

## Fast Recovery Rectifier Diodes

SKN 2 F 50  
SKR 2 F 50



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

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)	50 (95 °C)	A
		12/11	12/11	A
		18/17	17/16	A
		33/31	31/29	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	$A^2s$ $A^2s$
		$Q_{rr}$	$T_{vj} = 130$ °C; $I_F = 100$ A; $-dI_F = 30 \frac{A}{\mu s}$ ; $V_R = 30$ V	3
$I_{RM}$	10	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	max. 200 typ. 400
$V_F$	$T_{vj} = 25$ °C; $I_F = 50$ A	max. 1,8		
$V_{(TO)}$	$T_{vj} = 150$ °C	1,2		V
$r_T$	$T_{vj} = 150$ °C	4		m $\Omega$
$R_{thjc}$		0,5	0,65	°C/W
$R_{thch}$		0,25		°C/W
$T_{vj}$		- 40 ... + 150		°C
$T_{stg}$		- 55 ... + 150		°C
M	SI units	2,5		Nm
	US units	22		lb.in.
a		5 · 9,81		m/s <sup>2</sup>
w	approx.	20		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

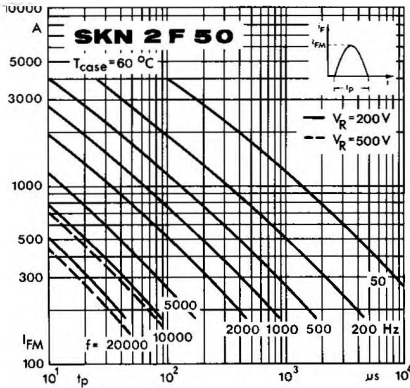


Fig. 1 a Rated sinusoidal peak forward current

