

# SKKD 380



SEMIPACK® 3 1)

## Rectifier Diode Modules

### SKKD 380

#### Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precise metal pressure contacts for high reliability
- UL recognized, file no. E 63 532

#### Typical Applications

- Uncontrolled rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

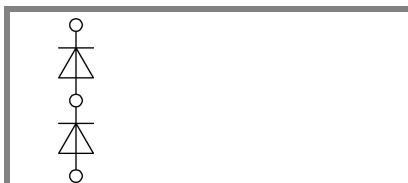
1) Discontinued version, redesigned version already available

2) See the assembly instruction

3) The screws must be lubricated

$V_{RSM}$ V	$V_{RRM}$ V	$I_{FRMS} = 600$ A (maximum value for continuous operation) $I_{FAV} = 380$ A (sin. 180; $T_c = 100$ °C)		
900	800	SKKD 380/08		
1300	1200	SKKD 380/12		
1500	1400	SKKD 380/14		
1700	1600	SKKD 380/16		
1900	1800	SKKD 380/18		
2100	2000	SKKD 380/20H4		
2300	2200	SKKD 380/22H4		

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 100$ °C	380	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	11000	A
	$T_{vj} = 150$ °C; 10 ms	10000	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	605000	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	500000	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 1000$ A	max. 1,25	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 0,8	V
$r_T$	$T_{vj} = 150$ °C	max. 0,35	mΩ
$I_{RD}$	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 15	mA
$R_{th(j-c)}$	cont. per diode / per module	0,11 / 0,055	K/W
	sin. 180 per diode / per module	0,116 / 0,058	K/W
$R_{th(c-s)}$	per diode / per module	0,04 / 0,02	K/W
$T_{vj}$		- 40 ... + 150	°C
$T_{stg}$		- 40 ... + 130	°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	$5 \pm 15\%$ <sup>2)</sup>	Nm
$M_t$	to terminals	$9 \pm 15\%$ <sup>3)</sup>	Nm
a		$5 * 9,81$	m/s <sup>2</sup>
m	approx.	750	g
Case		A 78a	



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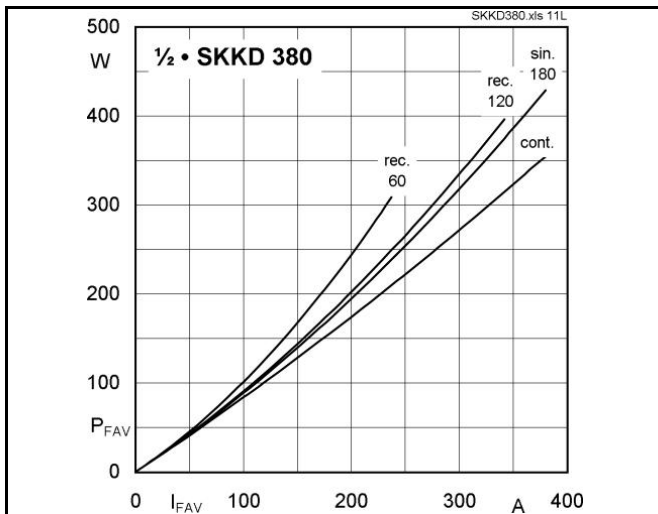


