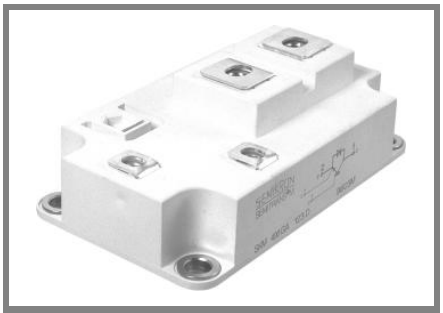
SKKE 600F



SEMIPACK®

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

SKKE

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		

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
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	245000	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	168000	A²s
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/s²
m	approx.	330	g
Case	SEMITRANS 4	A 68	

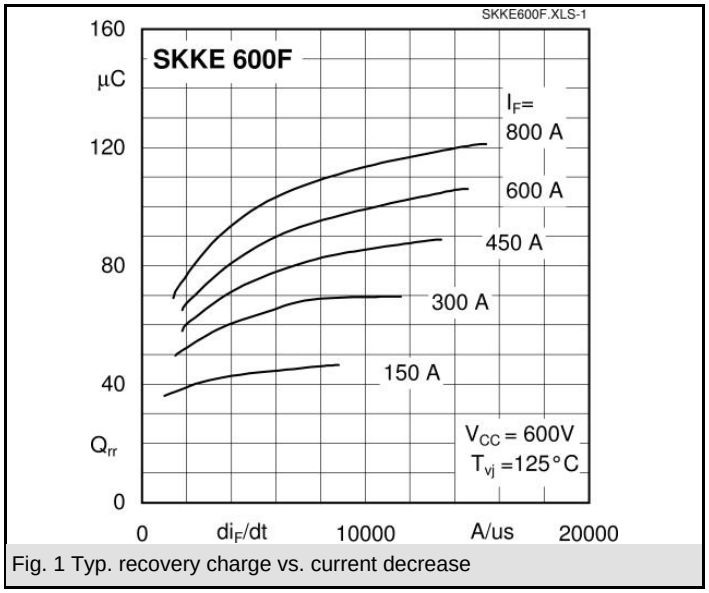


Fig. 1 Typ. recovery charge vs. current decrease

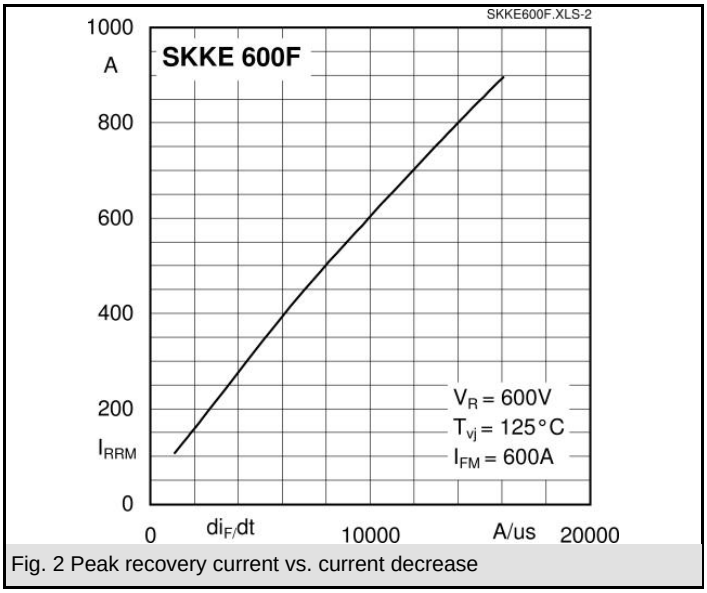


Fig. 2 Peak recovery current vs. current decrease

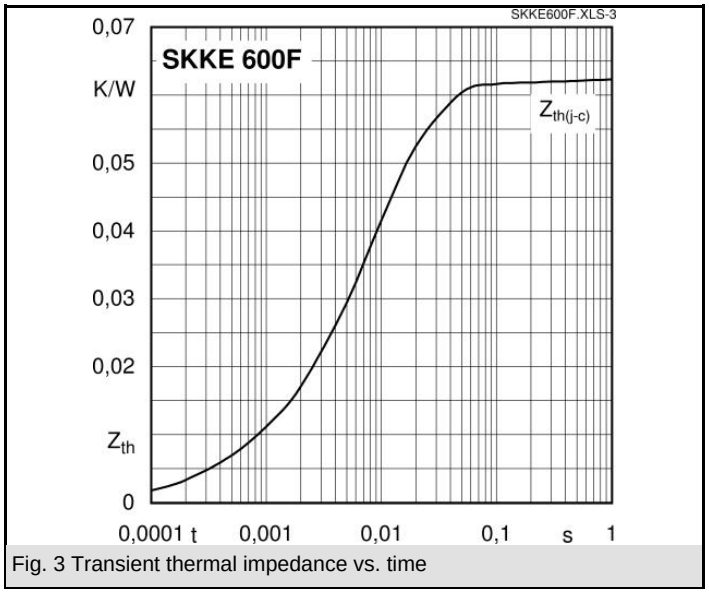


Fig. 3 Transient thermal impedance vs. time

