

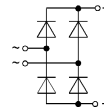
Miniature Bridge Rectifiers

SKB 2

V_{RSM} V_{RRM}	V_{VRMS}	I_D ($T_{amb} = 45\text{ °C}$) 2,5 A		
		Types	C_{max} μF	R_{min} Ω
200	60	SKB 2/02 L5A	3 000	1
400	125	SKB 2/04 L5A	2 200	1,5
800	250	SKB 2/08 L5A	1 000	3
1200	500	SKB 2/12 L5A	500	6



Symbol	Conditions	SKB 2
I_D	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾	1,7 A 2,5 A
I_{DCL}	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾	1,4 A 2 A
I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms $T_{vj} = 150\text{ °C}$, 10 ms	58 A 50 A
i^2t	$T_{vj} = 25\text{ °C}$, 8,3...10 ms $T_{vj} = 150\text{ °C}$, 8,3...10 ms	$17\text{ A}^2\text{s}$ $12,5\text{ A}^2\text{s}$
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 10\text{ A}$	1,65 V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85 A
r_T	$T_{vj} = 150\text{ °C}$	100 m Ω
I_{RD}	$T_{vj} = 25\text{ °C}$; $V_{RD} = V_{RRM} \leq 200\text{ V}$ $\geq 400\text{ V}$	20 μA 5 μA
	$T_{vj} = 150\text{ °C}$; $V_{RD} = V_{RRM} \leq 200\text{ V}$ $\geq 400\text{ V}$	1 mA 0,6 mA
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 10 μs
f_G		2000 Hz
R_{thja}	isolated ¹⁾ chassis ²⁾	30 °C/W 17,5 °C/W
T_{vj}		- 40...+ 150 °C
T_{stg}		- 55...+ 150 °C
RC	$P_R = 1\text{ W}$	10 nF+20...50 Ω
Fu		2 A
w		4 g
Case	→ page B 11 – 6	G 4



Features

- Compact plastic package with in-line terminals
- High blocking voltage

Typical Applications

- Internal power supplies for electronic equipment
- DC power supplies
- Control equipment
- TV sets

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

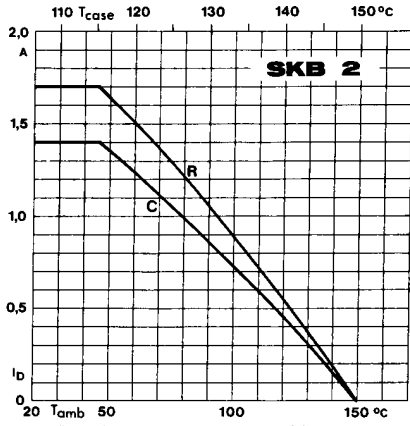


Fig. 1 Rated output current vs. ambient temperature

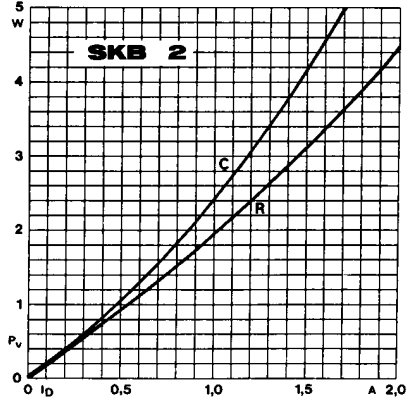


Fig. 2 Power dissipation vs. output current

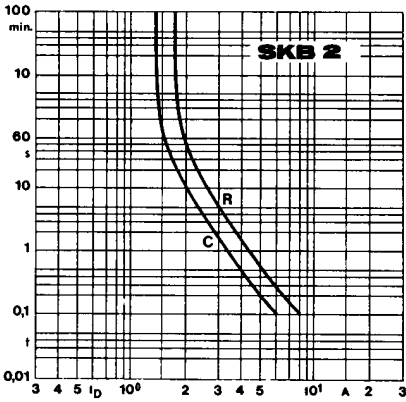


Fig. 6 Rated overload current vs. time

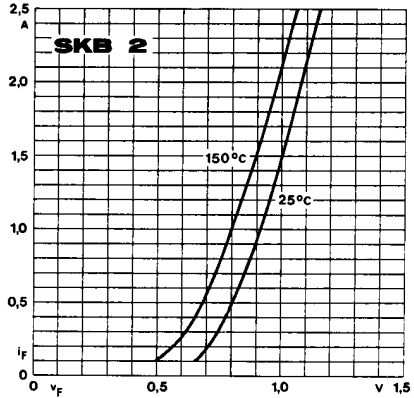


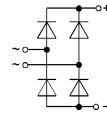
Fig. 9 Forward characteristics of a single diode

Miniature Bridge Rectifiers

SKB B ... C 1000 L5B
SKB B ... C 1500 L5B
SKBa B 500 C 1000 L5B
SKBa B 500 C 1500

V _{RSM} V _{RRM}	V _{VRMS} V	I _D (T _{amb} = 45 °C)					
		1,8 A			2,5 A		
		Types	C _{max} μF	R _{min} Ω	Types	C _{max} μF	R _{min} Ω
120	40	SKB B 40 C 1000 L5B	5000	0,5	SKB B 40 C 1500 L5B	7000	0,4
400	125	SKB B 80 C 1000 L5B	1600	1,5	SKB B 80 C 1500 L5B	2200	1,1
800	250	SKB B 250 C 1000 L5B	800	3	SKB B 250 C 1500 L5B	1000	2,5
1000	380	SKB B 380 C 1000 L5B	600	4,5	SKB B 380 C 1500 L5B	700	4
1200	500	SKB B 500 C 1000 L5B	400	6	SKB B 500 C 1500 L5B	500	5
V _(BR) min	V _{VRMS} V	Avalanche Types					
1300	500	SKBa B 500 C 1000 L5B	400	6	SKBa B 500 C 1500	500	5

Symbol	Conditions	SKB B...C 1000 SKBa B 500 C 1000	SKB B...C 1500 SKBa B 500 C 1500
I _D	T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	1,2 A 1,8 A	1,5 A -
I _{DCL}	T _{amb} = 33 °C; isolated ¹⁾ T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	- 1 A 1,5 A	1,5 A - -
I _{FSM}	T _{vj} = 25 °C, 10 ms T _{vj} = 150 °C, 10 ms	58 A 50 A	80 A 70 A
i ² t	T _{vj} = 25 °C, 8,3 ... 10 ms T _{vj} = 150 °C, 8,3 ... 10 ms	17 A ² s 12,5 A ² s	32 A ² s 24,5 A ² s
P _{RSM}	t _p = 10 μs; avalanche types	1000 W	1000 W
V _F	T _{vj} = 25 °C; I _F = 10 A	1,65 V	1,5 V
V _(TO)	T _{vj} = 150 °C	0,85 V	0,85 V
r _T	T _{vj} = 150 °C	100 mΩ	60 mΩ
I _{RD}	T _{vj} = 25 °C; V _{RD} = V _{RRM} = 120 V ≥ 400 V V _{RD} = V _{(BR)min} T _{vj} = 150 °C; V _{RD} = V _{RRM} = 120 V ≥ 400 V		20 μA 5 μA 5 μA 1 mA 0,6 mA
t _{rr}	T _{vj} = 25 °C		typ. 10 μs
f _g			2000 Hz
R _{thja}	isolated ¹⁾ chassis ²⁾	42 °C/W 27 °C/W	36 °C/W -
T _{vj}			- 40...+ 150 °C
T _{stg}			- 55...+ 150 °C
RC	P _R = 1 W		10 nF + 20...50 Ω
F _u		1,5 A	2 A
w		2 g	2 g
Case			G 2



Features

- Compact plastic package with in-line terminals
- High blocking voltage
- SKBa with avalanche characteristics

Typical Applications

- Internal power supplies for electronic equipment
- DC power supplies
- Control equipment
- TV sets
- Avalanche types for inductive loads:
Solenoids,
Motor brakes

