

SKKD 150F, SKMD 150F, SKND 150F



SEMIPACK® 2

Fast Diode Modules

SKKD 150F

SKMD 150F

SKND 150F

Features

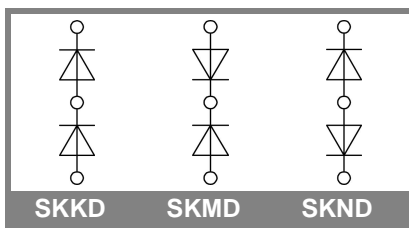
- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- SKKD half bridge connection
- centre tap connections: SKMD common cathode SKND common anode
- UL recognized,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

| | | | | |
|----------------|----------------|---|-------------|-------------|
| 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 $T_{vj} = 150$ °C; 10 ms | 2000 1800 | A A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms | 20000 16200 | A ² s A ² s |
| 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/s ² |
| m | approx. | 160 | g |
| Case | SKKD | A 53 | |
| | SKMD | A 51 | |
| | SKND | A 52 | |



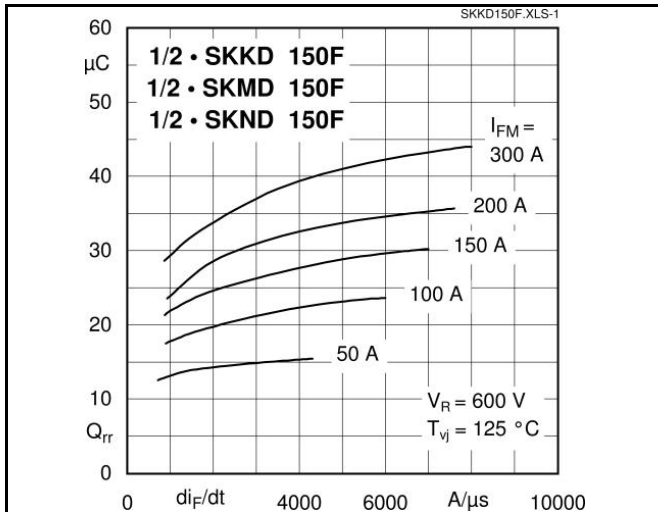


Fig. 1 Typ. recovery charge vs. current decrease

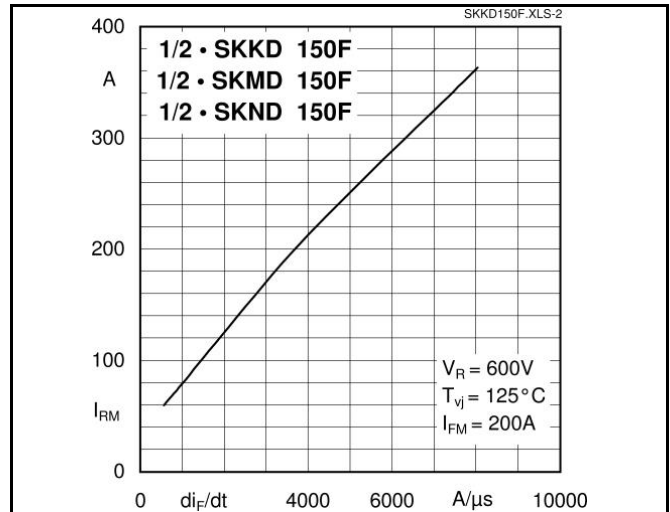


Fig. 2 Peak recovery current vs. current decrease

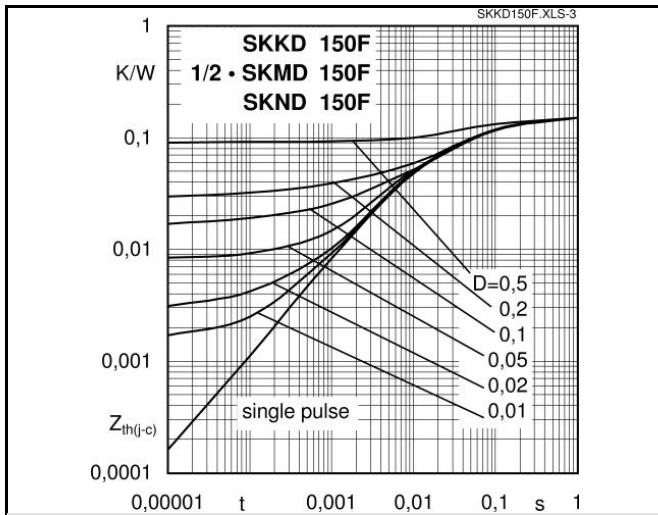


