



$V_{RSM}$ $V_{RRM}$	$I_{FRMS}$ (maximum values for continuous operation) 100 A	
	$I_{FAV}$ (sin. 180; $T_{case} = \dots$ ) 50 A (105 °C)   50 A (95 °C)	
	$t_{rr} = 200$ ns	
V		
400	<b>SKN 2 F 50/04</b> <b>SKN 2 F 50/04 UNF</b>	<b>SKR 2 F 50/04</b> <b>SKR 2 F 50/04 UNF</b>
600	<b>SKN 2 F 50/06</b> <b>SKN 2 F 50/06 UNF</b>	<b>SKR 2 F 50/06</b> <b>SKR 2 F 50/06 UNF</b>
800	<b>SKN 2 F 50/08</b> <b>SKN 2 F 50/08 UNF</b>	<b>SKR 2 F 50/08</b> <b>SKR 2 F 50/08 UNF</b>
1000	<b>SKN 2 F 50/10</b> <b>SKN 2 F 50/10 UNF</b>	<b>SKR 2 F 50/10</b> <b>SKR 2 F 50/10 UNF</b>

## Fast Recovery Rectifier Diodes

**SKN 2 F 50**  
**SKR 2 F 50**



Symbol	Conditions	SKN 2 F 50	SKR 2 F 50	Units
$I_{FAV}$	sin.180; ( $T_{case} = \dots$ ); $f = 5000$ Hz sin.180/rec.120; $T_{amb} = 45$ °C; K5 K3 K1,1	50 (105 °C) 12/11 18/17 33/31	50 (95 °C) 12/11 17/16 31/29	A A A A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 150$ °C; 10 ms	1100 940	800 670	A A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms	6000 4400	3200 2200	A <sup>2</sup> s A <sup>2</sup> s
$Q_{rr}$ $I_{RM}$	$T_{vj} = 130$ °C; $I_F = 100$ A; $-di_F = 30 \frac{A}{\mu s}$ ; $V_R = 30$ V	3 10		$\mu C$ A
$I_R$	$T_{vj} = 25$ °C; $V_R = V_{RRM}$ $T_{vj} = 130$ °C; $V_R = V_{RRM}$	0,4 50		mA mA
$t_{rr}$	$T_{vj} = 25$ °C $T_{vj} = 130$ °C } $I_F = I_R = 1$ A	max. 200 typ. 400		ns ns
$V_F$ $V_{(TO)}$ $r_T$	$T_{vj} = 25$ °C; $I_F = 50$ A $T_{vj} = 150$ °C $T_{vj} = 150$ °C	max. 1,8 1,2 4		V V mΩ
$R_{thjc}$ $R_{thch}$ $T_{vj}$ $T_{stg}$		0,5 0,25 - 40 ... + 150 - 55 ... + 150	0,65	°C/W °C/W °C °C
M a w	SI units US units approx.	2,5 22 5 · 9,81 20		Nm lb.in. m/s <sup>2</sup> g
Case		E10		

### Features

- Small recovered charge
- Soft recovery
- Up to 1000 V reverse voltage
- Hermetic metal cases with glass insulators
- Threaded studs ISO M6 or 1/4-28 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

