

Rectifier Diodes

SKN 20 **SKR 20**
SKNa 20
SKN 26 **SKR 26**



V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operations)			
	40 A			
V	I_{FAV} (sin. 180; $T_{case} = 100\text{ °C}$)			
	25 A			
400	SKN 20/04	SKR 20/04	SKN 26/04	SKR 26/04*
800	SKN 20/08	SKR 20/08	SKN 26/08	SKR 26/08*
1200	SKN 20/12	SKR 20/12	SKN 26/12	SKR 26/12*
1400	SKN 20/14	SKR 20/14	SKN 26/14	SKR 26/14*
1600	SKN 20/16	SKR 20/16	SKN 26/16	SKR 26/16*
Avalanche Types				
$V_{(BR) min}$ V	$I_{FAV} = 25\text{ A}$ ($T_{case} = 73\text{ °C}$)			
1300	SKNa 20/13			
1700	SKNa 20/17			

Symbol	Conditions	SKN 20 SKR 20	SKNa 20	SKN 26 SKR 26	Units
I_{FAV}	sin. 180; $T_{case} = 73\text{ °C}$	–	20	–	A
	$= 100\text{ °C}$	25	18	25	A
	$= 125\text{ °C}$	20	11	20	A
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms	375			A
	$T_{vj} = T_{vjmax}$; 10 ms	320			A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms	700			A ² s
	$T_{vj} = T_{vjmax}$; 8,3 ... 10 ms	510			A ² s
P_{RSM}	$T_{vj} > 250\text{ °C}$, $t_p = 10\text{ }\mu\text{s}$	–	6	–	kW
Q_{rr}	$T_{vj} = 160\text{ °C}$; $-di_f/dt = 10\text{ A}/\mu\text{s}$	typ. 20			μC
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$	0,3	–	0,3	mA
	$V_R = V_{(BR)min}$	–	10	–	μA
	$T_{vj} = 180\text{ °C}$; $V_R = V_{RRM}$	4	–	4	mA
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 60\text{ A}$; max.	1,55			V
$V_{(TO)}$	$T_{vj} = T_{vjmax}$	0,85			V
r_T	$T_{vj} = T_{vjmax}$	11			m Ω
R_{thjc}		2			$^{\circ}\text{C}/\text{W}$
R_{thch}		1			$^{\circ}\text{C}/\text{W}$
T_{vjmin}		– 40			$^{\circ}\text{C}$
T_{vjmax}		180	150	180	$^{\circ}\text{C}$
T_{stg}		– 55 ... + 180			$^{\circ}\text{C}$
M	SI units	2,0			Nm
	US units	18			lb.in.
a		5 · 9,81			m/s ²
w	approx.	10		8	g
RC	$P_R = 1\text{ W}$	0,05			μF
		200			Ω
R_p	$P_R = 4\text{ W}$	150			k Ω
Case		E 9		E 8	

Features

- Reverse voltages up to 1600 V, Avalanche Types to 1700 V
- Hermetic metal cases with glass insulators
- Threaded studs ISO M6 (SKR 26 also 10 – 32 UNF)
- **SKN**: anode to stud
- **SKR**: cathode to stud

Typical Applications

- All-purpose mean power rectifier diodes
- Cooling via metal plates or heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Avalanche Types**
- DC supply for magnets or solenoids (brakes, valves, etc.)
- Field coil supply for DC motors
- Series connections for high voltage applications

