

|                                      |   |                               |                               |                               |
|--------------------------------------|---|-------------------------------|-------------------------------|-------------------------------|
| V <sub>RSM</sub><br>V <sub>RRM</sub> | I <sub>FRMS</sub> (maximum values for continuous operation) |                               |                               |                               |
|                                      | 41 A  |                               |                               |                               |
| V                                    | I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = 85 °C)      |                               |                               |                               |
|                                      | 26 A  |                               |                               |                               |
|                                      | t <sub>rr</sub> = 150 ns                                    |                               | t <sub>rr</sub> = 250 ns      |                               |
|                                      | $\triangleleft$   | $\nabla$                      | $\triangleleft$               | $\nabla$                      |
| 400                                  | SKN 2F17/04<br>SKN 2F17/04UNF                               | SKR 2F17/04<br>SKR 2F17/04UNF | -<br>-                        | -<br>-                        |
| 600                                  | SKN 2F17/06<br>SKN 2F17/06UNF                               | SKR 2F17/06<br>SKR 2F17/06UNF |                               |                               |
| 800                                  | SKN 2F17/08<br>SKN 2F17/08UNF                               | SKR 2F17/08<br>SKR 2F17/08UNF | SKN 3F20/08<br>SKN 3F20/08UNF | SKR 3F20/08<br>SKR 3F20/08UNF |
| 1000                                 | SKN 2F17/10<br>SKN 2F17/10UNF                               | SKR 2F17/10<br>SKR 2F17/10UNF | SKN 3F20/10<br>SKN 3F20/10UNF | SKR 3F20/10<br>SKR 3F20/10UNF |
| 1200                                 | -<br>-  | -<br>-                        | SKN 3F20/12<br>SKN 3F20/12UNF | SKR 3F20/12<br>SKR 3F20/12UNF |

### Fast Recovery Rectifier Diodes

SKN 2 F 17      SKR 2 F 17  
SKN 3 F 20      SKR 3 F 20



| Symbol            | Conditions  | SKN 2 F 17<br>SKR 2 F 17 | SKN 3 F 20<br>SKR 3 F 20 | Units            |
|-------------------|---|--------------------------|--------------------------|------------------|
| I <sub>FAV</sub>  | sin.180; T <sub>case</sub> = 85 °C; f=5000 Hz<br>= 104 °C<br>= 113 °C<br>sin.180/rec.120; T <sub>amb</sub> = 5 °C; K9<br>K5 | 26                       | 26                       | A                |
|                   |   | -                        | 20                       | A                |
|                   |   | 17                       | -                        | A                |
|                   |   |                          | 6,7 /6,5<br>10/9,5       | A                |
| I <sub>FSM</sub>  | T <sub>vj</sub> = 25 °C; 10 ms  | 450                      | 375                      | A                |
|                   | T <sub>vj</sub> = 150 °C; 10 ms   | 380                      | 310                      | A                |
| i <sup>2</sup> t  | T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms<br>T <sub>vj</sub> = 150 °C; 8,3 ... 10 ms   | 1000                     | 700                      | A <sup>2</sup> s |
|                   |   | 720                      | 480                      | A <sup>2</sup> s |
| Q <sub>rr</sub>   | T <sub>vj</sub> = 130 °C; I <sub>F</sub> = 50 A;<br>- $\frac{dI_F}{dt} = 15 \frac{A}{\mu s}$ ; V <sub>R</sub> = 30 V        | 1,0                      | 1,5                      | μC               |
|                   |   | 4,5                      | 5                        | A                |
| I <sub>R</sub>    | T <sub>vj</sub> = 25 °C; V <sub>R</sub> = V <sub>RRM</sub><br>T <sub>vj</sub> = 130 °C; V <sub>R</sub> = V <sub>RRM</sub>   | max. 0,2                 | max. 0,2                 | mA               |
|                   |   | max. 16                  | max. 20                  | mA               |
| t <sub>rr</sub>   | T <sub>vj</sub> = 25 °C } I <sub>F</sub> = I <sub>R</sub> = 1 A<br>T <sub>vj</sub> = 130 °C }                               | max. 150                 | max. 250                 | ns               |
|                   |   | typ. 300                 | typ. 500                 | ns               |
| V <sub>F</sub>    | T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 50 A  | max. 2,15                |                          | V                |
| V <sub>(TO)</sub> | T <sub>vj</sub> = 130 °C  | 1,3                      |                          | V                |
| r <sub>T</sub>    | T <sub>vj</sub> = 130 °C  | 12                       |                          | mΩ               |
| R <sub>thjc</sub> |   | 1,2                      |                          | °C/W             |
| R <sub>thch</sub> |   | 0,5                      |                          | °C/W             |
| T <sub>vj</sub>   |   | - 40 ... + 150           |                          | °C               |
| T <sub>stg</sub>  |   | - 55 ... + 150           |                          | °C               |
| M                 | SI units  | 1,5                      |                          | Nm               |
|                   | US units  | 13                       |                          | lb.in.           |
| a                 | w   | 5 · 9,81                 |                          | m/s <sup>2</sup> |
|                   |   | 7                        |                          | g                |
| Case              |   | E7                       |                          |                  |

