



SEMiX® 13

SEMiX291D16s

Features

- Terminal height 17 mm
- Chips soldered directly to isolated substrate
- UL recognised file no. E63532

Typical Applications*

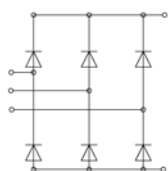
- Input Bridge Rectifier for AC/DC motor control
- Power supply

Absolute Maximum Ratings

Symbol	Conditions		Values	Unit
Recitifier Diode				
I _D	T _j = 150 °C	T _c = 85 °C	232	A
	sinus 180°	T _c = 100 °C	196	A
I _{FSM}	10 ms	T _j = 25 °C	1600	A
		T _j = 130 °C	1380	A
i ² t	10 ms	T _j = 25 °C	12800	A ² s
		T _j = 130 °C	9522	A ² s
V _{RSM}			1700	V
V _{RRM}			1600	V
T _j			-40 ... 150	°C
Module				
T _{stg}			-40 ... 125	°C
V _{isol}	AC sinus 50Hz	1 min	4000	V
		1 s	4800	V

Characteristics

Symbol	Conditions		min.	typ.	max.	Unit
Diode						
V _F	T _J = 25 °C, I _F = 231 A				2.06	V
V _(TO)	T _J = 130 °C				0.83	V
r _T	T _J = 130 °C				4.6	mΩ
I _{RD}	T _J = 130 °C, V _{RD} = V _{RRM}				1.1	mA
R _{th(j-c)}	sin. 180	per diode			0.45	K/W
						K/W
Module						
R _{th(c-s)}	per chip					K/W
	per module			0.04		K/W
M _s	to heat sink (M5)		3		5	Nm
M _t	to terminals (M6)		2.5		5	Nm
a					5 * 9,81	m/s ²
w					350	g



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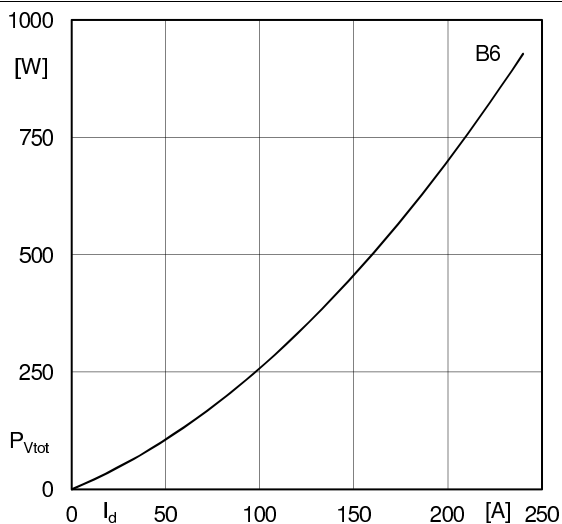


