Fast Recovery Rectifier Diodes

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

V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operation) 41 A			
	I_{FAV} (sin. 180; T_{case} = 85 °C) 26 A			
	t_{rr} = 150 ns		t_{rr} = 250 ns	
V				
400	**SKN 2F17/04** **SKN 2F17/04UNF**	**SKR 2F17/04** **SKR 2F17/04UNF**	– –	– –
600	**SKN 2F17/06** **SKN 2F17/06UNF**	**SKR 2F17/06** **SKR 2F17/06UNF**		
800	**SKN 2F17/08** **SKN 2F17/08UNF**	**SKR 2F17/08** **SKR 2F17/08UNF**	**SKN 3F20/08** **SKN 3F20/08UNF**	**SKR 3F20/08** **SKR 3F20/08UNF**
1000	**SKN 2F17/10** **SKN 2F17/10UNF**	**SKR 2F17/10** **SKR 2F17/10UNF**	**SKN 3F20/10** **SKN 3F20/10UNF**	**SKR 3F20/10** **SKR 3F20/10UNF**
1200	– –	– –	**SKN 3F20/12** **SKN 3F20/12UNF**	**SKR 3F20/12** **SKR 3F20/12UNF**

Symbol	**Conditions**	**SKN 2 F 17 SKR 2 F 17**	**SKN 3 F 20 SKR 3 F 20**	**Units**
I_{FAV}	sin.180; T_{case} = 85 °C; f=5000 Hz	26	26	A
	= 104 °C	–	20	A
	= 113 °C	17	–	A
	sin.180/rec.120; T_{amb} = 5 °C; K9	6,7 /6,5		A
	K5	10/9,5		A
I_{FSM}	T_{vj} = 25 °C; 10 ms	450	375	A
	T_{vj} = 150 °C; 10 ms	380	310	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	1000	700	A^2s
	T_{vj} = 150 °C; 8,3 ... 10 ms	720	480	A^2s
Q_{rr}	T_{vj} = 130 °C; I_F = 50 A;	1,0	1,5	µC
I_{RM}	$-\frac{di_F}{dt} = 15\frac{A}{\mu s}$; $V_R = 30V$	4,5	5	A
I_R	T_{vj} = 25 °C; $V_R = V_{RRM}$	max. 0,2	max. 0,2	mA
	T_{vj} = 130 °C; $V_R = V_{RRM}$	max. 16	max. 20	mA
t_{rr}	T_{vj} = 25 °C; $I_F = I_R$ = 1 A	max. 150	max. 250	ns
	T_{vj} = 130 °C; $I_F = I_R$ = 1 A	typ. 300	typ. 500	ns
V_F	T_{vj} = 25 °C; I_F = 50 A	max. 2,15		V
$V_{(TO)}$	T_{vj} = 130 °C	1,3		V
r_T	T_{vj} = 130 °C	12		mΩ
R_{thjc}		1,2		°C/W
R_{thch}		0,5		°C/W
T_{vj}		– 40 . . . + 150		°C
T_{stg}		– 55 . . . + 150		°C
M	SI units	1,5		Nm
	US units	13		lb.in.
a		5 · 9,81		m/s^2
w		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

