

Rectifier Diodes

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



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

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

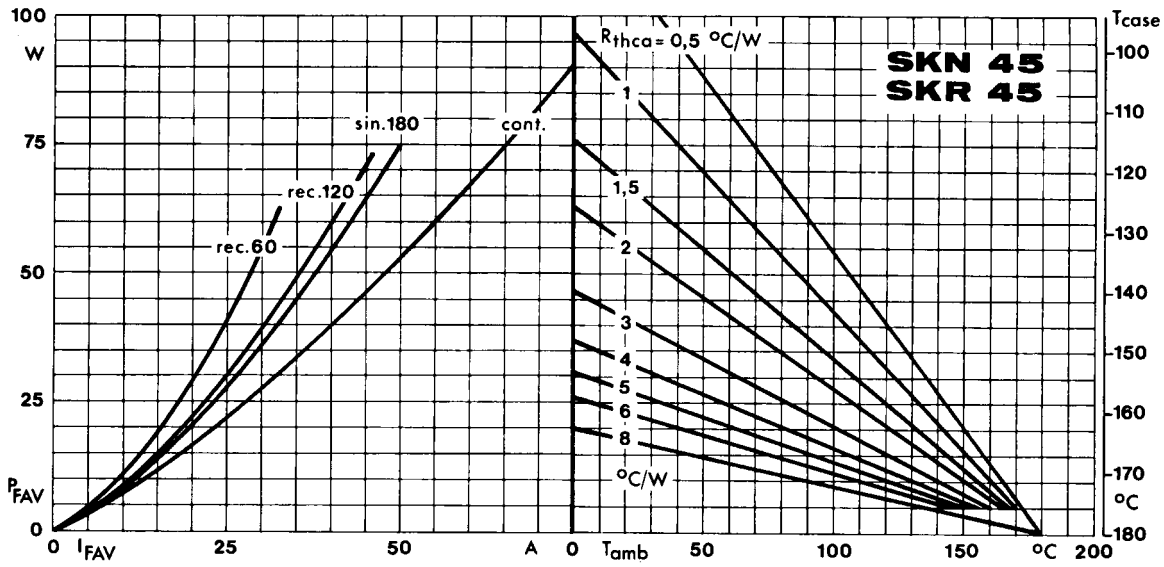


Fig. 1 a Power dissipation vs. forward current and case temperature

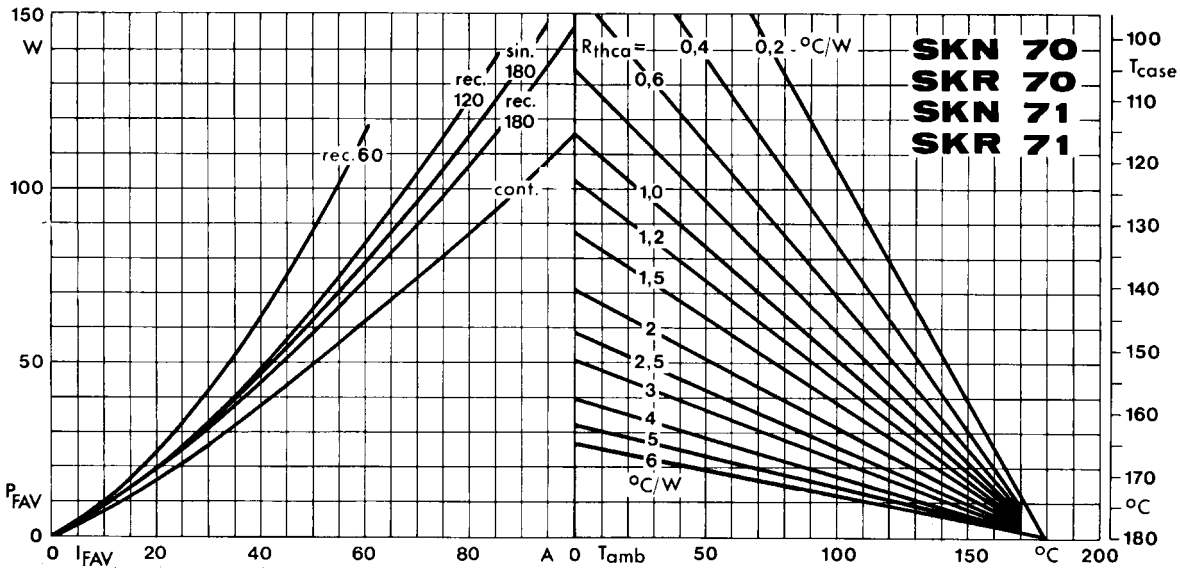


