

SEMiX341D16s



SEMiX® 13

Bridge Rectifier Module (uncontrolled) SEMiX341D16s

Features

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

Typical Applications*

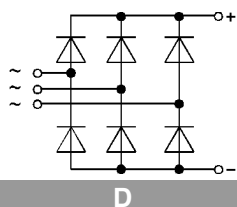
- Input Bridge Rectifier for AC/DC motor control
- Power supply

Absolute Maximum Ratings

Symbol	Conditions		Values	Unit
Rectifier Diode				
I_D	$T_j = 130\text{ °C}$ sinus 180°	$T_c = 85\text{ °C}$	348	A
		$T_c = 100\text{ °C}$	267	A
I_{FSM}	10 ms	$T_j = 25\text{ °C}$	2500	A
		$T_j = 130\text{ °C}$	2000	A
i^2t	10 ms	$T_j = 25\text{ °C}$	31250	A ² s
		$T_j = 130\text{ °C}$	20000	A ² s
V_{RSM}			1700	V
V_{RRM}			1600	V
T_j			-40 ... 130	°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	$T_j = 25\text{ °C}, I_F = 400\text{ A}$				1.75	V
$V_{(TO)}$	$T_j = 130\text{ °C}$				0.9	V
r_T	$T_j = 130\text{ °C}$				2.7	mΩ
I_{RD}	$T_j = 130\text{ °C}, V_{RD} = V_{RRM}$				4.5	mA
$R_{th(j-c)}$	sin. 180	per diode			0.22	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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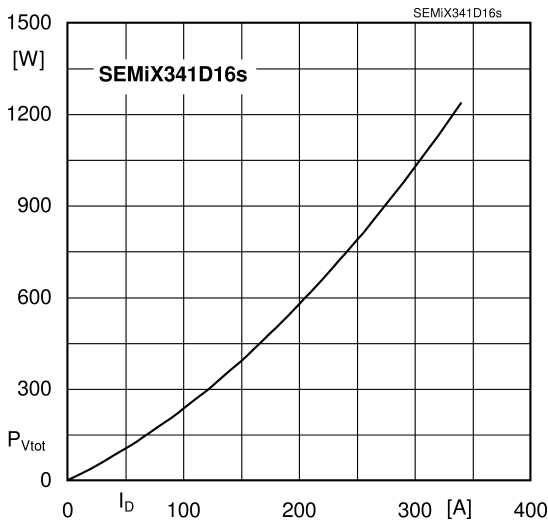


Fig. 4L: Power dissipation per module vs. direct current

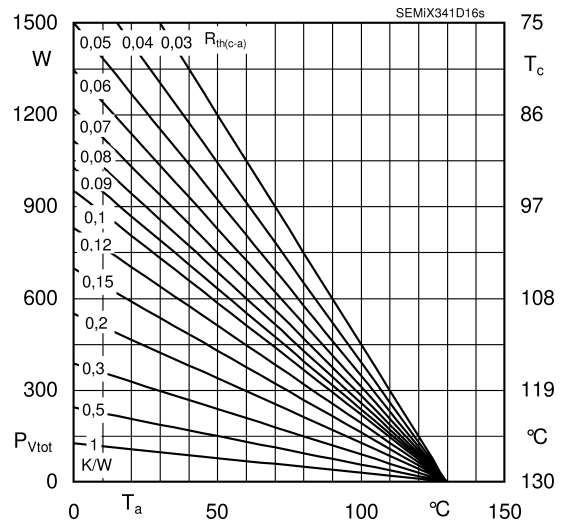


Fig. 4R: Power dissipation per module vs. case temperature

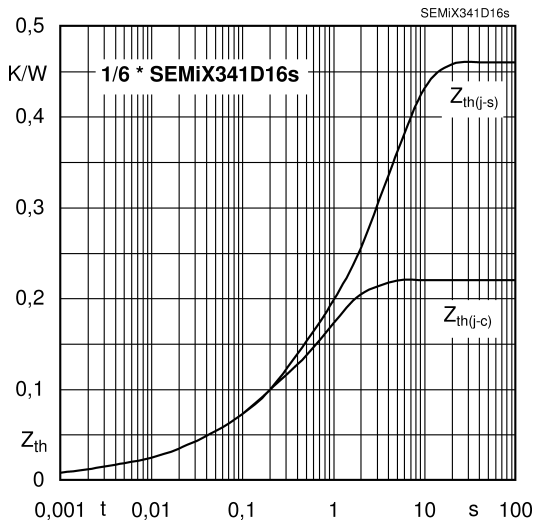


Fig. 6: Transient thermal impedance vs. time

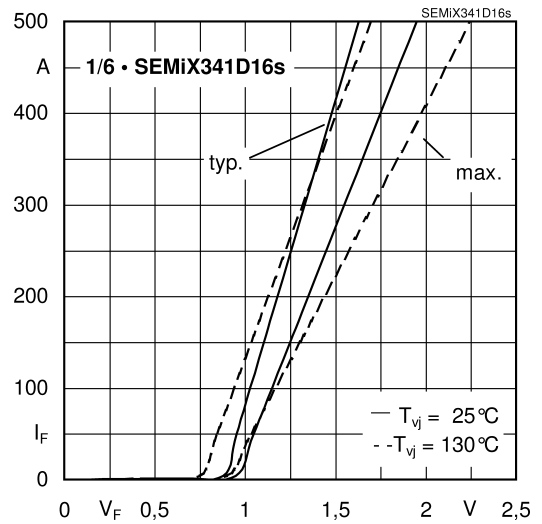


Fig. 7: On-state characteristics

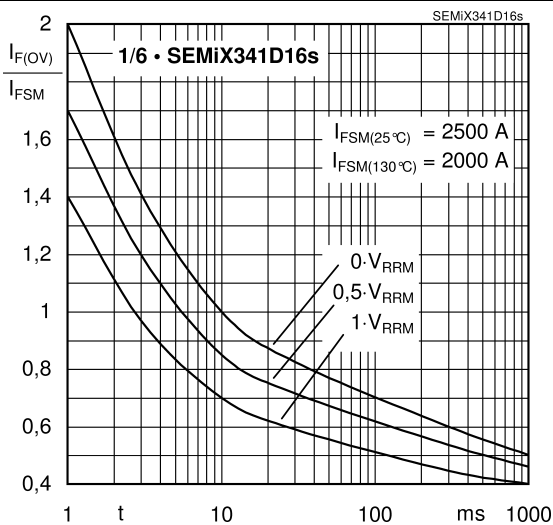


Fig. 8: Surge overload current vs. time

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