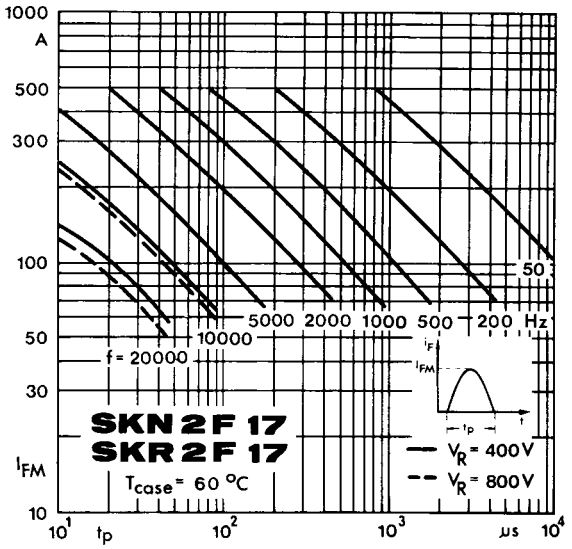


Fig. 1 a Rated sinusoidal peak forward current

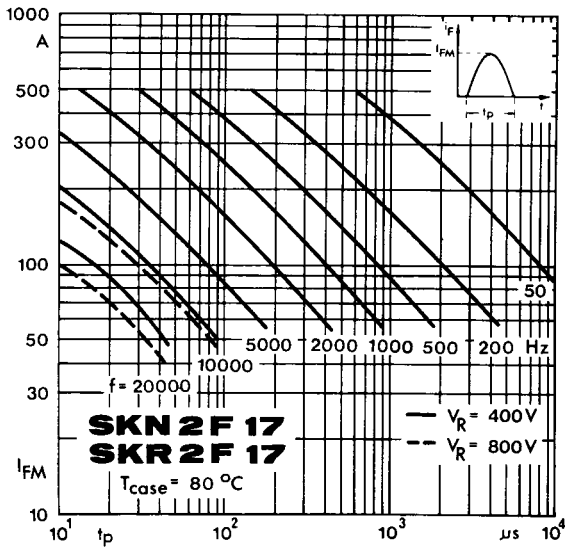


Fig. 1 b Rated sinusoidal peak forward current

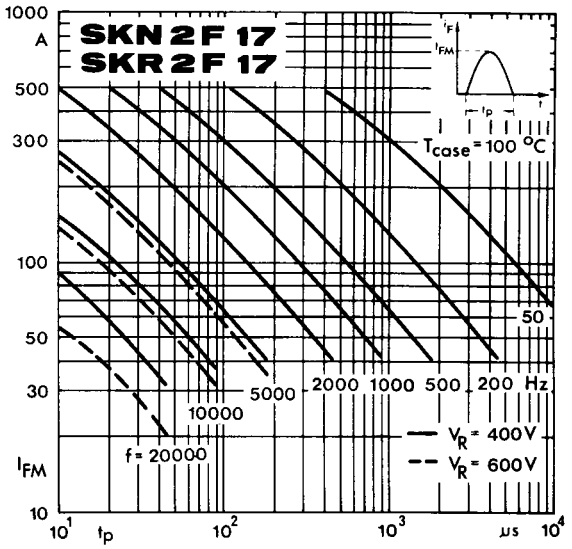


Fig. 1 c Rated sinusoidal peak forward current

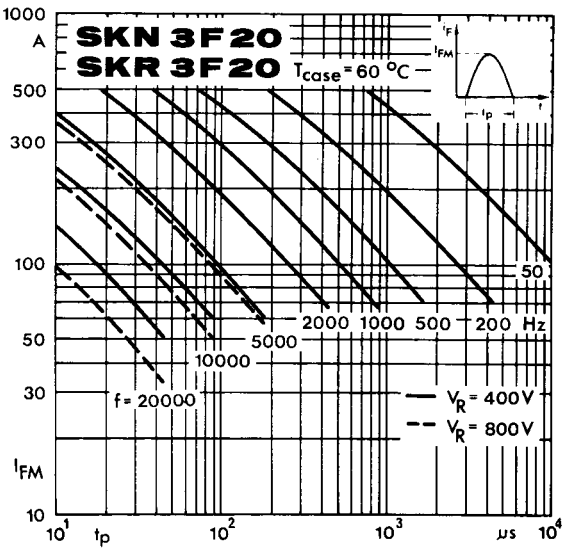