Fig. 11L Power dissipation per diode vs. forward current

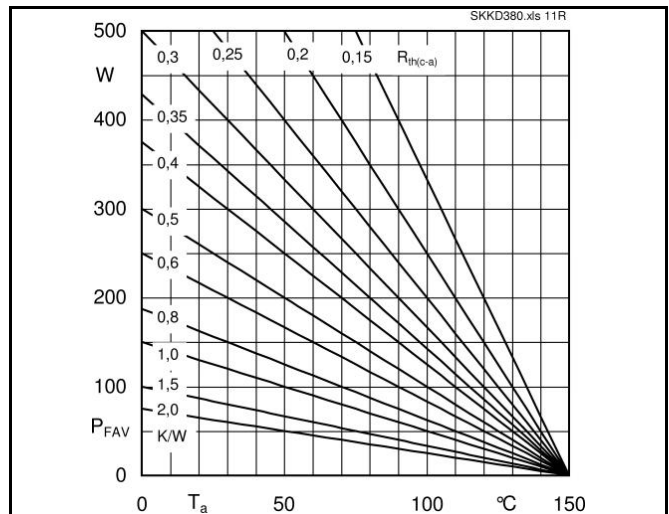


Fig. 11R Power dissipation per diode vs. ambient temperature

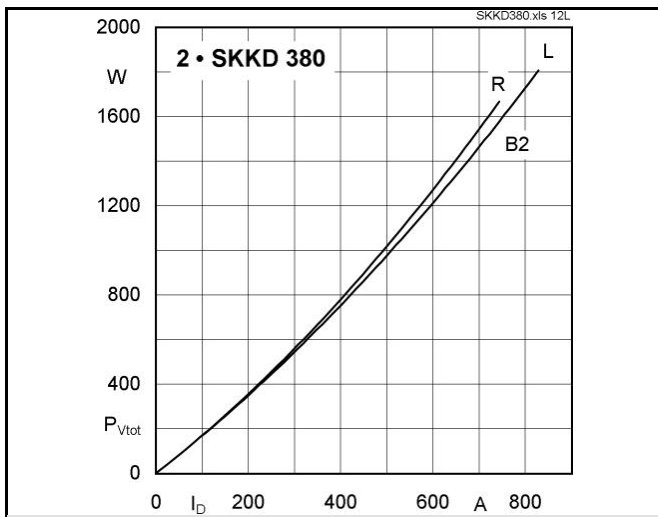


Fig. 12L Power dissipation of two modules vs. direct current

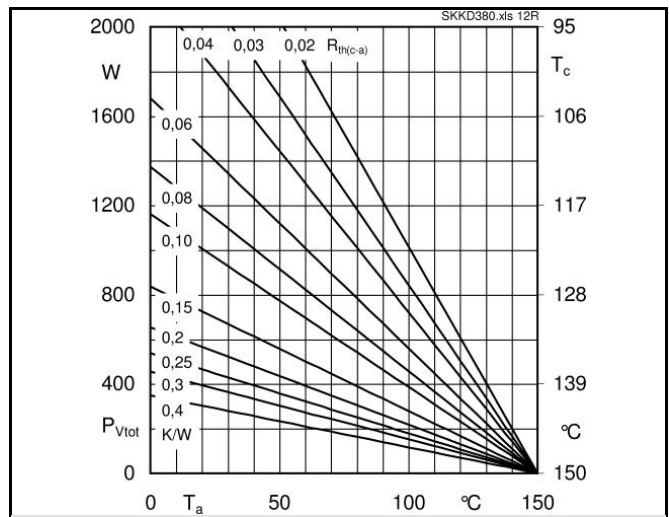


