

## Rectifier Diode Modules

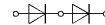
**SEMPACK® 1**  
**SKKD 100**    **SKMD 100<sup>1)</sup>**

**SEMPACK® 2**  
**SKKD 162**    **SKND 162<sup>1)</sup>**  
**SKKE 162**



V <sub>RSM</sub>	V <sub>RRM</sub>	I <sub>FRMS</sub> (maximum values for continuous operation)		
		175 A	250 A	250 A
V	V	I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = ...)		
		100 A (85 °C)	160 A (95 °C)	160 A (95 °C)
500	400	<b>SKKD 100/04</b>	–	–
900	800	<b>SKKD 100/08</b>	<b>SKKD 162/08</b>	<b>SKKE 162/08</b>
1300	1200	<b>SKKD 100/12</b>	<b>SKKD 162/12</b>	<b>SKKE 162/12</b>
1500	1400	<b>SKKD 100/14</b>	<b>SKKD 162/14</b>	<b>SKKE 162/14</b>
1700	1600	<b>SKKD 100/16</b>	<b>SKKD 162/16</b>	<b>SKKE 162/16</b>
1900	1800	<b>SKKD 100/18</b>	<b>SKKD 162/18</b>	<b>SKKE 162/18</b>
2100	2000	–	<b>SKKD 162/20</b>	<b>SKKE 162/20</b>
2300	2200	–	<b>SKKD 162/22</b>	<b>SKKE 162/22</b>

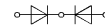
Symbol	Conditions	SKKD 100	SKKD 162 SKKE 162	Units	
I <sub>FAV</sub> I <sub>D</sub> <sup>1)</sup>	sin. 180; (T <sub>case</sub> = ...) B2/B6   T <sub>amb</sub> = 45 °C, P 3/180 T <sub>amb</sub> = 35 °C, P 3/180F P16/200F	100 (85°C) 73/91 150/190 –	160 (95°C) 90/115 210/260 320/425	A A A A	
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms T <sub>vj</sub> = 125 °C; 10 ms	2500 2000	6000 5000	A A	
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms T <sub>vj</sub> = 125 °C; 8,3 ... 10 ms	31 250 20 000	180 000 125 000	A <sup>2</sup> s A <sup>2</sup> s	
I <sub>RD</sub>	T <sub>vj</sub> max.; V <sub>RD</sub> = V <sub>RRM</sub>	5	9	mA	
V <sub>F</sub>	T <sub>vj</sub> = 25 °C (I <sub>F</sub> = ...); max.	1,35 (300 A)	1,5 (500 A)	V	
V <sub>(TO)</sub>	T <sub>vj</sub> max	0,85	0,85	V	
r <sub>T</sub>	T <sub>vj</sub> max	1,3	1,2	mΩ	
R <sub>thjc</sub> R <sub>thch</sub> T <sub>vj</sub> T <sub>stg</sub>	} per diode/per module <sup>2)</sup>	0,35/0,175 0,2/0,1 – 40 ... +125 – 40 ... +125	0,18/0,09 0,10/0,05 – 40 ... +135 – 40 ... +135	°C/W °C/W °C °C	
V <sub>isol</sub>		a. c. 50 Hz; r.m.s.; 1 s/1 min	3600/3000		V~
M <sub>1</sub>		to heatsink	SI units US units	5 ± 15 % 44 ± 15 %	Nm lb.in.
M <sub>2</sub>		to terminals	SI units US units	3 ± 15 % <sup>3)</sup> 26 ± 15 % <sup>3)</sup>	5 ± 15 % <sup>3)</sup> 44 ± 15 % <sup>3)</sup> Nm lb.in.
a w	approx.	5 · 9,81 120	5 · 9,81 250	m/s <sup>2</sup> g	
Case	→ page B 1 – 93; 94	SKKD 100: A 10 (B 1 – 42: SKMD 100: A 33)	SKKD 162: A 23 SKKE 162: A 24 SKMD 162: A 57		



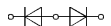
**SKKD**



**SKKE**



**SKMD**



**SKND**

### Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- **SKKD** half bridge connection center-tap connections:  
**SKMD** common cathode  
**SKND** common anode
- UL recognized, file no. E 63 532

### Typical Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors
- SKKE: Free-wheeling diodes

<sup>1)</sup> SKMD 100, SKND 162 available on request

<sup>2)</sup> SKKD types only

<sup>3)</sup> See the assembly instructions



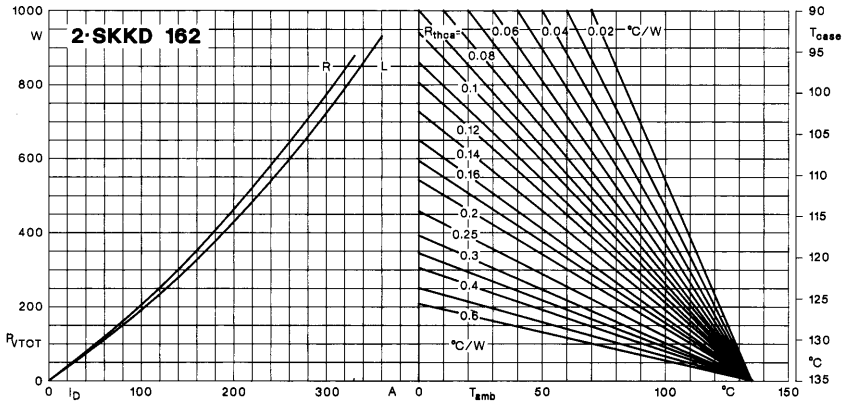


Fig. 12 b Power dissipation of two modules vs. direct current and case temperature