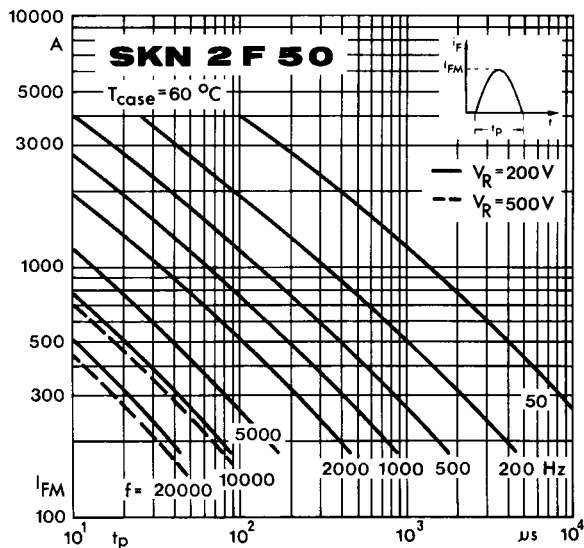


Fig. 1 a Rated sinusoidal peak forward current

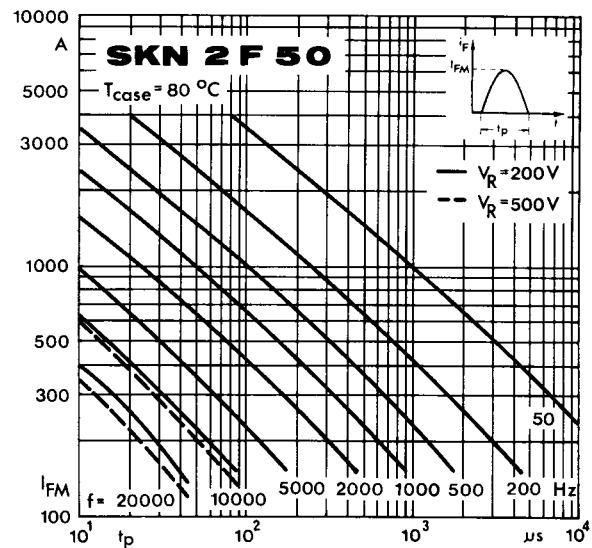


Fig. 1 b Rated sinusoidal peak forward current

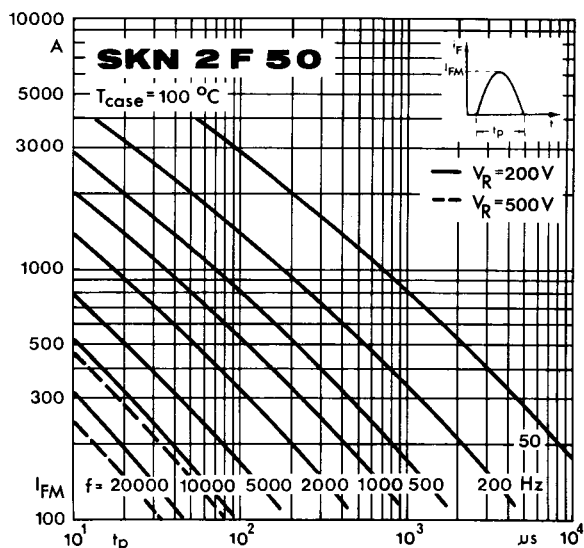


Fig. 1 c Rated sinusoidal peak forward current

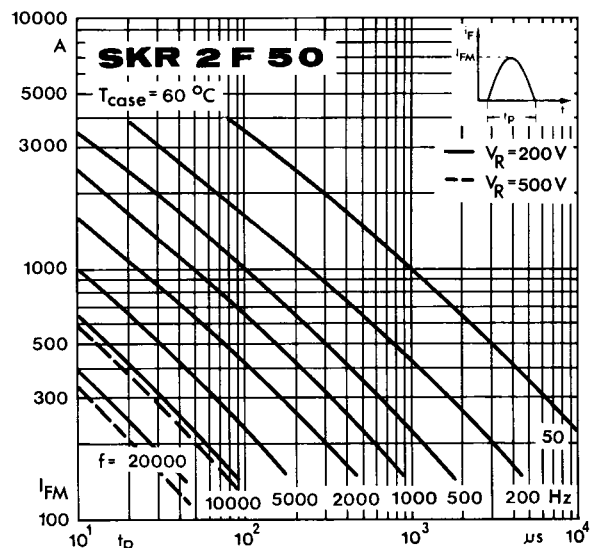


Fig. 1 d Rated sinusoidal peak forward current

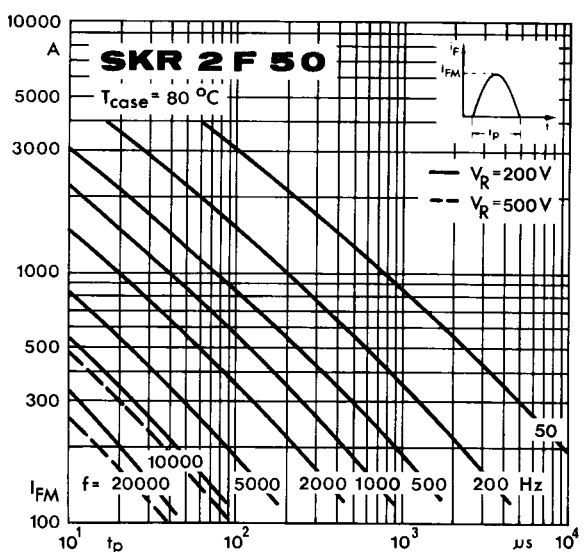


