

## 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 operation)					
	80 A			150 A		
	I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = . . .)					
V	50 A (118 °C)		95 A (100 °C)			
	$\triangleleft$	$\nabla$	$\triangleleft$	$\nabla$	$\triangleleft$	$\nabla$
200	SKN45/02	SKR45/02	SKN70/02	SKR70/02	SKN71/02*	SKR71/02*
400	SKN45/04	SKR45/04	SKN70/04	SKR70/04	SKN71/04*	SKR71/04*
800	SKN45/08	SKR45/08	SKN70/08	SKR70/08	SKN71/08*	SKR71/08*
1200	SKN45/12	SKR45/12	SKN70/12	SKR70/12	SKN71/12*	SKR71/12*
1400	SKN45/14	SKR45/14	SKN70/14	SKR70/14	SKN71/14	SKR71/14*
1600	SKN45/16	SKR45/16	SKN70/16	SKR70/16	SKN71/16*	SKR71/16*

Symbol	Conditions	SKN 45 SKR 45	SKN 70 SKR 70	SKN 71 SKR 71
I <sub>FAV</sub>	sin. 180; T <sub>case</sub> = 100 °C = 118 °C = 125 °C	50 A 45 A	95 A 70 A	
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms T <sub>vj</sub> = 180 °C; 10 ms	700 A 600 A	1150 A 1000 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 A <sup>2</sup> s 1800 A <sup>2</sup> s	6600 A <sup>2</sup> s 5000 A <sup>2</sup> s	
Q <sub>rr</sub>	T <sub>vj</sub> = 160 °C; - $\frac{di_F}{dt} = 10 \frac{A}{\mu s}$	typ. 70 μC	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 mA 10 mA	0,6 mA 10 mA	
V <sub>F</sub>	T <sub>vj</sub> = 25 °C; (I <sub>F</sub> = . . .); max.	1,6 V (150 A)	1,5 V (200 A)	
V <sub>(TO)</sub>	T <sub>vj</sub> = 180 °C	0,85 V	0,85 V	
r <sub>T</sub>	T <sub>vj</sub> = 180 °C	5 mΩ	3 mΩ	
R <sub>thjc</sub>		0,85 °C/W	0,55 °C/W	
R <sub>thch</sub>		0,25 °C/W	0,2 °C/W	
T <sub>vj</sub>		- 40 ... + 180 °C		
T <sub>stg</sub>		- 55 ... + 180 °C		
M	M 8                      SI units/ 1/4-28 UNF 2 A      US units	4 Nm/35 lb. in. 2,5 Nm/22 lb. in. 5 · 9,81 m/s <sup>2</sup>		
a				
w	approx.	30 g		
RC	(P <sub>R</sub> = . . .)	0,1 μ + 100 Ω (1 W)	0,1 μF + 100 Ω (2 W)	
R <sub>p</sub>	P <sub>R</sub> = 6 W	80 kΩ	80 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 71/02 UNF

