

SKN 60F



Stud diode

Fast Recovery Rectifier Diode

SKN 60F

SKR 60F

Features

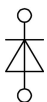
- Small recovered charge
- Soft recovery
- Up to 1500 V reverse voltage
- Hermetic metal case with glass insulator
- Threaded studs ISO M6 and M8
- SKN: anode to stud; SKR: cathode to stud

Typical Applications*

- Inverse diodes for power transistors, GTO thyristors, asymmetric thyristors
- SMPS, inverters, choppers
- A.C. motor control, uninterruptible power supplies (UPS)

| V_{RSM} V | V_{RRM} V | $I_{FRMS} = 120$ A (maximum value for continuous operation) $I_{FAV} = 60$ A (sin. 180; 1000 Hz; $T_c = 100$ °C) | |
|----------------|----------------|---|-----------|
| 1200 | 1200 | SKN 60F12 | SKR 60F12 |
| 1400 | 1400 | SKN 60F14 | SKR 60F14 |
| 1500 | 1500 | SKN 60F15 | SKR 60F15 |
| 1700 | 1700 | SKN 60F17 | SKR 60F17 |

| Symbol | Conditions | Values | Units |
|---------------|---------------------------------------|----------------|------------------|
| I_{FAV} | sin. 180; $T_c = 85$ (100) °C | 75 (60) | A |
| I_{FAV} | K3; $T_a = 45$ °C; sin. 180; 1000 Hz | 21,5 | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms | 1400 | A |
| | $T_{vj} = 150$ °C; 10 ms | 1200 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms | 9800 | A ² s |
| | $T_{vj} = 150$ °C; 8,3 ... 10 ms | 7200 | A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 150$ A | max. 1,75 | V |
| $V_{(TO)}$ | $T_{vj} = 150$ °C | max. 1 | V |
| r_T | $T_{vj} = 150$ °C | max. 4 | mΩ |
| I_{RD} | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$ | max. 0,4 | mA |
| I_{RD} | $T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$ | max. 60 | mA |
| Q_{rr} | $T_{vj} = 150$ °C; $I_F = 100$ A, | 75 | μC |
| I_{RM} | $-di/dt = 100$ A/μs, $V_R = 30$ V | 70 | A |
| t_{rr} | | 2100 | ns |
| E_{rr} | | - | mJ |
| $R_{th(j-c)}$ | | 0,5 | K/W |
| $R_{th(c-s)}$ | | 0,25 | K/W |
| T_{vj} | | - 40 ... + 150 | °C |
| T_{stg} | | - 55 ... + 150 | °C |
| V_{isol} | | - | V~ |
| M_s | to heatsink | 2,5 | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 20 | g |
| Case | | E 10 | |



