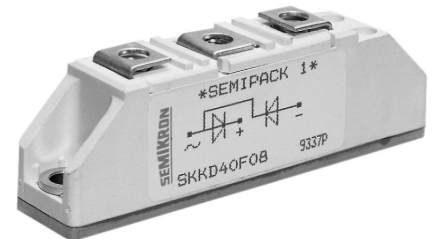


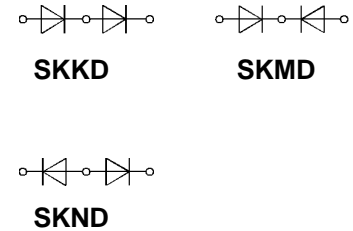
$V_{RSM}$	$I_{FRMS}$ (maximum values for continuous operation)			
$V_{RRM}$	200 A		200 A	
$V$	$I_{FAV}$ (sin. 180; $T_{case} = 85\text{ °C}$ ; 50 Hz)			
	102 A		113 A	
800	<b>SKKD 105F08</b>	<b>SKMD 105F08</b>	<b>SKND 105F08</b>	–
1000	<b>SKKD 105F10</b>	<b>SKMD 105F10</b>	<b>SKND 105F10</b>	–
1200	<b>SKKD 105F12</b>	<b>SKMD 105F12</b>	<b>SKND 105F12</b>	<b>SKKD 115F12</b>
1400	–	–	–	<b>SKKD 115F14</b>

## SEMIPACK® 1 Fast Diode Modules

**SKKD 105F**    **SKMD 105F**  
**SKKD 115F**    **SKND 105F**



Symbol	Conditions	SKKD 105F SKMD 105F SKND 105F	SKKD 115F	Units
$I_{FAV}$	sin. 180; $T_{case} = 83\text{ °C}$	105	115	A
$I_{FSM}$	$T_{vj} = 25\text{ °C}$ ; 10 ms	2 500	2 500	A
	$T_{vj} = 130\text{ °C}$ ; 10 ms	2 100	2 100	A
$i^2t$	$T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms	31 250	31 250	$A^2\text{ s}$
	$T_{vj} = 130\text{ °C}$ ; 8,3 ... 10 ms	22 000	22 000	$A^2\text{ s}$
$t_{rr}$	$T_{vj} = 25\text{ °C}$ ; $I_F = 1\text{ A}$ ; – $di_F/dt = 15\text{ A}/\mu\text{s}$ ; $V_R = 30\text{ V}$	500	800	ns
$Q_{rr}$	} $T_{vj} = 130\text{ °C}$ ; $I_F = 100\text{ A}$ ; – $di_F/dt = 50\text{ A}/\mu\text{s}$ ; $V_R = 30\text{ V}$	50	90	$\mu\text{C}$
$I_{RM}$		53	90	A
$I_R$	$T_{vj} = 25\text{ °C}$ ; $V_R = V_{RRM}$	1	1	mA
	$T_{vj} = 130\text{ °C}$ ; $V_R = V_{RRM}$	30	30	mA
$V_F$	$T_{vj} = 25\text{ °C}$ ; $I_F = 300\text{ A}$	2,05	1,8	V
$V_{(TO)}$	$T_{vj} = 130\text{ °C}$	1,2	1,1	V
$r_T$	$T_{vj} = 130\text{ °C}$	2,5	2	$m\Omega$
$R_{thjc}$	} per diode/per module	0,24/0,12		$^{\circ}\text{C}/\text{W}$
$R_{thch}$		0,2/0,1		$^{\circ}\text{C}/\text{W}$
$T_{vj}$		– 40 ... +130		$^{\circ}\text{C}$
$T_{stg}$		– 40 ... +125		$^{\circ}\text{C}$
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s/1 min.	3600/3000		V~
$M_1$	} to heatsink } SI (US) units	5 (44 lb. in.) $\pm 15\%$		Nm
$M_2$		3 (26 lb. in.) $\pm 15\%$		Nm
w	approx.	120		g
Case	→ page B 2 – 28	SKKD SKMD SKND	A 10 A 33 A 37	



### Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- **SKKD** half bridge connection  
centre tap connections:  
**SKMD** common cathode  
**SKND** common anode
- UL recognized, file no. E63 532

