

Rectifier Diodes

SKN 100 **SKR 100**
SKN 130 **SKR 130**
SKN 240 **SKR 240**

V _{RSM} V _{RRM}	I _{FRMS} (maximum values for continuous operation)					
	200 A		260 A		500 A	
V	I _{FAV} (sin. 180; T _{case} = 100 °C)					
	125 A		165 A		320 A	
	⚡	⚡	⚡	⚡	⚡	⚡
200	SKN 100/02	SKR 100/02	SKN 130/02	SKR 130/02*	SKN 240/02	SKR 240/02*
400	100/04	100/04	130/04	130/04*	240/04	240/04*
800	100/08	100/08	130/08	130/08*	240/08	240/08*
1200	100/12	100/12	130/12	130/12*	240/12	240/12*
1400	100/14	100/14	130/14	130/14*	240/14	240/14*
1600	100/16	100/16	130/16	130/16*	240/16	240/16*
1800	100/18♦	100/18♦	130/18♦	130/18♦	240/18♦	240/18♦

Symbol	Conditions	SKN 100 SKR 100	SKN 130 SKR 130	SKN 240 SKR 240
I _{FAV}	sin. 180; T _{case} = 100 °C = 125 °C	125 A 100 A	165 A 130 A	320 A 240 A
I _{FSM}	T _{vj} = 25 °C; 10 ms T _{vj} = 180 °C; 10 ms	1 750 A 1 500 A	2 500 A 2 000 A	6 000 A 5 000 A
i ² t	T _{vj} = 25 °C 8,3... T _{vj} = 180 °C 10 ms	15 000 A ² s 11 500 A ² s	31 000 A ² s 20 000 A ² s	180 000 A ² s 125 000 A ² s
Q _{rr}	T _{vj} = 160 °C; - $\frac{di_F}{dt} = 10 \frac{A}{\mu s}$	typ. 100 μC	typ. 120 μC	typ. 200 μC
I _R	T _{vj} = 25 °C; V _R = V _{RRM} T _{vj} = 180 °C; V _R = V _{RRM}	1 mA 15 mA	1 mA 22 mA	2 mA 60 mA
V _F	T _{vj} = 25 °C; (I _F = ...); max.	1,55V (400A)	1,5V (500A)	1,4V (750A)
V _(TO)	T _{vj} = 180 °C	0,85 V	0,85 V	0,85 V
r _T	T _{vj} = 180 °C	1,8 mΩ	1,3 mΩ	0,6 mΩ
R _{thjc} R _{thch} T _{vj} T _{stg}		0,45 °C/W 0,08 °C/W	0,35 °C/W 0,08 °C/W	0,20 °C/W 0,03 °C/W
M a w	SI units/US units approx.	10Nm/90lb.in. 5 · 9,81 m/s ² 100 g	10Nm/90lb.in. 5 · 9,81 m/s ² 100 g	30Nm/270lb.in. 5 · 9,81 m/s ² 250 g
RC R _p	P _R = 2 W P _R = 20 W	0,25μF + 50Ω 50 kΩ	0,25μF + 50Ω 50 kΩ	0,5μF + 30Ω 50 kΩ
Case		E 13	E 14	E 15



Features

- Reverse voltages up to 1600 V
- Hermetic metal cases with glass insulators
- Threaded studs ISO M 12, M16 x 1,5 (SKR 130 also 1/2–20 UNF or 3/8–24 UNF, SKR 240 also 3/4–16 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 in limited quantities
- * available with UNF threads: 3/8–24 UNF 2 A (e.g. SKR130/02 UNF 3/8) or 1/2–20 UNF 2 A (e.g. SKR 130/02 UNF), SKR 240/02 UNF with 3/4–16 UNF 2 A thread