Fig. 1 e Rated sinusoidal peak forward current

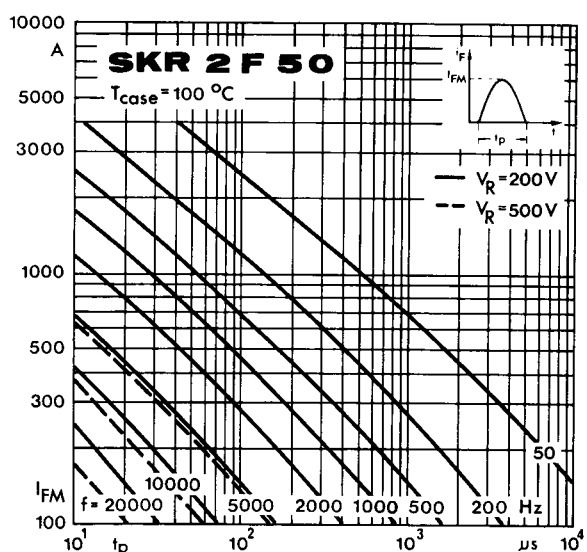


Fig. 1 f Rated sinusoidal peak forward current

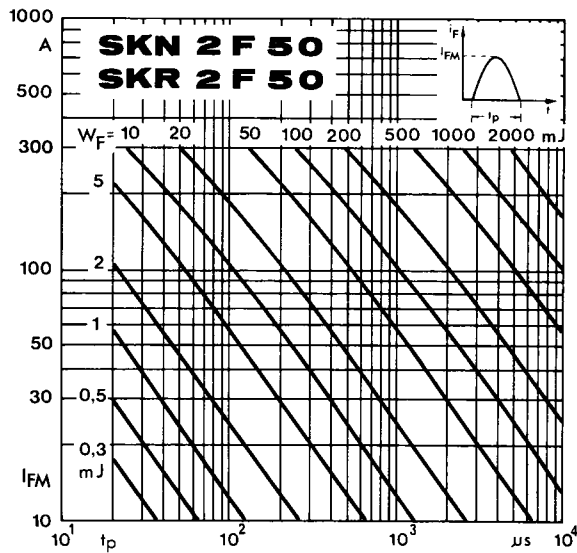


Fig. 2 Forward energy dissipation, sinusoidal

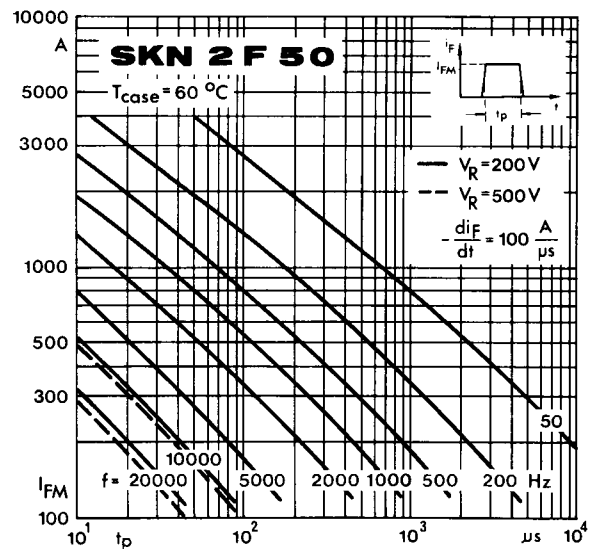


Fig. 3 a Rated rectangular peak forward current

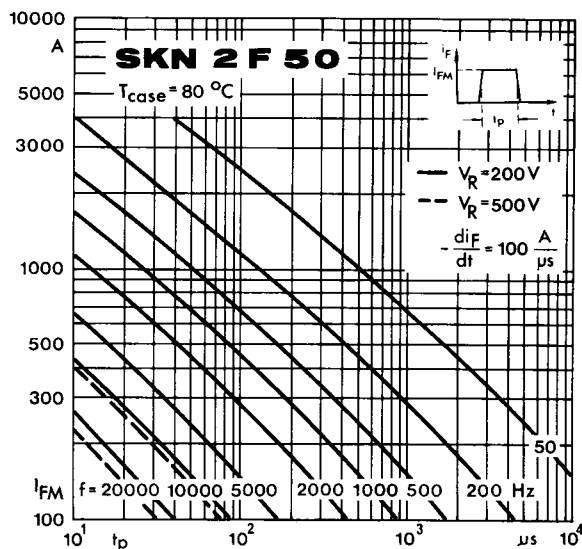


