

SKN 136F



Stud Diode

Fast Recovery Rectifier Diode

SKN 136F

SKR 136F

Features

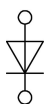
- Small recovered charge
- Soft recovery
- Hermetic metal case with glass insulator
- Threaded stud M12
- SKN: anode to stud;
SKR: cathode to stud

Typical Applications*

- Inverse diode for GTO and asymmetric thyristor
- Inverters and choppers
- A.C. motor control
- Uninterruptible power supplies (UPS)

| V_{RSM} V | V_{RRM} V | $I_{FRMS} = 260$ A (maximum value for continuous operation) $I_{FAV} = 135$ A (sin. 180; 1000 Hz; $T_c = 100$ °C) | |
|----------------|----------------|--|------------|
| 800 | 800 | SKN 136F08 | SKR 136F08 |
| 1000 | 1000 | SKN 136F10 | SKR 136F10 |
| 1200 | 1200 | SKN 136F12 | SKR 136F12 |

| Symbol | Conditions | Values | Units |
|---------------|---|----------------|------------------|
| I_{FAV} | sin. 180; $T_c = 85$ (100) °C | 160 (135) | A |
| I_{FAV} | K1,1F; $T_a = 35$ °C; sin. 180; 1000 Hz | 110 | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms | 2500 | A |
| | $T_{vj} = 150$ °C; 10 ms | 2100 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms | 31000 | A ² s |
| | $T_{vj} = 150$ °C; 8,3 ... 10 ms | 22000 | A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 300$ A | max. 1,95 | V |
| $V_{(TO)}$ | $T_{vj} = 150$ °C | max. 1,1 | V |
| r_T | $T_{vj} = 150$ °C | max. 2,3 | mΩ |
| I_{RD} | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$ | max. 1 | mA |
| I_{RD} | $T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$ | max. 100 | mA |
| Q_{rr} | $T_{vj} = 150$ °C; $I_F = 100$ A, | 50 | μC |
| I_{RM} | $-di/dt = 100$ A/μs, $V_R = 400$ V | 53 | A |
| t_{rr} | | 1900 | ns |
| E_{rr} | | - | mJ |
| $R_{th(j-c)}$ | | 0,2 | K/W |
| $R_{th(c-s)}$ | | 0,08 | K/W |
| T_{vj} | | - 40 ... + 150 | °C |
| T_{stg} | | - 55 ... + 150 | °C |
| V_{isol} | | - | V~ |
| M_s | to heatsink | 10 | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 75 | g |
| Case | | E 31 | |