Fig. 1 d Rated sinusoidal peak forward current

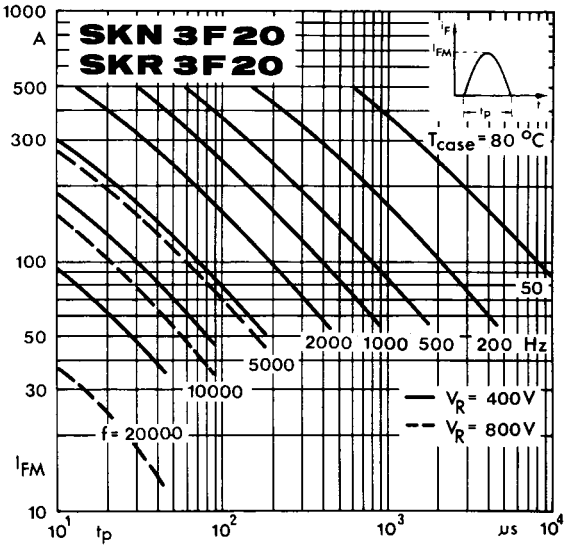


Fig. 1 e Rated sinusoidal peak forward current

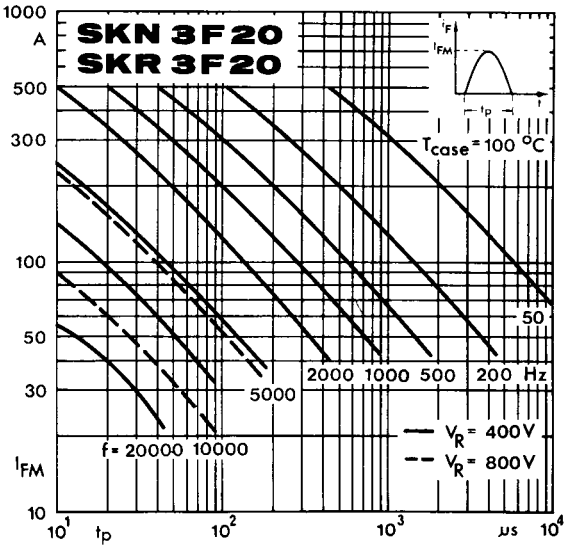


Fig. 1 f Rated sinusoidal peak forward current

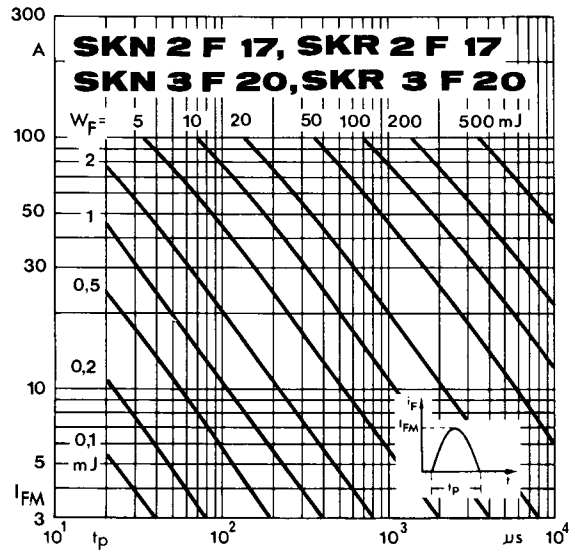


Fig. 2 Forward energy dissipation, sinusoidal

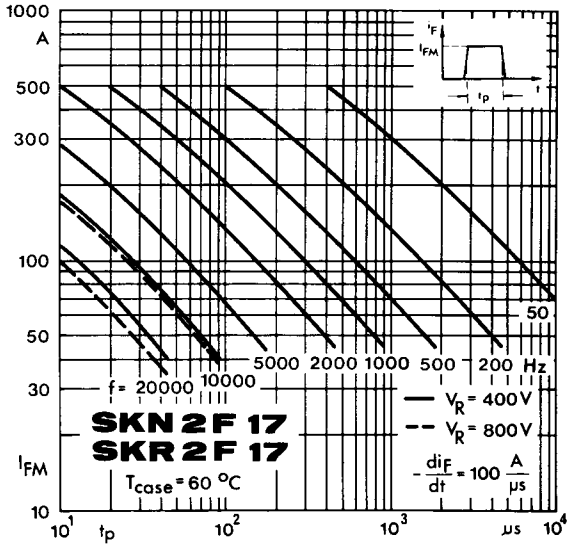


