

Fast Recovery Rectifier Diodes

SKN 60 F SKR 60 F



V_{RSM} V_{RRM}	I _{FRMS} (maximum values for continuous operation) 120 A	
	I _{FAV} (sin. 180; T _{case} = 85 °C) 75 A	
	t _{rr} = 700 ns	
V		
1200	SKN 60 F 12	SKR 60 F 12
1400	SKN 60 F 14	SKR 60 F 14
1500	SKN 60 F 15	SKR 60 F 15

Symbol	Conditions	SKN 60 F SKR 60 F	Units
I _{FAV}	sin. 180; T _{case} = 100 °C; f = 1000 Hz sin.180/rec.120; T _{amb} = 45 °C; K5 K3 K1,1	60 15 / 14,5 21,5 / 21 38 / 36,5	A A A A
I _{FSM}	T _{vj} = 25 °C; 10 ms T _{vj} = 150 °C; 10 ms	1400 1200	A A
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms T _{vj} = 150 °C; 8,3 ... 10 ms	9800 7200	A ² s A ² s
Q _{rr}	$\left. \begin{array}{l} T_{vj} = 150\text{ °C}; I_F = 100\text{ A}; \\ -\frac{di_F}{dt} = 100\frac{\text{A}}{\mu\text{s}}; V_R = 30\text{ V} \end{array} \right\}$	75	μC
I _{RM}		70	A
I _R	T _{vj} = 25 °C; V _R = V _{RRM} T _{vj} = 150 °C; V _R = V _{RRM}	0,4 60	mA mA
t _{rr}	$\left. \begin{array}{l} T_{vj} = 25\text{ °C} \\ T_{vj} = 150\text{ °C} \end{array} \right\} I_F = I_R = 1\text{ A}$	max. 0,7 typ. 1,4	μs μs
V _F	T _{vj} = 25 °C; I _F = 150 A	max. 1,75	V
V _(TO)	T _{vj} = 150 °C	1,0	V
r _T	T _{vj} = 150 °C	4	mΩ
R _{thjc}		0,5	°C/W
R _{thch}		0,25	°C/W
T _{vj}		- 40 ... + 150	°C
T _{stg}		- 55 ... + 150	°C
M	SI units US units	2,5 22	Nm lb.in.
a		5 · 9,81	m/s ²
w		20	g
Case		E10	

Features

- Small recovered charge
- Soft recovery
- Up to 1500 V reverse voltage
- Hermetic metal cases with glass insulators
- Threaded studs ISO M6 and M8
- **SKN**: anode to stud
- **SKR**: cathode to stud

Typical Applications

- Inverse diodes for power transistors, GTO thyristors, asymmetric thyristors
- SMPS, inverters, choppers
- A. C. motor control, uninterruptible power supplies (UPS)

