SEMIKRON

V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operation) 110 A	110 A	110 A	110 A
	I_{FAV} (sin. 180; T_{case} = ...°C; 50 Hz)			
V	40 A (80 °C)	40 A (83 °C)	40 A (83 °C)	40 A (80 °C)
400	**SKKD 40 F 04**	–	–	**SKMD 40 F 04**
600	**SKKD 40 F 06**	–	–	**SKMD 40 F 06**
800	**SKKD 40 F 08**	**SKKD 40 M 08**	**SKFH 30 /08..**	**SKMD 40 F 08**
1000	**SKKD 40 F 10**	–	**SKFH 30 /10..**	**SKMD 40 F 10**
1200	–	**SKKD 40 M 12**	**SKFH 30 /12..**	–
1400	–	**SKKD 40 M 14**	–	–
1500	–	**SKKD 40 M 15**	–	–

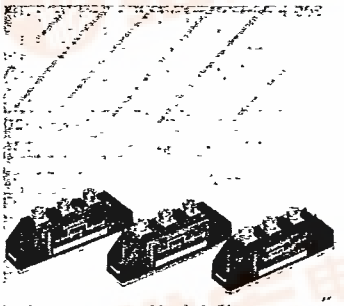
Symbol	Conditions	SKKD 40 F SKMD 40 F	SKKD 40 M SKFH 30[1)]
I_{FAV}	sin. 180; T_{case} = 85 °C	36 A	38 A
I_{FSM}	T_{vj} = 25 °C	1100 A	800 A
	T_{vj} = 125 °C	940 A	700 A
i^2t	T_{vj} = 25 °C	6000 A^2s	3200 A^2s
	T_{vj} = 125 °C	4400 A^2s	2450 A^2s
t_{rr}	T_{vj} = 25 °C; I_F = 1 A; $-di_F/dt$ = 15 A/µs; V_R = 30 V	200 ns	1 µs
Q_{rr}	T_{vj} = 125 °C; I_F = 100 A; $-di_F/dt$ = 30 A/µs; V_R = 30 V	3 µC	20 µC
I_{RM}		10 A	20 A
I_R	T_{vj} = 25 °C; V_R = V_{RRM}	0,5 mA	0,5 mA
	T_{vj} = 125 °C; V_R = V_{RRM}	50 mA	15 mA
V_F	T_{vj} = 25 °C; I_F = 150 A	2,0 V	1,85 V
$V_{(TO)}$	T_{vj} = 125 °C	1,2 V	1,0 V
r_T	T_{vj} = 125 °C	4 mΩ	5 mΩ
R_{thjc}	per diode/per module	0,7 °C/W/0,35 °C/W	
R_{thch}		0,2 °C/W/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.	3000 V~/2500 V~	
M_1	Case to heatsink, SI units/	5 Nm/44 lb. in ± 15 %	
M_2	Busbars to terminals, US units	3 Nm/26 lb. in. ± 15 %	
w	approx.	120 g	
Case	→ page B 2–12 SKKD	A 10	
	SKMD	A 11	
	SKFH	A 8	

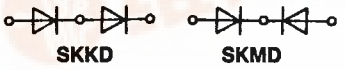
SEMIPACK® 1

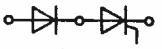
Fast Thyristor/ Diode Modules

SKKD 40 F SKMD 40 F
SKKD 40 M SKFH 30

Diode data[1)]







