



SEMIPACK® 2

Fast Diode Modules

SKKD 170F

Features

- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Very soft recovery over the whole current range
- Low switching losses
- UL recognized, file no. E 63532

Typical Applications*

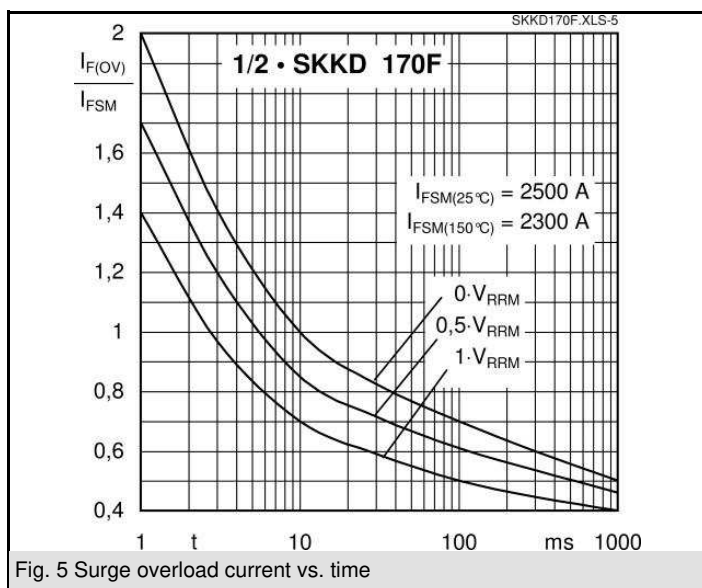
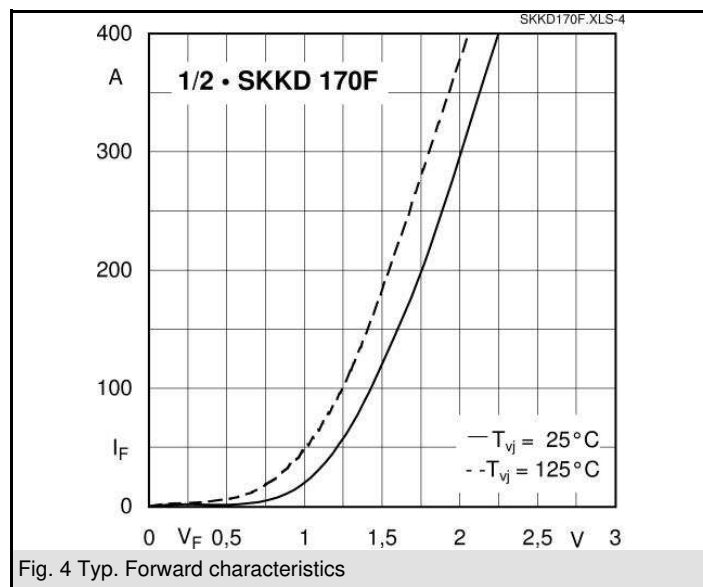
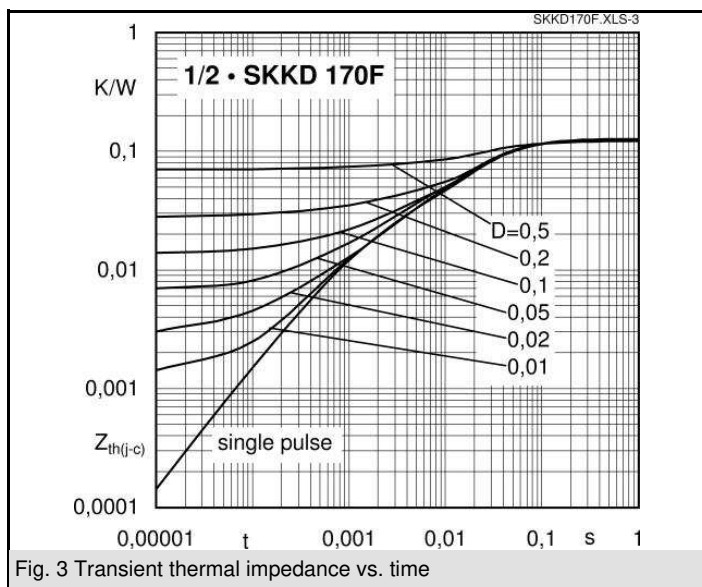
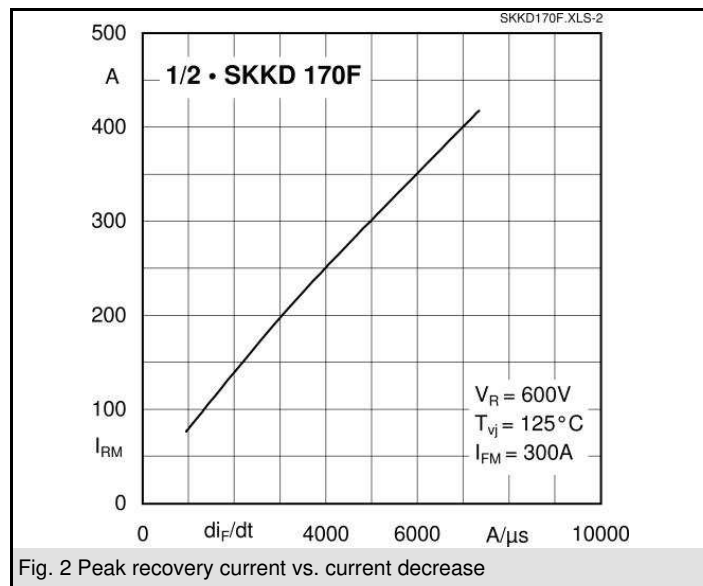
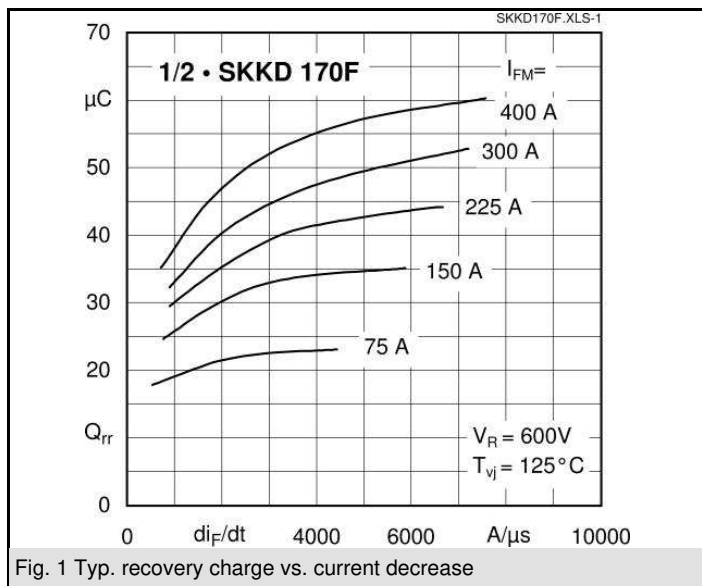
- Self-commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

