

Fast Recovery Rectifier Diodes

SKN 340 F
SKN 2M400



Features

- Small recovered charge
- Soft recovery
- Up to 1800 V reverse voltage
- Hermetic capsule type metal cases with ceramic insulators

Typical Applications

- Inverse diodes for GTO and asymmetric thyristors
- Inverters and choppers
- A. C. motor control
- Uninterruptible power supplies

V _{RSM} V _{RRM} V	I _{FAV} (sin. 180; T _{case} = 85 °C)	
	400 A	400 A
800	SKN 340 F 08	SKN 2M400/08
1000	–	SKN 2M400/10
1200	SKN 340 F 12	SKN 2M400/12
1400	SKN 340 F 14	SKN 2M400/14
1500	–	SKN 2M400/15
1600	SKN 340 F 16	–
1800	SKN 340 F 18	–

Symbol	Conditions	SKN 340 F	SKN 2M400	Units	
I _{FAV}	sin. 180; DSC (T _{case} = . . .); 2 kHz	340 (100 °C)	400 (85 °C)	A	
	sin. 180; R _{thha} = 0,05 °C/W; T _{amb} = 35 °C; DSC	360	410	A	
I _{FSM}	T _{vj} = 25 °C; 10 ms	4 000	7 000	A	
	T _{vj} = T _{vjmax} ; 10 ms	3 500	6 000	A	
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms	80 000	245 000	A ² s	
	T _{vj} = T _{vjmax} ; 8,3 ... 10 ms	61 250	180 000	A ² s	
Q _{rr}	$\left. \begin{array}{l} T_{vj} = T_{vjmax} \\ -\frac{dI_F}{dt} = 100 \frac{A}{\mu s} \end{array} \right\}$	I _{FM} = 300 A	165	–	μC
		I _{FM} = 500 A	–	130	μC
I _{RM}	$\left. \begin{array}{l} I_{FM} = 300 A \\ I_{FM} = 500 A \end{array} \right\}$	I _{FM} = 300 A	150	–	A
		I _{FM} = 500 A	–	125	A
I _R	T _{vj} = 25 °C; V _R = V _{RRM}	4	4	mA	
	T _{vj} = T _{vjmax} ; V _R = V _{RRM}	20	100	mA	
t _{rr}	$\left. \begin{array}{l} T_{vj} = 25 \text{ °C}; \\ I_{FM} = 300 A \\ -\frac{dI_F}{dt} = 100 \frac{A}{\mu s} \\ I_{FM} = 400 A \\ -\frac{dI_F}{dt} = 50 \frac{A}{\mu s} \end{array} \right\}$	max. 2,2	–	μs	
		–	max. 2,0	μs	
V _F	T _{vj} = 25 °C; (I _F = ...); max.	2,55(1000A)	1,95(1300A)	V	
V _(TO)	T _{vj} = T _{vjmax}	1,1	1,25	V	
r _T	T _{vj} = T _{vjmax}	1	0,5	mΩ	
R _{thjc} R _{thch}	$\left. \begin{array}{l} \text{DSC/SSC (Double-sided cooling/} \\ \text{single-sided cooling)} \end{array} \right\}$	0,075/0,15 0,02/0,04		°C/W °C/W	
T _{vj}		– 40...+ 150	– 40...+140	°C	
T _{stg}		– 40...+ 150	– 40...+140	°C	
F w	SI units	4...5		kN	
	US units	900...1100		lbs.	
		51		g	
Case		E18			

