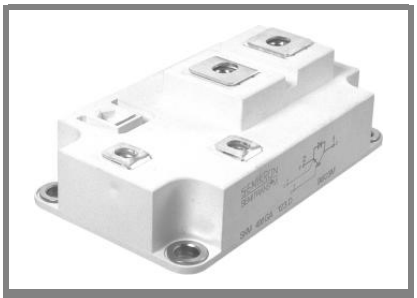
SKKE 600F



SEMIPACK®

V_{RSM} V	V_{RRM} V	I_{FRMS} = 450 A (maximum value for continuous operation) I_{FAV} = 360 A (sin. 180; 50 Hz; T_c = 85 °C)		
1200	1200	SKKE 600F12		

Fast Diode Modules

SKKE 600F

Features

- CAL (controlled axial lifetime) technology, patent No. 43 10 44
- Heat transfer through aluminium oxide DCB ceramic isolated metal baseplate
- Small recovered charge
- Fast & soft recovery CAL diodes
- UL recognized, file no. E 63 532

Typical Applications*

- Freewheeling diodes for IGBT
- Freewheeling diode for inductive loads
- Brake choppers
- Inverters and DC choppers
- AC motor control
- Boost choppers
- up to 20 kHz

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	360 (305)	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	7000	A
	T_{vj} = 150 °C; 10 ms	5800	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	245000	A^2s
	T_{vj} = 150 °C; 8,3 ... 10 ms	168000	A^2s
V_F	T_{vj} = 25 °C; I_F = 600 A	max. 2,5	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 1,2	V
r_T	T_{vj} = 150 °C	max. 1,9	mΩ
I_{RD}	T_{vj} = 25 °C; V_{RD} = V_{RRM}	max. 4	mA
I_{RD}	T_{vj} = 150 °C; V_{RD} = V_{RRM}	max. 30	mA
Q_{rr}	T_{vj} = 150 °C, I_F = 600 A,	80	µC
I_{RM}	-di/dt = 4000 A/µs, V_R = 600 V	280	A
t_{rr}		780	ns
E_{rr}		21	mJ
$R_{th(j-c)}$	DC	0,062	K/W
$R_{th(c-s)}$		0,038	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1s / 1 min.	4800 / 4000	V~
M_s	to heatsink	3 ... 5	Nm
M_t	to terminals	2,5 ... 5	Nm
a		5 * 9,81	m/s^2
m	approx.	330	g
Case	SEMITRANS 4	A 68	

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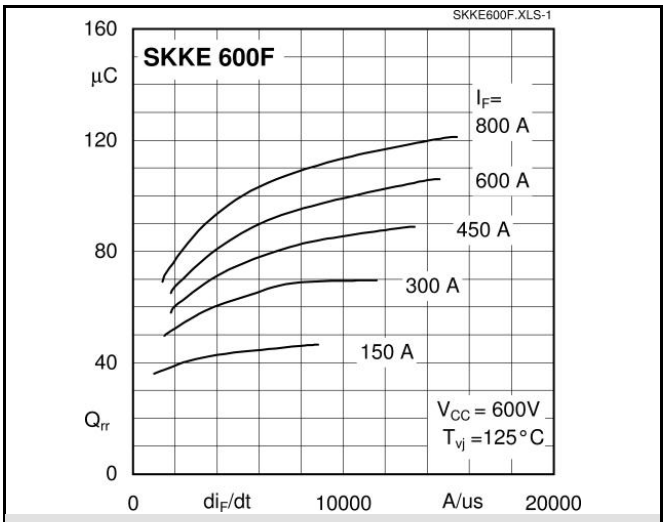


