
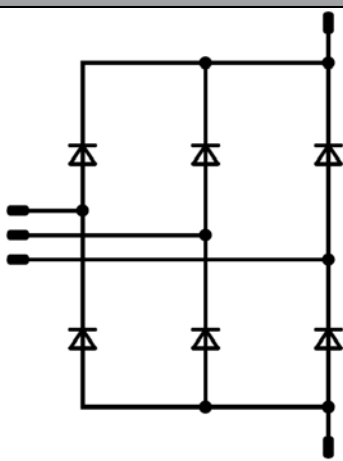




<i>flowCON OB</i>	1800 V / 35 A
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; background-color: #cccccc; margin: 0;">Features</p> <ul style="list-style-type: none"> Three-phase rectifier bridge Single screw mounting </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; background-color: #cccccc; margin: 0;">Target applications</p> <ul style="list-style-type: none"> Embedded Drives Industrial Drives </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; background-color: #cccccc; margin: 0;">Types</p> <ul style="list-style-type: none"> 10-ZB186RA035RJ-L609H08 </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; background-color: #cccccc; margin: 0;"><i>flowOB</i> 12 mm housing</p>  </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; background-color: #cccccc; margin: 0;">Schematic</p>  </div>

Maximum Ratings

$T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Condition	Value	Unit
Rectifier Diode				
Peak Repetitive Reverse Voltage	V_{RRM}		1800	V
Continuous (direct) forward current	I_F	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	49	A
Surge (non-repetitive) forward current	I_{FSM}	50 Hz Single Half Sine Wave $T_s = 150\text{ °C}$	420	A
Surge current capability	I^2t	$t_p = 10\text{ ms}$	880	A ² s
Total power dissipation	P_{tot}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	88	W
Maximum Junction Temperature	T_{jmax}		150	°C



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Maximum Ratings

$T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Condition	Value	Unit
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Module Properties

Thermal Properties

Storage temperature	T_{stg}		-40...+125	°C
Operation temperature under switching condition	T_{top}		-40...(T _{max} - 25)	°C

Isolation Properties

Isolation voltage	V_{isol}	DC Test Voltage* $t_p = 2\text{ s}$	6000	V
		AC Voltage $t_p = 1\text{ min}$	2500	V
Creepage distance			min. 12,7	mm
Clearance			11,89	mm
Comparative Tracking Index	CTI		> 200	

*100 % tested in production



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Characteristic Values

Parameter	Symbol	Conditions					Value			Unit
		V_{GE} [V] V_{GS} [V]	V_{CE} [V] V_{DS} [V] V_F [V]	I_C [A] I_D [A] I_F [A]	T_j [°C]	Min	Typ	Max		

Rectifier Diode

Static

Forward voltage	V_F			35	25 125 150		1,06 0,99 0,98	1,25		V
Reverse leakage current	I_r		1600		25 150			50 1500		μA

Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material $\lambda = 3,4$ W/mK					0,79			K/W
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Rectifier Diode Characteristics

figure 1. Rectifier Diode
Typical forward characteristics

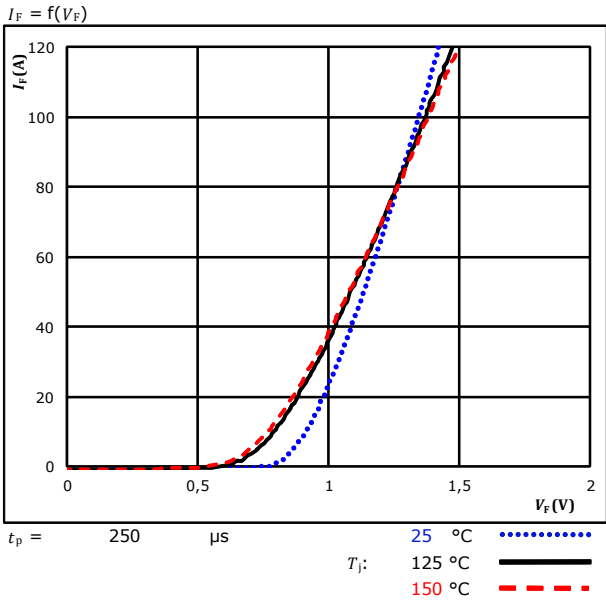
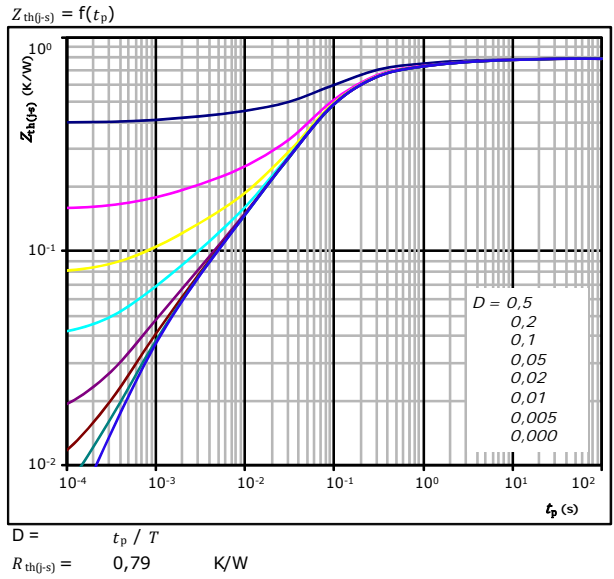


figure 2. Rectifier Diode
Transient thermal impedance as a function of pulse width



Diode thermal model values

R (K/W)	τ (s)
3,20E-02	9,00E+00
8,79E-02	1,05E+00
2,33E-01	1,74E-01
3,51E-01	5,88E-02
5,41E-02	5,90E-03
3,21E-02	1,05E-03
1,30E-03	6,60E-04



