



## SEMIPACK<sup>®</sup> 1

### Rectifier Diode Modules

#### SKKD 46

#### 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

$V_{RSM}$ V	$V_{RRM}$ V	$I_{FRMS} = 90$ A (maximum value for continuous operation) $I_{FAV} = 45$ A (sin. 180; $T_c = 86$ °C)	
500	400	SKKD 46/04	
700	600	SKKD 46/06	
900	800	SKKD 46/08	
1300	1200	SKKD 46/12	
1500	1400	SKKD 46/14	
1700	1600	SKKD 46/16	
1900	1800	SKKD 46/18	

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 85$ (100) °C	47 (33)	A
$I_D$	P3/120; $T_a = 45$ °C; B2 / B6	50 / 60	A
	P3/180F; $T_a = 35$ °C; B2 / B6	95 / 120	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	700	A
	$T_{vj} = 125$ °C; 10 ms	600	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	2450	A <sup>2</sup> s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	1800	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 250$ A	max. 1,95	V
$V_{(TO)}$	$T_{vj} = 125$ °C	0,85	V
$r_T$	$T_{vj} = 125$ °C	5	mΩ
$I_{RD}$	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$	max. 3	mA
$R_{th(j-c)}$	per diode / per module	0,6 / 0,3	K/W
$R_{th(c-s)}$	per diode / per module	0,2 / 0,1	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~
$M_s$	to heatsink	5 ± 15 %	Nm
$M_t$	to terminals	3 ± 15 %	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	95	g
Case		A 10	



