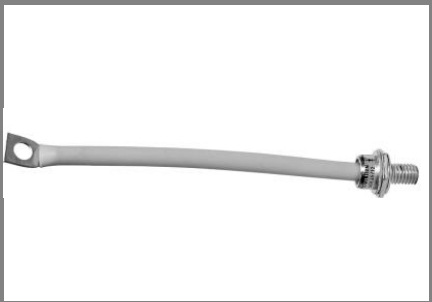




Stud Diode

Rectifier Diode

SKN 45  
SKR 45

Features

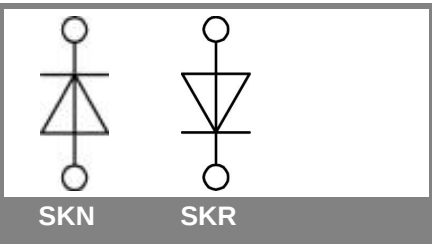
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M8
- SKN: anode to stud,  
SKR: cathode to stud

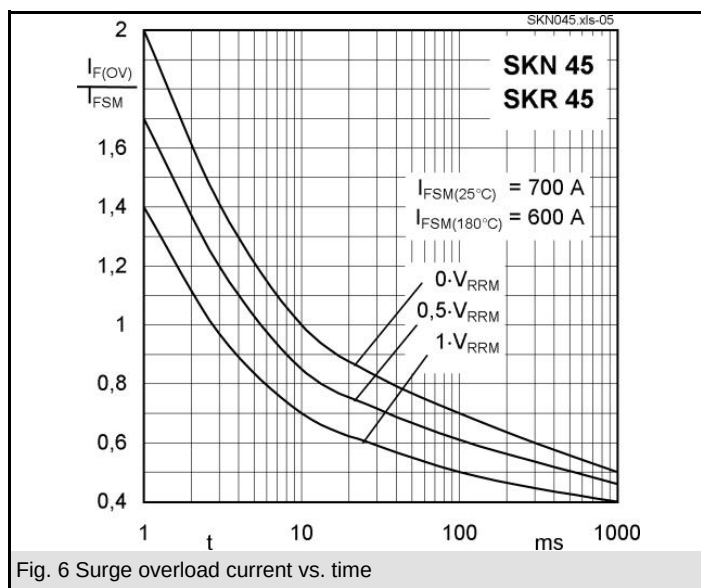
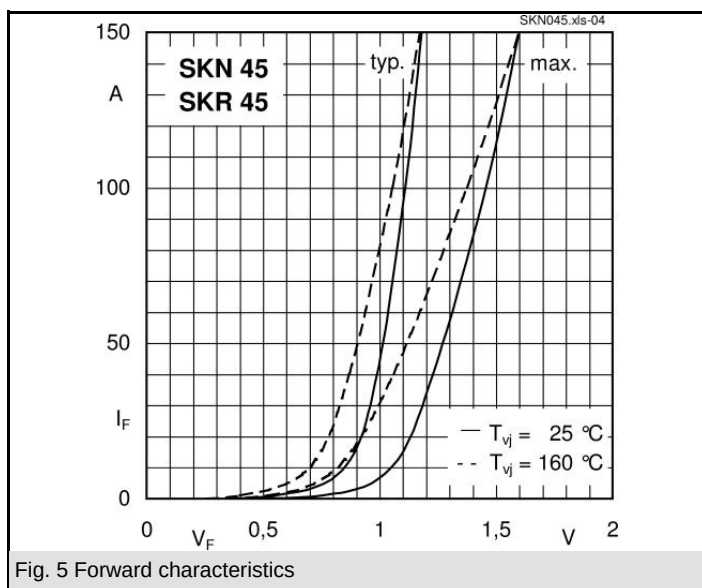
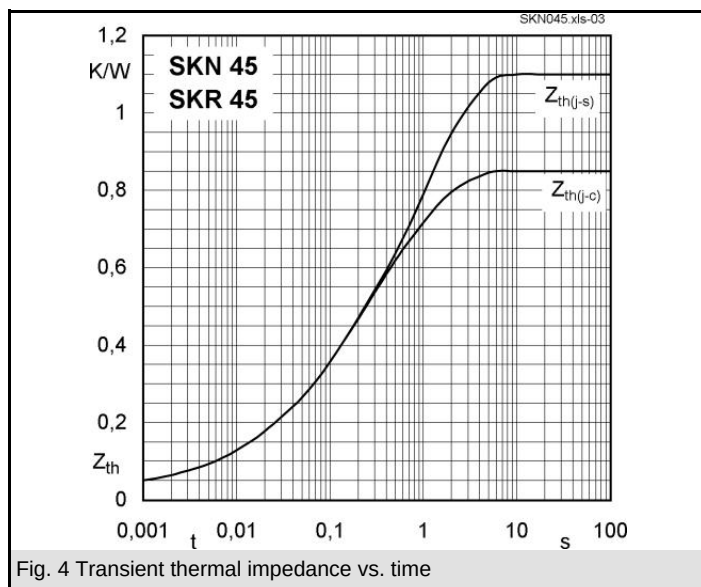
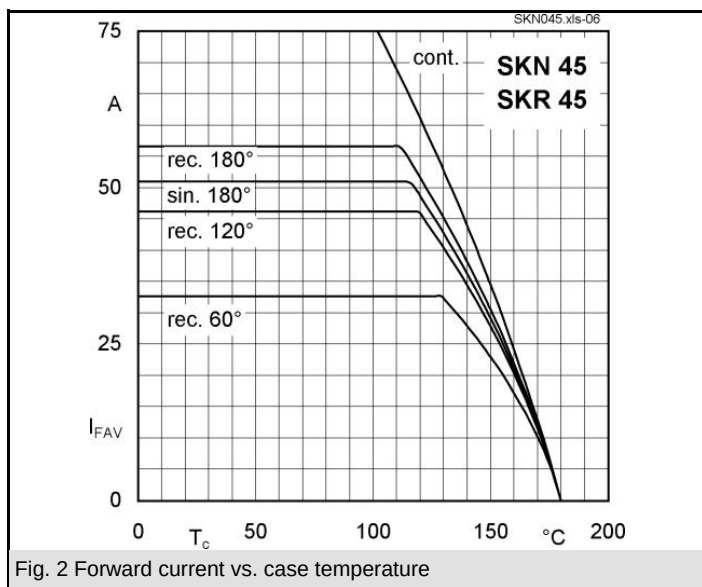
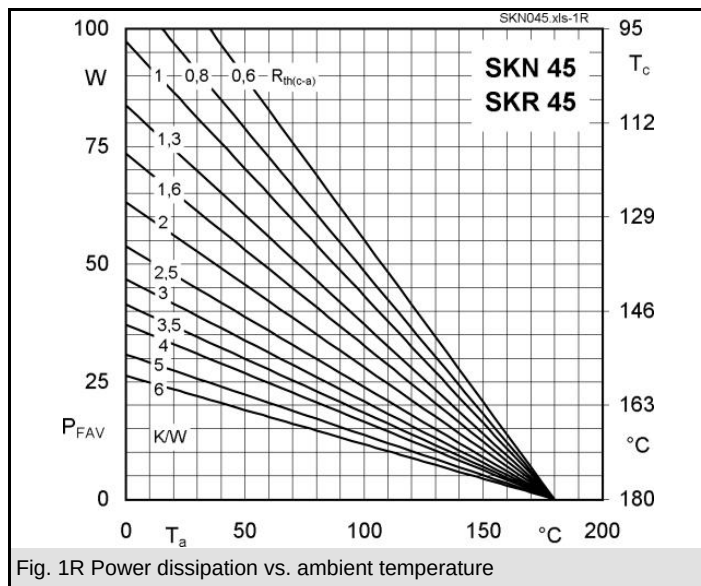
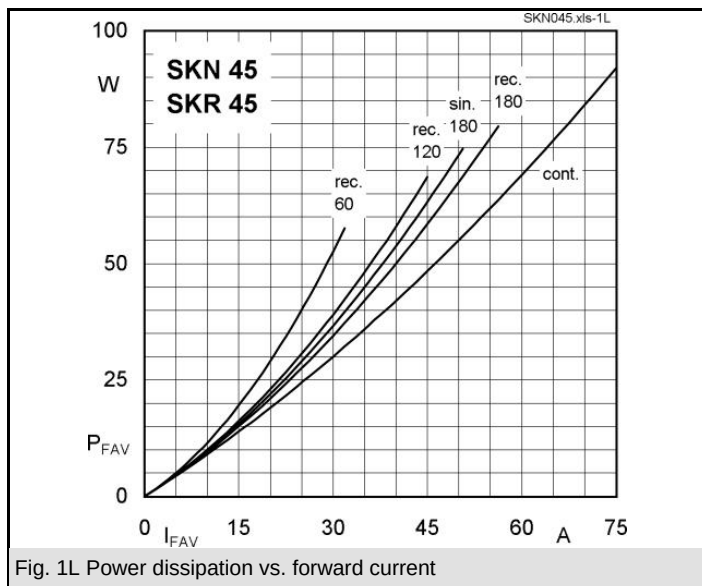
Typical Applications

