |               |                                      |
| m             | approx. weight  | 19            | g                                    |
| Case          | SEMITOP® 2  | T 6           |                                      |



B



Dimensions in mm



Case T97

B

Case T97 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins = 2mm)

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