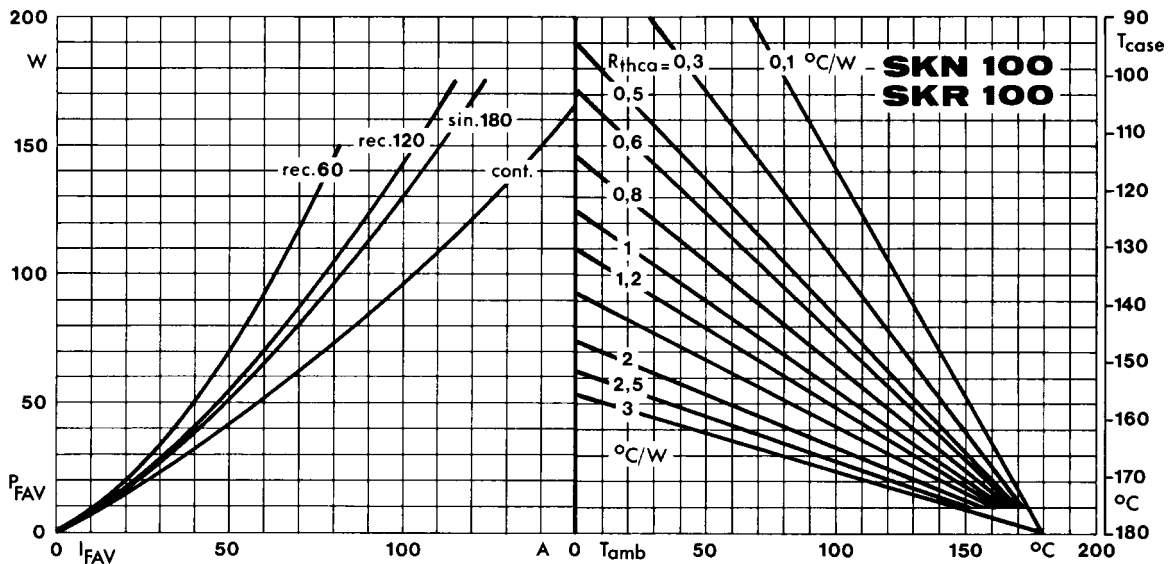


Fig. 1 a Power dissipation vs. forward current and case temperature

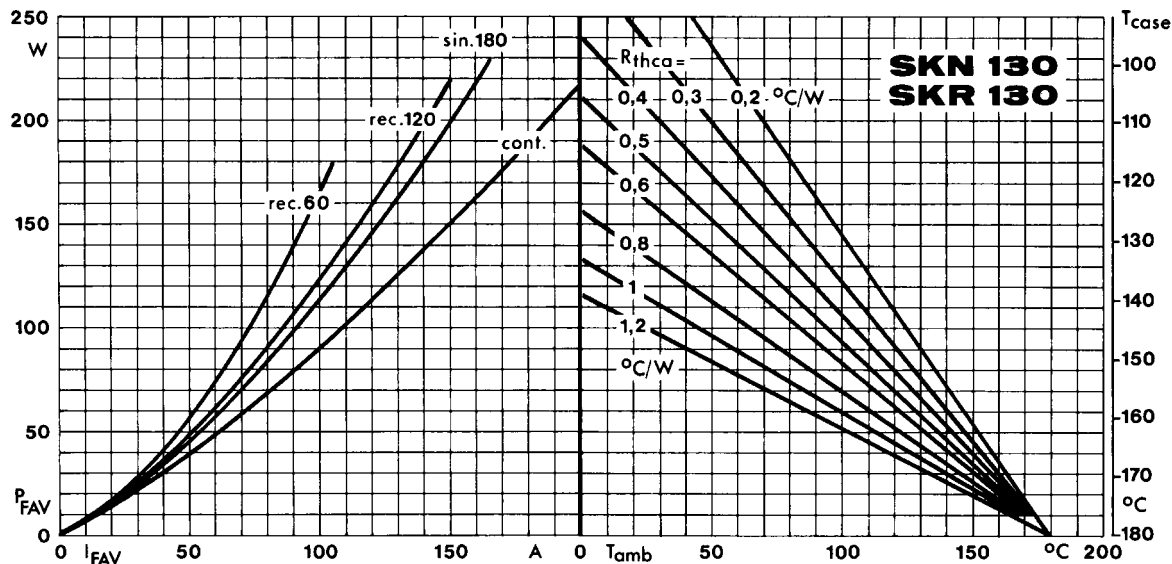


Fig. 1 b Power dissipation vs. forward current and case temperature

