# SKKD 150F, SKMD 150F, SKND 150F

**SEMIPACK® 2**

## Fast Diode Modules

**SKKD 150F**

**SKMD 150F**

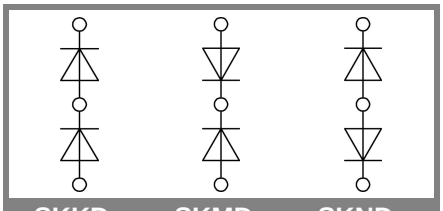
**SKND 150F**

### Features

- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- SKKD half bridge connection
- centre tap connections: SKMD common cathode SKND common anode
- UL recognized, file no. E 63 532

### Typical Applications

- Self-commutated inverters
- DC choppers
- AC motor speed control
- inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications



SKKD SKMD SKND

| $V_{RSM}$ V | $V_{RRM}$ V | $I_{FRMS}$ = 220 A (maximum value for continuous operation) $I_{FAV}$ = 150 A (sin. 180; 50 Hz; $T_c$ = 54 °C) | | |
|---|---|---|---|---|
| 1200 | 1200 | SKKD 150F12 | SKMD 150F12 | SKND 150F12 |

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | sin. 180; $T_c$ = 85 (100) °C | 117 (99) | A |
| $I_{FSM}$ | $T_{vj}$ = 25 °C; 10 ms | 2000 | A |
| | $T_{vj}$ = 150 °C; 10 ms | 1800 | A |
| i²t | $T_{vj}$ = 25 °C; 8,3 ... 10 ms | 20000 | A²s |
| | $T_{vj}$ = 150 °C; 8,3 ... 10 ms | 16200 | A²s |
| $V_F$ | $T_{vj}$ = 25 °C; $I_F$ = 150 A | max. 2,2 | V |
| $V_{(TO)}$ | $T_{vj}$ = 150 °C | max. 1,2 | V |
| $r_T$ | $T_{vj}$ = 150 °C | max. 5,5 | 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. 40 | mA |
| $Q_{rr}$ | $T_{vj}$ = 125 °C, $I_F$ = 150 A, | 21 | µC |
| $I_{RM}$ | -di/dt = 1000 A/µs, $V_R$ = 600 V | 80 | A |
| $t_{rr}$ | | 710 | ns |
| $E_{rr}$ | | 4,5 | mJ |
| $R_{th(j-c)}$ | per diode / per module | 0,2 / 0,1 | K/W |
| $R_{th(c-s)}$ | per diode / per module | 0,1 / 0,05 | K/W |
| $T_{vj}$ | | - 40 ... + 150 | °C |
| $T_{stg}$ | | - 40 ... + 125 | °C |
| $V_{isol}$ | a.c. 50 Hz; r.m.s.; 1 s / 1 min. | 4800 / 4000 | V~ |
| $M_s$ | to heatsink | 5 ± 15% | Nm |
| $M_t$ | to terminals | 5 ± 15 % | Nm |
| a | | 5 * 9,81 | m/s² |
| m | approx. | 160 | g |
| Case | SKKD | A 53 | |
| | SKMD | A 51 | |
| | SKND | A 52 | |

