



**Stud Diode**

## Rectifier Diode

**SKN 100**

**SKR 100**

### Features

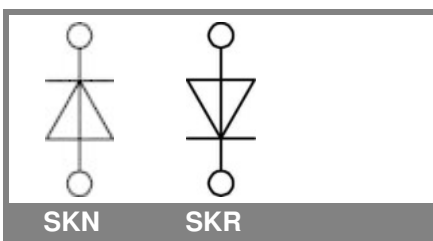
- Reverse voltages up to 1800 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M12, M16 x 1,5
- SKN: anode to stud, SKR: cathode to stud

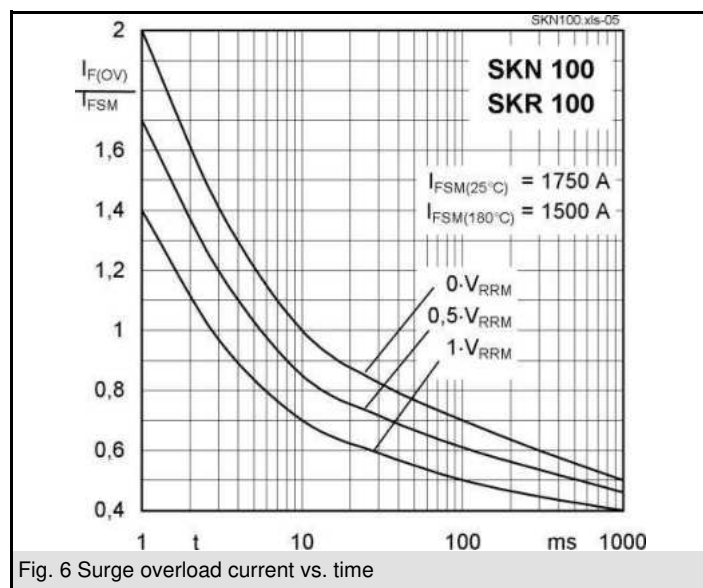
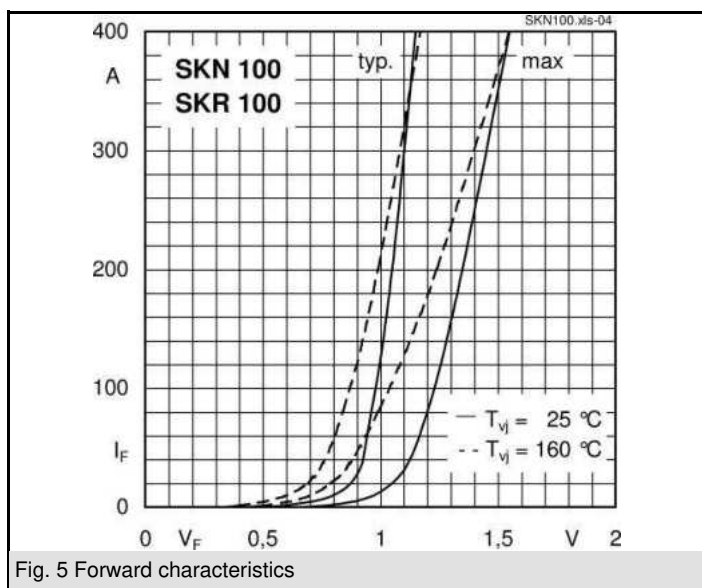
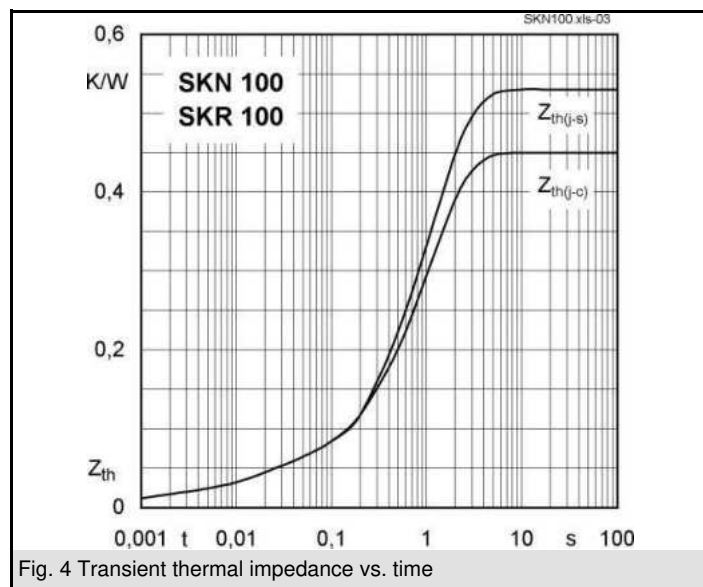
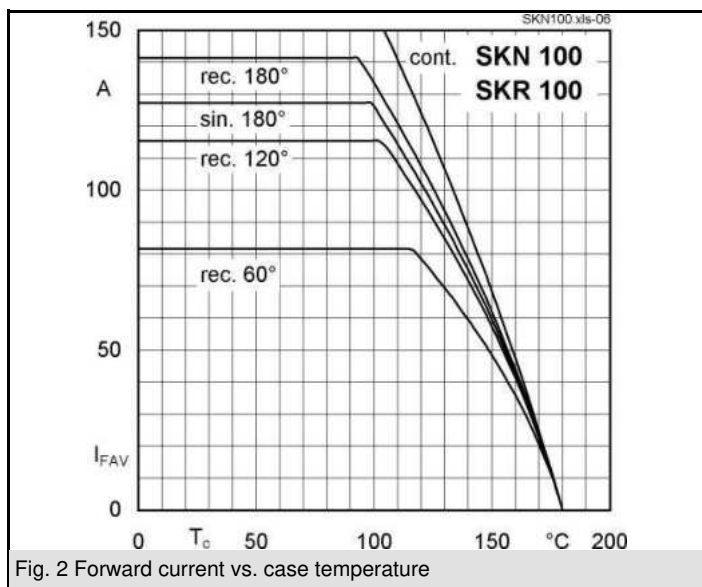
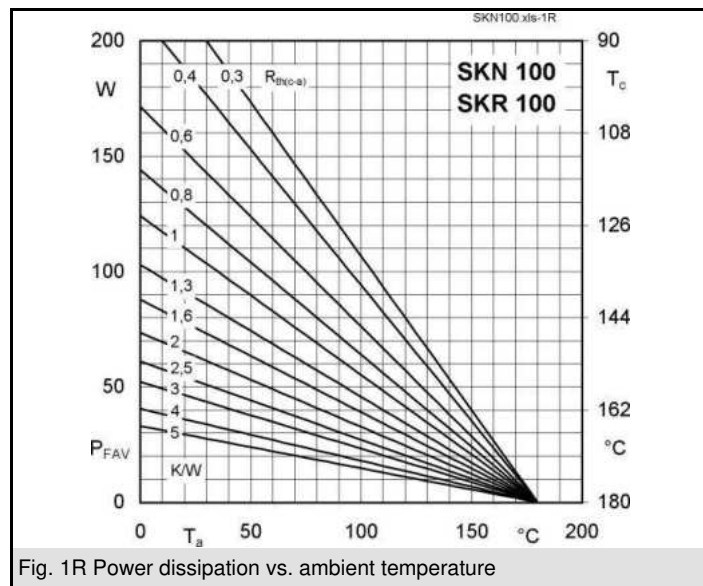
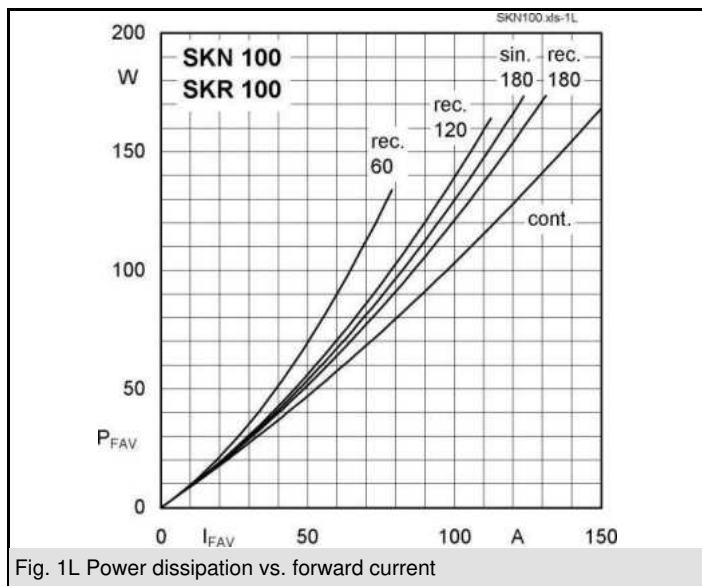
### Typical Applications\*

