



Rectifier Diode Modules

SKKD 101/16

Features*

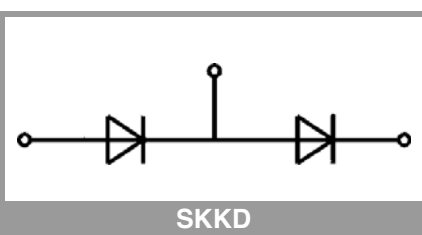
- Heat transfer through aluminium oxide ceramic insulated metal baseplate
- UL recognized, file no. E63532

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	134	A
	T _{j max} = 130 °C	T _c = 100 °C	101	A
I _{FSM}	10 ms	T _j = 25 °C	2500	A
		T _j = 130 °C	2000	A
i ² t	10 ms	T _j = 25 °C	31250	A ² s
		T _j = 130 °C	20000	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			1.45	1.60	V
V _{F0}	T _j = 130 °C			0.75	0.87	V
r _F	T _j = 130 °C			2.20	2.45	mΩ
I _R	T _j = 130 °C, V _{RRM}				3	mA
R _{th(j-c)}	cont.	per chip			0.15	K/W
		per module			0.075	K/W
R _{th(j-c)}	sin. 180°	per chip			0.2	K/W
		per module			0.1	K/W
Module						
R _{th(c-s)}	chip			0.09		K/W
	module			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



