

$V_{RSM}$ $V_{RRM}$ V	$I_{FAV}$ (sin. 180; $T_{case} = 85^\circ C$ ) 420 A
1800	<b>SKN 420 F 18</b>
2000	<b>SKN 420 F 20</b>
2200	<b>SKN 420 F 22</b>
2500	<b>SKN 420 F 25</b>

## Fast Recovery Rectifier Diodes

### SKN 420 F



Symbol	Conditions	SKN 420 F	Units
$I_{FAV}$	sin. 180; DSC; $T_{case} = 85^\circ C$ ; 500 Hz	420	A
	sin. 180; $R_{thja} = 0,05^\circ C/W$ ; $T_{amb} = 35^\circ C$ ; DSC; 500 Hz	415	A
$I_{FSM}$	$T_{vj} = 25^\circ C$ ; 10 ms	7500	A
	$T_{vj} = 125^\circ C$ ; 10 ms	7000	A
$i^2t$	$T_{vj} = 25^\circ C$ ; 8,3 ... 10 ms	281 000	$A^2s$
	$T_{vj} = 125^\circ C$ ; 8,3 ... 10 ms	245 000	$A^2s$
$Q_{rr}$	$T_{vj} = 125^\circ C$ ; $I_{FM} = 300 A$ ; $-\frac{di_F}{dt} = 100 \frac{A}{\mu s}$	550	$\mu C$
$I_{RM}$	$T_{vj} = 125^\circ C$ ; $I_{FM} = 500 A$ ; $-\frac{di_F}{dt} = 100 \frac{A}{\mu s}$	245	A
$I_R$	$T_{vj} = 25^\circ C$ ; $V_R = V_{RRM}$	4	mA
	$T_{vj} = 125^\circ C$ ; $V_R = V_{RRM}$	60	mA
$V_F$	$T_{vj} = 25^\circ C$ ; $I_F = 1500 A$ ; max.	2,4	V
$V_{(TO)}$	$T_{vj} = 125^\circ C$	1,2	V
$r_T$	$T_{vj} = 125^\circ C$	0,8	m $\Omega$
$R_{thjc}$ $R_{thch}$	DSC/SSC (Double-sided cooling/ single-sided cooling)	0,045/0,092	$^\circ C/W$
$T_{vj}$		-40 ... + 125	$^\circ C$
$T_{stg}$		-40 ... + 125	$^\circ C$
F		SI units	5,2...8
	US units	1200...1800	lbs.
w		95	g
Case		E 30	

#### Features

- Small recovered charge
- Soft recovery
- Up to 2500 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