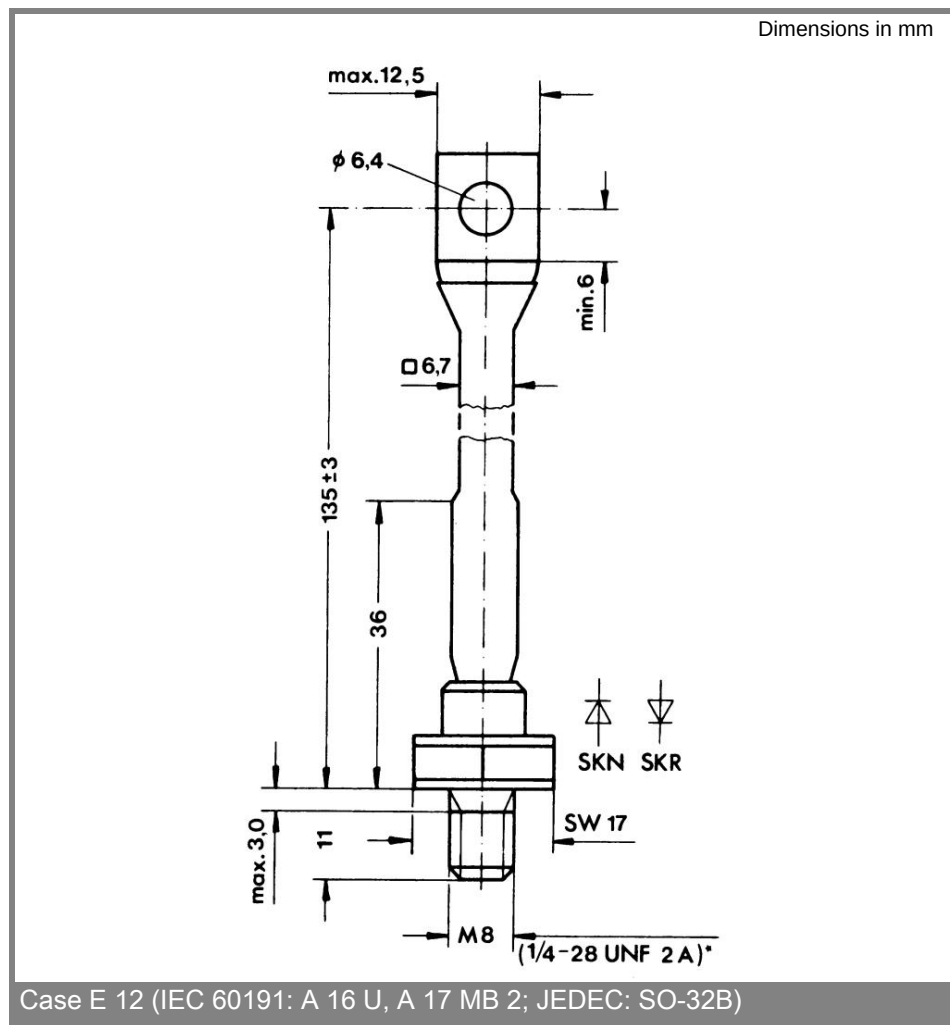
- All-purpose mean power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:  
RC: 0,1 µF, 100 Ω (P<sub>R</sub> = 1 W)  
R<sub>P</sub> = 80 kΩ (P<sub>R</sub> = 6 W)