Fig. 1 b Power dissipation vs. forward current and case temperature

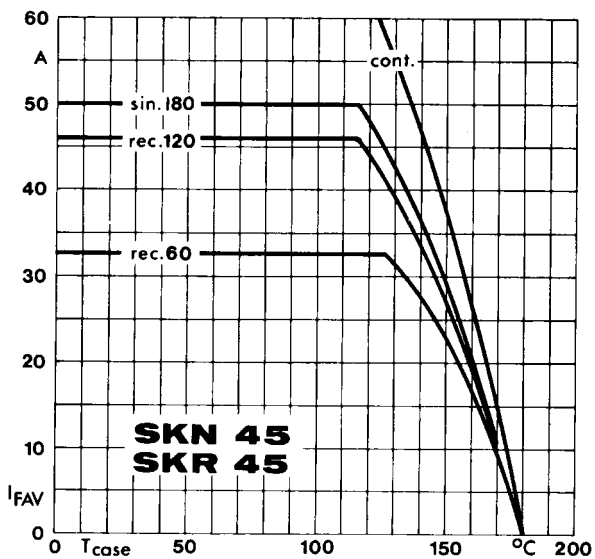


Fig. 3 a Rated forward current vs. case temperature

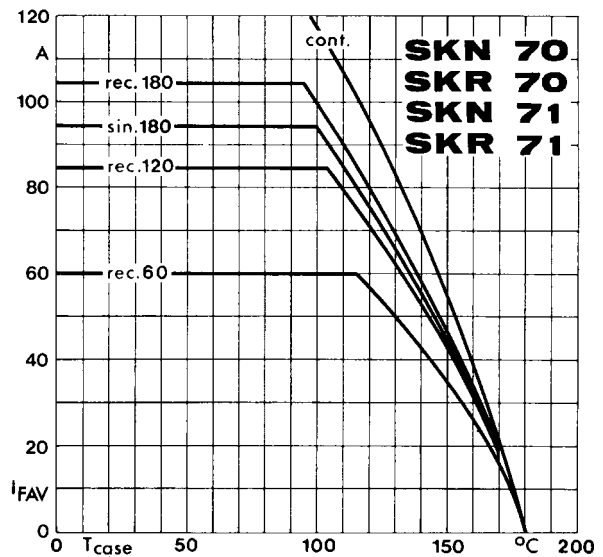


Fig. 3 b Rated forward current vs. case temperature

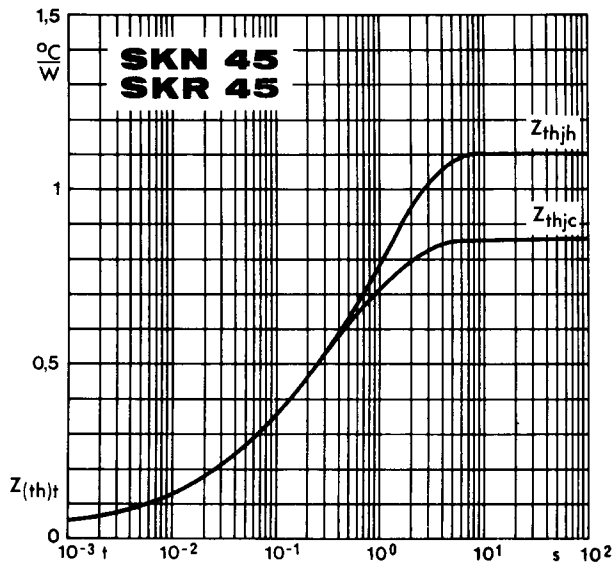


Fig. 5 a Transient thermal impedance vs. time