#### Features

- Small recovered charge
- Soft recovery
- Up to 1200 V reverse voltage
- Hermetic metal cases with glass insulators
- Threaded studs ISO M5 or 10-32 UNF
- **SKN**: anode to stud
- **SKR**: cathode to stud

#### Typical Applications

- Inverse diodes for power transistors, GTO thyristors asymmetric thyristors
- SMPS, inverters, choppers
- For severe ambient conditions

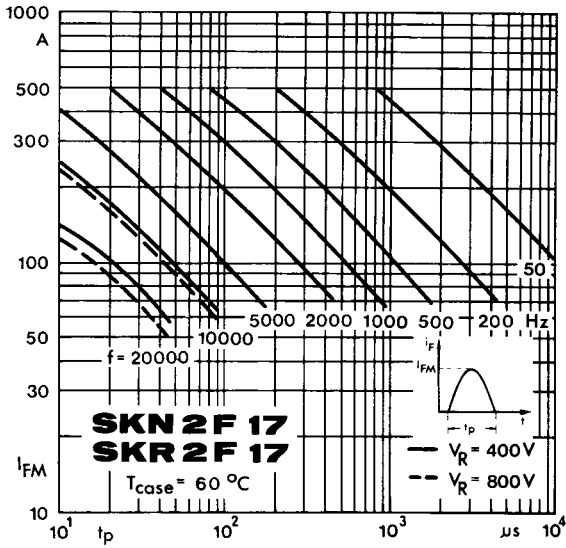


Fig. 1 a Rated sinusoidal peak forward current

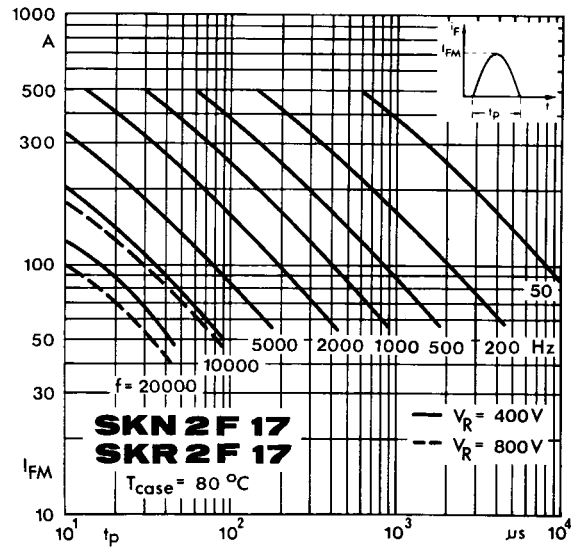


Fig. 1 b Rated sinusoidal peak forward current

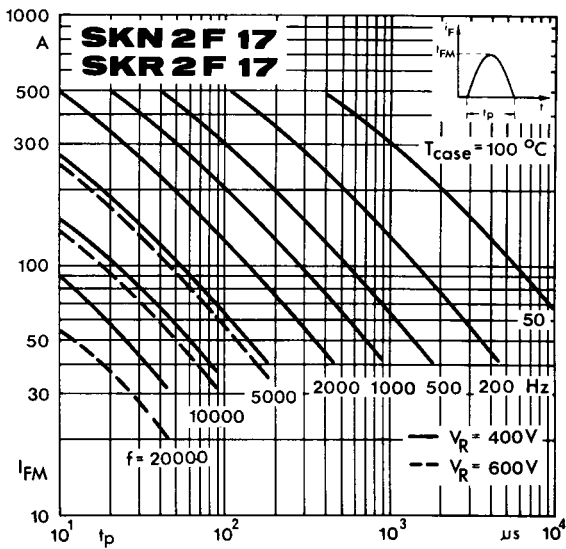


Fig. 1 c Rated sinusoidal peak forward current

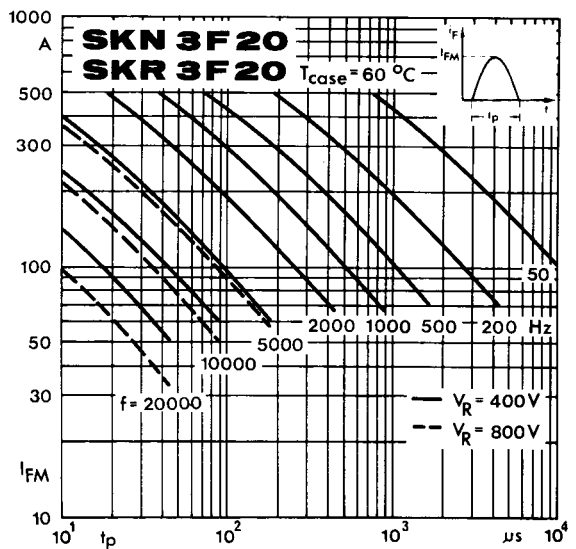


Fig. 1 d Rated sinusoidal peak forward current