Fig. 3 a Rated rectangular peak forward current

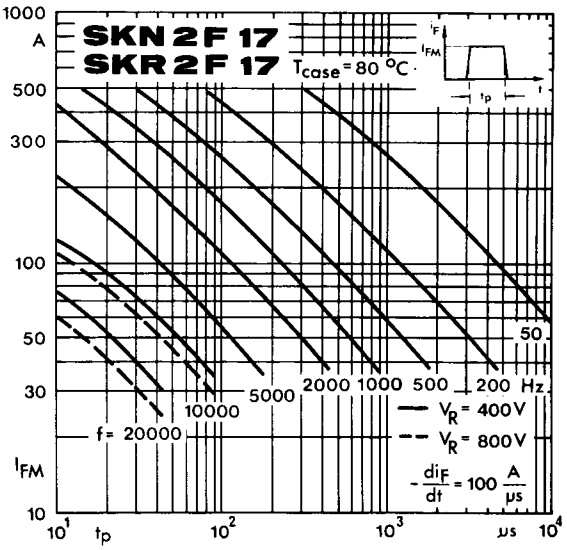


Fig. 3 b Rated rectangular peak forward current

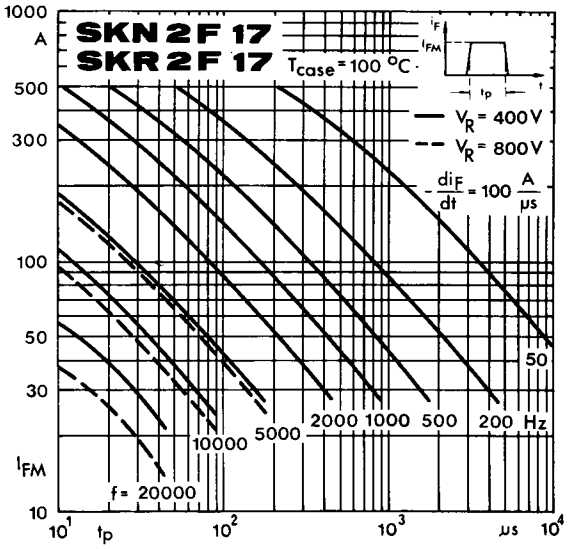


Fig. 3 c Rated rectangular peak forward current

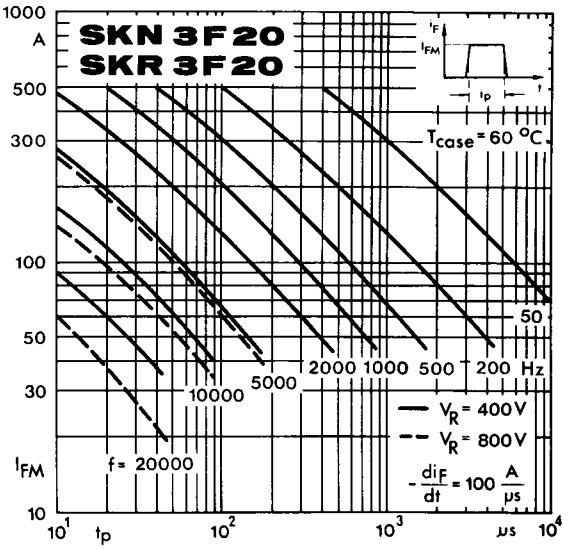


Fig. 3 d Rated rectangular peak forward current

