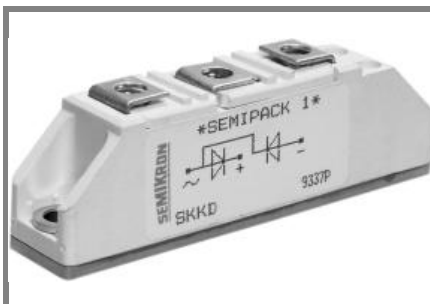


# SKKD 105F, SKMD 105F, SKND 105F



## SEMIPACK® 1

### Fast Diode Modules

**SKKD 105F**

**SKMD 105F**

**SKND 105F**

### Features

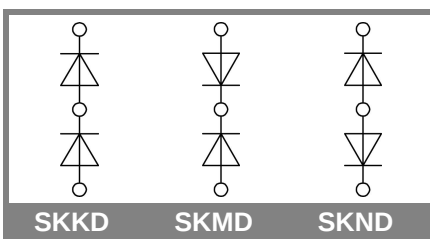
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- SKKD half bridge connection; centre tap connections: SKMD common cathode, SKND common anode
- UL recognized, file no. E 63 532

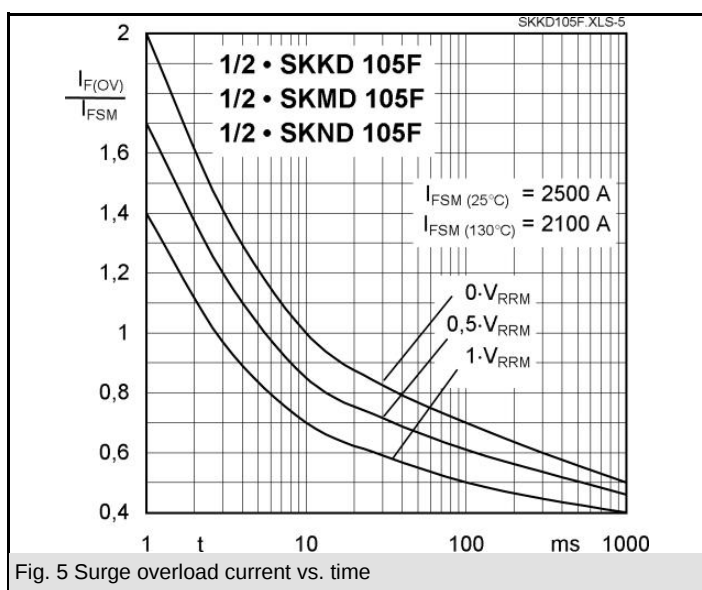
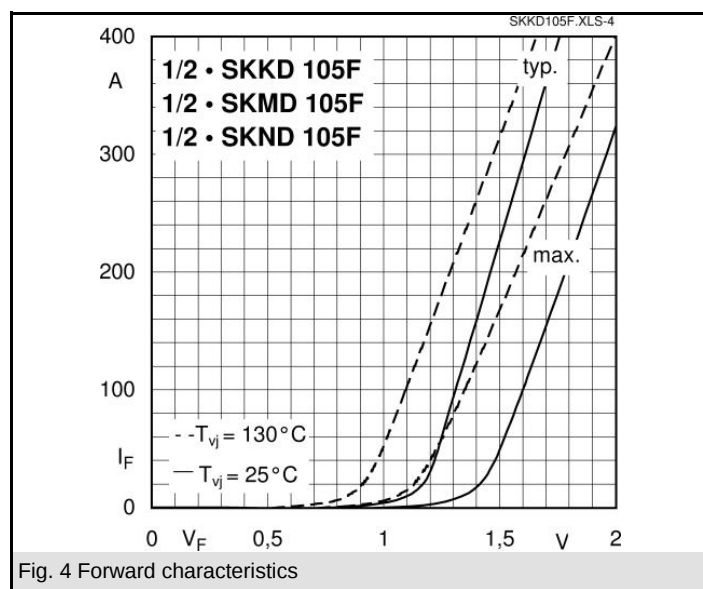
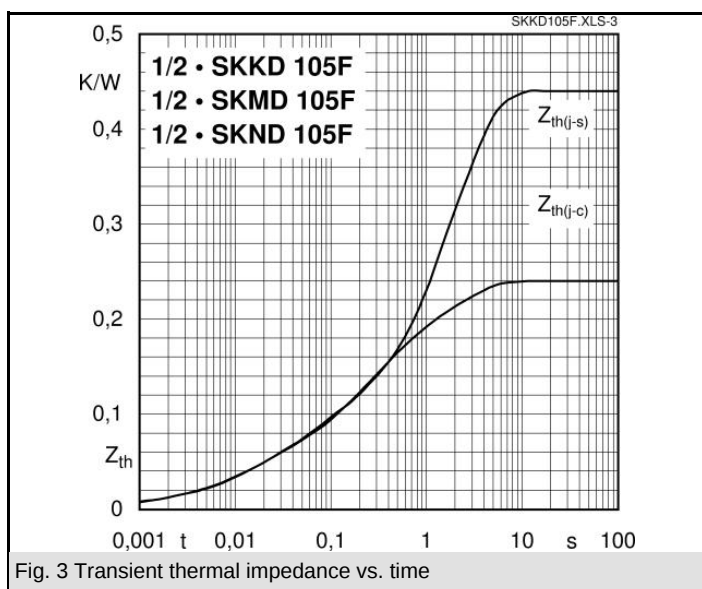
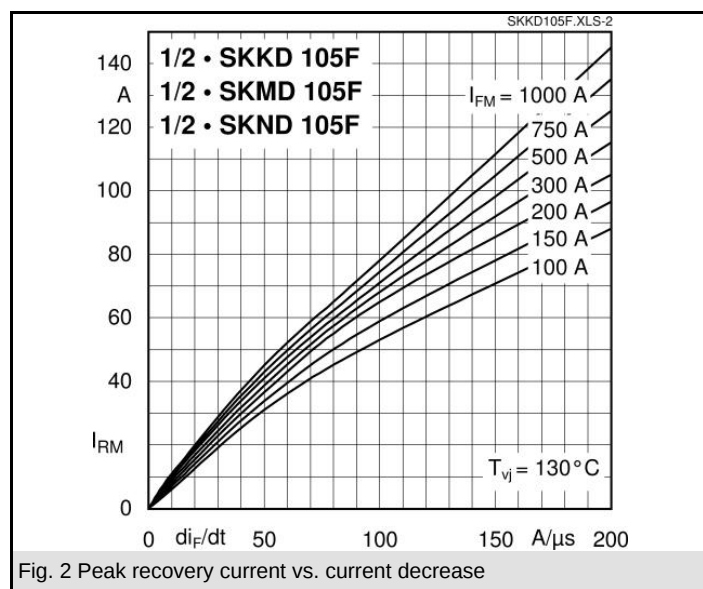
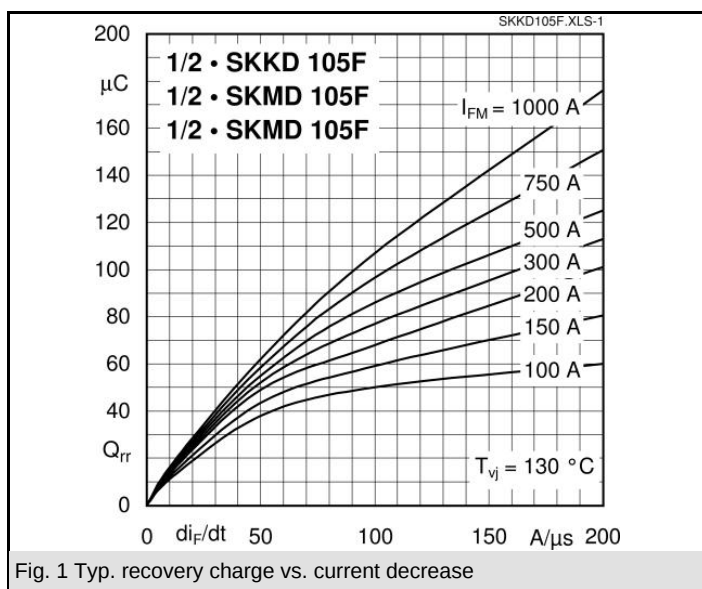
### Typical Applications

