SEMiX 302KD ...

SEMiX® 2s

Rectifier Diode Module

SEMiX 302KD

Preliminary Data

Features

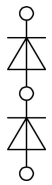
- Terminal height 17 mm
- Chips soldered directly to isolated substrate

Typical Applications

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

V_{RSM} V	V_{RRM} V	I_{FRMS} = 510 A (maximum value for continuous operation) I_{FAV} = 300 A (sin. 180; T_c = 85 = °C)		
1700	1600	SEMiX 302KD16s		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	300 (240)	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	8500	A
	T_{vj} = 130 °C; 10 ms	7500	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	361000	A²s
	T_{vj} = 130 °C; 8,3 ... 10 ms	281000	A²s
V_F	T_{vj} = 25 °C; I_F = 900 A	max. 1,6	V
$V_{(TO)}$	T_{vj} = 130 °C	max. 0,85	V
r_T	T_{vj} = 130 °C	max. 1,1	mΩ
I_{RD}	T_{vj} = 130 °C; V_{RD} = V_{RRM}	max. 15	mA
$R_{th(j-c)}$	per diode	0,091	K/W
$R_{th(c-s)}$	per module	0,045	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	AC, 50Hz; rms; 1s/1min	4800 / 4000	V~
M_s	(min./max.)	3/5	Nm
M_t	(min./max.)	2,5/5	Nm
a		5 * 9,81	m/s²
m	approx.	220	g
Case	SEMiX 2s		



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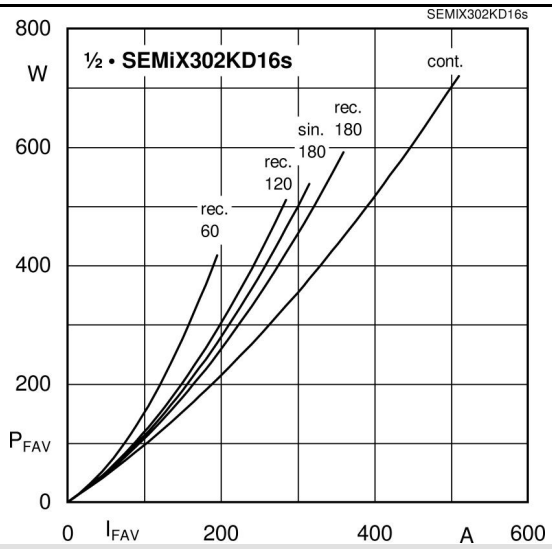