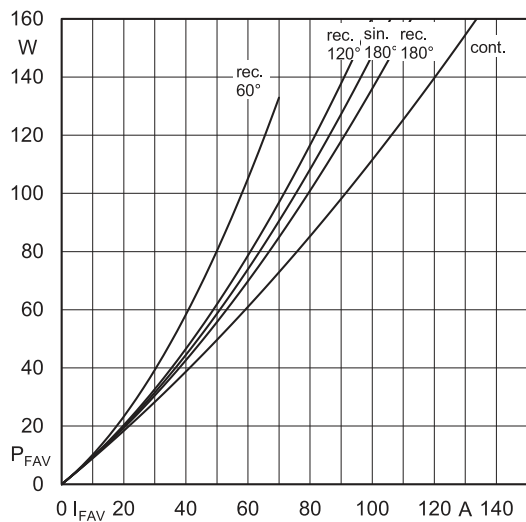


Fig. 11L: Power dissipation per diode vs. forward current

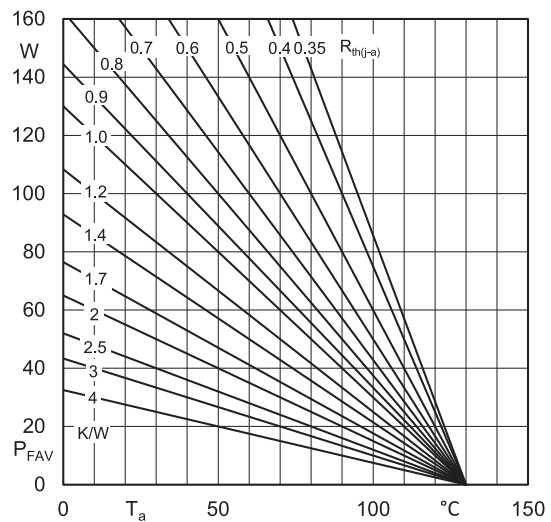


Fig. 11R: Power dissipation per diode vs. ambient temperature

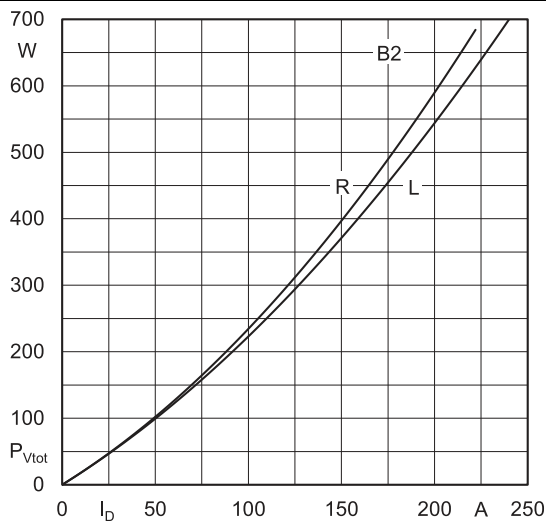


Fig. 12L: Power dissipation of two modules vs. direct current

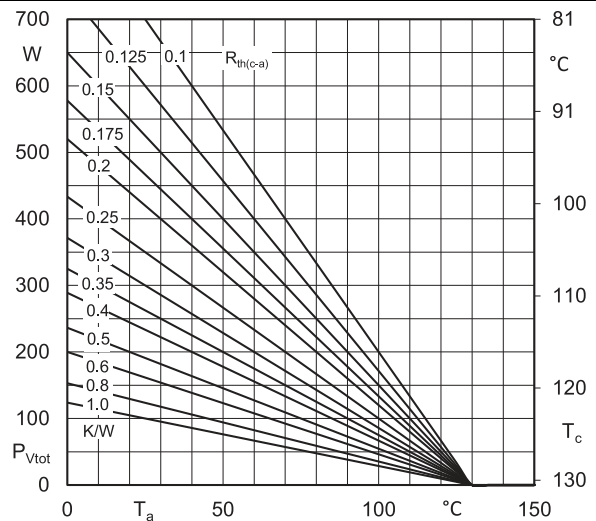


Fig. 12R: Power dissipation of two modules vs. case temperature

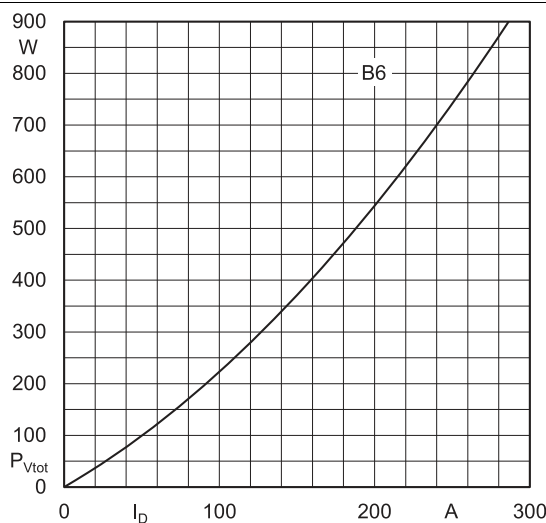


Fig. 13L: Power dissipation of three modules vs. direct current

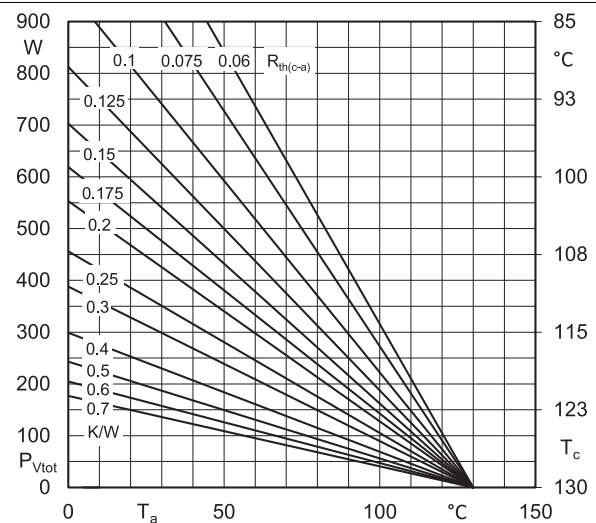


