



## Stud Diode

## Rectifier Diode

**SKN 130**

**SKR 130**

## Features

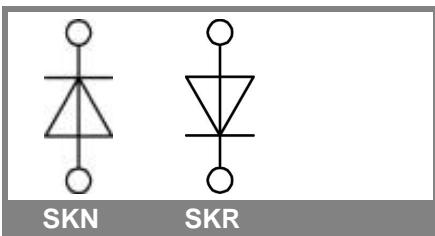
- Reverse voltages up to 1800 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M12 (also 1/2 - 20 UNF, 3/8 - 24 UNF and M12 x 1,5)
- SKN: anode to stud, SKR: cathode to stud

## Typical Applications

- All-purpose mean power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifier
- Free-wheeling diodes
- Recommended snubber network:  
RC: 0,25 µF, 50 Ω, ( $P_R = 2 \text{ W}$ ),  
 $R_P = 50 \text{ k}\Omega$  ( $P_R = 20 \text{ W}$ )

$V_{RSM}$	$V_{RRM}$	$I_{FRMS} = 260 \text{ A}$ (maximum value for continuous operation)	
$V$	$V$	$I_{FAV} = 130 \text{ A}$ (sin. 180; $T_c = 125 \text{ }^\circ\text{C}$ )	
400	400	SKN 130/04	SKR 130/04
800	800	SKN 130/08	SKR 130/08
1200	1200	SKN 130/12	SKR 130/12
1400	1400	SKN 130/14	SKR 130/14
1600	1600	SKN 130/16	SKR 130/16
1800	1800	SKN 130/18	SKR 130/18

Symbol	Conditions	Values	Units
$I_{FAV}$	$\sin. 180; T_c = 100 \text{ }^\circ\text{C}$	165	A
$I_D$	$K 1,1; T_a = 45 \text{ }^\circ\text{C}; B2 / B6$	160 / 225	A
	$K 1,1F; T_a = 35 \text{ }^\circ\text{C}; B2 / B6$	290 / 405	A
$I_{FSM}$	$T_{vj} = 25 \text{ }^\circ\text{C}; 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C}; 10 \text{ ms}$	2500	A
$i^2t$	$T_{vj} = 25 \text{ }^\circ\text{C}; 8,3 \dots 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C}; 8,3 \dots 10 \text{ ms}$	2000 31000 20000	A <sup>2</sup> s
$V_F$	$T_{vj} = 25 \text{ }^\circ\text{C}; I_F = 500 \text{ A}$	max. 1,5	V
$V_{(TO)}$	$T_{vj} = 180 \text{ }^\circ\text{C}$	max. 0,85	V
$r_T$	$T_{vj} = 180 \text{ }^\circ\text{C}$	max. 1,3	mΩ
$I_{RD}$	$T_{vj} = 180 \text{ }^\circ\text{C}; V_{RD} = V_{RRM}$	max. 22	mA
$Q_{rr}$	$T_{vj} = 160 \text{ }^\circ\text{C}; -di_F/dt = 10 \text{ A}/\mu\text{s}$	120	µC
$R_{th(j-c)}$		0,35	K/W
$R_{th(c-s)}$		0,08	K/W
$T_{vj}$		- 40 ... + 180	°C
$T_{stg}$		- 55 ... + 180	°C
$V_{isol}$		-	V~
$M_s$	to heatsink	10	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	100	g
Case		E 14	