Fig. 3 Transient thermal impedance vs. time

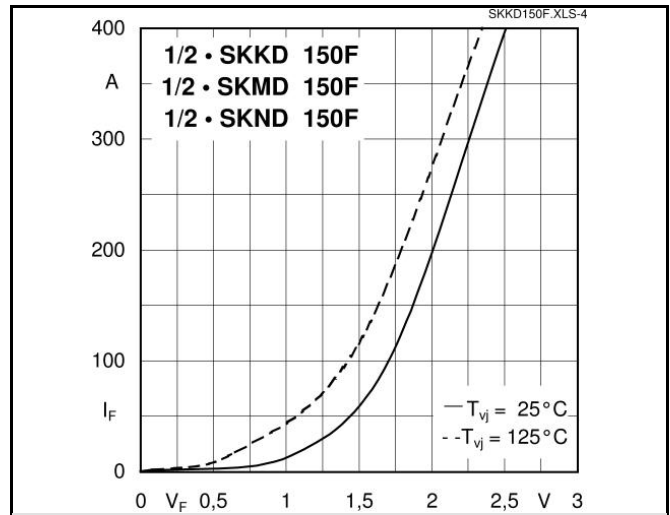


Fig. 4 Typ. forward characteristics

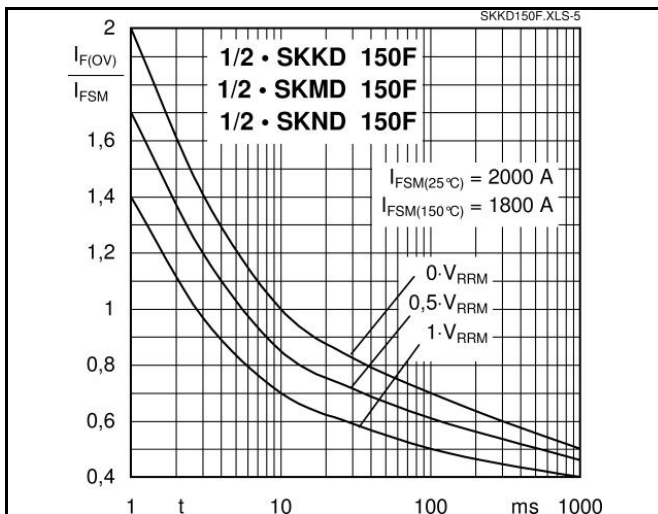


Fig. 5 Surge overload current vs. time

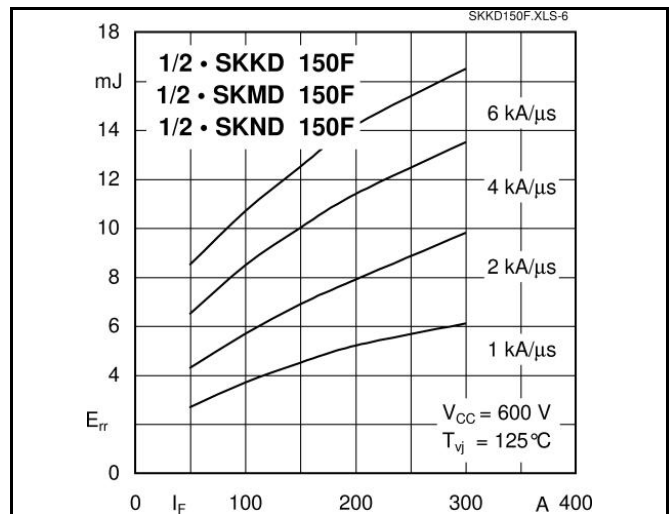
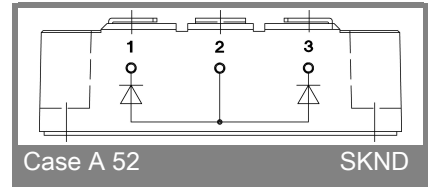
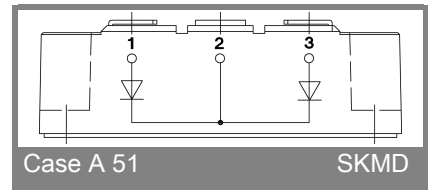
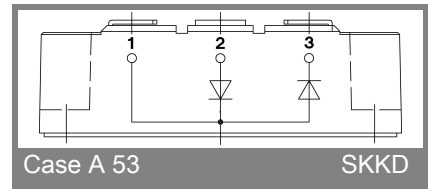
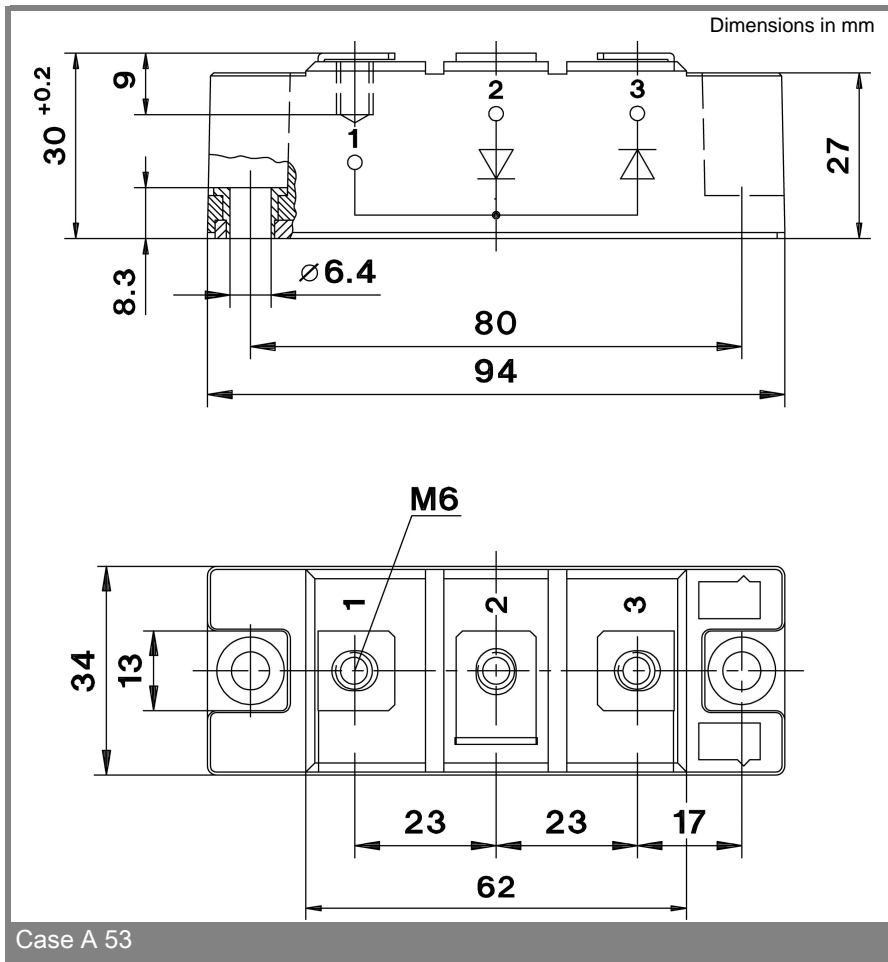


Fig. 6 Typ. turn-off energy dissipation per pulse

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