

Rectifier Diodes

SKN 2,5 SKNa 2
SKN 5 SKNa 4

V _{RSM} V _{RRM}	I _{FRMS} (maximum values for continuous operation)	
	5 A	10 A
V	I _{FAV} (sin. 180; T _{amb} = 45 °C)	
	2,5 A	5 A
200	–	SKN 5/02
400	SKN 2,5/04	SKN 5/04
800	SKN 2,5/08	SKN 5/08
1200	SKN 2,5/12	SKN 5/12
1600	SKN 2,5/16	SKN 5/16
Avalanche Types		
V _{(BR)min} V	I _{FAV} (sin. 180 °C; T _{amb} = 45 °C)	
	2 A	3,7 A
1300	SKNa 2/13	SKNa 4/13
1700	SKNa 2/17	SKNa 4/17



Symbol	Conditions	SKN2,5	SKNa2	SKN5	SKNa4	Units
I _{FAV}	T _{amb} = 45 °C; sin. 180 rec. 120	2,5	2	5	3,7	A
		2,4	1,9	4,8	3,5	A
I _{FSM}	T _{vj} = 25 °C; 10 ms T _{vj} = T _{vjmax} ; 10 ms	180		190		A
		150		160		A
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms T _{vj} = T _{vjmax} ; 8,3 ... 10 ms	160		180		A ² s
		110		130		A ² s
R _{RSM}	T _{vj} = 150 °C; t _p = 10 μs	–	3	–	3	W
Q _{rr}	T _{vj} = 160 °C; – $\frac{di_F}{dt} = 10 \frac{A}{\mu s}$	typ. 15		typ. 18		μC
I _R	T _{vj} = 25 °C; V _R = V _{RRM} V _R = V _{(BR)min}	0,1	–	0,1	–	mA
		–	4	–	4	μA
	T _{vj} = 180 °C; V _R = V _{RRM}	1,5	–	2,2	–	mA
V _F	T _{vj} = 25 °C; (I _F = . . .); max.	1,2		1,25	1,2	V
		(10)		(15)	(10)	A
V _(TO)	T _{vj} = T _{vjmax}	0,85		0,85	0,85	V
r _T	T _{vj} = T _{vjmax}	30		25	30	mΩ
R _{thja}		55		25		°C/W
R _{thjc}		2,5		1,8		°C/W
T _{vjmin}		– 40		– 40		°C
T _{vjmax}		+180	+150	+180	+150	°C
T _{stg}		– 55 ... + 180				°C
M	SI units	0,8				Nm
	US units	7				lb.in.
a		5 · 9,81				m/s ²
w	approx.	6		20		g
RC	P _R = 1 W	500				Ω
		0,02				μF
R _p	P _R = 2 W	270				kΩ
Case		E 5		E 6		

Features

- Reverse voltages up to 1600 V, Avalanche types up to 1700 V
- Hermetic metal cases with glass insulators
- Anode side threaded stud ISO M4 (SKN 2,5, SKNa 2 with lead wire in addition)
- SKN: anode to stud
- SKN 5, SKNa 4 with integrated cooling fins

Typical Applications

- All-purpose rectifier diodes
 - For severe ambient conditions
- #### Avalanche Types
- DC supply for magnets or solenoids (brakes, valves, etc.)
 - Field coil supply for DC motos
 - Series connections for high voltage applications (dust precipitators)