Features

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

Typical Applications

- Self-commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

[1)] For the data of the thyristor see page B 2–33

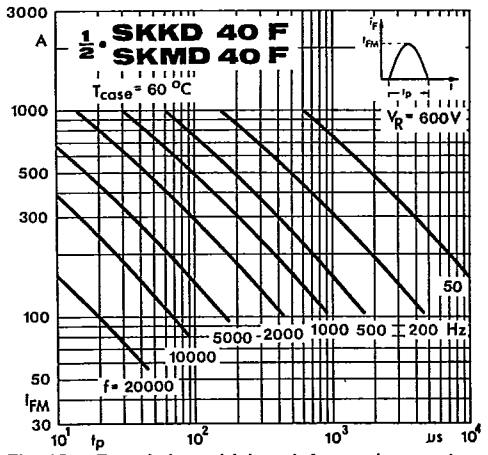


Fig. 12 a Rated sinusoidal peak forward current

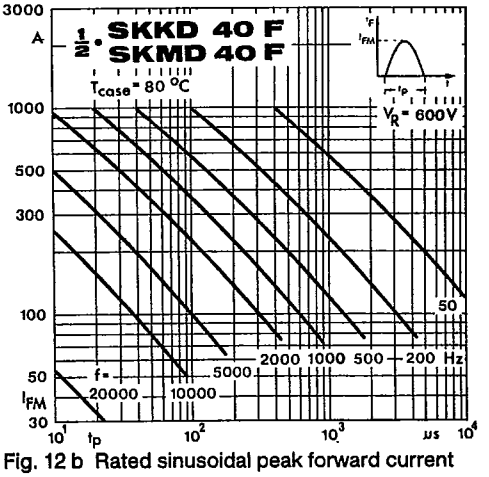


Fig. 12 b Rated sinusoidal peak forward current

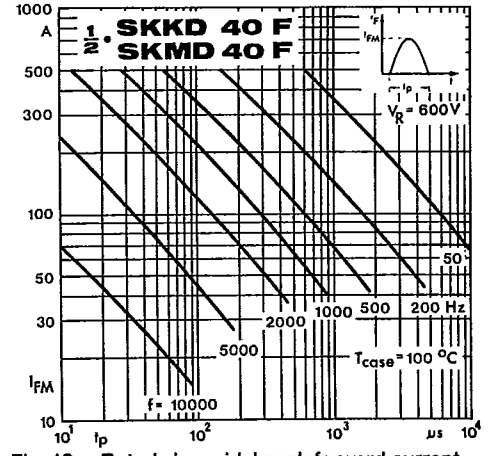


Fig. 12 c Rated sinusoidal peak forward current

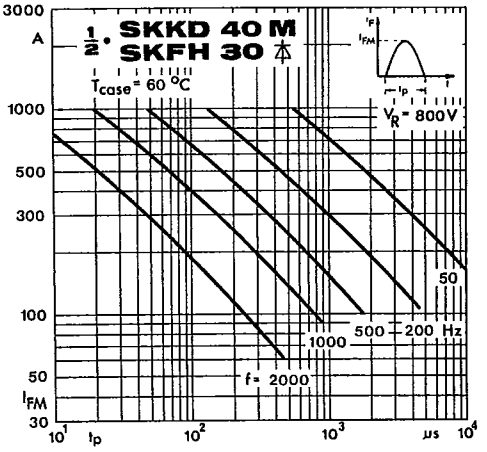


Fig. 12 d Rated sinusoidal peak forward current

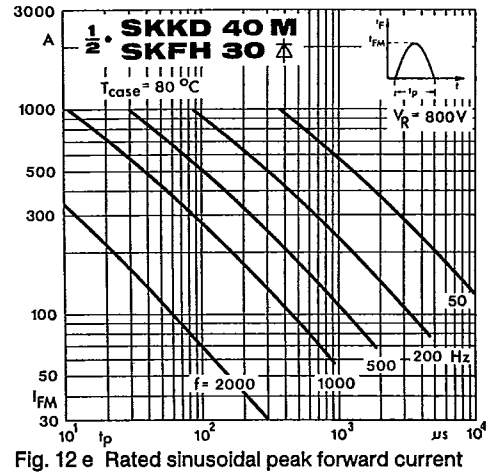


