# SKN 71, SKR 71

Stud Diode

| $V_{RSM}$ V | $V_{RRM}$ V | $I_{FRMS}$ = 150 A (maximum value for continuous operation) $I_{FAV}$ = 72 A (sin. 180; $T_c$ = 125 °C) | |
|---|---|---|---|
| 200 | 200 | SKN 71/02 | SKR 71/02 |
| 400 | 400 | SKN 71/04 | SKR 71/04 |
| 800 | 800 | SKN 71/08 | SKR 71/08 |
| 1200 | 1200 | SKN 71/12 | SKR 71/12 |
| 1400 | 1400 | SKN 71/14 | SKR 71/14 |
| 1600 | 1600 | SKN 71/16 | SKR 71/16 |

## Rectifier Diode

**SKN 71**
**SKR 71**

### Features

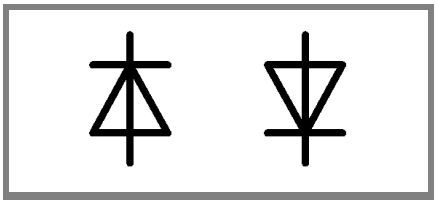
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8, M6 or ¼ - 28 UNF 2A[2)]
- **SKN:** anode to stud
- **SKR:** cathode to stud

### Typical Applications *

- All purpose high power rectifier diodes
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
  $R_C$: 0,1 µF, 100 Ω ($P_R$ = 2W),
  $R_p$: 80 kΩ ($P_R$ = 6 W)

1) Mounting with grease-like thermal compound or joint contact compound
2) M8x1,25 is standard, "UNF" should be added in description for ¼ - 28 2A thread, while "M6" must be added for M6x1

| Symbol | Condition | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | sin. 180 ; $T_C$ = 100 °C | 94 | A |
| $I_D$ | K 1,1; $T_a$ = 45°C; B2 / B6 | 112 / 159 | A |
| | K 1,1F; $T_a$ = 35°C; B2 / B6 | 174 / 246 | A |
| $I_{FSM}$ | $T_{vj}$ = 25° C ; 10 ms | 1150 | A |
| | $T_{vj}$ = 180° C ; 10 ms | 1000 | A |
| $i^2t$ | $T_{vj}$ = 25° C ; 8,3...10 ms | 6600 | $A^2s$ |
| | $T_{vj}$ = 180° C ; 8,3...10 ms | 5000 | $A^2s$ |
| $V_F$ | $T_{vj}$ = 25° C, $I_F$ = 200 A | max. 1,5 | V |
| $V_{(TO)}$ | $T_{vj}$ = 180° C | max. 0,85 | V |
| $r_T$ | $T_{vj}$ = 180° C | max. 3 | mΩ |
| $I_{RD}$ | $T_{vj}$ = 180° C ; $V_{RD}$ = $V_{RRM}$ | max. 10 | mA |
| $Q_{rr}$ | $T_{vj}$ = 160°C, -$di_F/dt$ = 10 A/µs | 70 | µC |
| $R_{th(j-c)}$ | | 0,55 | K/W |
| $R_{th(c-s)}$ | | 0,2 | K/W |
| $T_{vj}$ | | -40...+180 | °C |
| $T_{stg}$ | | -55...+180 | °C |
| $V_{isol}$ | | - | V~ |
| $M_s$ | M8 Stud | 4 | Nm |
| | M6 or ¼ - 28 UNF 2A | 2,5 | Nm |
| | M8 Stud (lubricated)[1)] | 3 | Nm |
| | M6 or ¼ - 28 UNF 2A (lubricated)[1)] | 2 | Nm |
| a | | 5 * 9,81 | $m/s^2$ |
| m | approx. | 18 | g |
| Case | | E 11 | |