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

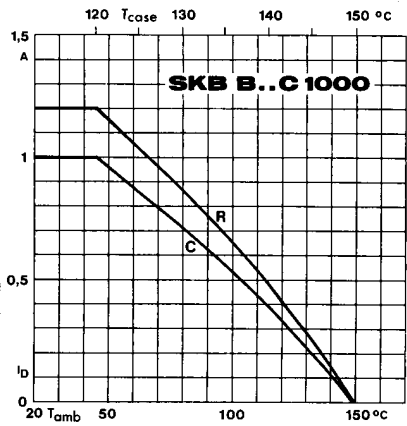


Fig. 1 a Rated output current vs. ambient temperature

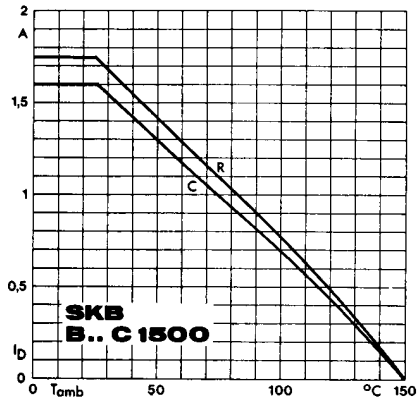


Fig. 1 b Rated output current vs. ambient temperature

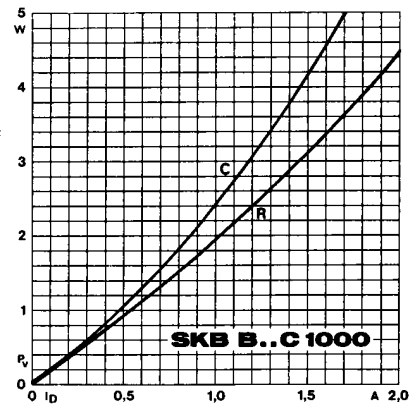


Fig. 2 a Power dissipation vs. output current

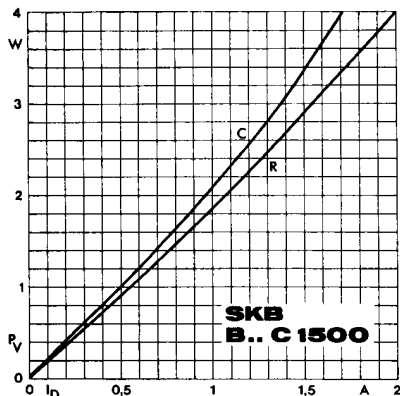


Fig. 2 b Power dissipation vs. output current

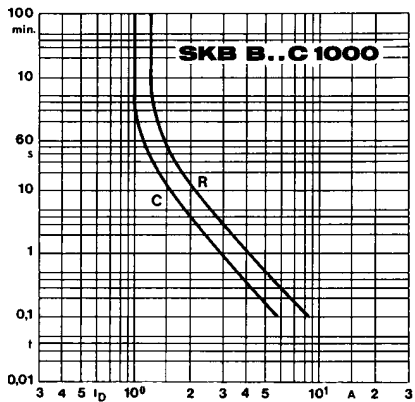


Fig. 6 a Rated overload current vs. time

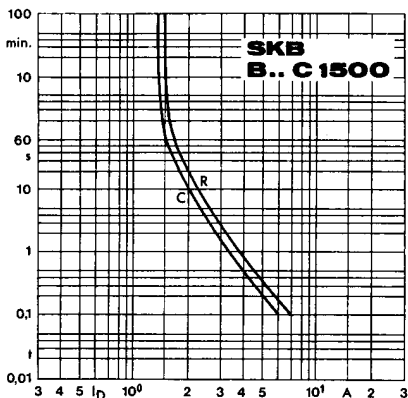


Fig. 6 b Rated overload current vs. time

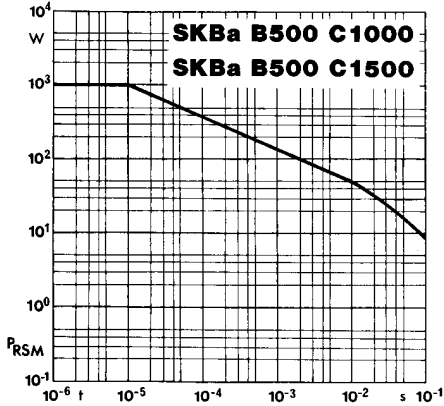


Fig. 7 Rated reverse power dissipation vs. time

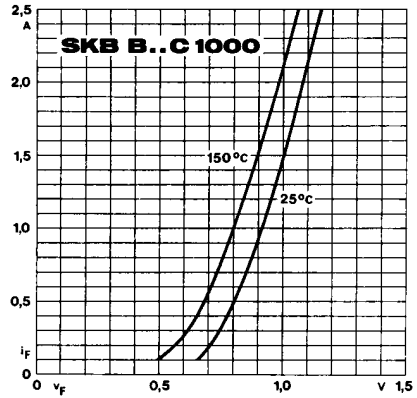


Fig. 9 a Forward characteristics of a single diode

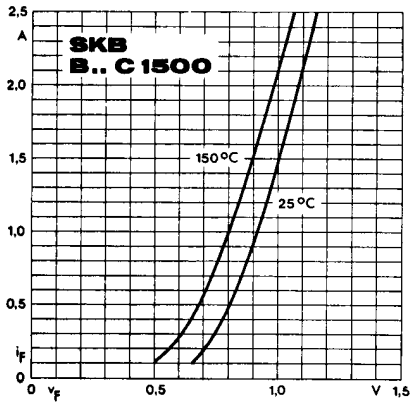
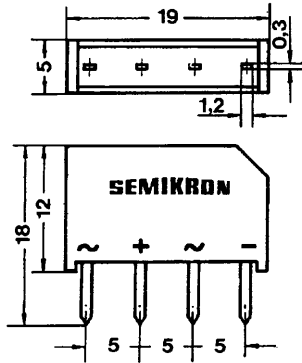
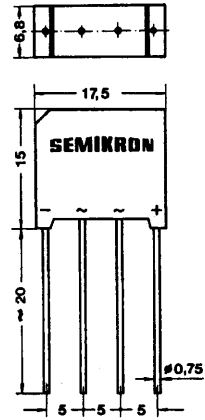


Fig. 9 b Forward characteristics of a single diode

SKB B... C 1000 L5B SKB B... C 1500 L5B
 SKBa B 500 C 1000 L5B SKBa B 500 C 1500
 Case G 2



SKB 2
 Case G 4

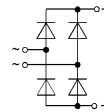


Dimensions in mm

Miniature Bridge Rectifiers

SKB B ... C 3200/2200
SKBa B ... C 3200/2200

V_{RSM} V_{RRM}	V_{VRMS}	I_D ($T_{amb} = 45^\circ\text{C}$) 4 A		
		Types	C_{max} μF	R_{min} Ω
100	40	SKB B 40 C3200/2200	10000	0,25
400	125	SKB B 80 C3200/2200	3000	0,8
800	250	SKB B 250 C3200/2200	1700	1,6
900	380	SKB B 380 C3200/2200	1800	2,4
1200	500	SKB B 500 C3200/2200	800	3
$V_{(BR)min}$ V	V_{VRMS} V	Avalanche Type		
1300	500	SKBa B 500 C3200/2200	800	3



Features

- Compact plastic package with in-line terminals
- High blocking voltage
- SKBa with avalanche characteristics
- Plastic material used for carries Underwriters Laboratories flammability classification 94 V-0

Typical Applications

- Internal power supplies for electronic equipment
- DC power supplies
- Control equipment
- TV sets
- Avalanche types for inductive loads:
Solenoids,
Motor brakes

Symbol	Conditions	SKB... SKBa ...	Units
I_D	$T_{amb} = 45^\circ\text{C}$; isolated ¹⁾ chassis ²⁾	2,7 4,0	A A
I_{DCL}	$T_{amb} = 45^\circ\text{C}$; isolated ¹⁾ chassis ²⁾	2,2 3,2	A A
I_{FSM}	$T_{vj} = 25^\circ\text{C}$, 10 ms $T_{vj} = 150^\circ\text{C}$, 10 ms	115 100	A A
I^2t	$T_{vj} = 25^\circ\text{C}$, 8,3...10 ms $T_{vj} = 150^\circ\text{C}$, 8,3...10 ms	66 50	A^2s A^2s
P_{RSM}	$t_p = 10 \mu\text{s}$; avalanche type	2000	W
V_F	$T_{vj} = 25^\circ\text{C}$; $I_F = 10 \text{ A}$	1,25	V
$V_{(TO)}$	$T_{vj} = 150^\circ\text{C}$	0,85	V
r_T	$T_{vj} = 150^\circ\text{C}$	24	m Ω
I_{RD}	$T_{vj} = 25^\circ\text{C}$; $V_{RD} = V_{RRM} = 100 \text{ V}$ $\geq 400 \text{ V}$ $V_{RD} = V_{(BR)min}$	20 5 5	μA μA μA
	$T_{vj} = 150^\circ\text{C}$; $V_{DR} = V_{RRM} = 100 \text{ V}$ $\geq 400 \text{ V}$	1 0,6	mA mA
t_{rr}	$T_{vj} = 25^\circ\text{C}$	typ. 10	μs
f_G		2000	Hz
R_{thja}	isolated ¹⁾ chassis ²⁾	22 15	$^\circ\text{C}/\text{W}$ $^\circ\text{C}/\text{W}$
T_{vj}		- 40...+ 150	$^\circ\text{C}$
T_{stg}		- 55...+ 150	$^\circ\text{C}$
RC	$P_R = 1 \text{ W}$	20...50 10	Ω nF
F_u		4	A
w		10	g
Case		G 5	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

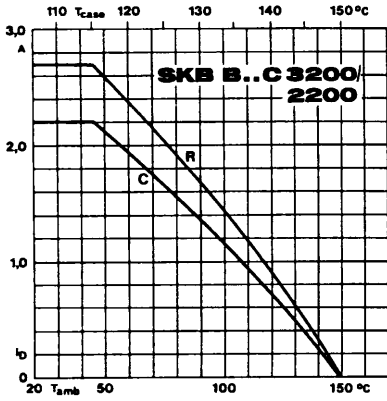


Fig. 1 Rated output current vs. ambient temperature

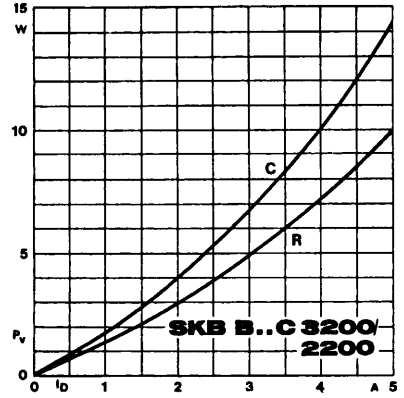


Fig. 2 Power dissipation vs. output current

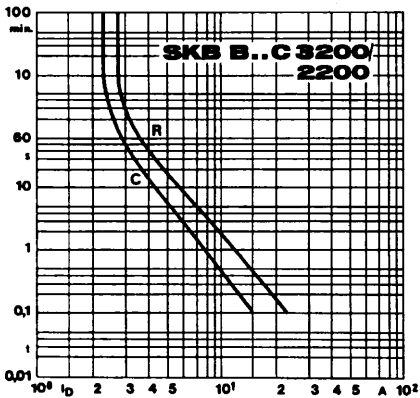


Fig. 6 Rated overload current vs. time

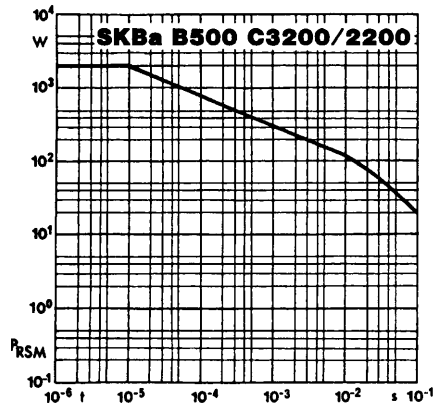


Fig. 7 Rated reverse power dissipation vs. time

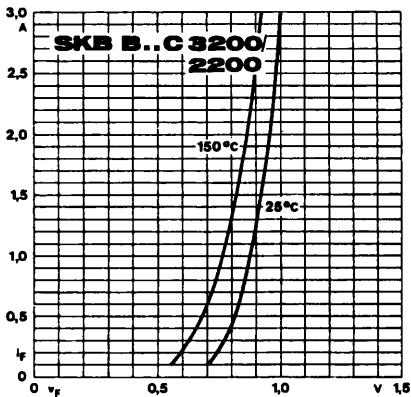
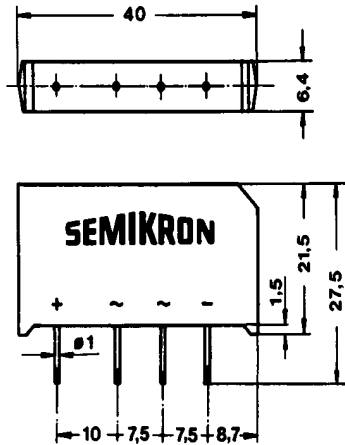


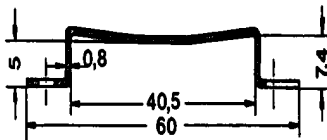
Fig. 9 Forward characteristics of a single diode

SKB B . . . C 3200/2200
SKBa B . . . C 3200/2200
Case G 5



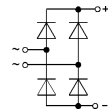
Dimensions in mm

No. 3233 2500



Power Bridge Rectifiers

SKB B . . / . -4
SKBa B . . / . -4
SKB 15



Features

- Square plastic case with screw terminals
- Blocking voltage to 1600 V
- **SKB 15** with metal baseplate for improved heat transfer
- **SKBa** with avalanche characteristics

Typical Applications

- Internal power supplies for electronic equipment
- Electronic control equipment
- DC motors
- Field rectifiers for DC motors
- Battery charger rectifiers
- Avalanche type for inductive loads:
Solenoids,
Motor brakes

V _{RSM} V _{RRM}	V _{VRMS} V	I _D			
		5 A (T _{amb} = 45 °C)		15 A (T _{case} = 117 °C)	
V	V	Types	R _{min} Ω	Types	R _{min} Ω
200	60	–	–	SKB 15/02 A2	0,15
400	125	SKB B 80/70-4	0,5	SKB 15/04 A2	0,3
800	250	SKB B 250/220-4	1	SKB 15/08 A2	0,5
1200	380	SKB B 500/445-4	2	SKB 15/12 A2	0,75
1400	440	–	–	SKB 15/14 A2	0,9
1600	500	–	–	SKB 15/16 A2	1
V _(BR) min	V _{VRMS} V	Avalanche Type			
1300	500	SKBa B 500/445-4	2	–	

Symbol	Conditions	SKB.. -4 SKBa.. -4	SKB 15	Units
I _D	T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	5 5	5 11	A A
I _{DCL}	P5A/100	–	17	A
	T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	4 4	4 9	A A
	P5A/100	–	14	A
I _{FSM}	T _{vj} = 25 °C, 10 ms	180	370	A
i ² t	T _{vj} = 150 °C, 10 ms	150	320	A ² s
	T _{vj} = 25 °C, 8,3...10 ms	160	680	A ² s
P _{RSM}	T _{vj} = 150 °C, 8,3...10 ms	110	500	A ² s
	t _p = 10 μs; avalanche type	3000	–	W
V _F	T _{vj} = 25 °C; I _F = 80 A I _F = 150 A	2,65 –	– 2,2	V V
V _(TO)	T _{vj} = 150 °C	0,8	0,85	V
r _T	T _{vj} = 150 °C	24	12	mΩ
I _{RD}	T _{vj} = 25 °C; V _{RD} = V _{RRM}	0,1	0,3	mA
	V _{RD} = V _{(BR)min}	10	–	μA
t _{rr}	T _{vj} = 150 °C; V _{RD} = V _{RRM}	0,6	5	mA
	T _{vj} = 25 °C	typ. 10 2000		μs Hz
R _{thjc}	total	–	1	°C/W
R _{thch}	total	–	0,3	°C/W
R _{thja}	isolated ¹⁾	13	12	°C/W
	chassis ²⁾	–	4,3	°C/W
	P5A/100	–	2,7	°C/W
T _{vj}		– 40...+150		°C
T _{stg}		– 55...+150		°C
V _{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	–	3000/2500	V
RC	P _R = 1 W	20 ... 50	20 ... 50	Ω
		10	100	nF
		6	20	A
Fu		1,5 ± 15 %		Nm
M ₁	to heatsink	13 ± 15 %		lb. in.
	to terminals	1 ± 15 %		Nm
M ₂	to terminals	9 ± 15 %		lb. in.
		60	65	g
w		60	65	g
Case		G 8	G 9	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