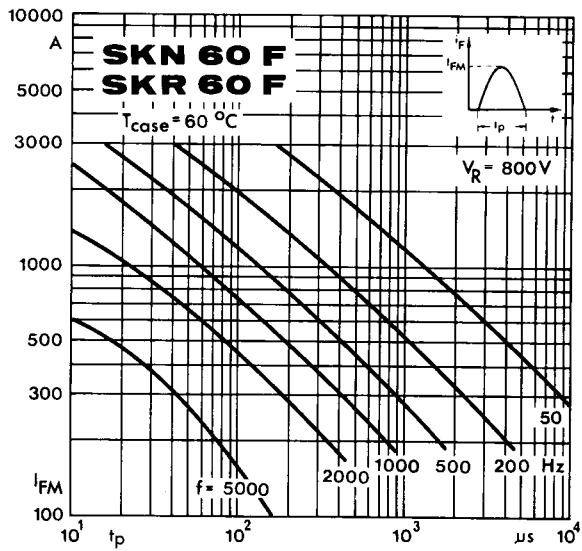


Fig. 1 a Rated sinusoidal peak forward current

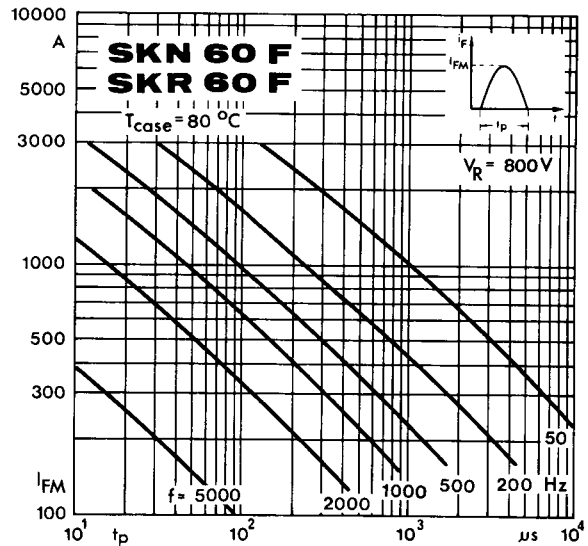


Fig. 1 b Rated sinusoidal peak forward current

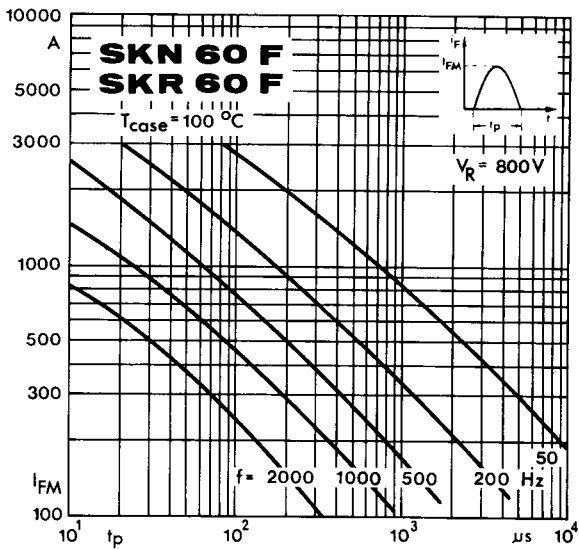


Fig. 1 c Rated sinusoidal peak forward current

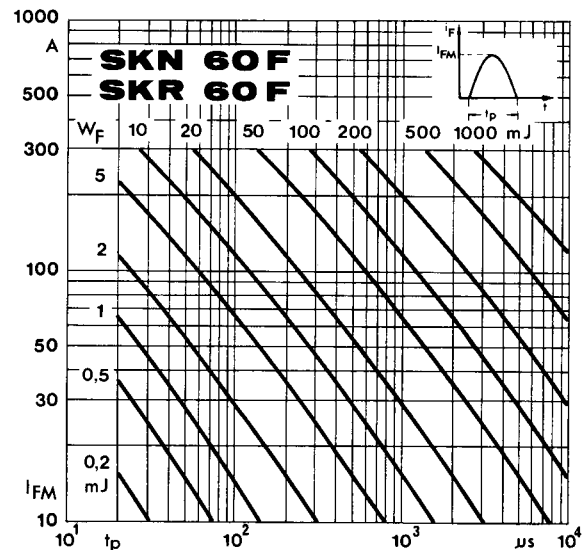


Fig. 2 Forward energy dissipation, sinusoidal

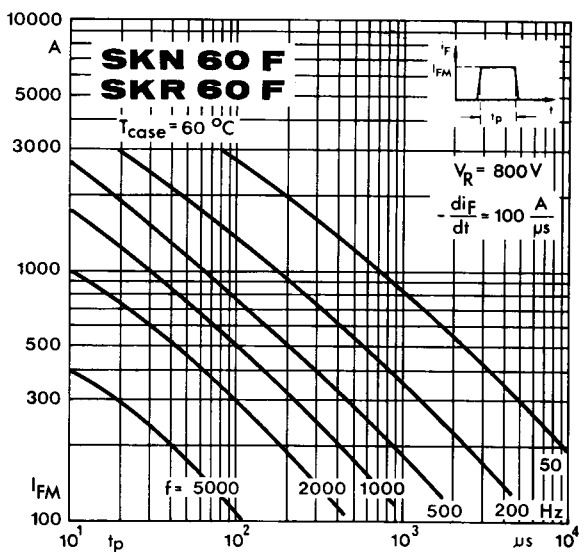