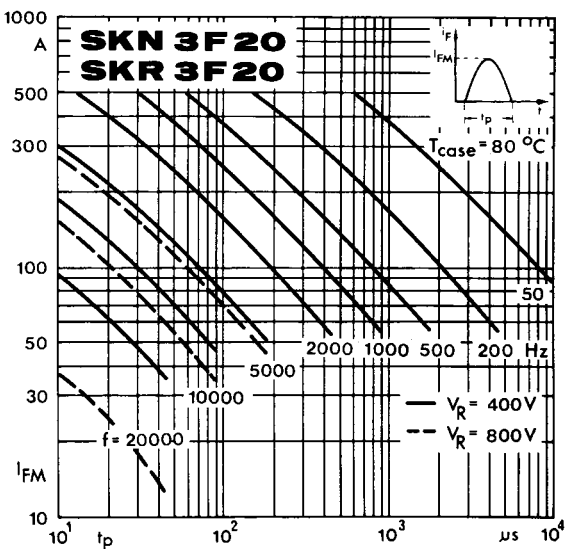


Fig. 1 e Rated sinusoidal peak forward current

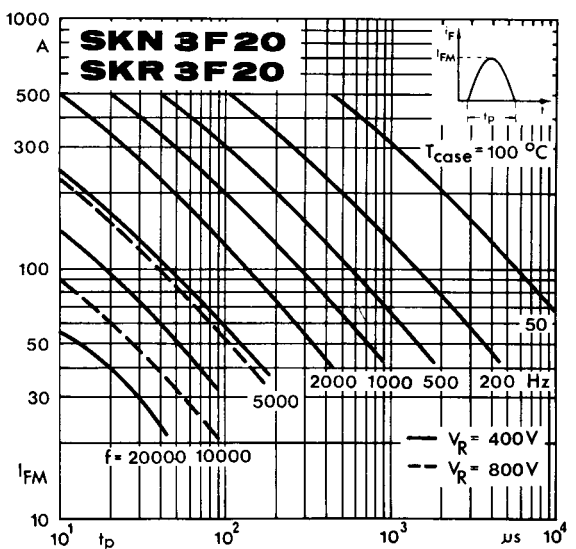


Fig. 1 f Rated sinusoidal peak forward current

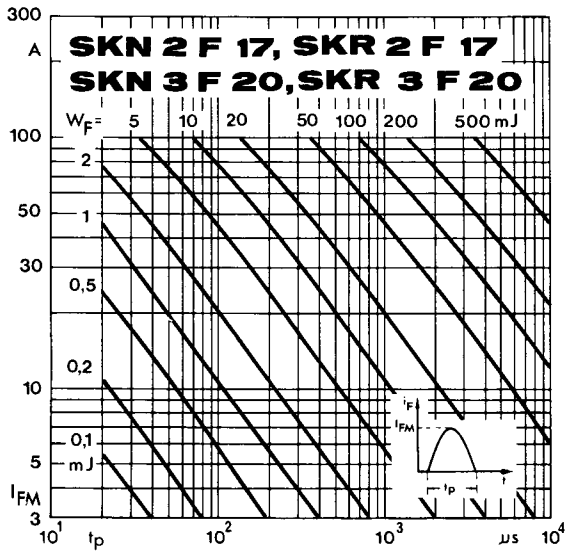


Fig. 2 Forward energy dissipation, sinusoidal

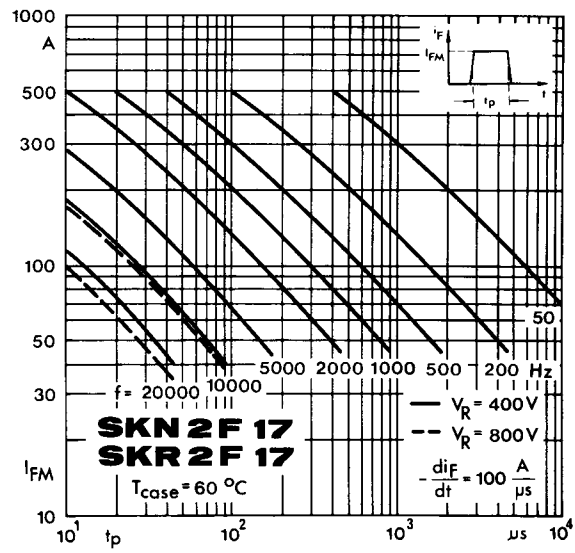


Fig. 3 a Rated rectangular peak forward current