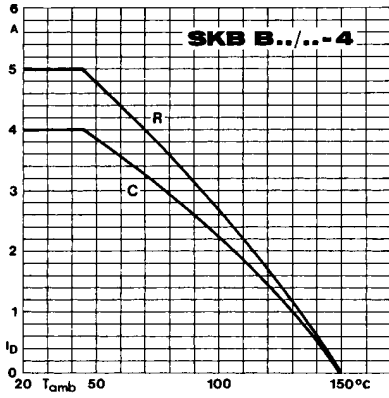


Fig. 1 Rated output current vs. ambient temperature

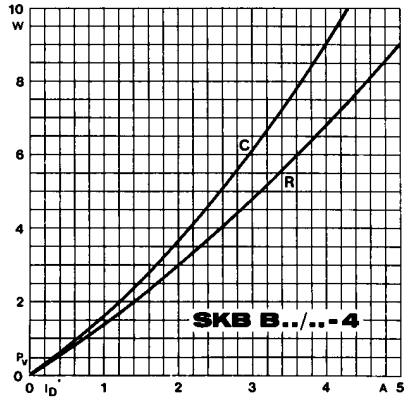


Fig. 2 Power dissipation vs. output current

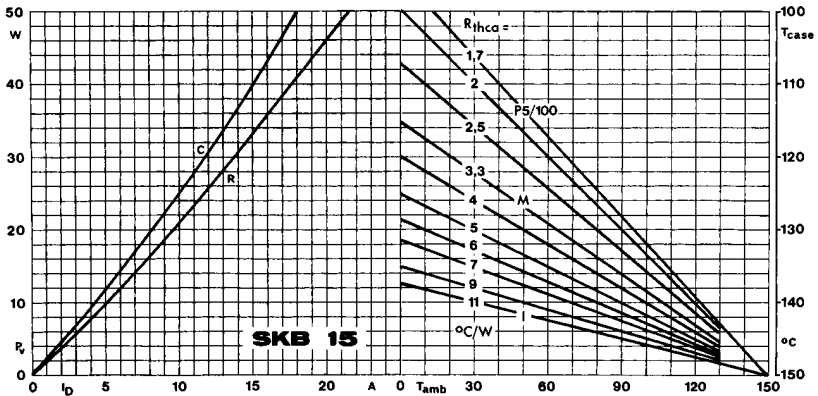


Fig. 3 Power dissipation vs. output current and case temperature

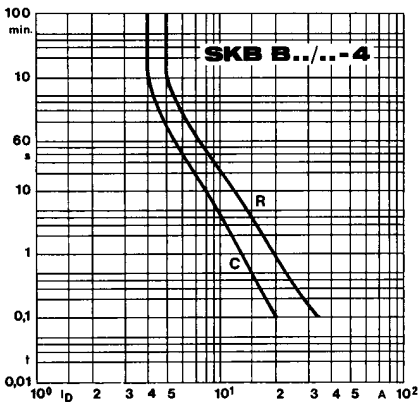


Fig. 6 a Rated overload current vs. time

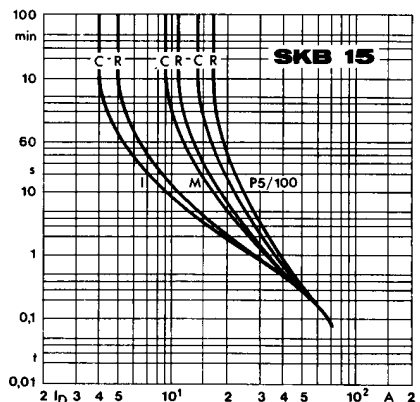


Fig. 6 b Rated overload current vs. time

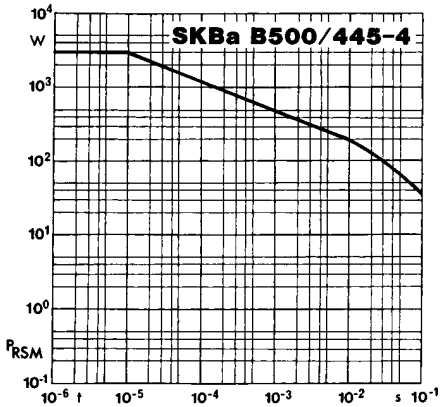


Fig. 7 Rated reverse power dissipation vs. time

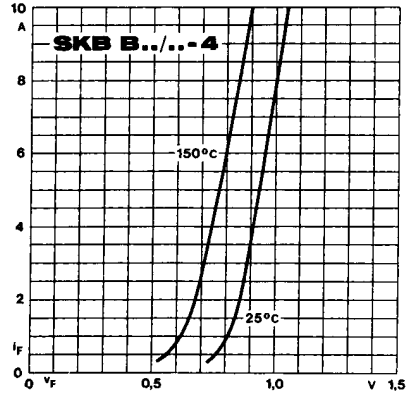


Fig. 9 a Forward characteristics of a single diode

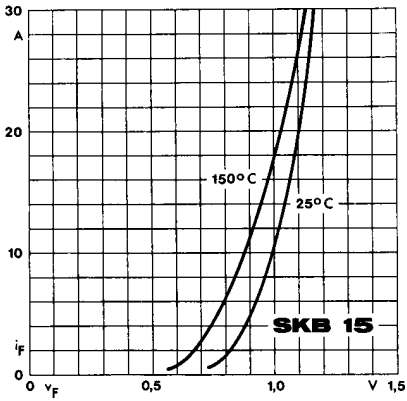
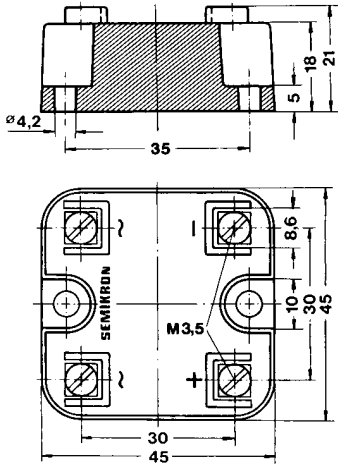


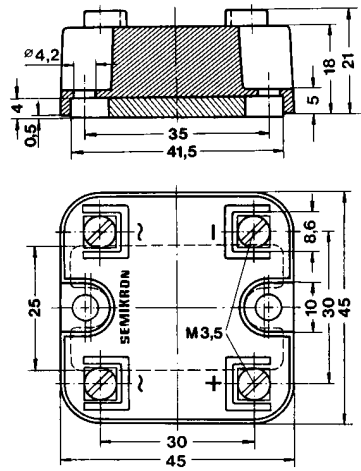
Fig. 9 b Forward characteristics of a single diode

SKBB...-4
SKB aB...-4
 Case G 8



Dimensions in mm

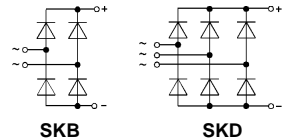
SKB 15
 Case G 9



Dimensions in mm

Power Bridge Rectifiers

SKB 25 SKD 25



Features

- Square plastic case with isolated metal base plate and fast-on connectors
- Blocking voltage to 1600 V
- High surge currents
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting
- UL recognized, file no. E 63 532

Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V _{RSM} V _{RRM} V	I _D (T _{case} = ...)			
	17 A (75 °C)		20 A (73 °C)	
	Types	R _{min} Ω	Types	R _{min} Ω
100	SKB 25/01	0,1	–	–
200	SKB 25/02	0,15	SKD 25/02	0,15
400	SKB 25/04	0,3	SKD 25/04	0,3
600	SKB 25/06	0,5	–	–
800	SKB 25/08	0,7	SKD 25/08	0,7
1200	SKB 25/12	1	SKD 25/12	1
1400	SKB 25/14	1,2	SKD 25/14	1,2
1600	SKB 25/16	1,5	SKD 25/16	1,5

Symbol	Conditions	SKB 25	SKD 25	Units
I _D	T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	3,5 10 14 17	3,5 12 15 20	A A A A
I _{DCL}	T _{amb} = 45 °C; isolated ¹⁾ chassis ²⁾	3 9,5 12 14	3,5 12 15 20	A A A A
I _{FSM}	T _{vj} = 25 °C, 10 ms	370		A
i ² t	T _{vj} = 150 °C, 10 ms	320		A
	T _{vj} = 25 °C, 8,3...10 ms	680		A ² s
V _F	T _{vj} = 25 °C; I _F = 150 A	2,2		V
	T _{vj} = 150 °C	0,85		V
V _(TO)	T _{vj} = 150 °C	12		mΩ
r _T	T _{vj} = 150 °C	0,3		mA
I _{RD}	T _{vj} = 25 °C; V _{RD} = V _{RRM}	5		mA
t _{rr}	T _{vj} = 150 °C; V _{RD} = V _{RRM}	typ. 10		μs
f _G	T _{vj} = 25 °C	2000		Hz
R _{thjc}	total	2	1,75	°C/W
R _{thch}	total	0,15		°C/W
R _{thja}	isolated ¹⁾	15		°C/W
	chassis ²⁾	4,7		°C/W
	R4A/120	3,6		°C/W
	P1A/120	2,75		°C/W
T _{vj}		– 40...+ 150		°C
T _{stg}		– 55...+ 150		°C
V _{isol}	a.c. 50...60 Hz; r.m.s.; 1 s/ 1 min	3000 / 2500		V–
RC	P _R = 1 W	50		Ω
		0,1		μF
		20		A
Fu		2 ± 15 %		Nm
M ₁	to heatsink	18 ± 15 %		lb. in.
w		24	26	g
Case		G 10	G 11	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

