SKKE 301F

SEMIPACK® 2

Fast Diode Modules

SKKE 301F

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 63 532

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} = 450 A (maximum value for continuous operation) I_{FAV} = 300 A (sin. 180; 50 Hz; T_c = 43 °C)		
1200	1200	SKKE 301F12		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	220 (185)	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	4000	A
	T_{vj} = 150 °C; 10 ms	3600	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	80000	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	64800	A²s
V_F	T_{vj} = 25 °C; I_F = 300 A	max. 2,2	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 1,2	V
r_T	T_{vj} = 150 °C	max. 2,75	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. 80	mA
Q_{rr}	T_{vj} = 125 °C, I_F = 300 A,	42	µC
I_{RM}	-di/dt = 2000 A/µs, V_R = 600 V	165	A
t_{rr}		690	ns
E_{rr}		10,8	mJ
$R_{th(j-c)}$		0,11	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 terminal	5 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	160	g
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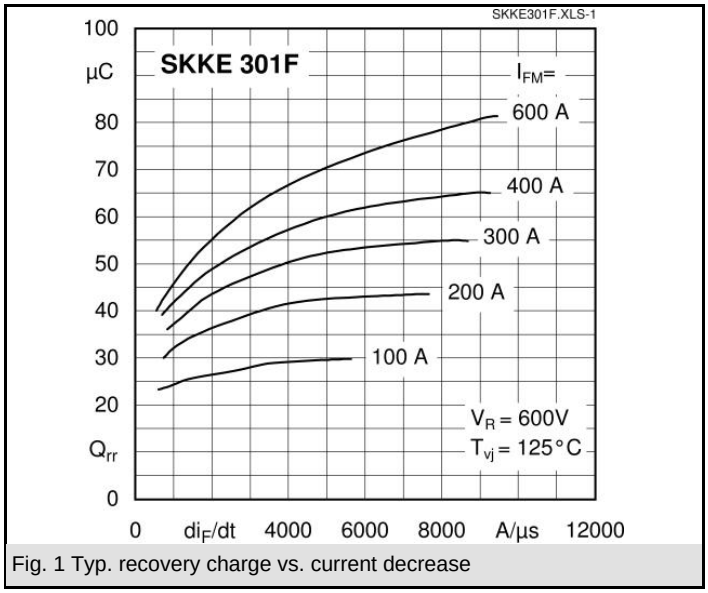

