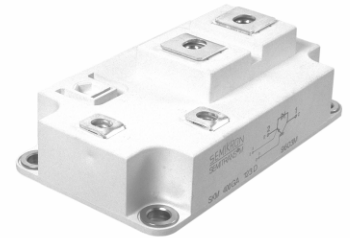


SEMIPACK® Fast Diode ¹⁾ Modules

SKKE 330 F



SKKE

Features

- Heat transfer through aluminium oxide DCB ceramic isolated metal baseplate
- Small recovered charge
- Fast & soft recovery CAL diodes ¹⁾
- UL recognized, file no. E 63 532
- Creepage distance 20 mm
- Clearance 12 mm

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_{RRM}	I_{FRMS} (maximum values for continuous operation) 450 A
V	I_{FAV} (sin. 180; $T_{case} = 85\text{ °C}$; 50 Hz) 290 A
1600	SKKE 330 F 16
1700	SKKE 330 F 17

Symbol	Conditions	SKKE 330 F	Units
I_{FDC}	$T_{case} = 66\text{ °C}$	450	A
I_{FDC}	$T_{amb} = 45\text{ °C}$; $R_{thha} = 0,05\text{ °C/W}$	300	A
I_{FDC}	$T_{amb} = 45\text{ °C}$; $R_{thha} = 0,15\text{ °C/W}$ (1/6 P16/300F)	200	A
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms	6 200	A
	$T_{vj} = 150\text{ °C}$; 10 ms	5 200	A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms	192 000	A ² s
	$T_{vj} = 150\text{ °C}$; 8,3 ... 10 ms	135 000	A ² s
Q_{rr}	$T_{vj} = 125\text{ °C}$	92	μC
I_{RM}	$I_F = 330\text{ A}$	240	A
E_{off}	$-di_F/dt = 2000\text{ A/μs}$	10	mJ
t_{rr}	$V_R = 600\text{ V}$	typ. 1	μs
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$	2	mA
	$T_{vj} = 150\text{ °C}$; $V_R = V_{RRM}$	30	mA
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 330\text{ A}$; max.	2,0	V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	1,5	V
r_T	$T_{vj} = 150\text{ °C}$	1,9	mΩ
R_{thjc}	DC	0,079	°C/W
R_{thch}		0,038	°C/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 130	°C
V_{isol}	a. c. 50 Hz; r.m.s; 1 min	4000	V~
M_1	to heatsink SI units (M6)	3 ... 5	Nm
	US units	27 ... 44	lb. in
M_2	to terminals SI units (M6)	2,5 ... 5	Nm
	US units	22 ... 44	lb. in
a		5 x 9,81	m/s ²
w		475	g
Case	SEMITRANS 4 → page B 2 – 52	A 68	

