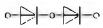
V_{RSM}	V_{RRM}	I_{FRMS} (maximum values for continuous operation) 90 A | 140 A | 140 A		
		I_{FAV} (sin. 180; T_{case} = . . .)		
V	V	57 A (71 °C)	90 A (80 °C)	90 A (80 °C)
500	400	**SKKD 46/04**	**SKKD 81/04**	**SKKE 81/04**
700	600	**SKKD 46/06**	**SKKD 81/06**	**SKKE 81/06**
900	800	**SKKD 46/08**	**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**

SEMIPACK® 1
Rectifier Diode Modules

SKKD 46
SKND 46[1)]

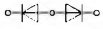
SKKD 81
SKKE 81
SKND 81[1)]

Symbol	Conditions	SKKD 46	SKKD 81 SKKE 81	Units
I_{FAV}	sin. 180 (T_{case} = . . .)	45(86 °C)	80(87 °C)	A
I_D[1)]	B2/B6 | T_{amb} = 45 °C; P 3/120	50/60	63/70	A
	P 3/180	54/66	70/85	A
	T_{amb} = 35 °C; P 3/180 F	95/120	135/175	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	700	2 000	A
	T_{vj} = 125 °C; 10 ms	600	1 750	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	2 450	20 000	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	1 800	15 000	A^2s
I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}	3	4,5	mA
V_F	T_{vj} = 25 °C (I_F = . . .); max.	1,95 (250 A)	1,55 (300 A)	V
$V_{(TO)}$	T_{vj} = 125 °C	0,85	0,85	V
r_T	T_{vj} = 125 °C	5	1,8	mΩ
R_{thjc}	per diode/per module[2)]	0,6/0,3	0,4/0,2	°C/W
R_{thch}		0,2/0,1	0,2/0,1	°C/W
T_{vj}		– 40 ... +125		°C
T_{stg}		– 40 ... +125		°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min	3600/3000		V~
M_1	to heatsink | SI (US) units	5 (44 lb. in.) ± 15 %[3)]		Nm
M_2	to terminals	3 (26 lb. in.) ± 15 %[3)]		Nm
a		5 · 9,81		m/s^2
w	approx.	120		g
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

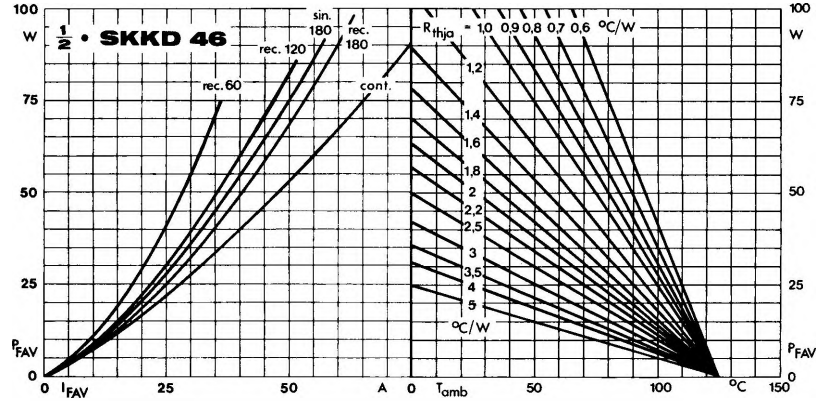


Fig. 11 a Power dissipation per diode vs. forward current and ambient temperature

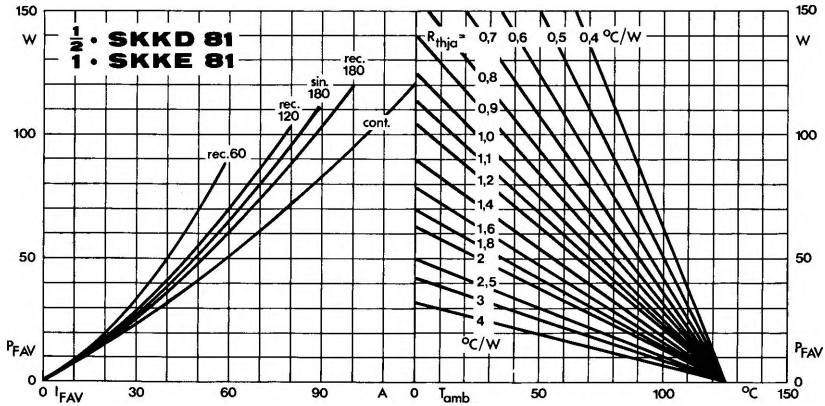


Fig. 11 b Power dissipation per diode vs. forward current and ambient temperature

