

SKMD 202E, SKND 202E



SEMIPACK® 2

Ultrafast Epitaxial Diode Modules

SKND 202E
SKMD 202E

Features

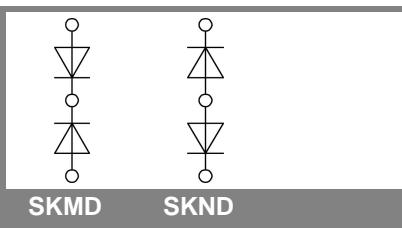
- Isolated metal baseplate
- Very short recovery times
- Low switching losses
- Up to 300 V peak inverse voltage
- SKMD common cathode
- SKND common anode
- UL recognized, file no. E 63 532

Typical Applications*

- Switched mode power converters
- Inverse diode for transistors in AC and DC motor controls
- Uninterruptible power supplies (UPS)

| | | | |
|----------------|----------------|---|-------------|
| V_{RSM} V | V_{RRM} V | $I_{FRMS} = 325$ A (maximum value for continuous operation) $I_{FAV} = 202$ A (sin. 180, 50 Hz; $T_c = 87$ °C) | |
| 200 | 200 | SKMD 202E02 | SKND 202E02 |
| 300 | 300 | SKMD 202E03 | SKND 202E03 |

| Symbol | Conditions | Values | Units |
|---------------|---|----------------|--------------------------------------|
| I_{FAV} | sin. 180; $T_c = 85$ (100) °C | 208 (156) | A |
| I_{FSM} | $T_{vj} = 25$ °C; 10 ms $T_{vj} = 150$ °C; 10 ms | 3200 2800 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms | 51000 39000 | A ² s A ² s |
| V_F | $T_{vj} = 25$ °C; $I_F = 500$ A | max. 1,65 | V |
| $V_{(TO)}$ | $T_{vj} = 150$ °C | max. 0,8 | V |
| r_T | $T_{vj} = 150$ °C | max. 1,5 | mΩ |
| I_{RD} | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$ | max. 2 | mA |
| I_{RD} | $T_{vj} = 130$ °C; $V_{RD} = V_{RRM}$ | max. 100 | mA |
| Q_{rr} | $T_{vj} = 150$ °C; $I_F = 50$ A, | 2 | μC |
| I_{RM} | $-di/dt = 100$ A/μs, $V_R = 100$ V | 16 | A |
| t_{rr} | | - | ns |
| E_{rr} | | - | 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. | 3000 / 2500 | V~ |
| M_s | to heatsink | 5 ± 15 % | Nm |
| M_t | to terminals | 5 ± 15 % | Nm |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 250 | g |
| Case | SKMD SKND | A 51 A 52 | |