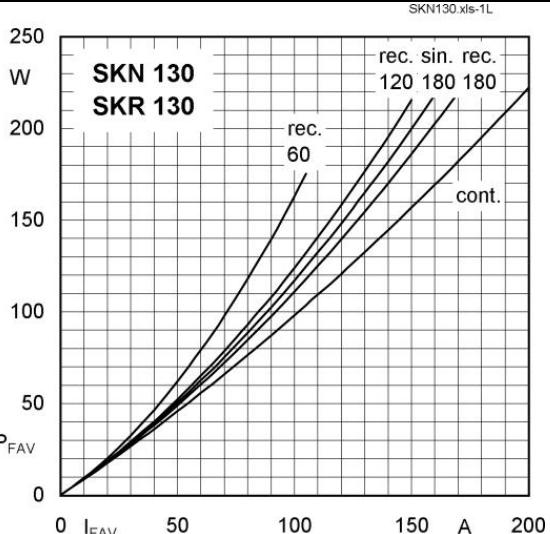


Fig. 1L Power dissipation vs. forward current

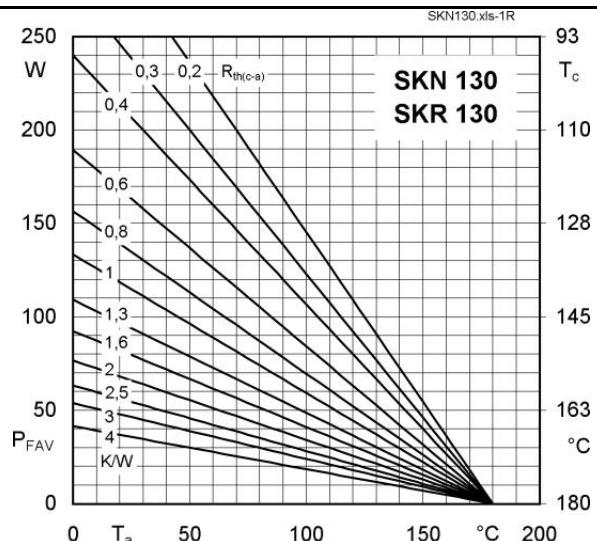


Fig. 1R Power dissipation vs. ambient temperature

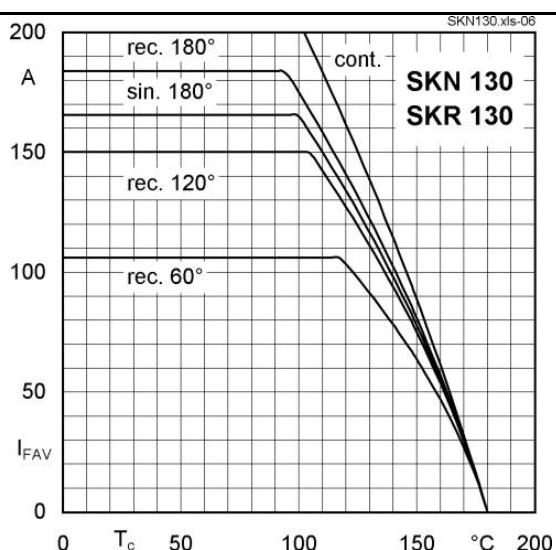


Fig. 2 Forward current vs. case temperature

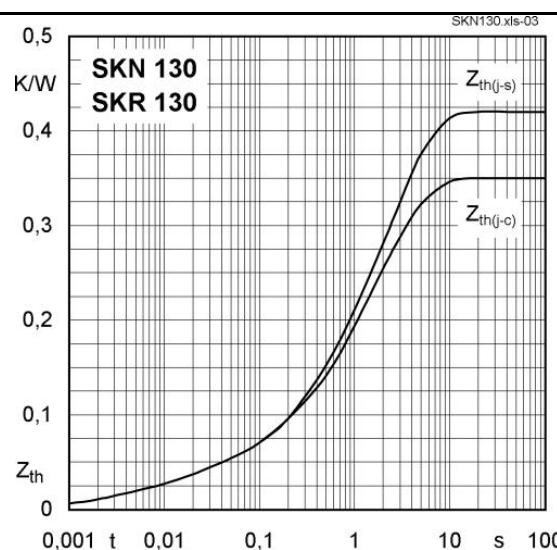


Fig. 4 Transient thermal impedance vs. time