Fig. 12 e Rated sinusoidal peak forward current

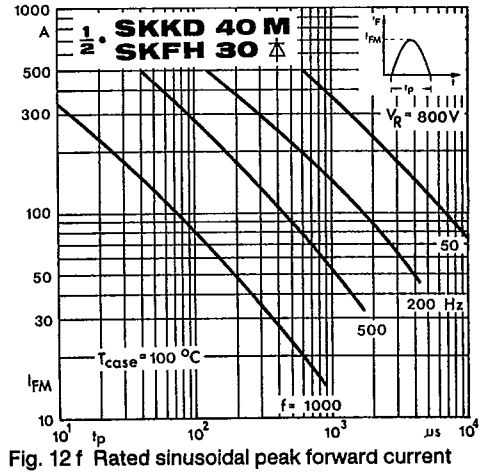


Fig. 12 f Rated sinusoidal peak forward current

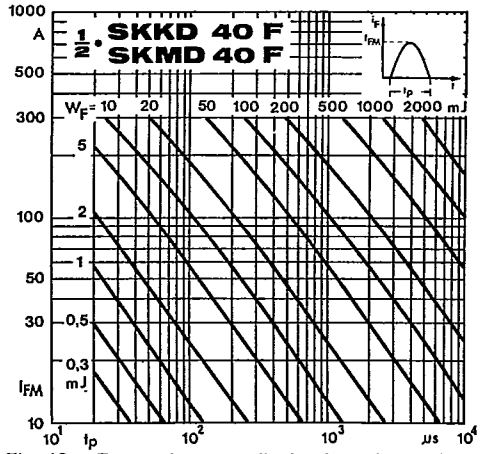


Fig. 13 a Forward energy dissipation, sinusoidal

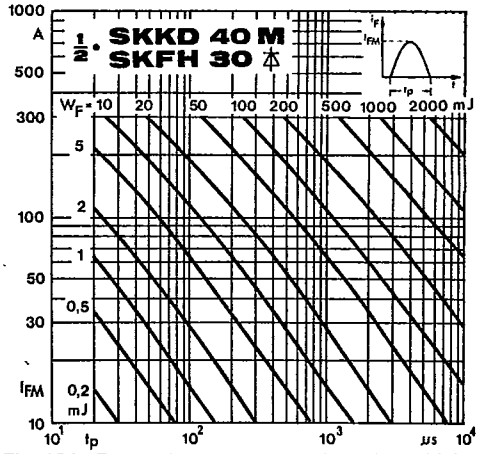


Fig. 13 b Forward energy dissipation, sinusoidal

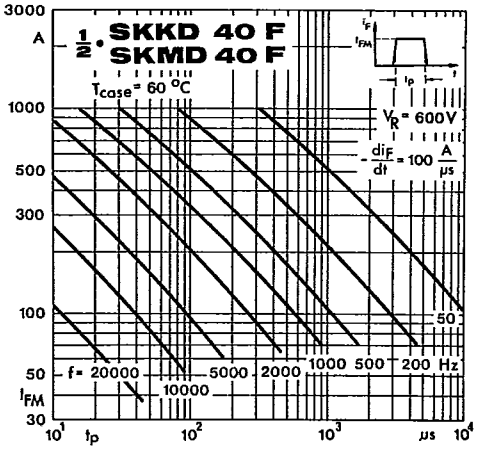


Fig. 14 a Rated rectangular peak forward current

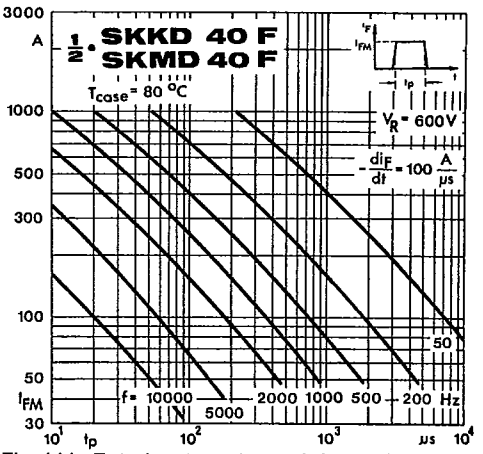


Fig. 14 b Rated rectangular peak forward current

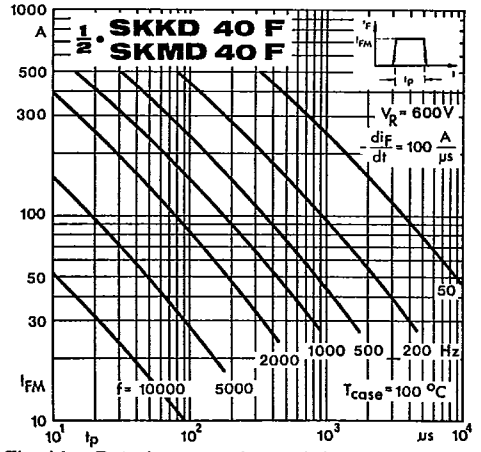


Fig. 14 c Rated rectangular peak forward current

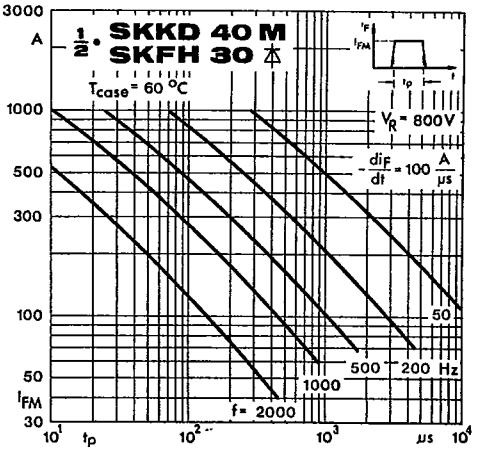


