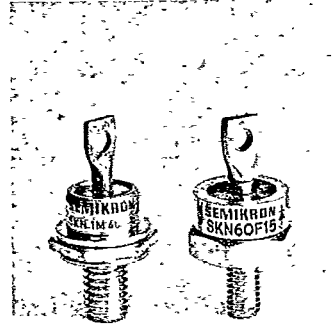


T-03-21

V _{RSM} V _{RRM}	I _{FRMS} (maximum values for continuous operation)			
	80 A		120 A	
	I _{FAV} (sin. 180; T _{case} = ...)			
	50 A (97 °C)		75 A (85 °C)	
V	t _{rr} = 1 μs		t _{rr} = 700 ns	
800	SKN 1 M 40/08	SKR 1 M 40/08	-	-
1000	SKN 1 M 40/10	SKR 1 M 40/10	-	-
1200	SKN 1 M 40/12	SKR 1 M 40/12	SKN 60 F 12	SKR 60 F 12
1400	SKN 1 M 40/14	SKR 1 M 40/14	SKN 60 F 14	SKR 60 F 14
1500	-	-	SKN 60 F 15	SKR 60 F 15

Fast Recovery Rectifier Diodes

SKN 1 M 40 SKR 1 M 40
SKN 60 F SKR 60 F



Symbol	Conditions	SKN 1 M 40 SKR 1 M 40	SKN 60 F SKR 60 F	Units
I _{FAV}	sin. 180; (T _{case} = ...); f = 1000 Hz	50 (97 °C) 40 (111 °C)	60 (100 °C)	A
	sin. 180/rec. 120; T _{amb} = 45 °C; K5 K3 K1,1	16/15	15/14,5	A
		22/21	21,5/21	A
		38/36	38/36,5	A
I _{FSM}	T _{vj} = 25 °C	800	1400	A
i ² t	T _{vj} = 150 °C	700	1200	A
	T _{vj} = 25 °C	3200	9800	A ² s
	T _{vj} = 150 °C	2450	7200	A ² s
Q _{rr}	T _{vj} = 150 °C; I _F = 100 A;	150	75	μC
I _{RM}	- $\frac{dI}{dt}$ = 100 $\frac{A}{\mu s}$; V _R = 30 V	100	70	A
I _R	T _{vj} = 25 °C; V _R = V _{RRM}	0,4	0,4	mA
	T _{vj} = 150 °C; V _R = V _{RRM}	15	60	mA
t _{rr}	T _{vj} = 25 °C } I _F = I _R = 1 A T _{vj} = 150 °C }	max. 1,0	max. 0,7	μs
		typ. 2,0	typ. 1,4	μs
V _F	T _{vj} = 25 °C; I _F = 150 A	max. 1,85	max. 1,75	V
V _(TO)	T _{vj} = 150 °C	1,0	1,0	V
r _T	T _{vj} = 150 °C	5	4	mΩ
R _{thjc}		0,65	0,5	°C/W
R _{thch}		0,2	0,25	°C/W
T _{vj}		-40 ... + 150		°C
T _{stg}		-55 ... + 150		°C
M	SI units	4	2,5	Nm
	US units	35	22	lb.in.
a		5·9,81	5·9,81	m/s ²
		17	20	g
Case		E11	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)