SKKD

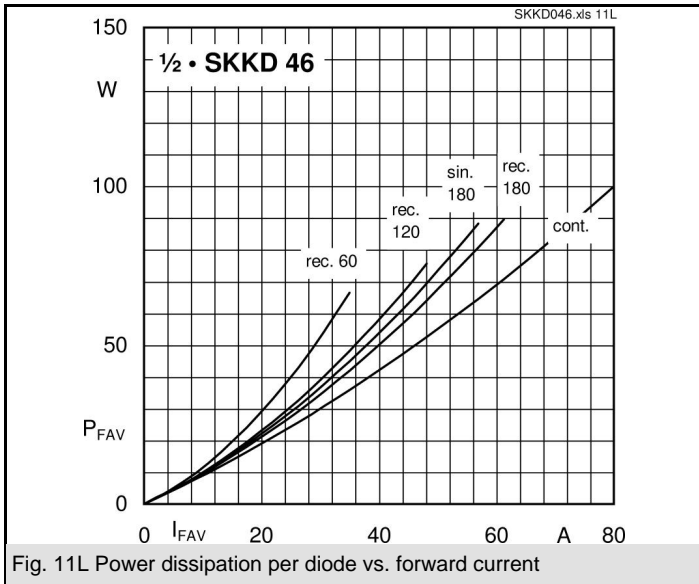


Fig. 11L Power dissipation per diode vs. forward current

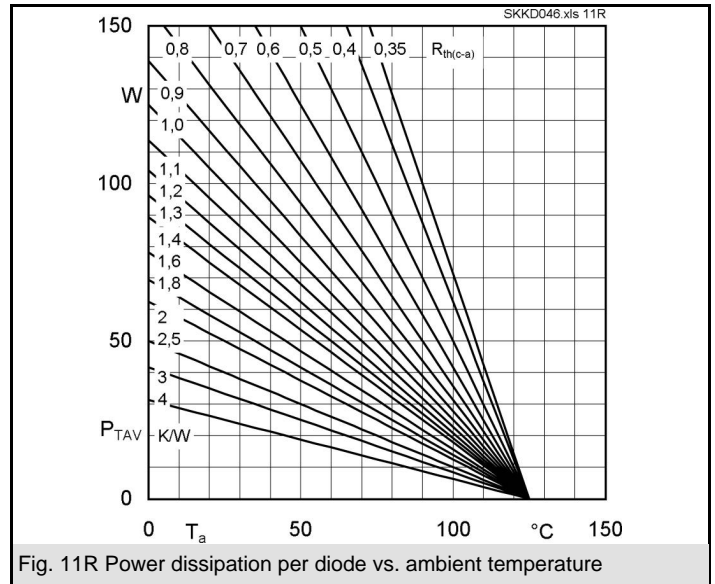


Fig. 11R Power dissipation per diode vs. ambient temperature

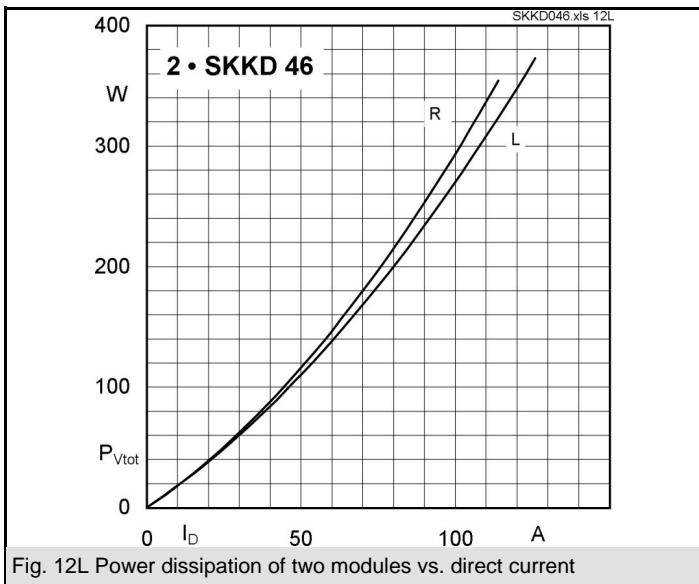


Fig. 12L Power dissipation of two modules vs. direct current

