SKKE 120F

THYRISTOR BRIDGE,SCR BRIDGE

SEMIPACK® 2

Fast Diode Modules

SKKE 120F

Features

- CAL (controlled axial lifetime) chip technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- 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
- snubber and free wheeling circuits

V_{RSM} V	V_{RRM} V	I_{FRMS} = 220 A (maximum value for continuous operation) I_{FAV} = 120 A (sin. 180; 50 Hz; T_c = 82 °C)		
1700	1700	SKKE 120F17		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	116 (87)	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	2000	A
	T_{vj} = 150 °C; 10 ms	1800	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	20000	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	16200	A²s
V_F	T_{vj} = 25 °C; I_F = 200 A	max. 2,7	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 1,5	V
r_T	T_{vj} = 150 °C	max. 4,5	mΩ
I_{RD}	T_{vj} = 25 °C; V_{RD} = V_{RRM}	max. 0,4	mA
I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}	max. 50	mA
Q_{rr}	T_{vj} = 125 °C, I_F = 120 A,	41	µC
I_{RM}	-di/dt = 1000 A/µs, V_R = 1200 V	110	A
t_{rr}		1020	ns
E_{rr}		10	mJ
$R_{th(j-c)}$		0,2	K/W
$R_{th(c-s)}$		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 terminals	5 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	160	g
Case		A 54	

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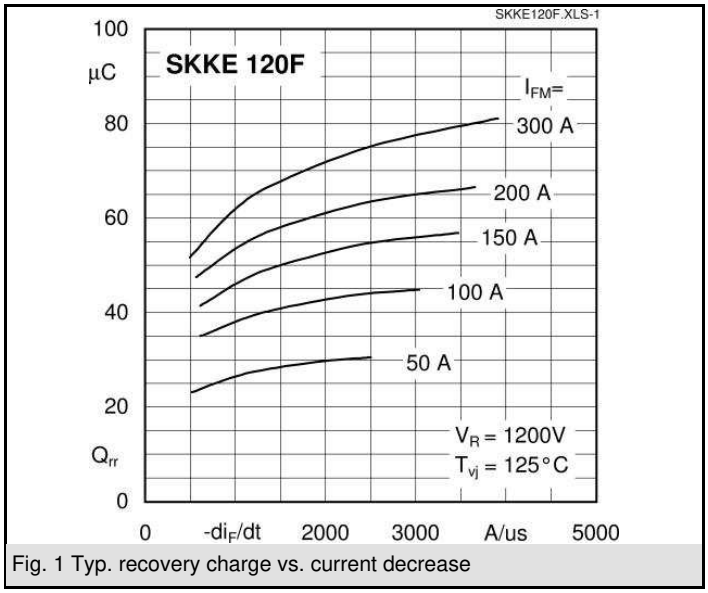