SKN

SKR

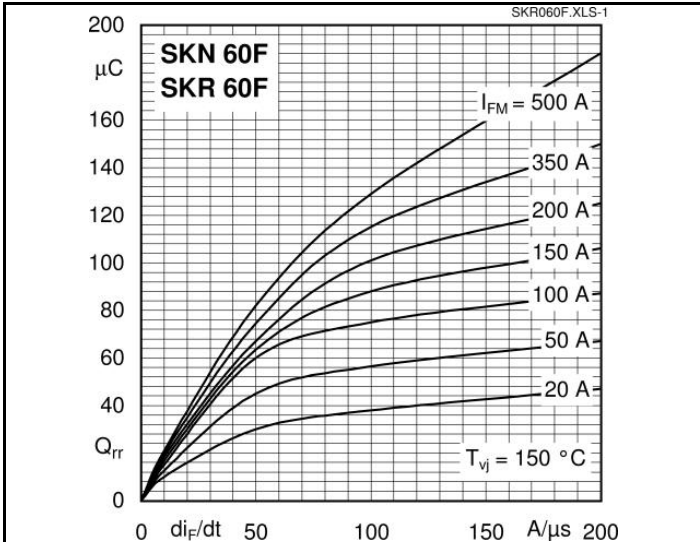


Fig. 1 Typ. recovery charge vs. current decrease

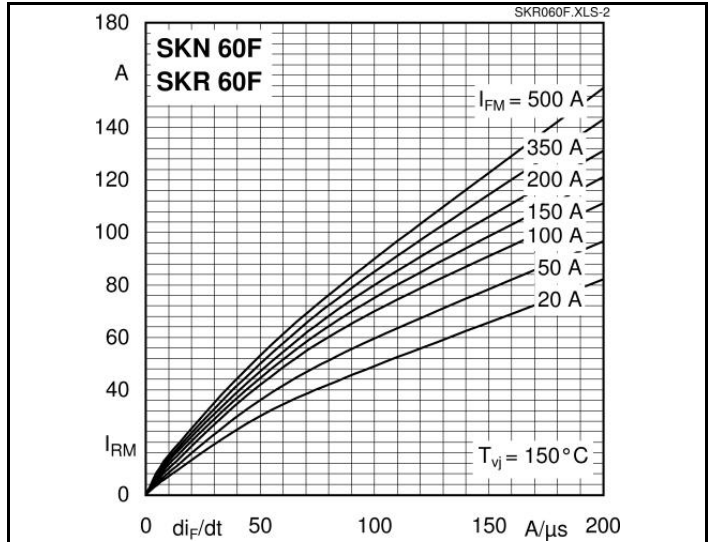


Fig. 2 Peak recovery current vs. current decrease

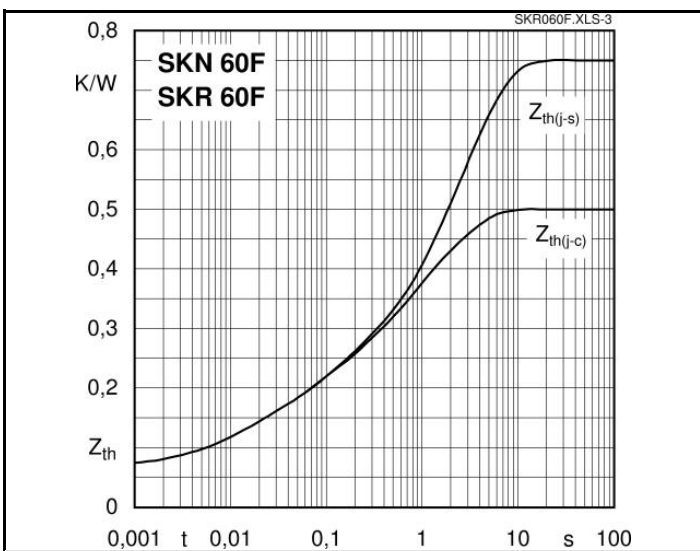


Fig. 3 Transient thermal impedance vs. time