Fig. 4L: Power dissipation per module vs. direct current

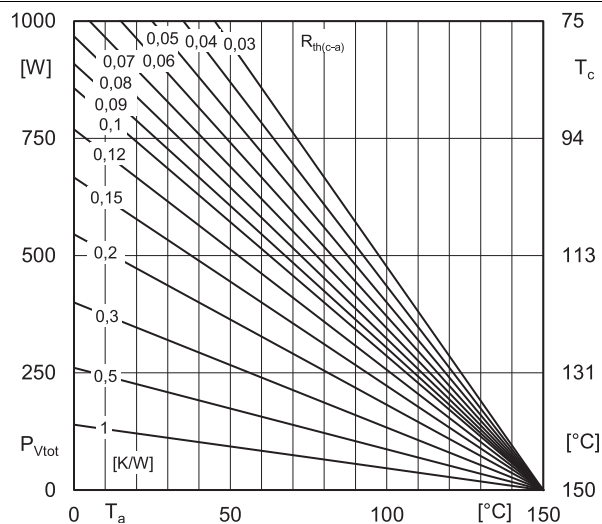


Fig. 4R: Power dissipation per module vs. case temperature

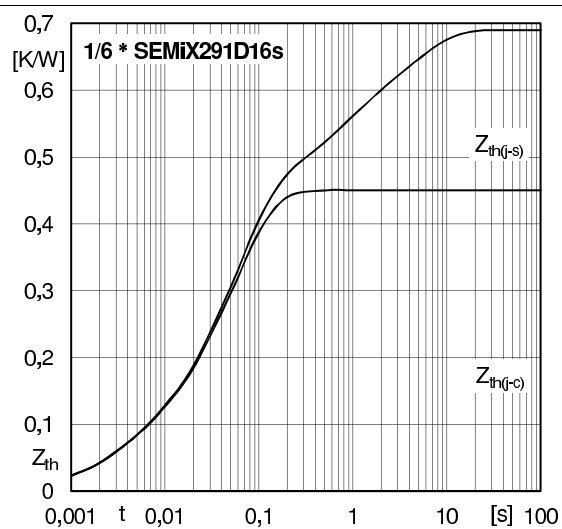


Fig. 6: Transient thermal impedance vs. time

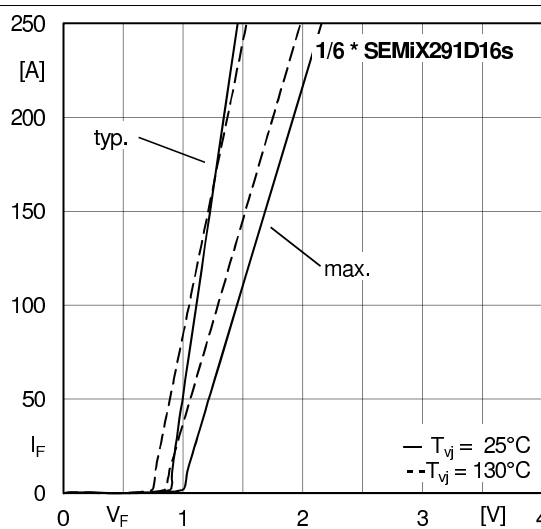


Fig. 7: On-state characteristics

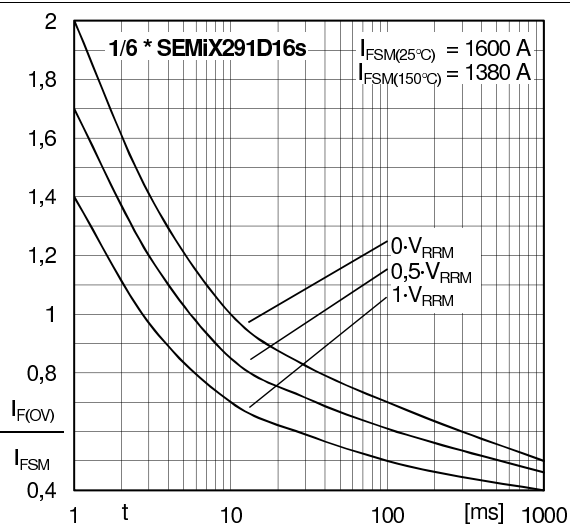
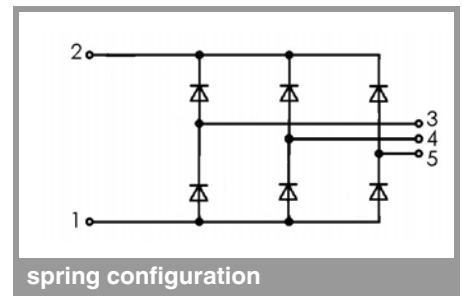
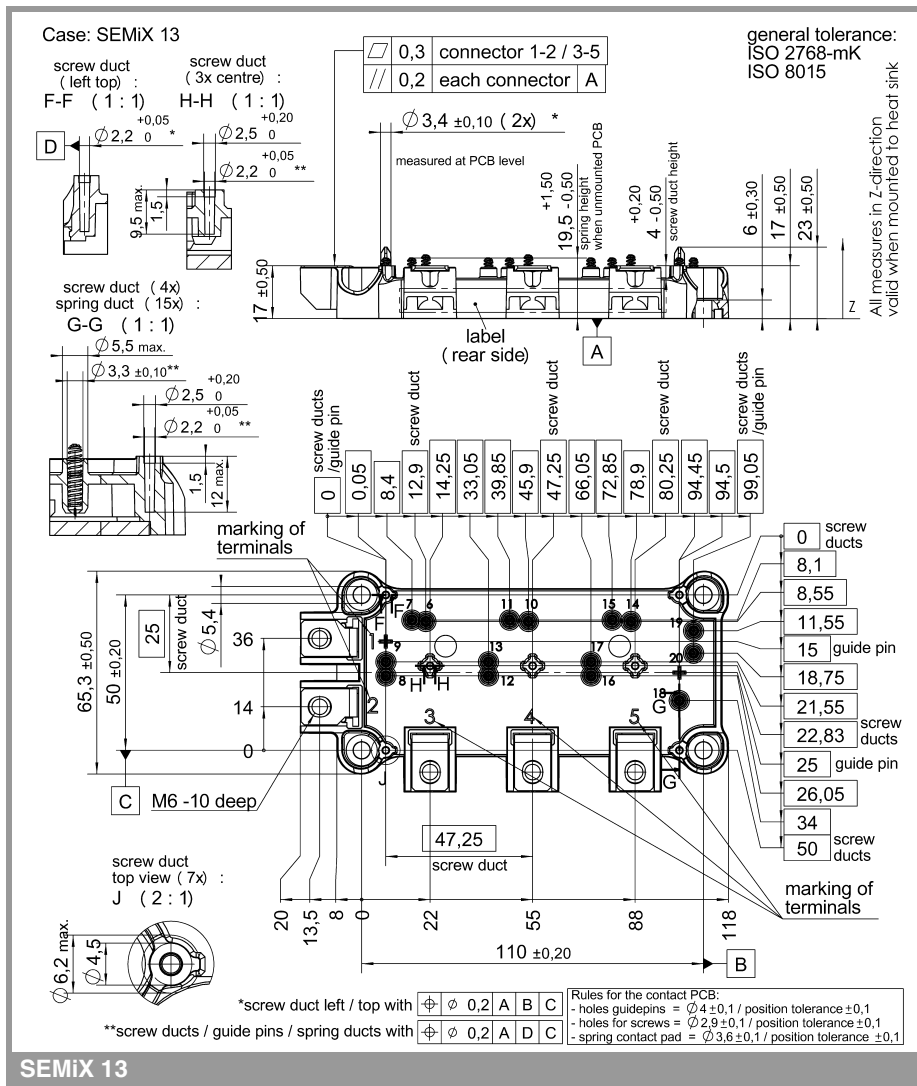


Fig. 8: Surge overload current vs. time



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

*IMPORTANT INFORMATION AND WARNINGS

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