

# SKKD 40F, SKMD 40F



SEMIPACK® 1

## Fast Diode Modules

SKKD 40F  
SKMD 40F

### Features

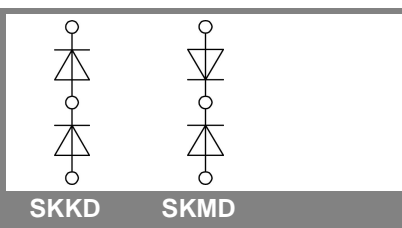
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- SKKD half bridge connection; SKMD centre tap connection, common cathode
- UL recognized, file no. E 63 532

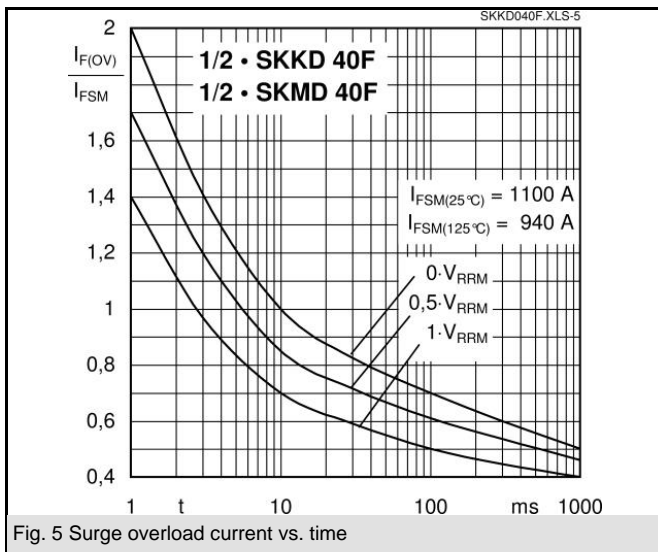
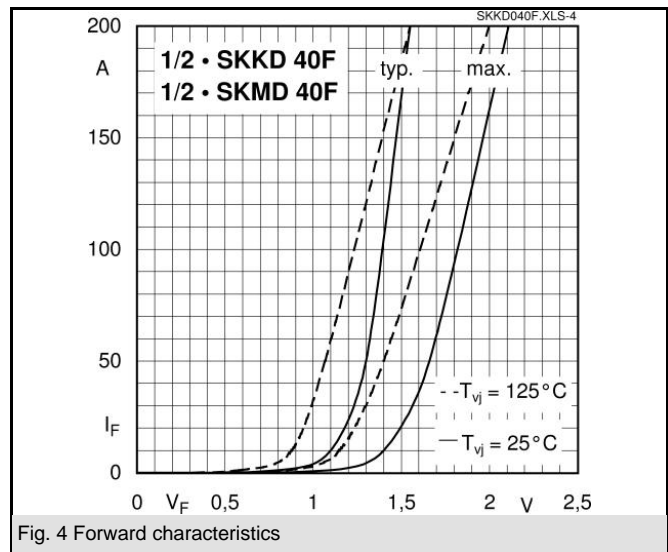
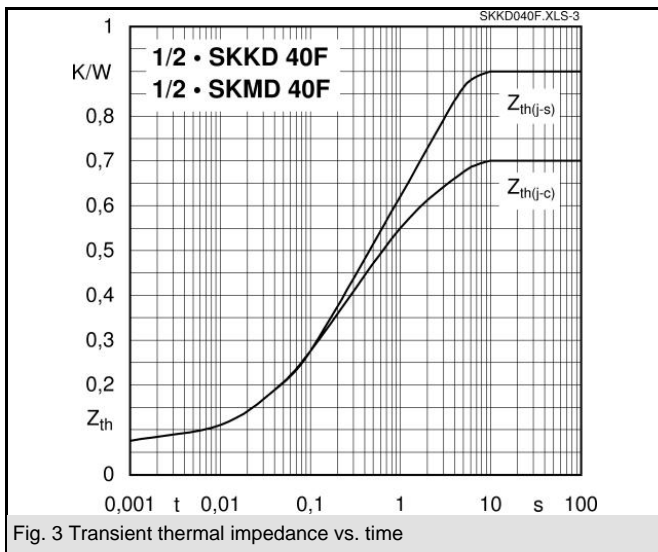
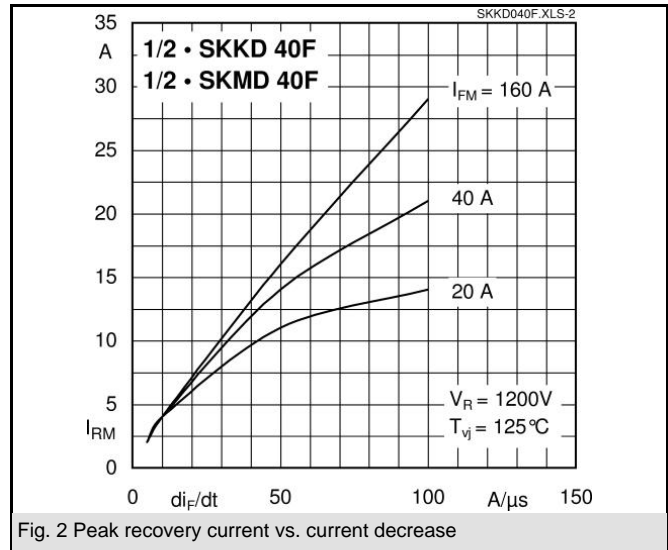
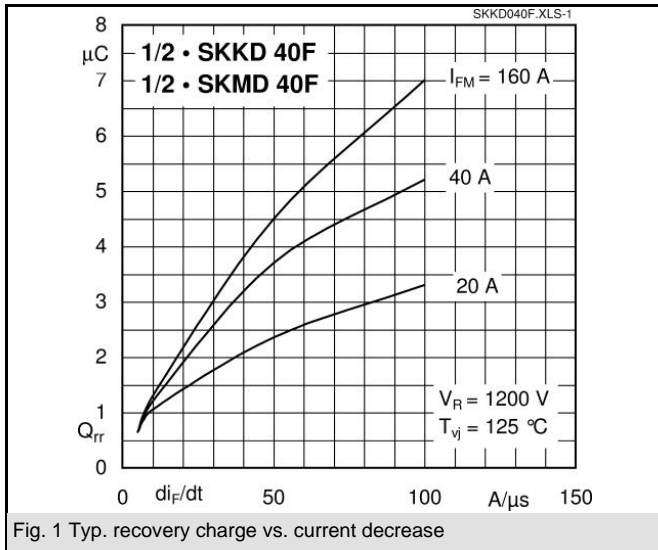
### Typical Applications