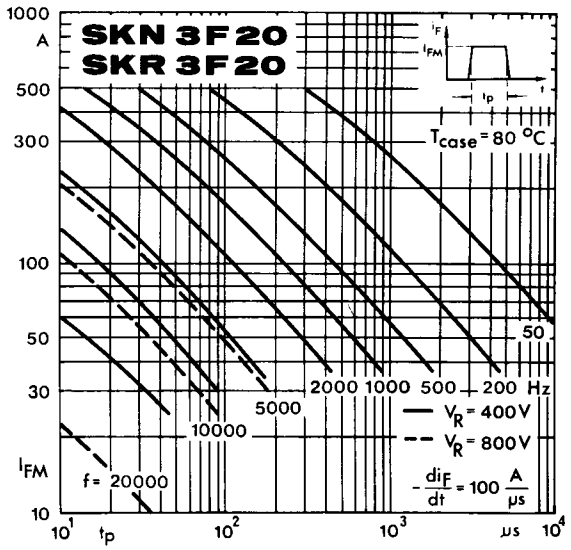


Fig. 3 e Rated rectangular peak forward current

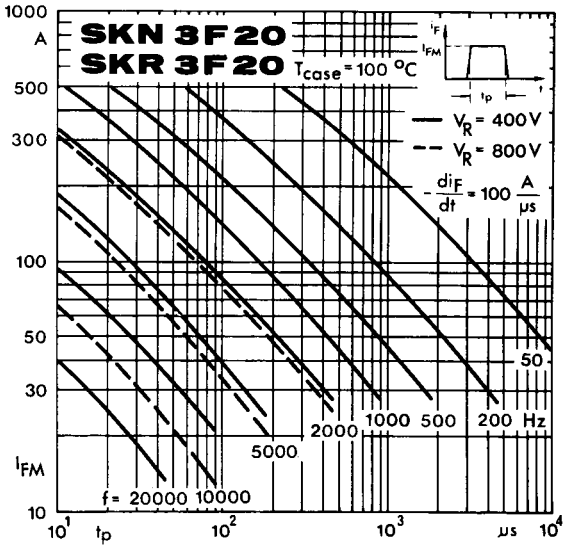


Fig. 3 f Rated rectangular peak forward current

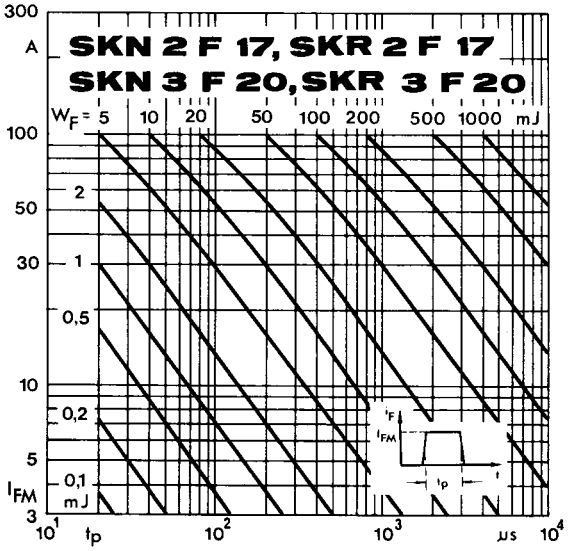


Fig. 4 Forward energy dissipation, rectangular

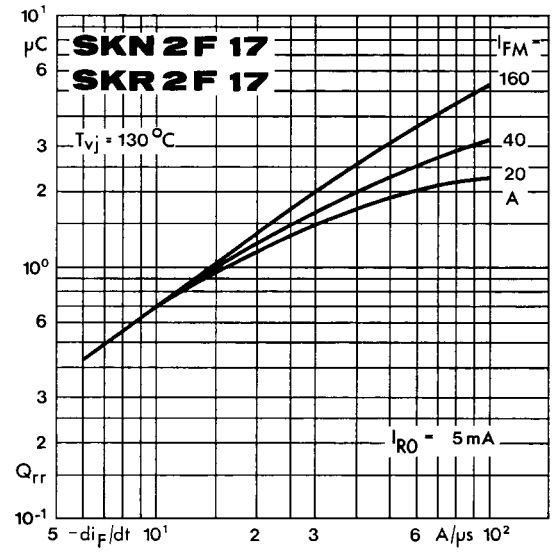


Fig. 5 a Recovered charge

