

# SKN 20



Stud Diode

V <sub>RSM</sub> V	V <sub>RRM</sub> V	I <sub>FRMS</sub> = 40 A (maximum value for continuous operation)	
		I <sub>FAV</sub> = 20 A (sin. 180 °; T <sub>c</sub> = 125 °C)	
400	400	SKN 20/04	SKR 20/04
800	800	SKN 20/08	SKR 20/08
1200	1200	SKN 20/12	SKR 20/12
1400	1400	SKN 20/14	SKR 20/14
1600	1600	SKN 20/16	SKR 20/16

## Rectifier Diode

SKN 20

SKR 20

### Features

- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M6
- 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
- Recommended snubber network:  
RC: 0,05 μF, 200 Ω (P<sub>R</sub> = 1 W),  
R<sub>p</sub> = 150 kΩ (P<sub>R</sub> = 4 W)

Symbol	Conditions	Values	Units
I <sub>FAV</sub>	sin. 180; T <sub>c</sub> = 100 °C	25	A
I <sub>D</sub>	K 9; T <sub>a</sub> = 45 °C; B2 / B6	20 / 29	A
	K 3; T <sub>a</sub> = 45 °C; B2 / B6	35 / 50	A
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms	375	A
	T <sub>vj</sub> = 180 °C; 10 ms	320	A
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms	700	A <sup>2</sup> s
	T <sub>vj</sub> = 180 °C; 8,3 ... 10 ms	510	A <sup>2</sup> s
V <sub>F</sub>	T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 60 A	max. 1,55	V
V <sub>(TO)</sub>	T <sub>vj</sub> = 180 °C	max. 0,85	V
r <sub>T</sub>	T <sub>vj</sub> = 180 °C	max. 11	mΩ
I <sub>RD</sub>	T <sub>vj</sub> = 180 °C; V <sub>RD</sub> = V <sub>RRM</sub>	max. 4	mA
Q <sub>rr</sub>	T <sub>vj</sub> = 160 °C; - di <sub>F</sub> /dt = 10 A/μs	20	μC
R <sub>th(j-c)</sub>		2	K/W
R <sub>th(c-s)</sub>		1	K/W
T <sub>vj</sub>		- 40 ... + 180	°C
T <sub>stg</sub>		- 55 ... + 180	°C
V <sub>isol</sub>		-	V~
M <sub>s</sub>	to heatsink	2,0	Nm
a		5 * 9,81	m/s <sup>2</sup>
m	approx.	10	g
Case		E 9	



