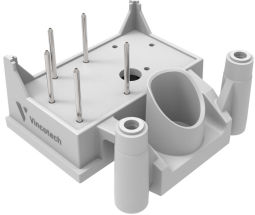
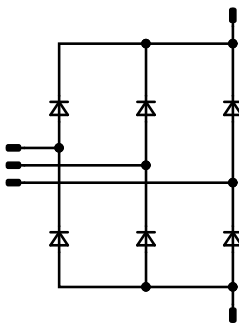




flowCON 0B		1600 V / 28 A	
Features <ul style="list-style-type: none">• 3 phase rectifier bridge• Single screw mounting		flow 0B 17 mm housing 	
Target applications <ul style="list-style-type: none">• Industrial Drives		Schematic 	
Types <ul style="list-style-type: none">• 10-0B166RA028RJ-M989H09			

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

Parameter	Symbol	Conditions	Value	Unit
Rectifier Diode				
Peak repetitive reverse voltage	V_{RRM}		1600	V
Forward average current	I_{FAV}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	39	A
Surge (non-repetitive) forward current	I_{FSM}	Single Half Sine Wave, $t_p = 10\text{ ms}$ $T_j = 150\text{ °C}$	270	A
Surge current capability	I^2t		370	A ² s
Total power dissipation	P_{tot}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	48	W
Maximum junction temperature	T_{jmax}		150	°C

Module Properties**Thermal Properties**

Storage temperature	T_{stg}		-40...+125	°C
Operation temperature under switching condition	T_{jop}		-40...+($T_{jmax} - 25$)	°C

Isolation Properties

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

*100 % tested in production



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Characteristic Values

Parameter	Symbol	Conditions					Values			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				28	25 125		1,15 1,1	1,5	V
Reverse leakage current	I_R	$V_r = 1600$ V				25 150			100 1000	μ A

Thermal

Thermal resistance junction to sink*	$R_{th(j-s)}$	$\lambda_{paste} = 3,4$ W/mK (PSX)						1,47		K/W
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*Only valid with pre-applied Vincotech thermal interface material.



Rectifier Diode Characteristics

figure 1. Rectifier

Typical forward characteristics

$$I_F = f(V_F)$$

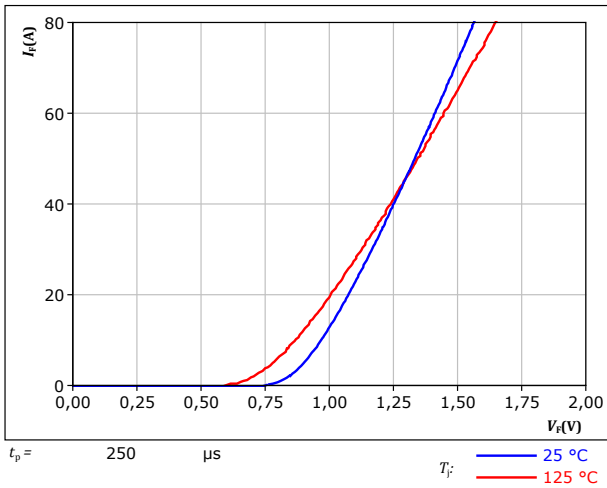
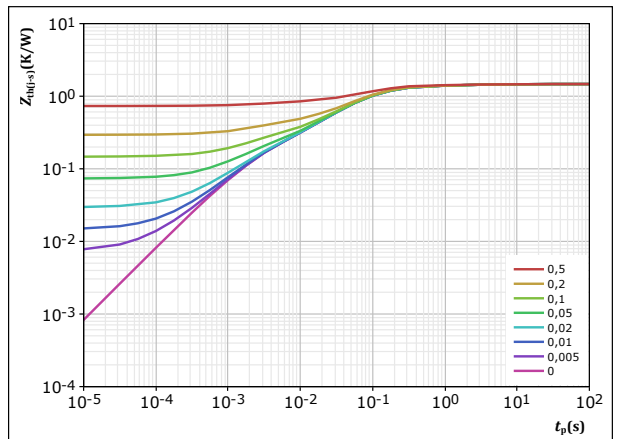


figure 2. Rectifier

Transient thermal impedance as a function of pulse width

$$Z_{th(j-s)} = f(t_p)$$



$D =$	t_p / T	
$R_{th(j-s)} =$	1,47	K/W
IGBT thermal model values		
R (K/W)	τ (s)	
5,46E-02	4,88E+00	
1,41E-01	5,73E-01	
8,54E-01	8,60E-02	
2,84E-01	2,74E-02	
1,34E-01	2,14E-03	



