



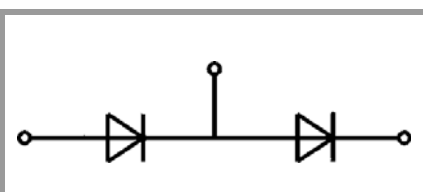
SEMIPACK® 3

Rectifier Diode Modules

SKKD 353/16

Features*

- Industrial standard package
- Electrically insulated base plate
- Heat transfer through aluminum oxide ceramic insulated metal base plate
- Chip soldered on direct copper bonded Al₂O₃ ceramic
- UL recognition, file no. E63532



SKKD

Absolute Maximum Ratings				
Symbol	Conditions		Values	Unit
Rectifier Diode				
I _{FAV}	sin. 180° T _{j max} = 130 °C	T _c = 85 °C	350	A
		T _c = 100 °C	260	A
I _{FRMS}	continuous operation		580	A
I _{FSM}	10 ms	T _j = 25 °C	10500	A
		T _j = 130 °C	9500	A
i ² t	10 ms	T _j = 25 °C	551250	A ² s
		T _j = 130 °C	451250	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 = 750 A				1.38	V
V _{F0}	T _j = 130 °C				0.84	V
r _F	T _j = 130 °C				0.67	mΩ
I _R	T _j = 130 °C, V _{RD} = V _{RRM}				15	mA
R _{th(j-c)}	cont.	per chip			0.09	K/W
		per module			0.045	K/W
R _{th(j-c)}	sin. 180°	per chip			0.092	K/W
		per module			0.046	K/W
Module						
R _{th(c-s)}	chip			0.08		K/W
	module			0.04		K/W
M _s	to heatsink M5		4.25		5.75	Nm
M _t	to terminals M8		7.65		10.35	Nm
a					5 * 9.81	m/s ²
w				410		g