Fig. 14 d Rated rectangular peak forward current

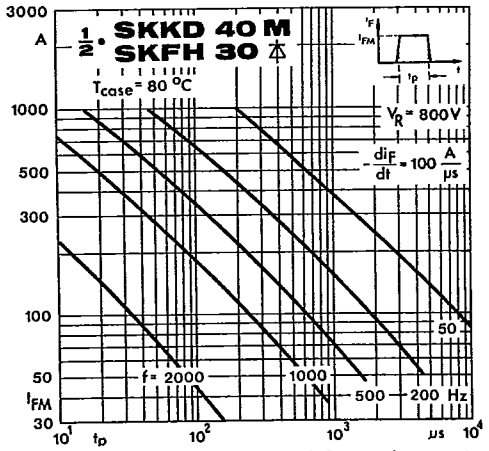


Fig. 14 e Rated rectangular peak forward current

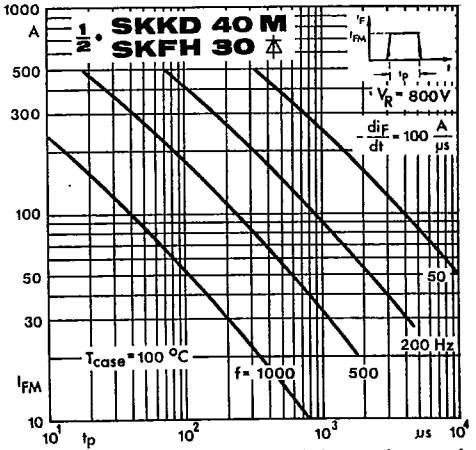


Fig. 14 f Rated rectangular peak forward current

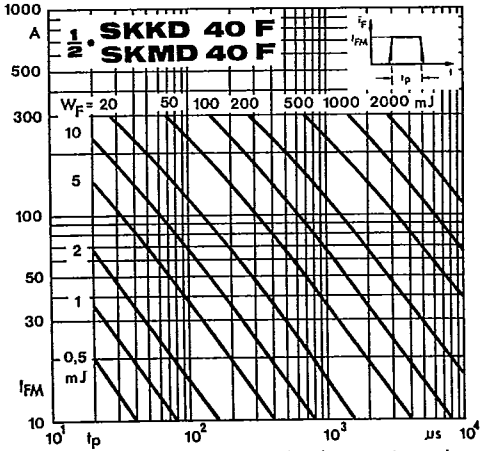


Fig. 15 a Forward energy dissipation, rectangular

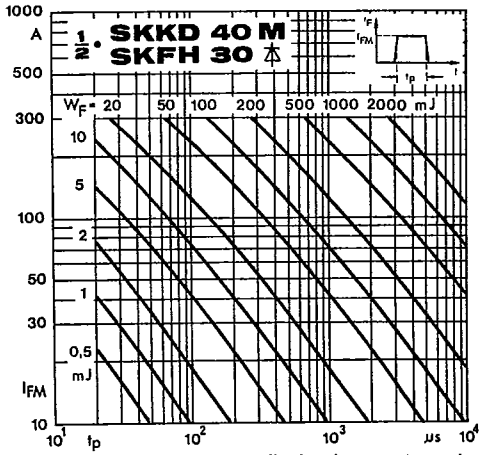


Fig. 15 b Forward energy dissipation, rectangular

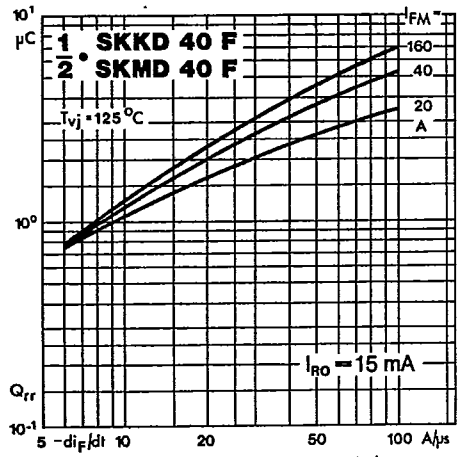


Fig. 16 a Recovered charge vs. current decrease

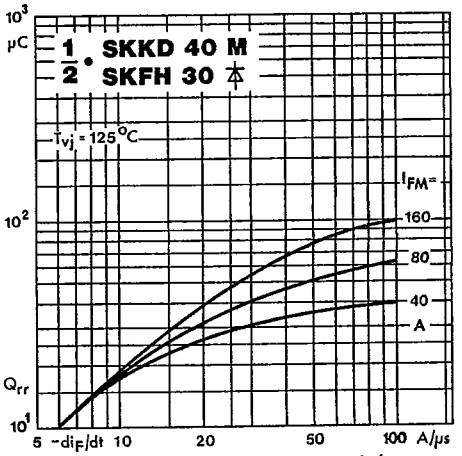


Fig. 16 b Recovered charge vs. current decrease

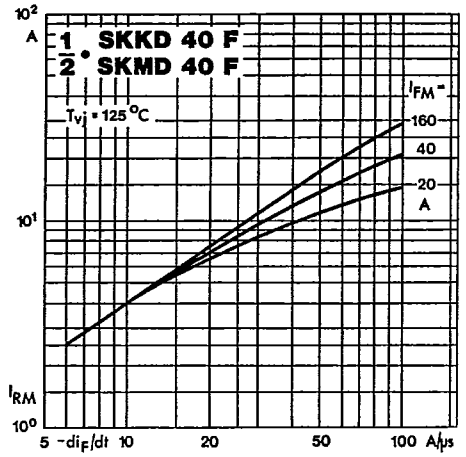