* available with UNF thread 10 – 32 UNF 2 A; e.g. SKR 26/12 UNF

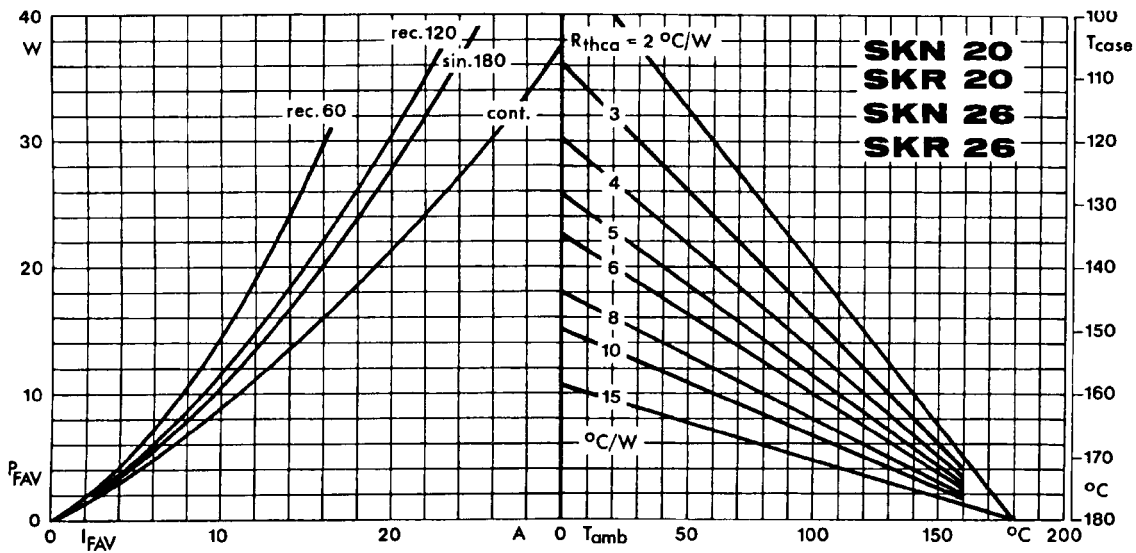


Fig. 1a Power dissipation vs. forward current and case temperature

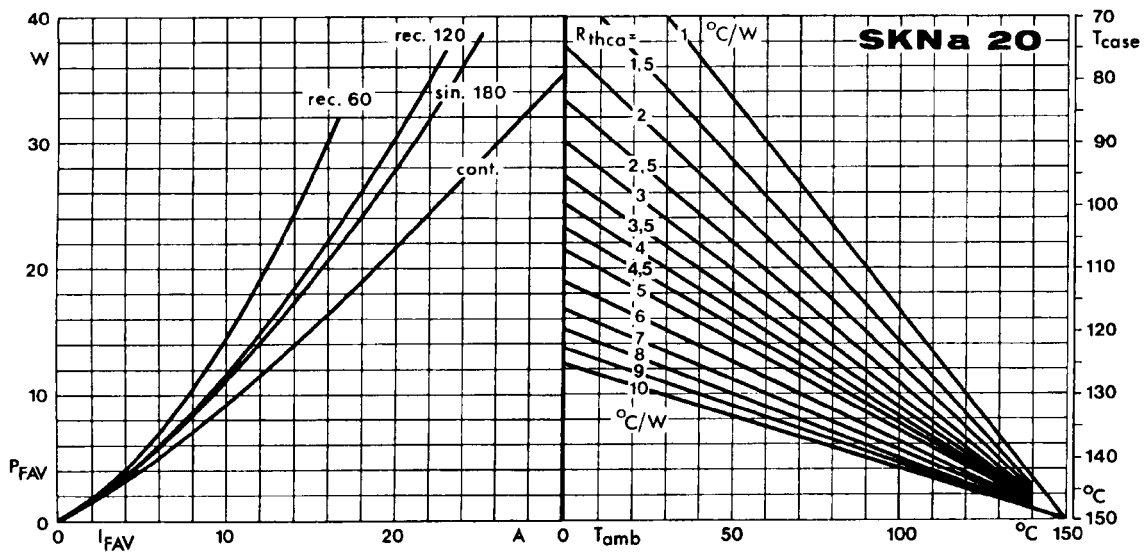


Fig. 1b Power dissipation vs. forward current and case temperature