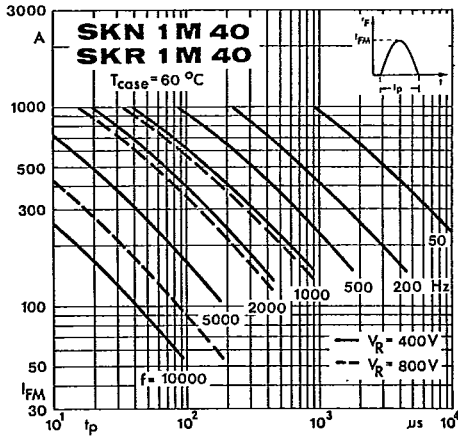


Fig. 1 a Rated sinusoidal peak forward current

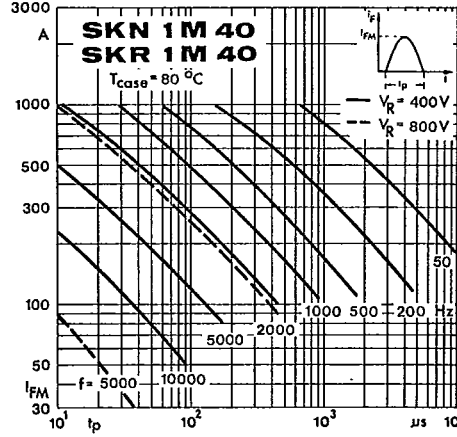


Fig. 1 b Rated sinusoidal peak forward current

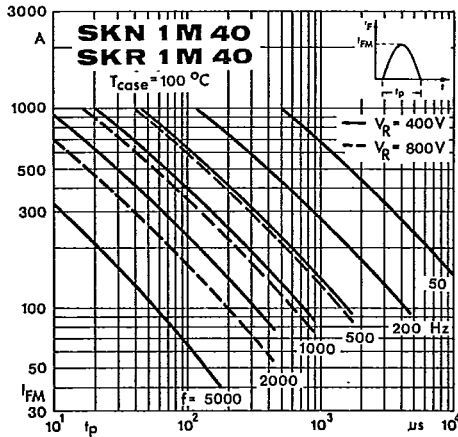


Fig. 1 c Rated sinusoidal peak forward current

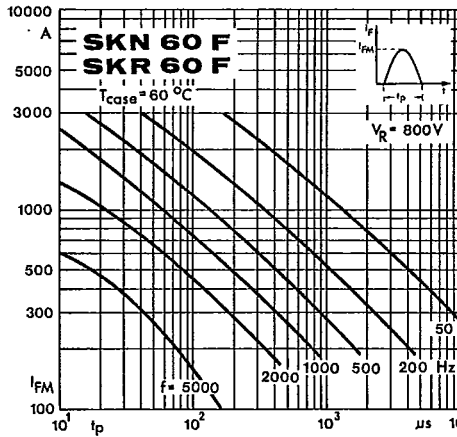


Fig. 1 d Rated sinusoidal peak forward current

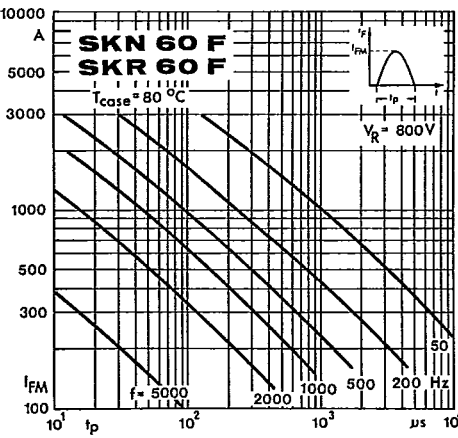


Fig. 1 e Rated sinusoidal peak forward current

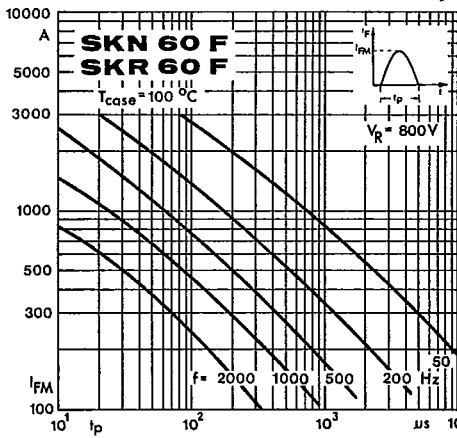


Fig. 1 f Rated sinusoidal peak forward current

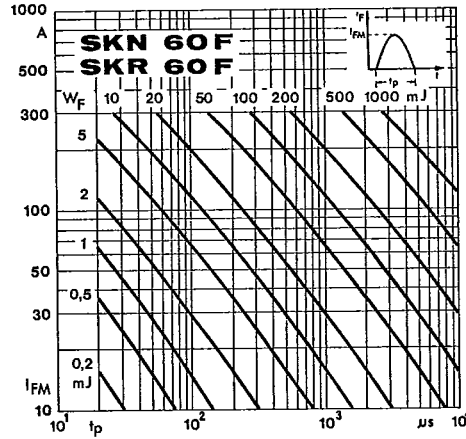
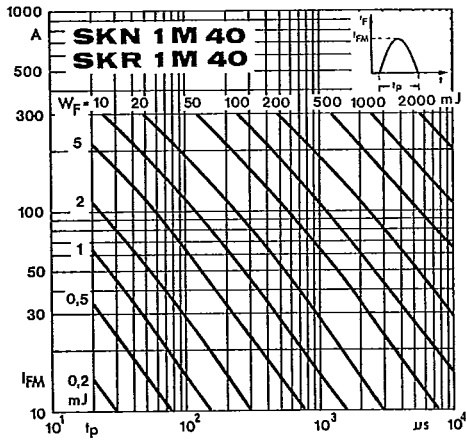


