

SKN 20



Stud Diode

Rectifier Diode

SKN 20

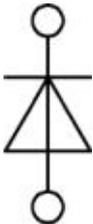
SKR 20

Features

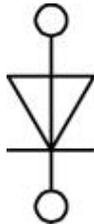
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M6
- SKN: anode to stud,
SKR: cathode to stud

Typical Applications

- All-purpose mean power rectifier diodes
- Cooling via metal plates or heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
RC: 0,05 μ F, 200 Ω ($P_R = 1$ W),
 $R_p = 150$ k Ω ($P_R = 4$ W)



SKN



SKR

| V_{RSM} | V_{RRM} | $I_{FRMS} = 40$ A (maximum value for continuous operation) | |
|-----------|-----------|--|-----------|
| V | V | $I_{FAV} = 20$ A (sin. 180 °; $T_c = 125$ °C) | |
| 400 | 400 | SKN 20/04 | SKR 20/04 |
| 800 | 800 | SKN 20/08 | SKR 20/08 |
| 1200 | 1200 | SKN 20/12 | SKR 20/12 |
| 1400 | 1400 | SKN 20/14 | SKR 20/14 |
| 1600 | 1600 | SKN 20/16 | SKR 20/16 |

| Symbol | Conditions | Values | Units |
|---------------|--|----------------|------------------|
| I_{FAV} | sin. 180; $T_c = 100$ °C | 25 | A |
| I_D | K 9; $T_a = 45$ °C; B2 / B6 | 20 / 29 | A |
| | K 3; $T_a = 45$ °C; B2 / B6 | 35 / 50 | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms | 375 | A |
| | $T_{vj} = 180$ °C; 10 ms | 320 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms | 700 | A ² s |
| | $T_{vj} = 180$ °C; 8,3 ... 10 ms | 510 | A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 60$ A | max. 1,55 | V |
| $V_{(TO)}$ | $T_{vj} = 180$ °C | max. 0,85 | V |
| r_T | $T_{vj} = 180$ °C | max. 11 | m Ω |
| I_{RD} | $T_{vj} = 180$ °C; $V_{RD} = V_{RRM}$ | max. 4 | mA |
| Q_{rr} | $T_{vj} = 160$ °C; - $di_F/dt = 10$ A/ μ s | 20 | μ C |
| $R_{th(j-c)}$ | | 2 | K/W |
| $R_{th(c-s)}$ | | 1 | K/W |
| T_{vj} | | - 40 ... + 180 | °C |
| T_{stg} | | - 55 ... + 180 | °C |
| V_{isol} | | - | V~ |
| M_s | to heatsink | 2,0 | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 10 | g |
| Case | | E 9 | |