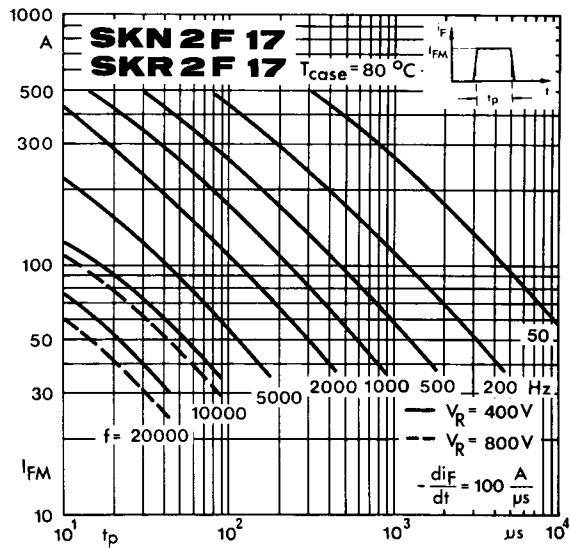


Fig. 3 b Rated rectangular peak forward current

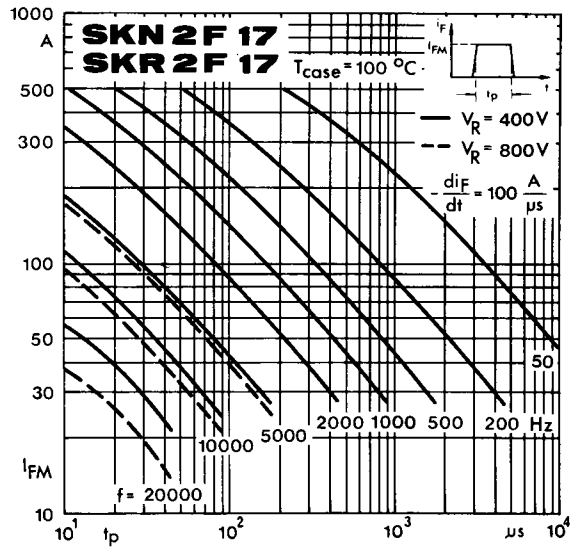


Fig. 3 c Rated rectangular peak forward current

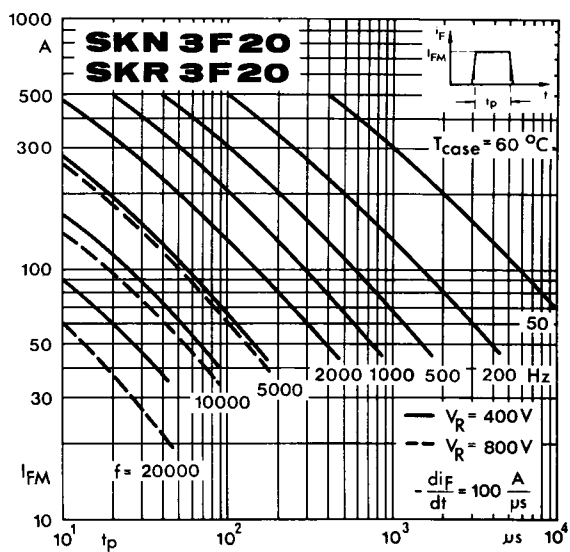


Fig. 3 d Rated rectangular peak forward current

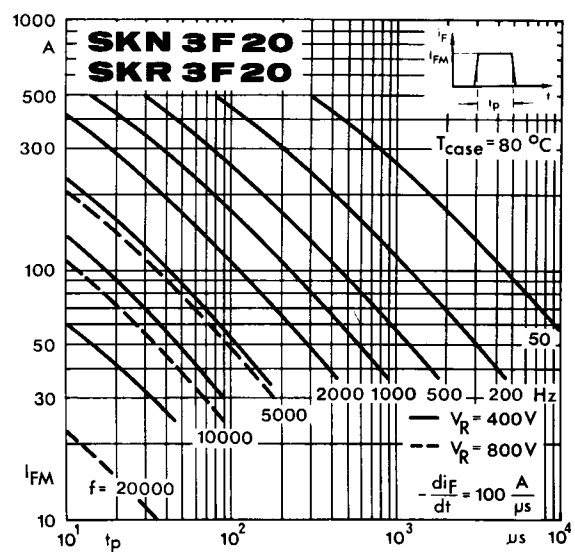


Fig. 3 e Rated rectangular peak forward current

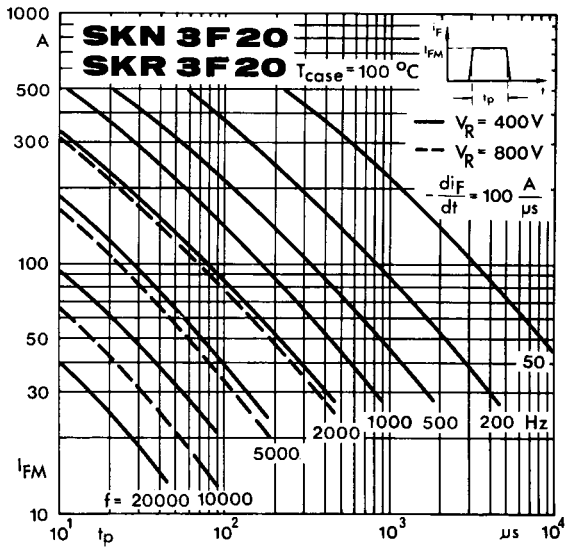