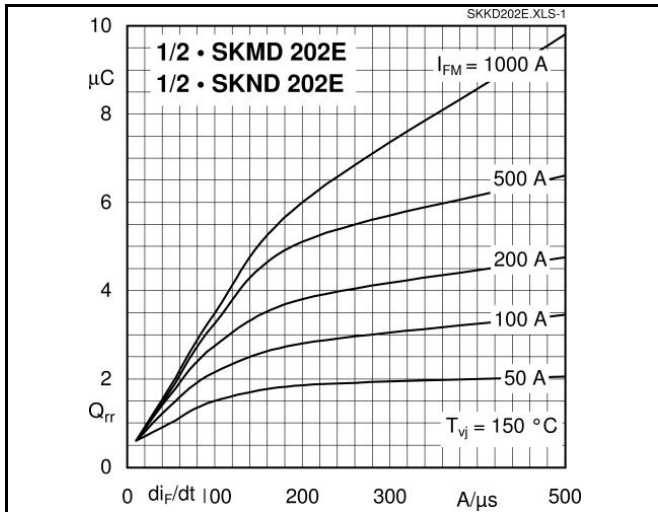


Fig. 1 Typ. recovery charge vs. current decrease

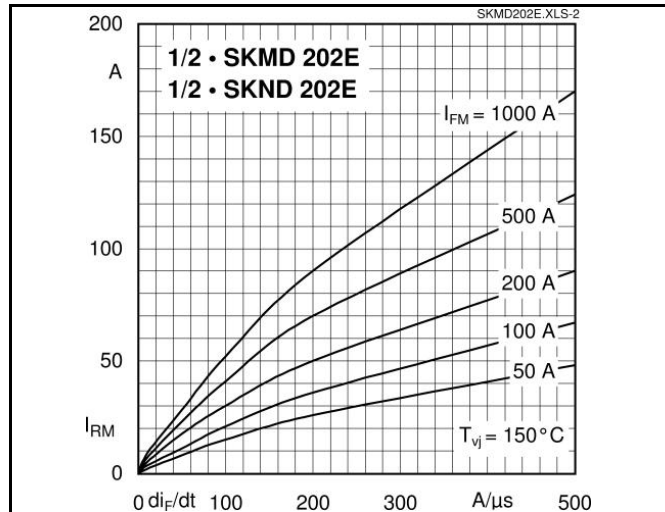


Fig. 2 Peak recovery current vs. current decrease

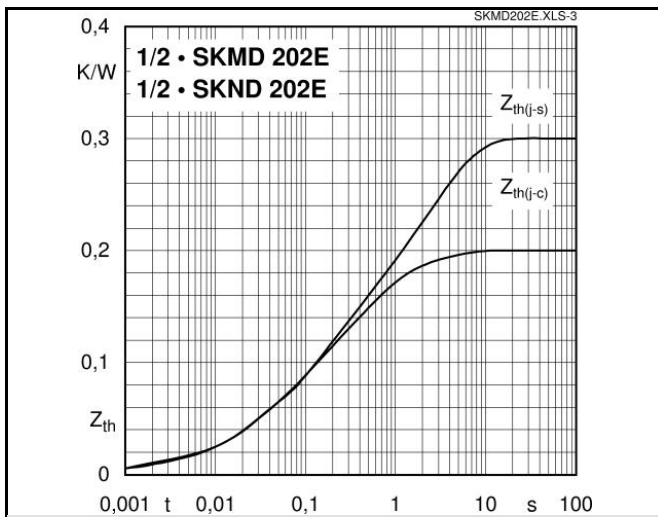


Fig. 3 Transient thermal impedance vs. time

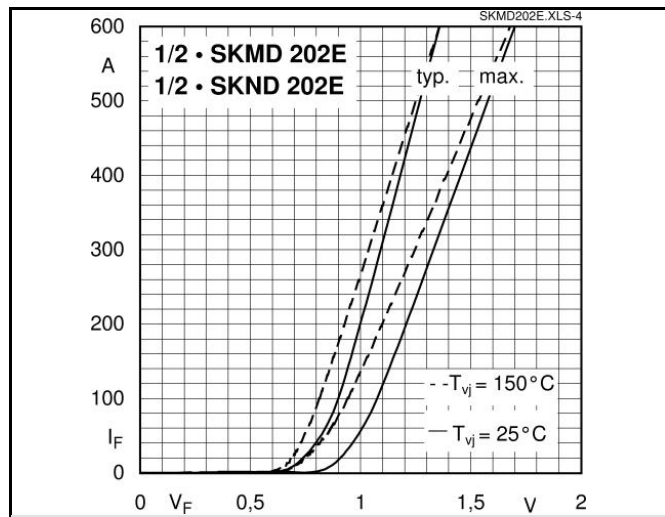


