

## 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	–	<b>SKN 5/02</b>
400	<b>SKN 2,5/04</b>	<b>SKN 5/04</b>
800	<b>SKN 2,5/08</b>	<b>SKN 5/08</b>
1200	<b>SKN 2,5/12</b>	<b>SKN 5/12</b>
1600	<b>SKN 2,5/16</b>	<b>SKN 5/16</b>
<b>Avalanche Types</b>		
$V_{(BR)min}$ V	$I_{FAV}$ (sin. 180 °C; $T_{amb} = 45\text{ °C}$ )	
	2 A	3,7 A
1300	<b>SKNa 2/13</b>	<b>SKNa 4/13</b>
1700	<b>SKNa 2/17</b>	<b>SKNa 4/17</b>

Symbol	Conditions	SKN2,5	SKNa2	SKN5	SKNa4	Units
$I_{FAV}$	$T_{amb} = 45\text{ °C}$ ; sin. 180 rec. 120	2,5	2	5	3,7	A
		2,4	1,9	4,8	3,5	A
$I_{FSM}$	$T_{vj} = 25\text{ °C}$ ; 10 ms $T_{vj} = T_{vjmax}$ ; 10 ms	180		190		A
		150		160		A
$i^2t$	$T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms $T_{vj} = T_{vjmax}$ ; 8,3 ... 10 ms	160		180		A <sup>2</sup> s
		110		130		A <sup>2</sup> s
$R_{RSM}$	$T_{vj} = 150\text{ °C}$ ; $t_p = 10\text{ }\mu\text{s}$	–	3	–	3	W
$Q_{rr}$	$T_{vj} = 160\text{ °C}$ ; $-\frac{di_F}{dt} = 10\frac{\text{A}}{\mu\text{s}}$	typ. 15		typ. 18		$\mu\text{C}$
$I_R$	$T_{vj} = 25\text{ °C}$ ; $V_R = V_{RRM}$ $V_R = V_{(BR)min}$ $T_{vj} = 180\text{ °C}$ ; $V_R = V_{RRM}$	0,1	–	0,1	–	mA
		–	4	–	4	$\mu\text{A}$
		1,5	–	2,2	–	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 $\Omega$
$R_{thja}$		55		25		$^{\circ}\text{C/W}$
$R_{thjc}$		2,5		1,8		$^{\circ}\text{C/W}$
$T_{vjmin}$		–40		–40		$^{\circ}\text{C}$
$T_{vjmax}$		+180	+150	+180	+150	$^{\circ}\text{C}$
$T_{stg}$		–55 ... +180				$^{\circ}\text{C}$
M	SI units	0,8				Nm
a	US units	7				lb.in.
w	approx.	5 · 9,81				m/s <sup>2</sup>
		6		20		g
RC	$P_R = 1\text{ W}$	500				$\Omega$
		0,02				$\mu\text{F}$
$R_p$	$P_R = 2\text{ W}$	270				k $\Omega$
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)