Fig. 3 f Rated rectangular peak forward current

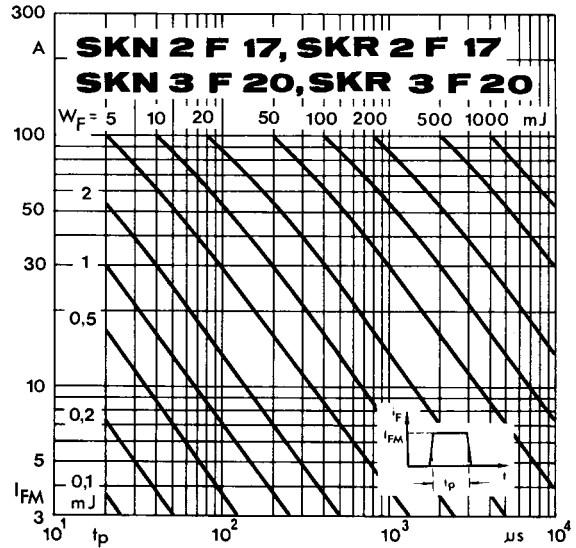


Fig. 4 Forward energy dissipation, rectangular

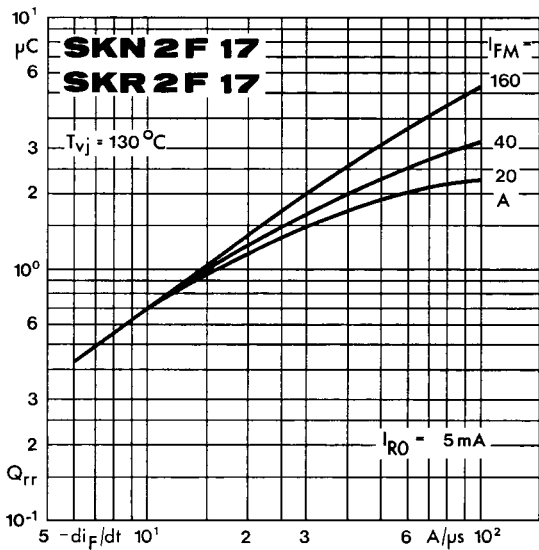


Fig. 5 a Recovered charge

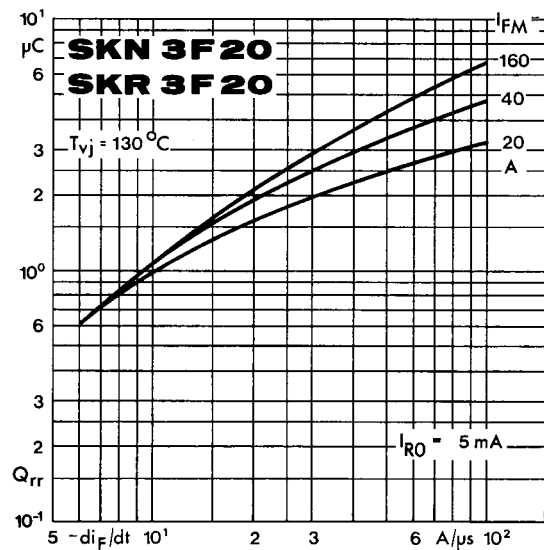


Fig. 5 b Recovered charge

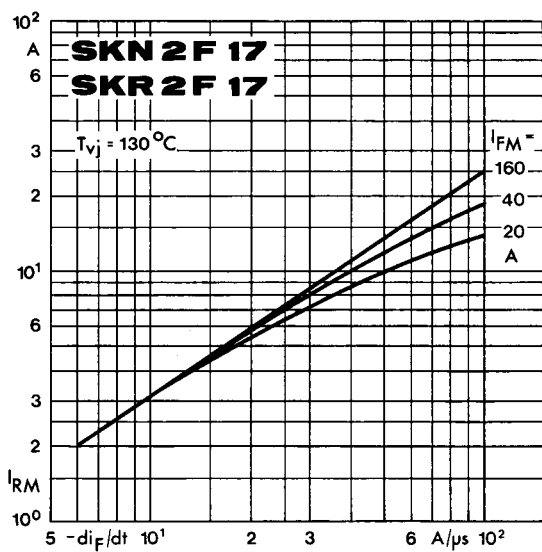


Fig. 6 a Peak reverse recovery current