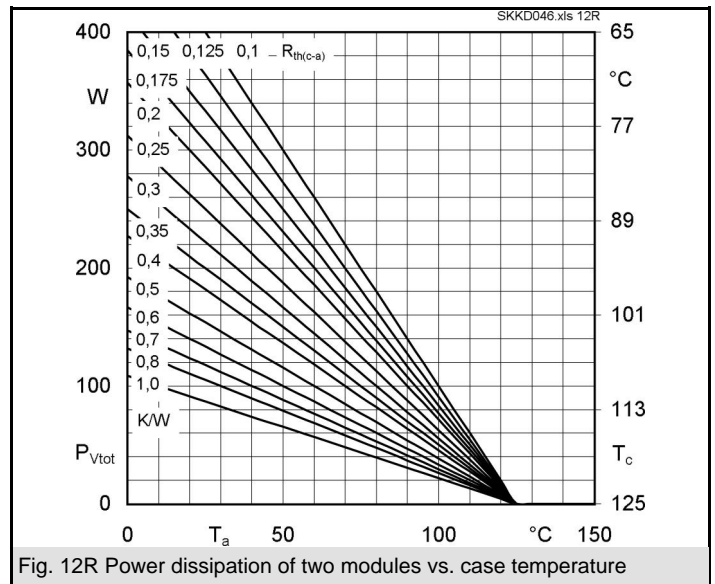


Fig. 12R Power dissipation of two modules vs. case temperature

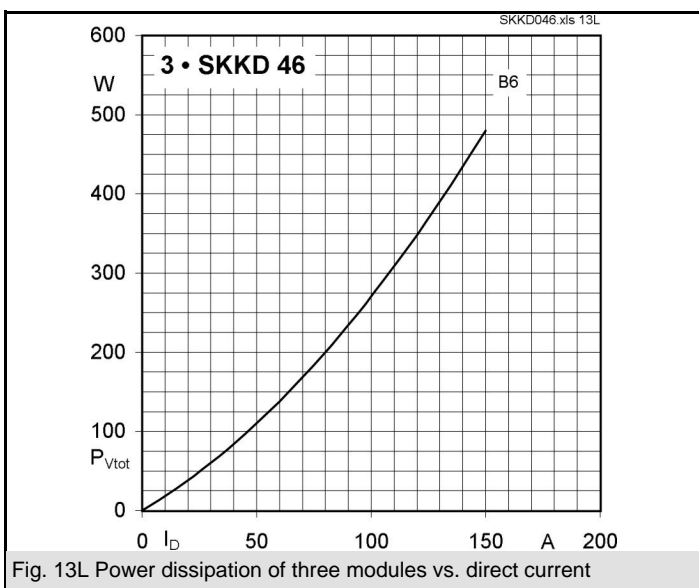


Fig. 13L Power dissipation of three modules vs. direct current

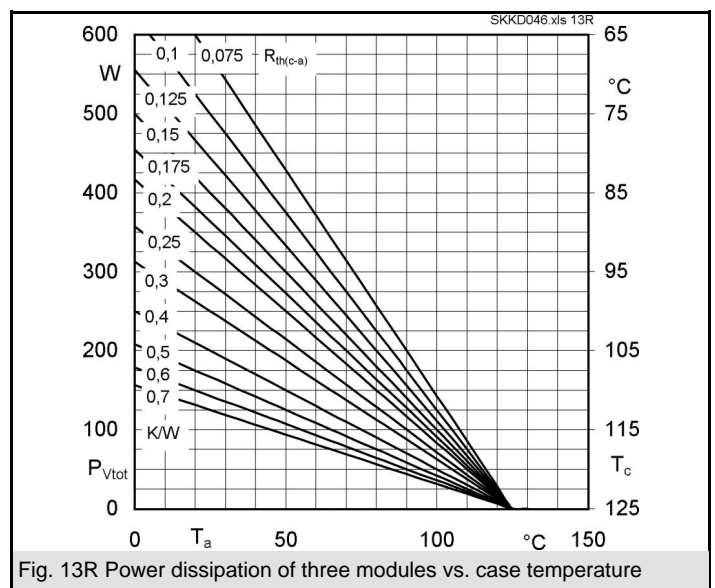