Fig. 3 a Rated rectangular peak forward current

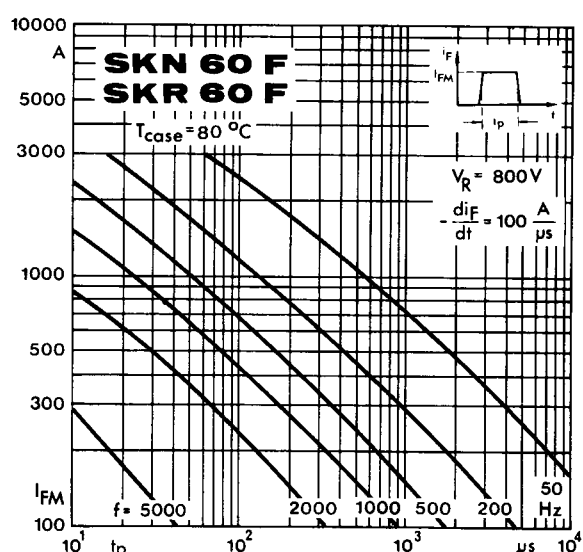


Fig. 3 b Rated rectangular peak forward current

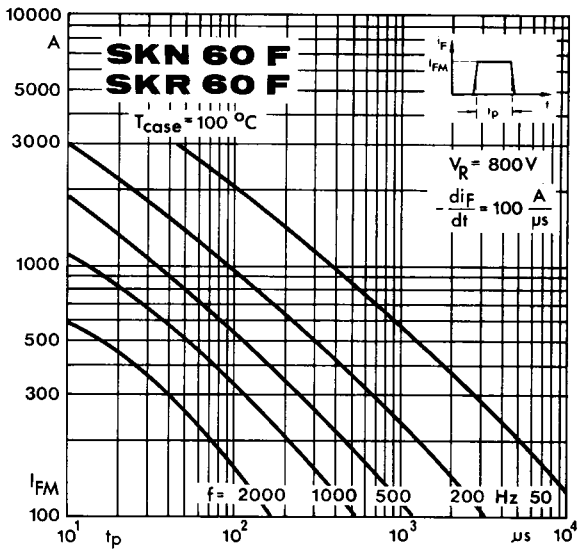


Fig. 3 c Rated rectangular peak forward current

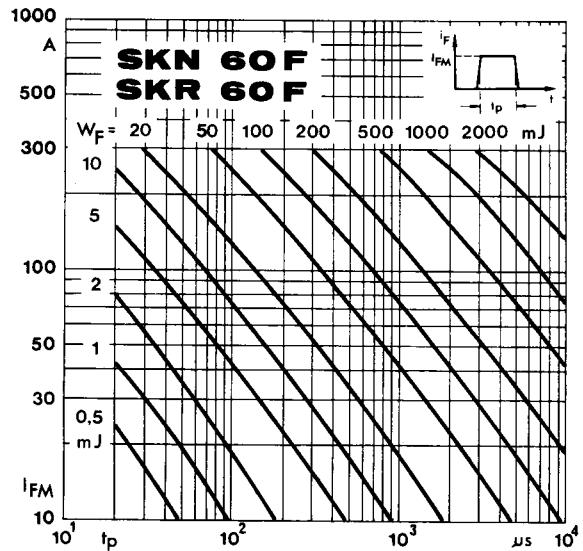


Fig. 4 Forward energy dissipation, rectangular

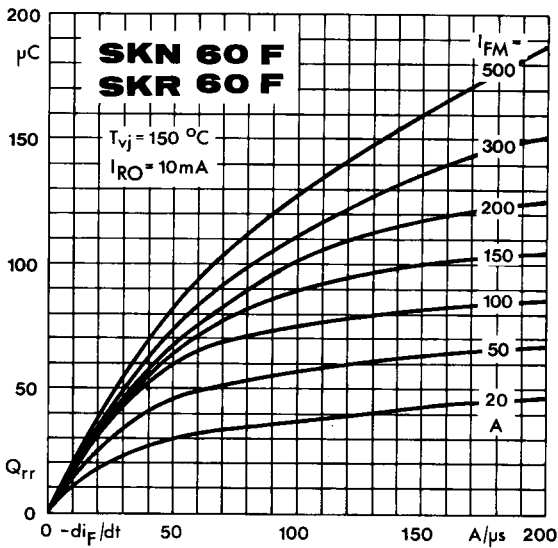


Fig. 5 Recovered charge

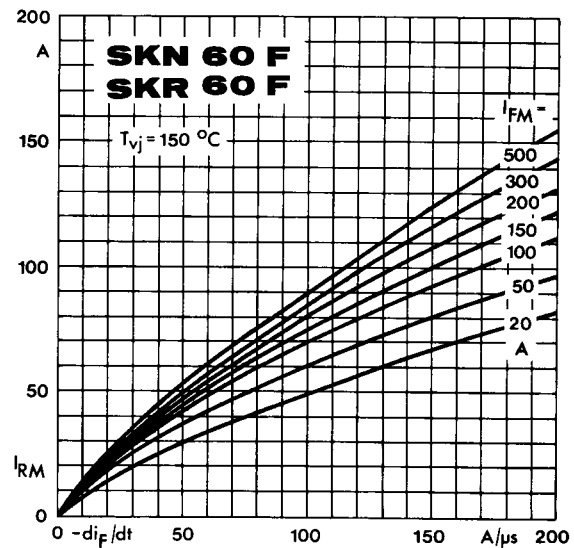