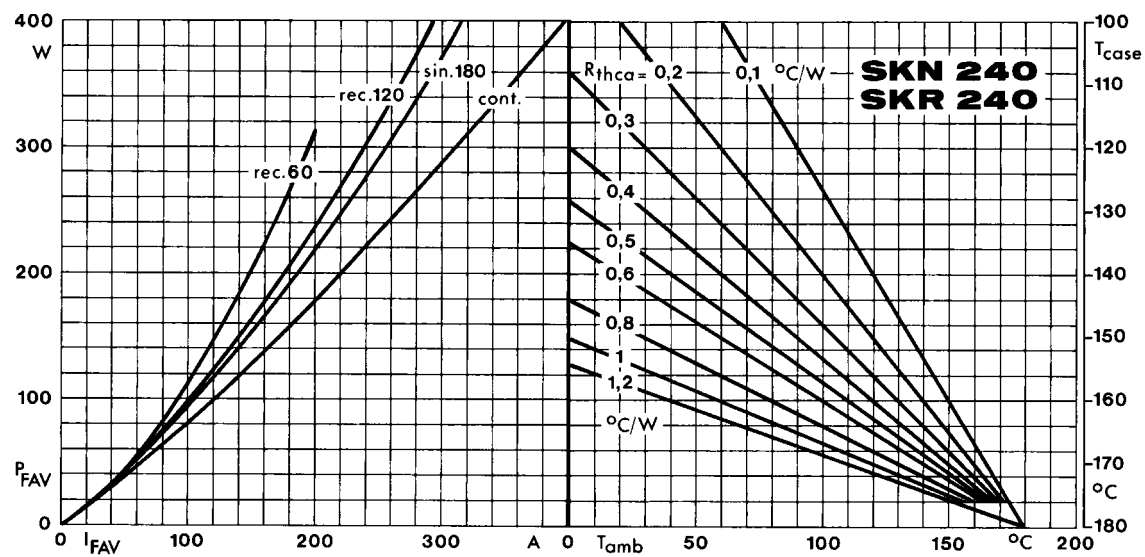


Fig. 1 c Power dissipation vs. forward current and case temperature

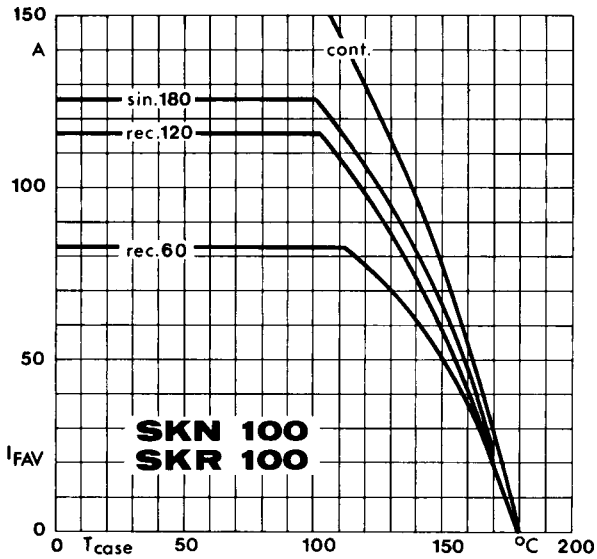


Fig. 3 a Rated forward current vs. case temperature

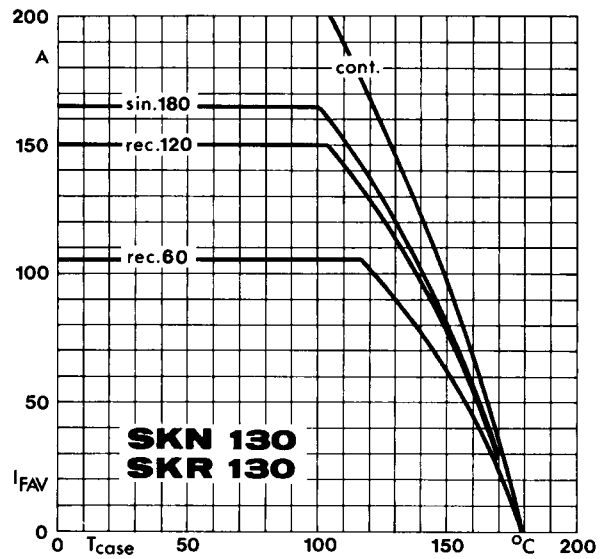