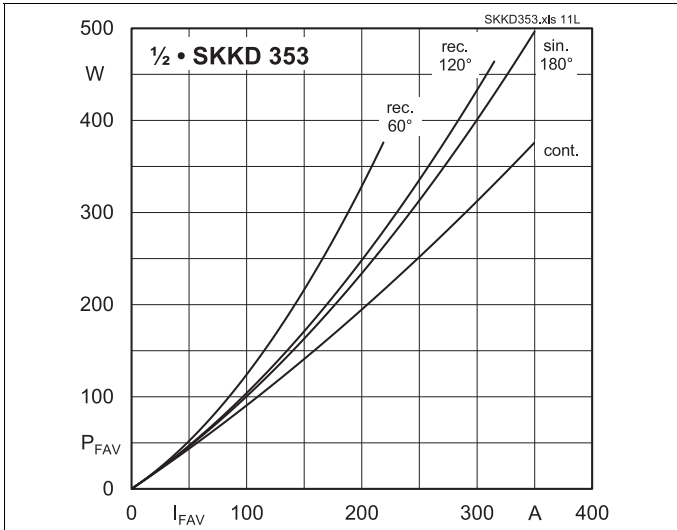


Fig. 11L: Power dissipation per diode vs. forward current

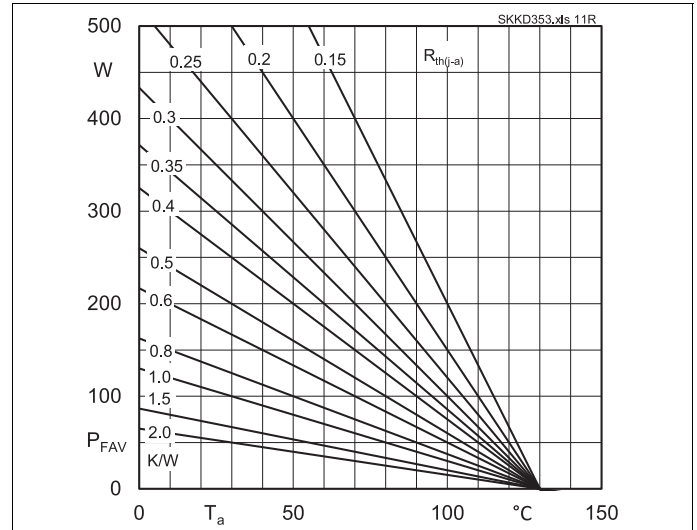


Fig. 11R: Power dissipation per diode vs. ambient temperature

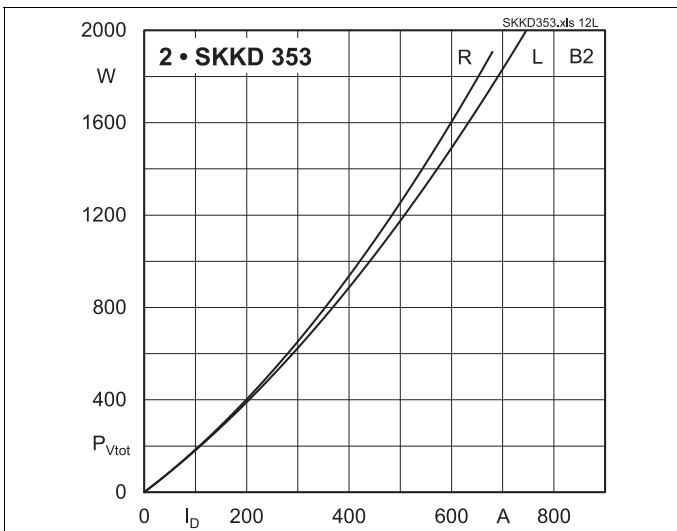


Fig. 12L: Power dissipation of two modules vs. direct current

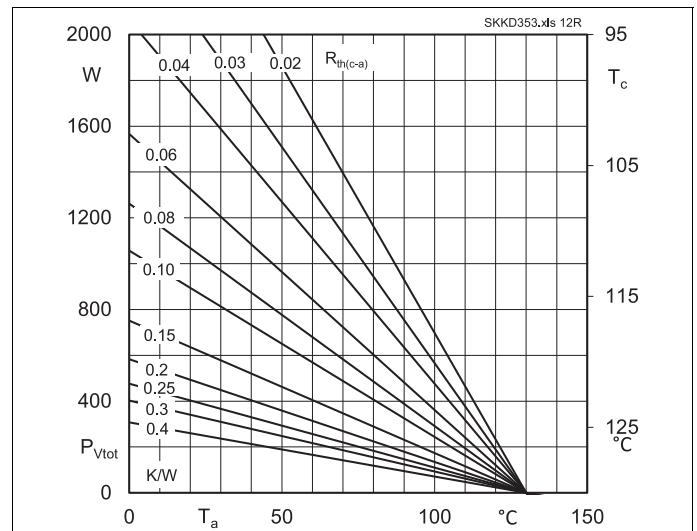


