

## Rectifier Diodes

**SKN 45**      **SKR 45**  
**SKN 70**      **SKR 70**  
**SKN 71**      **SKR 71**



V <sub>RSM</sub> V <sub>RRM</sub>	I <sub>FRMS</sub> (maximum values for continuous operations)					
	80 A			150 A		
	I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = ...)					
	50 A (118 °C)			95 A (100 °C)		
V						
400	<b>SKN 45/04</b>	<b>SKR 45/04</b>	<b>SKN 70/04</b>	<b>SKR 70/04</b>	<b>SKN 71/04*</b>	<b>SKR 71/04*</b>
800	<b>SKN 45/08</b>	<b>SKR 45/08</b>	<b>SKN 70/08</b>	<b>SKR 70/08</b>	<b>SKN 71/08*</b>	<b>SKR 71/08*</b>
1200	<b>SKN 45/12</b>	<b>SKR 45/12</b>	<b>SKN 70/12</b>	<b>SKR 70/12</b>	<b>SKN 71/12*</b>	<b>SKR 71/12*</b>
1400	<b>SKN 45/14</b>	<b>SKR 45/14</b>	<b>SKN 70/14</b>	<b>SKR 70/14</b>	<b>SKN 71/14*</b>	<b>SKR 71/14*</b>
1600	<b>SKN 45/16</b>	<b>SKR 45/16</b>	<b>SKN 70/16</b>	<b>SKR 70/16</b>	<b>SKN 71/16*</b>	<b>SKR 71/16*</b>

Symbol	Conditions	SKN 45 SKR 45	SKN 70 SKR 70	SKN 71 SKR 71	Units
I <sub>FAV</sub>	sin. 180; T <sub>case</sub> = 100 °C = 118 °C = 125 °C	– 50 45	95 – 70		A A A
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms T <sub>vj</sub> = 180 °C; 10 ms	700 600	1150 1000		A A
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms T <sub>vj</sub> = 180 °C; 8,3 ... 10 ms	2500 1800	6600 5000		A <sup>2</sup> s A <sup>2</sup> s
Q <sub>rr</sub>	T <sub>vj</sub> = 160 °C; – di <sub>F</sub> /dt = 10 A/μs	typ. 70	typ. 70		μC
I <sub>R</sub>	T <sub>vj</sub> = 25 °C; V <sub>R</sub> = V <sub>RRM</sub> T <sub>vj</sub> = 180 °C; V <sub>R</sub> = V <sub>RRM</sub>	0,6 10	0,6 10		mA mA
V <sub>F</sub>	T <sub>vj</sub> = 25 °C; (I <sub>F</sub> = ...); max.	1,6 (150)	1,5 (200)		V (A)
V <sub>(TO)</sub>	T <sub>vj</sub> = 180 °C	0,85	0,85		V
r <sub>T</sub>	T <sub>vj</sub> = 180 °C	5	3		mΩ
R <sub>thjc</sub> R <sub>thch</sub>		0,85 0,25	0,55 0,2		°C/W °C/W
T <sub>vj</sub> T <sub>stg</sub>			– 40 ... + 180 – 55 ... + 180		°C °C
M	M8                      SI units US units 1/4-28 UNF 2A        SI units US units		4 35 2,5 22		Nm lb.in. Nm lb.in.
a			5 · 9,81		m/s <sup>2</sup>
w	approx.		30		g
RC	(P <sub>R</sub> = ...)	0,1 (1 W)	0,1 (2 W)		μF
R <sub>p</sub>	P <sub>R</sub> = 6 W	100 80	100 80		Ω kΩ
Case		E 12	E 12	E 11	

### Features

- Reverse voltages up to 1600 V
- Hermetic metal cases with glass insulators
- Threaded studs ISO M8 (SKN/R 71 also 1/4 – 28 UNF)
- **SKN**: anode to stud  
**SKR**: cathode to stud