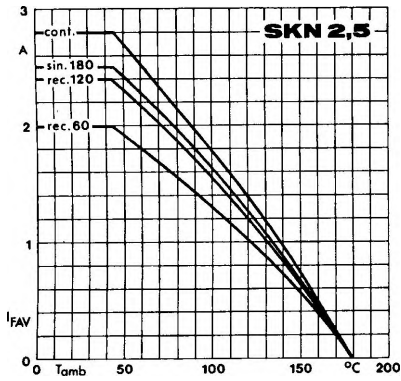


Fig. 4 a Rated forward current vs. ambient temperature

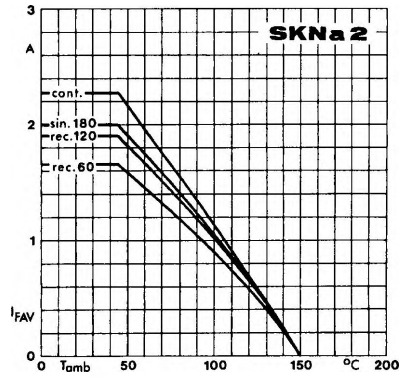


Fig. 4 b Rated forward current vs. ambient temperature

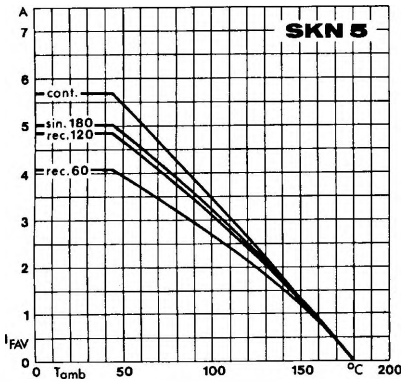


Fig. 4 c Rated forward current vs. ambient temperature

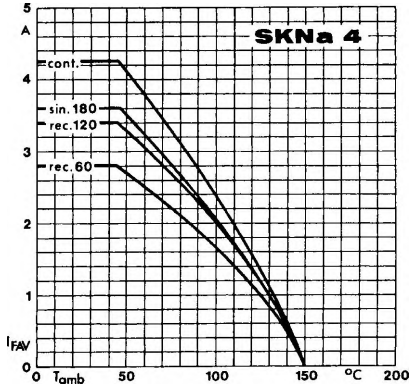


Fig. 4 d Rated forward current vs. ambient temperature

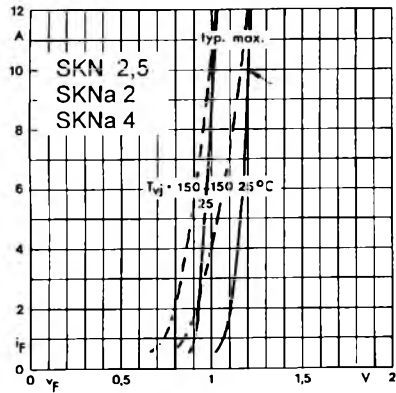


Fig. 6 a Forward characteristics

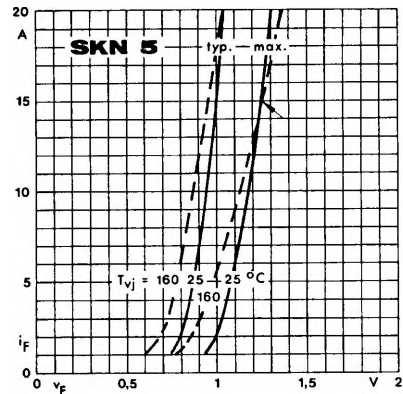


Fig. 6 b Forward characteristics

