V_{RSM} V_{RRM} V	I_{FRMS} (maximum values for continuous operation) 450 A I_{FAV} (sin. 180; T_{case} = 85 °C; 50 Hz 290 A
1000	**SKKE 600 F 10**
1200	**SKKE 600 F 12**

SEMIPACK® Fast Diode [1] Modules

SKKE 600 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

Symbol	Conditions	SKKE 600 F	Units
I_{FDC}	T_{case} = 92 °C	450	A
I_{FDC}	T_{amb} = 45 °C; R_{thha} = 0,05 °C/W	360	A
I_{FDC}	T_{amb} = 45 °C; R_{thha} = 0,15 °C/W (1/6 P16/300F)	250	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	7 000	A
	T_{vj} = 150 °C; 10 ms	5 800	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	245 000	A^2s
	T_{vj} = 150 °C; 8,3 ... 10 ms	168 000	A^2s
Q_{rr}	T_{vj} = 25 (150) °C	26 (80)	µC
I_{RM}	I_F = 600 A	200 (280)	A
E_{off}	– di_F/dt = 4000 A/µs	(20)	mJ
t_{rr}	V_R = 600 V	typ. 800	ns
I_R	T_{vj} = 25 °C; V_R = V_{RRM}	4	mA
	T_{vj} = 150 °C; V_R = V_{RRM}	30	mA
V_F	T_{vj} = 25 °C; I_F = 600 A; max.	2,5	V
$V_{(TO)}$	T_{vj} = 150 °C	1,2	V
r_T	T_{vj} = 150 °C	1,9	mΩ
R_{thjc}	DC	0,0625	°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 s/1min	3000 / 2500	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

