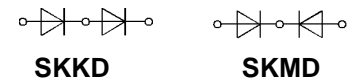
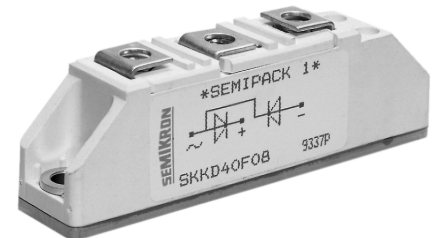


## SEMIPACK® 1 Fast Diode Modules

### SKKD 40 F SKMD 40 F



#### Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- **SKKD** half bridge connection
- **SKMD** center tap connection, common cathode
- 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

V <sub>RSM</sub> V <sub>RRM</sub>  V	I <sub>FRMS</sub> (maximum values for continuous operation)	
	110 A	110 A
	I <sub>FAV</sub> (sin. 180; T <sub>case</sub> = 80 °C; 50 Hz)	
	40 A	40 A
400	<b>SKKD 40 F 04</b>	<b>SKMD 40 F 04</b>
600	<b>SKKD 40 F 06</b>	<b>SKMD 40 F 06</b>
800	<b>SKKD 40 F 08</b>	<b>SKMD 40 F 08</b>
1000	<b>SKKD 40 F 10</b>	<b>SKMD 40 F 10</b>

Symbol	Conditions	SKKD 40 F SKMD 40 F
I <sub>FAV</sub>	sin. 180; T <sub>case</sub> = 85 °C	36 A
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms T <sub>vj</sub> = 125 °C; 10 ms	1100 A 940 A
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C; 8,3 ... 10 ms T <sub>vj</sub> = 125 °C; 8,3 ... 10 ms	6000 A <sup>2</sup> s 4400 A <sup>2</sup> s
t <sub>rr</sub>	T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 1 A; – di <sub>F</sub> /dt = 15 A/μs; V <sub>R</sub> = 30 V	200 ns
Q <sub>rr</sub>	} T <sub>vj</sub> = 125 °C; I <sub>F</sub> = 100 A; – di <sub>F</sub> /dt = 30 A/μs; V <sub>R</sub> = 30 V	3 μC
I <sub>RM</sub>		10 A
I <sub>R</sub>	T <sub>vj</sub> = 25 °C; V <sub>R</sub> = V <sub>RRM</sub> T <sub>vj</sub> = 125 °C; V <sub>R</sub> = V <sub>RRM</sub>	0,5 mA 50 mA
V <sub>F</sub>	T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 150 A	2,0 V
V <sub>(TO)</sub>	T <sub>vj</sub> = 125 °C	1,2 V
r <sub>T</sub>	T <sub>vj</sub> = 125 °C	4 mΩ
R <sub>thjc</sub>	} per diode/per module	0,7 °C/W/0,35 °C/W
R <sub>thch</sub>		0,2 °C/W/0,1 °C/W
T <sub>vj</sub>		– 40 ... +125 °C
T <sub>stg</sub>		– 40 ... +125 °C
V <sub>isol</sub>	a. c. 50 Hz; r.m.s.; 1 s/1 min.	3600 V~/3000 V~
M <sub>1</sub>	} Case to heatsink Busbars to terminals	} SI units/ US units
M <sub>2</sub>		
w	approx.	120 g
Case	→ page B 2 – 6	SKKD SKMD
		A 10 A 11