Fig. 1 Typ. recovery charge vs. current decrease

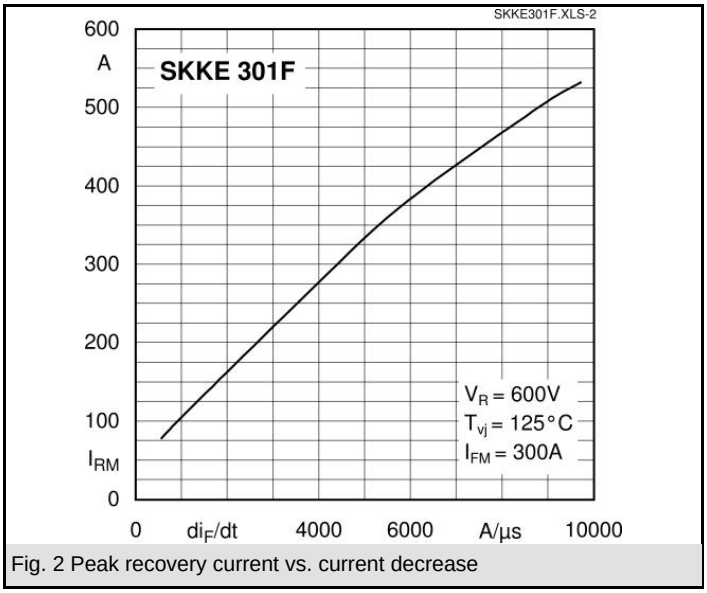

Fig. 2 Peak recovery current vs. current decrease

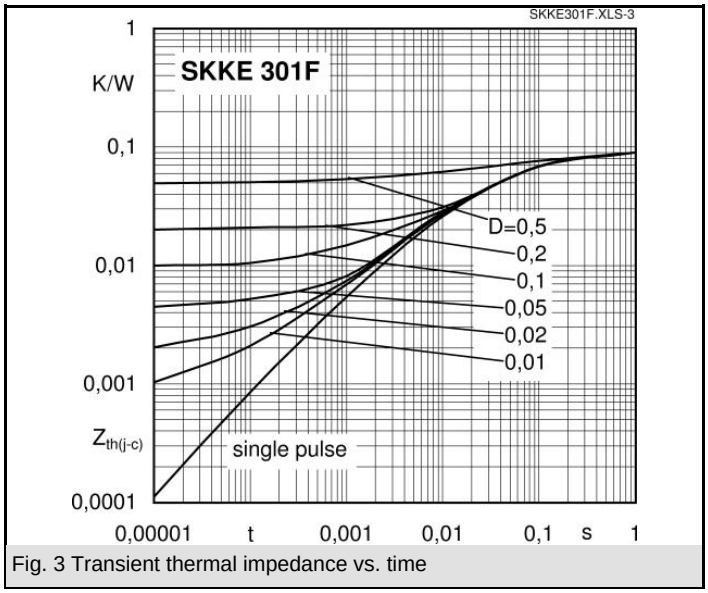

Fig. 3 Transient thermal impedance vs. time

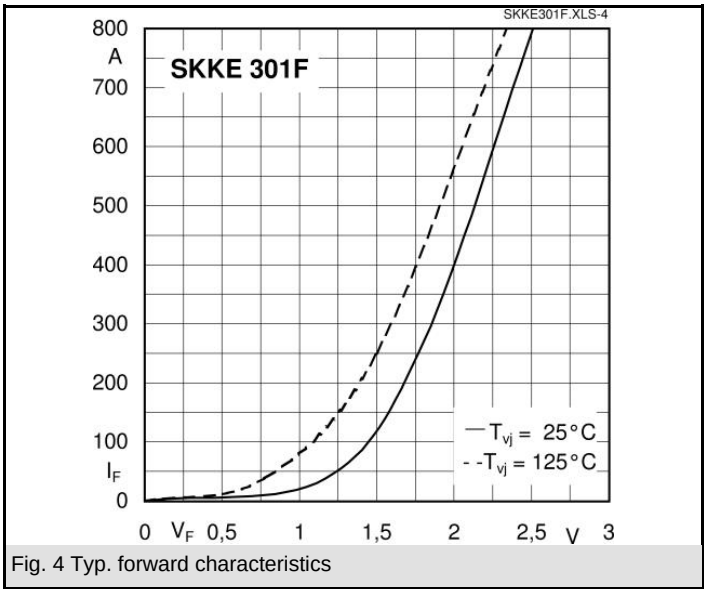

Fig. 4 Typ. forward characteristics