### Typical Applications

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

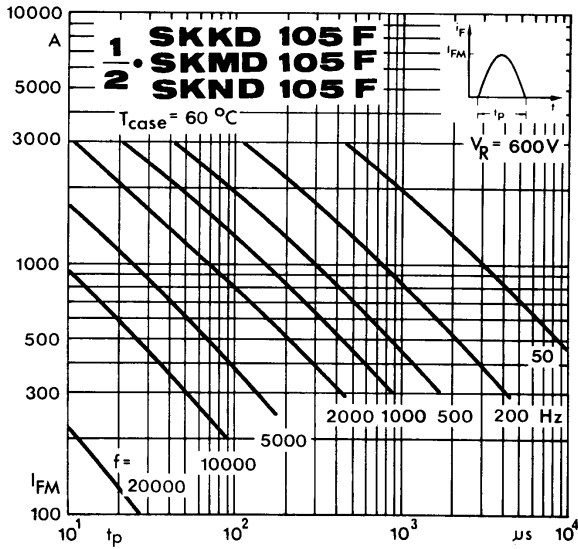


Fig. 12 a Rated sinusoidal peak forward current

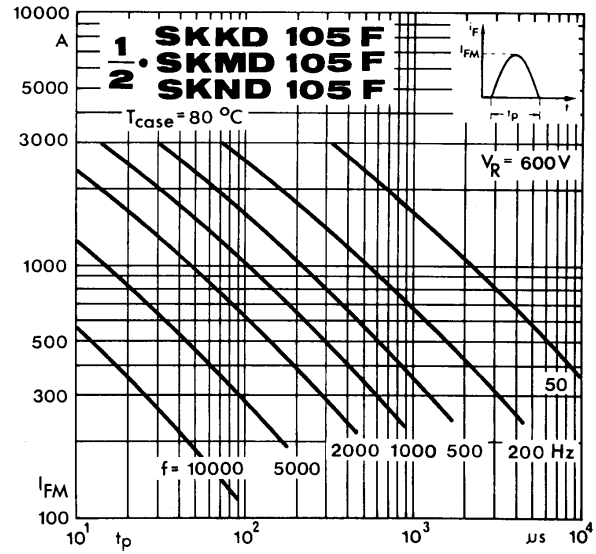


Fig. 12 b Rated sinusoidal peak forward current

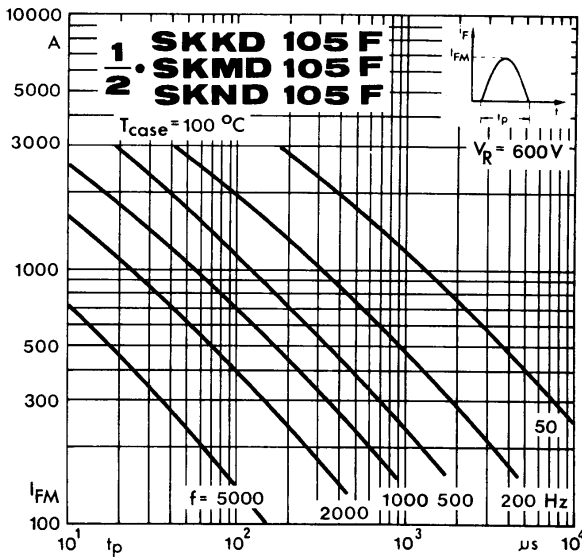


Fig. 12 c Rated sinusoidal peak forward current

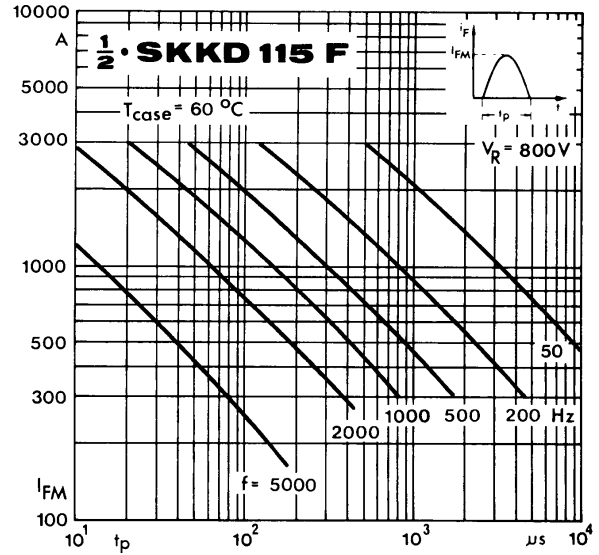


Fig. 12 d Rated sinusoidal peak forward current

