

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; $T_{amb} = 45\text{ °C}$)	
	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; $T_{amb} = 45\text{ °C}$)	
	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}	$T_{amb} = 45\text{ °C}$; sin. 180 rec. 120	2,5 2,4	2 1,9	5 4,8	3,7 3,5	A A
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms $T_{vj} = T_{vjmax}$; 10 ms	180 150		190 160		A A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms $T_{vj} = T_{vjmax}$; 8,3 ... 10 ms	160 110		180 130		A^2s A^2s
R_{RSM}	$T_{vj} = 150\text{ °C}$; $t_p = 10\text{ }\mu s$	–	3	–	3	W
Q_{rr}	$T_{vj} = 160\text{ °C}$; $-\frac{dI_F}{dt} = 10\frac{A}{\mu s}$	typ. 15		typ. 18		μC
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$ $V_R = V_{(BR)min}$ $T_{vj} = 180\text{ °C}$; $V_R = V_{RRM}$	0,1 – 1,5	– 4 –	0,1 – 2,2	– 4 –	mA μA mA
V_F	$T_{vj} = 25\text{ °C}$; ($I_F = \dots$); max.	1,2 (10)		1,25 (15)	1,2 (10)	V A
$V_{(TO)}$	$T_{vj} = T_{vjmax}$	0,85		0,85	0,85	V
r_T	$T_{vj} = T_{vjmax}$	30		25	30	m Ω
R_{thja}		55		25		$^{\circ}C/W$
R_{thjc}		2,5		1,8		$^{\circ}C/W$
T_{vjmin}		– 40		– 40		$^{\circ}C$
T_{vjmax}		+180	+150	+180	+150	$^{\circ}C$
T_{stg}		– 55 ... + 180				$^{\circ}C$
M	SI units	0,8				Nm
a	US units	7				lb.in.
w	approx.	5 · 9,81				m/s ²
		6		20		g
RC	$P_R = 1\text{ W}$	500				Ω
		0,02				μF
R_p	$P_R = 2\text{ W}$	270				k Ω
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
- DC supply for magnets or solenoids (brakes, valves, etc.)
- Field coil supply for DC motos
- Series connections for high voltage applications (dust precipitators)

