



SEMIPACK® 2

Rectifier Diode Modules

Evaluation Sample

SKKE60S12

Target Data

Features

- Heat transfer through aluminium oxide ceramic insulated metal baseplate
- Hard soldered joints for high reliability
- SiC Schottky diode
- UL recognized, file no. E63532

Typical Applications*

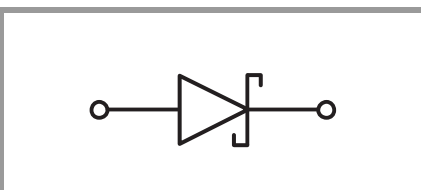
- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors
- High frequency rectifier applications

Remarks

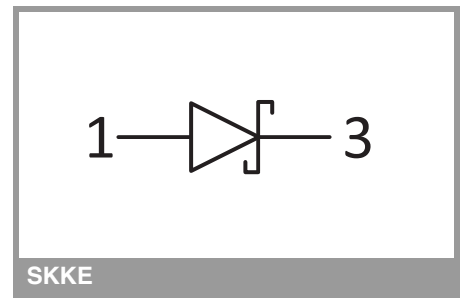
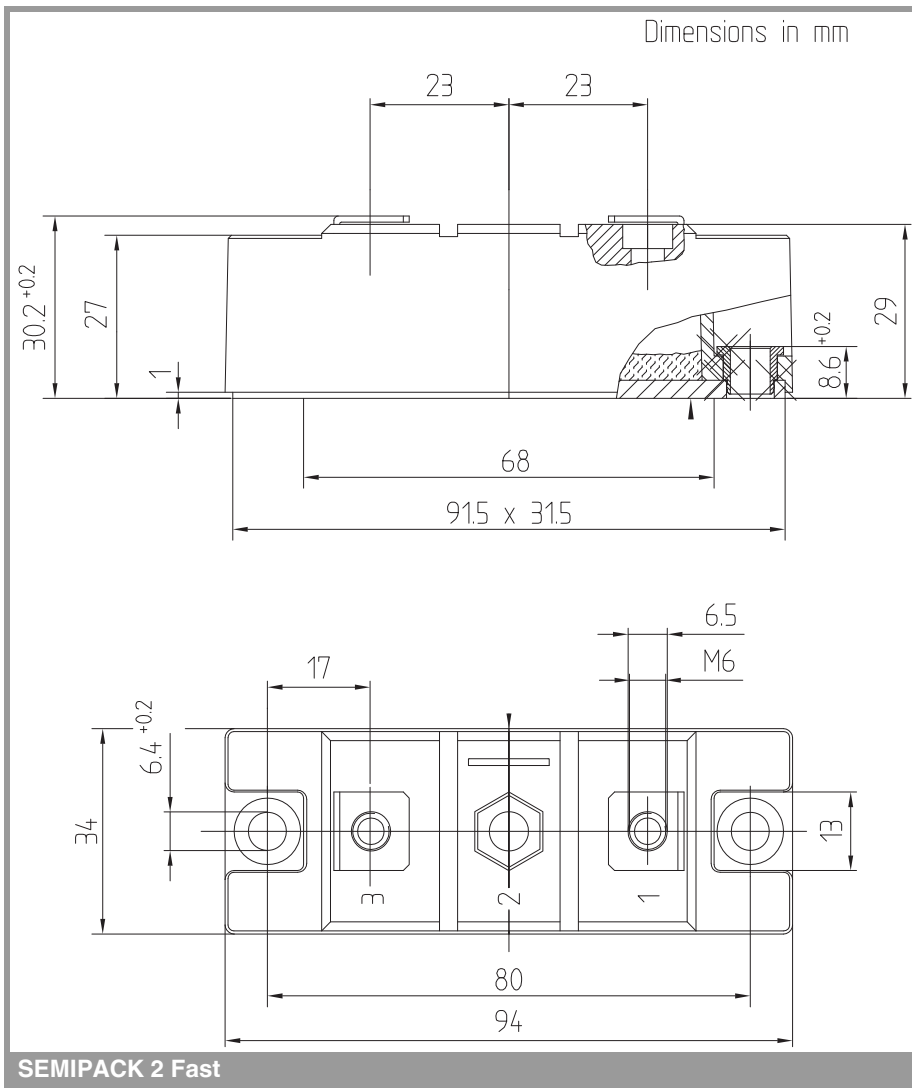
Product reliability results valid for $T_j = 150^\circ\text{C}$

Absolute Maximum Ratings				
Symbol	Conditions		Values	Unit
Diode				
I_{FAV}	sin. 180° $T_j = 175^\circ\text{C}$	$T_c = 85^\circ\text{C}$	83	A
		$T_c = 100^\circ\text{C}$	74	A
I_{FRM}			126	A
I_{FSM}	10 ms	$T_j = 25^\circ\text{C}$	t.b.d.	A
		$T_j = 150^\circ\text{C}$	945	A
i^2t	10 ms	$T_j = 25^\circ\text{C}$		A^2s
		$T_j = 150^\circ\text{C}$	4465	A^2s
V_{RSM}			1200	V
V_{RRM}			1200	V
T_j			-40 ... 175	$^\circ\text{C}$
Module				
T_{stg}			-40 ... 125	$^\circ\text{C}$
V_{isol}	a.c.; 50 Hz; r.m.s.	1 min	3000	V
		1 s	3600	V

Characteristics						
Symbol	Conditions		min.	typ.	max.	Unit
Diode						
V_F	$I_F = 60\text{ A}$	$T_j = 25^\circ\text{C}$		1.40	1.60	V
		$T_j = 150^\circ\text{C}$		1.80	2.10	V
V_{F0}	chipelevel	$T_j = 25^\circ\text{C}$		0.95	1.05	V
		$T_j = 150^\circ\text{C}$		0.80	0.90	V
r_F	chipelevel	$T_j = 25^\circ\text{C}$		7.5	9.2	$\text{m}\Omega$
		$T_j = 150^\circ\text{C}$		17	20	$\text{m}\Omega$
I_R	$V_R = V_{RRM}, T_j = 25^\circ\text{C}$				1	mA
C_j	$f = 1\text{ MHz}, V_R = 800\text{ V}, T_j = 25^\circ\text{C}$			0.255		nF
Q_C	$V_R = 800\text{ V}, di/dt = 500\text{ A}/\mu\text{s}, T_j = 25^\circ\text{C}$			0.198		μC
$R_{th(j-c)}$	module				0.4	K/W
Module						
$R_{th(c-s)}$	module			0.12		K/W
R_{CC+EE}						$\text{m}\Omega$
						$\text{m}\Omega$
M_s	to heatsink M5		4.25		5.75	Nm
M_t	to terminals M6		4.25		5.75	Nm
a					5 * 9,81	m/s^2
w				165		g



SKKE



This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, chapter IX.

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