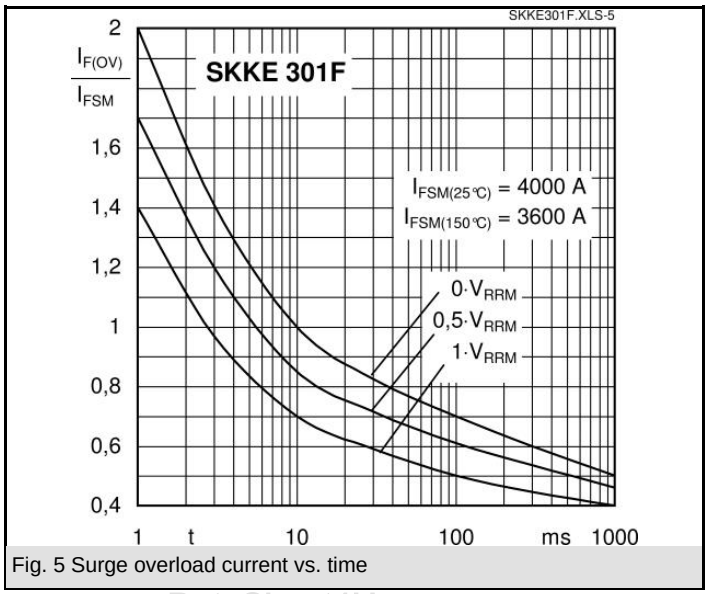

Fig. 5 Surge overload current vs. time

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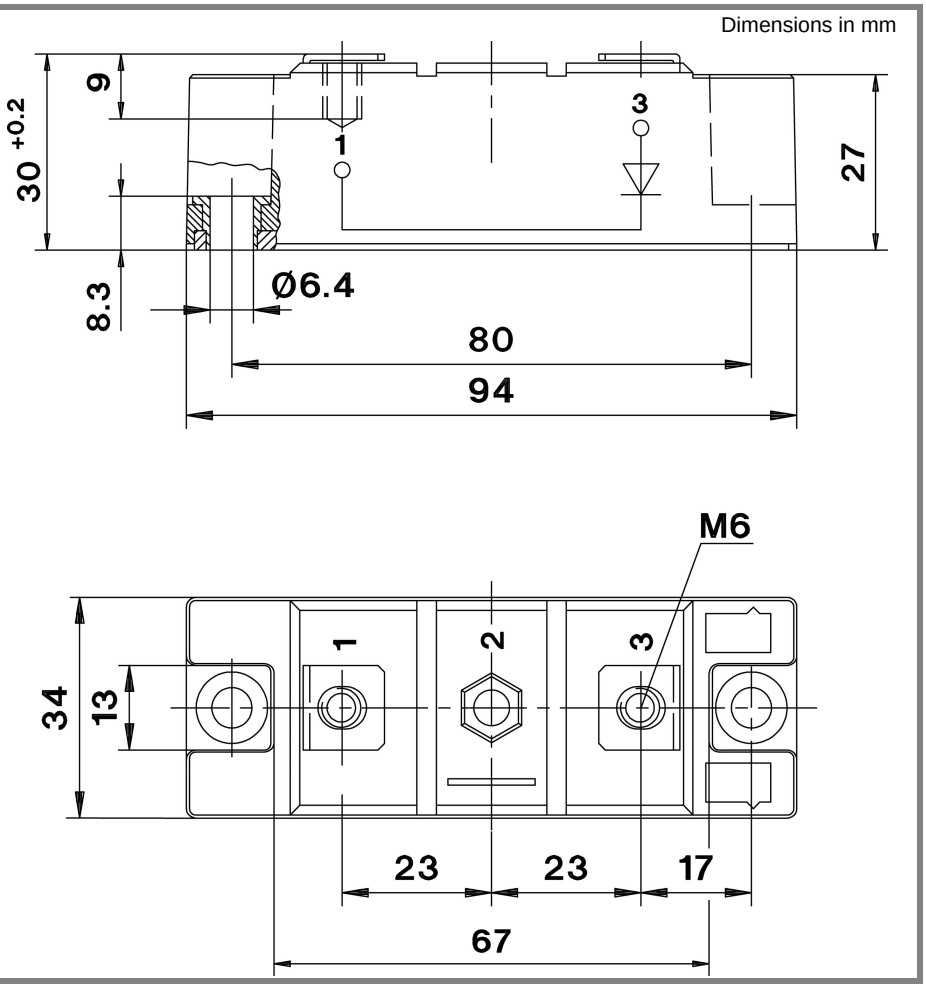

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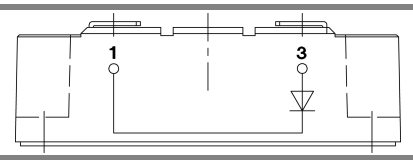

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