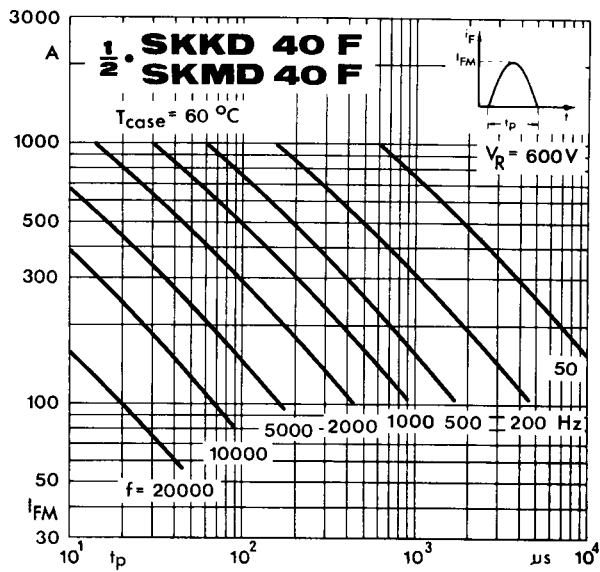


Fig. 12 a Rated sinusoidal peak forward current

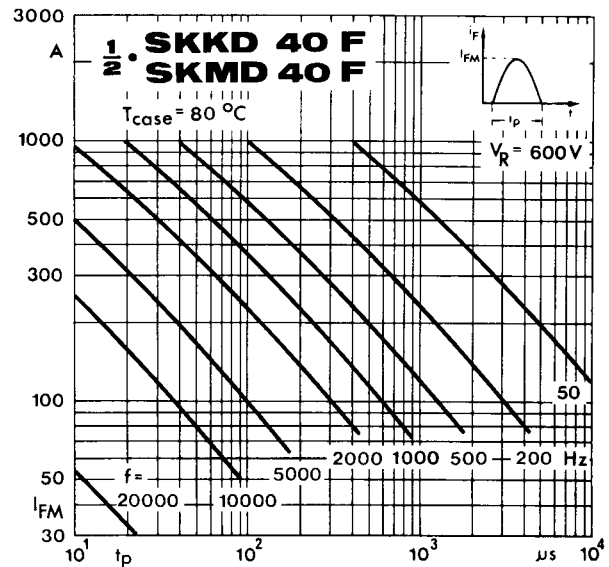


Fig. 12 b Rated sinusoidal peak forward current

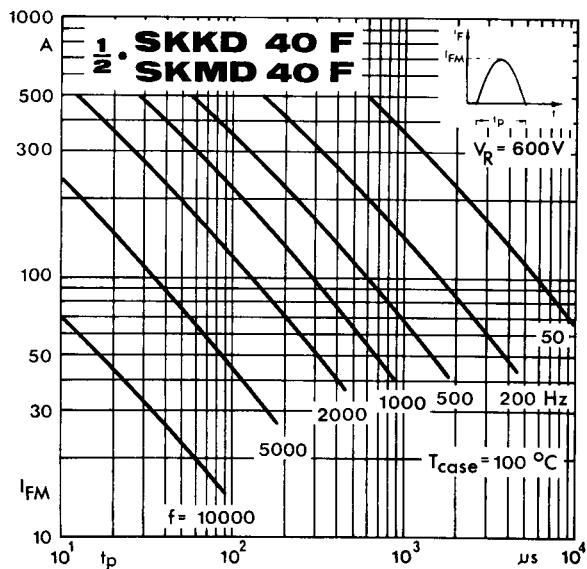


Fig. 12 c Rated sinusoidal peak forward current

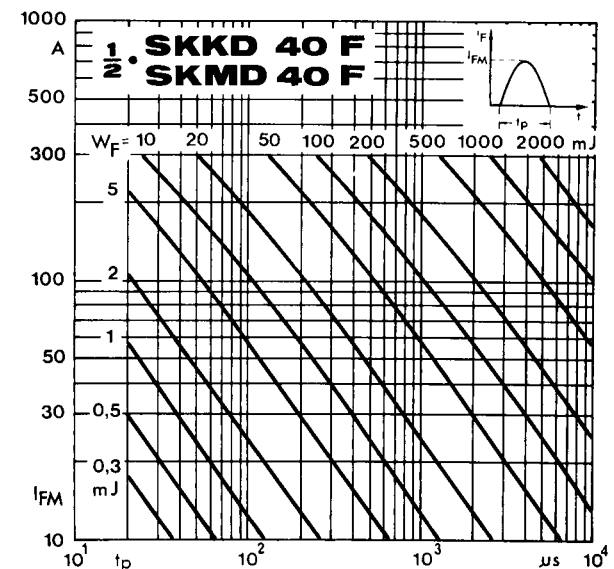


Fig. 13 Forward energy dissipation, sinusoidal