SKN SKR

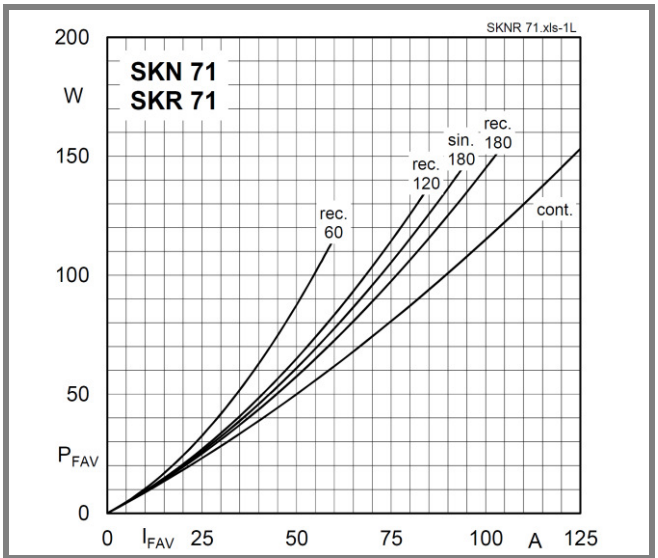



Fig. 1L Power dissipation vs. forward current

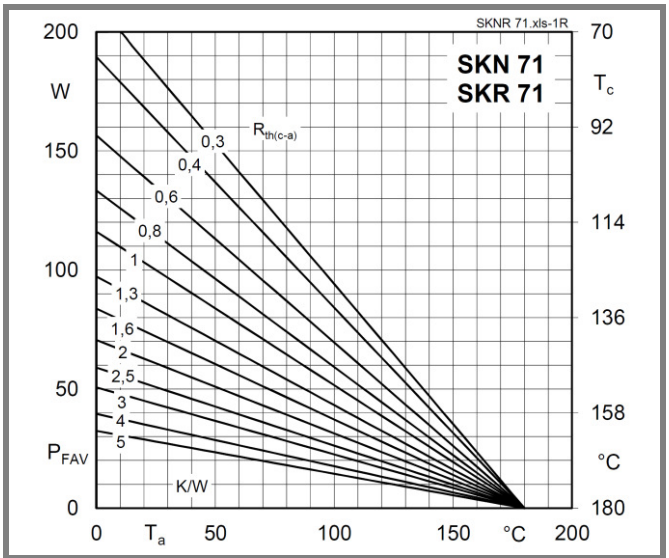



Fig. 1R Power dissipation vs. ambient temperature

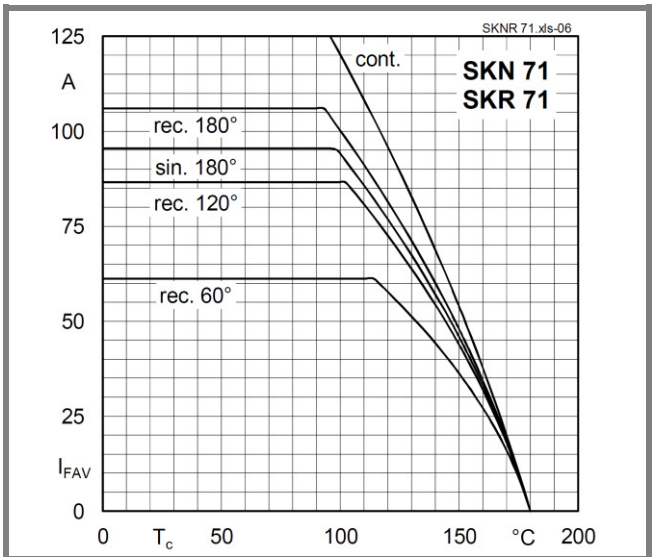



Fig. 2 Forward current vs. case temperature

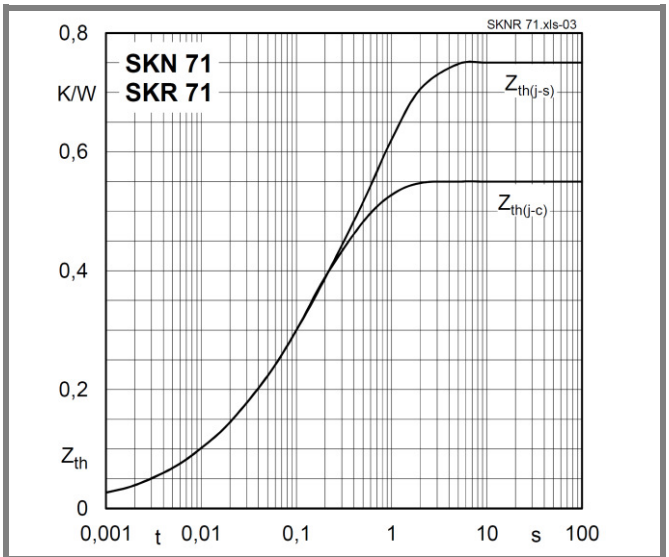



