

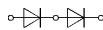
SEMIPACK® 1
Rectifier Diode Modules

SKKD 46 **SKKD 81**
SKND 46¹⁾ **SKKE 81**
 SKND 81¹⁾



VRSM	VRRM	IFRMS (maximum values for continuous operation)		
		90 A	140 A	140 A
		IFAV (sin. 180; T _{case} = ...)		
V	V	57 A (71 °C)	90 A (80 °C)	90 A (80 °C)
500	400	SKKD 46/04	SKKD 81/04	SKKE 81/04
700	600	SKKD 46/06	SKKD 81/06	SKKE 81/06
900	800	SKKD 46/08	SKKD 81/08	SKKE 81/08
1300	1200	SKKD 46/12	SKKD 81/12	SKKE 81/12
1500	1400	SKKD 46/14	SKKD 81/14	SKKE 81/14
1700	1600	SKKD 46/16	SKKD 81/16	SKKE 81/16
1900	1800	SKKD 46/18	SKKD 81/18	SKKE 81/18
2100	2000	–	SKKD 81/20	SKKE 81/20
2300	2200	–	SKKD 81/22	SKKE 81/22

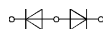
Symbol	Conditions	SKKD 46	SKKD 81 SKKE 81	Units	
I _{FAV} I _D ¹⁾	sin. 180 (T _{case} = ...) B2/B6 T _{amb} = 45 °C; P 3/120 P 3/180 T _{amb} = 35 °C; P 3/180 F	45(86 °C) 50/60 54/66 95/120	80(87 °C) 63/70 70/85 135/175	A A A A	
I _{FSM} i ² t	T _{vj} = 25 °C; 10 ms T _{vj} = 125 °C; 10 ms T _{vj} = 25 °C; 8,3 ... 10 ms T _{vj} = 125 °C; 8,3 ... 10 ms	700 600 2 450 1 800	2 000 1 750 20 000 15 000	A A A ² s A ² s	
I _{RD}	T _{vj} = 125 °C; V _{RD} = V _{RRM}	3	4,5	mA	
V _F V _(TO) r _T	T _{vj} = 25 °C (I _F = ...); max. T _{vj} = 125 °C T _{vj} = 125 °C	1,95 (250 A) 0,85 5	1,55 (300 A) 0,85 1,8	V V mΩ	
R _{thjc} R _{thch} T _{vj} T _{stg}	} per diode/per module ²⁾	0,6/0,3 0,2/0,1 – 40 ... +125 – 40 ... +125	0,4/0,2 0,2/0,1 – 40 ... +125 – 40 ... +125	°C/W °C/W °C °C	
V _{isol}		3600/3000		V~	
M ₁ M ₂		} SI (US) units to heatsink to terminals	5 (44 lb. in.) ± 15 % ³⁾ 3 (26 lb. in.) ± 15 % ³⁾ 5 · 9,81 120		Nm Nm m/s ² g
a					
w	approx.				
Case	→ page B 1 – 93	SKKD 46: A 10 SKND 46: A 19	SKKD 81: A 10 SKKE 81: A 12 SKND 81: A 19		



SKKD



SKKE



SKND

Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- 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

¹⁾ SKND 46 and SKND 81 available on request

²⁾ SKKD types only

³⁾ See the assembly instructions

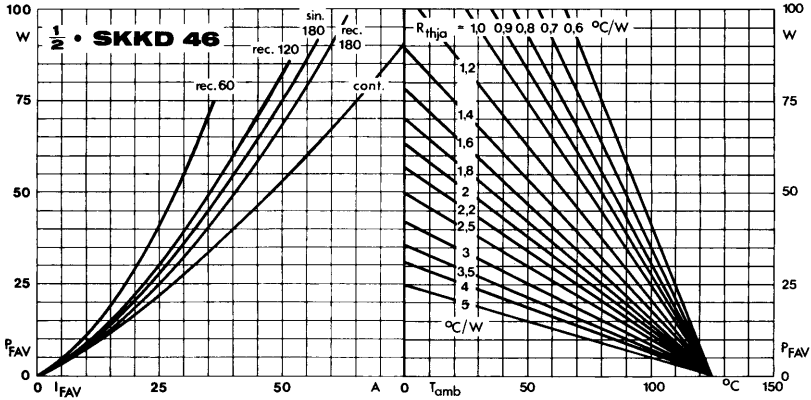


Fig. 11 a Power dissipation per diode vs. forward current and ambient temperature