Fig. 12R Power dissipation of two modules vs. case temperature

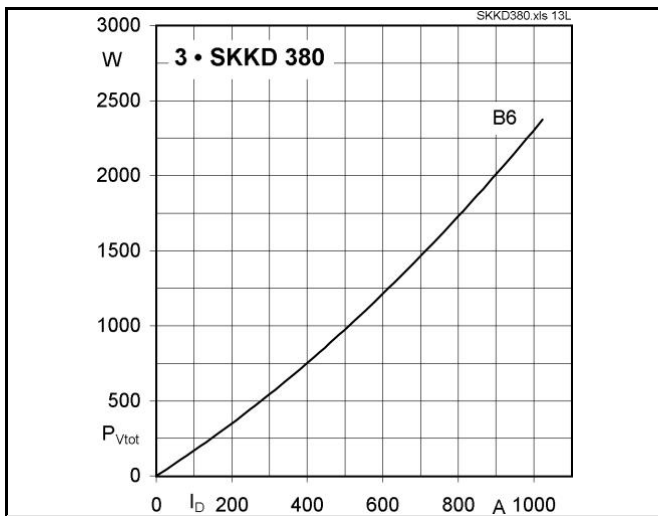


Fig. 13L Power dissipation of three modules vs. direct current

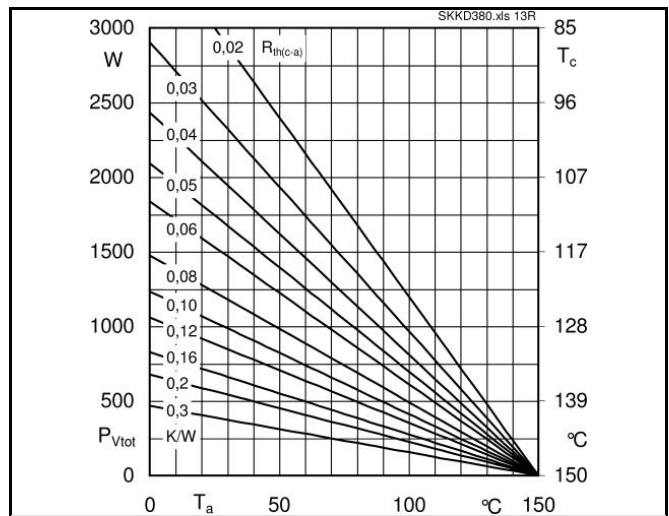


Fig. 13R Power dissipation of three modules vs. case temperature

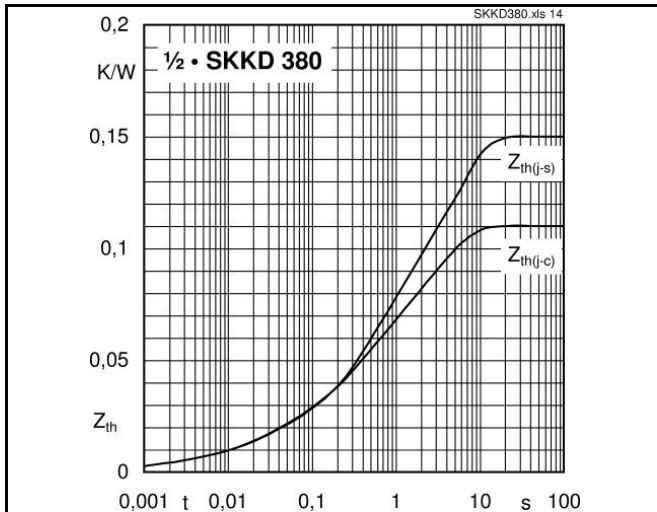