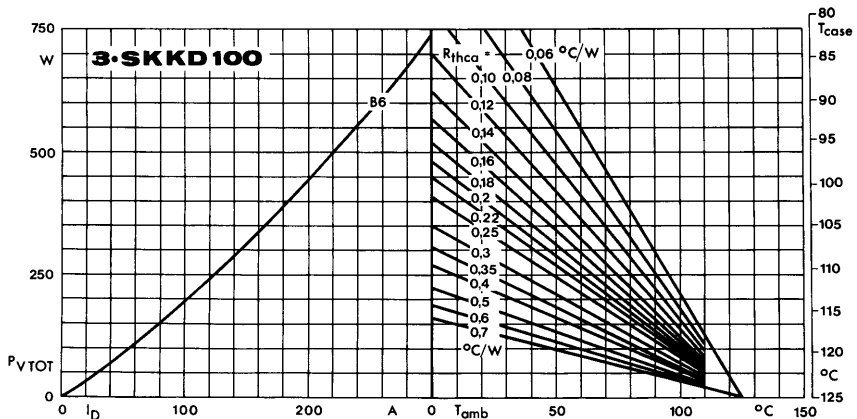


Fig. 13 a Power dissipation of three modules vs. direct current and case temperature

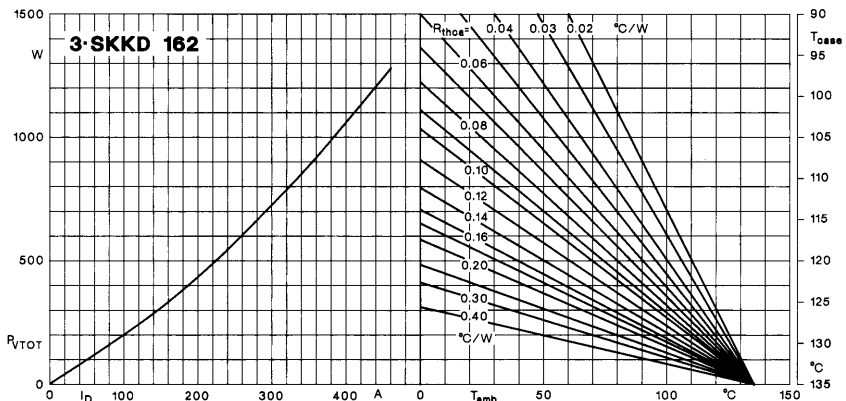


Fig. 13 b Power dissipation of three modules vs. direct current and case temperature

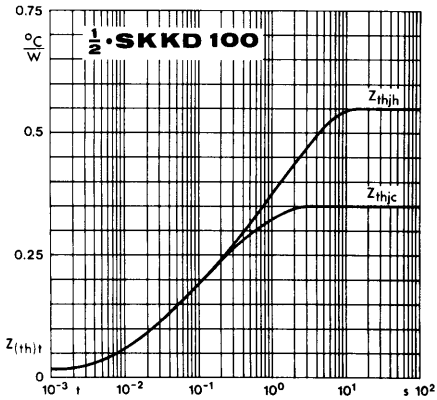


Fig. 14 a Transient thermal impedance vs. time

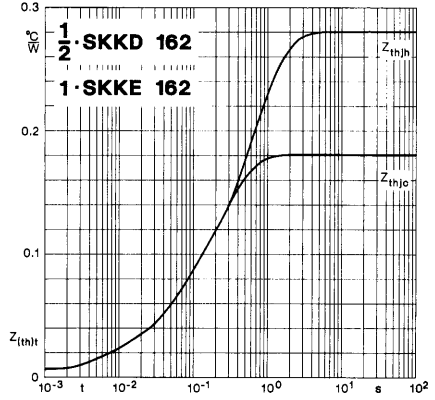


Fig. 14 b Transient thermal impedance vs. time

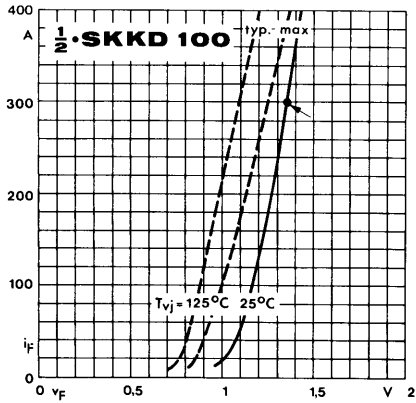


Fig. 15 a Forward characteristics

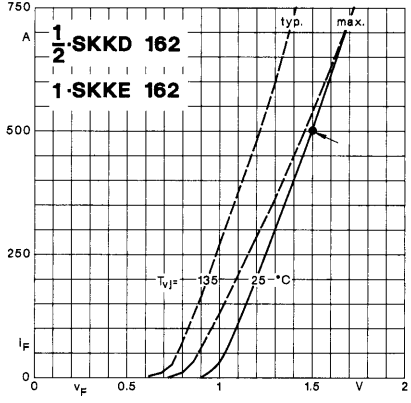


Fig. 15 b Forward characteristics

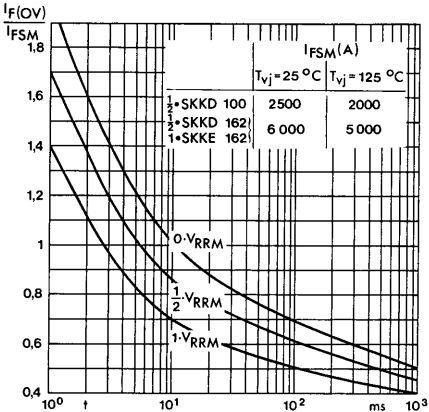


Fig. 16 Surge overload current vs. time