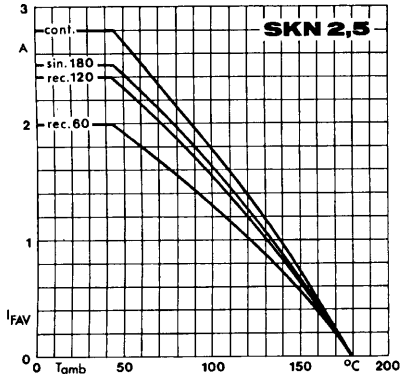


Fig. 4 a Rated forward current vs. ambient temperature

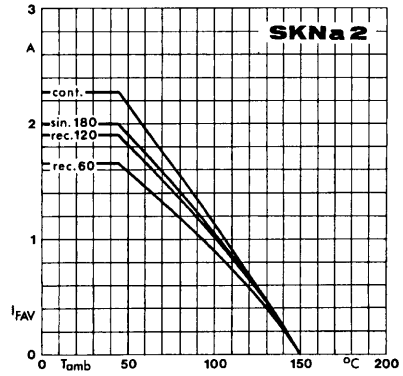


Fig. 4 b Rated forward current vs. ambient temperature

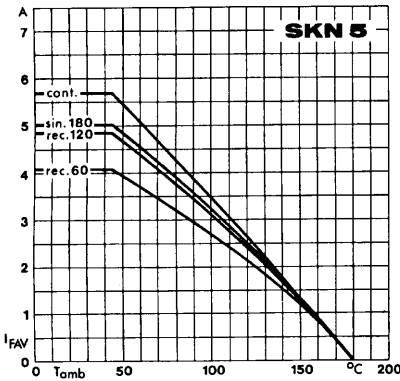


Fig. 4 c Rated forward current vs. ambient temperature

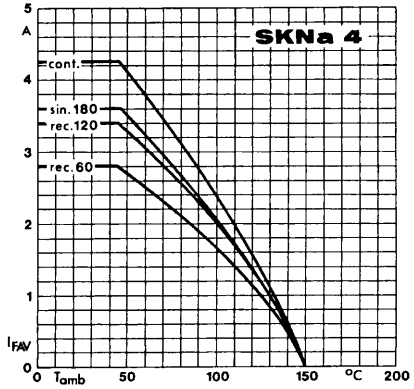


Fig. 4 d Rated forward current vs. ambient temperature

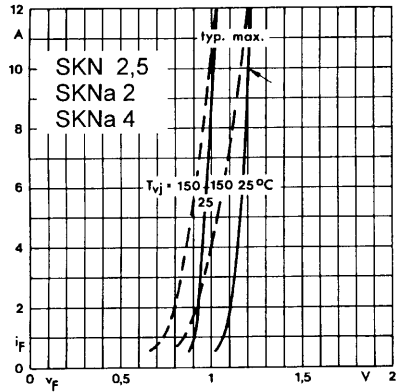


Fig. 6 a Forward characteristics

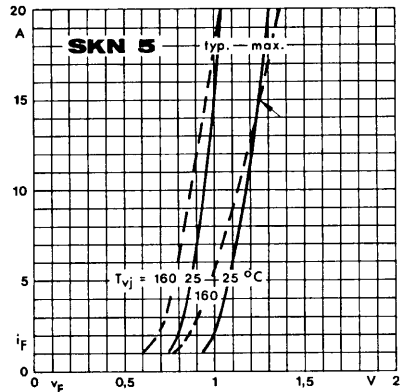


Fig. 6 b Forward characteristics

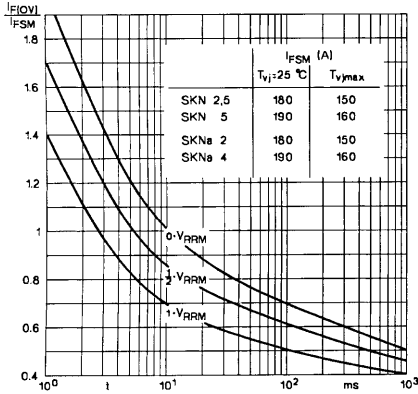


Fig. 7 Surge overload current vs. time

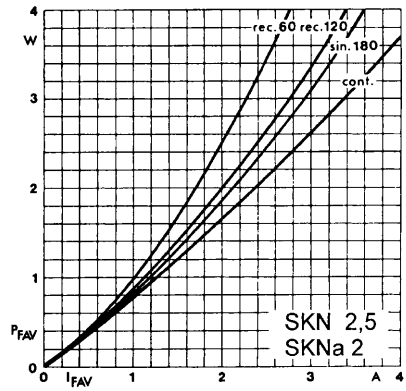


Fig. 8 a Power dissipation vs. forward current

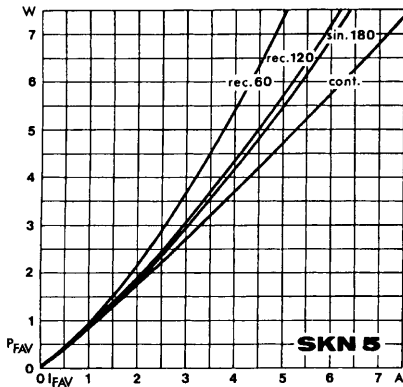


Fig. 8 b Power dissipation vs. forward current

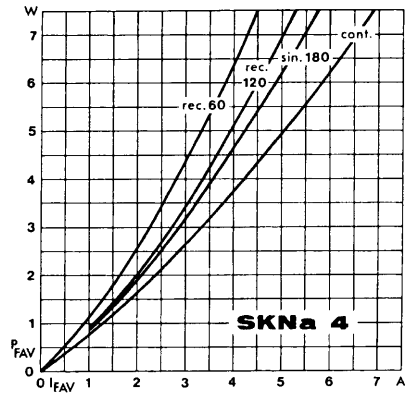


Fig. 8 c Power dissipation vs. forward current

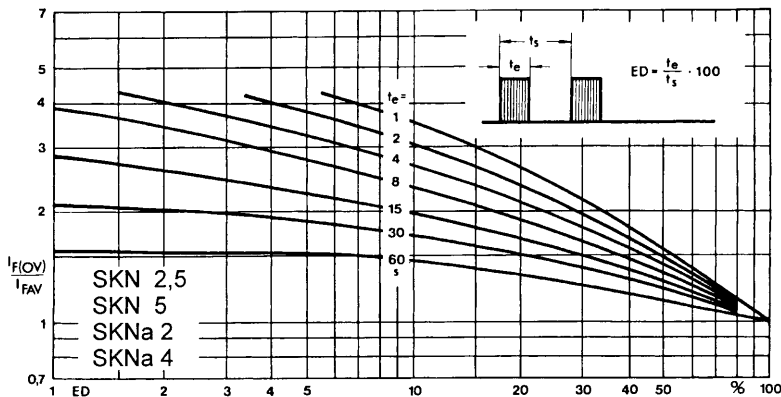


Fig. 9 Rated overload current vs. duty cycle

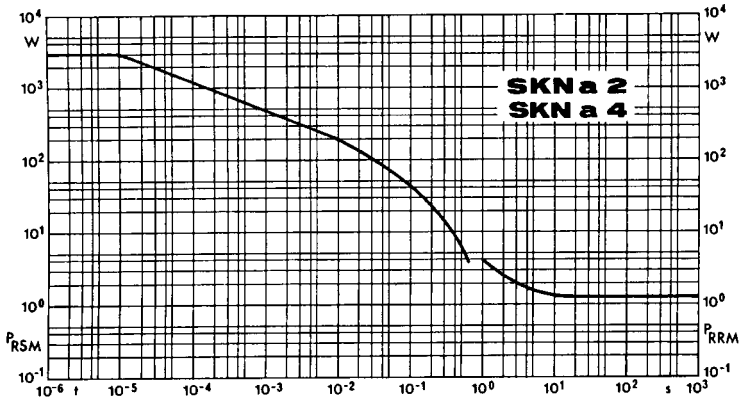


Fig. 11 Rated reverse power dissipation vs. time