Fig. 14 Transient thermal impedance vs. time

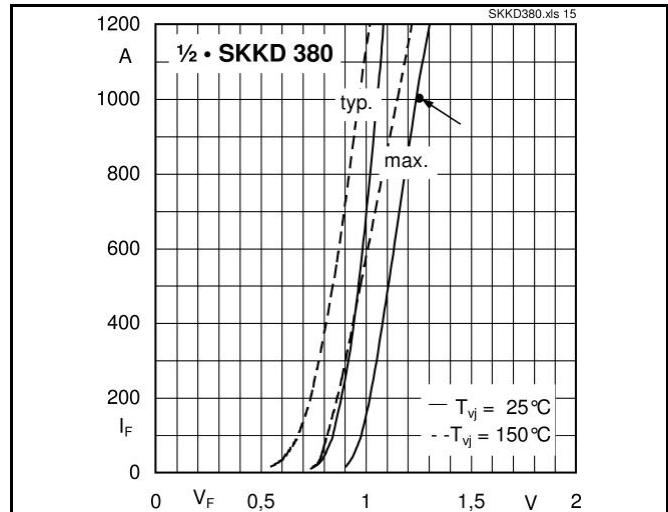


Fig. 15 Forward characteristics

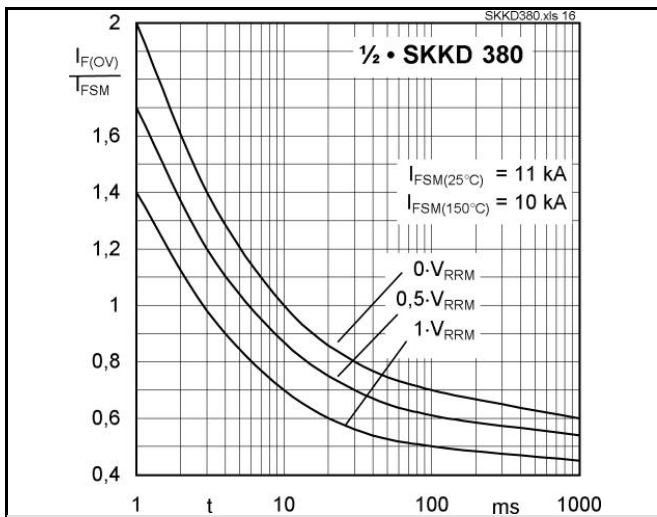
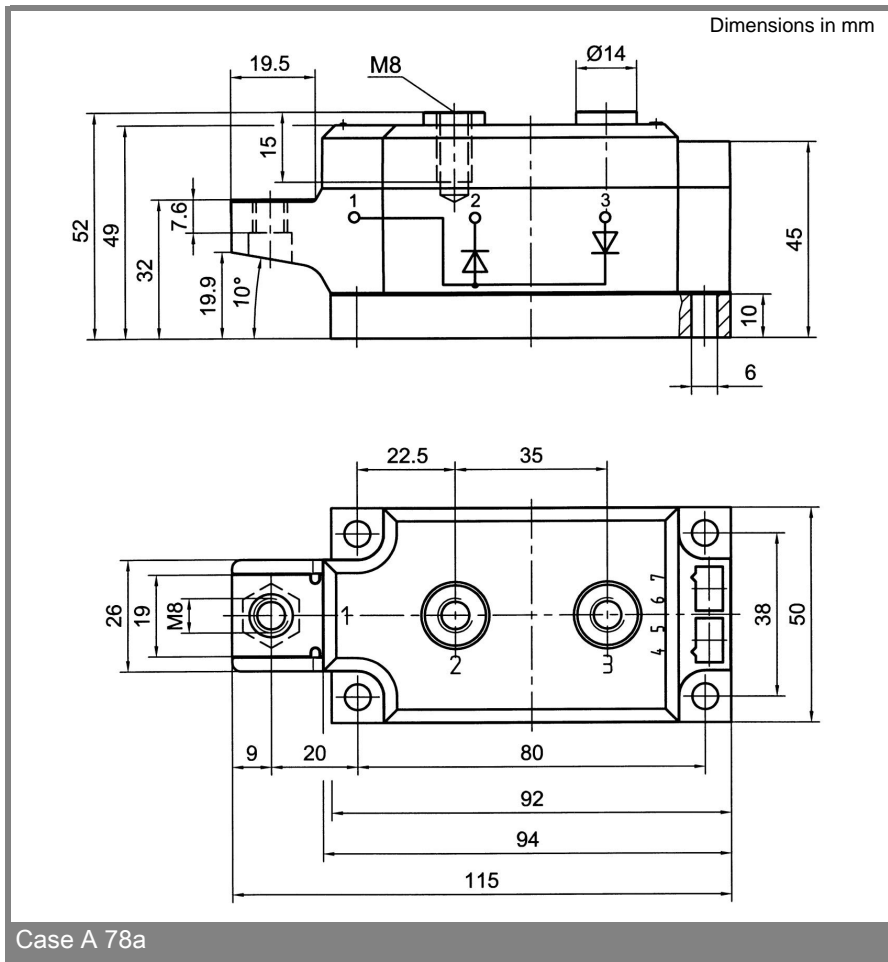


Fig. 16 Surge overload current vs. time

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