



SEMIPACK® 1

Rectifier Diode Modules

SKKD 95/16

Features*

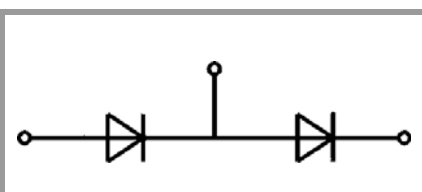
- Heat transfer through aluminium oxide ceramic insulated metal baseplate
- UL recognized, file no. E63532

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
Recitifier Diode				
I _{FAV}	sin. 180°	T _c = 85 °C	98	A
	T _{j max} = 130 °C	T _c = 100 °C	74	A
I _{FSM}	t _p = 10 ms	T _j = 25 °C	1850	A
		T _j = 130 °C	1600	A
i ² t	t _p = 10 ms	T _j = 25 °C	17100	A ² s
		T _j = 130 °C	12800	A ² s
V _{RSM}	T _j = 25 °C		1700	V
V _{RRM}	T _j = 25 °C		1600	V
T _j			-40 ... 130	°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 °C, I _F = 300 A				1.60	V
V _{F0}	T _j = 130 °C				0.85	V
r _F	T _j = 130 °C				2.80	mΩ
I _R	T _j = 130 °C, V _{RRM}				2	mA
R _{th(j-c)}	cont.	per chip			0.23	K/W
		per module			0.115	K/W
R _{th(j-c)}	sin. 180°	per chip			0.30	K/W
		per module			0.15	K/W
Module						
R _{th(c-s)}	per chip (λ _{grease} = 0.81 W/(m*K))			0.09		K/W
	per module (λ _{grease} = 0.81 W/(m*K))			0.05		K/W
M _s	to heatsink M5		4.25		5.75	Nm
M _t	to terminals M5		2.55		3.45	Nm
a					5 * 9.81	m/s ²
w				75		g



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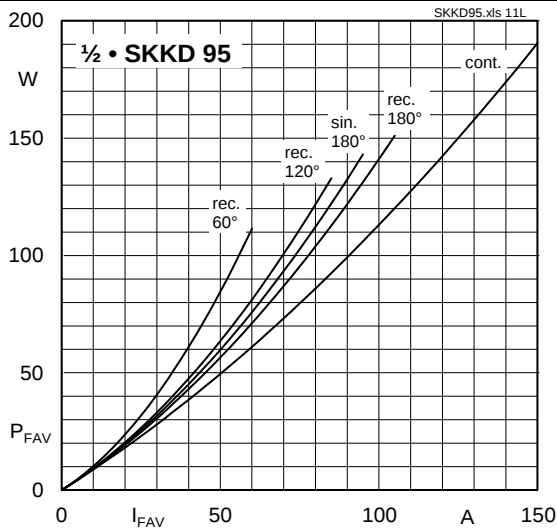