Fig. 3 b Rated forward current vs. case temperature

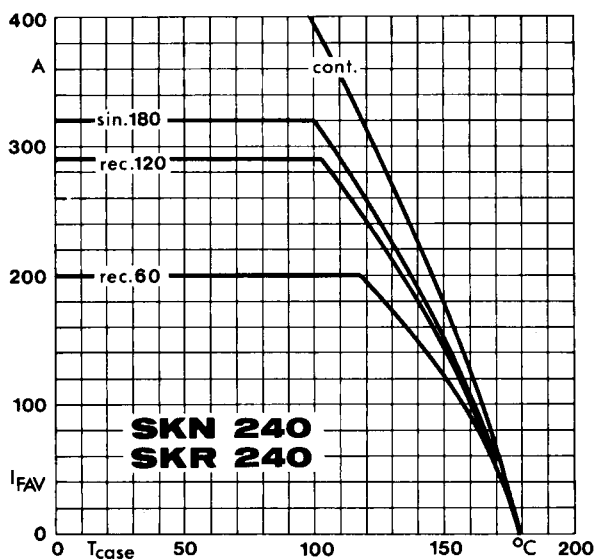


Fig. 3 c Rated forward current vs. case temperature

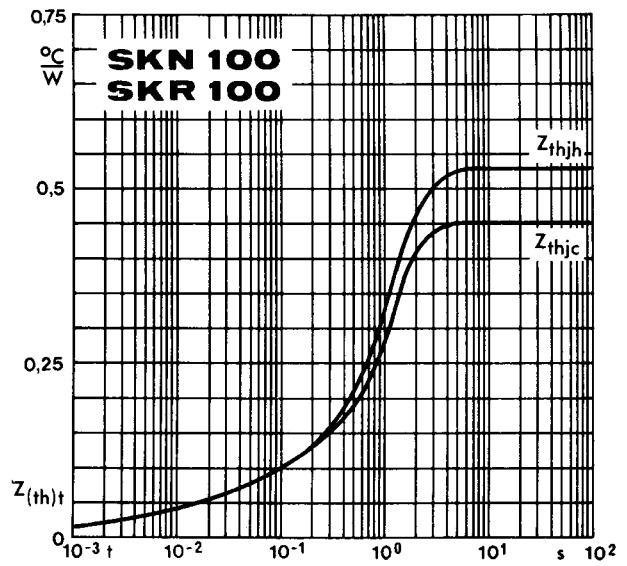


Fig. 5 a Transient thermal impedance vs. time