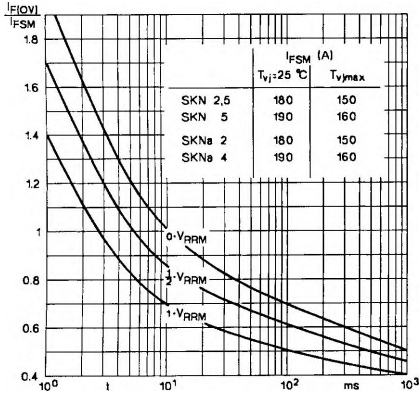


Fig. 7 Surge overload current vs. time

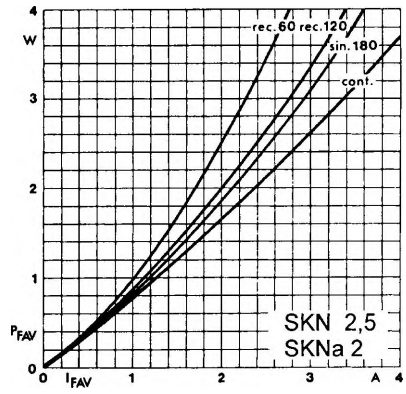


Fig. 8 a Power dissipation vs. forward current

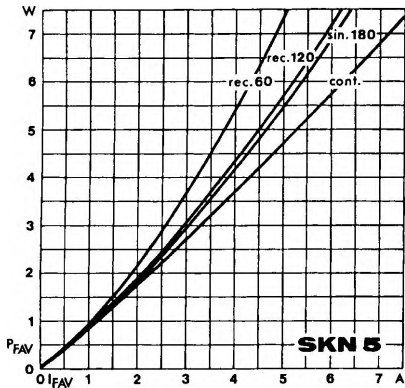


Fig. 8 b Power dissipation vs. forward current

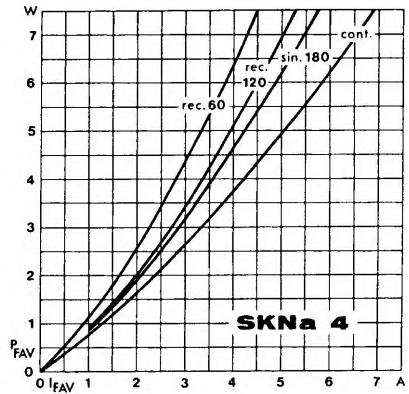


Fig. 8 c Power dissipation vs. forward current

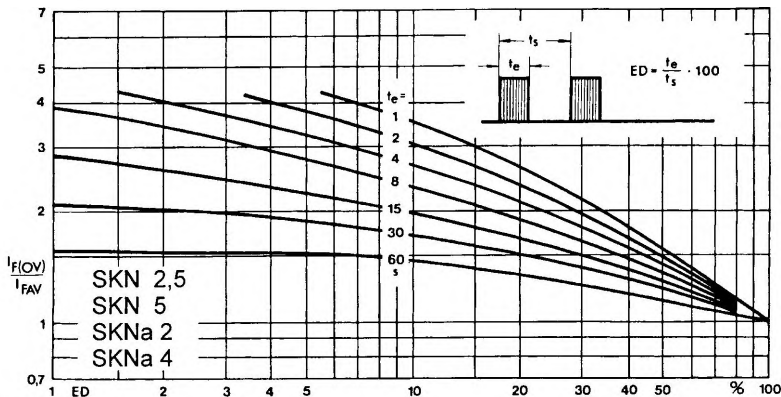


Fig. 9 Rated overload current vs. duty cycle

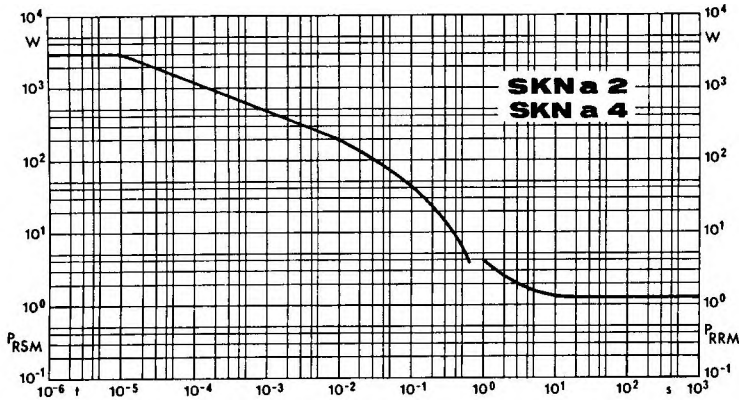


Fig. 11 Rated reverse power dissipation vs. time

