# SKN 140F

THYRISTOR BRIDGE,SCR BRIDGE

## Stud Diode

## Fast Recovery Rectifier Diode

**SKN 140F**

**SKR 140F**

### Features

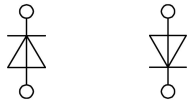
- Small recovered charge
- Soft recovery
- Hermetic metal case with glass insulator
- Threaded stud M12
- SKN: anode to stud; SKR: cathode to stud

### Typical Applications

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

| $V_{RSM}$ V | $V_{RRM}$ V | $I_{FRMS}$ = 260 A (maximum value for continuous operation) $I_{FAV}$ = 140 A (sin. 180; 1000 Hz; $T_c$ = 100 °C) | | |
|---|---|---|---|---|
| 1200 | 1200 | SKN 140F12 | SKR 140F12 | |
| 1400 | 1400 | SKN 140F14 | SKR 140F14 | |
| 1500 | 1500 | SKN 140F15 | SKR 140F15 | |
| 1700 | 1700 | SKN 140F17 | SKR 140F17 | |

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | sin. 180; $T_c$ = 85 (100) °C | 168 (140) | A |
| $I_{FAV}$ | K1,1F; $T_a$ = 35 °C; sin. 180; 1000 Hz | 114 | A |
| $I_{FSM}$ | $T_{vj}$ = 25 °C; 10 ms | 2500 | A |
| | $T_{vj}$ = 150 °C; 10 ms | 2100 | A |
| i²t | $T_{vj}$ = 25 °C; 8,3 ... 10 ms | 31000 | A²s |
| | $T_{vj}$ = 150 °C; 8,3 ... 10 ms | 22000 | A²s |
| $V_F$ | $T_{vj}$ = 25 °C; $I_F$ = 300 A | max. 1,8 | V |
| $V_{(TO)}$ | $T_{vj}$ = 150 °C | max. 1,1 | V |
| $r_T$ | $T_{vj}$ = 150 °C | max. 2 | 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, | 90 | µC |
| $I_{RM}$ | -di/dt = 100 A/µs, $V_R$ = 400 V | 90 | A |
| $t_{rr}$ | | 2000 | 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/s² |
| m | approx. | 100 | g |
| Case | | E 14 | |