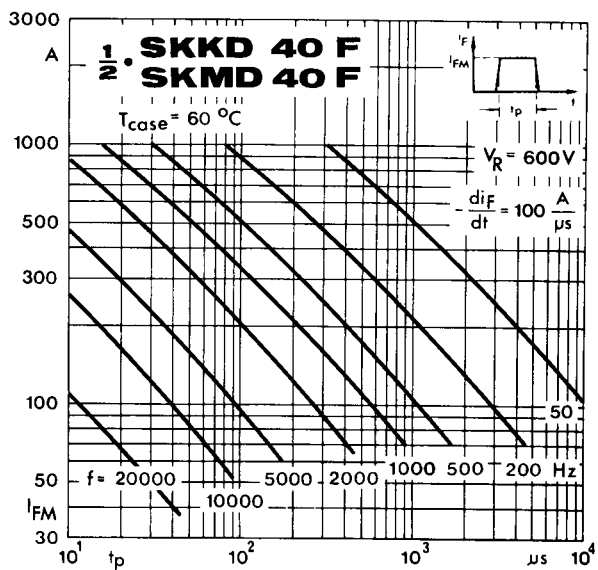


Fig. 14 a Rated rectangular peak forward current

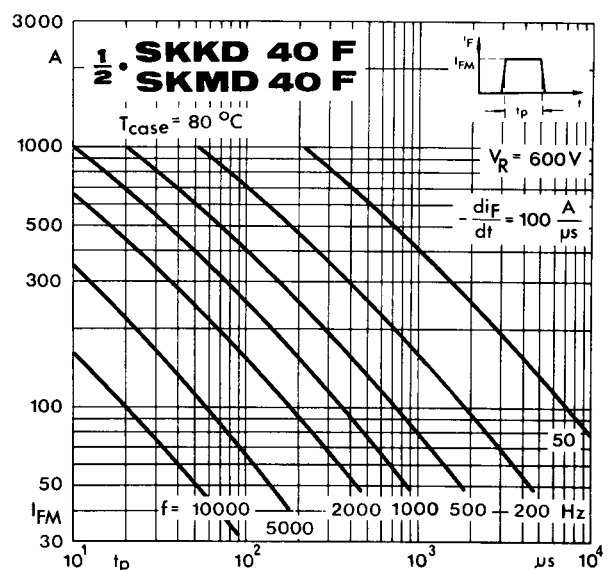


Fig. 14 b Rated rectangular peak forward current

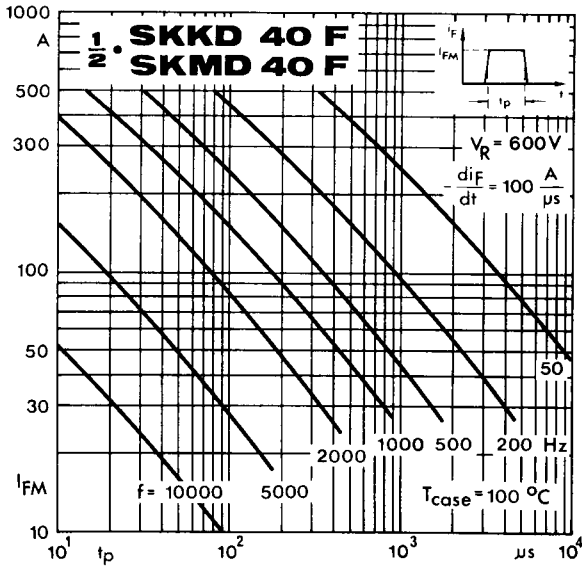


Fig. 14 c Rated rectangular peak forward current

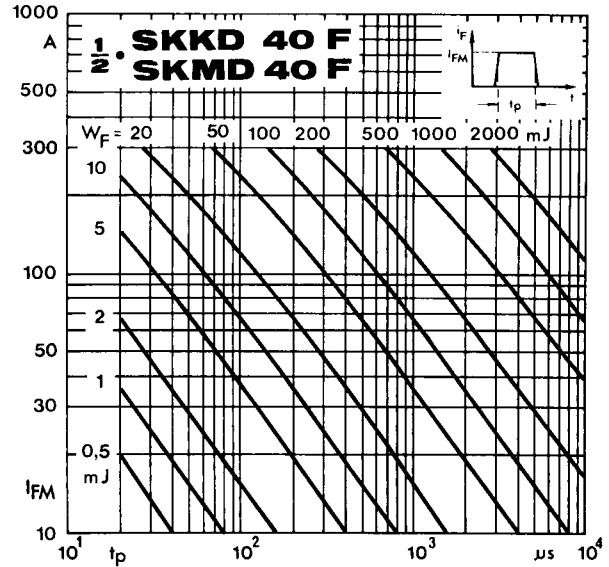


Fig. 15 Forward energy dissipation, rectangular