Fig. 1 Typ. recovery charge vs. current decrease

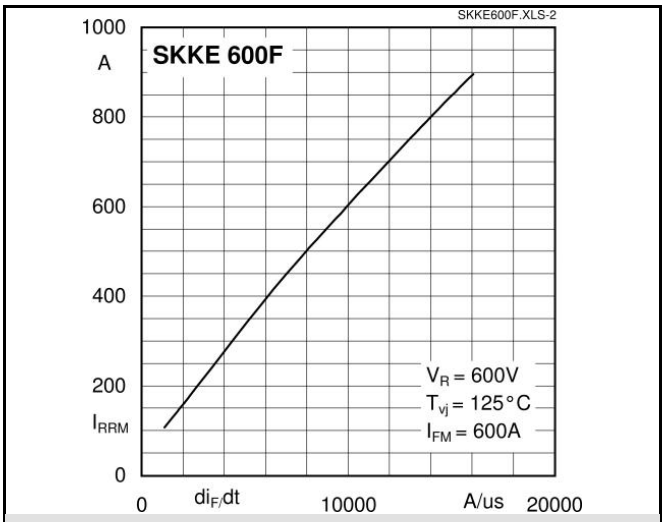


Fig. 2 Peak recovery current vs. current decrease

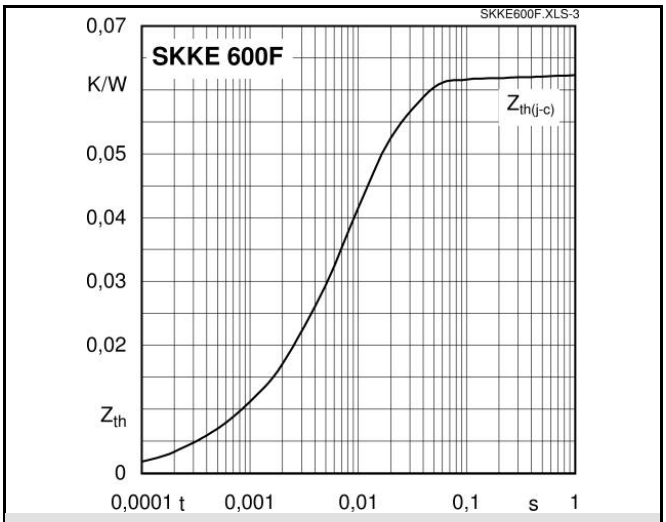


Fig. 3 Transient thermal impedance vs. time

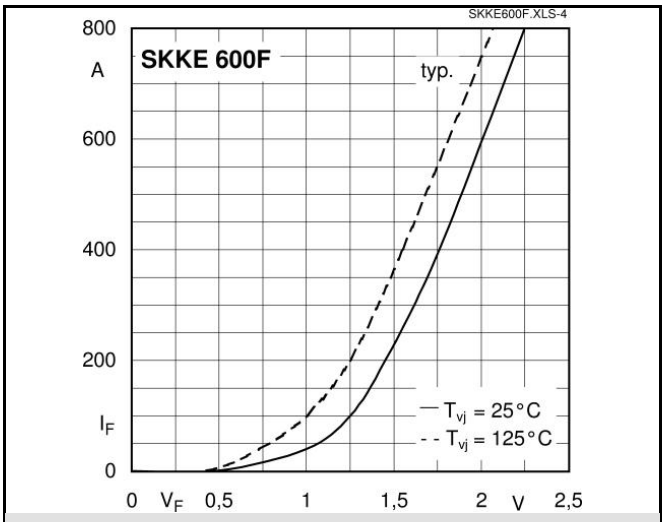


Fig. 4 Forward characteristics