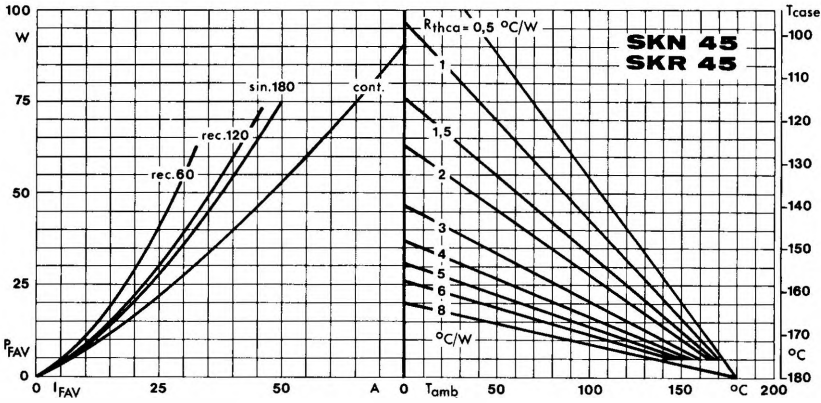


Fig. 1 a Power dissipation vs. forward current and case temperature

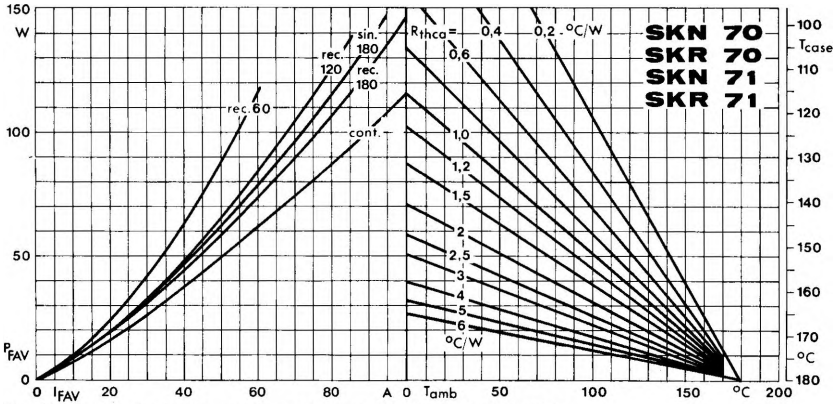


Fig. 1 b Power dissipation vs. forward current and case temperature

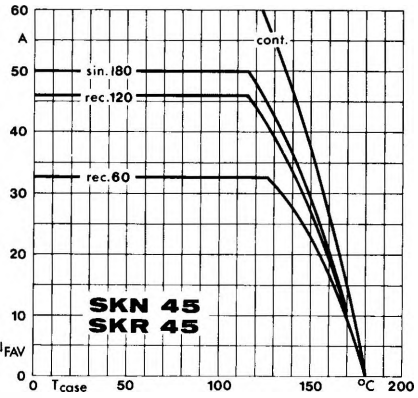


Fig. 3 a Rated forward current vs. case temperature

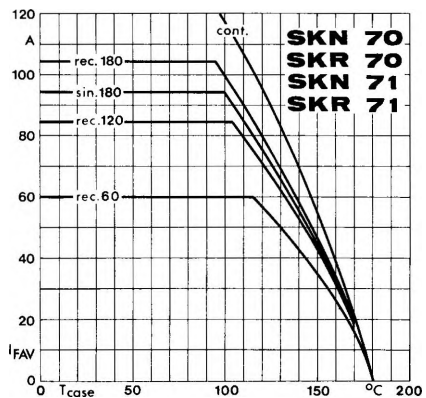


Fig. 3 b Rated forward current vs. case temperature

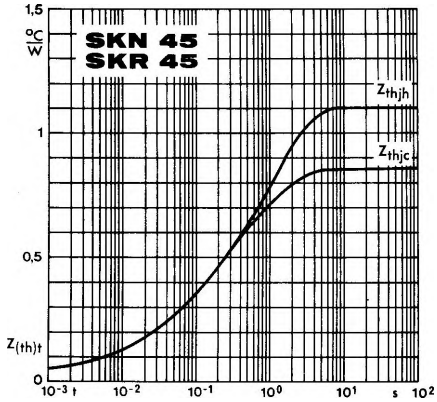


Fig. 5 a Transient thermal impedance vs. time

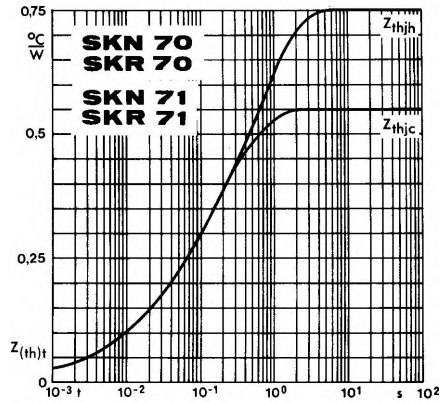


Fig. 5 b Transient thermal impedance vs. time

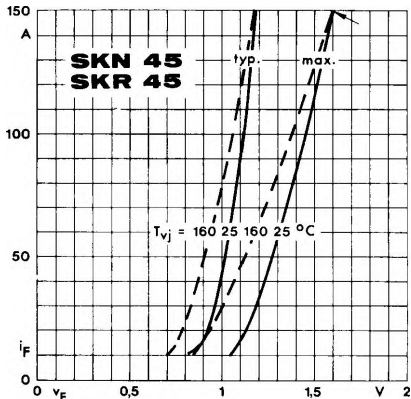


Fig. 6 a Forward characteristics

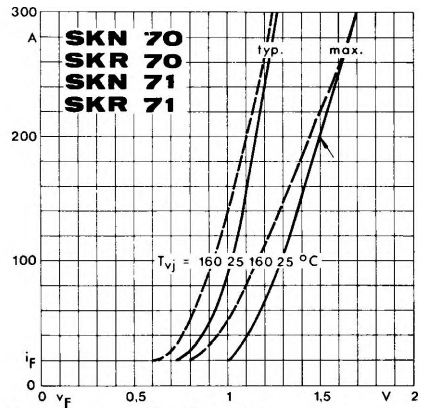


Fig. 6 b Forward characteristics

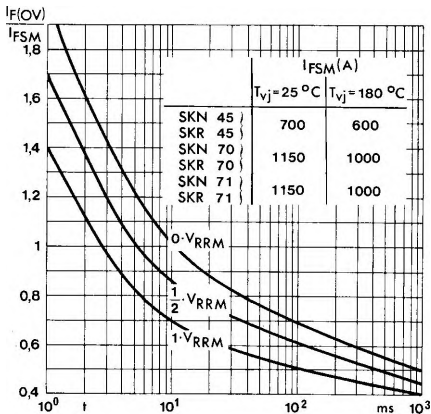
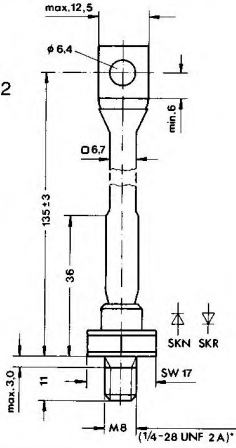