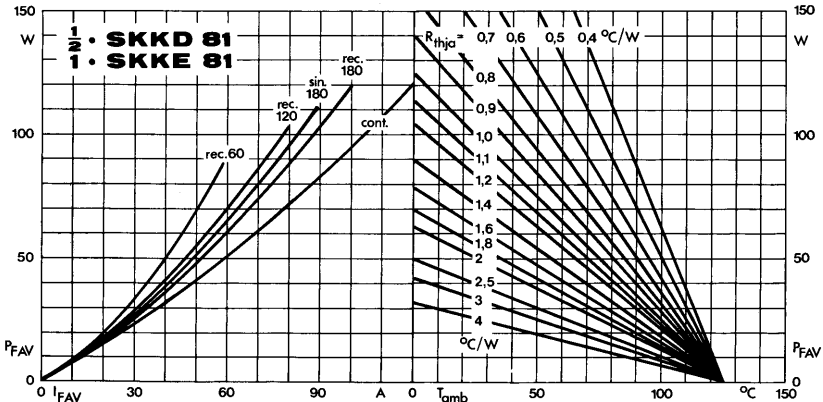


Fig. 11 b Power dissipation per diode vs. forward current and ambient temperature

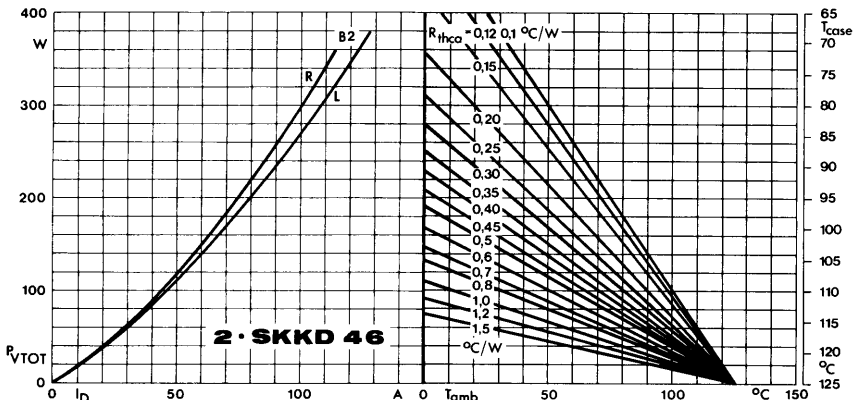


Fig. 12 a Power dissipation of two modules vs. direct current and case temperature

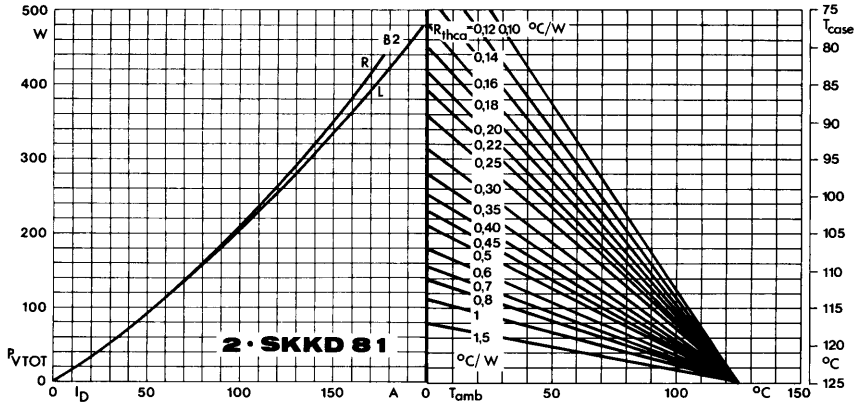


Fig. 12 b Power dissipation of two modules vs. direct current and case temperature

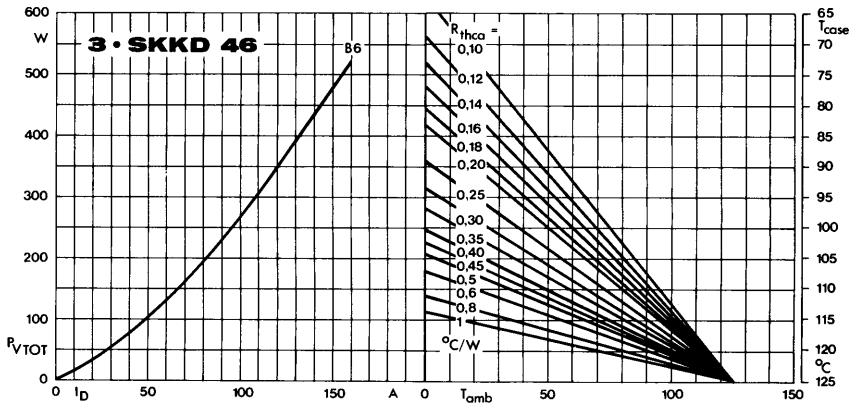


Fig. 13 a Power dissipation of three modules vs. direct current and case temperature