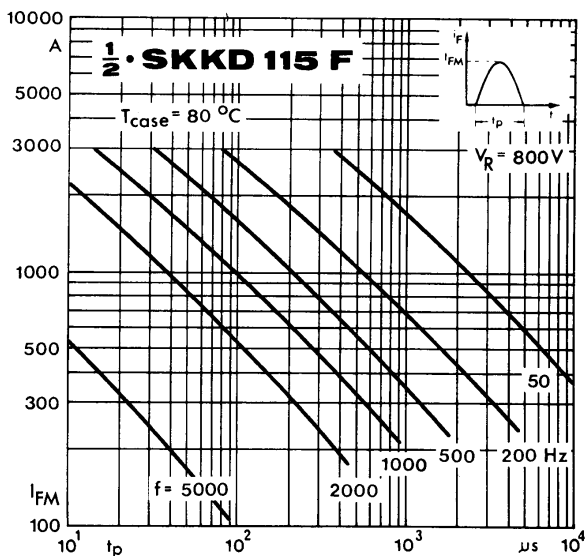


Fig. 12 e Rated sinusoidal peak forward current

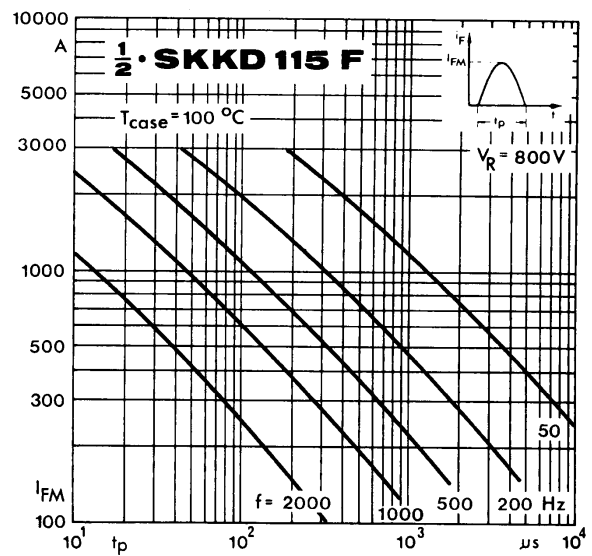


Fig. 12 f Rated sinusoidal peak forward current

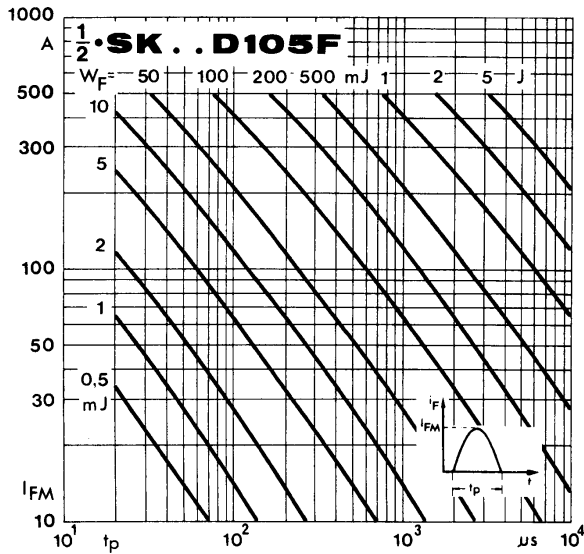


Fig. 13 a Forward energy dissipation, sinusoidal

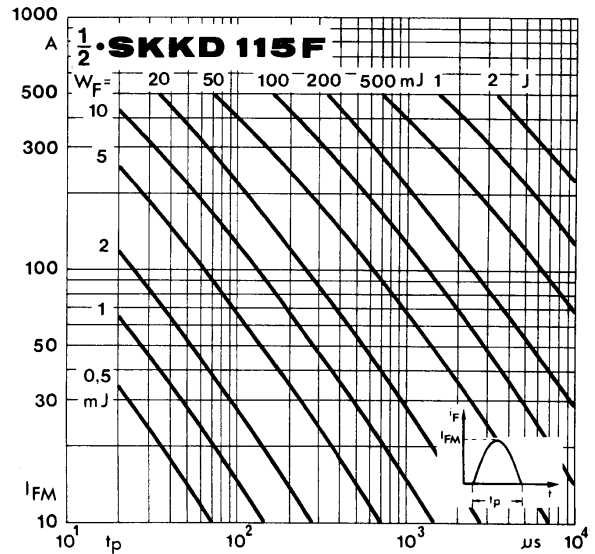


Fig. 13 b Forward energy dissipation, sinusoidal

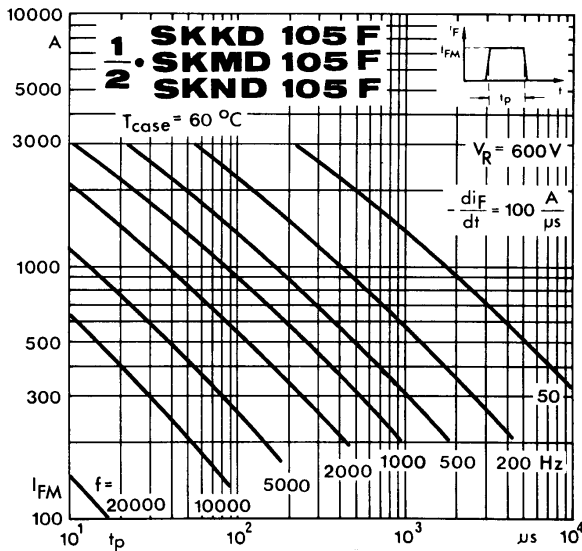