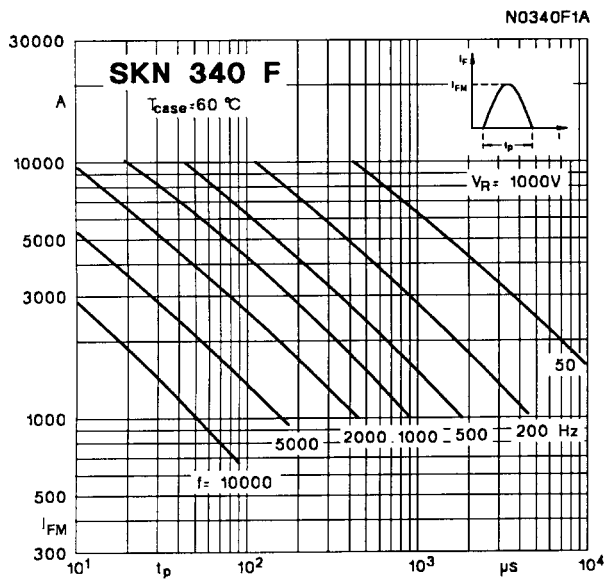


Fig. 1 a Rated sinusoidal peak forward current

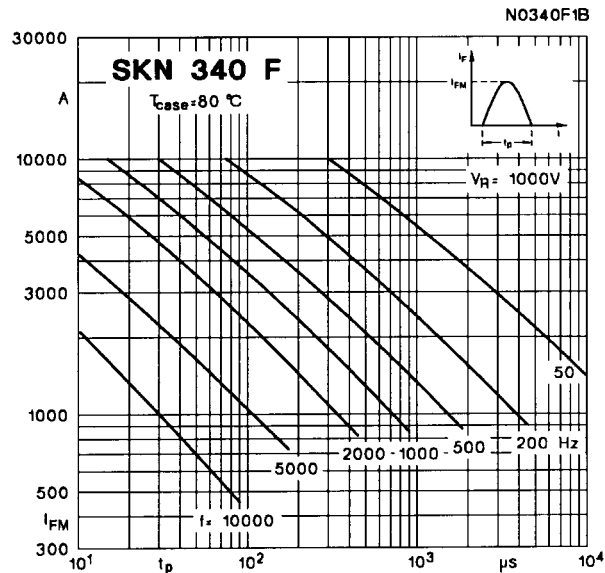


Fig. 1 b Rated sinusoidal peak forward current

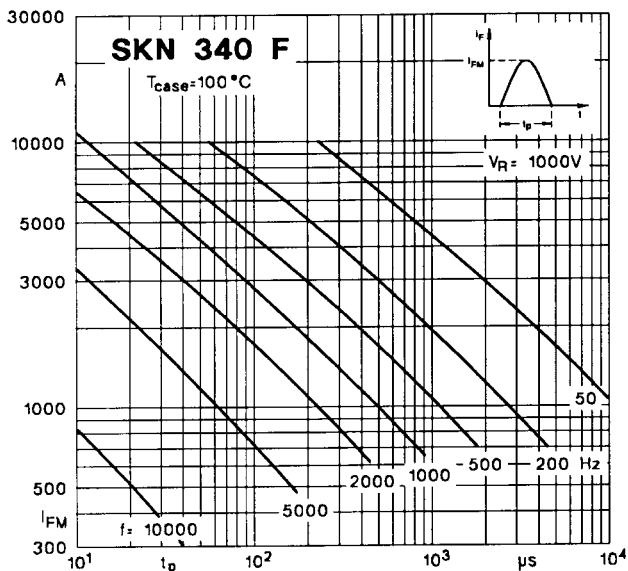


Fig. 1 c Rated sinusoidal peak forward current

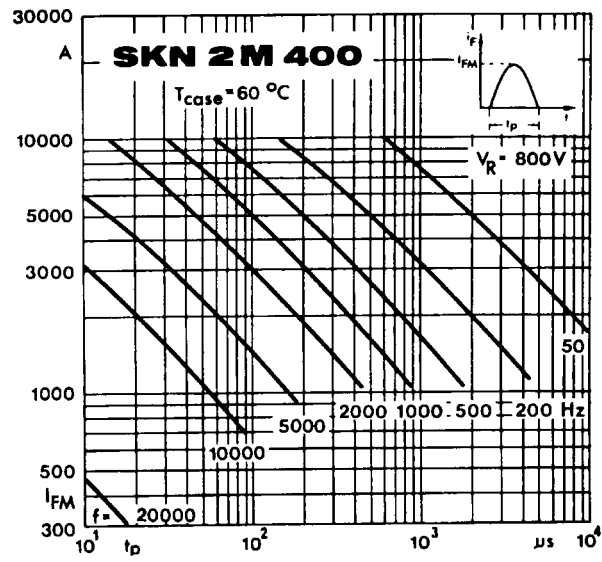