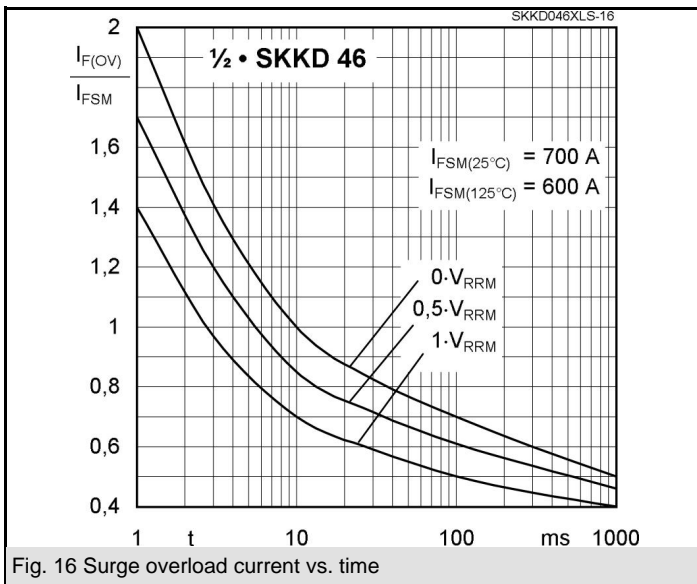
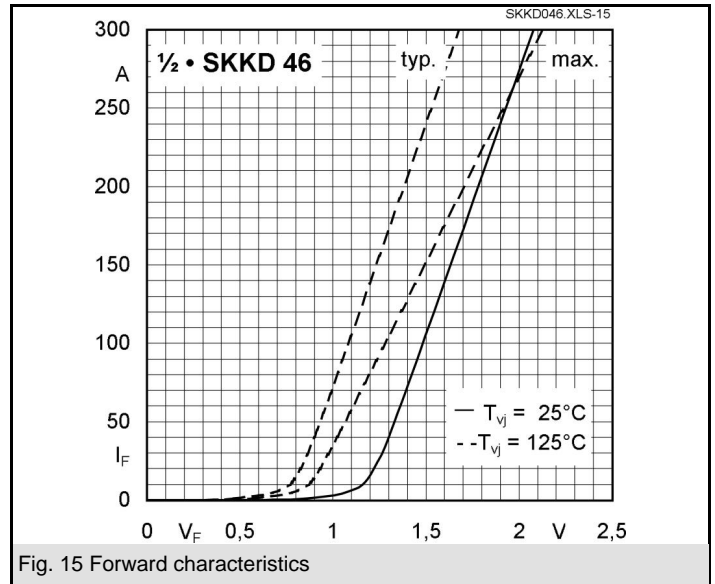
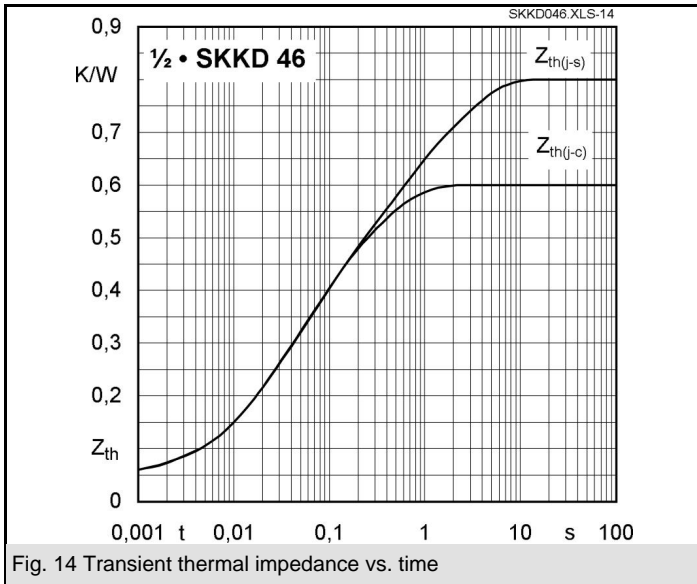
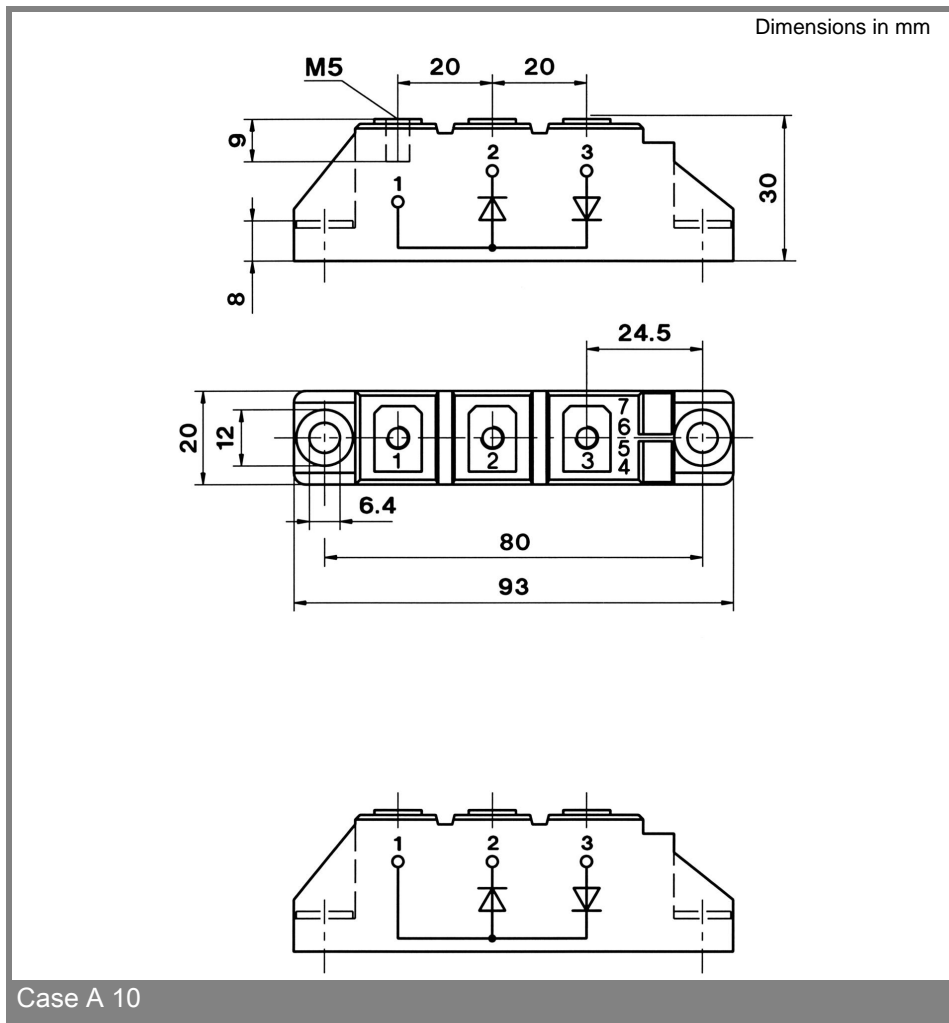


Fig. 13R Power dissipation of three modules vs. case temperature





This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.