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Ordering Code & Marking									
Version				Ordering Code					
without thermal paste 12 mm housing with solder pins				10-ZB186RA035RJ-L609H08					
NN-NNNNNNNNNNNNNN NNNNNNNN WWYY UL VIN LLLL SSSS			Name		Date code	UL & VIN	Lot	Serial	Serial
Text			NN-NNNNNNNNNNNNNN-TTTTTTVV		WWYY	UL VIN	LLLL	SSSS	SSSS
Datamatrix		Type&Ver	Lot number	Serial	Date code				
		TTTTTTTVV	LLLL	SSSS	WWYY				

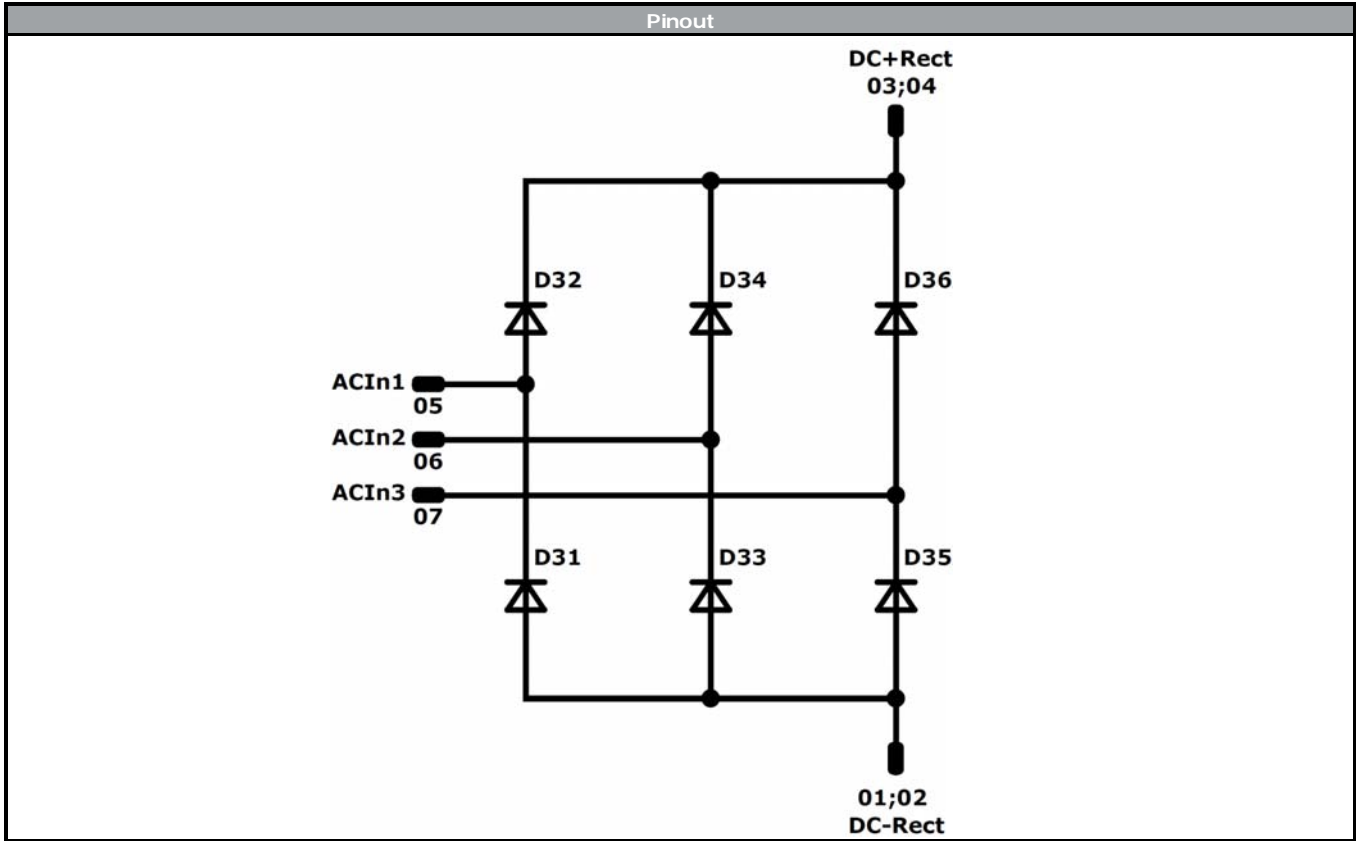
Pin table			
Pin	X	Y	Function
1	12,9	2,3	DC-Rect
2	10,2	2,3	DC-Rect
3	0	0	DC+Rect
4	0	2,7	DC+Rect
5	0	13,7	ACIn1
6	9,9	13,7	ACIn2
7	27,8	13,7	ACIn3

Outline

Tolerance of pinpositions: $\pm 0,5\text{mm}$ at the end of pins
Dimension of coordinate axis is only offset without tolerance



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Identification					
ID	Component	Voltage	Current	Function	Comment
D31, D32, D33, D34, D35, D36	Rectifier	1800 V	35 A	Rectifier Diode	




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Packaging instruction			
Standard packaging quantity (SPQ) 160	>SPQ	Standard	<SPQ Sample

Handling instruction
Handling instructions for <i>flow0</i> B packages see vincotech.com website.

Package data
Package data for <i>flow0</i> B packages see vincotech.com website.

UL recognition and file number
This device is certified according to UL 1557 standard, UL file number E192116. For more information see vincotech.com website. 

Document No.:	Date:	Modification:	Pages
10-ZB186RA035RJ-L609H08-D1-14	15 Aug. 2017		

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.