### Typical Applications

- All-purpose mean power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes

\* available with UNF thread  
1/4–28 UNF 2 A;  
e.g. SKN 71/12 UNF

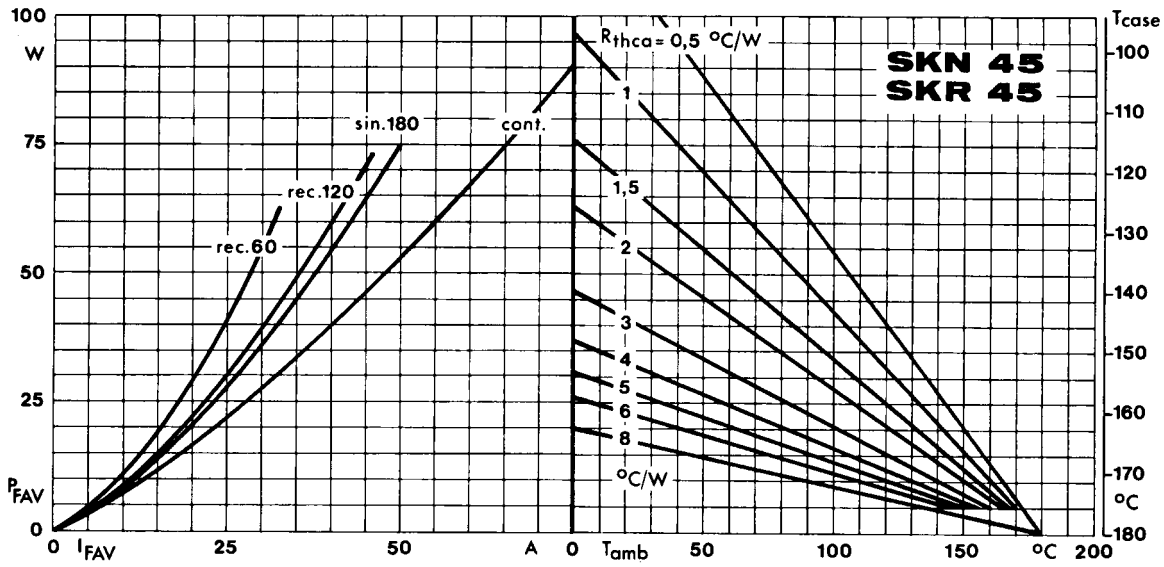


Fig. 1 a Power dissipation vs. forward current and case temperature

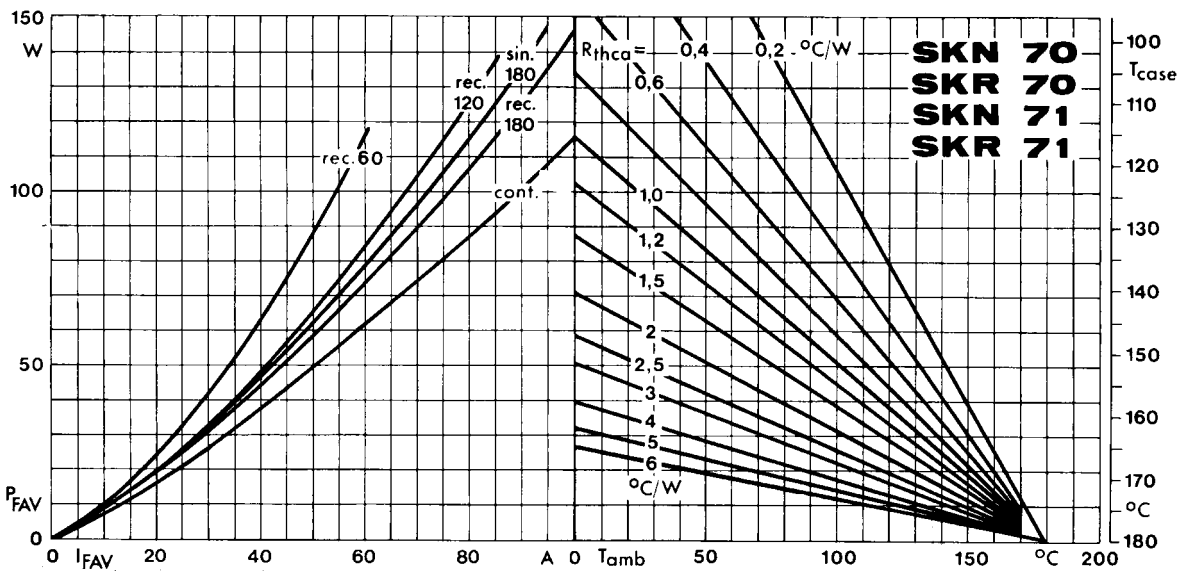