¹⁾ CAL (controlled axial lifetime) technology, patent No. DE 43 10 44

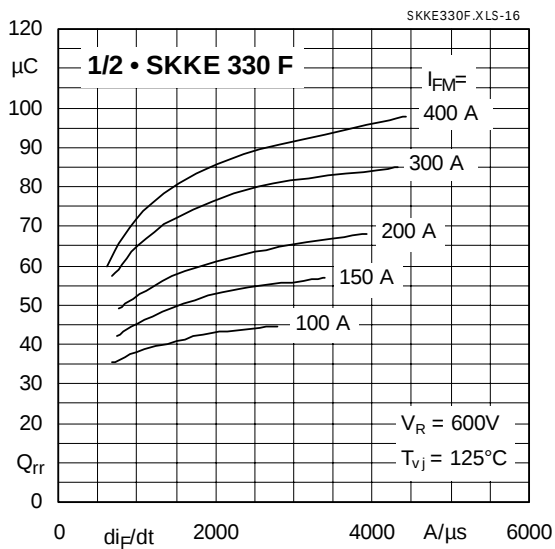


Fig. 16 Typ. recovered charge vs. current decrease

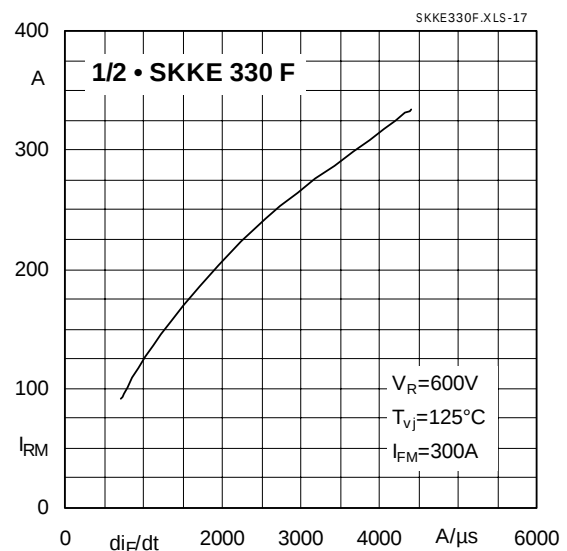


Fig. 17 Typ. peak recovery current vs. current decrease

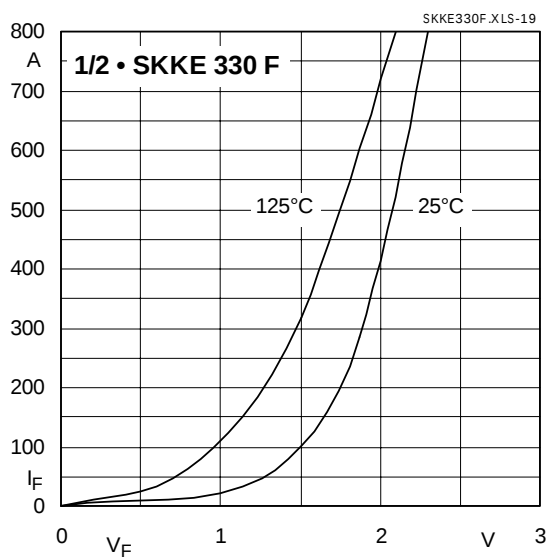
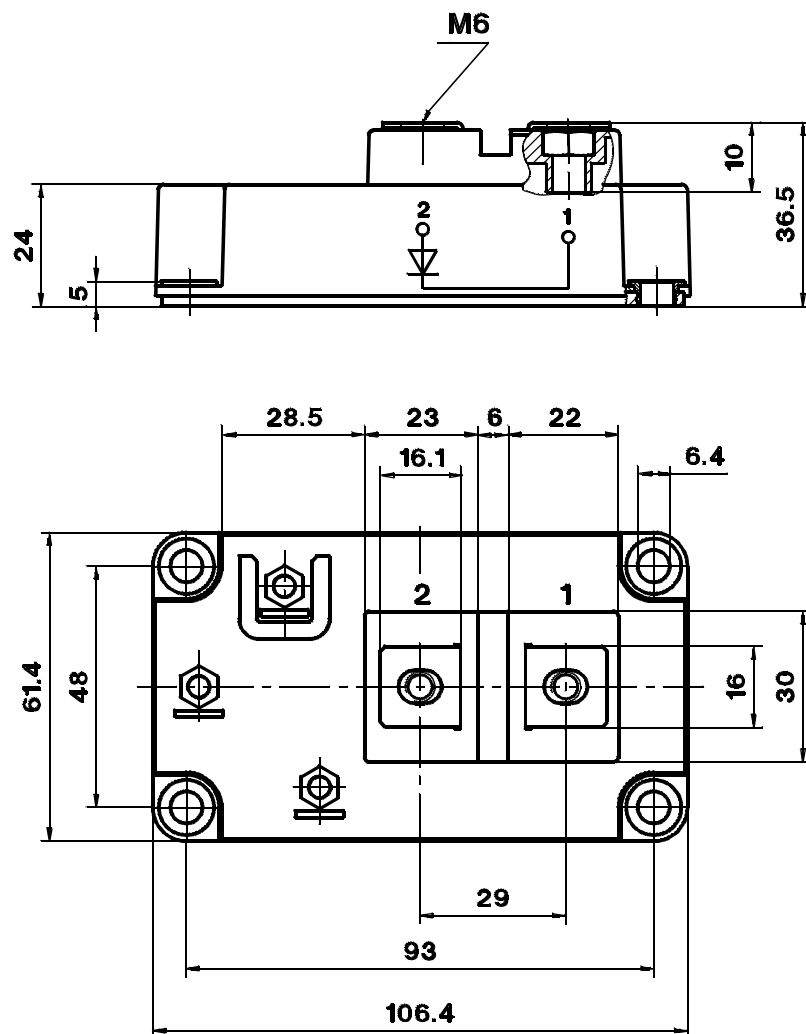


Fig. 19 Typ. forward characteristics

SKKE 330 F
SKKE 600 F
Case A 68

SEMIPACK®



Dimensions in mm