SKKD 170F



SEMIPACK® 2

Fast Diode Modules

SKKD 170F

Features

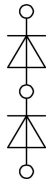
- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Very soft recovery over the whole current range
- Low switching losses
- UL recognized, file no. E 63532

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	2500	A
	T_{vj} = 150 °C; 10 ms	2300	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	31250	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	26450	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,	28	µC
I_{RM}	-di/dt = 1000 A/µs, V_R = 600 V	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	



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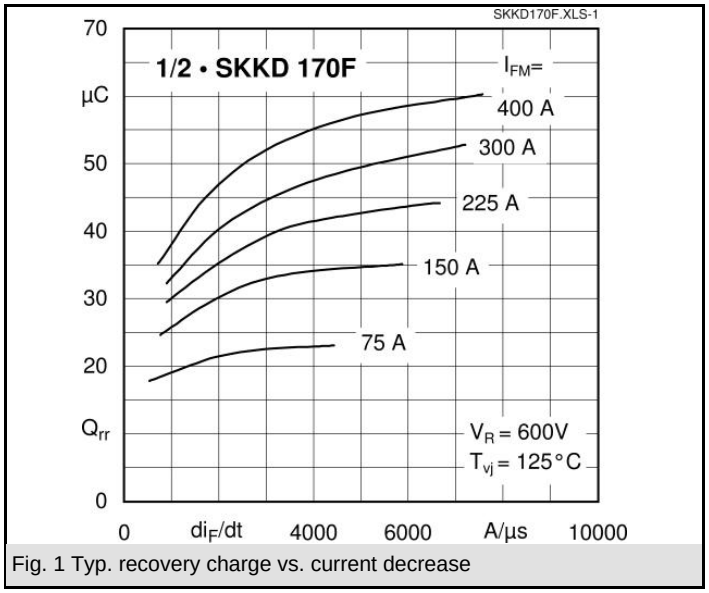