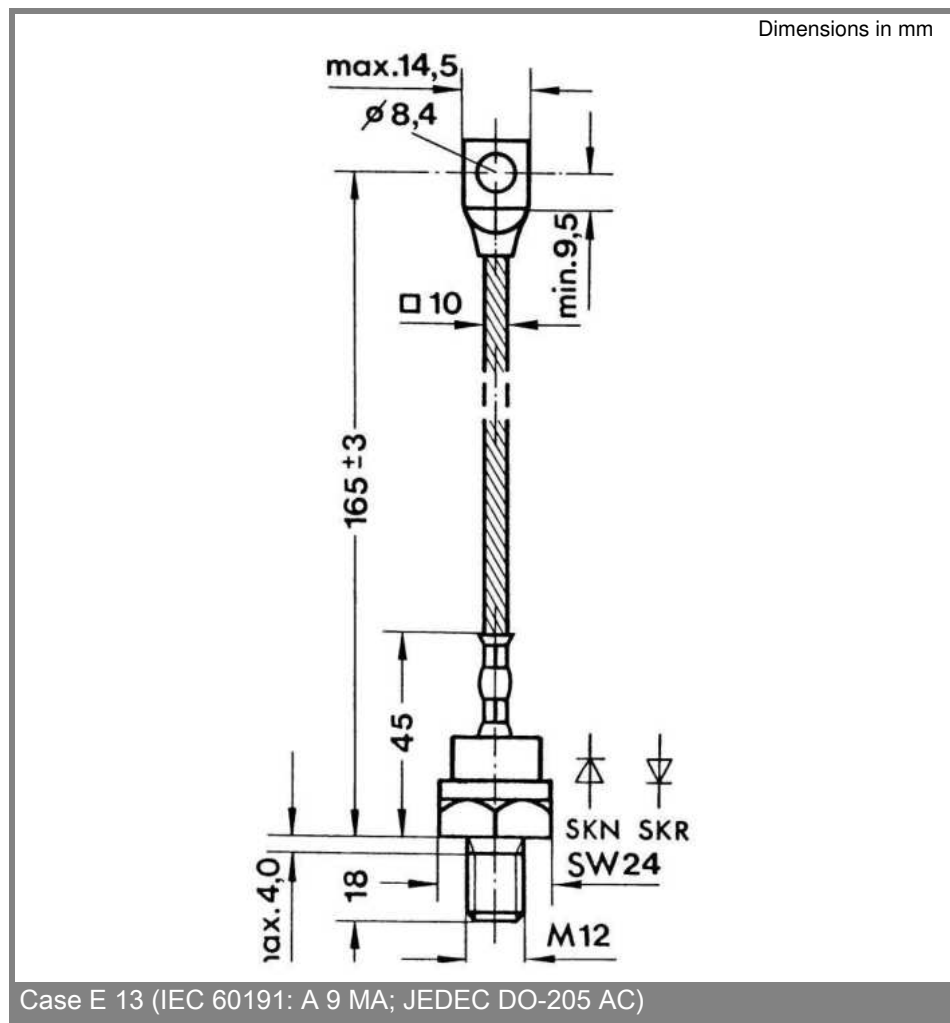
- All-purpose mean power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifier
- Free-wheeling diodes
- Recommended snubber network:  
RC: 0,25  $\mu$ F, 50  $\Omega$ , ( $P_R = 2$  W),  
 $R_P = 50$  k $\Omega$  ( $P_R = 20$  W)