Fig. 1 d Rated sinusoidal peak forward current

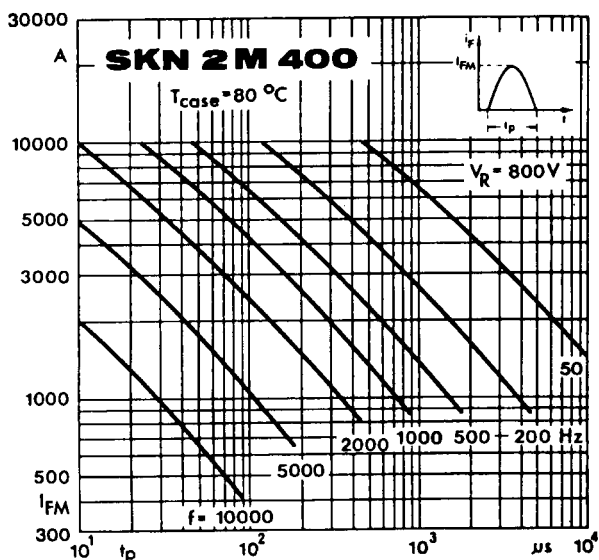


Fig. 1 e Rated sinusoidal peak forward current

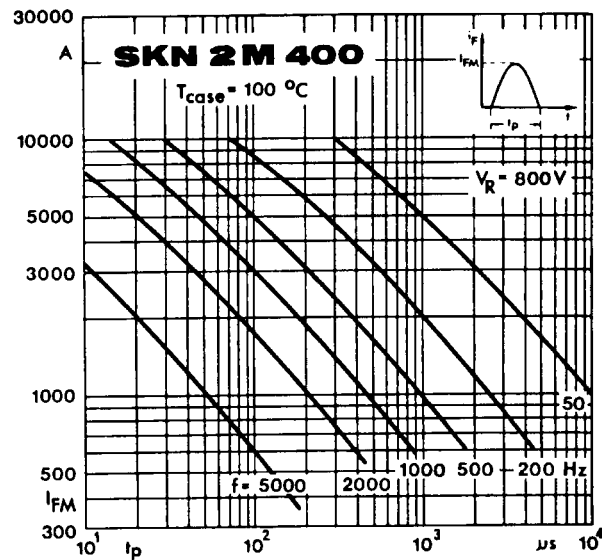


Fig. 1 f Rated sinusoidal peak forward current

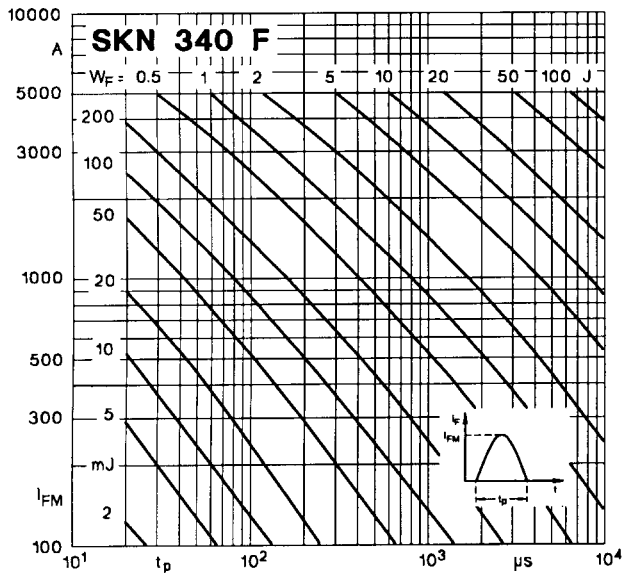


Fig. 2 a Forward energy dissipation, sinusoidal