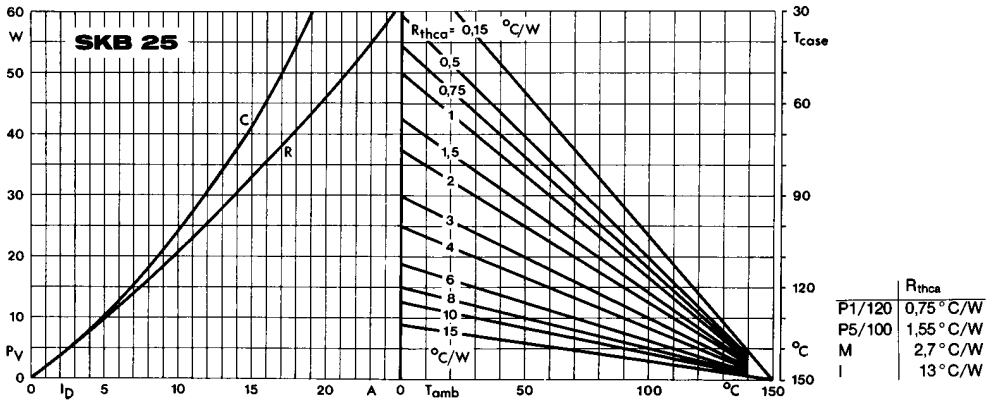


Fig. 3 a Power dissipation vs. output current and case temperature

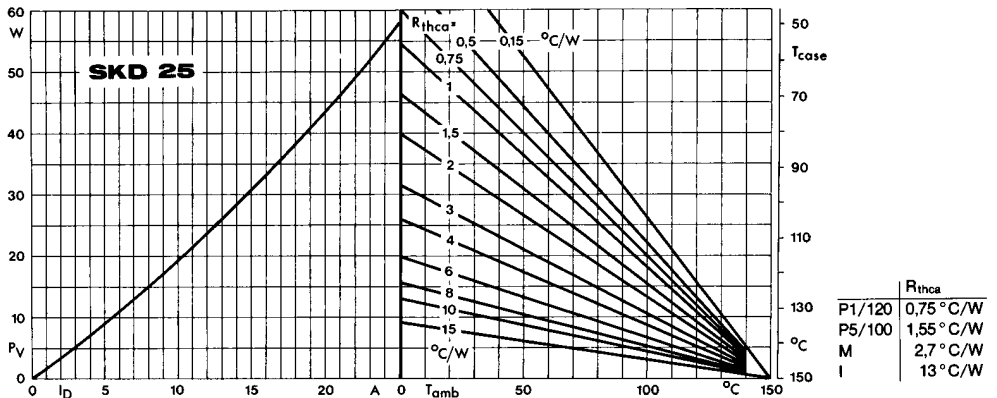


Fig. 3 b Power dissipation vs. output current and case temperature

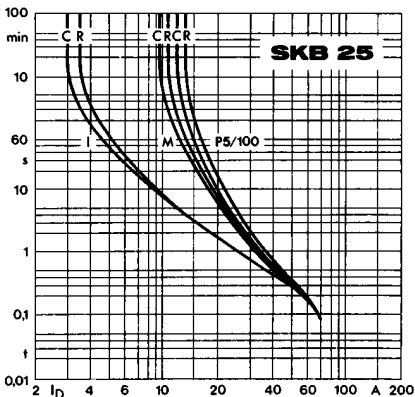


Fig. 6 a Rated overload current vs. time

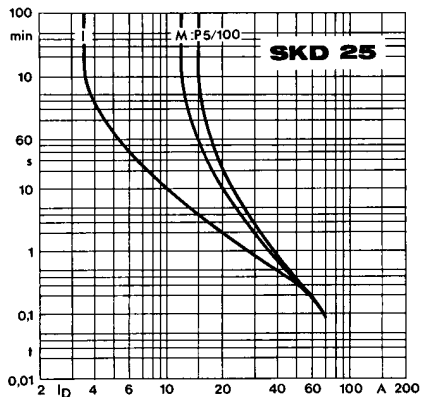


Fig. 6 b Rated overload current vs. time

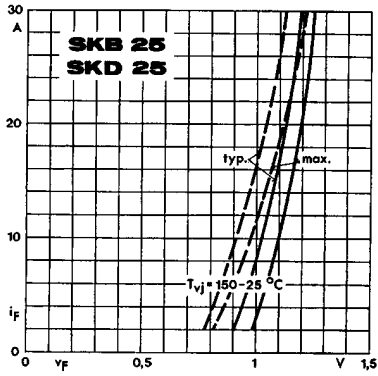
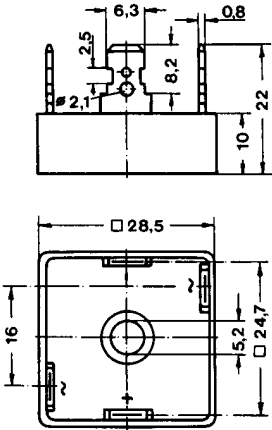
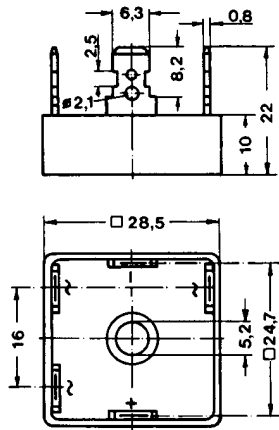


Fig. 9 Forward characteristics of a single diode

SKB 25
Case G 10

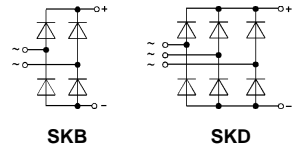


SKD 25
Case G 11



Power Bridge Rectifiers

SKB 30 SKD 30



Features

- Isolated metal case with screw terminals
- Blocking voltage to 1600 V
- High surge currents
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting
- UL recognized, file no. E 63 532

Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V_{RSM} V_{RRM} V	I_D ($T_{case} = . . .$)			
	30 A (94 °C)		30 A (98 °C)	
	Types	R_{min} Ω	Types	R_{min} Ω
200	SKB 30/02 A1	0,15	SKD 30/02 A1	0,15
400	SKB 30/04 A1	0,3	SKD 30/04 A1	0,3
800	SKB 30/08 A1	0,5	SKD 30/08 A1	0,5
1200	SKB 30/12 A1	0,75	SKD 30/12 A1	0,75
1400	SKB 30/14 A1	0,9	SKD 30/14 A1	0,9
1600	SKB 30/16 A1	1	SKD 30/16 A1	1

Symbol	Conditions	SKB 30	SKD 30	Units
I_D	$T_{amb} = 45\text{ °C}; \text{isolated}^{(1)}$ chassis ⁽²⁾ P5A/100 R4A/120 P1A/120	6,5	6,5	A
		15	15	A
		21	21	A
		23	23	A
		29	31	A
I_{DCL}	$T_{amb} = 35\text{ °C}; \text{P1A/120 F}$ $T_{amb} = 45\text{ °C}; \text{isolated}^{(1)}$ chassis ⁽²⁾ P5A/100 P1A/120	38	6,5	A
		6	13	A
		17	15	A
		24	21	A
		32	31	A
I_{FSM}	$T_{vj} = 25\text{ °C}; 10\text{ ms}$ $T_{vj} = 150\text{ °C}; 10\text{ ms}$	370	320	A
				A
i^2t	$T_{vj} = 25\text{ °C}; 8,3\dots 10\text{ ms}$ $T_{vj} = 150\text{ °C}; 8,3\dots 10\text{ ms}$	680	500	A^2s
				A^2s
V_F	$T_{vj} = 25\text{ °C}; I_F = 150\text{ A}$	2,2		V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85		V
r_T	$T_{vj} = 150\text{ °C}$	12		m Ω
I_{RD}	$T_{vj} = 25\text{ °C}; V_{RD} = V_{RRM}$ $T_{vj} = 150\text{ °C}; V_{RD} = V_{RRM}$	0,3		mA
		5		mA
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 25		μs
f_G		2000		Hz
R_{thjc}	total	0,7		$^{\circ}C/W$
R_{thch}	total	0,1		$^{\circ}C/W$
R_{thja}	isolated ⁽¹⁾ chassis ⁽²⁾ P5A/100 P1A/120	8,5		$^{\circ}C/W$
		3,3		$^{\circ}C/W$
		2,2		$^{\circ}C/W$
		1,4		$^{\circ}C/W$
T_{vj}		- 40...+ 150		$^{\circ}C$
T_{stg}		- 55...+ 150		$^{\circ}C$
V_{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	3000 / 2500		V-
RC	$P_R = 1\text{ W}$	50		Ω
		0,1		μF
		25		A
F_u				
M_1	to heatsink	SI units	5 \pm 15 %	Nm
		US units	44 \pm 15 %	lb. in.
M_2	to terminals	SI units	1,5 \pm 15 %	Nm
		US units	13 \pm 15 %	lb.in.
w		125		g
Case		G 12	G 13	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

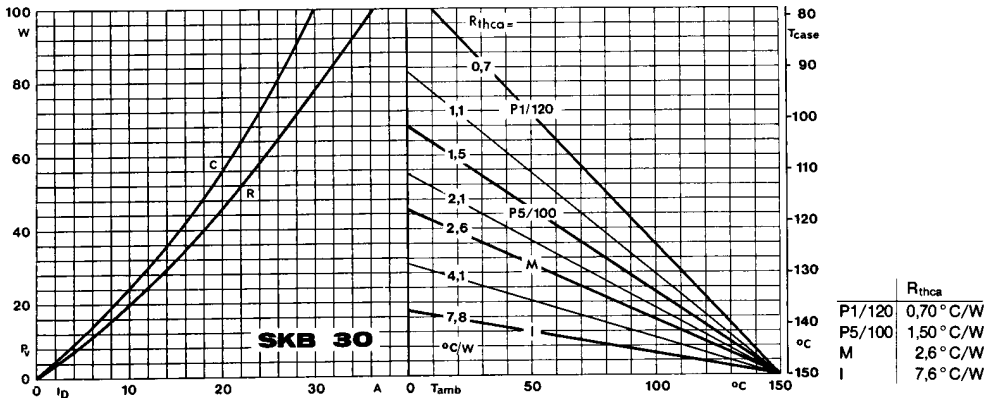


Fig. 3 a Power dissipation vs. output current and case temperature

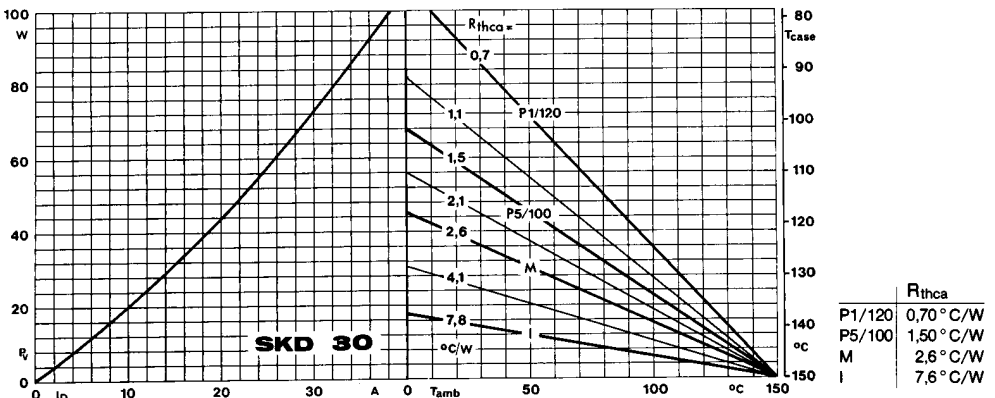


Fig. 3 b Power dissipation vs. output current and case temperature

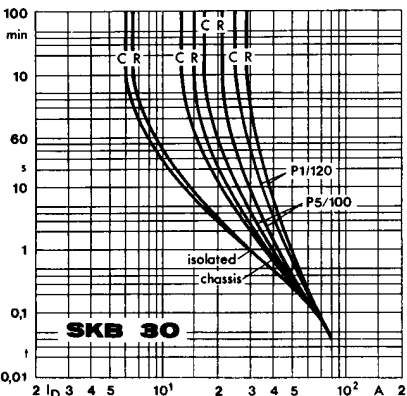


Fig. 6 a Rated overload current vs. time

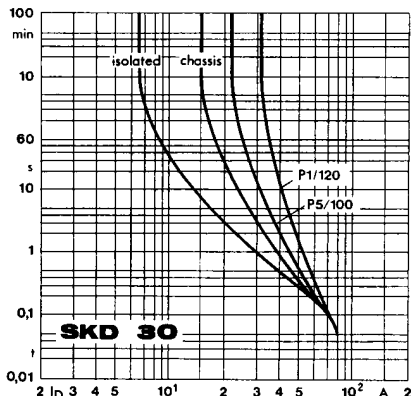


Fig. 6 b Rated overload current vs. time

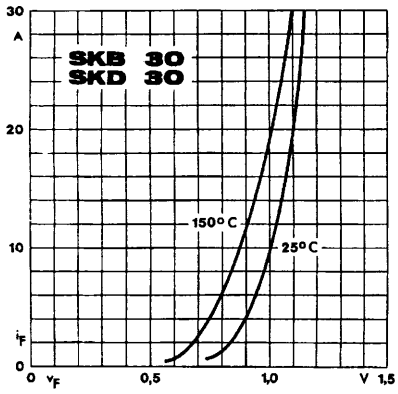
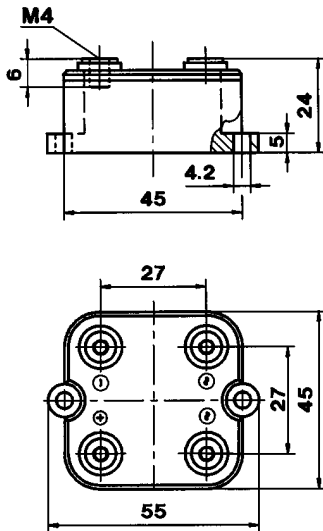