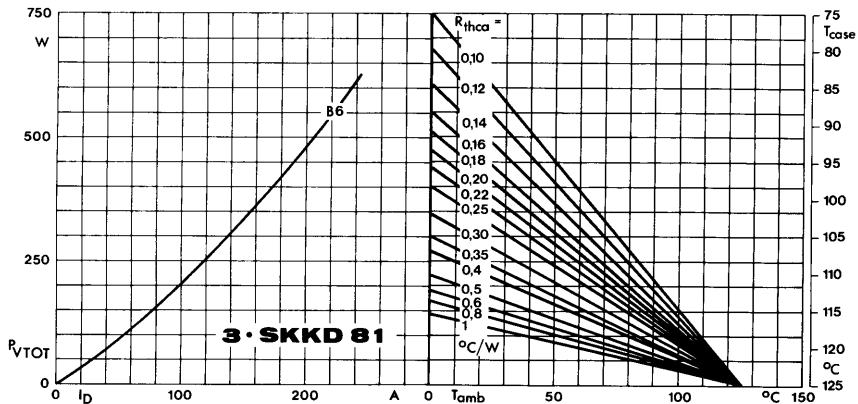


Fig. 13 b Power dissipation of three modules vs. direct current and case temperature

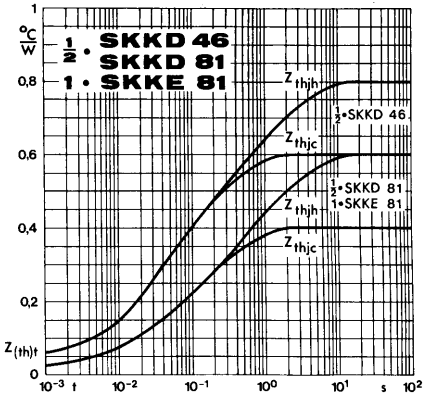


Fig. 14 Transient thermal impedance vs. time

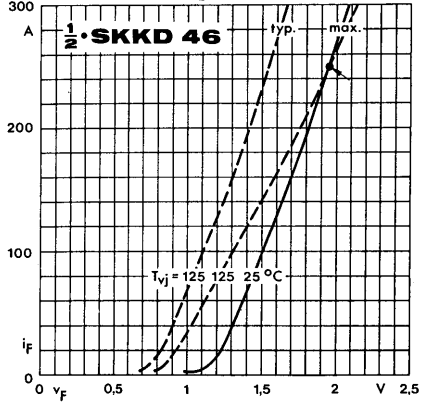


Fig. 15 a Forward characteristics

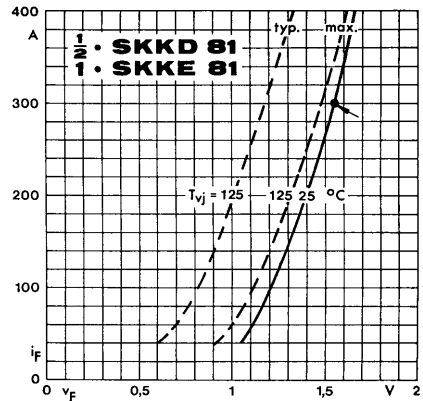


Fig. 15 b Forward characteristics

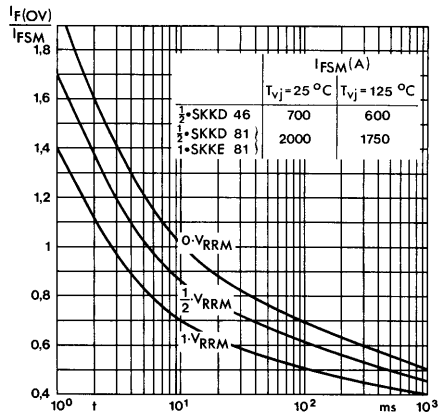


Fig. 16 Surge overload current vs. time