Fig. 1 b Power dissipation vs. forward current and case temperature

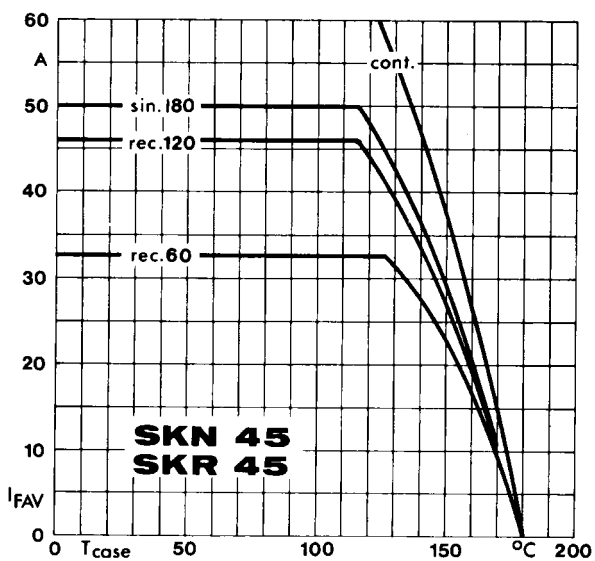


Fig. 3 a Rated forward current vs. case temperature

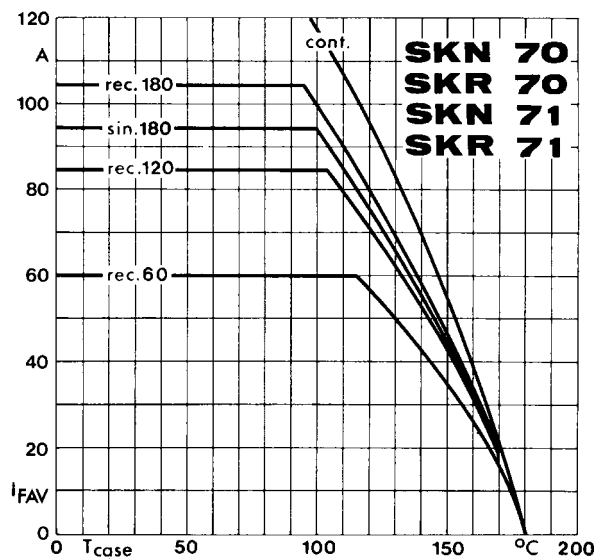


Fig. 3 b Rated forward current vs. case temperature

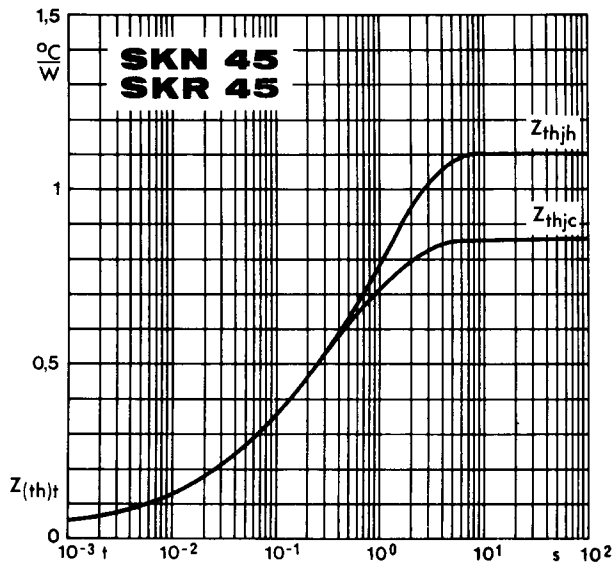


Fig. 5 a Transient thermal impedance vs. time