Fig. 9 Forward characteristics of a single diode

SKB 30

Case G 12



Dimensions in mm

SKD 30

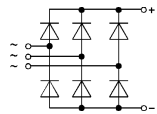
Case G 13



Dimensions in mm

SEMIPONT® 1 Power Bridge Rectifiers

SKD 31



Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- UL recognized, file no. E 63 532

Typical Applications

- DC power supply, e. g. for transistorized AC motor controllers
- Battery chargers
- Non-controlled DC motor field supply

V_{RSM} V_{RRM}	I_D ($T_{case} = 100\text{ }^\circ\text{C}$) 31 A
200 V	SKD 31/02
400 V	SKD 31/04
800 V	SKD 31/08
1200 V	SKD 31/12
1400 V	SKD 31/14
1600 V	SKD 31/16

Symbol	Conditions	SKD 31	
I_D	$T_{case} = 85\text{ }^\circ\text{C}$	44 A	
	$T_{amb} = 45\text{ }^\circ\text{C}$, isolated ¹⁾ chassis ²⁾	P5A/100	5,3 A
		R4A/120, P13A/125	17 A
		P1A/120	26 A
	$T_{amb} = 35\text{ }^\circ\text{C}$, P1A/120 F	56 A	
IFSM	$T_{vj} = 25\text{ }^\circ\text{C}$, 10 ms	370 A	
	$T_{vj} = 125\text{ }^\circ\text{C}$, 10 ms	320 A	
i^2t	$T_{vj} = 25\text{ }^\circ\text{C}$, 8,3...10 ms	685 A ² s	
	$T_{vj} = 125\text{ }^\circ\text{C}$, 8,3...10 ms	510 A ² s	
V_F	$T_{vj} = 25\text{ }^\circ\text{C}$; $I_F = 75\text{ A}$	max. 1,75 V	
$V_{(TO)}$	$T_{vj} = 125\text{ }^\circ\text{C}$	0,85 V	
r_T	$T_{vj} = 125\text{ }^\circ\text{C}$	12 mΩ	
I_{RD}	$T_{vj} = 25\text{ }^\circ\text{C}/125\text{ }^\circ\text{C}$; $V_{RD} = V_{RRM}$	0,2/2 mA	
R_{thjc}	per diode	2,0 °C/W	
	total	0,33 °C/W	
R_{thch}	total	0,1 °C/W	
R_{thja}	isolated ¹⁾	15 °C/W	
	chassis ²⁾	3 °C/W	
	P5A/100	1,85 °C/W	
	P1A/120	1,05 °C/W	
T_{vj}		- 40...+ 125 °C	
T_{stg}		- 40...+ 125 °C	
V_{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	3600 V- / 3000 V-	
RC	$P_R = 1\text{ W}$	0,1 μF + 50 Ω	
F_u		25 A	
M_1	case to heatsink; SI units/US units	2 Nm/18 lb. in. ± 15 %	
w		66 g	
Case	→ page B11-26	G 26	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

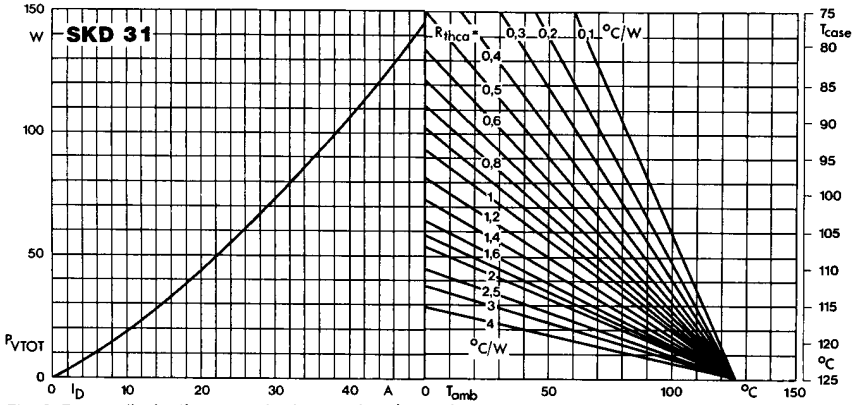


Fig. 3 Power dissipation vs. output current and case temperature

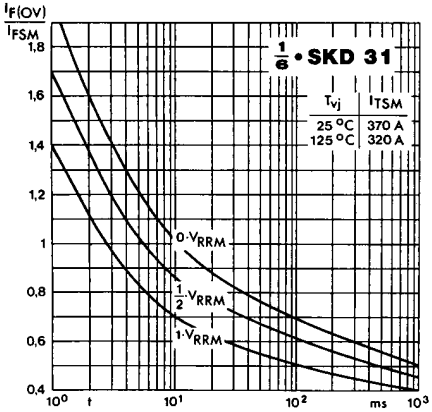


Fig. 5 Surge overload current vs. time

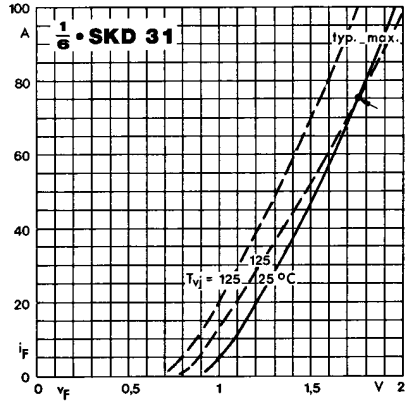


Fig. 9 Forward characteristics of a single diode

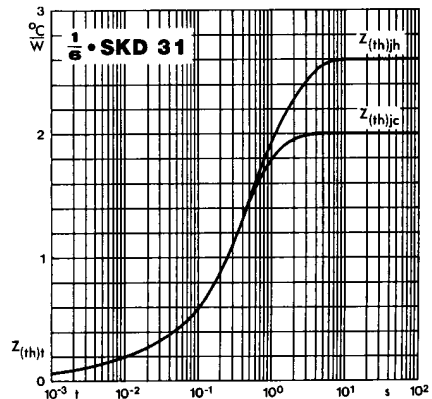


Fig. 12 Transient thermal impedance vs. time

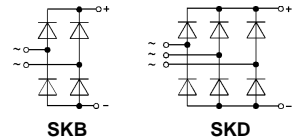
Power Bridge Rectifiers

SKB 50 SKD 50



V_{RSM} V_{RRM} V	I_D ($T_{case} = \dots$)			
	50 A (64 °C)		50 A (92 °C)	
	Types	R_{min} Ω	Types	R_{min} Ω
200	SKB 50/02 A3	0,1	SKD 50/02 A3	0,1
400	SKB 50/04 A3	0,3	SKD 50/04 A3	0,2
800	SKB 50/08 A3	0,4	SKD 50/08 A3	0,4
1200	SKB 50/12 A3	0,6	SKD 50/12 A3	0,6
1400	SKB 50/14 A3	0,7	SKD 50/14 A3	0,7
1600	SKB 50/16 A3	0,8	SKD 50/16 A3	0,8

Symbol	Conditions	SKB 50	SKD 50	Units	
I_D	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾	10 20 34	10 22 40	A A A	
	$T_{amb} = 35\text{ °C}$; P1A/120 F	47	60	A	
	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾	8 16 29	10 22 40	A A A	
I_{DCL}	$T_{amb} = 150\text{ °C}$; P1A/120 F	29	40	A	
	$T_{amb} = 35\text{ °C}$; P1A/120 F	40	60	A	
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms	750		A	
	$T_{vj} = 150\text{ °C}$; 10 ms	600		A	
i^2t	$T_{vj} = 25\text{ °C}$; 8,3...10 ms	2800		A ² s	
	$T_{vj} = 150\text{ °C}$; 8,3...10 ms	1800		A ² s	
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 150\text{ A}$	1,6		V	
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85		V	
r_T	$T_{vj} = 150\text{ °C}$	8		m Ω	
I_{RD}	$T_{vj} = 25\text{ °C}$; $V_{RD} = V_{RRM}$	1		mA	
	$T_{vj} = 150\text{ °C}$; $V_{RD} = V_{RRM}$	10		mA	
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 10		μ s	
f_G		2000		Hz	
R_{thjc} R_{thch} R_{thja}	total	0,65	0,45	°C/W	
	total	0,06	0,06	°C/W	
	$T_{amb} = 35\text{ °C}$; P1A/120 F	0,9	0,7	°C/W	
	isolated ¹⁾ chassis ²⁾	5,7 2,5	5,5 2,3	°C/W °C/W	
	P1A /120	1,3	1,1	°C/W	
T_{vj}		- 40...+ 150		°C	
T_{stg}		- 55...+ 150		°C	
V_{isol} RC	a.c. 50...60 Hz; r.m.s., 1 s / 1 min $P_R = 1\text{ W}$	3000 / 2500		V-	
		50		Ω	
		0,1		μ F	
F_u		50		A	
M_1	to heatsink	SI units	5 ± 15 %		Nm
		US units	44 ± 15 %		lb. in.
M_2	to terminals	SI units	3 ± 15 %		Nm
		US units	26 ± 15 %		lb. in.
w		250		g	
Case		G 14	G 15		



Features

- Isolated metal case with screw terminals
- Blocking voltage to 1600 V
- High surge current
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting

Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

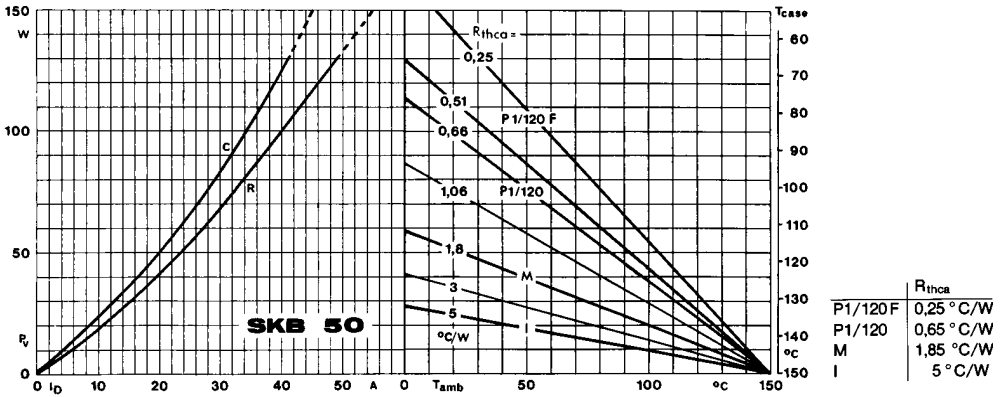


Fig. 3 a Power dissipation vs. output current and case temperature

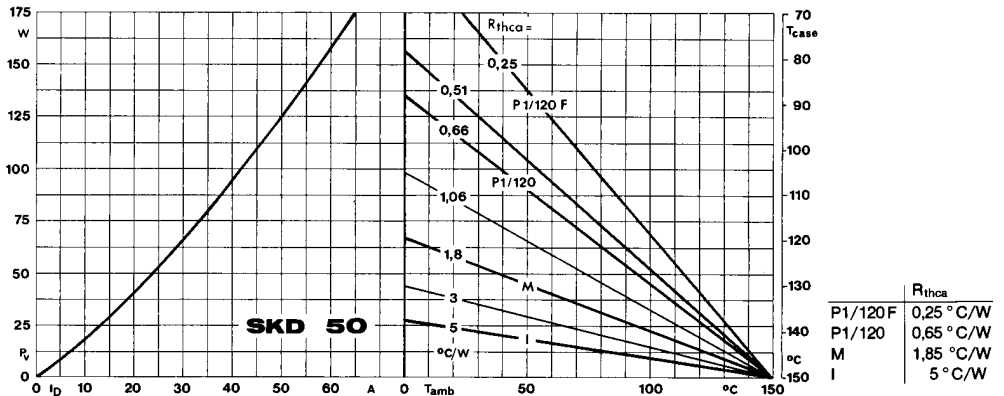


Fig. 3 b Power dissipation vs. output current and case temperature

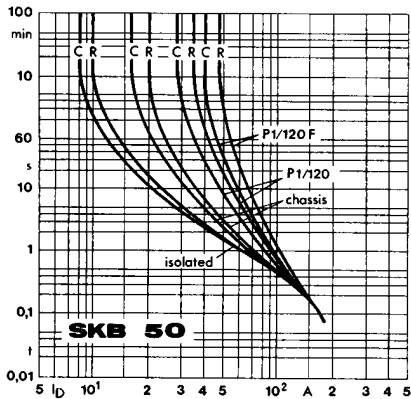


Fig. 6 a Rated overload current vs. time

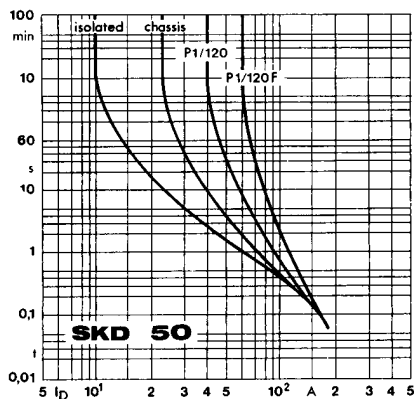


Fig. 6 b Rated overload current vs. time

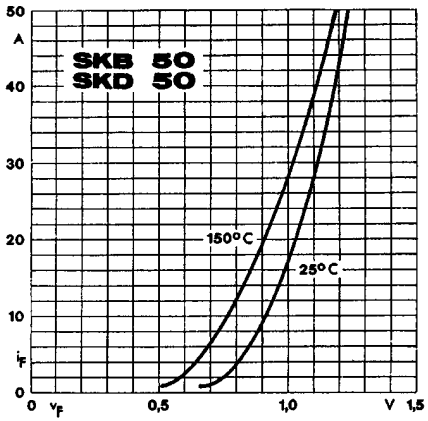
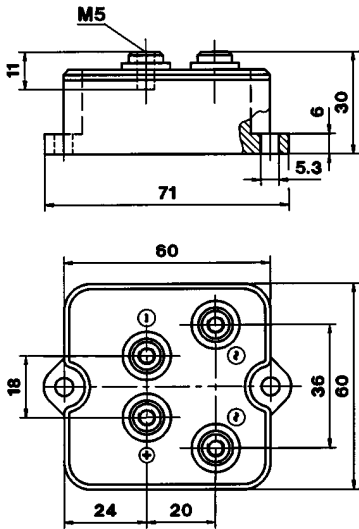


Fig. 9 Forward characteristics of a single diode

SKB 50

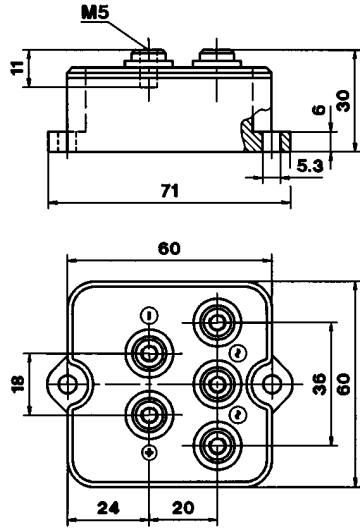
Case G 14



Dimensions in mm

SKD 50

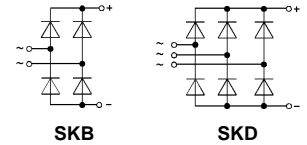
Case G 15



Dimensions in mm

SEMIPONT® 3 Power Bridge Rectifiers

SKB 52 SKD 62
SKB 72 SKD 82



Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage to 1800 V
- High surge currents
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting
- UL recognized file no. E 63 532

Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V _{RSM} V _{RRM}	I _D (T _{case} = . . .)			
	50 A (99 °C)	70 A (101 °C)	60 A (110 °C)	80 A (110 °C)
200 V	SKB 52/02	SKB 72/02	SKD 62/02	SKD 82/02
400 V	SKB 52/04	SKB 72/04	SKD 62/04	SKD 82/04
800 V	SKB 52/08	SKB 72/08	SKD 62/08	SKD 82/08
1200 V	SKB 52/12	SKB 72/12	SKD 62/12	SKD 82/12
1400 V	SKB 52/14	SKB 72/14	SKD 62/14	SKD 82/14
1600 V	SKB 52/16	SKB 72/16	SKD 62/16	SKD 82/16
1800 V	SKB 52/18	SKB 72/18	SKD 62/18*	SKD 82/18*

Symbol	Conditions	SKB 52	SKD 62	SKB 72	SKD 82
I _D	T _{case} = 110 °C; resistive/ inductive load	42 A	60 A	60 A	80 A
	T _{amb} = 45 °C, isolated ¹⁾ chassis ²⁾	9,5 A	10,5 A	10 A	12 A
	P 1A/120	40 A	46 A	48 A	54 A
	P 1A/200	45 A	53 A	54 A	63 A
I _{FSM}	T _{vj} = 25 °C, 10 ms	500 A		750 A	
	T _{vj} = 150 °C, 10 ms	425 A		640 A	
i ² t	T _{vj} = 25 °C, 8,3...10 ms	1250 A ² s		2800 A ² s	
	T _{vj} = 150 °C, 8,3...10 ms	900 A ² s		2000 A ² s	
V _F	T _{vj} = 25 °C; I _F = 150 A	1,8 V		1,6 V	
V _(TO)	T _{vj} = 150 °C	0,85 V		0,85 V	
r _T	T _{vj} = 150 °C	8 mΩ		5 mΩ	
I _{RD}	T _{vj} = 25/150 °C; V _{RD} = V _{RRM}	0,5 / 5 mA		0,5 / 6 mA	
R _{thjc}	per diode	1,5 °C/W		1,1 °C/W	
	total, SKB	0,375 °C/W		0,275 °C/W	
	total, SKD	0,25 °C/W		0,183 °C/W	
R _{thch}	total	0,07 °C/W			
T _{vj}		- 40 . . . + 150 °C			
T _{stg}		- 40 . . . + 125 °C			
V _{isol}	a.c. 50...60 Hz; r.m.s.; 1s/1min	3600 V~ / 3000 V~			
M ₁ M ₂	case to heatsink } SI units/ busbars to } US units terminals	5 Nm/44 lb. in. ± 15 % 5 Nm/44 lb. in. ± 15 %			
w		165 g			
Case		G 35	G 36	G 35	G 36

* Available in limited quantities

¹⁾ Freely suspended or mounted on an isolator

²⁾ Mounted on a painted metal sheet of minimum 250 x 250 x 1 mm: R_{thha} = 1,8 °C/W