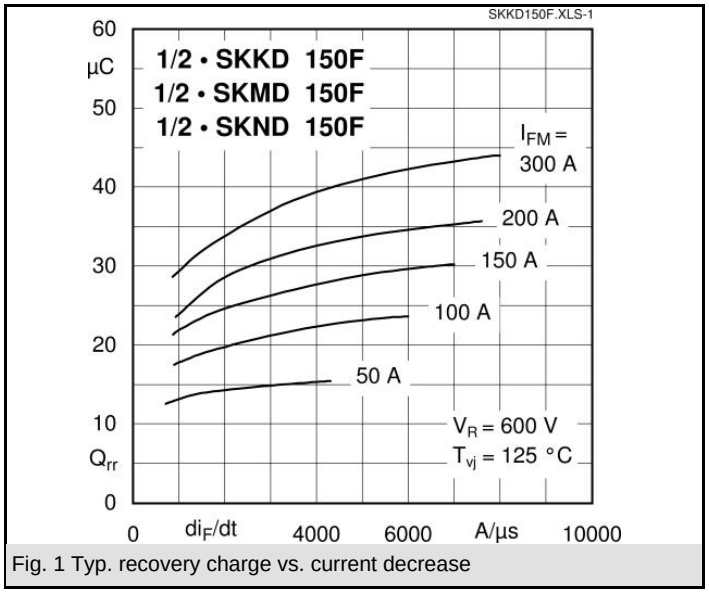



Fig. 1 Typ. recovery charge vs. current decrease

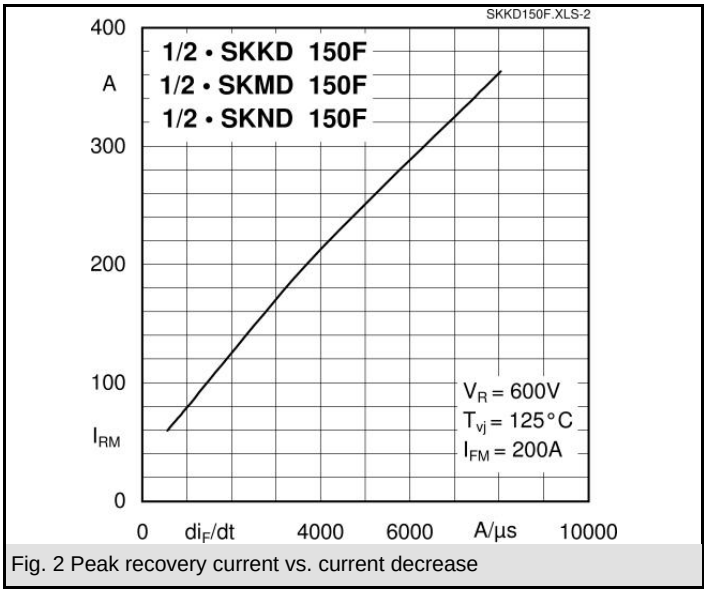



Fig. 2 Peak recovery current vs. current decrease

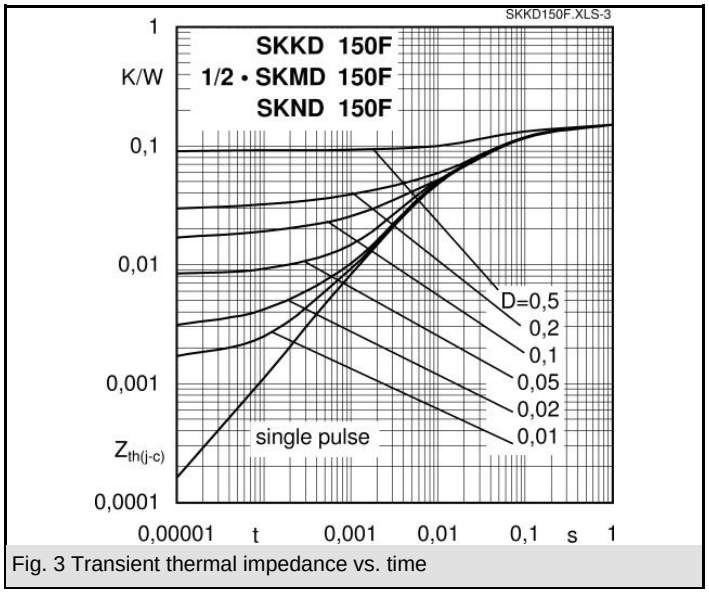



Fig. 3 Transient thermal impedance vs. time

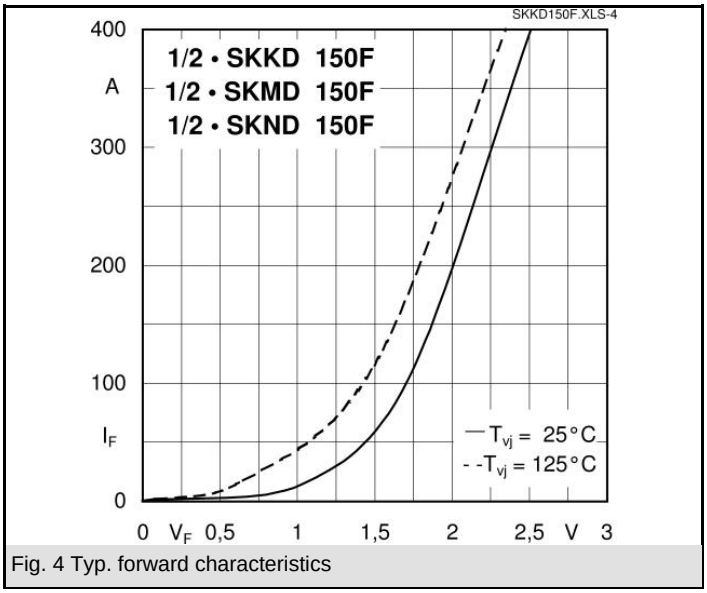