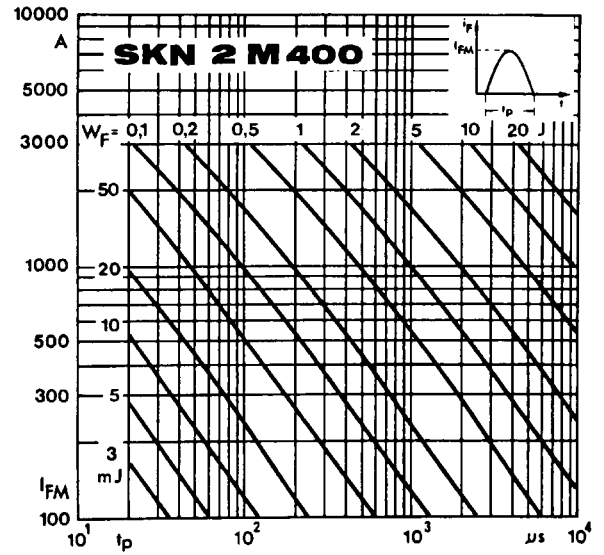


Fig. 2 b Forward energy dissipation, sinusoidal

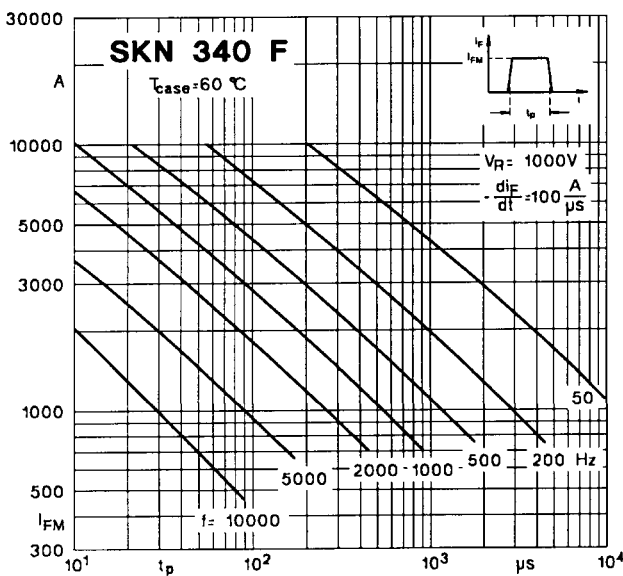


Fig. 3 a Rated rectangular peak forward current

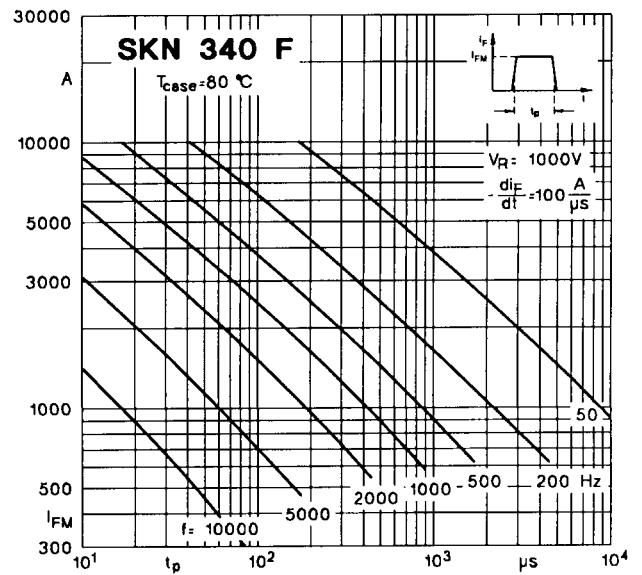


Fig. 3 b Rated rectangular peak forward current

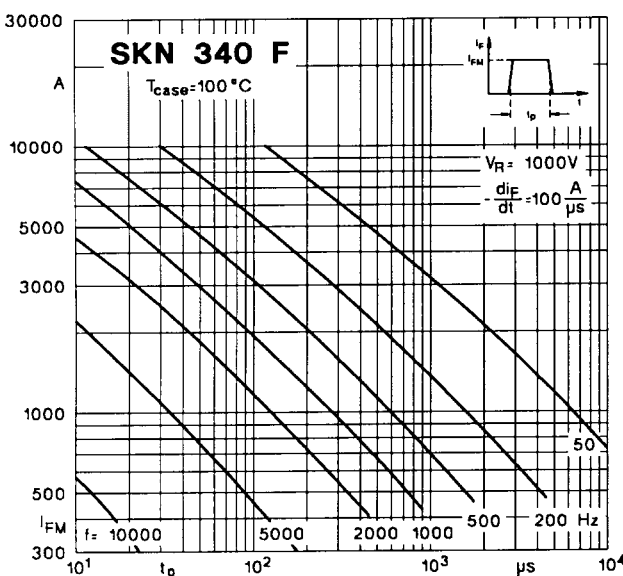


