SKKE 81

SEMIPACK® 1

Rectifier Diode Modules

SKKE 81

Features

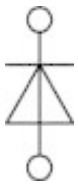
- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications*

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

V_{RSM} V	V_{RRM} V	I_{FRMS} = 140 A (maximum value for continuous operation) I_{FAV} = 80 A (sin. 180; T_c = 87 °C)
500	400	SKKE 81/04
700	600	SKKE 81/06
900	800	SKKE 81/08
1300	1200	SKKE 81/12
1500	1400	SKKE 81/14
1700	1600	SKKE 81/16
1900	1800	SKKE 81/18
2100	2000	SKKE 81/20 H4
2300	2200	SKKE 81/22 H4

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	82 (57)	A
I_D	P3/120; T_a = 45 °C; B2 / B6	63 / 70	A
	P3/180F; T_a = 35 °C; B2 / B6	135 / 175	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	2000	A
	T_{vj} = 125 °C; 10 ms	1750	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	20000	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	15000	A^2s
V_F	T_{vj} = 25 °C; I_F = 300 A	max. 1,55	V
$V_{(TO)}$	T_{vj} = 125 °C	max. 0,85	V
r_T	T_{vj} = 125 °C	max. 1,8	mΩ
I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}	max. 4,5	mA
$R_{th(j-c)}$	per diode / per module	0,4 / 0,4	K/W
$R_{th(c-s)}$	per diode / per module	0,2 / 0,2	K/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~
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min. for SKK...H4	4800 / 4000	V~
M_s	to heatsink	5 ± 15 %	Nm
M_t	to terminals	3 ± 15 %	Nm
a		5 * 9,81	m/s^2
m	approx.	95	g
Case	SKKE	A 12	



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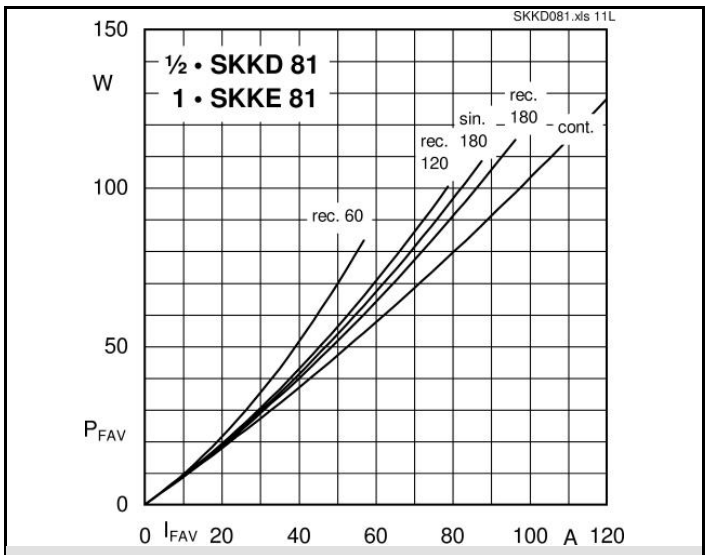