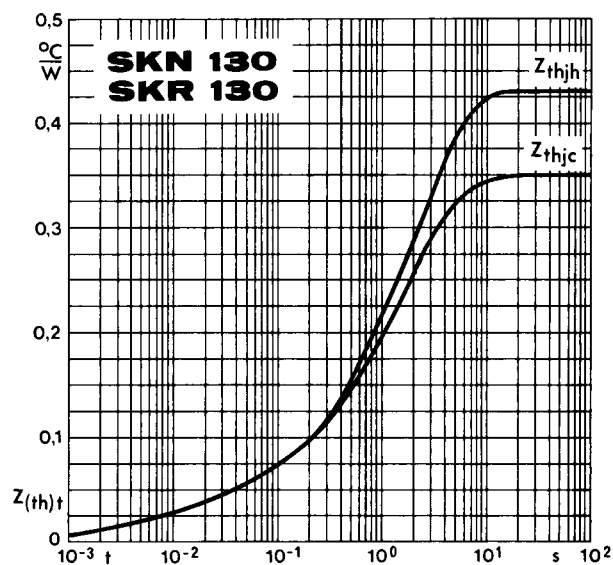


Fig. 5 b Transient thermal impedance vs. time

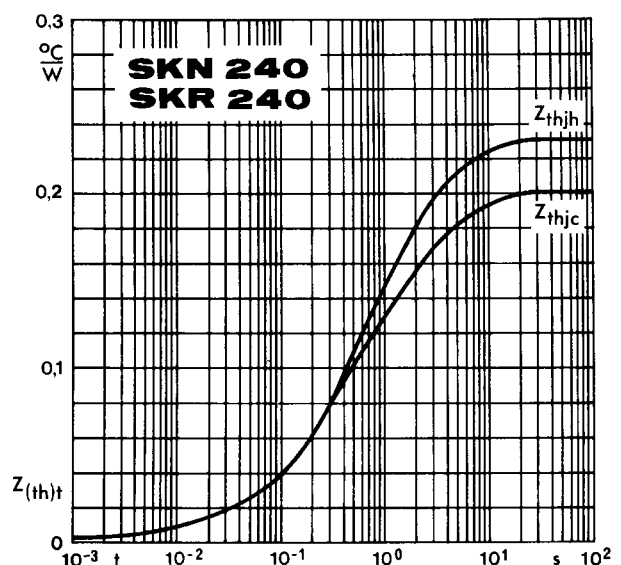


Fig. 5 c Transient thermal impedance vs. time

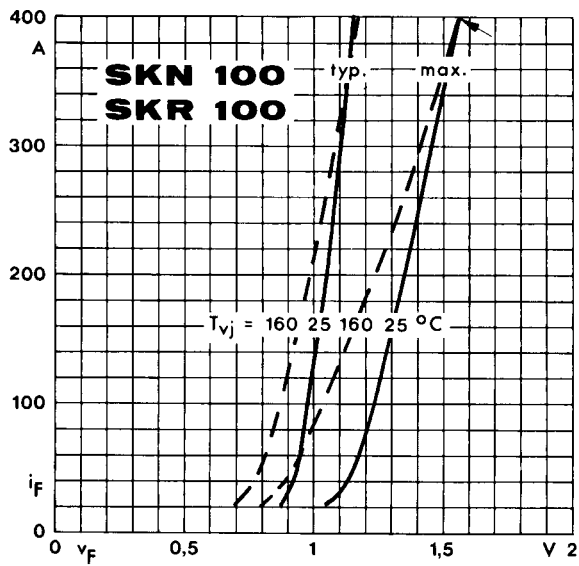


Fig. 6 a Forward characteristics