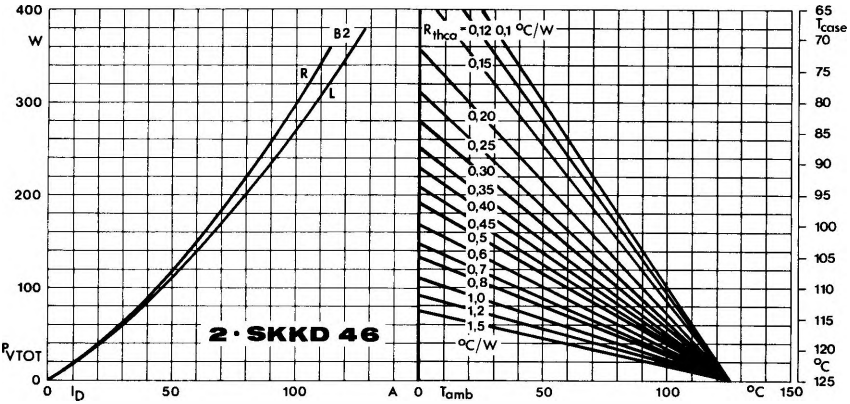


Fig. 12 a Power dissipation of two modules vs. direct current and case temperature

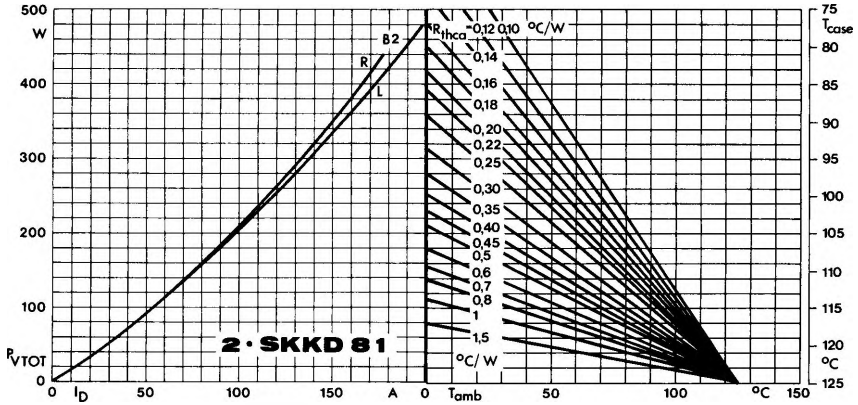


Fig. 12 b Power dissipation of two modules vs. direct current and case temperature

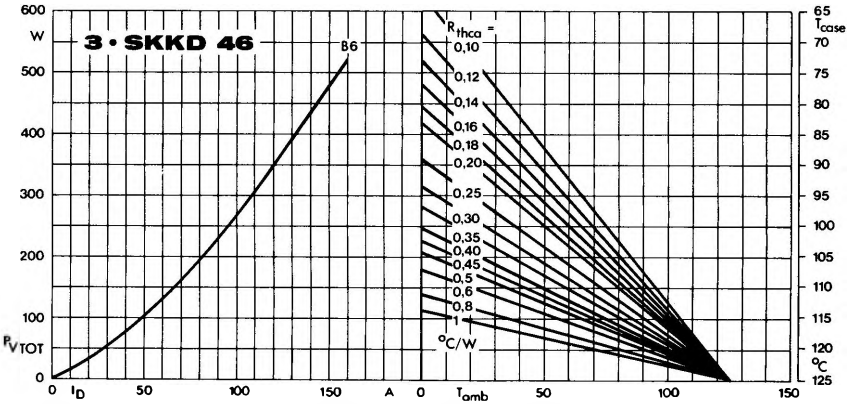


Fig. 13 a Power dissipation of three modules vs. direct current and case temperature

