



SEMIX291D16s

Features

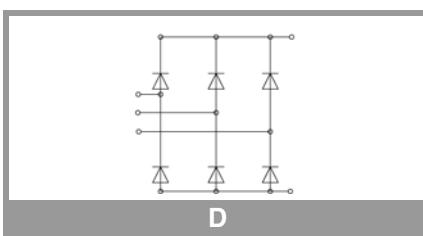
- Terminal height 17 mm
- Chips soldered directly to isolated substrate
- UL recognised file no. E63532

Typical Applications*

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

Absolute Maximum Ratings			Values	Unit
Symbol	Conditions			
Rectifier Diode				
I_D	$T_j = 150 \text{ }^\circ\text{C}$ sinus 180°	$T_c = 85 \text{ }^\circ\text{C}$	232	A
		$T_c = 100 \text{ }^\circ\text{C}$	196	A
I_{F5M}	10 ms	$T_j = 25 \text{ }^\circ\text{C}$	1600	A
		$T_j = 130 \text{ }^\circ\text{C}$	1380	A
i^2t	10 ms	$T_j = 25 \text{ }^\circ\text{C}$	12800	A^2s
		$T_j = 130 \text{ }^\circ\text{C}$	9522	A^2s
V_{RSM}			1700	V
V_{RRM}			1600	V
T_j			-40 ... 150	$^\circ\text{C}$
Module				
T_{stg}			-40 ... 125	$^\circ\text{C}$
V_{isol}	AC sinus 50Hz	1 min	4000	V
		1 s	4800	V

Characteristics				
Symbol	Conditions	min.	typ.	max.
Diode				
V_F	$T_j = 25 \text{ }^\circ\text{C}$, $I_F = 231 \text{ A}$		2.06	V
$V_{(TO)}$	$T_j = 130 \text{ }^\circ\text{C}$		0.83	V
r_T	$T_j = 130 \text{ }^\circ\text{C}$		4.6	$\text{m}\Omega$
I_{RD}	$T_j = 130 \text{ }^\circ\text{C}$, $V_{RD} = V_{RRM}$		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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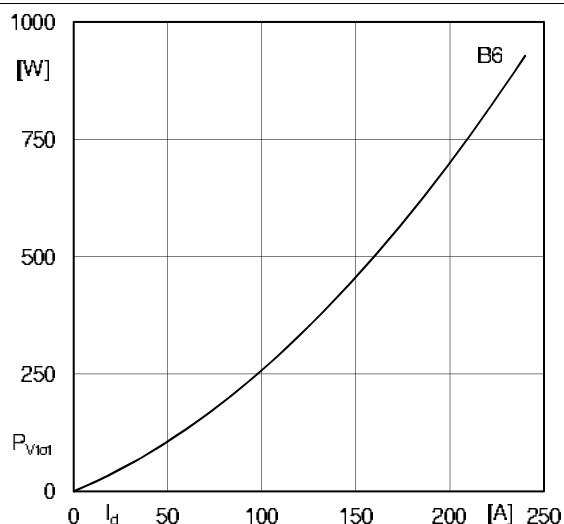