Fig. 11L: Power dissipation per diode vs. forward current

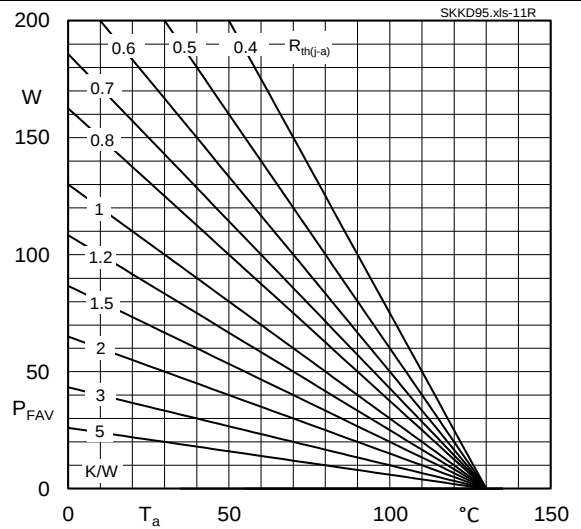


Fig. 11R: Power dissipation per diode vs. ambient temperature

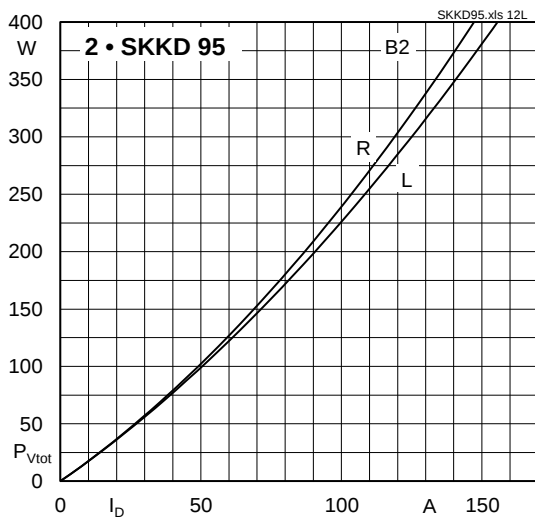


Fig. 12L: Power dissipation of two modules vs. direct current

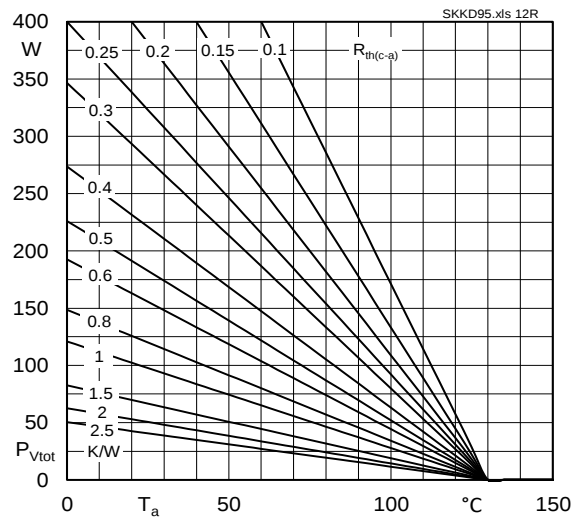


Fig. 12R: Power dissipation of two modules vs. ambient temperature

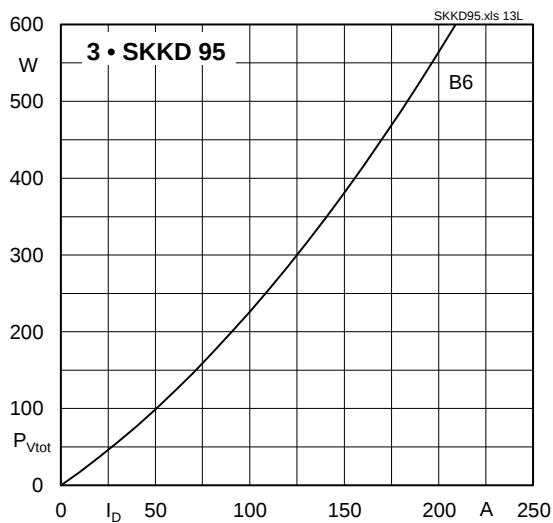


Fig. 13L: Power dissipation of three modules vs. direct current

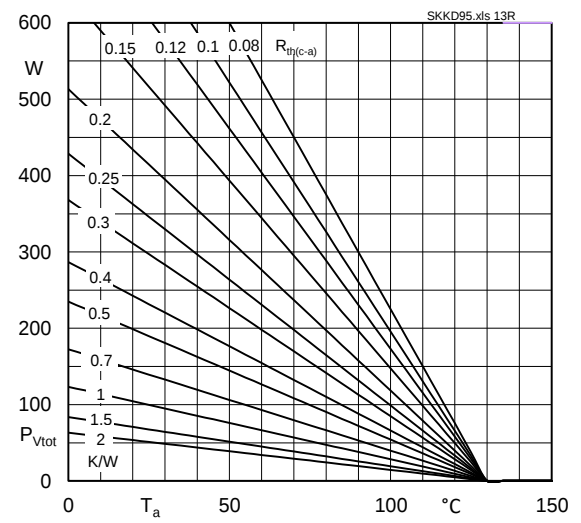