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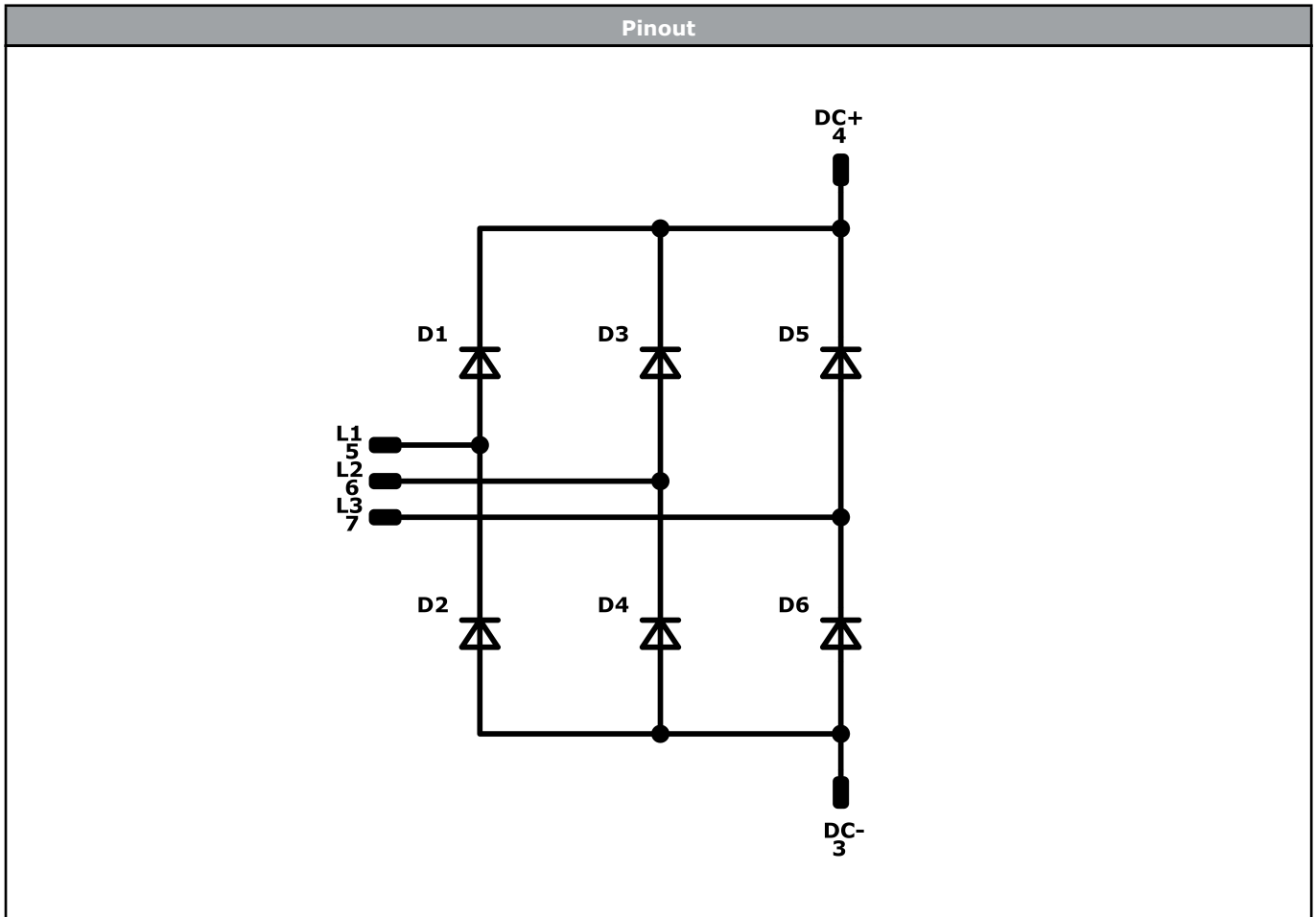
10-OB166RA028RJ-M989H09
datasheet

Ordering Code	
Version	Ordering Code
Without thermal paste	10-OB166RA028RJ-M989H09
With thermal paste	10-OB166RA028RJ-M989H09-/3/

Marking						
	Text	Name NN-NNNNNNNNNNNNNN- TTTTTVV	VIN & Lot VIN LLLLL	Date code WWYY	Serial SSSS	UL UL
	Datamatrix	Type&Ver TTTTTVV	Lot number LLLLL	Serial SSSS	Date code WWYY	

Pin table [mm]			
Pin	X	Y	Function
1			not assembled
2			not assembled
3	11,8	0	DC-
4	0	0	DC+
5	0	7,9	L1
6	5,3	13,7	L2
7	13,5	13,7	L3
8			not assembled
9			not assembled

Tolerance of pinpositions: ±0,5mm at the end of pins
Dimension of coordinate axis is only offset without tolerance
PCB cutouts and holes see in handling instruction document




Identification					
ID	Component	Voltage	Current	Function	Comment
D2, D1, D4, D3, D6, D5	Rectifier	1600 V	28 A	Rectifier Diode	



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

Handling instruction
Handling instructions for <i>flow</i> 0B packages see vincotech.com website.

Package data
Package data for <i>flow</i> 0B 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-OB166RA028RJ-M989H09-D1-14	8 Apr. 2020	Initial Release	

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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.