

# SKKE 310F



**SEMIPACK<sup>®</sup> 2**

## Fast Diode Module

### SKKE 310F

#### Preliminary Data

#### Features

- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses

#### Typical Applications\*

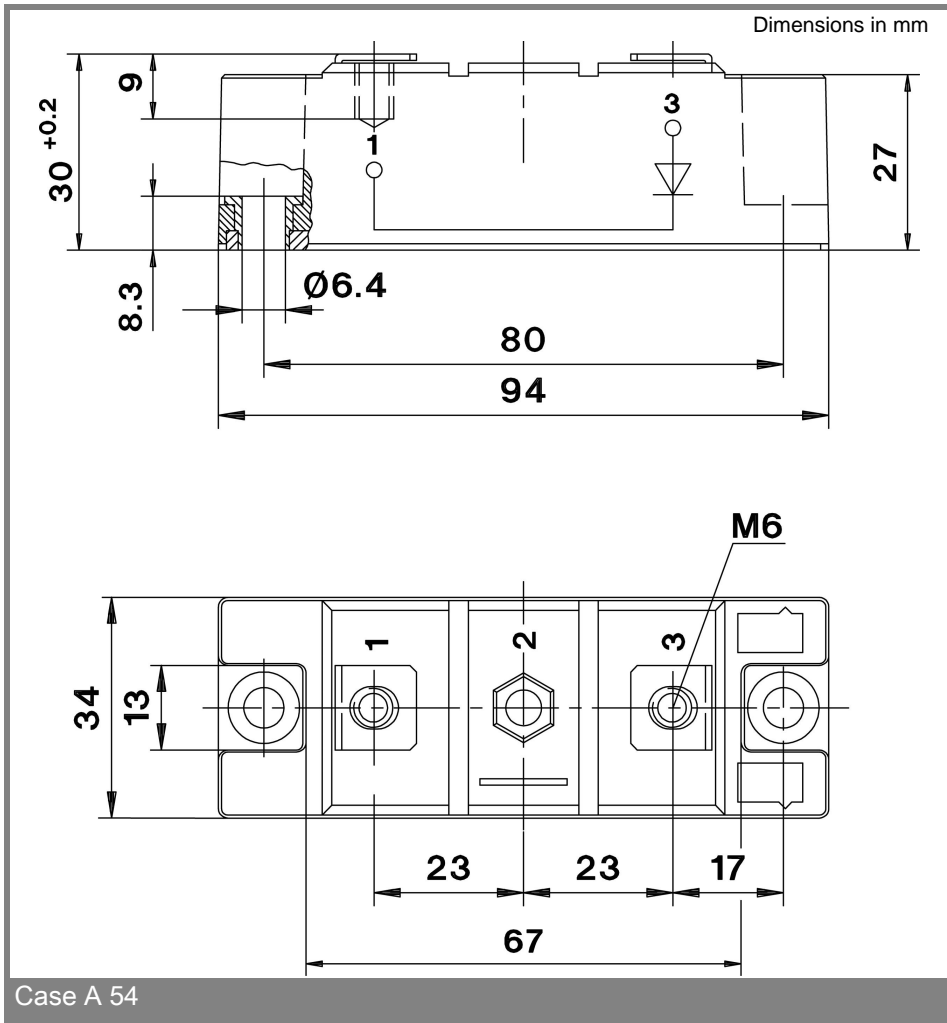
- Self-commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

$V_{RSM}$ V	$V_{RRM}$ V	$I_{FRMS} = 455$ A (maximum value for continuous operation) $I_{FAV} = 310$ A (sin. 180; 50Hz; $T_c = 84$ °C)	
1200	1200	SKKE 310F12	

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 85$ (100) °C	308 (260)	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	6500	A
	$T_{vj} = 150$ °C; 10 ms	5500	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	211000	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	151000	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 400$ A	max. 2,1	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. 2	mA
$I_{RD}$	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 60	mA
$Q_{rr}$	$T_{vj} = 125$ °C, $I_F = 400$ A,	58	μC
$I_{RM}$	-di/dt = 4000 A/μs, $V_R = 600$ V	400	A
$t_{rr}$		370	ns
$E_{rr}$		22	mJ
$R_{th(j-c)}$		0,08	K/W
$R_{th(c-s)}$		0,05	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.	3600 / 3000	V~
$M_s$	to heatsink	5 ± 15%	Nm
$M_t$	to terminals	5 ± 15%	Nm
a		5 * 9,81	m/s <sup>2</sup>
m	approx.	250	g
Case		A 54	



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\* 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.