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

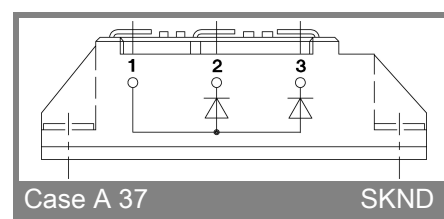
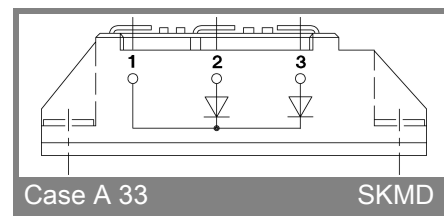
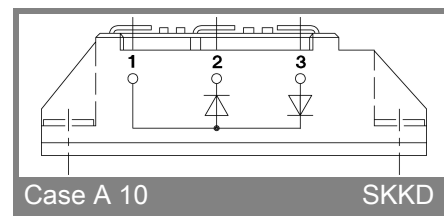
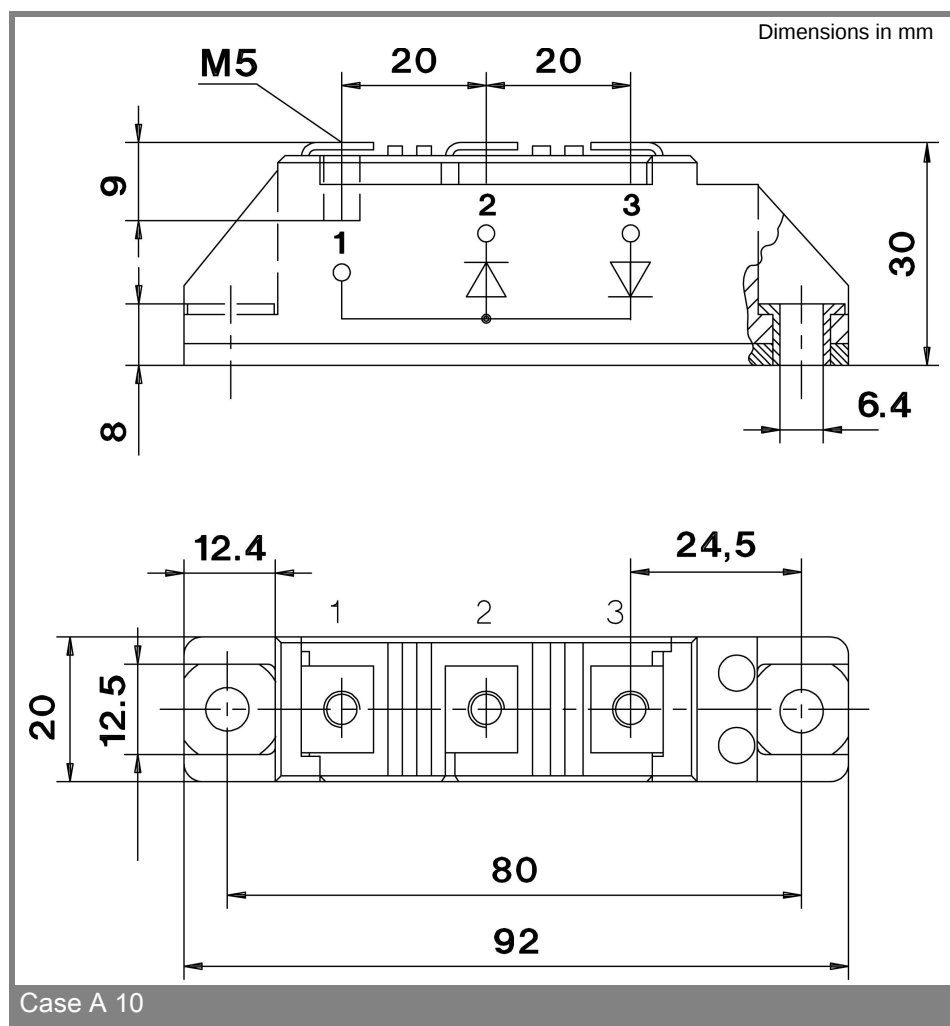
| $V_{RSM}$<br>V | $V_{RRM}$<br>V | $I_{FRMS} = 200$ A (maximum value for continuous operation)<br>$I_{FAV} = 105$ A (sin. 180; $T_c = 83$ °C) |             |             |
|----------------|----------------|------------------------------------------------------------------------------------------------------------|-------------|-------------|
| 800            | 800            | SKKD 105F08                                                                                                | SKMD 105F08 | SKND 105F08 |
| 1000           | 1000           | SKKD 105F10                                                                                                | SKMD 105F10 | SKND 105F10 |
| 1200           | 1200           | SKKD 105F12                                                                                                | SKMD 105F12 | SKND 105F12 |
| 1600           | 1600           | SKKD 105F16                                                                                                |             |             |