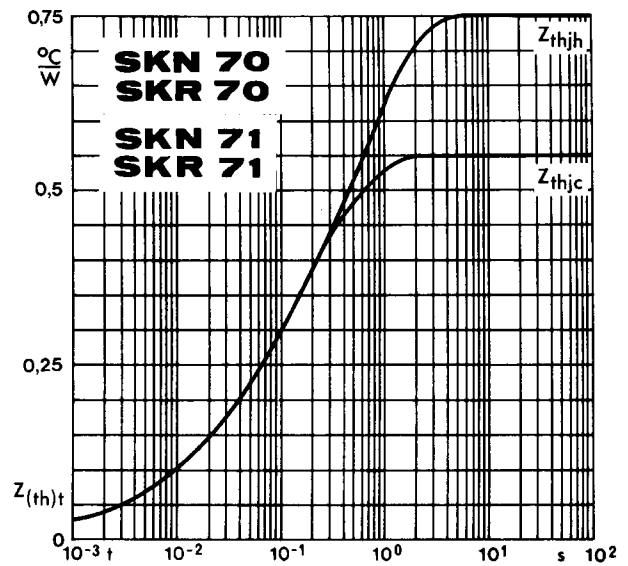


Fig. 5 b Transient thermal impedance vs. time

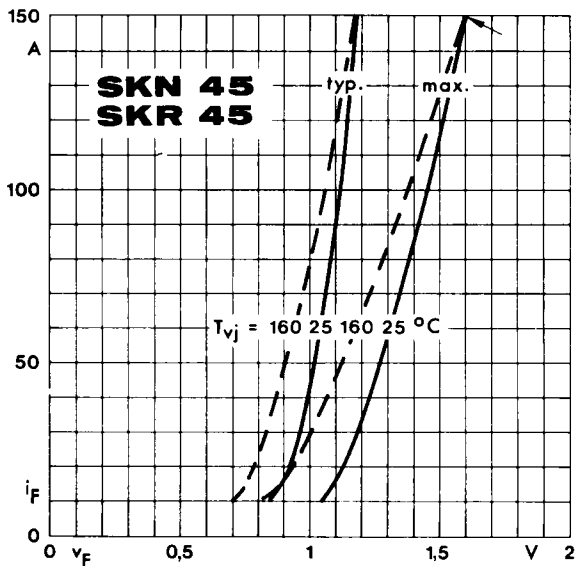


Fig. 6 a Forward characteristics

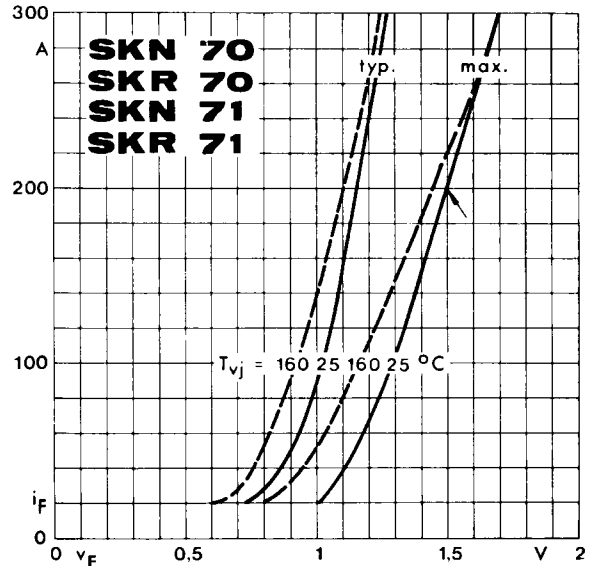


Fig. 6 b Forward characteristics

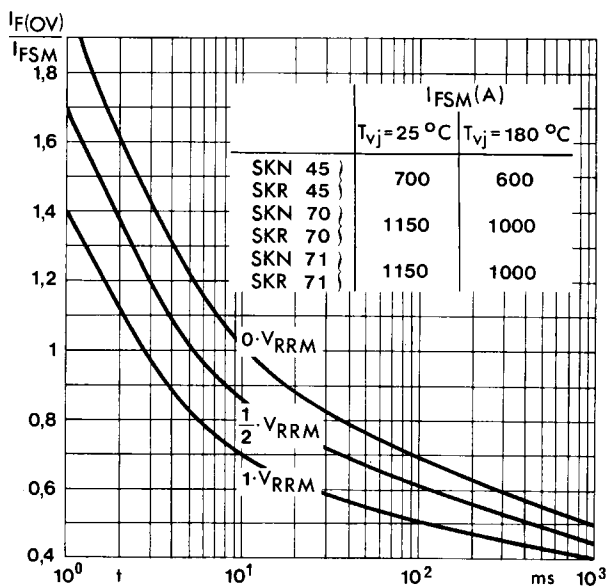
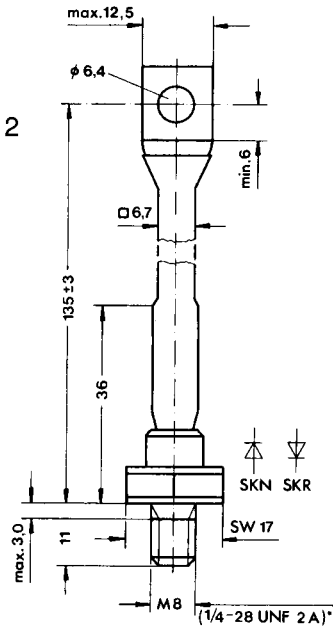