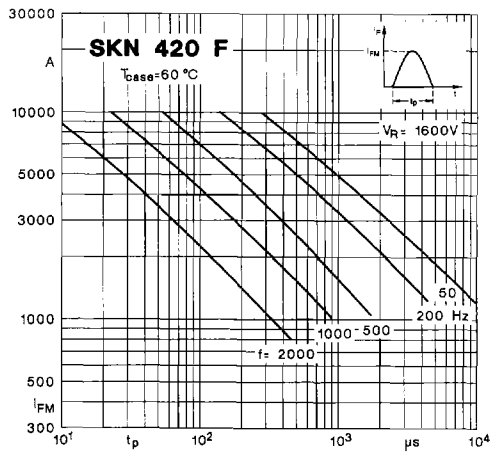


Fig. 1 a Rated sinusoidal peak forward current

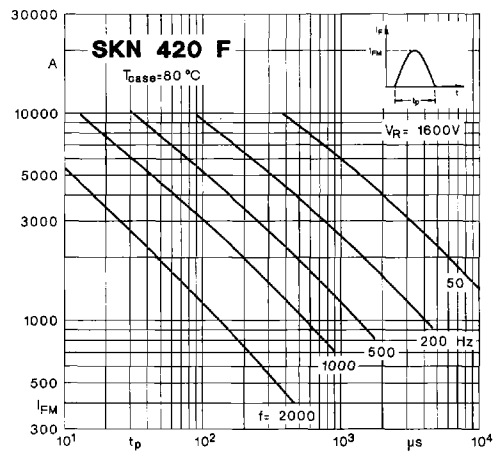


Fig. 1 b Rated sinusoidal peak forward current

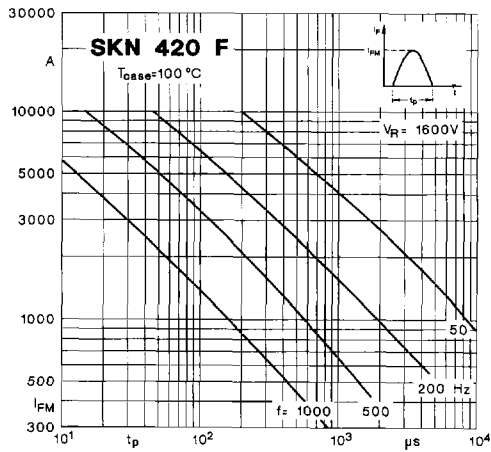


Fig. 1 c Rated sinusoidal peak forward current

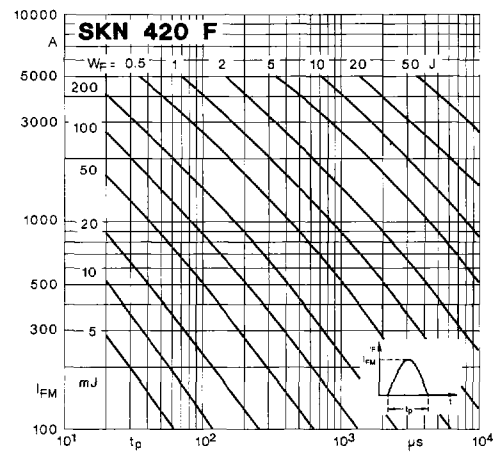


Fig. 2 Forward energy dissipation, sinusoidal

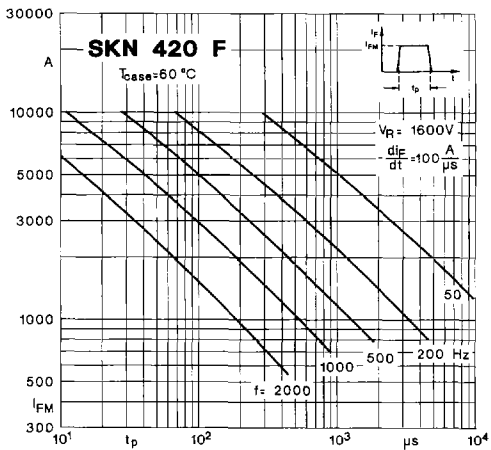


Fig. 3 a Rated rectangular peak forward current

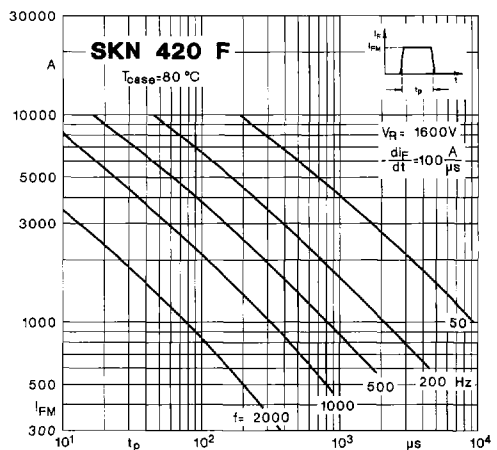


Fig. 3 b Rated rectangular peak forward current

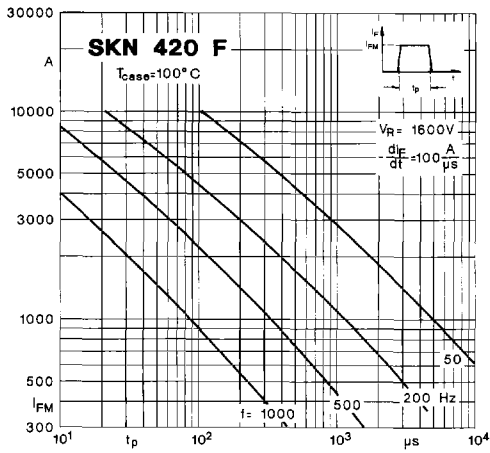


Fig. 3 c Rated rectangular peak forward current