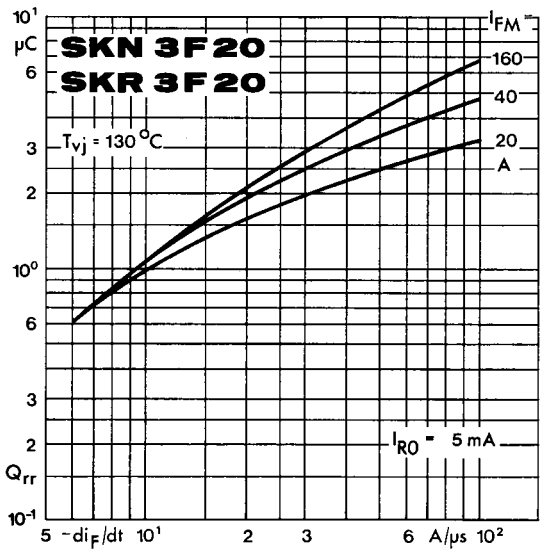


Fig. 5 b Recovered charge

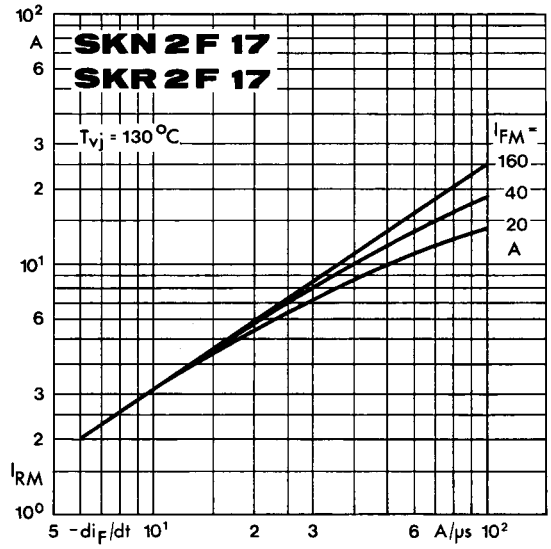


Fig. 6 a Peak reverse recovery current

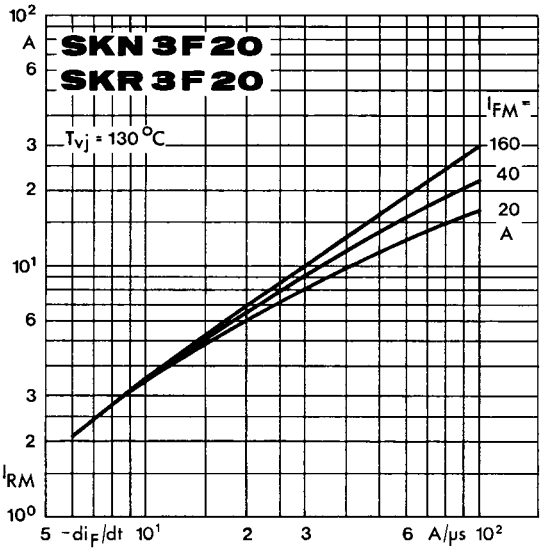


Fig. 6 b Peak reverse recovery current

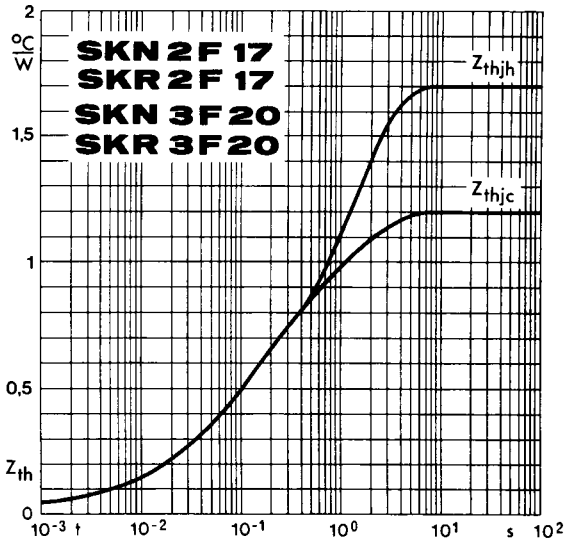


Fig. 7 Transient thermal impedance

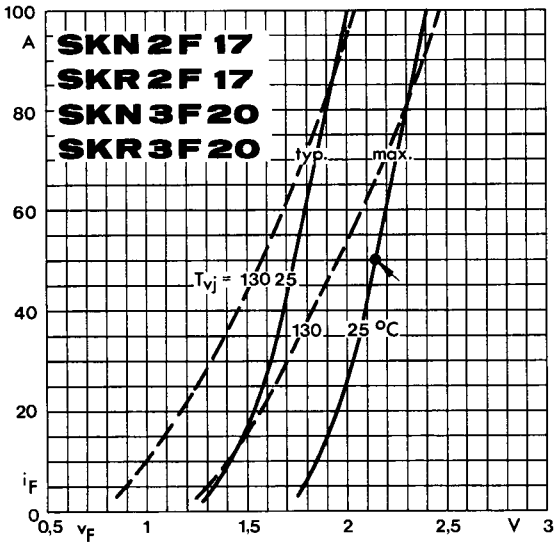