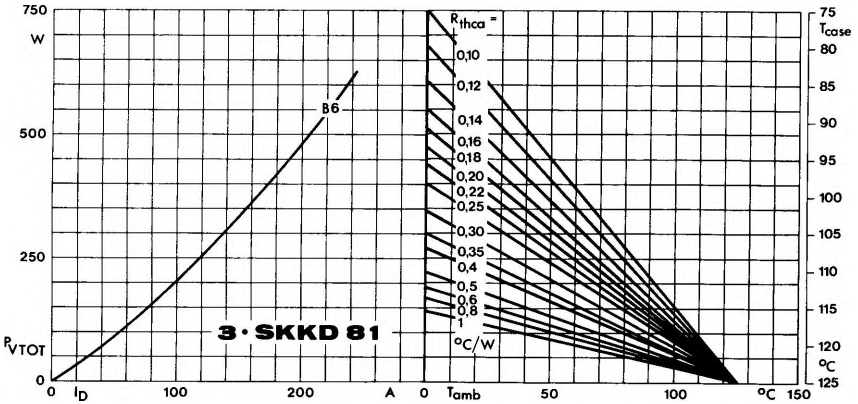


Fig. 13 b Power dissipation of three modules vs. direct current and case temperature

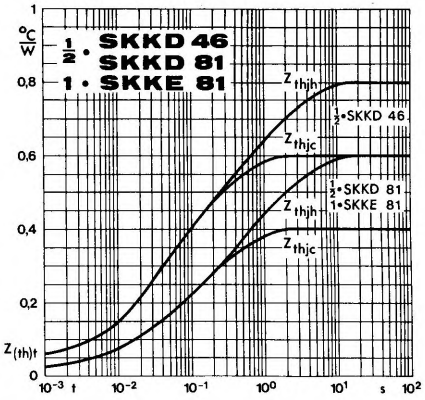


Fig. 14 Transient thermal impedance vs. time

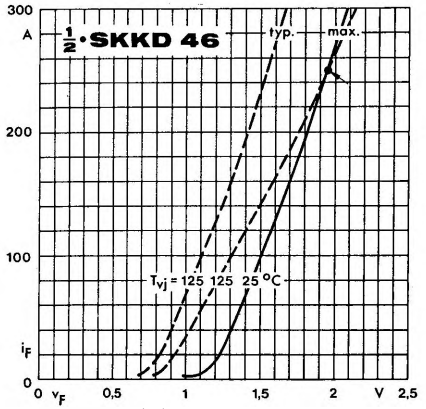


Fig. 15 a Forward characteristics

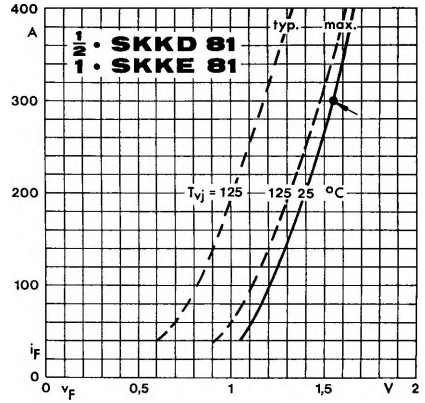


Fig. 15 b Forward characteristics

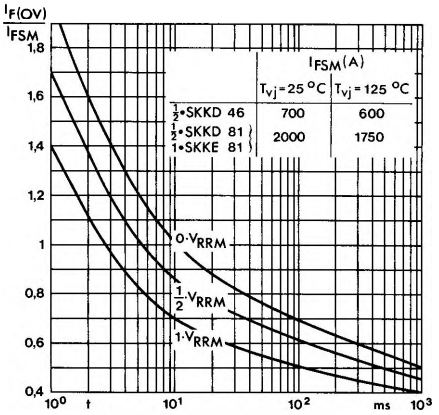


Fig. 16 Surge overload current vs. time