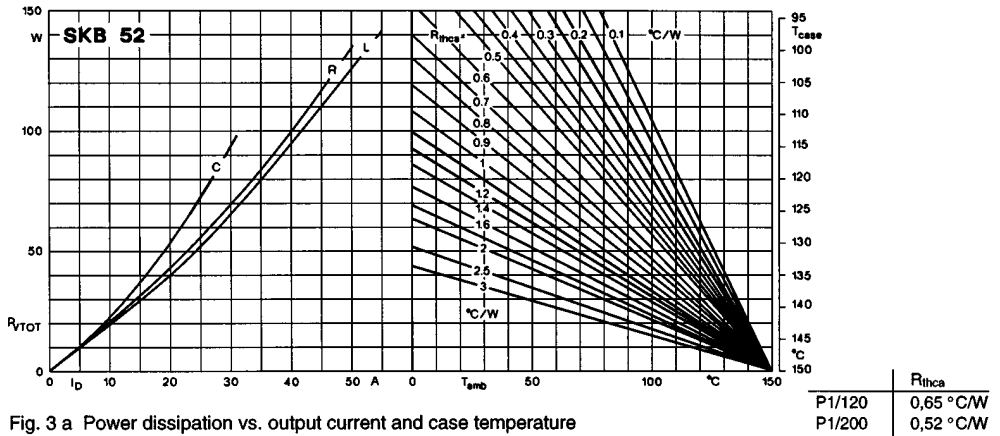


Fig. 3 a Power dissipation vs. output current and case temperature

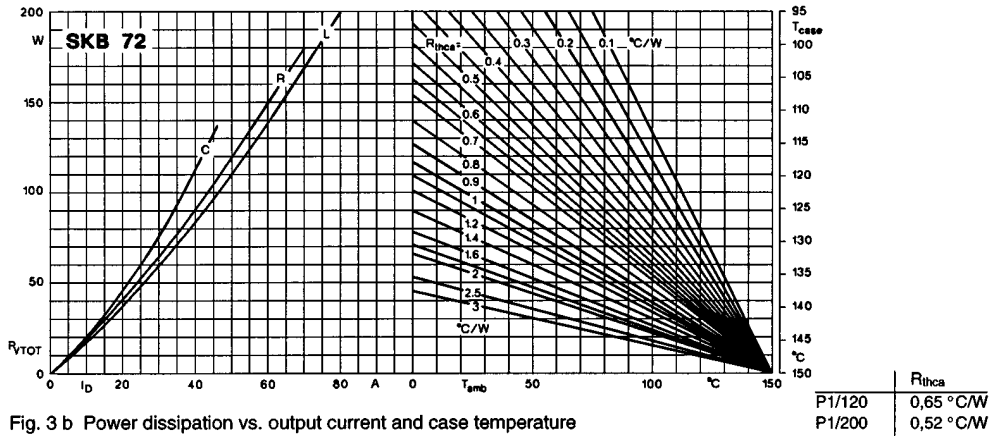


Fig. 3 b Power dissipation vs. output current and case temperature

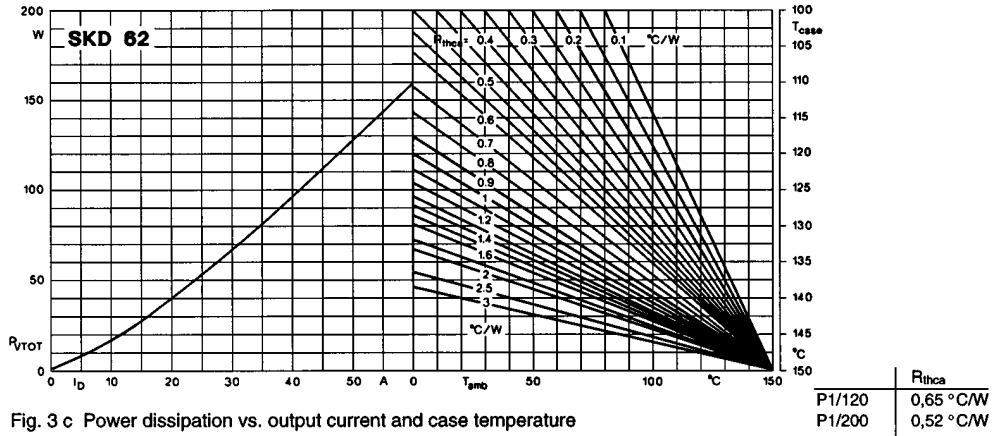


Fig. 3 c Power dissipation vs. output current and case temperature

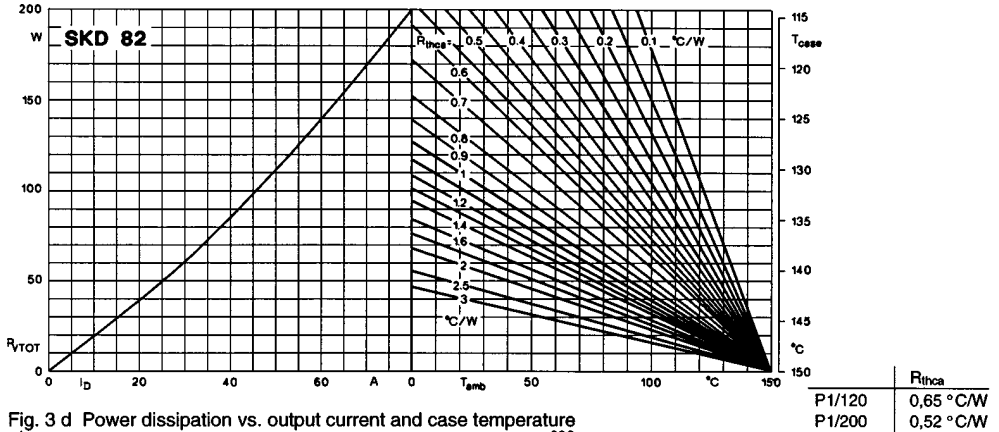


Fig. 3 d Power dissipation vs. output current and case temperature

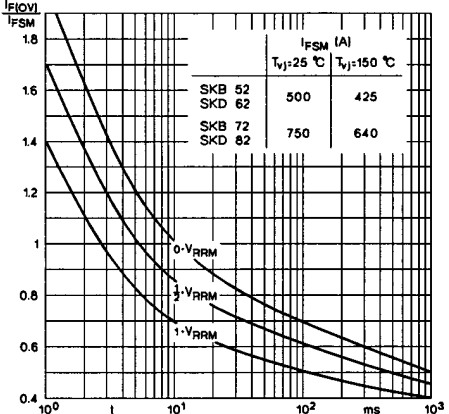


Fig. 5 Surge overload current vs. time

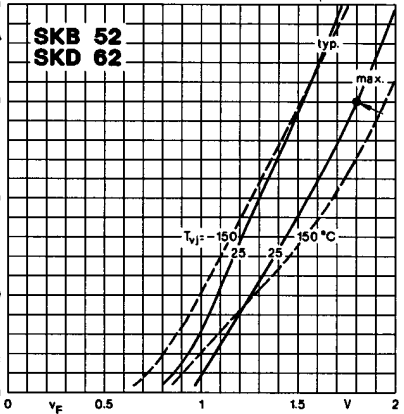


Fig. 9 a Forward characteristics of a single diode

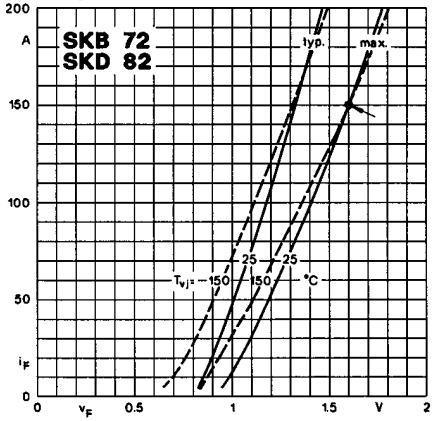


Fig. 9 b Forward characteristics of a single diode

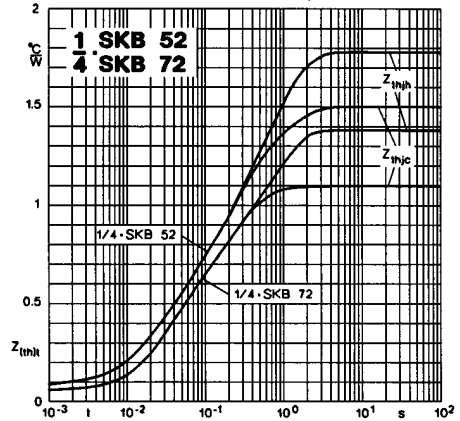
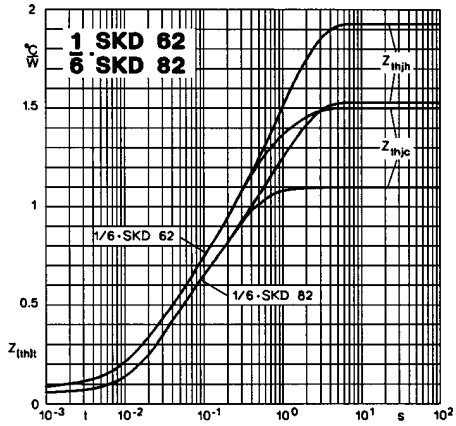
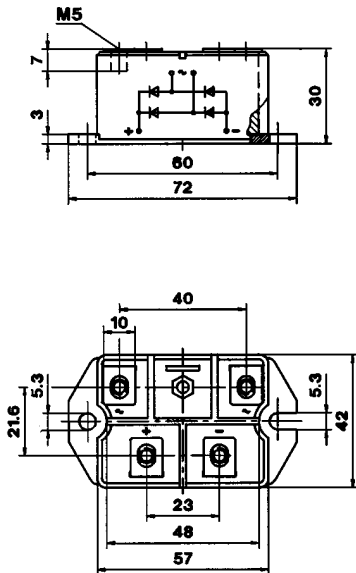


Fig. 12 a Transient thermal impedance vs. time



SKB 52
SKB 72
Case G 35

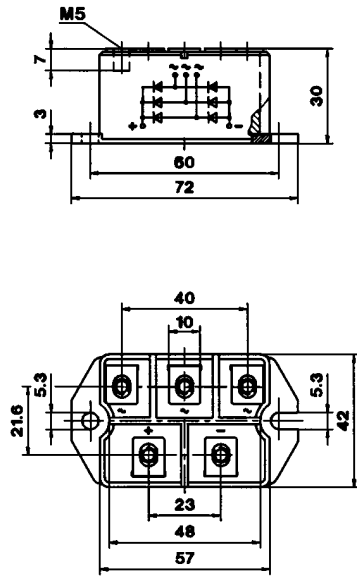
SEMIPONT®3



Dimensions in mm

SKD 62
SKD 82
Case G 36

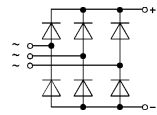
SEMIPONT®3



Dimensions in mm

SEMIPONT® 4 Power Bridge Rectifiers

SKD 110
SKD 160



SKD

Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage to 1800 V
- High surge currents
- Easy chassis mounting
- UL recognized, file no. E 63 532

Typical Applications

- Three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V_{RSM} V_{RRM}	I_D ($T_{case} = 100\text{ °C}$)	
	110 A	160 A
200 V	SKD 110/02	SKD 160/02
400 V	SKD 110/04	SKD 160/04
800 V	SKD 110/08	SKD 160/08
1200 V	SKD 110/12	SKD 160/12
1400 V	SKD 110/14	SKD 160/14
1600 V	SKD 110/16	SKD 160/16
1800 V	SKD 110/18*	SKD 160/18*

Symbol	Conditions	SKD 110	SKD 160	Units
I_D	$T_{case} = 100\text{ °C}$	110	160	A
	$T_{amb} = 45\text{ °C}$, chassis ¹⁾	28	30	A
		70	75	A
	$T_{amb} = 35\text{ °C}$, P1/120 F	110	145	A
	P3/120 F	123	146	A
I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms	1200	1800	A
	$T_{vj} = 150\text{ °C}$, 10 ms	1000	1500	A
i^2t	$T_{vj} = 25\text{ °C}$, 8,3...10 ms	7200	16 200	A ² s
	$T_{vj} = 150\text{ °C}$, 8,3...10 ms	5000	11 200	A ² s
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 300\text{ A}$	1,9	1,65	V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85	0,85	V
r_T	$T_{vj} = 150\text{ °C}$	4	3	mΩ
I_{RD}	$T_{vj} = 25\text{ °C}$; $V_{RD} = V_{RRM}$	0,5	0,5	mA
	$T_{vj} = 150\text{ °C}$; $V_{RD} = V_{RRM}$	5	6	mA
R_{thjc}	per diode	0,9	0,65	°C/W
	total	0,15	0,11	°C/W
R_{thch}	total	0,03		°C/W
T_{vj}		- 40 ... + 150		°C
T_{stg}		- 40 ... + 125		°C
V_{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	3600 / 3000		V~
M_1	to heatsink	SI units	5 ± 15 %	Nm
		US units	44 ± 15 %	lb. in.
M_2	to terminals	SI units	5 ± 15 %	Nm
		US units	44 ± 15 %	lb. in.
w		270		g
Case		G 37		