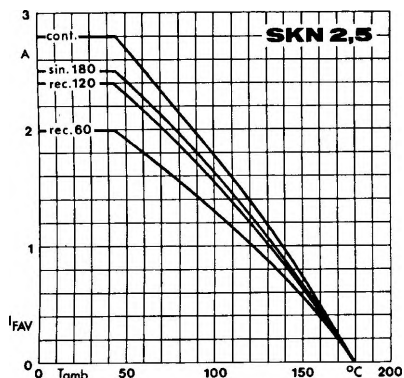


Fig. 4 a Rated forward current vs. ambient temperature

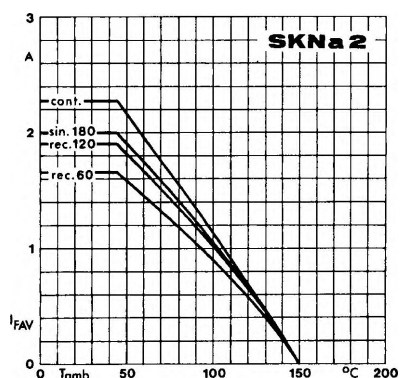


Fig. 4 b Rated forward current vs. ambient temperature

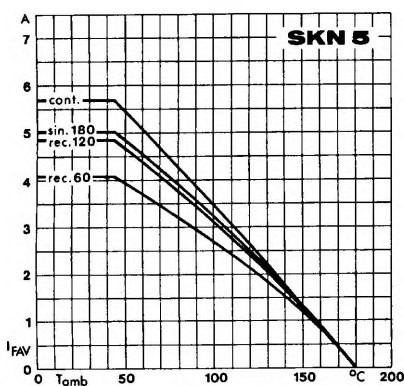


Fig. 4 c Rated forward current vs. ambient temperature

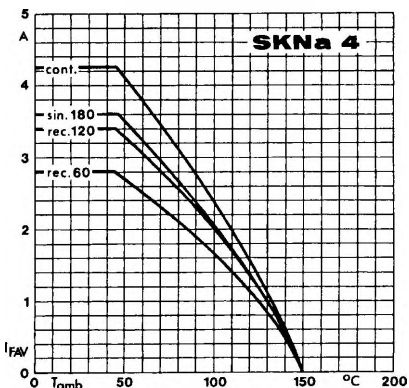


Fig. 4 d Rated forward current vs. ambient temperature

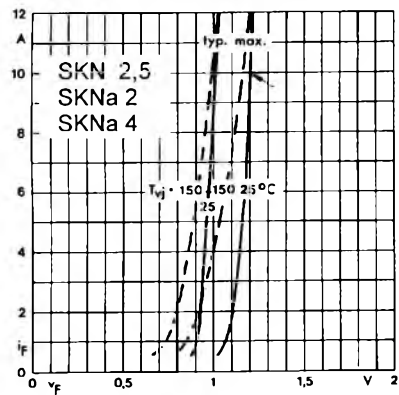


Fig. 6 a Forward characteristics

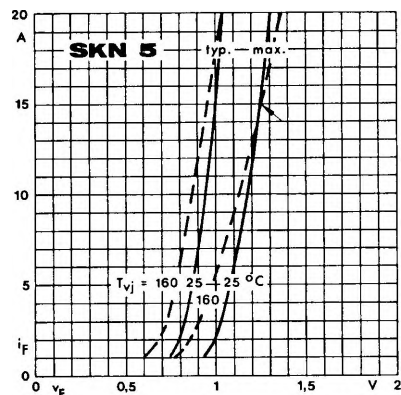


Fig. 6 b Forward characteristics

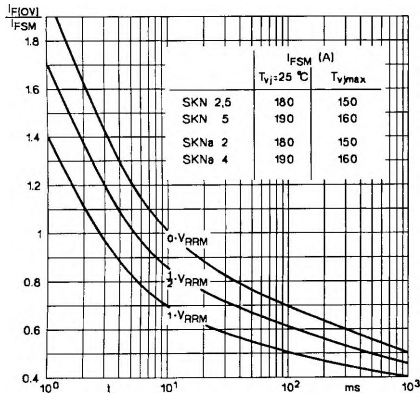


Fig. 7 Surge overload current vs. time

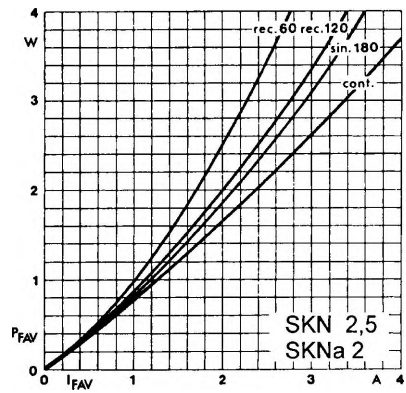


Fig. 8 a Power dissipation vs. forward current

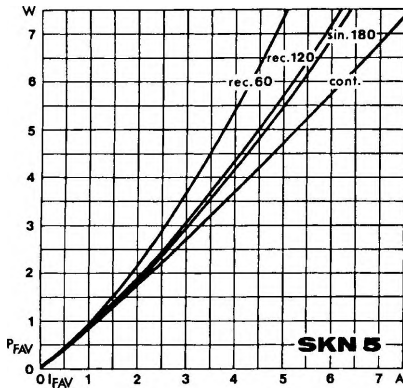


Fig. 8 b Power dissipation vs. forward current

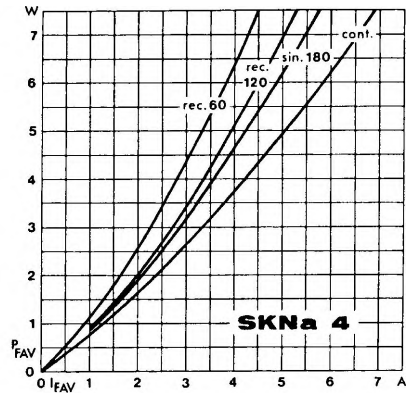


Fig. 8 c Power dissipation vs. forward current

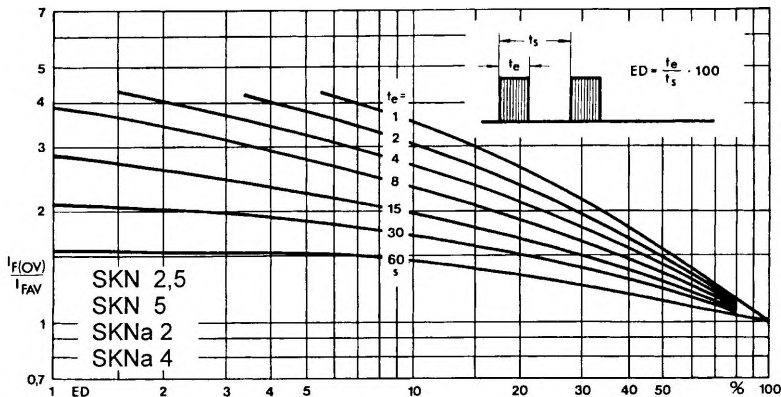


Fig. 9 Rated overload current vs. duty cycle