Fig. 14 a Rated rectangular peak forward current

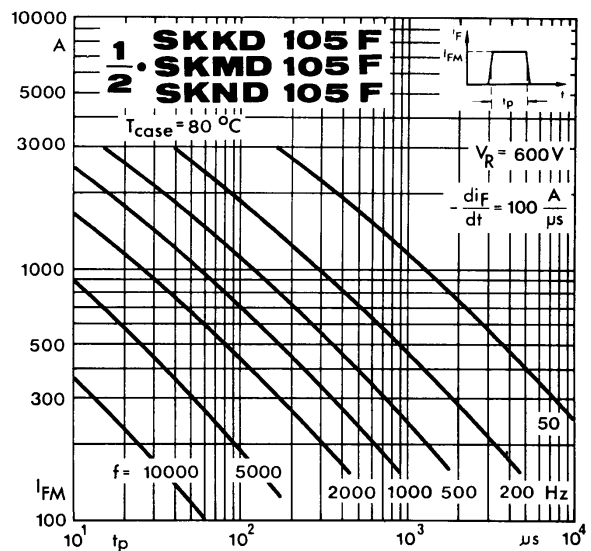


Fig. 14 b Rated rectangular peak forward current

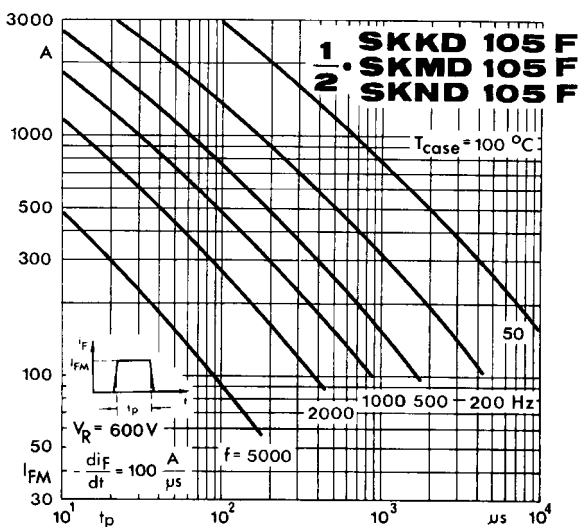


Fig. 14 c Rated rectangular peak forward current

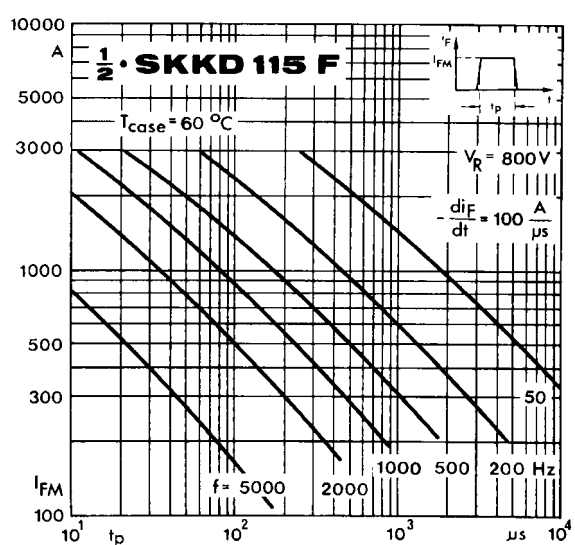


Fig. 14 d Rated rectangular peak forward current

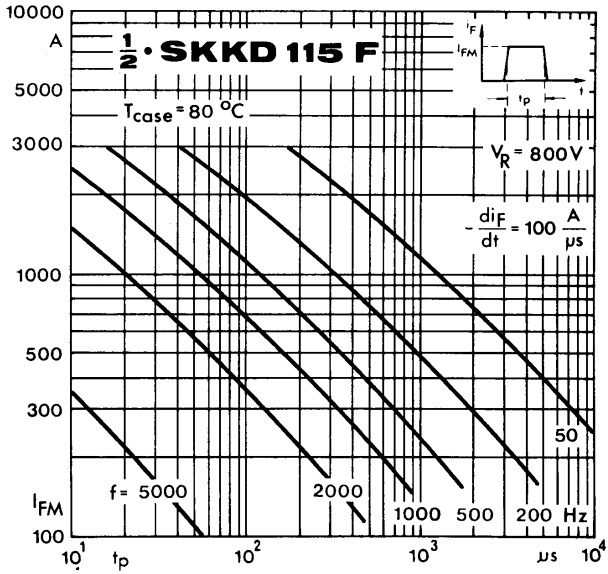


Fig. 14 e Rated rectangular peak forward current

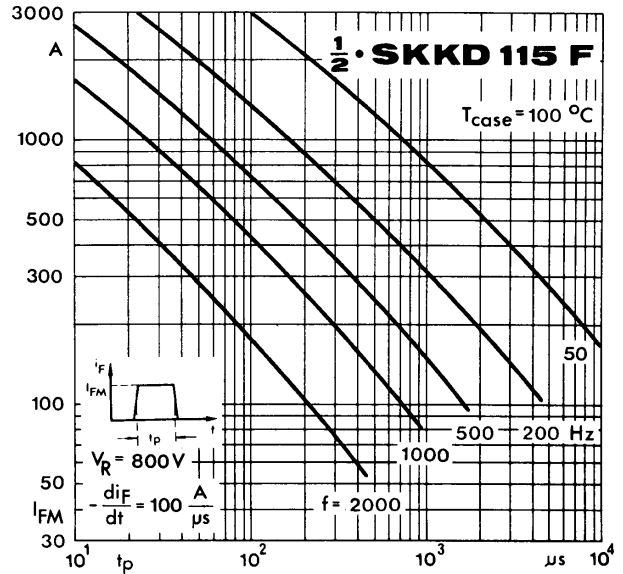