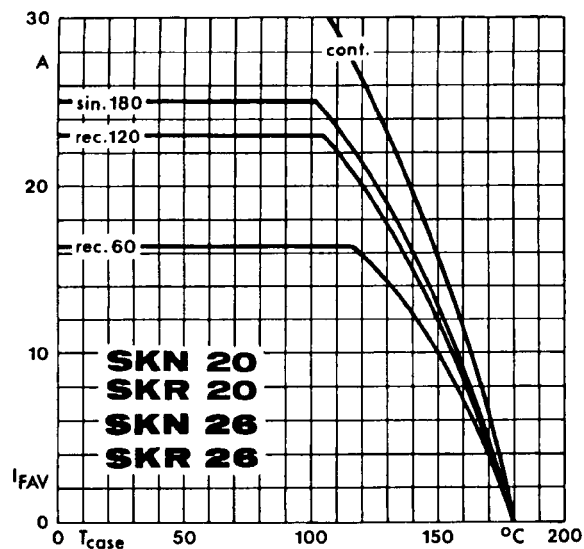


Fig. 3a Rated forward current vs. case temperature

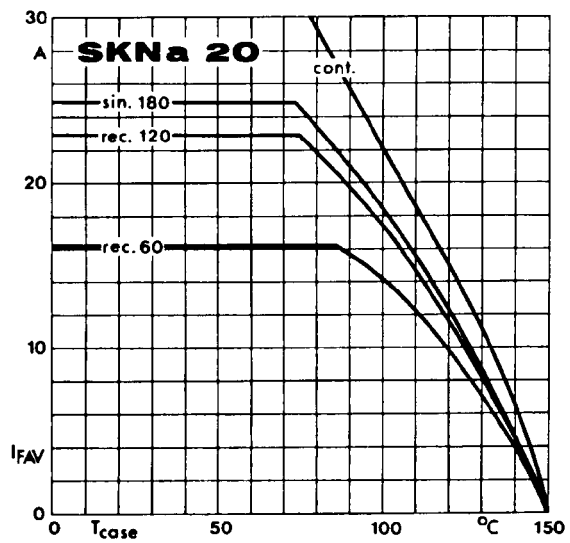


Fig. 3 b Rated forward current vs. case temperature

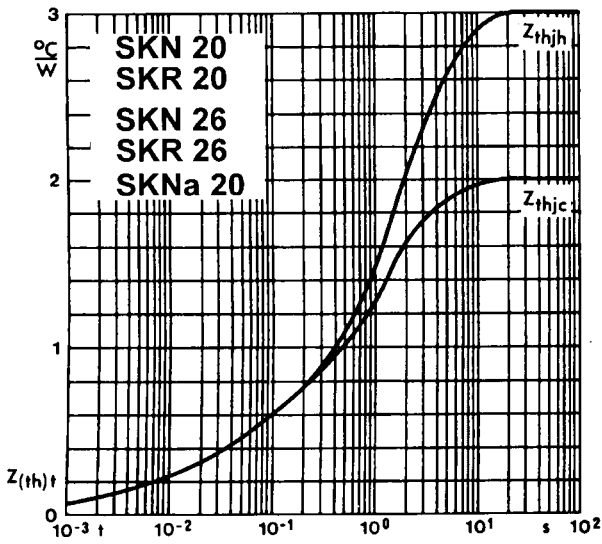


Fig. 5 Transient thermal impedance vs. time