Fig. 12R: Power dissipation of two modules vs. case temperature

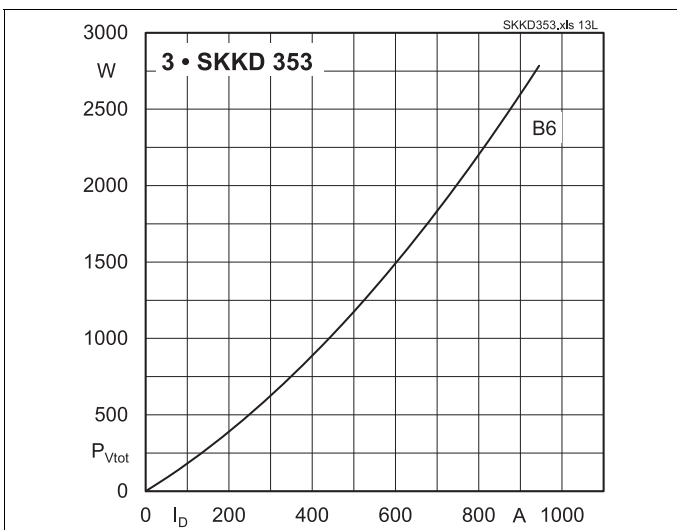


Fig. 13L: Power dissipation of three modules vs. direct current

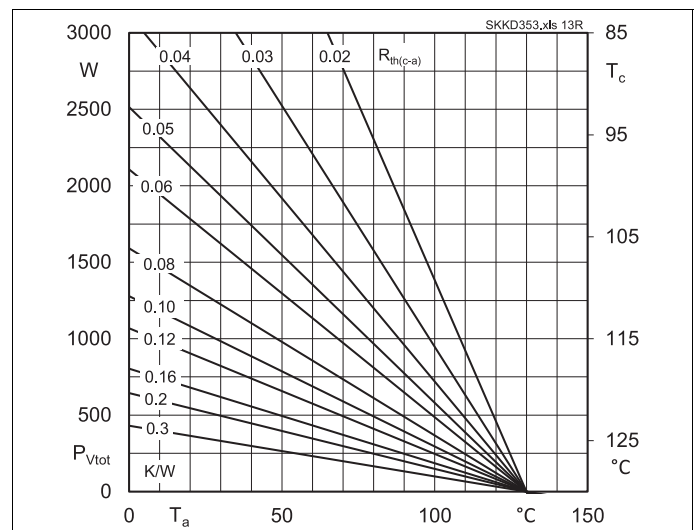


Fig. 13R: Power dissipation of three modules vs. case temperature

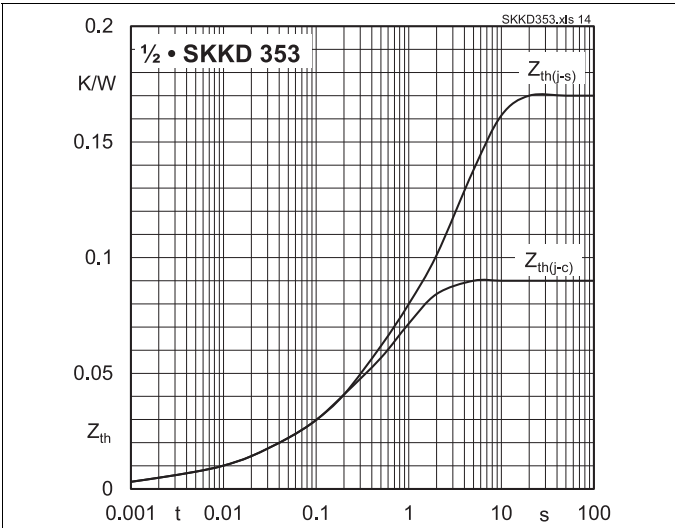


Fig. 14: Transient thermal impedance vs. time

