



SEMIPACK® 2

Rectifier Diode Modules

SKKD 250/16

Features*

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

Typical Applications

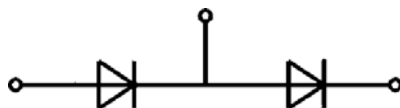
- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Absolute Maximum Ratings

Symbol	Conditions		Values	Unit
Rectifier Diode				
I _{FAV}	sin. 180°	T _c = 85 °C	255	A
	T _{j max} = 135 °C	T _c = 100 °C	199	A
I _{FSM}	10 ms	T _j = 25 °C	6600	A
		T _j = 135 °C	6000	A
i ² t	10 ms	T _j = 25 °C	217800	A ² s
		T _j = 135 °C	180000	A ² s
V _{RSM}	T _j = 25 °C		1700	V
V _{RRM}	T _j = 25 °C		1600	V
T _j			-40 ... 135	°C
Module				
T _{stg}			-40 ... 125	°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	$T_j = 25^\circ\text{C}, I_F = 750\text{ A}$			1.55	V
V_{F0}	$T_j = 135^\circ\text{C}$			0.77	V
r_F	$T_j = 135^\circ\text{C}$			1.00	mΩ
I_R	$T_j = 135^\circ\text{C}, V_{RRM}$			9	mA
$R_{th(j-c)}$	cont.			0.13	K/W
				0.065	K/W
$R_{th(j-c)}$	$\sin. 180^\circ$			0.14	K/W
				0.07	K/W
Module					
$R_{th(c-s)}$	chip		0.05		K/W
	module		0.03		K/W
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



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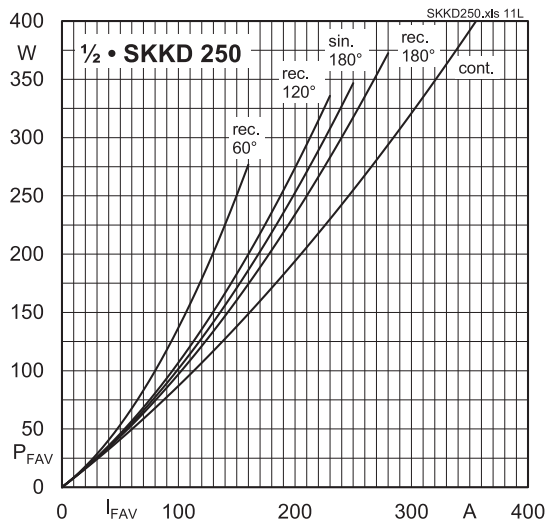