Fig. 4L: Power dissipation per module vs. direct current

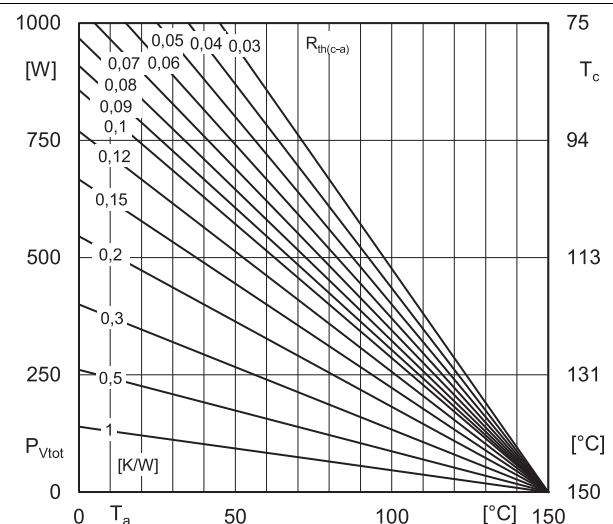


Fig. 4R: Power dissipation per module vs. case temperature

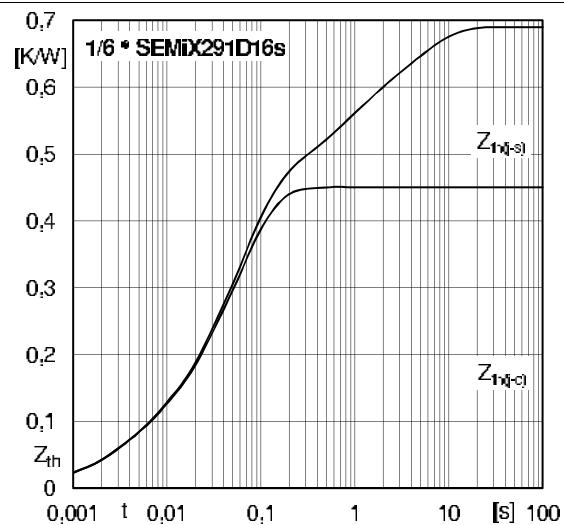


Fig. 6: Transient thermal impedance vs. time

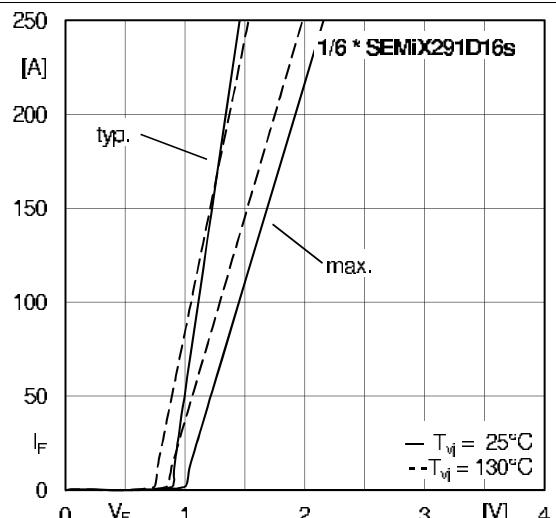


Fig. 7: On-state characteristics

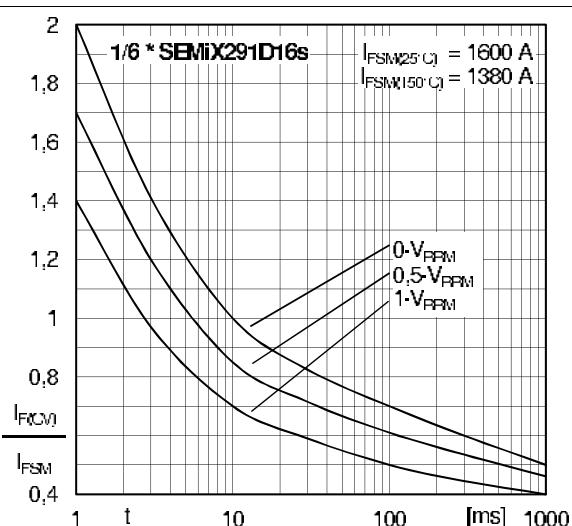
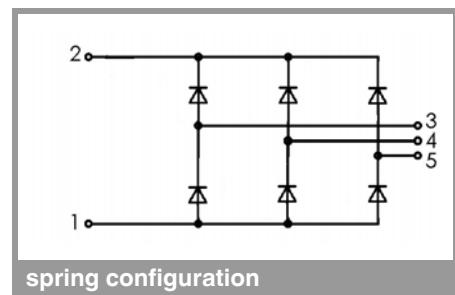
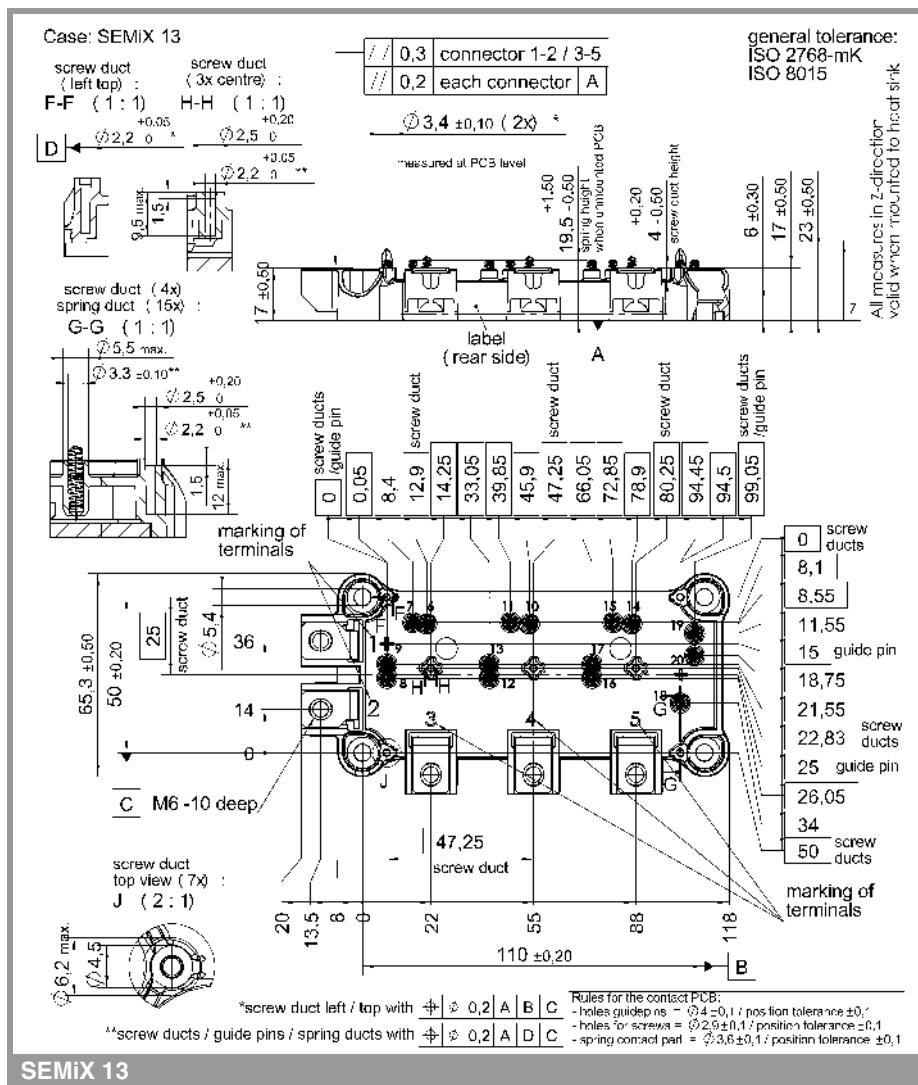


Fig. 8: Surge overload current vs. time



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

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