Fig. 1 Typ. recovery charge vs. current decrease

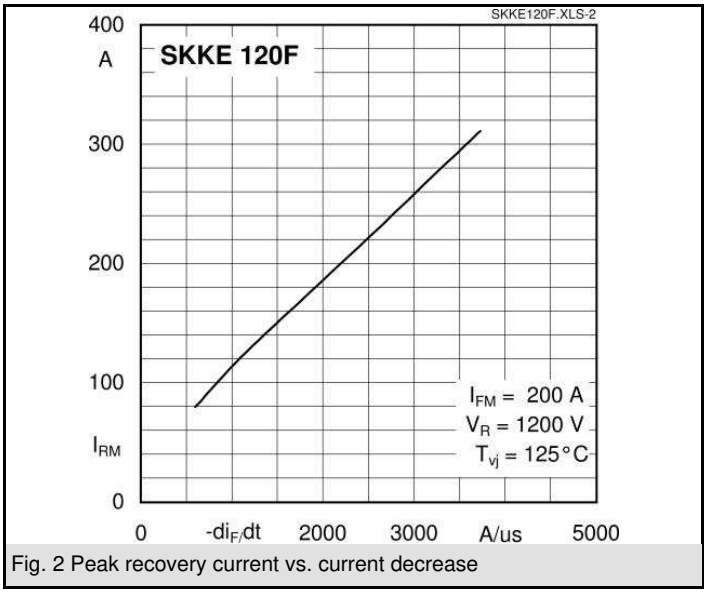

Fig. 2 Peak recovery current vs. current decrease

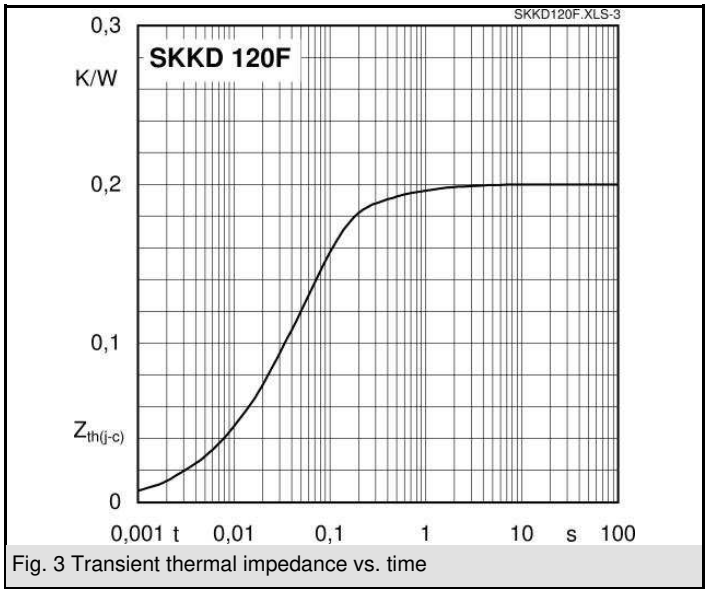

Fig. 3 Transient thermal impedance vs. time

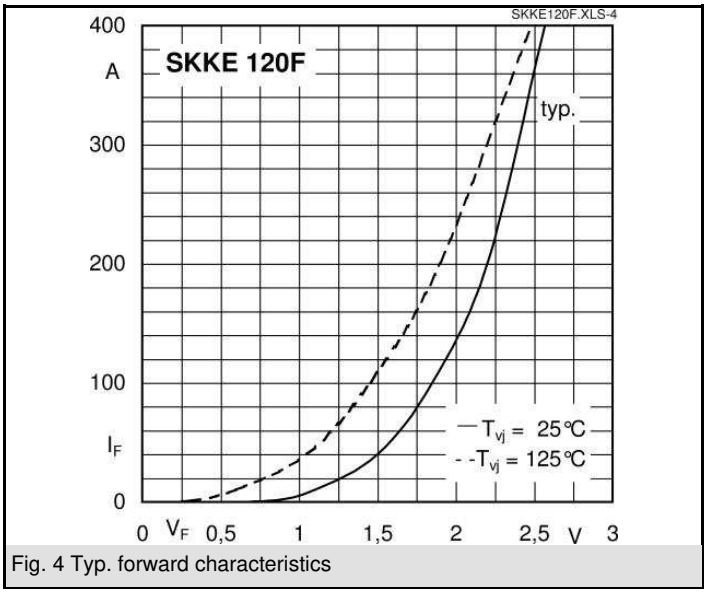

Fig. 4 Typ. forward characteristics

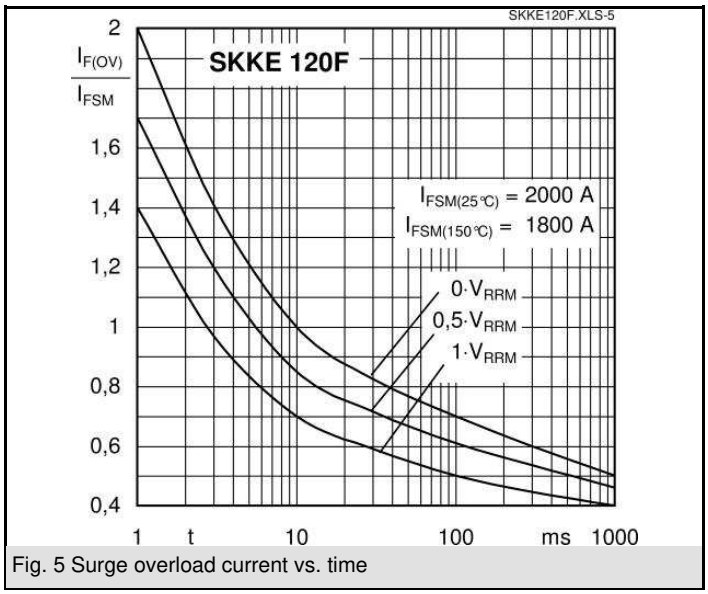

Fig. 5 Surge overload current vs. time