Fig. 14 f Rated rectangular peak forward current

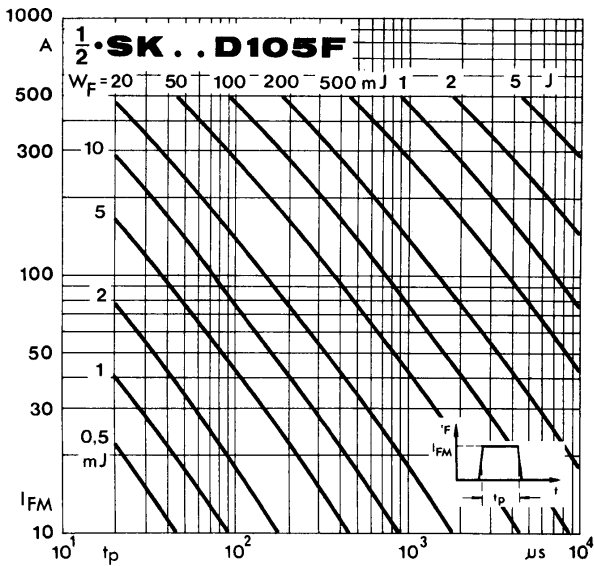


Fig. 15 a Forward energy dissipation, rectangular

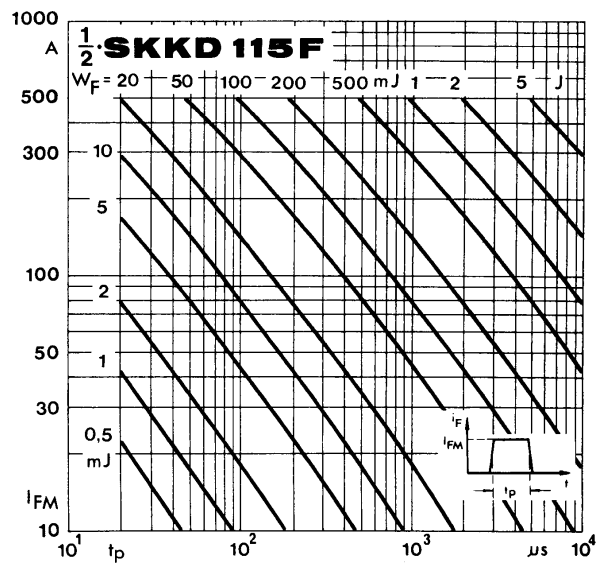


Fig. 15 b Forward energy dissipation, rectangular

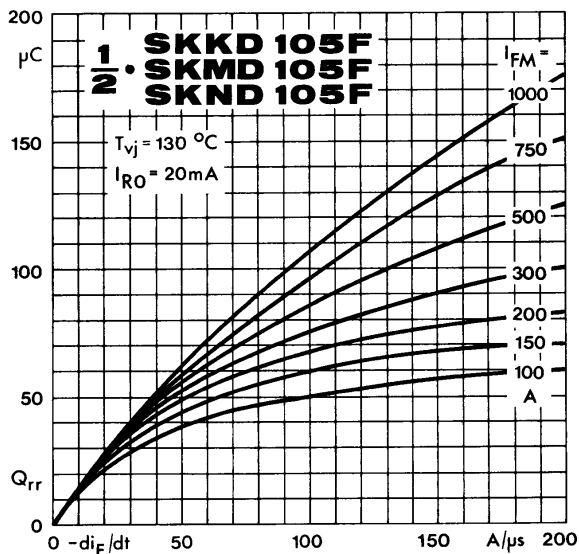


Fig. 16 a Recovered charge vs. current decrease

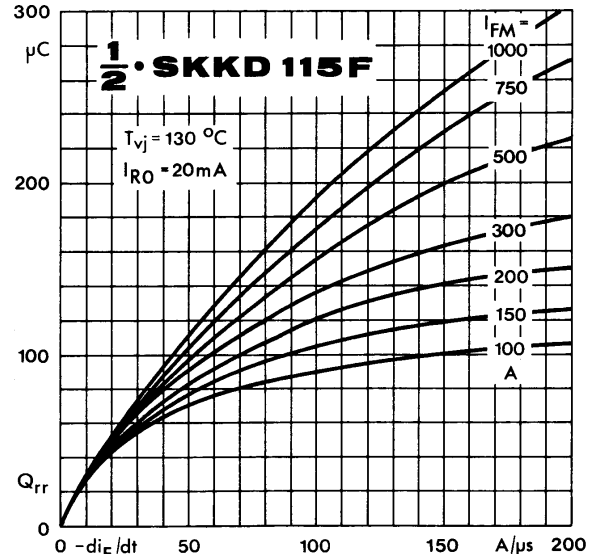


Fig. 16 b Recovered charge vs. current decrease