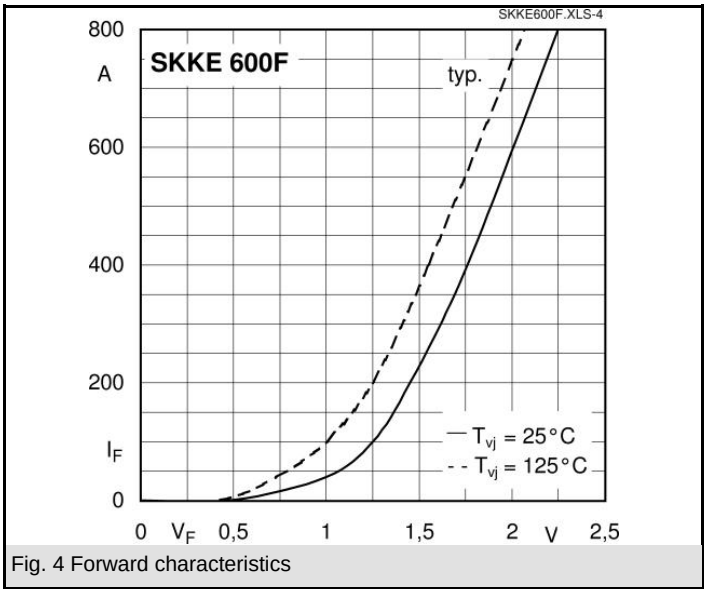


Fig. 4 Forward characteristics

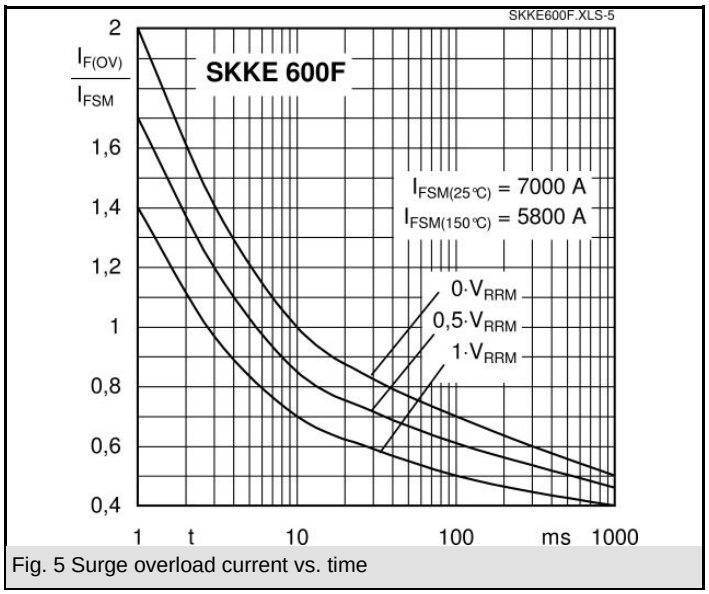


Fig. 5 Surge overload current vs. time

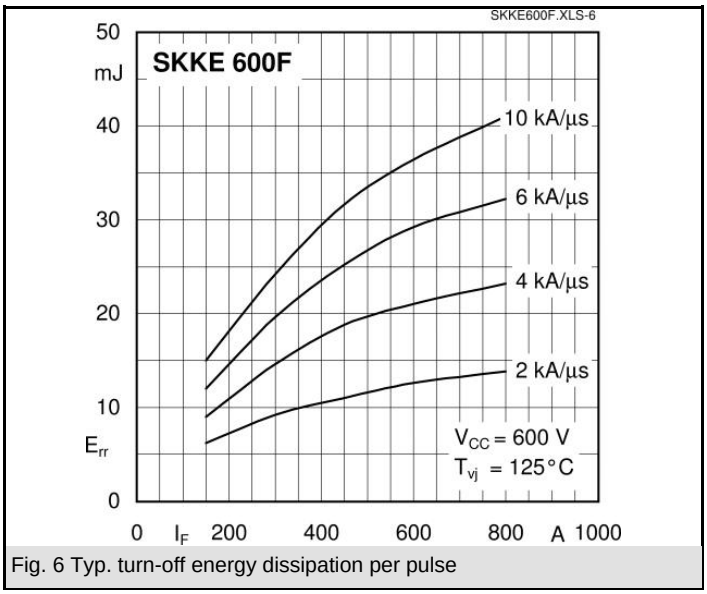
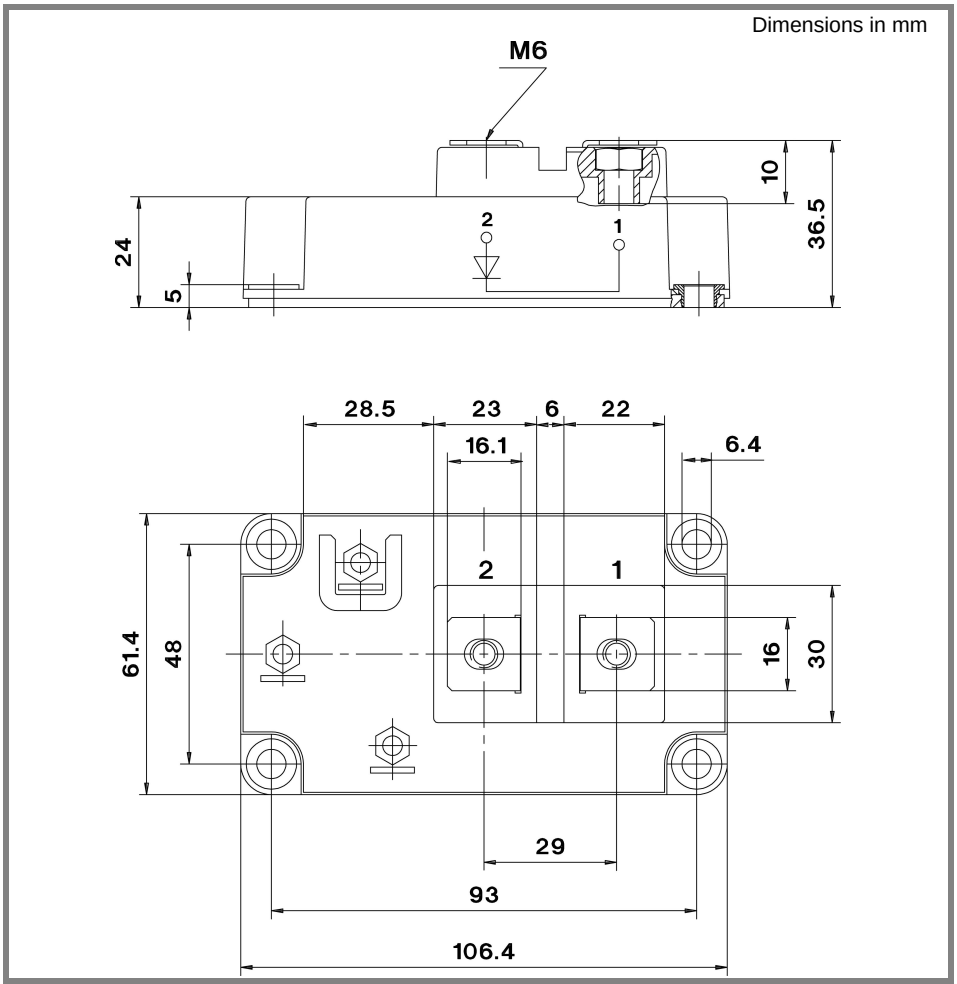


Fig. 6 Typ. turn-off energy dissipation per pulse



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