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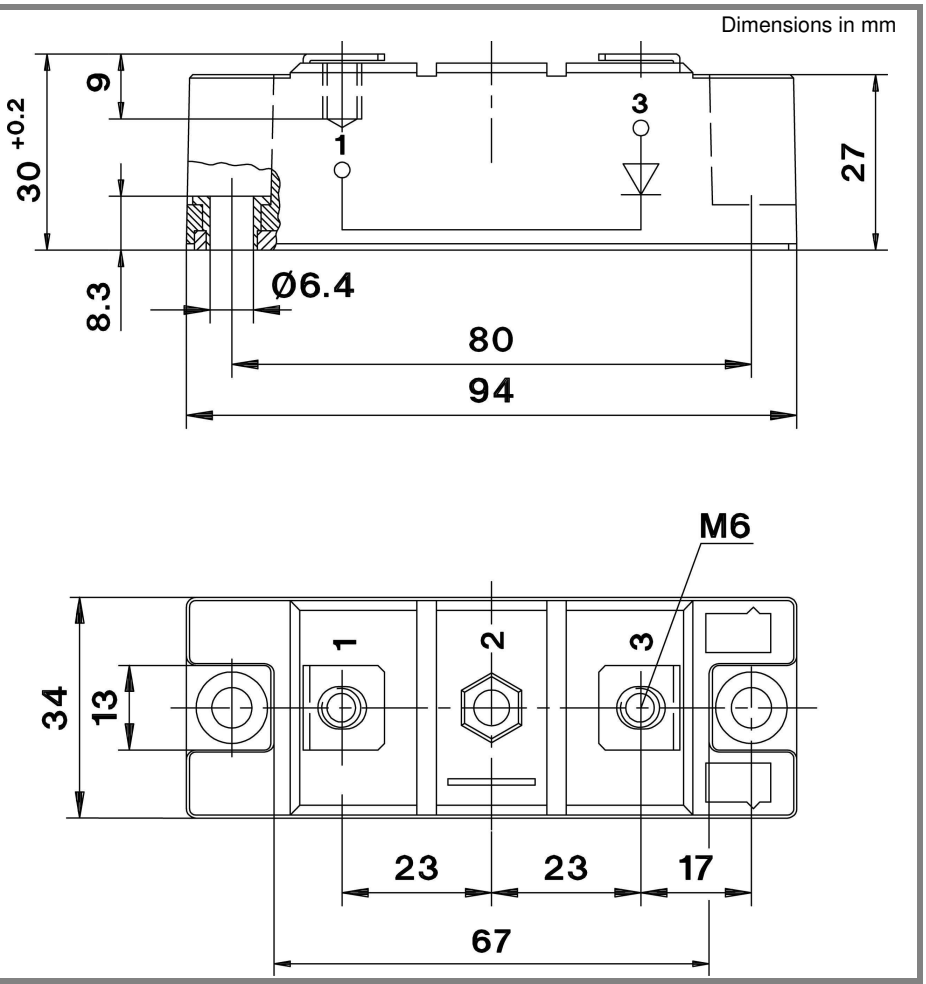

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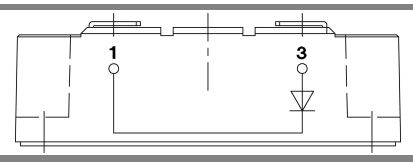

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* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances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

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