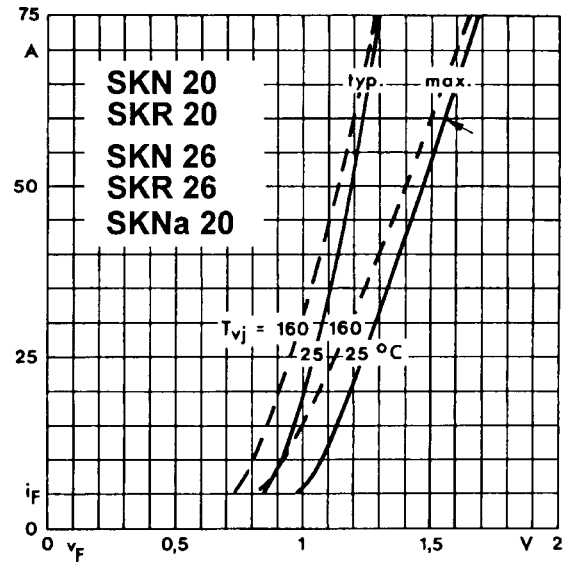


Fig. 6 Forward characteristics

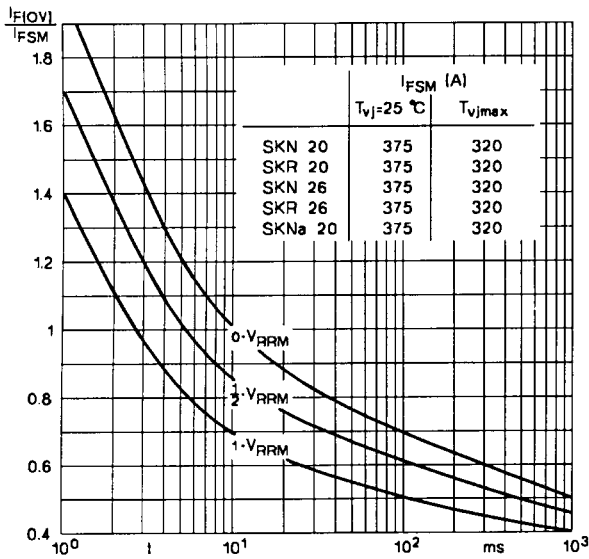


Fig. 7 Surge overload current vs. time

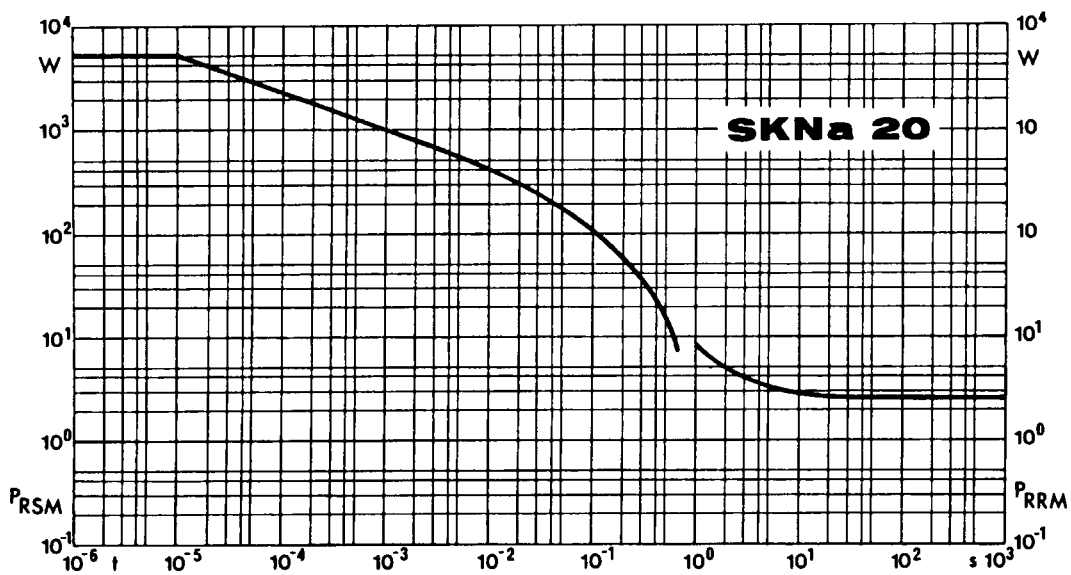


Fig. 11 Rated reverse power dissipation vs. time