Fig. 1L Power dissipation per diode vs. forward current

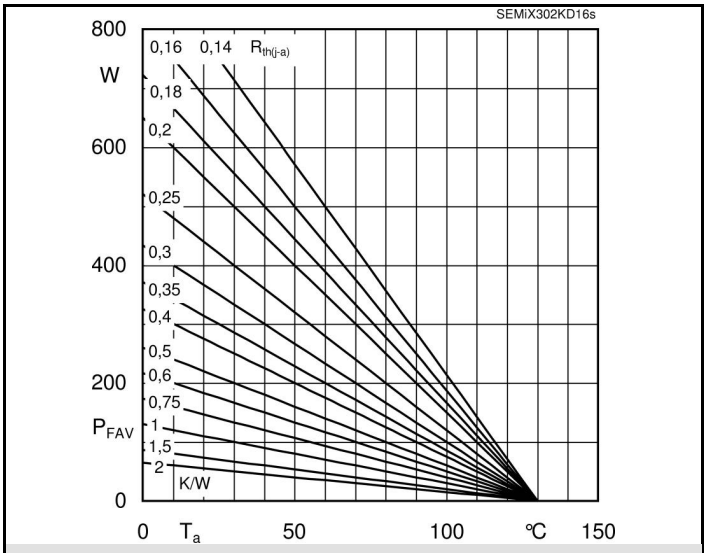


Fig. 1R Power dissipation per diode vs. ambient temperature

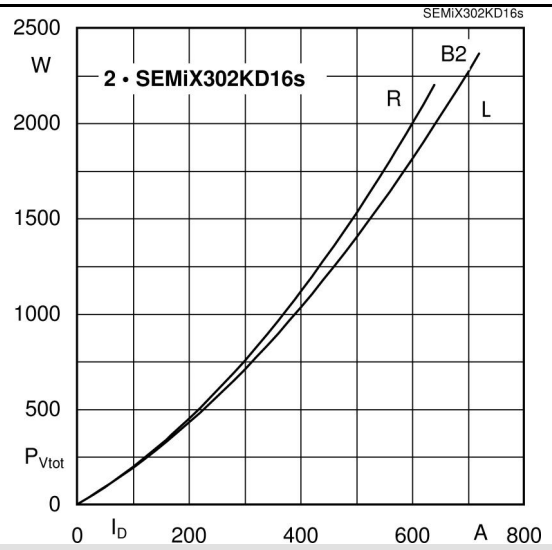


Fig. 3L Power dissipation of two modules vs. direct current

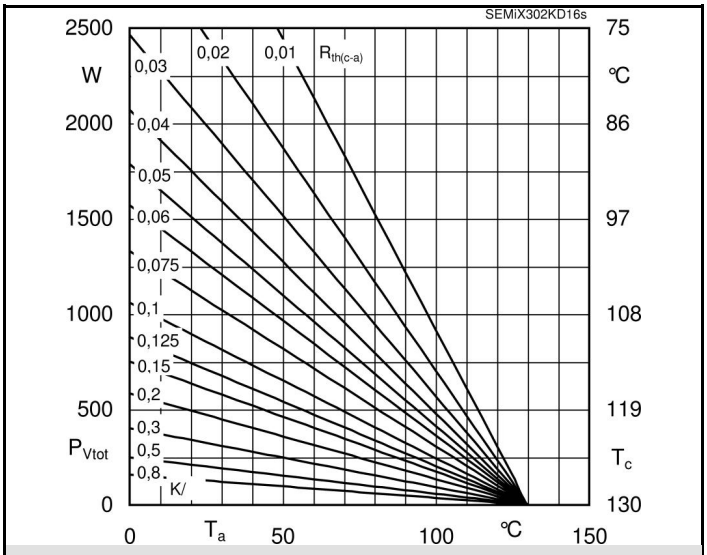


Fig. 3R Power dissipation of two modules vs. case temperature

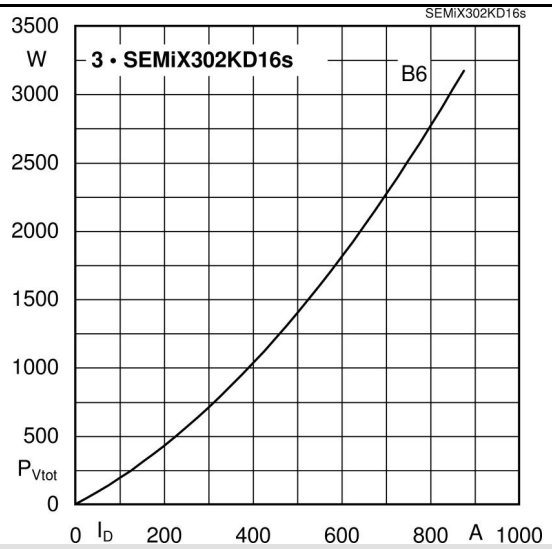


Fig. 4L Power dissipation of three modules vs. direct current

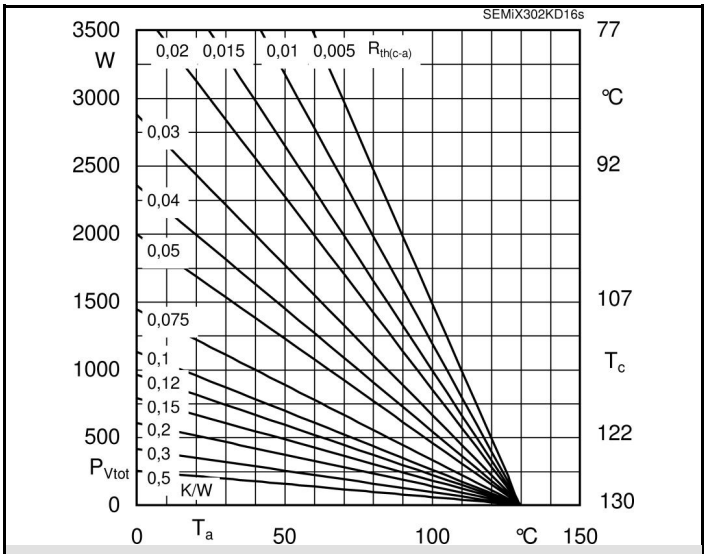