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | $I_{FRMS} = 200$ A (maximum value for continuous operation)<br>$I_{FAV} = 100$ A (sin. 180; $T_c = 120$ °C) |            |  |
|----------------|----------------|-------------------------------------------------------------------------------------------------------------|------------|--|
| 400            | 400            | SKN 100/04                                                                                                  | SKR 100/04 |  |
| 800            | 800            | SKN 100/08                                                                                                  | SKR 100/08 |  |
| 1200           | 1200           | SKN 100/12                                                                                                  | SKR 100/12 |  |
| 1400           | 1400           | SKN 100/14                                                                                                  | SKR 100/14 |  |
| 1600           | 1600           | SKN 100/16                                                                                                  | SKR 100/16 |  |
| 1800           | 1800           | SKN 100/18                                                                                                  | SKR 100/18 |  |

| Symbol        | Conditions                                    | Values         | Units            |
|---------------|-----------------------------------------------|----------------|------------------|
| $I_{FAV}$     | sin. 180; $T_c = 100$ °C                      | 125            | A                |
| $I_D$         | K 1,1; $T_a = 45$ °C; B2 / B6                 | 140 / 204      | A                |
|               | K 1,1F; $T_a = 35$ °C; B2 / B6                | 240 / 336      | A                |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms                       | 1750           | A                |
|               | $T_{vj} = 180$ °C; 10 ms                      | 1500           | A                |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3 ... 10 ms               | 15000          | A <sup>2</sup> s |
|               | $T_{vj} = 180$ °C; 8,3 ... 10 ms              | 11500          | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 400$ A               | max. 1,55      | V                |
| $V_{(TO)}$    | $T_{vj} = 180$ °C                             | max. 0,85      | V                |
| $r_T$         | $T_{vj} = 180$ °C                             | max. 1,8       | m $\Omega$       |
| $I_{RD}$      | $T_{vj} = 180$ °C; $V_{RD} = V_{RRM}$         | max. 15        | mA               |
| $Q_{rr}$      | $T_{vj} = 160$ °C; $-di_F/dt = 10$ A/ $\mu$ s | 100            | $\mu$ C          |
| $R_{th(j-c)}$ |                                               | 0,45           | K/W              |
| $R_{th(c-s)}$ |                                               | 0,08           | K/W              |
| $T_{vj}$      |                                               | - 40 ... + 180 | °C               |
| $T_{stg}$     |                                               | - 55 ... + 180 | °C               |
| $V_{isol}$    |                                               | -              | V~               |
| $M_s$         | to heatsink                                   | 10             | Nm               |
| $a$           |                                               | 5 * 9,81       | m/s <sup>2</sup> |
| $m$           | approx.                                       | 90             | g                |
| Case          |                                               | E 13           |                  |







\* 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.