Fig. 4 Typ. forward characteristics

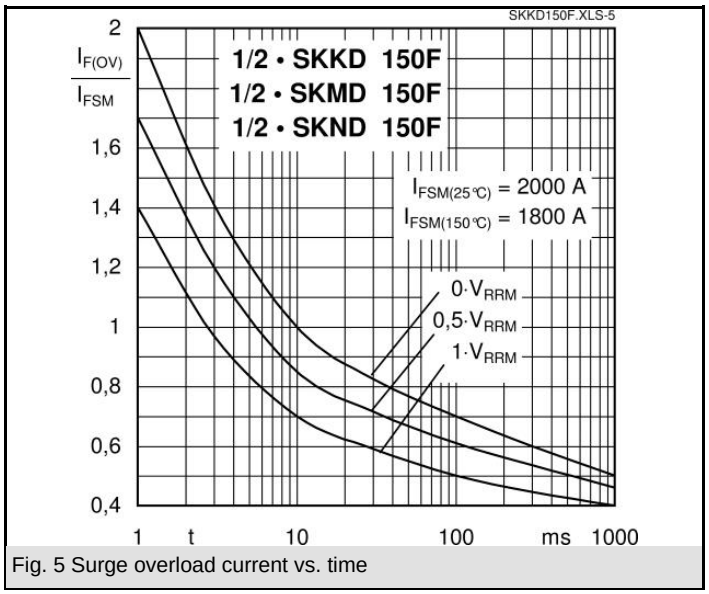



Fig. 5 Surge overload current vs. time

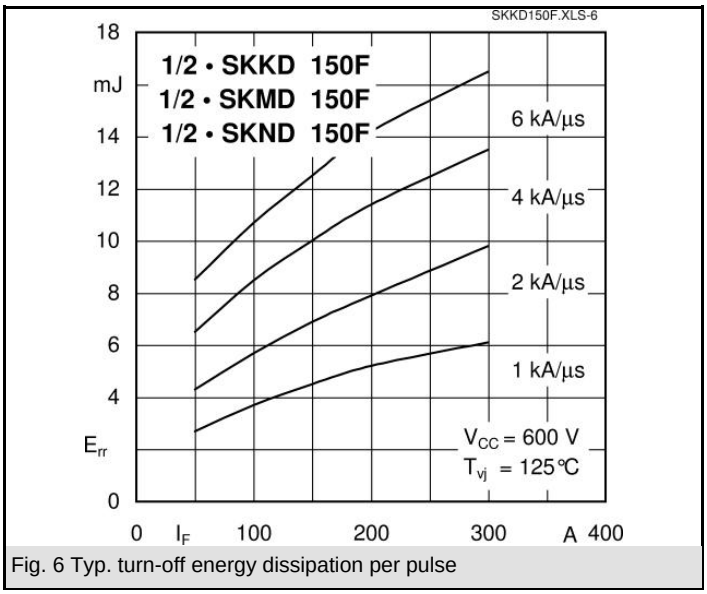



Fig. 6 Typ. turn-off energy dissipation per pulse

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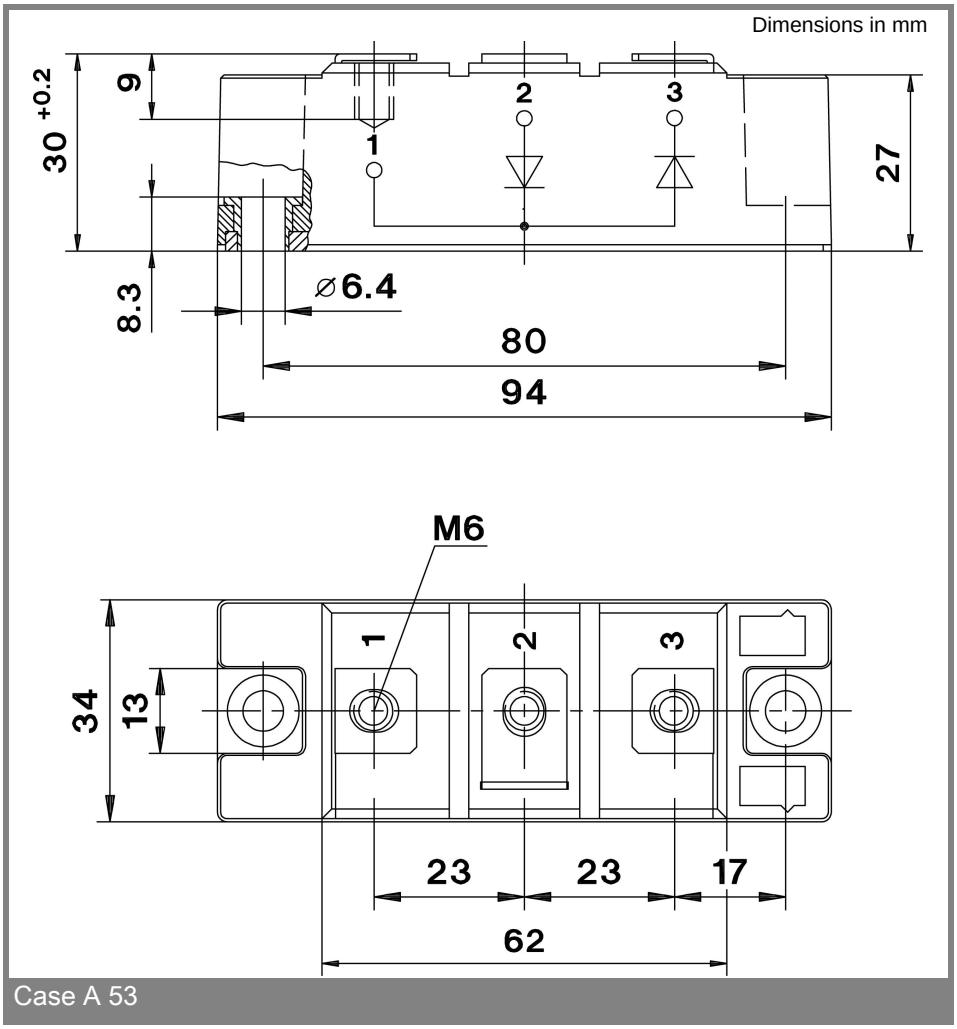
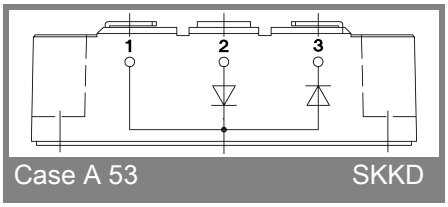
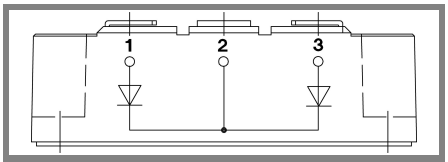



Case A 53




Case A 53 SKKD

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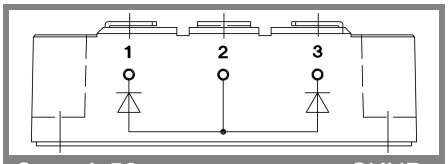


Case A 52 SKND

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