Fig. 17 a Peak recovery current vs. current decrease

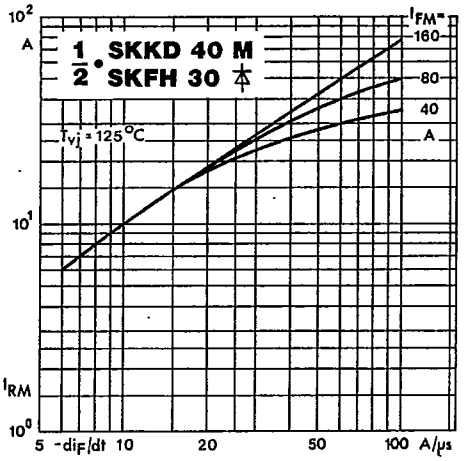


Fig. 17 b Peak recovery current vs. current decrease

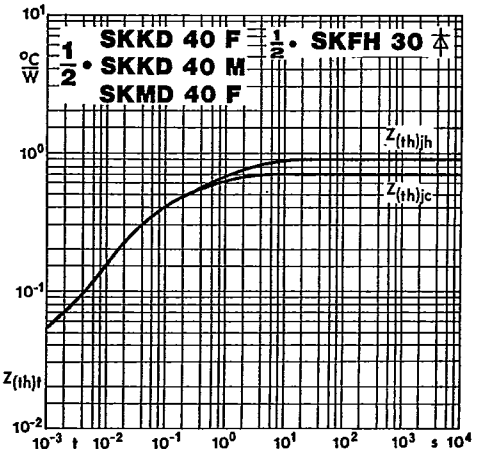


Fig. 18 Transient thermal impedance vs. time

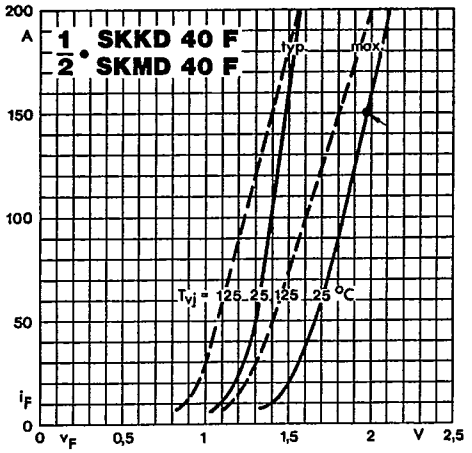


Fig. 19 a Forward characteristics

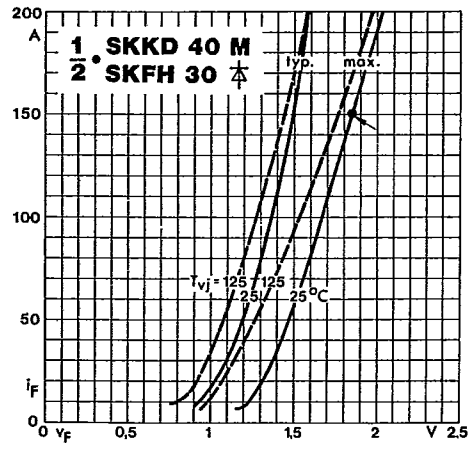


Fig. 19 b Forward characteristics

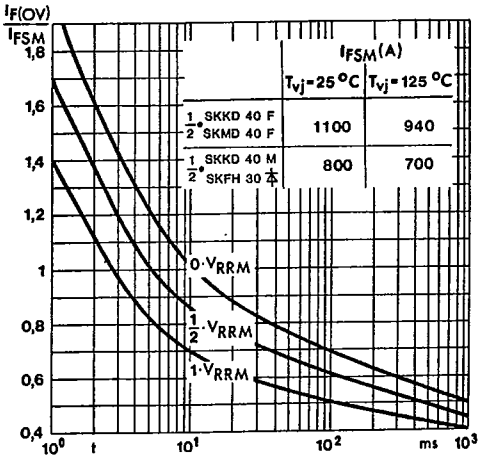
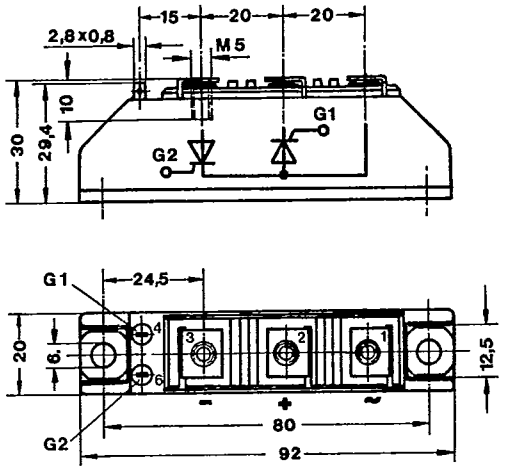


Fig. 20 Surge overload current vs. time

SKFT 30, 40, 60
Case A 5
SEMIPACK® 1

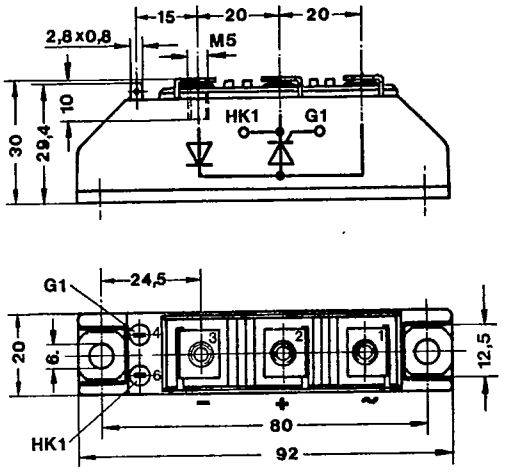
IEC 192-2: A 77 A