Fig. 6 Peak reverse recovery current

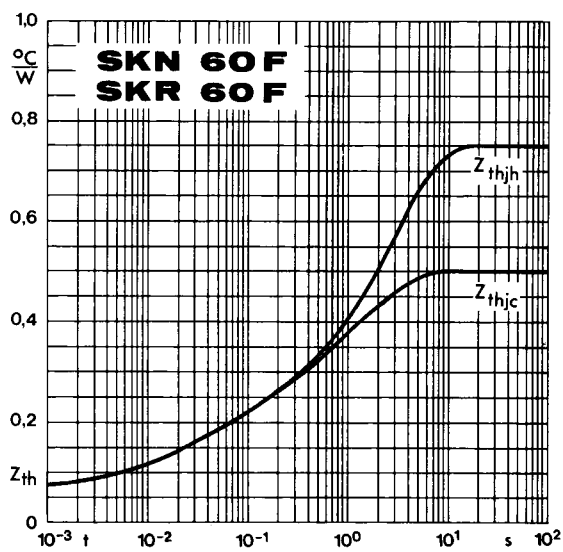


Fig. 7 Transient thermal impedance

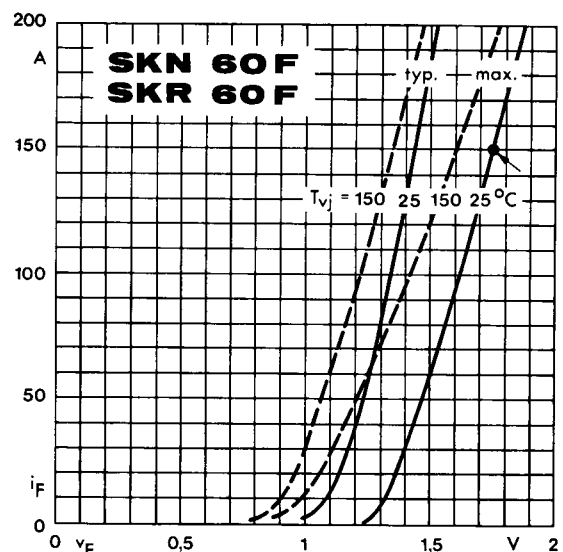


Fig. 8 Forward characteristics

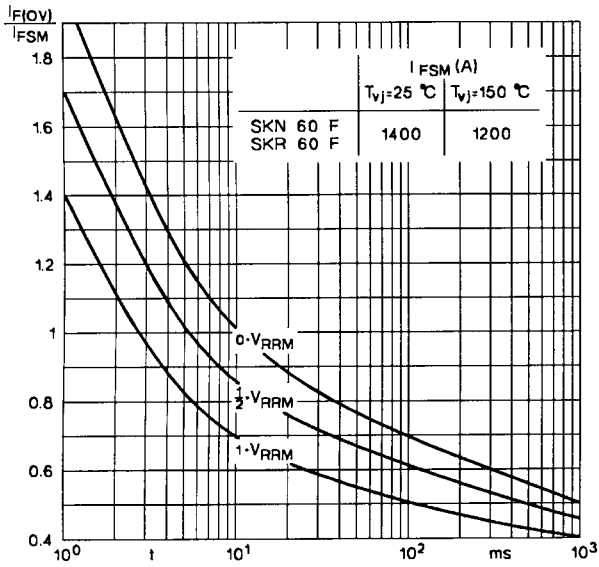
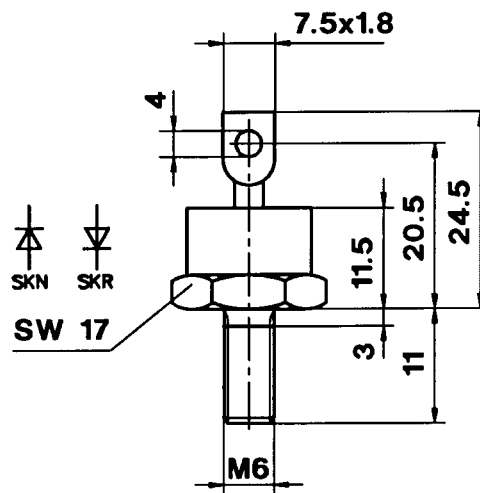


Fig. 9 Rated surge overload current

SKN 60 F
SKR 60 F

Case E 10

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



Dimensions in mm