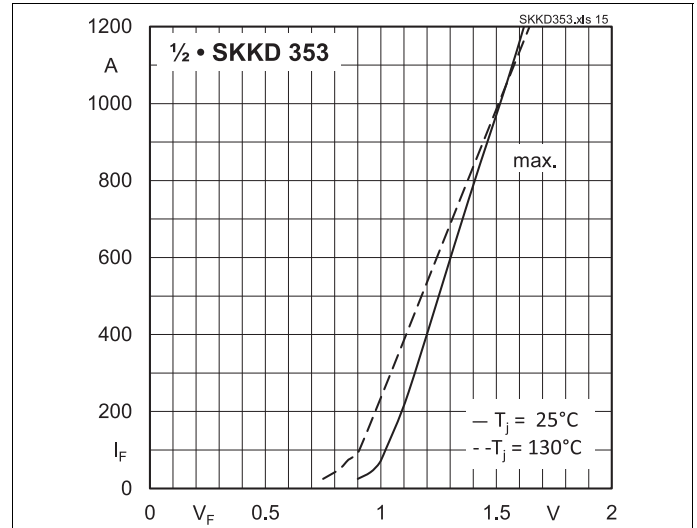


Fig. 15: Forward characteristics

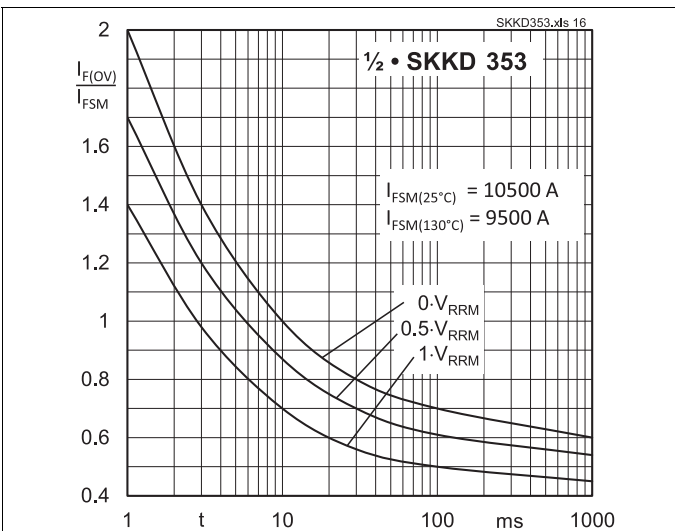
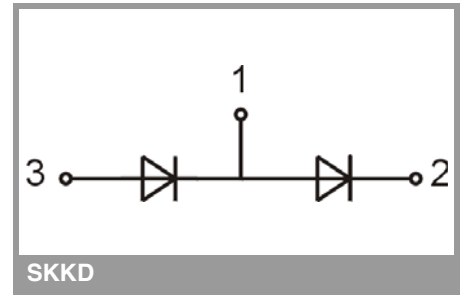
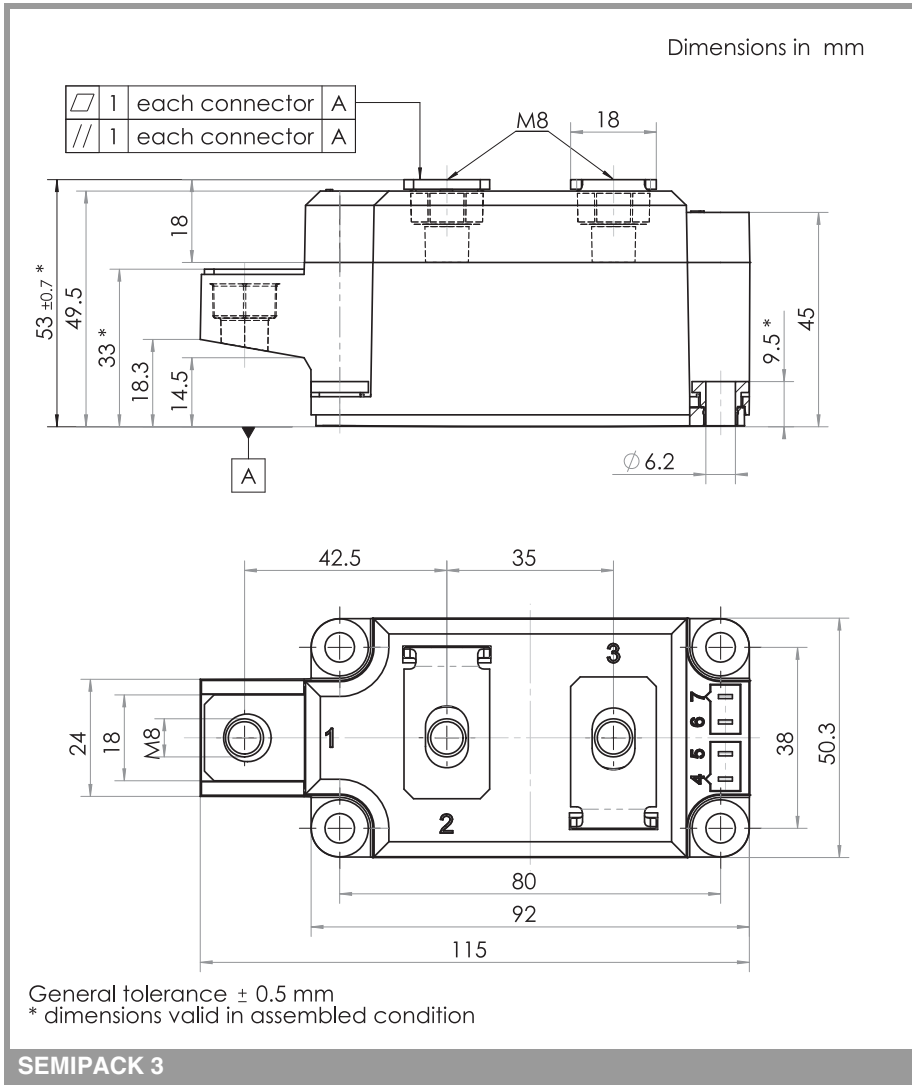


Fig. 16: Surge overload current vs. time



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

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