* Available in limited quantities

¹⁾ Painted metal sheet of minimum 250 x 250 x 1 mm: $R_{thca} = 1,8\text{ °C/W}$

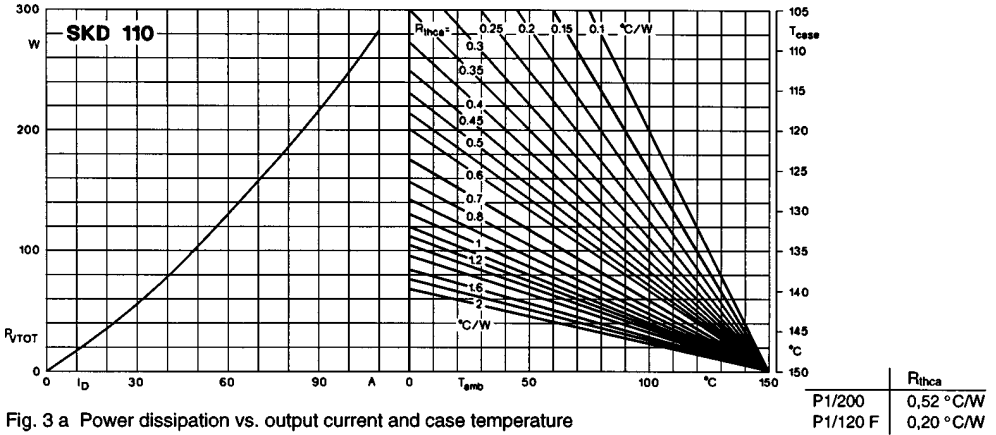


Fig. 3 a Power dissipation vs. output current and case temperature

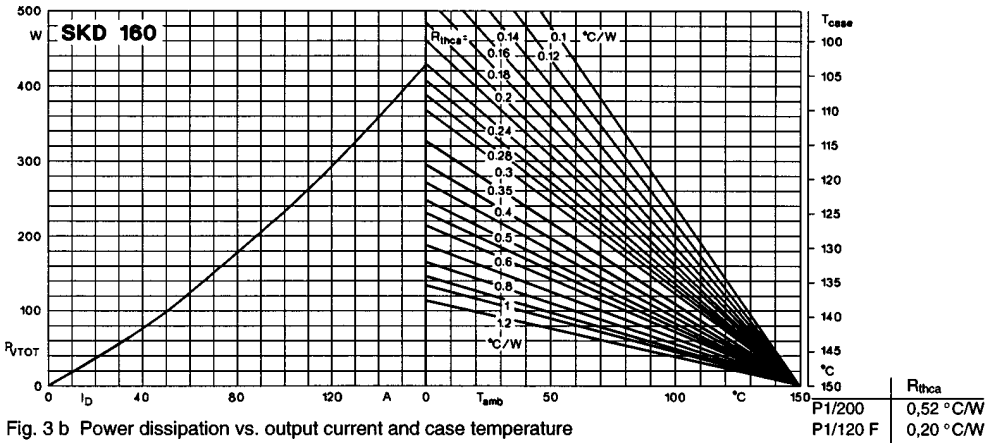


Fig. 3 b Power dissipation vs. output current and case temperature

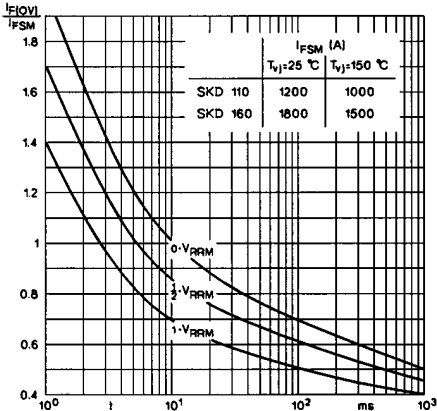


Fig. 5 Surge overload current vs. time

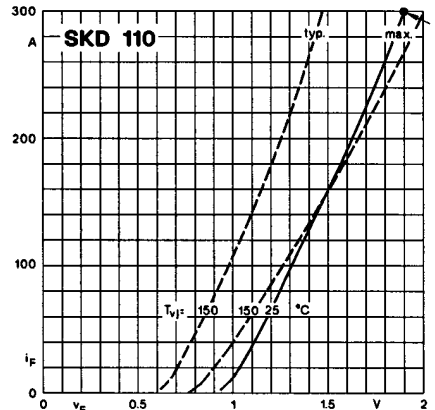


Fig. 9 a Forward characteristics of a single diode

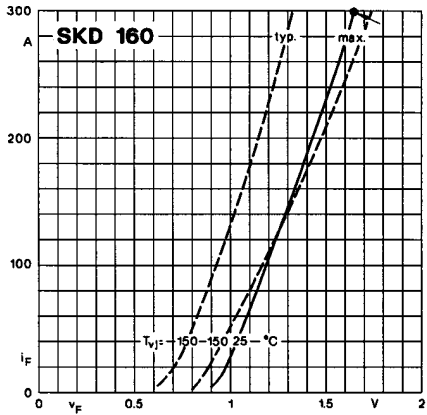


Fig. 9 b Forward characteristics of a single diode

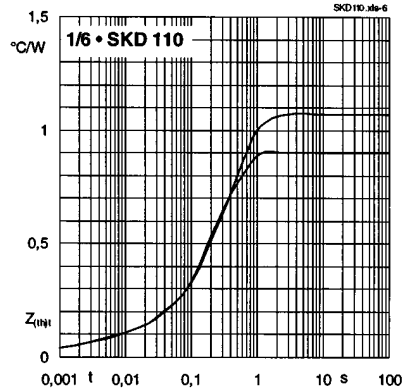


Fig. 12 a Transient thermal impedance vs. time

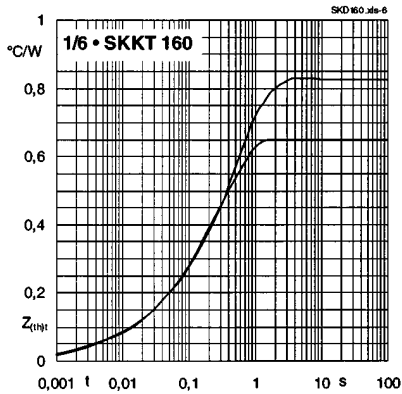
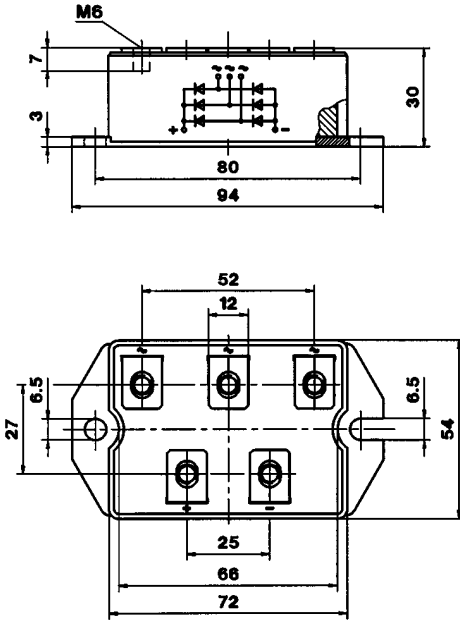


Fig. 12 b Transient thermal impedance vs. time

SKD 110
SKD 160

SEMIPONT® 4

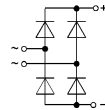
Case G 37



Dimensions in mm

Power Bridge Rectifiers

SKB 26



Features

- Square plastic case with isolated metal base plate and wire leads
- Ideal for printed circuit boards
- Blocking voltage up to 1600 V
- High surge currents
- Notch moulded in casing for easy polarity identification
- Easy chassis mounting

Typical Applications

- Single phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V_{RSM} V_{RRM}	V_{VRMS}	I_D ($T_{case} = 75\text{ °C}$) 18 A	
		Types	R_{min} Ω
200	60	SKB 26/02	0,15
400	125	SKB 26/04	0,3
600	185	SKB 26/06	0,4
800	250	SKB 26/08	0,5
1000	310	SKB 26/10	0,65
1200	380	SKB 26/12	0,75
1400	440	SKB 26/14	0,9
1600	500	SKB 26/16	1,0

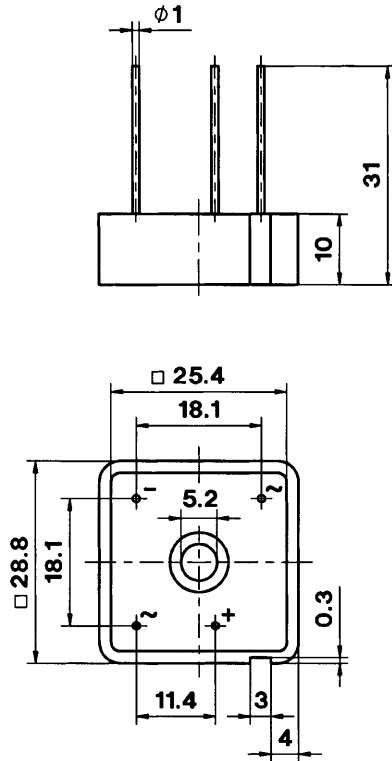
Symbol	Conditions	SKB 26	Units	
I_D	$T_{case} = 50\text{ °C}$; res./inductive load	22	A	
	$T_{amb} = 45\text{ °C}$; isolated ¹⁾	3,5	A	
	chassis ²⁾	10	A	
	P5A/100	13,5	A	
	P1A/120	17	A	
I_{DCL}	$T_{amb} = 45\text{ °C}$; isolated ¹⁾	3	A	
	chassis ²⁾	9,5	A	
	P5A/100	11,5	A	
	P1A/120	14	A	
I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms	370	A	
	$T_{vj} = 150\text{ °C}$, 10 ms	320	A	
i^2t	$T_{vj} = 25\text{ °C}$, 8,3...10 ms	680	A ² s	
	$T_{vj} = 150\text{ °C}$, 8,3...10 ms	500	A ² s	
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 150\text{ A}$	2,2	V	
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85	V	
r_T	$T_{vj} = 150\text{ °C}$	12	m Ω	
I_{RD}	$T_{vj} = 25\text{ °C}$; $V_{RD} = V_{RRM}$	0,3	mA	
	$T_{vj} = 150\text{ °C}$; $V_{RD} = V_{RRM}$	5	mA	
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 10	μ s	
f_G		2000	Hz	
R_{thjc}	total	1,9	$^{\circ}\text{C/W}$	
R_{thch}	total	0,15	$^{\circ}\text{C/W}$	
R_{thja}	isolated ¹⁾	15	$^{\circ}\text{C/W}$	
	chassis ²⁾	4,7	$^{\circ}\text{C/W}$	
	P5A/100	3,55	$^{\circ}\text{C/W}$	
	P1A/120	2,75	$^{\circ}\text{C/W}$	
	T_{vj}		- 40...+ 150	$^{\circ}\text{C}$
T_{stg}		- 55...+ 150	$^{\circ}\text{C}$	
V_{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	3000 / 2500	V~	
RC	$P_R = 1\text{ W}$	0,1	μ F	
		50	Ω	
M ₁	case to heatsink	SI units	2 ± 15 %	Nm
		US units	18 ± 15 %	lb. in.
w		20	g	
Case		G 50		

¹⁾ Soldered directly onto a p.c.b. of 100 x 160 mm with tinned tracking of min. 2,5 mm.

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

SKB 26

Case G 50



Dimensions in mm

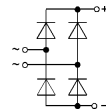
Miniature Bridge Rectifiers

MSK B . . . / . . -1,5
MSKa B . . . / . . -1,5

V_{RSM} V_{RRM} V	V_{VRMS} V	I_D ($T_{amb} = 45\text{ °C}$) 2 A
800	250	MSK B 250/220-1,5
$V_{(BR)min}$ V	V_{VRMS} V	Avalanche Types
1300 1700	500 660	MSKa B 500/445-1,5 MSKa B 660/585-1,5



Symbol	Conditions	MSK... MSKa...
I_D	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾	2 A 2 A
I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms $T_{vj} = 150\text{ °C}$, 10 ms	58 A 50 A
i^2t	$T_{vj} = 25\text{ °C}$, 8,3...10 ms $T_{vj} = 150\text{ °C}$, 8,3...10 ms	$17\text{ A}^2\text{s}$ $12,5\text{ A}^2\text{s}$
P_{RSM}	$t_p = 10\text{ }\mu\text{s}$; avalanche types	1000 W
V_F	$T_{vj} = 25\text{ °C}$, $I_F = 10\text{ A}$	1,65 V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85 V
r_T	$T_{vj} = 150\text{ °C}$	100 m Ω
I_{RD}	$T_{vj} = 25\text{ °C}$; $V_{RD} = V_{RRM}$ $V_{RD} = V_{(BR)min}$	5 μA 5 μA
t_{rr}	$T_{vj} = 150\text{ °C}$; $V_{RD} = V_{RRM}$ $T_{vj} = 25\text{ °C}$	0,6 mA -
f_G		2000 Hz
R_{thja}		23 °C/W
T_{vj}		- 40...+150 °C
T_{stg}		- 55...+150 °C
RC	$P_R = 1\text{ W}$	10 nF + 20...50 Ω
Fu		2 A
w		25 g
Case		G 7



Features

- Plastic case with screw terminals
- High blocking voltage
- MSKa with avalanche characteristics

Typical Applications

- Internal power supplies for electronic equipment
- DC power supplies
- Control equipment
- Avalanche types for inductive loads:
Solenoids,
Motor brakes

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

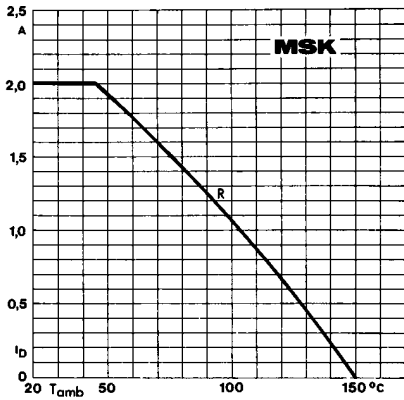


Fig. 1 Rated output current vs. ambient temperature

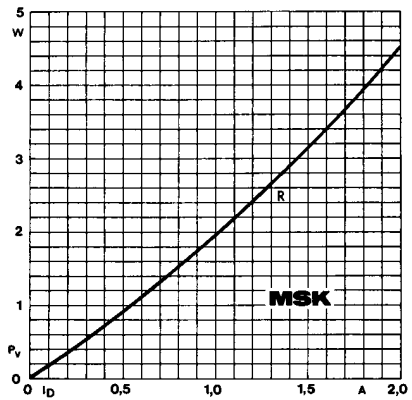


Fig. 2 Power dissipation vs. output current

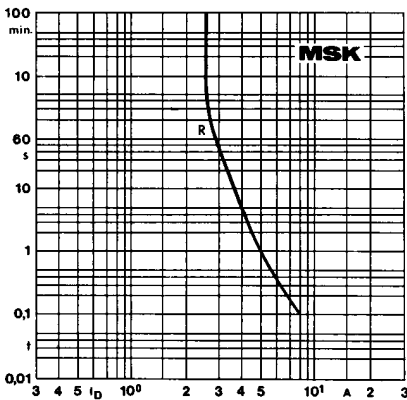


Fig. 6 Rated overload current vs. time

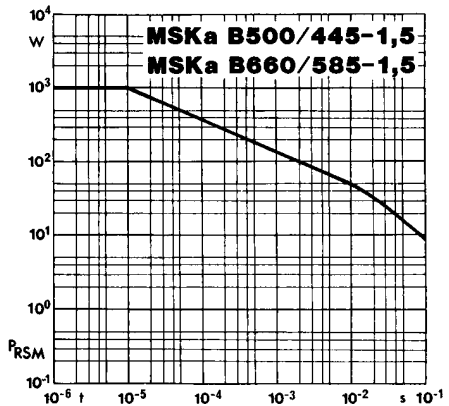


Fig. 7 Rated reverse power dissipation vs. time

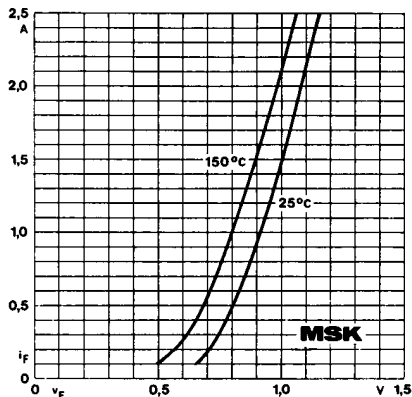


Fig. 9 Forward characteristics of a single diode