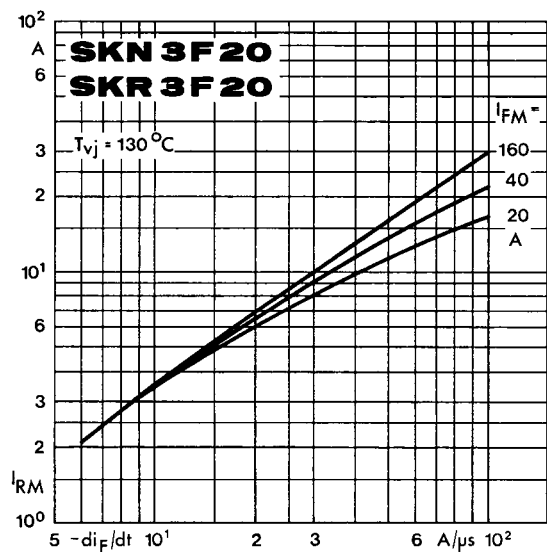


Fig. 6 b Peak reverse recovery current

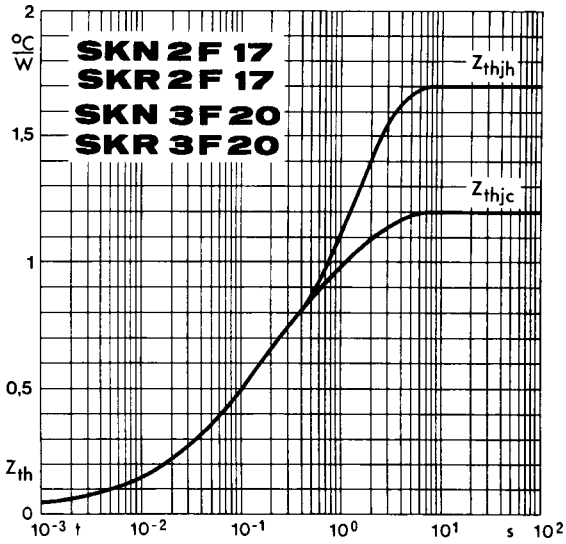


Fig. 7 Transient thermal impedance

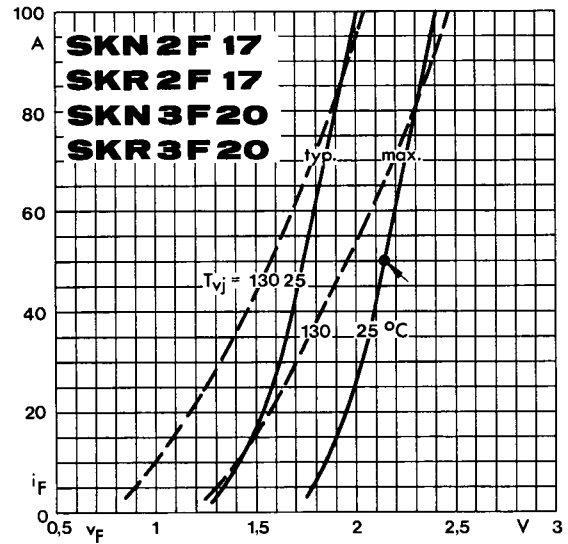


Fig. 8 Forward characteristics

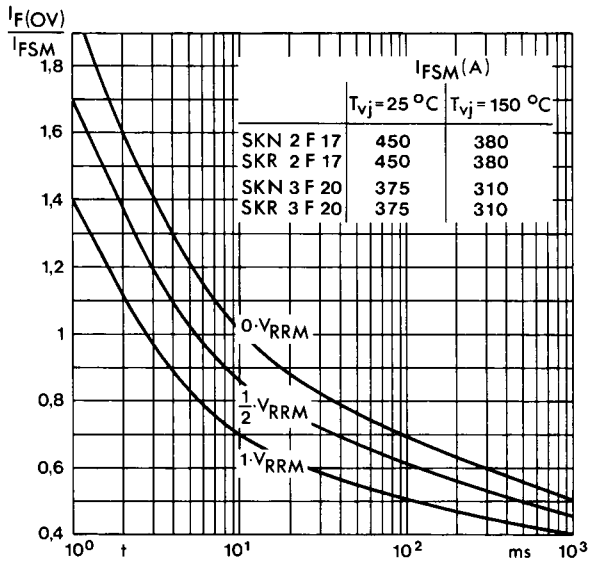


Fig 9 Rated surge overload current

SKN 2 F 17  
 SKR 2 F 17  
 SKN 3 F 20  
 SKR 3 F 20