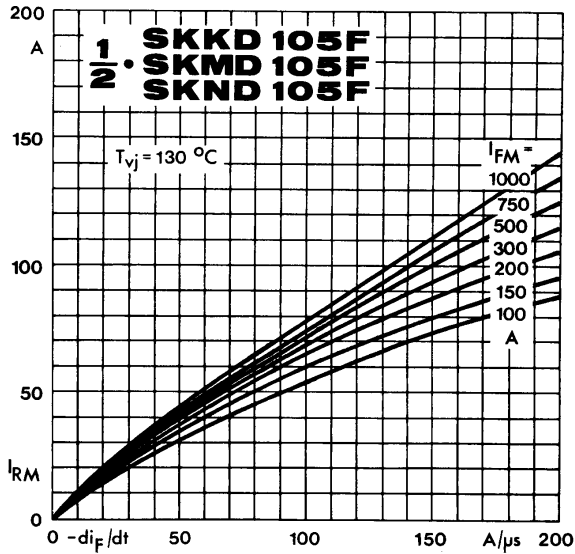


Fig. 17 a Peak recovery current vs. current decrease

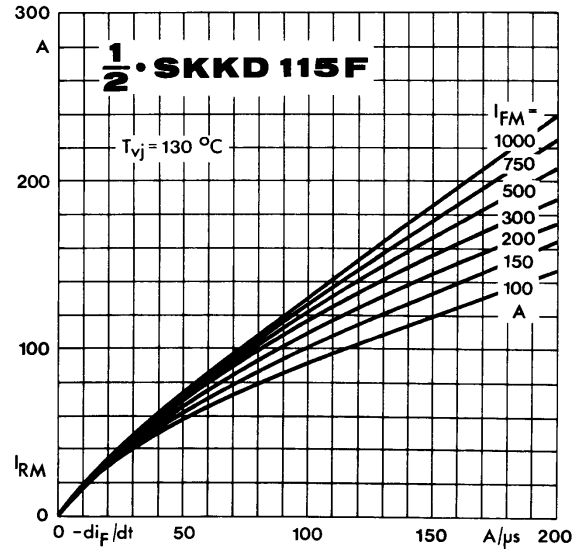


Fig. 17 b Peak recovery current vs. current decrease

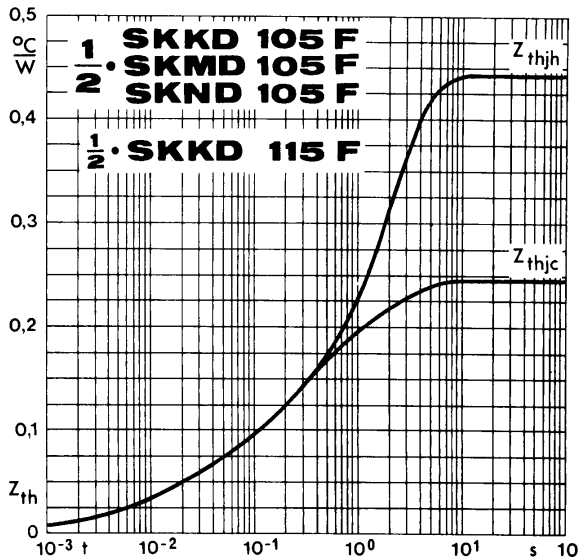


Fig. 18 Transient thermal impedance vs. time

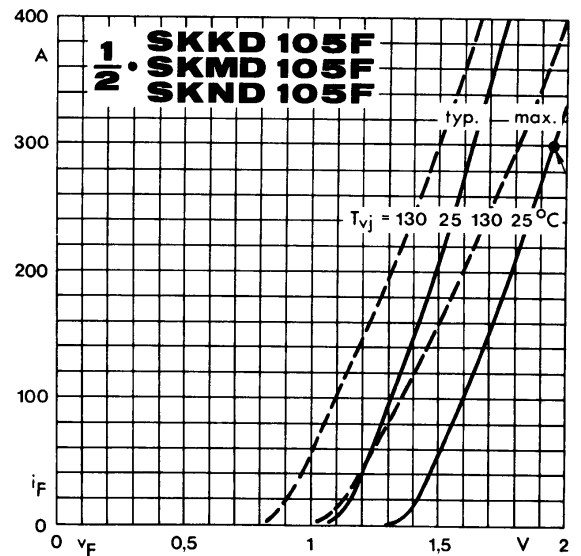


Fig. 19 a Forward characteristics

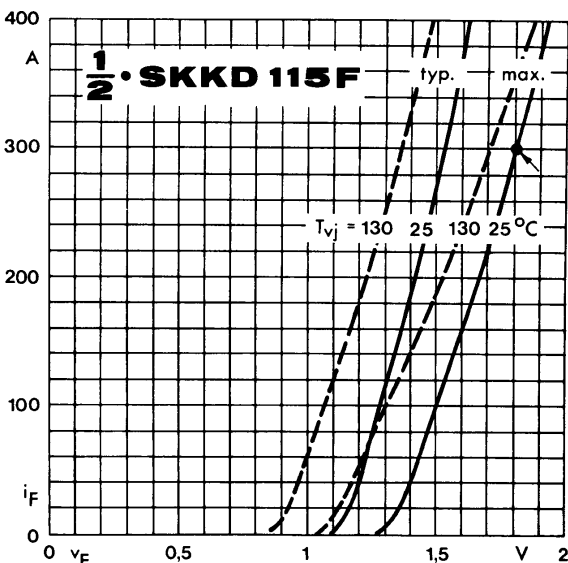


Fig. 19 b Forward characteristics