JEDEC: TO-240 AA
UL recognized, file no. E 63 532



Dimensions in mm

SKFH 30, 40, 60
Case A 8
SEMIPACK® 1

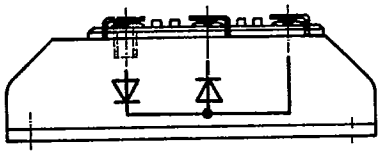
IEC 192-2: A 77 A
JEDEC: TO-240 AA
UL recognized, file no. E 63 53



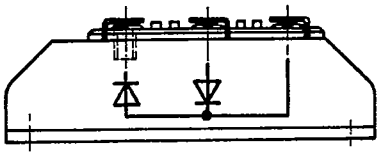
Dimensions in mm

SKKD 40 F, 40 M, 42 F, 105 F, 115 F
Case A 10

UL recognized, file no. E 63 532

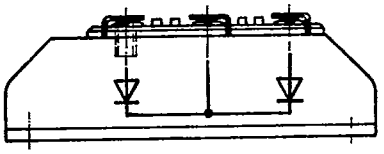


SKKD 50 E
Case A 20

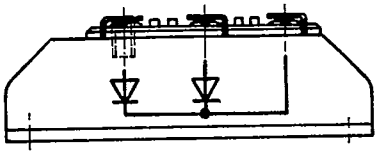


SKMD 40 F
Case A 11

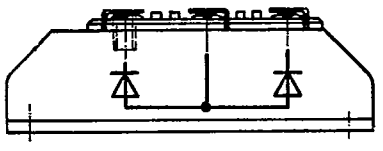
UL recognized, file no. E 63 532



SKMD 42 F, 105 F
Case A 33



SKND 50 E
Case A 19



SKND 42 F, 105 F
Case A 37