Fig. 3 b Rated rectangular peak forward current

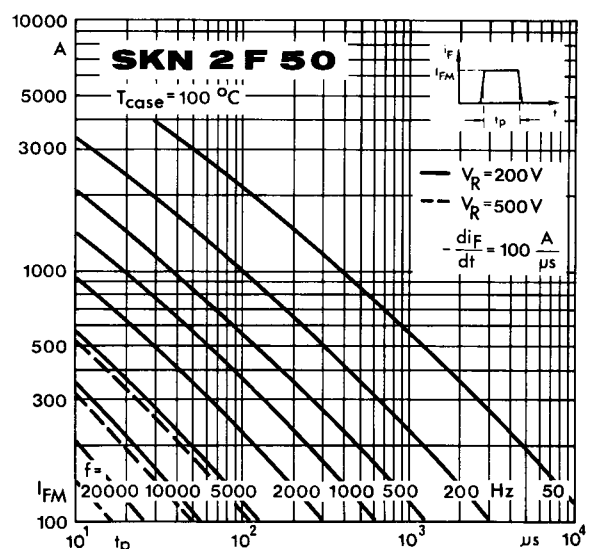


Fig. 3 c Rated rectangular peak forward current

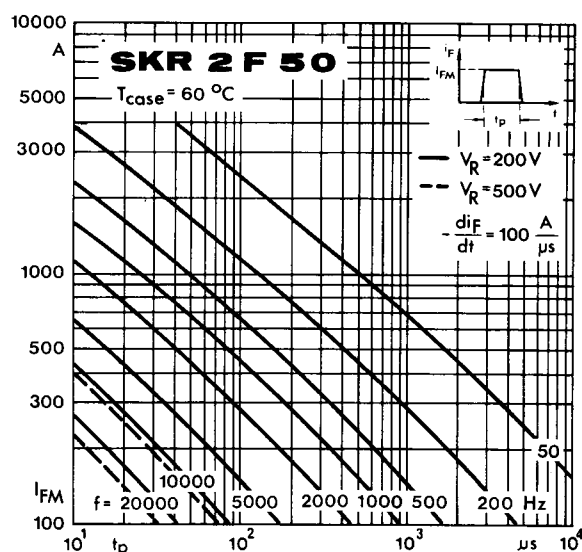


Fig. 3 d Rated rectangular peak forward current

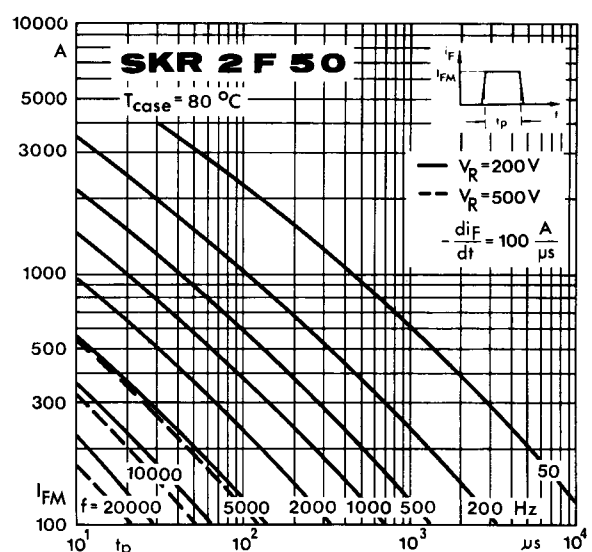


Fig. 3 e Rated rectangular peak forward current

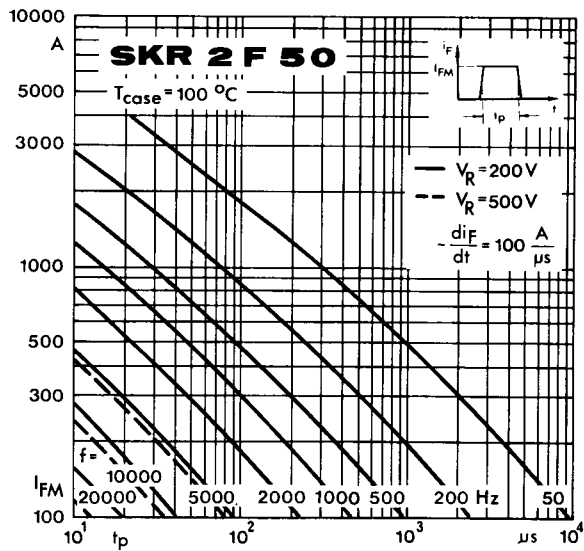


Fig. 3 f Rated rectangular peak forward current