Fig. 11L: Power dissipation per diode vs. forward current

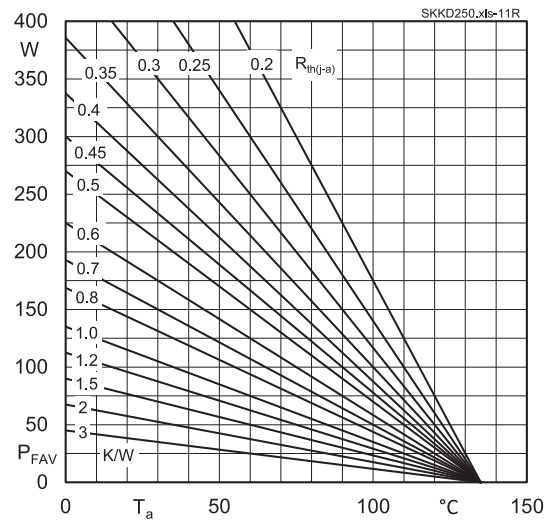


Fig. 11R: Power dissipation per diode vs. ambient temperature

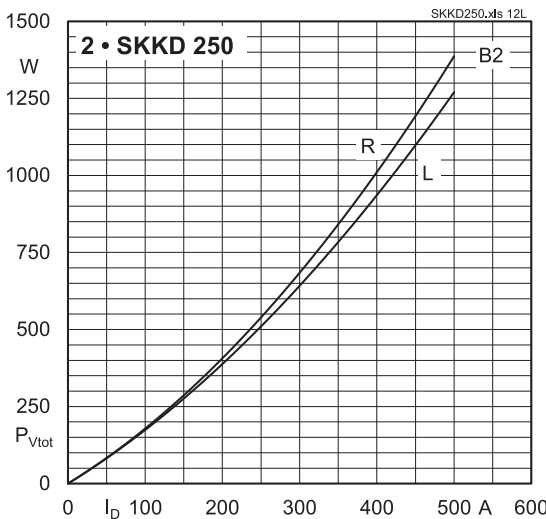


Fig. 12L: Power dissipation of two modules vs. direct current

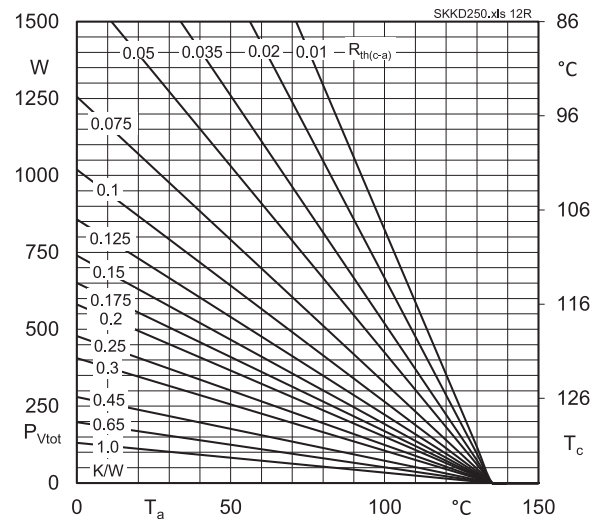


Fig. 12R: Power dissipation of two modules vs. case temperature

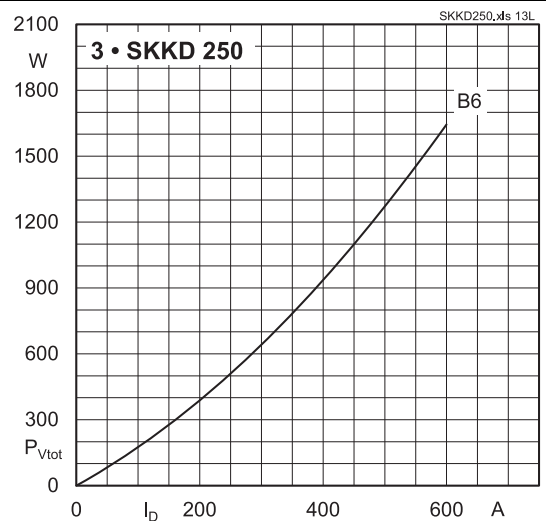


Fig. 13L: Power dissipation of three modules vs. direct current

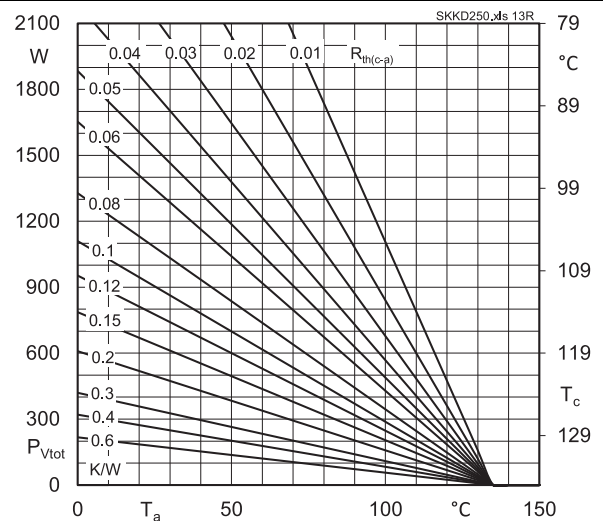


Fig. 13R: Power dissipation of three modules vs. case temperature

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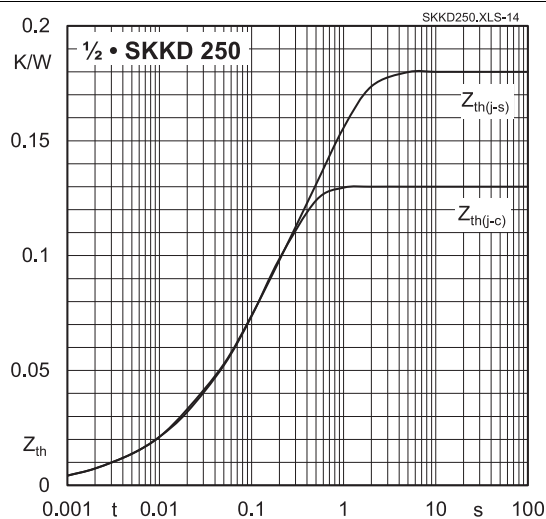