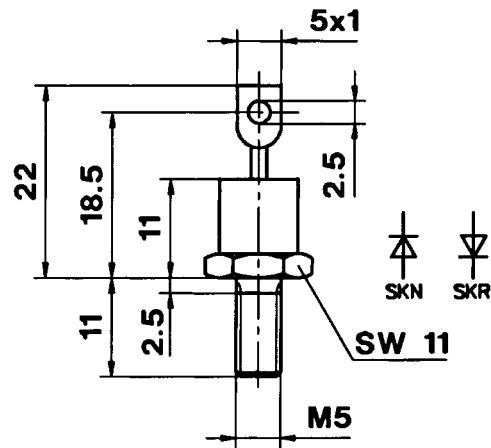
Case E 7

IEC-Publ. 191-2: A 3 M

DIN 41 885: 101 C 2

BS 3934: SO-10

JEDEC: DO-203 AA (DO-4) metric



Dimensions in mm

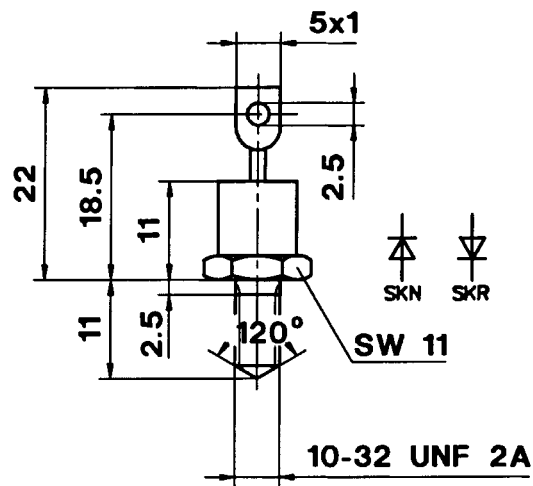
SKN 2 F 17 ... UNF  
 SKR 2 F 17 ... UNF  
 SKN 3 F 20 ... UNF  
 SKR 3 F 20 ... UNF

Case E 7 UNF

IEC-Publ. 191-2: A 3 U

BS 3934: SO-10

JEDEC: DO-203 AA (DO-4)



Dimensions in mm