



SEMIPACK®

Fast Diode Modules

SKKE 330F

Features

- CAL (controlled axial lifetime) chip technology, patent No. DE 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

V_{RSM} V 1700	V_{RRM} V 1700	$I_{FRMS} = 450$ A (maximum value for continuous operation) $I_{FAV} = 330$ A (sin. 180; 50 Hz; $T_c = 70$ °C) SKKE 330F17	
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	290 (240)	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 150$ °C; 10 ms	6200 5200	A A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms	192000 135000	A²s A²s
V_F	$T_{vj} = 25$ °C; $I_F = 330$ A	max. 2	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,5	V
r_T	$T_{vj} = 150$ °C	max. 1,9	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 2	mA
I_{RD}	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 30	mA
Q_{rr}	$T_{vj} = 125$ °C, $I_F = 330$ A, -di/dt = 2000 A/μs, $V_R = 1200$ V	80 220 990 25	μC A ns mJ
$R_{th(j-c)}$	DC	0,079	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.; 1 s / 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	



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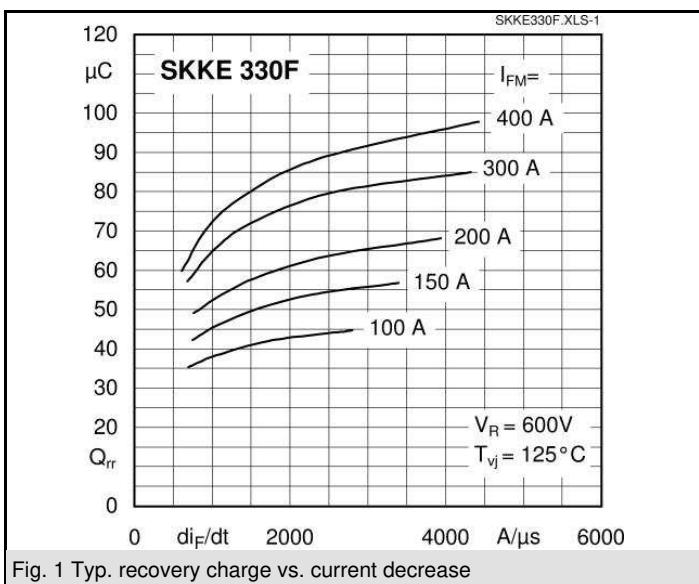