Fig. 4R Power dissipation of three modules vs. case temperature

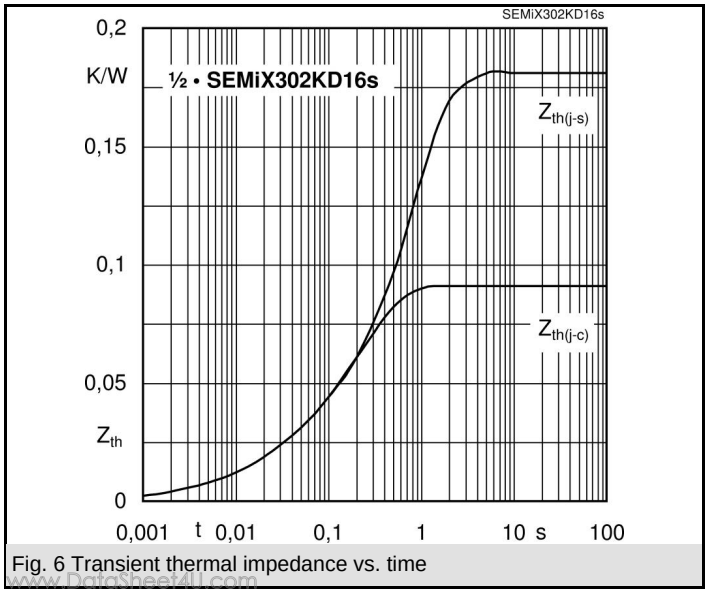


Fig. 6 Transient thermal impedance vs. time

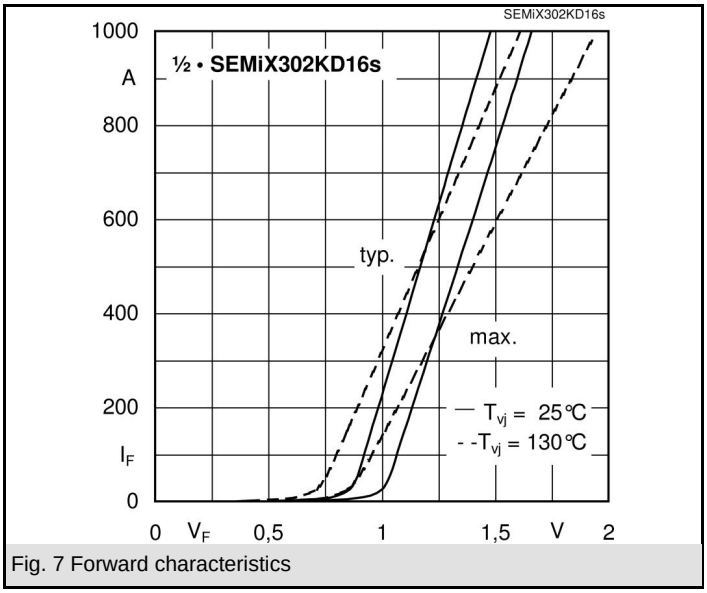


Fig. 7 Forward characteristics

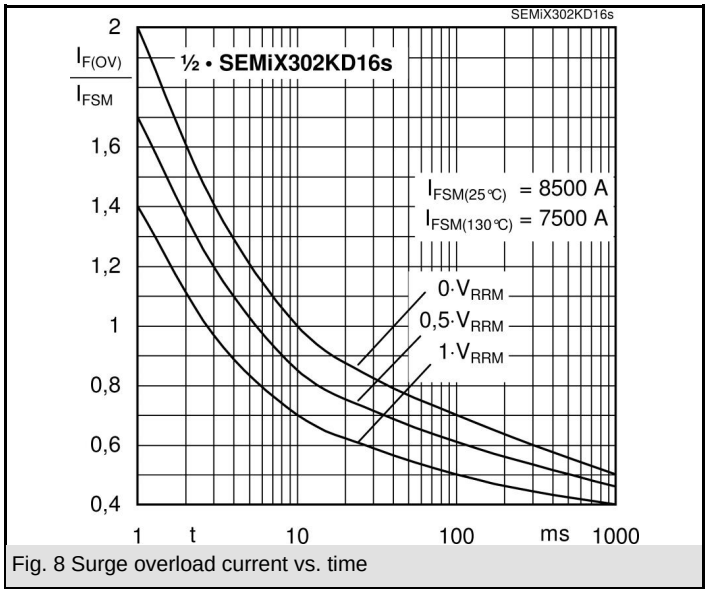
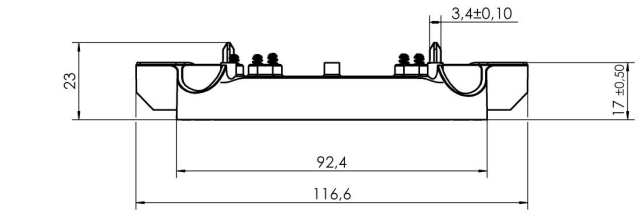
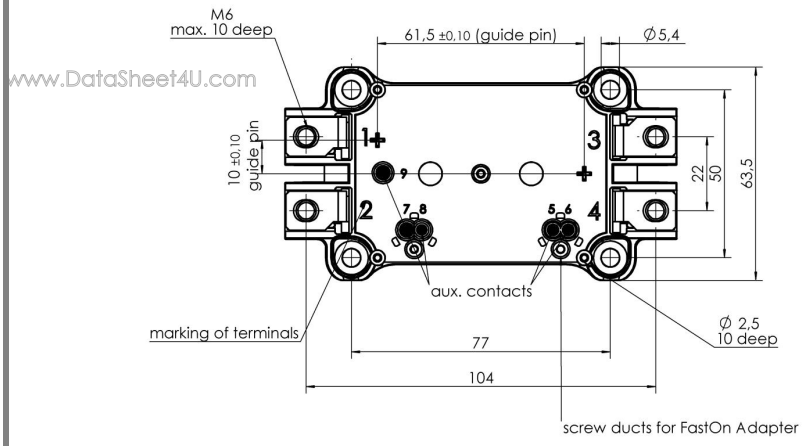


Fig. 8 Surge overload current vs. time

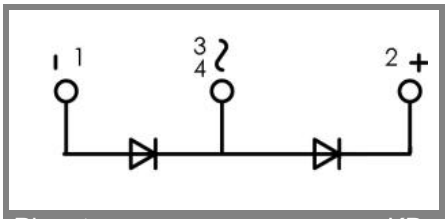
Dimensions in mm

case SEMiX2 rectifier





Case SEMiX2s



Pinout KD

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