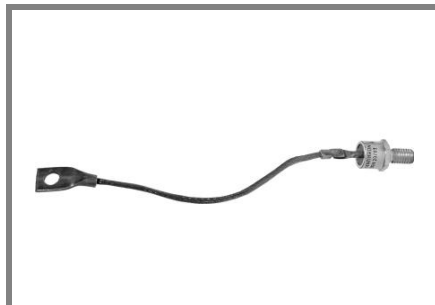




**Stud Diode**

## Avalanche Diode

### SKNa 20

#### Features

- Avalanche type reverse characteristic up to 1700
- Hermetic metal case with glass insulator
- Anode side threaded stud ISO M
- Cooling via metal plates or heat sinks
- SKN: Anode to stud

#### Typical Applications\*

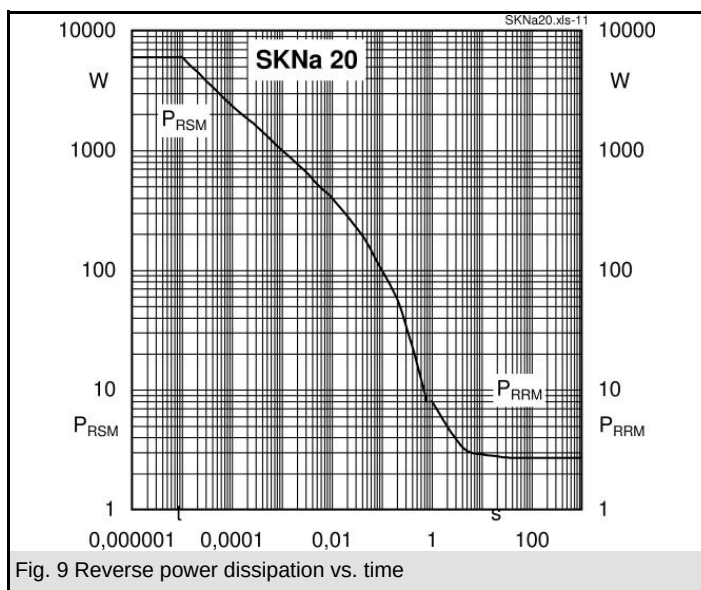