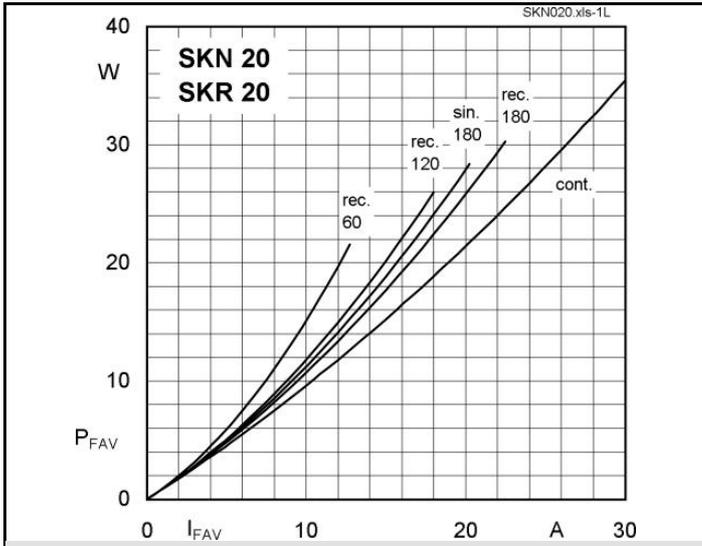


Fig. 1L Power dissipation vs. forward current

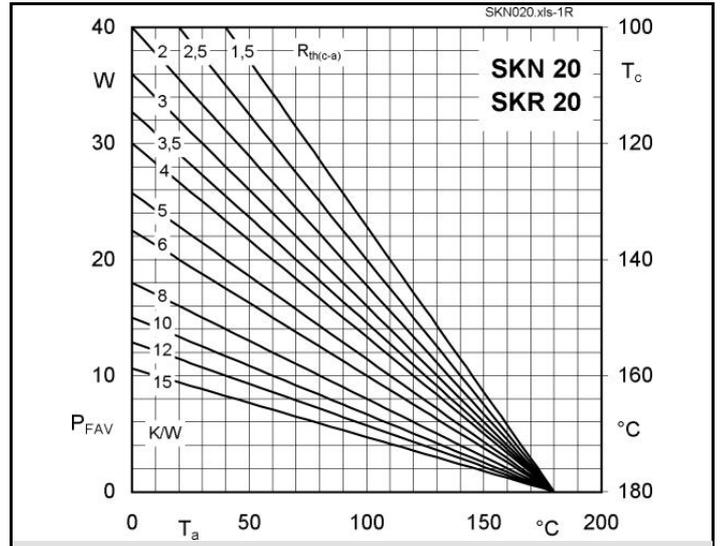


Fig. 1R Power dissipation vs. ambient temperature

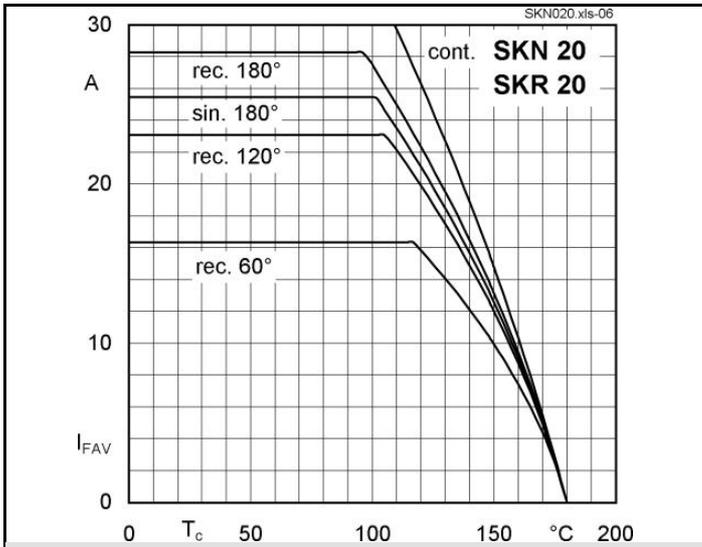


Fig. 2 Forward current vs. case temperature

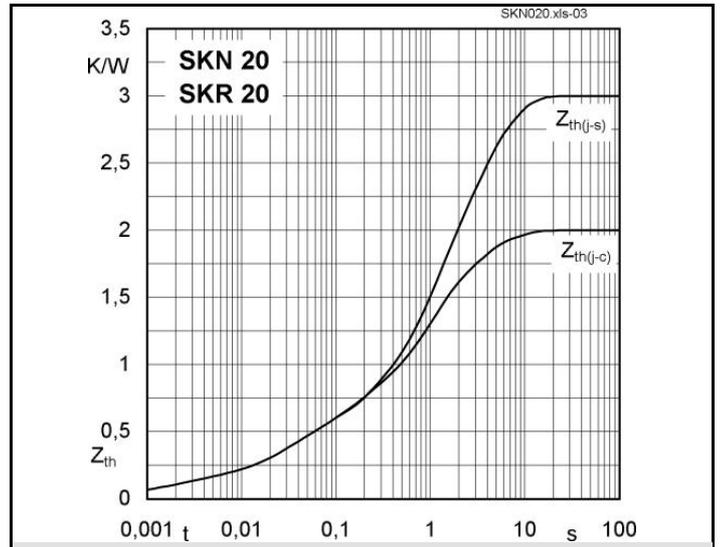


Fig. 4 Transient thermal impedance vs. time

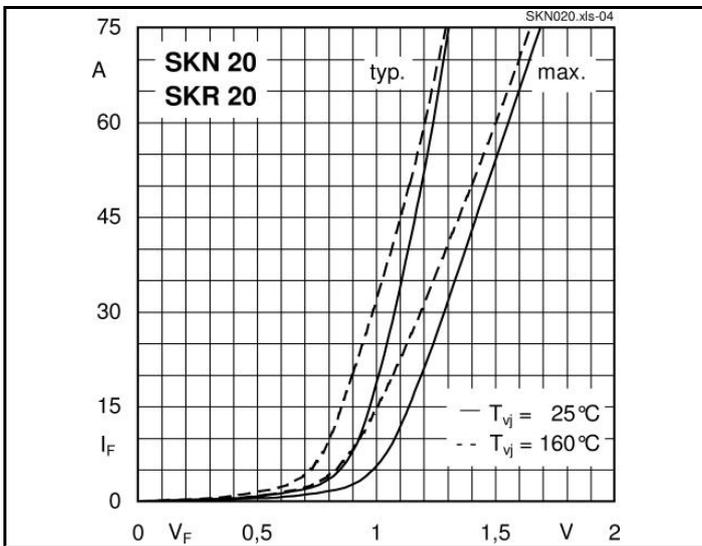


Fig. 5 Forward characteristics

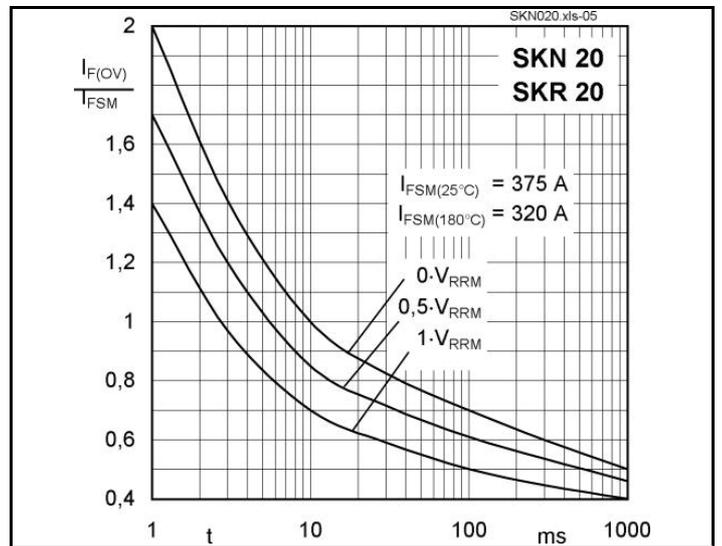


Fig. 6 Surge overload current vs. time