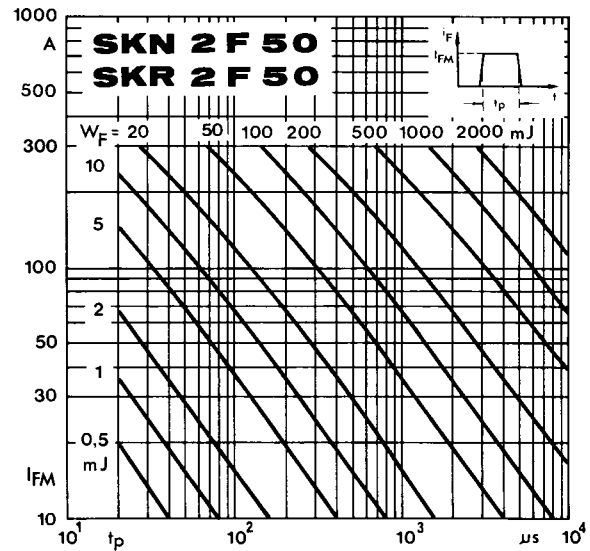


Fig. 4 Forward energy dissipation, rectangular

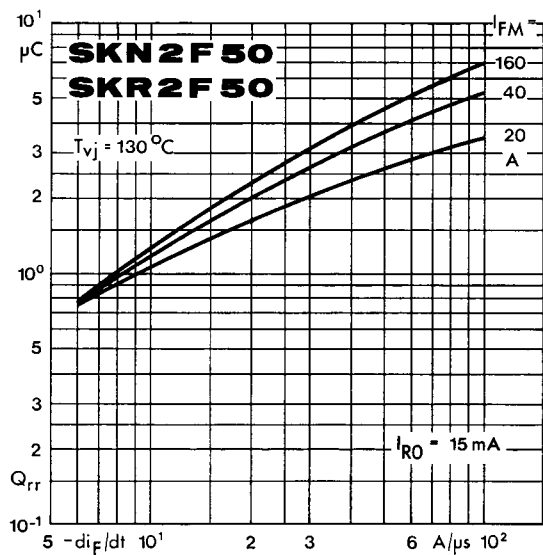


Fig. 5 Recovered charge

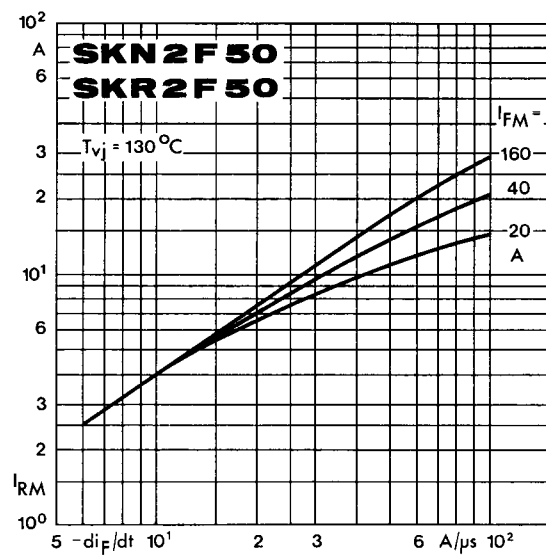


Fig. 6 Peak reverse recovery current

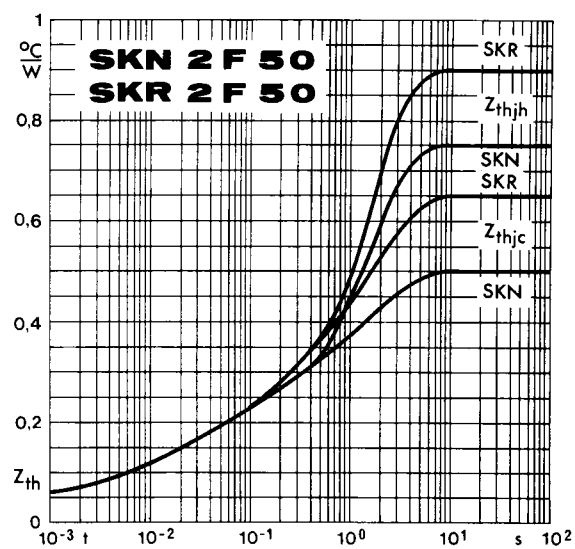


Fig. 7 Transient thermal impedance

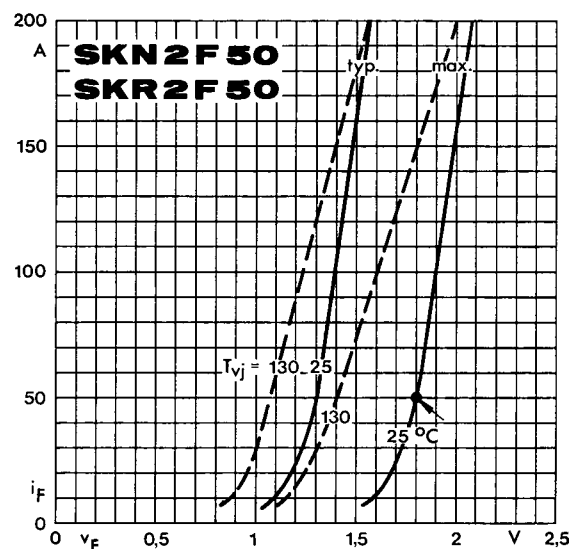


Fig. 8 Forward characteristics