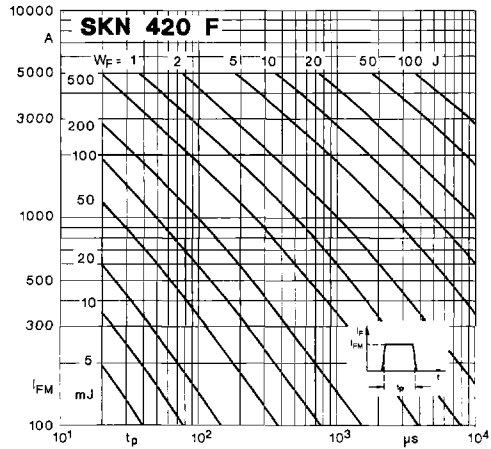


Fig. 4 Forward energy dissipation, rectangular

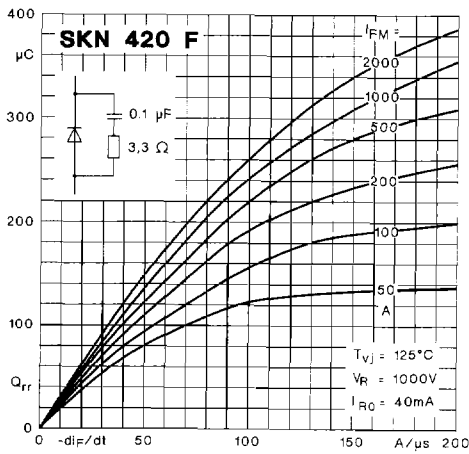


Fig. 5 Recovered charge

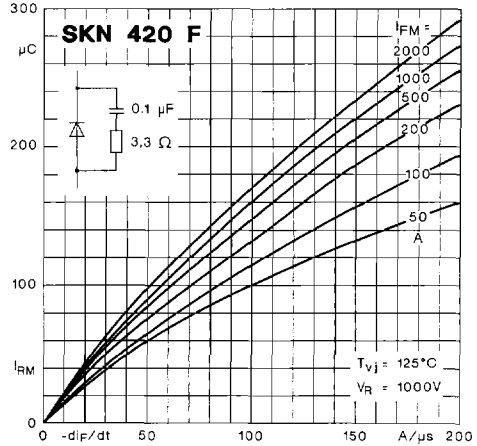


Fig. 6 Peak reverse recovery current

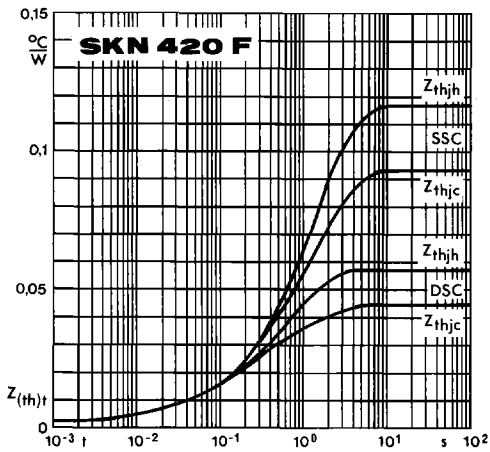


Fig. 7 Transient thermal impedance

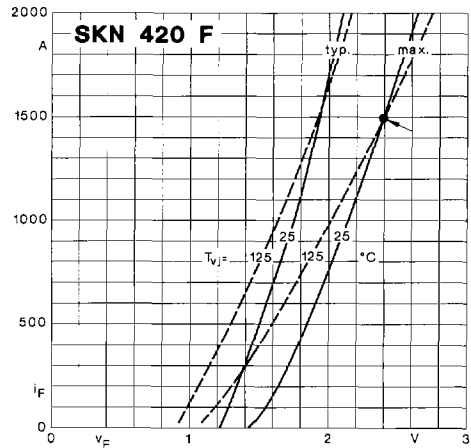


Fig. 8 Forward characteristics

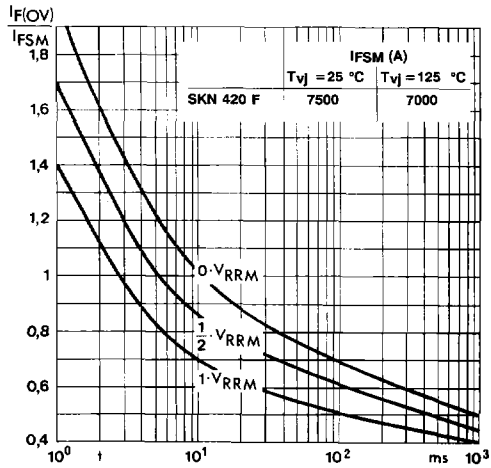
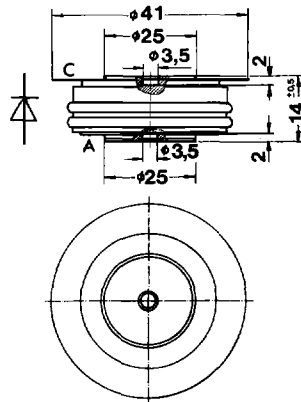


Fig. 9 Rated surge overload current

**SKN 420 F**

Case E 30

DIN 41 814: 152 A 2  
JEDEC: DO-200 AB



Dimensions in mm