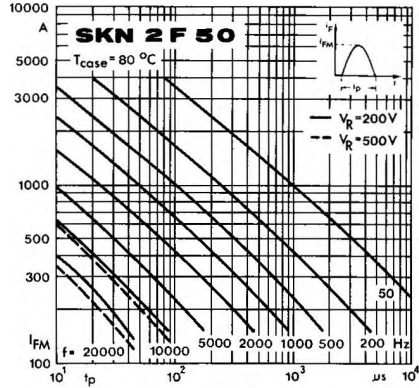


Fig. 1 b Rated sinusoidal peak forward current

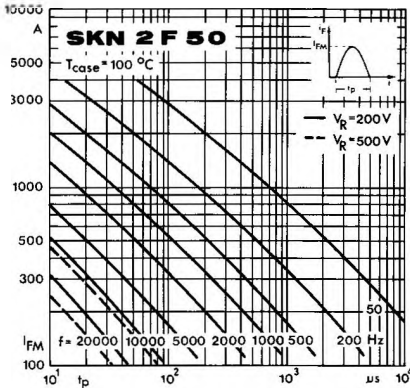


Fig. 1 c Rated sinusoidal peak forward current

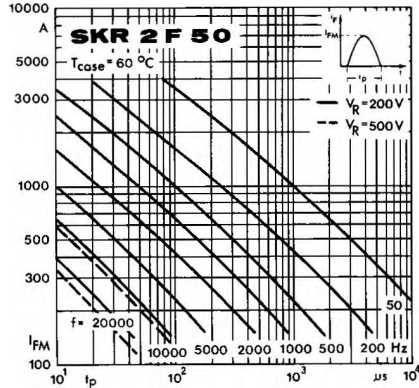


Fig. 1 d Rated sinusoidal peak forward current

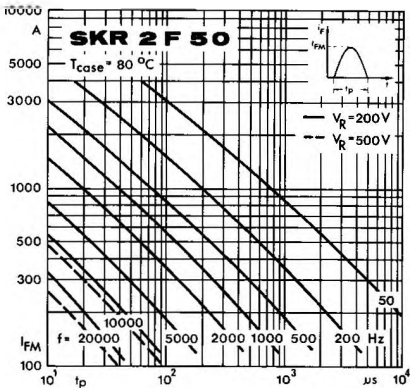


Fig. 1 e Rated sinusoidal peak forward current

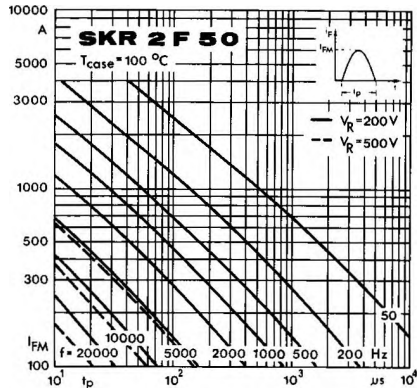


Fig. 1 f Rated sinusoidal peak forward current

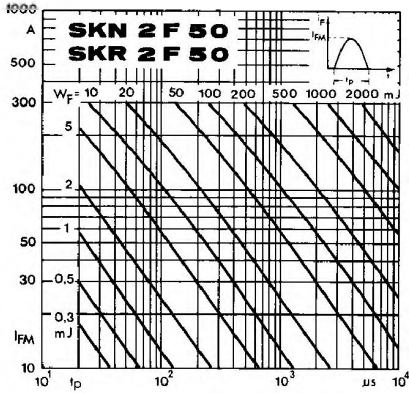


Fig. 2 Forward energy dissipation, sinusoidal

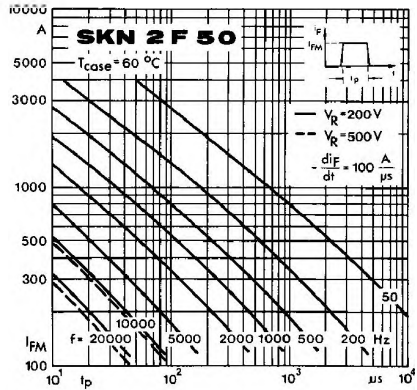


Fig. 3 a Rated rectangular peak forward current

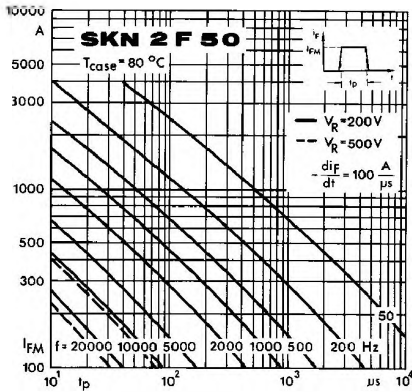


Fig. 3 b Rated rectangular peak forward current

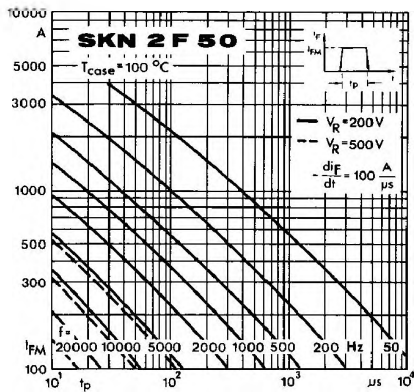


Fig. 3 c Rated rectangular peak forward current

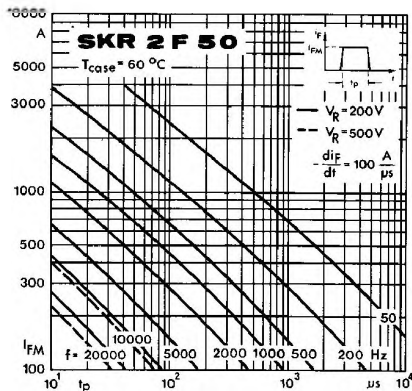


Fig. 3 d Rated rectangular peak forward current