Fig. 14: Transient thermal impedance vs. time

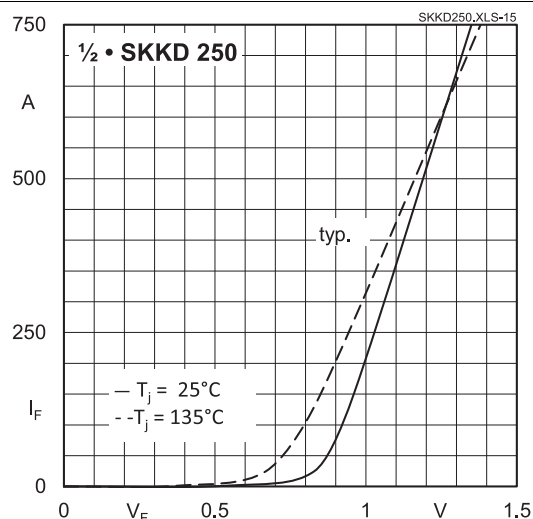


Fig. 15: Forward characteristics

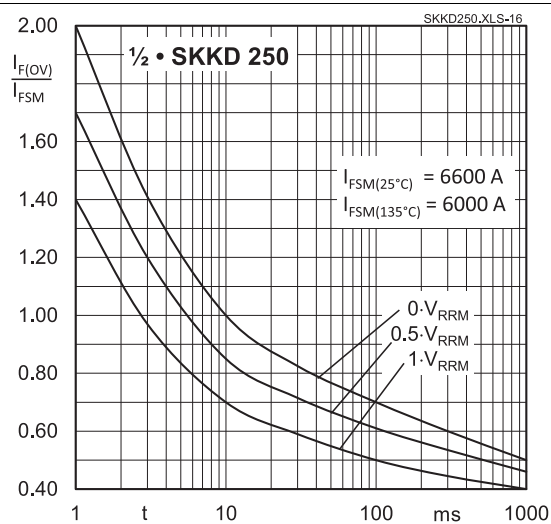
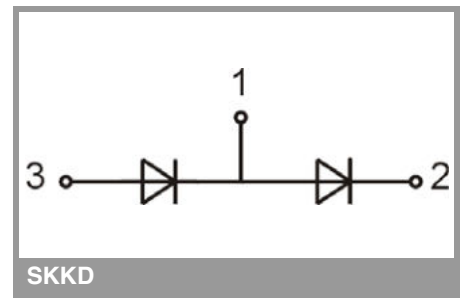
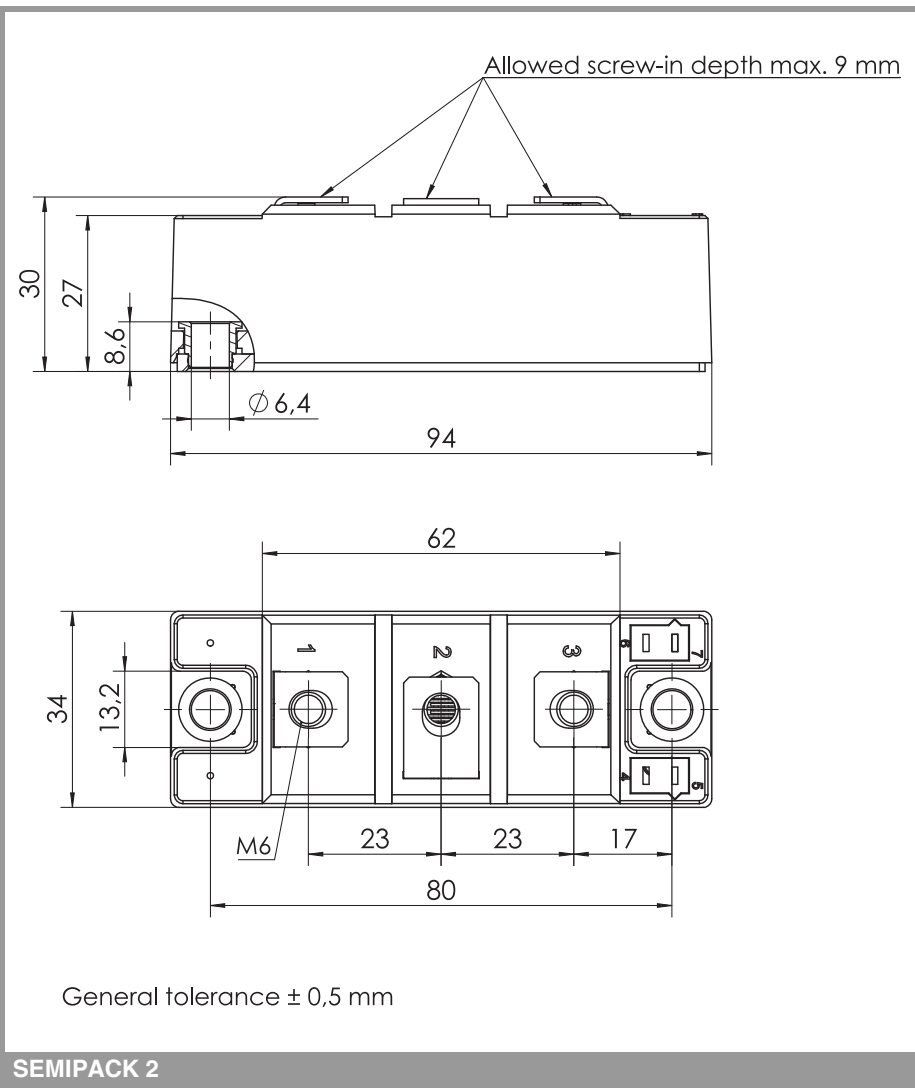


Fig. 16: Surge overload current vs. time



This is an electrostatic discharge sensitive device (ESDS) due to international standard IEC 61340.

*IMPORTANT INFORMATION AND WARNINGS

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