Fig. 7 Surge overload current vs. time

**SKN 45, SKR 45  
SKN 70, SKR 70**

Case E 12

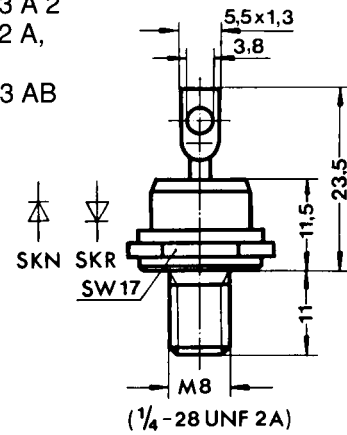
IEC: A 16 U; A 17 M B 2  
DIN 41 886: 103 A 2  
BS 3934: SO-32 A,  
SO-32 B



**SKN 71  
SKR 71**

Case E 11

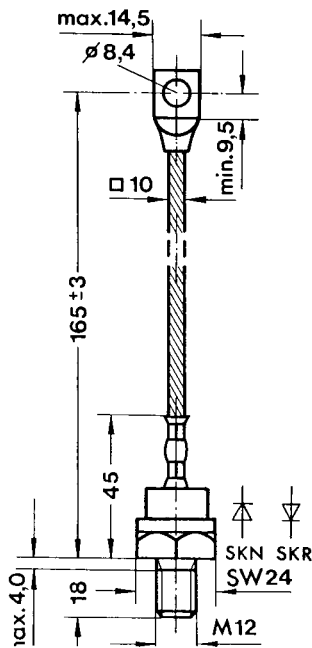
IEC: A 16 U; A 17 M B 2  
DIN 41 886: 103 A 2  
BS 3934: SO-32 A,  
SO-32 B  
JEDEC: DO-203 AB  
(DO-5)



**SKN 100  
SKR 100**

Case E 13

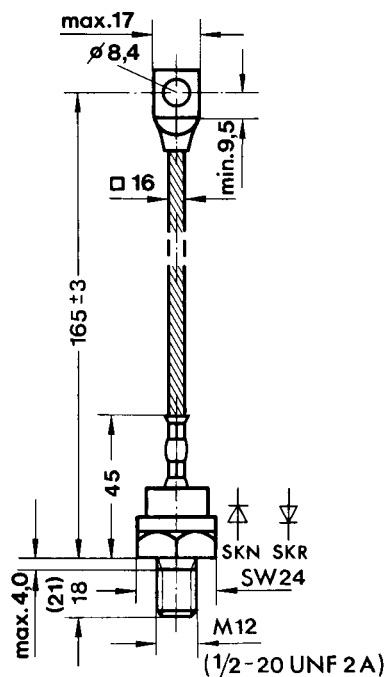
IEC: A 9 MA<sup>1)</sup>  
DIN 41 887: 105 B 2<sup>1)</sup>  
BS 3934: SO-29 B  
JEDEC: DO-205 AC



**SKN 130  
SKR 130**

Case E 14

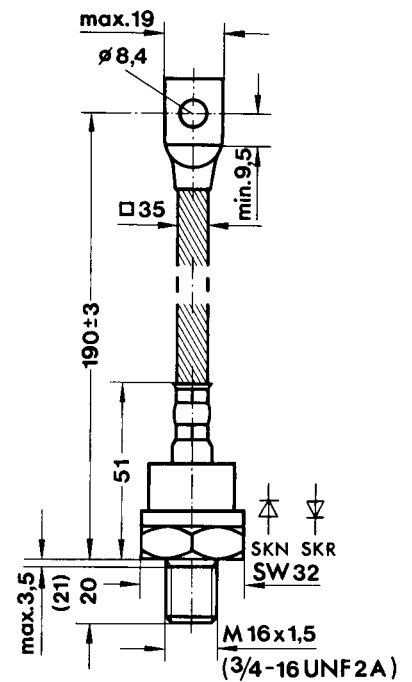
IEC: A 9 MA<sup>1)</sup>  
DIN 41 887: 105 B 2<sup>1)</sup>  
BS 3934: SO-29 B  
JEDEC: DO-205 AC  
(DO-30)<sup>2)</sup>



**SKN 240  
SKR 240**

Case E 15

IEC: A 15 M  
DIN 41 887: 106 B 2  
BS 3934: SO-42  
JEDEC: DO-205 AB  
(DO-9)



<sup>1)</sup> modified

<sup>2)</sup> available with thread 1/2-20 UNF 2 A or 3/8-28 UNF 2 A

Dimensions in mm