Fig. 7 Surge overload current vs. time

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

Case E 12

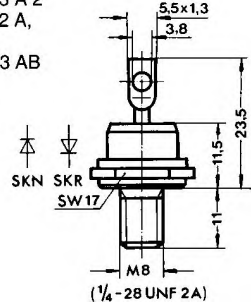
IEC: A 16 U; A 17 M B 2  
DIN 41 886: 103 A 2  
BS 3934: SO-32 A,  
SO-32 B



**SKN 71**  
**SKR 71**

Case E 11

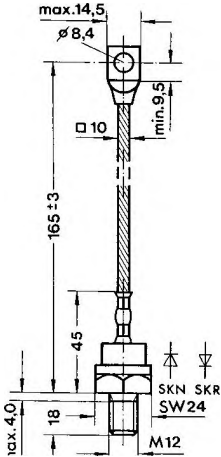
IEC: A 16 U; A 17 M B 2  
DIN 41 886: 103 A 2  
BS 3934: SO-32 A,  
SO-32 B  
JEDEC: DO-203 AB  
(DO-5)



**SKN 100**  
**SKR 100**

Case E 13

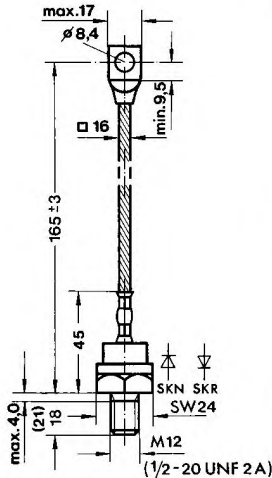
IEC: A 9 MA<sup>1)</sup>  
DIN 41 887: 105 B 2<sup>1)</sup>  
BS 3934: SO-29 B  
JEDEC: DO-205 AC



**SKN 130**  
**SKR 130**

Case E 14

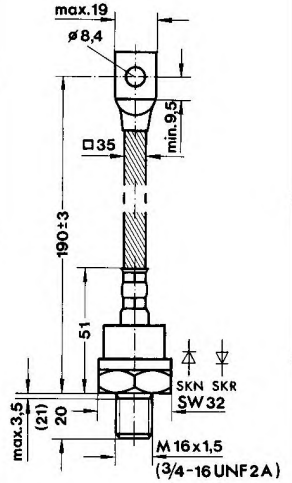
IEC: A 9 MA<sup>1)</sup>  
DIN 41 887: 105 B 2<sup>1)</sup>  
BS 3934: SO-29 B  
JEDEC: DO-205 AC  
(DO-30)<sup>2)</sup>



**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