SKN

SKR

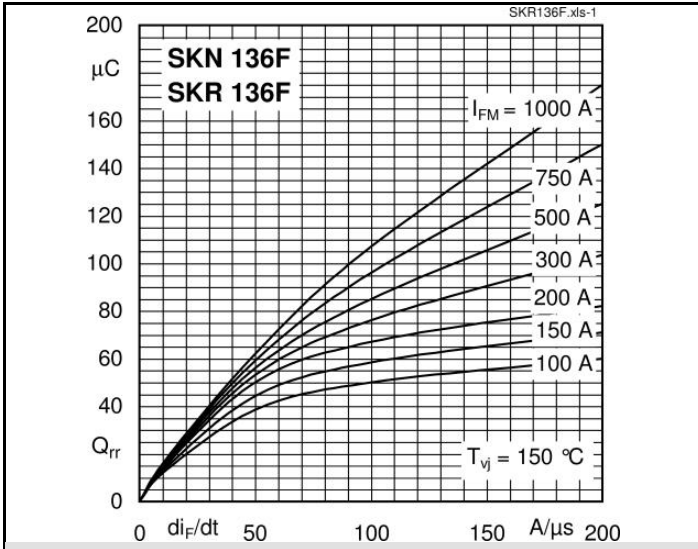


Fig. 1 Typ. recovery charge vs. current decrease

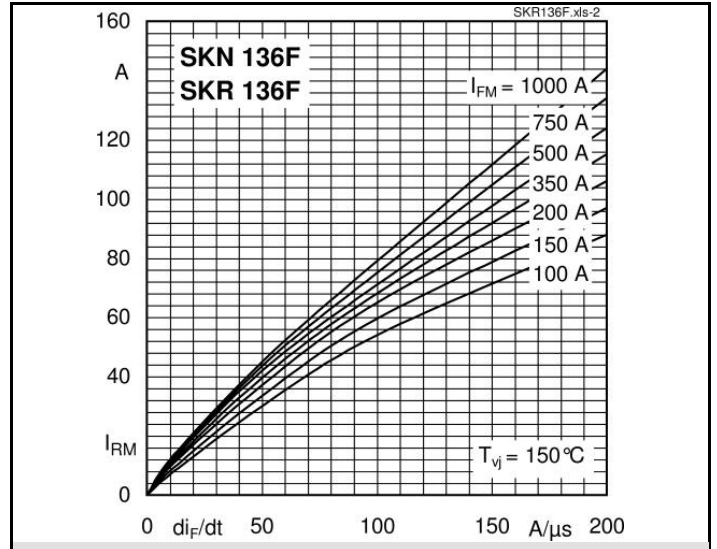


Fig. 2 Peak recovery current vs. current decrease

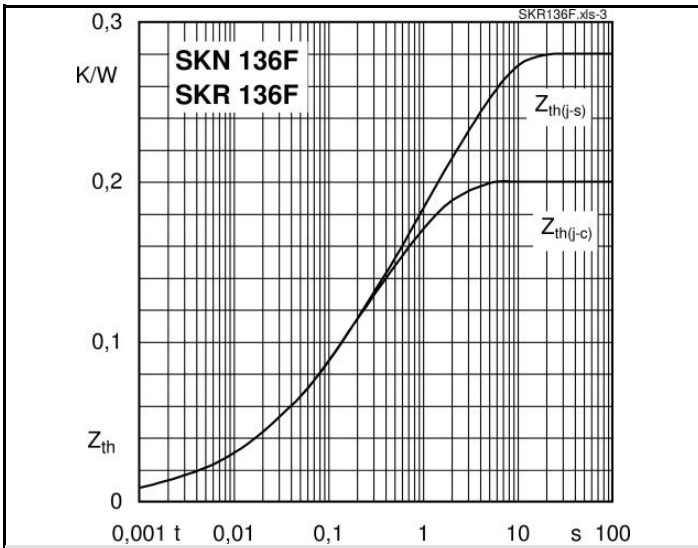


Fig. 3 Transient thermal impedance vs. time