| $V_{RSM}$<br>V | $V_{RRM}$<br>V | $I_{FRMS} = 80\text{ A}$ (maximum value for continuous operation) |           |  |
|----------------|----------------|-------------------------------------------------------------------|-----------|--|
|                |                | $I_{FAV} = 45\text{ A}$ (sin. 180; $T_c = 125\text{ °C}$ )        |           |  |
| 400            | 400            | SKN 45/04                                                         | SKR 45/04 |  |
| 800            | 800            | SKN 45/08                                                         | SKR 45/08 |  |
| 1200           | 1200           | SKN 45/12                                                         | SKR 45/12 |  |
| 1400           | 1400           | SKN 45/14                                                         | SKR 45/14 |  |
| 1600           | 1600           | SKN 45/16                                                         | SKR 45/16 |  |

| Symbol        | Conditions                                              | Values         | Units |
|---------------|---------------------------------------------------------|----------------|-------|
| $I_{FAV}$     | sin. 180; $T_c = 100\text{ °C}$                         | 50             | A     |
| $I_D$         | K 5; $T_a = 45\text{ °C}$ ; B2 / B6                     | 40 / 57        | A     |
|               | K 1,1; $T_a = 45\text{ °C}$ ; B2 / B6                   | 86 / 120       | A     |
| $I_{FSM}$     | $T_{vj} = 25\text{ °C}$ ; 10 ms                         | 700            | A     |
|               | $T_{vj} = 180\text{ °C}$ ; 10 ms                        | 600            | A     |
| $i^2t$        | $T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms                 | 2500           | A²s   |
|               | $T_{vj} = 180\text{ °C}$ ; 8,3 ... 10 ms                | 1800           | A²s   |
| $V_F$         | $T_{vj} = 25\text{ °C}$ ; $I_F = 150\text{ A}$          | max. 1,6       | V     |
| $V_{(TO)}$    | $T_{vj} = 180\text{ °C}$                                | max. 0,85      | V     |
| $r_T$         | $T_{vj} = 180\text{ °C}$                                | max. 5         | mΩ    |
| $I_{RD}$      | $T_{vj} = 180\text{ °C}$ ; $V_{RD} = V_{RRM}$           | max. 10        | mA    |
| $Q_{rr}$      | $T_{vj} = 160\text{ °C}$ ; - $di_F/dt = 10\text{ A/μs}$ | 70             | μC    |
| $R_{th(j-c)}$ |                                                         | 0,85           | K/W   |
| $R_{th(c-s)}$ |                                                         | 0,25           | K/W   |
| $T_{vj}$      |                                                         | - 40 ... + 180 | °C    |
| $T_{stg}$     |                                                         | - 55 ... + 180 | °C    |
| $V_{isol}$    |                                                         | -              | V~    |
| $M_s$         | to heatsink                                             | 4              | Nm    |
| a             |                                                         | 5 * 9,81       | m/s²  |
| m             | approx.                                                 | 30             | g     |
| Case          |                                                         | E 12           |       |







This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.