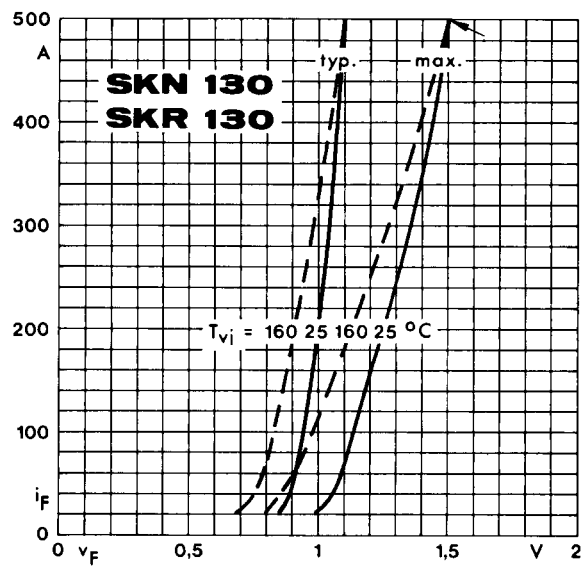


Fig. 6 b Forward characteristics

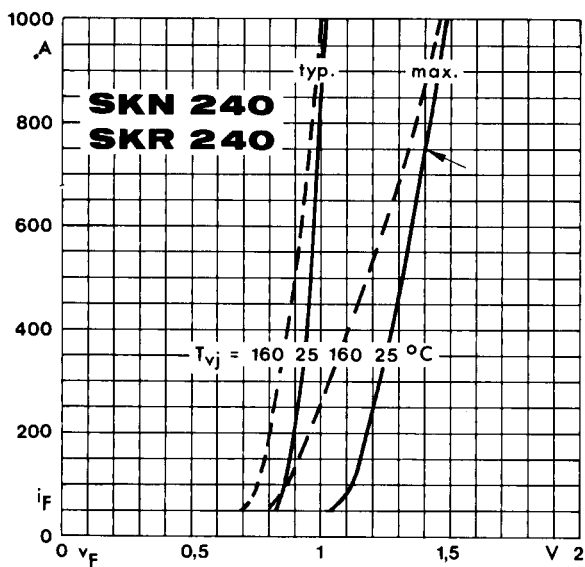


Fig. 6 c Forward characteristics

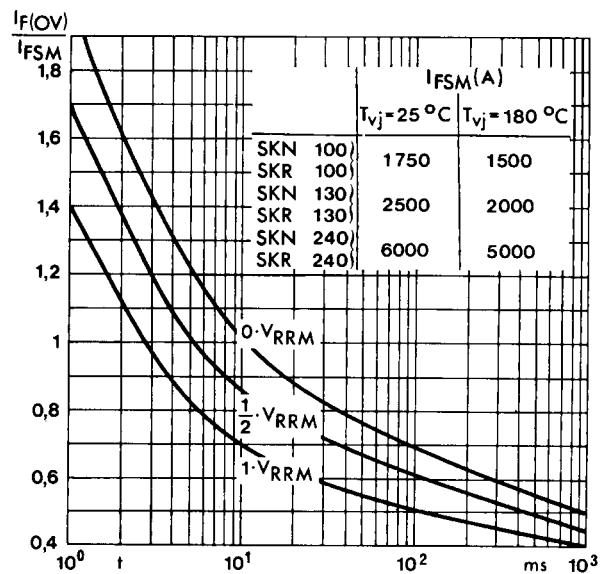
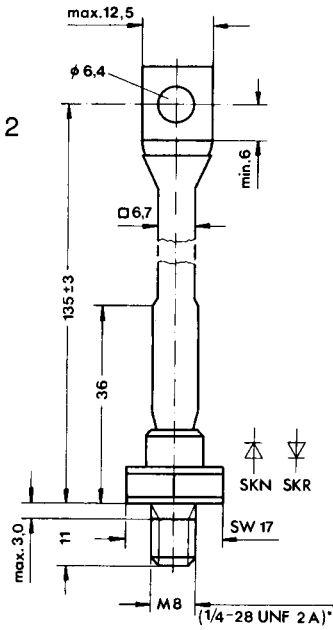