Fig. 1 Typ. recovery charge vs. current decrease

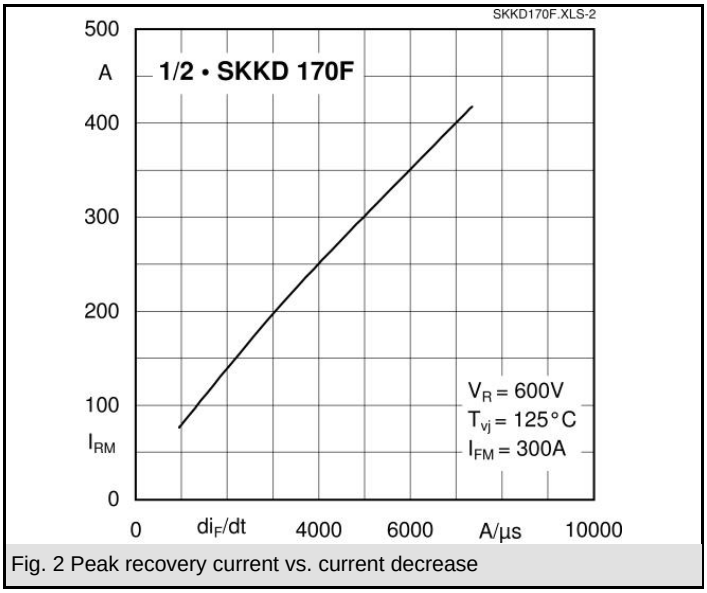


Fig. 2 Peak recovery current vs. current decrease

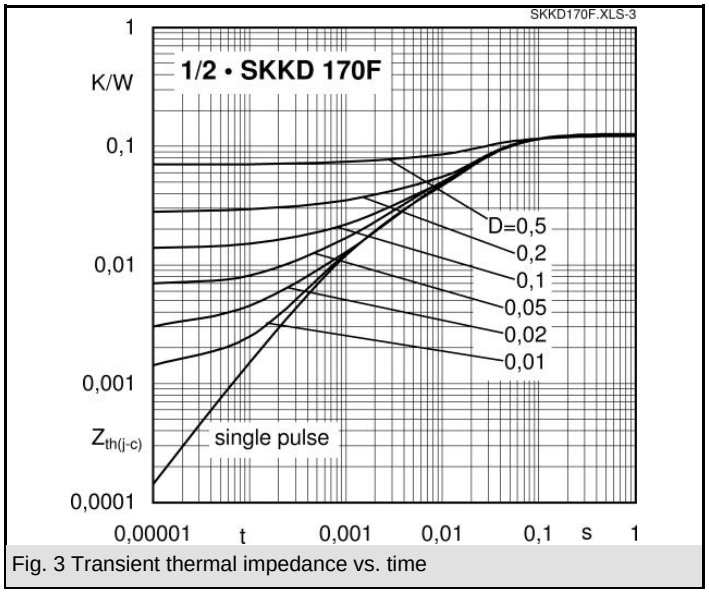


Fig. 3 Transient thermal impedance vs. time

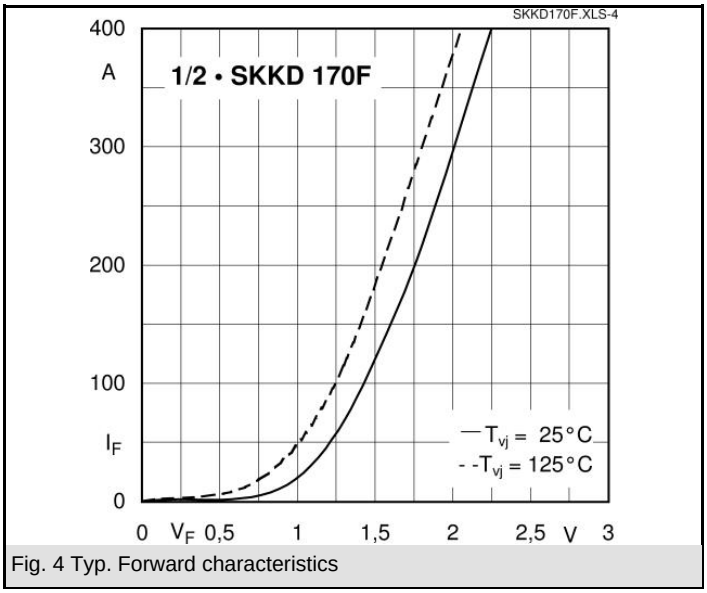


Fig. 4 Typ. Forward characteristics

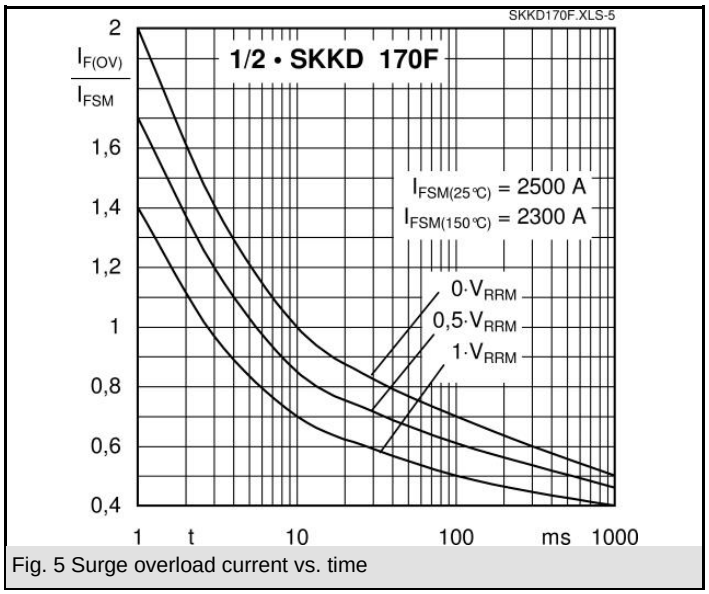
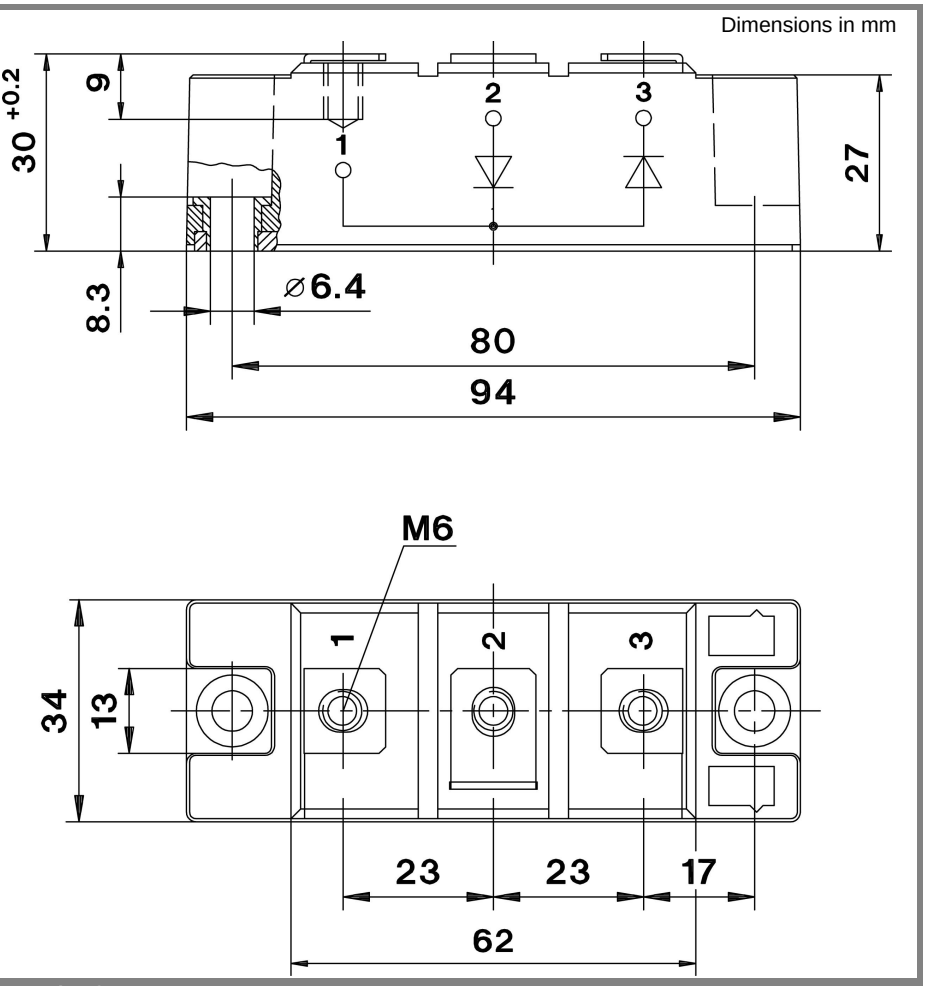


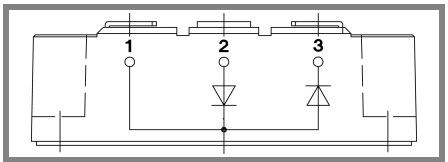
Fig. 5 Surge overload current vs. time

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Case A 53



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