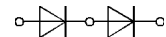


V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operation) 320 A
V	I_{FAV} (sin. 180; $T_{case} = 85\text{ °C}$; 50 Hz) 170 A
1100	SKKD 170 F 11
1200	SKKD 170 F 12

SEMIPACK® 2 Fast Diode ¹⁾ Modules

SKKD 170 F

Preliminary Data



SKKD

Features

- Very soft recovery over the whole current range
- Very short recovery times
- Low switching losses
- Up to 1200 V peak inverse voltage
- Heat transfer through ceramic isolated metal baseplate
- 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

Symbol	Conditions	SKKD 170 F	Units
I_{FAV}	sin. 180; $T_{case} = 85\text{ °C}$	170	A
	$T_{case} = 65\text{ °C}$	205	A
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms	2 500	A
	$T_{vj} = 150\text{ °C}$; 10 ms	2 300	A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms	34 650	A ² s
	$T_{vj} = 150\text{ °C}$; 8,3 ... 10 ms	26 450	A ² s
I_{RM}	$T_{vj} = 25\text{ °C}$ } $I_F = 170\text{ A}$	70	A
	$T_{vj} = 150\text{ °C}$ } $di/dt = 500\text{ A/}\mu\text{s}$	80	A
t_{rr}	$T_{vj} = 25\text{ °C}$ } $V_R = 600\text{ V}$	typ. 200	ns
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$	1	mA
	$T_{vj} = 150\text{ °C}$; $V_R = V_{RRM}$	60	mA
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 170\text{ A}$	2,0	V
	$T_{vj} = 150\text{ °C}$; $I_F = 170\text{ A}$	1,8	V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	1,2	V
r_T	$T_{vj} = 150\text{ °C}$	3,5	mΩ
R_{thjc}	per diode / per module	0,14 / 0,07	°C/W
R_{thch}	per diode / per module	0,1 / 0,05	°C/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 min	4000	V~
M_1	to heatsink	5 ± 15 %	Nm
	US units	44 ± 15 %	lb. in
M_2	for terminals	5 ± 15 %	Nm
	US units	44 ± 15 %	lb. in
w	approx.	250	g
Case	→ page B 2 – 28	A 53	