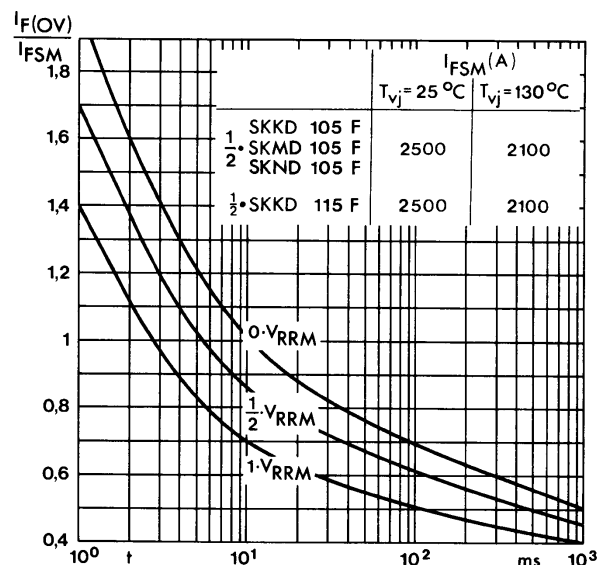


Fig. 20 Surge overload current vs. time

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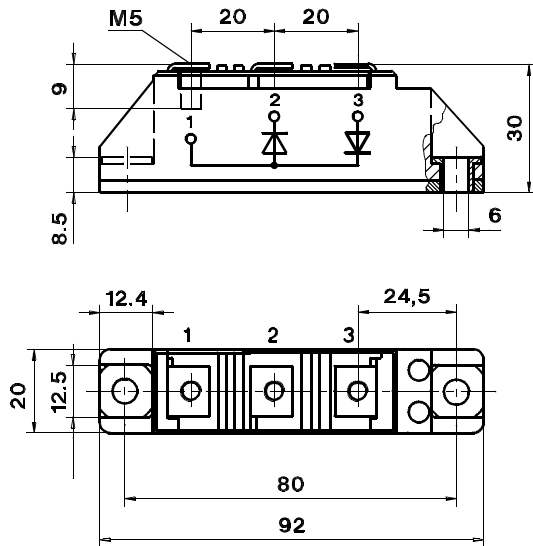
**SKKD 105 F, 115 F**

Case A 10

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

SEMIPACK® 1

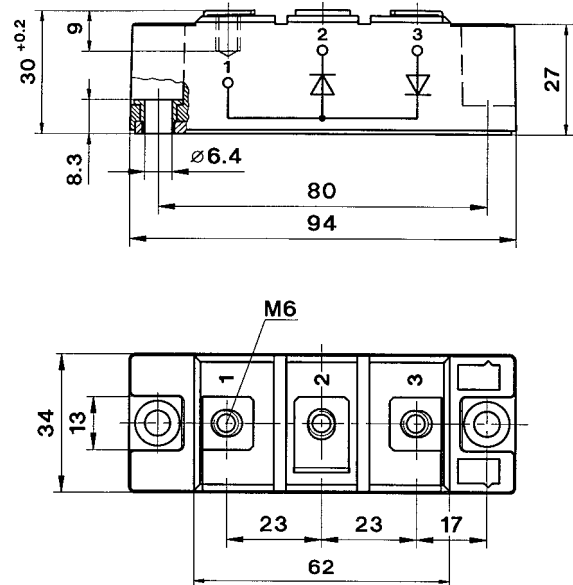
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**SKKD 60 F, 75 F**

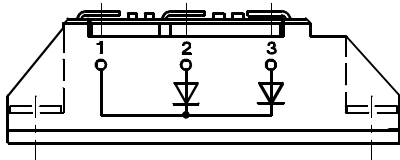
Case A 23

SEMIPACK® 2

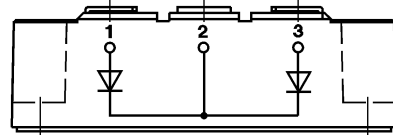
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**SKMD 105 F**

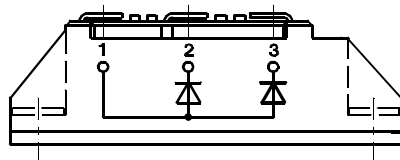
Case A 33

**SKMD 150 F, 202 E**

Case A 51

**SKND 105 F**

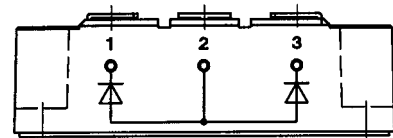
Case A 37



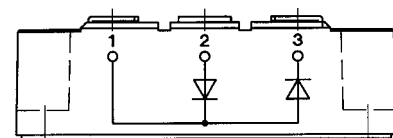
Dimensions in mm

**SKND 150 F, 202 E**

Case A 52

**SKKD 150 F, 170 F**

Case A 53



Dimensions in mm