Fig. 3 c Rated rectangular peak forward current

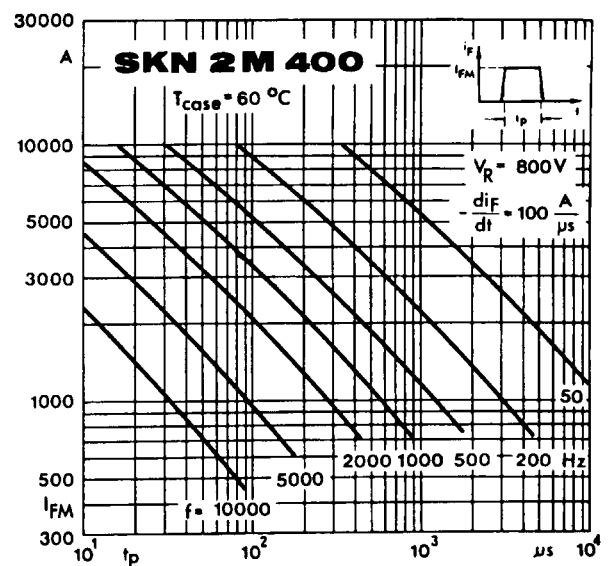


Fig. 3 d Rated rectangular peak forward current

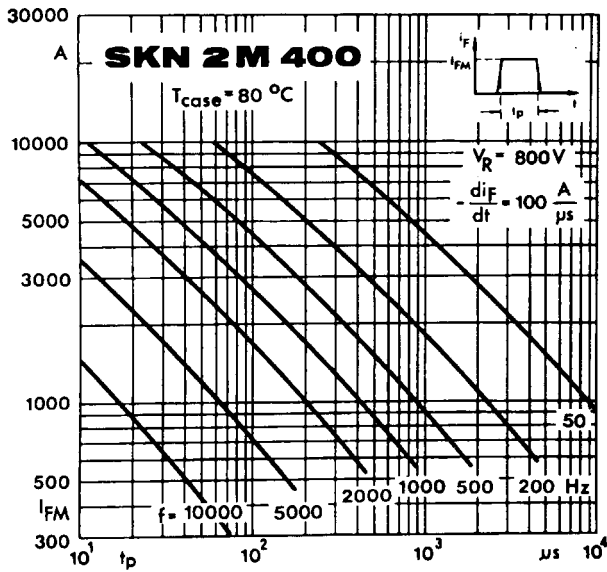


Fig. 3 e Rated rectangular peak forward current

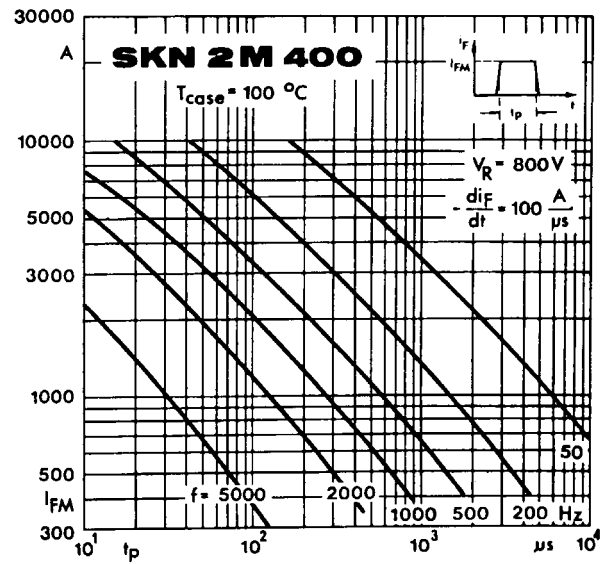


Fig. 3 f Rated rectangular peak forward current