Fig. 11L Power dissipation per diode vs. forward current

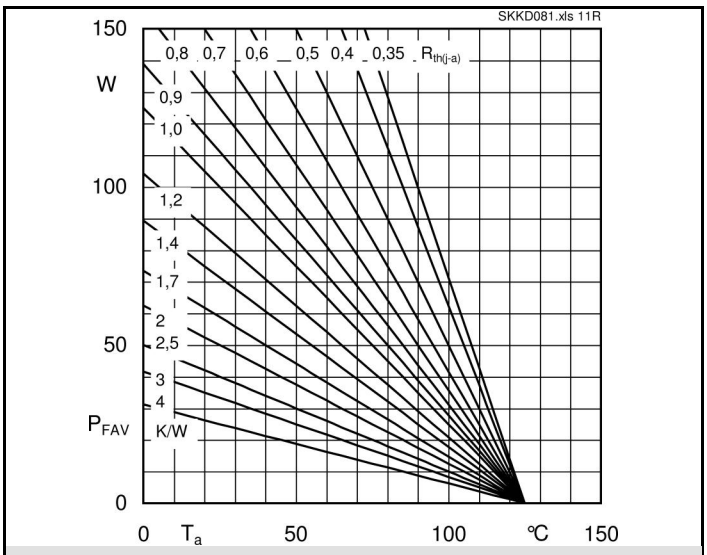


Fig. 11R Power dissipation per diode vs. ambient temperature

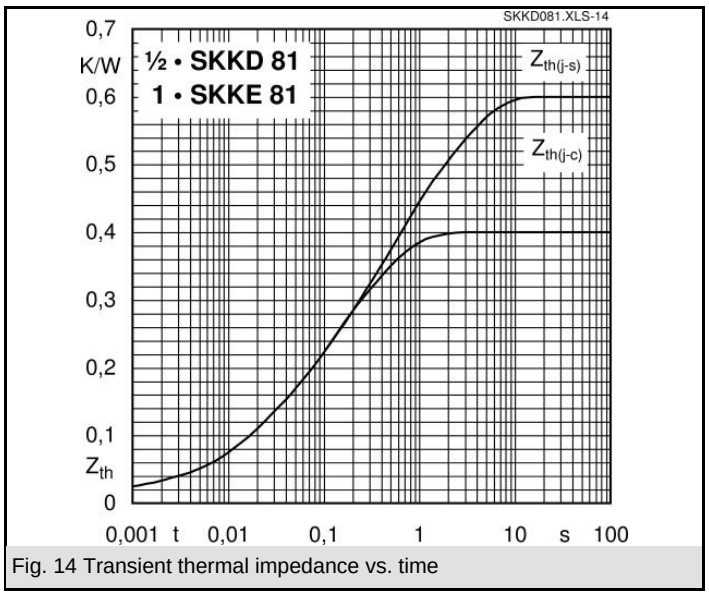


Fig. 14 Transient thermal impedance vs. time

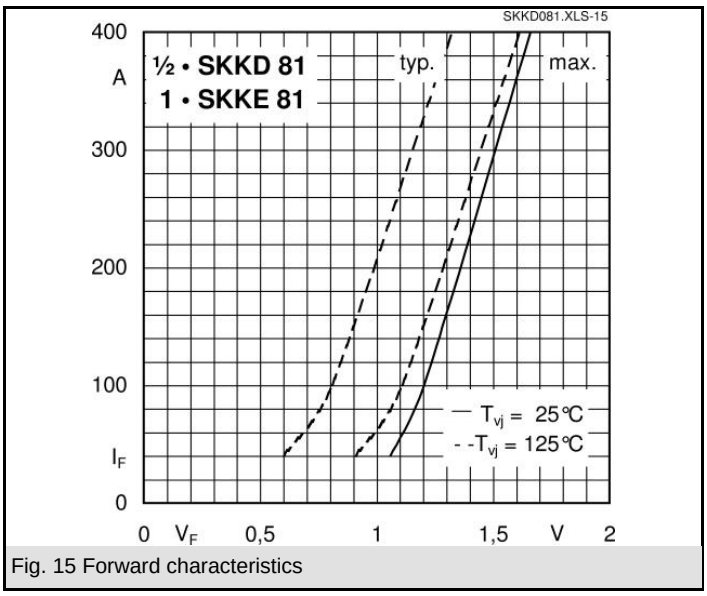


Fig. 15 Forward characteristics

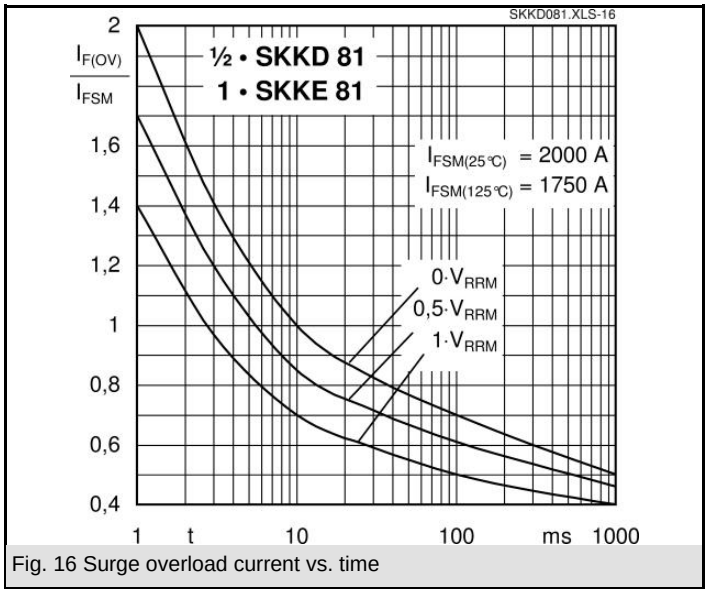
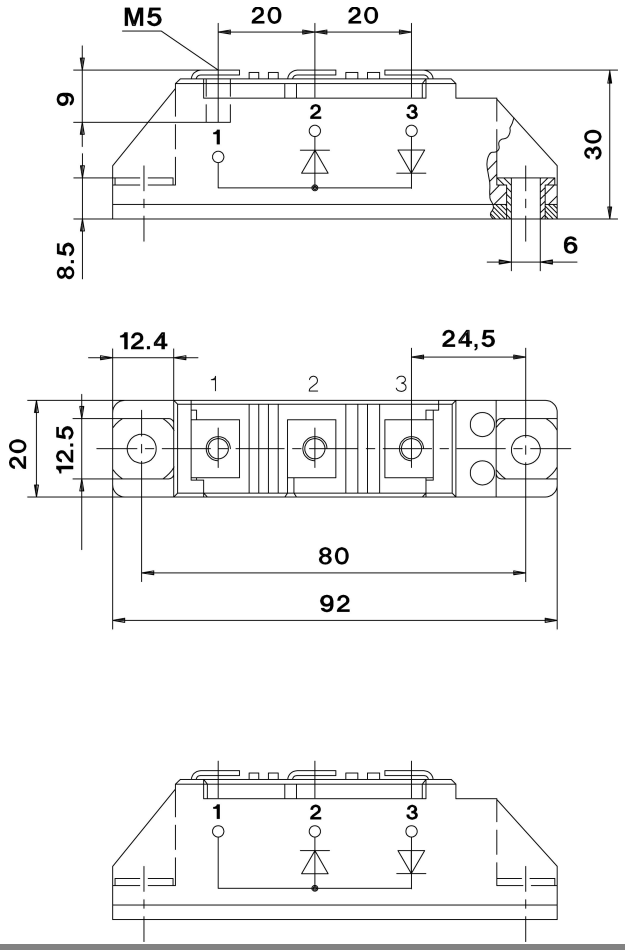
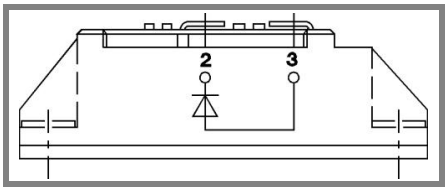


Fig. 16 Surge overload current vs. time

Dimensions in mm



Case A 10 (SKKD)



Case A 12 SKKE

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.