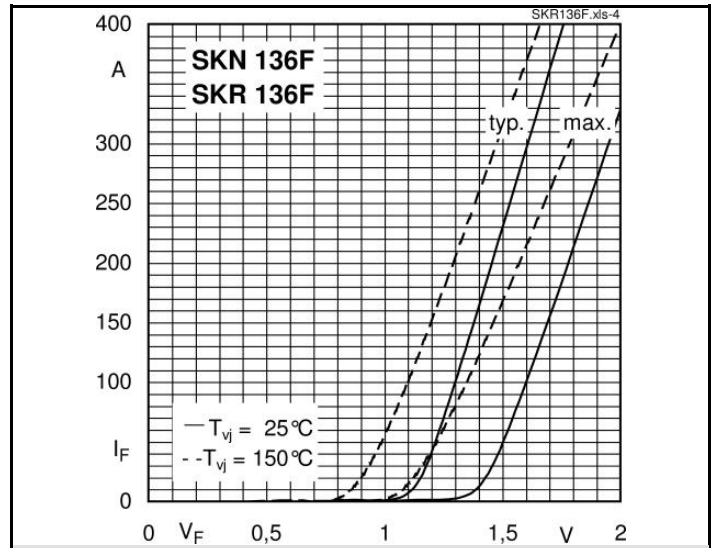


Fig. 4 Forward characteristics

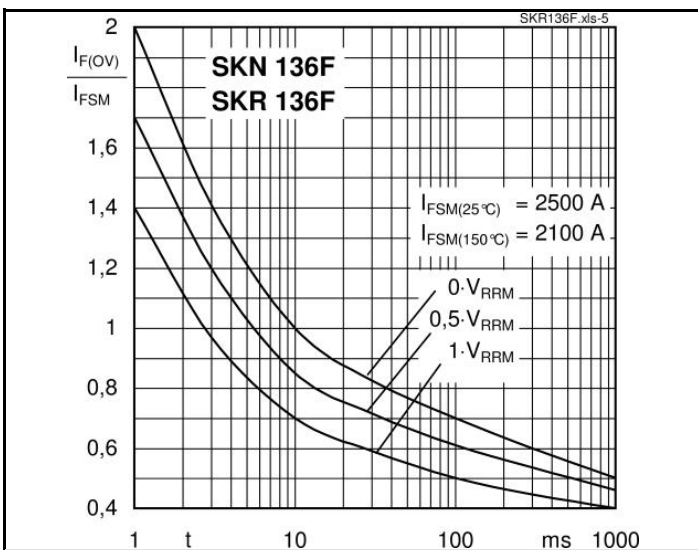
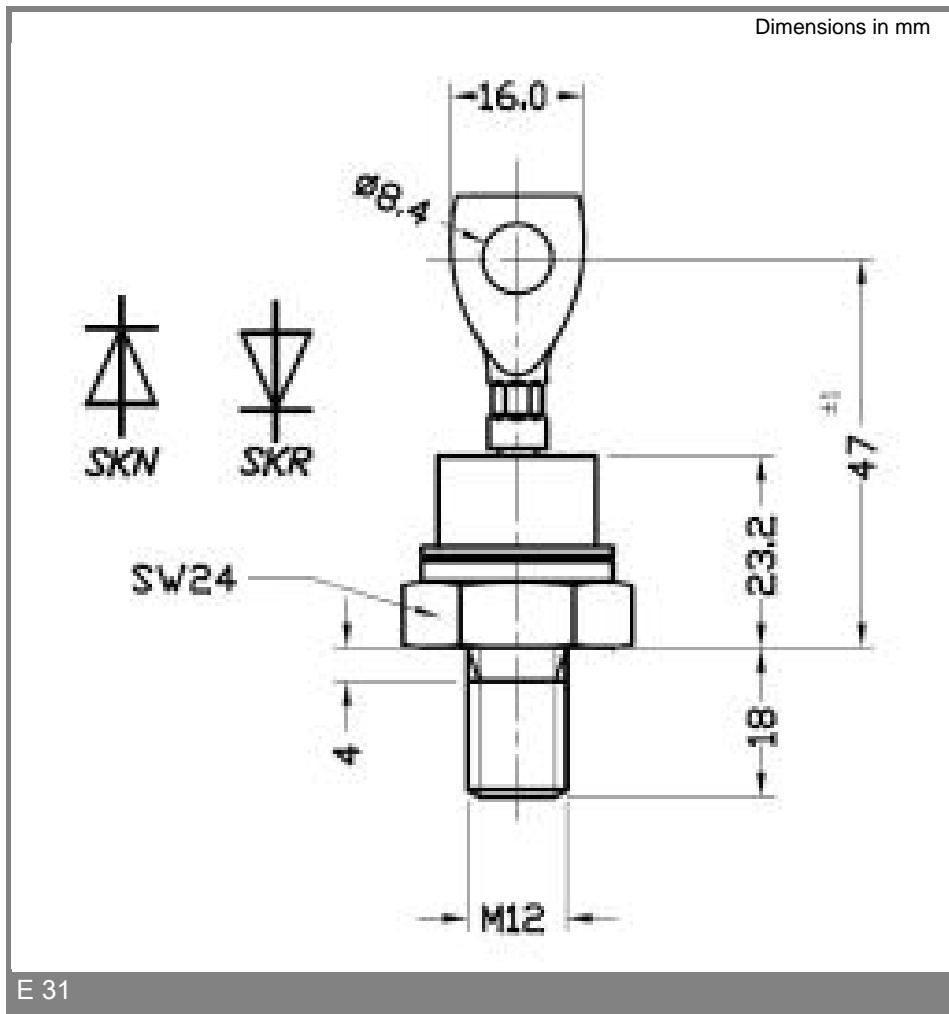


Fig. 5 Surge overload current vs. time

Dimensions in mm



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* 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.