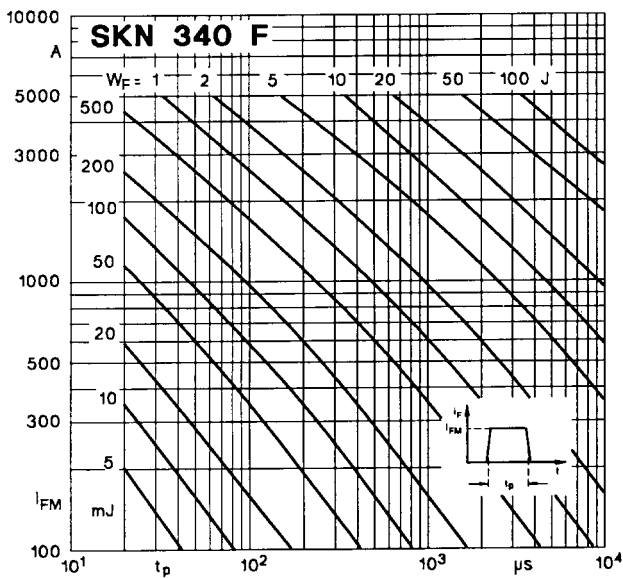


Fig. 4 a Forward energy dissipation, rectangular

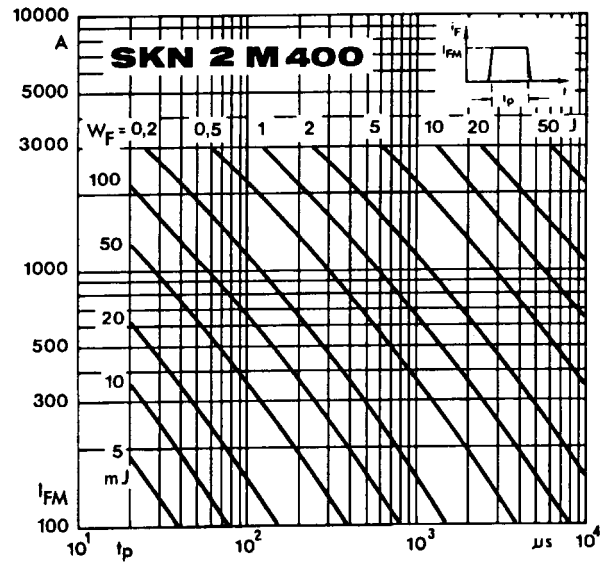


Fig. 4 b Forward energy dissipation, rectangular

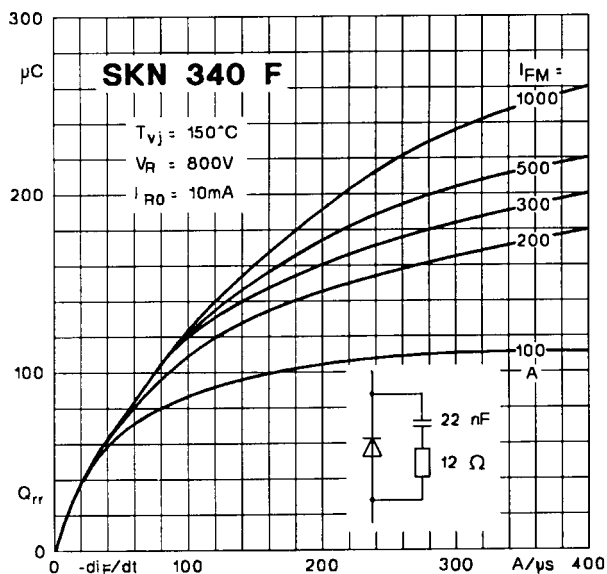


Fig. 5 a Recovered charge

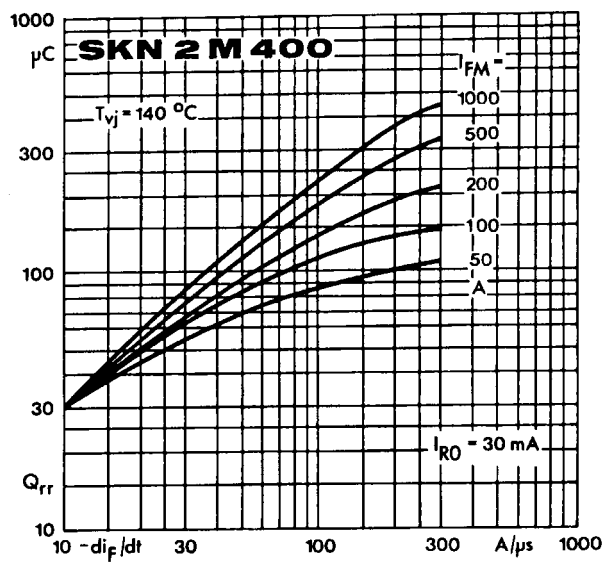