Diagrams

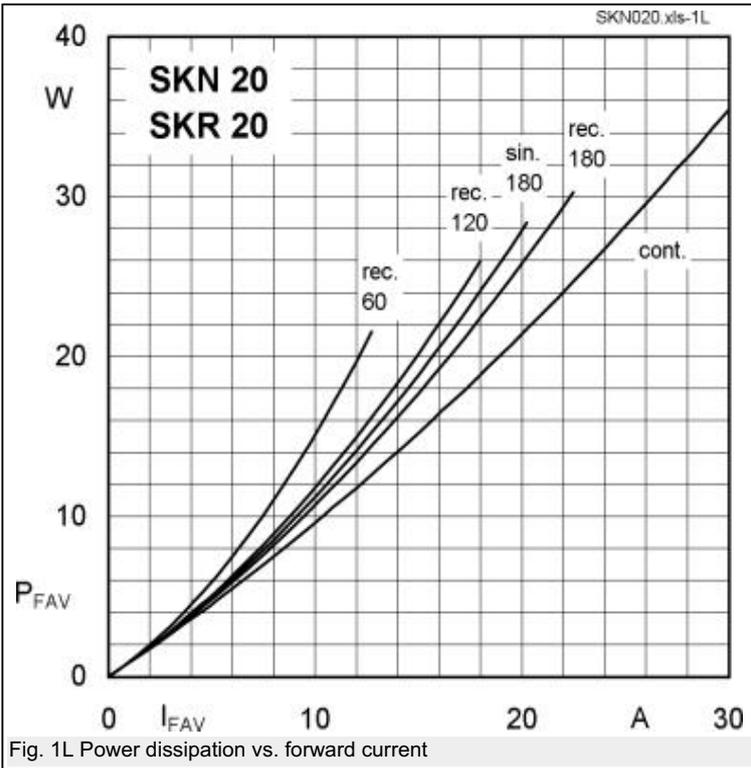


Fig. 1L Power dissipation vs. forward current

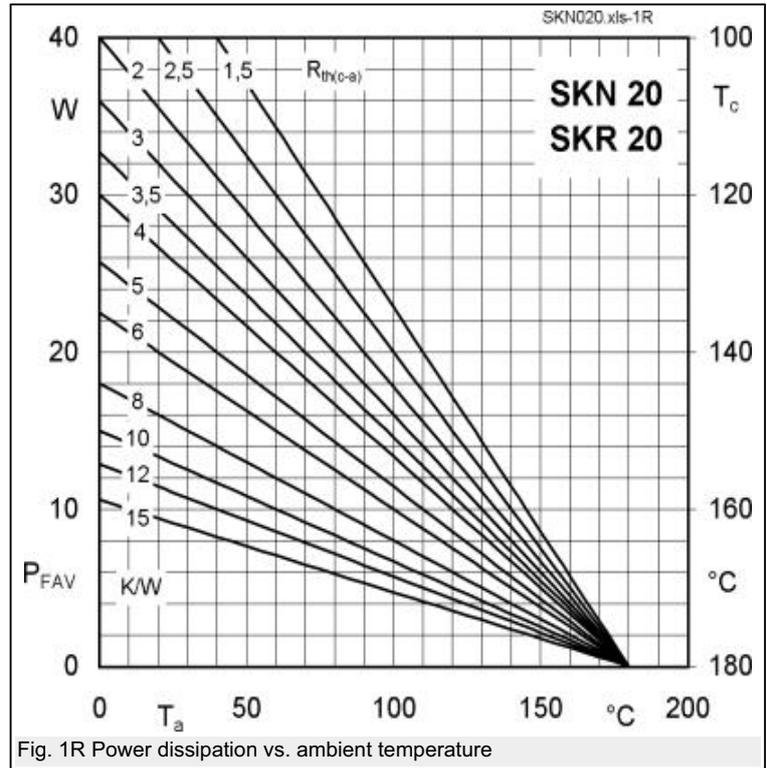


Fig. 1R Power dissipation vs. ambient temperature

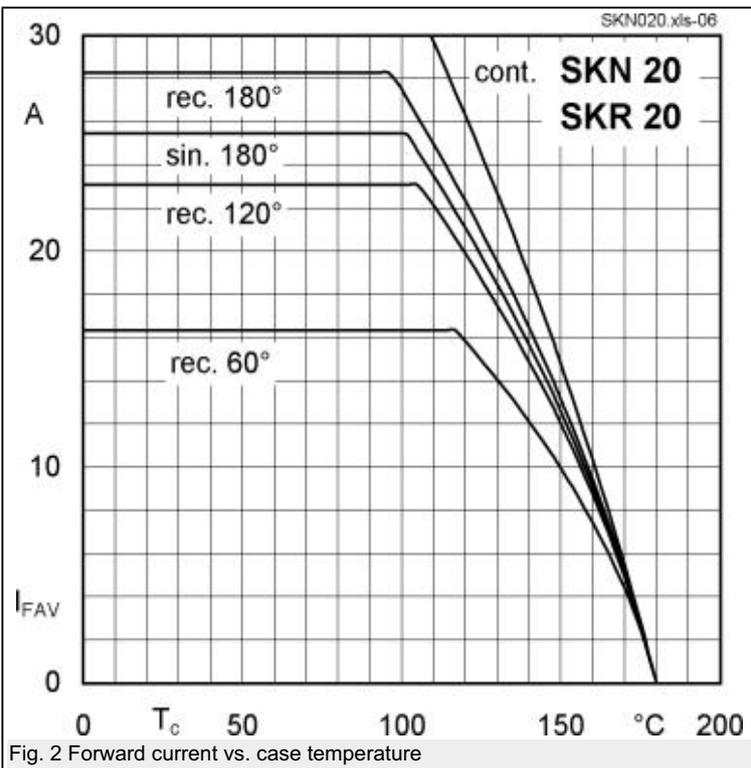