Fig. 8 Forward characteristics

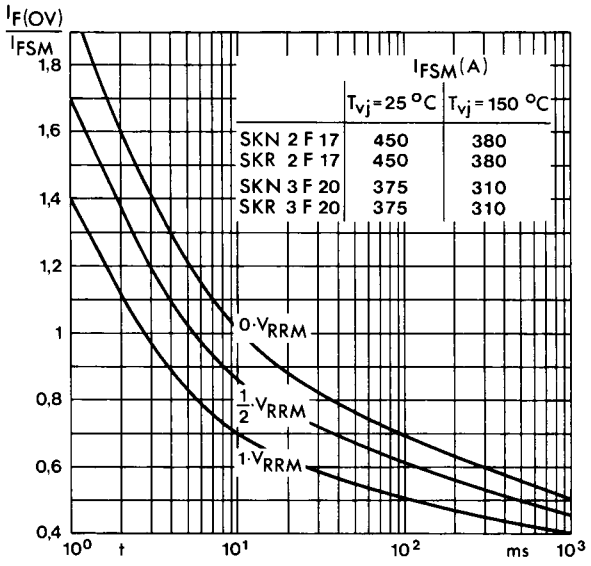
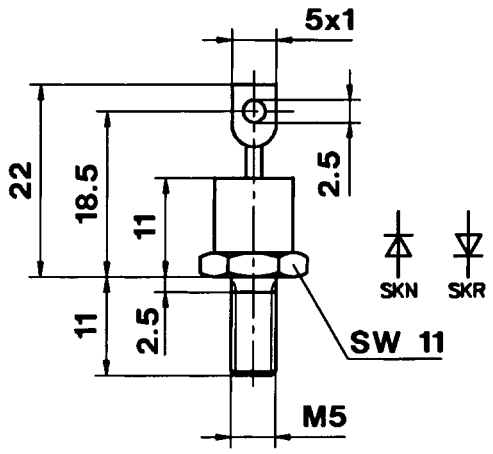


Fig 9 Rated surge overload current

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

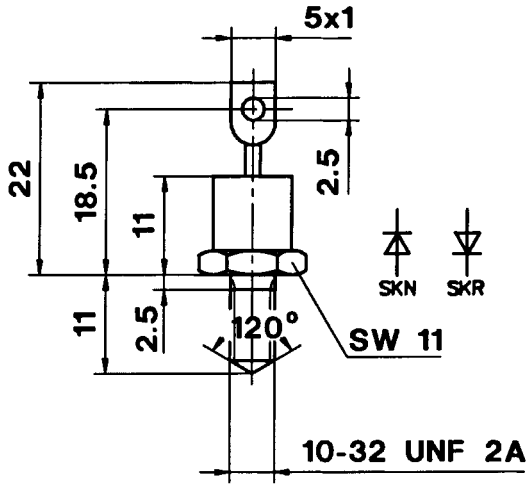


Dimensions in mm

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