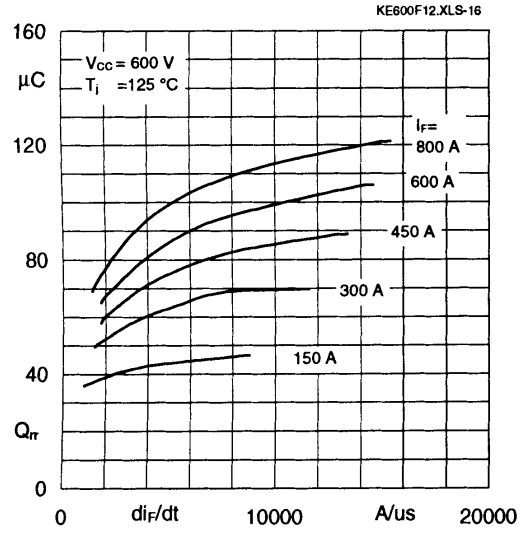

Fig. 16 Typ. recovered charge vs. current decrease

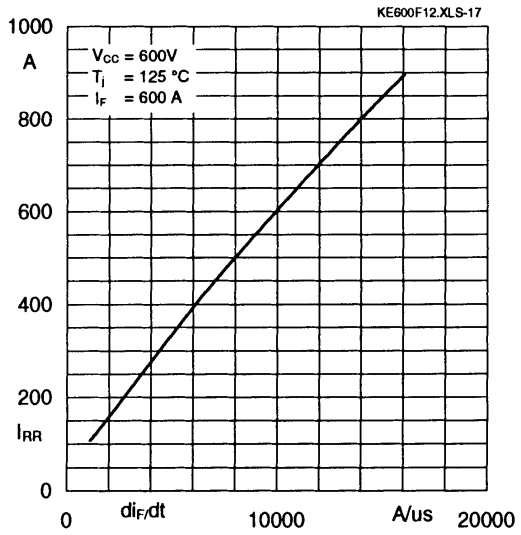

Fig. 17 Typ. peak recovery current vs. current decrease

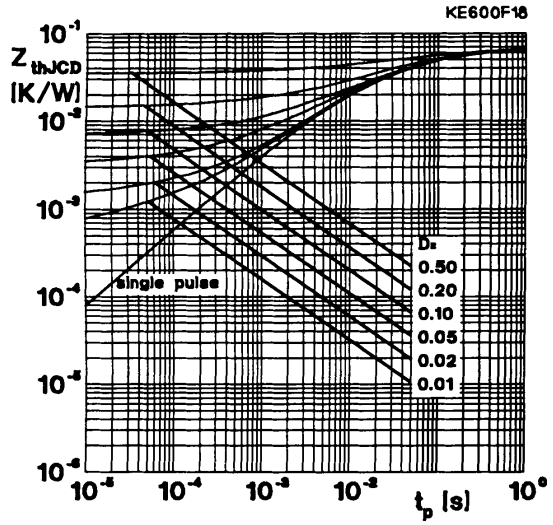

Fig. 18 Transient thermal impedance vs. time

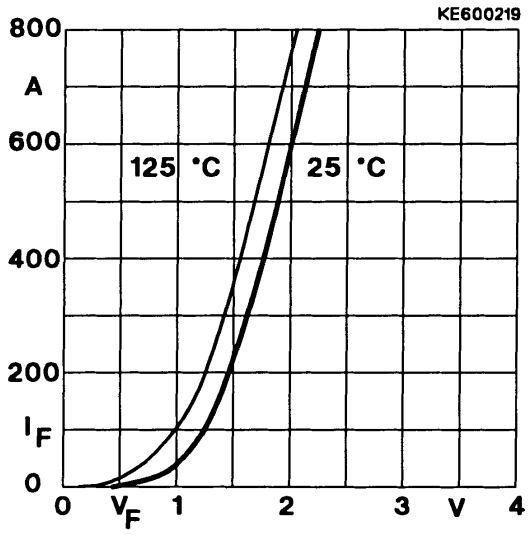

Fig. 19 Typ. forward characteristic

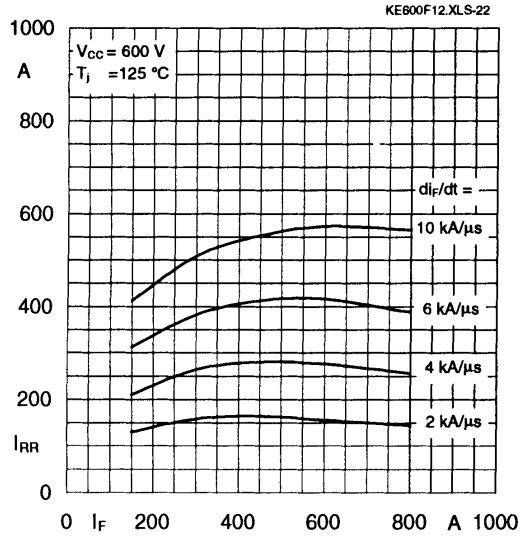

Fig. 22 Typ. peak reverse recovery current
$I_{RR} = f(I_F; di_F/dt)$

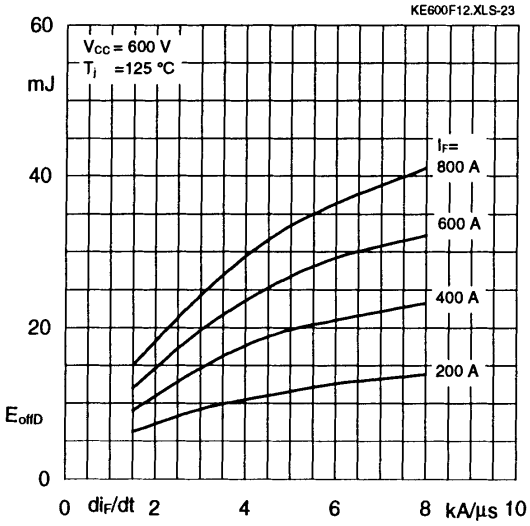

Fig. 23 Typ. turn-off energy dissipation per pulse
$(E_{offD} = f(di_F/dt; I_F)$

SKKE 330 F

SKKE 600 F

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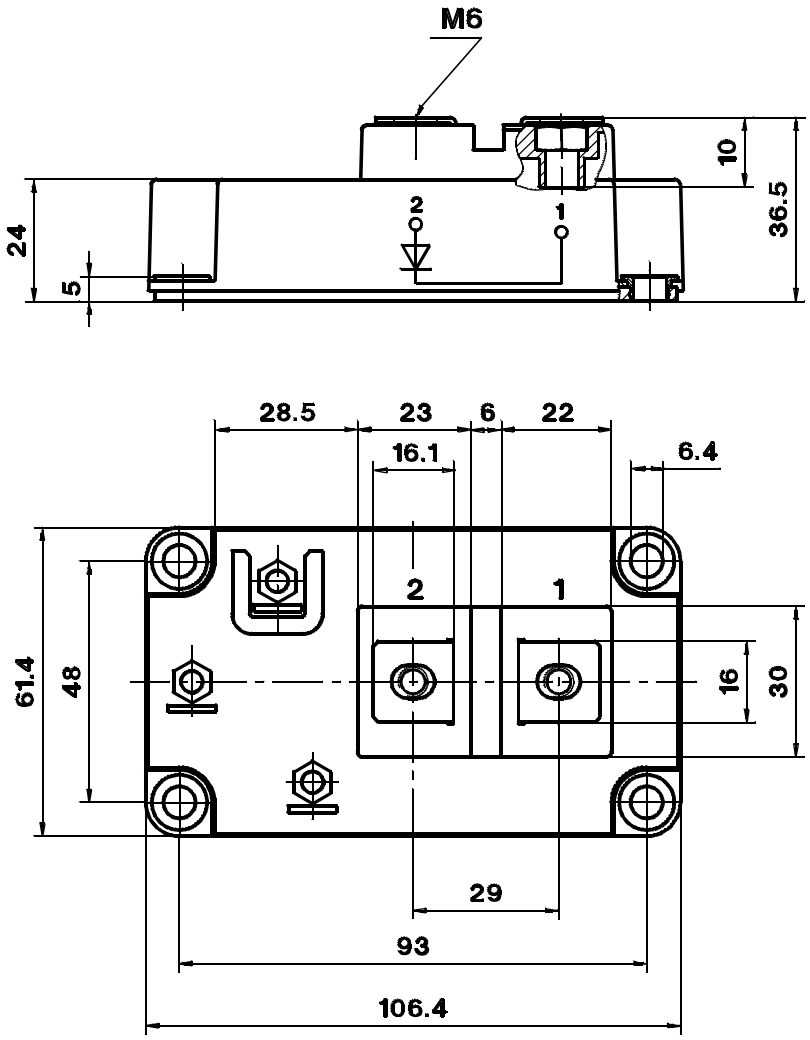

Dimensions in mm