¹⁾ CAL (controlled axial lifetime) technology, patent No. DE 43 10 44

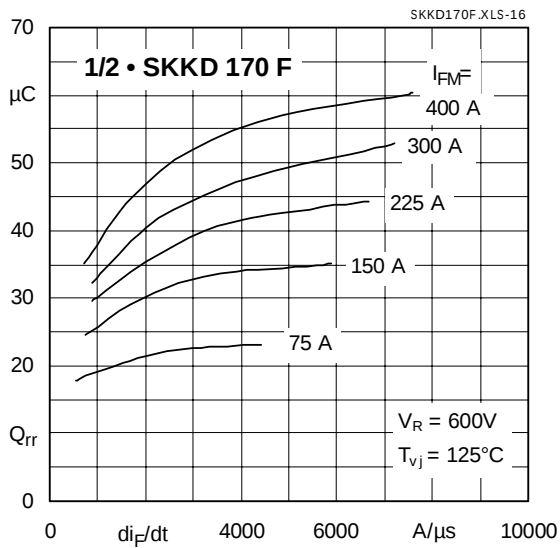


Fig. 16 Typ. recovered charge vs. current decrease

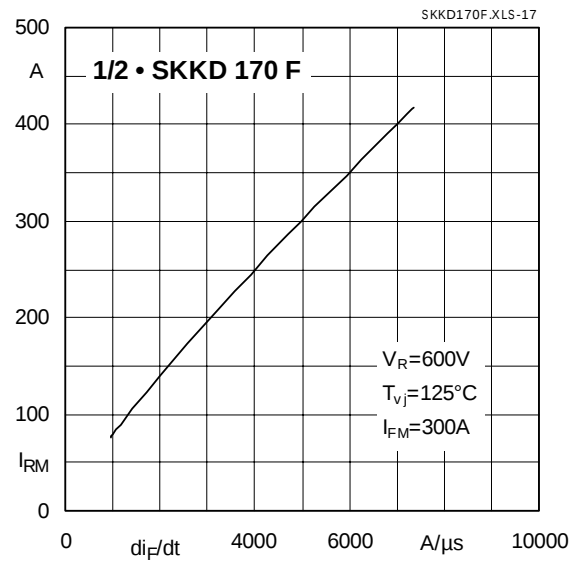


Fig. 17 Typ. peak recovery current vs. current decrease

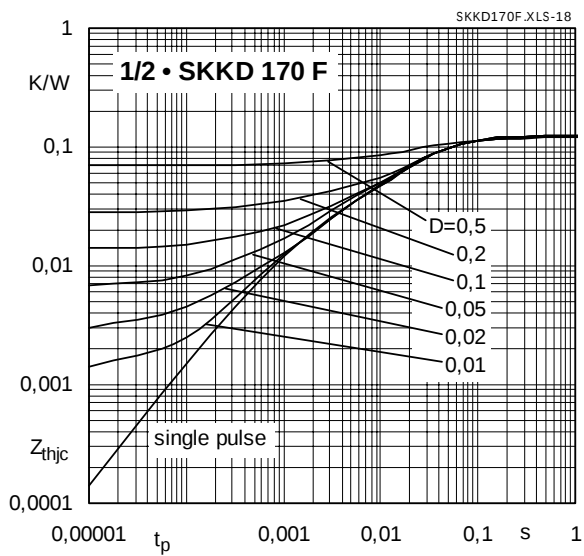


Fig. 18 Transient thermal impedance vs. time

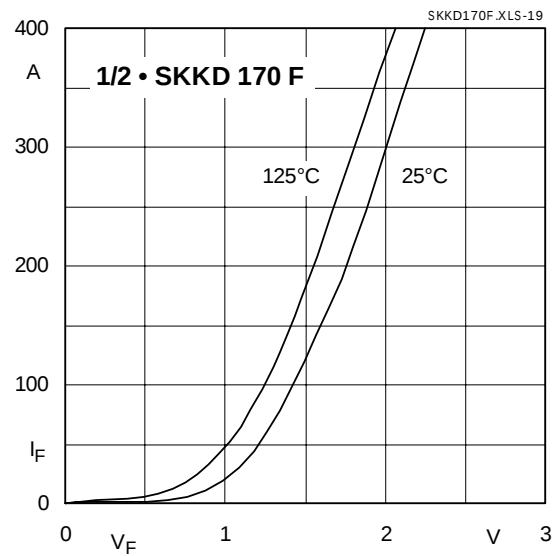


Fig. 19 Typ. forward characteristics

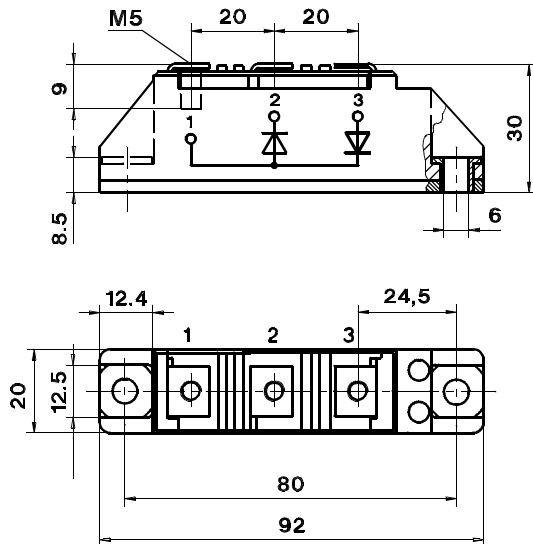
SKKD 105 F, 115 F

Case A 10

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

SEMIPACK® 1

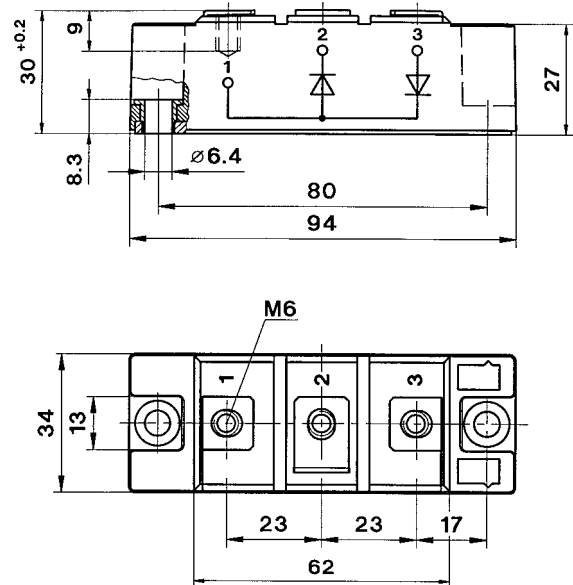
UL recognized, file no. E 63 532

**SKKD 60 F, 75 F**

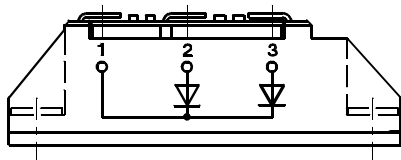
Case A 23

SEMIPACK® 2

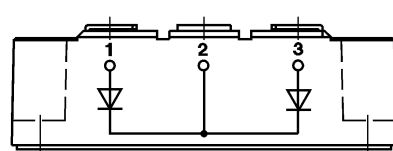
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**SKMD 105 F**

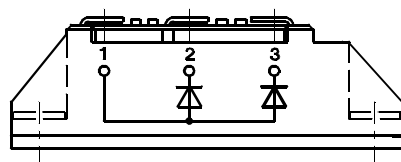
Case A 33

**SKMD 150 F, 202 E**

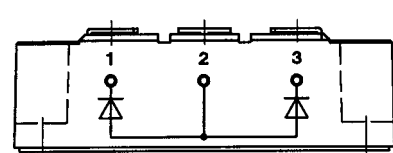
Case A 51

**SKND 105 F**

Case A 37

**SKND 150 F, 202 E**

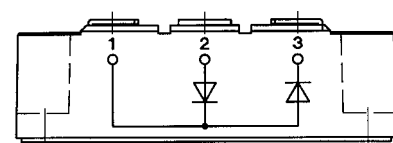
Case A 52



Dimensions in mm

SKKD 150 F, 170 F

Case A 53



Dimensions in mm