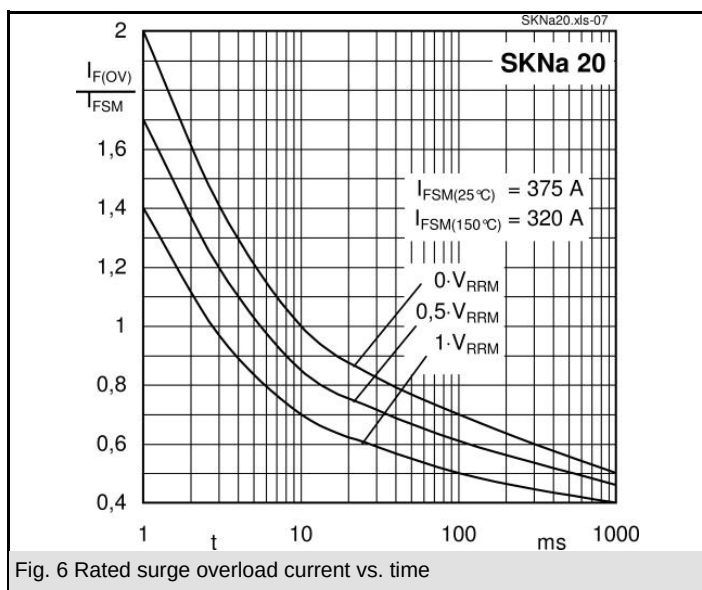
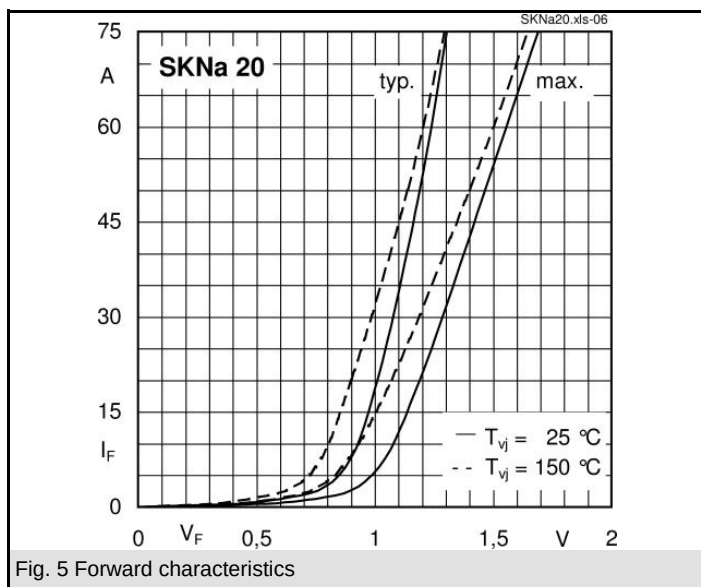
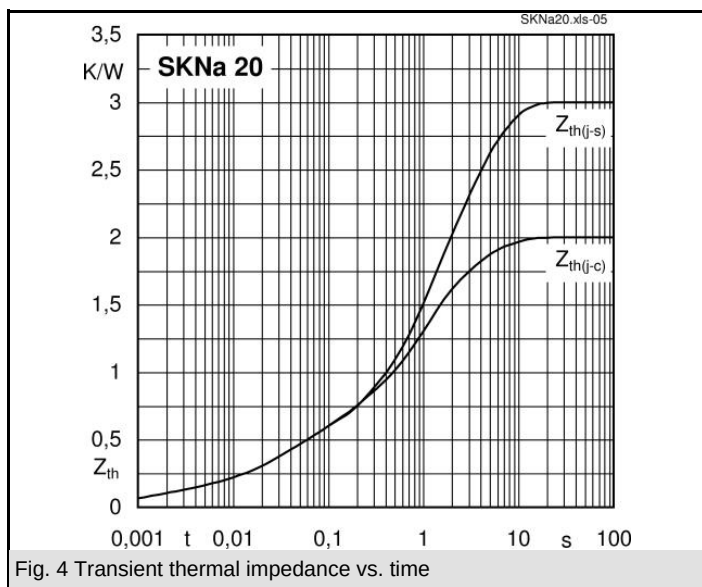
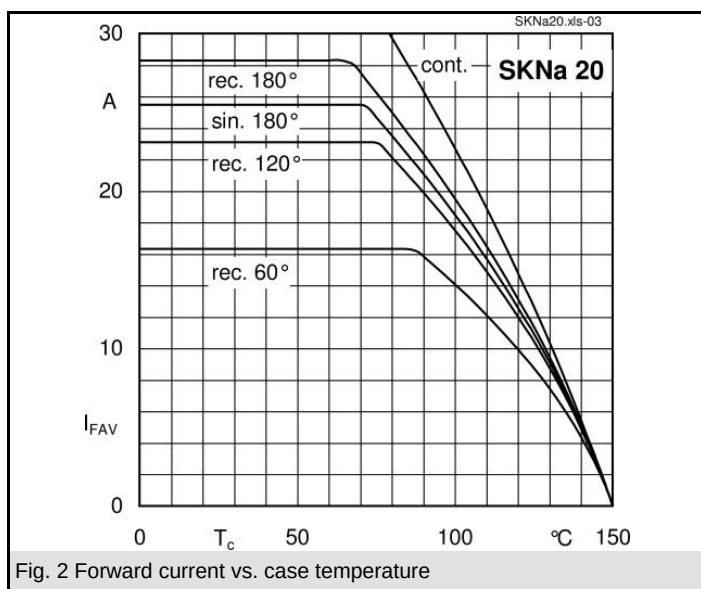
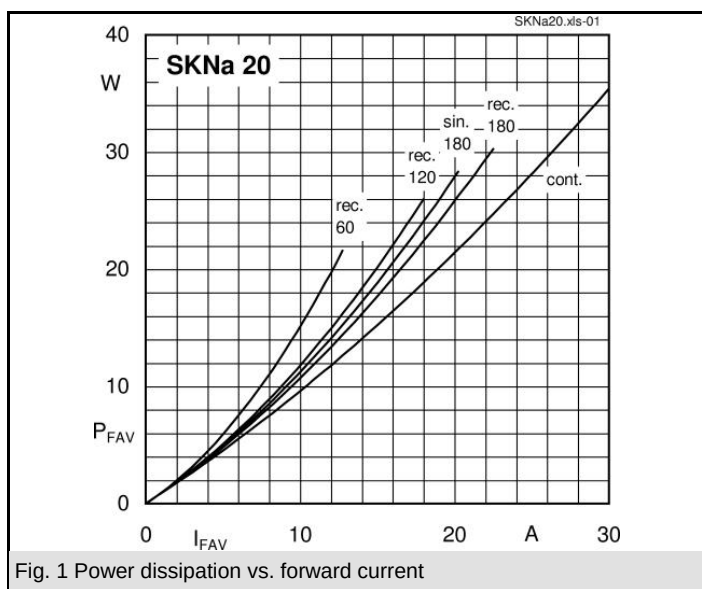
- DC supply for magnetes or solenoids (brakes, valves etc.)
- Field coil supply for DC motors
- Series connections for high voltage applications (dust precipitators)