Fig. 7 Surge overload current vs. time

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

Case E 12

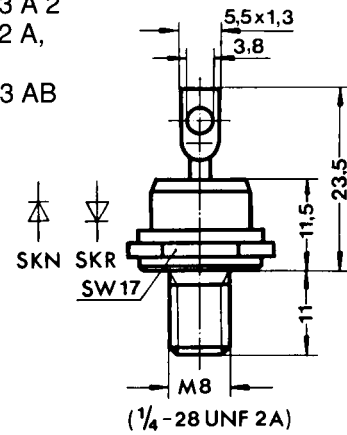
IEC: A 16 U; A 17 M B 2
DIN 41 886: 103 A 2
BS 3934: SO-32 A,
SO-32 B



**SKN 71
SKR 71**

Case E 11

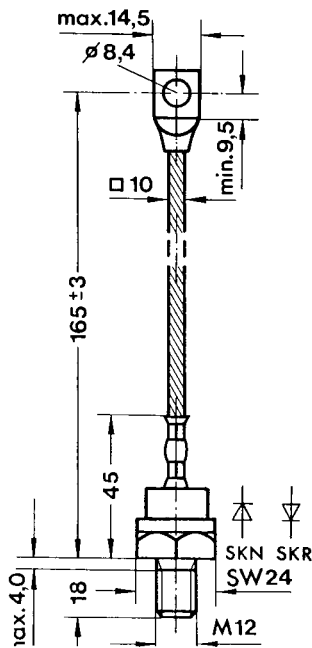
IEC: A 16 U; A 17 M B 2
DIN 41 886: 103 A 2
BS 3934: SO-32 A,
SO-32 B
JEDEC: DO-203 AB
(DO-5)



**SKN 100
SKR 100**

Case E 13

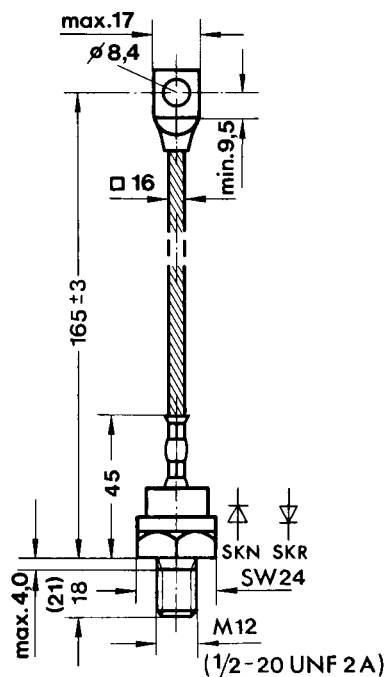
IEC: A 9 MA¹⁾
DIN 41 887: 105 B 2¹⁾
BS 3934: SO-29 B
JEDEC: DO-205 AC



**SKN 130
SKR 130**

Case E 14

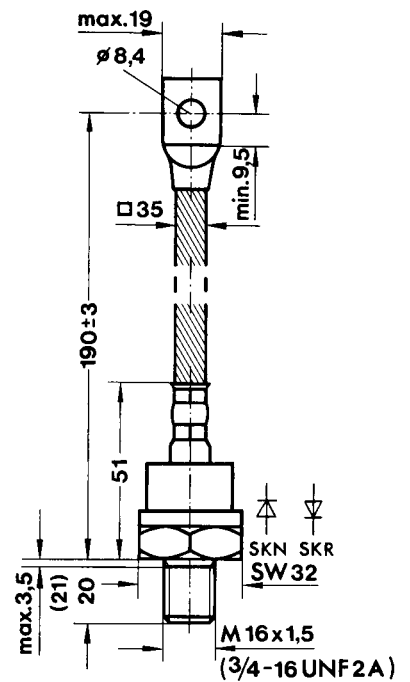
IEC: A 9 MA¹⁾
DIN 41 887: 105 B 2¹⁾
BS 3934: SO-29 B
JEDEC: DO-205 AC
(DO-30)²⁾



**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