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

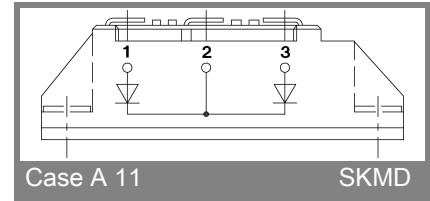
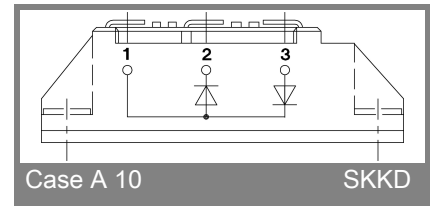
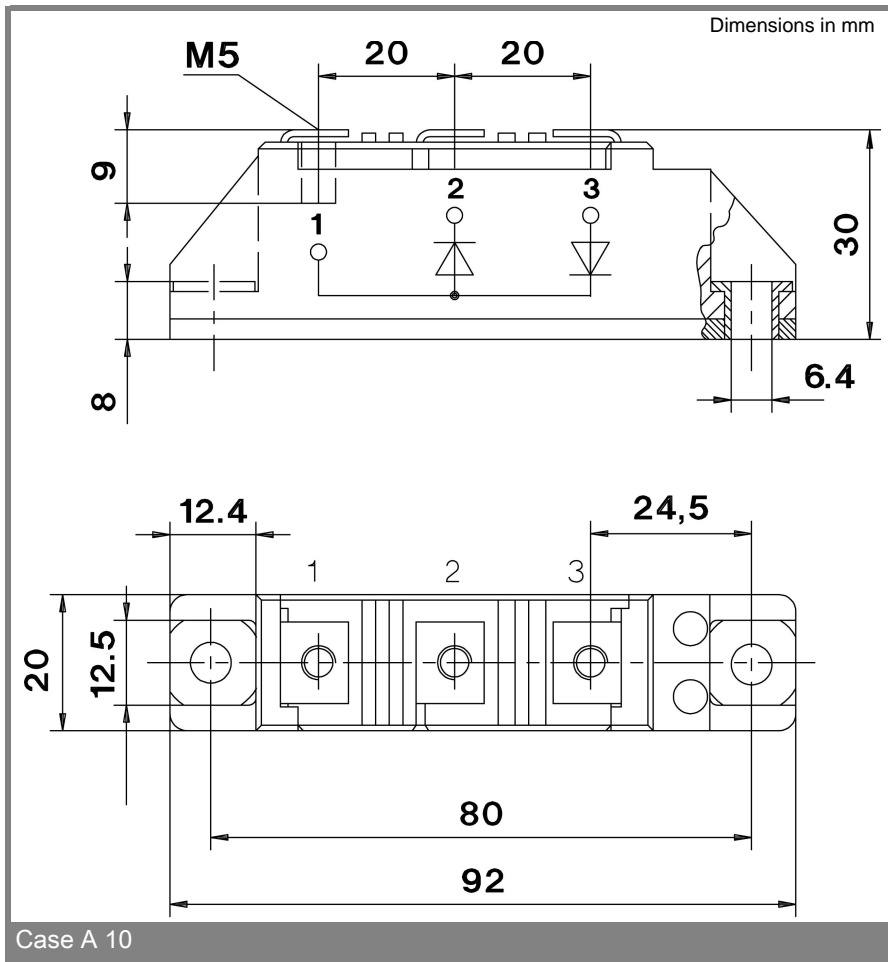
| $V_{RSM}$<br>V | $V_{RRM}$<br>V | $I_{FRMS} = 110$ A (maximum value for continuous operation)<br>$I_{FAV} = 40$ A (sin. 180°; 50Hz; $T_c = 80$ °C) |            |
|----------------|----------------|--|------------|
| 400            | 400            | SKKD 40F04   | SKMD 40F04 |
| 600            | 600            | SKKD 40F06   | SKMD 40F06 |
| 800            | 800            | SKKD 40F08   | SKMD 40F08 |
| 1000           | 1000           | SKKD 40F10   | SKMD 40F10 |

| Symbol        | Conditions  | Values         | Units            |
|---------------|---|----------------|------------------|
| $I_{FAV}$     | sin. 180; $T_c = 85$ (100) °C                                       | 37 (25)        | A                |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms   | 1100           | A                |
|               | $T_{vj} = 125$ °C; 10 ms  | 940            | A                |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3 ... 10 ms                                     | 6000           | A <sup>2</sup> s |
|               | $T_{vj} = 125$ °C; 8,3 ... 10 ms                                    | 4400           | A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 150$ A                                     | max. 2         | V                |
| $V_{(TO)}$    | $T_{vj} = 125$ °C   | max. 1,2       | V                |
| $r_T$         | $T_{vj} = 125$ °C   | max. 4         | mΩ               |
| $I_{RD}$      | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$                                | max. 0,5       | mA               |
| $I_{RD}$      | $T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$                               | max. 50        | mA               |
| $Q_{rr}$      | $T_{vj} = 125$ °C; $I_F = 100$ A,<br>-di/dt = 30 A/μs, $V_R = 30$ V | 3              | μC               |
| $I_{RM}$      |   | 10             | A                |
| $t_{rr}$      |   | 600            | ns               |
| $E_{rr}$      |   | 0,05           | mJ               |
| $R_{th(j-c)}$ | per diode / per module  | 0,7 / 0,35     | K/W              |
| $R_{th(c-s)}$ | per diode / per module  | 0,2 / 0,1      | K/W              |
| $T_{vj}$      |   | - 40 ... + 125 | °C               |
| $T_{stg}$     |   | - 40 ... + 125 | °C               |
| $V_{isol}$    | a. c. 50 Hz; r.m.s.; 1 s / 1 min.                                   | 3600 / 3000    | V~               |
| $M_s$         | to heatsink   | 5 ± 15 %       | Nm               |
| $M_t$         | to terminals  | 3 ± 15%        | Nm               |
| $a$           |   | 5 * 9,81       | m/s <sup>2</sup> |
| $m$           | approx.   | 120            | g                |
| Case          | SKKD  | A 10           |                  |
|               | SKMD  | A 11           |                  |





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