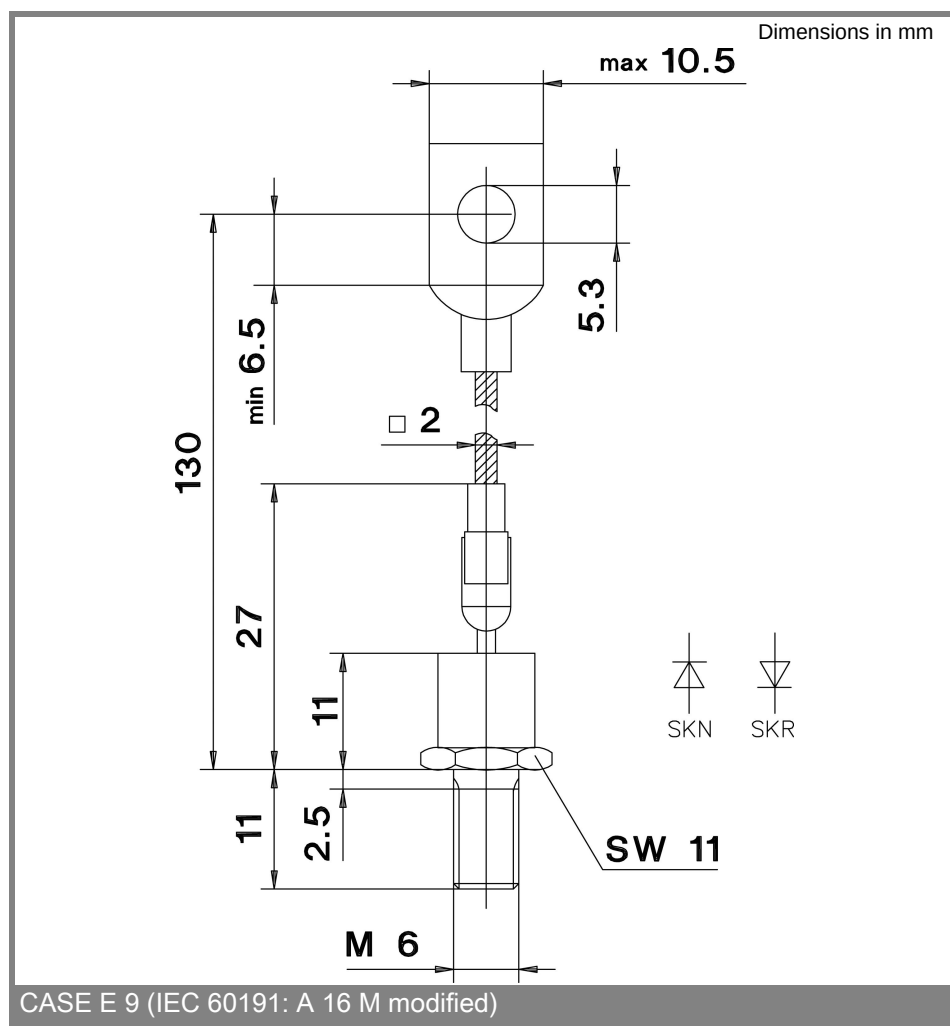
| $V_{(BR)min}$ | $I_{FRMS} = 40\text{ A}$<br>(maximum value for continuous operation) | $C_{max}$     | $R_{min}$ |
|---------------|----------------------------------------------------------------------|---------------|-----------|
| V             | $I_{FAV} = 20\text{ A (sin. 180; } T_c = 93\text{ °C)}$              | $\mu\text{F}$ | $\Omega$  |
| 1300          | SKNa 20/13                                                           |               |           |
| 1700          | SKNa 20/17                                                           |               |           |