Fig. 2 a Forward energy dissipation, sinusoidal

Fig. 2 b Forward energy dissipation, sinusoidal

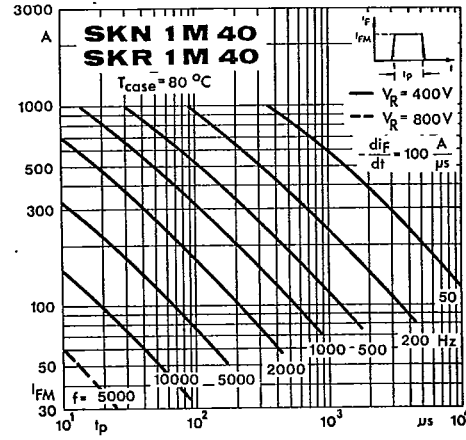
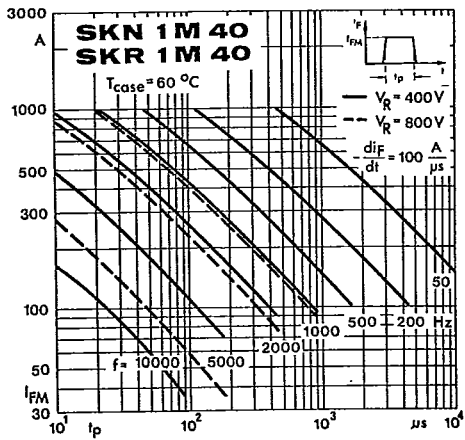


Fig. 3 a Rated rectangular peak forward current

Fig. 3 b Rated rectangular peak forward current

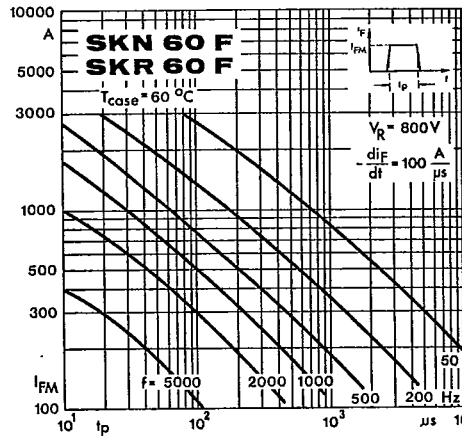
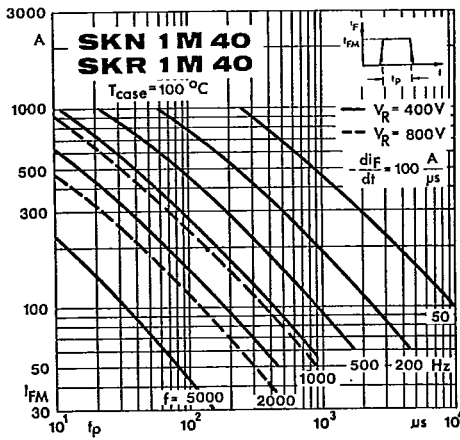