Fig. 4 Forward characteristics

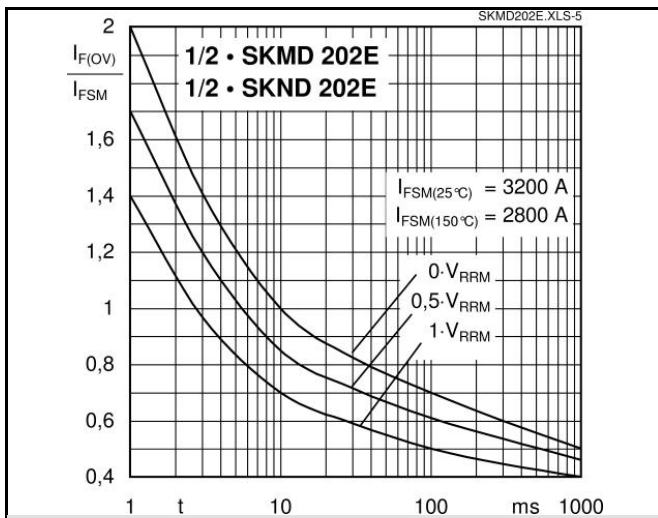
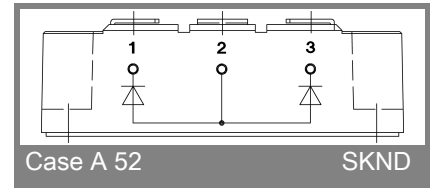
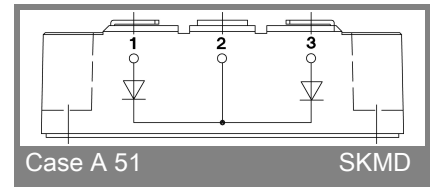
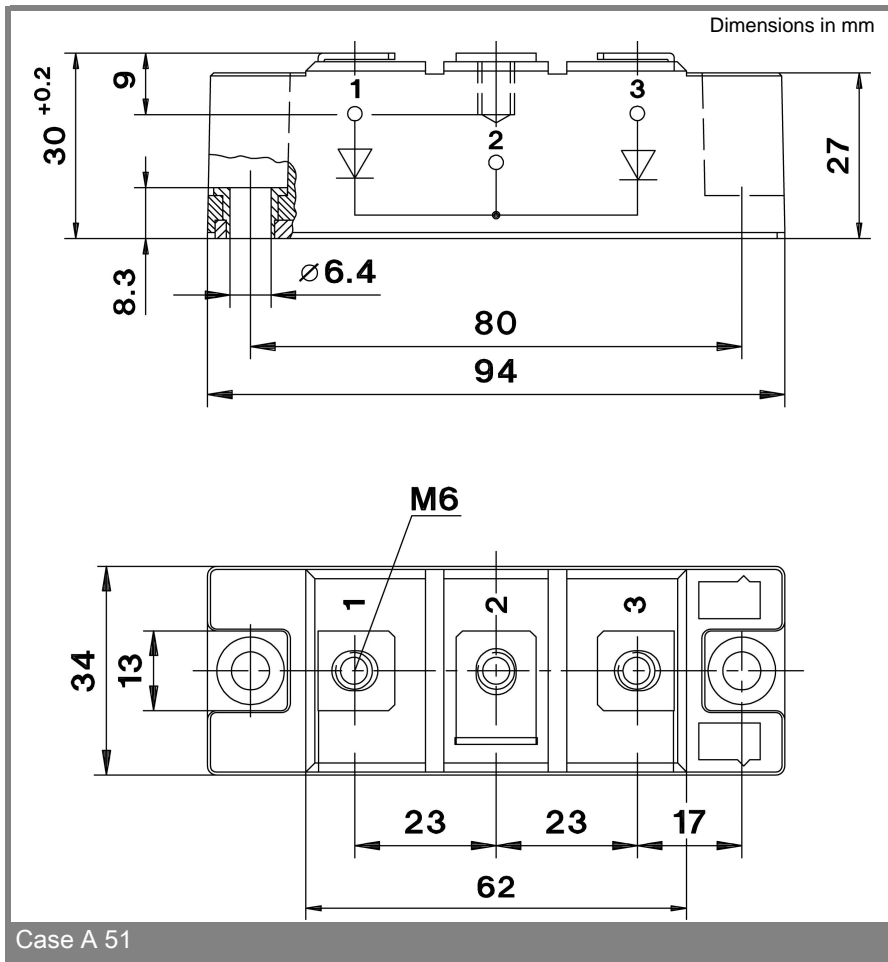


Fig. 5 Surge overload current vs. time

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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.