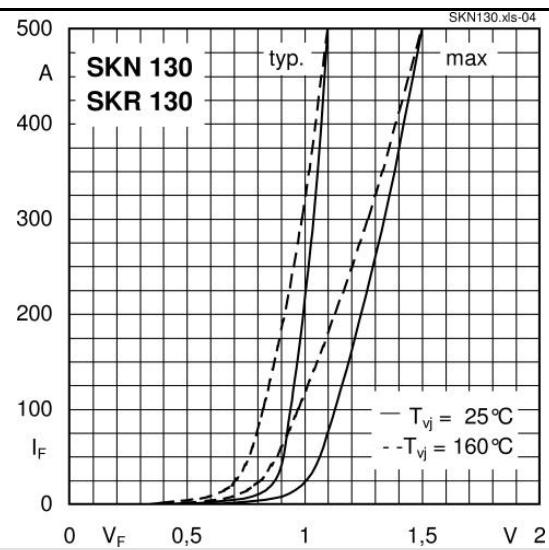


Fig. 5 Forward characteristics

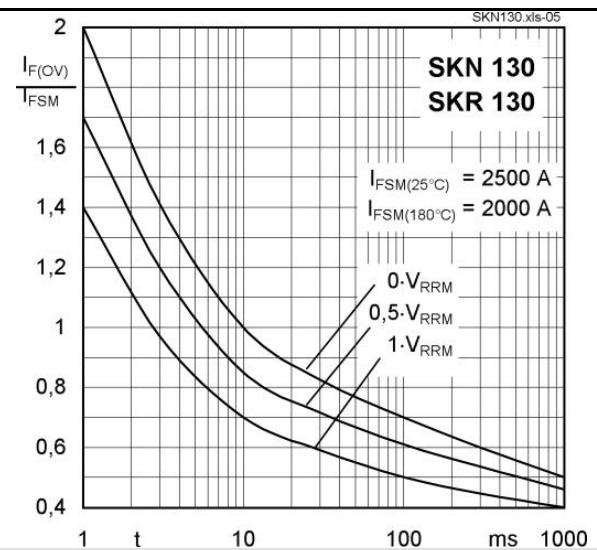
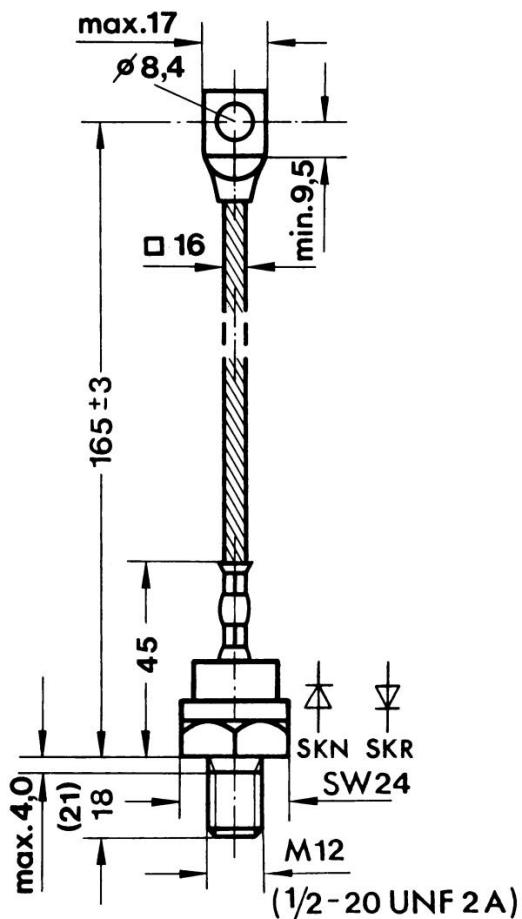


Fig. 6 Surge overload current vs. time

Dimensions in mm



Case E 14 (IEC 60191: A 9 MA modified; JEDEC: DO-205 AC)

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