Fig. 13R: Power dissipation of three modules vs. ambient temperature

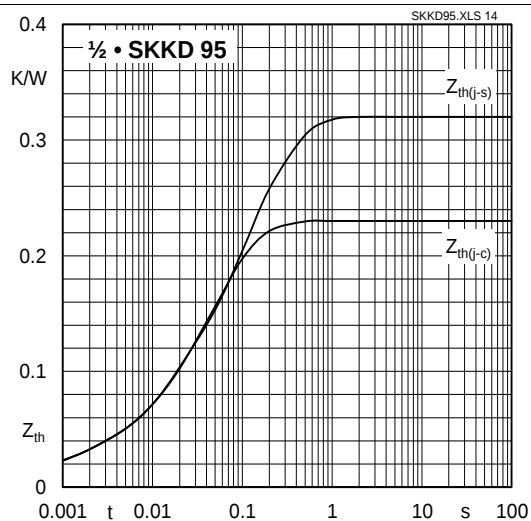


Fig. 14: Transient thermal impedance vs. time

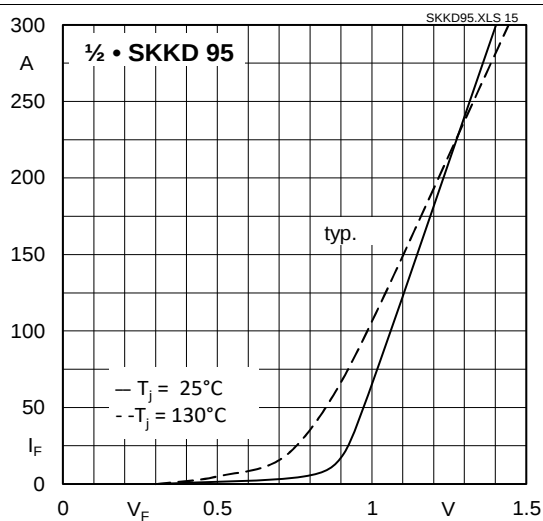


Fig. 15: Forward characteristics

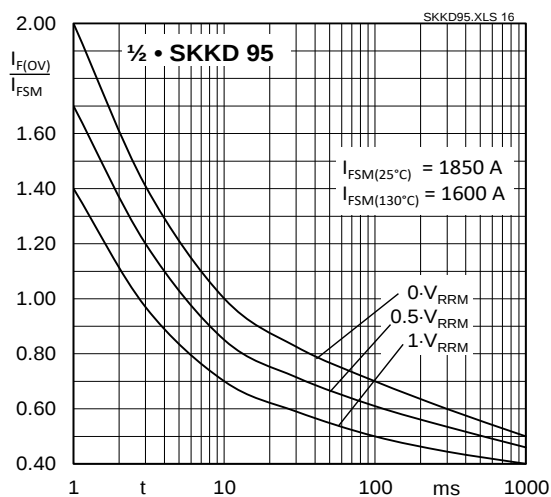
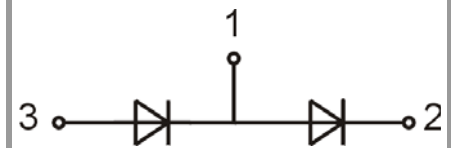
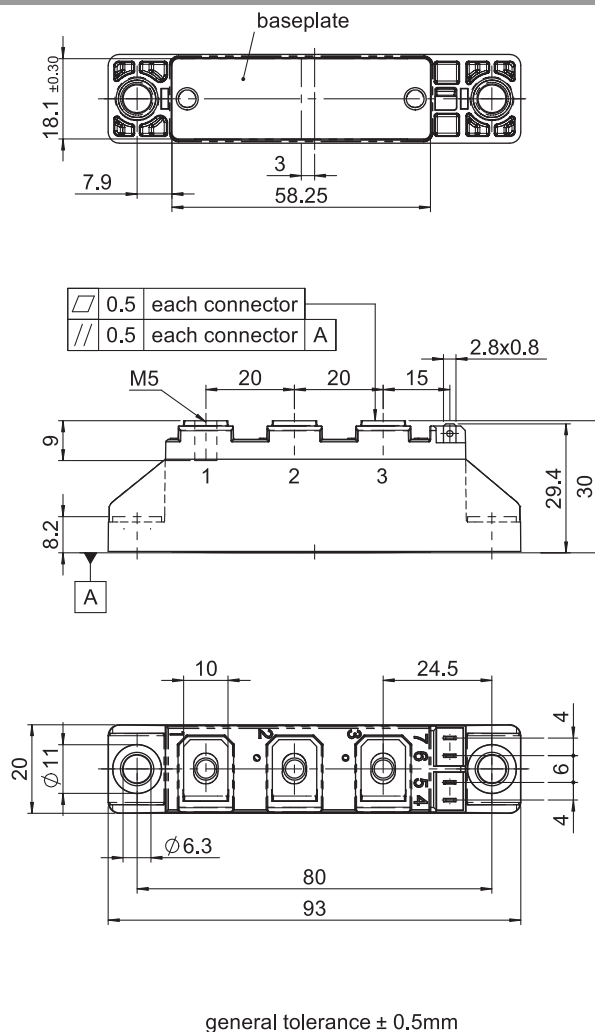


Fig. 16: Surge overload current vs. time



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IMPORTANT INFORMATION AND WARNINGS

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

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