Fig. 13R: Power dissipation of three modules vs. case temperature

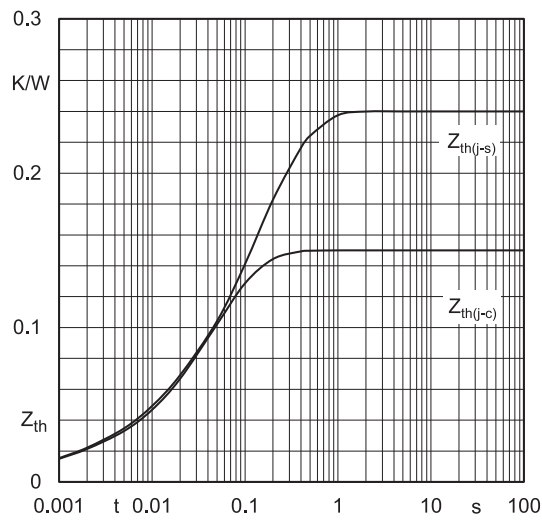


Fig. 14: Transient thermal impedance vs. time

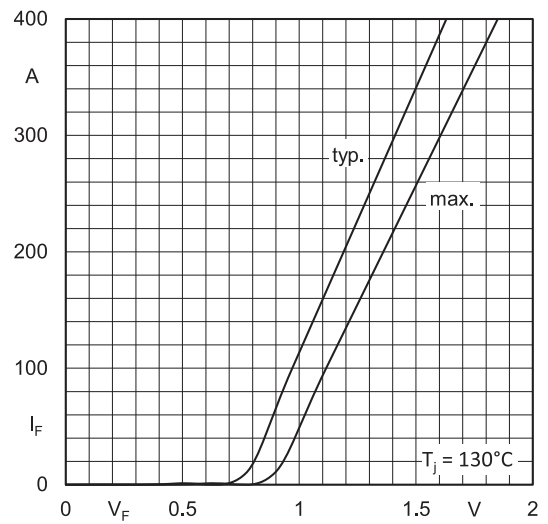


Fig. 15: Forward characteristics

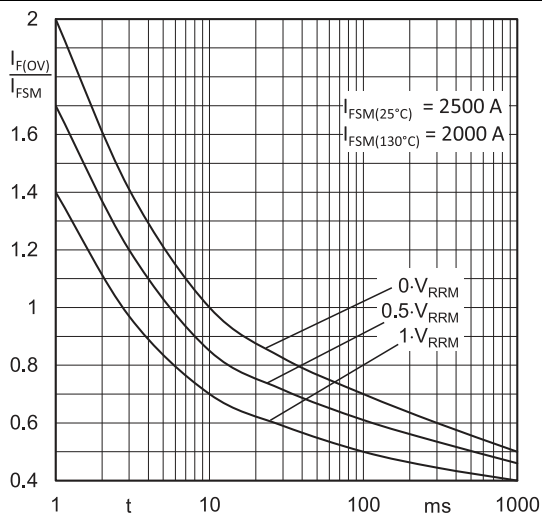
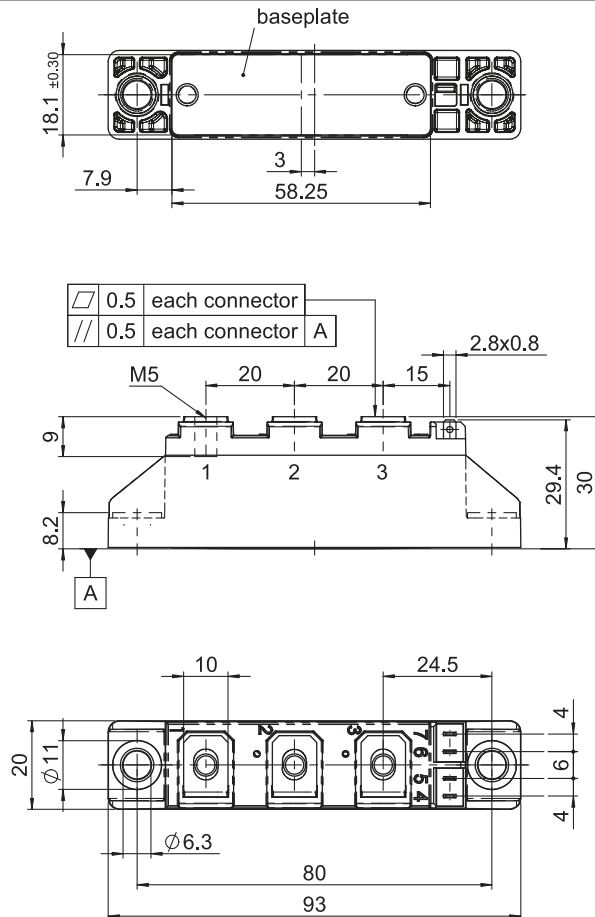
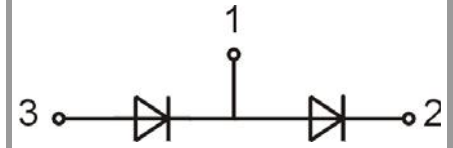


Fig. 16: Surge overload current vs. time



general tolerance $\pm 0.5\text{mm}$

SEMI PACK 1



SKKD

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

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