Fig. 2 Forward current vs. case temperature

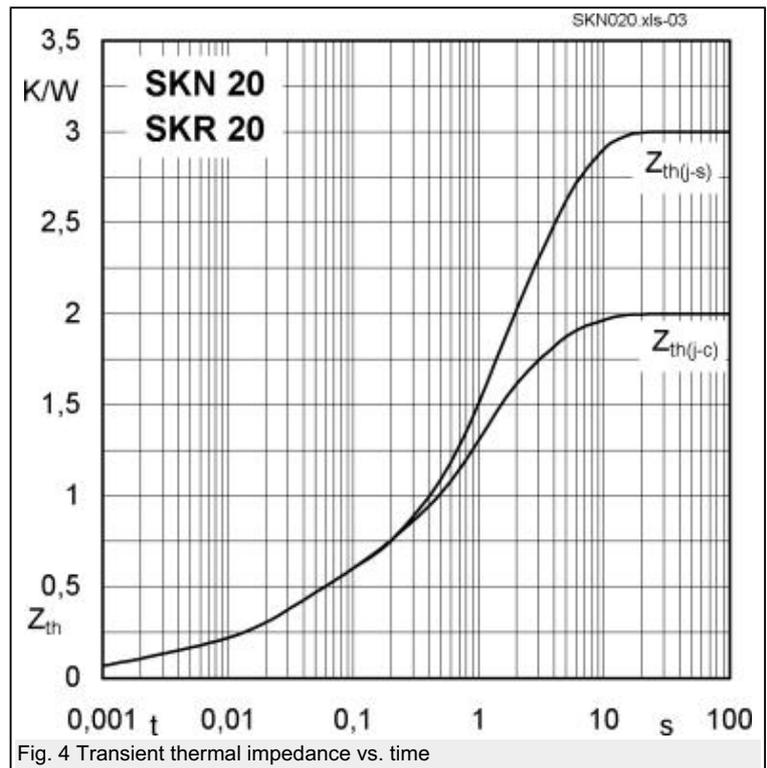
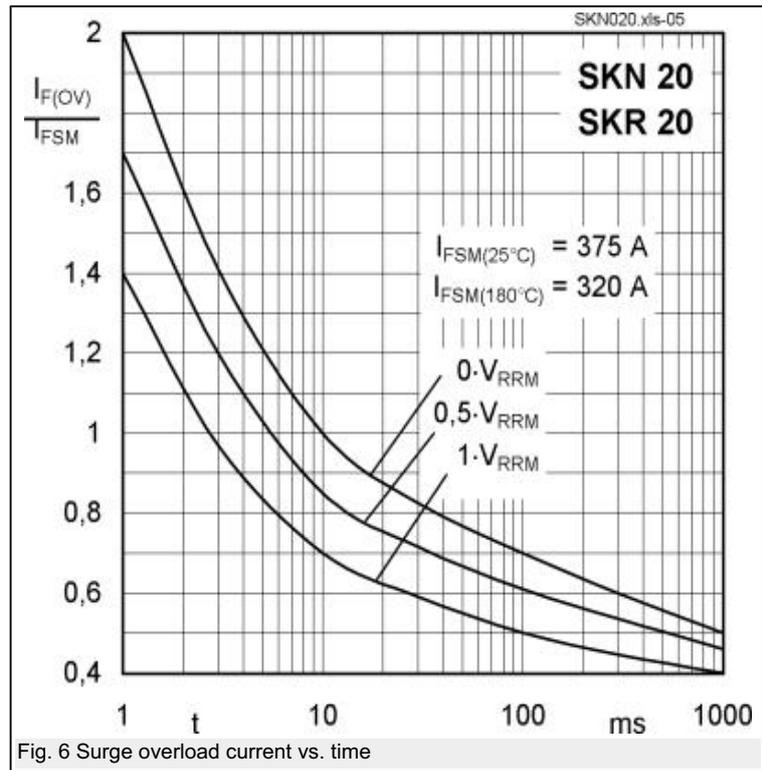
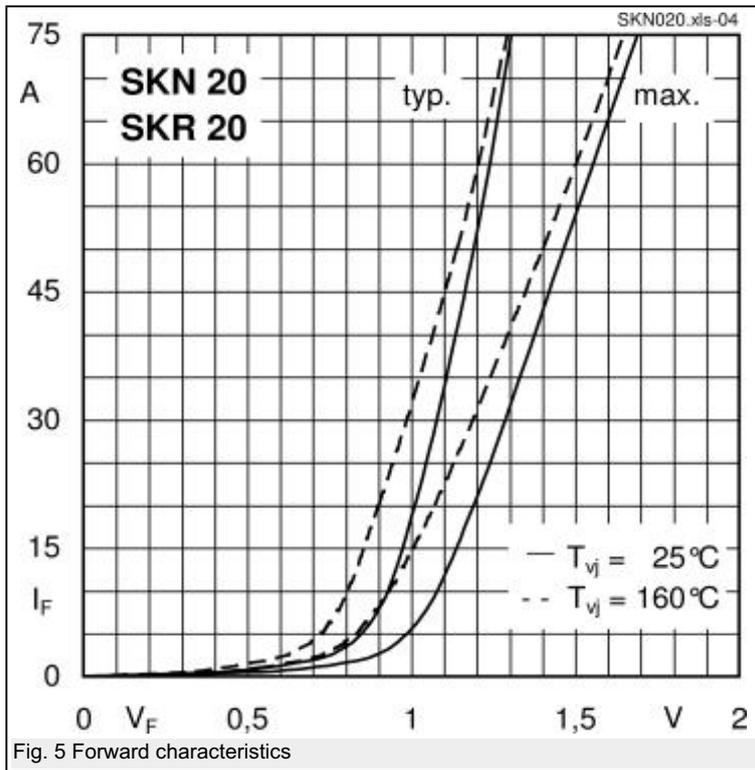


Fig. 4 Transient thermal impedance vs. time



Cases / Circuits