| Symbol        | Conditions                                                                          | Values             | Units                                |
|---------------|-------------------------------------------------------------------------------------|--------------------|--------------------------------------|
| $I_{FAV}$     | sin. 180; $T_c = 85\text{ (100) °C}$                                                | 22 (18)            | A                                    |
| $I_D$         | K 9; $T_a = 45\text{ °C}$ ; B2 / B6<br>K 3; $T_a = 45\text{ °C}$ ; B2 / B6          | 17 / 24<br>30 / 42 | A<br>A                               |
| $I_{FSM}$     | $T_{vj} = 25\text{ °C}$ ; 10 ms<br>$T_{vj} = 150\text{ °C}$ ; 10 ms                 | 375<br>320         | A<br>A                               |
| $i^2t$        | $T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms<br>$T_{vj} = 150\text{ °C}$ ; 8,3 ... 10 ms | 700<br>510         | A <sup>2</sup> s<br>A <sup>2</sup> s |
| $V_F$         | $T_{vj} = 25\text{ °C}$ ; $I_F = 60\text{ A}$                                       | max. 1,55          | V                                    |
| $V_{(TO)}$    | $T_{vj} = 150\text{ °C}$                                                            | max. 0,85          | V                                    |
| $r_T$         | $T_{vj} = 150\text{ °C}$                                                            | max. 11            | m $\Omega$                           |
| $I_{RD}$      | $T_{vj} = 25\text{ °C}$ ; $V_{RD} = V_{(BR)min}$                                    | max. 10            | $\mu\text{A}$                        |
| $P_{RSM}$     | $T_{vj} = 150\text{ °C}$ ; $t_p = 10\text{ }\mu\text{s}$                            | 6                  | kW                                   |
| $R_{th(j-c)}$ |                                                                                     | 2                  | K/W                                  |
| $R_{th(c-s)}$ |                                                                                     | 1                  | K/W                                  |
| $T_{vj}$      |                                                                                     | - 40 ... + 150     | °C                                   |
| $T_{stg}$     |                                                                                     | - 55 ... + 180     | °C                                   |
| $V_{isol}$    |                                                                                     | -                  | V~                                   |
| $M_s$         |                                                                                     | 2                  | Nm                                   |
| a             |                                                                                     | 5 * 9,81           | m/s <sup>2</sup>                     |
| m             | approx.                                                                             | 11                 | g                                    |
| Case          |                                                                                     | E 9                |                                      |



**SKN**





\* 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.