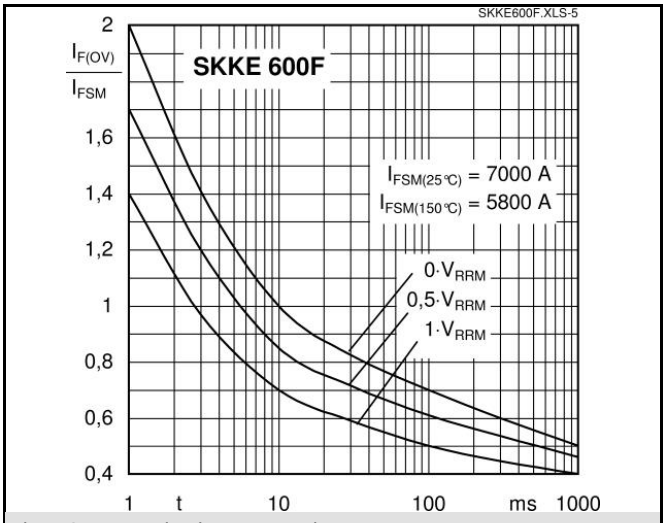


Fig. 5 Surge overload current vs. time

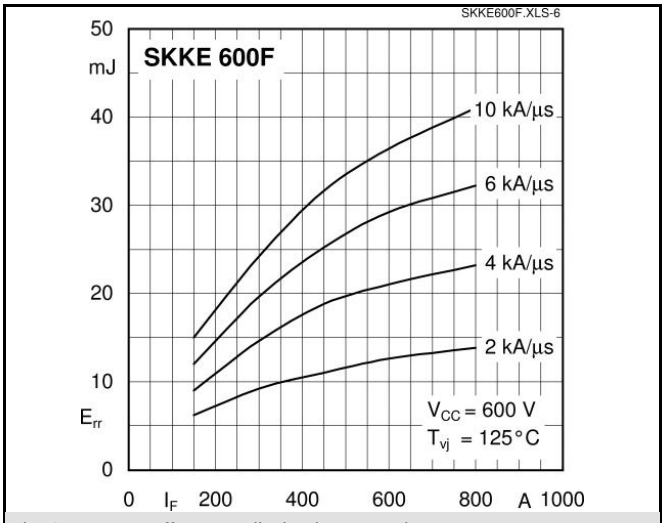
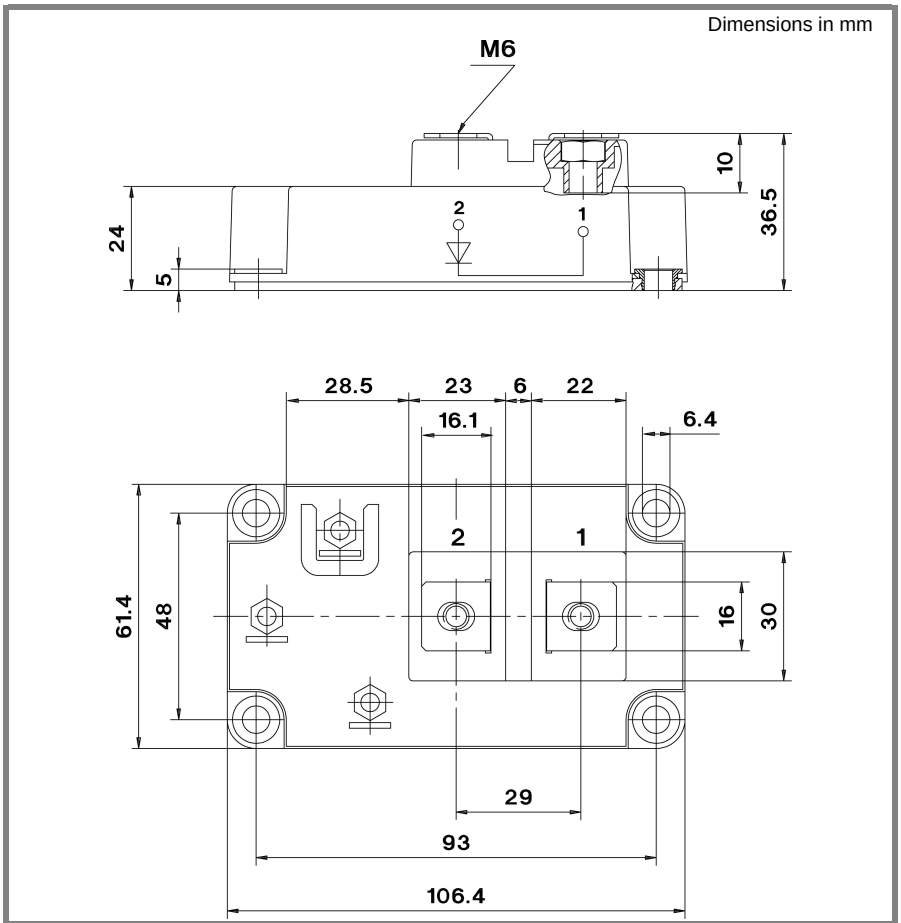


Fig. 6 Typ. turn-off energy dissipation per pulse



Case A 68

* 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.