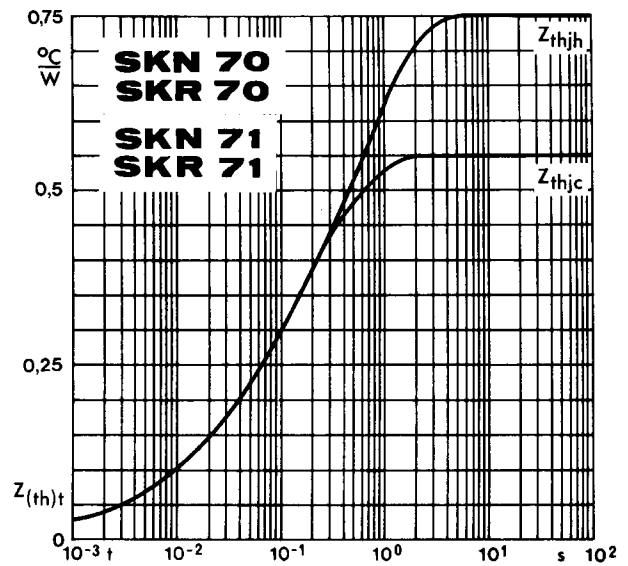


Fig. 5 b Transient thermal impedance vs. time

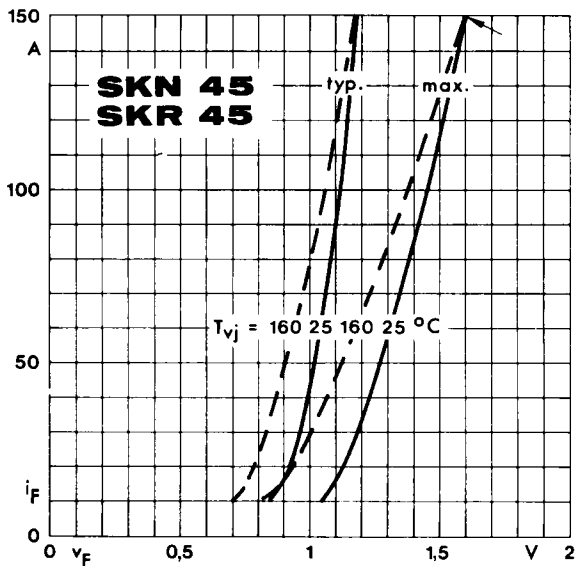


Fig. 6 a Forward characteristics

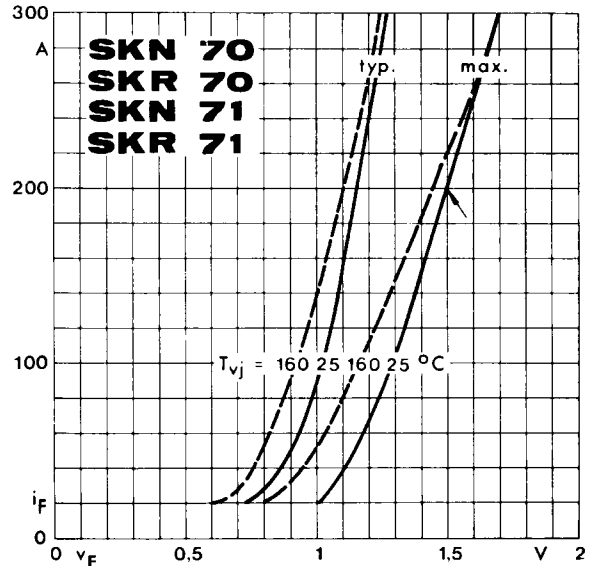


Fig. 6 b Forward characteristics

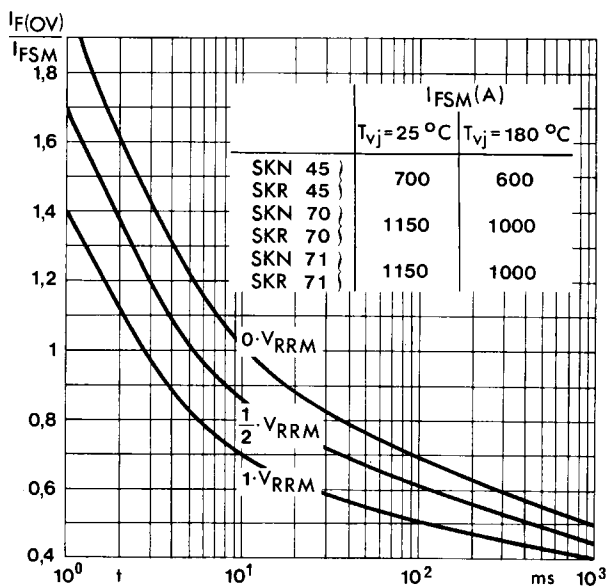
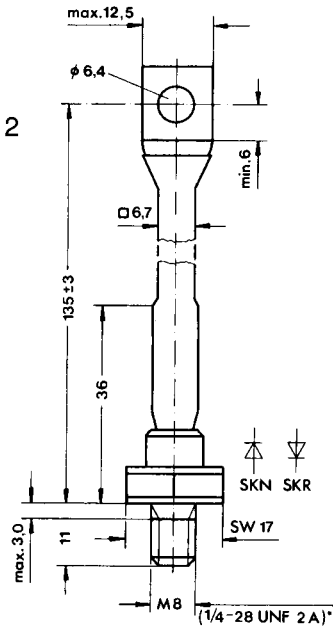