| Symbol        | Conditions                                                          | Values         | Units |
|---------------|---------------------------------------------------------------------|----------------|-------|
| $I_{FAV}$     | sin. 180; $T_c = 85$ (100) °C                                       | 102 (65)       | A     |
| $I_{FSM}$     | $T_{vj} = 25$ °C; 10 ms                                             | 2500           | A     |
|               | $T_{vj} = 130$ °C; 10 ms                                            | 2100           | A     |
| $i^2t$        | $T_{vj} = 25$ °C; 8,3 ... 10 ms                                     | 31250          | A²s   |
|               | $T_{vj} = 130$ °C; 8,3 ... 10 ms                                    | 22000          | A²s   |
| $V_F$         | $T_{vj} = 25$ °C; $I_F = 300$ A                                     | max. 2,05      | V     |
| $V_{(TO)}$    | $T_{vj} = 130$ °C                                                   | max. 1,2       | V     |
| $r_T$         | $T_{vj} = 130$ °C                                                   | max. 2,5       | mΩ    |
| $I_{RD}$      | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$                                | max. 1         | mA    |
| $I_{RD}$      | $T_{vj} = 130$ °C; $V_{RD} = V_{RRM}$                               | max. 30        | mA    |
| $Q_{rr}$      | $T_{vj} = 130$ °C; $I_F = 100$ A,<br>-di/dt = 50 A/μs, $V_R = 30$ V | 50             | μC    |
| $I_{RM}$      |                                                                     | 53             | A     |
| $t_{rr}$      |                                                                     | 1890           | ns    |
| $E_{rr}$      |                                                                     | 0,8            | mJ    |
| $R_{th(j-c)}$ | per diode / per module                                              | 0,24 / 0,12    | K/W   |
| $R_{th(c-s)}$ | per diode / per module                                              | 0,2 / 0,1      | K/W   |
| $T_{vj}$      |                                                                     | - 40 ... + 130 | °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/s²  |
| $m$           | approx.                                                             | 120            | g     |
| Case          | SKKD                                                                | A 10           |       |
|               | SKMD                                                                | A 33           |       |
|               | SKND                                                                | A 37           |       |





# SKKD 105F, SKMD 105F, SKND 105F THYRISTOR



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