Fig. 5 b Recovered charge

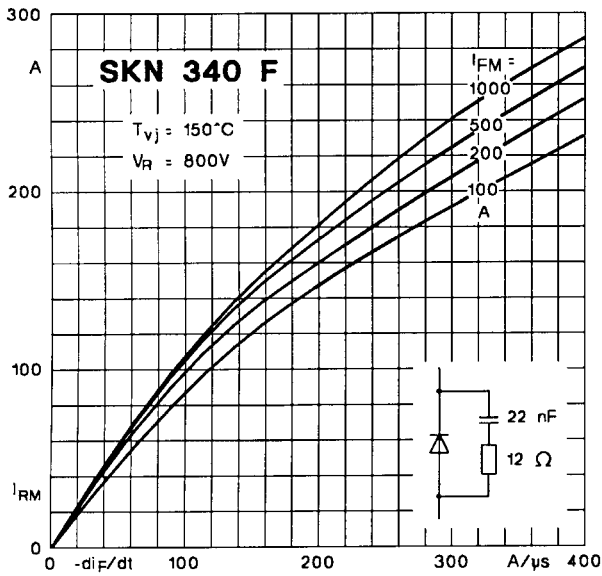


Fig. 6 a Peak reverse recovery current

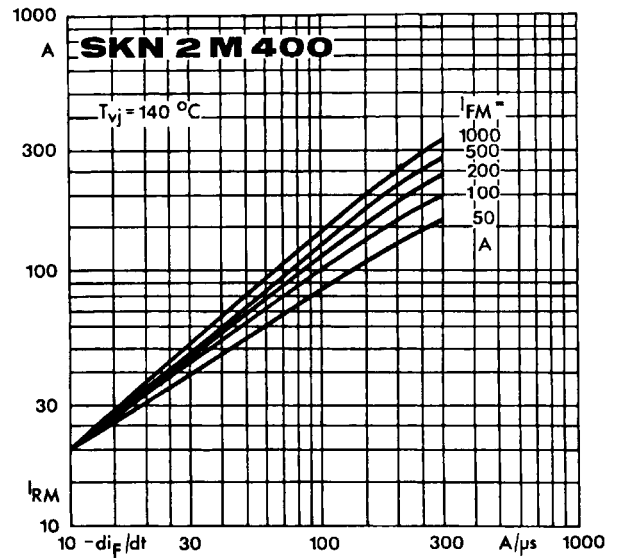


Fig. 6 b Peak reverse recovery current

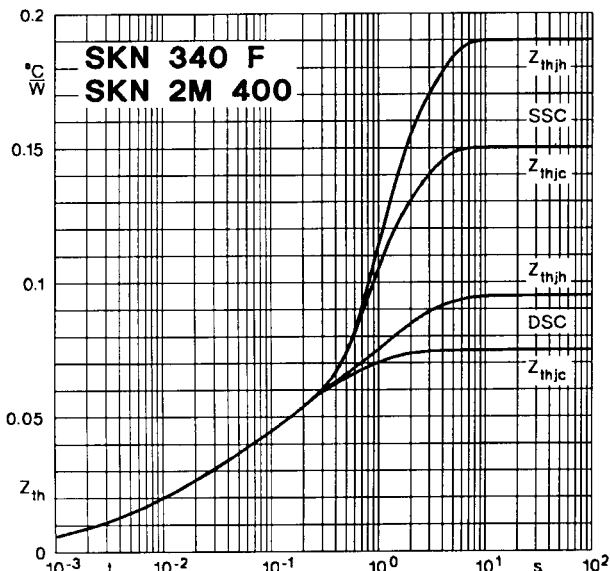


Fig. 7 Transient thermal impedance

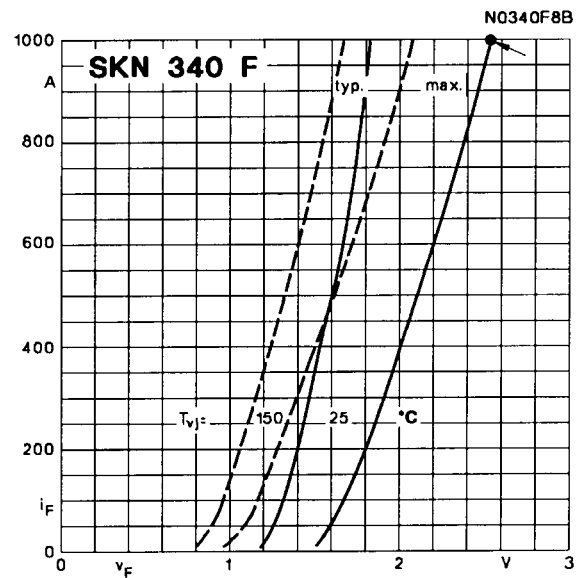