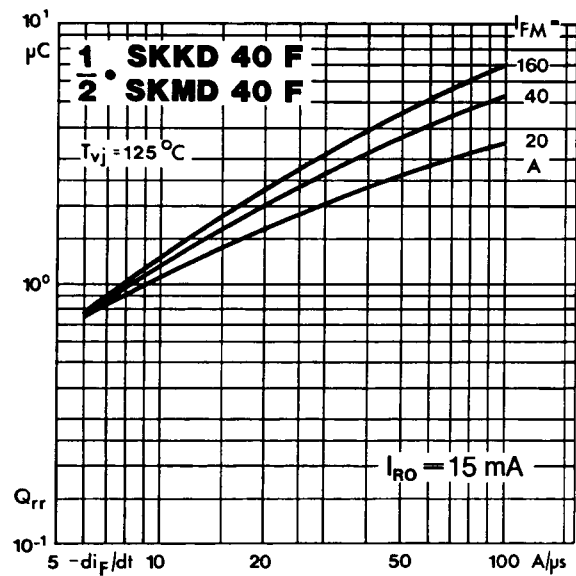


Fig. 16 Recovered charge vs. current decrease

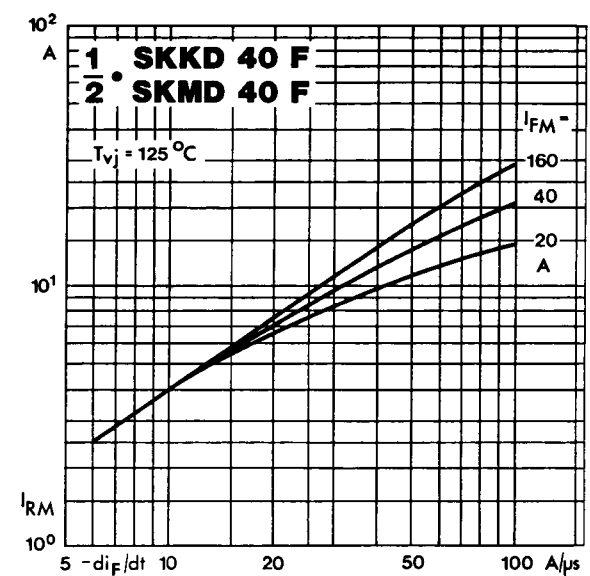


Fig. 17 Peak recovery current vs. current decrease

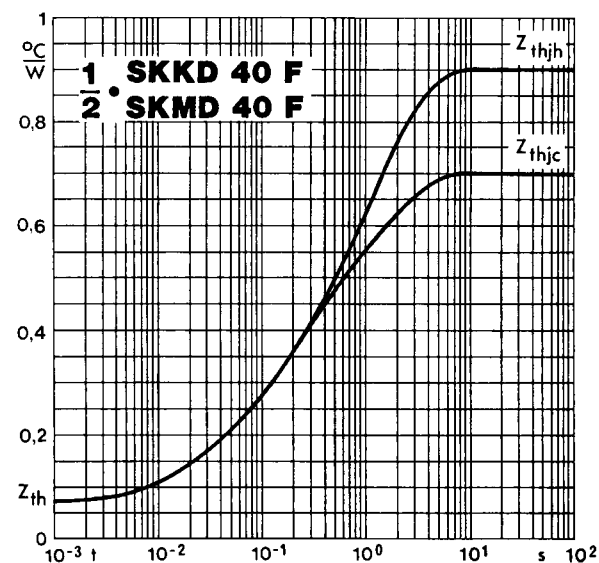


Fig. 18 Transient thermal impedance vs. time

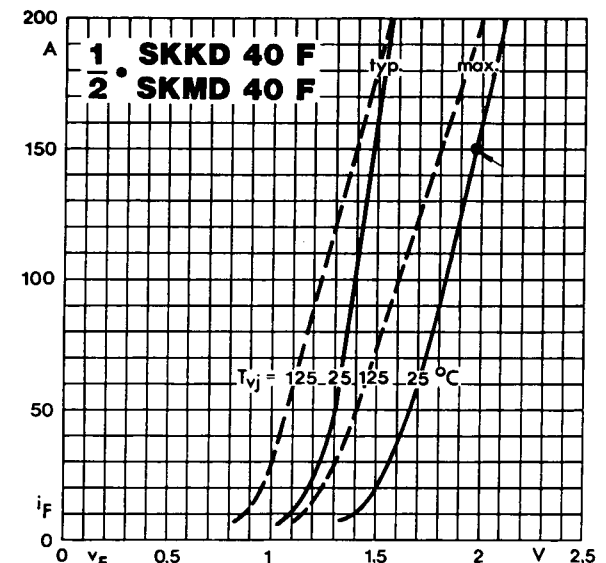


Fig. 19 Forward characteristics

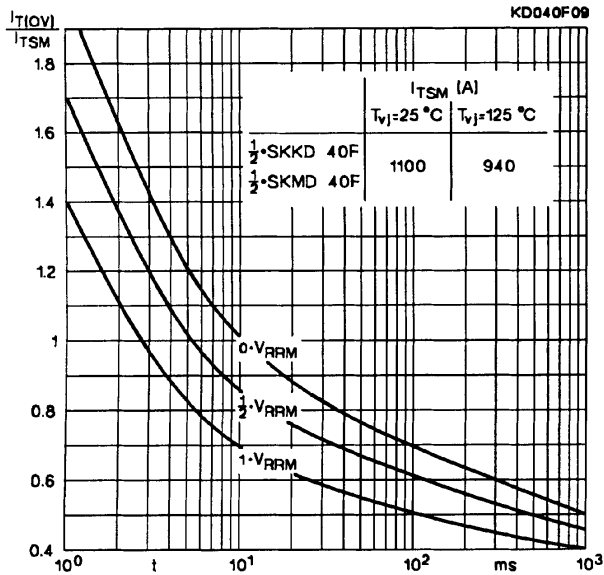