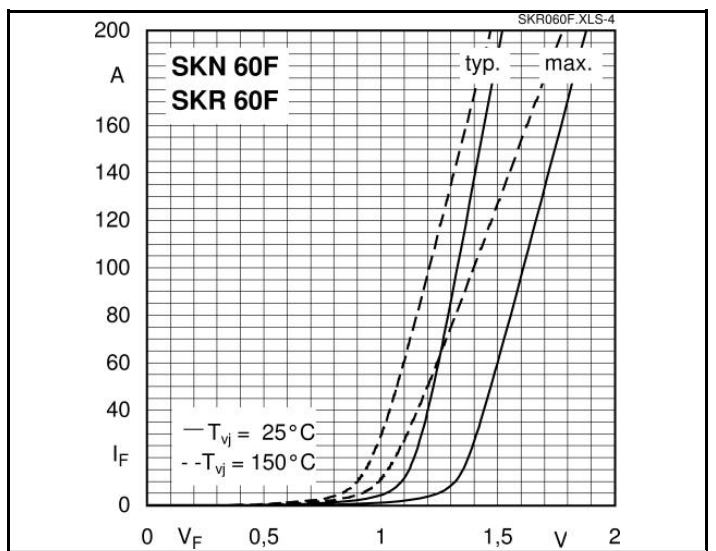


Fig. 4 Forward characteristics

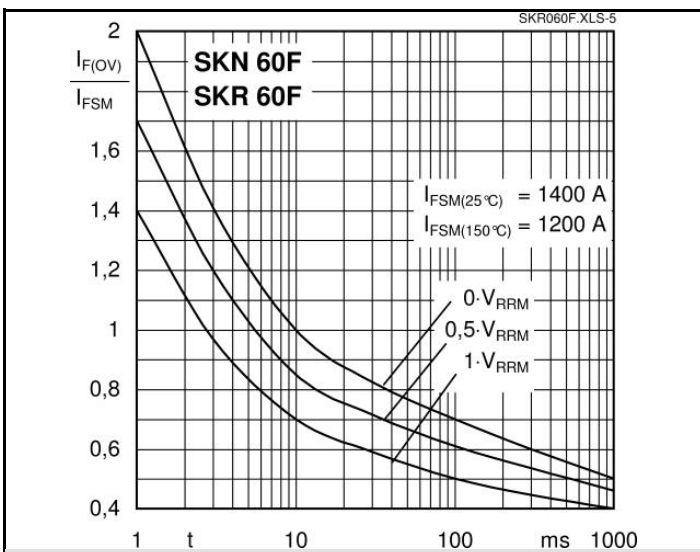
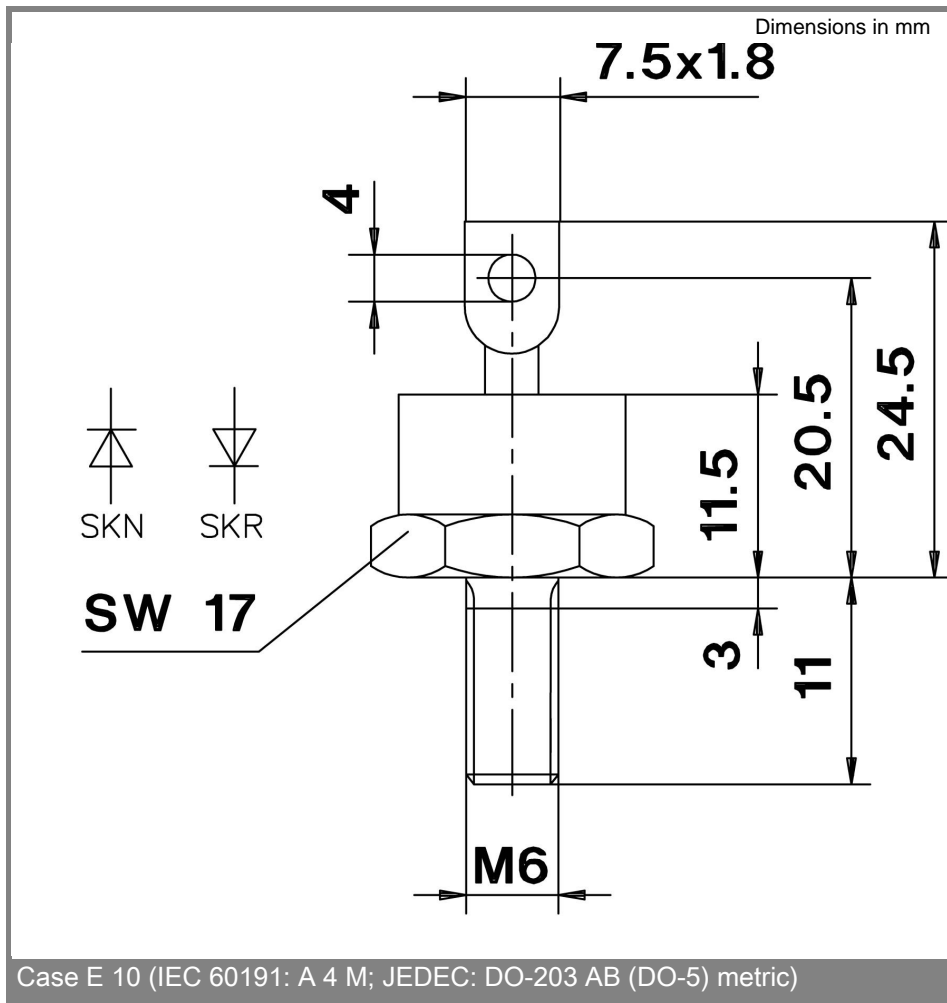


Fig. 5 Surge overload current vs. time



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