Fig. 7 Surge overload current vs. time

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

Case E 12

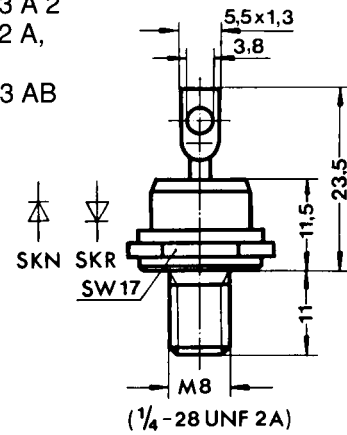
IEC: A 16 U; A 17 M B 2
DIN 41 886: 103 A 2
BS 3934: SO-32 A,
SO-32 B



**SKN 71
SKR 71**

Case E 11

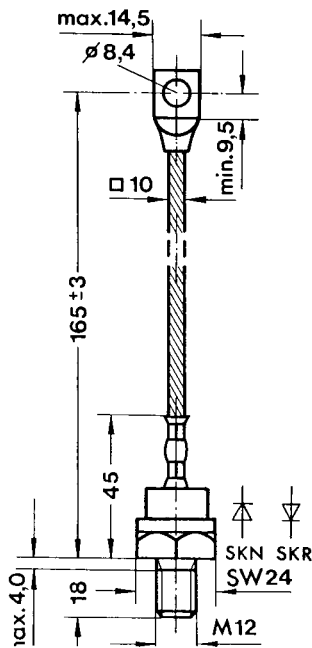
IEC: A 16 U; A 17 M B 2
DIN 41 886: 103 A 2
BS 3934: SO-32 A,
SO-32 B
JEDEC: DO-203 AB
(DO-5)



**SKN 100
SKR 100**

Case E 13

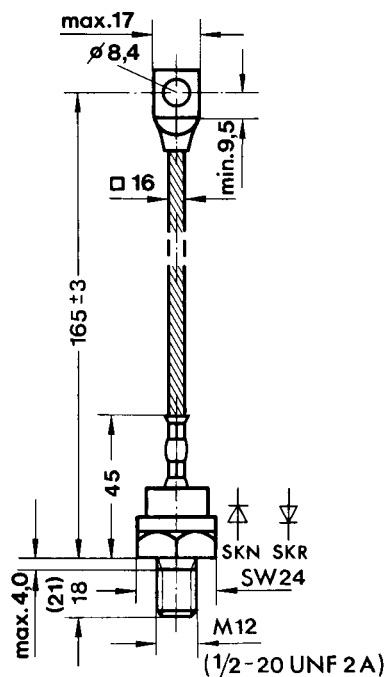
IEC: A 9 MA¹⁾
DIN 41 887: 105 B 2¹⁾
BS 3934: SO-29 B
JEDEC: DO-205 AC



**SKN 130
SKR 130**

Case E 14

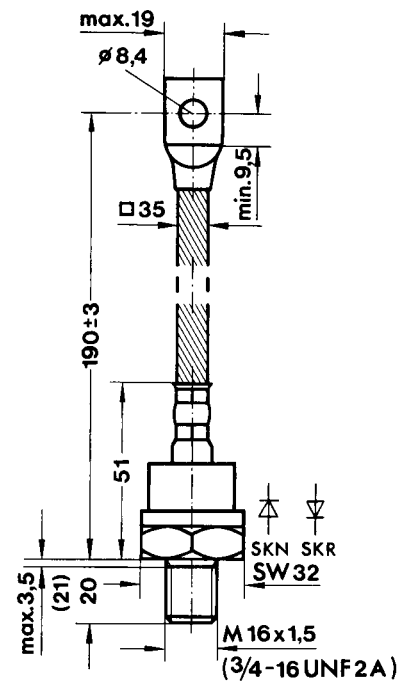
IEC: A 9 MA¹⁾
DIN 41 887: 105 B 2¹⁾
BS 3934: SO-29 B
JEDEC: DO-205 AC
(DO-30)²⁾



**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)



¹⁾ modified

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

Dimensions in mm