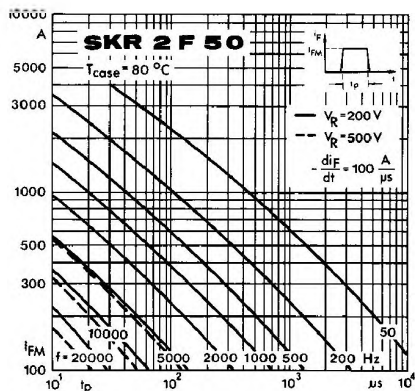


Fig. 3 e Rated rectangular peak forward current

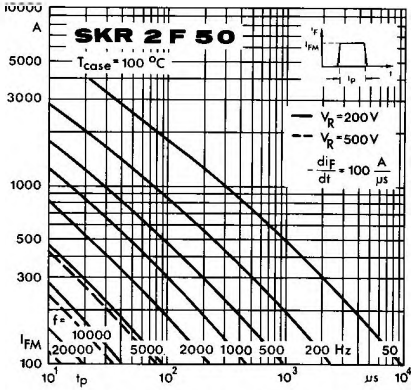


Fig. 3 f Rated rectangular peak forward current

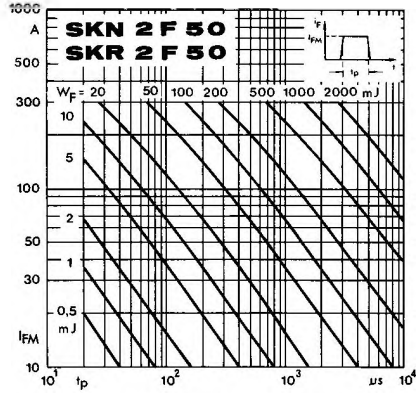


Fig. 4 Forward energy dissipation, rectangular

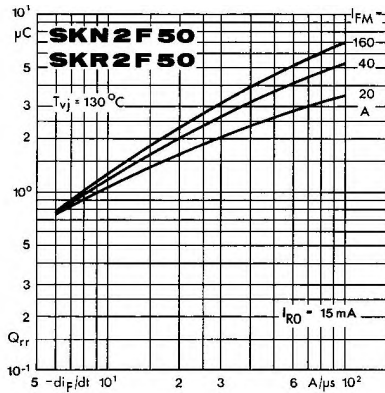


Fig. 5 Recovered charge

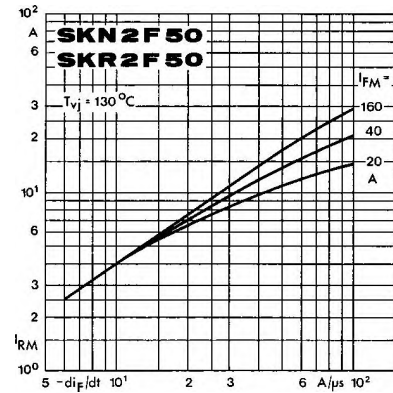


Fig. 6 Peak reverse recovery current

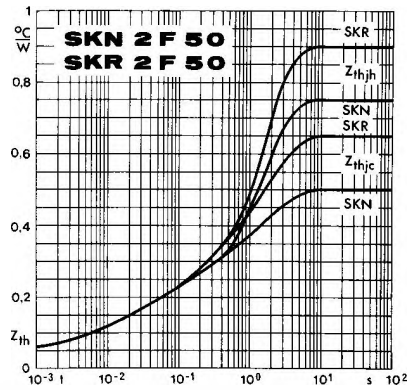


Fig. 7 Transient thermal impedance

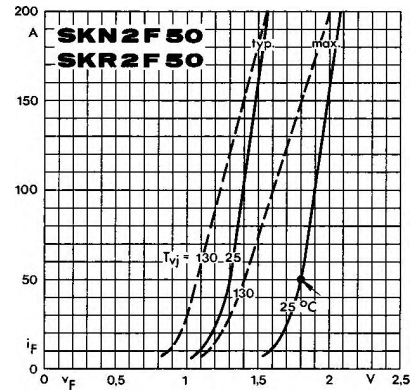


Fig. 8 Forward characteristics

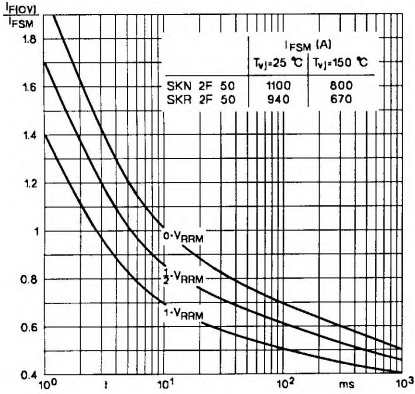
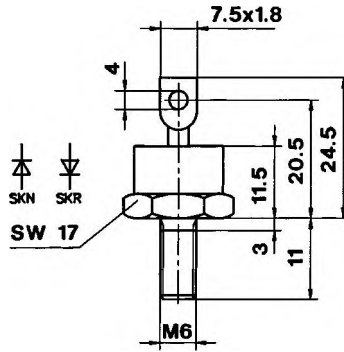


Fig. 9 Rated surge overload current

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

Case E 10

IEC-Publ. 191-2: A 4 M

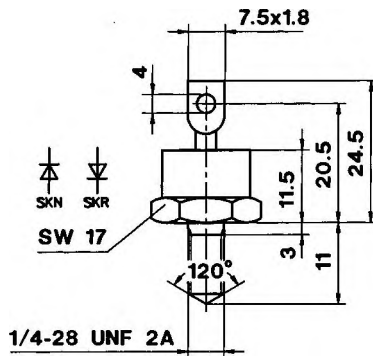


Dimensions in mm

**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