Fig. 1 Typ. recovery charge vs. current decrease

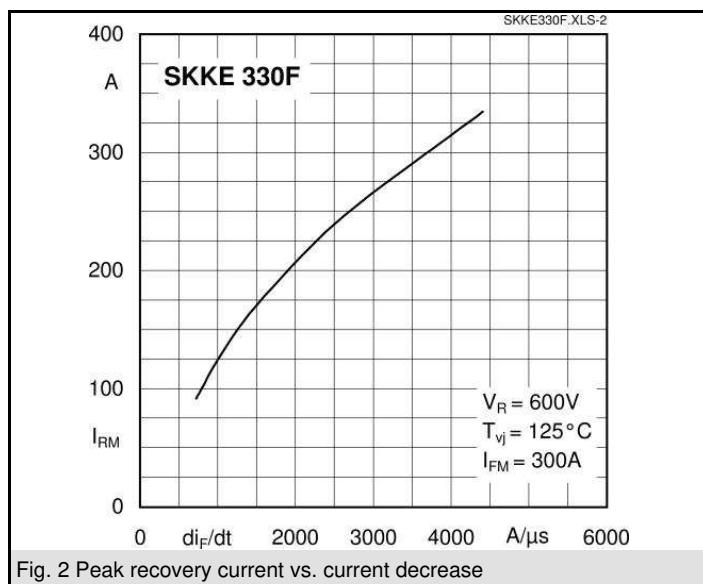


Fig. 2 Peak recovery current vs. current decrease

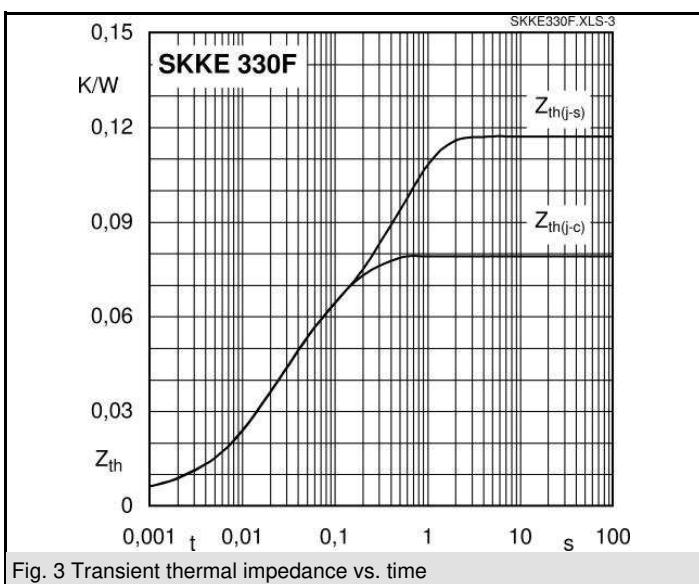


Fig. 3 Transient thermal impedance vs. time

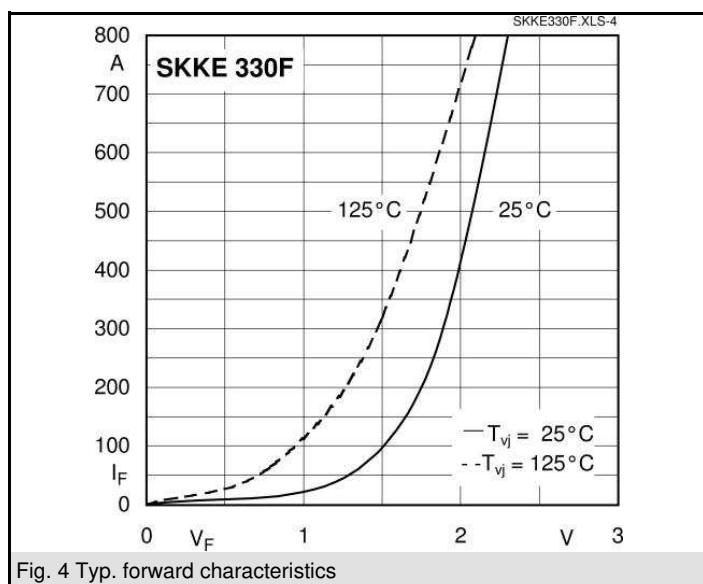


Fig. 4 Typ. forward characteristics

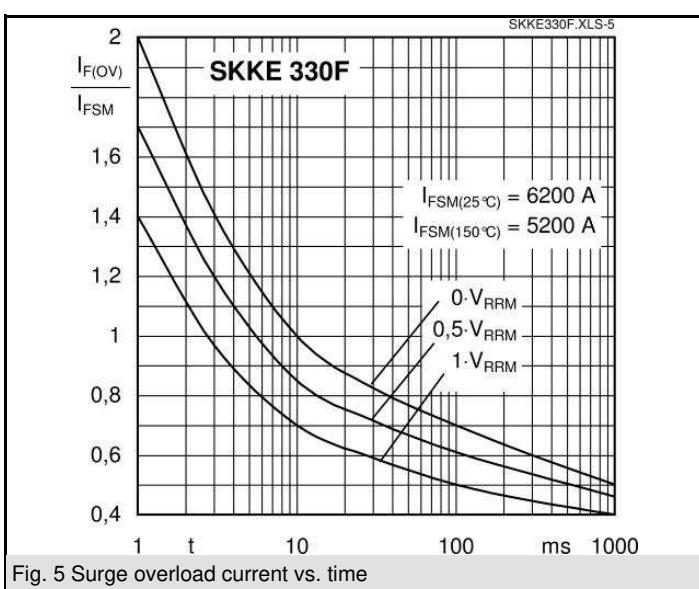
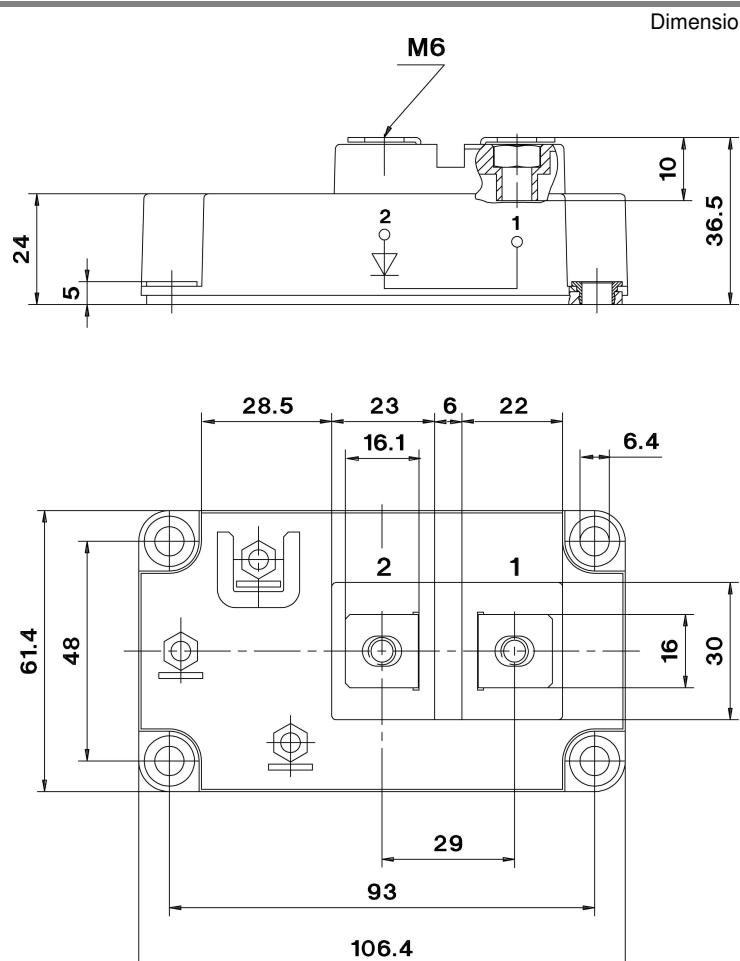


Fig. 5 Surge overload current vs. time



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.