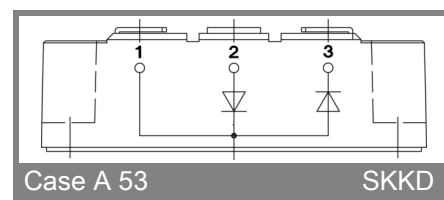
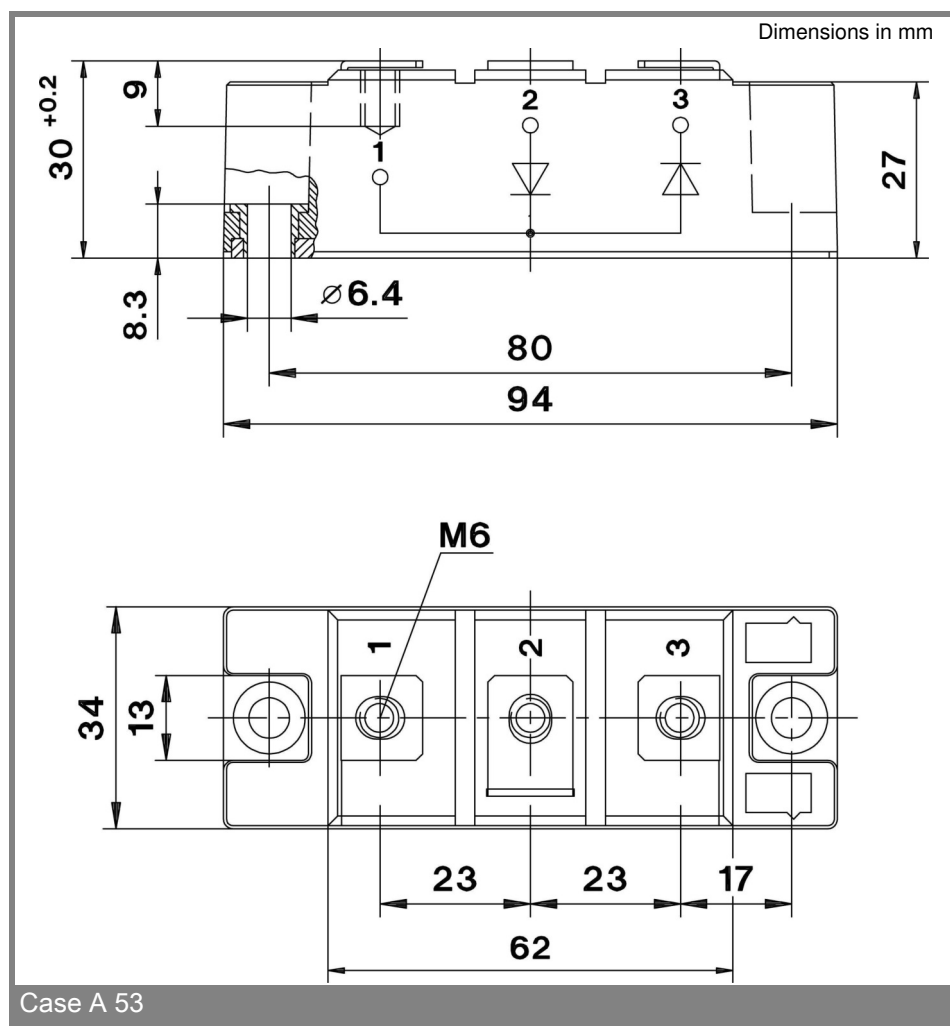
V_{RSM} V	V_{RRM} V	$I_{FRMS} = 320$ A (maximum value for continuous operation) $I_{FAV} = 170$ A (sin. 180; $T_c = 85$ °C)		
1200	1200	SKKD 170F12		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	170 (145)	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 150$ °C; 10 ms	2500 2300	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms	31250 26450	A²s A²s
V_F	$T_{vj} = 25$ °C; $I_F = 170$ A	max. 2	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,2	V
r_T	$T_{vj} = 150$ °C	max. 3,5	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 1	mA
I_{RD}	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 60	mA
Q_{rr}	$T_{vj} = 125$ °C, $I_F = 170$ A, -di/dt = 1000 A/μs, $V_R = 600$ V	28	μC
I_{RM}		80	A
t_{rr}		960	ns
E_{rr}		5	mJ
$R_{th(j-c)}$	per diode / per module	0,14 / 0,07	K/W
$R_{th(c-s)}$	per diode / per module	0,1 / 0,05	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	4800 / 4000	V~
M_s	to heatsink	5 ± 15 %	Nm
M_t	to terminal	5 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	153	g
Case		A 53	



SKKD





* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.