Fig. 4 Transient thermal impedance vs. time

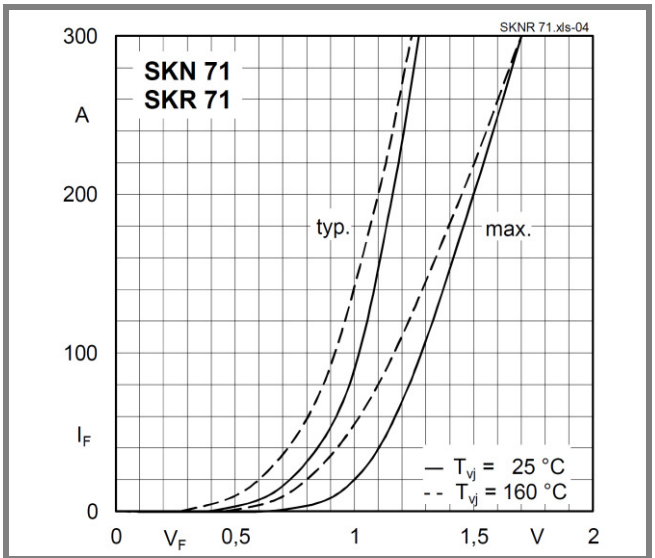



Fig. 5 Forward characteristics

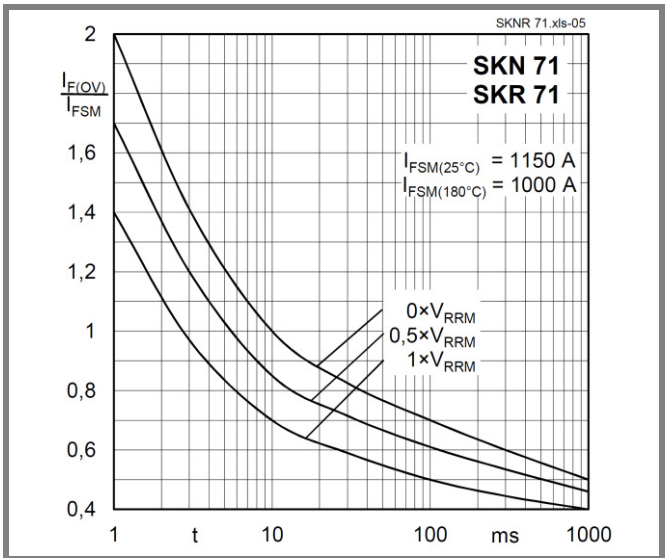
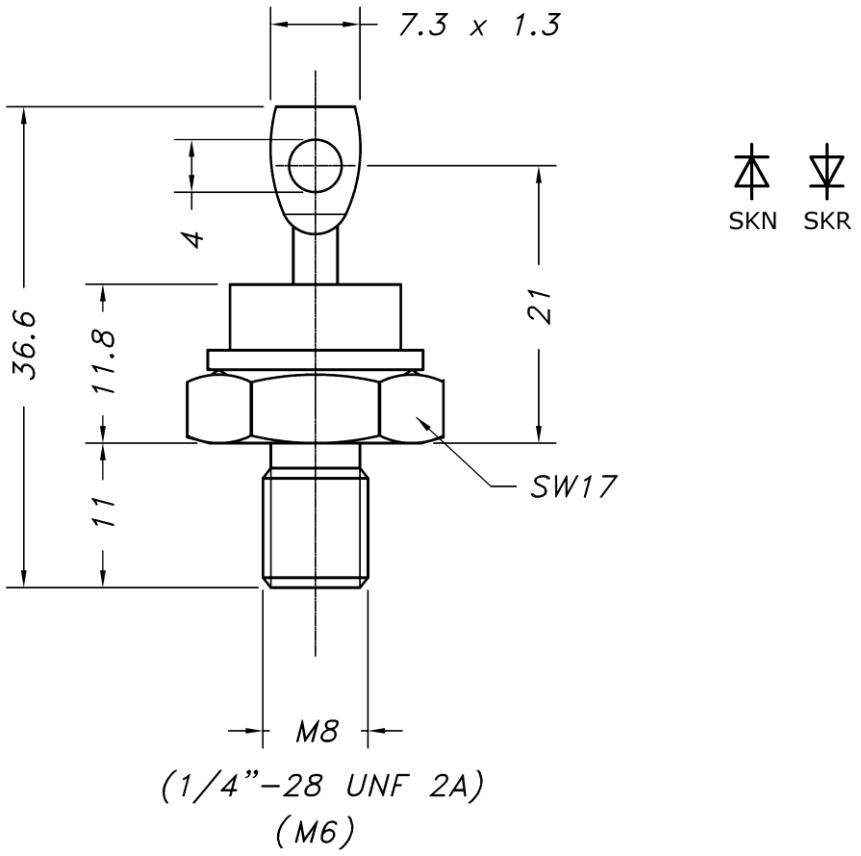



Fig. 6 Surge overload current vs. time

Dimensions in mm




Case E11 (IEC 60191: A 16 U; A 17 MB 2; JEDEC: DO-203 AB)