Fig. 3 c Rated rectangular peak forward current

Fig. 3 d Rated rectangular peak forward current

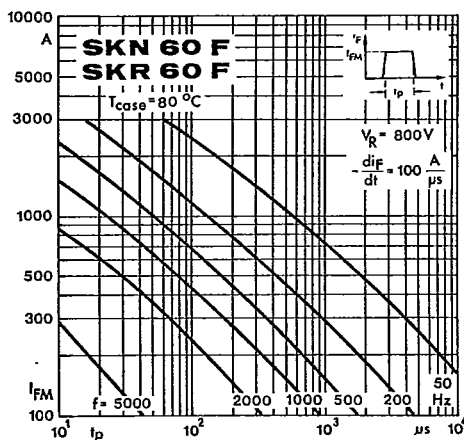


Fig. 3 e Rated rectangular peak forward current

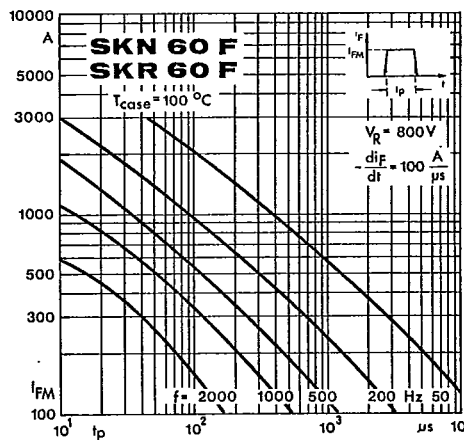


Fig. 3 f Rated rectangular peak forward current

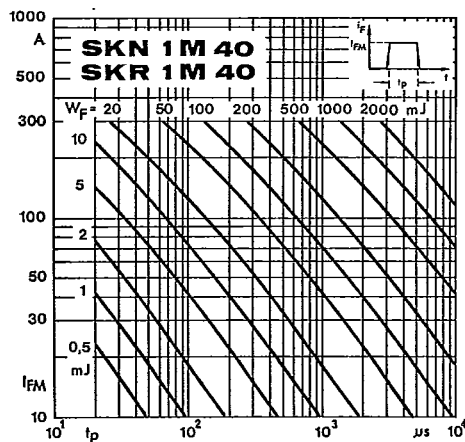


Fig. 4 a Forward energy dissipation, rectangular

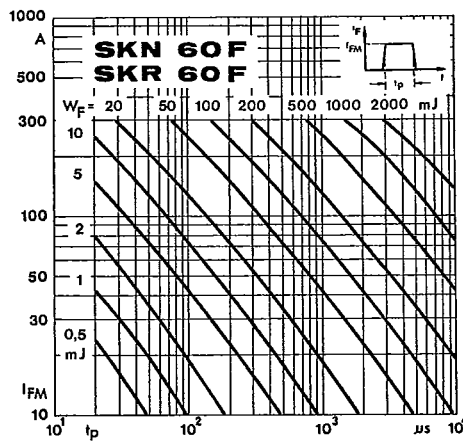


Fig. 4 b Forward energy dissipation, rectangular

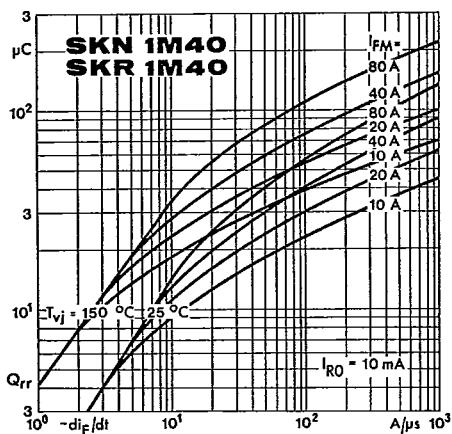


Fig. 5 a Recovered charge

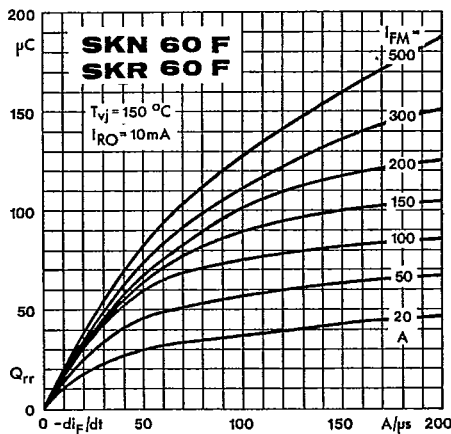


Fig. 5 b Recovered charge

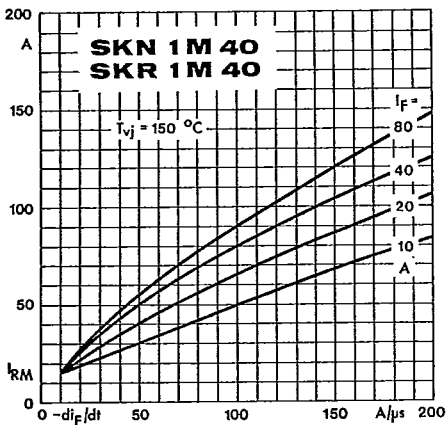


Fig. 6 a Peak reverse recovery current