SKN SKR

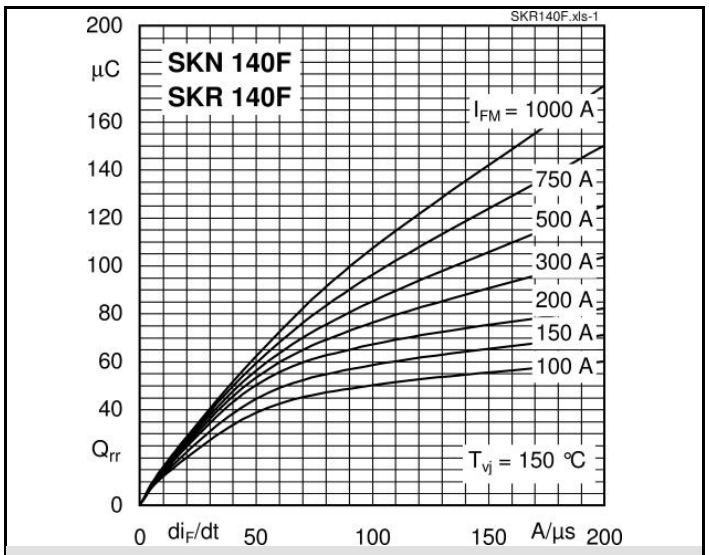



Fig. 1 Typ. recovery charge vs. current decrease

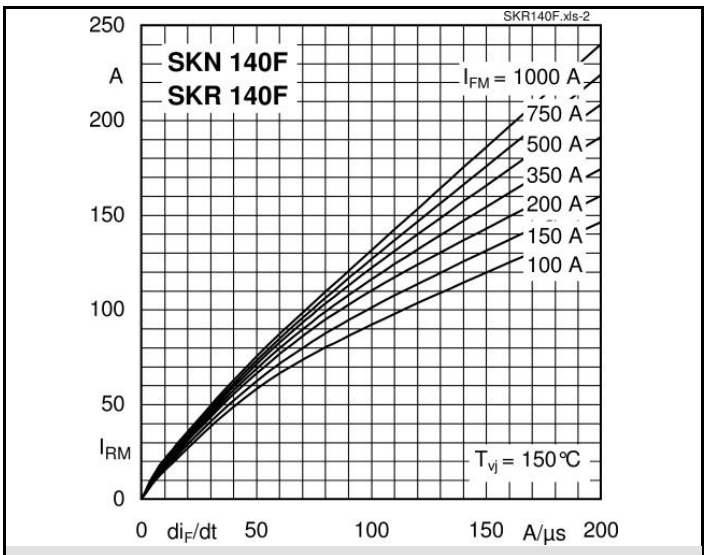



Fig. 2 Peak recovery current vs. current decrease

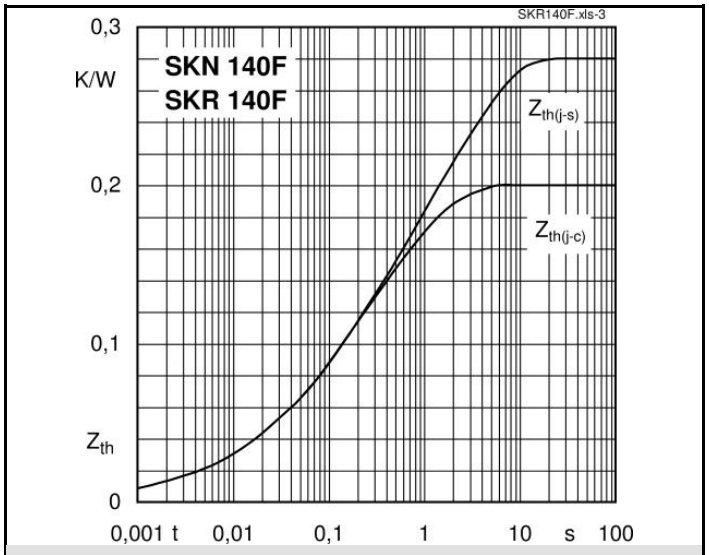



Fig. 3 Transient thermal impedance vs. time

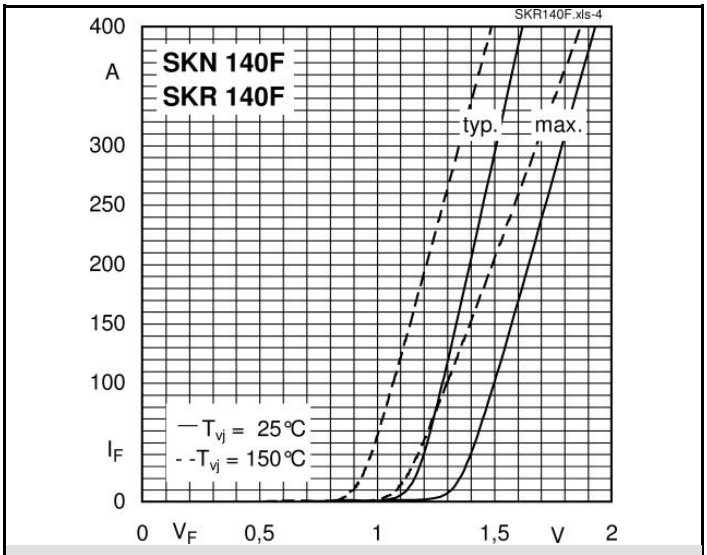



Fig. 4 Forward characteristics

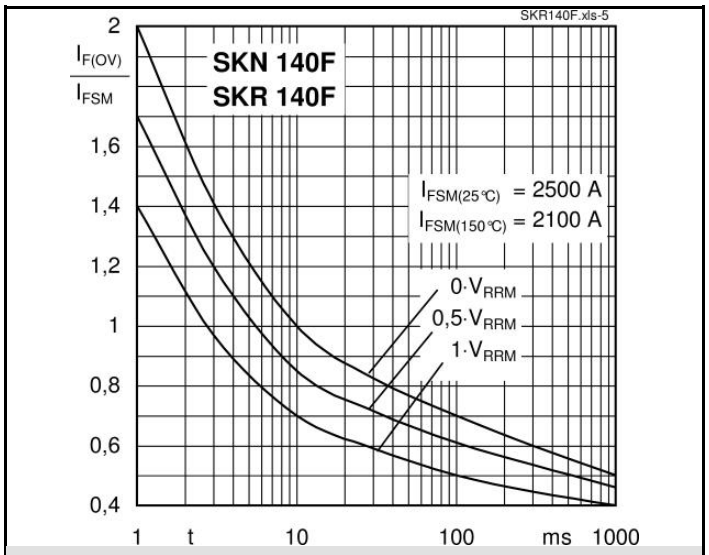
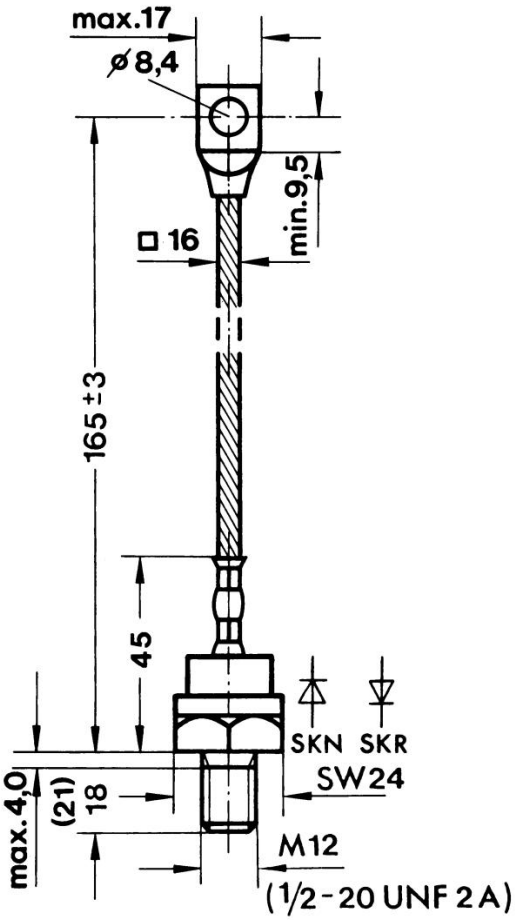



Fig. 5 Surge overload current vs. time

Dimensions in mm




Case E 14 (IEC 60191: A 9 MA modified; JEDEC: DO-205 AC (DO-30) modified)

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