Fig. 20 Surge overload current vs. time

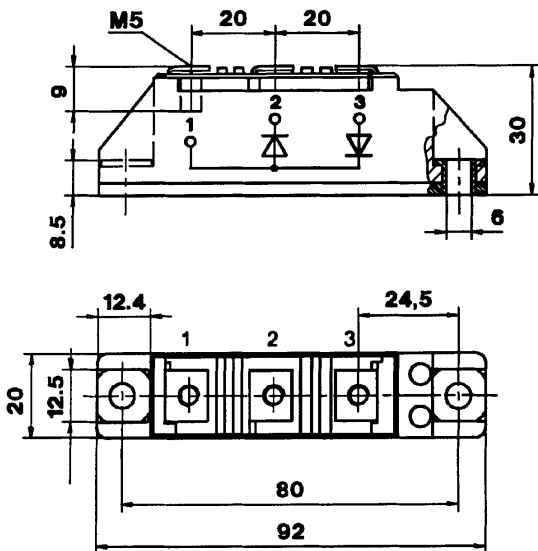
**SKKD 40 F, 42 F**

Case A 10

IEC 192-2: A 77 A  
JEDEC: TO-240 AA

SEMIPACK 1®

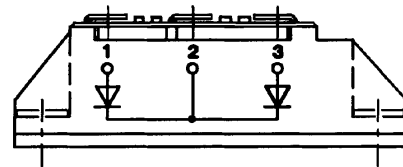
UL recognized, file no. E 63 532



Dimensions in mm

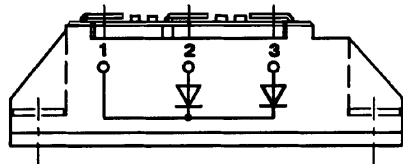
**SKMD 40 F**

Case A11



**SKMD 42 F**

Case A 33



**SKND 42 F**

Case A 37