Fig. 8 a Forward characteristics

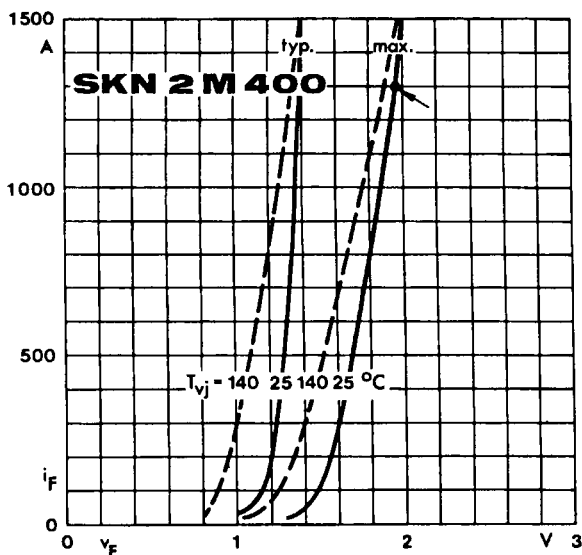


Fig. 8 b Forward characteristics

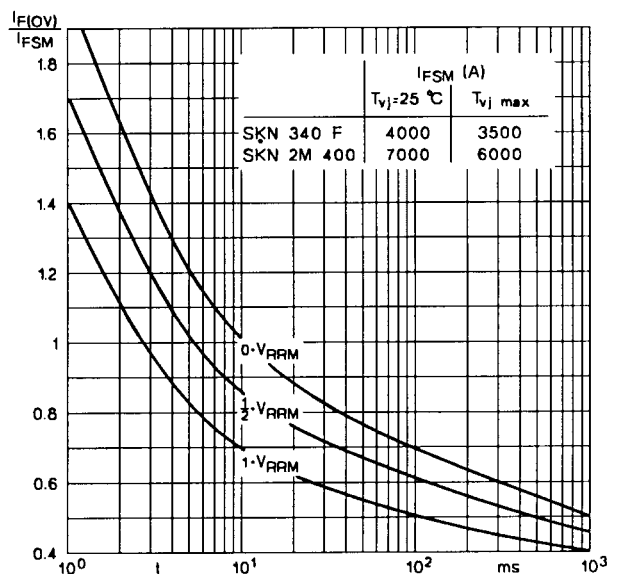
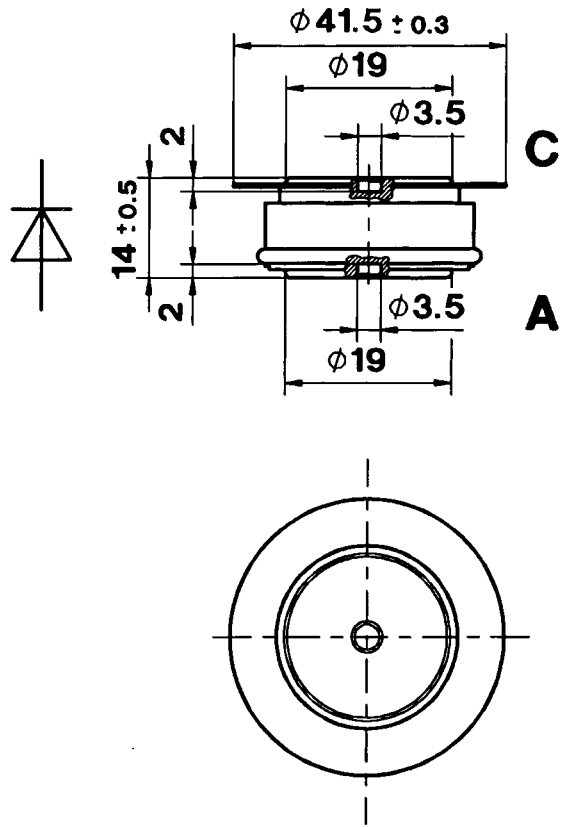


Fig. 9 Rated surge overload current

SKN 340 F
SKN 2 M 400

Case E 18

DIN 41 814: 151 A 2
JEDEC: DO-200 AA



Dimensions in mm