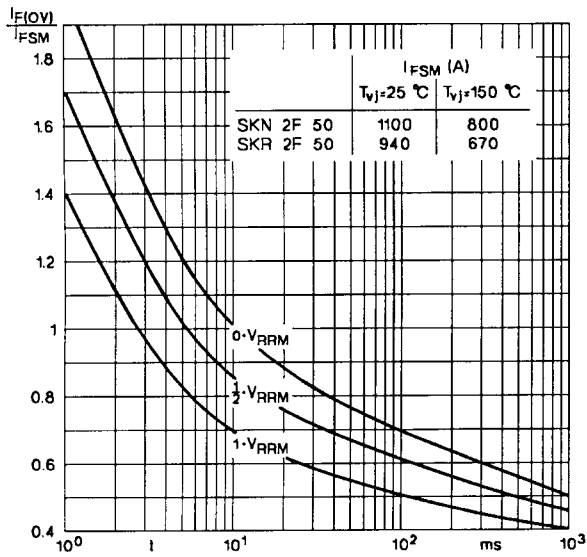
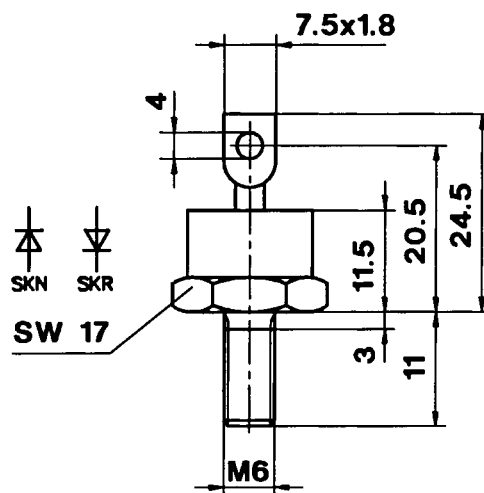


Fig. 9 Rated surge overload current

**SKN 2 F 50**  
**SKR 2 F 50**

Case E 10

IEC-Publ. 191-2: A 4 M

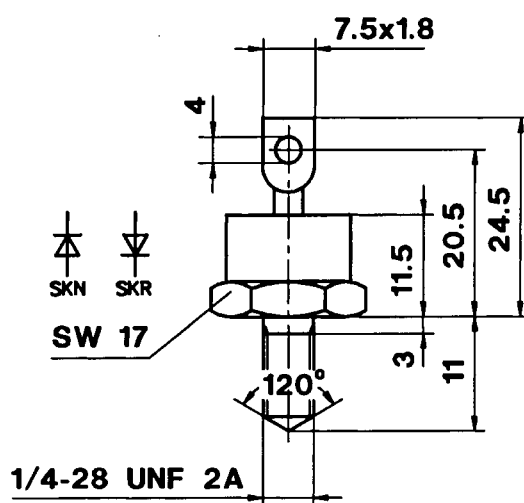


Dimensions in mm

**SKN 2 F 50 ... UNF**  
**SKR 2 F 50 ... UNF**

Case E 10 UNF

IEC-Publ. 191-2: A 4 U  
 JEDEC: DO-203 AB (DO-5)



Dimensions in mm