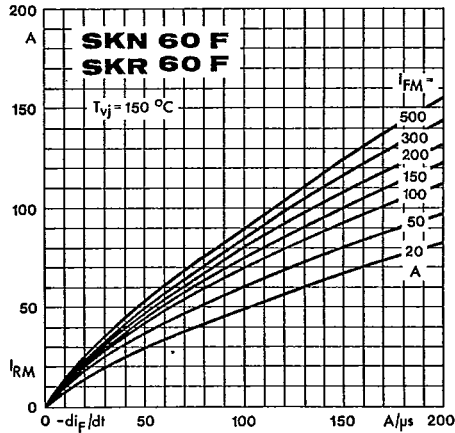


Fig. 6 b Peak reverse recovery current

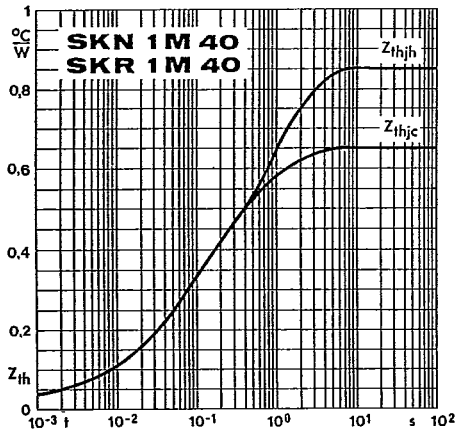


Fig. 7 a Transient thermal impedance

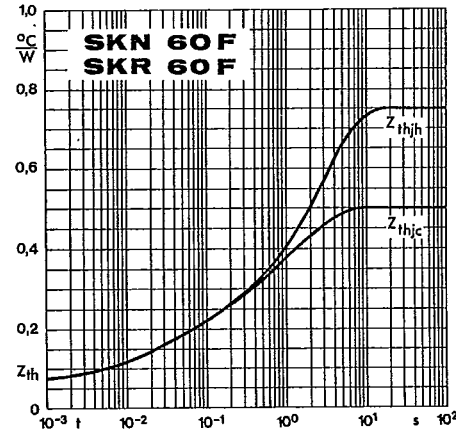


Fig. 7 b Transient thermal impedance

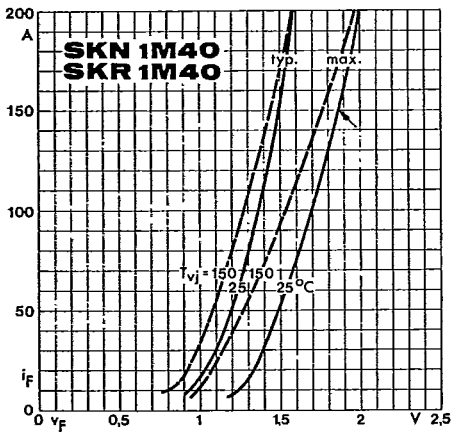


Fig. 8 a Forward characteristics

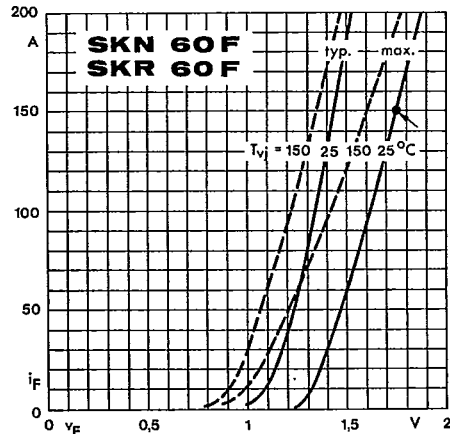


Fig. 8 b Forward characteristics

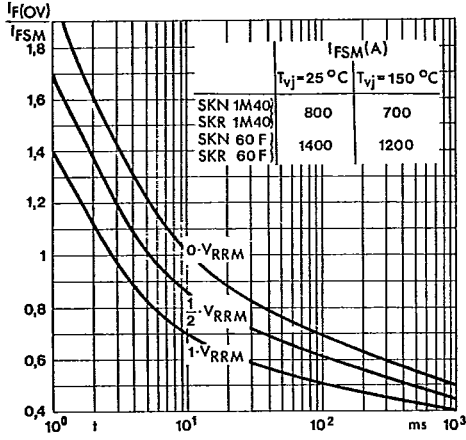
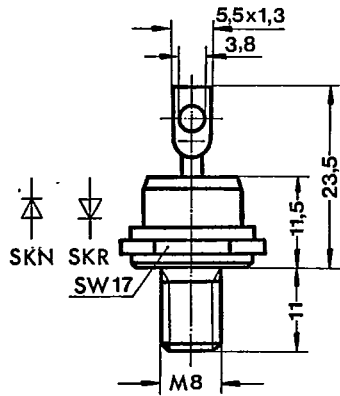


Fig. 9 Rated surge overload current

SKN 1 M 40
SKR 1 M 40

Case E 11

IEC-Publ. 191-2: A 37 MA
DIN 41 886: 103 C 2
BS 3934: SO-13
JEDEC: DO-203 AB (DO-5) metric



SKN 60 F
SKR 60 F

Case E 10

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

